# BEFORE AN INDEPENDENT HEARINGS PANEL OF THE WAIKATO DISTRICT COUNCIL

IN THE MATTER of the Resource

Management Act 1991

AND

**IN THE MATTER** of the proposed Waikato

District Plan (Stage 1)

Hearing 25

# STATEMENT OF EVIDENCE BY SARAH NAIRN OF THE SURVEYING COMPANY ON BEHALF TKDM FARMS LIMITED

## **PLANNING**

17 February 2020

#### 1. INTRODUCTION AND SUMMARY

- 1.1 This evidence is prepared behalf of TKDM Farms Limited who own a large farm block at Koheroa Raod, Mercer. The submission by TKDM Farms Limited sought that one title (Lot 9 Deposited Plan 461781) within the larger farm block be zoned Village (opposed to Rural) in the Proposed Waikato District Plan (PWDP).
- Since lodging the submission the extent of the Village zone within the Subject Site has been revised so that it only applies to a 10ha area fronting Koheroa Road. This modified extent recognizes that the upper slopes of the Subject Site are not well suited to residential development. The revised extent also ensures that future development on the land to be zoned Village is of a size and scale appropriate to the Mercer settlement.
- 1.3 Approximately 20 new sites could be developed on the land to be zoned Village when allowance is made for topography, access and the transmission lines/pylons traversing the site. 20 sites would equate to approximately 52<sup>1</sup> residents and result in an expansion of the existing population of Mercer by approximately one third.
- **1.4** The proposed Village zone would have a range of positive planning outcomes:
  - It will increase the range of housing options at Mercer and in the northern Waikato in general. To date the majority of residential growth has focused on Pokeno and the proposed Village zone would provide an alternative location:
  - An increased population would help Mercer to evolve and further develop its identity as a place in and of itself rather than being dominated by the larger adjoining settlements of Pokeno and Meremere;
  - There would be an increased number of children living in the village who
    would then attend the school which adjoins the Subject Site. This would
    increase the viability of the school which currently has in the order of
    49<sup>2</sup>children;

PWDP Hearing 25 - TKDM Evidence SN

Average of 2.6 per household in 2018 Census

<sup>&</sup>lt;sup>2</sup> 2019 ERO report

- It will provide a positive urban design outcome as it will connect the existing residential to the school;
- It will increase the residential catchment in close proximity to the retail/business area at Mercer, this will enhance the viability and vitality of these activities;
- It will consolidate development in nodes along the Waikato Expressway.
   This will promote efficient traffic movements and better utilize this road of regional significance;
- The will be an increased population within the settlement to create more of a community identity and better enable community facilities/events;
- There will be an increased number of residents living in close proximity to big employers in the region such as Springhall Correctional Facility and Hampton Downs.
- 1.5 Importantly, the proposal will give effect to the Waikato Regional Policy Statement (WRPS) as the proposed Village zone will consolidate development around the existing settlement of Mercer and will not compromise sensitive environments or an area of High Class Soils.
- **1.6** The proposal is also consistent with the objectives and policies in the PWDP for the following reasons:
  - Consolidating growth around existing centres and communities;
  - Creating a quality, compact urban environment that responds to the local context – particularly as it will facilitate a connection between the existing housing and Mercer School;
  - The overarching approach of the Futureproof Strategy;
  - · Maintaining rural amenity and character;
  - Protecting high class soils and productive capability;
  - Making efficient use of infrastructure and communities.
- 1.7 In terms of best practice planning, it is noted that the extent of the zone has been carefully thought out to ensure that it is large enough to enable a meaningful expansion of the Mercer settlement but yet is not so large as to detract from the surrounding rural landscape or overwhelm the existing small settlement.
- **1.8** Overall, this proposal is a sensible and pragmatic way of achieving a small amount of growth around an existing village. This small amount of growth will

allow the Mercer settlement to evolve and develop a greater sense of community identity whilst also enhancing the viability of the school and the business/retail activity. Adverse effects on the surrounding environment are avoided by ensuring that the extent of land to be zoned is limited to 10ha and therefore not impactful on any significant landscapes, ecological areas or the rural environment in general.

#### 2. EXPERIENCE AND QUALIFICATIONS

#### Sarah Nairn

- 2.1 My full name is Sarah Nairn. I am a Senior Planner at TSC in Pukekohe. I hold a Bachelor of Science and a Masters of Planning Practice (Hons) from the University of Auckland.
- 2.2 My relevant professional experience spans 20 years in both the private and public sectors in New Zealand and the United Kingdom. In the public sector, I have worked in the policy team at Auckland Council undertaking a wide variety of plan changes to the Auckland City Isthmus District Plan. In this role, I was also part of the team who undertook a review of the Hauraki Gulf Islands District Plan and inputted into the preliminary stages of the Auckland Unitary Plan.
- 2.3 Within the private sector, I have worked for a range of clients to obtain resource consents for large scale residential subdivisions and other development projects. I have also undertaken private plan changes to rezone land such as Three Kings Quarry in Auckland. I also presented evidence at the Auckland Unitary Plan hearings on a range of issues. These roles have provided me broad spectrum of both policy and resource consent experience in the Auckland and Waikato regions and New Zealand generally.

### 3. CODE OF CONDUCT

3.1 I confirm that I have read the 'Expert Witnesses Code of Conduct' contained in the Environment Court of New Zealand Practice Note 2014. This evidence has been prepared in compliance with that Code in the same way as if giving evidence in the Environment Court. In particular, unless I state otherwise, this evidence is within our sphere of expertise and I have not omitted to consider material facts known to us that might alter or detract from the opinions I express.

3.2 In preparing this statement of evidence, I have read the s42A Framework Report prepared by Mark Nairn Davey.

#### 4. SCOPE OF EVIDENCE

- **4.1** This evidence has been structured in the following way:
  - (a) Sections 5 and 6 set out the background as to the submitter, location of the Subject Site and the relief sought;
  - (b) Sections 7, 8 and 9 undertake a zone assessment of the relief sought in accordance with the '3 Lens' approach set out in the Framework Report by Mark Davey;
  - (c) Section 10 sets out a summary of the Section 32 analysis;
  - (d) Section 11 contains my conclusion.

#### 5. SUBMITTERS AND SUBJECT SITE

- 5.1 This evidence is prepared on behalf of TKDM Farms Limited who own Lot 9 Deposited Plan 461781 at Koheroa Road, Mercer (**Subject Site**).
- 5.2 The Subject Site is approximately 28ha in area and is located to the southeast of the Mercer settlement. Lot 9 Deposited Plan 461781 is part of a larger (390ha) farm block owned by the submitter. This Subject Site is shown in the aerial photo below:



Figure 1 Location of Subject Site

- 5.3 The above aerial photo shows that Mercer is a small settlement adjoining State Highway 1 to the south of Pokeno. The settlement is comprised of Mercer School (on Glass Road), a pocket of residential development on Koheroa Road, and a reasonably large area of business activity adjoining Great South Road.
- As a general, first up impression from a planning perspective, the amount of residential land in the settlement seems low considering the relatively large business area and the existence of community facilities, such as Mercer School. The Waikato District Blueprint 2019 confirms this impression as it estimates the population of Mercer at 140 whereas nearby Meremere has an estimated population of 564.

#### 6. RELIEF SOUGHT

- 6.1 The Subject Site is proposed to be zoned Rural in the PWDP. The submission by TKDM Farms Limited sought that the entire Subject Site be zoned Village instead of Rural.
- 6.2 However, since lodging the submission the extent of the Village zone has been modified so that it only applies to a 10ha area fronting Koheroa Road. This modified extent recognizes that the upper slopes of the Subject Site are not well suited to residential development and also ensures that future development on

the Subject Site is of a size and scale appropriate to the Mercer settlement. The plan below shows the revised extent of Village zone now sought by TKDM Farms Limited (a larger copy of the plan is contained in Appendix 1):

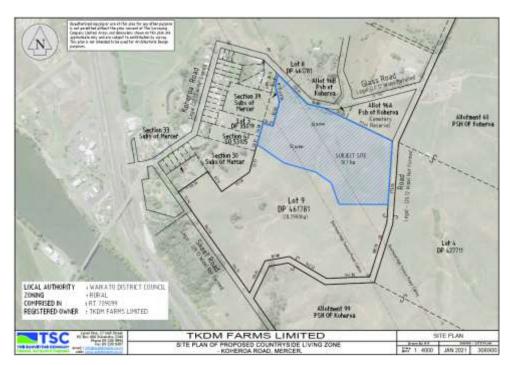


Figure 2 Plan Showing Revised Extent of Village Zone

- Village zone, it is expected that approximately 18-20 sites could be created when allowance is made for topography, access and the transmission lines/pylons located on the site. 18-20 sites would equate to approximately 47-52 residents which would result in an expansion of the existing population of Mercer by approximately one third.
- 6.4 Increasing the population of the settlement would have a range of positive planning outcomes:
  - It will increase the range of housing options at Mercer and in the northern Waikato in general. To date the majority of residential growth has focused on Pokeno and the proposed Village zone would provide an alternative location;
  - An increased population would help Mercer to evolve and further develop its identity as a place in and of itself rather than being dominated by the larger adjoining settlements of Pokeno and Meremere;

- There would be an increased number of children living in the village who
  would then attend the school which adjoins the Subject Site. This would
  increase the viability of the school which currently has in the order of
  49<sup>3</sup>children;
- It will provide a positive urban design outcome as it will connect the existing residential to the school;
- It will increase the residential catchment in close proximity to the retail/business area at Mercer, this will enhance the viability and vitality of these activities;
- It will consolidate development in nodes along the Waikato Expressway.
   This will promote efficient traffic movements and better utilize this road of regional significance;
- The will be an increased population within the settlement to create more
  of a community identity and better enable community facilities/events;
- There will be an increased number of residents living in close proximity to big employers in the region such as Springhall Correctional Facility and Hampton Downs.
- The Framework Report by Mark Davey sets out a '3 lens' assessment to be undertaken as part of any proposal to zone land. I have followed this assessment so that there is consistency across the evidence and the s42a reports. I do, however, note that there are aspects of the '3 lens' approach that I do not agree with, these areas are noted within the assessment below.

# 7. LENS 1: ASSESSMENT OF RELEVANT OBJECTIVES AND POLICIES IN THE PWDP

- 7.1 The Framework Report identifies that the 'starting point' for a zoning assessment is to evaluate the proposed zoning against the relevant objectives and policies in the PWDP.
- **7.2** To this end, I have evaluated the proposal against the matrix contained in Appendix 2 of the Framework Report:

<sup>&</sup>lt;sup>3</sup> 2019 ERO report

Relevant Objectives and	Assessment		
Policies			
Growth occurs in defined growth	The Framework Report states that "defined growth areas" are		
areas (1.5.2(a)).	'urban environment' zones under the PWDP (p64). As the		
	Subject Site is zoned Rural it is not within the 'urban		
	environment' in the PWDP and consequently is also not		
	within a "defined growth area" as per the PWDP.		
	I do not consider this to be an issue as this objective is an		
	example of an objective which is intended to be applied when		
	the plan is operative and is being implemented.		
	I also consider that it is up to this submissions and hearings		
	process to define the "growth areas" and the "urban and rural		
	environments", it is not the PWDP that does that.		
Urban development takes place	The proposed Village zoning will provide for urban		
within areas identified for the	development in an appropriate location given that the Subject		
purpose in a manner which utilizes	Site is located directly <u>adjacent</u> to the existing Mercer		
land and infrastructure most	settlement. This location and the density of development		
efficiently 1.12.8(b)(i).	sought will ensure that the land will be used efficiently.		
Promote safe, compact	The proposal to zone the Subject Site to Village will		
sustainable, good quality urban	consolidate urban development around the existing Mercer		
environments that respond	settlement. In particular, it will create a good urban design		
positively to their local context.	outcome as the proposal will effectively connect the		
1.12.8(b)(ii)	residential development on Koheroa Road with Mercer		
	School and the cemetery on Glass Road. This connection is		
	shown below:		

Relevant	Objectives	and	Assessment	
Policies				
			School School Subject Site	
Focus urban	growth in ex	isting	There is an existing community at Mercer. The proposed	
urban comm			Village zone will enable a natural extension/growth of this	
capacity	for expar	nsion.	community which will help to better utilize facilities such as	
1.12.8(b)(iii).			Mercer School (years 1-8) and the retail/business area.	
Protect and e	nhance green	open	There are no areas of historical, cultural, ecological or	
space, outsta	anding landsc	apes,	environmental significance on the Subject Site.	
and areas of	cultural, ecolo	gical,		
historic an	nd environm	nental		
significance (1	I.12.8(b)(vi)).			
Future se	ttlement pa	attern	This proposal will consolidate development 'around' the	
consolidated		round	existing village of Mercer.	
_	s and villages i			
	fined growth a		The proposal is not located in a 'defined growth area' but this	
1.5.1(b);	1.12.3(a);1.12	2.3(c);	is not considered to be significant for the reasons outlined	
4.1.2(a); 5.3.8			above.	
•	areas are cons		The Settlement Pattern contained within the Future Proof	
	Proof Strateg	y for	Strategy 2017 does not identify a Residential Growth Node	
Growth 2017	4.1.3(b)		at Mercer in the Settlement Pattern. In fact the Future Proof	
			Strategy does not identify or mention Mercer at all within the	
			whole document. This is because the Future Proof Strategy	
			is a high level/regional document and therefore does not	
			provide guidance on small settlements/villages such as	
			Mercer.	

Relevant Objectives and	Assessment		
Policies			
	Notwithstanding that Mercer is not specifically mentioned within the Future Proof Strategy, the proposal is consistent with the overarching principles within the document:  • The Key Targets in the strategy seek that "approximately" 80% of growth in the Waikato District will be in Te Kauwhata, Huntly, Pokeno, Tuakau, Ngaruawahia, Raglan and various villages". Mercer is a village;  • The Key Assumptions about the Sub-Region identify that "additional capacity is provided in the northern Waikato towns to meet anticipated demand as well as the influence of Auckland";  • The guiding principles seek to encourage development to locate adjacent to existing urban settlements and nodes in both the Waikato and Waipa Districts and that rural-residential development occurs in a sustainable way to ensure it will not compromise the Future Proof settlement pattern or create demand for the provision of urban services.  Overall, it is considered that proposal is consistent with the		
Infrastructure can be efficiently	As the land to be zoned adjoins the existing settlement it is		
and economically provided (4.1.3(a)).	considered that infrastructure should be able to be provided efficiently and economically. However, if this does not turn out to be the case, sites within the proposed Village zone are required to be self-sufficient in terms of water, wastewater and stormwater.		
Encourage higher density housing and retirement villages to be located near to and support commercial centres, community	Whilst the Village zone is not "higher density" housing, it will none the less result in a higher density of people living in close proximity to the Business zoned land and Mercer School. This is a positive outcome as residents will have		

Relevant	Objectives	and	Assessment	
Policies				
facilities, public transport and open space (4.1.5(a))			good access to community facilities and the viability of the school and business will be increased though the increased catchment of customers/students.	
environr (i) High prote rural	ment within the ment where:	are uctive	The area of land proposed to be zoned does not include High Class Soils as per the definition in the PWDP (soils are LUCIIIe3).  Whilst the proposal will remove 10ha from the larger farm	
are main		while ncing	block, 380ha will remain as a productive farm unit.	
(iii)Urban subdivision use, productive rural activities are supported and development in the rural environment is avoided.  5.1.1(A)(i)(ii)(iii); 5.3.8)			This is an example of an objective that is intended to apply in the implementation of the plan rather than the formulation of the plan. The extent of the rural environment needs to be determined in the process and then the objective applied to future resource consents.	
Rural character and amenity are maintained (5.3.1(a) and 5.3.4(a)(b)).		and	The location of the Subject Site adjoining the existing Merce settlement means that any future development will be viewed as part of the settlement rather than the wider rura environment. Adding to this is the fact that the Subject Site is tucked in behind the slopes of the existing housing and, as such, cannot be readily viewed from key viewing locations such as State Highway 1. These factors will ensure that rura character and amenity will be maintained.	
	rural character rural subdivision			
by direct	oroductive rural a cting urban forn ion, use ment to within	ns of and	The proposal will not compromise the productivity of the overall site as the land to be zoned does not contain High Class Soils (soils are LUCIIIe3) and as the remaining 380ha will be retained as a farming unit.	

#### Relevant **Objectives** and Assessment **Policies** boundaries of towns and As identified above, the location of the Subject Site adjoining villages; (b) Ensure development does the existing Mercer settlement means that any future development will be viewed as part of the settlement rather not compromise the predominant open space, than the wider rural environment. Adding to this is that fact character and amenity of rural that the Subject Site is tucked in behind the slopes of the existing housing and, as such, cannot be readily viewed from areas; key viewing locations such as State Highway 1. These factors will ensure that rural character and amenity will be maintained. (c) Ensure subdivision, use and Development on the land to be zoned will consolidate development minimize the development around the existing Mercer settlement rather effects of ribbon than creating ribbon development. development; (e) Subdivision, and As identified above, rural character and amenity will be use development opportunities maintained as development on the land to be zoned will be tucked in behind the existing development and hill slopes. ensure that rural character and amenity values are maintained: (f) Subdivision use and The Village zone requires sites to be self-sufficient in terms development ensures the of water, wastewater and stormwater. Therefore the only impact on public infrastructure will be cars using Koheora effects on public infrastructure are minimised. Road and given that there will only be 20 households this is likely to be minimal. This will need to be addressed as part of (5.3.8(a)(b),(c),(e),(f)).any future consent process. The only overlay applying to the site in the PWDP is the Meets district wide rules and any relevant overlays. National Grid overlay indicating the high voltage transmission lines which traverse the site. The required separation distances from these lines and pylons will need to be factored into the detailed design of any subdivision. Other district wide rules such as earthworks will also need to be factored into the detailed design of any subdivision.

- 7.3 The above table shows that the proposal to zone 10ha of land on the Subject Site to Village is consistent with the relevant objectives and policies relating to:
  - · Consolidating growth around existing centres and communities;
  - Creating a quality, compact urban environment that responds to the local context – particularly as it provides a connection between the residential and the school;
  - The overarching approach of the Futureproof Strategy;
  - Maintaining rural amenity and character;
  - · Protecting high class soils and productive capability;
  - Making efficient use of infrastructure and communities.

# 8. LENS 2: CONSISTENCY WITH HIGHER ORDER POLICY DOCUMENTS AND STRATEGIES

- 8.1 The second step of the 3 Lens approach is to assess the proposal against the relevant higher order documents, namely the National Policy Statement Urban Development 2020 (NPS-UD) and the WRPS. This assessment is important as Section 75 of the RMA requires district plans to give effect to any National Policy Statement and any operative regional policy statement.
- 8.2 These higher order documents are best assessed in a 'top down' fashion given that the higher level documents direct those that follow rather than the other way around.

### National Policy Statement - Urban Development

8.3 The NPS-UD requires district plans provide sufficient residential and business development capacity. This policy statement does not apply to this proposal as Mercer is not an "urban environment" as per the definition in the NPS-UD as set out below:

"any area of land (regardless of size, and irrespective of local authority or statistical boundaries) that:

(a) Is, or is intended to be, predominantly urban in character; and

(b) Is, or is intended to be, part of a housing and labor market of at least 10,000 people."

# Waikato Regional Policy Statement

8.4 The provisions of the WRPS that are relevant to this proposal are those relating to the soils, the built environment and growth. These provisions are addressed in turn below:

## (a) Soils

Objectives 3.25 relates to managing the soil resource to safeguard its life supporting capacity. The proposal to zone 10ha of land Village is consistent with this objective as the limited extent of the area to be zoned means that the vast majority of the farm (and therefore the vast majority of the soil resource) is maintained (being 380ha).

Objective 3.26 seeks to protect high class soils from inappropriate subdivision, use or development. As there are no high class soils on the land to be zoned, this objective is achieved.

#### (b) Built Environment

Objective 3.12 seeks to ensure that:

"development of the built environment (including transport and other infrastructure) and associated land use occurs in an integrated, sustainable and planned manner which enables positive environmental, social, cultural and economic outcomes....".

This proposal is consistent with this objective as the land to be zoned will enable development of housing while at the same time not compromising any areas of natural character, outstanding natural landscape or biodiversity.

Policy 6.1 in the WRPS seeks to give effect to Objective 3.12 by requiring subdivision, use and development, including transport, to occur in a planned and co-ordinated manner which has regard to the principles in section 6A,

recognizes potential cumulative effects, has regard to the existing environment and is based on sufficient information. This proposal meets policy 6.1 as:

- sufficient information has been provided in the submission and this evidence relative to the size of the proposal;
- the proposal will not have cumulative effects given that the proposal is limited to one discrete site adjoining the existing settlement;
- the proposal has regard to the existing built environment as it seeks to
  extend the existing pattern of development to the adjoining site and
  create a linkage between the existing residential sites and the school;
- An assessment in terms of the principles in section 6A is set out below (note that some of the principles have been abbreviated):

Development Principles	Assessment	
New development should:		
support existing urban areas in preference to creating new	This proposal supports the existing Mercer	
ones;	settlement rather than creating a new one.	
occur in a manner that provides clear delineation between	The Village zone boundary will create a clear	
urban areas and rural areas;	delineation between the urban environment in	
	Mercer and the wider rural landscape.	
	Particularly as the hill slopes rise steeply from	
	the edge of the zone boundary.	
make use of opportunities for urban intensification and	This proposal provides for development	
redevelopment to minimise the need for urban development	around an existing urban area as opposed to	
in greenfield areas;	a new greenfield area. It is also noted that	
	there are no other submissions seeking an	
	urban zone in or around Mercer, so therefore	
	this proposal represents the only opportunity	
	to provide for intensification around the	
	settlement.	
not compromise the safe, efficient and effective operation	This proposal will not compromise the	
and use of existing and planned infrastructure, including	operation of the Waikato Expressway. The	
transport infrastructure, and should allow for future	proposal is suitably separated from the	
infrastructure needs, including maintenance and upgrading,	Expressway to avoid any potential reverse	
where these can be anticipated;	sensitivity effects	

Development Principles	Assessment	
New development should:		
	The detailed design of the future subdivision	
	will also ensure that the necessary separation	
	distances from the transmission lines are met.	
connect well with existing and planned development and	This proposal will connect well with the	
infrastructure;	Waikato Expressway as it will increase the	
	number of people living in close proximity and	
	therefore encourage the efficient use of this	
	infrastructure.	
identify water requirements necessary to support	Lots within the Village zone need to be self-	
development and ensure the availability of the volumes	sufficient in terms of water.	
required		
be planned and designed to achieve the efficient use of	As lots within the Village zone need to be self-	
water	sufficient in terms of water this inherently	
	ensures that water is used efficiently.	
be directed away from identified significant mineral	There is a transmission corridor which	
resources and their access routes, natural hazard areas,	traverses the site but any future subdivision	
energy and transmission corridors, locations identified as	can be designed to ensure that the required	
likely renewable energy generation sites and their	separation distances can be met.	
associated energy resources, regionally significant industry,		
high class soils, and primary production activities on those	There are no high class soils on the site and	
high class soils;	primary production will be retained on the	
	remainder of the farm block.	
promote compact urban form, design and location to:	The proposal will create a compact form of	
i) minimise energy and carbon use;	development at Mercer through the	
ii) minimise the need for private motor vehicle use;	continuation of the Village zone on Koheroa	
iii) maximise opportunities to support and take	Road. The location of the Subject Site next to	
advantage of public transport in particular by	the school will encourage students to walk.	
encouraging employment activities in locations that	Whilst the railway station at Mercer is not in	
are or can in the future be served efficiently by public	use at the current it could have a passenger	
transport	service in the future. The proposal will also	
iv) encourage walking, cycling and multi-modal	make good use of the Waikato Expressway	
transport connections; and	given that residents will have close and easy	
v) maximise opportunities for people to live, work and	access to onramps.	
play within their local area;		
maintain or enhance landscape values and provide for the	The limited size of the land to be zoned Village	
protection of historic and cultural heritage;	will maintain the wider rural landscape.	

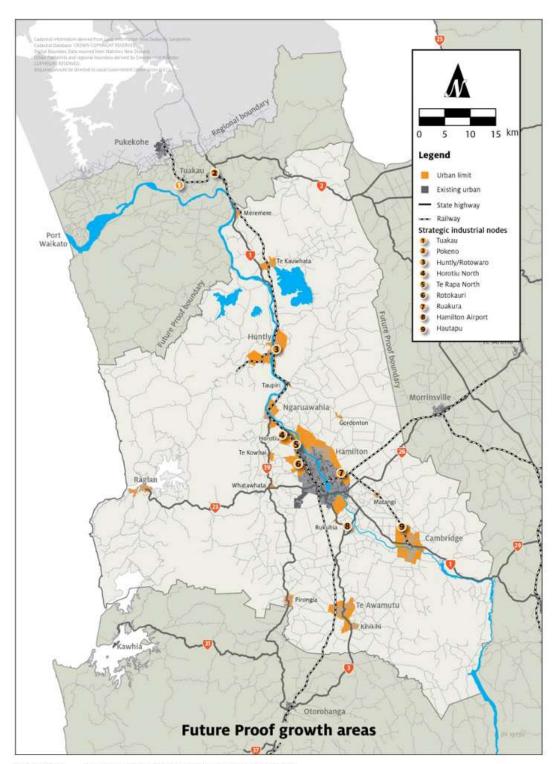
Development Principles	Assessment	
New development should:		
promote positive indigenous biodiversity outcomes and	There is no significant vegetation or ecological	
protect significant indigenous vegetation and significant	area on the land to be zoned Village.	
habitats of indigenous fauna. Development which can		
enhance ecological integrity, such as by improving the		
maintenance, enhancement or development of ecological		
corridors, should be encouraged;		
maintain and enhance public access to and along the	Not relevant.	
coastal marine area, lakes, and rivers;		
avoid as far as practicable adverse effects on natural	The development design of any future	
hydrological characteristics and processes (including	subdivision proposal will need to take the	
aquifer recharge and flooding patterns), soil stability, water	hydrological characteristics of the land into	
quality and aquatic ecosystems including through methods	account.	
such as low impact urban design and development (LIUDD);		
adopt sustainable design technologies,	It will be up to the design of the subdivision	
	and future houses to adopt sustainable design	
	technologies.	
not result in incompatible adjacent land uses (including	There will be not be any incompatible land	
those that may result in reverse sensitivity effects), such as	uses given that the Village zone will adjoin	
industry, rural activities and existing or planned	other Village zoned sites on one side and	
infrastructure	Rural zone on the other sides.	
be appropriate with respect to projected effects of climate	The site is well set back from the river and the	
change and be designed to allow adaptation to these	coast and as such is unlikely to be affected by	
changes;	climate change.	
consider effects on the unique tāngata whenua	Tangata whenua values are important and will	
relationships, values, aspirations, roles and responsibilities	be considered as part of the detailed design	
with respect to an area. Where appropriate, opportunities to	process.	
visually recognise tāngata whenua connections within an		
area should be considered;		
support the Vision and Strategy for the Waikato River in the	On-site mitigations measures will be put in	
Waikato River catchment	place to ensure that the works on the site do	
	not have adverse effects on the Waikato River	
	catchment.	
encourage waste minimisation and efficient use of resources	Efficient design and construction methods can	
(such as through resource-efficient design and construction	be adopted or included as part of the	
methods); and	subdivision design or works on-site.	

Development Principles	Assessment			
New development should:				
recognise and maintain or enhance ecosystem services	There are no protected or significant			
	ecosystems on the site.			

In addition to the principles in Section 6A, Policy 6.1.8 sets out a list of information that must be provided as part of the application of a zone to a site/land. This information list is provided in the Appendix 3.

# (c) Growth

The final aspect of the WRPS that is relevant to this proposal is Policy 6.14 which identifies that growth within the Waikato Region is to be managed by adopting the Future Proof land use pattern as set out on the plan below:



Map 6-2: Future Proof indicative urban limits

Figure 2 WRPS Future Proof Indicative Urban Limits

It can be seen that Mercer is not identified as a growth area (with urban limits) on the Future Proof Settlement Plan. While Mercer is not identified on Map 6-2 above, this does not mean that growth cannot occur in in Mercer as Policy 3.3 specifically provides for growth outside growth strategy areas. Policy 3.3 states:

#### "6.3.3 Urban Growth outside of growth strategy areas

District plans shall ensure that in areas not subject to a growth strategy, urban development is predominantly directed to existing urban areas and is contiguous with, and well connected to them".

The explanation to policy 6.14 further confirms this approach as it states that "new urban development can occur in centres which do not have urban limits as long as it is consistent with Table 6-1 and 6-2". Table 6-2 is not relevant to this application but Table 6-1 is relevant and indicates that 5% of the population of the Waikato region is expected to live in Rural Villages such as Mercer by 2041. This again confirms that growth is expected to occur in an around villages such as Mercer.

It is also noted that even if the proposal was not consistent with Table 6-1 it is consistent with the provisions relating to alternative land release (6.14.3) as:

- The proposal is consistent with the overarching principles of the Future Proof Strategy as set out in the table in Section 7;
- The proposal will maintain and enhance the safe functioning of infrastructure such as the Waikato Expressway;
- The proposal is consistent with the development principles contained in Section 6a (as shown in the table above).

Overall, the proposal will give effect to the WRPS as it protects the important soil resource (including high class soils), it is consistent with the objectives and policies relating to the built environment (given that development on the Village zoned land will integrate with the existing settlement) and as it is consistent with the provisions relating to growth as it consolidates growth around an existing settlement.

#### Other Documents - Growth Strategies

**8.5** Within the Framework Report there are two growth strategies that have been prepared to manage growth in the Waikato region. These strategies do not have

the same status as the WRPS as they are not RMA documents. As such, they are documents that must be "had regard to", rather than be "given effect to".

- 8.6 The first strategy to have regard to is the Future Proof Strategy 2017. This strategy was considered in the table in Section 7 above where it was identified that Mercer is not identified or mentioned in the entire Future Proof document but that growth around Mercer is consistent with the overarching principles of the strategy for the following reasons:
  - The Key Targets in the strategy seek that "approximately" 80% of growth in the Waikato District will be in Te Kauwhata, Huntly, Pokeno, Tuakau, Ngaruawahia, Raglan and <u>various villages</u>". Mercer is a village;
  - The Key Assumptions about the Sub-Region identify that "additional capacity is provided in the northern Waikato towns to meet anticipated demand as well as the influence of Auckland";
  - The guiding principles seek to encourage development to locate adjacent to existing urban settlements and nodes in both the Waikato and Waipa Districts and that rural-residential development occurs in a sustainable way to ensure it will not compromise the Future Proof settlement pattern or create demand for the provision of urban services.
- 8.7 The second strategy is Waikato 2070 which was approved in 2020. This strategy also seeks a compact form of development and includes a series of development plans. The development plan relating to Mercer is set out below:

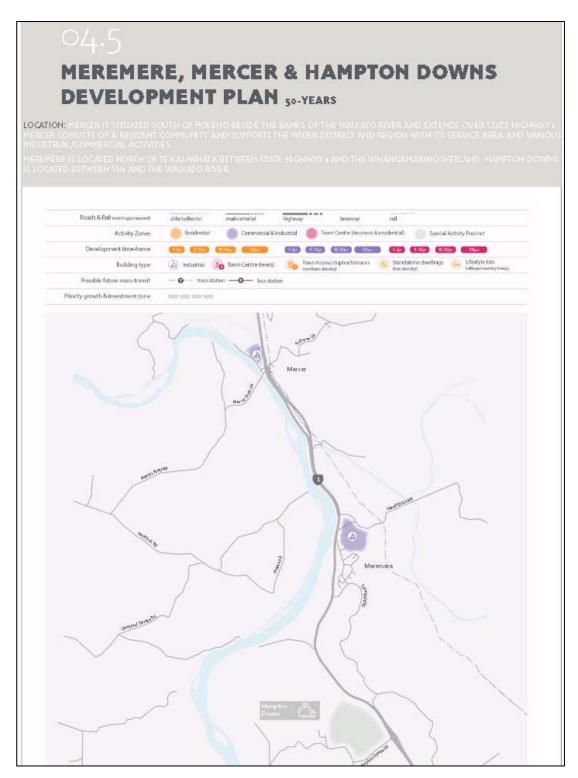


Figure 3 Development Plan from Waikato 2070

8.8 It is acknowledged that the above plan does not show the land proposed to be zoned village. This does not mean that it is not a good idea or that it should not happen, it simply means that the submitter was not part of the Waikato 2070 process.

# 9. LENS 3: PLANNING BEST PRACTICE

9.1 The third and final step of the '3 Lens' approach requires an assessment of the proposed rezoning against a range of matters that relate to 'planning best practice'. This assessment is undertaken in the table below:

Planning Best Practice Issues	Assessment		
Economic costs and benefits are	The Section 32 assessment included in Appendix 4 of this		
considered	evidence outlines the costs and benefits associated with the		
	proposed Village zone. In essence, there are economic benefits		
	in terms of the increased amount of housing and the increased		
	residential catchments patronizing the retail and business		
	activities within the Mercer village.		
	There is a cost in terms of the reduction of land included in the		
	farm block but given that 380ha will remain the overall		
	productivity is not compromised.		
Changes take into account the	There are no plan changes that raise any issues that are		
issues debated in recent plan	relevant to this proposal.		
changes			
Changes to zone boundaries are	As identified above, there are no specific overlays or constraints		
consistent with the maps in the	applying to the site other than the high voltage transmission		
plan that show overlays or	lines. The Subject Site is not identified as being subject to any		
constraints e.g. hazards	flood hazard overlays in Stage 2 of the PWDP.		
Changes take into account	The extent of the proposed Village zone has specifically been		
features of the site (where it is,	reduced in recognition of the fact that the upper portion of the		
what the land is like, what it is	site is too steep for residential development.		
used for and what is already built			
there).			
Zone boundary changes	As identified above, lots in the Village zone are self-sufficient i		
recognise the availability, or lack	k terms of water, wastewater and stormwater and therefore the		
of, major infrastructure.	availability of infrastructure is not an issue.		
	In terms of transport infrastructure the land is in close proximity		
	to the Waikato Expressway. It is a positive planning outcome to		

Planning Best Practice Issues	Assessment		
	increase the amount of housing in close proximity to the		
	expressway as it will promote the efficient use of this significant		
	infrastructure.		
There is adequate separation	There are no incompatible land uses surrounding the land to be		
between incompatible land uses	zoned Village. The southern boundary of the Village zone will		
e.g. houses not next to heavy	interface with the Rural zone but this is almost always the case		
industry	with the Village zone.		
Zone boundaries need to be	The zone boundary has been aligned to exclude the upper		
clearly defensible	areas of the subject site which are too steep for residential		
	development.		
	Furthermore, the zone boundary has been set to limit the size		
	of the land to be zoned Village to 10ha so as to ensure that the		
	growth being provided does not 'overwhelm' the existing small		
	settlement.		
Zone boundaries follow property	The southern boundary of the proposed Village zone will not		
boundaries	follow a cadastral boundary. This will create a "split zone" of		
	Rural and Village which is not ideal from a best practice		
	planning perspective. However, the split zone will only be an		
	interim issue as the submitter will be able to undertake a		
	boundary adjustment (or subdivide) along the zone boundary		
	which will effectively make the split zone 'disappear'.		
Generally, no "spot zoning"	The proposed Village zone will not create a "spot zone" as it will		
	adjoin an existing area of Village zoned land as shown below:		

Planning Best Practice Issues	Assessment
	Subject Site
Zoning takes into account	There are no existing resource consents that are relevant to this
existing resource consents and	rezoning proposal.
existing use rights, but this does	
not determine zoning.	

9.2 Overall, the proposal is considered to meet the 'best planning practice' guidance as the extent of the proposed Village zone has been carefully thought out to ensure that it is large enough to enable a meaningful expansion of the Mercer village but yet is not so large as to dominate or overwhelm the village. The need to avoid development on the steep upper slopes has meant that the southern boundary of the proposed Village zone does not follow a cadastral boundary but this will only be an interim situation as it can be remedied through a boundary adjustment or subdivision.

## 10. SECTION 32 ANALYSIS

- Appendix 4 to this evidence contains an analysis of the proposal in accordance with Section 32 of the Resource Management Act (and in accordance with the template contained in the Framework Report). This analysis identifies that the most appropriate rezoning option is to apply the Village zone to 10ha portion of the Subject Site adjoining Koheroa Road Village.
- This option will enable this lower portion of the site to be developed for housing which will in turn increase the population of Mercer. The increased population will enhance the viability of Mercer School and the retail and business activities.

10.3 The option of retaining the Rural zone was considered but it was discounted on the basis that it did not generate any significant benefits for the community or the environment.

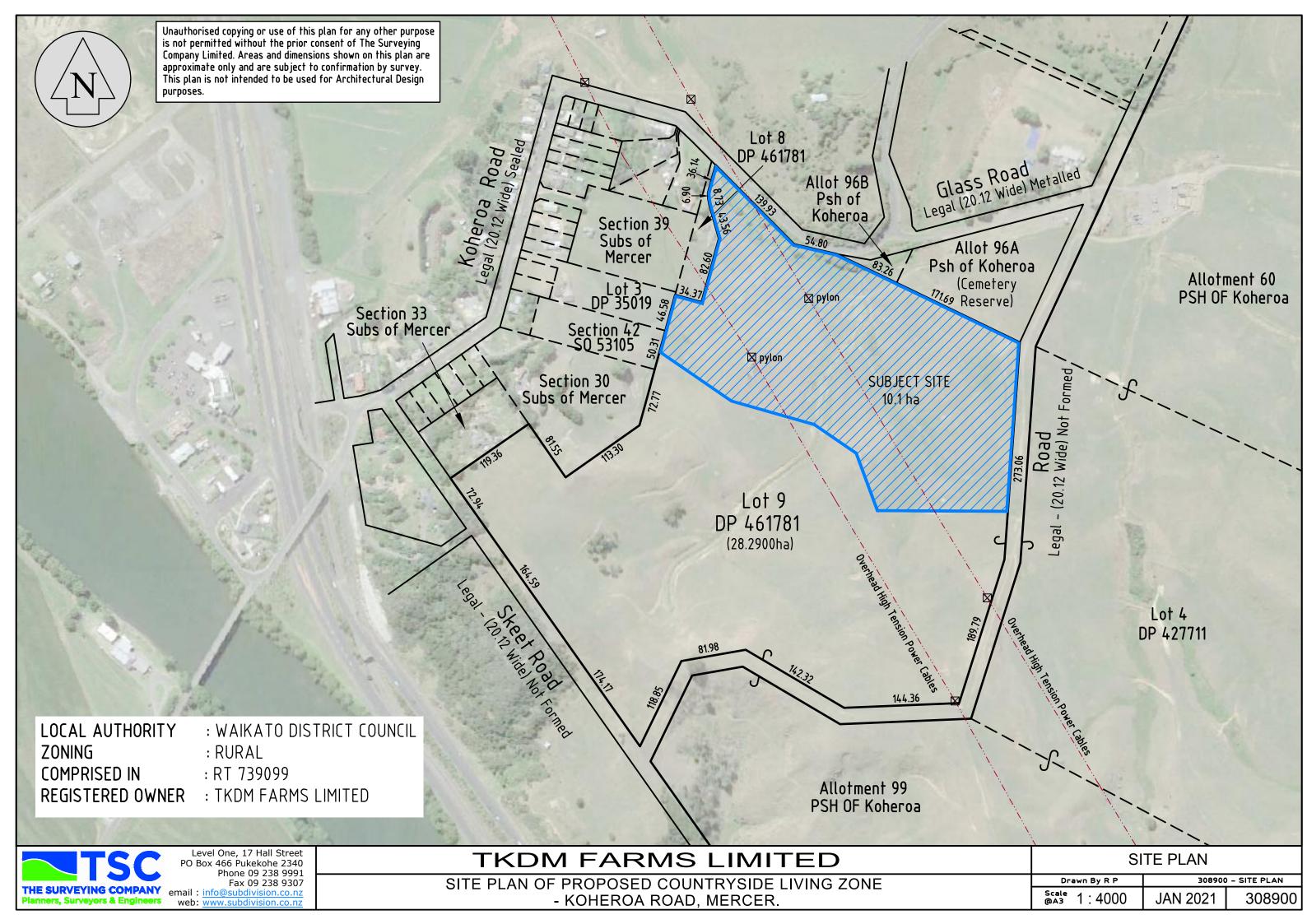
## 11. CONCLUSIONS

- 11.1 The ultimate question for this hearing is to determine if the Rural zone (as proposed in the PWDP) is the most appropriate zone for the 10ha portion of land fronting Koheroa Road or if the 10ha portion should be zoned Village.
- 11.2 I am of the view that the Village zone is the most appropriate as it will enable a form of growth that is needed and sought by the relevant planning documents and most importantly will enhance the Mercer settlement by creating a quality urban form and by enhancing the viability of the school and retail and business activities.

**SARAH NAIRN** 

17 February 2021

# **APPENDIX 1 – PLAN**



# **APPENDIX 2 – GEOTECH REPORT**

# TKDM FARMS LTD

LOT 9, KOHEROA ROAD, MERCER





# GEOTECHNICAL FEASIBILITY ASSESSMENT FOR A PROPOSED VILLAGE ZONE

REF: R6791-1A DATE: 22 DECEMBER 2020



# REPORT QUALITY CONTROL

REPORT PREPARED BY: GROUND CONSULTING LIMITED (GCL)



## **PUKEKOHE OFFICE**

UNIT 2, 4 MANUKAU ROAD, PUKEKOHE POST: PO BOX 1019, PUKEKOHE, 2120

EMAIL: pukekohe@gcltech.co.nz

TEL: 09 239 2229

DOCUMENT CONTROL					
REPORT TITLE		GEOTECHNICAL FEASIBILITY ASSESSMENT FOR A PROPOSED VILLAGE ZONE			
REPOR <sup>-</sup>	T REFERENCE	R6791-1A PROJECT NUMBER		6791	
CLIENT		TKDM FARMS LTD			
REV	DATE	REVISION STATUS	AUTHOR	REVIEWER	
Α	22 DECEMBER 2020	ISSUED TO CLIENT	LUKE KENNEDY	FRASER WALSH	
APPRO)	VAL				
AUTHOR SIGNATURE		Sall	REVIEWER SIGNATURE	Fraze N	
NAME		LUKE KENNEDY	NAME	FRASER WALSH CMEngNZ (PEngGeol)	
TITLE		ENGINEERING GEOLOGIST	TITLE	DIRECTOR	



# **TABLE OF CONTENTS**

1	INTRODUCTION	5
1.1	PROJECT BACKGROUND	5
1.2	PROPOSED SITE DEVELOPMENT	5
2	DESKTOP STUDY	5
2.1	PREVIOUS INVESTIGATIONS	5
2.2	NEW ZEALAND GEOTECHNICAL DATABASE	5
2.3	HISTORIC AERIAL PHOTOGRAPHS	5
3	SITE CONDITIONS	6
3.1	SITE TOPOGRAPHY & GEOMORPHOLOGY	6
3.1.1	Low risk of slope instability - semi-level to gentle topography (ZONE 1)	7
3.1.2	Moderate risk of slope instability – moderate to steeply sloping topography (ZONE 2)	7
3.1.3	High risk of slope instability – Very steeply sloping & observed instability (ZONE 3)	7
3.2	SITE SURFACE WATER FEATURES	8
3.3	PUBLISHED GEOLOGY	8
3.3.1	Late Miocene to Middle Pleistocene River Deposits	9
3.3.2	Koheroa Siltstone of the Meremere Subgroup	9
	SITE INVESTIGATIONS	10
4.1	GENERAL	10
4.2	SITE MAPPING AND GEOMORPHOLOGICAL FEATURES	10
4.2.1		10
4.2.2	Relict Landslides	10
4.3	GROUND MODEL	10
	GEOTECHNICAL CONSIDERATIONS	11
5.1	GENERAL	11
5.2	SLOPE STABILITY	11
5.2.1		12
5.3	CONSOLIDATION SETTLEMENT	12
5.3.1		12
5.3.2	<b>'</b>	12
5.3.3		13
5.4	LIQUEFACTION POTENTIAL	13
5.4.1		13
5.4.2		13
5.4.3	<b>'</b>	13
5.4.4		14
5.4.5	,	14
5.5	BEARING CAPACITY	15
	DEVELOPMENT FEASIBILITY	15
6.1	GENERAL	15
6.2	GEOLOGICAL GROUND MODEL	15
6.3	MAIN CONSTRAINTS AND OPPORTUNITIES	16
6.3.1	<u> </u>	16
6.3.2		16
6.3.3		16
6.4 -	CONCLUSIONS	16
	LIMITATIONS	17
7.1	GENERAL	17



# **LIST OF TABLES**

TABLE 1: SLOPE INSTABILITY POTENTIAL	11
TABLE 2: SLOPE INSTABILITY ZONE RISK MATRIX	12
TABLE 2: SLOPE INSTABILITY ZONE MITIGATION EXAMPLES	12
TABLE 3: LIQUEFACTION POTENTIAL	14



# 1 INTRODUCTION

#### 1.1 PROJECT BACKGROUND

A geotechnical feasibility assessment has been undertaken by GCL for a proposed plan change to Village zone comprising the property held by the client, TKDM Farms Ltd at Lot 9, Koheroa Road, Mercer.

This geotechnical feasibility assessment has been prepared for the purpose of providing sufficient geotechnical information in order to develop and progress the Proposed Waikato District Plan Change to allow low density residential use (village zone).

A site location plan is presented as Drawing 001.

#### 1.2 PROPOSED SITE DEVELOPMENT

TKDM Farms Ltd, wish to rezone the subject land (currently zoned rural) to low density residential use (village zone).

No earthworks plans have been provided to date and as such all likely earthworks profiles are assumed at this stage and possible suitable options are discussed further within the report.

We would anticipate any land modifications proposed as part of the future subdivision development to comprise re-grading of the existing topographies and potentially filling within some sections of the site. Based on the geological and topographical setting of the subject land, we consider future land modifications to be largely geotechnically feasible; this is discussed further within the report.

A map of the anticipated site development area is presented as Drawing 002.

# 2 DESKTOP STUDY

#### 2.1 PREVIOUS INVESTIGATIONS

GCL has undertaken a number of geotechnical investigations within the area surrounding the proposed site development and are therefore familiar with the local geology.

## 2.2 NEW ZEALAND GEOTECHNICAL DATABASE

The New Zealand Geotechnical Database (NZGD) has been viewed but no geotechnical investigations of significance have been identified in proximity to the project site.

#### 2.3 HISTORIC AERIAL PHOTOGRAPHS

Aerial photographs available from the Waikato GIS Viewer and Google Earth dating from 2001 to 2020 were studied to observe the site over time and assess the geomorphological setting. The review of historic aerial photography indicates that from at least 2001 to 2020 the site has remained largely untouched with little to no significant human modification with exception to renewing of some farm tracks (non-significant). Over this time period, no indication of significant land instability has occurred.



# 3 SITE CONDITIONS

#### 3.1 SITE TOPOGRAPHY & GEOMORPHOLOGY

The proposed plan change area is encompassed by high ridgelines predominantly consisting of moderately steep slopes which generally descend into gently sloping topography of valley floors. The topographies of the area have been split into three defined slope instability "zones", of which will be referred to through-out the report.

An overview of the site topography is presented on Figures 1a & 1b below together with a brief summary of the topographical relief and geomorphology of the area.

Figure 1a: Site Topography Overview

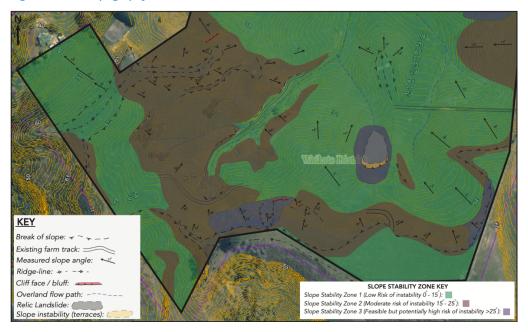
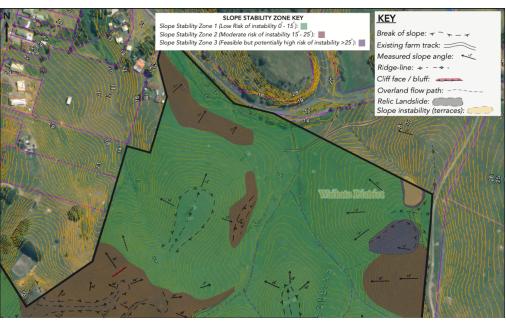


Figure 1b: Site Topography Overview





#### 3.1.1 Low risk of slope instability - semi-level to gentle topography (ZONE 1)

The lower elevations of the proposed development area largely comprise gently sloping topography devoid of any notable slope instability features.

Some regions of Zone 1 include areas of moderately steep topography, however given the lack of notable slope instability features and general topographic setting, the risk of the development of slope instability is considered to be low.

Drawings 006 and 007 present the region of slope stability "Zone 1", as described above,

#### 3.1.2 Moderate risk of slope instability – moderate to steeply sloping topography (ZONE 2)

Areas pertaining to Zone 2 comprise moderately steep topography typically within the elevated regions of the site.

The moderately steep topography consists of measured slope angles of between 15° to 25° to the horizontal and contain either very little or minor slope instability features, such as soil creep terraces.

Zone 2 is considered geotechnically feasible in regard to residential land development or otherwise but is a topography where land modifications needs to be cognisant of geotechnical implications associated with excavation, slope loading (filling) and building foundation design in regard to the potential for shallow slope instability affects. All slope instability implications described above are likely to be remediated via. conventional development practices and appropriate geotechnical input.

This is further discussed within Section 4.3 and 5.2.

#### 3.1.3 High risk of slope instability – Very steeply sloping & observed instability (ZONE 3)

Zone 3 comprises a relatively small portion of the proposed development area, covering sections of land where slope angles typically exceed 25° to the horizontal and often consists of sub-vertical bedrock exposes.

Given the high slope gradients or extremely shallowly underlying bedrock of Zone 3, these areas are prone to more obvious and fragile slope instability risks.

However, portions of Zone 3 often consist of exposed bedrock which when exposed is not considered at risk to conventional slope instability but may pose a risk in regard to erosion and/or block failure over time. Whilst the exposed bedrock does not display a high degree of block-like weathering or significant erosional fragmentation, this is still a notable geotechnical constraint requiring assessment in all future developments. Mitigation / remediation to concerns around bedrock exposures and/or shallow bedrock can typically be achieved by fairly conventional means. This is further discussed within Section 4.3 and 5.2.

Additionally, Zone 3 includes area of land where either moderate soil creep is occurring or where relict deep seated /rotational slope failure events have occurred in the past. The failure mechanism is likely associated with residual soils mantling underlying and shallow bedrock and triggered by significant perching of groundwater flows along this contact, resulting in increased pore-water pressures at the residual soil's base leading to slippage / failure. These relict land instability features have remained inactive over at least the 20 year period of historical aerial images observed as discussed in Section 2.3. This is further discussed within Section 4.3 and 5.2.



#### 3.2 SITE SURFACE WATER FEATURES

The subject area contains a number of overland flow paths which descend from the upper site elevations, channelling along the base of numerous incised gully features and converge with two predominate paths at the lower valley floor.

A large number of groundwater seeps source the majority of the overland flow paths, as groundwater perches upon the underlying bedrock and outlets at geometrically aligned points. The preservation of these existing groundwater seeps is of significant geotechnical importance.

#### 3.3 PUBLISHED GEOLOGY

The Geological Map of New Zealand, Sheet 3, at a scale of 1:250,000 maps the proposed development area as being predominantly underlain by Koheroa Siltstone, undifferentiated Kerikeri Volcanic Group tuff and Miocene / Pleistocene river deposits.

Figure 2 below provides an excerpt from the Geological Map of New Zealand, Sheet 3, at a scale of 1:250,000 which covers the proposed development area.

As observed from Figure 2, the proposed development area is underlain by varying geological units.



Figure 2: Extract of the Geological Map of New Zealand, Sheet 3, 1:250,000

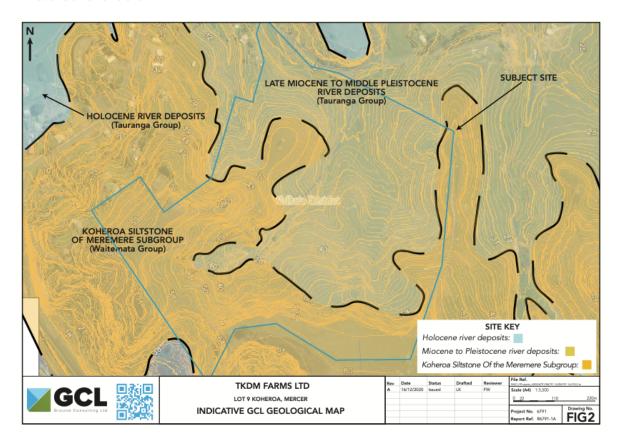
However, based on GCL's local knowledge and site mapping, GCL are of the opinion that the true site geology map differs broadly from that presented by the published map. The point of differences are:

• The undifferentiated Kerikeri Volcanic Group tuff is not considered to be present.

A site-specific geological map of the site has been formed by GCL and is presented as Drawing 005.



#### **DRW005: GCL GEOLOGICAL MAP**



The below provides a description of the anticipated ground conditions located within the proposed development area, based on the above Drawing 005 geological map.

# 3.3.1 Late Miocene to Middle Pleistocene River Deposits

Late Miocene to middle Pleistocene river deposits is a relatively young to "middle age" geological unit, comprising interbedded deposits of alluvial sand silt and erosional clay soils with some lens of gravel.

Given the age of the unit, the soils are typically at least normally consolidated, however the upper profiles of the soil can be partially unconsolidated.

The deposits located in higher elevations likely comprise the older more compact profiles of the unit, whereas the lower lying and more channelised sections of the unit can contain weaker / unconsolidated units where cessation of deposition is most recent.

# 3.3.2 Koheroa Siltstone of the Meremere Subgroup

The Koheroa Siltstone unit consists of calcareous, sandy siltstone with minor fine sandstone and tuff beds. Numerous bedrock exposures of this unit have been observed across the subject site, which also included beddings of conglomerate and coarse grain sandstone.

The weathered upper profile of this unit has produced a residual soil layer which mantles the bedrock.



# 4 SITE INVESTIGATIONS

#### 4.1 GENERAL

Site investigations for the purposes of this report have comprised a site walkover and engineering geomorphological mapping exercise across the wider property. The geomorphological mapping details are shown on Drawings 003 and 004.

#### 4.2 SITE MAPPING AND GEOMORPHOLOGICAL FEATURES

A series of notable geomorphological features exist across the proposed development area and are described in detail below. The location and extent of described geomorphological features are shown on Drawings 003 & 004.

#### 4.2.1 Bluffs/Cliffs

A number of non-extensive sub-vertical cliff exposures of between 5m to 12m high exists within the southern half (elevated portion) of the proposed development area.

The sub-vertical cliff exposure comprises weathered rock consisting of interbedded cemented conglomerates and fine to coarse grain sandstones. The rock outcrop is moderately weathered.

Some patches of exposed bedrock also exists within the nearby sloping regions of bluff/cliffs.

#### 4.2.2 Relict Landslides

A number of inactive and relic mass landslide features have been observed across the site and proposed development area.

The typical mode of failure is considered to be via. the residual soil mass failing on the less weathered and impermeable underlying rock mass where the topography steepens. The relic landslide features are likely to relate to the Koheroa Siltstone, where transitional weathering, differential soil strengths and contrasting permeability is present.

Additionally, as previous discussed, the moderate and steep slopes across the site contain shallow regolith soil creep type slope instability. This mode of instability however is considered to be more superficial than that of the above landslide features.

Typically, the upper 250mm to 500mm of the soil profile experiences movement via. periodic saturation and soil swelling, resulting in increase in pore pressures and reduction in undrained shear strength, mobilising the soil under gravity, the magnitude of the mass often dependant on the specific slope grade.

#### 4.3 GROUND MODEL

The proposed development area comprises two predominant geological units, as outlined on Drawings 003 & 004 and defined within Section 3.3 of this report.

We consider the following ground model appropriate to the proposed development area, with some geologies either present, overlain or eroded out depending on the given elevation and topographic relief at any one point:

The site is anticipated to be underlain by the following sequence of geological unit



- Late Miocene to middle Pleistocene river deposits, followed by
- Residual soils associated with the Koheroa Siltstone, followed by
- Weathered bedrock associated with the Koheroa Siltstone
- The elevated regions of the site is underlain by residual soils followed by weathered bedrock associated with the Koheroa Siltstone. Whilst the lower regions are underlain by river deposits of the Late Miocene to middle Pleistocene.

# 5 GEOTECHNICAL CONSIDERATIONS

#### 5.1 GENERAL

The following sections provide some commentary on the engineering geology and geotechnical engineering constraints and opportunities that the site presents in context of the proposed plan change and land use. The considerations are as follows:

- Slope Stability (soil/rock).
- Consolidation settlement.
- Liquefaction.
- Bearing Capacity.

#### 5.2 SLOPE STABILITY

The proposed development area comprises a range of topographies from semi-level to steep slopes and a well-defined cliff / bluff.

The landforms have been categorised into three slope instability hazard <u>vulnerability classes</u> (low, medium and high) based on the expected geology (per the geological model) and the ground surface topography (LiDAR data). The slope profile limits have been derived based on the geomorphological mapping, our previous experience and knowledge of similar soils and topography within the greater North Waikato region.

TABLE 1: Slope Instability Potential

GEOLOGICAL UNIT	SLOPE INSTABILITY POTENTIAL – SLOPE PROFILE LIMITS		
GEOEOGICAE UNIT	Low	Moderate	High
River deposits	0-12°	12-20°	>20°
Koheroa Residual soils	0-15°	15-25°	>25°
Koheroa bedrock	n/a	n/a	n/a

As outlined in Section 3.1 of this report, the site comprises a large proportion of semi-level low-lying wetland area boarded by a range of gentle to steeply sloping topography. Further to this, the topographies have been delineated into three zones based on their slope angle and associated slope instability features.

In regard to the three topographic zones, 1, 2 and 3 as illustrated on Drawings 006 and 007, we consider the below slope stability risk matrix to apply:



TABLE 2: Slope Instability Zone Risk Matrix

TOPOGRAHPIC ZONE	SLOPE INSTABILITY POTENTIAL RISK		
TOTOGRAFII IC ZONE	Low	Moderate	High
ZONE 1	X		
ZONE 2		X	
ZONE 3			X

# 5.2.1 Potentional mitigation practices

In regard to the above risk profile and individual zones as presented in the above section 5.2, we provide a summary of conventional practices and mitigation methodologies which may likely be utilised within each zone in order to provide safe and stable building conditions for proposed future development.

TABLE 2: Slope Instability Zone mitigation examples

TOPOGRAHPIC ZONE	SLOPE INSTABILITY MITIGATION EXAMPLES
ZONE 1	Zone 1 is considered to provide safe and stable conditions in it's current form and therefore requires little to no topographic alteration and/or ground improvement / stabilisation.
ZONE 2	Zone 2 is prone to the development of slope instability features over the life-time of any proposed structural development. Re-contouring, suitable building set-backs or the use of engineered retention structures are considered feasible solutions in order to provide safe and stable conditions.
ZONE 3	Zone 3 is prone to the development of slope instability features over the life-time of any proposed structural development. Re-contouring, suitable building set-backs, the use of engineered retention structures and/or the implementation of rock-fall debris bund or the installation of rock-bolt and steel mesh retaining are considered feasible solutions in order to provide safe and stable conditions.  However, given the slope angle and potential for moderate to deep instability, some of the remedial measures may be cost prohibitive.

#### 5.3 CONSOLIDATION SETTLEMENT

#### 5.3.1 General

The proposed development area is underlain by two predominant geologies, namely the Late Miocene to middle Pleistocene river deposits and Koheroa Siltstone.

The two geologies have distinct differences in potential compressibility due to their relative geological age.

#### 5.3.2 Late Miocene to Middle Pleistocene River Deposits

The Late Miocene to middle Pleistocene river deposits is mapped within the proposed development area according to the Geological Map of New Zealand; however, based on recent site observations and ground investigations the river deposits extends further and beyond that presented by the published geology (as shown on Drawing 005).



The Late Miocene to middle Pleistocene river deposits is a relatively young geology and as described within Section 3.3.1 typically comprises relatively stiff and medium dense soils consisting of clays, silts, sands and gravel deposits.

The Late Miocene to middle Pleistocene river deposits are typically understood to be at least normally consolidated and as such should be providing conventional rates of ground settlement in proportion to the volume of ground load applied. We would anticipate ground settlements to be in line with code limits for fill volumes of up to 2.0m (pending confirmation via. specific ground investigation) and light-weight residential building use.

As such, we anticipate the Late Miocene to middle Pleistocene river deposits is likely to generate a relatively low to moderate settlement in relation to relatively low applied loads.

#### 5.3.3 Koheroa Siltstone

The residual soils and weathered rock profiles of the Koheroa Siltstone are typically competent, with relatively high shear strengths and low compressibility characteristics with relatively low settlement potential.

#### 5.4 LIQUEFACTION POTENTIAL

#### 5.4.1 General

Liquefaction occurs due to an increase in pore water pressure as a result of an earthquake event resulting in significant loss of soil strength. It is often manifest as ejection of soil at the ground surface leading to associated ground settlement. Loose silts and sands below the water table are the most susceptible to liquefaction.

The occurrence of liquefaction depends on many factors, including the soil particle size and distribution, groundwater level, soil density, and in-situ stresses. Following liquefaction, significant ground deformation may occur as the soil particles are re-arranged into a denser state. Such deformations can be damaging to structures located on such soils. There may also be additional building foundation settlement as a result of loss of bearing capacity.

#### 5.4.2 Liquefaction Susceptibility

As discussed in Section 3.3, the proposed development site is underlain by two distinct geological formations.

The three geologies contain varying particle sizes, depositional environments and soil densities which influence a soil's susceptibility to experiencing liquefaction under potential seismic accelerations.

#### 5.4.3 Late Miocene to Middle Pleistocene River Deposits

The Late Miocene to middle Pleistocene river deposits typically comprises at least stiff to medium dense, layers consisting of consolidated silt, sand, clay and lenes of gravel in some instances.

The Late Miocene to middle Pleistocene river deposits is typically deposited within locally low-lying environments confined by the erosional and/or damming horizons of more competent geological bodies (such as the Koheroa Siltstone); and therefore, typically contain elevated groundwater tables.



Furthermore, the Late Miocene to middle Pleistocene river deposits within this specific area is anticipated to provide a seismic subsoil class C based on NZS 1170:2004 in relation to potential ground shaking severity. The above classification is generalised from the desktop study to date, making assumptions of the upper limits of the river deposits and our local experience in relation to depth to bedrock and relative soil strengths in the area.

Based on the relatively moderate shaking potential (class C) and relatively stiff / dense condition of the Late Miocene to middle Pleistocene river deposits may be susceptible to low magnitudes of liquefaction in response to large seismic events within low lying areas of the site.

#### 5.4.4 Waikawau Sandstone

The Waikawau Sandstone unit comprises residual fine to medium grained soils and weathered clay minerals which transition into the highly weathered bedrock sandstone and conglomerate components of the broader unit.

Due to the relatively high density and degree of cementation of the unit, it is not considered to be prone to liquefaction.

#### **5.4.5 Summary**

The underlying geologies have been categorised into three liquefaction vulnerability classes (low, medium and high) based on the expected nominal ULS land settlement during a magnitude 5.8 earthquake in conjunction with the anticipated seismic subsoil class discussed above for each geology. The expected nominal ULS land settlement have been derived based on our previous experience with the local geology and knowledge of the soil performance under similar seismic loading conditions.

TABLE 3: Liquefaction Potential

GEOLOGICAL UNIT	LIQUEFACTION POTENTIAL EXPECTED NOMINAL ULS LAND SETTLEMENT		
	Low (0-25mm) Moderate (25-100mm) High (>100mm)		
River deposits (within low- lying areas of the site)	Х	Х	
Koheroa siltstone	Х		

The liquefaction potential within Late Miocene to middle Pleistocene river deposits within the proposed development area likely to be "Low to Moderate", with nominal ULS land settlements expected to be between 0mm to 50mm in relation to a seismic subsoil class C and a magnitude 5.8 earthquake with a 1/25 SLS and 1/500 ULS return period. However, we again note, this only applies tow low lying areas of the site with potential elevated groundwater levels.

The liquefaction potential within the Waikawau Sandstone unit is considered to be "Low" with nominal ULS land settlements expected to be less than 25mm in relation to a seismic subsoil class C and a magnitude 5.8 earthquake with a 1/25 SLS and 1/500 ULS return period.

Furthermore, the extent by which liquefaction can affect development can be coarsely assessed with knowledge of the "crust thickness" overlying a liquefiable soil, i.e. the thickness



of the surface soils (non-liquefiable cohesive soils and/or above groundwater level) which 'raft' over the liquefied soils. Based on experience gained from the Christchurch sequence of earthquakes and published empirically based information (Ishihara, 1985) it is anticipated that where the "crust thickness" exceeds a minimum of 3 m, the effects of liquefaction can generally be mitigated without significant damage to structures at ground surface. This assumes that the "crust" is of sufficient capacity/strength to 'raft' over the liquefiable layers, though this does not preclude global settlement and deep-seated lateral spreading.

Furthermore, we note the use of rafted foundation systems as conventional methods for mitigation against the surface effects of low to moderate liquefaction magnitudes.

#### 5.5 BEARING CAPACITY

We anticipate the entire proposed development area to be underlain by ground conditions which provide "good ground" in regard to bearing capacity and in accordance with NZS3604 for light-weight residential buildings.

However, the existing overland flow paths may likely consist of shallow deposits of recent and weak alluvium. These overland flow path will likely not provide "good ground" in this regard and as such, should be excavated / undercut prior to any structural filling works ect.

# **6 DEVELOPMENT FEASIBILITY**

#### 6.1 GENERAL

The proposed development area comprises a variety of topographical relief, ground conditions and geological units with varying engineering and geotechnical properties. The resulting ground model does present some engineering challenges but they are not considered to be prohibitive in most cases to the proposed land use change for low density residential use.

Some commentary on the site in terms of the engineering constraints and opportunities are summarised below.

#### 6.2 GEOLOGICAL GROUND MODEL

The geological ground model is a consideration of the underlying geology and its relationship with the site's topography and relief. The interplay of the two has direct implication on the likely engineering geology characteristics of the underlying soils and the constraints they will present.

Based on the site mapping undertaken so far, the most convenient form of zoning the site is based on the likely slope stability categories as presented in Drawing 006 and 007. The slope stability is basically determined by the underlying geology, and therefore the likely engineering characteristics.

Slope Stability Zone 3 will pose the most significant challenge to the development due to the steepness of the topography and potential engineering requirement required in order to ensure long-term stability (such as in-ground barrier walls and deep drains).



#### 6.3 MAIN CONSTRAINTS AND OPPORTUNITIES

The following is a summary of the main issues, constraints and opportunities the site presents in terms of the proposed development and land use:

#### 6.3.1 Drainage

A number of groundwater seeps are present across the site. These features play a fundamental role in the stability of the mantling soils and as such, the control, management and preservation of these features needs to be ensured.

#### 6.3.2 Localised Slope Stability

As previously stated, slope stability Zone 3 will pose the most significant challenges to the site's development. However, engineering solutions can be implemented to reduce or remove the risk.

Shallow soil type instability features can often be mitigated through simple earthworks and implementation of land drainage to reduce groundwater pore pressures. Where steeper slopes exist, or finished ground levels require the excavation of the toes of such features, retaining structures can be constructed.

In the case of the rock bluffs in the north of the site, where rock fall and potential rock face instability can occur, mitigation measures can be applied such as implementing an appropriate set-back distance from the cliff face (estimated in the range of 20m but subject to modelling), the construction of a simple rock-fall debris bund or the installation of active measures at the face including scaling, rock-bolting and steel mesh retention.

#### 6.3.3 Site Won Material

Subject to appropriate screening and earthworks specifications being developed, there is the opportunity to reuse site won materials for use as bulk engineering fill material.

#### 6.4 CONCLUSIONS

The site can be suitably developed for the proposed village land use change to low density residential use. Depending on the proposed development plan, the scale of earthworks and civil engineering input required to achieve safe and stable conditions in some regions of the site will vary.

Basic low density residential development is achievable with appropriate planning, detailed design and the employment of a competent earthworks and civils contractor implementing good engineering practice.

There are no significant geotechnical constraints that cannot be suitably managed, mitigated or designed out of the proposed development within Zone 1 and the majority of Zone 2. Zone 3 may provide some challenges with cost effective stabilisation measures within some portions.



# 7 LIMITATIONS

#### 7.1 GENERAL

Ground Consulting Ltd has undertaken this assessment in accordance with the brief as provided, based on the site location as shown on Drawing 001. This report has been provided for the benefit of our client, and for the authoritative council to rely on for the purpose of processing the consent for the specific project described herein. No liability is accepted by this firm or any of its directors, servants or agents, in respect of its use by any other person, and any other person who relies upon information contained herein does so entirely at their own risk.

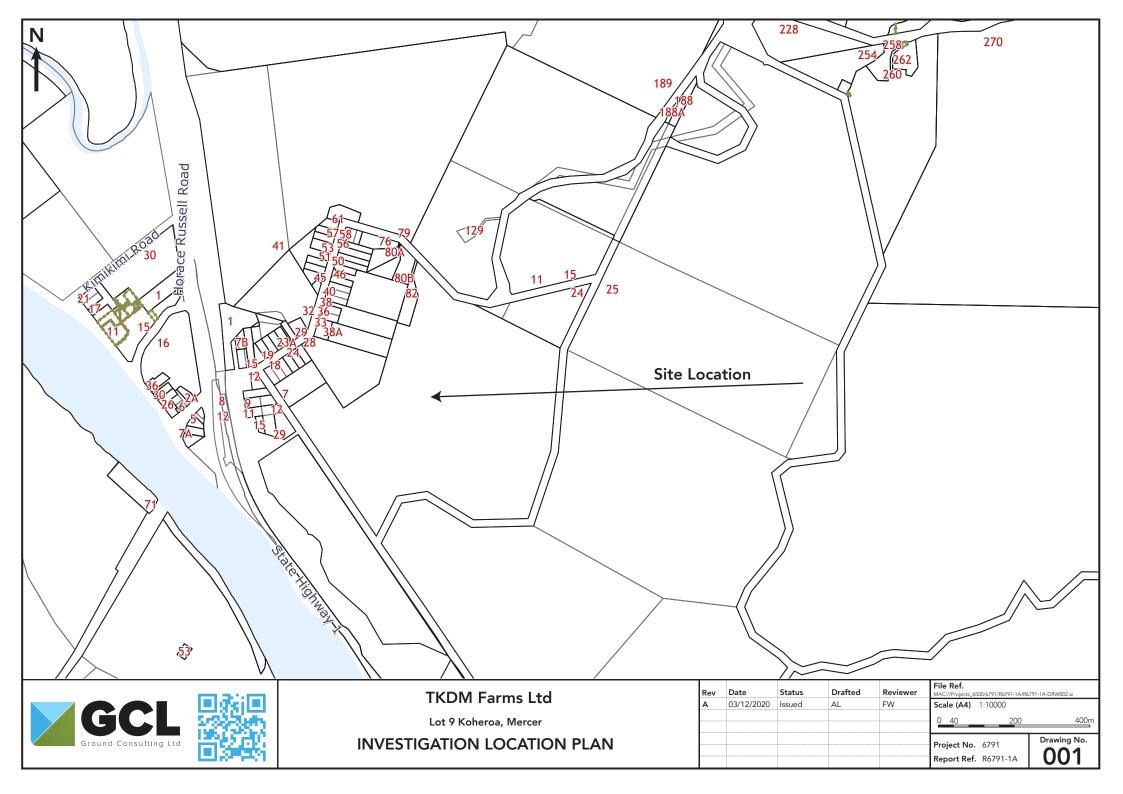
No part of this document may be reproduced without the prior written approval of Ground Consulting Ltd.

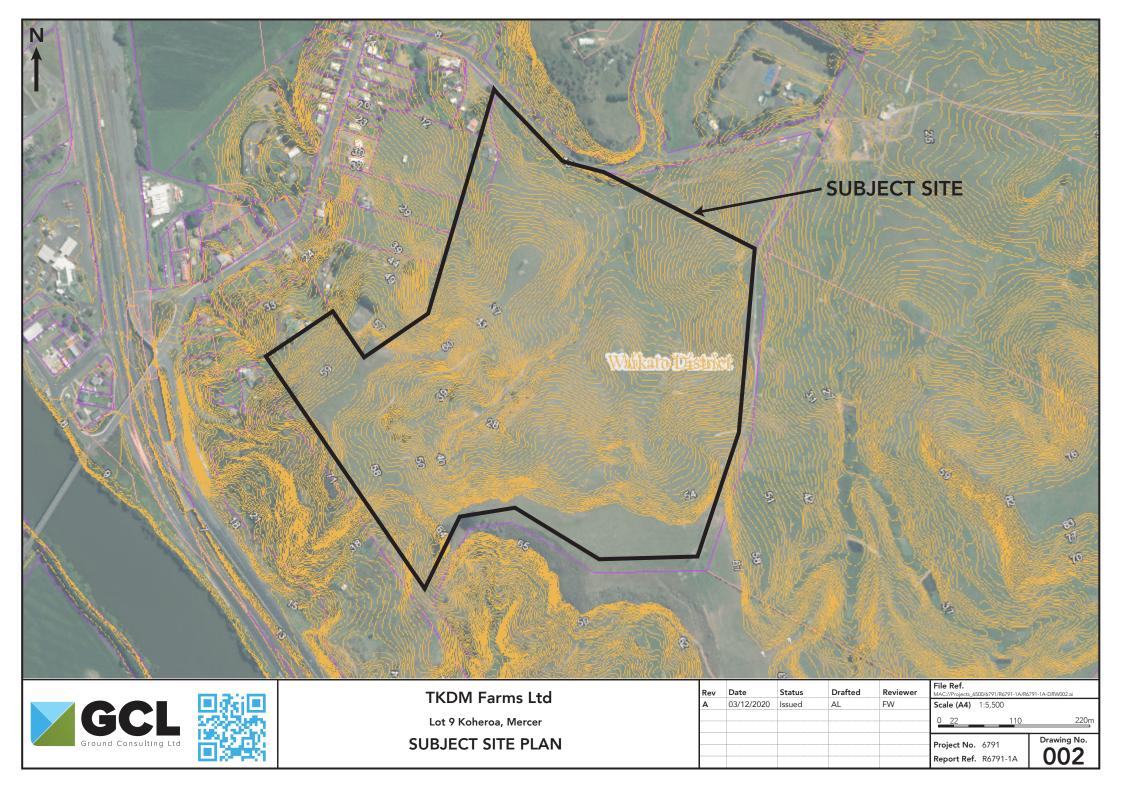
#### 7.2 FURTHER INVESTIGATIONS REQUIRED

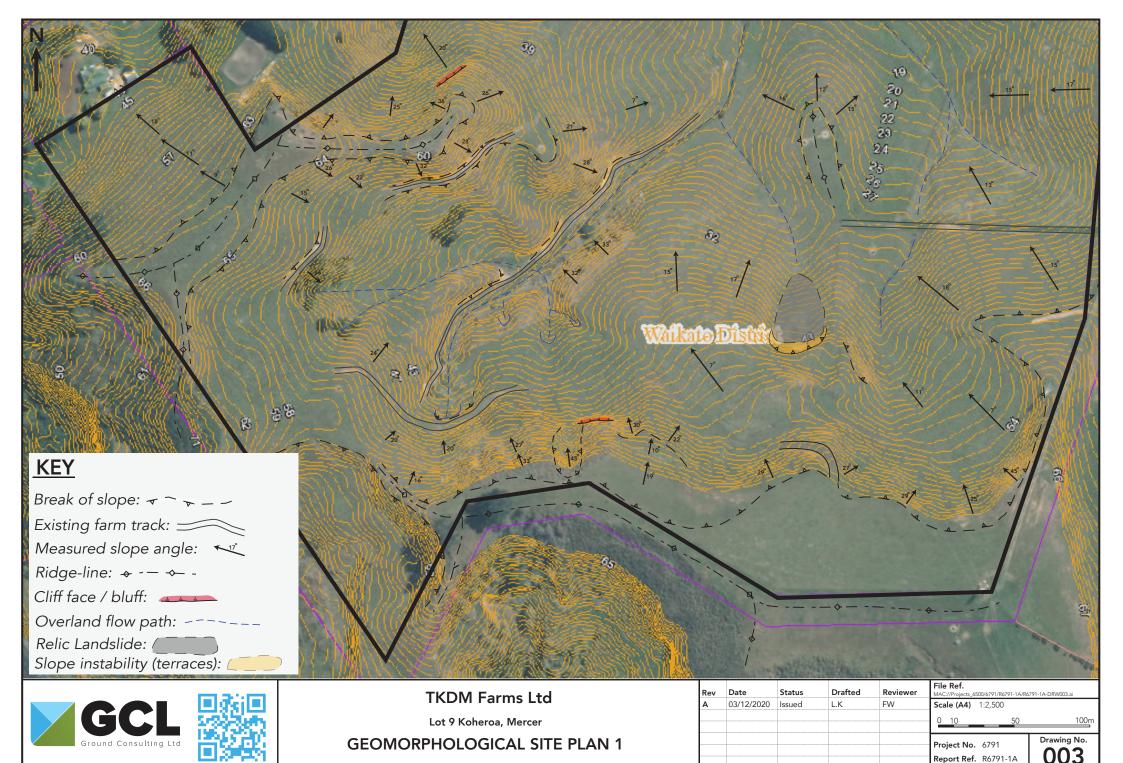
This assessment has been undertaken for the proposed site development to date for the purposes of obtaining a plan change. Any structural changes, alterations and additions made to the proposed development should be checked by a suitably qualified person and may require further investigations and analysis.

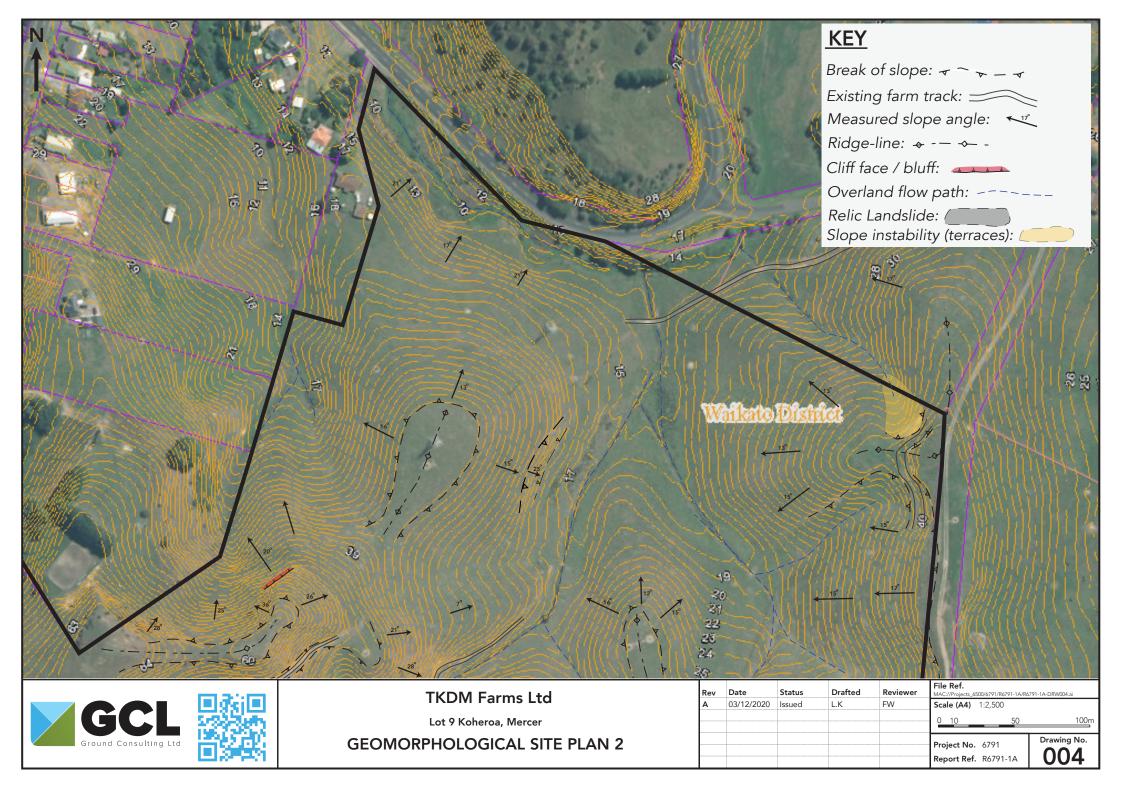


# **DRAWINGS**









#### **PUKEKOHE OFFICE**

UNIT 2, 4 MANUKAU ROAD, PUKEKOHE POST: PO BOX 1019, PUKEKOHE, 2120

TEL: 09 239 2229

# **AUCKLAND CENTRAL OFFICE**

LEVEL 1, KAURI TIMBER BUILDING 104 FANSHAWE STREET, AUCKLAND, 1010 FMAIL: auckland@octech.co.nz

TEI - 00 370 0777

#### **QUEENSTOWN OFFICE**

157 GLENDA DRIVE, FRANKTON POST: PO BOX 2963, QUEENSTOWN 9349

EMAIL: queenstown@gcitecn.co.

TEL: 03 442 5700

# **GREAT BARRIER IS. OFFICE**

6 MOANA VIEW ROAD, OKUPU POST: PO BOX 1019, PUKEKOHE, 2120

TFI · 09 239 2229



# **APPENDX 3 – IMPLEMENTATION METHODS**

Information required by Implementation	Assessment
Method 6.1.8	
The type and location of land uses (including residential, industrial, commercial and recreational land uses, and community facilities	The proposed Village zone will provide for residential lots with minimum size of 3000m <sup>2</sup> .
where these can be anticipated) that will be permitted or provided for, and the density, staging and trigger requirements.	Any subdivision may be split into stages to allow titles to be progressively released.
The location, type, scale, funding and staging of infrastructure required to service the area.	As lots/dwellings in the Village zone need to be self-sufficient in terms of water, wastewater and stormwater there is no need for significant investment in public infrastructure. Any roading upgrades necessary can be required as part of the subdivision consent.
Multi-modal transport links and connectivity, both within the area of new urban development, and to neighbouring areas and existing transport infrastructure; and how the safe and efficient functioning of existing and planned transport and other regionally significant infrastructure will be protected and enhanced.	Access to the site will be via Koheroa Road. The future dwellings will enjoy close access to the Waikato Expressway enabling them to go both north and south. The value of the easy access to the Waikato Expressway is not to be underestimated given the substantial investment in its construction.
How existing values, and valued features of the area (including amenity, landscape, natural character, ecological and heritage values, water bodies, high class soils and significant view catchments) will be managed.	As identified above there are no High Class soils on the Subject Site. Nor are any overlays relating to natural character, ecology or heritage values applied.  The character and amenity of the landscape will be maintained given the limited scale and extent of the land to be zoned and also as views of the site are precluded by the existing hill slopes and development.
Potential natural hazards and how the related risks will be managed.	A geotechnical report which identifies that the site is generally suitable for development is appended to this evidence in Appendix 3.

Information required by Implementation	Assessment
Method 6.1.8	
Potential issues arising from the storage, use,	It is not anticipated that any issues will arise relating to
disposal and transport of hazardous substances in	hazardous substances.
the area and any contaminated sites and	
describes how related risks will be managed.	
How stormwater will be managed having regard to	The management of stormwater will be factored into the
a total catchment management approach and low	detailed design of any future development on the land to
impact design methods.	be zoned Village.
Any significant mineral resources (as identified	No significant mineral resources have been identified on
through Method 6.8.1) in the area and any	the site.
provisions (such as development staging) to allow	
their extraction where appropriate.	
How the relationship of tangata whenua and their	Consideration to the cultural values could be incorporated
culture and traditions with their ancestral lands,	into the detailed design process.
water, sites, wāhi tapu, and other taonga has been	
recognised and provided for.	
Anticipated water requirements necessary to	The water supply demands will be determined through the
support development and ensure the availability of	detailed design process which will be undertaken at a later
volumes required, which may include identifying	date.
the available sources of water for water supply.	
How the design will achieve the efficient use of	The efficient use of water on the will be factored into the
water;	detailed design of future development.
How any locations identified as likely renewable	The land to be zoned is not a location identified for a
energy generation sites will be managed.	renewable energy generation site.
The location of existing and planned renewable	There is no existing or planned renewable energy sources
energy generation and consider how these areas	in the area.
and existing and planned urban development will	
be managed in relation to one another.	
The location of any existing or planned electricity	The required separation distances from the high voltage
transmission network or national grid corridor and	transmission lines which traverse the site will need to be
how development will be managed in relation to	factored into the design of the subdivision and the location
that network or corridor, including how sensitive	of houses. The minimum lot size of 3000m <sup>2</sup> is big enough
activities will be avoided in the national grid	to enable this to occur.
corridor.	

# **APPENDIX 4 - SECTION 32 ANALYSIS**

# \$32 Evaluation - KOHEROA ROAD, MERCER

The specific provisions sought to be amended	Assessment of the efficiency and effectiveness of the provisions in achieving the objectives of the Proposed Waikato District Plan (PWDP)
The zoning	This proposal seeks to zone a 10ha piece of land Village in the Proposed Waikato District Plan. The Subject Site is approximately 28ha in area and
proposal	is located to the southeast of the Mercer settlement. The site is legally described as Lot 9 Deposited Plan 461781 and is part of a larger (390ha) farm
	block owned by the TKDM Farms Limited. This Subject Site is shown in the aerial photo below:



Figure 4 Location of Subject Site

The Subject Site is proposed to be zoned Rural in the Proposed Waikato District Plan (PWDP). The submission by TKDM Farms Limited sought that the entire Subject Site be zoned Village instead of Rural.

However, since lodging the submission, the extent of the Village zone has been modified so that it only applies to a 10ha area fronting Koheroa Road. This modified extent recognizes that the upper slopes of the Subject Site are not well suited to residential development and also ensures that future development on the Subject Site is of a size and scale appropriate to the Mercer settlement. The plan below shows the revised extent of Village zone now sought by TKDM Farms Limited:

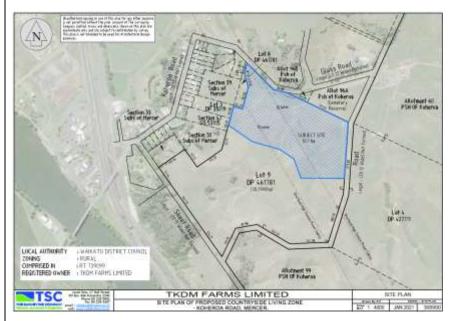


Figure 2 Plan Showing Revised Extent of Village Zone

# Relevant objectives of the

**PWDP** 

The relevant objectives and policies in the PWDP are the Strategic Objectives set out in 1.12.8 and the objectives relating the Village zone. The objectives of the Rural zone have also been considered given that this is the zone applied in the PWDP.

The Strategic Objectives are set out below:

# 1.12.8 Strategic objectives

- (a) The matters set out in paragraphs 4.1.1 4.1.7 provide the overarching directions for the development of the objectives, policies and other provisions within the district plan.
- (b) In summary, the overarching directions include the following:
  - (i) Urban development takes place within areas identified for the purpose in a manner which utilises land and infrastructure most efficiently.
  - (ii) Promote safe, compact sustainable, good quality urban environments that respond positively to their local context.
  - (iii) Focus urban growth in existing urban communities that have capacity for expansion.
  - (iv) Plan for mixed-use development in suitable locations.
  - (v) Encourage community collaboration in urban growth decisions
  - (vi) Protect and enhance green open space, outstanding landscapes and areas of cultural, ecological, historic, and environmental significance

The proposal achieves the above objectives in an efficient and effective manner as it will provide for growth in an existing urban community that has capacity for expansion. Furthermore:

- The proposal will utilise the existing infrastructure in the settlement effectively, in particular it will be well connected to the Waikato Expressway;
- The proposal will contribute to a compact urban environment by consolidating growth around the exiting residential activity;
- The proposal will enhance the quality of the urban environment as it will provide a connection between the existing residential and the school;
- The proposal will not impact on any open space or areas of environmental significance.

The Strategic Objective for the Urban Environment is set out below:

#### 4.1.1 Objective - Strategic

- (a) Liveable, thriving and connected communities that are sustainable, efficient and co-ordinated.
- (b) National Policy Statement on Urban Development Capacity Minimum Targets.

The minimum targets for sufficient, feasible development capacity for housing in the Waikato District area are met, in accordance with the requirements of the National Policy Statement on Urban Development Capacity 2016.

	Minimum Targets (nu	Minimum Targets (number of dwellings)		
Area	Short to Medium 1-10 years (2017-2026)	Long term 11-30 years (2027-2046)	Total	
Waikato District	7,100	12,300	19,400	

# 4.1.2 Objective - Urban growth and development

(a) Future settlement pattern is consolidated in and around existing towns and villages in the district.

The proposal is consistent with the above objectives as consolidates development around the existing village of Mercer. This growth will contribute to meeting the minimum targets for urban development capacity.

The objectives of Village zone are set out below:

# 4.3.1 Objective - Village Zone character

(a) The character of the Village Zone is maintained.

This proposal will maintain the character of Mercer given that the proposed lot size will complement the existing development but will also provide a transition to the wider rural environment.

The relevant objectives of the Rural zone are set out below:

#### 5.1.1 Objective - The rural environment

Objective 5.1.1 is the strategic objective for the rural environment and has primacy over all other objectives in Chapter 5.

- (a) Subdivision, use and development within the rural environment where:
  - (i) high class soils are protected for productive rural activities;
  - (ii) productive rural activities are supported, while maintaining or enhancing the rural environment;
  - (iii) urban subdivision, use and development in the rural environment is avoided.

#### 5.2 Productive Versatility of Rural Resources

#### 5.2.1 Objective - Rural resources

- (a) Maintain or enhance the:
  - (i) Inherent life-supporting capacity and versatility of soils, in particular high class soils;
  - (n) The health and wellbeing of rural land and natural ecosystems;
  - (iii) The quality of surface fresh water and ground water, including their catchments and connections;
  - (iv) Life-supporting and intrinsic natural characteristics of water bodies and coastal waters and the catchments between them.

# 5.3 Rural Character and Amenity

# 5.3.1 Objective - Rural character and amenity

(a) Rural character and amenity are maintained.

The proposal is an effective and efficient means of giving effect to the above objectives as it avoids urban development on land containing high class soils and/or a productive rural activity. Furthermore, the limited scale and extent of the proposed zoning is an effective means of maintaining rural character and amenity. The only area where the proposal is at variance with the objectives relates to objective 5.1.1 which seeks to avoid urban development in the rural environment. However, this variance is not considered to be significant for the following reasons:

• Objective 5.1.1 should have primacy over the other objectives and policies in the Rural zone <u>but does not</u> have primacy over objectives and policies in other zone (such as objective 4.6.1 of the Industrial Zones or the Strategic Direction);

- The Subject Site is part of the rural environment as identified in the PWDP. Given that this zoning is only <u>proposed</u>, it should not be taken as a given especially as the Subject Site was zoned AEP in the OWDP. It is the operative provisions that will determine the extent of the rural environment not the proposed provisions;
- The subject site is located on the edge of the Mercer township. Zoning a location such as this is not as impactful as zoning land in the wider rural environment and this needs to be taken account of.

As a result of the assessment above, the proposed zoning is an effective and efficient means of achieving the objectives of the PWDP as the proposed zoning will take a piece of land which is not overly appropriate for a rural use and enables it to be developed for an expansion of the Mercer settlement. The growth enabled will give effect to the objectives set out above as it will consolidate growth around the existing settlement, will make good use of the existing infrastructure within Mercer (particularly the Waikato Expressway) and will result in a positive urban design outcome by connecting the existing residential development to the school.

# Scale and significance of the zoning proposal

# Scale and significance of proposal

the As identified above, the spatial extent of the proposed zoning is limited to 10ha. Whilst the proposal is limited in its scale and extent, it is still of a size which will enable a meaningful expansion of the Mercer settlement.

# Higher order documents

The Higher-order documents that are relevant to this proposal are the National Policy Statement on Urban Development (NPS-UD) and the Waikato Regional Policy Statement (WRPS). These higher order documents are best assessed in a 'top down' fashion given that the higher level documents direct those that follow rather than the other way around.

# National Policy Statement - Urban Development

The NPS-UD requires district plans provide sufficient residential and business development capacity. This policy statement does not apply to this proposal as Mercer is not an "urban environment" as per the definition in the NPS-UD as set out below:

"any area of land (regardless of size, and irrespective of local authority or statistical boundaries) that:

- (a) Is, or is intended to be, predominantly urban in character; and
- (b) Is, or is intended to be, part of a housing and labor market of at least 10,000 people."

# Waikato Regional Policy Statement

The provisions of the WRPS that are relevant to this proposal are those relating to the soils, the built environment and growth. These provisions are addressed in turn below:

(a) Soils

Objectives 3.25 relates to managing the soil resource to safeguard its life supporting capacity. The proposal to zone 10ha of land Village is consistent with this objective as the limited extent of the area to be zoned means that the vast majority of the farm (and therefore the vast majority of the soil resource) is maintained (being 380ha).

Objective 3.26 seeks to protect high class soils from inappropriate subdivision, use or development. As there are no high class soils on the land to be zoned, this objective is achieved.

#### (b) Built Environment

Objective 3.12 seeks to ensure that:

"development of the built environment (including transport and other infrastructure) and associated land use occurs in an integrated, sustainable and planned manner which enables positive environmental, social, cultural and economic outcomes....".

This proposal is consistent with this objective as the land to be zoned will enable development of housing while at the same time not compromising any areas of natural character, outstanding natural landscape or biodiversity.

Policy 6.1 in the WRPS seeks to give effect to Objective 3.12 by requiring subdivision, use and development, including transport, to occur in a planned and co-ordinated manner which has regard to the principles in section 6A, recognizes potential cumulative effects, has regard to the existing environment and is based on sufficient information. This proposal meets policy 6.1 as:

- sufficient information has been provided in the submission and this evidence relative to the size of the proposal;
- the proposal will not have cumulative effects given that the proposal is limited to one discrete site adjoining the existing settlement;
- the proposal has regard to the existing built environment as it seeks to extend the existing pattern of development to the adjoining site and create a linkage between the existing residential sites and the school;

• An assessment in terms of the principles in section 6A was undertaken in the main body of the evidence. It was shown that the proposal is in accordance with these principles.

# (c) Growth

The final aspect of the WRPS that is relevant to this proposal is Policy 6.14 which identifies that growth within the Waikato Region is to be managed by adopting the Future Proof land use pattern contained in Map 6-2.

Mercer is not identified as a growth area (with urban limits) on the Future Proof Settlement Plan. While Mercer is not identified on Map 6-2 above, this does not mean that growth cannot occur in in Mercer as Policy 3.3 specifically provides for growth outside growth strategy areas. Policy 3.3 states:

# "6.3.3 Urban Growth outside of growth strategy areas

District plans shall ensure that in areas not subject to a growth strategy, urban development is predominantly directed to existing urban areas and is contiguous with, and well connected to them".

The explanation to policy 6.14 further confirms this approach as it states that "new urban development can occur in centres which do not have urban limits as long as it is consistent with Table 6-1 and 6-2". Table 6-2 is not relevant to this application but Table 6-1 is relevant and indicates that 5% of the population of the Waikato region is expected to live in Rural Villages such as Mercer by 2041. This again confirms that growth is expected to occur in an around villages such as Mercer.

It is also noted that even if the proposal was not consistent with Table 6-1 it is consistent with the provisions relating to alternative land release (6.14.3) as:

- The proposal is consistent with the overarching principles of the Future Proof Strategy as set out in the table in Section 7;
- The proposal will maintain and enhance the safe functioning of infrastructure such as the Waikato Expressway;
- The proposal is consistent with the development principles contained in Section 6a (as shown in the table above).

Overall, the proposal will give effect to the WRPS as it protects the important soil resource (including high class soils), it is consistent with the objectives and policies relating to the built environment (given that development on the Village zoned land will integrate with the existing settlement) and as it is consistent with the provisions relating to growth as it consolidates growth around an existing settlement.

#### Other Documents - Growth Strategies

There are two growth strategies that have been prepared to manage growth in the Waikato region. These strategies do not have the same status as the WRPS as they are not RMA documents. As such, they are documents that must be "had regard to", rather than be "given effect to".

The first strategy to have regard to is the Future Proof Strategy 2017. This strategy was considered in the table in the evidence above where it was identified that Mercer is not identified or mentioned in the entire Future Proof document but that growth around Mercer is consistent with the overarching principles of the strategy for the following reasons:

- The Key Targets in the strategy seek that "approximately" 80% of growth in the Waikato District will be in Te Kauwhata, Huntly, Pokeno, Tuakau, Ngaruawahia, Raglan and <u>various villages</u>". Mercer is a village;
- The Key Assumptions about the Sub-Region identify that "additional capacity is provided in the northern Waikato towns to meet anticipated demand as well as the influence of Auckland";

• The guiding principles seek to encourage development to locate adjacent to existing urban settlements and nodes in both the Waikato and Waipa Districts and that rural-residential development occurs in a sustainable way to ensure it will not compromise the Future Proof settlement pattern or create demand for the provision of urban services.

The second strategy is Waikato 2070 which was approved in 2020. This strategy also seeks a compact form of development and includes a series of development plans. The development for Mercer does not show the land proposed to be zoned village. This does not mean that it is not a good idea or that it should not happen, it simply means that the submitter was not part of the Waikato 2070 process.

#### Change to anticipated outcomes

The given that the site is zoned Rural in the Operative Waikato District Plan, the expectation will be that this site is retained for rural use. However, the counter-balance to this expectation is that the PWDP and the relevant growth strategies all make it clear that growth can occur and is expected to occur around existing towns and villages.

#### Section 6

There are no Section 6 matters which are relevant to this proposal.

# Transport

Given the limited number of houses that can be created any impacts on Koheroa Road will be minimal. The proposal will make good use of the Waikato Expressway given it will increase the density of people living in close proximity to on-ramps.

	<u>Infrastructure</u>
	As sites within the Village zone are self-sufficient in terms of water, wastewater and stormwater there is no impact on services.
	Future Development
	The Subject Site is surrounded by Rural land in both the PWDP and the OWDP. Therefore, large scale development on surrounding rural land is not provided for or anticipated. There are no other submissions to the PWDP which seek development in other parts of the Mercer settlement.
Other reasonably practicable	Do Nothing: Retain the proposed Rural Zone
options to achieve the objectives	Alternative 1: Rezone the 10ha portion of the site fronting Koheroa Road Village
(alternative options)	Alternative 2: There are no other alternatives that can be considered given that the alternatives have to be limited to the scope of the submission.

Table 2: Benefits and Costs Analysis of the Zoning Proposal

Zoning Proposal: Retain the Proposed Rural Zone		
-	Benefits	Costs
General	The benefit of retaining the Rural zone over the	Retaining the Rural zone over the whole site will mean that there will
	whole site is that it will retain its rural character and	be no expansion/growth for Mercer (given that there are no other
	would also be retained as part of the farm.	submissions seeking growth).
		This will mean that there is no increase in housing choice, no expanded
		catchment for the business and retail activities, no additional children
		at the school, no connection between the existing residential and the
		school and no overall increase in people living in Mercer to add to the
		identity and vitality of the community.
Environmental	There is no real environmental benefit to retaining	There are no environmental costs to retaining the Rural zone over the
	the Rural zone other than retaining the rural	whole site.
	character of this part of the landscape.	
Social	There is no social benefit to retaining the Rural zone	The social costs of retaining the rural zone is that there will be no
	over the whole site.	additional people in Mercer to add to the identity and vitality of the

		community. There will also be no additional children at the school which could reduce its viability given that there is only 49 children.
Economic - General	There could be very small economic benefits from	If the Rural zone is retained, the land will not be able to be developed
	retaining the 10ha block as part of the working farm	which will have an economic cost to the landowner. It will also limit the
		housing supply in the northern Waikato which could come at a cost to
		those wishing the purchase a house.
<b>Economic Growth</b>	There could be very small economic benefits from	If the Rural zone is retained, the land will not be able to be developed
	retaining the 10ha block as part of the working farm.	which will have an economic cost to the landowner. It will also limit the
		housing supply in the northern Waikato which could come at a cost to
		those wishing the purchase a house.
Employment	There are no employment benefits to retaining the	If the Rural zone is retained the land will not be able to be developed
	Rural zone as farm workers will still be required for	for housing. Development of housing generates employment.
	the remaining 380ha.	
Cultural	There are no benefits from a cultural perspective	There are no real costs to from a cultural perspective to retaining the
	from retaining the Rural zone.	Rural zone.

Zoning Propos	Zoning Proposal: Zone 10ha to Village		
	Benefits	Costs	
General	There would be an increased number of children	The only cost to the zoning 10ha Village is a small reduction in the	
	living in the village who would then attend the school	amount of rural land but given there is 380ha remaining this is not	
	which adjoins the Subject Site. This would increase	considered to be significant.	
	the viability of the school which currently has in the		
	order of 49 children;		
	It will increase the residential catchment in close		
	proximity to the retail/business area at Mercer, this		
	will enhance the viability of these activities;		
	There will be an increased number of people living		
	within easy access of the Waikato Expressway. This		
	will promote efficient traffic movements and better		
	utilize this road of regional significance;		
	The will be an increased population within the		
	settlement to create more of a community identity		
	and better enable community facilities/events;		

	There will be an increased number of residents living in close proximity to big employers in the region such as Springhall Correctional Facility and Hampton Downs.  There will also be increased housing choice.	
Environmental	Zoning the land Village will improved the quality of the environment as it will provide a connection between the residential and the school.	There are no environmental costs to zoning 10ha Village as there are no areas of environmental significance on the land. There will be construction effects but these will be temporary.
Social	There will be social benefits to zoning the land Village in that it will increase the number of people living in Mercer which will in turn increase the identity and vitality of the settlement and will increase the viability of the school.	There are no social costs to zoning the land Village.
Economic - General	There will be economic benefits to zoning the land Village as it will enable the land to be developed which will be of economic gain to the landowner. There will also be economic benefits for the retail and business activities given the increased catchment of people that they will serve. The increase in housing	There will be a small amount of land removed from rural production activities, this may have a small economic cost but this is relatively unlikely given that 380ha of production land remains.

	choice and availability could also be of economic	
	gain.	
<b>Economic Growth</b>	There will be economic benefits to zoning the land	There will be a small amount of land removed from rural production
	Village as it will enable the land to be developed	activities, this may have a small economic cost but this is relatively
	which will be of economic gain to the landowner.	unlikely given that 380ha of production land remains.
	There will also be economic benefits for the retail and	
	business activities given the increased catchment of	
	people that they will serve. The increase in housing	
	choice and availability could also be of economic	
	gain.	
Employment	There will be employment benefits in terms of the	There are no employment costs to zoning the land Village as farm
	construction of the housing to be located on the land.	workers will need to be retained for the remainder of the farm.
Cultural	It is unlikely that there will be benefits from a cultural	There is nothing to indicate that there will be costs from a cultural
	perspective in zoning the land Village.	perspective in zoning this land Village.

**Table 3: Evaluation of the Proposal** 

Reasons for the selection of the preferred	The preferred option is to rezone 10ha of the Subject Site to Village. The reasons for selecting
option	this option are set out in the conclusion below.
Extent to which the objectives of the proposal	The proposal is the most appropriate way to achieve the objectives as it will consolidate
being evaluated are the most appropriate way	development around the existing settlement. Development in this form is the Waikato Districts
to achieve the purpose of the RMA.	Council's means of achieving Sustainable Management given that it enables economic and social
	wellbeing at the same time and managing effects on the environment.
Assessment of the risk of acting or not acting	Given the limited size and scale of this land to be zoned Village there is no real risk in acting,
if there is uncertain information about the	especially as there are no areas of environmental significance.
subject matter of the provisions.	
	There is a risk in not acting as it will mean that there will no provision for Mercer to expand.
Conclusion	Overall, this proposal represents a balanced planning approach which promotes a number of
	positive planning outcomes:
	It will increase the range of housing options at Mercer and in the northern Waikato in
	general. To date the majority of residential growth has focused on Pokeno and the
	proposed Village zone would provide an alternative location;

- An increased population would help Mercer to evolve and further develop its identity as a place in and of itself rather than being dominated by the larger adjoining settlements of Pokeno and Meremere;
- There would be an increased number of children living in the village who would then attend the school which adjoins the Subject Site. This would increase the viability of the school which currently has in the order of 49<sup>4</sup>children;
- It will provide a positive urban design outcome as it will connect the existing residential to the school;
- It will increase the residential catchment in close proximity to the retail/business area at Mercer, this will enhance the viability and vitality of these activities;
- It will consolidate development in nodes along the Waikato Expressway. This will promote efficient traffic movements and better utilize this road of regional significance;
- The will be an increased population within the settlement to create more of a community identity and better enable community facilities/events;
- There will be an increased number of residents living in close proximity to big employers in the region such as Springhall Correctional Facility and Hampton Downs.

This balance of outcomes means that Sustainable Management can be achieved.