

1 September 2022

A Shepherd
C/- Planscapes (NZ) Limited
PO Box 99
Nelson 7040

Dear Andrew

**Decision on Non-Notified Resource Consent Application RM220547–
Land use consent to construct a new dwelling in the Rural 3 Zone at
105 Redvale Road, Redwood Valley**

Your application for resource consent has been granted. A copy of Council's decision is attached. Please carefully read the conditions that have been attached to the consent and feel free to contact me if you have any questions about your consent or its conditions. My contact details are listed at the top of this letter.

Here are some matters that I need to highlight for you.

Section 357A of the Resource Management Act 1991 (the Act) provides you with the right to lodge an objection with Council against this decision, including any of the conditions. Objections must be made in writing setting out the reasons for the objection together with a deposit fee of \$340.00 (GST inclusive) and must be lodged with Council within 15 working days of receiving this letter.

The final cost of processing your application has not been calculated yet. If the final cost exceeds the deposit already paid then, as we previously advised, you will be invoiced separately for the additional cost. If the final cost is less than the deposit already paid, then you will receive a refund. Where the costs are equal to the deposit already paid, no further action is required. You will receive a letter shortly about the final costs of processing your application.

Under Section 125 of the Act, your consent will lapse in 5 years unless you have given effect to it before then.

Yours sincerely



Ina Holst-Stoffregen
Consultant Planner, Land Use Team

RESOURCE CONSENT DECISION

Resource consent number: RM220547

Pursuant to Section 104B of the Resource Management Act 1991 ("the Act"), the Tasman District Council ("the Council") hereby grants resource consent to:

Andrew John Shepherd

(hereinafter referred to as "the Consent Holder")

Activity authorised: Land use consent to construct a new dwelling in the Rural 3 Zone.

Location details:

Address of property: 105 Redvale Road, Redwood Valley
Legal description: Lot 14 DP 476117
Record of title: 662384
Valuation number: 1938076736
Co-ordinates: Easting: 1606139 Northing: 5428620 (NZTM)

Pursuant to Section 108 of the Act, this consent is issued subject to the following conditions:

CONDITIONS

General

- 1 The activity shall be in accordance with the application submitted, as shown on the approved plans marked Plans A-E RM220547 and dated 1 September 2022 and Tasman Consulting Engineers Limited (TCE Ltd), referenced as 20309 and dated 4 November 2021 and attached to this consent as Appendix 1. Where there is any apparent conflict between the information provided with the application and any condition of this consent, the conditions shall prevail.

Advice Note:

This resource consent is bundled with consent notice variation RM220548.

Domestic Wastewater

- 2 The dwellings shall be connected to a communal wastewater treatment and disposal system installed in accordance with resource consent RM050377.

Colour

- 3 The exterior of the building shall be finished in the following colours:

Part of Building	Finish Material	Colour
Roof	Colorsteel	Ebony LRV 10%
Walls	Colorsteel; Linea Weatherboard	Ebony LRV 10% Moroccan Spice LRV 24%
Joinery	Aluminium	CS Ebony LRV 5%

This condition is imposed to ensure the building colour and finish materials are recessive, non-reflective and merge into, rather than stand out from, the surrounding rural landscape.

- 4 The Consent Holder may use alternative colours provided the prior written approval of the Council has been obtained. In this case, prior to applying for building consent the Consent Holder shall submit to Council's Consent Planner, Richmond for approval the finish materials and colour for all exterior parts of the building.

The following information for each part of the building (including the roof, walls, joinery, decking, water tanks and any other exterior structures as applicable) is required to be submitted:

- (a) Finish material;
- (b) Manufacturer;
- (c) Colour;
- (d) Reflectance value (for paint finish);
- (e) A sample colour chip.

Advice Note:

Contact Council's duty planner for further information on approved hue ranges. As a guide, the Council will generally approve painted roof colours with a reflectance value of $\leq 25\%$ and painted wall colours with a reflectance value of $\leq 50\%$.

Water Supply

- 5 Prior to the dwelling becoming habitable the Consent Holder shall provide:

- (a) a domestic potable water supply of at least 23 000 litres; and
- (b) firefighting water supply from a home sprinkler system that is fitted to a reliable year-round water supply.

As an alternative to (b), the Consent Holder may provide firefighting water supply that is accessible and usable by a fire engine and between 6 and 90 metres from the dwelling that either:

- (i) stores at least 45 000 litres; or
- (ii) is from a source that provides at least 25 litres per second for 30 minutes.

Geotechnical

- 6 The proposed development shall be undertaken in accordance with the recommendations of the Geotechnical Assessment Report by TCE Ltd dated

4 November 2021, attached as Appendix 1, and as indicated in the following conditions. If alternative development elsewhere on the site is proposed, further site investigations should be undertaken.

(a) Foundations

At building consent stage, foundations for the proposed dwelling are to be specifically designed by a suitably qualified engineer familiar with the site and this report due to the soil not meeting the requirements of 'good ground' in accordance with NZS3604:2011. Design soil parameters are given below in Table 4. Foundation design should allow for Class S soil in accordance with AS2870.

(b) Retaining Walls

Retaining walls shall be designed by a suitably qualified engineer familiar with the site, taking into account surcharges and the findings of the TCE Ltd report. Free-draining backfill and drainage pipes should be incorporated into the retaining wall design to minimise the build-up of hydrostatic pressures. Soil parameters given in Table 4 above, can be utilised for the design.

Landscaping

- 7 Amenity planting shall be provided in accordance with the attached Plan E dated 1 September 2022. Planting shall be implemented by 30 November 2023. All planting shall be maintained on an ongoing basis. If any planting dies or is removed, it shall be replaced by the following November.

Advice Notes:

- The Consent Holder shall ensure that landscaping – including (but not limited to) any plantings, paths, decks, fencing, walls and alterations to the ground contour – does not affect stormwater secondary flow paths or overland flow paths. Please note that the land disturbance rules in Chapter 18.5 and the discharge rules in Chapter 36 of the Tasman Resource Management Plan also apply to changing the level of the land.
- The above condition shall not preclude the Consent Holder planting additional plantings, provided that the additional planting complies with all applicable rules of the Tasman Resource Management Plan (other than the rules breached and approved under this consent), the conditions of consent and meets all applicable New Zealand regulations and legislation.

ADVICE NOTES

Council Regulations

- 1 This is not a building consent and the Consent Holder shall meet the requirements of Council with regard to all Building and Health Bylaws, Regulations and Acts.

Other Tasman Resource Management Plan Provisions

- 2 This resource consent only authorises the activity described above. Any matters or activities not referred to in this consent or covered by the conditions must either:
1) comply with all the criteria of a relevant permitted activity rule in the Tasman Resource Management Plan (TRMP); 2) be allowed by the Resource Management Act; or 3) be authorised by a separate resource consent.

Consent Holder

- 3 This consent is granted to the abovementioned Consent Holder but Section 134 of the Act states that such land use consents “attach to the land” and accordingly may be enjoyed by any subsequent owners and occupiers of the land. Therefore, any reference to “Consent Holder” in the conditions shall mean the current owners and occupiers of the subject land. Any new owners or occupiers should therefore familiarise themselves with the conditions of this consent as there may be conditions that are required to be complied with on an ongoing basis.

Archaeological

- 4 In the event of Māori archaeological sites (eg, shell midden, hangi or ovens, garden soils, pit depressions, occupation evidence, burials, taonga) or koiwi (human remains) being uncovered, activities in the vicinity of the discovery shall cease. The Consent Holder shall then consult with Heritage New Zealand’s Central Regional Office (PO Box 19173, Wellington, phone (04) 801 5088, fax (04) 802 5180), and shall not recommence works in the area of the discovery until the relevant Heritage New Zealand approvals to damage, destroy or modify such sites have been obtained.

The discovery of any pre-1900 archaeological site (Māori or non-Māori) which is subject to the provisions of the Heritage New Zealand Pouhere Taonga Act 2014 needs an application to Heritage New Zealand for an authority to damage, destroy or modify the site.

Monitoring

- 5 Monitoring of this resource consent will be undertaken by the Council as provided for by Section 35 of the Act and a one-off fee has already been charged for this monitoring. Should the monitoring costs exceed this fee, the Council reserves the right to recover these additional costs from the Consent Holder. Costs can be minimised by consistently complying with conditions, thereby reducing the necessity and/or frequency of Council staff visits.

Interests Registered on Property Title

- 6 The Consent Holder should note that this resource consent does not override any registered interest on the property title.

Construction Times and Noise from Construction Work

- 7 Construction work may only take place between 7.30 am and 6.00 pm from Monday to Saturday. There shall be no works on Sundays or public holidays. The restriction on hours of works shall not apply to low noise-generating activities, such as site set-up or staff meetings, which may occur outside of these hours provided they are generally inaudible off-site. The noise from any construction work activity must be measured and assessed in accordance with the requirements of New Zealand Standard NZS6803:1999 Acoustics – Construction noise.

REASONS FOR THE DECISION

Proposed Activity

Resource consent is sought to construct a 211 square metre, three-bedroom dwelling in the Rural 3 Zone. The building will be located within the specified building location area (BLA).

The 3051 square metre corner site is located within the Galeo Estate subdivision, which was granted consent in 2006 and has been developed for residential purposes.

The property will be connected to the Redwood Valley Water Scheme and is located within a residential subdivision with all adjoining sites being used for residential purposes. The site slopes east to west from Redvale Road to the building platform and is currently vacant.

Resource consents RM050370, RM050405, RM050375, RM050377, RM050378 apply to the site. A resource consent for the construction of dwellings RM050405 was granted at the time of subdivision RM050370. The land use consent lapsed in 2015. However, most of the conditions from that land use consent were replicated on the consent notice registered on the title for the subject site, and includes landscape plan, architectural design materials and colours, height, bulk, scale and location, lighting, fencing, earthworks and site certification, water storage, wastewater, stormwater and car parking conditions. The site is serviced by a communal wastewater system as per RM050377V3.

The consent notice registered on the record of title has been varied under RM220548, which is bundled with this resource consent. Building Consent BC220230 has been granted and issued for the proposed development.

Tasman Resource Management Plan ("TRMP") Zoning, Area, and Rules Affected

According to the TRMP the following apply to the subject property:

Zoning: Rural 3
Areas: Wastewater Management Area; Land Disturbance Area 1

The activity authorised by this consent does not comply with TRMP Permitted Activity Rule 17.7.3.1(b) (new dwelling in the Rural 3 Zone) and is assessed as a Controlled Activity in accordance with Rule 17.7.3.2(a) of the TRMP.

As the consent is bundled with consent notice variation RM220548, this activity is overall deemed an Innominate Discretionary Activity.

Principal Issues (Actual and Potential Effects on the Environment)

The relevant matters are listed below:

- (a) Rural 3 matters - the location of the building on the site and the effects on the potential availability of productive land and effects on the amenity values of the area, including landscaping and the colour, materials and surface treatment of buildings and the potential impact for existing productive activities to be adversely affected by complaints from new residential activities arising from adverse cross-boundary effects.
- (b) Effects of access and services.
- (c) Geotechnical matters.

It is considered that the application is able to be granted for the following reasons.

Rural 3 matters

- (a) The dwelling will be 4.4 metres in height and complies with all required TRMP setbacks for the zone. The dwelling has been architecturally designed and is of similar size and design as the surrounding dwellings within the Galeo subdivision.

The dwelling complies with specified development controls within the TRMP and will not create any direct adverse effects on adjoining landowners or any wider amenity impacts on the surrounding environment.

Condition C of the consent notice (CN) requires the Applicant to provide details of building design, landscaping and colour schedule at building consent stage. These plans and details were provided to Council for the building consent BC220230 and the proposed development is deemed to meet these consent notice conditions.

Access and Services

- (b) The dwelling will have a vehicle crossing and access compliant with Nelson Tasman Land Development Manual (NTLDM) standards. The right of way (ROW) on the southern boundary of the site is not classed as a 'legal road' and therefore the 10-metre setback from the road boundary does not apply on this boundary. The proposed dwelling will be connected to the reticulated wastewater system available at the site boundary, and potable water will be supplied via the Redwood Water Scheme. The dwelling will also be fitted with a rainwater collection system that can be connected to the 25,000L potable water storage tank in order to supplement potable water supply.

Any stormwater overflow will be directed away from the building platform as per Condition J of the Consent Notice. The site will be provided with 1x 25,000L tank for potable water and 2x 25,000L tanks for firefighting purposes. It is noted that the potable water tank is located outside of both the 2 metre and 3 metre special setback zones, with the tank located in an area with certified fill. Landscaping will be established around all water tanks to screen these from view. The firefighting water tanks will be partially buried to a depth of 500mm, which complies with Condition C of the Consent Notice 9848633.2.

Geotechnical Matters

- (c) The existing building location area (BLA) was formed via extensive earthworks, and at RL 67.6 metres, again underwent alterations carried out by the previous landowner in 2016. The building platform was then lowered approximately 0.7 metre to RL66.9 metres and the upper slope was battered back and benched. Prior to carrying out any building works on the site, the property was sold to the applicant, in 2019.

The current owner engaged Tasman Consulting Engineers Limited (TCE Ltd) to investigate and certify the raising of the BLA of the site by 1 metre in 2021. The existing site contains areas that require Specific Investigation and Design (SID Zone) by a Chartered Professional Engineer. Minimum setbacks have been specified from the toe of the cut batter (2m) and from the top of the batter slope (3m). The assessment of the foundation design is part of the associated Building Consent.

Council's Resource Scientist – Hazards has assessed the proposal stating that:

"The TCE Ltd Geotech report (4 November 2021) and accompanying email annexure (23 March 2022) covers the geotechnical issues around the location of the proposed building. It concludes that the site is suitable for the proposed building provided the foundations are Specifically Investigated and Designed (SID) by a chartered professional engineer with experience in foundation design.

In terms of the resource consent this is sufficient to allow the granting of consent (from a geotechnical perspective). The BLA specified in the CN seems overly large

compared to the identified building area in the TCE report. The net result is that the proposed building is well inside the BLA.”

I accept this assessment.

Relevant Statutory Provisions

In considering this application, I had regard to the matters outlined in Section 104 of the Act. In particular, I had regard to the relevant provisions of the following planning documents:

- (a) the Tasman Regional Policy Statement (TRPS); and
- (b) the Tasman Resource Management Plan (TRMP).

Most of the objectives and policies contained within the TRPS are mirrored in the TRMP. The activity is considered to be consistent with the relevant objectives and policies contained in Chapters 5 (Site Amenities Effects), 7 (Rural Environment Effects), 9 (Landscape) and 11 (Land Transport Effects) of the TRMP.

Part II Matters

I have taken into account the relevant principles outlined in Sections 6, 7 and 8 of the Act and it is considered that granting this resource consent achieves the purpose of the Act as presented in Section 5.

Notification and Affected Parties

The adverse environmental effects of the activity are considered to be no more than minor. The Council's Principal Planner Resource Consents has, under the authority delegated to them, decided that the provisions of Section 95 of the Act have been met and therefore the application has been processed without notification.

Conclusions and Recommendations

The approval of this consent by non-notified procedures is therefore recommended for the reasons provided above and subject to the conditions in the resource consent to which this report is attached.



Ina Holst-Stoffregen
Consultant Planner, Land Use Team

Peer Review

The above recommendation and report have been peer reviewed on behalf of Tasman District Council by:



Bill Harrington
Senior Consultant Planner – Land Use Team

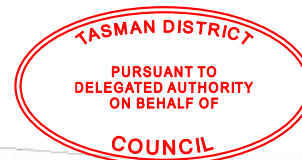
Decision

The recommendation is accepted and this consent is hereby granted on 1 September 2022 under delegated authority from the Tasman District Council by:

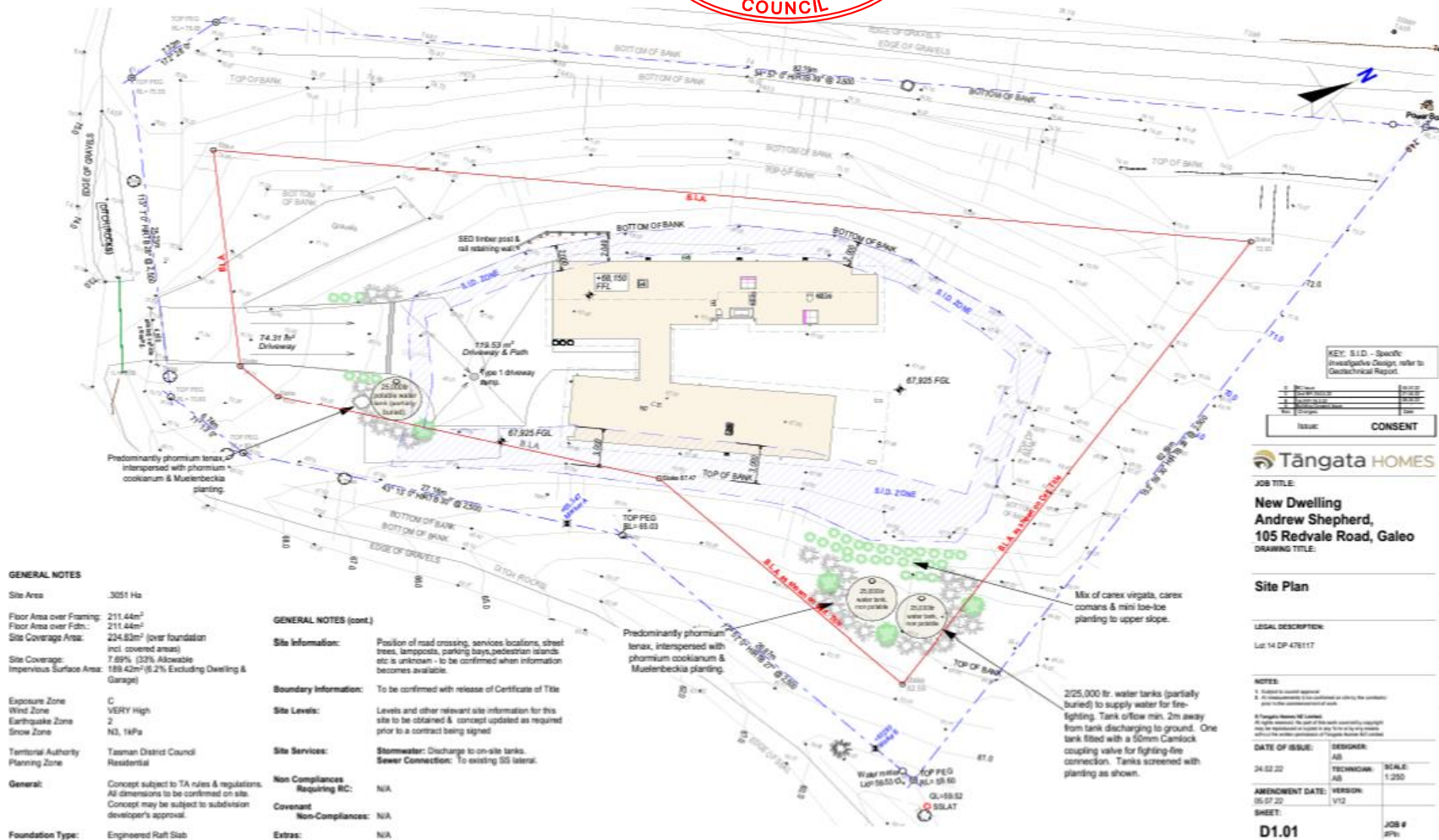


Katrina Lee
Resource Consents Manager

Free



Plan A RM220547 dated 1 September 2022





Notes

		
Total area (lower frame):		211.1Ain ²
Total area (upper foundation):		211.1Ain ²
Additional coverage area:		23.30m ²
Wind zone:	Very High	
Earthquake zone:	2	
Exposure zone:	C	
Snow loading:	NO	
All walls load internally with 15mm GIB board, stepped to a F4 flat quality finish. GIB Standard to non-wet areas. GIB Standard to wet areas. GIB Brucellac as per exterior plan.		
Building work to all exterior walls to be Thermastar Thermalwrap Plus, openings to be framed with Alumatic flexible flashing tape, refer details.		
Personal maintenance to allow for double stairs to either side of doors where practical to accommodate 30mm architraves.		
Bathroom Shower:	Tiled walls & base.	
Ensuite Shower:	Tiled walls & base.	
Both walls glass screens in accordance with NZS4223. Floor fixings to all wet areas to be as shown.		
Artificial lighting to be provided to achieve min. 20 lux in all access rooms. Refer to NZBC GBAS1 Table 1 for the min. wattage required per m² of floor area to achieve 20 lux.		
Kitchen to have interior linings & work surfaces that are impervious & easily cleaned. All building elements are to be constructed with materials which are free from hazardous substances which could cause contamination to building contents in accordance with NZBC C. 03.3.1.2. Rangeshood installed depth over hob/s vented to exterior providing min. 50% flow rate in accordance with NZBC G4.3.3.2.		
Kitchen layout is shown indicatively only, refer to kitchen design for further detail. Bench depths have been drawn at 600mm deep unless noted otherwise. If dimensions of kitchen or kitchen window placement are critical, please add Latitude Height Notes or Flat cut, can revise kitchen layout to suit kitchen design by others.		
Any intended access to the building to be constructed of either profile timber decking with the profile laid perpendicular to the access or concrete with a brown finish (Class 5 or 6 or worst flat finish concrete). Absorbent or other material with a tested wet slip co-efficient of not less than 0.4 when tested against D19/M1 of the NZBC. Provide slip at all access points with max. rise of 180mm & min. tread depth of 300mm.		
Any window or door size given on this plan is unit size NOT the frame size & is the format of hinge & width.		
Legend:  Indicates battery operated hush button smoke alarm, alarm to smoke, alarm to be installed on the ceiling, positioned so the test button is readily accessible.  Smoke alarm positioning for flat ceiling.  Ceiling Smoke alarm Dead air space Wall mounts is acceptable only when ceiling mount is not possible.		

Legend (continued):

Indicates standard wall framing for exterior walls or internal load bearing walls. 90x45 SGB m1 2, 2.4m studs @ 400mm c/c with two rows of cleads (internal walls @ 400 mm c/c)

Indicates standard wall framing for interior non-load bearing walls. 30x45 SGB m1 2, 2.4m studs @ 400mm c/c with two rows of cleads for all wind zones as per NZS3604:2011 Table 6.2

Indicates roof space access hatch, 600 x 600mm min.

Legend (continued):

All door sizes noted on layout plan are leaf sizes:

- 880 opening = door size + 2 x 30mm jambs + 30mm oil adjustment

Internal door trim sizes - unless noted otherwise on the plans, all internal door openings shall have the following trimmed opening heights in mm from FFL:

- hinged doors and sliding doors = 2040
- casily sliders = 2060
- ac-casily slider and slider door opening widths need to be 2 x the width + 30mm, eg. 2 x 710 doors plus 30mm = 1450mm opening.

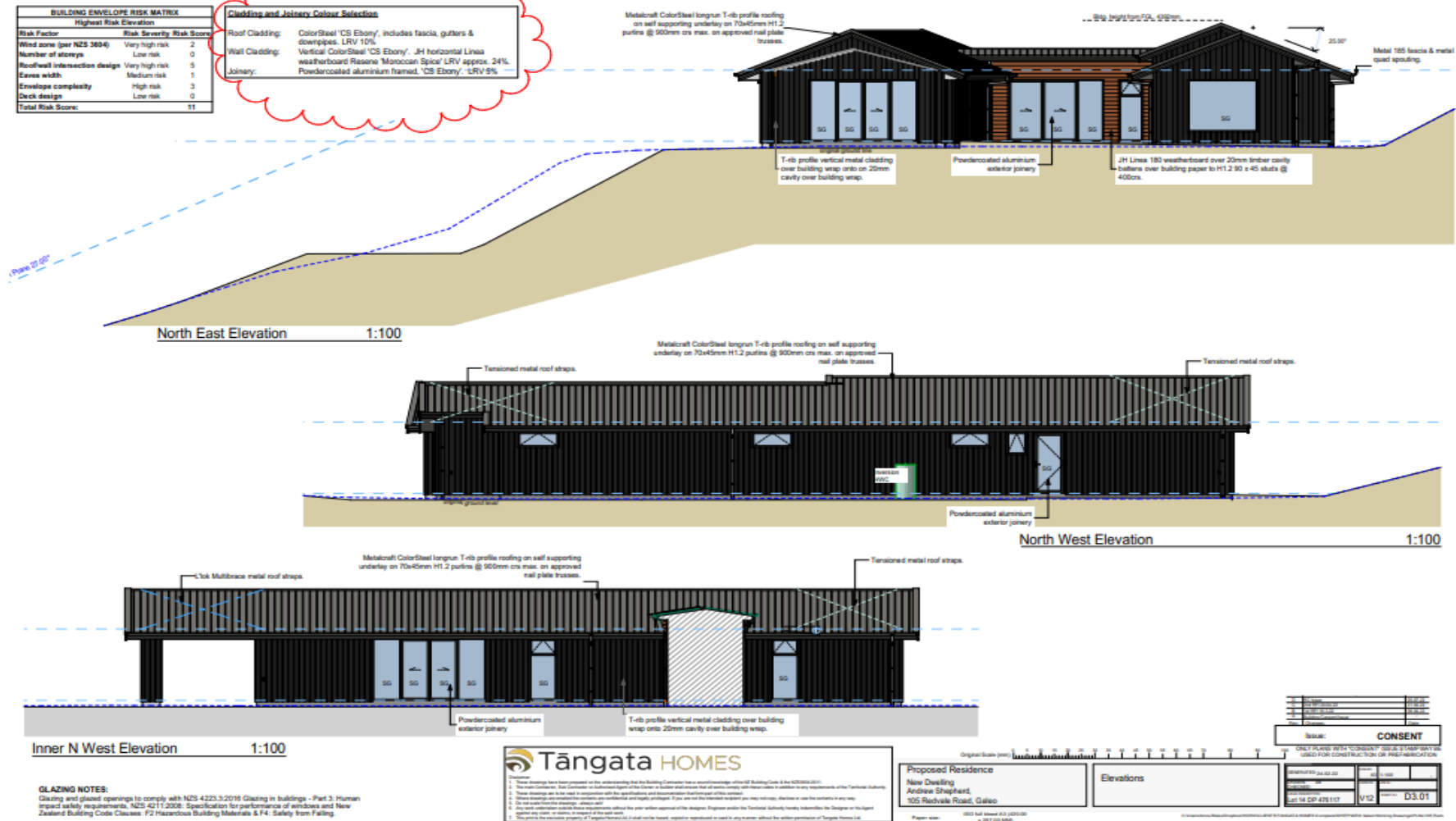
Indicates Mamrose EL100S extractor fan, refer A0



Free

TASMAN DISTRICT
PURSUANT TO
DELEGATED AUTHORITY
ON BEHALF OF
COUNCIL

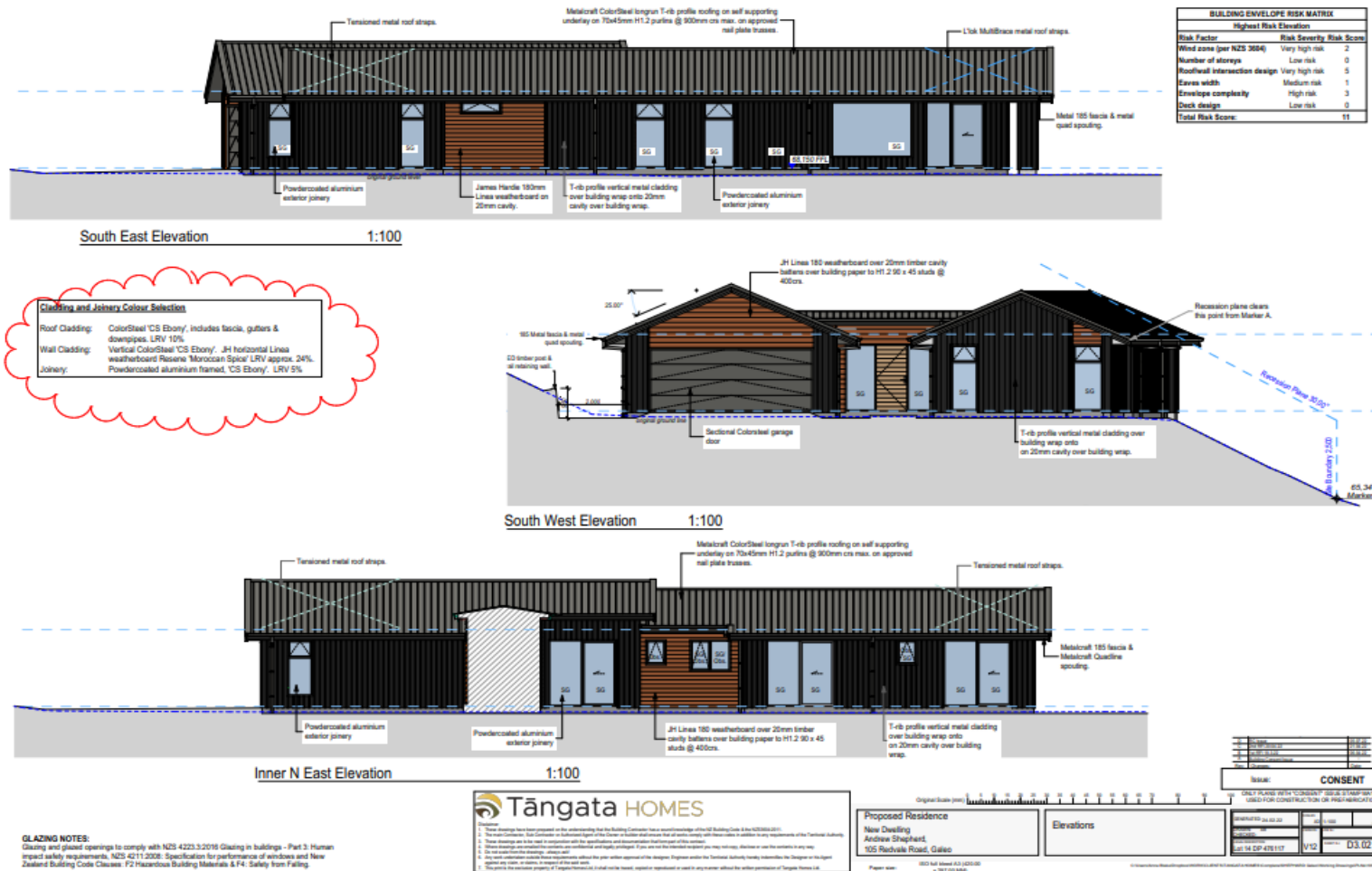
Plan C RM220547 dated 1 September 2022



Free



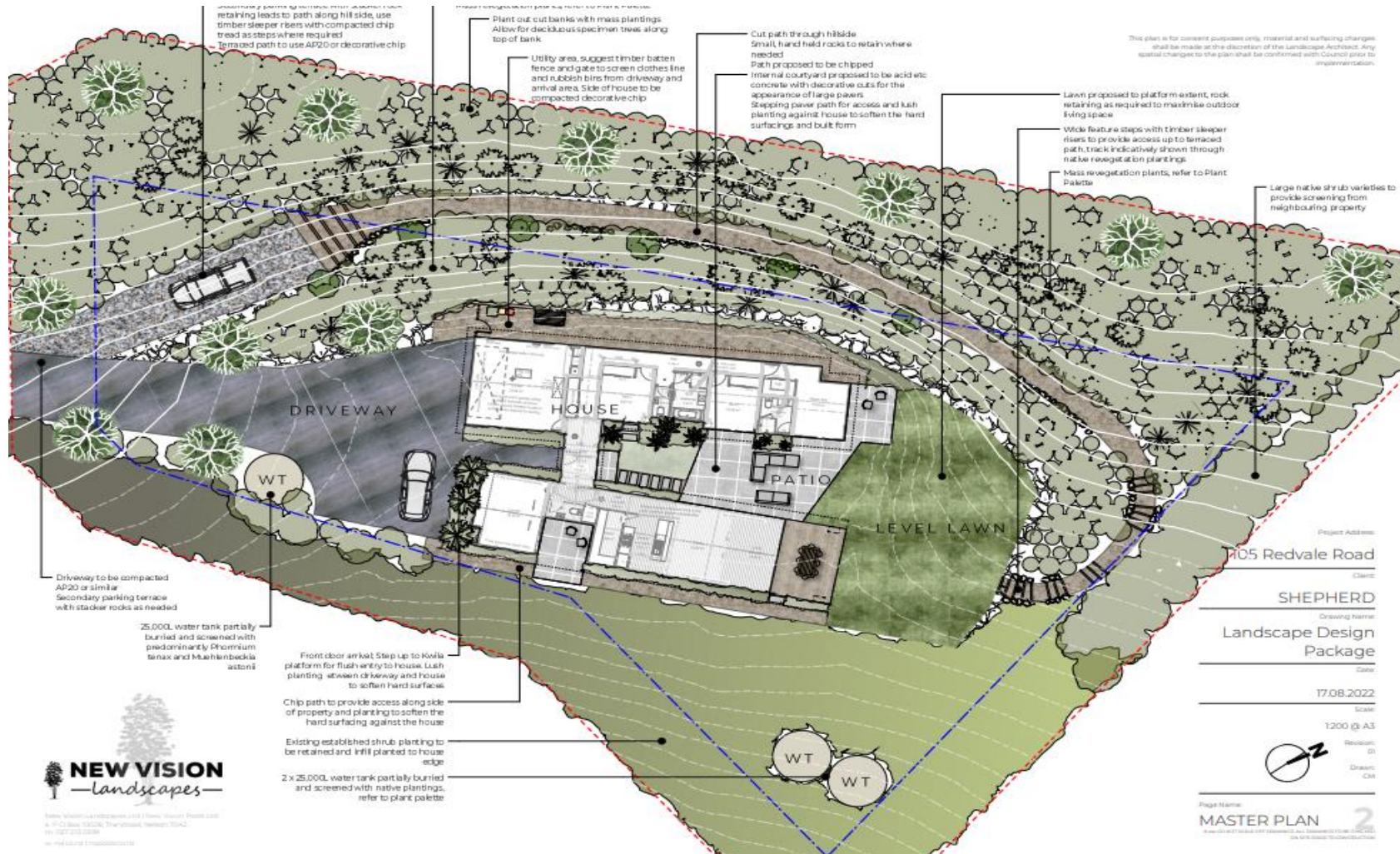
Plan D RM220547 dated 1 September 2022



Free



Plan E RM220547 dated 1 September 2022



**Appendix 1 Geotechnical Assessment for RM220547 – Recommendation and Site Plan
(Pages 1-5; for the complete version of this report refer to the copy held by Council)**

BC 220230

TASMAN DISTRICT COUNCIL - APPROVED

26/04/2022



File Ref: 20308

4th November 2021

Andrew Shepherd
105 Redvale Road
Redwood Valley
NELSON 7081

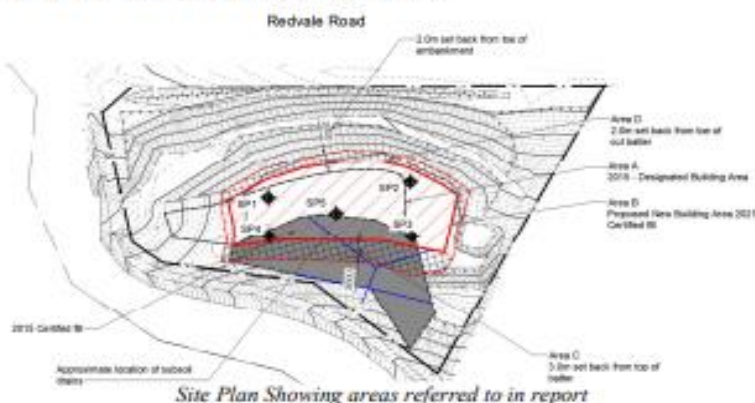
**BUILDING LOCATION AREA ALTERATIONS – ANDREW SHEPHERD –
105 REDVALE ROAD, REDWOOD VALLEY**

Tasman Consulting Engineers Limited (TCEL) was engaged by Andrew Shepherd to investigate and certify the raising of the existing Building Location Area at 105 Redwood Valley Rd, Redwood Valley. The legal description of the property is Lot 14 DP 476117.

Background

TCEL previously issued a Geotechnical Completion Report – Utopia Lifestyles - Galeo Estates for Lot 14 - Appleby Hills, Nelson, 11th March 2015. The 2015 building platform at RL 67.6m underwent alterations by the owner Mareen Black in 2016. The building platform was lowered approximately 0.7m to RL66.9m (approx.) and the upper slope was battered back and benched. Prior to carrying out the building works the property was on-sold to Andrew Shepherd in 2019.

The area designated A on Lot 14 in the attached site plan is the original Designated Building Area formed by cut and fill. The Geotechnical Completion Report prepared by Tasman Consulting Engineers on the 11th of March 2015 designated the BLA as a SID - *foundations would need to be specifically investigated and designed. Refer to attached report Geotechnical Completion Report March 2015*



Ron O'Hara BE (Civil) MIPENZ

David King ME (Civil) MIPENZ CPEng IntPE

PO Box 3631, Richmond
Nelson 7050, New Zealand

Phone +64 3 544 6404

Fax +64 3 544 6694

Email admin@tcel.co.nz



Fig 1. Site photo pre works 2020 – looking south-west (18/12/2020)

Scope of works

The scope of the works was to raise the overall level of the building platform by approximately 1.0m. Fill soil was to be sourced onsite from cut batter slopes on the western and northern batter slopes.

Tasman Consulting Engineers Limited (TCEL) was engaged to supervise and certify excavations and filling and confirm a new BLA. Tasman consulting Engineers undertook four inspections of the bulk earthworks on this site over the period 15th of March to the 26th of March 2021. The contractor was Gary Claire Contracting.

Stripping

Topsoil and organic material was stripped from batter slopes and building platform to a depth of approximately 100 mm and stockpiled exposing medium to light orange Silty gravelly CLAY.



Fig 2. Site photo – looking north (15/03/2021)

TCEL inspected and approved the stripped area, confirming the soil strength using Scala penetrometer.

Filling

Fill was site won gravelly CLAY from the batter slopes to the west and north of the site.

Fill was laid in layers by a digger and was compacted in 100-200 mm lifts using a 2.5T self-powered vibrating drum roller. TCEL sighted and approved the filling throughout the works and at completion.

The finished platform was raised approximately 1.0m to RL 67.9m.

Batter slopes to the western and northern boundary lines were trimmed back to maintain slopes of 1v:2h and batter slopes on the eastern batter (fill) were maintained to 1v:2h.

Scala penetrometer testing by Tasman Consulting Engineers Ltd together with Nuclear Densometer Testing (NDM) testing by Civil Engineering Laboratory Services Ltd was undertaken at intervals during the filling and on the finished surface to check that:

- Fill density was consistent for each lift
- A minimum of 95% of MDD was achieved

Fill depth is approximately 1.0 m depth over the building platform.

Fill Certification of the new BLA area

During the work TCEL and CEL staff made periodic visits of inspection to the site as detailed above. On the basis of these inspections, it is my opinion that the bulk filling shown in Figure 3 below and the attached drawing 20308-S1 dated 01-11-2021 has been placed in accordance with NZS4431:1989 and complies with the bearing strength requirements of NZS3604:2011.

In my opinion the following limitations should be observed:

- No buildings are to be located within 3.0 m of the eastern boundary
- No buildings are to be located within 2.0 m of the northern and western batter toe

This certificate does not remove the necessity for the normal design and inspection of foundations as would be required in natural ground.



Fig 3. Site photo – looking south-east (24/11/2020)

Fill Testing

1. Scala Penetrometer Testing

New BLA area B – FGL

Summary of NZS 3604:2011 Bearing Strength Compliance

SP1	SP2	SP3	SP4	SP5
Pass >300kPa at 360mm -1140mm	Pass >300kPa at 480mm - 1150mm	Pass >300kPa at FGLmm - 1150mm	Pass >300kPa at FGLmm - 950mm	Pass >300kPa at FGLmm 1010mm

It is our opinion that this area is suitable to support foundations for a residential house

2. Nuclear Densometer Testing (NDM) testing - Refer to Appendix B

Specific Investigation and Design (SID) - Area C and D

The geotechnical completion report for Lot 14 by Tasman Consulting Engineers Ltd dated March 2015 made reference to cut and fill slopes on this site.

The recommendations from that report are incorporated into this certification.

The attached Schedule 2A certificate for lot 14 contains limitations related to building offsets from the base of cut and top of fill batters, and requirements for the design of future buildings and foundations. Refer to Attachments

The attached drawings "Designated Building Area Plan" show the designated areas to clarify the effect of the limitations. They have been drawn to show the innermost constraint of the following items:

- The established building platform
- The Land Title covenant restrictions covering building offsets from boundaries
- Offsets from banks or cut slopes as assessed by the 2015 report

Refer to Attachments, Tasman Consulting Engineer Ltd Geotechnical Completion Report 11th March 2015 and Galo Developments Subdivision Maisey Road.

General notes

Options for residential house foundations suitable for use on lot 14 include:-

- Low ground pressure **Rib Raft** floor slabs. Such slabs typically require 150 to 200 kPa ultimate soil bearing strength (cf. 300 kPa required for full NZS 3604:2011 compliance). Use of Rib Raft floors in conjunction with additional layers of compacted hardfill is considered suitable for use on this lot.

- Conventional 'slab on ground' construction will likely require an increase in the width and/or depth of the perimeter foundations to match the bearing strength of the foundation soil. For example a 400mm wide foundation will often reduce the ultimate bearing strength requirement for a brick veneer clad house to under 150 kPa.
- Drilled reinforced concrete or driven timber piles could also be used to support the foundations of conventional 'slab on ground' construction in areas identified as having low soil bearing strength. If the piles are located at approx. 1.5m centres it is not usually necessary to alter the perimeter foundation reinforcing from that required to comply with NZS 3604:2011.

Site Drainage

A swale drain has been formed along the bench above the building pad and the toe of the western batter to alleviate standing water prior to house construction with a permanent swale drain at the toe of the batter along the western to north-west edge of the platform.

Recommendation

It is our opinion not to be construed as a guarantee that the proposed Building Location Area Extensions as shown on the attached site plan, and designated areas A, B & C are suitable for construction of residential buildings provided that foundations are Specifically Investigated and Designed (SID) by a chartered professional engineer with experience in foundation design.

Limitations

This report is furnished to the Tasman District Council and Andrew Shepherd only. It is acknowledged that the council is entitled to provide information contained in this report pursuant to section 217 of the Building Act 2004 and section 44A of the Local Government Official Information and Meetings Act 1987.

Yours faithfully

Tasman Consulting Engineers Limited

Per:

Reviewed:

Approved:



Mark Sommers
NZCE (Civil), REA
Senior Engineering
Technician

Ron O'Hara
BE (Civil), CMEngNZ
Senior Engineer

David King
ME (Civil), MIPENZ, CPEng
Senior Engineer

