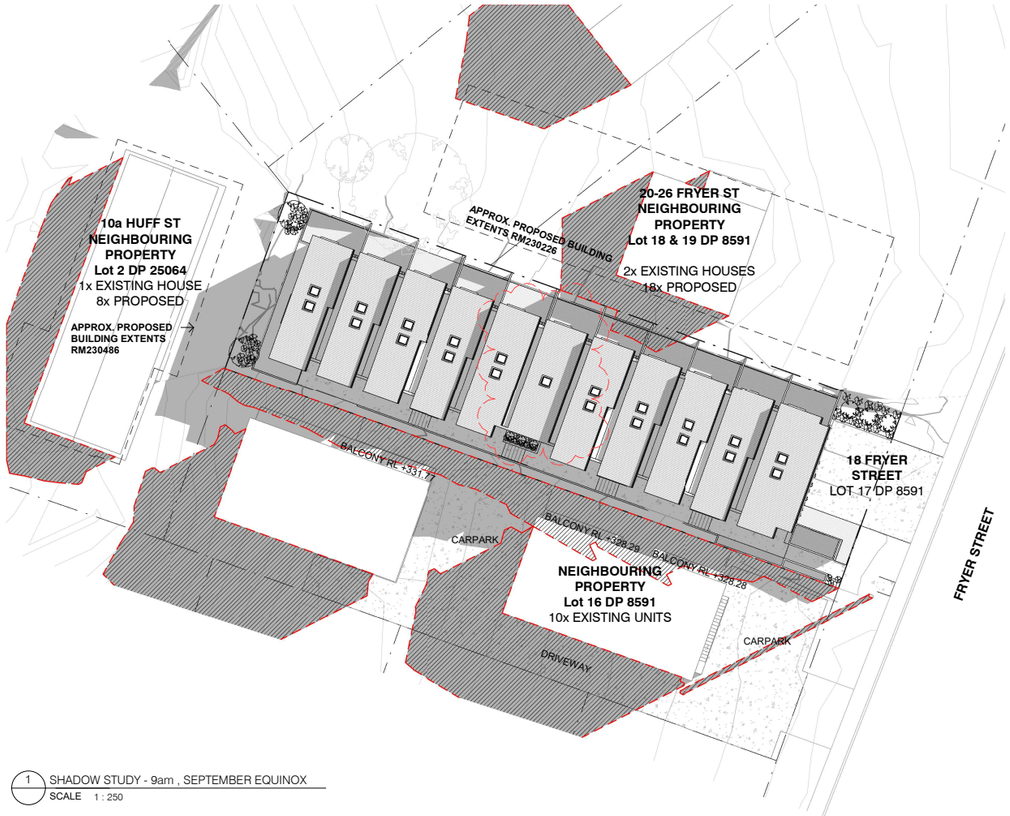

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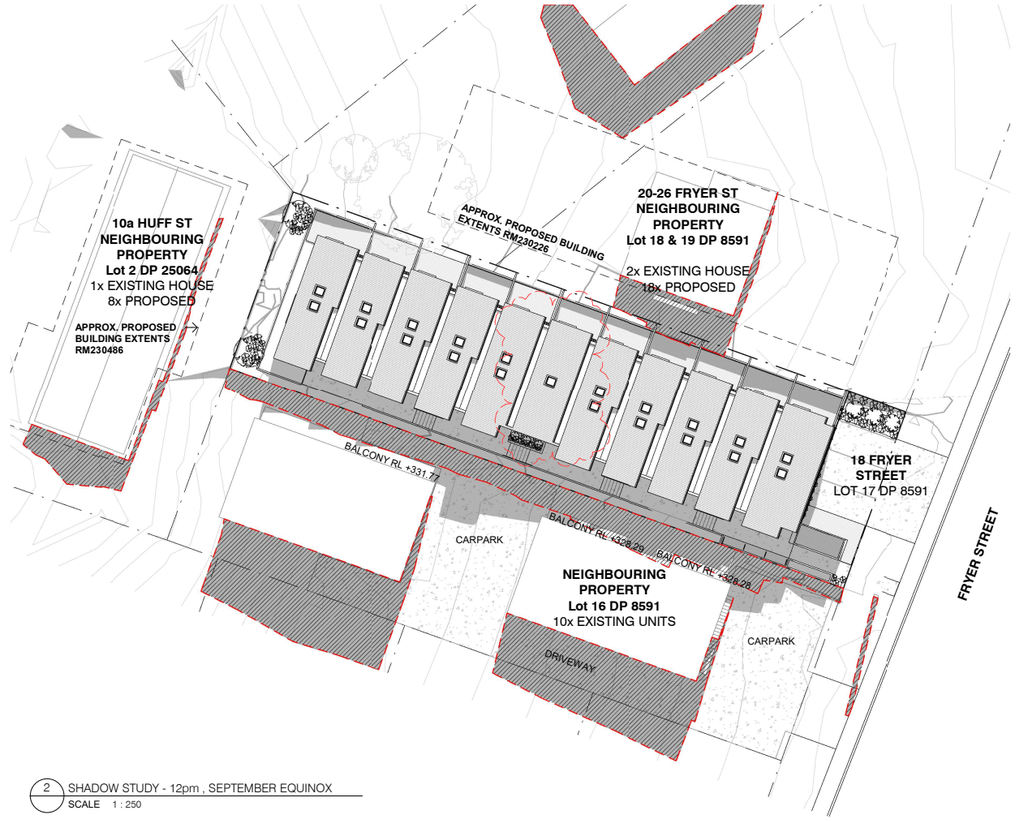

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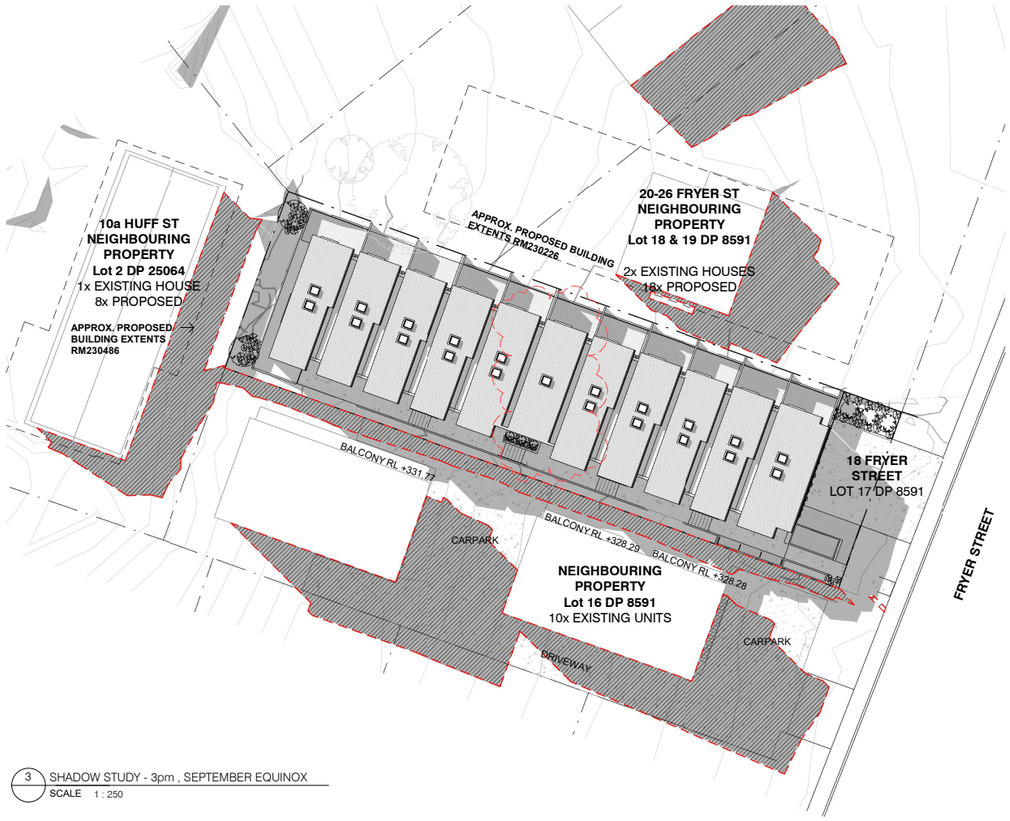


3 SHADOW STUDY - 3pm , SEPTEMBER EQUINOX
SCALE 1 : 250

SHADOW DIAGRAMS

EXISTING CAST SHADOW EXTENTS

PROPOSED SHADOW

YOKE
architecture / interiors / design

Level 1, 44 Beach street
Queenstown, NZ

studio@yoke.net.nz
+64 21 0873 3838

General Notes

ARCHITECTURAL DRAWINGS TO BE READ IN CONJUNCTION WITH THE FOLLOWING DOCUMENTS WHERE RELEVANT:

1. ARCHITECTURAL SPECIFICATION
2. FINISHES, FIXTURES, LIGHTING, AND DOOR HARDWARE SCHEDULES
3. SUPPLEMENTARY TRADE SPECIFICATIONS
4. STRUCTURAL ENGINEERS DOCUMENTS
5. CIVIL ENGINEERING DOCUMENTS
6. RESOURSE CONSENT
7. BUILDING CONSENT
8. ADDITIONAL SPECIALIST CONSULTANTS DOCUMENTS

BUILDERS / CONTRACTORS SHALL VERIFY ALL LEVELS / DIMENSIONS / SET OUTS BEFORE ANY WORK COMMENCES. DIMENSIONS SHOWN ARE NOMINAL. FIGURED DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS.

THE ARCHITECT IS TO BE MADE AWARE OF ANY DISCREPANCIES IN ANY OF THE DOCUMENTS BEFORE AFFECTED WORKS COMMENCE.

ALL SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW WHERE APPROPIATE AND MANUFACTURE SHALL NOT COMMENCE PRIOR TO THE RETURN OF APPROVED SHOP DRAWINGS.

ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH LOCAL AUTHORITY REQUIREMENTS / BY-LAWS, THE BUILDING CODE OF NEW ZEALAND + ANY RELEVANT NEW ZEALAND STANDARDS & ACCEPTABLE SOLUTIONS WHERE APPLICABLE.

ALL WORK TO COMPLY WITH THE BUILDING CONSENT ISSUED FOR THE PROJECT.

CO-ORDINATE AND KEEP UPDATED ALL REQUIRED SUB CONTRACTORS TO ENSURE PROMPT TIMING & INTEGRATION OF ALL TRADES INVOLVED ACROSS THE PROJECT

Copyright

Consultants	Contact
STRUCTURAL AND CIVIL ENGINEER	
?	?
PROJECT MANAGER	
?	?

Project Name
18_FRYER STREET

Site Address
18 FRYER STREET, QUEENSTOWN

Project Number
#2307

Client
SKY HANN

Status
SKD

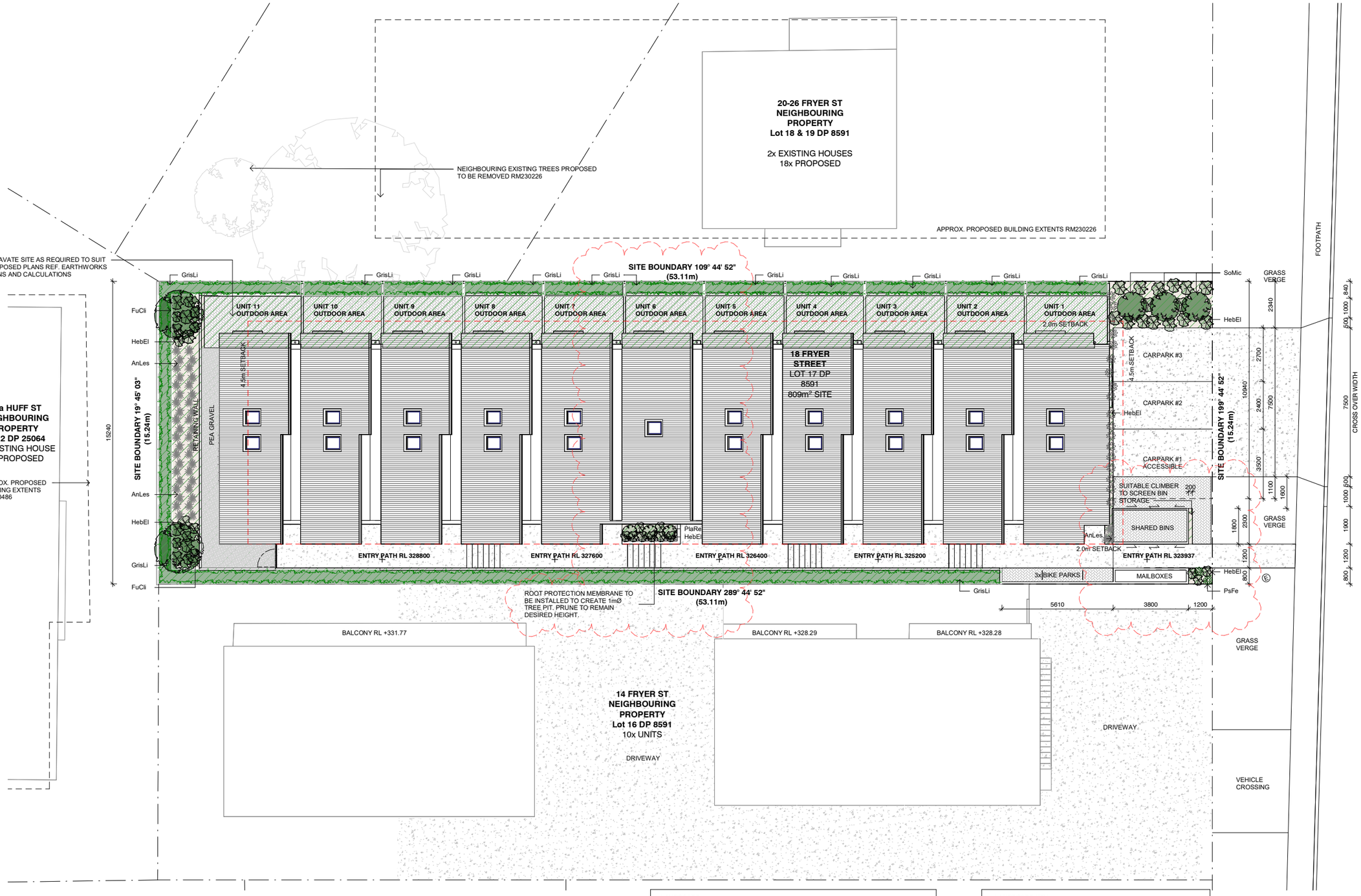
Date
20.08.2024

Sheet Name
PROPOSED SHADOW DIAGRAMS

Scale
As indicated @ A1
50% AT A3

Drawing Number
RC08

Revision
7



1 PROPOSED LANDSCAPE PLAN
SCALE 1 : 100

18 FRYER ST PROPOSED FLOOR AREAS

Unit no.	Ground Floor Area	First Floor Area	Total Floor Area	Outdoor Area
Unit 1	40.8m²	44.0 m²	84.8 m²	14.3 m²
Units 2-5, 7-10	38.75 m²	41.9 m²	80.7 m²	13.3 m²
Unit 11	39.2 m²	42.5 m²	81.7 m²	66.0 m²
Units 6	35.83 m²	38.98 m²	74.81 m²	13.3 m²

SITE CALCULATIONS
Site Area: 809m²
Site Coverage: 461.5m² (57.1%)
Landscape Area: 248.38m² (30.7%)
Permeable Area: 124.7m² (15.4%) / 50.2% of Landscape Area
Number of Residences: 11
Number of Carparks: 3
Number of Bike Parks: 3

LANDSCAPE

ID	COMMON	BOTANNICAL	HEIGHT AT MATURITY
FuCli	Mountain Beech	Fuscospora Cliffortioides	12-15m
PsFe	Lancewood	Pseudopanax ferox	<15m
GrisLi	Griselinia	Griselinia littoralis	3-6m
HebEl	Hebe Waireka	Hebe elliptica Speciosa	<0.5m
AnLes	Windgrass	Anemanthele lessoniana	<1.0m
SoMic	South Island Kowhai	Sophora microphylla	5-8.0m
PlaRe	Ribbonwood	Plagianthus regius	<12m

LANDSCAPE KEY:

LAWN
GARDEN BED
LANDSCAPE PAVING
CONCRETE
LANDSCAPE AREA
PEA GRAVEL

YOKE
architecture / interiors / design
Level 1, 44 Beach street
Queenstown, NZ
studio@yoke.net.nz
+64 21 0873 3838

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Consultants	Contact
STRUCTURAL AND CIVIL ENGINEER	
?	?
PROJECT MANAGER	
?	?

Project Name
18_FRYER STREET

Site Address
18 FRYER STREET, QUEENSTOWN

Project Number
#2307

Client
SKY HANN

Status
SKD

Date
20.08.2024

Sheet Name
PROPOSED SITE INFO + LANDSCAPE

Scale
As indicated @ A1
50% AT A3

Drawing Number
RC09

Revision
7

SKY HANN

18 FRYER STREET, QUEENSTOWN

GEOTECHNICAL ASSESSMENT

FOR A PROPOSED NEW MULTI UNIT RESIDENTIAL DEVELOPMENT

DATE: 7 DECEMBER 2023

REF: GL21-131.1

geotago

Engineering Geology & Geotechnics

Report Quality Control

Report prepared by: Geotago Ltd
36 Glencoe Road
Arrowtown Junction
9371

Document Control

Report Title	Geotechnical Assessment for a Proposed New Multi-unit Residential Development
Project Number	23-131
Document Reference	GL23-131.1
Client	Sky Hann

Rev	Date	Revision Status	Author
A	7 Dec 2023	Issued to Client	Tom Goosey

Approval

Task	Geotago Personnel	Title	Date Signed
Author of Report	Tom Goosey BSc (Geol) MEngSc (EngGeol & Geotech)	Senior Engineering Geologist	7 Dec 2023
Reviewer of Report	Peter Forrest BSc PhD FGS CMEngNZ (PEngGeol)	Director Principal Engineering Geologist	7 Dec 2023

Signature of author of report

Signature of reviewer

Executive Summary

Scope of Work		Geotago Ltd has been engaged to conduct a geotechnical investigation of the ground conditions at 18 Fryer Street and make appropriate recommendations for resource consent for foundations and earthworks.
Current Site Status		The site is currently partially occupied by the original single storey dwelling.
Development Proposals		Eleven 2-storey terraced residential units built into and up the gentle east facing slope of the site.
Site Details	Location	Lot 17 DP 8591 - 18 Fryer Street, Queenstown.
	History	The area/suburb was developed from open pasture in the 1960s.
Ground Conditions	Published Geology	Late Pleistocene glacial deposits comprising generally unweathered, unsorted to sorted, loose sandy gravel silt and sand (till) in terminal and ground moraines.
	Previous Investigations	Several site in close proximity to the subject site have been investigated by several different consultants. The reports, available on EDocs, have been reviewed for the purpose of gaining knowledge of the ground conditions at 18 Fryer Street. BECA completed a detailed Natural hazard Report for Gorge Road for QLDC to assist with developing their development policies. This has been relied on for the discussion on the natural hazards impacting the project site.
	Site Geology	Alluvial silty sands and gravels only encountered in the test pits. Adjacent sites have had dense glacial till, and soft lake deposits exposed/encountered, and these should be anticipated at the project site.
	Hydrogeology	Elevated groundwater at 3m below ground level anticipated.
	Environmental Condition	No environmental hazards are expected.
Natural Hazards	Liquefaction	Liquefaction is anticipated to occur during a significant seismic event with settlements of between 50mm and 100mm expected.
	Alluvial landforms	Addressed by the BECA report. The site is not considered exposed to levels of risk form risk fall, debris flow or other alluvial activity beyond those considered tolerable for loss of life or property damage. Flooding is considered to pose a potential to minor risk.
	Seismic characteristics	Seismic Soil Class D considered appropriate. No active faults in proximity but design should be cognisant of NZS1170.5.
Geotechnical Considerations	Slope Stability	No stability issues.
	Building Platform	Earthworks required to form a cut to fill platforms.
	Foundations	Specific Engineered Design (SED) will be required to address and mitigate the geotechnical constraints identified including liquefaction, settlement, differential settlement, and low bearing soils.
	Earthworks	Standard conditions apply to align with QLDC Code of Practice. Site won material is suitable for reuse subject to appropriate screening.

Limitations

Geotago Ltd has undertaken this assessment in accordance with the brief as provided, based on the site and location as shown on Drawings 001 & 002. This report has been provided for the benefit of our client, and for the authoritative council to rely on for the purpose of processing the consent for the specific project described herein. No liability is accepted by this firm or any of its directors, servants or agents, in respect of its use by any other person, and any other person who relies upon information contained herein does so entirely at their own risk.

Table of Contents

Drawings

Appendices

1 Introduction

1.1 Project Brief

Geotago Ltd has been commissioned by the client Sky Hann in association with John Edmonds & Associates to carry out a geotechnical assessment for the purposes of gaining resource consent for a proposed multi-unit residential development at 18 Fryer Street, Queenstown.

This report will form part of the documentation submitted to Queenstown Lakes District Council (QLDC) in support of the submission. This report includes a summary of the investigations undertaken in order to provide pertinent information on the following:

- Site details
- Ground and groundwater conditions
- Natural hazards
- Geotechnical considerations for foundations, retention and earthworks

The site location is presented in Drawing 001.

1.2 Proposed Development

The property is currently occupied by a single storey residential dwelling that would be demolished to make way for a multi-unit residential development comprising 11 terraced two-storey units. Nominal earthworks are required to step the units up the natural slope of the site, creating five level building platforms that are retained on the upslope side.

Earthworks, comprising cut to fill will generate a maximum cut of 1.2m. Some retaining will be required along the property's lateral boundaries with the adjacent sites to the north and south of the property.

The scheme layout of the subdivision is presented in Appendix A.

1.3 Related Documents and Standards

In this report, reference is made to the following documents:

- NZS 3604: 2011 Timber Framed Buildings.
- New Zealand Geotechnical Society, 2005: Field Description for Soil and Rock.
- Tokin + Taylor Queenstown Lakes District Council (QLDC) 2012 Liquefaction Hazard Assessment Report.
- NZS 1170.5-2012: Structural design actions Part 5 Earthquake actions – New Zealand.
- NZS4431:2022: Engineered Fill Construction for Lightweight Structures.

2 Site Information

2.1 Site Description

The site is located at 18 Fryer Street within the Gorge Road area north of Queenstown town centre. The site occupies a single lot on gently sloping land falling to the east at a gradient of less than 5°.

The current dwelling is a single storey wooden villa of typical 1960s build, situated in the east of the site towards Fryer Street.

The legal details for the site are Lot 17 DP 8591 covering an area of 809m^2.

2.2 Surface Water and Drainage

The site contains no surface water features in the general vicinity of the proposed dwelling. Surface water from the site is considered to be via. sheet flow from north west to south east.

2.3 Site History and Aerial Photography

Aerial photographs available from the Google Earth Images, Retrolens.nz and the QLDC mapping data set dating from 1954 to 2019 were studied to observe the site over time and assess the geomorphological setting.

The review of historic aerial photography indicates that the site has and surrounding nearby area has undergone significant change during this period. With reference to the aerial survey archive available through Retrolens NZ, the site is clearly open natural ground up to the early 1960s, at which point Fryer Street in its current configuration is clearly visible, with a few residential dwellings occupying the area.

2.4 Services and Utilities

The area of Fryer Street is service by reticulated stormwater and wastewater, although connection to these utilities is not necessarily possible due to current capacity on the services from surrounding properties.

2.5 Previous Site Investigations

2.5.1 Ground Consulting Limited Geotechnical Reporting

A geotechnical assessment was completed for the adjacent site to the north (20-26 Fryer Street) in September 2018, referenced GCL R4331-1A. The report led to further investigations including deep CPT probing on the grounds that liquefaction of the lower portion of the site (Fryer Street) was a possibility. The results of the liquefaction assessment identified significant settlement potential due to liquefaction during a significant seismic event (ULS event).

Further reporting was provided for the site in the form of natural hazard assessment. The purpose of this latter report was to address the concerns regarding debris flow, rock fall and flooding associated with the proximal Reavers stream that had been subject to detailed study by Beca Consulting Engineers.

The outcome from these reports can be summarised as follows:

- The site is underlain by alluvial deposits over glacial till and potentially lake deposits between the two, tapering out with distance up slope.
- Groundwater in the vicinity of Fryer Street is approximately 2m below ground level
- CPT analyses highlighted the risk of liquefaction and associated settlement of significant magnitude under ULS events.
- Natural hazard assessment discounted the risks from debris flow, rockfall and flooding as low (tolerable) and manageable through engineering design.

2.5.2 *Geotago Limited Site Investigation*

Further site investigation of the 20-26 Fryer Street site is ongoing with Geotago Ltd, having recently completed three deep machine drilled boreholes to further determine the ground model and reassessed the original CPT data using current seismic design parameters for the district.

The results of the investigation are being reported concurrently this current report. It is apparent however that Lake Deposits do exist at approximately 5m below the alluvial material to an unknown depth but are not present in the west of the site on the upper levels pf the property.

Liquefaction remains a hazard that poses a risk to the site.

3 Site Investigation Details

3.1 Site Assessment

Geotago Ltd completed an engineering geological assessment of the subject property on 15 November 2023, which included a general site walkover and subsurface investigations. The geotechnical investigation comprised three test pits advanced to a maximum depth of 2.6m where they met with effective refusal from the excavator on dense material. Scala penetrometer tests were completed adjacent to each test pit, with a fourth Scala completed in the north east corner of the site where the excavator could not access.

The investigations were located as shown on Drawing 002. Test pits were obviously restricted to the western, upper section of the property in the garden area of the existing dwelling.

3.2 Investigation Logging

Soils recovered from the test pits have been logged and are presented in Appendix B. Logging of the soil encountered has been undertaken in accordance with NZ Geotechnical Society Guidelines for the Field Classification and Description of Soil and Rock for Engineering Purposes.

The Scala penetrometer results have been plotted on logs as presented in Appendix B. Determination of the soil density as tested by the Scalas has been undertaken in accordance with NZ Geotechnical Society Guidelines for the Field Classification and Description of Soil and Rock for Engineering Purposes, Table 2.8.

4 Subsurface Conditions

4.1 Geological Setting

The Geological Map of New Zealand, Sheet 18 (Wakatipu), at a scale of 1:250,000 maps the site as being underlain by Late Pleistocene glacial deposits comprising generally unweathered, unsorted to sorted, loose sandy gravel silt and sand (till) in terminal and ground moraines.

Given the nature and topography of the site and its position adjacent to the elevated topography and alluvial channels associated with the Gorge Road valley, a degree of fine grained alluvial material is likely to mantle the upper surface and overlie the glacial deposits.

In addition, investigations carried out in the immediate area have also identified Lake Deposits to be present below the alluvium and tapering out upslope overlying the glacial till.

4.2 Ground Conditions & Stratigraphy

Apart from the thin layer of surficial topsoil, the site is underlain by alluvial soils. Glacial till or Lake deposits were not encountered in any of the test pits.

Full details of the observed subsurface stratigraphy can be found within the test pit logs contained in Appendix B.

A summary of the sub-surface conditions identified in the investigations undertaken is presented below in order of depth from the ground surface. The sub-surface conditions have been extrapolated between the investigations undertaken and other available information.

4.2.1 Topsoil

Topsoil comprises organic sandy SILT, with some gravels, dark brown, with roots and rootlets to approximately 0.3 m.

4.2.2 Alluvium

Alluvium underlies the topsoil in all of the test pits to depths of the excavations completed. The alluvium in the most part comprises sandy silty GRAVELS with some cobbles and boulders. There are however discrete horizons of sandy SILT with some gravels and organic material noted at approximately 1.5 to 2.0m below ground level in TPs 101 and 103.

The alluvium was dry to moist in all cases with no groundwater encountered.

Scala penetrometer testing within the alluvium met with variable results, with blow counts per 50mm of penetration varying from <2 to 12, with the majority being approximately 3 to 5 blows per 50mm.

Good Ground, as per the definition of NZS3604 is five blows per 100mm (2.5 blows per 50mm) of penetration. Based on the Scala profiles, Good Ground is not consistently met in the upper 2m.

4.3 Groundwater

Groundwater was not encountered in any of the test pits. Based on the knowledge of the adjacent sites, the groundwater is anticipated to be shallow at between 3 and 5m below ground level, being shallower at the Fryer Street end of the property.

5 Natural Hazards

5.1 General

The Reavers Creek and Brewery Creek catchment area of Gorge Road has been subject to a detailed hazards assessment conducted by BECA under commission from QLDC. 18 Fryer Street is covered in the area of study of the BECA report.

The initial report was published in 2019 and largely adopted by Council to steer their development policies and District Plan. The original BECA report was then subject to GNS peer review and consultation, with the final revision republished in November 2020[1].

The hazard assessment is considered a more appropriate source of review and assessment than the current QLDC and ORC web based GIS hazard mapping, which refers back to the BECA report for further details. For this reason, we have interrogated the Final Version of the BECA report for the purposes of assessing the natural hazards that impact 18 Fryer Street.

[1] *Natural Hazards Affecting Gorge Road, Queenstown Rev 2 dated 12 November 2020. Prepared by BECA.*

Given the complexity of the BECA report, the detail provided below is a summary; the full BECA report should be read in conjunction with our findings if further detail and clarity is required.

It should also be noted that Geotago are very familiar with the BECA report as it has been used as a source of reference and benchmark for other sites within the Gorge Road catchment we have investigated and reported on.

5.2 Natural Hazards Identified for Fryer Street

Based on the GIS mapping of ORC, QLDC and the BECA reporting, the main hazards impacting the area and addressed by BECA are as follows:

- Alluvial fan deposits (general terms)
- Rockfall
- Debris flow
- Liquefaction
- Flooding

The assessment has reported on the level of risk associated with these hazards in terms of Annual Individual Fatality Risk (AIFR) and Annual Property Risk (APR) with the results of their analyses presented as contour plans for the study areas.

For the purposes of this report and based on the general rationale presented by BECA in the absence of a national guideline for the level of tolerable risk for the loss of life (AIFR), the level of tolerable risk is taken as 1×10^{-5} for new slopes/developments.

In terms of damage to property, quantitative property risk assessment has not been adopted as broadly as quantitative life risk assessment in New Zealand to date. As a result, there are no known examples of precedent in assessing public tolerability to property risk. This may be the result of a lower community tolerance of life risk than property risk, meaning that if life risk tolerability is assessed and actions taken, property risk is also addressed.

Therefore accepting AIFR tolerability boundaries initially to define planning zones and then using APR to inform stakeholders of the corresponding property risk.

5.3 Alluvial Fan

The alluvial fan associated with the site is the Reevers Creek catchment. The Reavers fan presents as a reasonably steep topographical feature predominantly occupied by residential and tourist accommodation type property. A stream exits the steep tributary valley at the top of the fan, whereby it passes through a culvert and channelled below ground to its exit point beyond and to the east of Fryer Street. The apex of the fan is situated at 370m, falling to 330m in the vicinity of Fryer Street.

The Reavers Creek catchment above the fan extends to an elevation of 1050m, sloping down at approximately 30 degrees to the apex of the fan. The catchment is currently afforested with conifer and bush, with surface exposure of highly fractured rock that provides source of fine and course rock material.

The near surface geology of the Fryer Street area indicates that this part of the fan is 'distal' given the presence of predominantly fine-grained sediments (silts and sands), although it is accepted that some coarse material is present. This is substantiated by observations made of excavations by Beca, RDA Consulting, GCL and Geotago (reporting all found on EDocs).

The Reavers Creek culvert and channel has been identified as being under capacity to accommodate any high-volume flow and would be blocked by debris resulting in the overland flow of mobilised debris across existing residential property.

Rock fall has been identified as being restricted to the upper margins of the fan only, with little geomorphological evidence of rock fall affected the lower reaches of the fan. There is no historical data indicating rockfall impacting on any property. The Beca report suggests that any significant rock fall will be restricted to major seismic events associated with local fault systems, the probability of which is reasonably low.

5.4 Liquefaction

Regardless of the district mapping of the site as LIC1(P), subsequent investigations in the immediate area have been assessed by BECA and the conclusion made that the site is in an area likely where liquefaction is 'Possible'.

With reference to the geotechnical report prepared by RDA Consulting for 37-41 Fryer Street, a liquefaction assessment using CPT profiles identified liquefaction as a risk that could result in circa 50mm of settlement.

Current investigations being undertaken by Geotago on the adjacent site at 20-26 Fryer Street has also identified a likelihood of liquefaction under ULS conditions with settlement in the magnitude of 80 to 100mm within the 50 to100 year return period. Settlement associated with liquefaction under SLS conditions are negligible to manageable. This is based on the ground model generated through deep investigations and groundwater monitoring.

Based on these current site observations, it must be assumed that 18 Fryer Street is susceptible to liquefaction and as such should be fully investigated for the purposes of detailed design.

5.5 Rock Fall

Given the position of the proposed development on the marginal downslope areas of the fan remote from the steeper slopes of the catchment, in addition to the significant infrastructure and property situated between the subject site and potential source of rock fall, we believe of risk of rock fall impacting 18 Fryer Street is LOW to Nil.

5.6 Debris Flow

Debris flow modelling undertaken by BECA is complex, but essentially has modelled flows from the Reevers Creek catchment for slopes that are both forested and deforested. Various scenarios have been run in terms of annual return periods for storm events and release of debris from various sources collectively and individually.

With reference to Appendix G and the worst case scenario of large scale block release in the 1:20,000yr event, large scale inundation will occur across the Reevers Creek fan above Fryer Street, with the project site subject to levels of flow from 0.1 to 1m thick.

The more relevant small scale release that can occur within the lifetime of a building (50-200 years) indicates that inundation is restricted to the area above the culvert and the urban area of Reevers Creek catchment.

Debris Flow risk zones have been mapped by BECA and show that the western half of the subject site has a risk of loss of life greater than 2.2 $x10^{-5}$ but less than 1 x 10^{-4} and as such is considered tolerable.

5.7 Slope Stability

To assess the level of risk from rock fall and debris flow, the BECA report has produced hazard mapping that combines the two hazards. With reference to these maps, the project site sits in a Combined Slope Stability Risk zone of less than 1 $x10^{-5}$ and as such is considered not to be at risk from slope stability. (Refer to BECA drawing 3209881-J018 in Appendix J).

5.8 Flooding

Based on the flood modelling prepared by Beca, the 18 Fryer Street site will be susceptible to flooding for a 1 in 100 year event occurring in the Reavers Creek catchment area, resulting in up to 200mm depth of sheet flow.

The cause of the flood is indicated to be the incapacity of the current culvert and channel and that it is likely to be overwhelmed during a significant event.

The flood assessment for Reavers Creek suggests that flood waters across the Fryer Street site pose a potential to minor risk, associated with flood waters of up to 200mm depth travelling at velocities less than 2m/s (BECA Figure 20).

The flood hazard was assessed by updating of the pre-existing flood model for the Gorge Road area to include the stormwater network, stream channels and land surface with buildings removed. With respect to the latter, we believe this exacerbates the extent of flooding and that the risk associated with the Fryer Street site is somewhat elevated and should only be considered 'Potential', which requires no further mitigation.

In addition, the flood risk is identified as a result of under capacity of the Reavers Creek culvert and channel and as such, we believe it is incumbent on QLDC to address these issues.

5.9 Seismic

The soil classification for the site is Class D, relating to deep or soft ground. Based on the investigations undertaken, this is considered an appropriate classification.

No active faults were mapped in the field, however, the active NW Cardrona Fault shown on the published Qm 18 is approximately 11.5km east from the site and the Moonlight Fault some 20km to the west. There is a significant seismic risk to the Wakatipu region when the rupture of the Alpine Fault system occurs; recent probability predictions estimate a magnitude 7.5 or greater is highly likely within the next 45 years. Significant ground shaking is expected from this type of event.

5.10 Summary

Based on the above discussions, the project site is only considered to be at risk from the effects of liquefaction and associated settlement and as such any future design will require appropriately designed engineering mitigation.

6 Geological Ground Model & Residual Risk

6.1 Ground Model

The geological ground model for the site is based on the collated information presented in this report including the desk top information, intrusive investigation and our interpretation. The ground model is summarised as:

- The site is presently occupied by a single dwelling that was built in the late 1960s.

- The site is located on gently sloping topography which does not display any slope instability features. In addition, the site is remote from steeper slopes and/or slopes prone to the development of slope instability features. Hazard assessment completed by BECA has demonstrated that the project site sits within a zone of tolerable risk for slope stability in terms of individual fatality and property damage from rock fall and debris flow.
- The site is underlain by competent ground conditions consisting of alluvial sands and gravels which overlie dense glacial till in the upper western section of the site. It is anticipated that the alluvial material is underlain by Lake Deposits in the eastern section. Topsoil mantles the colluvium to a depth of 300mm.
- The building platform has no surface water features.
- Ground water was not encountered in any of the test pits indicating that the water table is at least 2.6m below ground level. Knowledge of the ground water regime for the immediate area would suggest that groundwater sits at approximately 3m below ground level at Fryer Street.
- Groundwater is susceptible to seasonal variations and it is feasible that groundwater levels may rise, or seepage rates increase, over those observed following a period of prolonged rainfall and during the winter months, to the extent that it would interfere with foundations.
- The site is not located in the vicinity of an active fault zone but should be considered as seismically active in line with the wider Otago region.
- The site is considered to be at risk of liquefaction based on liquefaction assessments completed for adjacent sites. Based on those assessments, it is not unreasonable to assume settlement in the region of 50 to 100mm during a significant seismic event.

6.2 Geotechnical Risk and Limitations

Geotechnical investigation and their interpretation are subject to limitations and inherent risk due to the spatial distribution of the investigation points relative to the property/site area and the residual uncertainties of the ground conditions that remains uninvestigated. Therefore the following should be noted:

- Ground conditions can vary between investigations undertaken and there is always some natural variability in ground conditions both laterally and vertically, particularly with recent deposits.
- Small-scale ground anomalies, particularly associated with human disturbance such as demolished buildings, buried services and landscaping works can often be missed by the investigations.
- Ground strength can change with variations in natural water/moisture content, soil type and ground loading. As such, our interpretation and assessments are cognisant that ground conditions may differ to those reported at the time of this investigation due to periods of wet weather and/or during the winter months.
- The impact of climate change and its influence on ground conditions from a geotechnical perspective is an area being currently researched. However, based on our current understanding effects will include changes in groundwater regimes, soil saturation and surface water characteristics all of which may have a future effect on any current site development.

7 Geotechnical Considerations

7.1 General Geotechnical Constraints

Based on our ground model developed for the site, we are of the opinion that the site is generally suitable for the proposed residential development comprising two storey lightweight residential structures.

However, the ground conditions do pose some geotechnical constraints that will require further investigation as well as specific engineering design at detailed design stage. Issues to be addressed are

- Soft ground with reduced bearing capacity
- High groundwater table
- Susceptibility to liquefaction
- Potential long term settlement in the eastern section of the site due to the presence of soft lake deposits
- Differential settlement over the length of the building

7.2 Site Preparation

Earthworks and drainage should be undertaken in accordance with NZS4404 Land Development and Subdivision Engineering, QLDC Land Development and Subdivision Code of Practice and NZS4431 Code of Practice for Earth Fill for Residential Development .

When considering conventional light timber framed dwellings, developments should be in accordance with NZS3604, however provisions should be made for AS2870 expansive site class.

Other relevant Codes and Standards include but not restricted to:

- NZS 1170:2004: 'Structural design actions'.
- New Zealand Building Code: Clause B1
- District and Regional Plan provisions on residential development.

Specific comments and recommendations are provided in the sections below.

7.2.1 Standard Preparation

During the earthworks operations and excavation to the required levels all topsoil, uncontrolled fill, organic matter and other unsuitable materials should be removed from the construction areas in accordance with the recommendations of NZS 4431:2022. The subgrade should be inspected prior to fill being placed and/or foundations being constructed to establish it has suitable bearing capacity and is clear of unsuitable materials.

Subject to confirmation on site, aside from topsoil, site won material is considered suitable for placement as fill provided the following measures are taken:

- Fill areas to be benched/tied in.
- Free draining material and drainage system placed immediately behind any retaining walls.
- Appropriate lift height, compaction and certification for fill greater than 600mm.

Appropriate shallow graded sediment control measures should be installed during construction where rainwater and drainage run-off over exposed soils is likely. If slope gradients in excess of 5%

are proposed in soils then the construction and lining of drainage channels is recommended, e.g. with geotextile and suitably graded granular material, or similarly effective armouring.

Exposure to the elements should be limited for all soils and covering the soils with polythene sheeting will reduce degradation due to wind, rain and surface run-off. Under no circumstances should water be allowed to pond or collect near or under a foundation or slab. This can be avoided with shaping of the subgrade to prevent water ingress or ponding.

The upper soils present at the site are prone to erosion, both by wind and water, and should be protected by hardfill capping or re-topsoiled/mulched and re-vegetated as soon as the finished batter or subgrade levels are achieved.

If fill is utilised as bearing for foundations it should be placed and compacted in accordance with the recommendations of NZS 4431:2022 and certification provided to that effect.

7.3 Batter Slopes

Recommended temporary and permanent batter angles for cut slopes up to a maximum of 3.0m in both wet and dry conditions are presented below in Table 1. The batters provided should be adhered to where more than one soil type is present within the slope or defaulted to the shallower angle where appropriate.

Slopes that are required to be steeper than those described below should be structurally retained or subject to specific geotechnical design.

Table 1: Batter angles for soil slopes

Material Type	Recommended Maximum Batter Angles for Temporary Cut Slopes Formed in Soils		Recommended Maximum Batter Angles for Permanent Cut Slopes Formed in Dry (Drained) Soils
	Wet ground	Dry Ground	
Topsoil	2H:1V	1H:2V	2H:1V (grassed/planted
Alluvium	1H:1V	1H:2V	2H:1V
Glacial Till	1H:2V	1H:3V	1H:2V
Engineered Fill	1H:1V	1H:2V	2H:1V (unretained, drained)
Lake Deposits	Specific assessment as these have not been observed on site but may be exposed on deep excavation		

All slopes should be periodically monitored during construction for signs of instability and excessive erosion, and, where necessary, corrective measures should be implemented to the satisfaction of a Geotechnical Engineer or Engineering Geologist. Should construction and earthworks be undertaken during the winter period, the frequency of the inspections should increase, with site inspections being made after any significant weather event.

Seepages are common in excavations completed in hillside areas and drainage measures, such as horizontal drains, may be required if excessive groundwater seepages are encountered during excavation. This may well be the case in the deeper excavations where groundwater may be encountered. The final design and location of all sub-soil drainage works should be confirmed during construction by a suitably qualified and experienced Geotechnical Engineer or Engineering Geologist.

Inspections of soil cuts will be required during construction to confirm the above recommendations and based on the site observations a reduction in batter angles from those provided above may be required and conversely, if materials are preforming, may be steepened if site conditions and construction sequencing/programme are favourable.

7.4 Engineered Fill Slopes

As recommended in Table 2 above, unretained engineered fill slopes should be formed at 2H:1V (or flatter) providing they are well drained and compacted to the appropriate specification based on NZS4431. If steeper grades are required, the fill will require geogrid reinforcement to form slopes up to 45° but subject to specific engineering design from a chartered professional engineer.

7.5 Construction Monitoring & Certification

Given the extent of the earthworks and the volume of cut and fill required for the apartment complex, the earthworks and placement of fill should be undertaken in general accordance of Queenstown Lakes District Council's Land Development and Subdivision Code of Practice (incorporating NZS4404) and NZS4431:2022.

Of particular importance are the inspection and certification of the following:

- Subgrade inspection.
- Suitability of site won material for reuse as engineered fill.
- Performance of temporary cut batters.
- Foundation inspections.
- Fill >600mm depth or built as a slope >2H:1V.

7.6 Services

We recommend that all underground services are backfilled with adequately compacted backfill to minimise the risk of significant trench consolidation and settlement.

Trench excavations should be shored or battered appropriately in accordance with the OSH/DOL Approved Code of Practice for Safety in Excavations and Shafts for Foundations (April 2000).

The contractor is expected to employ the appropriate plant and machinery to undertake the excavation and retaining wall construction.

7.7 On-Site Slope Stability

The proposed building platform is located on moderate sloping topography which is underlain by competent ground conditions and is remote from steeper slopes and/or slopes prone to the development of slope instability features.

The modest overall slope angles and underlying competent ground conditions in the vicinity of the proposed building platform should provide a safe and stable ground with respect to slope stability conditions.

A safe and stable building platform is defined as having a low to negligible risk of failure over the lifetime of the dwelling and is assessed as a factor of safety where a quantitative slope stability assessment is undertaken. Given the modest slope angles in the vicinity of the site, we consider that a qualitative assessment of slope stability (as provided above) is acceptable for defining risk for this site and that a more rigorous quantitative analysis is not required.

Site earthworks are required to provide a suitable level building platform within the existing slopes, and we consider that appropriate site development constraints are required in order to maintain safe and stable conditions. This is addressed in Section 7.3 of this report.

7.8 Retaining Walls

Engineered retaining walls will be required on site under the following circumstances:

- where the retention height is greater than 1.5m.
- where retaining wall supports any surcharged loads such as sloping ground and structure/traffic loads.
- where retaining wall failure will affect the stability and integrity of adjacent structures and neighbouring properties.

Table 2 provides geotechnical parameters for the engineered retaining wall design as required:

Table 2: Retaining Wall Design Parameters

Unit	Cohesion (c')	Friction Angle (ϕ')	Ultimate Bearing Capacity (kPa)	Unit Weight (γ)
Topsoil	-	-	-	15kN/m^3
Alluvium	0	27°	200kPa	17kN/m^3
Glacial Till	0	30-34°	300kPa	18kN/m^3
Engineered Fill	0	40°	300kPa	19kN/m^3

All retaining walls should be constructed with appropriate toe drainage and backfilled to their full height with lightly compacted free draining granular material or other appropriate drainage solution. Toe drainage should be discharged at a point that will not impact or influence the construction works on site or alternatively be connected to the reticulated stormwater system.

7.9 Foundation Recommendations

7.9.1 Foundation Design Options

Based on the preliminary cross sections of the proposed build, the five terraced platforms will be cut into the slope and the downside edge is likely to comprise engineered fill, therefore, the foundations of any new dwelling will be in/on alluvial materials and engineered fill.

Given the preliminary ground model, and the geological and geotechnical constraints identified for the site, foundations must be subject to specific engineering design carried out by a suitably qualified Chartered Professional Engineer (CPEng).

It is advantageous that the proposed structures are maintained at two storeys with nominal excavation, as the upper alluvial material does provide a 'crust' above potentially softer sediments particularly in the eastern section of the site. This would allow foundations to be formed in the upper horizons of the dry alluvium and avoid exposing or surcharging on soft saturated ground.

However, the potential for liquefaction will have to be further assessed and may dictate a more robust foundation system to mitigate liquefaction below the founds. As such, foundations aligned with MBIE's technical category TC2 and TC3 foundations developed for the Canterbury region may be more appropriate.

Alternatively, depending on the confirmed ground model after site demolition, a piled foundation may be adopted carrying structural loads to competent ground below alluvium and lake sediments. This would have the benefit of mitigating both liquefaction and long term consolidation settlement and eradicate potential differential settlement.

7.9.2 *Bearing Capacity & Settlement*

The bearing capacity has been determined from our interpretation of the engineering description of the soil conditions, observations from the test pits on the soil behaviour and relative density measurements based on the site-specific testing undertaken. The values presented take into consideration natural variability of ground strength likely between investigations undertaken and potential strength reduction associated with saturated soil conditions.

To be compliant with ultimate limit state design methods outlined in AS/NZS 1170, this report provides ultimate bearing capacity values and a strength reduction factor in order to allow calculation of design foundation bearing capacity.

We have adopted a strength reduction factor of 0.5 (i.e., a factor of safety of 2) which is in general accordance with the requirements of AS/NZS 1170.

On this basis, the alluvial material does not consistently meet the criteria of NZS3604 Good Ground and as such will provide a reduced geotechnical Ultimate Bearing Capacity of 200 kPa.

Glacial till, if encountered is likely to exhibit more competent ground and provide an Ultimate Bearing Capacity of at least 300kPa (Good Ground).

It is anticipated that engineered fill placed in accordance with NZS4431 will achieve 300 kPa geotechnical Ultimate Bearing Capacity in accordance with NZS3604 section 3 testing requirements.

Lake Deposits would have to be assessed at the time of their exposure but are likely to be very soft and provide less than 150kPa Ultimate Bearing Capacity.

Settlement at this time cannot be commented on sensibly as it will depend on final form of the structure and the ground conditions it is founded on.

7.10 Soil Expansivity

There is no specific engineered foundation design required to resist shrink/swell associated with the non-expansive soils encountered on site.

7.11 Site Subsoil Category

For detailed design purposes it is recommended the magnitude of seismic acceleration be estimated in accordance with the recommendations provided in NZS 1170.5:2004 assuming Class D subsoil conditions exists across the site.

However, if on excavation of the building platform, rockhead is encountered or is demonstrated to be within close proximity to the surface, then Class C may be adopted.

8 Further Investigation

8.1 Site Investigation

The current investigation has been restricted to shallow test pits and Scala penetrometer testing. It is essential that further investigation is completed post demolition of the existing dwelling so that a competent ground model can be developed. At the stage of demolition the following is recommended:

- Further test pitting of the shallow soils
- Three CPT probes along the axis of the site, taken to refusal (anticipate 5m to 25m depth profiles)

- One machine drilled borehole in the eastern section of the site to allow for piezometer installation, visual inspection of the soil profile and sampling for laboratory testing including Plasticity Index, Particle Size Distribution and standard consolidation testing.
- Groundwater levels to be measured post investigation.

8.2 Liquefaction Assessment

A full liquefaction assessment will be required following the site investigation using the CPT data. This will, in conjunction with the soil data retrieved from the boreholes and laboratory testing, provide a detailed assessment of the liquefaction potential and magnitude of any settlement.

From these assessment the ground model can be confirmed and the geotechnical design parameters established for detailed design.

Drawings

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Engineering Geology & Geotechnics

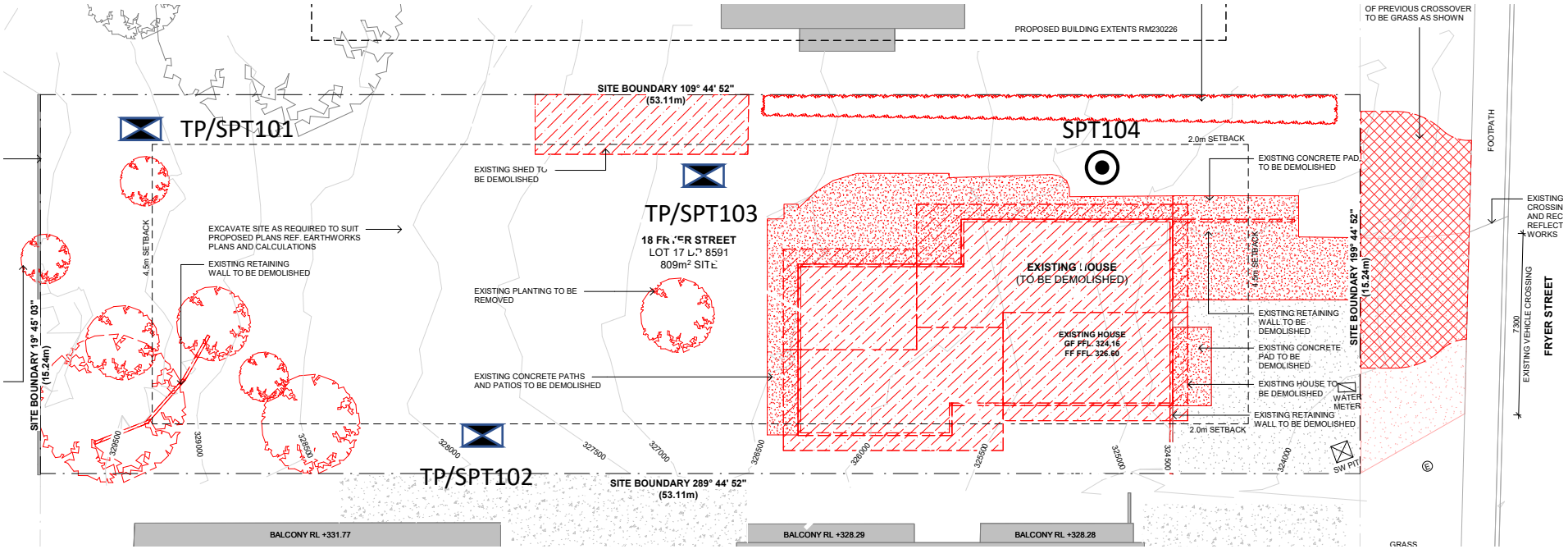
SKY HANN

18 FRYER STREET, QUEENSTOWN

SITE LOCATION PLAN

SCALE: NOT TO SCALE

REF:	DATE:
GL23-131.1 DRW001	16 November 2023



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SKY HANN

18 FRYER STREET, QUEENSTOWN

SITE INVESTIGATION PLAN

SCALE: AS SHOWN

REF: GL23-131.1 DRW002

DATE: 6 DECEMBER 2023

Appendix A – Scheme Layout

PROJECT: **2307_18 FRYER STREET**

CLIENTS: **S. HANN**
ADDRESS: **18 FRYER STREET,**
QUEENSTOWN, 9300
LEGAL DESCRIPTION: **LOT 17 DP 8591**
STAGE: **RESOURCE CONSENT**

SITE CONTEXT APPROX 1:500

1 3D View - South East corner
SCALE

2 3D View - North East corner
SCALE

DRAWING SCHEDULE - RC

SHEET NUMBER	SHEET NAME	REVISION	DATE
RC00	COVER PAGE	2	27.10.2023
RC01	EXISTING SITE & DEMOLITION PLAN	2	27.10.2023
RC02	PROPOSED SITE PLAN	2	27.10.2023
RC03	PROPOSED GF PLANS	2	27.10.2023
RC04	PROPOSED FF PLANS	2	27.10.2023
RC05	PROPOSED ELEVATIONS	2	27.10.2023
RC06	PROPOSED ELEVATIONS	2	27.10.2023
RC07	PROPOSED SECTION + HEIGHT PLANE	2	27.10.2023
RC08	PROPOSED SHADOW DIAGRAMS	2	27.10.2023
RC09	PROPOSED SITE INFO + LANDSCAPE	2	27.10.2023

3 3D View - Northern elevation
SCALE

YOKE
architecture / interiors / design

Level 1, 44 Beach street
Queenstown, NZ

studio@yoke.net.nz
+64 21 0873 3838

General Notes

ARCHITECTURAL DRAWINGS TO BE READ IN CONJUNCTION WITH THE FOLLOWING DOCUMENTS WHERE RELEVANT:

1. ARCHITECTURAL SPECIFICATION
2. FINISHES, FIXTURES, LIGHTING, AND DOOR HARDWARE SCHEDULES
3. SUPPLEMENTARY TRADE SPECIFICATIONS
4. STRUCTURAL ENGINEERS DOCUMENTS
5. CIVIL ENGINEERING DOCUMENTS
6. RESOURSE CONSENT
7. BUILDING CONSENT
8. ADDITIONAL SPECIALIST CONSULTANTS DOCUMENTS

BUILDERS / CONTRACTORS SHALL VERIFY ALL LEVELS / DIMENSIONS / SET OUTS BEFORE ANY WORK COMMENCES. DIMENSIONS SHOWN ARE NOMINAL. FIGURED DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS.

THE ARCHITECT IS TO BE MADE AWARE OF ANY DISCREPANCIES IN ANY OF THE DOCUMENTS BEFORE AFFECTED WORKS COMMENCE.

ALL SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW WHERE APPROPIATE AND MANUFACTURE SHALL NOT COMMENCE PRIOR TO THE RETURN OF APPROVED SHOP DRAWINGS.

ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH LOCAL AUTHORITY REQUIREMENTS / BY-LAWS, THE BUILDING CODE OF NEW ZEALAND + ANY RELEVANT NEW ZEALAND STANDARDS & ACCEPTABLE SOLUTIONS WHERE APPLICABLE.

ALL WORK TO COMPLY WITH THE BUILDING CONSENT ISSUED FOR THE PROJECT.

CO-ORDINATE AND KEEP UPDATED ALL REQUIRED SUB CONTRACTORS TO ENSURE PROMPT TIMING & INTEGRATION OF ALL TRADES INVOLVED ACROSS THE PROJECT

Copyright

Consultants	Contact
STRUCTURAL AND CIVIL ENGINEER ?	?
PROJECT MANAGER ?	?

Project Name
18_FRYER STREET

Site Address
18 FRYER STREET, QUEENSTOWN

Project Number
#2307

Client
SKY HANN

Status
SKD

Date
27.10.2023

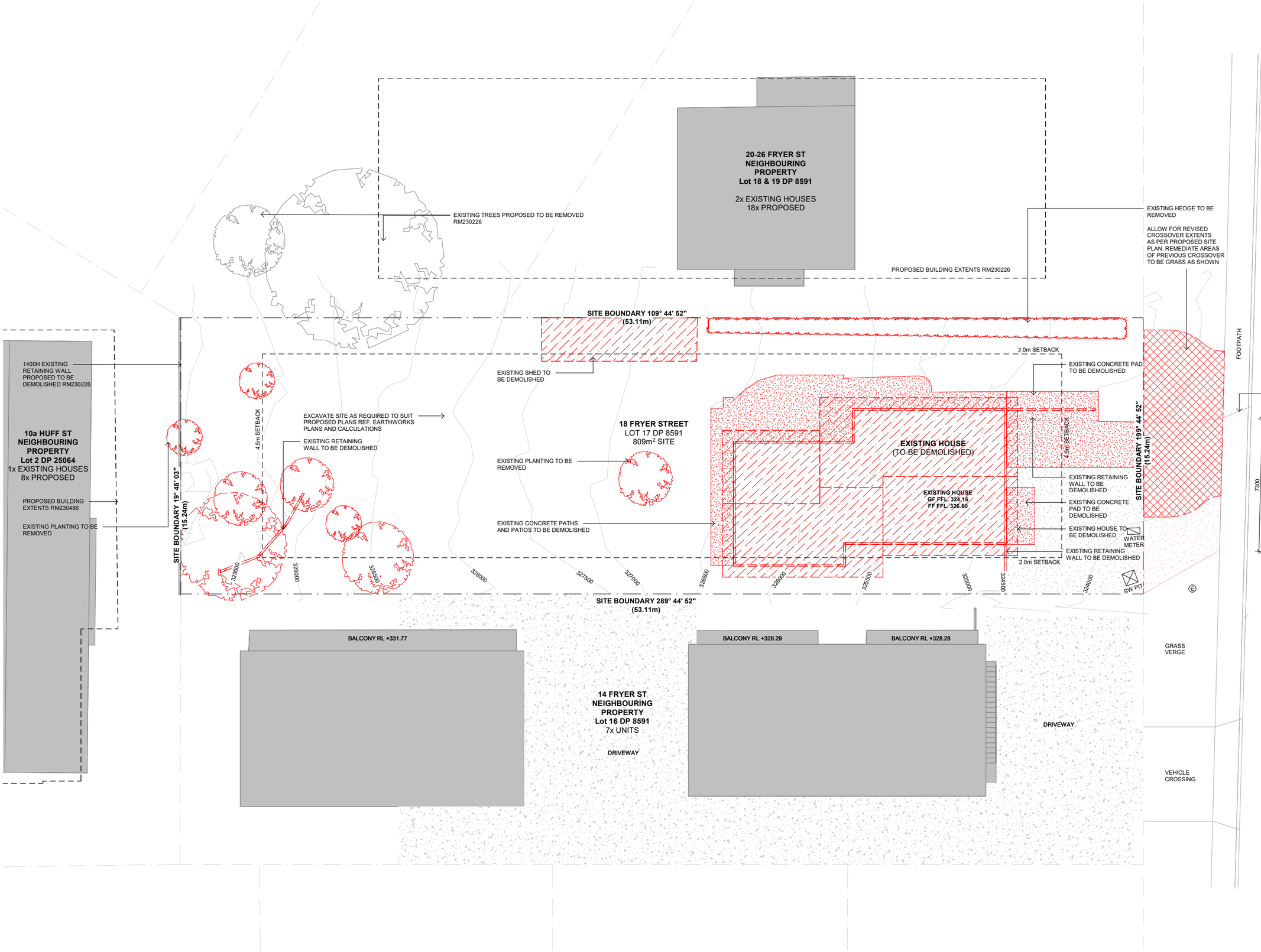
Sheet Name
COVER PAGE

Scale
1 : 500 @ A1
50% AT A3

NORTH

Drawing Number
RC00

Revision
2



1 EXISTING SITE PLAN
SCALE 1 : 100

YOKE
architecture / interiors / design

Level 1, 44 Beach street
Queenstown, NZ

studio@yoke.net.nz
+64 21 0873 3838

General Notes

ARCHITECTURAL DRAWINGS TO BE READ IN CONJUNCTION WITH THE FOLLOWING DOCUMENTS WHERE RELEVANT:

1. ARCHITECTURAL SPECIFICATION
2. FINISHES, FIXTURES, LIGHTING, AND DOOR HARDWARE SCHEDULES
3. SUPPLEMENTARY TRADE SPECIFICATIONS
4. STRUCTURAL ENGINEERS DOCUMENTS
5. CIVIL ENGINEERING DOCUMENTS
6. RESOURSE CONSENT
7. BUILDING CONSENT
8. ADDITIONAL SPECIALIST CONSULTANTS DOCUMENTS

BUILDERS / CONTRACTORS SHALL VERIFY ALL LEVELS / DIMENSIONS / SET OUTS BEFORE ANY WORK COMMENCES. DIMENSIONS SHOWN ARE NOMINAL. FIGURED DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS.

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CO-ORDINATE AND KEEP UPDATED ALL REQUIRED SUB CONTRACTORS TO ENSURE PROMPT TIMING & INTEGRATION OF ALL TRADES INVOLVED ACROSS THE PROJECT

Copyright

Consultants	Contact
STRUCTURAL AND CIVIL ENGINEER	
?	?
PROJECT MANAGER	
?	?

Project Name
18_FRYER STREET

Site Address
18 FRYER STREET, QUEENSTOWN

Project Number
#2307

Client
SKY HANN

Status
SKD

Date
27.10.2023

Sheet Name
EXISTING SITE & DEMOLITION PLAN

Scale
1 : 100 @ A1
50% AT A3

Drawing Number
RC01

Revision
2

Appendix B – Engineering Logs

Test Pit Log

Project:	18 Fryer Street	Project Number:	GL23-131
Site Location:	Queenstown	Client:	Sky Hann
Test Pit Number:	TP101/SP1		Sheet 1

Depth (m)	Water Level	Geological Unit	Sample	Soil Rock Description	Legend	Scala Penetrometer (blows/50mm)	Depth
	GWNE	Topsoil		Sandy SILT with some gravels; dark brown. Moist, contains rootlets and organics.			
0.5		Alluvium		Sandy silty GRAVEL with some cobbles and boulders; grey. Dry to moist, loose. Sand; fine to coarse, gravels; fine to coarse, sub rounded to sub angular.			0.5
1.0							1.0
1.5							1.5
2.0				Sandy SILT with some gravels; brown. Moist, contains some organic material. Sand, fine to coarse; Gravel, fine to coarse, sub rounded to sub angular.			2.0
2.5				Silty sandy GRAVELS with some cobbles; brown. Moist; gravels, fine to coarse, sub angular to sub rounded; sand, fine to coarse.			2.5
3.0				EOTP 2.6m: Target Depth			3.0
3.5							3.5

Date Excavated: 15 November 2023	Equipment: 5.5T tracked excavator
Logged By: JEG	Contractor: Southern Lakes Bobcats

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Engineering Geology & Geotechnics

Notes: Groundwater not encountered on 15/11/2023.

Test Pit Log

Project:	18 Fryer Street	Project Number:	GL23-131
Site Location:	Queenstown	Client:	Sky Hann
Test Pit Number:	TP102/SP2		Sheet 2

Depth (m)	Water Level	Geological Unit	Sample	Soil Rock Description	Legend	Scala Penetrometer (blows/50mm)	Depth
	GWNE	Topsoil		Sandy gravelly SILT with some cobbles; dark brown. Moist; contains rootlets; gravels, fine to coarse, angular to sub angular; sand, fine to coarse.			
0.5		Alluvium		Silty GRAVELS with some sand cobbles and boulders; brown. Moist; sand, fine to coarse; gravels, fine to coarse, sub rounded to sub angular; cobbles, sub angular to sub rounded; boulders sub angular to sub rounded, upto 0.6m. Some rootlets throughout.			0.5
1.0							1.0
1.5							1.5
				1.7m: silt layer 0.05m thick.			
2.0							2.0
2.5				EOTP 2.4m: Target Depth			2.5
3.0							3.0
3.5							3.5

Date Excavated: 15 November 2023	Equipment: 5.5T tracked excavator
Logged By: JEG	Contractor: Southern Lakes Bobcats

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Engineering Geology & Geotechnics

Notes: Groundwater not encountered on 15/11/2023

Test Pit Log

Project:	18 Fryer Street	Project Number:	GL23-131
Site Location:	Queenstown	Client:	Sky Hann
Test Pit Number:	TP103		Sheet 3

Depth (m)	Water Level	Geological Unit	Sample	Soil Rock Description	Legend	Scala Penetrometer (blows/50mm)	Depth
	GWNE	Topsoil		Sandy gravelly SILT with some cobbles; dark brown. Moist; contains rootlets; gravels, fine to coarse, angular to sub angular; sand, fine to coarse.			
0.5		Alluvium		Silty GRAVELS with some sand cobbles and boulders; brown. Moist; sand, fine to coarse; gravels, fine to coarse, sub rounded to sub angular; cobbles, sub angular to sub rounded; boulders sub angular to sub rounded, upto 0.7m. Some rootlets throughout.			0.5
1.0							1.0
1.5				1.3m: thin organic silt layer 0.05m thick.			1.5
				SILT with some gravels and sand; grey. Moist; sand, fine to coarse; gravels fine to coarse, sub angular to sub rounded. Some organincs.			
2.0				Sandy GRAVEL with some silt and cobbles. Grey brown. Moist. Sand fine to coarse. Gravels fine to coarse, subrounded to subangular.			2.0
2.5				EOTP 2.3m: Target Depth			2.5
3.0							3.0
3.5							3.5

Date Excavated: 15 November 2023	Equipment: 5.5T tracked excavator
Logged By: JEG	Contractor: Southern Lakes Bobcats

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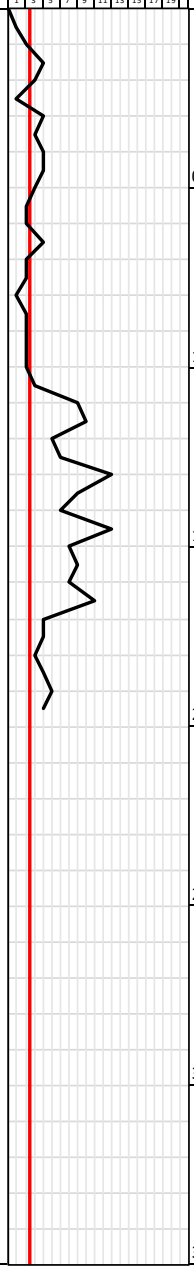
Notes:

Test Pit Log

Project:	18 Fryer Street	Project Number:	GL23-131
Site Location:	Queenstown	Client:	Sky Hann
Test Pit Number:	SPT104		Sheet 4

Depth (m)	Water Level	Geological Unit	Sample	Soil Rock Description	Legend	Scala Penetrometer (blows/50mm)	Depth
0.5				Scala Penetrometer Only			0.5
1.0							1.0
1.5							1.5
2.0							2.0
2.5							2.5
3.0							3.0
3.5							3.5

Date Excavated: 15 November 2023	Equipment: 5.5T tracked excavator
Logged By: JEG	Contractor: Southern Lakes Bobcats

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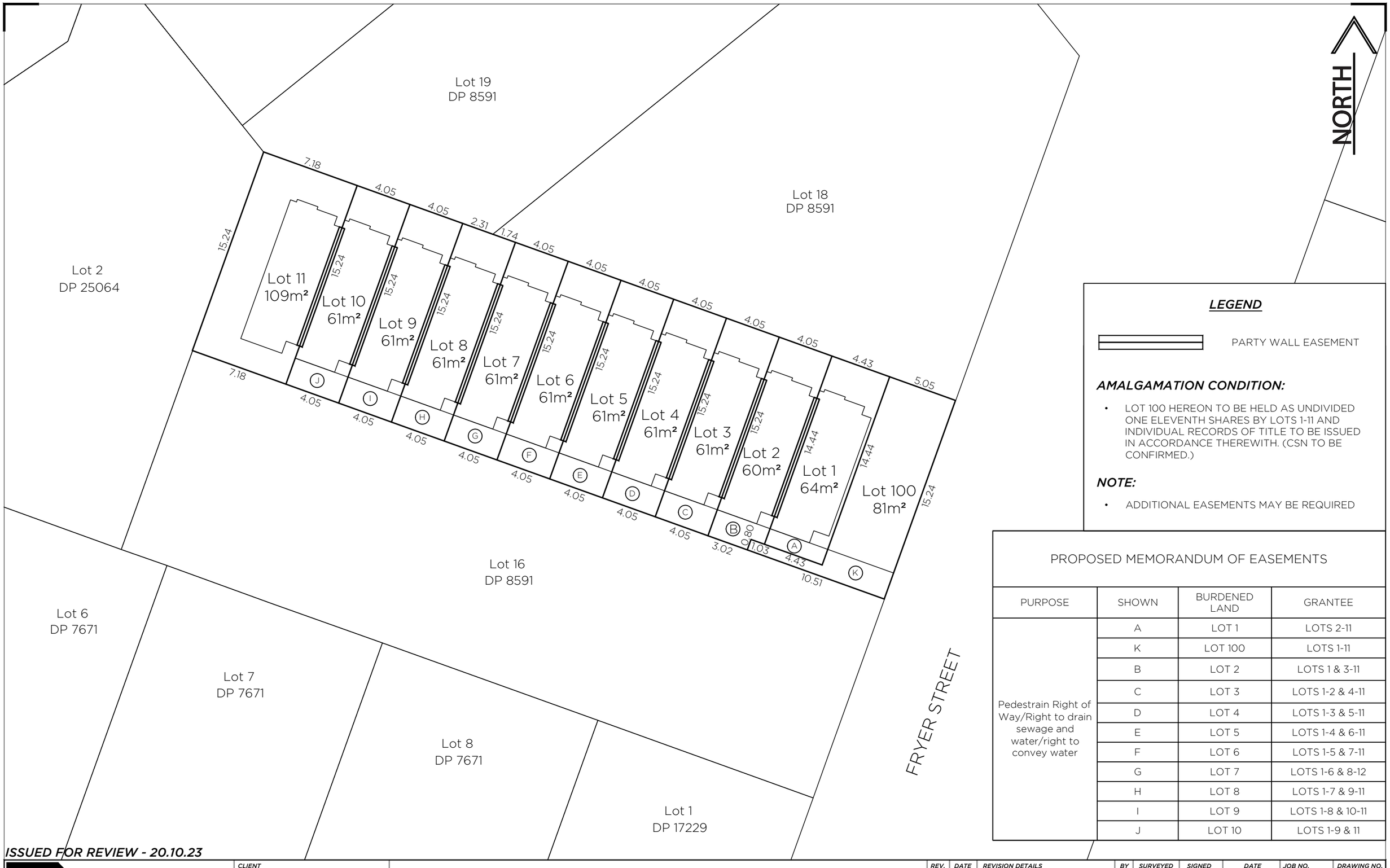
Notes:

Appendix C - Site Photographs

Test Pit 101

Test Pit 102

Test Pit 103



LEGEND

PARTY WALL EASEMENT

AMALGAMATION CONDITION:

- LOT 100 HEREON TO BE HELD AS UNDIVIDED ONE ELEVENTH SHARES BY LOTS 1-11 AND INDIVIDUAL RECORDS OF TITLE TO BE ISSUED IN ACCORDANCE THEREWITH. (CSN TO BE CONFIRMED.)

NOTE:

- ADDITIONAL EASEMENTS MAY BE REQUIRED

PROPOSED MEMORANDUM OF EASEMENTS

PURPOSE	SHOWN	BURDENED LAND	GRANTEE
Pedestrain Right of Way/Right to drain sewage and water/right to convey water	A	LOT 1	LOTS 2-11
	K	LOT 100	LOTS 1-11
	B	LOT 2	LOTS 1 & 3-11
	C	LOT 3	LOTS 1-2 & 4-11
	D	LOT 4	LOTS 1-3 & 5-11
	E	LOT 5	LOTS 1-4 & 6-11
	F	LOT 6	LOTS 1-5 & 7-11
	G	LOT 7	LOTS 1-6 & 8-12
	H	LOT 8	LOTS 1-7 & 9-11
	I	LOT 9	LOTS 1-8 & 10-11
	J	LOT 10	LOTS 1-9 & 11

ISSUED FOR REVIEW - 20.10.23

JEA TOWN PLANNERS & SURVEYORS
Level 2, 36 Shotover Street
PO Box 95, Queenstown, 9300

CLIENT
HANN, SKY

NOTES:
- *ALL DIMENSIONS SHOWN ARE IN METERS UNLESS SHOWN OTHERWISE.*
- *CHECK ELECTRONIC DATA AGAINST LATEST HARD COPY VERSION.*
- *COPYRIGHT ON THIS DRAWING IS RESERVED.*
- *THIS PLAN MAY BE SUBJECT TO FINAL SURVEY.*

LOTS 1 - 11 AND LOT 100 BEING A SUBDIVISION OF LOT 17 DP 8591
18 FRYER STREET, QUEENSTOWN

REV.	DATE	REVISION DETAILS	BY
A	20.10.23	INITIAL	FC

SURVEYED	SIGNED	DATE	JOB NO.	DRAWING NO.
-	-	-	23140	01.01

DRAWN	CHECKED	DATE	SCALE
FC	CW	20.10.23	1:250m @ A3

DATUM & LEVEL: MT NIC 2000 - NZVD16 — REV. A

C:\Users\JEA Craig\John Edmonds and Associates\John Edmonds and Associates - Shared Documents\Clients\2023\23140 - 18 Fryer Street\Survey\CAD\23140.06.01A - Scheme Plan.dwg Plotted: 06.11.2023

INFRASTRUCTURE REPORT

Bing Li and Don Han

18 Fryer Street

Lot 17 DP 8591

December 2023

1.0 EXECUTIVE SUMMARY OF PROPOSAL

Bing Li and Don Han seeks consent to construct and subdivide 11 residential dwellings at 18 Fryer Street, Queenstown.

The proposed development is located on the western side of Birch Lane. The land is legally described as:

Lot 17 DP 8591	809m²	RT OT389/173

The proposed 11 residential are joined by a party wall between each of the units. The 11 units accessed via a proposed pedestrian right-of-way along the south of the units.

This report will outline the following infrastructure availability;

2. Wastewater
3. Potable Water
4. Stormwater
5. Fire fighting
6. Power and telecommunications

2.0 WASTEWATER

2.1 Existing Wastewater Availability

The site is zoned high density residential, therefore it is assumed that there is adequate capacity within the wastewater supply to service this development.

The site is currently serviced by a single 100mm sewer lateral in the northern roadside corner which is directly connected to the 150mm sewer main within Fryer Street.

2.2 Proposed Wastewater Treatment

Due to the layout of the site a new 150mm connection would be required to service the proposed development. The location of this with regards to the development is along the southern boundary.

A new manhole would be required to be installed at the junction of this new pipe and the existing wastewater main within Fryer Street.

2.3 Conclusion

Existing QLDC sewer reticulation is present within Fryer Street which could be used to cater for the additional dwellings. Further detailed design would be required should consent be granted.

3.0 POTABALE WATER

3.1 Existing Potable Water Availability

The site is zoned high density residential, therefore it is assumed that there is adequate capacity within the water supply to service this development.

QLDC GIS records show an existing 100mm main within the eastern side of Fryer Street fronting the site. In addition to this the recently developed site directly south of 18 Fryer Street has installed a 50mm rider main, which services the 10 units located on this site.

3.2 Proposed Potable Water Supply

Within table 6.3 of the QLDC COP a one end 50mm water supply within the medium bracket can cater for 15 dwelling units, and a high-pressure bracket can cater for 20 dwelling units. It is not known what pressure exists in this area.

The 50mm rider main could be connected to the 100mm main to create a looped connection which increases the dwelling unit potential supply, from 15 to 30 in the medium bracket and 20 to 40 in the high bracket.

3.3 Conclusion

There is adequate water supply within Fryer Street to service the proposed development.

4.0 STORMWATER

4.1 Existing Stormwater Availability

There is no existing stormwater lateral servicing the underlying allotment.

The recent development to the south of the site installed a manhole and 150mm connection to the 450mm main running west-east draining directly into Horn Creek.

4.2 Proposed Stormwater

Onsite attenuation will be required to mimic pre and post development flows from the site.

A 150mm connection from the site could be installed within the verge of Fryer Street connecting to the recently installed manhole outside 14 Fryer Street.

4.3 Conclusion

With onsite attenuation and a connection to nearby infrastructure the site can be serviced.

5.0 TELECOMMUNICATION & ELECTRICITY

5.1 Proposed Development Electricity Supply

Aurora have confirmed the proposed development can be serviced by the existing Aurora network, this confirmation is attached to this report.

5.2 Proposed Development Telecommunications Supply

Chorus NZ Ltd have confirmed the proposed development can be serviced by the existing telecommunication this confirmation is attached to this report.

6.0 FIRE FIGHTING

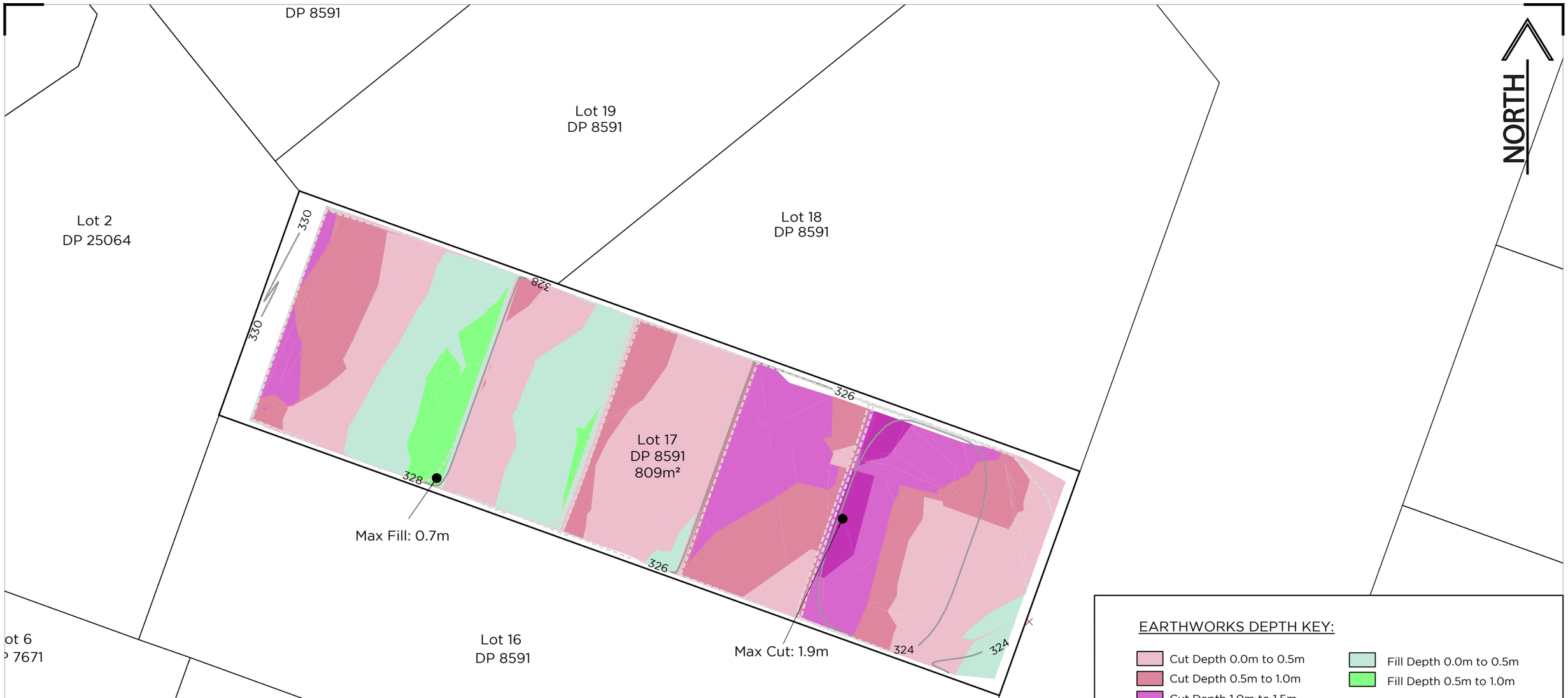
6.1 Fire Fighting Availability

QLDC GIS records show there is a fire hydrant located opposite 20 Fryer Street. This location provides the required firefighting availability for this development.

7.0 CONCLUSION

This infrastructure report demonstrates that the proposed development can be serviced through the existing available services.

Should consent be granted the appropriate conditions can be imposed to ensure further detailed design of the infrastructure is completed prior to construction commencing.



EARTHWORKS DEPTH KEY:

- Cut Depth 0.0m to 0.5m
- Cut Depth 0.5m to 1.0m
- Cut Depth 1.0m to 1.5m
- Cut Depth 1.5m to 2.0m
- Fill Depth 0.0m to 0.5m
- Fill Depth 0.5m to 1.0m
- MAJOR CONTOUR
- MINOR CONTOUR

EARTHWORKS SUMMARY

Areas	
Earthworks area	737m²
Volumes	
Cut	343m³
Fill	48m³

NOTES

-No allowance for topsoil stripping.
-No allowance for site retaining.
-No allowance for pavement surfaces.
-Contour interval 0.5m

ISSUED FOR REVIEW - 6.11.23

JEA TOWN PLANNERS & SURVEYORS
Level 2, 36 Shotover Street
PO Box 95, Queenstown, 9300

CLIENT: HANN, SKY

NOTES:
- ALL DIMENSIONS SHOWN ARE IN METERS UNLESS SHOWN OTHERWISE.
- CHECK ELECTRONIC DATA AGAINST LATEST HARD COPY VERSION.
- COPYRIGHT ON THIS DRAWING IS RESERVED.
- THIS PLAN MAY BE SUBJECT TO FINAL SURVEY.

SITE EARTHWORKS
18 FRYER STREET, QUEENSTOWN
LOT 17 DP 8591

REV.	DATE	REVISION DETAILS	BY
A	20.06.24	AMENDED EARTHWORKS	MF

SURVEYED	SIGNED	DATE	JOB NO.	DRAWING NO.
FC	CW	05.09.23	23140	04.01
DRAWN	CHECKED	DATE	SCALE	
CW	CW	6.11.23	1:250m @ A3	
DATUM & LEVEL				REV.
MT NIC 2000 - NZVD16				A

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JOHN EDMONDS & ASSOCIATES

03 450 2243 | info@jea.co.nz
www.jea.co.nz
Level 2, 36 Shotover Street, PO Box 95, Queenstown 9300

RESIDENTIAL VISITOR ACCOMMODATION MANAGEMENT PLAN – UNIT _, 18 FRYER STREET, QUEENSTOWN

1. Background

Resource Consent is sought for the use of Unit __, 18 Fryer Street, to be used as Residential Visitor Accommodation up to 365 nights per year. Unit __ is a two-bedroom unit, with a maximum capacity limited to 4 adult guests and up to 2 additional children.

2. Management Plan

The purpose of this Management Plan is to control any potential effects on neighbours and the surrounding environment from the residential visitor accommodation use of Unit _, 18 Fryer Street, Queenstown. The main nuisance effects experienced from neighbours to a residential visitor accommodation activity are noise, rubbish collection and car parking. This Management Plan seeks to minimise the possibility of these (and any other) nuisance effects as a result of the visitor accommodation activity.

This Management Plan is a dynamic document that can and will be amended at any time, to ensure the most efficient and effective ways of managing effects resulting from the visitor accommodation operation.

The Unit will be managed by a management entity, which will ensure on-going management of the following components of the operation:

- To provide guests with a copy of the House Rules and obtain confirmation from the visitors that they agree to the rules as a condition of staying at the property.
- To check that the number of visitors does not exceed 4 adult guests (plus up to 2 additional children).
- To check that the on-site compendium contains a copy of the House Rules and a copy of the conditions of resource consent RM [CONSENT NUMBER].
- To enforce the house rules.
- To ensure all conditions of the resource consent are met at all times.
- To ensure rubbish and recycling bins are taken to the communal collection points and the days of collection will be advised to the guests.
- To ensure signage is placed on doors leading to the outside patio area stating: “Outdoor area, is STRICTLY not to be used between 10pm and 7am daily. There shall be no outside speaker systems operating at any time”.
- One Mobility Car parking/One car park/no parking is available on the site.
- (All Units except Unit 1) Please be aware that pedestrian access to the property is via a shared pathway with stairs.

3. House Rules

The House Rules below shall be in place at all times. These shall be held in an on-site compendium available to guests at all times.

- Consideration must be shown to neighbours at ALL times. Particularly in relation to noise and any other activities that cause nuisance to neighbours.
- Guests shall not engage in activities which generate excessive noise.

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- The unit is located within a residential area and use of the outdoor space associated with the accommodation is not permitted between 10pm and 7am daily.
- There shall be no outside speaker systems operating at any time.
- Only guests that are part of the visitor accommodation activity can sleep at the property.
- Guests shall not park in parking spaces assigned to any other unit.

4. Complaints or Comments

The residential visitor accommodation activity has the potential to affect neighbours from nuisance such as noise, rubbish collection and car parking if not managed appropriately. It is important that there is a conduit for any misconduct or complaints or comments from neighbours of Unit _, 18 Fryer Street, resulting from any effects of the visitor accommodation. For any complaints or comments, please contact the Residential Visitor Accommodation Property Manager.

The details of the property manager for the site have been outlined below:

Property Address:	"To be confirmed"
Name:	"To be confirmed"
Email:	"To be confirmed"
Phone (24hr):	"To be confirmed"

Any complaints from neighbours shall be immediately actioned and resolved. Feedback with the steps taken to resolution to the complainant will be critical when actioning any complaints. This will be the responsibility of the Property Manager.

The Property Manager shall take into consideration any issues that may arise from the use of the unit for residential visitor accommodation activity and amend the Management Plan as necessary, for on-going management of effects.

JOHN EDMONDS & ASSOCIATES
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Environmental Risk Assessment

for,

18 Fryer Street, Queenstown

Version 1.0 - Dec 2023

Author:

Anton Kirkbeck NZCE Civil

Senior Project Manager
John Edmonds & Associates Ltd.

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Table of Contents

Site Description

This Environmental risk assessment (ERA) covers works at 18 Fryer Street, Queenstown

In brief, the proposed development consists of the existing building being either demolished or removed, the site cleared for the proposed physical works, followed then by minor earthworks, and construction of a new terraced unit building.

The property lot area is 809 m^2 with an existing dwelling, with the development site location shown below in figure 1.

Figure 1. *Development site location.*

No ecological information is available for the property, with the current state and use of the development area an empty residential lot.

The nearest dwellings outside the development area, are located either side and to the rear, with a minimum distance of approximately 2m beyond the property boundaries.

There are no natural water courses within this property, and the proximity of the nearest water body, Horn Creek, is approximately 160m to the area of works, this is downslope via road overland flow paths or by existing stormwater infrastructure, therefore the site has a manageable low risk of pollution to this sensitive receiver, shown below in figure 2.

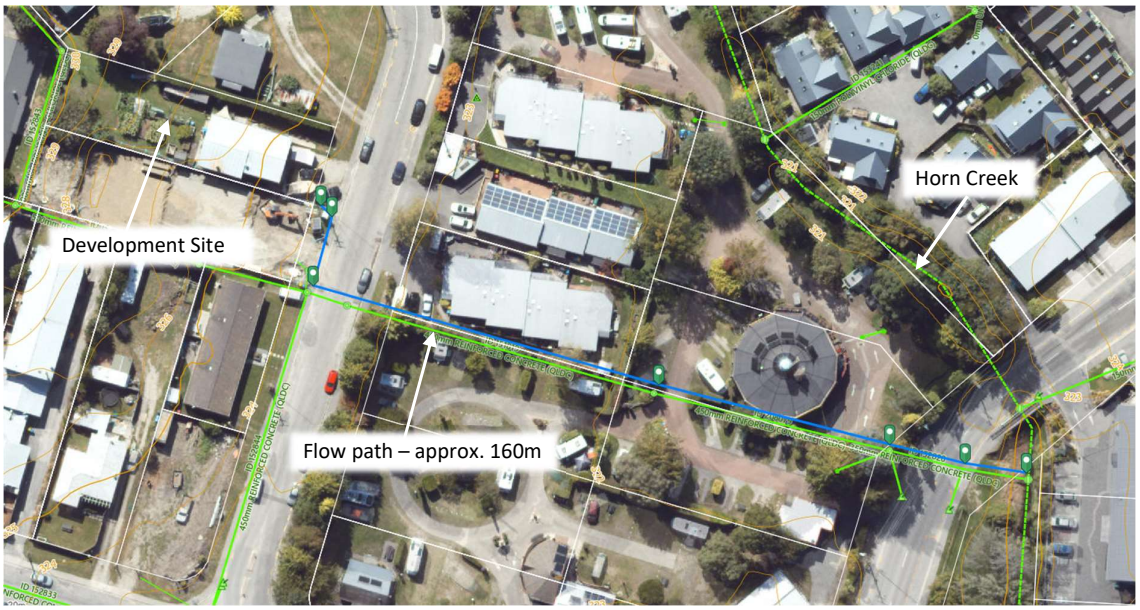

Figure 2. *Development site location, distance to Horn Creek.*

Earthworks Summary

As per JEA Ltd's earthworks plan, figure 3 below, the area of disturbance is estimated to an area of approximately 763m^2, where the total lot area is 809 m^2.

The plan also notes the total fill to be 46m3 and the total cut to be 381m3.

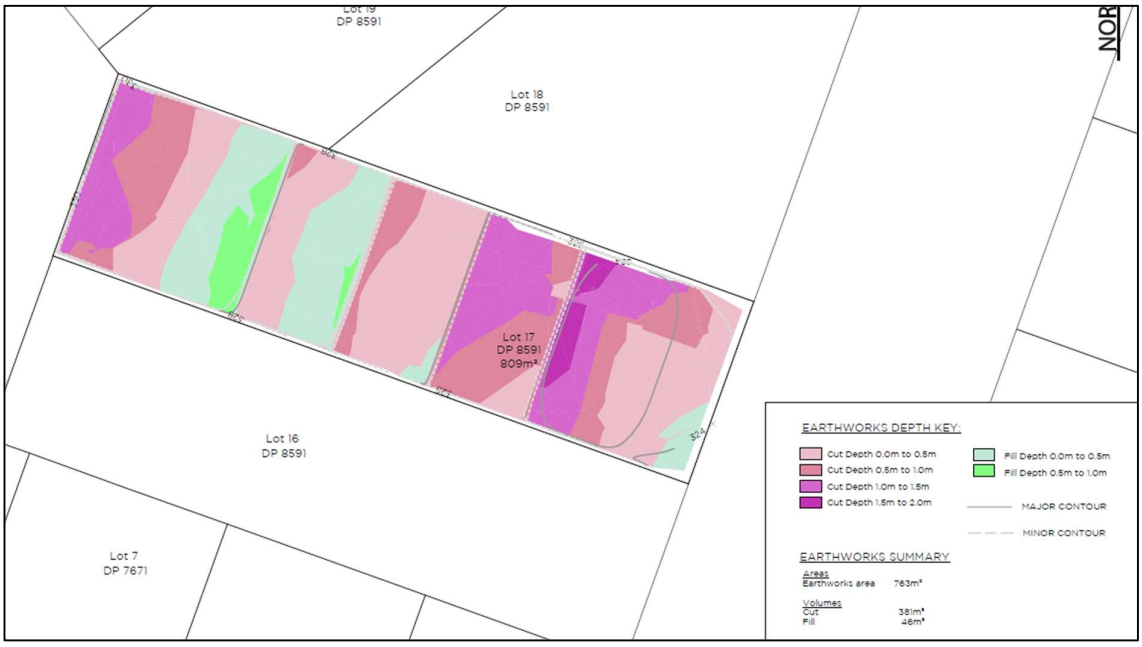

Figure 3. *JEA Ltd Plan – Site Earthworks 18 Fryer Street, Queenstown LOT 17 DP 8591 dated 5/09/2023.*

As per Yoke's site section plan, figure 4 below, the maximum cut depths are approx. 1.5m, which occurs through the site and become permanent retaining walls.

Figure 4. *Yokes Plan – Proposed Section + Height Plane RC07 dated 2/11/2023.*

Site Visit

Site visit photos taken 19th December 2023, showing key features.

1. View of site, looking south along Fryer Street, showing the existing driveway and building.

2. View of site, looking west into the property, showing the existing building and site topography.

3. View of site, looking south, showing the existing road reserve adjacent to property.

Stormwater Flow and Catchments

Being a highly urbanised area, any upper catchment area flow potential has been removed, and the existing internal site stormwater flow is minimal and currently controlled.

During works, any potential stormwater concentrations will be from the sites area itself, which can be controlled using appropriate and standard erosion sedimentation control (ESC).

Environmental Risk Assessment

Per the QLDC guidelines, as meets the criteria for a **"low risk"** project, as defined by QLDC's Guidelines for the Preparation of Environmental Management Plans June 2019.

QLDC criteria for a **"low risk"** as follows:

- Less than 2,500m2 disturbed surface area open at any one time; and
  - **763m2**
- Less than 15% (6.6 degrees) slope; and
  - **4% Slope (existing building platform)**
- Earthworks not located within 50m of a Sensitive Environmental Receptor; and
  - **75m**
- Controls installed and maintained in accordance with Template EMP including measures to ensure sediment does not enter the stormwater network.
  - **Refer appendix 1, to be implemented.**

Given the above assessment, the Environmental Management Plan (EMP) required has been prepared for Low-Risk environmental management, refer appendix 1.

SQEP - Suitably Qualified and Experienced Person

SQEP Credentials

This Environmental Risk Assessment (ERA) has been prepared by Anton Kirkbeck of John Edmonds & Associates Ltd., who meets the criteria for a SQEP as defined by QLDC's Guidelines for the Preparation of Environmental Management Plans June 2019.

Anton is a civil construction professional, who studied NZCE Civil and has worked both as a consultant and contractor since 1994. During his career, Anton has been involved with the ever-changing Environmental Management policies and direction within the construction industry, covering all aspects from Erosion Settlement Controls (ESC) including design, through to physical installation, management, and monitoring.

Also, as per requirements of a SQEP, Anton is actively working to further his standing with Environmental accreditation, and ongoing Environmental refresher and technical courses.

This EMP reflects Anton's both SQEP professional experience, and the QLDC EMP requirements, and overseeing the environmental aspects of this project.

SQEP Disclaimer

Anton Kirkbeck and John Edmonds & Associates Ltd. has exercised appropriate professional expertise, care, and diligence in preparing this Environmental Risk Assessment, of which is wholly based on their understanding of the subject site, through their own site visits, as well as information provided by the client and its consultants.

Both Anton Kirkbeck and John Edmonds & Associates Ltd. has no control over the physical actions, altered designs, type of equipment, level of services, and methodologies undertaken by the client or other third parties, tasked with implementing the instructions or recommendations contained in this ERA.

Anton Kirkbeck and John Edmonds & Associates Ltd. do not accept any liability for environmental incidents, defects of control measures, complaints or any matters arising from deviations or variance from the measures specified within this ERA, and any supplementary documents.

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APPENDIX 1. EMP - QLDC Low Risk Template

ENVIRONMENTAL MANAGEMENT PLAN FOR LOW RISK SITES

Project Address: 18 Fryer Street, Queenstown.	**QLDC Consent Number (if applicable):** **RM**123456 **BC**123456 RM230992 TBC
Brief Project Description: Construction of a new block of unit buildings, including removal of an existing building, minimal earthworks, retaining wall and vertical construction.	
Nearest Sensitive Receptors: (e.g storm water network, waterway) Road stormwater infrastructure (nearest mudtank inlet 75m), plus Horn Creek (160m)	

Purpose

This document is for use for sites that are deemed through resource consent to be of low environmental risk. These are also designed for the construction industry to provide guidance to construction environmental management on small scale jobs with low environmental risk. This document is a guide for operators to help control environmental effects such as storm water, erosion and sediment run off into nearby waterways and storm water infrastructure, manage dust, noise, litter pollution and other construction related effects to neighbours and the environment.

Administrative requirements

Roles and responsibilities

ROLE	NAME	PHONE NUMBER	EMAIL
SITE SUPERVISOR	TBC		
ENVIRONMENTAL REPRESENTATIVE	Anton Kirkbeck (JEA)	022 462 6494	anton.kirkbeck@jea.co.nz

Inductions

All workers on site shall be briefed on the control measures outlined in this Environmental Management Plan. This should include and outline of the rapid stabilisation and spill response procedures. A copy of this Environmental Management Plan shall be kept on site at all times.

Environmental incident notification and reporting

Any environmental incidents which may result in an adverse effect on the environment or community shall be notified to the Regulatory Team at Queenstown Lakes District Council within 12 hours of the incident occurring. Any spills or offsite release of a hazardous substance shall be notified immediately to the Pollution Hotline at Otago Regional Council.

QLDC Regulatory Team – 03 441 0499 **ORC Pollution Hotline – 0800 800 033**

Environmental inspections
The Environmental Representative will inspect all control measures at the start of each working day, and ensure that all measures are in good condition and suitable for the works. Inspections will also be undertaken where adverse weather events are forecast. The site should always be suitably stabilised to limit erosion and sedimentation, any potential spills, discharges and deposition of waste from site.

Operational requirements

Site Set-up
The site will have the following measures installed. These need to be considered when planning site set out:

- [x] Stabilised access point
- [x] Waste collection facility
- [ ] Concrete wash out bay
- [x] Parking area
- [x] Hazardous substance storage facility
- [x] Wash down facility (mud from tyres)
- [x] Fencing
- [x] Spill kit

Further Comments/Other Measures:

The site entrance will require the entrance to be stabilised using a coarse aggregate.
Vehicles leaving site will need to ensure wheels are free of mud.
Ensure the entranceway kerb and channel is kept clean and free of debris.
Daily checks on driveway conditions, clean if needed.

Drainage, Erosion and Sediment Control
Under the Queenstown Lakes District Plan, no discharge of water holding sediment is allowed off-site, unless you have a resource consent permitting this activity. Consider your site and your works: what's the best tool for the job, to make sure your site is stabilised at all times.

The site will have the following measures installed. These need to be considered when planning site set out:

- [ ] Water diverted around site
- [x] Minimise area of exposed soil
- [x] Sediment fences
- [x] Bunds and/or catch drains
- [x] Sediment retention device
- [x] Stockpile management
- [x] Stabilisation following earthworks
- [x] Storm water inlets protected (closed off or sediment sock)

Ongoing management of erosion and sediment controls:

- [x] E&SCs to be inspected daily, prior to heavy rainfall and following heavy rainfall
- [x] E&SCs are always correctly installed and suitable for the planned works
- [x] Sediment deposits removed from E&SCs following storm events to ensure capacity for next storm

Rapid Stabilisation Procedure:
In the event of heavy rainfall or significant weather event forecast, the site can be quickly stabilised by:

Geo-textile fabric or coconut matting to be laid over any areas of unstabilised soils.
Roof run-off, temporary down-pipe discharge to be directed into soak pits, or contained in appropriately sized tanks.

Further Comments/Other Measures:

Downstream roadway storm water inlets protected with sediment socks and bidim cloth over inlet grate.

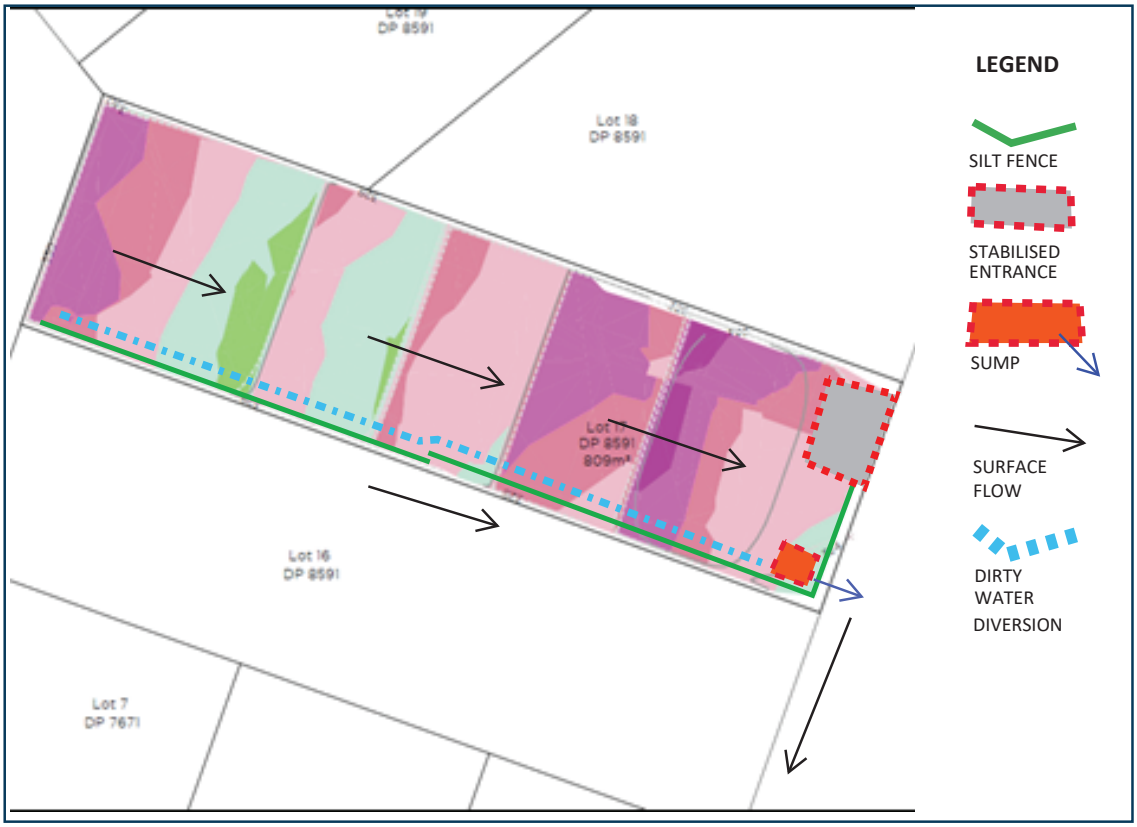
Erosion and Sediment Control Plan:

An example of this at the end of this appendix

This needs to demonstrate:

> overland flow paths
> locations of controls (sediments fences, catch drains, sumps, etc)
> stormwater outlet point

Draw ESCP Here



Dust Management

The site will have the following measures installed. These need to be considered when planning site set out:

- [x] Irrigators for soil dampening
- [x] Hand watering
- [ ] Longstanding stockpiles covered/stabilised
- [x] Stockpile heights minimised
- [x] Geotextiles device
- [ ] Soil binders
- [x] Progressive stabilisation

Ongoing management of dust:

- [x] Dust generating activities avoiding during windy weather (where possible)
- [x] Stabilise site when works untended for more than 5 calendar days

Further Comments/Other Measures:

During time of earthworks, hand watering of unstabilised soils will be essential during times of windy weather, soil to be kept damp during these events, and if necessary stop earthworks.
If possible, lay over geo-textile (and stake down), in areas where potential dust can be generated.

Noise and Vibration management

Ongoing management of noise and vibration:

- [x] Noisy activities to be undertaken between 0800hrs – 1700hrs Monday to Saturday inclusive
- [x] Letter drops to neighbours during any unusually loud or noisy activities outside of 0800 – 1700 Mon to Sat
- [ ] Noise dampening devices utilised and avoidance of loud slamming to be avoided where possible

Further Comments/Other Measures:

Advise neighbours of work activities min 24hrs in advance.

Cultural Heritage Management

Accidental Discovery Protocol

In the event that an archaeological site (defined as a place associated with pre-1900 human activity, regardless of cultural association) is discovered during construction, works onsite will cease immediately and the accidental discovery protocol attached to this document as Appendix 4 will be followed.

Further Comments/Other Measures:

As this site was recently shaped during subdivision, archaeological discoveries are highly unlikely, however, should artifacts be found, refer Appendix 4.

Chemicals and Fuels management

The main environmental concern for fuel and chemical management is avoiding spills entering a watercourse or groundwater.

Ongoing management of chemicals and fuels:

- ■ Containers closed and appropriately stored at all times when not in use
- ■ Spill kit onsite at all times and restocked immediately following any spills

Spill Response procedure:

Any spill is to be attended to immediately.
Contain the spill to avoid further contamination with bunding and spill kit devices.
Dispose of any contaminated soils to the appropriate waste reciprocal.
Report the spill in the sites EMP incident register, attend to any tasks to mitigate further spills if required.

Further Comments/Other Measures:

Waste management

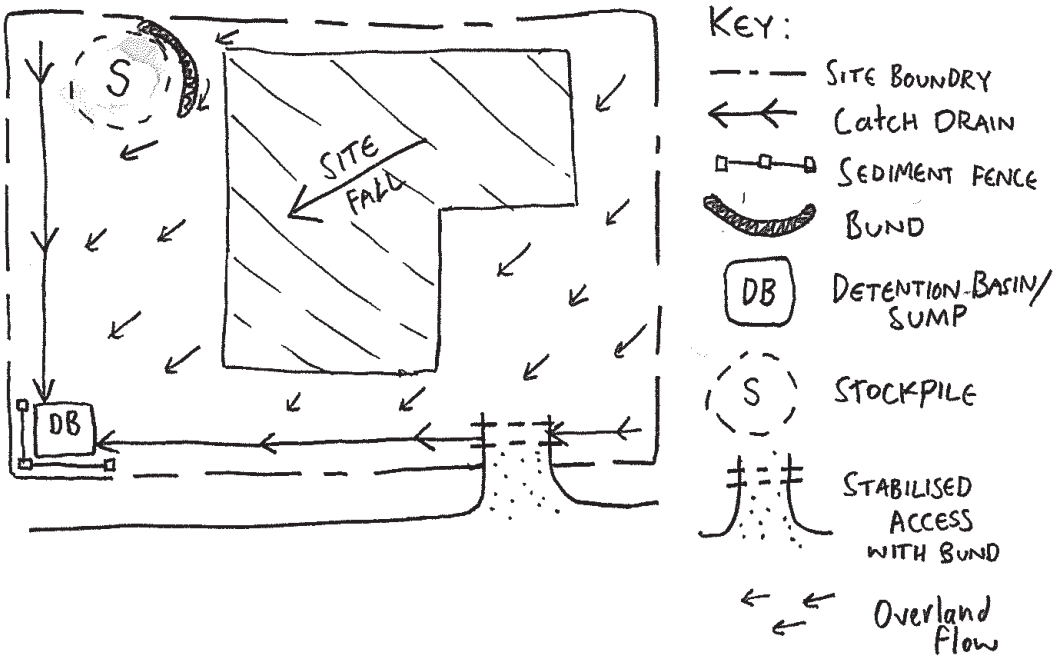
Ongoing management of waste:

- ■ Appropriately-sized bin located onsite with lid
- ■ Site cleaned free of rubbish at the end of each day
- ■ Waste regularly removed from site such that bins are not overflowing
- ■ Adopt the Waste Hierarchy

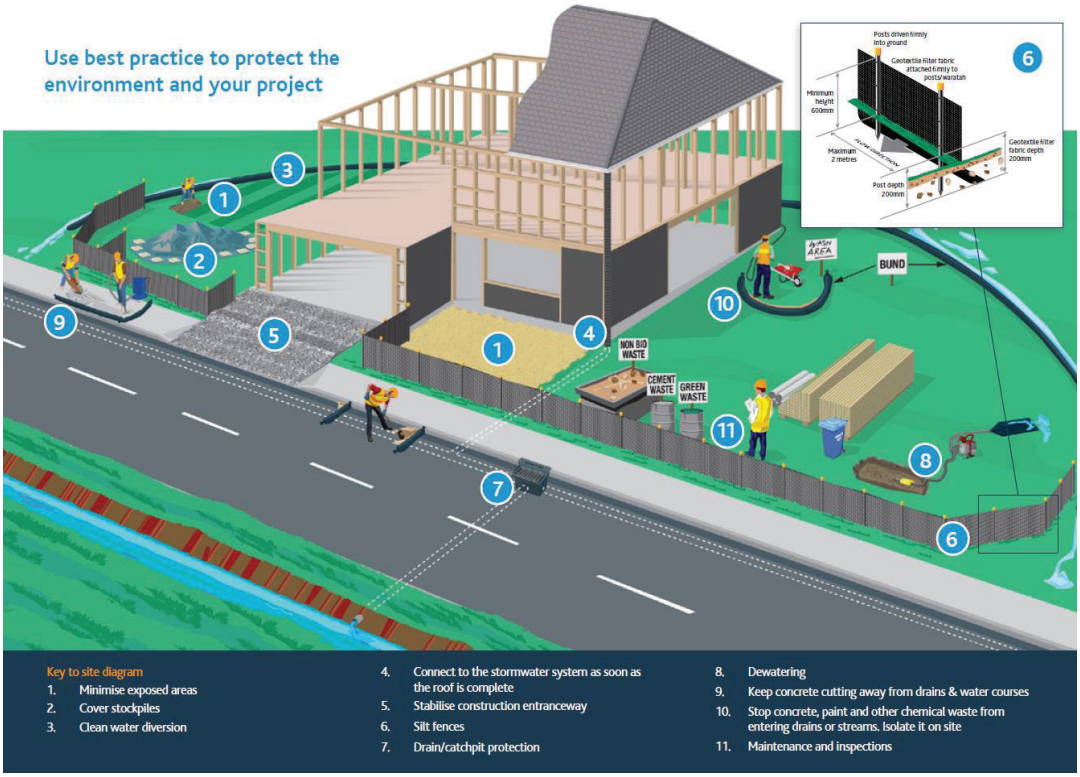
Further Comments/Other Measures:

Ensure covers over skips, lids on bins to avoid wind blown rubbish.

Example of an Erosion and Sediment Control Plan:



Example of Best Practice Construction Environmental Management:



APPENDIX 3: ENVIRONMENTAL INCIDENT REPORT FORM

Project Address:	**QLDC Consent Number (if applicable):** **RM**123456 **BC**123456
Brief Project Description:	

Instructions

Complete this form for all environmental incident that cause contaminants (including sediment) or environmental nuisance to leave the site. Please be succinct, stick to known facts and do not make assumptions.

Once completed submit to the Regulatory team at Queenstown Lakes District Council at RCMonitoring@qldc.govt.nz Call the Regulatory team immediately on 03 441 0499 for any serious or ongoing incidents that cannot be brought under control.

Incident details

Date and Time	Date: XX/XX/XX Time: XX:XX am ☐ pm ☐
Description Provide a brief and factual description of what happened during the incident, include relevant details such as: > The estimated distance to the nearest waterway (include storm water and dry courses) > The estimated distance to the nearest sensitive receiver > The activity being undertaken when the incident occurred Sketches/diagrams/photos may be reference and appended to this report to aid in the description of the incident.	
EXACT location of the incident Include address, landmarks, features, nearest cross street, etc. Maps and plans can be attached to the incident report if appropriate	
Quantity or volume of material escaped or causing incident (provide and estimate if quantity unknown	
Who identified the incident?	☐ Contractor ☐ Council ☐ Community ☐ Other

What immediate actions/control measures were taken to rectify or contain the incident?

What initial corrective action will be taken to prevent similar incidents recurring in the near future?

Has the Otago Regional Council been notified? ☐ Yes ☐ No

Approvals:

Environmental Representative/Person making report

Name…… Signature……..

Organisation…… Date……..

Mobile phone number……

Site Supervisor

Name…… Signature……..

Organisation…… Date……..

Mobile phone number……

HERITAGE NEW ZEALAND
POUHERE TAONGA

Heritage New Zealand Pouhere Taonga Archaeological Discovery Protocol

Under the Heritage New Zealand Pouhere Taonga Act (2014) an archaeological site is defined as any place in New Zealand that was associated with human activity that occurred before 1900 and provides or may provide, through investigation by archaeological methods, evidence relating to the history of New Zealand. For pre-contact Maori sites this evidence may be in the form of bones, shells, charcoal, stones etc. In later sites of European/Chinese origin, artefacts such as bottle glass, crockery etc. may be found, or evidence of old foundations, wells, drains or similar structures. Burials/koiwi tangata may be found from any historic period.

In the event that an unidentified archaeological site is located during works, the following applies;

1. Work shall cease immediately at that place and within 20m around the site.

2. The contractor must shut down all machinery, secure the area, and advise the Site Manager.

3. The Site Manager shall secure the site and notify the Heritage New Zealand Regional Archaeologist. Further assessment by an archaeologist may be required.

4 If the site is of Maori origin, the Site Manager shall notify the Heritage New Zealand Regional Archaeologist and the appropriate iwi groups or kaitiaki representative of the discovery and ensure site access to enable appropriate cultural procedures and tikanga to be undertaken, as long as all statutory requirements under legislation are met (*Heritage New Zealand Pouhere Taonga Act*, *Protected Objects Act*).

5. If human remains (koiwi tangata) are uncovered the Site Manager shall advise the Heritage New Zealand Regional Archaeologist, NZ Police and the appropriate iwi groups or kaitiaki representative and the above process under 4 shall apply. Remains are not to be moved until such time as iwi and Heritage New Zealand have responded.

6. Works affecting the archaeological site and any human remains (koiwi tangata) shall not resume until Heritage New Zealand gives written approval for work to continue. Further assessment by an archaeologist may be required.

7. Where iwi so request, any information recorded as the result of the find such as a description of location and content, is to be provided for their records.

8. Heritage New Zealand will determine if an archaeological authority under the *Heritage New Zealand Pouhere Taonga Act* 2014 is required for works to continue.

It is an offence under S87 of the *Heritage New Zealand Pouhere Taonga Act 2014* to modify or destroy an archaeological site without an authority from Heritage New Zealand irrespective of

whether the works are permitted or a consent has been issued under the Resource Management Act.

Heritage New Zealand Regional archaeologist contact details:

Dr Matthew Schmidt
Regional Archaeologist Otago/Southland
Heritage New Zealand
PO Box 5467
Dunedin
Ph. +64 3 470 2364, mobile 027 240 8715
Fax. +64 3 4773893
mschmidt@heritage.org.nz

Urban Design Review – 18 Fryer Street, Queenstown

Date	2 February 2024
Prepared By	Bruce Harland (MTP, MurbDes), Candor 3
Plan	Operative District Plan
Zoning	High Density Residential – Subzone B
Activity Status	Non _Complying
Applicants Urban Design Statement	Not provided. (Architects Statement supplied)

Background

Resource consent is sought to allow for the construction of eleven mixed-use (residential and/or visitor accommodation) attached units that will breach permitted bulk and location standards.

As part of considering this application the processing planner has requested an urban design assessment of the proposed residential/visitor accommodation units, with including particular consideration of :

- How the building interacts with the street, including effects on visual amenity, character, and CPTED (noting that the two high windows on the road façade do not have views over the public space).
- The location and design of parking in front of the building up to the road boundary.
- The proposed outdoor space for each of the units and shared outdoor space at the rear of the units, and pedestrian access along the southern boundary.
- The location and design of bin storage.
- Any other relevant urban design aspects of the proposal.

7.7 Assessment Matters Residential and Visitor Accommodation Zones and the New Zealand Urban Design Protocol

One of the key assessment matters is the NZ Urban Design Protocol and in particular the assessment matters that are identified in 7.78.2 xiii Urban Design Protocol. The NZ Urban Design Protocol identifies seven essential design qualities (the seven C's)that together create quality urban design. The following is my assessment against the specific matters identified in the PDP.

7.7.2 xiii (a) Context

ODP Provision	Comment
(i) The nature of the relationship with and integration into the surrounding streets and neighbourhood such that the development fits well within the existing urban fabric and makes a positive contribution to the residential amenity of public spaces, walkways and views;	The site is zoned High Density Residential and is in a neighborhood in transition with several new or consented developments happening in the immediate area, including the site immediately to the south. The proposed development is located within a 5-10 minute walk of central Queenstown and is well located in terms of access to wider amenities.
(ii) Presents itself as a "good neighbour" in terms of its relationship to adjacent and nearby properties in terms of access to sunlight and	

ODP Provision	Comment
views, readily accessible and safe temporary parking, stopping and loading/unloading areas that respect neighbouring properties, passing traffic and pedestrians; and *(iii) The avoidance of unsightly elements such as prominent carpark entrances, garish signs, cluttered rooftops (to include parking) and intrusive utility connections, stormwater facilities and trashbin placements that diminish public amenity.*	The development proposes one very wide vehicle crossing of 11.1m wide (at the front boundary), which is well in excess of the 3 to 6m permissible length for residential activities (and between 4m and 9m for no residential activities). It is acknowledged that the Transport rules 14.2.4.2 under 'other activities' provide for a wider minimum and maximum vehicle crossing than for residential, but in the context of applying discretion to this non complying activity it is not dissimilar to residential activity for all intents and purposes. The only vehicles using these carparks will be light vehicles and there is no need for a wide crossing to accommodate ingress / egress of larger vehicles (eg buses trucks). This wide crossing combined with the proposed parking, bin storage and entry path results in almost the entire area forward of proposed development being hard landscaping with a detrimental impact on pedestrian safety and overall amenity of the street. The design layout does not enable any screen planting of the carparks proposed and limited opportunity to screen the bin storage area. The applicant has chosen to provide few carparks for the development (with minimum carparking standards now removed from the district plan), but this results in squeezing the four carparks across most of the frontage of the site with a loss of landscape amenity, pedestrian safety and general street amenity including a loss of on-street carparking. The proposed development does not present itself as a good neighbour in terms of passing pedestrians and general vehicle movements along Fryer Street. The common bin storage area is located adjacent to the front entrance path and is screened by 1.8m fencing and combined with the letterboxes does create an identifiable although underwhelming pedestrian entrance to the development.

ODP Provision	Comment
	The low level landscaping in front of the bin storage area is weak and would benefit by a reconfiguration of the bins and front yard carparking to enable appropriate specimen tree planting to help with identifying the front pedestrian entrance and improve overall street/public amenity. Setting the bins back from the being hard against the pedestrian access would also be beneficial

7.7.2 xiii (b) Character

ODP Provision	Comment
(i) The use of materials and other architectural elements that do not clash with adjacent and nearby buildings and that contribute positively to the wider street scene;	The proposed materials and colour schemes are reflective of a local vernacular which combined with the 'timber look horizontal cladding' will not be out of keeping with the zone. The landscape treatment in front of the proposed development does not soften the end of the building and carparking that dominates the front of the site, which overall contributes to a poor street level experience. There is also no informal surveillance of the street from the front dwelling (unit 1) This is discussed further under 'custodianship' The varying roof lines and façade design provides visual interest and avoids a commercial appearance although there are concerns about the extensive continuous length of the building that dominates the site. (discussed further under Creativity)
(ii) The uses of architectural elements that reflect the unique history and cultural values of the surrounding area;	
(iii) Attention to human scale in façade design, fenestration details and street level experience, to include entries, gardens and hardscape elements;	
(iv) Varying rooflines and/or roof pitches to provide architectural interest and avoid a commercial appearance; and	
(v) Landscaping that softens the building impact on the streetfront and provides amenity for passersby.	

ODP 7.7.2 xiii (c) Choice

ODP Provision	Comment
(i) Adaptable designs that provide a mixture of unit sizes and numbers of bedrooms to create flexibility in terms of future reuses over the longer term so as to ensure a sustainable community.	The proposed development proposes 11 almost identical 2 bedroom residential and/or visitor accommodation units. There is flexibility as to how these units may be used (visitor accommodation or residential) and in the wider context of the central Queenstown area the lack of choice within this development is not considered an issue.

ODP 7.7.2 xiii (d) Connections

ODP Provision	Comment
(i) Ready access to public transportation, footpaths and tracks, cycle ways and other means of transportation that do not require private vehicles;	The site is located within 800m of the centre of Queenstown (Earnslaw Park) and is an easy walk flat walk. This includes access to the Stanley Street bus stops providing access to the wider Wakatipu Basin.
(ii) Efficient and considerate of public amenity means of delivering goods and collecting waste;	The site is centrally located with easy access to wider Queenstown area services including waste.
(iii) Utility and safety of public parking, drop-off and stopping areas;	The proposed 4 carparks requiring one large vehicle crossing that dominates the front of the site creates serious concerns for overall streetscape amenity, pedestrian safety and loss of general street parking. Given the lack of carparking, most people will access the site as pedestrians.
(iv) Supporting and enhancing public views and access to the surrounding built and natural environment;	The proposed development does not compromise any public views or access to the surrounding built and natural environment
(v) Facilitating contact among people both within the site and within the surrounding neighbourhood area; and	The proposed shared pathway to the 11 units will create opportunities for informal contact of people within the site. Relatively high levels of pedestrian activity generated from the site will also facilitate opportunities for contact within the wider neighbourhood.
(vi) Providing lively and safe public spaces and places.	The street is an important public place as it contains an important connection to the wider urban system and it has an important role to play in shaping the collective experience of a place. The proposed development makes a very poor contribution to the public street, with no functional windows providing opportunities for informal surveillance of the street and the wide vehicle crossing (with 4 carparks) compromising pedestrian safety and landscape amenity opportunities.

ODP 7.7.2 xiii (e) Creativity

ODP Provision	Comment
i) Artistic vision that enhances neighbourhood amenity values while not competing for individual attention;	The overall landscape and built form relationship of the building with the street results in a poor urban design outcome that compromises pedestrian safety and general streetscape amenity. Although the building itself has some articulation and breaking up of the built form through angled roof lines and stepping of the
(ii) Articulated façades that utilise architectural elements to create an overall composition that enriches the eye in terms of scale, rhythm and detailing of the building while avoiding inappropriate or unattractive repetitive façades,	

ODP Provision	Comment
"cookie cutter" design solutions and flat, blank or uninteresting walls; and	façade, the repetitive nature of the development covering a long building form of circa 45m (considerably longer than the 30m maximum in Rule 7.5.5.2vii) results in a cookie cutter design that dominates the site and creates a sense of higher apparent density from adjoining properties and the public realm. The dominant nature of the continuous building footprint contributes to a sense of being 'closed in' notwithstanding there are no direct windows looking south into the adjoining living spaces of development at 14 Fryer Steet.
(iii) Attractive use of landscaping materials to enhance building appearance and use.	

ODP 7.7.2 xiii (f) Custodianship

ODP Provision	Comment
(i) Environmentally sustainable and responsive design solutions that include attention to energy efficiency, waste disposal, transportation access, sunlight, and outdoor spaces;	The proposed development is orientated to provide good solar access to the units and outdoor living areas on the north side of the site, while also providing reasonable levels of sunlight to adjoining developments by generally meeting the height and bulk and location standards. The size of the outdoor living areas although not meeting the minimum 20m^2 standard, do provide for a quality north facing outdoor living area with direct access from the open plan living floor. The outdoor living areas are considered adequate for visitor accommodation or residential use of the units. The development is well located in terms of walkable urbanism with a wide range of activities including a supermarket and public transport options available within a 10 minute walk. The proposed development has a poor relationship with the public realm in that it has no 'informal surveillance' or overlooking of the street from the front unit and therefore does not meet a basic tenant of good urban design and CPTED (Crime Prevention though environmental design). This could be rectified by adding additional windows that allow informal overlooking of the street from the front unit. One option for additional windows is suggested below (circles red) but this is only one suggestion as to how informal surveillance of the street may be achieved.
(ii) Enjoyable, safe public spaces; and	
(iii) A quality environment that infuses a sense of ownership and responsibility in residents and visitors such that they care for and protect the places and spaces.	

ODP Provision	Comment
	

ODP 7.7.2 xiii (g) Collaboration

ODP Provision	Comment
(i) Where appropriate, use of a multi-disciplinary design approach involving architects, landscape architects and urban planners early in the design process, to include reference to current and planned public projects, if relevant; and	The proposed AEE has acknowledged the proposed developments in the vicinity. It is not clear what involvement (if any) there has been with neighbours in developing the design.
(ii) Where appropriate, involvement of neighbours and public in decision making process that may have a substantial impact on their amenity values.	

Objectives and Policies

A detailed identification of the assessment of the objectives and policies has been included in the AEE application and part of the Urban Design Report submitted with the application.

Overall, it is considered that the location is an appropriate location for high density residential development and visitor accommodation having regard to the Strategic Direction contained in Operative District Plan, and the zoning of the land which anticipates such activities. Although the proposal meets many of the high level strategic objectives and policies - being in a location suitable for high density and in walking proximity to central Queenstown there are a number of objectives and policies which are not met when it comes to site specific responses. These are discussed below:

7.1.2 District Wide Residential Objectives and Policies

Objective 3 Residential Amenity

Pleasant living environments within which adverse effects are minimised while still providing the opportunity for community needs.

ODP Provision	Comment
Policy 3.1: To protect and enhance the cohesion of residential activity and the sense of community and well being obtained from residential neighbours.	Although broken up by roof forms and façade detailing, the proposed building is very long and repetitive (being 45m long) that contributes to a feeling of being 'closed in'. The proposed building and layout, does generally provide for acceptable outdoor living arrangements for the units, although the planting opportunities in the front yard area is minimal due to the spatial layout of the site. The relationship of the proposed development with the street is poor due to no informal surveillance of the street and the domination of carparking and hard landscaping in the front yard. On balance it is considered that the proposal does not satisfy the principles of good urban design and Objective 3.
Policy 3.6: To ensure a balance between building activity and open space on sites to provide for outdoor living and planting	
Policy 3.13 To require an urban design review to ensure that new developments satisfy the principles of good design	

7.1.3 High Density Residential Zones – District Wide

Objective 1 – Amenity Values

Sustainable residential communities and neighbourhoods that have high amenity values of a quality and character anticipated in a high-density living environment.

ODP Provision	Comment
Policy 1.1 To ensure development enables high density living and achieves the character and amenity values anticipated in a high density living zone by:	

Policy 1.1.1 Improving the aesthetic appeal of the built environment *Policy 1.1.5 Ensuring development is of a high architectural quality in accordance with good urban design principles.* *Policy 1.1.6 Ensuring that open space is maintained between buildings on sites, and between neighbouring sites* *1.1.7 Encouraging the provision of underground car parking.*	The long repetitive continuous building form results in a poor integration with the wider neighbourhood and nearby properties, and contributes to higher apparent densities and a sense of the development 'closing in' on itself and neighbouring properties. The proposed development does not relate well to the street with no informal surveillance from Unit 1 and the frontage dominated by carparking across most of the site with little opportunity for landscaping. These shortcomings do not accord with good urban design principles.
Policy 1.2 To avoid visually dominant buildings that overshadow public places, block views and degrade the built environment	Although the development does not overshadow public places it is considered to negatively impact on the built environment as discussed in Policy 1.1 above
Policy 1.3 To enhance the attractiveness of the zone, including the streetscape, by:	
Policy 1.3.1 Ensuring landscaped areas are provided in scale and proportion to the size of the building.	The front yard area is dominated by carparking and poor landscaping which detracts from the attractiveness of the streetscape.
Policy 1.3.3 Ensuring the effects of developments are internalised to the site and do not detract from the amenities of neighbouring sites and roads.	The long continuous repetitive building length and spatial layout of the site results in a significant undermining of amenities of neighbouring properties and the streetscape amenities including through carparks and hard landscaping dominating the frontage.

Objective 2 – Multi-Unit Developments

Multi-unit developments that are designed to a high standard, integrate well with their neighbourhood and streetscape, are located where they are supported by physical and social infrastructure, and any adverse effects on amenity values are avoided or mitigated where possible.

ODP Provision	Comment
Policy 2.3 To ensure multi-unit developments are designed to achieve all of the following:	
Policy 2.3.4 Incorporate suitable crime prevention through environmental design techniques in their layout and methods of access	The proposed development results in a poor relationship with the street with the front façade of the development providing no overlooking of the street. This could be rectified with the addition of further windows to the ground floor (living floor) of the front façade.
Policy 2.4 To ensure multi-unit developments are located on sites that:	
Policy 2.4.1 Enable units to face or relate well to public streets.	See comment above regarding lack of overlooking the street.

ODP Provision	Comment
	In addition, the front yard is dominated by carparking and hard landscaping, with no screen planting of the carparks which leads to a poor relationship with the street.
Policy 2,4,2 Relate to nearby properties and public areas in ways that facilitate the integration of the development into the neighbourhood.	The long repetitive continuous building form results in a poor integration with the wider neighbourhood and nearby properties, and contributes to higher apparent densities and a sense of the development 'closing in' itself and neighbouring properties. The domination of the carparking across most of the frontage is not considered to facilitate the integration of the development into the neighbourhood and leads to an overall loss of amenity including on street carparking and pedestrian safety.

Conclusion

This urban design review has been considered against the objectives and policies of the Operative District Plan and urban design principles that are captured through the assessment criteria of the Operative District Plan which includes reference in Rule 7.7.2 to the New Zealand Urban Design Protocol.

The proposed development proposes 11 units on a relatively narrow 15.2m by 55m, 809m^2 site and is close to or exceeds many of the maximum development standards for the zone including height limit for a part of the development and the 30m continuous building length true elevation which is exceed by 15m. The applicant has chosen to provide only 4 carparks on the site and configured the site in such a way that the carparks are provided at the front of the site directly perpendicular off the road with a wide 11.1m vehicle crossing at the boundary that necessitates reverse maneuvering across the footpath. This not only creates an unsafe environment for pedestrians, it also undermines the ability to provide meaningful landscaping and screen planting in the front yard to the detriment of the overall quality of the street and neighbourhood amenity.

The front yard area is dominated by carparking and almost no soft landscaping which combined with the lack of any street surveillance from the front unit creates a poor outcome that is not in keeping with sound urban design principles. Adding more windows to the living floor of Unit 1 could rectify overlooking of the street and CPTED issues but does not change the fundamental concerns over the configuration of parking, access and lack of landscaping and the negative effect of these on the amenity of the street and the public realm generally.

The repetitive nature of the development covering a long building form of circa 45m (considerably longer than the 30m maximum in Rule 7.5.5.2vii(b)) results in a cookie cutter design that dominates the site and creates a sense of higher apparent density from adjoining properties and the public realm. The dominant nature of the continuous building footprint contributes to a sense of being 'closed in' by the development for users of the site and neighbouring properties.

On balance the proposal as currently proposed is not supportable from an urban design perspective.

A number of changes would be required as outlined in the recommendations below.

Recommendations

1. That the building mass be broken up by breaking the development into two distinctive buildings through the removal of one unit (either unit 5, 6, 7 or 8). A darker colour hue should be applied to one of the two buildings.
2. In the current form with reverse maneuvering directly onto the street the number of carparks be reduced to two spaces (1 being disabled), in order to fit an appropriate vehicle crossing at the boundary and to provide opportunity for enhanced landscaping at the front of the development.
3. That an updated landscape plan be provided for the front yard area, including specimen trees and to provide better landscape screening around a reconfigured bin storage area.
4. Subject to appropriate tree species (having regard to overhead powerlines), consider a specimen tree within the front berm
5. That the front façade of dwelling 1 be updated to include windows that provide informal surveillance opportunities over the street and any carparks in the front yard area.

Memorandum

Date: 21.08.2024	Job No: 1775
	No of Pages: 2 plus attachment
To: Georgie Hadfield, QLDC	
From: Bruce Harland	

Re: RM230992 - B Li & D Han - Urban Design Assessment 18 Fryer Street, Queenstown

This memo is a follow up to my original Urban Design Assessment dated 2 February 2024, which raised a number of concerns including:

- The lack of informal surveillance opportunities from the front unit over Fryer Street.
- Domination of carparking across the frontage of the site with consequential loss of overall amenity.
- No opportunity for substantial landscaping and specimen tree planting in the front yard area including further screening of the landscape bin storage area.
- The overall long and repetitive massing of the building

At an online meeting on 7 August 2024 with Georgie Hadfield (QLDC), the applicant's planner and architect a number of proposals were discussed to improve the overall development from an urban design perspective. My revised comments relate to the amended plan set provided by the architect on 21 August 2024, which are attached to this memo.

Starting with the front yard area of the development a number of improvements have been made to address the concerns raised. In particular this includes reducing the number of carparks to 3 spaces (1 accessible) which provides an opportunity for a large planter area on the northern boundary, which includes the planting of 3 specimen trees. This reduces the overall length of the vehicle crossing to 7.5m and combined with the additional windows on the front unit, along with improvements to the landscaping will result in a substantially improved presentation to the street and overall neighbourhood amenity.

Informal surveillance of the street has been enabled by the introduction of additional windows on the front façade including having a window sill height of 1.4m above the floor level which will enable opportunities to look over the street while also maintaining a degree of privacy for occupants.

The reconfigured bin storage area will enable access from the accessible carpark while also creating the opportunity to plant in front of the screen wall with a creeper which, combined with the southern landscape and letterbox fencing creates a clear pedestrian entrance to the development.

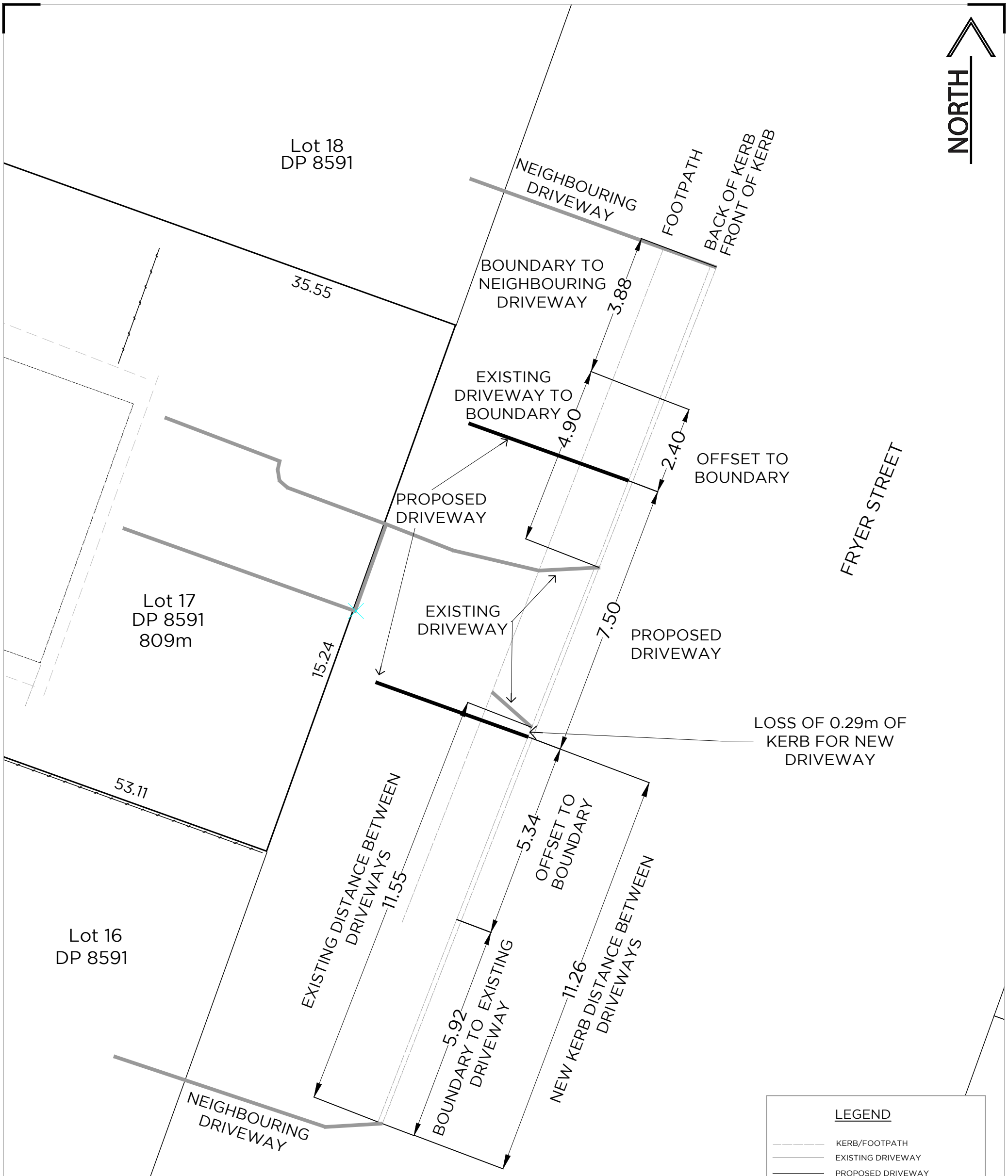
Memorandum

In terms of breaking up the building length and massing, a number of changes are proposed including; an updated colour scheme that creates an alternating paring of units between light and dark colours (except for the front unit which is not paired due to the odd number of units) and the reduction in size of Unit 6 which creates opportunity for additional landscaping and further variation to the articulation of the building mass.

The changes to Unit 6 relate to the southern elevation, which is both the side of pedestrian access to the whole development but is also the elevation that the recently built units at 14 Frayer Street look directly towards. The proposed break to the repetition of the building length along with the proposed landscaping will improve the overall appearance of the development and also improves the pedestrian amenity to the site and helps to break up the overall massing of the development.

On balance, as a result of the proposed changes, I am now in a position to support the proposal from an Urban Design perspective.

Bruce Harland (BTP, MurbDes)



REV.	DATE	REVISION DETAILS	BY

SURVEYED	SIGNED	DATE	JOB NO.	DRAWING NO.
MF	CW	13.03.24	23140	05.01
DRAWN	**CHECKED**	**DATE**	**SCALE**	
MF	CW	14.03.24	1:100m @ A3	
DATUM & LEVEL				**REV.**
MT NIC 2000 - NZVD16				-

ISSUED FOR REVIEW - 14.03.24

JEA
TOWN PLANNERS & SURVEYORS
Level 2, 36 Shotover Street
PO Box 95, Queenstown, 9300

CLIENT
HANN, SKY

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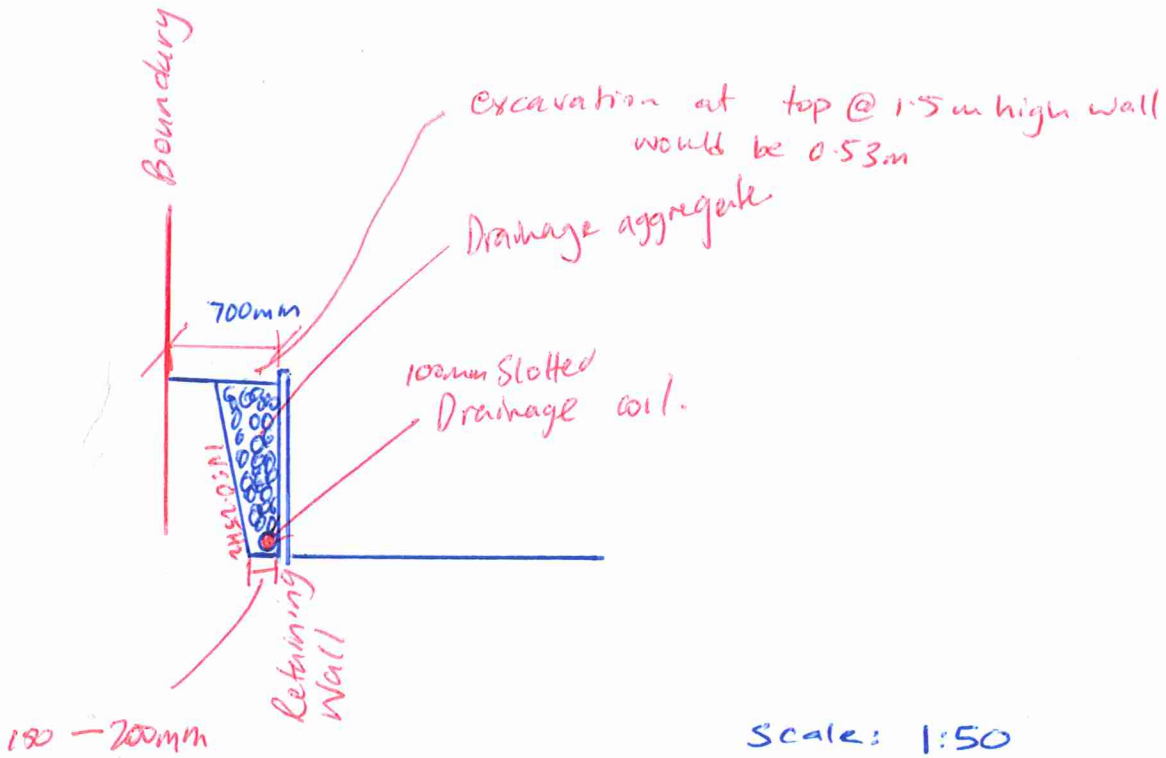
PROPOSED DRIVEWAY
18 FRYER STREET, QUEENSTOWN
LOT 17 DP 8591

C:\Users\Mecaela JEA\JEA\JEA - Shared Documents\Clients\2023\23140 - 18 Fryer Street\Survey\CAD\23140.05.01 - Driveway Plan.dwg

JE&A TOWN PLANNERS & SURVEYORS



DATE:	14/3/24
TITLE:	18 Fryer St - Example retaining cut.
BY:	Craig Woodcock.

From: "Georgie Hadfield"
Sent: Mon, 22 Jan 2024 16:01:49 +1300
To: "James.Aoake" <james.aoake@jea.co.nz>
Subject: RM230992 - B Li & D Han - s92(1) Request for further information

Kia ora James,

Hope you enjoyed your weekend. I've just received the RFIs back from our engineer, so have compiled all RFIs here for you - happy to discuss any questions on the phone.

Re: RM230992 – B Li & D Han - s92(1) request for further information

This email is a request under s92(1) of the Resource Management Act 1991 (RMA) for further information to assist Council in processing your application and understanding of the actual or potential adverse effects of your proposal. Please see the below which sets our why the request is being made, and process should you refuse to provide information or not respond to this request.

Requested Information

The following additional information about your application is requested for the reasons set out below:

Engineering

Transport:

1. ODP 12.2.4.2(a) requires the maximum width of vehicles crossings at the property boundary is 6.0m for residential activities or 9.0m for other. Within the AEE it states: "*As the proposal seeks to allow for a land use except for residential (being VA) so the maximum length of a crossing is 9m*." I do not agree with the assumption that the vehicle crossing should be considered as 'other'. It is intended to be used for Visitor Accommodation and the crossing should be designed for residential use. Non-residential vehicle crossings are wider to cater for larger vehicles.
   I do not support the proposed wider vehicle crossing of 11.1m.
   The site frontage onto Fryer Street is 15.2m and therefore the vehicle crossing will take up a significant portion of this frontage, the wider crossing with result in a larger area of the footpath being having vehicles cross it and it with result in a reduction in on street parking spaces.
   Additionally the vehicle crossing design does not include the 1m splay and the vehicles crossing is not offset by 500mm from the boundary, as per the requirements of the CoP.
   Can the applicant please address these concerns and provide an alternative configuration?

Subdivision:

2. Confirm whether this is a unit title subdivision. Scheme plans appears to be for fee simple whilst AEE says unit title. Please update the application accordingly.
3. I have concerns regarding the shared pedestrian access to the lots. What measures are proposed to ensure that clear access and no obstructions are will prevent residents and emergency services from accessing the lots at the rear?

Services:

4. Under the ODP zoning the minimum lot size is 450m^2 and the applicants lot size is 809m^2. Therefore under the district plan only 1 residential lot is permitted. Within the infrastructure report it says that as it is zoned high density it is assumed that there is adequate capacity within the water and wastewater network. I disagree with this, as due to the permitted density, previous infrastructure capacity assessments will not have assumed capacity for 11 units. Please provide confirmation from Councils P&I department that there is sufficient capacity in the wastewater and water reticulation to services these developments.
5. The applicant proposes to extend Council's reticulated stormwater and make a new connection. Please provide written confirmation from P&I that they are in support of this configuration?
6. Please provide information from a suitably qualified person that clearly shows the pre-development and post development flows for the 20% AEP event as per QLDC CoP. Within the application attenuation is proposed, demonstrate there is sufficient space on site for the required attenuation calculated, taking into consideration the required offset from building foundations and boundaries.

Bin Storage / Refuse Collection:

7. The applicant is advised that Council refuse collection will not service VA for 365 days, therefore private collection will be required. The plans provided show 9 bins to service 11 units, with 3 of the bins blocked behind other bins, I do not think this is adequate for the management of waste from the 11 lots. Can the applicant provide further details regarding the bin storage and solid waste collection, including but not limited to:
    a. How many times a week collection is anticipated (i.e. number of heavy vehicle movements) for general waste, mixed recycling and glass recycling collection?
    b. Demonstrate that there is suitable space along the road frontage to allow for the kerb side collection for bins.

    For information, useful guidance can be found on waste management for MUD here: Waste requirements for business - Before you apply - Wellington City Council (note, it says that all bins shall be easily accessed (i.e. not placed behind another), passageways/doors should be at least 1.5m wide to allow for manoeuvring of bins.

Earthworks:

8. Please confirm whether retaining is only proposed along the western boundary?

9. Please provide cross sections of the proposed retaining and earthworks along all boundaries that will have retaining. Within these cross sections, please include:
    a. The existing wall along the western boundary with 10 Huff St
    b. The permanent infrastructure (including the required drainage), and offsets from the boundary
    c. The temporary earthworks, showing the required cut required during the construction of the retaining wall (with the cut being in accordance with the Geotago Report), and offsets from the boundary.

Planning

Earthworks:

10. Please provide the distance that the earthworks are set back from the site boundaries. Please update the earthworks plan to demonstrate these dimensions.
11. Please confirm whether the site is a sloping site or not. The abovementioned cross-sections should be sufficient at answering this question if clear dimensions are included.

Transport:

12. Currently it is proposed to provide four car parking spaces (including one mobility parking space), and these will not be assigned to any particular unit. This means when guests book the accommodation, they may not be aware that there is no onsite parking. Please provide additional information that details how guests will be made aware of the parking situation before booking, such as whether they will be informed prior to their stay, or whether the parking spaces will be assigned to a particular unit. Additional information may be included within the VAMP.
13. Currently the mobility car park is not assigned to a specific unit. It is generally preferred that the car park is assigned to one unit so that when guests book one of the units they know whether they have access to a mobility park or not (and ensures the mobility park is not double booked). Please update your VAMP to include which unit the mobility park will be assigned to.

Other:

14. The AEE states: "the proposal seeks to allow for a land use except for residential (being VA)". However elsewhere in the AEE it is stated that the application allows for residential development. Please confirm whether residential activity is also being applied for.
15. Please confirm the level of transparency of the fencing surrounding the outdoor storage area. Provide a percentage and/or detailed plans. If the fencing is opaque, please provide the height of the fencing.
16. The VAMP states that signage will be placed on doors leading to the outside patio area stating: "Outdoor area, is STRICTLY not to be used between 10pm and 7am daily". The VAMP also states that there shall be no outdoor speaker systems in use at any time. Please confirm whether the signage will be updated to include that speakers/amplified music is not permitted in the outdoor area.
17. The ODP requires a minimum of 30% landscape coverage, and at least half of this landscaped area must consist of permeable surfaces and is to be planted. This rule has been triggered with the AEE stating that the landscape coverage is 29.3% of the site. Please confirm what percentage of this is permeable surfaces/planting.

Responding to this request

This letter represents the formal request under Section 92(1) and sets out the reasons for the Council requesting the information in accordance with section 92(3)(a) of the RMA.

*You are required to respond to this request in writing within **15 working days** from the date of this letter, which is **13 February 2024,** to advise the consent authority that you either agree or refuse to provide the information requested, or to seek an alternative timeframe to provide the information in accordance with RMA section 92A(2)(a).*

If you are seeking an alternative timeframe to provide the information, this new timeframe must be agreed in writing with Council.

In accordance with RMA section 88C(2), the consent authority will exclude all time from the consent process working days starting from the date of this request, and ending when – satisfactory information is received on or before either the statutory 15 working day date (above), or other agreed dated; or if no information is received the agreed date; or the date Council receives confirmation the applicant refuses to provide the information (in accordance with s88C(2)(b)).

In accordance with section 92A(3) of the RMA, if the applicant refuses to provide, or does not provide the information in the agreed timeframe, or does not respond to this request, the Council must advance processing the application without the benefit of the requested information, and must publicly notify the application in accordance with section 95C of the RMA.

Kind regards,

Georgie Hadfield | Planner | Planning & Development
Queenstown Lakes District Council
DD: +64 3 450 2386 | P: +64 3 441 0499
E: Georgie.Hadfield@qldc.govt.nz

QUEENSTOWN LAKES DISTRICT COUNCIL

From: "Craig Woodcock" <craig.woodcock@jea.co.nz>
Sent: Thu, 14 Mar 2024 10:03:24 +1300
To: "Catriona Lamont" <Catriona.Lamont@qldc.govt.nz>
Cc: "Georgie Hadfield" <georgie.hadfield@qldc.govt.nz>
Subject: FW: RM230992 - B Li & D Han - s92(1) Request for further information
Attachments: 20240314101257297.pdf

Hi Catriona,

Can we please get you to go to P&I, we don't have much luck when trying to get anything out of them.

The soakage table was a snip from the consented neighbouring development which was consented to have soakage to ground. As ground conditions are consistent within our site this soakage table can be utilised for our development.

I have sketched up how a retaining wall would be excavated. This shows earthworks will be contained within the site.

Kind Regards

Craig

JEA TOWN PLANNERS & SURVEYORS

CRAIG WOODCOCK
B. Surv, MNZIS
licensed cadastral surveyor - principal
021 982 563 | 03 409 0009
craig@jea.co.nz | **www.jea.co.nz**
Level 2, 36 Shotover Street, PO Box 95, Queenstown 9300

From: Georgie Hadfield <georgie.hadfield@qldc.govt.nz>
Sent: Thursday, March 7, 2024 10:17 AM
To: Craig Woodcock <craig.woodcock@jea.co.nz>
Cc: James.Aoake <james.aoake@jea.co.nz>
Subject: RE: RM230992 - B Li & D Han - s92(1) Request for further information

Hi Craig and James,

Catriona has provided the following further comments in response to your email below.

4 – As mentioned in the infrastructure report the site is zoned high density. Under the zoning there is no min size therefore zoning should allow for what is proposed. If this is not possible you are then suggesting the land is zoned incorrectly.

As per my original RFI, please provide confirmation from Councils P&I department that there is sufficient capacity in the wastewater and water reticulation to services these developments.
Additional planning comment from Georgie: Acknowledge that there are no density requirements for residential units per 450m2 site. However, the application is proposing 11 units and at this scale, it is relevant that engineering takes into consideration the existing capacity of the network as this scale of development may impact its efficiency. I support this information requirement.

6 – Pre and post development SW flows are required to be the same, soakage will be required with excess water conveyed to the QLDC system. Given the below calculation allows for an area of 809m2 which requires a soakage volume of 8m3 with rocks, there is the appropriate location under the proposed carparks which is far enough away from the proposed dwelling.
A soakpit volume of $8m^3$ based on an impervious area of $809m^2$ and a soakage rate of 60 mm/hr does not seem sufficient. Can the applicant provide details of the formulas used in the screenshot, specifically how the Run Off From Catchment was obtained?

I am assuming based on this RFI response it will be a communal soak pit. Therefore, as an fyi, before I can issue my report I will need to know if it will be ownership/required easements etc.

8 – Cut to boundary breach applied for in the AEE.
9 – This seems to be a detailed design requirement.
Typical cut would be 5-800mm behind the wall to allow for drainage aggregate. Wall would be designed by a structural engineer which would be specific to the wall.
In the plans provided in the retaining wall appears to be offset from the boundary by 0.4m (taken from scaled measurements as no dimensions have been provided by the applicant as previously requested). If the typical cut is to be up to 800mm behind the wall to allow for drainage aggregate, as written above, how can these earthworks be undertaken wholly within the applicants site? Please provide cross sections showing how this is feasible?

Thanks,

Georgie Hadfield | Planner | Planning & Development
Queenstown Lakes District Council
DD: +64 3 450 2386 | P: +64 3 441 0499
E: Georgie.Hadfield@qldc.govt.nz

QUEENSTOWN LAKES DISTRICT COUNCIL

From: Craig Woodcock <craig.woodcock@jea.co.nz>
Sent: Wednesday, February 28, 2024 1:53 PM
To: Catriona Lamont <Catriona.Lamont@qldc.govt.nz>
Cc: Georgie Hadfield <georgie.hadfield@qldc.govt.nz>
Subject: RE: RM230992 - B Li & D Han - s92(1) Request for further information

Hi Catriona,

In response to your below;

4 – As mentioned in the infrastructure report the site is zoned high density. Under the zoning there is no min size therefore zoning should allow for what is proposed. If this is not possible you are then suggesting the land is zoned incorrectly.

6 – Pre and post development SW flows are required to be the same, soakage will be required with excess water conveyed to the QLDC system. Given the below calculations allows for an area of 809m2 which requires a soakage volume of 8m3 with rocks, there is the appropriate location under the proposed carparks which is far enough away from the proposed dwelling.

8 – Cut to boundary breach applied for in the AEE.

9 – This seems to be a detailed design requirement.
Typical cut would be 5-800mm behind the wall to allow for drainage aggregate. Wall would be designed by a structural engineer which would be specific to the wall.

Kind Regards

Craig

JEA TOWN PLANNERS & SURVEYORS

CRAIG WOODCOCK
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licensed cadastral surveyor - principal
021 982 563 | 03 409 0009
craig@jea.co.nz | **www.jea.co.nz**
Level 2, 36 Shotover Street, PO Box 95, Queenstown 9300

From: Catriona Lamont <Catriona.Lamont@qldc.govt.nz>
Sent: Monday, February 5, 2024 2:03 PM
To: Craig Woodcock <craig.woodcock@jea.co.nz>
Cc: Georgie Hadfield <georgie.hadfield@qldc.govt.nz>
Subject: RE: RM230992 - B Li & D Han - s92(1) Request for further information

Hi Craig,

Please see my comments below in green. Let me know if you need any further details on any of the points.

Thanks,

Catriona Lamont | Senior Land Development Engineer

DD: +64 3450 1742

From: Craig Woodcock <craig.woodcock@jea.co.nz>
Sent: Thursday, February 1, 2024 3:34 PM
To: Catriona Lamont <Catriona.Lamont@qldc.govt.nz>
Cc: Georgie Hadfield <georgie.hadfield@qldc.govt.nz>
Subject: FW: RM230992 - B Li & D Han - s92(1) Request for further information

Hi Catriona,

See my response in red below

Transport:

1. ODP 12.2.4.2(a) requires the maximum width of vehicles crossings at the property boundary is 6.0m for residential activities or 9.0m for other. Within the AEE it states: "*As the proposal seeks to allow for a land use except for residential (being VA) so the maximum length of a crossing is 9m*." I do not agree with the assumption that the vehicle crossing should be considered as 'other'. It is intended to be used for Visitor Accommodation and the crossing should be designed for residential use. Non-residential vehicle crossings are wider to cater for larger vehicles.

   I do not support the proposed wider vehicle crossing of 11.1m.

   The site frontage onto Fryer Street is 15.2m and therefore the vehicle crossing will take up a significant portion of this frontage, the wider crossing with result in a larger area of the footpath being having vehicles cross it and it with result in a reduction in on street parking spaces.

   Additionally the vehicle crossing design does not include the 1m splay and the vehicles crossing is not offset by 500mm from the boundary, as per the requirements of the CoP.

   Can the applicant please address these concerns and provide an alternative configuration?

Consistent with neighboring consented development to the north being RM190626 – this shows 2 – 3 bay perpendicular parks fronting Fryer Street. A 0.5-1.0m vegetation strip separates these, crossing width would be continuous(6 x 2.6m min = 15.6m).

This response does not address my RFI.
The example consent is from 5 years ago, it was varied by RM230263 which has a maximum width of vehicle crossing of 6m, additionally this site has a far longer frontage with the road reserve than the subject site.

Services:

4. Under the ODP zoning the minimum lot size is 450m^2 and the applicants lot size is 809m^2. Therefore under the district plan only 1 residential lot is permitted. Within the infrastructure report it says that as it is zoned high density it is assumed that there is adequate capacity within the water and wastewater network. I disagree with this, as due to the permitted density, previous infrastructure capacity assessments will not have assumed capacity for 11 units. Please provide confirmation from Councils P&I department that there is sufficient capacity in the wastewater and water reticulation to services these developments.

The site is zoned high density – neighbouring consented developments consistent to this proposal have been approved with the QLDC engineer saying; *Wastewater/water supply reticulation is available and the density of the proposed development is anticipated in the zone.*
Please refer to RM 190626 and RM190030.
This response does not address my RFI
This RFI is consistent with more recent consents in the area. I have raised this matter with other members of the team they agree that the additional demand needs to be addressed as per my RFI.

Although the minimum lots size is 450m2, you will note that there is NO max density standards - only the multi-unit development standard that is being applied for. Development of this scale are not only anticipated but encouraged within the HDR zone.
5. The applicant proposes to extend Council's reticulated stormwater and make a new connection. Please provide written confirmation from P&I that they are in support of this configuration?
The site is not serviced and suitable connection point is within 20m of the site.
RFI Closed.
I agree that there is a connection point within 20m of the site. I have spoken to P&I and they are ok with this connection. I will condition the design comes in for EA accordingly.

Happy to have an and/or condition here, the other option being as per RM190626 with overflows to discharge to the kerb and channel. As an FYI discharge to kerb and channel is only accepted if the applicant has demonstrated that no other options exist. This would involve demonstration poor onsite soakage and that a connection to Council infrastructure is not feasible.

6. Please provide information from a suitably qualified person that clearly shows the pre-development and post development flows for the 20% AEP event as per QLDC CoP. Within the application attenuation is proposed, demonstrate there is sufficient space on site for the required attenuation calculated, taking into consideration the required offset from building foundations and boundaries.

Both the neighbours directly north and south of the site have disposed to ground, with soakage test showing soakage of 60mm/hr.

SOAKPIT SIZING	
50	mm/hr HIRDS,
809	m² (rood area)
0.9	C
60	mm/hr Soak Rate (from field test & test logs)
16.75	Rc (Run-off from catchment)
6.03	(m³) 1 hour accumulation
0.24	Vsoak volume disposed of by soakage in 1hr (m³)
5.79	Vstor
2.20	Rock Volume (0.38 factor)
7.99	required soakpit volume
2	Width
2	Length
2	Depth
4	**Soakpit base area**
8	**(m³) Soakpit volume**
Design ok	

It is anticipated that a soakpit system such as ATLANTIS FLO-TANK be utilised, this system allows more capacity given there is no requirement for the rock volumes.

Appropriate condition to test soakage prior to construction.
This response does not address my RFI.
I do not understand the relevance of the soakage test? Are the applicant proposing now to discharge to ground as well as attenuation prior to discharge into Council reticulation?
My RFI was to confirm what volume of attenuation (storage) would be required on site to ensure the post development flow did not exceed the pre development. As per Council's CoP this has to be for the 20% AEP storm event (i.e. the change in surface from pervious to impervious results in how much extra stormwater and where will that be stored on site before connecting into councils reticulation). Once the applicant has confirmed the volume of storage, they will need to provide plans on where the tanks are placed (including depth and required earthworks cuts). It is a relatively constrained site given the footprint of the building, therefore in the response please consider building foundations and required offsets.

Earthworks:

8. Please confirm whether retaining is only proposed along the western boundary?

Please refer to Architectural sections – retaining shown southern boundary and some locations along northern boundary
Retaining along north boundary in for units: 1-6, 8, 11. What height are the retaining walls? They are shown to be ~0.4m from the boundary. Please confirm if these retaining walls will result in any earthworks breach?
Retaining along southern boundary is for the entire length. From cross section below the cut looks to be ~1.5m, these are shown to be ~0.4m from the boundary which will result in earthworks rule breaches. Please address this.

9. Please provide cross sections of the proposed retaining and earthworks along all boundaries that will have retaining. Within these cross sections, please include:

a. The existing wall along the western boundary with 10 Huff St

b. The permanent infrastructure (including the required drainage), and offsets from the boundary

c. The temporary earthworks, showing the required cut required during the construction of the retaining wall (with the cut being in accordance with the Geotago Report), and offsets from the boundary.

Please refer to Architectural sections – earthworks plans based off this. These detail what is requested.

This response does not address my RFI.

The architectural sections do not show the detail requested in the my RFI. I have concerns regarding the proximity of the cuts to neighbour site and structures on neighbouring lots and I have therefore requested further information on them. Depending on the response to RFI No. 8 and No. 9 additional geotechnical comment and methodologies may be required.

Kind Regards

Craig

TOWN PLANNERS
& SURVEYORS

CR
licensed cadastr
021 9
craig@jea
Level 2, 36 Shotover Street, PO Box

From: James.Aoake <james.aoake@jea.co.nz>
Sent: Thursday, February 1, 2024 11:26 AM
To: Craig Woodcock <craig.woodcock@jea.co.nz>
Subject: Fw: RM230992 - B Li & D Han - s92(1) Request for further information

Can you touch base with georgie re engineering rfi matters?

Kind regards,

JOHN EDMONDS
& ASSOCIATES

JAMES AOAKE
BSc, PGDipPlan, Assoc.NZPI
planner - director
022 194 6418 | 03 450 0009
james.aoake@jea.co.nz | www.jea.co.nz
Level 2, 36 Shotover Street, PO Box 95, Queenstown 9300

From: Georgie Hadfield <georgie.hadfield@qldc.govt.nz>
Sent: Wednesday, January 24, 2024 8:04 AM
To: James.Aoake <james.aoake@jea.co.nz>
Subject: RE: RM230992 - B Li & D Han - s92(1) Request for further information

Hi James,

The engineer for this one is Catriona Lamont. I understand you have her details already? If so she's happy for you to call or vice versa today.

Kind regards,

Georgie Hadfield | Planner | Planning & Development

Queenstown Lakes District Council

DD: +64 3 450 2386 | P: +64 3 441 0499

E: Georgie.Hadfield@qldc.govt.nz

QUEENSTOWN LAKES DISTRICT COUNCIL

From: James.Aoake <james.aoake@jea.co.nz>
Sent: Tuesday, January 23, 2024 2:52 PM
To: Georgie Hadfield <georgie.hadfield@qldc.govt.nz>
Subject: Re: RM230992 - B Li & D Han - s92(1) Request for further information

Kia ora Georgie,

Will work through the matters outlined below over the coming week.

Are you able to let me know who the engineer is that has provided their feedback below? There are several aspects that we would like to discuss with them and are of a differing opinion (given the approach council itself has taken on nearby recent developments).

Kind regards,

JOHN EDMONDS & ASSOCIATES

JAMES AOAKE
BSc, PGDipPlan, Assoc.NZPI
planner - director
022 194 6418 | 03 450 0009
james.aoake@jea.co.nz | www.jea.co.nz
Level 2, 36 Shotover Street, PO Box 95, Queenstown 9300

From: Georgie Hadfield <georgie.hadfield@qldc.govt.nz>
Sent: Monday, January 22, 2024 4:01 PM
To: James.Aoake <james.aoake@jea.co.nz>
Subject: RM230992 - B Li & D Han - s92(1) Request for further information

Kia ora James,

Hope you enjoyed your weekend. I've just received the RFIs back from our engineer, so have compiled all RFIs here for you - happy to discuss any questions on the phone.

Re: RM230992 – B Li & D Han - s92(1) request for further information

This email is a request under s92(1) of the Resource Management Act 1991 (RMA) for further information to assist Council in processing your application and understanding of the actual or potential adverse effects of your proposal. Please see the below which sets our why the request is being made, and process should you refuse to provide information or not respond to this request.

Requested Information

The following additional information about your application is requested for the reasons set out below:

Engineering

Transport:

1. ODP 12.2.4.2(a) requires the maximum width of vehicles crossings at the property boundary is 6.0m for residential activities or 9.0m for other. Within the AEE it states: "*As the proposal seeks to allow for a land use except for residential (being VA) so the maximum length of a crossing is 9m*." I do not agree with the assumption that the vehicle crossing should be considered as 'other'. It is intended to be used for Visitor Accommodation and the crossing should be designed for residential use. Non-residential vehicle crossings are wider to cater for larger vehicles.

I do not support the proposed wider vehicle crossing of 11.1m.

The site frontage onto Fryer Street is 15.2m and therefore the vehicle crossing will take up a significant portion of this frontage, the wider crossing with result in a larger area of the footpath being having vehicles cross it and it with result in a reduction in on street parking spaces.

Additionally the vehicle crossing design does not include the 1m splay and the vehicles crossing is not offset by 500mm from the boundary, as per the requirements of the CoP.

Can the applicant please address these concerns and provide an alternative configuration?

Subdivision:

2. Confirm whether this is a unit title subdivision. Scheme plans appears to be for fee simple whilst AEE says unit title. Please update the application accordingly.

3. I have concerns regarding the shared pedestrian access to the lots. What measures are proposed to ensure that clear access and no obstructions are will prevent residents and emergency services from accessing the lots at the rear?

Services:

4. Under the ODP zoning the minimum lot size is 450m^2 and the applicants lot size is 809m^2. Therefore under the district plan only 1 residential lot is permitted. Within the infrastructure report it says that as it is zoned high density it is assumed that there is adequate capacity within the water and wastewater network. I disagree with this, as

due to the permitted density, previous infrastructure capacity assessments will not have assumed capacity for 11 units. Please provide confirmation from Councils P&I department that there is sufficient capacity in the wastewater and water reticulation to services these developments.

5. The applicant proposes to extend Council's reticulated stormwater and make a new connection. Please provide written confirmation from P&I that they are in support of this configuration?

6. Please provide information from a suitably qualified person that clearly shows the pre-development and post development flows for the 20% AEP event as per QLDC CoP. Within the application attenuation is proposed, demonstrate there is sufficient space on site for the required attenuation calculated, taking into consideration the required offset from building foundations and boundaries.

Bin Storage / Refuse Collection:

7. The applicant is advised that Council refuse collection will not service VA for 365 days, therefore private collection will be required. The plans provided show 9 bins to service 11 units, with 3 of the bins blocked behind other bins, I do not think this is adequate for the management of waste from the 11 lots. Can the applicant provide further details regarding the bin storage and solid waste collection, including but not limited to:

    a. How many times a week collection is anticipated (i.e. number of heavy vehicle movements) for general waste, mixed recycling and glass recycling collection?

    b. Demonstrate that there is suitable space along the road frontage to allow for the kerb side collection for bins.

For information, useful guidance can be found on waste management for MUD here: Waste requirements for business - Before you apply - Wellington City Council (note, it says that all bins shall be easily accessed (i.e. not placed behind another), passageways/doors should be at least 1.5m wide to allow for manoeuvring of bins.

Earthworks:

8. Please confirm whether retaining is only proposed along the western boundary?

9. Please provide cross sections of the proposed retaining and earthworks along all boundaries that will have retaining. Within these cross sections, please include:

a. The existing wall along the western boundary with 10 Huff St

b. The permanent infrastructure (including the required drainage), and offsets from the boundary

c. The temporary earthworks, showing the required cut required during the construction of the retaining wall (with the cut being in accordance with the Geotago Report), and offsets from the boundary.

Planning

Earthworks:

10. Please provide the distance that the earthworks are set back from the site boundaries. Please update the earthworks plan to demonstrate these dimensions.

11. Please confirm whether the site is a sloping site or not. The abovementioned cross-sections should be sufficient at answering this question if clear dimensions are included.

Transport:

12. Currently it is proposed to provide four car parking spaces (including one mobility parking space), and these will not be assigned to any particular unit. This means when guests book the accommodation, they may not be aware that there is no onsite parking. Please provide additional information that details how guests will be made aware of the parking situation before booking, such as whether they will be informed prior to their stay, or whether the parking spaces will be assigned to a particular unit. Additional information may be included within the VAMP.

13. Currently the mobility car park is not assigned to a specific unit. It is generally preferred that the car park is assigned to one unit so that when guests book one of the units they know whether they have access to a mobility park or not (and ensures the mobility park is not double booked). Please update your VAMP to include which unit the mobility park will be assigned to.

Other:

14. The AEE states: “the proposal seeks to allow for a land use except for residential (being VA)”. However elsewhere in the AEE it is stated that the application allows

for residential development. Please confirm whether residential activity is also being applied for.

15. Please confirm the level of transparency of the fencing surrounding the outdoor storage area. Provide a percentage and/or detailed plans. If the fencing is opaque, please provide the height of the fencing.

16. The VAMP states that signage will be placed on doors leading to the outside patio area stating: "Outdoor area, is STRICTLY not to be used between 10pm and 7am daily". The VAMP also states that there shall be no outdoor speaker systems in use at any time. Please confirm whether the signage will be updated to include that speakers/amplified music is not permitted in the outdoor area.

17. The ODP requires a minimum of 30% landscape coverage, and at least half of this landscaped area must consist of permeable surfaces and is to be planted. This rule has been triggered with the AEE stating that the landscape coverage is 29.3% of the site. Please confirm what percentage of this is permeable surfaces/planting.

Responding to this request

This letter represents the formal request under Section 92(1) and sets out the reasons for the Council requesting the information in accordance with section 92(3)(a) of the RMA.

*You are required to respond to this request in writing within **15 working days** from the date of this letter, which is **13 February 2024,** to advise the consent authority that you either agree or refuse to provide the information requested, or to seek an alternative timeframe to provide the information in accordance with RMA section 92A(2)(a).*

If you are seeking an alternative timeframe to provide the information, this new timeframe must be agreed in writing with Council.

In accordance with RMA section 88C(2), the consent authority will exclude all time from the consent process working days starting from the date of this request, and ending when – satisfactory information is received on or before either the statutory 15 working day date (above), or other agreed dated; or if no information is received the agreed date; or the date Council receives confirmation the applicant refuses to provide the information (in accordance with s88C(2)(b)).

In accordance with section 92A(3) of the RMA, if the applicant refuses to provide, or does not provide the information in the agreed timeframe, or does not respond to this request, the Council must advance processing the application without the benefit of the requested information, and must publicly notify the application in accordance with section 95C of the RMA.

Kind regards,

Georgie Hadfield | Planner | Planning & Development

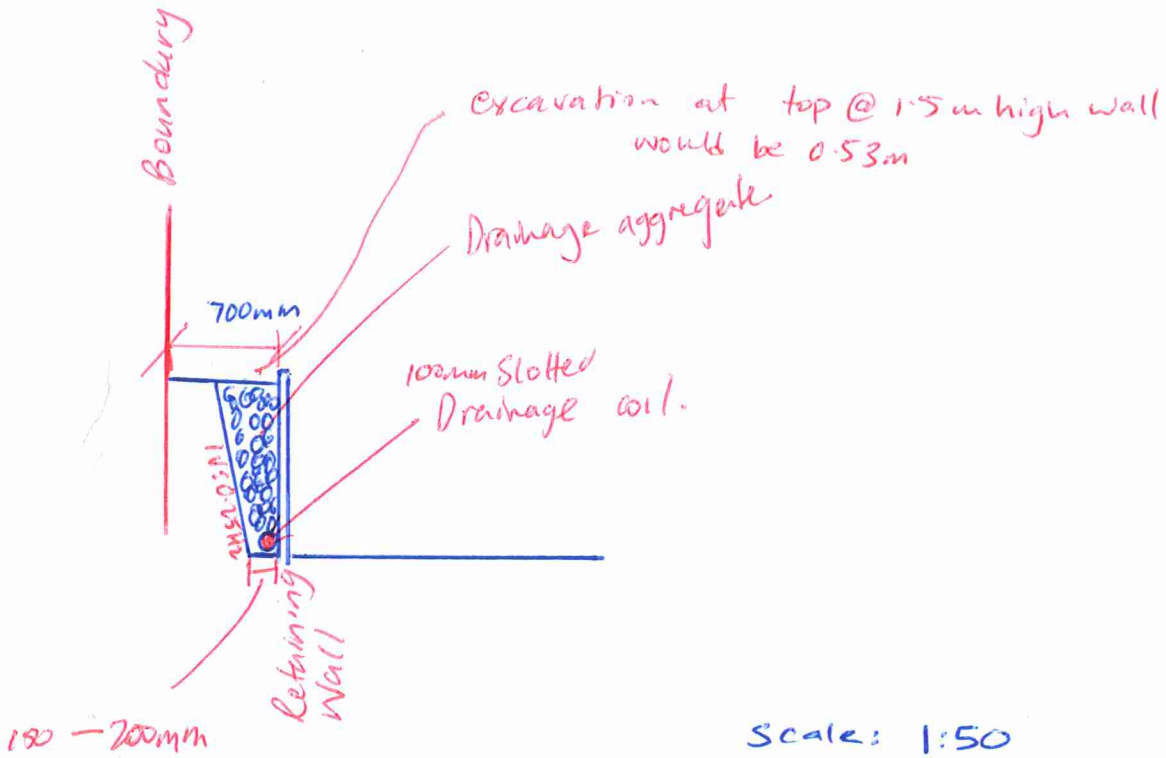
Queenstown Lakes District Council

DD: +64 3 450 2386 | P: +64 3 441 0499

E: Georgie.Hadfield@qldc.govt.nz

QUEENSTOWN LAKES DISTRICT COUNCIL

JE&A TOWN PLANNERS & SURVEYORS



DATE:	14/3/24
TITLE:	18 Fryer St - Example retaining cut.
BY:	Craig Woodcock.

From: "James.Aoake" <james.aoake@jea.co.nz>
Sent: Fri, 15 Mar 2024 11:14:37 +1300
To: "Georgie Hadfield" <georgie.hadfield@qldc.govt.nz>
Subject: Re: 18 Fryer Street - Car Parking Option
Attachments: 23140.05.01 - Driveway Plan.pdf

Kia ora Georgie,

Apologies for the delay - been a busy week.
Just wanted to respond to your previous email with comments from catriona.
Unsure how she has come to this conclusion but we disagree that the proposed car parking arrangement.

If we look at the existing B99 Vehicle size (the full length of a 99.8th percentile vehicle is 5.2m) or even the B85 Vehicle size (the full length of a 85th percentile vehicle is 4.91m) then the additional vehicle crossing length will not result in ANY reduction in car parks given the existing and approved vehicle crossing layout of both the site and adjoining properties.
Please refer to the plan attached

- as noted, the total length between the existing driveway and the APPROVED driveway to the north is 8.78m. This is only enough room for a **single car park** - if two car parks were to be provided within the space between these two vehicle crossings then a minimum of around 10m would need to be provided (for B85). The proposal will result in a reduction of this length by 2.5m - reducing the length between the approved vehicle crossing and that which is proposed to 6.28m. Again this is enough room for a single car park.
- The proposal will result in a reduction of 0.29m of vehicle crossing to the south. The total distance between the proposed driveway and the neighbouring formed driveway is 11.26m. This allows for two on street parks which is the same as what the current parking layout.

As demonstrated the proposal will not result in ANY reduction of car parks when considered against the existing/approved environment. As such we do not accept the engineers rational below.
Happy to discuss - but can you please ask for further comment if required.

Kind regards,

JOHN EDMONDS & ASSOCIATES

JAMES AOAKE
BSc, PGDipPlan, Assoc.NZPI
planner - director
022 194 6418 | 03 450 0009
james.aoake@jea.co.nz | www.jea.co.nz
Level 2, 36 Shotover Street, PO Box 95, Queenstown 9300

From: Georgie Hadfield <georgie.hadfield@qldc.govt.nz>
Sent: Thursday, March 7, 2024 10:10 AM
To: James.Aoake <james.aoake@jea.co.nz>
Subject: RE: 18 Fryer Street - Car Parking Option

Kia ora James,

Thanks for provided the updated concept sketch. As discussed on the phone, the additional landscaping and reduced width of vehicle crossing do improve the proposal – however I have chatted with the engineer this morning and there are still concerns about the vehicle crossing width:

> I do not support a vehicle crossing width of 7.5m. This site has a frontage of 15m so the applicant is proposing that half of it will be a vehicle crossing. From looking at the sketch provided and the existing on street parking, this looks to encroach on the available on street parking to the east and the west of the site. Additionally, the existing width of the vehicle crossing which is taken from where there is a drop down kerb and is approximately 3m wide. Council is very aware of the limited on street car parking and do not support the removal of on street car parks to allow for additional off street, private parking in this area.

I know you mentioned that the existing crossing has a width of 7.3m, however it looks like this is not actually the case and the existing crossing is fairly small at present? I think the main issue really is the possible removal of onstreet parking, and this wouldn't be something that Council could support unfortunately.

The engineer has also provided some updated RFI responses, so I'll send those in a separate email chain.

Thanks,

Georgie Hadfield | Planner | Planning & Development
Queenstown Lakes District Council
DD: +64 3 450 2386 | P: +64 3 441 0499
E: Georgie.Hadfield@qldc.govt.nz

QUEENSTOWN LAKES DISTRICT COUNCIL

From: James.Aoake <james.aoake@jea.co.nz>
Sent: Monday, March 4, 2024 1:37 PM
To: Georgie Hadfield <georgie.hadfield@qldc.govt.nz>
Subject: 18 Fryer Street - Car Parking Option

Kia ora Georgia,

I hope you have been well.
We have been working in the background regarding the RFI items, particularly addressing the car parking/vehicle crossing matters.
Before we progress this option further (with formalised plans etc) I just wanted to run past you the attached option for discussion.
Taking on the comments from engineer/urban designer, we have completed an initial design which has;

- Reduced the car parks from four to three (one mobility - two standard)

- Reduced vehicle crossing width to 7.5m (noting that the existing vehicle crossing width is 7.3m)
- Adds 12sqm of landscape area, which takes us to 30.8% of the site area – and achieves compliance with the ODP
- Adds 12sqm of permeable area, which takes us to 15.5% of the site area / 50.4% of the landscape area – and achieves compliance with the ODP
- Introduce either two or three kowhai trees within the northern landscape area in the setback with Hebes underplanted.
- Allows for a revised bin storage area that will reduce the shortfall - only a small shortfall of glass bins.

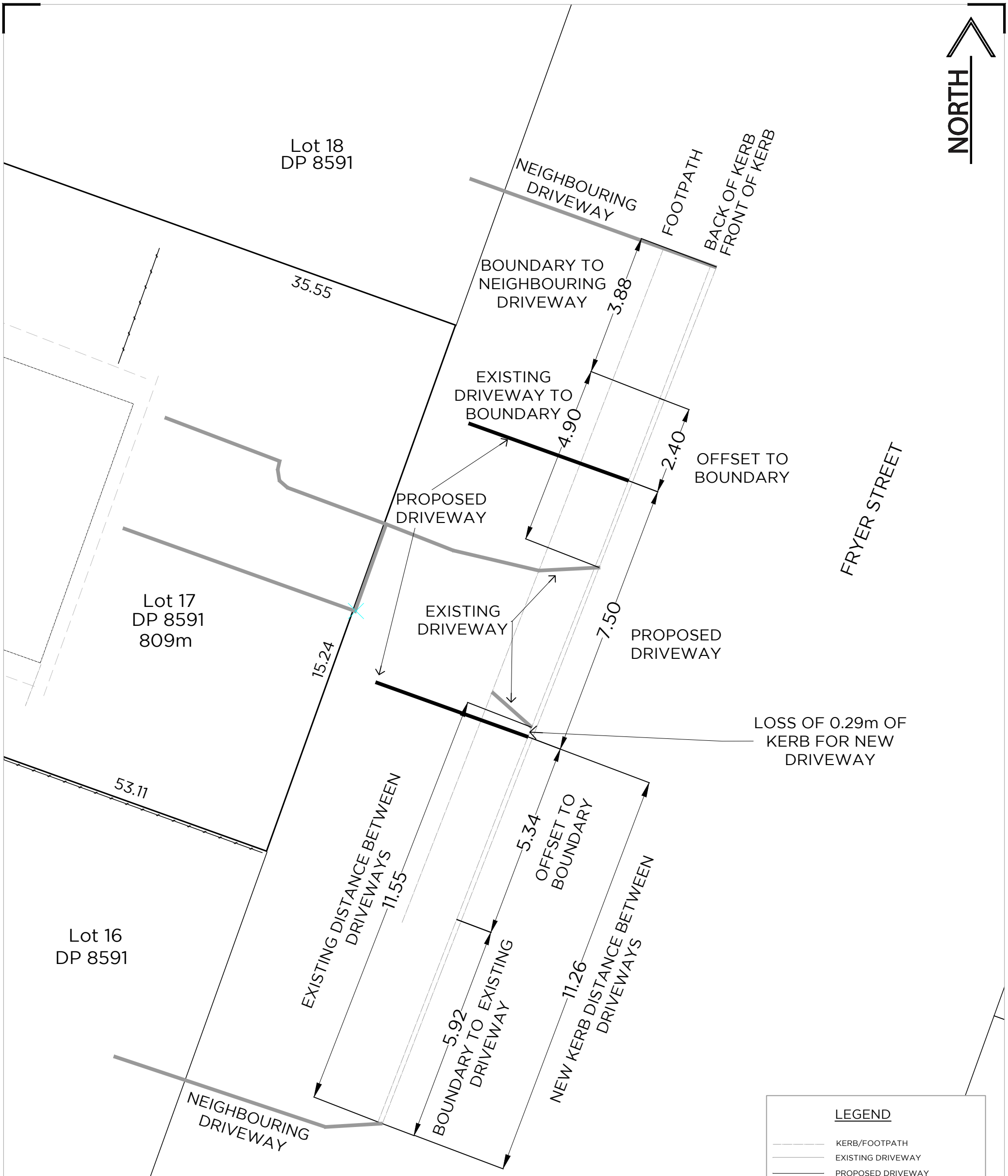
Please note that the above is just an initial concept for discussion purposes.
Are you able to review and then give me a call to discuss - free tomorrow from 1030

Kind regards,

JOHN EDMONDS & ASSOCIATES

JAMES AOAKE
BSc, PGDipPlan, Assoc.NZPI
planner - director

022 194 6418 | 03 450 0009
james.aoake@jea.co.nz | **www.jea.co.nz**
Level 2, 36 Shotover Street, PO Box 95, Queenstown 9300



REV.	DATE	REVISION DETAILS	BY

SURVEYED	SIGNED	DATE	JOB NO.	DRAWING NO.
MF	CW	13.03.24	23140	05.01
DRAWN	**CHECKED**	**DATE**	**SCALE**	
MF	CW	14.03.24	1:100m @ A3	
DATUM & LEVEL				**REV.**
MT NIC 2000 - NZVD16				-

ISSUED FOR REVIEW - 14.03.24

JEA
TOWN PLANNERS & SURVEYORS
Level 2, 36 Shotover Street
PO Box 95, Queenstown, 9300

CLIENT
HANN, SKY

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PROPOSED DRIVEWAY
18 FRYER STREET, QUEENSTOWN
LOT 17 DP 8591

C:\Users\Mecaela JEA\JEA\JEA - Shared Documents\Clients\2023\23140 - 18 Fryer Street\Survey\CAD\23140.05.01 - Driveway Plan.dwg

S92(1) Request RM230922 – Points accepted and outstanding

Engineering

Transport:

1. ODP 12.2.4.2(a) requires the maximum width of vehicles crossings at the property boundary is 6.0m for residential activities or 9.0m for other. Within the AEE it states: "*As the proposal seeks to allow for a land use except for residential (being VA) so the maximum length of a crossing is 9m*." I do not agree with the assumption that the vehicle crossing should be considered as 'other'. It is intended to be used for Visitor Accommodation and the crossing should be designed for residential use. Non-residential vehicle crossings are wider to cater for larger vehicles.
   I do not support the proposed wider vehicle crossing of 11.1m.
   The site frontage onto Fryer Street is 15.2m and therefore the vehicle crossing will take up a significant portion of this frontage, the wider crossing with result in a larger area of the footpath being having vehicles cross it and it with result in a reduction in on street parking spaces.
   Additionally the vehicle crossing design does not include the 1m splay and the vehicles crossing is not offset by 500mm from the boundary, as per the requirements of the CoP.
   Can the applicant please address these concerns and provide an alternative configuration? Accepted.

Subdivision:

2. Confirm whether this is a unit title subdivision. Scheme plans appears to be for fee simple whilst AEE says unit title. Please update the application accordingly.
   Outstanding
   Updated application attached.

3. I have concerns regarding the shared pedestrian access to the lots. What measures are proposed to ensure that clear access and no obstructions are will prevent residents and emergency services from accessing the lots at the rear? Outstanding – see my email to you on 12/02/2024

   This is a common layout throughout high density developments. Unsure where it has been noted that there is a gate to this area also as none is shown on the plans? Are council trying to say that we need controls to ensure a shared pathway is obstruction free? How is this different from for example a hallway within a multi-floor apartment building?

   Further, there is no requirement for a developer to make all homes disability accessible, and any guests/future owners will be fully aware of the access restrictions prior to use. The internal layout of the units themselves do not lend toward providing for wheelchair access.

   Can you please note where in any of QLDC/legislative documents it requires us to provide a minimum pathway width or that this is an untenable access solution?

Services:

4. Under the ODP zoning the minimum lot size is 450m^2 and the applicants lot size is 809m^2. Therefore under the district plan only 1 residential lot is permitted. Within the infrastructure report it says that as it is zoned high density it is assumed that there is adequate capacity within the water and wastewater network. I disagree with this, as due to the permitted density, previous infrastructure capacity assessments will not have assumed capacity for 11 units. Please provide confirmation from Councils P&I department that there is sufficient capacity in the wastewater and water reticulation to services these developments. Outstanding – believe this is sitting with Catriona currently, so don't believe there is any further action for the Applicant to take for this point.

5. The applicant proposes to extend Council's reticulated stormwater and make a new connection. Please provide written confirmation from P&I that they are in support of this configuration? Accepted.

6. Please provide information from a suitably qualified person that clearly shows the pre-development and post development flows for the 20% AEP event as per QLDC CoP. Within the application attenuation is proposed, demonstrate there is sufficient space on site for the required attenuation calculated, taking into consideration the required offset from building foundations and boundaries. Outstanding

Bin Storage / Refuse Collection:

7. The applicant is advised that Council refuse collection will not service VA for 365 days, therefore private collection will be required. The plans provided show 9 bins to service 11 units, with 3 of the bins blocked behind other bins, I do not think this is adequate for the management of waste from the 11 lots. Can the applicant provide further details regarding the bin storage and solid waste collection, including but not limited to:
    a. How many times a week collection is anticipated (i.e. number of heavy vehicle movements) for general waste, mixed recycling and glass recycling collection?
    b. Demonstrate that there is suitable space along the road frontage to allow for the kerb side collection for bins.

    For information, useful guidance can be found on waste management for MUD here: Waste requirements for business - Before you apply - Wellington City Council (note, it says that all bins shall be easily accessed (i.e. not placed behind another), passageways/doors should be at least 1.5m wide to allow for manoeuvring of bins. See my email to you on 12/02/2024. I don't believe I have received a response that details how rubbish will be collected?

    I believe I discussed this on the phone, but this is to be dealt privately. There are several waste disposal companies within the region that do this (we have one who comes and collects this for our office). This can be privately arranged without the requirement for Council input.

Earthworks:

8. Please confirm whether retaining is only proposed along the western boundary? Outstanding

9. Please provide cross sections of the proposed retaining and earthworks along all boundaries that will have retaining. Within these cross sections, please include:
    a. The existing wall along the western boundary with 10 Huff St
    b. The permanent infrastructure (including the required drainage), and offsets from the boundary
    c. The temporary earthworks, showing the required cut required during the construction of the retaining wall (with the cut being in accordance with the Geotago Report), and offsets from the boundary. Outstanding
    Believe this has been resolved.

Planning

Earthworks:

10. Please provide the distance that the earthworks are set back from the site boundaries. Please update the earthworks plan to demonstrate these dimensions. Outstanding
    Believe this has been resolved.

11. Please confirm whether the site is a sloping site or not. The abovementioned cross-sections should be sufficient at answering this question if clear dimensions are included. Accepted.

Transport:

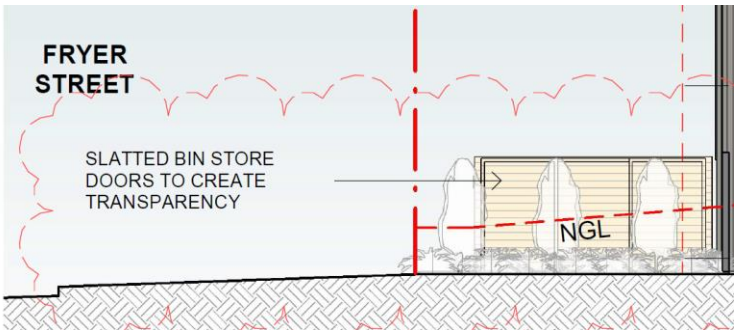
12. Currently it is proposed to provide four car parking spaces (including one mobility parking space), and these will not be assigned to any particular unit. This means when guests book the accommodation, they may not be aware that there is no onsite parking. Please provide additional information that details how guests will be made aware of the parking situation before booking, such as whether they will be informed prior to their stay, or whether the parking spaces will be assigned to a particular unit. Additional information may be included within the VAMP. Outstanding
    We discussed this on our phone call but see updated VAMP.

13. Currently the mobility car park is not assigned to a specific unit. It is generally preferred that the car park is assigned to one unit so that when guests book one of the units they know whether they have access to a mobility park or not (and ensures the mobility park is not double booked). Please update your VAMP to include which unit the mobility park will be assigned to. Outstanding
    As discussed, this is a private matter that will be resolved at a later stage. A condition of consent is appropriate to require the final VAMP to be submitted to include the unit with the mobility park. At this stage it is not required.

Other:

14. The AEE states: “the proposal seeks to allow for a land use except for residential (being VA)”. However elsewhere in the AEE it is stated that the application allows for residential development. Please confirm whether residential activity is also being applied for. Outstanding
    It is a residential zone. The applicant could undertake residential activity without any resource consent this is permitted. We do not need to apply for residential activity, nor will the applicant ever need to apply for residential activity.

15. Please confirm the level of transparency of the fencing surrounding the outdoor storage area. Provide a percentage and/or detailed plans. If the fencing is opaque, please provide the height of the fencing. Partly answered – bin storage fencing to be slatted. Need additional detail to confirm the level of transparency e.g. height of gaps between slats, or detailed render or example image.



    Is this really necessary? We have stated on the plans that we are going to include slatted bin storage – this will comply with the standard. If this is not complied with we will not be in accordance with the DP so will be picked up in monitoring.

16. The VAMP states that signage will be placed on doors leading to the outside patio area stating: “Outdoor area, is STRICTLY not to be used between 10pm and 7am daily”. The VAMP also states that there shall be no outdoor speaker systems in use at any time. Please confirm whether the signage will be updated to include that speakers/amplified music is not permitted in the outdoor area. Outstanding
    Updated.

17. The ODP requires a minimum of 30% landscape coverage, and at least half of this landscaped area must consist of permeable surfaces and is to be planted. This rule has been triggered with the AEE stating that the landscape coverage is 29.3% of the site. Please confirm what percentage of this is permeable surfaces/planting. Accepted

From: "Georgie Hadfield"
Sent: Mon, 8 Jul 2024 15:18:10 +1300
To: "James.Aoake" <james.aoake@jea.co.nz>
Subject: RE: 18 Fryer Street - Earthworks and Retaining walls - RM230992

Hi James,

I can confirm that this answers my remaining RFI questions. Thanks for providing this information and for bearing with Catriona and I while we've worked through this process.

I'll continue drafting my assessment and let you know if any further questions pop up.

Kind regards,

Georgie Hadfield | Planner | Planning & Development
Queenstown Lakes District Council
DD: +64 3 450 2386 | P: +64 3 441 0499
E: Georgie.Hadfield@qldc.govt.nz

QUEENSTOWN LAKES DISTRICT COUNCIL

From: James.Aoake <james.aoake@jea.co.nz>
Sent: Tuesday, July 2, 2024 2:15 PM
To: Georgie Hadfield <georgie.hadfield@qldc.govt.nz>
Subject: Fw: 18 Fryer Street - Earthworks and Retaining walls - RM230992

Kia ora Georgie,

Please see attached and emails below re your query.

Kind regards,

JEA JOHN EDMONDS & ASSOCIATES

JAMES AOAKE
BSc, PGDipPlan, Assoc.NZPI
planner - director
022 194 6418 | 03 450 0009
james.aoake@jea.co.nz | **www.jea.co.nz**
Level 2, 36 Shotover Street, PO Box 95, Queenstown 9300

From: Craig Woodcock <craig.woodcock@jea.co.nz>
Sent: Tuesday, July 2, 2024 2:11 PM
To: James.Aoake <james.aoake@jea.co.nz>
Subject: FW: 18 Fryer Street - Earthworks and Retaining walls - RM230992

Min 300mm EW from the boundaries.

Retaining completed as per Pete's advice on the northern boundary, since amended.

This is a common method within the district, and explained within the attached email.

Kind Regards

Craig

JEA TOWN PLANNERS & SURVEYORS

CRAIG WOODCOCK
B. Surv, MNZIS
licensed cadastral surveyor - principal
021 982 563 | 03 409 0009
craig@jea.co.nz | **www.jea.co.nz**
Level 2, 36 Shotover Street, PO Box 95, Queenstown 9300

From: Camden Pyke <Cam@yoke.net.nz>
Sent: Tuesday, July 2, 2024 1:58 PM
To: Craig Woodcock <craig.woodcock@jea.co.nz>
Subject: RE: 18 Fryer Street - Earthworks and Retaining walls - RM230992

Hi Craig,

There are retaining walls on:

- the southern side of the shared pathway (between pathway and hedging), 700mm from boundary, max 950mm H.

- northern side of Outdoor terraces (between terraces and hedging). These vary in height from 0.6m to 1.4m H. and the hedged / planted area is not accessible.

- between units 2-3, 4-5, 6-7, 8-9. These can be seen in the northern elevation. 1.2m H, with fence on the high side to act as balustrade / prevent overlooking.

Let me know if you need any further info.

Thanks,

Cam

Cam Pyke

+64 22 398 9195

cam@yoke.net.nz

Yoke

From: Georgie Hadfield <georgie.hadfield@qldc.govt.nz>
Sent: Tuesday, July 2, 2024 11:30 AM

To: James.Aoake <james.aoake@jea.co.nz>
Subject: RE: 18 Fryer Street - Earthworks and Retaining walls - RM230992

Kia ora James,

Thank you for the updated plan set.

I've chatted to Catriona and I believe all engineering RFI points are completed, however, I don't believe I received a response to points 8 and 10. Can you please supply the following info:

- Please clarify the location of all retaining walls (we know that there will be one on the western boundary as shown in the new plans) however it is uncertain as to the location and height of any others?
- Also please confirm the setback distances of all earthworks from the boundaries. The earthworks plan doesn't show these and it would be helpful to know the specific dimensions of the earthworks in my assessment.

Thanks,

Georgie Hadfield | Planner | Planning & Development

Queenstown Lakes District Council

DD: +64 3 450 2386 | P: +64 3 441 0499

E: Georgie.Hadfield@qldc.govt.nz

QUEENSTOWN LAKES DISTRICT COUNCIL

From: James.Aoake <james.aoake@jea.co.nz>
Sent: Wednesday, June 26, 2024 12:04 PM
To: Georgie Hadfield <georgie.hadfield@qldc.govt.nz>
Subject: Re: 18 Fryer Street - Earthworks and Retaining walls - RM230992

Kia ora Georgie,

I believe this covers off all outstanding information.

Are you able to update me where we are sitting with things?

Kind regards,

JOHN EDMONDS & ASSOCIATES

JAMES AOAKE
BSc, PGDipPlan, Assoc.NZPI
planner - director
022 194 6418 | 03 450 0009
james.aoake@jea.co.nz | www.jea.co.nz
Level 2, 36 Shotover Street, PO Box 95, Queenstown 9300

From: Craig Woodcock <craig.woodcock@jea.co.nz>
Sent: Monday, June 24, 2024 3:18 PM
To: Catriona Lamont <Catriona.Lamont@qldc.govt.nz>
Cc: Georgie Hadfield <georgie.hadfield@qldc.govt.nz>; James.Aoake <james.aoake@jea.co.nz>; sky@masterace.co.nz <sky@masterace.co.nz>; Camden Pyke <Cam@yoke.net.nz>
Subject: RE: 18 Fryer Street - Earthworks and Retaining walls - RM230992

Hi Catriona,

We have noted your concerns below and revised the earthworks along this boundary, please see attached plans for the revised design.

These include;

- Retaining wall is 900mm off the building. This is to create a comfortable width pea gravel (permeable) path around the building and from discussion with Pete(Geotago) creates an acceptable outcome for excavation / retaining.
- Landscape plan updated to reflect change. Creates a wider landscape strip of windgrass plants at the west (previously lawn) and shifts trees to be on retained ground (previously at terrace level).

Can we please progress the application with this revised planset.

Can you please confirm that everything else is accounted for.

Kind Regards

Craig

JEA TOWN PLANNERS & SURVEYORS

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licensed cadastral surveyor - principal
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craig@jea.co.nz | **www.jea.co.nz**
Level 2, 36 Shotover Street, PO Box 95, Queenstown 9300

From: Catriona Lamont <Catriona.Lamont@qldc.govt.nz>
Sent: Wednesday, June 12, 2024 2:55 PM
To: Craig Woodcock <craig.woodcock@jea.co.nz>
Cc: Georgie Hadfield <georgie.hadfield@qldc.govt.nz>
Subject: RE: 18 Fryer Street - Earthworks and Retaining walls - RM230992

Hi Craig,

Thanks for providing the additional information. I have reviewed the below recommendations and advice from Geotago which considers several options, and I require the following additional information

depending on the different options. I am more than happy to go through these with you and Geotago, if it would make things easier.

Earthworks – 3m cut undertaken by applicant (Scenario 1)

The required cut is shown on the boundary for 10 Huff Street. The house is offset ~4m from the boundary and there is also Council stormwater and wastewater reticulation on the neighbouring site. From GIS it is unclear what the depth of the pipes are along this boundary, however, based on the recently installed wastewater manhole on 14 Fryer St it looks to have an IL of 329 as well as manholes near the north-west corner of the site.

The Geotago email recommends the following different construction methods to achieve this cut:

1. Suitable batter / benching slope. The Geotago report says for temporary cuts up to 3m (dry) 1H:2V are recommended. For the required 3m cut it would require at least a 1.5m excavation into the neighbouring site. This will potentially expose the Council reticulation. Please provide the additional information:
    1. Provide a suitable construction methodology that will ensure that the earthworks to not result in Council reticulation being undermined.
    2. Please provide a cross section that shows the retaining wall and the zone of influence of the stormwater and wastewater reticulation (the reticulation will be required to be surveyed and depths confirmed for this).
    3. This will require earthworks into the neighbouring site, please confirm that the earthworks will not result in any instability or impact the buildings foundation.
    4. Affected Party Approval (APA) from the owners of 10 Huff Street for the earthworks which clearly shows the extent of the earthworks and the proximity to their residential unit

2. Narrow Pilot cuts to assess the temporary stability and ground investigation. The proposal is for these narrow pilot cuts to be undertaken during the onsite earthworks and the stability to be monitored and assessed at that time, I have the following concerns regarding this. The assumption that a 3m sub vertical cut remain stable is based on the previous 2.5m cuts on the neighbouring site remaining stable, although this is generally suitable evidence, it is not clear if Geotago was involved of the supervision on the neighbouring site, can this be confirmed? If not, please provide suitable evidence that shows the 2.5m cut remained stable (i.e. site reports, photos) and that show these cuts were in alluvial material. Additionally glacial till was not logged in any of the test pits on the site, specifically 101 which is near the proposed retaining wall, therefore I am reluctant to rely on this unless additional test pit logs are provided showing glacial till. Furthermore, this is likely to involve an excavation deeper than the Council reticulation, in close proximity to the reticulation. Therefore I request the following information:
    1. Please provide evidence from the geotech engineering that supervised the cuts on the neighbouring site that the 2.5m sub vertical cuts remained stable and that the material was similar to that logged on the test pits in the applicants site.

5. Please provide excavation methodology and confirmation from the geotech that Council's reticulation will not be undermined or result in any instability on the neighbouring lot. Provide a cross section that shows the retaining wall and the zone of influence of the stormwater and wastewater reticulation (the reticulation will be required to be surveyed and depths confirmed for this).
2. Depending on the response from the points above, the pilot cuts may be required to be done up front, prior to issuing the consent for Council to review and assess the risk on the reticulation/stability on neighbouring site.

3. Retaining wall construction prior to excavations. Construction method such as a universal column wall that can be installed through piling/driving techniques.
    1. Please provide a cross section that shows the retaining wall and the zone of influence from the stormwater and wastewater reticulation (the reticulation will be required to be surveyed and confirmed for this).

Earthworks Occurring on 10 Huff Street Prior (Scenario 2)

This relies on the earthworks occurring on the neighbouring site, to be undertaken prior to the earthworks on this site being done. I have discussed this with the Council's planner and we can add in an either/or condition for Scenario 1 and 2. With a condition that *prior to works commencing on site the applicant would have to demonstrate that the earthworks on 10 Huff Street are have been undertaken and the relative level has been reduced to 329.820.*

If the applicant can demonstrate that the RL is 329.820 upfront, then we do not need to do an either/or condition and only Scenario 2 would be conditioned.

Thanks,

Catriona Lamont | Senior Land Development Engineer

DD: +64 3450 1742

From: Craig Woodcock <craig.woodcock@jea.co.nz>
Sent: Friday, June 7, 2024 3:29 PM
To: Catriona Lamont <Catriona.Lamont@qldc.govt.nz>
Subject: FW: 18 Fryer Street - Earthworks and Retaining alls

Hi Catriona,

Please see Geotago's response to your question around the western retaining wall.

Can you please let me know how the other outstanding items are tracking.

Kind Regards

Craig

JEA TOWN PLANNERS & SURVEYORS

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021 982 563 | 03 409 0009
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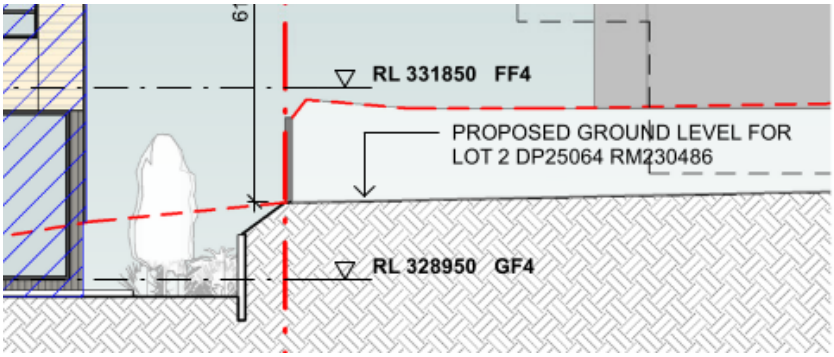
Level 2, 36 Shotover Street, PO Box 95, Queenstown 9300

From: Peter Forrest <pete@geotago.nz>
Sent: Thursday, June 6, 2024 6:35 PM
To: Craig Woodcock <craig.woodcock@jea.co.nz>; James.Aoake <james.aoake@jea.co.nz>
Subject: 18 Fryer Street - Earthworks and Retaining alls

Craig, James,

In response to Catriona Lamont's observations regarding the excavations along the Western elevation of 18 Fryer Street, I make the following comments based on the snapshot provided below and the two likely scenarios. It is appreciated that this makes for a difficult consent condition but given the unknowns, I can't see any alternative until confirmation of what scenario will play out.



Scenario 1: The neighbouring site (Lot 2) does not excavate down to the proposed RL to leave an approximate 3m high cut

Scenario 2: The neighbouring site does excavate down as per the RM230486 to leave an approximate 1.3m high cut.

Based on the knowledge of temporary works supervised by the author at 14 Fryer Street, sub vertical cuts of up to 2.5m in the upper sequence of the alluvial material will remain stable for temporary works, but that they are subject to site specific assessment at the time of the excavation. Where glacial till is encountered sub vertical cuts of 3m will be achievable. There will be site notes from GCL during the construction of 14 Fryer Street that should be archived in eDocs to support this.

Scenario 1: 3m high cut

- It is recommended to carry out narrow pilot cuts into the bank to assess the temporary stability and the ground conditions encountered along the western elevation
- If the material is deemed sufficiently dense and capable of holding itself in a sub vertical cut, it is recommended to proceed with the preferred retaining wall albeit constructing in manageable segments (<5m) to avoid opening up the whole property boundary in one excavation
- If the material is not deemed stable then there two options available
    - Approach the neighbouring property for permission to excavate into their property to allow for benched and or battered slopes for the safe construction of the retaining wall or
    - Adopt a retaining wall construction method such as a universal column wall that can be installed through piling/driving techniques that provides stability of the

bank before the material is removed in front of the piles/columns. This is commonly used in Queenstown in this situation, 14 Fryer street being a prime example.

Scenario 2: 1.5m cut

- This height of cut is very manageable for temporary works if cut sub vertically or as steep as 1H:3V
- Standard retaining wall construction can be applied with very little risk to the neighbouring property.

The most sensible solution is to liaise with the neighbouring property such that the earthworks on Lot 2 is contemporaneous with the construction of the retaining wall on 18 Fryer street. But that is obviously not an easy outcome to control or manipulate.

I trust this helps clarify the options open to the developer.

Kind regards,

Peter Forrest

BSc PhD FGS CGeol CMEngNZ (PEngGeol)

Director and Principal Engineering Geologist

Mobile: +64 272 699 736

geotago.nz

geotago
Engineering Geology & Geotechnics

ENGINEERING NEW ZEALAND OFFICIAL MEMBER

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