

**BEFORE THE HEARING COMMISSIONERS
IN WAIKATO DISTRICT**

IN THE MATTER of the Resource Management Act 1991 (“**the Act**”)

AND

IN THE MATTER of the Proposed Waikato District Plan (Stage 1) Hearing 27 Natural Hazards and Hearing 28 Other Matters Natural Hazards: Supplementary

**STATEMENT OF EVIDENCE BY LYNETTE PEARL WHARFE
FOR HORTICULTURE NEW ZEALAND
21 JUNE 2021**

1. QUALIFICATIONS AND EXPERIENCE

- 1.1 My name is Lynette Pearl Wharfe. I am a planning consultant with The AgriBusiness Group. I have a BA in Social Sciences and post graduate papers in Environmental Studies, including Environmental Law, Resource Economics and Resource Management.
- 1.2 I am an accredited commissioner under the Making Good Decisions programme with Ministry for the Environment.
- 1.3 I have been a consultant with The AgriBusiness Group since 2002. The Agribusiness Group was established in 2001 to help build business capability in the primary sector.
- 1.4 I have spent over 18 years as a consultant, primarily to the agricultural industry and rural sector, specialising in resource management, environmental issues, and environmental education and facilitation, including 18 years of providing advice to Horticulture New Zealand (“**HortNZ**”) and its precursor organisations, NZ Vegetable and Potato Growers Federation, NZ Fruitgrowers Federation.
- 1.5 As part of providing advice to HortNZ for submissions and plans across the country I have been involved in development of Regional Policy Statements, Regional Plans and District Plans, including omnibus plans such as the Auckland Unitary Plan and the Horizons One Plan and district plans in Whakatane, Opotiki and Hastings so am familiar with the range of matters to be addressed in the Proposed Waikato District Plan (“**PWDP**”).
- 1.6 I have been involved as a consultant to HortNZ contributing to submissions and further submissions on the Proposed Waikato District Plan.
- 1.7 I have read the Environment Court’s Code of Conduct for Expert Witnesses, and I agree to comply with it. My qualifications as an expert are set out in Appendix 1. I confirm that the issues addressed in this brief of evidence are within my area of expertise, except where I state I am relying on what I have been told by another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

2. SCOPE OF EVIDENCE

- 2.1 This evidence provides a planning assessment of those provisions on which HortNZ submitted which are addressed in Hearing 27 Natural Hazards which are addressed in the following reports:

- (a) Hearing 27B Natural Hazards General Submissions
 - (b) Hearing 27C Natural Hazards – Flood Hazards and Defendable Areas
 - (c) Hearing 27E Natural Hazards and Climate Change
 - (d) Hearing 27F Natural Hazards – Fire Climate change and definitions
 - (e) Hearing 28 Other matters Natural Hazards: Supplementary
- 2.2 The HortNZ submissions and further submissions do not address any matters relating to the Coastal Hazard areas.
- 2.3 In undertaking this assessment I have considered:
- (a) The Section 42A Hearing Reports for Hearing 27 and Hearing 28 Other Matters Natural Hazards Supplementary
 - (b) The s32 Reports for PWDP
- 2.4 The HortNZ submissions are addressed throughout the reports, sometimes with similar submission points being addressed in different reports by different s42A Report writers.
- 2.5 Therefore I address topics, which may traverse a number of s42A Reports, rather than sequentially through each s42a Report.
- 2.6 I will provide a table that cross references the various HortNZ submission and further submission points to the s42A Report and where they are addressed in this evidence.
- 2.7 I do note that a number of the issues addressed in Hearing 27 have been canvassed as part of the Rural or Definitions hearings and that there should be consistency across various parts of the Plan.
- 2.8 The topics are:
- (a) Buildings
 - (b) Artificial crop protection structures
 - (c) Earthworks including ancillary rural earthworks
 - (d) Hazardous substances
 - (e) Climate change

3. MY UNDERSTANDING OF HORTICULTURE NEW ZEALAND'S SUBMISSIONS

- 3.1 HortNZ made submissions and further submission on the PWDP because horticulture is a key activity within the Waikato District.
- 3.2 The submissions assessed as part of Hearing 27 Natural Hazards are concerned with horticultural activities that may be affected by the provisions in Chapter 15 Natural Hazards.
- 3.3 Such concerns particularly relate to earthworks, ancillary rural earthworks, buildings and structures and use of hazardous substances and how these activities can be undertaken in areas at risk of natural hazards.

4. GENERAL APPROACH

- 4.1 The Chapter 15 provisions are based on a risk-based approach which is supported in principle.
- 4.2 The issues identified in the submission of HortNZ are largely focussed on a different assessment of risk related to some activities undertaken as part of normal horticultural operations.
- 4.3 Growers have considerable investment in their horticultural operations and they are unlikely to want to invest where there is a risk of harm or damage.
- 4.4 However, the areas that are identified as Flood Plain Management Areas, Flood Ponding Areas or Defended areas include significant areas of rural land which must be able to use that land for rural production purposes. Much of that land is likely to remain as rural, as urban development in such areas would contain inherent risks.
- 4.5 Therefore, what the HortNZ submission seeks is that such areas are able to be utilised for rural production whilst recognising the natural hazard risks associated with that land.

5. BUILDINGS

- 5.1 HortNZ made a range of submissions on the provisions for buildings in Chapter 15. The main focus of the submissions was on farm buildings and the limitations of buildings in the rules, particularly 15.4.1.
- 5.2 Linked to the submissions on buildings were submissions seeking provisions for artificial crop protection structures, which I address separately below.

- 5.3 A number of the submissions and further submissions seek a differentiation between habitable and non-habitable buildings, on the basis that non-habitable buildings provide a lesser risk to people.
- 5.4 The s42A Report 27C (Para 130-132) reject this differentiation as the in Policy 15.2.1.12 as the policy is focused on damages to property not loss of life and amending the policy would not achieve the Objective 15.2.1 for a resilient community.
- 5.5 The policy has a provisions for buildings that are of a type that are not likely to suffer material damage during a flood. This flows through into Rule 15.4.1 P4 where there is provision for accessory or farm buildings without a floor to be a permitted activity.
- 5.6 Therefore it is taken from this that non-habitable farm buildings with a floor would likely suffer material damage during a flood. Such buildings are included within Rule 15.4.1 P1 which requires a minimum floor level at least 0.5m above the 1%AEP flood level.
- 5.7 There are a range of farm buildings that have a floor, in particular concrete floors, which water could pass through yet these are subject to permitted activity conditions under the provisions in the Plan.
- 5.8 The s42A Report 27C Para 206 considers that flooding above floor levels causes considerable damage to many other built resources and that it is difficult to determine what is a habitable building and what is not.
- 5.9 The same reasons are provided for rejecting submissions to amend 15.4.1 P4 to enable construction of non-habitable farm buildings with a floor as a permitted activity.
- 5.10 In my opinion a habitable building is one that provides cooking and ablution facilities. If these facilities don't exist a building would not be suitable for human habitation.
- 5.11 By definition a farm building is not habitable as the definition of farm building means:
- A building that supports the primary use of the site for farming. It excludes residential units.*
- 5.12 A change could be made to 15.4.1 P4 by applying the provision to all farm buildings, not just those without a floor.
- 5.13 That would enable suitable provision of farm buildings within the Flood Plain Management area and Flood Ponding areas.

- 5.14 HortNZ opposed submissions by DOC(2108.15) that sought that all buildings be Restricted Discretionary Activity. The s42A Report writer rejects these submissions and I support that recommendation.

6. ARTIFICIAL CROP PROTECTION STRUCTURES

- 6.1 There are specific concerns relating to artificial crop protection structures which are matters that have been addressed in the Rural Hearings on the Plan.
- 6.2 HortNZ has sought specific provisions for artificial crop protection structures because it is not clear if all such structures are buildings under the National Planning Standard definition of building or not.
- 6.3 Therefore, it is also unclear how the provisions in Chapter 15 will provide for such structures.
- 6.4 HortNZ provided Supplementary statements to Hearing 18 that included information regarding artificial crop protection structures and photos.
- 6.5 The definition of building in the National Planning Standard is:
- Means a temporary or permanent movable or immovable physical construction that is:*
- (a) *Partially or fully roofed; and*
 - (b) *Is fixed or located on or in land; but*
 - (c) *Excludes any motorised vehicle or other mode of transport that could be moved under its own power.*
- 6.6 Under this definition artificial crop protection structures that are only vertical (ie no horizontal cover) would not be classed as a building and so the building provisions would not apply.
- 6.7 There is a question as to whether the artificial crop protection structures with horizontal cover would be classed as a 'roof' in that the material is permeable.
- 6.8 I note that s42a Report 27F Para 176 considers that tunnel houses may be classed as artificial crop protection structures. A definition is recommended in the Hearing 18 s42a Report Rebuttal:
- Artificial crop protection structures means structures with material used to protect crops and or enhance growth (excluding greenhouses).*

- 6.9 This definition could be further clarified that the materials are permeable so that it is clear that enclosed impermeable structures are not artificial crop protection structures.
- 6.10 The s42A 27F Report writer, when evaluating submissions on the definition of farm building at Para 234-235, considers that such structures are not buildings (applying the definition of building in the PWDP) and so it is not necessary to exclude them.
- 6.11 Because of the uncertainty regarding the application of the definition of building I have sought in my EIC for Hearing 18 a separate rule for artificial crop protection structures as a permitted activity in Rule 22.1.2 subject to conditions on colour and an RDA in 22.1.3 where the permitted activity conditions are not met.
- 6.12 If the Hearing Panel accepts this approach, then such structures would not be captured by the rules for buildings in Chapter 15.
- 6.13 The question then arises as to whether restrictions should apply within Chapter 15, particularly within the Flood Plain Management Area and Flood Ponding Areas.
- 6.14 Policy 15.2.1.12 seeks to reduce the potential for flood damage to buildings located on the floodplains and flood ponding areas which is based on a minimum floor level or the building is not likely to suffer material damage during a flood.
- 6.15 The s42A 27C report writer (Para 81) considers that artificial crop protection structures are unlikely to result in material damage during a flood event.
- 6.16 The conditions relating to buildings in 15.4.1 P1 relate to a minimum floor level. 15.4.1 P4 provides for farm buildings without a floor.
- 6.17 Given that artificial crop protection structures do not have a floor they would not trigger a limitation as a building and so should be provided for as a permitted activity.
- 6.18 As artificial crop protection structures may not be classed as a building it would be appropriate that there is specific provision for artificial crop protection structures in 15.4.1. This could be achieved by adding a further line to P4:
- Construction of artificial crop protection structures.
- 6.19 A similar provision could be added to 15.5.1 P2 for High Risk Flood Area.

- 6.20 Such a provision would enable such structures to utilise the soil resource in the Flood Plain Management Area and Flood Ponding Areas.

7. EARTHWORKS AND ANCILLARY RURAL EARTHWORKS

- 7.1 HortNZ made a number of submission and further submission points relating to earthworks, particularly ancillary rural earthworks, in the Natural Hazards provisions.

- 7.2 Hearing 5, Definitions, has recommended that the National Planning Standard definition of earthworks apply to the district plan. That definition is:

Means the alteration or disturbance of land, including by moving, removing, placing, blading, cutting, contouring, filling or excavation of earth (or any matter constituting the land including soil, clay, sand and rock); but excludes gardening, cultivation, and the disturbance of land for the installation of fence posts.

- 7.3 As a consequence of the recommendation to adopt the National Planning Standard definition of earthworks it was recommended that the definition of cultivation in the standard be adopted:

Means the alteration or disturbance of land (or any matters constituting land including soil, clay, sand and rock), for the purpose of sowing, growing or harvesting of pasture or crops.

- 7.4 Adopting these definitions means that cultivation is not regarded as an earthwork and so conditions relating to earthworks do not apply to cultivation.

- 7.5 A number of submissions on the Plan sought that there be provisions for ancillary rural earthworks to enable routine farm maintenance and works to be undertaken as a permitted activity.

- 7.6 Ideally ancillary rural earthworks would be an exclusion to earthworks but that is not possible given that the National Planning Standard definition of earthworks is used.

- 7.7 Therefore the Rural Chapter recommends that ancillary rural earthworks are a permitted activity in the Rural Zone and HortNZ seeks that the same approach is adopted in Chapter 15 Natural Hazards.

- 7.8 The definition of ancillary rural earthworks has been addressed in the Rural hearings and the definition recommended in the s42A Rebuttal Report is as follows:

- a) Means any earthworks or disturbance of soil associated with: cultivation, land preparation (including establishment of sediment and erosion control measures), for planting and growing operations;
 - (b) harvesting of agricultural and horticultural crops (~~and forests~~ ~~(forestry)~~); and
 - (c) maintenance and construction of facilities typically associated with farming ~~and forestry~~ activities, including, but not limited to, farm/~~forestry~~ tracks, roads and landings, stock races, silage pits, offal pits, farm drains, farm effluent ponds, feeding pads, fertiliser storage pads, airstrips, helipads, post holes, fencing, drilling bores, stock water pipes, water tanks and troughs, the maintenance of on-farm land drainage networks, and ~~erosion and sediment control measures~~.
- 7.9 The Natural Hazard chapter has rules relating to earthworks in the Flood Plain Management Area and Flood Ponding areas (15.4), and Defended Areas (15.6).
- 7.10 The s42A Report 27C states at Para 248 in respect to submissions on Rule 15.4.1 P8 that:
- I consider that the definition of earthworks and the definition of cultivation within it, if adopted for the PWDP will mean that normal farming practices will not be constrained by this rule.*
- 7.11 On this basis the submissions seeking that ancillary rural earthworks be provided as a permitted activity in Rule 5.4.1 are rejected.
- 7.12 I do not agree that normal farming practices will not be constrained by the rule as there are limitations on cumulative volume of filling and excavation of 200m³ per site in the Rural Zone.
- 7.13 This provision is dependent on the definition of site which is recommended in Hearing 5 to be the National Planning Standard definition which is based on a single record of title. Therefore, the provision will disadvantage those whose land is held in a single large title, rather than numerous small titles.
- 7.14 A person with a 5ha title is able to undertake the same amount of earthworks as a farmer with a 100ha title. This does not appear to be a very effects based approach to the issue.
- 7.15 The concern in Rule 15.4.1 P8 appears to be volume of fill and excavation.
- 7.16 There are also submissions on Rule 15.4.1 P6 which provide for earthworks associated with construction, replacement, repair, maintenance, minor upgrading or upgrading of utilities including the

formation and maintenance of access tracks with no conditions or volumes attached.

7.17 As I read 15.4.1 P6 it applies specifically to utilities, not other earthwork activities. As such it provides for a wide range of earthworks for utility operations with no constraints.

7.18 Yet there are conditions and constraints placed on similar works to be undertaken as part of ancillary rural earthworks.

7.19 The policies specifically relevant to earthworks for normal farm operations (ie not new developments) include 15.2.1.10 Areas defended by stopbanks adjacent to the Waikato River and Policy 15.2.1.13 Control filling of land within the 1% AEP floodplain and flood ponding areas.

7.20 When I consider these policies I do not see a clear policy framework that would preclude ancillary rural earthworks being a permitted activity within the floodplain and flood ponding areas as they do not constitute filling of land – it is activities that are being undertaken within the existing environment.

7.21 Therefore I would support a rule in 15.4.1 as follows:

	Activity	Conditions
P9	Ancillary rural earthworks	Nil

7.22 P8 would need to be amended to add P9:

Earthworks not provided for under Rule 15.4.1 P6, P7 or P9.

7.23 Earthworks in the Defended Areas are discretionary if located within 50m of the toe of a stopbank, Rule 15.6.3.

7.24 The policy framework for Rule 15.6.3 is Policy 15.2.1.0 which is Areas defended by stopbanks adjacent to the Waikato River.

7.25 The purpose of the provision is to ensure that the integrity of the stopbanks are not compromised.

7.26 The integrity of the stopbanks is important to growers as breaches of the stopbanks could lead to loss of crop, such as occurred in the 2005 Flood event in Manawatu where major breaches of the stopbanks occurred and significant areas of crop were lost.

7.27 Therefore, a setback for earthworks that could compromise the stopbanks is supported.

7.28 I do note that the National Planning Standard definition of earthworks does not include cultivation so the *sowing, growing or harvesting of*

pasture or crops could occur within the 50m setback. I consider that this would provide for appropriate use of the land without undertaking earthworks that would compromise the integrity of the stopbanks.

8. HAZARDOUS SUBSTANCES

- 8.1 Policy 15.2.1.14 seeks to ensure that the location and storage of hazardous substances within the floodplains and flood ponding areas and High Risk Flood areas does not pose an unacceptable risk to people, property, infrastructure or the environment.
- 8.2 The policy is implemented in Rule 15.4.3 D3 by classing a hazardous facility as a discretionary activity in the floodplains and flood ponding areas. There does not appear to be a similar provision in 15.5.3 for High Risk Flood areas.
- 8.3 The issue of how hazardous substances should be managed was subject to significant differences between council and submitters in Hearing 8A. Until the Hearing Panel make a decision on the matter it is uncertain what provisions may apply.
- 8.4 In my EIC for Hearing 8A I opposed the use of the term hazardous facilities and sought that the focus is on hazardous substances. Therefore I do not support the use of the term 'hazardous facilities' in Rule 15.4.3 D3.
- 8.5 As currently defined in the PWDP a hazardous facility could include a vehicle applying agrichemicals and that would be a significant limitation to use of the floodplains and flood ponding areas for rural production activities.
- 8.6 An alternative that the hazardous substance provisions focus on major hazardous facilities. It would be appropriate that such facilities should be restricted within the floodplains and flood ponding areas given the nature of the activity and the amount of hazardous substance stored.
- 8.7 Therefore I would support Rule 15.4.3 D3 being amended to 'Major hazardous facilities'.

9. CLIMATE CHANGE

- 9.1 HortNZ made a submission on a number of submissions on climate change provisions, which are included in the Plan under Objective 15.2.3 and Policies 15.2.3.1 – 15.2.3.5.
- 9.2 HortNZ also made a submission on Objective 15.2.1 seeking changes relating to the ability to respond to climate change.

- 9.3 The s42A Report 27B (Para 215) does not accept the submission as an objective should not contain examples and suggests that the potential responses would form part of a policy response, but does not recommend such, rather considering that risk mitigations for climate change are best delivered through education and other non-regulatory tools.
- 9.4 I do not support that approach as I consider that responses such as water storage and changes to primary production are risk mitigations against the potential climate change hazard and should be provided for in the Plan.
- 9.5 However the main consideration of climate change is in Report 27F so this submission point has not been carried over into that report and discussion.
- 9.6 HortNZ also supported a submission by Waikato Regional Council to strengthen the links to Chapter 15 including reference to water storage and drought resistance.
- 9.7 The submission is rejected as it raises broad issues that would entail significant restructuring of the Plan. While I accept the reason the matter does highlight that the matter of climate change sits in isolation from other parts of the Plan that are relevant.
- 9.8 HortNZ sought changes to Policy 15.2.3.2 and sought that food security be included in 15.2.3.2 a) i).
- 9.9 The s42A Report 27F rejects the submission (Para 131-132) on the basis that food security is not within the current definition of natural hazards.
- 9.10 I consider that this is a very limited understanding of the issue as climate change hazard can have significant issues in terms of food security. The recent floods in the South Island and the lack of suitable routes for food supply as a result of damage to infrastructure by floods is an example of how climate change hazard could affect food security.
- 9.11 Objective 15.2.3 is recommended to read:
A well-prepared community that is resilient to the effects of climate change.
- 9.12 In my opinion such resilience includes food supply and food security when adapting to the effects of climate change.
- 9.13 Policy 15.2.3.2 lists a range of matters that are relevant to adapting to the effects of climate change and including food security within the provision is appropriate as it responds to a real concern as a result of

climate change hazard. Matters in 15.2.3.2 ii) are not all directly related to climate change hazard yet are included in the policy.

- 9.14 There is no more basic need than the provision of food and water and recognising that this need should be addressed as part of climate change hazard mitigation would seem an appropriate inclusion in the plan so that the community is well prepared and resilient.
- 9.15 Waikato District is an important area in terms of New Zealand's food supply and impacts on that food supply will affect food security across the country, so resilience is needed to be able to provide for people's basic needs.
- 9.16 Therefore I support the inclusion of food security in Policy 15.2.3.2.
- 9.17 Policy 15.2.3.4 seeks to provide for setbacks from water bodies and the coast for new development to address potential adverse effects of climate change.
- 9.18 HortNZ sought that there is specific provision for artificial crop protection structures and also opposed a submission by Waikato Regional Council (2102.89) seeking increases in the setbacks.
- 9.19 The s42A Report 27F rejects the submission of Waikato Regional Council as the submission does not seek specific setbacks.
- 9.20 I consider the submission is too broad within the context of Chapter 15 and so concur with the s42A Report recommendation.
- 9.21 The s42A Report also rejects the submission of HortNZ regarding artificial crop protection structures and that they be excluded from setbacks for climate change purposes.
- 9.22 I have addressed these structures in Hearing 18 Rural and also above in terms of flooding area.
- 9.23 If the Hearing Panel accept the recommendations in my EIC to include specific provisions for artificial crop protection structures in the rural provisions the matter will be effectively addressed.
- 9.24 It may become even more relevant for crops to be grown under cover due climate change risks so there should not be barriers to using methods that can mitigate risks in supply of food.

10. CONCLUSION

- 10.1 This evidence has set out changes I support to Chapter 15 Natural Hazards.

- 10.2 This approach is consistent with the strategic direction in the plan to provide for primary production activities which enable the economic social and cultural wellbeing of the community.

Lynette Wharfe

21 June 2021

Appendix 1: Experience of Lynette Wharfe

Some of the projects I have been involved in that I consider are particularly relevant in this context are:

- a) Project Manager and facilitator for a Sustainable Management Fund (“**SMF**”) Project ‘Reducing nitrate leaching to groundwater from winter vegetable crops’, to develop management tools for vegetable growers to implement best practice for fertiliser applications, to assist in changing fertiliser usage.
- (b) Managed an SMF project for NZ Agrichemical Education Trust communicating the revised NZS 8409:2004 Management of Agrichemicals to local authorities throughout NZ, including development and leading workshops with councils.
- (c) Revised the Manual for the Introductory GROWSAFE® Course for the NZ Agrichemical Education Trust, to make the Manual more user friendly and accessible and to align it with the Hazardous Substances and New Organisms legislation. (
- (d) Managing the research component for SFF project – SAMSN – developing a framework for the development of Sustainable Management Systems for agriculture and horticulture.
- (e) Project Manager MAF Operational Research Project Effectiveness of Codes of Practice investigating the use of codes of practice in the agriculture and horticulture sectors.
- (f) Undertook a review of Current Industry and Regional Programmes aimed at reducing pesticide risk, including assessing a number of Codes of Practice.
- (g) Contributed as a project team member for a Sustainable Farming Fund project ‘Environmental best practice in agricultural and rural aviation’ that included developing a Guidance Note on agricultural aviation, which is now on the Quality Planning website.
- (h) Undertook a review of agrichemical provisions in the Auckland Regional Air Land and Water Plan and developed a risk based response for inclusion in the Proposed Auckland Unitary Plan.