

**BEFORE THE QUEENSTOWN LAKES  
DISTRICT COUNCIL**

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

**AND**

**IN THE MATTER** of the Queenstown Lakes Proposed  
District Plan

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**Statement of Evidence of  
Duncan Lawrence White**

**For Christopher Jopson, Jacqueline Moreau  
and Shane Jopson (submission #287)**

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**4 April 2017**

## **1.0 Introduction**

- 1.1 My name is Duncan Lawrence White. I hold the qualifications of a Bachelor of Science in Geography, a Diploma for Graduates and a Post Graduate Diploma in Science. Both of the latter two qualifications are in Land Planning and Development. These qualifications are all from the University of Otago.
- 1.2 I have over 14 years experience as a planner. I have seven years planning experience with the Manukau City Council, including three years as a subdivision officer processing subdivision resource consent applications, followed by four years as an environmental policy planner undertaking district plan changes, policy development and the acquisition of reserves. For the past seven years I have lived in Wanaka and worked as a planner for Paterson Pitts Limited Partnership (Paterson Pitts). Paterson Pitts is a land development consultancy that undertakes a variety of rural and urban subdivision, resource consent applications and plan change work, primarily around Wanaka.
- 1.3 While this is a Council hearing, rather than an Environment Court process, I confirm I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2014, and agree to comply with it. I can confirm that this evidence is within my area of expertise, except where I state that I have relied on material produced by other parties, and that I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

## **2.0 Scope of Evidence**

- 2.1 This evidence has been prepared on behalf of Christopher Jopson, Jacqueline Moreau and Shane Jopson in support of submission #287 to the Proposed District Plan. This submission sought that the properties on Terranova Place (Lots 1 – 9 DP 304375) be rezoned from Large Lot Residential as notified to Low Density Residential. This area is shown on the plan in Appendix **A** and is described in the following section.

- 2.2 This evidence examines the objectives from the Large Lot Residential chapter (section 11) of the Proposed District Plan in comparison to those from the proposed Low Density Residential chapter (section 7) to consider which of these represents the most appropriate way to achieve the sustainable management of natural and physical resources (the purpose of the Resource Management Act 1991) as required by Section 32(1)(a). In this evidence all references to the Act or the RMA are to the Resource Management Act 1991, PDP refers to the Proposed District Plan and ODP to the Operative District Plan, LLR refers to the Large Lot Residential zone and, LDR to the Low Density Residential zone.
- 2.3 This evidence then considers whether the provisions (the policies and methods) are the most appropriate way to achieve the objectives (Section 32(1)(b)) by identifying other reasonably practicable options for achieving the objectives, and assessing the efficiency and effectiveness of the provisions in achieving the objectives.
- 2.4 This evidence has been prepared to provide the level of assessment required by Sections 32 and 32AA of the Act in relation to the provisions sought by the submissions (S32(3)) at a level of detail that corresponds to the significance of the anticipated effects from the proposed change to Low Density Residential zone (S32(1)(c)).
- 2.5 In preparing this evidence I have reviewed (amongst other documentation) the following:
- The PDP planning maps, primarily Map 20,
  - The S32 Evaluation Reports – Low Density Residential Zone (Chapter 7) and Large Lot Residential Zone (Chapter 11),
  - S42A Hearing Reports – Chapter 7 Low Density Residential Zone Chapter 11 Large Lot Residential, including the S32AA evaluations of recommended changes,
  - National Policy Statement on Urban Development Capacity 2016.

### **3.0 Section 42A Report**

- 3.1 I have reviewed the S42A report and concur with the Infrastructure, ecology and traffic assessments, but have noted what I consider to be a material error in the assessment of the relief sought by the submission. The S42A report at para 4.38 notes *“the submitters seek to rezone the properties located on the southern side of Terranova Place from LLR B to LDRZ.”* In fact the Jopson submission (#287) sought *“the properties on Terranova Place be rezoned from Large Lot Residential to Low Density Residential.”* The Jopson submission was drafted to apply to all Terranova Place sites, not just those on the southern side of the road.
- 3.2 I consider the misinterpretation of the submission resulted in the summary conclusion that the rezoning *“would result in a lack of coherent zoning and interface between the LDRZ and LLRZ.”* Para 4.43 of the S42A report considers *“that the application of the LDRZ would lead to a pepper potting of densities and would have a negative impact on the interface with the LLRZ properties on the northern side of Terranova Place.”* These issues then lead the reporting planner to recommend that the submission be rejected.
- 3.3 As the submission actually applies to the sites on both sides of Terranova Place I consider that the LDR zone would provide a coherent zone interface to the north of Terranova Place, indeed that the zone interface would be more coherent as a result of extending the LDR zone than would occur under the LLR zone. I also consider that pepper potting of densities would not be an outcome of the rezoning. I therefore disagree with the S42A recommendation and for the reasons described in previous sections consider that all the Terranova Place properties are appropriate to be rezoned to LDR.

### **4.0 The Submission Area**

- 4.1 The submission relates to a 4.1 hectare area shown on the plan in Appendix A. This area has been developed into nine lots in accordance with the ODP Rural Residential zoning. These nine lots range in size from 4,173m<sup>2</sup> to 5,484m<sup>2</sup>. A

15 metre wide central cul-de-sac known as Terranova Place provides access and services to all lots. The lots have generally been developed with houses and outbuildings, although there are still two vacant sites.

4.2 The PDP as notified zones the Terranova Place sites as Large Lot Residential (LLR). Land on the western side of Anderson Road, and to south of the Terranova Place lots is currently zoned under the ODP as Low Density Residential Zone (LDR), while land to the east of the Terranova Place lots is currently zoned Rural General (although this has been developed in accordance with the LDR provisions with lots from 1,300m<sup>2</sup> to 1,900m<sup>2</sup>). The PDP identifies that the land on the western side of Anderson Road, and to the south and east of the Terranova Place lots is to be zoned LDR. The Terranova Place lots and land further north is proposed to be identified as LLR. This means that there is a step in the LDR area that excludes the Terranova Place area, and conversely a bulge in the LLR area to include the Terranova Place area.

4.3 The LLR zone in the notified version of the PDP generally had a minimum lot size of 4,000m. Several submissions sought that the minimum lot size and residential density in the LLR be reduced to 2,000m<sup>2</sup>. The LLR S42A report (p12 paras 9.18 – 9.23) considers that the LLR area in Anderson Road and part way along Aubrey Road is suitable for a reduction in the residential density and minimum lot size to 2,000m<sup>2</sup>.

4.4 Submission #287 seeks to have all the Terranova Place lots rezoned from Large Lot Residential zone to Low Density Residential zone. The following sections assess this proposal against the requirements of Section 32 and 32AA of the Act.

## **5.0 Evaluation of Proposed Objectives – Section 32 (1)(a)**

5.1 The following table compares the relevant notified LLR objectives (as modified by the S42A report) with the notified LDR objectives (as modified by the S42A report). The S32 and S32AA assessments for the proposed LDR chapter have considered the appropriateness of the proposed residential objectives in the

District-wide context and considered these to be an appropriate way of achieving sustainable management (see the S32 report for the Act's definition of sustainable management). The above submissions have sought to apply existing proposed objectives to an extended area of the District adjacent to the proposed extent of the LDR zone, therefore this assessment is a location specific assessment rather than an overall assessment of the appropriateness of the objectives as this overall assessment has been undertaken in the Section 32 and 32AA assessments already completed.

5.2 Two alternative zoning scenarios were considered in preparing the submission: the status quo (Large Lot Residential zone) or an extension of the adjacent Low Density Residential zone to cover all the Terranova Place land. The following table therefore compares the LLR objectives against the LDR objectives to provide an evaluation of which is the most appropriate for the submission area. The objectives listed below are those from the Recommended Revised Chapters from the relevant S42A reports:

Low Density Residential Objectives	Large Lot Residential Objectives	Comparison of Appropriateness in Relation to Submission Area in Achieving the Purpose of the Act.
7.2.1 – Development provides a low density residential living environment with high amenity values for residents, adjoining sites and the street.	11.2.1 – High levels of residential amenity within the Large Lot Residential Zone.	Both objectives seek to provide high levels of residential amenity. The primary difference is in the respective residential densities. Low density residential development in the submission area is considered more appropriate as it is consistent with adjacent development to the west, south and east. It is also considered more appropriate to enable more residential use within the Urban Growth Boundary as it provides a more efficient use of residential land, provides choice of section and housing types, as well as providing for a more competitive land market.
7.2.2 – Development of higher 'gentle density' occurs where it responds appropriately and sensitively to the context and character of the locality and does not occur within	No similar objective	Terranova Place is an area more suited to residential lots in the vicinity of 1,000m <sup>2</sup> as this would be a redevelopment of existing sites and around existing houses, would be consistent with the character of sites to the south and east. The objective recognises that gentle

the Queenstown Airport Noise Boundary or Outer Control Boundary.		density is not appropriate in all locations, the subject area is more suited to larger section sizes, but this does not make the objective or the proposed zone extension inappropriate. Indeed there is no similar objective for the LLR zone so it is considered that the more specific policy direction is more appropriate.
7.2.3 – Arrowtown only – not relevant	No similar objective	Not Applicable
7.2.4 – Community activities are best located where adverse effects on residential amenity are managed.	11.2.2 – Predominant land uses are residential and where appropriate, community and recreational activities.	Both these objectives cover similar ground, the LLR objective is more specific, but there would be limited chance of a community activity wishing to locate on Terranova Place so the difference between the subtleties of the objectives is more than likely academic.
7.2.5 – Development efficiently utilises existing infrastructure and minimises impacts on infrastructure and roading networks.	No similar objective	The LDR objective is considered appropriate as it provides for more efficient use of existing infrastructure (primarily wastewater) by providing for residential development at higher densities than otherwise provided for in the LLR zone in areas where this service is already provided. In this case the existing wastewater service in Terranova Place is a pumped network so the timing of pumping into the trunk main in Anderson Road can be adjusted to avoid peak flow periods, allowing more efficient use of the existing network without the need for upgrades. See the infrastructure Report in Appendix B for details. Terranova Place is an existing access point onto Anderson Road and can be upgrade in accordance with Council standards to provide for the level of development anticipated.
7.2.6 – Commercial development is discouraged except where it is small scale and generates minimal amenity impacts.	No similar objective	This LDR objective is specific in discouraging commercial activities and so is considered appropriate for Terranova Place.
7.2.7 – Residential amenity is retained through pleasant living environments within which adverse	See 11.2.2	The LDR objective is generic and aspirational, but provides better direction as to the outcomes sought in the LDR zone. This direction is not as

effects are minimised while still providing the opportunity for community needs.		specific in the LLR objectives. Consequently the LDR objective is considered more appropriate.
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5.3 The LDR objectives are considered more appropriate to achieve sustainable resource management in the submission area than the objectives of the LLR section of the Proposed District Plan in the submission area as they are considered to provide more explicit guidance on the level of amenity high levels of residential amenity as well as enabling more residential use within the Urban Growth Boundary, thus providing for a more efficient use of residential land, greater choice of section and housing types, and potentially enabling a more competitive land market.

5.4 The proposed residential objectives have already been considered through the S32 and S32AA assessments, and will be considered again during deliberations and so are considered to be appropriate and an appropriate way overall of achieving sustainable management. Through those assessments the provisions have also been assessed against the higher level strategic resource management plans and policies including national policy statements (including the National Policy Statement on Urban Development Capacity although I note this assessment has not yet concluded) and the Regional Policy Strategy and the Proposed Regional Policy Statement, consequently it is not proposed to undertake this assessment again.

**6.0 Evaluation of Proposed Provisions – Section 32(1)(b)**

6.1 As required by S32(1)(b) the following section considers whether the proposed LDR provisions (the policies and methods) are the most appropriate way to achieve the relevant objectives in relation to the submission area. This section also considers the costs and benefits of the proposed provisions.

6.2 The submission seeks that the proposed LDR provisions apply to the Terranova Place land instead of the LLR provisions. The proposed LDR provisions have been considered through the S32 and S32AA assessments in a District-wide context and considered by those assessments to be an appropriate way of achieving the objectives. As this submission seeks to extend the area these provisions apply to, this evidence relies on that overall assessment and so will

focus on the appropriateness of key LDR policies and rules in relation to Terranova Place.

- 6.3 The key difference between the LLR and the LDR zones is the residential density (and associated minimum lot size). The LDR rules (Rule 7.4.9.1 and associated rules (S42A report version)) set a density of one residential unit per 450m<sup>2</sup> net site area as a Permitted Activity and one residential unit per 300m<sup>2</sup> net site area as a Restricted Discretionary Activity. This is consistent with the subdivision rules (S2A version) that identify subdivision as a Restricted Discretionary Activity (Rule 27.5.5) and at Rule 27.6.1 a minimum lot area of 450m<sup>2</sup>.
- 6.4 Adopting the residential density in Terranova Place is considered appropriate as it is consistent with adjacent LDR development to the west, south and east. There is no physical or infrastructural reason for the zone boundary to be located to the south of Terranova Place rather than to its north. The site is within the Urban Growth Boundary and it is considered appropriate to enable residential development adjacent to existing residential area to provide a more efficient use of land for residential than can be provided in the 4,000m<sup>2</sup> or 2,000m<sup>2</sup> LLR zone. Development to LDR standards in this location provides a greater choice of section and housing types, as it is likely to provide a range of site sizes as a result of the position of existing houses and buildings. Given the site is currently in nine ownerships, the rezoning of the site will assist in the provision of a more competitive land market as well as a staged release of sections developed in this area.
- 6.5 The submission seeks the extension of an adjacent zone to cover the submission area, the other alternative (S32)(1)(b)(i) is the site maintains its proposed LLR zoning (as considered in the previous section). As the proposed provisions are the LDR provisions these have already been considered (and/or will be considered) through the S32 and S32AA assessments and commissioners' deliberations to be efficient and effective as required by S32(1)(b)(ii).

#### Other Provisions

6.6 If it is accepted that the site is suitable for LDR residential density (and associated minimum lot size) then it is considered appropriate, as well as efficient and effective, for the remaining provisions to also be extended to cover the site.

## **7.0 Evaluation of Proposed Provisions – Section 32(2)**

7.1 Section 32(2)(a) requires the identification and assessment of the anticipated benefits, costs, and the environmental, economic, social and cultural effects of the proposal.

7.2 The proposed LDR zone extension will provide an increase in the residential land availability in a consistent and logical location adjacent to existing residential development. This will assist in providing a supply of residential land to provide a less restrictive property market. The rezoning will provide for economic benefits to existing owners, enabling them to provide for their economic wellbeing and provides additional economic and employment activity during the development and construction phases. Denser residential development would enable Council to collect additional development contributions to recover the costs associated with growth and rates for ongoing operation of physical infrastructure and other services. Denser residential development also provides the opportunity for more efficient use of infrastructure, primarily the wastewater network. The costs of infrastructure upgrades will be borne by the developers, with these assets vested in Council. These economic effects will not arise to the same extent under the LLR zoning.

7.3 Environmental and social effects of the proposal are expected to be limited as the site is already developed for lower density residential use and is on the periphery of existing residential development. No sites of cultural significance would be affected by the proposal and no cultural effects are anticipated as a result of the proposal.

7.4 Section 32(2)(c) requires an assessment of the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the provisions. In the case of the proposed LDR zone in the submission area there is very limited uncertainty and sufficient information in order to make a decision on the submission. The risk associated with the zoning sought is very low as it

is an existing zoning, with provisions similar to the Operative District Plan, in an area already developed to a similar density and adjacent to a LDR zoned area. The likely outcomes of the LDR sought can be predicted with some accuracy and would be approximately 25 more houses/lots. As the environmental conditions are already known and well understood the level of risk associated with the rezoning is very low.

## **8.0 Assessment Against Higher Order Proposed District Plan Provisions**

8.1 The proposal has been assessed against the higher order strategic provisions of the PDP contained in Chapter 3 – Strategic Direction and Chapter 4 Urban Development. This assessment is documented in the following paragraphs.

8.2 The Strategic Direction chapters includes objective 3.2.2 that seeks to ensure urban development is compact, well designed and integrated, and protects the District's rural landscapes from sporadic and sprawling development. The proposal would provide for an additional and integrated residential area adjacent to the LDR, this is compact and not sporadic or sprawling as adjacent land and that on the opposite side of Anderson Road is already LDR, would reduce the need for further future residential expansion into rural areas. The design qualities are controlled by the LDR provisions and those contained in the PDP's Subdivision section (Chapter 27). The proposal is also in accordance with Objective 3.2.5.3.1 which directs new urban subdivision within those areas that have the potential to absorb change without detracting from landscape and visual amenity values.

8.3 These objectives and policies lead into those contained in Chapter 4 – Urban Development. The proposal is specifically in accordance with relevant objectives 4.2.1 – 4.2.3 and 4.2.6 and relevant policies. The proposal specifically provides for compact and integrated urban development within an existing major urban settlement, in a location that is integrated with existing infrastructure, adjacent to transport and does not have ecological, heritage or landscape significance and is not subject to natural hazards.

## **9.0 Evaluation Against Regional Planning Documents**

- 9.1 Section 75(3)(c) of the RMA requires district plans to give effect to any regional policy statement and S74(2) requires Council to have regard any proposed regional policy statement when preparing a district plan. Consequently the proposal has been assessed against the relevant provisions of the Otago Regional Policy Statement 1998 (the RPS) and the Proposed Regional Policy Statement for Otago 2016 (Decisions Version) (the PRPS) as documented in the following paragraphs.
- 9.2 The relevant sections from the RPS are Chapter 5 – Land and Chapter 9 – Built Environment. Chapter 5 primarily relates to the sustainable management of rural land environments and so focuses on productive capacity, protection of outstanding features and landscapes, public access and mineral resources, none of which are particularly relevant to the submission area as it is already developed for rural residential uses and on the boundary between residential and rural residential uses.
- 9.3 Chapter 9 – Built Environment is more relevant. In relation to these objectives and policies it is considered that as a result of current and projected population growth there is a current demand and a foreseeable future demand for additional housing stock (objective 9.4.1(a)), associated with this is a rising cost of housing (see the S42A report for PDP Chapters 3 and 4 for additional details). The proposed Terranova Place rezoning would, in a small way, assist in meeting the foreseeable housing demands. The submission area is on the edge of the residential area, and including Terranova Place in the residential area will not significantly impact on amenity values (objective 9.4.1(b) and policy 9.5.4 (d)) within the submission area or in relation to adjacent sites as this will be controlled by the Low Density Residential zone provisions. As demonstrated in the infrastructure report (Appendix **B**) infrastructure can be provided to serve additional development along Terranova Place and this would be sustainable (objective 9.4.2 and policy 9.5.2) (see S42A report). Residential development would be undertaken in accordance with regional plans and the provisions of the LDR zone to avoid effects from residential development (Objective 9.4.3).
- 9.4 As a result of the above it is considered that the rezoning of Terranova Place would give effect to the RPS in the sense of avoiding effects on the environment and would assist in the provision of additional housing supply to meet the

foreseeable demand for further housing stock in a location that can sustainably be provided with infrastructure.

- 9.5 The proposal has also been assessed against the relevant provisions of the Proposed Regional Policy Statement (the PRPS). The relevant provisions are the urban growth objectives and policies are contained in objective 4.5 and policies 4.5.1 – 4.5.7. These are listed below, but for completeness I note that these provisions have been appealed by various parties.

***“Objective 4.5 - Urban growth and development is well designed, reflects local character and integrates effectively with adjoining urban and rural environments***

***Policy 4.5.1 Managing for urban growth and development***

*Manage urban growth and development in a strategic and co-ordinated way, by all of the following:*

- a) *Ensuring there is sufficient residential, commercial and industrial land capacity, to cater for the demand for such land, over at least the next 20 years;*
- b) *Coordinating urban growth and development and the extension of urban areas with relevant infrastructure development programmes, to provide infrastructure in an efficient and effective way;*
- c) *Identifying future growth areas and managing the subdivision, use and development of rural land outside these areas to achieve all of the following:*
  - i. *Minimise adverse effects on rural activities and significant soils;*
  - ii. *Minimise competing demands for natural resources;*
  - iii. *Maintain or enhance significant biological diversity, landscape or natural character values;*
  - iv. *Maintain important cultural or historic heritage values;*
  - v. *Avoid land with significant risk from natural hazards;*
- d) *Considering the need for urban growth boundaries to control urban expansion;*
- e) *Ensuring efficient use of land;*
- f) *Encouraging the use of low or no emission heating systems;*
- g) *Giving effect to the principles of good urban design in Schedule 5;*
- h) *Restricting the location of activities that may result in reverse sensitivity effects on existing activities.*

***Policy 4.5.2 Planned and coordinated urban growth and development***

*Where urban growth boundaries or future urban development areas, are identified in a district plan, control the release of land within those boundaries or areas, by:*

- a) *Staging development using identified triggers to release new stages for development; or*
- b) *Releasing land in a way that ensures both:*
  - i. *a logical spatial development; and*
  - ii. *efficient use of existing land and infrastructure before new land is released; and*
- c) *Avoiding urban development beyond the urban growth boundary or future urban development area.*

***Policy 4.5.3 Urban design***

*Encourage the use of Schedule 5 good urban design principles in the subdivision and development of urban areas.*

***Policy 4.5.4 Low impact design***

*Encourage the use of low impact design techniques in subdivision and development to reduce demand on stormwater, water and wastewater infrastructure and reduce potential adverse environmental effects.*

**Policy 4.5.5 Warmer buildings**

*Encourage the design of subdivision and development to reduce the adverse effects of the region's colder climate, and higher demand and costs for energy, including maximising passive solar gain.*

**Policy 4.5.6 Designing for public access**

*Design and maintain public spaces, including streets and open spaces, to meet the reasonable access and mobility needs of all sectors.*

**Policy 4.5.7 Integrating infrastructure with land use**

*Achieve the strategic integration of infrastructure with land use, by undertaking all of the following:*

- a) *Recognising the functional needs of infrastructure of regional or national importance;*
- b) *Locating and designing infrastructure to take into account all of the following:*
  - i. *Actual and reasonably foreseeable land use change;*
  - ii. *The current population and projected demographic changes;*
  - iii. *Actual and reasonably foreseeable change in supply of, and demand for, infrastructure services;*
  - iv. *Natural and physical resource constraints;*
  - v. *Effects on the values of natural and physical resources;*
  - vi. *Co-dependence with other infrastructure;*
  - vii. *The effects of climate change on the long term viability of that infrastructure;*
  - viii. *Natural hazard risk.*
- c) *Locating growth and development:*
  - i. *Within areas that have sufficient infrastructure capacity; or*
  - ii. *Where infrastructure services can be upgraded or extended efficiently and effectively;*
- d) *Coordinating the design and development of infrastructure with land use change in growth and redevelopment planning."*

9.6 In relation to this objective and these policies I consider that rezoning Terranova Place to LDR would specifically provide for urban growth, the LDR provisions require well designed development in accordance with local character that integrates well with adjacent LDR and LLR zonings, and as a result of its position does not impact on rural environments.

9.7 These policies are similar to those of the PDP Strategic Direction and Urban Development chapters (Chapters 3 and 4 respectively) and for the Low Density Residential Zone (Chapter 7). The zone extension is part of a package that would provide land for future residential development adjacent to existing residential uses and can be provided with efficient and effective infrastructure in an area that is inside the Urban Growth Boundary.

9.8 The proposal is therefore considered to give effect to these provisions and therefore the PRPS. The LDR provisions achieve more of the outcomes sought by the RPS than the LLR provisions.

## **10.0 Evaluation Against National Planning Instruments**

10.1 The National Policy Statement on Urban Development Capacity 2016 (the NPS) is relevant to this proposal as Wanaka is an urban environment and is expected to experience growth. Council's response to this NPS is not yet fully known, however the proposal to extend the LDR to cover Terranova Place would assist Council to achieve its obligations under the NPS by providing opportunities for housing development to meet demand, provide choices and future generations by intensifying an existing urban area to meet residential demand.

## **Conclusions**

11.1 Submission #287 sought that the properties on Terranova Place (Lots 1 – 9 DP 304375) be rezoned from Large Lot Residential zone as notified to Low Density Residential zone. This evidence provides an assessment of the proposal against the criteria contained in 32 of the RMA. In relation to these criteria it is considered that the rezoning to Low Density Residential is appropriate as the Low Density Residential objectives are the most appropriate way to achieve sustainable resource management, the low density provisions are the most appropriate way of achieving the objectives, and are efficient and effective in doing so.

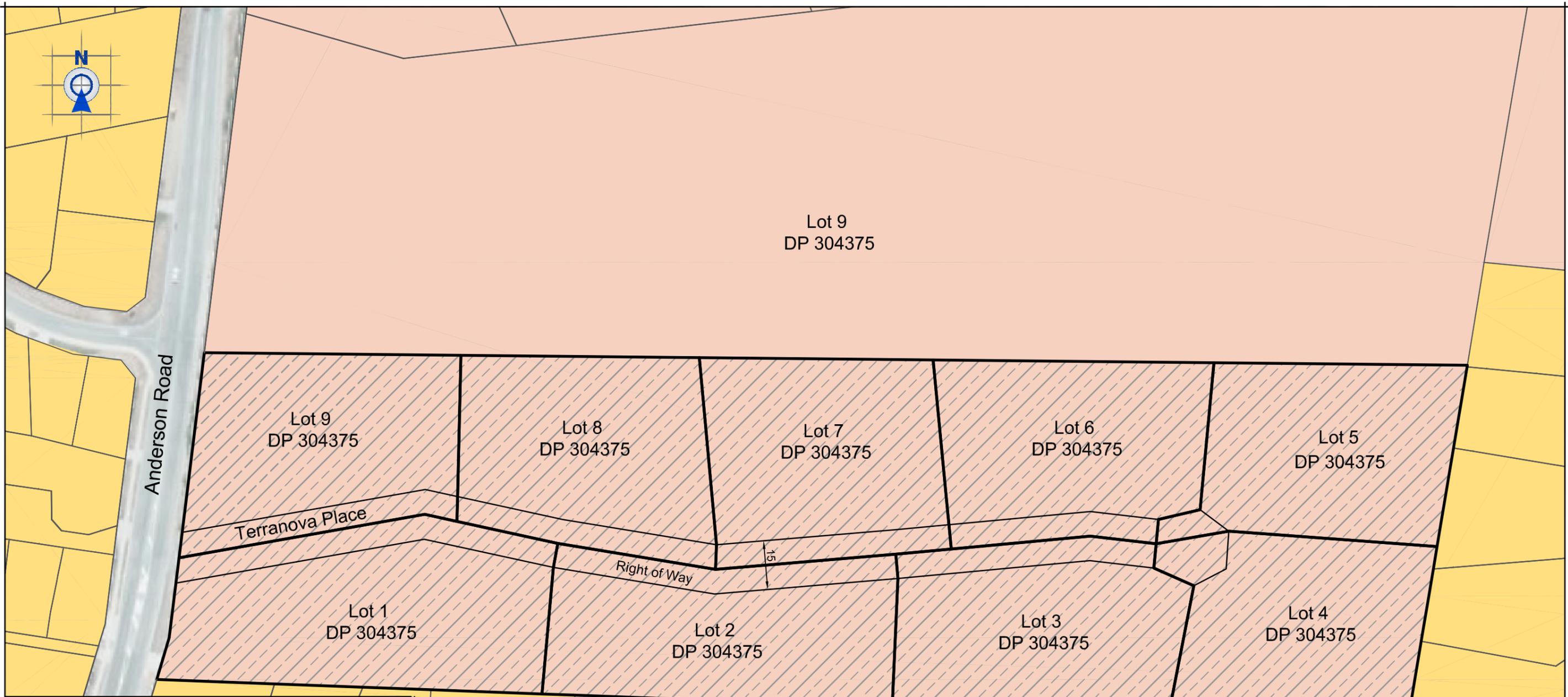
11.2 The evidence assesses the benefits and costs of the environmental, economic, social and cultural effects of the proposal and considers there are economic benefits to the Low Density Residential zoning with limited adverse environmental, social or cultural effects as a result of the site's existing development and position location adjacent to existing residential development.

11.3 The risks of acting or not acting have also been considered. It is considered that there is very limited uncertainty and sufficient information in order to make a decision on the submissions. The risk associated with the zoning sought is very low as it is an existing zoning, with provisions similar to the Operative

District Plan, in an area already developed to a similar density and adjacent to a Low Density Residential zoned area.

- 11.4 The proposal to extend the Low Density Residential zone has been assessed against the relevant provisions of the Strategic Direction and Urban Development chapters of the Proposed District Plan and is considered to be consistency with these higher level policies. The proposal has also been considered against the Regional Policy Statement and is considered to give effect to it as the proposal avoids effects on the environment and provides additional housing supply to meet the foreseeable demand for housing. Regard has also been given to the Proposed Regional Policy Statement and it is considered that the zone extension would provide land for future residential development adjacent to existing residential uses, can be provided with efficient and effective infrastructure in an area that is inside the Urban Growth Boundary and therefore gives effect to its urban growth objectives and policies. The proposal would also assist Council to achieve its obligations under the National Policy Statement on Urban Development Capacity (2016) by providing opportunities for housing development to meet demand, provide choices and future generations by intensifying an existing urban area to meet residential demand.
- 11.5 As a result of the above it is considered that rezoning of Terranova Place to Low Density Residential provides a more sustainable option as it better achieves the objectives of the Proposed District Plan and the higher order resource management documents than the Large Lot Residential zone of the notified Proposed District Plan. Therefore it is sought that the submission be adopted and the land at Terranova Place be zoned Low Density Residential.

## Appendix A – Submission Area Plan

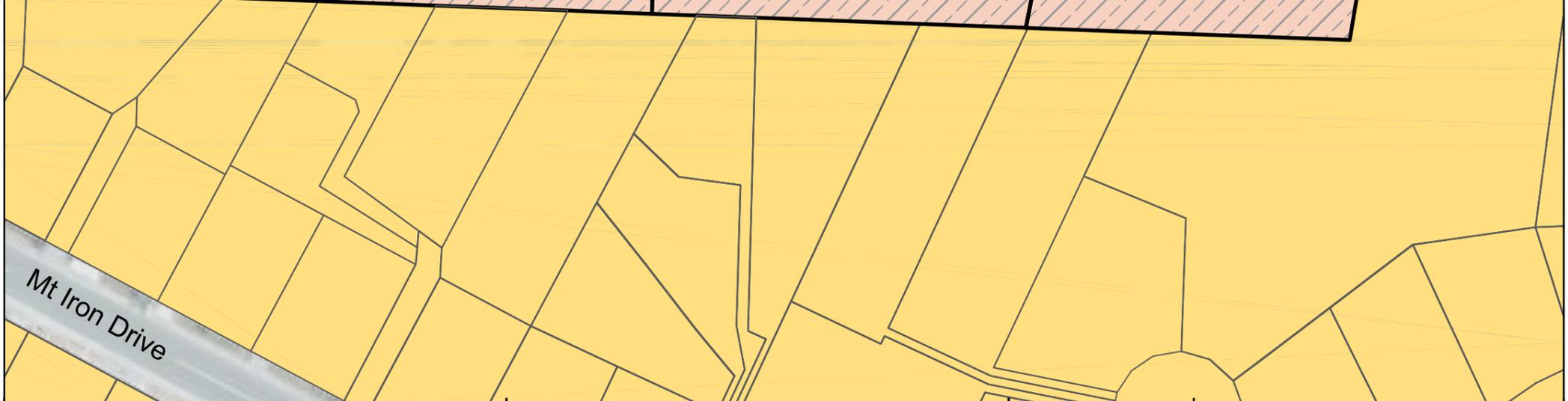


**Legend**

- Large Lot Residential - Proposed District Plan
- Low Density extension sought by Submission #287
- Low Density Residential - Proposed District Plan

**Notes:**

1. Combined right of way width is 15m.
2. Refer to DP 304375 for details



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Client & Location:  
**Terranova Place  
 Wanaka**

Purpose & Drawing Title:  
**Submission #287  
 Low Density Residential  
 Zone Extension**

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				Date Created:	03/03/2017

## Appendix B – Infrastructure Report



## INFRASTRUCTURE REPORT

### Terranova Place, Wanaka

### Low Density Zone Submission

**PROJECT:** Terranova Place  
**PRINCIPAL:** Jopson and others  
**OUR REF:** W4804  
**DATE:** 3<sup>rd</sup> April 2017

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**REVISION / APPROVAL PANEL**

Rev:	Date:	Prepared By:	Reviewed By:	Comments:
A	3/04/17	PHJ	DLW	Original issue

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## **1. SCOPE**

This report has been prepared to provide servicing information to support submissions #287 (Shane Jopson). This area is shown on the plan in Appendix A. This report covers the following infrastructure issues.

- Natural Hazards
- Water Supply
- Wastewater
- Stormwater
- Network Utility Services (electricity and telecommunications)
- Access

## **2. NATURAL HAZARDS**

### **2.1 Council Hazard maps**

The council hazard maps identify this land as LIC1 as nil to low risk of liquefaction.

## **3. PROPOSED INFRASTRUCTURE**

### **3.1 General**

It is anticipated that all infrastructure for development would be designed and constructed in accordance with Council's infrastructure standards – "Land Development and Subdivision Code of Practice" adopted June 2015 and any subsequent amendments.

### **3.2 Water Supply**

There is an existing 100mm watermain located in Terranova Place. This line has suitably placed hydrants to service the existing lots and any future subdivision. This 100mm line is connected into the 200mm main in Anderson Road. A single ended 100mm watermain has sufficient capacity to service the proposed development densities.

### **3.3 Wastewater**

A wastewater report has been prepared by Fluent, this is attached as appendix B

This report highlights that the existing pumps, reticulation and rising main has sufficient capacity to service the proposed densities. The emergency storage will need to increase in size to cater for increased loading.

The pump station is currently in private ownership and would need upgrades to comply with council standards.

### **3.4 Stormwater**

There is no Council reticulated stormwater servicing the lots in Terranova Place. The existing lots and road dispose of stormwater to ground.

A stormwater report has been prepared by Fluent, this is attached as appendix **B**

This report indicates that a suitable stormwater solution can be designed to accommodate the increased runoff at the proposed densities. The exact design of the soakage field and location will be subject to detailed design at the time of implementation.

### **3.5 Network Utility Services**

#### *3.5.1 Electricity*

There is existing electrical reticulation to the area of single phase 15kVA. A letter from Aurora confirming that future development in this area can be serviced to this standard is included in Appendix **C**.

#### *3.5.2 Telecommunications*

Chorus has confirmed that telecommunications can be made available to future development within the submission area. Confirmation from Chorus is included as Appendix **D**.

### **3.6 Access**

The existing access serving the properties in Terranova place consists of a 5m sealed carriageway located within a 15m wide easement width. This is currently a private road protected by right of way easements.

The proposed development densities will need this formation to be widened to 5.5m seal width with footpaths to meet the current engineering design standards. There is sufficient width in the existing right of way easements to enable legal and practicable implementation of these works to meet Council standards.

The road will also need to be vested in Council as the maximum number of dwelling units of 12 allowed from a right of way will be exceeded.

The existing intersection between Terranova Place and Anderson Road has sufficient clearance between adjacent intersections. The sight distances in both directions exceed the 45m required for a 50km road.

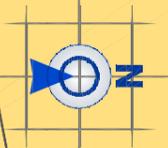
#### **4. Conclusion**

Development within the submission area can be serviced in accordance with Council's District Plan and Land Development and Subdivision Code of Practice. Specific design issues can be identified and resolved at the time of resource consent or specific engineering design and approval (if necessary). There are no engineering or servicing issues that would preclude the subject area being rezoned from Rural Residential to medium density residential.

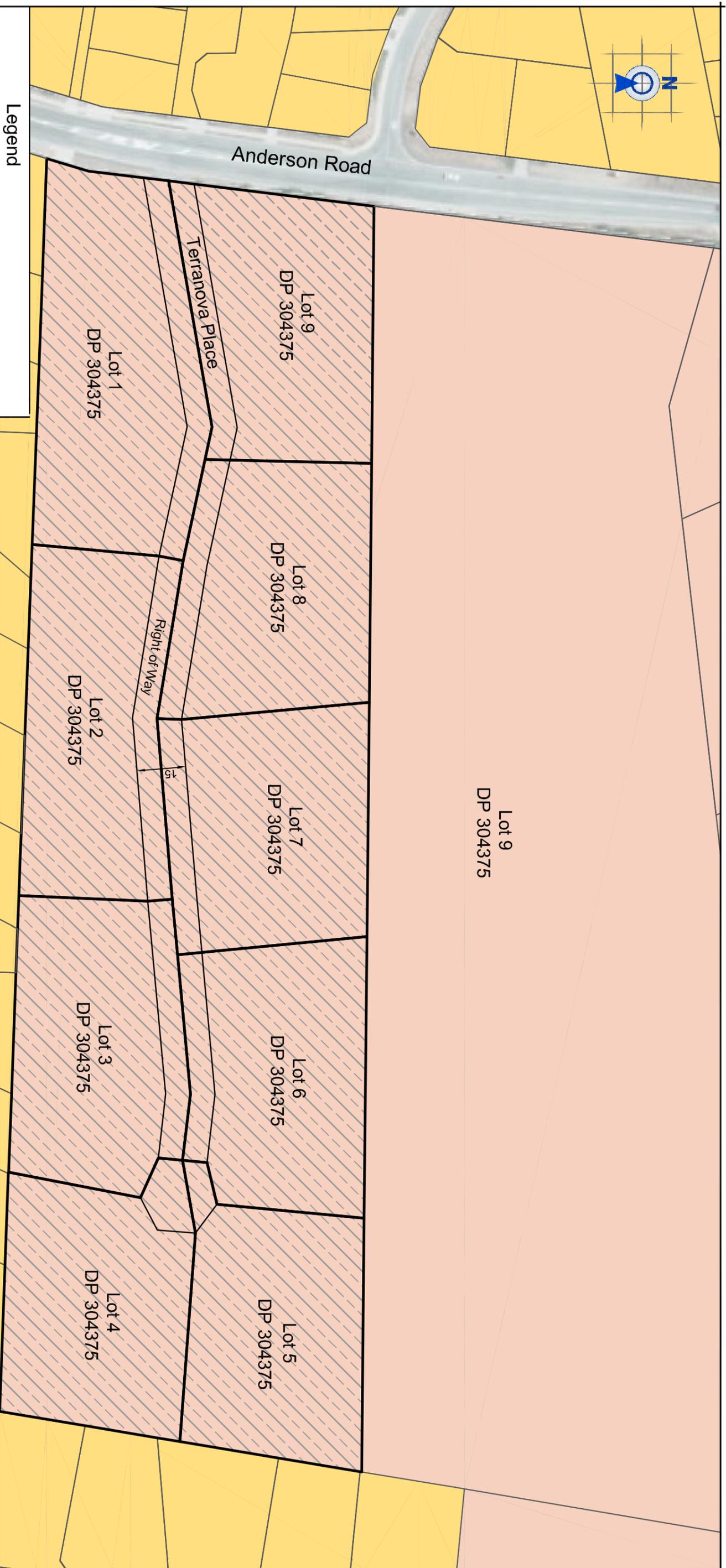
Peter Joyce  
Registered Professional Surveyor  
**Paterson Pitts Limited Partnership**

**Appendix A**

**Site Plan**



Anderson Road



### Legend

-  Large Lot Residential - Proposed District Plan
-  Low Density extension sought by Submission #287
-  Low Density Residential - Proposed District Plan

#### Notes:

1. Combined right of way width is 15m.
2. Refer to DP 304375 for details

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 or P.O. Box 283  
 Wanaka 9343  
 T 03 443 0110  
 E wanaka@ppgroup.co.nz

Client & Location:

Terranova Place  
 Wanaka

Purpose & Drawing Title:

Submission #287  
 Low Density Residential  
 Zone Extension

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**Appendix B**

**Fluent Stormwater and Foul sewer report.**

Ref: GL-17-04-03 HMW Q000346.Docx

03 April 2017

Dunollie Trust  
PO Box 456  
**WANAKA 9343**

Attention: Graham McDougall

Dear Graham

## **TERRANOVA PLACE DEVELOPMENT WASTEWATER & STORMWATER**

### **1.0 Introduction**

Terranova Place in Wanaka was developed as a nine-lot residential subdivision in 2001/2002 (reference RM010522). Fluent Solutions has been engaged by Dunollie Trust to investigate and provide a feasibility report on the wastewater and stormwater systems for a future further subdivision of the nine lots.

Two possible development options have been considered:

- Option 1: two dwellings per existing lot, ie a total of 18 residential lots
- Option 2: four dwellings per existing lot, ie a total of 36 residential lots

The following report provides a description of the wastewater and stormwater requirements for the two options.

### **2.0 Site Wastewater**

#### **2.1 Existing System**

The existing wastewater system serving the nine lots is comprised of a standard gravity collection system conveying the site wastewater to a wastewater pumping station located in a 1500mm diameter wet well adjacent to lots 6 & 7. The wastewater is then pumped through a 318m long, 50mm OD PE rising main that discharges into a gravity manhole located in Andersons Road, connected to the town's gravity wastewater reticulation. The pump station has two pumps operating as duty/standby. The pumps are model Flygt MP3068.170 HT-210 2.4kW 3ph 400V 50Hz 2650rpm (installed 2007). The pump station has a power supply with electrical control cabinet and an alarm system with audible and visual alarm.

It is understood that the entire wastewater system is privately owned by the existing nine lots who are responsible for the maintenance of the system.

The condition of the existing system was not assessed as part of this feasibility report.

## 2.2 Future Development Wastewater

To determine the feasibility of the existing wastewater system to handle future development, wastewater flows have been calculated based on the Queenstown Lakes District Council (QLDC) Land Development Code of Practice Residential flow design parameters of 250 Litres/person/day with 3 people per dwelling, and a wet weather peaking factor of 5. Refer to Table 1 below for the design flows.

**Table 1: Future Development Wastewater Flows**

Development Option	No. of Dwellings	Average Dry Weather Flow (ADWF)	Peak Wet Weather Flow (PWWF)	Instantaneous Flow for PWWF day
Option 1	18	13.5 m <sup>3</sup> /day	67.5 m <sup>3</sup> /day	0.78 L/s
Option 2	36	27 m <sup>3</sup> /day	135 m <sup>3</sup> /day	1.56 L/s

A review of the existing pump curve and the rising main hydraulics has determined that a single pump may be capable of operating at around 2.5 L/s (at approx. 19m head). This flow rate is greater than the estimated instantaneous flow for the PWWF figure for Option 2. The existing pump station should therefore be capable of pumping the increased wastewater flows for further future development of the subdivision.

However, with increased flow comes a requirement to provide for emergency storage volume in the case of prolonged pump failure or power cut. For installations of this type without the provision of standby emergency generation QLDC expect 8 hours of emergency storage. The depth of the 1500mm diameter wet well has been estimated at 3.8m, with the invert level of the incoming gravity inlet pipe estimated at approximately 1.25m above the depth of the wet well chamber. This gives a storage volume of approximately 2.2m<sup>3</sup> within the pump chamber. This represents approximately 4 hours storage at average dry weather flows for Option 1 and 2 hours storage for Option 2. As a result should the lots be developed further it is recommended that additional emergency storage be supplied at the time. An alternate approach to this would be to consider the extra storage provided in the gravity piped reticulation leading to the wet well. However as we do not know the extent, size and depths of the pipelines and the house plat form levels this has not been considered at this stage.

The pump operating volume (from pump start to pump stop), and alarm levels may also need to be modified for improved operation as the wastewater flows increase.

## 2.3 Wastewater System Upgrades for Future Development

The existing wastewater system is owned and maintained by the nine lot owners. If operating as it should, the existing pump station and rising main will be able to handle the estimated wastewater flows from the future development. However, if the future development requires that the accessway becomes a legal vested road and the wastewater

## Terranova Place Development - Wastewater & Stormwater Management

Page 3 of 5

system is adopted by the QLDC, then the system must comply with the QLDC standards and requirements. The following are points that may need to be considered as upgrades should this development occur:

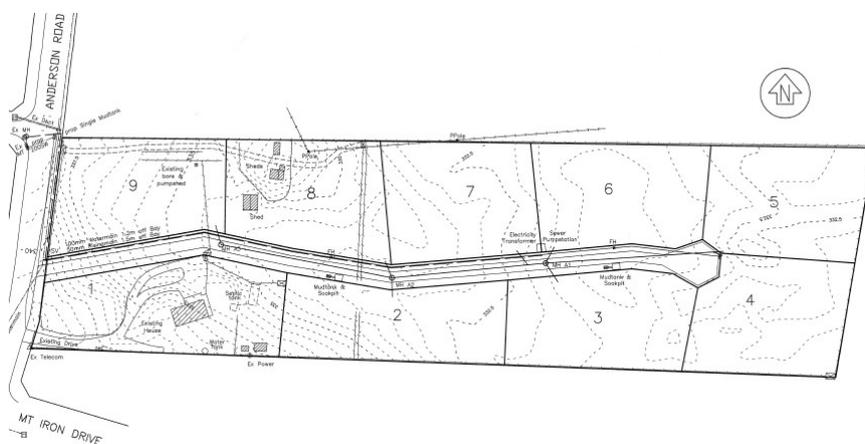
- Emergency standby storage - installation of a separate emergency storage chamber (eg a connected chamber adjacent to the existing wet well) may be required
- Ventilation requirements should be investigated and upgraded if necessary.
- Alarms – the alarm system is local only and may be required to be connected into the QLDC system (eg via SCADA or similar).
- Power supply – have the ability to connect a back-up generator in periods of prolonged power cut.
- Access should be provided for maintenance.
- Confirm that the rising main discharge manhole and gravity wastewater system has the capacity for the increased flows.

### 3.0 Site Stormwater

#### 3.1 Existing System

The subdivision site is sited in a basin located below Anderson Road with the low point near the eastern end of the site adjacent to Lots 3 and 4. Each of the developed lots currently have their own stormwater runoff collected and drained to ground via soak-pits located on each of the individual properties.

The street channel (southern side) has two soak-pit grates located along the length of the road. The lower soak-pit is located in the site low point adjacent to Lot 3. Refer to the original Paterson Pitts Subdivision plan below in Figure 1 for the site contours and approximate soak-pit locations.



**Figure 1: Original Paterson Pitts Subdivision Plan Showing Site Contours**

Anecdotal evidence has noted that the existing stormwater disposal system for the road is insufficient to cope with rainfall events.

It is understood that the soils on site consist of glacial till with layers of silty sand and stone/gravel inclusions. At this stage however no geotechnical investigations have been carried out.

### **3.2 Future Development Stormwater Management**

As there is no piped stormwater reticulation to connect to easily, the feasibility of the future management of the site stormwater runoff needs to consider storage and infiltration into the ground as the method to manage the runoff. This type of stormwater management system allows for the stormwater runoff volume to be stored whilst it soaks into the ground at a rate determined by the soil properties.

The storage volume required for the subdivision site was determined from rainfall - runoff calculations using a HEC-HMS software model. Rainfall hyetographs for the 100 year Average Return Interval (ARI) were developed from rainfall depth-duration-frequency data from High Intensity Rainfall Distribution System (HIRDS) and adjusted for climate change. The storage volume was estimated using infiltration characteristics estimated for the prevailing soil type and the impermeable areas such as roofs, roads and paving.

Other criteria used in the calculations were:

- The road reserve area was estimated to be 5,665 m<sup>2</sup>, with 65% of the road reserve considered as being impervious.
- Estimated soil permeability of  $k = 0.0001$  m/s – typical of glacial tills.
- A safety factor of 2 has been adopted for the storage volume sizing to allow for the decline in discharge efficiency with time.
- A 20% effective pit volume has been assumed based on a rock filled soakaway being used.

The sizing of the soak pits was performed for two stormwater control and dispersal options.

#### **Option A**

A soak pit servicing all the lots 35,318 m<sup>2</sup> with 60% of the area considered as impervious + the road reserve as noted above.

#### **Option B**

A soak pit servicing all the lots but assuming that the impervious areas on each of the lots is being handled by their own stormwater control solutions + the road reserve as noted above.

**Terranova Place Development - Wastewater & Stormwater Management**

Page 5 of 5

Based on the set of assumptions noted above, the HEC-HMS model results show that for a 100 year Average Return Interval (ARI) rainfall event, a detention storage volume of 2,400m<sup>3</sup> (40m x 40m x 1.5m deep say) is required for Option A, and a detention storage volume of 1,840m<sup>3</sup> (35m x 35m x 1.5m say) is required for Option B. Both of these options should be able to be installed under the proposed road and cul-de-sac bulb.

At this stage it is recommended that a detailed geotechnical investigation be performed to properly determine the permeability of the receiving ground to allow a more detailed stormwater management design to be undertaken.

If you have any questions pertaining to the above report please do not hesitate in contacting the writer.

Yours faithfully

**FLUENT INFRASTRUCTURE SOLUTIONS LTD**

Per:



Helen Wightman  
Infrastructure Engineer

**Appendix C      Confirmation of supply electricity**



Your Ref:  
Our Ref:

10 March 2017

Duncan White  
Paterson Pitts Group  
19 Reece Crescent  
Wanaka 9305

By email only: [duncan.white@ppgroup.co.nz](mailto:duncan.white@ppgroup.co.nz)

Dear Duncan

**RE: ELECTRICITY SUPPLY FOR SUBDIVISION TERRANOVA PLACE, WANAKA  
PROPOSED 9 LOT SUBDIVISION OF DP 304375 TERRANOVA PLACE**

Thank you for your letter and accompanying plans dated 21 February 2017, outlining the above proposed development.

Aurora can make an electricity supply available for this development, subject to the following conditions:

- Supply confirmation is limited to a single phase 15kVA supply per lot.
- Easements in gross, in favour of Aurora, must be granted over the placement of all new and existing Aurora plant associated with this development, unless installed in road reserve.
- Where the development involves further subdivision of a land parcel containing an existing serviced installation, the mains cables (overhead or underground) intended to supply each lot must be completely contained within the lot that it serves. In some cases this will require relocation of the cable serving the existing installation.
- All electrical installations must comply with Aurora's Network Connection Requirements and related standards & policies.
- The developer must comply with the Electricity Act, subordinate Regulations and associated Codes of Practice. Particular attention must be paid to the minimum distances between power lines and other structures defined in NZECP34:2011 "NZ Electrical Code of Practice for Electrical Safe Distances".
- No building shall be erected over any electricity easement without specific written authority from Delta's General Manager – Asset Management
- The developer is responsible for all resource consents and local authority approvals.
- The developer will be required to make capital contributions toward the costs of providing the power supply, in accordance with Aurora's Capital Contributions policy prevailing at the time the development, or each stage of development, proceeds.
- This approval will lapse within 12 months of the date of this letter, unless the developer enters into a formal supply agreement with Aurora for this development.

Aurora Energy Limited  
10 Halsey Street • Dunedin • New Zealand  
Email enquiries [@auroraenergy.co.nz](mailto:auroraenergy.co.nz)  
Postal PO Box 1404  
Phone 03-474-0322  
Fax 03-477-5771



Please note that this letter is to confirm that a power supply can be made available and does not imply that a power supply is available now, or that Aurora will make power available at their cost.

Aurora's Network Connection Requirements and Capital Contributions policy are available from <http://www.auroraenergy.co.nz/>. Should you require further information or clarification please contact the undersigned.

Yours sincerely

A handwritten signature in black ink, appearing to be 'R. Starkey', with a long horizontal line extending to the right.

Richard Starkey  
Commercial Development Manager (Delta)  
For Aurora Energy Limited

DDI Phone	(03) 470 7504
Mobile	(021) 117 5100
Email	richard.starkey@thinkdelta.co.nz



Subject Sites



0 10 20 30 40 50 60 70 80 90 100

**Appendix D      Confirmation of supply telecommunications.**

**Chorus Network Services**

PO Box 9405  
Waikato Mail Centre  
Hamilton 3200  
Telephone: 0800 782 386  
Email: [tsg@chorus.co.nz](mailto:tsg@chorus.co.nz)



27 February 2017

Chorus Ref: WNK39111

Your Ref:

C/O PATERSON PITTS GROUP

**Attention:** Duncan White

Dear Sir / Madam

**SUBDIVISION RETICULATION - WNK: Terranova Place, Wanaka, 40 lots - Simple Estimate**

Thank you for your enquiry regarding the above subdivision.

Chorus is pleased to advise that, as at the date of this letter, we would be able to provide ABF telephone reticulation for this subdivision. In order to complete this reticulation, we require a contribution from you to Chorus' total costs of reticulating the subdivision. Chorus' costs include the cost of network design, supply of telecommunications specific materials and supervising installation. At the date of this letter, our estimate of the contribution we would require from you is \$73,600.00 (including GST).

We note that (i) the contribution required from you towards reticulation of the subdivision, and (ii) our ability to connect the subdivision to the Chorus network, may (in each case) change over time depending on the availability of Chorus network in the relevant area and other matters.

If you decide that you wish to undertake reticulation of this subdivision, you will need to contact Chorus (see the contact details for Chorus Network Services above). We would recommend that you contact us at least 3 months prior to the commencement of construction at the subdivision. At that stage, we will provide you with the following:

- confirmation of the amount of the contribution required from you, which may change from the estimate as set out above;
- a copy of the Contract for the Supply and Installation of Telecommunications Infrastructure, which will govern our relationship with you in relation to reticulation of this subdivision; and
- a number of other documents which have important information regarding reticulation of the subdivision, including - for example - Chorus' standard subdivision lay specification.

Yours faithfully

A handwritten signature in blue ink, appearing to be "AV", written over a horizontal line.

Alex Vatavu  
Network Services Coordinator