

Appendix I: Table of submission points

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
245.3	Aaron Mooar	Neutral/Amend	Add a resource management framework for the management of Genetically Modified Organisms that is regionally specific taking into account environmental, economic and social well-being considerations.	Environmental damage caused by Genetically Modified Organisms can be dealt with under the RMA. Genetic Engineering will harm our clean green image. There should be no further development and field testing of transgenic organisms. Supports adopting the precautionary principle. Genetically Modified Organisms have irreversible significant adverse impacts.	Reject	13
FS1342.260	Federated Farmers	Oppose	Disallow submission point 245.3.	<p>The issues raised in the submissions are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness. Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or the Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: address climate change, water quality and predator control; improve productivity; innovate to create new products, enhance the attributes and health outcomes of food; as well as remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
FS1296.1	Beef + Lamb New Zealand Limited	Oppose	B+LNZ oppose the requests to insert policies and rules relating to Genetically Modified Organisms because of the implications it would have for the ability to undertake contained research. AgResearch's Ruakura research facility, in particular, would fall within the proposed plan and its GMO provisions, making it more difficult and costly to undertake its research into GMOs. The challenges the world's food supply faces a range of challenges over the coming decades in response to climate change, rapid population growth, and environmental limits. The opportunity to continue to assess and better understand the risks and potential opportunities associated with a wide range of biotechnology is an important part of meeting this challenge. We have reservations over the costs and benefits of wider genetic modification technology - not least from the perspective of market acceptance of GM food products. Nonetheless, we can see the importance of continued, contained research and are concerned that the proposed GMO provisions of the Plan would inhibit this research at one of New Zealand's leading scientific facilities.		Accept	13
FS1295.2	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1343.4	Bruce Cameron	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set in the attached pages and include: Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1215.1	Steven &	Oppose	We oppose submitter 245; submission point	We submit that a topic of this magnitude needed to be clearly signaled in the Notified Plan as	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
	Theresa Stark		245.3.	most ratepayers will be unaware that this topic is up for debate. We submit it is a matter for central government, not local government, to regulate.		
FS1276.75	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole of the submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Reject	13
FS1214.2	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope. Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermined the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FSI 320.2	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	<p>LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies).</p>	Accept	13

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				Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1212.2	David Stewart Bull	Oppose	Disallow the whole submission point.	<p>Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.</p>	Accept	13
FS1199.1	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	The original submitter(s) have made statements to the effect that: GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1225.2	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13

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FS1192.2	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
245.4	Aaron Moorar	Neutral/Amend	Add strong precautionary and prohibitive provisions, policies and rules relating to Genetically Modified Organisms that are the same (or similar) as those in the Far North District Plan, the Whangarei District Plan and the Auckland Unitary Plan.	To ensure a consistent approach across Northland, Auckland and the Waikato. To eliminate cross boundary issues. Environmental damage caused by Genetically Modified Organisms can be dealt with under the RMA. Genetic Engineering will harm our clean green image. There should be no further development and field testing of transgenic organisms. Supports adopting the precautionary principle. Genetically Modified Organisms have irreversible significant adverse impacts.	Reject	13
FS1214.3	Forest Owners Association	Oppose	Disallow this whole submission point.	Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermined the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding</p>		

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				<p>pinus, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS1212.3	David Stewart Bull	Oppose	Disallow this whole submission point.	<p>Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.</p>	Accept	13
FS1343.5	Bruce Cameron	Oppose	Disallow this whole submission point.	<p>My reasons for opposing this submission point are set in the attached pages and include: Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	13
FS1225.3	BIOTech New Zealand	Oppose	Disallow this whole submission point.	<p>Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	13
FS1320.3	Livestock	Oppose	Disallow this whole submission point.	<p>LIC opposes this submission point for the following reasons: Claims of harm are not</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
	Improvement Corporation			scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1276.76	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole of the submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Accept	13
FS1215.2	Steven & Theresa Stark	Oppose	We oppose submitter 245; submission point 245.4.	We submit that a topic of this magnitude needed to be clearly signaled in the Notified Plan as most ratepayers will be unaware that this topic is up for debate. We submit it is a matter for central government, not local government, to regulate.	Accept	13
FS1342.261	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1295.3	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1192.3	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1199.2	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
245.5	Aaron Mooar	Neutral/Amend	Amend the Proposed Waikato District Plan to require consents which are exempt from plan rules to be automatically publicly notified whether rules are on Genetically Modified Organisms or any other matter.	Several Councils have passed resolutions that there should be no further development and field-testing of transgenic organisms envisaged for agriculture, horticulture and forestry in their areas until the risk potential has been adequately identified and evaluated and a strict liability regime put in place. Environmental damage caused by Genetically Modified Organisms can be dealt with under the RMA. Genetic	Reject	14

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				Engineering will harm our clean green image. There should be no further development and field testing of transgenic organisms. Supports adopting the precautionary principle. Genetically Modified Organisms have irreversible significant adverse impacts.		
FS1276.121	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole of the submission point be allowed.	These submissions support submission point 780.30 in WED's submission. This strong call from Raglan submitters, for public notification of all consents, indicates the need for effective rules to protect Raglan's character, which may include notification.	Reject	14
FS1215.3	Steven & Theresa Stark	Oppose	We oppose submitter 245; submission point 245.5.	We submit that a topic of this magnitude needed to be clearly signaled in the Notified Plan as most ratepayers will be unaware that this topic is up for debate. We submit it is a matter for central government, not local government, to regulate.	Accept	14
353.1	Michael Anderson	Neutral/Amend	Add strong precautionary and prohibitive policies and rules relating to the management of genetically modified organisms (GMOs), the same or similar to the Far North District Plan, Whangarei District Plan and the Auckland Unitary Plan.	The submission references provisions allowed under the Resource Management Act 1991 and pursuant to the ruling in Federated Farmers of New Zealand v Northland Regional Council [2015] NZEnC 89. Release of genetically modified organisms has a potential to cause significant adverse effects on the environment, including the following: biological or ecosystem harm; harm to tangata whenua cultural values such as mauri and tikanga; harm to the cultural values and lifestyle decisions of people and communities at a local level concerning what constitutes their wellbeing; harm from genetically modified organism contamination to existing or potential forms of land use including farming, forestry and other primary production activities dependent on an uncontaminated environmental brand; Adverse effects to these land uses could include loss of organic and GMO-free certification, reputational damage, loss of markets and premiums paid for GMO free produce and loss of livelihood. Conditions of consent may be breached by poor management, human error, natural events. Once GMOs have been released they would be very difficult, if not impossible to eradicate. Application of integrated management and precautionary approach to GMOs under the RMA is the best technique for managing potential adverse effects. It is consistent with the sustainable management purpose and Part II of the RMA to establish district plan provisions that manage the release, location and management of GMOs where they have the potential to adversely affect the environment.	Reject	13
FS1214.5	Forest Owners Association	Oppose	Disallow this whole submission point.	Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation)	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA.</p> <p>Jurisdiction and control of effects by the council</p> <p>The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so.</p> <p>Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs.</p> <p>The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act.</p> <p>Thus it is more efficient:</p> <p>To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools,</p> <p>Than to put in place prohibitive rules which would require a plan change to undo.</p> <p>New Genetic Technologies and Gene editing</p> <p>Genetic technologies are developing rapidly.</p> <p>While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter.</p> <p>The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses.</p> <p>Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding.</p> <p>The use of Genetic Modification in Modern Society</p> <p>The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification.</p> <p>Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding.</p> <p>The use of Genetic Modification in the New Zealand Environment</p> <p>New Zealand is not GMO free.</p> <p>There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council.</p> <p>Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions.</p> <p>Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS1212.5	David Stewart Bull	Support	Disallow the whole submission point.	<p>Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act.</p> <p>Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.</p>	Accept	13
FS1320.5	Livestock	Oppose	Disallow this whole submission point.	<p>LIC opposes this submission point for the following reasons: Claims of harm are not</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
	Improvement Corporation			scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1295.5	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1225.5	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1192.5	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1199.3	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipped to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in reply showing that all of the above claims are false.	Accept	13
FS1276.77	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole of the submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Reject	13
FS1342.263	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
FS1343.7	Bruce Cameron	Oppose	Disallow this whole submission.	My reasons for opposing this submission point are set in the attached pages and include: Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
380.7	Norman Hill for Waahi Whaanui Trust	Neutral/Amend	Add clear provisions to include precautionary policies to regulate the outdoor use of genetically modified organisms AND Add provisions to prohibit the release of GMOs on land and make field trials a discretionary activity with performance standards in regard to liability and the posting of bonds.	Whanui are concerned about the potential risks posed by releasing GMOs into the environment. It considers that the science is unproven, and the risk of biological and ecosystem harm is too great not to include precautionary provisions for GMOs under local plans. Equally important is the risk to social, economic, and cultural wellbeing, even if the Waikato District Council considers that GMOs pose no biological or ecosystem risks. This is because GMO contamination could have significant adverse effects on the economic markets, and way of life, for both organic and non-GMO food producers, and the mauri and tikanga of tangata whenua. The Waikato Tainui Environmental Plan takes a precautionary approach to GMOs. It specifies that applications for new organisms and GMOs must demonstrate that there are no risks to humans, indigenous ecosystems, indigenous species, or primary production. Whanui takes a precautionary approach to GMOs. It specifies that any applications for the introduction of new or GMOs into the environment must ensure that there is no risk to indigenous flora and fauna, ecosystems, or to the health and wellbeing of Waikato Tainui Iwi. A number of councils around New Zealand have been moving to protect their primary producers and communities by introducing precautionary or prohibitive policies. Auckland Council, Far North District Council, Whangarei District Council and Hastings District Council have all included provisions in their planning documents to regulate the outdoor use of genetically modified organisms. All four councils have prohibited the release of GMOs on land and made field trials a discretionary activity with performance standards in regard to liability and the posting of bonds.	Reject	13
FS1108.136	Te Whakakitenga o Waikato Incorporated (Waikato-Tainui)	Support	Null	Provisions to prohibit the release of GMO's on land and make field trials a discretionary activity.	Reject	13
FS1276.78	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole of the submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Reject	13
FS1342.264	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1212.6	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would:</p> <p>Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.</p>		
FS1192.6	J H & R Cotman	Oppose	Disallow this whole submission point.		Accept	13
FS1199.4	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1343.8	Bruce Cameron	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set in the attached pages and include: Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1320.6	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				quality and competitiveness.		
FS1214.6	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope. Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation.</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS1225.6	BIOTech New Zealand	Oppose	Disallow this whole submission point.	<p>Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
FS1295.6	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
480.1	Susan Carter	Neutral/Amend	Add a resource management framework for the management of genetically modified organisms (GMOs) that is region-specific, taking into account environmental, economic and social wellbeing considerations.	GMOs are not needed in New Zealand, there has been insufficient research done on this. GMOs have the potential to adversely affect ecological, economic and resource management values and the social and cultural wellbeing of people, communities and tangata whenua. Once GMOs have been released into the environment, they would be very difficult if not impossible to eradicate. No matter how carefully conditions of consent are crafted, there inevitably remains a risk. The release of GMOs has the potential to cause significant adverse on the environment which could include: Biological or ecosystem harm; Harm to tangata whenua cultural values such as mauri and tikanga; Harm to the cultural values and lifestyle decision of people and communities; Harm from GMO contamination to existing or potential forms of land use including farming, forestry, beekeeping, marine farming, and other primary production activities dependent on an uncontained environmental brand. Adverse effects include loss of organic GMO-free certification, reputational damage, loss of markets and premiums for GMO-free produce and loss of livelihood. The amendments requested are consistent with the sustainable management purpose and Part II of the RMA to establish district plan provisions that concern the release, location and management of GMOs where they have potential to adversely affect the environment and other land use activities.	Reject	13
FS1295.7	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1343.9	Bruce Cameron	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set in the attached pages and include: Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1225.7	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1320.7	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1276.79	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole of the submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Reject	13
FS1342.265	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1214.7	Forest Owners Association	Oppose	Disallow this whole submission point.	Out of scope. Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under</p>		

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				<p>the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate</p> <p>Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS1212.7	David Stewart Bull	Oppose	Disallow the whole submission point.	<p>Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.</p>	Accept	13
FS1192.7	J H & R Cotman	Oppose	Disallow this whole submission point.	<p>Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				control, water quality and competitiveness.		
FS1199.5	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
480.4	Susan Carter	Neutral/Amend	Add strong precautionary and prohibitive provisions, policies and rules for Genetically Modified Organisms that are the same (or similar) to those in the Far North District Plan, the Whangarei District Plan and the Auckland Unitary Plan.	GMOs are not needed in New Zealand, there has been insufficient research done on this. GMOs have the potential to adversely affect ecological, economic and resource management values and the social and cultural wellbeing of people, communities and tangata whenua. Once GMOs have been released into the environment, they would be very difficult if not impossible to eradicate. No matter how carefully conditions of consent are crafted, there inevitably remains a risk. The release of GMOs has the potential to cause significant adverse on the environment which could include: - Biological or ecosystem harm; - Harm to tangata whenua cultural values such as mauri and tikanga; - Harm to the cultural values and lifestyle decision of people and communities; - Harm from GMO contamination to existing or potential forms of land use including farming, forestry, beekeeping, marine farming, and other primary production activities dependent on an uncontained environmental brand. - Adverse effects include loss of organic GMO-free certification, reputational damage, loss of markets and premiums for GMO-free produce and loss of livelihood. - The amendments requested are consistent with the sustainable management purpose and Part II of the RMA to establish district plan provisions that concern the release, location and management of GMOs where they have potential to adversely affect the environment and other land use activities.	Reject	13
FS1276.80	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole of the submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Reject	13
FS1342.266	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1320.8	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1343.10	Bruce Cameron	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set in the attached pages and include: Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1212.8	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	13
FS1199.6	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipped to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1192.8	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1225.8	BIOTech New	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include:	Accept	13

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	Zealand			GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1295.8	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1214.8	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermined the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding</p>		

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				<i>pinus, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</i>		
525.1	Gillian Marie	Neutral/Amend	Add a resource management framework for the management of GMOs that is regional specific taking into account environmental, economic and social well-being considerations.	Provisions are allowed under the Resource Management Act 1991 and pursuant to the ruling in Federated Farmers of New Zealand v Northland Regional Council [2015] NZEnC 89. Release of GMOs has a potential to cause significant adverse effects on the environment, including the following: Biological or ecosystem harm Harm to tangata whenua cultural values such as mauri and tikanga Harm to the cultural values and lifestyle decisions of people and communities at a local level concerning what constitutes their wellbeing Harm from GMO contamination to existing or potential forms of land use including farming, bee keeping, forestry and other primary production activities dependant on an uncontaminated environmental brand. Adverse effects to these land uses could include: loss of organic and GMO-free certification, reputational damage, loss of markets and premiums paid for GMO free produce and loss of livelihood. The Waikato has three major milk suppliers which have a GMO Free requirement for the milk products. The ability to control the grass genetic pollution is a major concern. There are several organic producers in Waikato Conditions of consent may be breached by poor management, human error, natural events. Once GMOs have been released they would be very difficult, if not impossible to eradicate. The GE Free status of the district potentially would be lost permanently along with the market advantage of that status. This along with the potential health hazards to all living things as the long term impact of GMO's has not been ascertained. Application of integrated management and precautionary approach to GMOs under the RMA is the best technique for managing potential adverse effects. It is consistent with the sustainable management purpose and Part II of the RMA to establish district plan provisions that manage the release, location and management of GMOs where they have the potential to adversely affect the environment.	Reject	13
FS1214.10	Forest Owners Association	Oppose	Disallow this whole submission point.	Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for	Accept	13

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FS1199.8	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1192.10	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1212.10	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.		
FS1320.10	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1342.268	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1295.10	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1225.10	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1343.12	Bruce Cameron	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set in the attached pages and include: Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<i>opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</i>		
525.2	Gillian Marie	Neutral/Amend	Add strong precautionary and prohibitive policies and rules relating to the management of genetically modified organisms that are the same (or similar) as those in the Far North District Plan, Whangarei District Plan and the Auckland Unitary Plan.	Provisions are allowed under the Resource Management Act 1991 and pursuant to the ruling in <i>Federated Farmers of New Zealand v Northland Regional Council</i> [2015] NZEnC 89. Release of GMOs has a potential to cause significant adverse effects on the environment, including the following: Biological or ecosystem harm Harm to tangata whenua cultural values such as mauri and tikanga Harm to the cultural values and lifestyle decisions of people and communities at a local level concerning what constitutes their wellbeing Harm from GMO contamination to existing or potential forms of land use including farming, bee keeping, forestry and other primary production activities dependant on an uncontaminated environmental brand. Adverse effects to these land uses could include: loss of organic and GMO-free certification, reputational damage, loss of markets and premiums paid for GMO free produce and loss of livelihood. The Waikato has three major milk suppliers which have a GMO Free requirement for the milk products. The ability to control the grass genetic pollution is a major concern. There are several organic producers in Waikato Conditions of consent may be breached by poor management, human error, natural events. Once GMOs have been released they would be very difficult, if not impossible to eradicate. The GE Free status of the district potentially would be lost permanently along with the market advantage of that status. This along with the potential health hazards to all living things as the long term impact of GMO's has not been ascertained. Application of integrated management and precautionary approach to GMOs under the RMA is the best technique for managing potential adverse effects. It is consistent with the sustainable management purpose and Part II of the RMA to establish district plan provisions that manage the release, location and management of GMOs where they have the potential to adversely affect the environment.	Reject	13
FS1343.13	Bruce Cameron	Oppose	Disallow this whole submission point.	<i>My reasons for opposing this submission point are set in the attached pages and include: Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</i>	Accept	13
FS1295.11	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	<i>The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</i>	Accept	13
FS1320.11	Livestock	Oppose	Disallow this whole submission point.	<i>LIC opposes this submission point for the following reasons: Claims of harm are not</i>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
	Improvement Corporation			scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1276.83	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole of the submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Accept	13
FS1342.269	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1199.9	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1214.11	Forest Owners Association	Oppose	Disallow this whole submission point.	Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines,	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermined the Waikato's leadership in agricultural science and innovation. Limit</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.		
FS1212.11	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	13
FS1225.11	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1192.11	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<i>when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</i>		
546.1	Lynne Adrienne	Neutral/Amend	Add strong precautionary and prohibitive policies and rules relating to the management of genetically modified organisms that are the same (or similar) as those in the Far North District Plan, the Whangarei District Plan and the Auckland Unitary Plan.	Provided for under the Resource Management Act 1991 and pursuant to the ruling in Federated Farmers of New Zealand v Northland Regional Council. Concerns about the potential risks posed by the release of GMO's into the environment. GMO's have the potential to adversely affect ecological, economic, and resource management values, and the social and cultural wellbeing of people, communities and tangata whenua. There is a risk that conditions of consent may be breached by poor management, human error, natural events. Once GMO's have been released into the environment they would be difficult if not impossible to eradicate. The GE status of a district would likely be lost permanently along with the market advantages with that status. Integrated management and a precautionary approach to GMO's under the RMA 1991 is the best available technique for managing the potential adverse effects posed for GMO's within the region. It is consistent with the purpose and Part II of the RMA to establish plan provisions e.g. issues, objectives, policies, rules and methods that manage the release, location and management of GMO's where they have the potential to adversely affect the environment and other land use activities. Further adverse effects are elaborated on in the submission.	Reject	13
FS1214.13	Forest Owners Association	Oppose	Disallow this whole submission point.	<p><i>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until</i></p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient:</p> <p>To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo.</p> <p>New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermined the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.		
FS1343.15	Bruce Cameron	Oppose	Disallow this whole submission point.	My reason for opposing this submission: Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1199.11	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1192.13	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1320.13	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1342.271	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1276.84	Whaingaroa Environmental	Support	WED seeks that the whole of the submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA;	Reject	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
	Defence Inc. Society			"managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."		
FS1225.13	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1212.13	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	13
FS1295.13	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
553.1	Malibu Hamilton	Neutral/Amend	Add strong precautionary and prohibitive provisions, policies and rules relating to Genetically Modified Organisms. The same or similar to those in the Far North District	Submitter has concerns about the potential risks by the release of GMOs into the environment. GMOs have the potential to adversely affect ecological, economic and resource management values, and the social and cultural wellbeing of people, communities and Tangata Whenua. The release of GMOs has a potential to cause	Reject	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
			Plan, Whangarei District Plan and the Auckland Unitary Plan.	significant adverse effects on the environment, which could include: (a) biological or ecosystem harm; (b) harm to Tangata whenua cultural values such as mauri and tikanga; (c) harm to the cultural values and lifestyle decisions of people and communities at a local level concerning what constitutes their wellbeing; and (d) harm from GMO contamination to existing or potential forms of land use including farming, forestry, beekeeping, marine farming and other primary production activities dependant on an uncontaminated environmental brand. Adverse effects to these land uses could include loss of organic and GMO-free certification; (i) reputational damage; (ii) loss of markets and premiums paid for GMO free produce; (iii) loss of livelihood; and (iv) The Waikato has three major milk suppliers. Tatua, Fonterra and Miraka Milks have a GMO Free requirement for their milk products and rely on shareholders farmers milk supply. The ability to control the grass genetic pollution is a major concern and it is important to have a precautionary approach to any escape and release of GM until the negative effects are known in the region. Additionally there are also several other organic producers in the Waikato. No matter how carefully conditions of consent for GMOs are crafted, there inevitably remains a risk, even if small, that conditions may be breached by poor management, human error, natural events such as severe storms and even the sabotage of projects. Once GMOs have been release into the environment, they would be very difficult if not impossible to eradicate. In the case of a food product, the "GE free" status of a district would likely be lost permanently along with the market advantages of that status. Application of integrated management and a precautionary approach to GMOs under the RMA is the best available technique for managing the potential adverse effects posed by GMOs within the region. It is consistent with the sustainable management purpose and Part II of the RMA to establish District Plan provisions that manage the release, location and management of GMOs where they have the potential to adversely affect the environment and other land use activities.		
FS1295.14	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1343.16	Bruce Cameron	Oppose	Disallow this whole submission point.	My reason for opposing this submission: Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1320.14	Livestock Improvement	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
	Corporation			precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1276.86	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole of the submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Reject	13
FS1342.272	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1214.14	Forest Owners Association	Oppose	Disallow this submission point.	<p>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter.</p> <p>The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses.</p> <p>Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding.</p> <p>The use of Genetic Modification in Modern Society</p> <p>The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification.</p> <p>Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding.</p> <p>The use of Genetic Modification in the New Zealand Environment</p> <p>New Zealand is not GMO free.</p> <p>There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues.</p> <p>AgResearch have been running GM field trials for many years without the need for rules from the District Council.</p> <p>Loss of Science Capability</p> <p>Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions.</p> <p>Blanket provisions not appropriate</p> <p>Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation.</p> <p>Limit the opportunity to use new genetic technologies such as gene editing to:</p> <p>Address climate change, water quality and predator control;</p> <p>Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as</p> <p>Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				(unsatisfactory) levels of control.		
FS1212.14	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	13
FS1192.14	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1225.14	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1199.12	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
			<i>detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits</i>	<i>with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.</i>		
553.9	Malibu Hamilton	Neutral/Amend	Add a resource management framework for the management of genetically modified organisms that is regional-specific, taking into account the environmental, economic and social well-being considerations.	No reasons provided.	Reject	13
FS1276.87	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole of the submission be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Reject	13
599.1	Martin Hastings	Neutral/Amend	Add strong precautionary and prohibitive provisions, rules and policies relating to the management of Genetically Modified Organisms, made similar or the same as those in the Far North District Plan, the Whangarei District Plan, and the Auckland Unitary Plan.	To ensure a consistent approach across Northland, Auckland and the Waikato and to eliminate cross boundary issues. GMOs have the potential to adversely affect ecological, economic, resource management values, the cultural and social well-being of people and tangata whenua. The release of GMOs has the potential to cause significant adverse effects on the environment. No matter how carefully conditions of consent are crafted, there is a risk that conditions may be breached. Once GMOs are in the environment, they would be very difficult if not impossible to eradicate. Application of integrated management and a precautionary approach to GMO under the RMA is the best available technique for managing the potential adverse effects posed by GMOs. It is consistent with the sustainable management purpose and Part II of the RMA to establish district plan provisions that manage the release, location, and management of GMOs where they have the potential to adversely affect the environment and other land use activities.	Reject	13
FS1214.15	Forest Owners Association	Oppose	Disallow this whole submission point.	Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate</p> <p>Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermined the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS1295.15	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	<p>The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	13
FS1225.15	BIOtech New Zealand	Oppose	Disallow this whole submission point.	<p>Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	13
FS1320.15	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	<p>LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	13
FS1192.15	J H & R Cotman	Oppose	Disallow this whole submission point.	<p>Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1276.88	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole of the submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Reject	13
FS1343.17	Bruce Cameron	Oppose	Disallow this whole submission point.	My reason for opposing this submission: Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1369.26	Ngati Tamaoho Trust	Support	Supports	Ngati Tamaoho supports the numerous submission requesting GMO release be a prohibited activity and that a policy should align with the Far North and Auckland Unitary Plan.	Reject	13
FS1342.273	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1212.15	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	13
599.2	Martin Hastings	Neutral/Amend	Add a resource management framework for the management of Genetically Modified Organisms that is regionally specific, taking into account environmental, economic, and	GMOs have the potential to adversely affect ecological, economic, resource management values, the cultural and social well-being of people and Tangata whenua. No matter how carefully conditions of consent are crafted, there is a risk that conditions may be breached. Application of integrated management and a	Reject	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
			social well-being considerations.	precautionary approach to GMO under the RMA is the best available technique for managing the potential adverse effects posed by GMOs. It is consistent with the sustainable management purpose and Part II of the RMA to establish district plan provisions that manage the release, location, and management of GMOs where they have the potential to adversely affect the environment and other land use activities. The release of GMOs has a potential to cause significant adverse effects on the environment, which could include: - biological or ecosystem harm - harm to Tangata whenua cultural values such as mauri and tikanga - harm to the cultural values and lifestyle decisions of people and communities at a local level concerning what constitutes their wellbeing - harm to existing or potential forms of land use including farming, forestry, beekeeping, marine farming and other primary production activities dependent on an uncontaminated environmental brand - reputational damage - loss of markets and premiums paid for GMO free produce - loss of livelihood The Waikato has three major milk suppliers - Tatua, Fonterra and Miraka Milks have a GMO Free requirement for the milk products and rely on shareholders farmers milk supply. Once GMOs have been released into the environment, they are difficult to eradicate. In the case of a food product, the GE Free status of a district would likely be lost permanently along with the market advantages.		
FS1225.16	BIOTech New Zealand	Oppose	Disallow this submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1276.89	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole of the submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Reject	13
FS1199.14	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1320.16	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				quality and competitiveness.		
FS1192.16	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1295.16	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1212.16	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	13
FS1214.16	Forest Owners Association	Oppose	Disallow this whole submission point.	Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS1342.274	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1343.18	Bruce Cameron	Oppose	Disallow this whole submission point.	My reason for opposing this submission: Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
638.1	Nora van der Voorden	Not Stated	Amend the Proposed Waikato District Plan to include a resource management framework for the management of Genetically Modified Organisms that is regionally specific taking into account environmental, economic and social well-	There is currently a major push in Aotearoa to adopt GE technology, citing competition from other countries attempting to be lower cost producers. Industry lobby pressure is being applied to the public and EPA to process experiments in containment to actual release into the environment without robust regulations on release. Therefore it is crucial that protective mechanisms are included in the Proposed District Plan to reduce potential liability. Concerned about potential	Reject	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
			being considerations.	risks posed by release of GMOs into the environment. GMOs have the potential to adversely affect ecological, economic and resource management values, and the social and cultural wellbeing of people, communities and Tangata whenua. Release of GMOS have potential to cause significant adverse effects on the environment. Regardless of the care given to crafting consent conditions for GMOs, there inevitably remains a risk (albeit small) that conditions may be breached by poor management, human error, natural events and even sabotage of projects. Once GMOs are released into the environment, they would be difficult, if not impossible, to eradicate. 'GE Free' status of a district would likely be lost as well as their market advantages. Application of integrated management and precautionary approach to GMOs under the RMA is best available technique for managing potential adverse effects posed by GMOs within region. It is consistent with sustainable management purpose and Part II of the RMA to establish district plan provisions that manage the release, location and management of GMOs where they have the potential to adversely affect the environment and other land use activities. Numerous significant adverse effects on the environment which would include biological or ecosystem harm, cultural values, contamination to existing farming, reputational damage and loss of markets and premiums paid for GMO free produce.		
FS1343.19	Bruce Cameron	Oppose	Disallow this whole submission point.	My reason for opposing this submission: Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1342.275	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1276.90	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole of the submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Reject	13
FS1199.15	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1225.17	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1192.17	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1295.17	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1320.17	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1212.17	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.		
FS1214.17	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society</p> <p>The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment</p> <p>New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council.</p> <p>Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate</p> <p>Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to:</p> <p>Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
638.2	Nora van der Voorden	Neutral/Amend	Amend the Proposed District Plan to include strong precautionary and prohibitive provisions, policies and rules relating to Genetically Modified Organisms that are the same (or similar) as those in the Far North	There is currently a major push in Aotearoa to adopt GE technology, citing competition from other countries attempting to be lower cost producers. Industry lobby pressure is being applied to the public and EPA to process experiments in containment to actual release into the environment without robust regulations on release. Therefore it is crucial that protective mechanisms are included in the	Reject	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
			District Plan, the Whangarei District Plan and Auckland Unitary Plan.	Proposed District Plan to reduce potential liability. Concerned about potential risks posed by release of GMOs into the environment. GMOs have the potential to adversely affect ecological, economic and resource management values, and the social and cultural wellbeing of people, communities and Tangata whenua. Release of GMOs have potential to cause significant adverse effects on the environment. Regardless of the care given to crafting consent conditions for GMOs, there inevitably remains a risk (albeit small) that conditions may be breached by poor management, human error, natural events and even sabotage of projects. Once GMOs are released into the environment, they would be difficult, if not impossible, to eradicate. 'GE Free' status of a district would likely be lost as well as their market advantages. Application of integrated management and precautionary approach to GMOs under the RMA is best available technique for managing potential adverse effects posed by GMOs within region. It is consistent with sustainable management purpose and Part II of the RMA to establish district plan provisions that manage the release, location and management of GMOs where they have the potential to adversely affect the environment and other land use activities. Numerous significant adverse effects on the environment which would include biological or ecosystem harm, cultural values, contamination to existing farming, reputational damage and loss of markets and premiums paid for GMO free produce.		
FS1342.276	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1276.91	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Reject	13
FS1225.18	BIOTech New Zealand	Oppose	Disallow this submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1199.16	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1295.18	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1320.18	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1212.18	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	13
FS1214.18	Forest Owners Association	Oppose	Disallow this whole submission point.	Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage.</p> <p>Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA.</p> <p>Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so.</p> <p>Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act.</p> <p>Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo.</p> <p>New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter.</p> <p>The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses.</p> <p>Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding.</p> <p>The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification.</p> <p>Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermined the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS1192.18	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1343.20	Bruce Cameron	Oppose	Disallow the whole of this submission point.	My reasons for opposing this submission: Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
651.1	Jon Muller for GE Free New Zealand	Neutral/Amend	Add new provisions to the Proposed District Plan to give Genetically Modified Organisms their own section, as follows (which replicate those provisions in the Auckland Unitary Plan): Issue: Genetically	The members are highly concerned over the lack of any consideration of genetically modified organisms in the Proposed District Plan. Whilst there have been no applications for the release of Genetically Modified Organism (GMO) there is a strong possibility that in the next few years there could be. The Environmental Protection Agency (EPA) under Hazardous Substances and New Organisms Act acknowledges	Reject	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
			<p>Modified Organisms The environment, including human health and well-being, is safe from the adverse effects of GMO's from land use activities. Resource Consent Categories Field Trials - Discretionary Activity Food-related GMO Releases - Prohibited Activity Non-food-related GMO Releases - Prohibited Activity Policies Adopt a precautionary approach by prohibiting the general release of a GMO Require outdoor field trialling of GMOs to be a discretionary activity to avoid the risk effects to the environment from the use, storage, cultivation, harvesting, processing or transportation. Adopt an adaptive approach through periodic reviews of these plan provisions, particularly if new information on the benefits and/or adverse effects of a GMO activity becomes available. Require the holder of a resource consent granted for the outdoor field trialling of a GMO is financially accountable for any adverse effects associated with the activity. Enable the use of GMOs approved releases for medical and veterinary applications, except for the outdoor cultivation of pharmaceutical producing organisms. Require where appropriate, more stringent measures than those required under the provisions of the HSNO Act to manage potential risks. Require all monitoring costs to be met by the consent holder.</p> <p>Reasons and Explanations The objectives, policies and methods seek to achieve the following: Manage risk and avoid adverse effects on people, communities, tangata whenua, the economy and the environment associated with the outdoor use of GMOs. Provide the framework for a unified approach to the management of the outdoor use of GMOs to address cross-boundary effects. Ensure accountability by GMO operators for the full costs related to the monitoring of GMO activities, and any migration of GMOs beyond specified areas, including unintentional GM contamination.</p>	<p>that though it is a genetically modified organism once released is no longer a new organism. The EPA will no longer have any jurisdiction as to its consequences. This then falls onto local bodies to manage and protect their communities from any hazards associated with all GMO releases. Members are concerned over the adverse effects and consequences of GMO contamination and the compromises they will need to make regarding the economic loss to their businesses, farming and cultural activities, should GMO land use be introduced into the region at this time. In the last 17 years since GMO's have been developed in New Zealand there is evidence that the expected outcomes have not come to fruition. Submission refers to the GM animal research at the facility in Ruakura (Attached as Appendix 1) Evidence from overseas, where GM crops have been grown for 15 years, has found an increasing level of pesticide use on crops, deleterious health effects from those working with and living near GM crops and an ever growing weed and insect resistance problem that is forcing other pesticide measures to be used with an increased battle for market dominance of their particular patented proprietary chemical. Conflicts over GMO pollution between farming neighbours has led to legal action; cultural and traditional beliefs are being disregarded; consumer resistance is still high and there is an export market premium for non-GMO produce. There are also potential adverse effects for unexpected and unknown medium-term and long term impacts on soil biota, waterways and the natural environment generally arising from GMOs outside containment. Tataua, Fonterra and Miraka Milks have a GMO Free requirement for the milk products. Concerns over the ability to control the grass genetic pollution is a major concern and it is important to have precautionary approach to any escape and release of GM until the negative effects are known on the region. The Hazardous Substance and New Organisms (HSNO) Act only has jurisdiction on any adverse effects of GMOs whilst they are in containment. As soon as GMOs are fully released the Hazardous Substances and New Organisms Act no longer governs them. This is because a GMO is considered a new organism and thereby governed under HSNO, until it is released then it is no longer a new organism. The conclusions of the nine council strong "Inter Council Working Party on GMO Risk Evaluation & Management Options" found local regulation highly necessary when it comes to GMOs release in the regions. In recent years there have been Resource Management Act changes and several legal decisions giving "jurisdiction under the RMA for regional councils to make provision for control of the use of GMOs through regional policy statements and plans". Submission sets out recent cases. Submitter requests Waikato District to support the approach taken by the Auckland Unitary Plan and Whangarei/Far North District Council's and adopt their rules, policies and objectives toward the outdoor use of GMOs. These policies and objectives support the need for GMO precautionary approach. Environmental Protection Area is to protect and enhance ecosystems and ecological corridors, and protect the habitats of plants, birds and other wildlife. There is some concerning data highlighting the hazards that GMO and their associated pesticides are having on the environment. The genetic pollution from GMOs eco toxic properties should be considered hazardous substances in relation to their pollution and self-perpetuating invasive qualities. The pollution of the environment from excessive industrial agriculture destroys the amenity values for people and the environment. The adverse effects on land use</p>		

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			Ensure accountability by GMO operators for compensation via performance bonds in the event that the activity under their operation results in adverse effects to third parties or the environment. The manufacture, trialling or use of viable and/or non-viable genetically modified organisms for medical purposes recognised as medicines under the Medicines Act 1981 and approved as safe to use by the Ministry of Health, including the EPA approved releases except for the outdoor cultivation of pharmaceutical producing organisms.	policy should have added to Policy (I) Genetically Modified Organisms. Submission discusses the residual risks of Hazardous substances in relation to Chapter 10 (Hazardous Substances). The submitter states that while there have been no applications for the release of GMOs there is a strong possibility that in the next few years there could be. The submission indicates that there is mounting concern over the "new advanced GE technologies" and though they are considered as "genetically modified organisms" there is mounting pressure to have them exempt from central government regulation. The possibility of the escape of these GMO could become eco hazards and have cumulative effects which if unregulated have the possibility of serious consequences on the environment and communities. As these technologies are very new, there is now growing evidence around the unanticipated off target effects of organisms engineered through these techniques and what these effects will have on ensuing generations. Submitter refers to several research literature relevant to Genetic Engineering and concludes that these studies show that the technology has a long way to go and if released prematurely the cumulative effects would be damaging on the region.		
FS1225.19	BIOtech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1199.17	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipped to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1192.19	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1320.19	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1212.19	David Stewart Bull	Oppose	Disallow this whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	13
FS1295.19	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1214.19	Forest Owners Association	Oppose	Disallow this whole submission point.	Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary	Accept	13

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				<p>approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council.</p> <p>Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermined the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS1342.277	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1343.21	Bruce Cameron	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
651.2	Jon Muller for GE Free New Zealand	Not Stated	No specific decision sought, but submission states that the AgResearch Ruakura animal field test site should be the only area zoned for Genetically Modified Organism (GMO) activity.	Any new field tests must obtain resource consent and be notified.	Reject	14
FS1199.18	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm.	Accept	14

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
			(ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	We wish to submit evidence in replay showing that all of the above claims are false.		
FS1342.278	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	14
FS1343.22	Bruce Cameron	Oppose	Disallow the whole this submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Awaiting recommendation	14
FS1192.20	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	14
FS1225.20	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	14
FS1320.20	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	14
FS1295.20	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	14
FS1212.20	David Stewart	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection	Accept	14

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
	Bull			<p>Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.</p>		
FS1214.20	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO</p>	Accept	14

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would:</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p><i>Undermined the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</i></p>		
651.3	Jon Muller for GE Free New Zealand	Not Stated	Genetically Modified animal sites should be registered on the Land Information Memorandum (LIM) reports.	Submitter refers to the Whakamaru Field test site (not within the Waikato District) where 3,000 GM sheep were buried. After the failed experiment there was no further monitoring and any responsibility for further site inspection or monitoring any adverse effects rising over time will fall on Council. The site could still be considered a contaminated site and remediated as such.	Reject	14
651.5	Jon Muller for GE Free New Zealand	Not Stated	Amend Section A Plan Overview and Strategic Directions to include a section on Genetically Modified organisms.	The conclusion of the Inter Council Working Party on GMO Risk Evaluation of Management Options found that local regulation is highly necessary when it comes to GMO release in the region.	Reject	14
FS1387.89	Mercury NZ Limited for Mercury D	Oppose	Null	<p><i>At the time of lodging this further submission, neither natural hazard flood provisions nor adequate flood maps were available, and it is therefore not clear from a land use management perspective, either how effects from a significant flood event will be managed, or whether the land use zone is appropriate from a risk exposure. Mercury considers it is necessary to analyse the results of the flood hazard assessment prior to designing the district plan policy framework. This is because the policy framework is intended to include management controls to avoid, remedy and mitigate significant flood risk in an appropriate manner to ensure the level of risk exposure for all land use and development in the Waikato River Catchment is appropriate.</i></p>	Accept	14
707.1	Soil & Health Association of New Zealand (S&H) on behalf of	Neutral/Amend	Add a new provision, 1.5.7.X Genetically modified organisms (GMO), as follows: 1.5.1.7.X Genetically Modified Organisms (GMO) (a) The Hazardous Substances and New Organism Act 1996 (HSNO) requires that before any GMO can be imported into the country, developed in containment, tested in the field or released into the environment, approval must be obtained from the Environmental Protection Authority (EPA). (b) The RMA provides the scope for District Plans to place additional controls on the use of GMOs, if that control can be justified under section 32 of the RMA. It is considered that the prohibited	Inclusion of new provisions are required to provide an explanation in regards to why the prohibited activity status has been attributed to the release of and specified trials of GMOs. Provides further commentary on the importance of the GMO issue to Waikato District. This is the most appropriate place to provide an overarching explanation of the rationale in terms of GMOs and context for such objectives, policies and rules.	Reject	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
			<p>status for the release of all GMO land use activities and strict controls on the field trialling of GMO land use activities is necessary to reflect social and cultural expectations that Waikato will be protected from accidental contamination of the environment by GMOs. Providing for the wellbeing of the community by giving certainty through the use of a prohibited activity status and strict discretionary controls, including the use of bonds, is therefore appropriate. (c) Prohibited status for the release of GMOs and for field trial activities that cannot meet discretionary activity standards means that the Waikato District is taking a precautionary approach to managing the potentially significant, long term and irreversible effects of GMOs. In addition to the environmental risks associated with the release of GMOs, there are economic risks caused by the sensitivity of export markets for high value produce to potential GMO contamination. (d) Discretionary activity status has been applied to specific viable GMO activities, namely the use of viable GMOs in veterinary vaccines where permitted standards cannot be met, and in field trials, provided discretionary standards can be met. By applying standards to the outdoor use of GMOs in only a select number of circumstances, the risks associated with their use, storage, cultivation, harvesting, processing or transportation can be reduced. (e) As the Council has adopted a prohibited status for the release of all GMOs and the field testing of all GMOs (unless specifically provided for), while approval could be sought and obtained from the EPA their use would be unable to be carried out within the Waikato District. (f) The necessity and relevance of the prohibited activity status for field trialling of GMOs that fail to meet discretionary standards, and the release of GMOs will be reconsidered at the next plan review. If in the meantime GMO use is proven to be safe</p>			

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
			and advantageous and the community then accepts that a precautionary approach is no longer warranted, then their prohibited activity status may be overturned by a plan change. This could either be in relation to GMOs in general, or to a specific GMO for which there is a demand for in the community and which poses a low risk with regard to adverse effects and to the economic viability of the production and marketing of GE free produce. AND Any consequential amendments or additional relief as necessary to address the concerns raised in the submission.			
FS1212.22	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	13
FS1199.20	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
			Working Party (v) Co-existence (vi) Benefits			
FS1225.22	BIOTech New Zealand	Oppose	Disallow this whole submission.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1192.22	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1342.280	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1214.22	Forest Owners Association	Oppose	Disallow this whole submission point.	Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermined the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity;</p>		

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				Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.		
FS1343.24	Bruce Cameron	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1320.22	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1295.22	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
707.2	Soil & Health Association of New Zealand (S&H) on behalf of	Not Stated	Amend Chapter 10 Heading as follows: Chapter 10: Hazardous Substances and Contaminated Land and Genetically Modified Organisms AND Add section 10.3 Genetically Modified Organisms, as follows: 10.3 Genetically Modified Organisms 10.3.1 Objective- Adverse effects of Genetically Modified Organisms (a) To protect the community and their social, economic and cultural wellbeing and environment from the adverse effects associated with the outdoor release	Inclusion of objectives and policies relating to GMOs reflect the precautionary approach of prohibiting release of GMOs and field trials of GMOs until such time as they have been proven to be safe and economically beneficial without adverse effects on the environment and general social, cultural and economic wellbeing of the community. Specific objectives and policies will give guidance to planners in regards to consent applications and processing for discretionary GMO activities. Objectives and policies will address the cultural impact of GMOs on mana whenua and the environment (appropriate wording to be determined by iwi and council).	Reject	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
			<p>or field trials of Genetically Modified Organisms through the adoption of a precautionary approach. 10.3.2 Policy-Precautionary approach to managing Genetically Modified Organisms (a) To adopt a precautionary approach to the management of Genetically Modified Organisms by prohibiting the release of a Genetically Modified Organism and the field trials of a Genetically Modified Organism, except as specifically provided for as a permitted activity or discretionary activity. 10.3.3 Policy-District specific approach to managing Genetically Modified Organisms (a) To adopt a resource management framework for the management of Genetically Modified Organisms (GMOs) that is District specific taking into account environmental, economic, cultural and social well-being considerations. 10.3.4 Policy-Consent applications for selected outdoor use of Genetically Modified Organisms (GMOs). (a) To allow consent applications to be made for the use of a viable Genetically Modified Veterinary Vaccine that does not meet permitted standards as a discretionary activity. (b) To allow consent applications to be made for a field trial of a Genetically Modified Organism as a discretionary activity, provided specific standards are met. (c) To require the holder of a resource consent granted for the field trialling of a Genetically Modified Organism to be financially accountable (to the extent possible) for any adverse effects associated with the activity, including clean-up costs, remediation and monitoring. (d) Require that the field trialling of a Genetically Modified Organism does not result in migration of Genetically Modified Organisms beyond the area designated by the consent. 10.3.5 Policy- Future review of Genetically Modified Organism provisions (a) To review the Plan provisions relating to Genetically Modified Organisms, particularly if there is new information on benefits</p>			

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			and/or adverse effects of a Genetically Modified Organism Activity and/or there is a general community acceptance of the use of Genetically Modified Organisms that have proven to be safe and economically beneficial without adversely affecting the environment and the general social and economic wellbeing of the community. AND Any consequential amendments or additional relief as necessary to address the concerns raised in the submission.			
FS1320.23	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1342.281	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1343.25	Bruce Cameron	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1295.23	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1212.23	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules	Accept	13

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				<p>until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would:</p> <p>Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to:</p> <p>Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.</p>		
FS1199.21	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	<p>GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.</p>	Accept	13
FS1225.23	BIOTech New Zealand	Oppose	Disallow this whole submission point.	<p>Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	13
FS1214.23	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to</p>	Accept	13

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				<p>manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council</p> <p>The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been</p>		

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				<p>five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council.</p> <p>Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions.</p> <p>Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS1192.23	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
707.3	Soil & Health Association of New Zealand (S&H) on behalf of	Not Stated	Add five new definitions to Chapter 13- Definitions, in relation to Genetically Modified Organisms, as follows: FIELD TRIALS- Means, in relation to a Genetically Modified Organism, the carrying on of outdoor trials on the effects of the organism under conditions similar to those of the environment into which the organism is likely to be release but from which the organism, or any heritable material arising from it, could be retrieved or destroyed at the end of trials. GENETICALLY MODIFIED ORGANISM- Means any organism in which any of the genes or other genetic material: a.) have been	Definitions are requested in support of other requested provisions relating to GMOs.	Reject	14

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
			<p>modified by in vitro techniques; or b.) are inherited or otherwise derived, through any number of replications, from any genes or other genetic material which has been modified by in vitro techniques. For the absence of doubt, this does not apply to Genetically Modified (GM) products that are not viable (and are thus no longer GM organisms), or products that are dominantly non-GM but contain non-viable GM ingredients (such as processed foods).</p> <p>GENETICALLY MODIFIED VETERINARY VACCINE- Means a veterinary vaccine that is a genetically modified organism as defined in this Plan.</p> <p>GENETICALLY MODIFIED MEDICAL APPLICATIONS- Means the manufacture, trialling or use of viable and/or non-viable genetically modified organisms for medical purposes recognised as medicines under the Medicines Act 1981 and approved as safe to use by the Ministry of Health, including EPA approved releases, except for the outdoor cultivation of pharmaceutical producing organisms.</p> <p>RELEASE- Means, in relation to a Genetically Modified Organism, to allow the organism to move within New Zealand free of any restrictions other than those imposed in accordance with the Biosecurity Act 1993 or the Conservation Act 1987. For the avoidance of doubt this definition covers releases that are subject to conditions set out in Section 38A of the Hazardous Substances and New Organisms Act 1996 as well as any release not subject to conditions.</p>			
FS1387.788	Mercury NZ Limited for Mercury D	Oppose	Null	<p>At the time of lodging this further submission, neither natural hazard flood provisions nor adequate flood maps were available, and it is therefore not clear from a land use management perspective, either how effects from a significant flood event will be managed, or whether the land use zone is appropriate from a risk exposure.</p> <p>Mercury considers it is necessary to analyse the results of the flood hazard assessment prior to designing the district plan policy framework. This is because the policy framework is intended to include management controls to avoid, remedy and mitigate significant flood risk in an appropriate manner to ensure the level of risk exposure for all land use and development in the Waikato River Catchment is appropriate.</p>	Accept	14

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707.5	Soil & Health Association of New Zealand (S&H) on behalf of	Neutral/Amend	<p>Add the following provisions to Chapter 22: Rural Zone to address Genetically Modified Organisms as follows: 22.1.1 Prohibited Activities (1) The following activities is a prohibited activities ...</p> <p>PR2 The Release of a Genetically Modified Organism</p> <p>PR3 The Field Trialing of a Genetically Modified Organism that does not meet the discretionary standards in Rule 22.2.9.D1</p> <p>Rule 22.1.2 Permitted Activities Activity Specific Conditions P13</p> <p>Activities involving Genetically Modified Organisms that are not classified as Veterinary Vaccines, Field Trials or Releases. This includes (but is not limited to) research within contained Laboratories, Medical Applications and Food containing non-viable Genetically Modified Products. Nil. P14 The use of a viable Genetically Modified Veterinary Vaccine. (A) A specific dose of vaccine must be supervised by a veterinarian</p> <p>Rule 22.1.5 Discretionary Activities D17</p> <p>The use of a viable Genetically Modified Veterinary Vaccine that does not comply with the permitted activity standard in Rule 22.1.2 P14 but meets the discretionary activity standards in Rule 22.2.9 D1. D18</p> <p>D1 (1)All discretionary Genetically Modified Organism activities must:</p> <p>(a)Have the relevant approval from the Environmental Protection Authority;</p> <p>(b)Be undertaken in accordance with Environmental Protection Authority approval conditions for the activity; and</p> <p>(c)Provide evidence of the Environmental Protection Authority approval to Council.</p> <p>(2)The consent holder must provide a bond to guarantee the performance of one or more consent conditions if required by the Council. This bond will be available to pay or reimburse any costs incurred by, or on behalf of, the Council to avoid, remedy or mitigate any adverse environmental effects and any other adverse effects to, or on, third</p>	<p>Chapter 22 Rural Zone is shown as an example of the framework for application of GMO provisions. Prohibition of release of GMO is the cornerstone of the precautionary approach rule regime. The approach is justified until such time as GMOs can be proven to be used safely and contained in an outdoor context. Chapter 22 Rural Zone chosen as an example framework for application of GMO provisions. Uses of viable veterinary vaccines are provided for as a permitted activity so long they are administered under the supervision of a veterinarian at a specific dosage. Established through drafting of Auckland Unitary Plan provisions-conditions not complied with then such use if discretionary. Chapter 22 Rural Zone chosen as an example framework for application of GMO provisions. Field Trials meeting discretionary activity standards, with relevant EPA approvals allows full scope of effects to be understood and an opportunity to include appropriate conditions. Requirement for management plans and clear containment and risk management protocols. If viable veterinary vaccines are not applied according the appropriate conditions then such use goes from permitted (under Rule 22.1.2 Permitted Activities P13) to discretionary. Viable genetically modified veterinary vaccines can have higher risks if not administered correctly. An example of such risk is a GM veterinary vaccine distributed by way of edible food/plants, which cannot be supervised by a veterinarian, and may present high risks to the environment and health and safety of people. In this circumstance, council holds discretion by requiring controls or declining an application.</p>	Reject	13

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			<p>parties (including economic effects), that become apparent during the exercise or after the expiry of consent. (3)The consent holder must provide all of the following information when submitting a consent application:</p> <p>(a)Details of the proposed containment measures for the commencement, duration and completion of the proposed activity.</p> <p>(b)Details of the species, its characteristics, and lifecycle, to which the Genetically Modified Organism activities will relate;</p> <p>(c)Research on adverse effects to the environment and economy associated with the activity should genetically modified organisms escape from the activity area, and measures that will be taken to avoid, remedy or mitigate such effects.</p> <p>(d)Evidence of research undertaken that characterises and tests the Genetically Modified Organisms, and the certainty associated with the accuracy of that information;</p> <p>(e)A management plan outlining on-going research and how monitoring will be undertaken during, and potentially beyond, the duration of consent.</p> <p>(f)Details of areas in which the activity is to be confined; and</p> <p>(g)A description of contingency and risk management plans and measures.</p> <p>AND Add similar provisions to every zone chapter.</p> <p>OR Add a new district wide chapter addressing Genetically Modified Organisms.</p> <p>AND Any consequential amendments or additional relief as necessary to address the concerns raised in the submission.</p>			
FS1342.195	Federated Farmers	Oppose	Disallow submission point 707.5.	FFNZ opposes the amendment for reasons outlined in our further submissions relating to proposals to introduce GMO provisions in the District Plan.	Accept	13
FS1387.790	Mercury NZ Limited for Mercury D	Oppose	Null	At the time of lodging this further submission, neither natural hazard flood provisions nor adequate flood maps were available, and it is therefore not clear from a land use management perspective, either how effects from a significant flood event will be managed, or whether the land use zone is appropriate from a risk exposure. Mercury considers it is necessary to analyse the results of the flood hazard assessment prior to designing the district plan policy framework. This is because the policy framework is intended	Accept	13

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				to include management controls to avoid, remedy and mitigate significant flood risk in an appropriate manner to ensure the level of risk exposure for all land use and development in the Waikato River Catchment is appropriate.		
707.6	Soil & Health Association of New Zealand (S&H) on behalf of	Not Stated	Add objectives and policies to address the cultural impact of Genetically Modified Organisms on mana Whenua and the environment.	It may be appropriate to require a cultural values assessment from applicants applying for resource consents. Council may need to engage with relevant iwi to determine the most fit-for-purpose wording.	Reject	13
FS1320.24	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1199.22	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1343.26	Bruce Cameron	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1342.282	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1225.24	BIOtech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1295.24	Life Sciences Network	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues	Accept	13

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	<i>Incorporated</i>			raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1212.24	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	13
FS1214.24	Forest Owners Association	Oppose	Disallow this whole submission point.	Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for	Accept	13

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				<p>those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council</p> <p>The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient:</p> <p>To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District</p>		

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				<p>Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS1192.24	J H & R Cotman	Oppose	Disallow this whole submission point.	<p>Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	13
721.1	Jennifer Berczely	Neutral/Amend	Add strong precautionary and prohibitive policies and rules relating to the management of genetically modified organisms that are the same or similar to those in the Far North District Plan, Whangarei District Plan and Auckland Unitary Plan.	<p>Provisions allowed under the Resource Management Act 1991 and pursuant to the ruling in Federated Farmers of New Zealand v Northland Regional Council [2015] NZEnC 89. Concerns about the potential risks posed by the release of GMOs into the environment and the potential to adversely affect ecological, economic and resource management values, social, cultural wellbeing and tangata whenua. Release of GMOs has a potential to cause significant adverse effects on the environment, including the following: Biological or ecosystem harm Harm to tangata whenua cultural values such as mauri and tikanga Harm to the cultural values and lifestyle decisions of people and communities at a local level concerning what constitutes their wellbeing Harm from GMO contamination to existing or potential forms of land use including farming, forestry and other primary production activities dependant on an uncontaminated environmental brand. Adverse effects to these land uses could include: loss of organic and GMO-free certification, reputational damage, loss of markets and premiums paid for GMO free produce and loss of livelihood. Conditions of consent may be breached by poor management, human error, natural events and sabotage of projects. Once GMOs have been released they would be very difficult, if not impossible to eradicate. Application of integrated management and precautionary approach to GMOs under the RMA is the best technique for managing potential</p>	Reject	13

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				adverse effects. It is consistent with the sustainable management purpose and Part II of the RMA to establish district plan provisions that manage the release, location and management of GMOs where they have the potential to adversely affect the environment.		
FS1199.23	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1192.25	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1225.25	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1212.25	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.		
FS1214.25	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermined the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS/342.283	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS/276.92	Whaingaroa Environmental	Support	WED seeks that the whole submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA;	Reject	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
	Defence Inc. Society			"managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."		
FS1343.27	Bruce Cameron	Oppose	Disallow the whole of this submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1320.25	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1295.25	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
721.2	Jennifer Berczely	Neutral/Amend	Add a resource management framework for the management of genetically modified organisms to the Proposed District Plan that is region specific, taking into account environmental, economic and social well-being considerations.	Provisions allowed under the Resource Management Act 1991 and pursuant to the ruling in Federated Farmers of New Zealand v Northland Regional Council [2015] NZEnC 89. Concerns about the potential risks posed by the release of GMOs into the environment and the potential to adversely affect ecological, economic and resource management values, social, cultural wellbeing and tangata Whenua. Release of GMOs has a potential to cause significant adverse effects on the environment, including the following: Biological or ecosystem harm Harm to tangata whenua cultural values such as mauri and tikanga Harm to the cultural values and lifestyle decisions of people and communities at a local level concerning what constitutes their wellbeing Harm from GMO contamination to existing or potential forms of land use including farming, forestry and other primary production activities dependant on an uncontaminated environmental brand. Adverse effects to these land uses could include: loss of organic and GMO-free certification, reputational damage, loss of markets and premiums paid for GMO free produce and loss of livelihood. Conditions of consent may be breached by poor management, human error, natural events and sabotage of projects. Once GMOs have been released they would be very difficult, if not impossible to eradicate. Application of integrated management and precautionary approach to GMOs under the RMA is the best technique for managing potential	Reject	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				adverse effects. It is consistent with the sustainable management purpose and Part II of the RMA to establish district plan provisions that manage the release, location and management of GMOs where they have the potential to adversely affect the environment.		
FS1276.93	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Reject	13
733.1	Dave Currie	Neutral/Amend	Add strong precautionary and prohibitive policies and rules relating to the management of genetically modified organisms that are the same (or similar) as those in the Far North District Plan, Whangarei District Plan and the Auckland Unitary Plan.	Provisions allowed under the Resource Management Act 1991 and pursuant to the ruling in Federated Farmers of New Zealand v Northland Regional Council [2015] NZEnC 89. Concerns about the potential risks posed by the release of GMOs into the environment. GMOs have the potential to adversely affect ecological, economic and resource management values and the social and cultural wellbeing of people, communities and tangata whenua. Release of GMOs has the potential to cause significant adverse effects on the environment, including the following: Biological or ecosystem harm Harm to tangata whenua cultural values such as mauri and tikanga Harm to the cultural values and lifestyle decisions of people and communities at a local level concerning what constitutes their wellbeing Harm from GMO contamination to existing or potential forms of land use including farming, forestry, beekeeping, marine farming and other primary production activities dependant on an uncontaminated environmental brand. Adverse effects to these land uses could include: loss of organic and GMO-free certification, reputational damage, loss of markets and premiums paid for GMO free produce and loss of livelihood. Waikato is the centre of dairying having head offices and farms for the three major suppliers of milk and milk products in the area. There are many farmers who are highly concerned that their livelihoods will be affected if GMOs are released. Conditions of consent may be breached by poor management, human error, natural events and the sabotage of projects Once GMOs have been released they would be very difficult, if not impossible, to eradicate. Application of integrated management and precautionary approach to GMOs under the RMA is the best technique for managing potential adverse effects. It is consistent with the sustainable management purpose and Part II of the RMA to establish district plan provisions that manage the release, location and management of GMOs where they have the potential to adversely affect the environment.	Reject	13
FS1342.284	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1343.28	Bruce Cameron	Oppose	Disallow the whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
FS1320.26	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1295.26	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1199.24	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1276.94	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Reject	13
FS1225.26	BIOtech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1212.26	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would:</p> <p>Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to:</p> <p>Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.</p>		
FS1214.64	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermined the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
FSI192.26	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
733.2	Dave Currie	Neutral/Amend	Add a resource management framework for the management of genetically modified organisms that is region specific, taking into account environmental, economic and social well-being considerations.	Provisions allowed under the Resource Management Act 1991 and pursuant to the ruling in Federated Farmers of New Zealand v Northland Regional Council [2015] NZEnC 89. Concerns about the potential risks posed by the release of GMOs into the environment. GMOs have the potential to adversely affect ecological, economic and resource management values and the social and cultural wellbeing of people, communities and tangata whenua. Release of GMOs has the potential to cause significant adverse effects on the environment, including the following: Biological or ecosystem harm Harm to tangata whenua cultural values such as mauri and tikanga Harm to the cultural values and lifestyle decisions of people and communities at a local level concerning what constitutes their wellbeing Harm from GMO contamination to existing or potential forms of land use including farming, forestry, beekeeping, marine farming and other primary production activities dependant on an uncontaminated environmental brand. Adverse effects to these land uses could include: loss of organic and GMO-free certification, reputational damage, loss of markets and premiums paid for GMO free produce and loss of livelihood. Waikato is the centre of dairying having head offices and farms for the three major suppliers of milk and milk products in the area. There are many farmers who are highly concerned that their livelihoods will be affected if GMOs are released. Conditions of consent may be breached by poor management, human error, natural events and the sabotage of projects Once GMOs have been released they would be very difficult, if not impossible, to eradicate. Application of integrated management and precautionary approach to GMOs under the RMA is the best technique for managing potential adverse effects. It is consistent with the sustainable management purpose and Part II of the RMA to establish district plan provisions that manage the release, location and management of GMOs where they have the potential to adversely affect the environment.	Reject	13
FSI295.27	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FSI199.25	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
			assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.		
FSI192.27	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FSI225.27	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FSI276.95	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Reject	13
FSI212.27	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.		
FS1214.26	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society</p> <p>The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment</p> <p>New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council.</p> <p>Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate</p> <p>Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS1342.285	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1343.29	Bruce Cameron	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1320.27	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
744.1	Peter McCallum	Neutral/Amend	Add a resource management framework for the management of GMOs that is regional specific taking into account environmental, economic and social well-being considerations.	Provisions allowed under the Resource Management Act 1991 and pursuant to the ruling in Federated Farmers of New Zealand v Northland Regional Council [2015] NZEnC 89. Release of GMOs has a potential to cause significant adverse effects on the environment, including the following: 1. Biological or ecosystem harm 2. Harm to tangata whenua cultural values such as mauri and tikanga 3. Harm to the cultural values and lifestyle decisions of people and communities at a local level concerning what constitutes their wellbeing 4. Harm from GMO contamination to existing or potential forms of land use including farming, forestry and other primary production activities dependant on an uncontaminated environmental brand. 5. Adverse effects to these land uses could include: loss of organic and GMO-free certification, reputational damage, loss of markets and premiums paid for GMO free produce and loss of livelihood. Conditions of consent may be breached by poor management, human error, natural events. Once GMOs have been released they would be very difficult, if not impossible to eradicate. Application of integrated management and precautionary approach to GMOs under the RMA is the best technique for managing potential adverse effects. It is consistent with the sustainable management purpose and Part II of the RMA to establish district plan provisions that manage the release, location and management of GMOs where they have the potential to adversely affect the environment.	Reject	13
FS1276.96	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Reject	13
FS1199.27	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1192.28	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1225.28	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1214.27	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter.</p> <p>The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses.</p> <p>Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding.</p> <p>The use of Genetic Modification in Modern Society</p> <p>The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification.</p> <p>Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding.</p> <p>The use of Genetic Modification in the New Zealand Environment</p> <p>New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues.</p> <p>AgResearch have been running GM field trials for many years without the need for rules from the District Council.</p> <p>Loss of Science Capability</p> <p>Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions.</p> <p>Blanket provisions not appropriate</p> <p>Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation.</p> <p>Limit the opportunity to use new genetic technologies such as gene editing to:</p> <p>Address climate change, water quality and predator control;</p> <p>Improve productivity;</p> <p>Innovate to create new products, enhance the attributes and health outcomes of food; as well as</p> <p>Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.		
FS1212.28	David Stewart Bull	Support	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	13
FS1342.286	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1343.30	Bruce Cameron	Oppose	Disallow the whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1320.28	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1295.28	Life Sciences Network	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
	<i>Incorporated</i>			<i>raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</i>		
744.2	Peter McCallum	Neutral/Amend	Add strong precautionary and prohibitive policies and rules relating to the management of genetically modified organisms that are the same (or similar) to those in the Far North District Plan, Whangarei District Plan and the Auckland Unitary Plan.	Provisions allowed under the Resource Management Act 1991 and pursuant to the ruling in Federated Farmers of New Zealand v Northland Regional Council [2015] NZEnC 89. Release of GMOs has a potential to cause significant adverse effects on the environment, including the following: 1. Biological or ecosystem harm 2. Harm to tangata whenua cultural values such as mauri and tikanga 3. Harm to the cultural values and lifestyle decisions of people and communities at a local level concerning what constitutes their wellbeing 4. Harm from GMO contamination to existing or potential forms of land use including farming, forestry and other primary production activities dependant on an uncontaminated environmental brand. 5. Adverse effects to these land uses could include: loss of organic and GMO-free certification, reputational damage, loss of markets and premiums paid for GMO free produce and loss of livelihood. Conditions of consent may be breached by poor management, human error, natural events. Once GMOs have been released they would be very difficult, if not impossible to eradicate. Application of integrated management and precautionary approach to GMOs under the RMA is the best technique for managing potential adverse effects. It is consistent with the sustainable management purpose and Part II of the RMA to establish district plan provisions that manage the release, location and management of GMOs where they have the potential to adversely affect the environment.	Reject	13
FS1295.29	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1199.28	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1192.29	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1225.29	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1276.97	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic...wellbeing and for their health and safety."	Reject	13
FS1212.29	David Stewart Bull	Oppose	The whole submission point be disallowed.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	13
FS1214.28	Forest Owners Association	Oppose	Disallow this whole submission point.	Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS1342.287	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1343.31	Bruce Cameron	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1320.29	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<i>quality and competitiveness.</i>		
755.1	Jade Penn	Neutral/Amend	Amend the Proposed Waikato District Plan to include a resource management framework for the management of Genetically Modified Organisms that is regional-specific taking into account environmental, economic and social well-being considerations.	Submitter has concerns around the potential risks posed by Genetically Modified Organisms release into the environment. Genetically Modified Organisms have the potential to adversely affect ecological, economic, and resource management values, and the social and cultural wellbeing of people, communities and tangata whenua. Regardless of the care taken to crafting consent conditions for Genetically Modified Organisms there inevitably remains a risk, even if small. Such conditions may be breached by poor management, human error, natural events and sabotage of projects. Once Genetically Modified Organisms have been released into the environment they would be very difficult, near impossible, to eradicate and "GE Free" status and market advantages may be lost permanently. Application of integrated management and a precautionary approach to Genetically Modified Organisms under the RMA is the best available technique for managing the potential adverse effects posed by Genetically Modified Organisms within the region. This approach is also consistent with sustainable management purpose and Part II of RMA to establish district plan provisions and management of Genetically Modified Organisms where they have potential to adversely affect the environment and other land use activities.	Reject	13
<i>FS1192.31</i>	<i>J H & R Cotman</i>	<i>Oppose</i>	<i>Disallow this whole submission point.</i>	<i>Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</i>	<i>Accept</i>	<i>13</i>
<i>FS1214.30</i>	<i>Forest Owners Association</i>	<i>Oppose</i>	<i>Disallow this whole submission point.</i>	<i>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if</i>	<i>Accept</i>	<i>13</i>

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermined the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.		
FSI342.289	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	I3
FSI276.98	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Reject	I3
FSI343.33	Bruce Cameron	Oppose	Disallow the whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	I3
FSI199.30	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	I3
FSI320.31	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	I3
FSI225.31	BIOTech New	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include:	Accept	I3

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
	Zealand			GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1295.31	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1212.31	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
755.2	Jade Penn	Neutral/Amend	Amend the Proposed Waikato District Plan to include strong precautionary and prohibitive provisions, policies and rules relating to Genetically Modified Organisms that are the same, or similar, as those in the Far North District Plan, the Whangarei District Plan and the Auckland Unitary Plan.	Submitter has concerns around the potential risks posed by Genetically Modified Organisms release into the environment. Genetically Modified Organisms have the potential to adversely affect ecological, economic, and resource management values, and the social and cultural wellbeing of people, communities and tangata whenua. Regardless of the care taken to crafting consent conditions for Genetically Modified Organisms there inevitably remains a risk, even if small. Such conditions may be breached by poor management, human error, natural events and sabotage of projects. Once Genetically Modified Organisms have been released into the environment they would be very difficult, near impossible, to eradicate and "GE Free" status and market advantages may be lost permanently. Application of integrated management and a precautionary approach to Genetically Modified Organisms under the RMA is the best available technique for managing the potential adverse effects posed by Genetically Modified Organisms within the region. Ensures a consistent approach across Northland, Auckland and the Waikato. Eliminates cross boundary issues.	Reject	13
FS1342.290	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1276.99	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Reject	13
FS1343.34	Bruce Cameron	Oppose	Disallow the whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1320.32	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1295.32	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1225.32	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1212.32	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	13
FS1214.31	Forest Owners Association	Oppose	Disallow this whole submission point.	Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time.	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO</p> <p>The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis.</p> <p>New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative.</p> <p>Any use of GMO must first obtain approval from the EPA.</p> <p>The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage.</p> <p>Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA.</p> <p>Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA.</p> <p>Jurisdiction and control of effects by the council</p> <p>The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so.</p> <p>Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs.</p> <p>The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act.</p> <p>Thus it is more efficient:</p> <p>To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools,</p> <p>Than to put in place prohibitive rules which would require a plan change to undo.</p> <p>New Genetic Technologies and Gene editing</p> <p>Genetic technologies are developing rapidly.</p> <p>While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter.</p> <p>The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses.</p> <p>Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS1199.31	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1192.32	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<i>opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</i>		
758.1	Clifford & Maureen Bayliss	Not Stated	Amend the Proposed Waikato District Plan to include a resource management framework for the management of Genetically Modified Organisms that is regional-specific taking into account environmental, economic and social well-being considerations.	Submitter is concerned about the liability of introduction of genetically modified/engineered/edited plant or animal species unintentionally entering their property. Submitter has significant concerns about the potential risks posed by release of Genetically Modified Organisms into the environment. Provisions allowed under the Resource Management Act 1991 and pursuant to the ruling in Federated Farmers of New Zealand v Northland Regional Council [2015] NZEnC 89. Release of Genetically Modified Organisms has the potential to cause significant adverse effects on the environment, including the following: Biological or ecosystem harm Harm to tangata whenua cultural values such as mauri and tikanga Harm to the cultural values and lifestyle decisions of people and communities at a local level concerning what constitutes their wellbeing Harm from Genetically Modified Organism contamination to existing or potential forms of land use including farming, forestry and other primary production activities dependent on an uncontaminated environmental brand. Adverse effects to these land uses could include: loss of organic and Genetically Modified Organism-free certification, reputational damage, loss of markets and premiums paid for Genetically Modified Organism free produce and loss of livelihood. Conditions of consent may be breached by poor management, human error, natural events. Once Genetically Modified Organisms have been released they would be very difficult, if not impossible to eradicate. Application of integrated management and precautionary approach to Genetically Modified Organisms under the Resource Management Act 1991 is the best technique for managing potential adverse effects. It is consistent with the sustainable management purpose and Part II of the Resource Management Act 1991 to establish district plan provisions that manage the release, location and management of Genetically Modified Organisms where they have the potential to adversely affect the environment.	Reject	13
FS1342.294	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1320.36	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1295.36	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
FSI343.38	Bruce Cameron	Oppose	Disallow the whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FSI199.35	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FSI276.102	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Reject	13
FSI192.35	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FSI225.36	BIOtech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FSI212.36	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would:</p> <p>Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to:</p> <p>Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.</p>		
FS1214.35	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback,</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<i>develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</i>		
758.2	Clifford & Maureen Bayliss	Not Stated	Amend the Proposed Waikato District Plan to include strong precautionary and prohibitive provisions, policies and rules relating to GMOs that are the same (or similar) as those in the Far North District Plan, the Whangarei District Plan and the Auckland Unitary Plan, to ensure a consistent approach across Northland, Auckland the Waikato.	Submitter is concerned about the liability of introduction of genetically modified/engineered/edited plant or animal species unintentionally entering their property. Submitter has significant concerns about the potential risks posed by release of GMOs into the environment. Provisions allowed under the Resource Management Act 1991 and pursuant to the ruling in Federated Farmers of New Zealand v Northland Regional Council [2015] NZEnC 89. Release of GMOs has the potential to cause significant adverse effects on the environment, including the following: Biological or ecosystem harm Harm to tangata whenua cultural values such as mauri and tikanga Harm to the cultural values and lifestyle decisions of people and communities at a local level concerning what constitutes their wellbeing Harm from GMO contamination to existing or potential forms of land use including farming, forestry and other primary production activities dependent on an uncontaminated environmental brand. Adverse effects to these land uses could include: loss of organic and GMO-free certification, reputational damage, loss of markets and premiums paid for GMO free produce and loss of livelihood. Conditions of consent may be breached by poor management, human error, natural events. Once GMOs have been released they would be very difficult, if not impossible to eradicate. Application of integrated management and precautionary approach to GMOs under the RMA is the best technique for managing potential adverse effects. It is consistent with the sustainable management purpose and Part II of the RMA to establish district plan provisions that manage the release, location and management of GMOs where they have the potential to adversely affect the environment.	Reject	13
FS1276.103	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole submission point be allowed.	<i>GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."</i>	Reject	13
FS1199.36	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	<i>GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.</i>	Accept	13
FS1192.36	J H & R Cotman	Oppose	Disallow this whole submission point.	<i>Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator</i>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				control, water quality and competitiveness.		
FS1225.37	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1212.37	David Stewart Bull	Oppose	Disallow this whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	13
FS1295.37	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1342.295	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1343.39	Bruce Cameron	Oppose	Disallow the whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1320.37	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1214.36	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter.</p> <p>The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses.</p> <p>Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding.</p> <p>The use of Genetic Modification in Modern Society</p> <p>The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification.</p> <p>Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding.</p> <p>The use of Genetic Modification in the New Zealand Environment</p> <p>New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues.</p> <p>AgResearch have been running GM field trials for many years without the need for rules from the District Council.</p> <p>Loss of Science Capability</p> <p>Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions.</p> <p>Blanket provisions not appropriate</p> <p>Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation.</p> <p>Limit the opportunity to use new genetic technologies such as gene editing to:</p> <p>Address climate change, water quality and predator control;</p> <p>Improve productivity;</p> <p>Innovate to create new products, enhance the attributes and health outcomes of food; as well as</p> <p>Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<i>biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</i>		
759.1	Tracey Bayliss	Neutral/Amend	Amend the Proposed Waikato District Plan to include a resource management framework for the management of Genetically Modified Organisms that is regional specific taking into account environmental, economic and social well-being considerations.	Submitter is concerned about the liability of introduction of genetically modified/engineered/edited plant or animal species unintentionally entering their property. Submitter has significant concerns about the potential risks posed by release of Genetically Modified Organisms into the environment. Provisions allowed under the Resource Management Act 1991 and pursuant to the ruling in Federated Farmers of New Zealand v Northland Regional Council [2015] NZEnC 89. Release of Genetically Modified Organisms has the potential to cause significant adverse effects on the environment, including the following: Biological or ecosystem harm Harm to tangata whenua cultural values such as mauri and tikanga Harm to the cultural values and lifestyle decisions of people and communities at a local level concerning what constitutes their wellbeing Harm from Genetically Modified Organism contamination to existing or potential forms of land use including farming, forestry and other primary production activities dependent on an uncontaminated environmental brand. Adverse effects to these land uses could include: loss of organic and Genetically Modified Organism-free certification, reputational damage, loss of markets and premiums paid for Genetically Modified Organism free produce and loss of livelihood. Conditions of consent may be breached by poor management, human error, natural events. Once Genetically Modified Organisms have been released they would be very difficult, if not impossible to eradicate. Application of integrated management and precautionary approach to Genetically Modified Organisms under the Resource Management Act 1991 is the best technique for managing potential adverse effects. It is consistent with the sustainable management purpose and Part II of the Resource Management Act to establish district plan provisions that manage the release, location and management of Genetically Modified Organisms where they have the potential to adversely affect the environment	Reject	13
FS1199.37	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1342.296	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1343.40	Bruce Cameron	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
FSI276.104	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Reject	13
FSI320.38	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FSI192.37	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FSI225.38	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FSI295.38	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FSI212.38	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would:</p> <p>Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to:</p> <p>Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.</p>		
FS1214.37	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback,</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<i>develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</i>		
759.2	Tracey Bayliss	Not Stated	Amend the Proposed Waikato District Plan to include strong precautionary and prohibitive provisions, policies and rules relating to Genetically Modified Organisms that are the same (or similar) as those in the Far North District Plan, the Whangarei District Plan and the Auckland Unitary Plan, to ensure a consistent approach across Northland, Auckland the Waikato and to eliminate cross boundary issues.	Submitter is concerned about the liability of introduction of genetically modified/engineered/edited plant or animal species unintentionally entering their property. Submitter has significant concerns about the potential risks posed by release of Genetically Modified Organisms into the environment. Provisions allowed under the Resource Management Act 1991 and pursuant to the ruling in Federated Farmers of New Zealand v Northland Regional Council [2015] NZEnC 89. Release of Genetically Modified Organisms has the potential to cause significant adverse effects on the environment, including the following: Biological or ecosystem harm Harm to tangata whenua cultural values such as mauri and tikanga Harm to the cultural values and lifestyle decisions of people and communities at a local level concerning what constitutes their wellbeing Harm from Genetically Modified Organism contamination to existing or potential forms of land use including farming, forestry and other primary production activities dependent on an uncontaminated environmental brand. Adverse effects to these land uses could include: loss of organic and Genetically Modified Organism-free certification, reputational damage, loss of markets and premiums paid for Genetically Modified Organism free produce and loss of livelihood. Conditions of consent may be breached by poor management, human error, natural events. Once Genetically Modified Organisms have been released they would be very difficult, if not impossible to eradicate. Application of integrated management and precautionary approach to Genetically Modified Organisms under the Resource Management Act is the best technique for managing potential adverse effects. It is consistent with the sustainable management purpose and Part II of the RMA to establish district plan provisions that manage the release, location and management of Genetically Modified Organisms where they have the potential to adversely affect the environment.	Reject	13
FS1199.38	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1343.41	Bruce Cameron	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1342.297	Federated	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
	Farmers					
FS1276.105	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Reject	13
FS1320.39	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1192.38	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1225.39	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1295.39	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1212.39	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would:</p> <p>Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.</p>		
FS/2/4.38	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermined the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<i>pinus, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</i>		
762.1	Simon Thomson	Neutral/Amend	Amend the Proposed District Plan to include a resource management framework for the management of Genetically Modified Organisms that is regionally specific taking into account environmental, economic and social wellbeing considerations.	Provisions allowed under the Resource Management Act 1991 and pursuant to the ruling in Federated Farmers of New Zealand v Northland Regional Council [2015] NZEnC 89. Submitter concerned about potential risks posed by release of Genetically Modified Organisms into environment. Release of Genetically Modified Organisms has the potential to cause significant adverse effects on the environment, including the following: Biological or ecosystem harm Harm to Tangata whenua cultural values such as mauri and tikanga Harm to the cultural values and lifestyle decisions of people and communities at a local level concerning what constitutes their wellbeing Harm from Genetically Modified Organism contamination to existing or potential forms of land use including farming, forestry and other primary production activities dependent on an uncontaminated environmental brand. Adverse effects to these land uses could include: loss of organic and Genetically Modified Organism-free certification, reputational damage, loss of markets and premiums paid for Genetically Modified Organism free produce and loss of livelihood. Conditions of consent may be breached by poor management, human error, natural events. Once Genetically Modified Organisms have been released they would be very difficult, if not impossible to eradicate. Application of integrated management and precautionary approach to Genetically Modified Organisms under the Resource Management Act is the best technique for managing potential adverse effects. It is consistent with the sustainable management purpose and Part II of the Resource Management Act to establish district plan provisions that manage the release, location and management of Genetically Modified Organisms where they have the potential to adversely affect the environment.	Reject	13
FS1276.171	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole of the submission be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA,"managing the use,...in a way,... which enables people and communities to provide for their...economic,...well-being and for their health and safety".	Reject	13
FS1342.298	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1343.42	Bruce Cameron	Oppose	Disallow the whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1320.40	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies).	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FSI199.39	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FSI192.39	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FSI225.40	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FSI295.40	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FSI214.39	Forest Owners Association	Oppose	Disallow this whole submission point.	Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermined the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
762.2	Simon Thomson	Neutral/Amend	Amend the Proposed District Plan to include strong precautionary and prohibitive provisions, policies and rules relating to Genetically Modified Organisms that are the same (or similar) as those in the Far North District Plan, the Whangarei District Plan and the Auckland Unitary Plan.	<p>Provisions allowed under the Resource Management Act 1991 and pursuant to the ruling in Federated Farmers of New Zealand v Northland Regional Council [2015] NZEnC 89. Precautionary approach would place liability with creators and owners of genetic material. Submitter concerned about potential risks posed by release of Genetically Modified Organisms into environment. Ensures a consistent approach across Northland, Auckland and Waikato. Eliminates cross boundary issues. Release of Genetically Modified Organisms has the potential to cause significant adverse effects on the environment, including the following: Biological or ecosystem harm Harm to Tangata whenua cultural values such as mauri and tikanga Harm to the cultural values and lifestyle decisions of people and communities at a local level concerning what constitutes their wellbeing Harm from Genetically Modified Organism contamination to existing or potential forms of land use including farming, forestry and other primary production activities dependent on an uncontaminated environmental brand. Adverse effects to these land uses could include: loss of organic and Genetically Modified Organism-free certification, reputational damage, loss of markets and premiums paid for Genetically Modified Organism free produce and loss of livelihood. Conditions of consent may be breached by poor management, human error, natural events. Once Genetically Modified Organisms have been released they would be very difficult, if not impossible to eradicate. Application of integrated management and precautionary approach to Genetically Modified</p>	Reject	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				Organisms under the Resource Management Act is the best technique for managing potential adverse effects. It is consistent with the sustainable management purpose and Part II of the Resource Management Act to establish district plan provisions that manage the release, location and management of Genetically Modified Organisms where they have the potential to adversely affect the environment.		
FS1225.41	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1212.63	David Stewart Bull	Oppose	Disallow this whole submission point.		Accept	13
FS1276.172	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole of the submission be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA;"managing the use,...in a way,... which enables people and communities to provide for their...economic,...well-being and for their health and safety".	Reject	13
FS1199.40	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1192.40	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1320.41	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1295.41	Life Sciences Network	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
	Incorporated			raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1214.40	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermined the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS/342.299	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS/343.43	Bruce Cameron	Oppose	Disallow the whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS12/12.40	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	13
762.3	Simon Thomson	Not Stated	Amend the Proposed District Plan to include that liability for spread and damage caused by Genetically Modified Organism's be with the owners of that genetic material, and secondly local and regional councils.	Provisions allowed under the Resource Management Act 1991 and pursuant to the ruling in Federated Farmers of New Zealand v Northland Regional Council [2015] NZEnC 89. Submitter is concerned about liability of introduction of Genetically Modified Organisms. Submitter also concerned about potential risks posed by release of Genetically Modified Organisms into environment. A precautionary approach would place the liability with the creators and owners of genetic material. Would allow farmers and individuals to take legal action against companies and corporates, and against councils for negligence. Release of Genetically Modified Organisms has the potential to cause significant adverse effects on the environment, including the following: Biological or ecosystem harm Harm to Tangata whenua cultural values such as mauri and tikanga Harm to the cultural values and lifestyle decisions of people and communities at a local level concerning what constitutes their wellbeing Harm from Genetically Modified Organism contamination to existing or potential forms of land use including farming, forestry and other primary production activities dependent on an uncontaminated environmental brand. Adverse effects to these land uses could include: loss of	Reject	14

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				organic and Genetically Modified Organism-free certification, reputational damage, loss of markets and premiums paid for Genetically Modified Organism free produce and loss of livelihood. Conditions of consent may be breached by poor management, human error, natural events. Once Genetically Modified Organisms have been released they would be very difficult, if not impossible to eradicate.		
FS1320.42	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	14
FS1276.173	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole of the submission be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA;"managing the use,...in a way,... which enables people and communities to provide for their...economic,...well-being and for their health and safety".	Reject	14
FS1199.41	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	14
FS1192.41	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	14
FS1342.300	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	14
FS1225.42	BIOtech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	14
FS1295.42	Life Sciences Network	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues	Accept	14

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
	<i>Incorporated</i>			raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1212.41	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	14
FS1214.41	Forest Owners Association	Oppose	Disallow this whole submission point.	Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for	Accept	14

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council</p> <p>The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient:</p> <p>To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p><i>Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</i></p>		
FS1343.44	Bruce Cameron	Oppose	Disallow the whole submission point.	<p><i>Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</i></p>	Accept	14
762.4	Simon Thomson	Neutral/Amend	Amend the Proposed District Plan to require those who introduce Genetically Modified Organism material into the environment be required to pay a bond to council equal in order of magnitude greater than any possible clean-up to eradicate at the genetic material.	<p><i>Provisions allowed under the Resource Management Act 1991 and pursuant to the ruling in Federated Farmers of New Zealand v Northland Regional Council [2015] NZEnC 89. Submitter concerned about potential risks posed by release of Genetically Modified Organisms into environment. Release of Genetically Modified Organisms has the potential to cause significant adverse effects on the environment, including the following: Biological or ecosystem harm Harm to Tangata whenua cultural values such as mauri and tikanga Harm to the cultural values and lifestyle decisions of people and communities at a local level concerning what constitutes their wellbeing Harm from Genetically Modified Organism contamination to existing or potential forms of land use including farming, forestry and other primary production activities dependent on an uncontaminated environmental brand. Adverse effects to these land uses could include: loss of organic and Genetically Modified Organism-free certification, reputational damage, loss of markets and premiums paid for Genetically Modified Organism free produce and loss of livelihood. Conditions of consent may be breached by poor management, human error, natural events. Once Genetically Modified Organisms have been released they would be very difficult, if not impossible to eradicate. Application of integrated management and precautionary approach to Genetically Modified Organisms under the Resource Management Act is the best technique for managing potential adverse effects. It is consistent with the sustainable</i></p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				management purpose and Part II of the Resource Management Act to establish district plan provisions that manage the release, location and management of Genetically Modified Organisms where they have the potential to adversely affect the environment.		
FS1342.301	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1276.174	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole of the submission be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA;"managing the use,...in a way,... which enables people and communities to provide for their...economic,...well-being and for their health and safety".	Reject	13
FS1199.42	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1343.45	Bruce Cameron	Oppose	Disallow the whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1225.43	BIOtech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1320.43	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1295.43	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1212.42	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	13
FS1214.42	Forest Owners Association	Oppose	Disallow this whole submission point.	Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council</p> <p>The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so.</p> <p>Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs.</p> <p>The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act.</p> <p>Thus it is more efficient:</p> <p>To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools,</p> <p>Than to put in place prohibitive rules which would require a plan change to undo.</p> <p>New Genetic Technologies and Gene editing</p> <p>Genetic technologies are developing rapidly.</p> <p>While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter.</p> <p>The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses.</p> <p>Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding.</p> <p>The use of Genetic Modification in Modern Society</p> <p>The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification.</p> <p>Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding.</p> <p>The use of Genetic Modification in the New Zealand Environment</p> <p>New Zealand is not GMO free.</p> <p>There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues.</p> <p>AgResearch have been running GM field trials for many years without the need for rules from the District Council.</p> <p>Loss of Science Capability</p> <p>Led by Ruakura</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				(AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.		
FSI192.42	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
776.1	GE Free Northland (in food & environment)	Neutral/Amend	Add a resource management framework for the management of genetically modified organisms that is region specific, taking into account environmental, economic, cultural and social well-being considerations.	The requested framework of issues, objectives, policies, rules and methods is consistent with the sustainable management purpose and Part 2 of the Resource Management Act to manage the release, location and management of genetically modified organisms where they have the potential to adversely affect the environment and other land use activities. Refer to original submission for various hyperlinks to supporting documents. Wish to keep unwanted organisms out of Taitokerau and Auckland regions. There are potential risks posed by outdoor GE experiments, field trials or the release of GMOs into the environment. GMOs have the potential to adversely affect ecological, economic, and resource management, shared values, social, cultural well-being of all communities.	Reject	13
FSI342.302	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FSI343.46	Bruce Cameron	Oppose	Disallow the whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
FS1212.43	David Stewart Bull	Oppose	Disallow the whole submission point.		Accept	13
FS1276.106	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks the whole submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Reject	13
FS1225.44	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1320.44	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1192.43	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1199.43	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false. GE Free Northland have cited a number of science papers in support of a premise that gene editing for gene drive to eliminate disease vectors is a risky or undeveloped technology. The papers do not support this assertion but are standard reporting of a specific set of experiments conducted in containment. They report only small components of the research and development process and no extrapolation of the research findings beyond those stated by the authors can be justified. Gene edited mosquitoes have since been released in the US and South America with no reported detrimental environmental effects.	Accept	13
FS1214.43	Forest Owners	Oppose	Disallow this whole submission point.	Out of scope Inserting provisions into the District Plan is out of scope as there is no	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
	Association			<p>mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society</p> <p>The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment</p> <p>New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council.</p> <p>Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate</p> <p>Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermined the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS1295.44	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	<p>The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	13
776.2	GE Free Northland (in food & environment)	Not Stated	Add strong precautionary and prohibitive provisions, policies and rules relating to genetically modified organisms that are aligned with those in the Far North District	<p>The requested framework of issues, objectives, policies, rules and methods is consistent with the sustainable management purpose and Part 2 of the Resource Management Act to manage the release, location and management of genetically modified organisms where they have the potential to adversely affect the environment</p>	Reject	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
			Plan, the Whangarei District Plan, the Auckland Unitary Plan and Northland Regional Policy Statement.	and other land use activities. Refer to original submission for various hyperlinks to supporting documents. Wish to keep unwanted organisms out of Taitokerau and Auckland regions. There are potential risks posed by outdoor GE experiments, field trials or the release of GMOs into the environment. GMOs have the potential to adversely affect ecological, economic, and resource management, shared values, social, cultural well-being of all communities.		
FS1192.44	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1276.107	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole submission point be allowed.		Reject	13
FS1342.303	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1199.44	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1212.44	David Stewart Bull	Oppose	Disallow the whole submission point.		Accept	13
FS1320.45	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1225.45	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				address climate change, predator control, water quality and competitiveness.		
FS1295.45	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1214.44	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS1343.47	Bruce Cameron	Oppose	Disallow the whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible.	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<i>The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</i>		
788.6	Susan Hall	Neutral/Amend	Add a resource management framework for the management of Genetically Modified Organisms that is regionally specific taking into account environmental, economic and social well-being considerations	Several councils have passed resolutions that there should be no further development and field-testing of transgenic organisms envisaged for agriculture, horticulture and forestry in their areas until the risk potential has been adequately identified and evaluated and a strict liability regime put in place. A report prepared for Whangarei, Far North, Kaipara and Rodney District Councils and Local Government New Zealand, and based on an opinion from Dr Royden Somerville QC, says "If an agent making use of GMOs has inadequate financial resources to cover environmental damage resulting from its activities, the burden will tend to fall on local government" As central government has failed to put in place a strict liability regime for Genetically Modified Organisms, liability for clean-ups, removal and elimination of escaped GE organisms, could lie with ratepayers. Ratepayers should not face the burden of paying for the clean-up of potential contaminated sites. The Law Commission said "it is possible that environmental damage caused by GMOs could be dealt with under the RMA Section 17(1) states that "every person has a duty to avoid, remedy or mitigate any adverse effect on the environment arising from an activity carried on by or on behalf of that person, whether or not the activity is in accordance with a rule in a plan (or) resource consent...". That duty is not itself enforceable but in Part XII of the RMA there are powers to issue an abatement. The continuing involvement with GE will harm all other farmers through tarnishing the 'clean green' image and could potentially end conventional farming, especially organic farmers. Section 5 of the RMA refers to enabling people to provide for their economic wellbeing, so there should be no further development and field-testing of transgenic organisms envisaged for agriculture, horticulture, and forestry in the Waikato district until the risk potential has been adequately identified and evaluated and a strict liability regime put in place. Section 5 of the RMA states "enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while (a) Sustaining the potential of natural and physical resources to meet the reasonably foreseeable needs of future generations. The Council is applying the precautionary principle in the case of high voltage transmission lines and global warming. Section 5.2.9 of the RMA states "Development should be designed and located to avoid or mitigate the predicted effects of global climate change on natural hazards, especially increased flooding, erosion, fire, and storms. Where there is incomplete information, a precautionary approach should be taken." Section 5.3.8 of the RMA states "Scientific opinion differs about the possible impacts of global climate change, but majority opinion predicts that the effects could include a greater frequency and intensity of extreme weather events. Increased storms, floods and droughts may occur. The extent of these is uncertain and a precautionary approach is taken, because of the high potential for harm" Genetically modified organisms have potentially even	Reject	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				more irreversible significant adverse impacts and the level of scientific uncertainty was recognised by the Law Commission, which states "It is difficult to estimate the level of risk posed by GMOs; it is difficult to assess the magnitude of the potential damage that could be caused; GMOs have the potential to create catastrophic levels of harm; GMOs have the potential to cause irreversible damage; Some of the potential negative effects of GMOs will likely manifest in the long term and be diffuse in nature." If the benefits were significant, the risk might be worth taking. However, it is increasingly clear that the main markets do not want GE food. The WISE group recognise the research employment and the value of better understanding GE, if only to minimise the extent of any disaster, so research contained within Ruakura should be exempt. Any other GE experiments and releases should be prohibited in the Waikato District due to the risks to the environment, economy and the public health. This is to protect finite resources including indigenous biodiversity from transgenic pollution. Conventional and organic reproductive crops must be protected and the integrity of heritage seeds is critical. The Hazard Risks chapter is 'under review', but, so far there is no mention in the Hazards draft of genetically modified organisms. The submitter supports the response made by GE Free New Zealand. Submissions were made on this in 2005 and January 2019, and the issue has not been addressed, therefore it is urgent that these are addressed before any risks or liabilities arise.		
FS1199.47	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipped to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in reply showing that all of the above claims are false.	Accept	13
FS1192.47	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1343.50	Bruce Cameron	Oppose	Disallow the whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1225.48	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are scientifically credible. The issues raised in the	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1214.47	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermined the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FSI212.47	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would:</p> <p>Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.</p>		
FS1295.48	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	<p>The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	13
FS1342.306	Federated Farmers	Oppose	Disallow this whole submission point.	<p>My reasons for opposing this submission point are set out under point 245.3.</p>	Accept	13
FS1276.108	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole submission point be allowed.	<p>GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."</p>	Reject	13
FS1320.48	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	<p>LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	13
788.9	Susan Hall	Neutral/Amend	Add strong precautionary and prohibitive provisions, policies and rules relating to Genetically Modified Organisms that are the same or similar to those in the Far North	<p>Several councils have passed resolutions that there should be no further development and field-testing of transgenic organisms envisaged for agriculture, horticulture and forestry in their areas until the risk potential has been adequately identified and evaluated and a strict liability regime put in place. A report prepared for Whangarei,</p>	Reject	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
			District Plan, the Whangarei District Plan and the Auckland Unitary Plan.	<p>Far North, Kaipara and Rodney District Councils and Local Government New Zealand, and based on an opinion from Dr Royden Somerville QC, says "If an agent making use of GMOs has inadequate financial resources to cover environmental damage resulting from its activities, the burden will tend to fall on local government" As central government has failed to put in place a strict liability regime for Genetically Modified Organisms, liability for clean-ups, removal and elimination of escaped GE organisms, could lie with ratepayers. Ratepayers should not face the burden of paying for the clean-up of potential contaminated sites. The Law Commission said "it is possible that environmental damage caused by GMOs could be dealt with under the RMA Section 17(1) states that "every person has a duty to avoid, remedy or mitigate any adverse effect on the environment arising from an activity carried on by or on behalf of that person, whether or not the activity is in accordance with a rule in a plan (or) resource consent...". That duty is not itself enforceable but in Part XII of the RMA there are powers to issue an abatement. The continuing involvement with GE will harm all other farmers through tarnishing the 'clean green' image and could potentially end conventional farming, especially organic farmers. Section 5 of the RMA refers to enabling people to provide for their economic wellbeing, so there should be no further development and field-testing of transgenic organisms envisaged for agriculture, horticulture, and forestry in the Waikato district until the risk potential has been adequately identified and evaluated and a strict liability regime put in place. Section 5 of the RMA states "enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while (a) Sustaining the potential of natural and physical resources to meet the reasonably foreseeable needs of future generations. The Council is applying the precautionary principle in the case of high voltage transmission lines and global warming. Section 5.2.9 of the RMA states "Development should be designed and located to avoid or mitigate the predicted effects of global climate change on natural hazards, especially increased flooding, erosion, fire, and storms. Where there is incomplete information, a precautionary approach should be taken." Section 5.3.8 of the RMA states "Scientific opinion differs about the possible impacts of global climate change, but majority opinion predicts that the effects could include a greater frequency and intensity of extreme weather events. Increased storms, floods and droughts may occur. The extent of these is uncertain and a precautionary approach is taken, because of the high potential for harm" Genetically modified organisms have potentially even more irreversible significant adverse impacts and the level of scientific uncertainty was recognised by the Law Commission, which states "It is difficult to estimate the level of risk posed by GMOs; it is difficult to assess the magnitude of the potential damage that could be caused; GMOs have the potential to create catastrophic levels of harm; GMOs have the potential to cause irreversible damage; Some of the potential negative effects of GMOs will likely manifest in the long term and be diffuse in nature." If the benefits were significant, the risk might be worth taking. However, it is increasingly clear that the main markets do not want GE food. The WISE group recognise the research employment and the value of better understanding GE, if only to minimise the extent of any disaster, so research contained within Ruakura should be exempt. Any other GE experiments and releases should be prohibited in the Waikato District due to the risks to the</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				environment, economy and the public health. This is to protect finite resources including indigenous biodiversity from transgenic pollution. Conventional and organic reproductive crops must be protected and the integrity of heritage seeds is critical. The Hazard Risks chapter is 'under review', but, so far there is no mention in the Hazards draft of genetically modified organisms. The submitter supports the response made by GE Free New Zealand. Submissions were made on this in 2005 and January 2019, and the issue has not been addressed, therefore it is urgent that these are addressed before any risks or liabilities arise.		
FS1276.109	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Reject	13
FS1192.48	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1225.49	BIOtech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1212.48	David Stewart Bull	Oppose	Disallow the submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.</p>		
FSI199.48	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	<p>GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.</p>	Accept	13
FSI214.48	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermined the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>pinus, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS1343.51	Bruce Cameron	Oppose	Disallow the whole submission point.	<p>Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	13
FS1320.49	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	<p>LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	13
FS1295.49	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	<p>The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	13
FS1342.307	Federated Farmers	Oppose	Disallow this whole submission point.	<p>My reasons for opposing this submission point are set out under point 245.3.</p>	Accept	13
789.1	Graham Shepherd for BioAgriNomics Ltd	Neutral/Amend	Add strong precautionary and prohibitive policies and rules relating to the management of Genetically Modified Organisms that are the same or similar to those in the Far North District Plan, the Whangarei District Plan and the Auckland Unitary Plan.	<p>Submitter supports submission by Simon Thomson for the Proposed Waikato District Plan (in particular Clause 8). Submitter has concerns about risks posed by GMO's into the environment. GMO's have potential to adversely affect ecological, economic, and resource management values, and the social wellbeing of people, communities and tangata whenua. Release of GMOs has potential to cause significant adverse effects on environment (e.g. biological or ecosystem harm, harm to tangata whenua cultural values such as mauri and tikanga, harm to cultural values and lifestyle decisions. Harm from GMO contamination to existing or potential land uses (e.g. farming, forestry, beekeeping, marine farming and other primary production activities dependant on an uncontaminated environmental brand). Adverse effects can include a loss of organic and GMO-free certification, reputational damage, loss of markets and premiums paid for GMO free produce, loss of livelihood, loss of food quality and the contamination of the food chain, development of increased pest resistance. There inevitably remains a risk that conditions of consent for GMOs are breached. Once GMOs are released into environment they are</p>	Reject	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				impossible to eradicate. Integrated management and a precautionary approach to GMOs under the Resource Management Act (RMA) is the best available technique for managing potential adverse effects. Establishing District Plan provisions to manage GMOs is consistent with Part 2 of RMA (sustainable management).		
FS1214.49	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS1108.143	Te Whakakitenga o Waikato Incorporated (Waikato-Tainui)	Support	Null	Add prohibitive rules into plan.	Reject	13
FS1192.49	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible.	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1139.128	Turangawaewae Trust Board	Support	Null	Add prohibitive rules into the plan.	Reject	13
FS1212.49	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	13
FS1343.52	Bruce Cameron	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1225.50	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1295.50	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1342.308	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1320.50	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	
FS1199.49	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
789.2	Graham Shepherd for BioAgriNomics Ltd	Not Stated	Add a resource management framework for the management of Genetically Modified Organisms that is regionally specific taking into account environmental, economic and social well-being considerations.	Submitter supports submission by Simon Thomson for the Proposed Waikato District Plan (in particular Clause 8). Submitter has concerns about risks posed by GMO's into the environment. GMO's have potential to adversely affect ecological, economic, and resource management values, and the social wellbeing of people, communities and tangata whenua. Release of GMOs has potential to cause significant adverse effects on environment (e.g. biological or ecosystem harm, harm to tangata whenua cultural values such as mauri and tikanga, harm to cultural values and lifestyle decisions. Harm from GMO contamination to existing or potential land uses (e.g. farming, forestry, beekeeping, marine farming and other primary production activities dependant on an uncontaminated environmental brand). Adverse effects can include a loss of organic and GMO-free certification, reputational damage, loss of markets and premiums paid for GMO free produce, loss of livelihood, loss of food quality and the contamination of the food chain, development of increased pest resistance. There inevitably remains a risk that conditions of consent for GMOs are breached. Once GMOs are released into environment they are impossible to eradicate. Integrated management and a precautionary approach to GMOs under	Reject	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				the Resource Management Act (RMA) is the best available technique for managing potential adverse effects. Establishing District Plan provisions to manage GMOs is consistent with Part 2 of RMA (sustainable management).		
FS1214.50	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society</p> <p>The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment</p> <p>New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council.</p> <p>Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate</p> <p>Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS1199.50	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council	<p>GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
			Working Party (v) Co-existence (vi) Benefits			
FS1342.309	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1320.51	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1295.51	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1225.51	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1212.50	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.		
FS1343.53	Bruce Cameron	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1192.50	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
789.3	Graham Shepherd for BioAgriNomics Ltd	Not Stated	Seeks Genetically Modified Organisms and all genetically engineered products completely banned from being introduced into New Zealand.	Claims by companies that GMO's and GE products increase yield and have greater resistance to insect pests and diseases is unsubstantiated. GMOs are scientifically proven to cause human health issues including cancer, bowel, liver and kidney disease, infertility and environmental pollution. GMOs and GE crops showed greater resistance to beneficial strains of micro-organisms resulting in resistant weeds, diseases and insect pests. There are no independent peer-reviewed scientific papers establishing the safety of GMO crops. Given the deleterious nature of GMOS and GE's, it is imperative that NZ is kept GMO and GE free.	Reject	14
FS1199.51	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipped to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in reply showing that all of the above claims are false.	Accept	14
FS1212.51	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and	Accept	14

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would:</p> <p>Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.</p>		
FS1214.51	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is</p>	Accept	14

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermined the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>pinus, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS1342.310	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1320.52	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	<p>LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	13
FS1343.54	Bruce Cameron	Oppose	Disallow the whole submission point.	<p>Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	14
FS1192.51	J H & R Cotman	Oppose	Disallow this whole submission point.	<p>Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	14
FS1295.52	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	<p>The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	14
FS1225.52	BIOtech New Zealand	Oppose	Disallow this whole submission point.	<p>Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to</p>	Accept	14

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				address climate change, predator control, water quality and competitiveness.		
795.1	Hinemaria Ward-Holmes	Neutral/Amend	Add strong precautionary and prohibitive policies and rules relating to Genetically Modified Organisms that are the same (or similar) as those in the far North District Plan, the Whangarei District Plan and the Auckland Unitary Plan, to ensure a consistent approach across Northland, Auckland and the Waikato and to eliminate cross boundary issues.	Eating is crucial for health, wellbeing and life. Unknown effects of GMO's. Must stop thinking about technology solving the problems. The way forward is smaller forms and be more productive, reducing chemicals. Concerned at the potential risks posed by GMO's. GMO's have the potential to adversely effect ecological, economic and resource management values and the social and cultural wellbeing of people, communities and tangata whenua. No matter how carefully crafted conditions of consent for GMOs, there is still a residual risk that these may be breached by poor management, human error, natural events or sabotage. Once GMOs have been released into the environment, it would be very difficult if not impossible to eradicate. Management of GMOs is consistent with the purpose and Part 2 of the RMA.	Reject	13
FS1199.52	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1212.52	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	13
FS1214.52	Forest Owners Association	Oppose	Disallow this whole submission point.	Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis</p>		

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				<p>making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermined the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FSI108.144	Te Whakakitenga o Waikato Incorporated (Waikato-Tainui)	Oppose	Null	Retain as notified. Add prohibitive rules into plan.	Reject	13
FSI192.52	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13

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FS1295.53	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1225.53	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1320.53	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1342.311	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1343.55	Bruce Cameron	Oppose	Disallow the whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1276.110	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Accept	13
795.2	Hinemaria Ward-Holmes	Neutral/Amend	Add a resource management framework for the management of Genetically Modified Organisms that is regionally specific taking into account environmental, economic and well-being considerations.	Eating is crucial for health, wellbeing and life. Unknown effects of GMO's. Must stop thinking about technology solving the problems. The way forward is smaller forms and be more productive, reducing chemicals. Concerned at the potential risks posed by GMO's. GMO's have the potential to adversely effect ecological, economic and resource management values and the social and cultural wellbeing of people, communities and tangata whenua. No matter how carefully crafted conditions of consent for GMOs, there is still a residual risk that these may be breached by poor	Reject	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				management, human error, natural events or sabotage. Once GMOs have been released into the environment, it would be very difficult if not impossible to eradicate. Management of GMOs is consistent with the purpose and Part 2 of the RMA.		
FS1276.111	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole of the submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submissions indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use...in a way...which enables people and communities to provide for their...economic...wellbeing and for their health and safety."	Reject	13
FS1342.312	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1343.56	Bruce Cameron	Oppose	Disallow the whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1192.53	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1225.54	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1295.54	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1320.54	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies).	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1199.53	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1212.53	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	13
FS1214.53	Forest Owners Association	Oppose	Disallow this whole submission point.	Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage.</p> <p>Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA.</p> <p>Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so.</p> <p>Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act.</p> <p>Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo.</p> <p>New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter.</p> <p>The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses.</p> <p>Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding.</p> <p>The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification.</p> <p>Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermined the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
830.6	Linda Silvester	Oppose	Add A resource management framework for the management of Genetically Modified Organisms that is regionally specific and takes into account environmental, economic and social wellbeing.	Several Councils have passed resolutions that there should be no further development and field-testing of transgenic organisms envisaged for agriculture, horticulture and forestry in their areas until the risk potential has been adequately identified and evaluated and a strict liability regime put in place. As central government has failed to put in place a strict liability regime for GMOs, liability for clean-ups, removal and elimination of escaped GE organisms, could lie with ratepayers. The Law Commission said "It is possible that environmental damage caused by GMOs could be dealt with under the RMA." The duty in itself is not enforceable, but in Part XII of the RMA there are powers to issue an abatement. The continuing use of Genetic Engineering will also harm other farmers through tarnishing our clean green image and could potentially bring an end to conventional farming. Organic farmers will be affected more by the image loss. There should be no further development and field testing of transgenic organisms envisaged for agriculture, horticulture and forestry in the district.	Reject	13
FS1320.60	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				quality and competitiveness.		
FS1342.318	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1276.115	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submissions indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use...in a way...which enables people and communities to provide for their...economic...wellbeing and for their health and safety."	Reject	13
FS1343.62	Bruce Cameron	Oppose	Disallow the whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1214.59	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermined the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>pinus, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS1295.60	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	<p>The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	13
FS1199.59	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	<p>GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipped to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in reply showing that all of the above claims are false.</p>	Accept	13
FS1192.59	J H & R Cotman	Oppose	Disallow this whole submission point.	<p>Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	13
FS1225.60	BIOtech New Zealand	Oppose	Disallow this whole submission point.	<p>Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	13
FS1212.59	David Stewart Bull	Oppose	Disallow the whole submission point.	<p>Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.</p>		
942.3	Angeline Greensill for Tainui o Tainui	Neutral/Amend	Add a new chapter that addresses Genetically Modified Organisms.	The District Plan concentrates mostly on the effects on human health or amenity, therefore there is a need to be vigilant where new technologies are being trialed and have the potential to impact on communities. These should stay in containment as the risks and unexpected consequences are too great to control.	Reject	13
FS1199.61	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1276.117	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submissions indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use...in a way...which enables people and communities to provide for their...economic...wellbeing and for their health and safety."	Reject	13
963.1	June Penn	Oppose	Add a resource management framework for the management of Genetically Modified Organisms that is regionally specific, taking into account environmental, economic and social well-being.	<p>GMOs have the potential to adversely affect ecological, economic, and resource management values, and the social and cultural wellbeing of communities and Tangata whenua. The release of GMOs can cause:</p> <p>Biological/ecosystem harm Harm to Tangata whenua values Harm to cultural value and lifestyles, concerning the communities wellbeing Harm to existing or potential forms of land use. The effects on land uses could include: Loss of organic and GMO-free certification Reputational damage Loss of markets and premiums paid for GMO-free produce Loss of livelihood The Waikato is the centre of dairy offices and farms for the three major suppliers of milk and milk products in the area. Many farmers are highly concerned that their livelihoods will be affected if GMO's are released in the Waikato. Tatua, Fonterra and Miraka Milks have a GMO-free requirement for milk products. Concerns over the ability to control the grass genetic pollution is a major concern and it is important to have precautionary approach to any escape and release of GMOs. No matter how carefully</p>	Reject	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				conditions of consent for GMOs are crafted, there is still a risk of poor management, human error, or natural events that aid in breaching conditions. Once GMOs have been released into the environment it will be difficult or impossible to eradicate. For food products, the GE-free status would be permanently lost, along with the market advantages of that status. Application of integrated management and a precautionary approach to GMOs under the RMA is the best available technique for managing the potential adverse effects posed by GMOs within the region. It is consistent with the sustainable management purpose and Part II of the RMA to establish district plan provisions that manage the release, location, and management of GMOs where they have the potential to adversely affect the environment and other land use activities.		
FS1199.62	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1343.64	Bruce Cameron	Oppose	Disallow the whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1320.62	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1295.62	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1342.320	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
FS1276.119	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submissions indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use...in a way...which enables people and communities to provide for their...economic...wellbeing and for their health and safety."	Reject	13
FS1214.61	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermined the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FSI192.61	J H & R Cotman	Oppose	Disallow this whole submission point.	<p>Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1212.60	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	13
FS1225.62	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
963.2	June Penn	Oppose	Add strong precautionary and prohibitive provisions, policies and rules relating to Genetically Modified Organisms that are the same or similar to those in the Far North District Plan, the Whangarei District Plan and the Auckland Unitary Plan.	GMOs have the potential to adversely affect ecological, economic, and resource management values, and the social and cultural wellbeing of communities and Tangata whenua. The release of GMOs can cause: Biological/ecosystem harm Harm to Tangata whenua values Harm to cultural value and lifestyles, concerning the communities wellbeing Harm to existing or potential forms of land use. The effects on land uses could include: Loss of organic and GMO-free certification Reputational damage Loss of markets and premiums paid for GMO-free produce Loss of livelihood The Waikato is the centre of dairy offices and farms for the three major suppliers of milk and milk products in the area. Many farmers are highly concerned that their livelihoods will be affected if GMO's are released in the Waikato. Tatua, Fonterra and Miraka Milks have a GMO-free requirement for milk products. Concerns over the ability to control the grass genetic	Reject	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				pollution is a major concern and it is important to have precautionary approach to any escape and release of GMOs. No matter how carefully conditions of consent for GMOs are crafted, there is still a risk of poor management, human error, or natural events that aid in breaching conditions. Once GMOs have been released into the environment it will be difficult or impossible to eradicate. For food products, the GE-free status would be permanently lost, along with the market advantages of that status. Application of integrated management and a precautionary approach to GMOs under the RMA is the best available technique for managing the potential adverse effects posed by GMOs within the region. It is consistent with the sustainable management purpose and Part II of the RMA to establish district plan provisions that manage the release, location, and management of GMOs where they have the potential to adversely affect the environment and other land use activities.		
FS1320.63	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1343.65	Bruce Cameron	Oppose	Disallow the whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1342.321	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1214.62	Forest Owners Association	Oppose	Disallow this whole submission point.	Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>for many years without the need for rules from the District Council.</p> <p>Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions.</p> <p>Blanket provisions not appropriate</p> <p>Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermined the Waikato's leadership in agricultural science and innovation.</p> <p>Limit the opportunity to use new genetic technologies such as gene editing to:</p> <p>Address climate change, water quality and predator control;</p> <p>Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as</p> <p>Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS1295.63	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1225.63	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1192.62	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1199.63	New Zealand Forest Research	Oppose	We seek that the whole of the original submissions to be disallowed on the	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
	Institute		basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.		
FS1276.120	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submissions indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use...in a way...which enables people and communities to provide for their...economic...wellbeing and for their health and safety."	Reject	13
FS1212.61	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	13
286.37	Lorraine Dixon for Waikato-Tainui	Not Stated	Add clear provisions for genetically modified organisms that include: precautionary policies to regulate the outdoor use of genetically modified organisms; prohibit the release of genetically modified organisms on land; and make field trials a discretionary activity with performance standards in regard to liability and the posting of bonds.	Waikato-Tainui are concerned about the potential risks posed by releasing genetically modified organisms (GMOs) into the environment. It considers the science is unproven and the risk of biological and ecosystem harm is too great not to include precautionary provisions for GMOs under local plans. Equally important is the risk to social, economic, and cultural wellbeing, even if the Council considers that GMOs pose no biological or ecosystem risks. GMO contamination could have significant adverse effects on the economic markets, way of life, for both organic and non-GMO food producers and the mauri and tikanga of Tangata whenua. The Waikato-Tainui Environmental Plan takes a precautionary approach to GMOs and specifies that application for new organisms and GMOs must demonstrate that there are no risks to humans, indigenous ecosystems, indigenous species, or primary production. The draft Maniapoto Environment Plan also takes a precautionary approach to GMOs and	Reject	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				specifies that any applications for the introduction of new or GMOs into the environment must ensure that there is no risk to indigenous flora and fauna, ecosystems, or to the health and wellbeing of Maniapoto Iwi. A number of councils around New Zealand have been moving to protect their primary producers and communities by introducing precautionary or prohibitive policies. Auckland Council, Far North District Council, Whangarei District Council and Hastings District Council have all included provisions in their planning documents to regulate the outdoor use of genetically modified organisms. All four councils have prohibited the release of GMOs on land and made field trials a discretionary activity with performance standards in regards to liability and the posting of bonds.		
FS1320.4	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness. Inconsistent with Tainui Environmental Plan.	Accept	13
FS1035.43	Pareoranga Te Kata	Support	Support the submission in full.	• Council needs to partner with Kaitiaki, mana whenua or review strategies with Waikato Tainui to ensure preservation and restoration of the Waikato River.	Reject	13
FS1342.262	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1192.4	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness. Is not consistent with Tainui Environmental Plan.	Accept	13
FS1295.4	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1212.4	David Stewart Bull	Oppose	Disallow this whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would:</p> <p>Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress. Is not consistent with Tainui Environmental Plan.</p>		
FS1214.4	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control. Is inconsistent with Tainui Environmental Plan.		
FS1343.6	Bruce Cameron	Oppose	Disallow this whole submission.	My reasons for opposing this submission point are set in the attached pages and include: Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	I3
FS1225.4	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness. Is not consistent with Tainui's Environmental Plan.	Accept	I3
499.19	Adrian Morton	Support	Add a resource management framework for the management of Genetically Modified Organisms that is regional specific taking into account environmental, economic and social well-being considerations.	The submitter has significant concerns about the potential risks posed by the release of GMOs into the environment and the ethical issues associated with the development of GMO's in relation to food, pest control, corporate control and financial gain. GMOs have the potential to adversely affect ecological, economic, and resource management values, and the social and cultural wellbeing of people, communities and tangata whenua that may not be able to be avoided, remedied or mitigated. 1. The release of GMOs has a potential to cause significant adverse effects on the environment, which could include: (a) biological or ecosystem harm or damage; (b) harm to tangata whenua cultural values such as mauri and tikanga especially in relation to native plants and animals; (c) harm to the cultural values and lifestyle decisions of people and communities at a local level concerning what constitutes their wellbeing. This is particularly relevant in relation to the quality of food and potential health related issues of GMO food on humans (extent of research is poor and the research that does exist indicates issues around GMO foods); and (d) harm from GMO contamination to existing or potential forms of land use including farming, forestry, beekeeping, marine farming and other primary production activities dependent on an uncontaminated environmental brand. Adverse effects to these land uses could include: (i) loss of organic and GMO-free certification; (ii) reputational damage; (iii) loss of markets and premiums paid for GMO free produce; and (iv) loss of livelihood. 2. No matter how carefully conditions of consent for GMOs are crafted, there inevitably remains a risk, even if small, that conditions may be breached by poor	Reject	I3

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				management, human error, natural events such as severe storms and even the sabotage of projects. 3. Once GMOs have been released into the environment, they would be very difficult if not impossible to eradicate. In the case of a food product, the "GE free" status of a district would likely be lost permanently along with the market advantages of that status. 4. Application of integrated management and a strong precautionary approach to GMOs under the RMA is the best available technique for managing the potential adverse effects posed by GMOs within the region. In addition, the liability of cross contamination of non--GMO crops should be held to the manufacturer or registered user(s) to protect growers that do not support this flawed science model. 5. It is consistent with the sustainable management purpose and Part II of the RMA to establish district plan provisions (e.g. issues, objectives, policies, rules and methods) that manage the release, location and management of GMOs where they have the potential to adversely affect the environment and other land use activities.		
FS1225.9	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1342.267	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1276.81	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole of the submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Accept	13
FS1199.7	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1320.9	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1295.9	Life Sciences Network	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
	<i>Incorporated</i>			<i>raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</i>		
FS1343.11	Bruce Cameron	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set in the attached pages and include: Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1212.9	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	13
FS1214.9	Forest Owners Association	Oppose	Disallow this whole submission point.	Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS1192.9	J H & R Cotman	Oppose	Disallow this whole submission point.	<p>Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	13
499.20	Adrian Morton	Not Stated	Add strong precautionary and prohibitive provisions, policies and rules relating to GMOs that are the same (or similar) as those in the Far North District Plan, the Whangarei District Plan and the Auckland Unitary Plan, to ensure a consistent approach across Northland, Auckland and the Waikato and to eliminate cross boundary issues.	<p>The submitter has significant concerns about the potential risks posed by the release of GMOs into the environment and the ethical issues associated with the development of GMO's in relation to food, pest control, corporate control and financial gain. GMOs have the potential to adversely affect ecological, economic, and resource management values, and the social and cultural wellbeing of people, communities and tangata whenua that may not be able to be avoided, remedied or mitigated. 1. The release of GMOs has a potential to cause significant adverse effects on the environment, which could include: (a) biological or ecosystem harm or damage; (b) harm to tangata whenua cultural values such as mauri and tikanga especially in relation to native plants and animals; (c) harm to the cultural values and lifestyle decisions of people and</p>	Reject	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				communities at a local level concerning what constitutes their wellbeing. This is particularly relevant in relation to the quality of food and potential health related issues of GMO food on humans (extent of research is poor and the research that does existing indicates issues around GMO foods); and (d) harm from GMO contamination to existing or potential forms of land use including farming, forestry, beekeeping, marine farming and other primary production activities dependent on an uncontaminated environmental brand. Adverse effects to these land uses could include: (i) loss of organic and GMO-free certification; (ii) reputational damage; (iii) loss of markets and premiums paid for GMO free produce; and (iv) loss of livelihood. 2. No matter how carefully conditions of consent for GMOs are crafted, there inevitably remains a risk, even if small, that conditions may be breached by poor management, human error, natural events such as severe storms and even the sabotage of projects. 3. Once GMOs have been released into the environment, they would be very difficult if not impossible to eradicate. In the case of a food product, the "GE free" status of a district would likely be lost permanently along with the market advantages of that status. 4. Application of integrated management and a strong precautionary approach to GMOs under the RMA is the best available technique for managing the potential adverse effects posed by GMOs within the region. In addition, the liability of cross contamination of non--GMO crops should be held to the manufacturer or registered user(s) to protect growers that do not support this flawed science model. 5. It is consistent with the sustainable management purpose and Part II of the RMA to establish district plan provisions (e.g. issues, objectives, policies, rules and methods) that manage the release, location and management of GMOs where they have the potential to adversely affect the environment and other land use activities.		
FS1276.82	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole of the submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Reject	13
FS1108.140	Te Whakakitenga o Waikato Incorporated (Waikato-Tainui)	Support	Null	Add strong precautionary and prohibitive provisions, policies rules relating to GMO's.	Reject	13
FS1139.125	Turangawaewae Trust Board	Support	Null	Add strong precautionary and prohibitive provisions, policies and rules relating to GMO's.	Reject	13
546.12	Lynne Adrienne	Neutral/Amend	Add a resource management framework for the management of genetically modified organisms that is regional specific taking into account environmental, economic and social well-being considerations.	No reasons provided.	Reject	13
757.12	Karen White	Support	Amend the Proposed Waikato District Plan to include a resource management framework for the management of	Submitter has significant concerns about the potential risks posed by release of Genetically Modified Organisms into the environment. Submitter has significant concerns about the ethical issues associated with development of Genetically Modified	Reject	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
			Genetically Modified Organisms that is regional specific taking into account environmental, economic and social well-being considerations.	Organisms in relation to food, plant medicine and pest control. Provisions are allowed under the Resource Management Act 1991 and pursuant to the ruling in Federated Farmers of New Zealand v Northland Regional Council [2015] NZEnC 89. Release of Genetically Modified Organisms has a potential to cause significant adverse effects on the environment, including the following: biological or ecosystem harm harm to tangata whenua cultural values such as mauri and tikanga harm to the cultural values and lifestyle decisions of people and communities at a local level concerning what constitutes their wellbeing harm from Genetically Modified Organisms contamination to existing or potential forms of land use including farming, forestry and other primary production activities dependant on an uncontaminated environmental brand. Adverse effects to these land uses could include: loss of organic and Genetically Modified Organism-free certification, reputational damage, loss of markets and premiums paid for Genetically Modified Organism free produce and loss of livelihood. Conditions of consent may be breached by poor management, human error, natural events. Once Genetically Modified Organisms have been released they would be very difficult, if not impossible to eradicate. Application of integrated management and precautionary approach to Genetically Modified Organisms under the RMA is the best technique for managing potential adverse effects. It is consistent with the sustainable management purpose and Part II of the RMA to establish district plan provisions that manage the release, location and management of Genetically Modified Os where they have the potential to adversely affect the environment.		
FS1276.100	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Reject	13
FS1342.292	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1343.36	Bruce Cameron	Oppose	Disallow the whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1320.34	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1214.33	Forest Owners	Oppose	Disallow this whole submission point.	Out of scope Inserting provisions into the District Plan is out of scope as there is no	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
	Association			<p>mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society</p> <p>The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding.</p> <p>The use of Genetic Modification in the New Zealand Environment</p> <p>New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council.</p> <p>Loss of Science Capability</p> <p>Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions.</p> <p>Blanket provisions not appropriate</p> <p>Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation.</p> <p>Limit the opportunity to use new genetic technologies such as gene editing to:</p> <p>Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as</p> <p>Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FSI199.33	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipped to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in reply showing that all of the above claims are false.	Accept	13
FSI295.34	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1192.34	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1212.34	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	13
FS1225.34	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
757.13	Karen White	Support	Amend the Proposed Waikato District Plan to include strong precautionary and	Submitter has significant concerns about the potential risks posed by release of Genetically Modified Organisms into the environment. Submitter has significant	Reject	13

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			prohibitive provisions, policies and rules relating to Genetically Modified Organisms that are the same (or similar) as those in the Far North District Plan, the Whangarei District Plan and the Auckland Unitary Plan.	concerns about the ethical issues associated with development of Genetically Modified Organism's in relation to food, plant medicine and pest control. Provisions are allowed under the Resource Management Act 1991 and pursuant to the ruling in Federated Farmers of New Zealand v Northland Regional Council [2015] NZEnC 89. Release of Genetically Modified Organisms has a potential to cause significant adverse effects on the environment, including the following: biological or ecosystem harm harm to tangata whenua cultural values such as mauri and tikanga harm to the cultural values and lifestyle decisions of people and communities at a local level concerning what constitutes their wellbeing harm from Genetically Modified Organism contamination to existing or potential forms of land use including farming, forestry and other primary production activities dependant on an uncontaminated environmental brand. Adverse effects to these land uses could include: loss of organic and Genetically Modified Organism-free certification, reputational damage, loss of markets and premiums paid for Genetically Modified Organism free produce and loss of livelihood. Conditions of consent may be breached by poor management, human error, natural events. Once Genetically Modified Organisms have been released they would be very difficult, if not impossible to eradicate. Application of integrated management and precautionary approach to Genetically Modified Organisms under the RMA is the best technique for managing potential adverse effects. It is consistent with the sustainable management purpose and Part II of the Resource Management Act to establish district plan provisions that manage the release, location and management of Genetically Modified Organisms where they have the potential to adversely affect the environment.		
FSI192.64	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FSI342.293	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FSI276.101	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submission indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use,...in a way,...which enables people and communities to provide for their...economic,...wellbeing and for their health and safety."	Reject	13
FSI199.34	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13

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FS1343.37	Bruce Cameron	Oppose	Disallow the whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1320.35	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1225.35	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1295.35	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1212.35	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.</p>		
FS1214.34	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter.</p> <p>The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses.</p> <p>Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding.</p> <p>The use of Genetic Modification in Modern Society</p> <p>The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification.</p> <p>Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding.</p> <p>The use of Genetic Modification in the New Zealand Environment</p> <p>New Zealand is not GMO free.</p> <p>There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues.</p> <p>AgResearch have been running GM field trials for many years without the need for rules from the District Council.</p> <p>Loss of Science Capability</p> <p>Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions.</p> <p>Blanket provisions not appropriate</p> <p>Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation.</p> <p>Limit the opportunity to use new genetic technologies such as gene editing to:</p> <p>Address climate change, water quality and predator control;</p> <p>Improve productivity;</p> <p>Innovate to create new products, enhance the attributes and health outcomes of food; as well as</p> <p>Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		

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780.39	John Lawson (Whaingaroa Environmental Defence Incorporated on behalf of Whaingaroa Environmental Defence Incorporated Society	Oppose	Add a new chapter that provides the following: A resource management framework for the management of Genetically Modified Organisms that is regionally specific taking into account environmental, economic and social well-being considerations. Strong precautionary and prohibitive provisions, policies and rules relating to Genetically Modified Organisms that are the same (or similar) as those in the Far North District Plan, the Whangarei District Plan and the Auckland Unitary Plan, to ensure a consistent approach across Northland, Auckland and the Waikato and to eliminate cross boundary issues.	Several Councils have passed resolutions that there should be no further development and field-testing of transgenic organisms envisaged for agriculture, horticulture and forestry in their areas until the risk potential has been adequately identified and evaluated and a strict liability regime put in place. The submission raises concern regarding liability and potential cost to ratepayers as well as the implications under the Resource Management Act. Submission also raises concerns regarding harm to farmers, clean green image, irreversible impacts from GMO's, scientific uncertainty, lack of demand for GE food from main markets, transgenic pollution. Wants GE experiments and releases prohibited except in Ruakura. Conventional and organic reproductive crops must be protected and integrity of heritage seeds is critical. No mention is made of the hazards of genetically modified substances in the Proposed District Plan. GE poses risks to our environment, economy and public health.	Reject	13
FS1212.45	David Stewart Bull	Oppose	Disallow the whole submission point.		Accept	13
FS1192.45	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1199.45	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1214.45	Forest Owners Association	Oppose	Disallow this whole submission point.	Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first	Accept	13

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				<p>obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage.</p> <p>Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA.</p> <p>Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so.</p> <p>Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act.</p> <p>Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo.</p> <p>New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter.</p> <p>The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses.</p> <p>Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding.</p> <p>The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification.</p> <p>Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than</p>		

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				<p>conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermined the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS1343.48	Bruce Cameron	Oppose	Disallow the whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1225.46	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1342.304	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1320.46	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual	Accept	13

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				issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1295.46	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
802.14	Vera van der Voorden	Not Stated	Add a resource management framework for the management of Genetically Modified Organisms that is regionally specific, taking into account environmental, economic and social well-being considerations.	As a person living on a "life style" block the submitter does not wish to be liable for any accidental cross pollination or unintentional theft of genetic material GMOs have the potential to have significant adverse effects on ecological, economic, and resource management values, the social and cultural wellbeing of people, communities and tangata whenua, cause biological or ecosystem harm, and GMO contamination to existing or potential forms of land use including farming, forestry, beekeeping, marine farming and other primary production activities dependent on an uncontaminated environmental brand. The new GM methods can cause much bigger and more dangerous genetic disruptions. New GM organisms have scant history of safe use, as they were only invented in the past 5 years and could cause more harm than first assumed. The Waikato has three major milk suppliers. Tatura, Fonterra and Miraka Milks have a GMO Free requirement for the milk products and rely on shareholder farmers' milk supply. The ability to control the grass genetic pollution is a major concern and it is important to have precautionary approach to any escape and release of GM until the negative effects are known on the region. Additionally there are also several other organic producers in Waikato. Once GMOs have been released into the environment, they would be very difficult if not impossible to eradicate. In the case of a food product, the "GE free" status of a district would likely be lost permanently along with the market advantages of that status. Application of integrated management and a precautionary approach to GMOs under the RMA is the best available technique for managing the potential adverse effects posed by GMOs within the region. It is consistent with the sustainable management purpose and Part 11 of the RMA to establish district plan provisions (e.g. issues, objectives, policies, rules and methods) that manage the release, location and management of GMOs where they have the potential to adversely affect the environment and other land use activities. This will ensure a consistent approach across Northland, Auckland and the Waikato and to eliminate cross boundary issues.	Reject	13
FS1295.56	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using	Reject	13

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				provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1276.113	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole of the submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submissions indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use...in a way...which enables people and communities to provide for their...economic...wellbeing and for their health and safety."	Reject	13
FS1343.58	Bruce Cameron	Oppose	Disallow the whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1320.56	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1342.314	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1199.55	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk to the environment GM cannot co-exist with other activities That the EPA is not equipped to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in reply showing that all of the above claims are false.	Accept	13
FS1225.56	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1212.55	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release	Accept	13

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				<p>and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would:</p> <ul style="list-style-type: none"> Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. <p>I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.</p>		
FS1214.55	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until</p>	Accept	13

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				<p>it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient:</p> <p>To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo.</p> <p>New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermined the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address</p>		

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				climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.		
FS1192.55	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
825.39	John Lawson	Oppose	Add a new chapter that provides the following: A resource management framework for the management of Genetically Modified Organisms that is regionally specific taking into account environmental, economic and social well-being considerations. Strong precautionary and prohibitive provisions, policies and rules relating to Genetically Modified Organisms that are the same (or similar) as those in the Far North District Plan, the Whangarei District Plan and the Auckland Unitary Plan, to ensure a consistent approach across Northland, Auckland and the Waikato and to eliminate cross boundary issues.	Several Councils have passed resolutions that there should be no further development and field-testing of transgenic organisms envisaged for agriculture, horticulture and forestry in their areas until the risk potential has been adequately identified and evaluated and a strict liability regime put in place. The submission raises concern regarding liability and potential cost to ratepayers as well as the implications under the Resource Management Act. Submission also raises concerns regarding harm to farmers, clean green image, irreversible impacts from GMO's, scientific uncertainty, lack of demand for GE food from main markets, transgenic pollution. Wants GE experiments and releases prohibited except in Ruakura. Conventional and organic reproductive crops must be protected and integrity of heritage seeds is critical. No mention is made of the hazards of genetically modified substances in the Proposed District Plan. GE poses risks to our environment, economy and public health.	Reject	13
FS1212.56	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification	Accept	13

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				to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.		
FS1139.126	Turangawaewae Trust Board	Support	Null	Add a new chapter- precautionary matters.	Reject	13
FS1108.141	Te Whakakitenga o Waikato Incorporated (Waikato-Tainui)	Support	Null	Add a new chapter - precautionary matters.	Reject	13
FS1199.56	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.	Accept	13
FS1192.56	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1342.315	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1214.56	Forest Owners Association	Oppose	Disallow this whole submission point.	Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified	Accept	13

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Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS1276.114	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submissions indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use...in a way...which enables people and communities to provide for their...economic...wellbeing and for their health and safety."	Reject	13
FS1343.59	Bruce Cameron	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1320.57	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				quality and competitiveness.		
FS1295.57	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1225.57	BIOtech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
830.19	Linda Silvester	Neutral/Amend	Add strong precautionary and prohibitive provisions relating to Genetically Modified Organisms that are the same or similar to those in the Far North District Plan, Whangarei District Plan and Auckland Unitary Plan	Several Councils have passed resolutions that there should be no further development and field-testing of transgenic organisms envisaged for agriculture, horticulture and forestry in their areas until the risk potential has been adequately identified and evaluated and a strict liability regime put in place. As central government has failed to put in place a strict liability regime for GMOs, liability for clean-ups, removal and elimination of escaped GE organisms, could lie with ratepayers. The Law Commission said "It is possible that environmental damage caused by GMOs could be dealt with under the RMA." The duty in itself is not enforceable, but in Part XII of the RMA there are powers to issue an abatement. The continuing use of Genetic Engineering will also harm other farmers through tarnishing our clean green image and could potentially bring an end to conventional farming. Organic farmers will be affected more by the image loss. There should be no further development and field testing of transgenic organisms envisaged for agriculture, horticulture and forestry in the district.	Reject	13
FS1295.58	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1342.316	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1343.60	Bruce Cameron	Oppose	Disallow the whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1320.58	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1212.57	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	13
FS1199.57	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits		Accept	13
FS1276.116	Whaingaroa Environmental	Support	WED seeks that the whole submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submissions indicate that many do not think GMOs accord with the purpose of the RMA;	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
	Defence Inc. Society			"managing the use...in a way...which enables people and communities to provide for their...economic...wellbeing and for their health and safety."		
FS1192.57	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1225.58	BIOTech New Zealand	Oppose	Disallow this whole submission point.	Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1214.57	Forest Owners Association	Oppose	Disallow this whole submission point.	Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient:</p> <p>To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo.</p> <p>New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter.</p> <p>The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses.</p> <p>Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding.</p> <p>The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification.</p> <p>Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding.</p> <p>The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues.</p> <p>AgResearch have been running GM field trials for many years without the need for rules from the District Council.</p> <p>Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions.</p> <p>Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well</p>		

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.		
942.24	Angeline Greensill for Tainui o Tainui	Neutral/Amend	Add a separate chapter to include a separate chapter addressing Genetically Modified Organisms that prohibits the release of Genetically Modified Organisms into the rural environment through field trials, similar to the provisions of neighbouring Councils e.g. Auckland. AND Amend the Proposed District Plan to require all applications for Genetically Modified Organism releases to be publicly notified. AND Amend the Proposed District Plan to require a bond be imposed to cover clean up should the EPA approve applications for the release of Genetically Modified Organisms in the district.	The release of genetically modified organisms into the rural landscape has become more imminent. No field trials have been permitted in New Zealand, however experiments in containment have been ongoing since the late 1990s. With the recent arrival and marketing of CRISPR and other gene editing technologies in the primary sector, it is likely that the next life of the district plan will be required to address genetically modified organisms, potentially putting taonga, primary production and the economy at risk. Council is committed to protecting high class soils for primary productive producers. There is no option but to ban field trials or release of genetically modified organisms into the environment. Tainui and the local community have become informed and more concerned about the risks of genetically modified organisms.	Reject	13
FS1295.61	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1320.61	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1343.63	Bruce Cameron	Oppose	Disallow the whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection. After that, any residual issues can be managed using	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.		
FS1342.319	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13
FS1214.60	Forest Owners Association	Oppose	Disallow this whole submission point.	<p>Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS1212.64	David Stewart Bull	Oppose	Disallow this whole submission point.	<p>Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials,</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
				<p>conditional release and full release requires public consultation. Thus there is plenty of opportunity for those oppose to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act.</p> <p>Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would:</p> <ul style="list-style-type: none"> Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. <p>I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.</p>		
FS1225.61	BIOTech New Zealand	Oppose	Disallow this whole submission point.	<p>Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	13
FS1192.60	J H & R Cotman	Oppose	Disallow this whole submission point.	<p>Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	13
FS1199.60	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	<p>GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipment to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.</p>	Accept	13

Submission point	Submitter	Support Oppose	Decision requested	Reasons	Recommendation	Section of this report where the submission point is addressed
FS1276.118	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submissions indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use...in a way...which enables people and communities to provide for their...economic...wellbeing and for their health and safety."	Reject	13
802.1	Vera van der Voorden	Not Stated	Add strong precautionary and prohibitive policies and rules relating to the management of genetically modified organisms, that are the same (or similar) as those in the Far North District Plan, the Whangarei District Plan and the Auckland Unitary Plan.	<p>As a person living on a "life style" block the submitter does not wish to be liable for any accidental cross pollination or unintentional theft of genetic material. GMOs have the potential to have significant adverse effects on ecological, economic, and resource management values, the social and cultural wellbeing of people, communities and Tangata whenua, cause biological or ecosystem harm, and GMO contamination to existing or potential forms of land use including farming, forestry, beekeeping, marine farming and other primary production activities dependent on an uncontaminated environmental brand.</p> <p>The new GM methods can cause much bigger and more dangerous genetic disruptions. New GM organisms have scant history of safe use, as they were only invented in the past 5 years and could cause more harm than first assumed.</p> <p>The Waikato has three major milk suppliers. Tatu, Fonterra and Miraka Milks have a GMO Free requirement for the milk products and rely on shareholder farmers' milk supply. The ability to control the grass genetic pollution is a major concern and it is important to have precautionary approach to any escape and release of GM until the negative effects are known on the region. Additionally there are also several other organic producers in Waikato. Once GMOs have been released into the environment, they would be very difficult if not impossible to eradicate. In the case of a food product, the "GE free" status of a district would likely be lost permanently along with the market advantages of that status.</p> <p>Application of integrated management and a precautionary approach to GMOs under the RMA is the best available technique for managing the potential adverse effects posed by GMOs within the region.</p> <p>It is consistent with the sustainable management purpose and Part 11 of the RMA to establish district plan provisions (e.g. issues, objectives, policies, rules and methods) that manage the release, location and management of GMOs where they have the potential to adversely affect the environment and other land use activities.</p> <p>This will ensure a consistent approach across Northland, Auckland and the Waikato and to eliminate cross boundary issues.</p>	Reject	13
FS1192.54	J H & R Cotman	Oppose	Disallow this whole submission point.	Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.	Accept	13
FS1199.54	New Zealand Forest Research Institute	Oppose	We seek that the whole of the original submissions to be disallowed on the basis that they are based on claimed facts and assumptions and conclusions that cannot be supported by the evidence as demonstrated and	GM is polluting and contaminating and by false implication that the Waikato and New Zealand are currently GE free GM has no benefits GM is a risk the environment GM cannot co-exist with other activities That the EPA is not equipped to manage GMOs That Waikato District Council should follow Northland Regional Council and the recommendations of the Inter-Council Working Party That GMOs are causing problems	Accept	13

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			detailed in the attached documents: (i) Pollution (ii) IS NZ GE Free (iii) Pesticide (iv) Inter-Council Working Party (v) Co-existence (vi) Benefits	with pesticides; and in the case of GE Free NZ have cited science papers proving harm. We wish to submit evidence in replay showing that all of the above claims are false.		
FS1212.54	David Stewart Bull	Oppose	Disallow the whole submission point.	Genetically modified organisms (GMO) are regulated by the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act. Any use of a GMO must first obtain approval from the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. Genetic modification has been used in other parts of the world with no scientifically credible incident of harm to human health or the environment attributable to genetic modification. Led by AgResearch Ruakura, the Waikato has been a leader in agricultural science and innovation. Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment, manage our biosecurity risks and incursions. I do not consider genetic modification is the only answer to all these issues but we will need all the tools in the toolbox if we are to make meaningful and timely progress.	Accept	13
FS1214.54	Forest Owners Association	Oppose	Disallow this whole submission point.	Out of scope Inserting provisions into the District Plan is out of scope as there is no mention of genetic modification in the notified proposed district plan, thus To provide a proper process a separate plan change should be undertaken at a future time. A plan change could be sponsored by the proponents or by the Council itself Unnecessary and inappropriate duplication of the Environmental Protection Authority under HSNO The Environmental Protection Agency currently regulates the use of GMOs under the Hazardous Substances and New Organisms Act. Decisions are made on a case by case basis. New Zealand's management of genetically modified organisms is considered one of the most conservative regulatory regimes in the world. Advice to government suggests that it is too conservative. Any use of GMO must first obtain approval from the EPA. The EPA is required to exercise a precautionary approach in its decision making therefore it is unlikely there would be any residual risk to manage. Issues of safety (including environmental safety), adverse effects on areas such as markets, effects on Maori and local iwi, other adverse effects, risks (risk mitigation) and management are considered by the EPA. Approval for field trials, conditional release and full release requires public consultation. Thus there is plenty of opportunity for those opposed to GMOs to make submissions and have their voice heard. Matters which are raised by the submitters are already considered by the EPA. Jurisdiction and control of effects by the council The courts have clarified that councils do have the	Accept	13

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				<p>jurisdiction to place controls on organisms which are GMOs. The court has not clarified if councils can prohibit GMOs as a class or put in place rules simply on the basis an organism is a GMO, nor that there is justification in doing so. Tools already exist (e.g. pest management strategies under the Biosecurity Act) for councils to manage any particular GMO which is economically useful but unwanted in the wrong place as it does with wilding pines, wilding kiwifruit, feral goats, deer and pigs. The Council should make no rules until it knows the risks which it considers have not been addressed by the EPA. This will depend on the nature of the organism and the genetic changes which have been made and should be assessed on a case by case basis. Only then should the council consider rules which it could make under the Biosecurity Act or Resource Management Act. Thus it is more efficient: To address any (unlikely) residual risk of an effect when that risk/effect is known using current tools, Than to put in place prohibitive rules which would require a plan change to undo. New Genetic Technologies and Gene editing Genetic technologies are developing rapidly. While the traditional methods of genetic modification involve the insertion of whole genes into an organism more recent techniques (often termed "gene editing"), allow changes to be made in a far more precise way. These techniques are explained in a series of information papers put out by the Royal Society of New Zealand. A simple analogy is that if the genetic code is a book, traditional GM is akin to inserting a sentence (possibly on an unrelated topic) randomly into the pages; gene editing is like using the find-and-replace function on a word processor. Some of these edits can be as small as a single letter. The genetic code in an organism runs into billions of letters. Gene editing, where it changes only one or two letters of that genetic code in a precise and targeted way compares favorably with traditional (non GM) methods such as mutagenesis where thousands of random mutations are created by exposing a plant or seed to radiation or chemicals in order to speed up the natural process of mutation. Gene editing does, in fact, introduce fewer changes than either mutagenesis or traditional breeding using pollen crosses. Mutagenesis is unregulated whereas gene editing is regulated in New Zealand as genetic modification. It is not possible to tell a gene edited organism from a non GM organism produced through traditional breeding or mutagenesis making identification in breeding programmes or the market difficult. A number of countries have (USA, Brazil, Japan, Sweden, Australia) deregulated certain gene editing techniques where the outcome could have been achieved through traditional breeding. The use of Genetic Modification in Modern Society The approved use of genetic modification has a history of safe use in medicine for 35 years and food production for 20 to 25 years. No scientifically credible incident of harm to human health or the environment attributable to genetic modification. Regulatory and science organisations around the world consider that the approved use of genetic modification to be no more risky than conventional breeding. The use of Genetic Modification in the New Zealand Environment New Zealand is not GMO free. There have already been five GMO releases into the environment approved since the passing of the Hazardous Substances and New Organisms Act (Animal vaccines and human therapeutics). These releases have presented no issues. AgResearch have been running GM field trials for many years without the need for rules from the District Council. Loss of Science Capability Led by Ruakura (AgResearch), the Waikato has been a leader in agricultural science and innovation. If the WDC were to impose rules on genetic modification in addition to those required under</p>		

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				<p>the Hazardous Substances and New Organisms act it will make research harder and more expensive in the Waikato District and there is a risk that the Waikato District will lose scientific capability to other regions. Blanket provisions not appropriate</p> <p>Implementing policies and rules in a blanket fashion as requested by the submitters would: Undermine the Waikato's leadership in agricultural science and innovation. Limit the opportunity to use new genetic technologies such as gene editing to: Address climate change, water quality and predator control; Improve productivity; Innovate to create new products, enhance the attributes and health outcomes of food; as well as Remediate the environment or manage our biosecurity risks and incursions. For instance, within the forest industry, as well as providing potential opportunities to increase the productivity of key species there are also opportunities to address the problem of wilding pines, potentially rapidly identify, isolate and breed kauri with resistance to kauri dieback, develop genetic solutions to exotic pest animal species that currently cause significant biodiversity loss, involve high costs and dispersal of chemical toxins to maintain current (unsatisfactory) levels of control.</p>		
FS1225.55	BIOTech New Zealand	Oppose	Disallow this whole submission point.	<p>Oppose this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	13
FS1295.55	Life Sciences Network Incorporated	Oppose	Disallow this whole submission point.	<p>The LSN opposes this submission point for the reasons set out in the attached pages which include: GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	13
FS1320.55	Livestock Improvement Corporation	Oppose	Disallow this whole submission point.	<p>LIC opposes this submission point for the following reasons: Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies). Another unnecessary level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</p>	Accept	13
FS1343.57	Bruce Cameron	Oppose	Disallow the whole submission point.	<p>Provisions regulating GMOs are out of scope. Claims of harm are not scientifically credible. The issues raised in the submission are already considered (using a precautionary approach) by the Environmental Protection Authority. After that, any residual issues can be managed using provisions in the Biosecurity Act (Pest Management Strategies) or the RMA by the WDC when they are known. Another level of regulation as proposed will undermine Waikato's position as a leader in agricultural science, will erode scientific capability, reduce economic</p>	Accept	13

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				<i>opportunities and will limit access to new technologies to address climate change, predator control, water quality and competitiveness.</i>		
FS1108.142	Te Whakakitenga o Waikato Incorporated (Waikato-Tainui)	Support	Null	Add prohibitive rules into plan.	Reject	13
FS1276.112	Whaingaroa Environmental Defence Inc. Society	Support	WED seeks that the whole of the submission point be allowed.	GMOs are not valued in many of the markets which local growers trade with. The extent of these submissions indicate that many do not think GMOs accord with the purpose of the RMA; "managing the use...in a way...which enables people and communities to provide for their...economic...wellbeing and for their health and safety."	Reject	13
FS1342.313	Federated Farmers	Oppose	Disallow this whole submission point.	My reasons for opposing this submission point are set out under point 245.3.	Accept	13