

APPENDIX A

Response to Prelim s42A

MEMORANDUM REPORT: PTDP – Hearing G – Response to RFI

To: Timaru District Council

Applicant: Submitter 128 - Scott

From: Davis Ogilvie (Aoraki) Ltd

Date: 20 February 2025

Subject: Response to Hearing G Preliminary s42A report

1 INTRODUCTION

This memo has been prepared in response to the Preliminary s42A report prepared by Matt Bonis in October 2024, and subsequent clarification provided by Council and its representatives in the months since.

In his preliminary report, Mr Bonis identifies the purpose and scope of his report, and acknowledges the need described by Panel Minute 6, for more time for assessment and reporting than usual.

In his report, Mr Bonis identifies the information required and detailed this in a checklist for submitters (**Appendix 1**) to respond to. In addition to the general checklist, the following additional information is sought:

- a) The existing environment, including configuration and fragmentation of titles and geophysical boundaries that would delineate the requested zone boundaries.
- b) N/A
- c) N/A
- d) N/A
- e) Application of requirements in the NPS-UD especially in terms of development capacity beyond 'at least sufficient development capacity' for the purpose of Policy 2, and implications for integrated infrastructure and funding decisions (Objective 6).
- f) Consideration against the relevant statutory framework for achieving a consolidated pattern of development (as required by the CRPS and notified PDP) for all submissions listed, which includes the provision of a 'coordinated pattern of development' including implications for amending timeframes associated with SCHED-15
- g) Service provision as set out in Attachment B.

2 SITE CONTEXT

The subject site is located at 22 Templer Street, Geraldine, at the northeastern end of Geraldine (as shown in **Figure 1 – 3** below). The site directly to the west of the subject site has been subdivided for residential purposes, including the McKenzie Lifestyle Village. The subject site is intersected by a waterway (Raukapuka

Stream). The underlying zoning of the site is General Rural (GRUZ) under the Proposed Timaru District Plan, and the land is included within Future Development Area 3 (FDA3) as show in **Figures 1 – 3** below.

Overall, the submitter is supportive of the FDA over their site, however, the submitter seeks a reduction in the timeline for preparation of the Development Area Plan (DAP) and resulting plan change process. Given that the design of the proposed development of the site is well underway (**Figure 4**), the submitter seeks to reduce the 5 year timeframe for the preparation of a final DAP for the site.

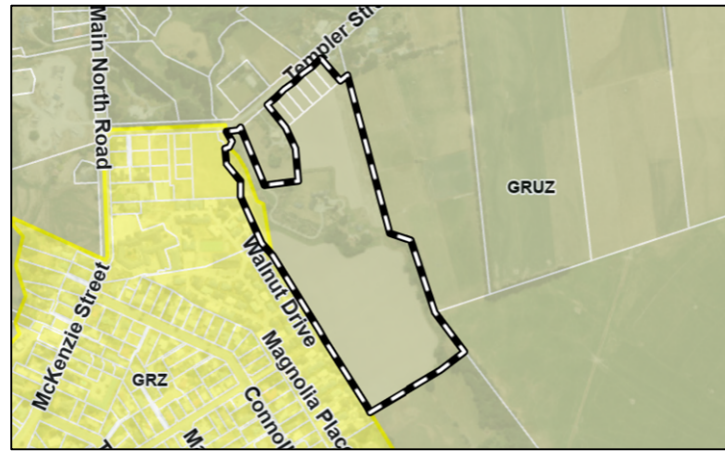


Figure 1: Proposed Timaru District Plan Planning Maps, showing relevant zoning.



Figure 2: Proposed Timaru District Plan Planning Maps showing Future Development Area for the site FDA3 (and its relation to FDA11).



Figure 3: Proposed Timaru District Plan Planning Maps, showing relevant overlays, including Drinking Water Protection Area, Esplanade Provision and Versatile Soils. The area of the site subject to versatile soils overlay is also classed LUC 2 land.

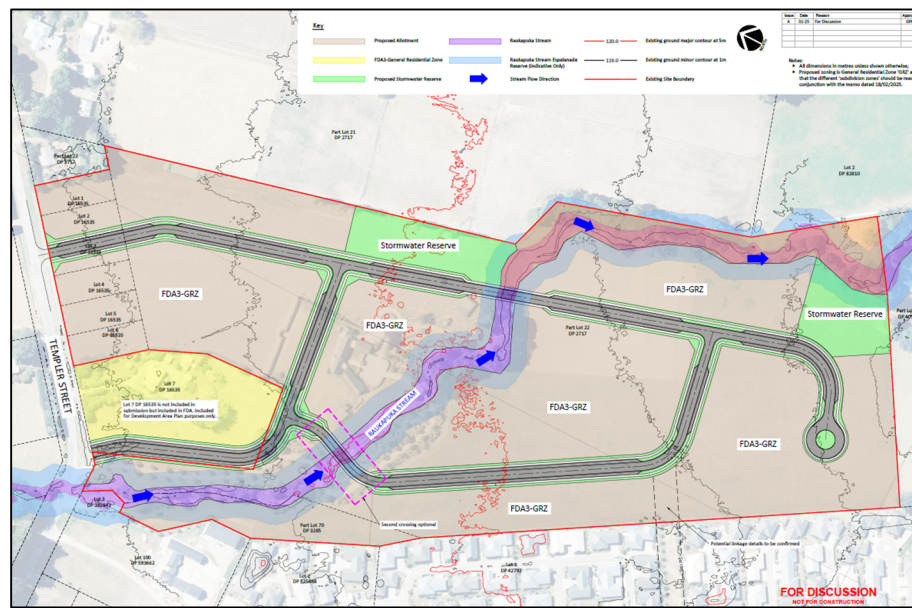


Figure 4: Indicative concept layout

3 ASSESSEMENT

NPS-UD

Question 1: What is the contribution of the rezoning (or amendment in timing associated with SCHED-15 (FDAs)) in terms of the provision (residential / rural lifestyle – yield, density; and business - area) in relation

to the Council's provision of 'at least' sufficient development capacity (**Policy 2**) given the Property Economics analysis (**Section 8**)?

The site was identified in the Planz Review of the Growth Management Strategy 2022 (GMS 2022) as suitable for future residential development. That report recommended that the site be zoned as General Residential under the Proposed District Plan (PDP). However, the site has remained rurally zoned within the PDP, with a Future Development Area (FDA) overlay applied to the land.

The 'Property Economics' (PE) Report examines development capacity of existing and identified land for future general residential development within the area. As such, the site has been deemed appropriate for future development – given its inclusion in the PDP as an FDA area. **Appendix 2** contains a concept development plan for the site and **Appendix 3** contains the Engineering Servicing Memorandum which assesses the site relative to the need for infrastructure to support development).

Of note, under the Proposed Timaru District Plan FDA5 and FDA11 (the only other FDA areas identified in Geraldine) both have Development Area Plan (DAP) requirements of 10 years. FDA3 is identified as a priority area (5 years). Given that a concept plan is well progressed and the submitter has been liaising with consultants to progress development of the site, the 5 year timeframe for preparing this DAP is now redundant. The submitter seeks that this timeframe is reduced in order to commence development of the site at an earlier date, to assist in reaching 'at least' sufficient development capacity, where the site has already been identified suitable for residential development. As identified throughout the plan review process, ensuring an adequate supply of land for housing is of key importance to all communities, with significant adverse implication for the community if supply is not sufficient.

These matters among others are mentioned within the brief planning advice memo prepared by Novo Group, attached as **Appendix 7**. We consider Council should be certain on the assumptions that the PE modelling has used. In particular seemingly basing the capacity/supply assessment on a 450m² lot size within the general residential zone, when in reality for our district the average residential typology size is much larger. This is supported by the market evidence within the Colliers, 2022 Timaru Residential Property Market Study commissioned by Council, which notes on page 13: "Of note the average land area of a vacant section is 1,033sqm compared to 784sqm for the average house", both being well above the 450m² that seems has been used. Even using an average of 12 HH/ha (833m²) compared to 450m² represents that forecast capacity modelling could fall short by some 46% of projections if on average 450m² has been used across the district – putting into question whether 'at least' sufficient supply is being allowed for.

Question 2: For residential and business rezonings how would the rezoning (or amendment in timing associated with SCHED-15 (FDAs)) contribute to 'well-functioning urban environments' (**Objective 1** and **Policy 1**) and align with responsibilities of the Timaru District Council to ensure decisions on urban development that affect urban environments are integrated with infrastructure planning and funding decisions (**Objective 6**)?

The FDA area is located directly adjacent to existing residential development, and the proposed concept design seeks to accommodate a similar form of development. As the site is located close to an existing local road, and a new subdivision is in development to the west of the site, connecting to existing infrastructure is considered feasible. Matters of infrastructure and servicing are discussed in more detail in **Appendix 3**.

Given the location of the site in relation to existing residential development, services, and wider infrastructure, early residential development of the site will enhance the prospect of developing a well-functioning urban environment.

NPS-HPL

Question 3: Urban Rezonings: *Demonstrate consideration and alignment with the requirements of the NPS-HPL Clause 3.6. for any submission for an urban rezoning (GRZ or GIZ) where the exemptions in 3.5(7)(b) are not applicable.*

The site was identified in the Planz Review of the Growth Management Strategy 2022 (GMS 2022) as suitable for future residential development.

As confirmed by correspondence between Mr Hakkaart (Timaru District Council) and Mr Bonis, the 'site is able to meet the exemption from the transitional definition of Highly Productive Land under Clause 3.5(7)(b)(i) and it is assumed that the National Policy Statement for Highly Productive Land (NPS-HPL) does not apply to the land' (Appendix 4).

Question 4: Rural Lifestyle Rezonings: *Demonstrate consideration and alignment with the requirements of the NPS-HPL Clauses 3.7 and 3.10 for any submission that requests a Rural Lifestyle rezoning (RLZ) where the exemptions in Clause 3.5(7)(b) are not applicable.*

Not applicable.

Canterbury Regional Policy Statement

Question 5: Growth Rezonings / Amendments to SCHED-15: *Does the proposal, either individually or in combination with those areas identified in the PDP concentrate and promote a coordinated pattern of development (referencing capacity provided in Section 8 of this report).*

As described in Question 2 above, the site has already been identified as suitable for development and is an acknowledged priority site for residential growth, hence its inclusion in the FDA overlay. The zoning is considered appropriate for the area given the proximity to established residential zoned areas, as well as FDA 11.

The submitters have already made significant progress in preparing a DAP and have included a concept development plan (**Appendix 2**) to show the anticipated development layout of the site.

The subject site is located within an area of Geraldine that is well serviced by roads and infrastructure, and has already experienced growth (the existing subdivision to the west of the site). The development of FDA3 is anticipated to include residential section size typology similar to that neighbouring the site to the west (i.e. 500-1000m²), aimed at achieving 12 HH/ha of nett.

Overall, it is considered that in allowing for earlier development than the 5 years proposed within the PDP, will assist in achieving a coordinated and connected pattern of development, as sought by the Council's 'Property Economics' report, among others.

Question 6: Energy efficiency: *Does the proposal assist in maintaining an urban form that shortens trip*

distances.

The subject site is connected to local roading which intersects State Highway 79 approximately 300 m from the proposed access to the subject site. Any residential development at the site will require a new road to be established to allow for vehicular access to all sites. This roading will be designed to efficiently move residents from the new development to the existing road network as required (including pedestrian and bike access).

It is considered that as the FDA is located close to existing road networks and will result in a consolidated and logical design, that the additional roading proposed at the site will not result in trips that are longer than necessary.

Question 7: Natural Hazards: *Is the subject site associated with the submission free from inappropriate risk from a natural hazard event, if not what is the appropriate management response – including avoidance.*

As the site is identified within a Flood Hazard overlay, Environment Canterbury has prepared a Flood Hazard Assessment (**Appendix 5**) of the site. This report concluded that “Overall, flooding at the property can be described as low risk and therefore development should be permitted under the District Plan rules relating to natural hazards”.

A geotechnical assessment of the site has also been undertaken (**Appendix 6**). This report concluded that “The site is considered geotechnically suitable for the proposed development subject to carrying out site-specific geotechnical testing”.

Overall, the assessment above concludes that the site is not subject to inappropriate risk from natural hazards, and is suitable for residential development, subject to developed design.

Proposed District Plan

Question 8: Proposed District Plan: *Does the urban growth / rural lifestyle development (and or sequencing) contribute to a consolidated and integrated settlement pattern, achieve a coordinated pattern of development and is capable of integrating with the efficient use of infrastructure?*

The development of FDA3 will result in a consolidated and co-ordinated urban form, given the subject site’s location in relation to existing the urban area and established services.

FDA3 is located on the immediate north western fringe of Geraldine and the sequencing of development will not be dissimilar to that of the existing subdivision to the west of the site that is currently being developed for residential purposes. The Engineering Servicing Memorandum (**Appendix 3**), prepared by Davis Ogilvie, covers matters of infrastructure servicing in more detail.

Question 9: Growth Rezonings / Amendments to SCHED-15: *Given the updated residential capacity projections in Attachment A, how does the proposal, either individually or in combination with those areas identified in the PDP, concentrate and promote a coordinated pattern of development. How is the rezoning sought (or change in FDA sequencing) required to ensure ‘sufficient development capacity’?*

The subject site has already been identified as appropriate for residential development and is identified as a priority future residential development area (5 years). The change in FDA sequencing to less than 5 years

will not inhibit 'sufficient development capacity', but will instead allow the initial stages of development to commence in a timely manner. Both other FDA areas within Geraldine have a future capacity limitation – for the next ten years. Should demand be required, this reduction in sequencing will allow development to respond to the market.

Given the location of FDA3 in relation to existing residential development, and that this would be the first FDA to be developed (if all FDA areas are developed in sequence in terms of priority), the proposal will allow for an ongoing and coordinated approach to development that is not out of keeping with existing urban development in the area.

For General Industrial Zone

Question 10: Growth Rezonings / Amendments to SCHED-15: *Given the Industrial land capacity projections, how does the proposal, either individually or in combination with those areas identified in the PDP, concentrate and promote a coordinated pattern of development. How is the rezoning sought (or change in FDA sequencing) required to ensure 'sufficient development capacity'?*

Not applicable

Infrastructure and integration with land use

Question 11: Service Provision: *Identify (in conjunction with the requirements of Attachment B) how the future servicing needs of the area and the provision of adequate, coordinated and integrated infrastructure to serve those needs, including how using water sensitive design to manage stormwater will be undertaken.*

The Engineering Servicing Memorandum (**Appendix 3**) notes that in any instance (ie now, or 5 years time) for the FDA to be developed, extensions and upgrades will be required to the potable and wastewater networks to ensure that adequate pressure and capacity is available within the system to service the proposed development.

The concept design and Engineering Servicing Memorandum also identifies stormwater reserves as suitable to support stormwater management of the site. All internal servicing of the site will be carried out in accordance with industry best practice methodology, and bringing development forward will have no adverse impact in this regard.

Question 12: Infrastructure integration: *Identify whether the rezoning if not required for 'sufficient development capacity' would result in wider issues for the district in terms of integration with infrastructure planning and funding decisions, or where for Rural Lifestyle Rezoning has consequences for overall yield / density and servicing requirements.*

As identified in Question 11 above, for any residential development to occur at the subject site, upgrades will be required to potable and wastewater systems in order to provide an acceptable level of service to the proposed residential development. This is not anticipated to result in significant wider issues within the district.

Question 13: Hazards: *Demonstrate with reference to suitable standards, the avoidance and / or management of inappropriate natural hazard risk, and suitable geotechnical conditions.*

As described in Question 7 above, an initial flood hazard assessment and geotechnical assessment has been undertaken for the subject site (**Appendix 5** and **Appendix 6** respectively).

These assessments have indicated that the site is suitable for residential development, subject to detailed design.

Transport

Question 14: Transport network integration: *Demonstrate with reference to suitable standards and the potential yield / density of development – the safe and efficient functioning of the supporting transport network, ability to facilitate modal choice, and consolidating an accessible urban form.*

The Engineering Servicing Memorandum (**Appendix 3**) identifies that carriageway improvements will be required to accommodate the additional traffic movements generated by the increase in residential development. The report also notes that an “*Integrated Transport Assessment (ITA) will need to be carried out in order to address of increased traffic, implications on the efficiency, effectiveness and safety of the wider network fully*”. Bringing forward development of the site will have no detrimental effect on the existing or proposed traffic network around the site.

Environmental values

Question 15: Existing Environment and characteristics: *Identify the following as relevant to the submission:*

- (a) The existing lawfully established land use(s) as they relate to the area that is subject to the submission, including: density (and existing fragmentation of sites), amenity and character, and range of uses.*
- (b) Geophysical boundaries that would distinguish zone boundaries, including how the proposal would result in the contiguity of existing urban areas (proximity and agglomeration of existing urban areas).*
- (c) Existing resource consents that provide for established land uses, including alignment with the anticipated outcomes associated with the submission.*

The site is currently utilised for a lifestyle block form of farming with one dwelling existing on site. The property is currently semi rural in character and comprises paddocks and is traversed by a waterway. The proposed layout and detailed design of the site will be sensitive to both of these existing features.

Question 16: Environmental Values: *Where the site incorporates or adjoins any of the following as notated within the PDP:*

- (a) Specific values associated with Landscape values and natural character.*
- (b) Biodiversity constraints.*
- (c) Cultural and / or Heritage values.*
- (d) Existing or permitted Intensive Farming Activities, Rural Industry or other established Rural that could generate incompatible land uses with the submission outcome.*

The site is not located within an area of natural significance, biodiversity overlay, or is identified for cultural or heritage values. These matters do not constrain the site nor are there any incompatible use matters that

would arise as a result of altering the sequencing and timing of the FDA requirement.

Submitters shall provide information as to whether any additional standards, rules or methods (other than those already contained within the respective zone standards) are required to maintain or enhance any specific attribute, value or effects. This shall include where specific features or attributes should be retained through subsequent subdivision, use or development.

No specific additional standards, rules, or methods have been considered as part of this additional report memo, however, it is acknowledged that it may be appropriate to generate site specific rules and methods such as the provision of an outline development plan to ensure that future development proceeds in a prescribed manner, providing certainty for both Council and the community.

Specific matters

Question 17: Submitters shall provide information and analysis on the specific matters identified, noting that these may well overlap with Questions 1 – 16 above.

All of the relevant specific matters and information requirements have been included in earlier sections of this report memo.

4 CONCLUSION

Overall, the submitter is supportive of the proposed FDA3 overlay under the Proposed Timaru District Plan. The site is located within an established residential area and is considered appropriate for future residential development. However, the submitter requests that the sequencing of the FDA provisions be reduced from 5 years, given that concept plans and investigations for the development are already underway and the submitter wishes to be in a position to commence development more rapidly than anticipated by the current Proposed Plan.

Additional information has been provided regarding the NPS-UD, as well as engineering comment with regard to natural hazards, transport, and infrastructure.

Given that the site has been found to be appropriate for residential development, and the PDP has identified, by way of the priority given to the site in sequencing, there is no reason why the site should not be immediately rezoned to Residential, without the FDA constraint that has the potential to hold up development and result in increased costs to be incurred resulting in increased housing costs and reduced choice for the community.

Disclaimer: The above is intended to provide the preliminary s.42A author with some further information in regards to the suitability of the site for development. The submitter retains their right to provide further information in response to the s42A report and is not bound by the information provided to date.

5 ATTACHMENTS

- Appendix 1 – Table 1 Checklist for Submitters
- Appendix 2 – Conceptual Development Plan
- Appendix 3 – Engineering Service Memorandum
- Appendix 4 – Highly Productive Land Assessment
- Appendix 5 – Flood Assessment
- Appendix 6 – Geotechnical Assessment
- Appendix 7 – Novo Group – Planning Advice on NPS-UD

APPENDIX B

Statement of Evidence (Selwyn Chang)

IN THE MATTER of the Resource Management
Act 1991

AND

IN THE MATTER In relation to the Proposed
Timaru District Plan –
Hearing G (Growth Chapter)

**STATEMENT OF EVIDENCE OF SELWYN CHANG
ON BEHALF OF CLIENT SCOTT
(SUBMITTER NO. 128)**

25 JUNE 2025

1. INTRODUCTION

- 1.1 My full name is Selwyn Chang. I am a Chartered Professional Engineer (Water Services) and the Principal Civil Engineer (Timaru Lead) at Davis Ogilvie (Aoraki) Limited based in Timaru.
- 1.2 I hold over 20 years of civil engineering experience, specialising in land development, infrastructure planning, and public servicing solutions. Prior to working with Davis Ogilvie (Aoraki) Limited I spent 15 years working in local government with the Timaru District Council as a Drainage and Water Engineer.
- 1.3 Through my work at Davis Ogilvie I lead engineering assessments for growth planning, infrastructure feasibility, and rezoning across South Canterbury.
- 1.4 I am familiar with Geraldine's infrastructure network and have prepared this evidence to support the rezoning of 22 Templer Street.

Qualifications and experience

- 1.5 In terms of academic qualifications I hold a:
 - (a) Bachelors (Honours) degree in Civil Engineering (2004);from the University of Canterbury NZ

1.6 I am a Chartered Professional Engineer with a practice field of Three Waters competent in drinking water supply systems, wastewater systems, stormwater management, asset management and renewals planning and water safety planning.

1.7 I am an active member of the Engineering NZ Canterbury branch and am committed to continually advancing my professional and advancing skills and capabilities.

2. **CODE OF CONDUCT**

2.1 I have read the **Environment Court's Code of Conduct for Expert Witnesses** set out in the Environment Court Practice Note 2023. I agree to comply with it while giving this evidence. I confirm that I have not omitted any material facts known to me that might alter or detract from the opinions expressed in this evidence. I confirm that the issues addressed in this brief of evidence are within my area of expertise. I understand my duty to the Hearing Panel is to assist impartially and that this duty overrides any obligation to the party engaging me.

3. **SCOPE OF EVIDENCE**

3.1 This evidence assesses the servicing feasibility of the land at 22 Templer Street, Geraldine for future residential development.

3.2 It provides professional commentary on the ability of the site to be serviced for water, wastewater, and stormwater, and responds to the relevant planning and infrastructure context to support a rezoning request.

4. **SITE CONTEXT AND DEVELOPMENT INTENT**

4.1 The site is located at 22 Templer Street, Geraldine, and is currently zoned General Rural Zone under the Proposed District Plan.

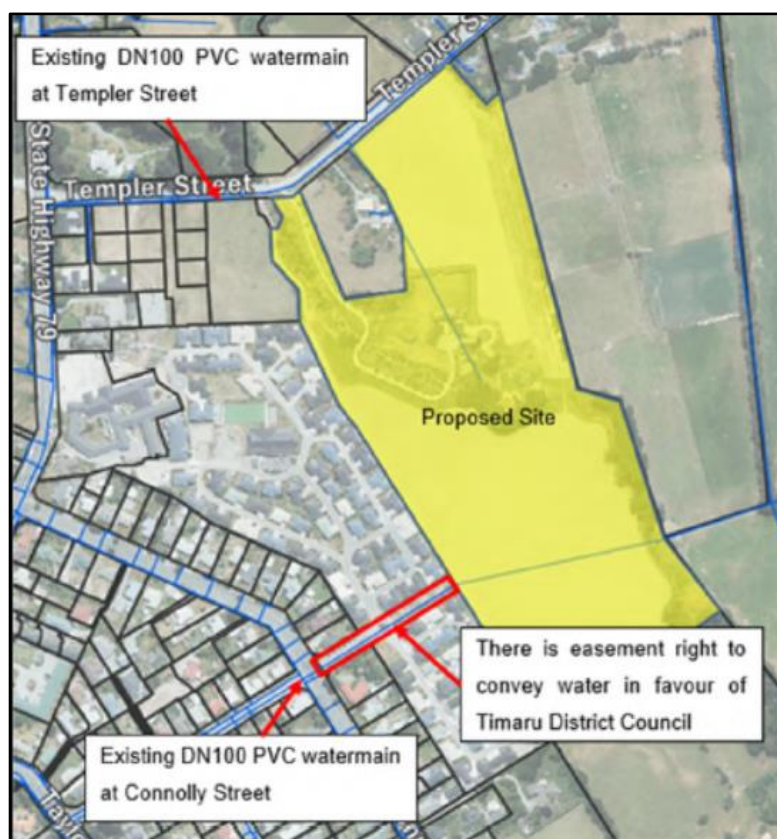
4.2 The submitter seeks within the scope of the original submission to rezone the site to Future Urban Zone (FUZ)

4.3 The proposal includes the potential creation of approximately 100 residential lots, supported by new roading, water, wastewater and stormwater infrastructure.

5. **INFRASTRUCTURE FEASIBILITY – WATER**

5.1 The site is adjacent to the existing public water supply network, with mains available on both Templer Street and Connolly Street.

- 5.2 Extension of watermain from the existing water reticulation of approximately 120 to 170 metres will be required, which is technically feasible and will be developer-funded.
- 5.3 There is easement right to convey water in favour of Timaru District Council is in place across adjoining land, supporting feasible watermain alignment and access as shown in the below figure.



- 5.4 Fire-fighting capacity is found to be insufficient to service the proposed development, which can be mitigated via:
- (a) An on-site booster pump station;
 - (b) Contribution toward a shared network upgrade (if broader public benefit is identified);
 - (c) Adjustment of development staging based on servicing readiness.
- 5.5 Hydraulic modelling will be undertaken at the subdivision or Engineering Design stage to confirm pressure and flow rates, particularly for firefighting scenarios.

6. **INFRASTRUCTURE FEASIBILITY – WASTEWATER**

- 6.1 Public wastewater connections exist on two sides of the site; however, the shallow pipe depth (<1.5m) limits the feasibility of a gravity network system to be extended across the site fully.
- 6.2 The preferred servicing strategy involves a communal pump station and rising main to connect to the nearest Council wastewater reticulation at Templer Street and Connolly Street.
- 6.3 Alternatively, a low-pressure wastewater system may be considered, subject to Council approval.
- 6.4 This solution will allow modulated discharge to reduce pressure on the network during peak periods, which is consistent with approaches used elsewhere in Timaru District and across the country.
- 6.5 The extension of the wastewater network will be developer-led funded.
- 6.6 Wastewater design and discharge modelling will be detailed as part of the development of the DAP, subdivision or Engineering Approval process.

7. **INFRASTRUCTURE FEASIBILITY – STORMWATER**

- 7.1 There is no public stormwater network available in the area.
- 7.2 The proposed site will need discharge consent and stormwater management plan to support the development.
- 7.3 The proposed stormwater strategy involves on-site attenuation and treatment, with discharge either:
 - (a) To ground (infiltration), subject to geotechnical validation;
 - (b) Or to Raukapuka Stream, subject to a resource consent from ECan.
- 7.4 The site's subsoil materials (gravels and sands) and topography indicate that both infiltration and hybrid discharge strategies are technically viable.
- 7.5 Flood risk is minimal and will be managed through overland flow path design and Finished Floor Level (FFL) setting.
- 7.6 Obtaining stormwater consents, design and constructing stormwater infrastructure within the proposed site will be developer-led funded.

8. **FUNDING AND NETWORK INTEGRATION**

- 8.1 All infrastructure within the land owners site, including new water, wastewater and stormwater systems will be fully funded by the developer.
- 8.2 Where off-site upgrades are required and deliver wider network benefits, the submitter supports cost-sharing arrangements in accordance with Council's Financial/Development Contributions Policy.
- 8.3 This ensures the development proceeds without creating unplanned demand on public infrastructure budgets or disrupting the Long-Term Plan.

9. **CONCLUSION AND RECOMMENDATION**

- 9.1 In my opinion, the site at 22 Templer Street is technically serviceable for urban development, subject to detailed engineering design and appropriate consenting to enable the infrastructure works to take place.
- 9.2 No fundamental servicing constraints have been identified that would preclude rezoning, and all proposed systems are consistent with best practice in greenfield development.
- 9.3 I recommend the site be rezoned for Future Urban Zone (FUZ) purposes. With a FUZ in place, a structure plan can be worked through and this would address any infrastructure-related triggers that would enable timely sequencing of servicing capacity, and any consenting requirements



Selwyn Chang
Principal Civil Engineer

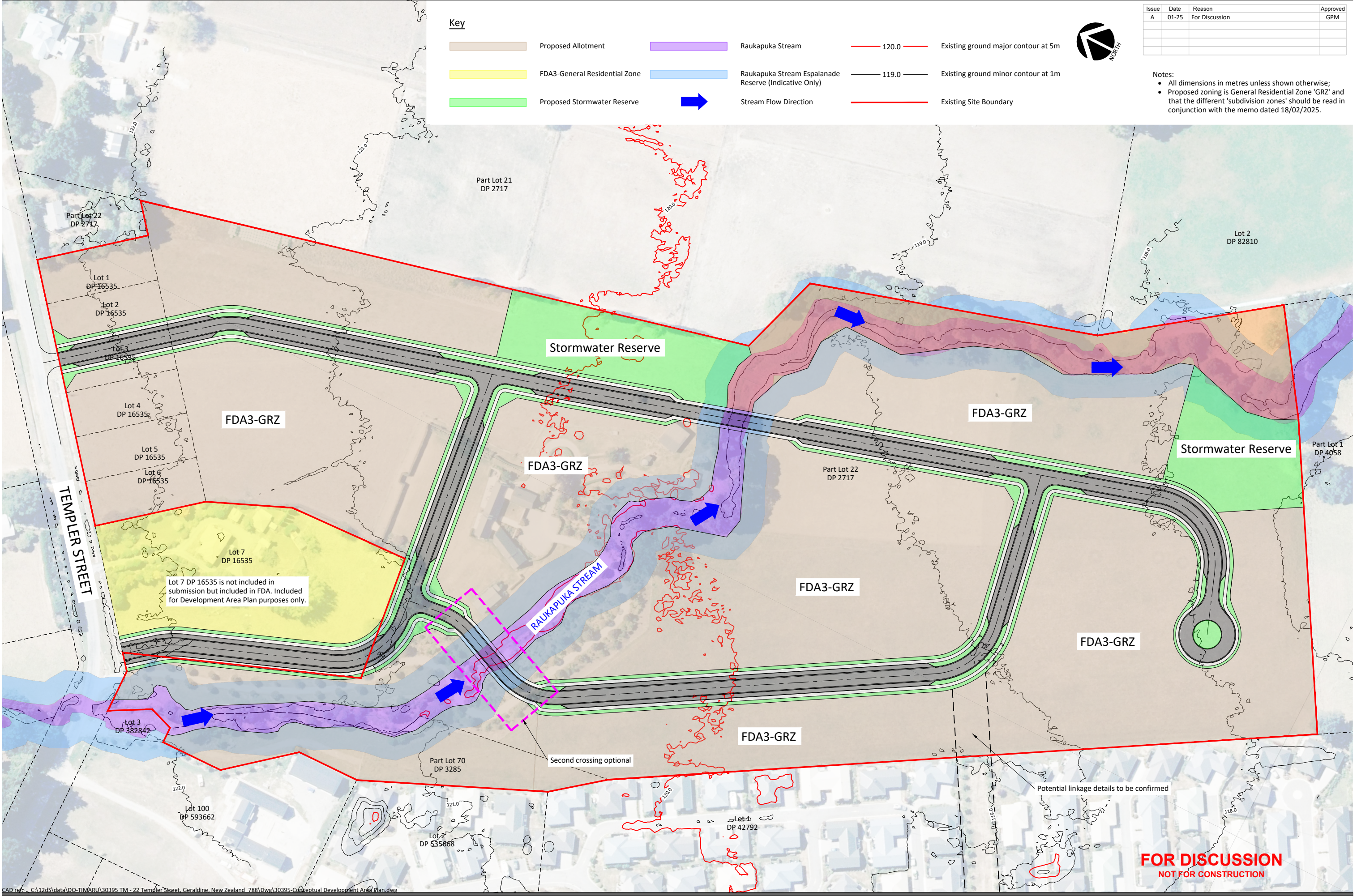
BEng (Civil), CPENG, CMEngNZ

Davis Ogilvie (Aoraki) Ltd

25 June 2025

APPENDIX C

Outline Development Plan



CAD ref: C:\12d5\data\DO-TIMARU\30395 TM - 22 Templer Street, Geraldine, New Zealand 788\DWG\30395-Conceptual Development Area Plan.dwg

APPENDIX D

Transport Memo (Antoni Facey - Avanzar)

Memo

To: Glen McLachlan
From: Antoni Facey
CC:
Date: 27/6/2025
Re: **Transport Assessment – Scott 128**

You have asked for my high level assessment of the traffic and transportation effects of the proposal for rezoning of 22 Templer Street, Geraldine to allow for urban subdivision on the site.

Introduction

My full name is Antoni Peter Facey. I am the Director of Avanzar Consulting Ltd and work as Traffic and Transportation Engineer and Planner. Following graduation from Auckland University in 1987, I have worked for a number of local authorities, Land Transport Safety Authority and consulting firms as well as my own company. I have assessed numerous subdivisions of a similar size to the proposed subdivision of 22 Templer Street. My current qualifications and memberships are BE (Civil), CMEngNZ, IntPE(NZ) and APEC Engineer.

Scope of report

My report considers the high level Traffic and Transport Planning issues associated with the rezoning.

Current zoning

The site is currently zoned Rural in the Operative District Plan. In the Proposed District Plan, the site is zoned General Rural but has a Future Development Area (FDA3-Scotts Farm Future Development Area-Residential) underlay. This means that the zoning could be changed to urban in more than 5 years from now.

Roading network

The site fronts Templer Street and could potentially also have some frontage for access to Lancaster Street in the future.

Templer Street is a Local Road in the Proposed DP.

The road is a two lane, two way road with urban development on the southern side of the road (the same side as the applicant) from the Raukapuka Stream to SH79. The road reserve width is 20 metres and the carriageway at the applicants site is about 5.4 metres wide. To the northeast of the site, the road is unsealed to Bennett Road.

Mobileroads notes that the traffic volume on Templer Street near the site is estimated to be 100 vpd.

The Templer Street/SH79 intersection is controlled by a Stop sign.

The speed limit on Templer Street is 50 km/hr between SH79 and the Raukpuka Stream increasing to 100 along the applicants frontage.

SH79 is a two lane two way road controlled by NZTA.

SH79 carries about 3813 vpd and has a speed limit of 50 km/hr.

Proposed DP Objectives

Objective TRAN-01 – “Safe, efficient, integrated and sustainable land transport infrastructure” provides a set of objectives that apply to new infrastructure. The infrastructure must be:

“[Land transport infrastructure](#) that is well-connected, integrated and accessible, and which:

1. is safe, efficient and sustainable for all transport modes;
2. meets and is responsive to current and future needs, including projected population growth;
3. aligns and integrates with the timing and location of [urban development](#);

4. promotes multi-modal transport options, including the use of [active transport](#) and [public transport](#), and reduces dependency on private [motor vehicles](#);
5. supports consolidated, well designed and sustainable growth in and around existing [urban areas](#);
6. encourages sustainable economic development; and
7. provides parking opportunities in an efficient, functional and sustainable manner and to avoid adverse [effects](#) on the [environment](#)."

This proposal meets the objectives, particularly for supporting consolidated and sustainable growth around existing urban areas. The site is adjacent to existing urban sites in Geraldine.

ODP

A draft ODP has been prepared that shows the developed site with two intersections on Templer Street with a fully connected road network serving the new Lots. The potential link to Lancaster Street is also shown indicatively.

It is noted that the FDA requires development within an FDA to progress in sequence suggesting that the first area to be released will include 22 Templer Street to then be developed creating a logical expansion of the urban area of Geraldine. FDA 11 on the northern side of Templer Street is much larger and has a timeframe of beyond 10 years so is planned to follow on from FDA 3. It is noted that FDA 11 is appealed proposed for rezoning to GRUZ with an RLZ overlay. If accepted, this would affect timing of the developments.

The ODP could provide for up to 100 Lots and this is used as the potential yield for considering the high level effects on the local roading network.

Traffic Generation and Distribution

Trip generation from residential areas varies based on many different factors but is typically considered to be between 6.3 and 8.2 trips per day per dwelling and 0.9 trips per peak hour per dwelling for standalone single dwellings. The higher figure will be used for this assessment.

Assuming the yield of 100 Lots and 8.2 trips per day per dwelling, the total traffic generation from the site will be 820 vpd and 90 vph in the peak hour. In the morning peak hour, typically 60% of traffic leaves a residential subdivision and 40% enters.

Most of the traffic is likely to have the urban area of Geraldine as a destination so the left turn from Templer Street into SH79 and the right turn from SH79 are likely to be the main movements.

The AUSTROADS Guide to Traffic Management Part 3: “Traffic Studies and Analysis” provides guidance as to when capacity analysis is unnecessary and traffic is considered to operate under free flow conditions. The table is reproduced below.

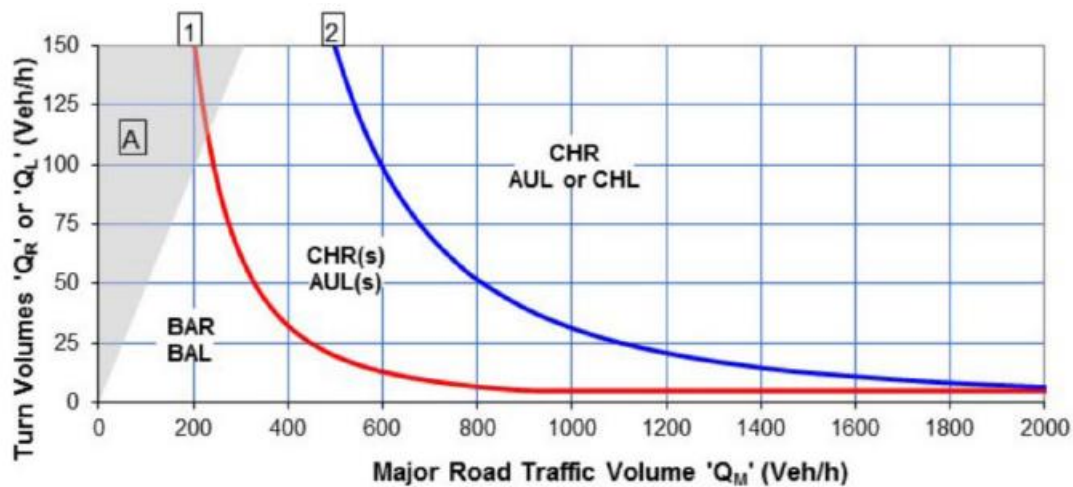
Table 6.1: Intersection volumes below which capacity analysis is unnecessary

Type of road	Light cross and turning volumes maximum design hour volumes vehicles per hour (two way)		
Two-lane major road	400	500	650
Cross road	250	200	100
Four-lane major road	1000	1500	2000
Cross road	100	50	25

Assuming the traffic volume on Templer Street is 3813 vpd, the peak hour traffic volume is typically 10% of this volume, or 381 vph.

Table 6.1 suggests that for 400 vph on a main road (SH79), a peak hour traffic volume of less than 250 vph on the side road would be considered free flow. In this case, both factors are well below the specified volumes so the intersection is considered to operate under free flow conditions after the subdivision is completed.

The figure below is an extract from AUSTROADS Guide to Traffic Management Part 6 “Intersections, Interchanges and Crossings”, Figure 2.26. The figure relates to a warrant for turning facilities at an intersection.



(c) Design Speed ≤ 70 km/h

Assuming the Major Road traffic volume is 200 vph southbound and the right turn volume from SH79 into Templer Street is 54 vehicles in the peak hour, it is clear that no additional turning facilities would be required to accommodate the completed subdivision.

Templer Street itself has sufficient capacity to accept the generated traffic from the subdivision with some upgrades to the carriageway to create an urban standard of road environment.

Based on the above high level assessment, it is clear that the subdivision will have minimal effect on the capacity or functioning of the local road network. A more detailed assessment would be required at the time of the subdivision application.

Infrastructure extension

The cross section of Templer Street would need to be upgraded. The road would require additional sealed width, a footpath, streetlighting and positive drainage. This is easily achieved within a 20 metre wide road reserve. 20 metres is a typical road reserve in any existing urban area.

Particular attention would need to be paid to the intersections created by the new subdivision. However, there appears to be sufficient space in the road reserve to allow for suitable intersections to be designed and constructed.

The Raukapuka Stream Bridge may also need to be reviewed.

Proposed DP Compliance

Templer Street is straight and flat with a typical road reserve width for a road of this type and function. As a result, there are no obvious reasons that the internal roads and the Templer Street intersections could not comply with the Rules of the Proposed DP.

The potential Lancaster Street access would be desirable to provide additional connectivity to neighbouring sites even though they are already developed.

Conclusion

It is my opinion that a modern subdivision generally compliant with the Proposed District Plan Transport Rules could be constructed on 22 Templer Street with minimal effects on the local road network. A more detailed assessment at subdivision application stage will demonstrate this.



Antoni Facey

BE (Civil), CMEngNZ, IntPE(NZ), APEC Engineer