

Land Information Memorandum

Application

E D K Flynn 579 Curraghs Road RD 6 Christchurch 7676	No. LM2301859 Application date 08 December 2023 Issue date 08 December 2023
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Property

Valuation No.	2144019504
Location	9 Vaughan Street SEFTON
Legal description	Lot 4 DP 557597
Owner	Emma Dorothy Kate Flynn & Aaron Jamie Flynn
Area (hectares)	0.101900

Rates

Rating Valuation	
Land	\$295,000
Capital Value	\$820,000
Improvements	\$525,000
Date of Last Revaluation	1 July 2022
Current Rates Year 1st July 2023 to 30th June 2024	
Annual Rates	\$3,834.95
Current Instalment	\$958.85
Current Year – Outstanding Rates	\$3,605.39
Arrears for Previous Years	\$258.77
Next Instalment Due	20/02/2024
Note: Rates are charged in four equal instalments for the period commencing 1 July and ending 30 June each year.	

This Land Information Memorandum (LIM) has been prepared for the purposes of Section 44A of the Local Government Official Information and Meetings Act 1987. It contains all the information described in section 44A(2) that is held by the Waimakariri District Council in relation to the land, as at the date above. It is based on a search of the Council's records only and there may be other information relating to the land which is not held by the Council. The records may not show illegal or unauthorised structures or other work on the land.

The Council has not undertaken an inspection of the land or any building(s) on it for the purpose of preparing this LIM. The applicant is solely responsible for ensuring that the land is suitable for a particular purpose. Please consult the Council if you have any questions.

The inclusion or omission of information in or from this LIM does not limit or affect the Council's functions, powers or duties in relation to the land under any statute, regulation, bylaw, policy, or other enactment.

The Council will, upon request, provide additional information about the land. There will generally be an additional fee payable, based on the amount of time required to locate, collate and provide the requested information.

Planning/Resource Management

WAIMAKARIRI DISTRICT PLAN

The Waimakariri District Council is currently undergoing a review of the current District Plan, which was made operative in November 2005. The purpose of the District Plan Review is to review the current provisions of the Operative District Plan (2005) which may include introducing new or amended provisions/zoning to ensure that land use and subdivision in the Waimakariri District continues to be effectively provided for and managed.

The Waimakariri District Council publicly notified the Proposed District Plan on 18th September 2021. To find out more on the Proposed District Plan, its status, and how it applies to your property, please refer to the links below:

Link to the Information on the Proposed District Plan review and its status :

<https://www.waimakariri.govt.nz/planning/district-plan/district-plan-review>

Link to find out the zoning and rules in the Proposed District Plan :

<https://waimakariri.isoplan.co.nz/draft/>

Link to find out the zoning and rules in the Current District Plan :

<https://waimakariri.isoplan.co.nz/eplan/>

23/05/2017 RESOURCE CONSENT RC165152 : CREATION OF 12 RESIDENTIAL ALLOTMENTS THAT WILL NOT BE SERVICED FOR THE DISPOSAL OF WASTEWATER, copy attached. A certificate of conditions was issued 26/05/21, copy attached.

08/01/2020 RESOURCE CONSENT RC195068 : VARIATION TO RESOURCE CONSENT RC165152, copy attached.

No other information located

Land Use on Contiguous Properties

No information located

Building

03/09/2021 BUILDING CONSENT
BC210957 ERECT DWELLING WITH LOG BURNER
AND ATTACHED GARAGE WITH SEPTIC
TANK A Code Compliance Certificate was
issued 28/09/2022, copy attached.

It is recommended that Council records are viewed and compared with the actual structure(s) and activities on site to identify any illegal or unauthorised building works or activities.

Copies of site, floor and drainage plans and elevations are attached.
Gasfitting Certificate, copy attached.

Sewer and Water

Sewer No Council service available.
Environment Canterbury resource consent CRC170607, copy attached.

Water Water Available - HURUNUI WATER – plan attached.

Water rates for this property are included in the rates charged by the Waimakariri District Council. For water supply or service information please contact the Hurunui District Council.

A full chemical analysis of the water supply for this property is available at the following link : <https://www.hurunui.govt.nz/roading-water/water/watertestingreports>.

Where Council services are located within a property boundary, they may not be built over and appropriate separation distance by any future development must be maintained. If a buildover is considered unavoidable, Council's Three Waters team must be contacted to discuss the design prior to any resource or building consent being lodged for the site.

No other information located

Land and Building Classifications

Heritage Site Reference: No Information Located.

Refer to copy of map from District Plan for other classifications in the immediate vicinity.

Compliance with The Building (Pools) Amendment Act 2016

There is no swimming pool or spa pool registered on this property. If there is a swimming pool please go on-line and register it at <https://waimakariri.govt.nz/building-services/swimming-pool-registration>. A Council representative will then contact you to arrange an inspection of the pool and any associated barriers (fencing). If there is a spa pool please check first at <https://www.waimakariri.govt.nz/building-services/i-want-to-build-a.../swimming-and-spa-pools> to determine if it needs to be registered.

Swimming pools must be fenced as required by The Building (Pools) Amendment Act 2016. Owners are advised that an inspection of the swimming pool fencing is mandatory every 3 years to ensure its ongoing compliance with The Building (Pools) Amendment Act 2016.

Vehicle Crossing Requirements

The installation of vehicle crossings is the responsibility of the owner of the property to be accessed; vehicle crossings may not be constructed or Council roading assets (e.g., footpaths, kerb ramps, street trees) impacted without an approved Vehicle Crossing Permit. For further information refer to the Council's Vehicle Crossing Information Pack in the following link:
https://www.waimakariri.govt.nz/_data/assets/pdf_file/0024/3894/QP-C289-AE-Is-10-Vehicle-Crossing-Information-Pack-Complete-Updated-July-2022.pdf

Special Land Features

Wind Zone	High
Earthquake Zone	2
Snow Load Zone	4
Other	No Information located

Licences/Environmental Health

No Information located

Network Utility Operators

Contact Mainpower for power availability.
Contact Chorus for phone availability.

Other Information

Lot 4 Soil Bearing Investigation from Constructure, copy attached.

Combined Geotechnical, Soakage and Preliminary Site Investigation from EDC , copy attached.

Environment Canterbury may hold information on natural and physical resources that may be relevant to a property. Information on obtaining a Land Information Report can be found at <https://www.ecan.govt.nz/do-it-online/property-information/land-information-requests/what-is-included-in-a-lir/>

The Listed Land Use Register (LLUR) is a database that Environment Canterbury uses to manage information about land that is or has been associated with the use, storage or disposal of hazardous substances. Further information on the LLUR can be found at <https://www.ecan.govt.nz/your-region/your-environment/hazardous-land-use/listed-land-use-register/>

Environment Canterbury has had a report undertaken on the general distribution and characteristics of active faults and folds in the Waimakariri District. We advise you to refer to Environment Canterbury for more information.

The Council has completed a hazard assessment for the District. This includes flood hazard, location of fault lines, areas susceptible to liquefaction, coastal flood depth and tsunami inundation. **People are encouraged to view this information before making a property decision.** Maps and information on natural hazards for the district are available at: <https://arcq.is/0P4Wzn>

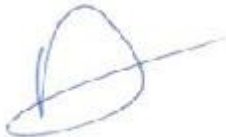
For information regarding Tsunami refer to the Waimakariri District Council's website on the following link:

<https://www.waimakariri.govt.nz/services/emergencies-and-recovery/in-case-of-an-emergency>

Notes

1. Final inspections on buildings were not mandatory prior to 1 January 1993. Should an evaluation of the building be required an independent qualified person should be consulted.
2. Every care has been taken to ensure that the information supplied by the Council on this form is accurate. The Council relies on information available to it, and will not be held responsible for incomplete or inaccurate information provided, or for any errors or omissions made in good faith.
3. Property boundaries shown on the attached copies of computer generated plans are based on the Digital Cadastral DataBase (DCDB). Topographical information shown (for example, buildings etc.) is captured by photogrammetric methods. The accuracy of the two methods of data capture is different and the relationship of buildings to boundaries cannot be relied on.
4. Any enquiry not accompanied by a fee will be invoiced separately. (All prices are GST inclusive.)
5. If a property is cross-leased any building alterations undertaken may affect the lease documents. If this is the case, appropriate resource consents pursuant to the Resource Management Act 1991, and amended Certificates of Title, should be obtained to reflect the correct situation.
6. It is in your interests to locate the boundary pegs by discovery or redefinition before purchasing the property.

7. Property purchasers should ensure particularly with newly constructed dwellings that the vehicle crossing from the road onto the property is fully formed, in accordance with the Councils' specifications. A check can be made with the Customer Services, if any damage is noted, or if the crossing is not completed.
8. Any subdivision or other further development on this property which requires a new connection or an increased level of usage of Council provided services may be subject to the Council's development contributions policy, ie additional charges may be payable. Council services may include water supply, sewerage, stormwater drainage, reserves, roading and community infrastructure.
9. Use of open fires or older-style burners (older than 15 years within the Clean Air Zones) is not allowed. All older style wood burners that do not meet a 1 gram emission standard and are not on the Environment Canterbury authorised list that are 15 years or older can be replaced with a low emission wood burner provided that a building consent is issued by Waimakariri District Council before 31 October 2017. For information regarding domestic fires and wood burners refer to Environment Canterbury's website www.ecan.govt.nz or telephone 0800 324 636.
10. The applicant is advised that this Land Information Memorandum (LIM) covers information held by the Waimakariri District Council. Any relevant information from Environment Canterbury held on Council files has been included. It is in your interest to also request a Land Information Request (LIR) from Environment Canterbury. Further information can be found at www.ecan.govt.nz/services/online-services/property-information.
11. Territorial Authorities have a wide discretion as to the sort of information that is included in the LIM. Section 44A (3) provides that a Territorial Authority may provide in the LIM such other information concerning the land as the authority considers, as its discretion, to be relevant.
12. This Land Information Memorandum does not contain all information held in a property file. Property files may be requested by telephoning the Council's Contact Team on 0800 965 468 or by visiting a Council Service Centre.



Name: _____ Date: 08 December 2023

Signed on Behalf of Council

DIANA WILLETTS – PROPERTY INFORMATION OFFICER



Our Reference: RC165152/ 170524052930
Valuation Reference: 2144019500

24 May 2017

Taylor Homes Limited
C/- Resource Consent Services
2 Campbell Lane
OXFORD 7430

Dear Sir/Madam

**DECISION ON RESOURCE CONSENT APPLICATION
TAYLOR HOMES LIMITED – 32 & 36 PEMBERTONS ROAD, SEFTON**

Please find enclosed a copy of the decision reached by the Plan Implementation Manager under delegated authority from the Council on the above application.

We also enclose information relating to rights of appeal, lapsing of consent (where applicable), and other legal requirements.

Yours faithfully

A handwritten signature in blue ink, appearing to be "John Cook", written over a horizontal line. The signature is stylized and includes a large loop at the top.

John Cook
CONSULTANT RESOURCE MANAGEMENT PLANNER

Encl

Cc:

Taylor Homes Limited
PO Box 578
Rangiora 7440



RC165152/ 170524052930

2144019500

WAIMAKARIRI DISTRICT COUNCIL**IN THE MATTER** of the Resource Management Act 1991**AND****IN THE MATTER** of an application lodged by **Taylor Homes Limited** for a resource consent under Section 88 of the aforementioned Act.**APPLICATION**

The applicants sought a resource consent for the creation of 12 residential allotments ranging in net area from 800m² (Lot 10) to 1131m² (Lot 9) that will not be serviced for the disposal of wastewater.

Access to Lots 8 and 9 will be via a shared right of way. All the other new allotments will have direct access onto either Pembertons Road, Cross Street or Vaughan Street that collectively surrounds the subject property on three sides.

Lot 10 will contain the existing dwelling and associated accessory buildings.

Lots 13 and 14 are to be corner splays (being 18m² each) located at the two street intersections with Cross Street.

The proposed development is contained on the survey application plan prepared by Scandlyn Surveying Ltd. (File ref: 1605 R1).

DECISION

The Plan Implementation Manager, on the 23rd May 2017 approved:

THAT pursuant to Section 104B of the Resource Management Act 1991, consent be granted to subdivide Pts RS 6675 (CT's CB232/116 & CB654/20) into Lots 1 - 14 at 32 & 36 Pembertons Road, Sefton, as a non-complying activity, subject to the following conditions which are imposed under Section 108 of the Act:

1. Except to give effect to the following conditions, the activity shall be carried out in accordance with the attached approved application plans.

2. **Standards**

2.1 All stages of design and construction shall be in accordance with the following standards

(and their latest amendments) where applicable:

Waimakariri District Council Standards

- Waimakariri District Council Engineering Code of Practice.

Other Standards

- NZS 4404 - Urban Land Subdivision
- NZS 4431 - Earth fill for Residential Development.

3. Easements

- 3.1 All services, including open drains, access ways and water pipelines serving more than one lot or traversing lots other than those being served and not situated within a public road or proposed public road, shall be protected by easements. All such easements shall be granted and reserved. This shall also include the shared private stormwater pipework network in favour of Lots 1, 2, 10, 11 and 12 that will discharge into the Cross Street swale.

4. Power and Telephone Connections

- 4.1 An appropriate network utility operator(s) at the consent holder's expense shall provide underground electrical and telephone reticulation to the main body of Lots 1 – 9, 11 and 12
- 4.2 The consent holder shall provide written evidence from the relevant authority(ies) that the required service reticulation has been installed into Lots 1 – 9, 11 and 12 in accordance with their respective requirements.

5. Stormwater - Dwelling Detention tanks.

- 5.1 The consent holder shall install a stormwater detention tank(s) on each of Lots 1-12 inclusive to restrict the stormwater outflow collected from impervious roof areas. The storage shall provide hydraulic neutrality for 1:10 year and 1:50 year storm events up to storm durations of 24 hours. These stormwater detention tanks shall be sized according to the following table based on roof and hardstand impervious areas:

Roof area (m ²)	Drive (m ²)					
	50	70	90	110	130	150
300	4.3	4.5	4.8	5.0	5.8	6.5
	8.8	9.0	9.3	9.5	9.7	10.0
275	4.0	4.2	4.5	5.0	5.7	6.4
	8.1	8.3	8.6	8.8	9.1	9.5
250	3.7	3.9	4.1	4.9	5.6	6.4
	7.4	7.7	7.9	8.1	8.4	8.4
225	3.4	3.6	4.1	4.8	5.5	6.4
	6.7	7.0	7.2	7.5	8.2	9.4
200	3.0	3.3	4.0	4.7	5.5	6.9
	6.1	6.3	6.5	7.0	8.1	10.0
175	2.7	3.2	3.9	4.6	5.9	x
	5.4	5.6	5.9	6.9	8.6	x
150	2.4	3.1	3.8	5.0	x	x
	4.7	4.9	5.7	7.2	x	x

Cells indicate minimum storage volume required for 10yr ARI Storm
 Cells indicate minimum total storage volume required for 50yr ARI event
 Cells marked 'x' indicate the roof + drive areas are not acceptable

(Note: The scenarios indicated in the table above are to provide options for

detention tank sizing based on various sized lots and potential house/driveway impervious areas. These have been modelled for 10 year and 50 year ARI storm events (based on NIWA Hirds 3 intensity rates +16% to allow for climate change) to determine runoff flowrates and detention tank sizing to ensure that the existing flowrates off the site are maintained.

- 5.2 Each dwelling detention tank shall be fitted with two outlets with restricted orifices; one for each of the 10 year and 50 year storm event flows, and a further unrestricted overflow with the discharges being to the road-side swales. (Note: The restricted orifice sizing shall be determined at building consent stage depending on tank dimensions).
- 5.3 An Operation and Maintenance Manual shall be provided for each detention tank installed on Lots 1 - 12 inclusive. This manual shall include at least those matters as contained in Section 5.2.4 (*Tank Maintenance*) in the EDC Engineering Design Consultants report prepared for this development having the reference 46029.SW Rev E. and dated 28 March 2017.
- 5.4 The consent holder shall submit to Council for approval detailed engineering plans and calculations for any stormwater detention tank to be prepared by a Chartered Professional Engineer prior to any building works commencing on-site.
- 5.5 Conditions 5.1 - 5.4 inclusive shall be subject to a Consent Notice pursuant to Section 221 of the Resource Management Act 1991 to be registered on the Certificates of Title/Computer Freehold Registers for Lots 1 - 12 ensuring that these conditions are met at the time of establishing any building on the lots.
- 5.6 Notwithstanding Condition 5.5, Conditions 5.1 – 5.4 are required to be met prior to the issue of a s.224(c) certificate for Lot 10, in relation to the buildings remaining on Lot.

6. Stormwater – Right of Way Detention & Additional Stormwater Lateral

- 6.1 The consent holder shall install a catch pit and an in-ground storage tank to collect the stormwater run-off from the right of way this is to serve Lots 8 and 9. This detention system shall discharge to the Cross Street swale.
- 6.2 The consent holder shall install a shared private stormwater lateral to a bubble-up chamber in the Cross Street swale to discharge primary stormwater collected from Lots 1, 2, 10, 11 and 12.
- 6.3 The consent holder shall submit detailed engineering plans and calculations prepared by a Chartered Professional Engineer to Council for approval in writing, prior these works commencing on-site.

7. Stormwater - Roadside swales

- 7.1 The consent holder shall widen the existing roadside swales along Pembertons Road and Cross Street to cater for the effects on existing flows resulting from this development.
- 7.2 The roadside swale along Pembertons Road alongside the subject property shall have a maximum batter slope of 1:4 (Vertical:Horizontal) on the roadside, and a maximum batter slope of 1:2 (Vertical:Horizontal) on the property side. The battered slopes steeper than 1:4 are required to be planted for ground stabilisation and maintenance purposes.

- 7.3 The roadside swale along Cross Street shall also meet the above requirements except in cases where the existing batter slope exceeds the above.
- 7.4 Where the proposed swale formation along the road frontage of Lots 1, 2, 10, 11 and 12 is located on private property, the lot owners shall ensure that the swale is adequately maintained, not backfilled, and remains clear to convey stormwater flows.
- 7.5 Condition 7.4 shall be subject to a Consent Notice pursuant to Section 221 of the Resource Management Act 1991 to be registered on the Certificate of Title for Lots 1, 2, 10, 11 and 12 ensuring that this condition is being complied with on an ongoing basis.
- 7.6 A stormwater easement in favour of Council shall be granted where the proposed swale formation along the road frontage of Lots 1, 2, 10, 11, and 12 is located on private property. This condition shall be confirmed prior to the Council granting any Section 223 approval.
- 7.7 The consent holder shall form a grassed swale along the Vaughan Street frontage of Lots 3, 4, 5 and 6.
- 7.8 The consent holder shall submit detailed engineering plans and calculations prepared by a Chartered Professional Engineer to Council for approval in writing, prior to any of the upgrading swale works commencing.
- 7.9 The consent holder shall provide written evidence from MainPower that their existing infrastructure has not been compromised by the forming/upgrading of the various roadside swales.
- 7.10 The consent holder shall provide a written proposal to the Council, prepared by a Registered Arborist, on how the two existing street trees in the Pembertons Road berm alongside the subject property will be managed as part of the swale widening so to ensure their continued survival.

8. Stormwater - Drainage network upgrade

- 8.1 The consent holder shall at his/her cost upgrade the existing roadside drainage channel along the Cross Street frontage of the proposed Lots 6, 7 and 12.
- 8.2 The consent holder shall submit in respect of this requirement detailed engineering plans and calculations, prepared by a Chartered Professional Engineer, to Council for approval prior to any works commencing on site.

9. Stormwater – Secondary flow paths

- 9.1 The consent holder shall, at their expense, form a cut-off drain and bund inside the northern boundary off the proposed Lot 3 to convey secondary flow to the new Vaughan Street swale.
- 9.2 The owner of Lot 3 shall ensure that this cut-off drain is not backfilled and the drain integrity is maintained on an ongoing basis.
- 9.3 Condition 9.2 shall be subject to a Consent Notice pursuant to Section 221 of the Resource Management Act 1991 to be registered on the computer freehold register for Lot 3 ensuring that this condition is being complied with on an ongoing basis.
- 9.4 The consent holder shall submit in respect of this cut-off drain and bund detailed engineering plans and calculations, prepared by a Chartered Professional Engineer, to Council for approval in writing, prior to any on-site works commencing.

10. Stormwater - Culverts

- 10.1 The consent holder shall install new culverts where vehicle crossings are required to be installed across the roadside swales.
- 10.2 The consent holder shall in respect of this culvert requirement submit detailed engineering plans and calculations prepared by a Chartered Professional Engineer to Council for approval in writing, prior to any on-site works commencing.

11. Property Boundary Fencing

- 11.1 Any solid property boundary fences, or similar structures, established on Lots 1 - 12 inclusive shall include a 100mm minimum high clear gap along the bottom edges of such fences and structures to allow shallow flood water to flow unimpeded across the site.
- 11.2 Condition 11.1 shall be subject to a Consent Notice pursuant to Section 221 of the Resource Management Act 1991 to be registered on the computer freehold registers for Lots 1 – 12.

12. Vehicle Crossings

- 12.1 The consent holder shall at their expense form and seal the vehicle crossings/access to the right of way serving proposed Lots 8 and 9, and also the vehicle crossings/access to the proposed Lots 1, 2 and 10; to accord with Council's Standard Drawing 600-211D Issue D. The formation shall in each of these situations include a culvert pipe(s) as required by Condition 10.
- 12.2 The consent holder shall at their expense form and seal the vehicle crossings/access to Lots 3, 4, 5 and 6 off Vaughan Street and shall include a minimum of two 300mm diameter culverts, laid at 3% grade, to convey water flow in the swale with a corresponding 50-100mm sag curve in the crossing surface located above these culverts.

13. Right of Way

- 13.1 The consent holder shall form and seal the right of way serving Lots 8 and 9 to accord with approved engineering plans.
- 13.2 The right of way shall include a minimum of 3.3m³ of stormwater detention in a buried detention tank as specified in Condition 6.
- 13.3 The consent holder shall submit to Council for approval in writing for these works detailed engineering plans and calculations, prepared by a Chartered Professional Engineer, prior to works commencing on-site.

14. Minimum Dwelling Floor Levels

- 14.1 The minimum floor level of any dwelling erected on Lots 1, 2 and 4 - 12 shall be set at 400mm above the finished ground level following the bulk site re-contouring works.
- 14.2 The minimum floor level of any dwelling erected on Lot 3 shall be set at 420mm above the finished ground level following the bulk site re-contouring works.
- 14.3 Condition 14.1 shall be subject to a consent notice to be registered on the computer freehold registers of the proposed Lots 1, 2 and 4 - 12. This consent notice shall ensure that this condition is being complied with at the time of establishing any new dwelling on

the Lots 1, 2 and 4 - 12.

- 14.4 Condition 14.2 shall be subject to a consent notice to be registered on the computer freehold register of the proposed Lot 3. This consent notice shall ensure that this condition is being complied with at the time of establishing any new dwelling on the Lot 3.

15. Roading

- 15.1 The consent holder shall at their cost upgrade Vaughan Street to cater for this subdivision development. This upgrade shall include widening and sealing of the existing gravel carriageway to a 5.0 metre wide sealed carriageway with grassed berms and swales. The extent of the carriageway upgrading shall extend northwards from the Cross Street intersection to the northern boundary of Lot 3.

16. Maintenance

- 16.1 The consent holder shall be responsible for the maintenance of all subdivision and associated works for a period of twelve months from the date of issue of the 224(c) Conditions Certificate. A bond equal to 5% of the cost of construction works shall be lodged with Council for the same period
- 16.2 Maintenance shall include:
- a. Appropriate and regular mowing of grass and watering of all plants, including the two Pemberton's Road street trees, together with the replacement of any dead specimens including wetland plants.
 - b. Repair of any damage or defects in any of the works or services associated with the development of the subdivision as consented to.
 - c. Full operation and provision of a maintenance program.

17. Earthworks

- 17.1 The consent holder shall carry out bulk earthworks across the development site shaped to fill in existing channels and ensure that overland flow is spread as shallow sheet flow.
- 17.2 Any stockpiles of excavated and/or fill material within the site shall be managed to ensure they do not cause a public nuisance. The height of any stockpiles shall be limited to a maximum of 2.0 metres above surrounding ground level and shall not be located within 15 metres of any neighbouring property.
- 17.3 Any filling shall be installed and compacted to be in compliance with New Zealand Standards 4431 - Code of Practice for Earth filling in Residential Development, 4402 - Methods of Testing Soils for Civil Engineering Purposes, and 4404 - Land Development and Subdivision Engineering. The filling shall also be completed to the requirements of the applicant's geotechnical and/or structural engineer. The engineer shall provide a certification that all filling has been installed to the required standards. As-built plans of the earthworks undertaken shall be prepared for submission to the Council on completion.
- 17.4 Earthworks, reshaping or fill shall not alter natural ground level by more than 300mm where it is carried out within 2 metres of the northern boundaries of Lots 1, 2 and 3, or by more than 600mm where it is carried out between 2 metres and 20 metres of the northern boundaries of Lots 1, 2 & 3.

- 17.5 All rubbish, organic and any other unsuitable material for filling shall be removed and appropriately disposed off-site.
- 17.6 The consent holder shall submit detailed engineering plans and calculations prepared by a Chartered Professional Engineer to Council for approval in writing, prior to on-site works commencing on site.

18. Construction Environmental Management

- 18.1 Prior to any works commencing on-site the consent holder shall provide to the Council an Environmental Management Plan ('EMP') detailing the methodology of works and the environmental controls in place to limiting effects from issues involving flooding, dust, noise, refuelling operations, stockpiling of materials measures for handling and disposal off site of waste materials, wildlife etc.
- 18.2 The EMP shall specifically discuss proposed measures that shall be in place to prevent sediment migration from the site.
- 18.3 Site works shall cease when winds are of such magnitude to create a dust nuisance, or wet weather events create a sediment mobilisation issue and appropriate control measures employed.
- 18.4 Construction noise shall not exceed the recommended limits specified in, and shall be measured and assessed in accordance with, the provisions of NZS: 6803: P1989 "Measurement and Assessment of Noise from Construction, Maintenance, and Demolition Work". Adjustments and exemptions provided in clause 6 of NZS: 6803: P1989 shall apply.
- 18.5 Hours of operation for the undertaking works on-site shall be limited to 7am to 7pm Monday to Saturday. No works shall be carried out on Sundays or public holidays.
- 18.6 No site works shall commence until the Council has approved the Environmental Management Plan in writing.

19. Traffic Management

The consent holder shall submit for approval a Traffic Management plan detailing traffic control works (including sketch layout and control signs). This plan shall be submitted prior to the works commencing on or in Pemberton's Road, Cross Street and Vaughan Street. Traffic Management shall be to Level 1, as described in the NZTA Code of Practice for Temporary Traffic Management.

20.0 As-Built Plans

"As Built" plans setting out in detail the location of all services shall be provided to the Council immediately following completion of the works. Two sets of plans (hard copy and electronic form) shall be provided at a scale of 1:200 or 1:250.

21. Removal of Existing Buildings

All the existing buildings and associated structures, other than those on the proposed Lot 10, shall be totally removed from the subject property.

22.0 Road to Vest

Lots 13 and 14 shall vest in the Waimakariri District Council as Road.

23.0 Conditions Auditing

- 23.1 The Council will audit compliance with the conditions of consent by both site inspections and checking of associated documentation to the extent necessary to ensure the utility reticulation aspects are completed in accordance with the approved plans and to the Council's standards.
- 23.2 The Council will undertake inspections and checking. The consent holder, or their authorised agent, shall notify Council at least one working day prior to commencing various stages of the works to enable audit inspections required by the consent to be carried out.
- 23.3 The minimum level of inspection shall be as follows:

Water

- At completion of installation by Hurunui District Council.

Access/Right of way/Roading/Culverts

- Upon excavation to subgrade.
- Prior to final surfacing.

Drainage

- Upon excavation to subgrade.
- During installation of piping and headwalls.
- At completion of the works.

Street trees (Pembertons Road)

- At completion of the works.

Whole Works

- Prior to issue of a certificate under Section 224(c) of the Resource Management Act

Where repeat inspections are required because of faulty workmanship or work not being ready contrary to the receipt of notification such inspections will be carried out at the current hourly rate for staff time and vehicle running costs for kilometres travelled.

24 Works Conditions

That a certificate under Section 224(c) of the Resource Management Act 1991 will not be issued until Conditions 1 - 23 inclusive above have been met to the satisfaction of the Waimakariri District Council, at the expense of the consent holder.

ADVICE NOTES

- a) The requirements and conditions listed are a statement of the Council's minimum standards. Where the consent holder proposes higher standards or more aesthetically acceptable alternatives these shall be submitted to the Council for approval.
- b) No excavation shall commence within a road reserve without the prior receipt of a Council Trenching Permit.
- c) The following geotechnical-related excerpts are from the combined Geotechnical, Soakage and Preliminary Site Investigation assessment prepared by EDC Ltd:

" The general soil profile is variable and consist of topsoil, underlain by silt and sand, 2.0m – 2,5 m deep. From this depth, the soil profile is mainly gravel with varying amounts of sand up to 4.5m begl, although three of the ten intrusive holes had estuarine like silt from 2.9 m through to termination depth. The silt in the upper 2.0/2.5m was firm to stiff and the gravel was generally medium dense to dense (except for at STP 104, where it was loose to medium dense). The silt below 2.9 m was soft to firm.

Based on the desk top study and intrusive works information the risk of liquefaction related surface damage/settlement on the site is considered Low and future land performance is likely to be within the limits of CERA land classification Technical Category 1 (TC1).

The intrusive site investigation indicates that the shallow soil profile may met the NZS:3604 definition of Good Ground though this will need to be assessed using Scala penetrometer testing

Provided that foundations are located on a suitable bearing stratum, and to an engineered design, the risk of static subsidence is considered to be low.

EDC consider that the seismic site subsoil classification 'Class D-Deep or soft soil silts' as defined in NZS 1170.5 is appropriate for the site".

Based on the findings of this investigation the Council considers the subject property suitable for residential development.

- d) Electrical and telephone reticulation requires that the network structures be available. In some cases, this could mean that ducting only is provided to the lot from the service box.
- e) Should it transpire that the Council wish to have the balance of Vaughan Street formed beyond that required as part of this subdivision proposal, then the Council would be prepared to pay the additional costs arising from this.
- f) The installation of any on-site wastewater treatment and disposal system shall be in accordance with any building consent approval and the Environment Canterbury discharge consent CRC170607. This consent limits the number of dwelling bedrooms to a maximum of 4.
- g) The Traffic Management Plan forms can be sourced from the WDC Service Centres or on-line at:
http://www.waimakariri.govt.nz/services/roads_transport/traffic-management.aspx.
- h) Conditions 5.1 – 5.4 have been consent noticed on Lot 10 to cover any changes to the existing building or the erection of any buildings in the future.

REASONS FOR DECISION

Pursuant to Section 113 of the Act the Council considered the following in determining the application:

- No person is deemed to be adversely affected by the proposal.
- In regards to s106 of the Resource Management Act 1991, the subject property is suitable to be developed for residential purposes.
- All 12 proposed residential lots created by this subdivision meet the minimum size and shape factor requirements in accordance with Rule 32.1.1.1.1. Accordingly, the character of this Residential 3 zone will be maintained.
- The subdivision will not result in any non-compliances with the bulk and location rules contained within Chapter 31 of the District Plan.
- Any actual or potential adverse effects arising on the environment will be less than minor.
- The proposal achieves the thrust and direction of the relevant policies and objectives of the District Plan.
- The submitted preliminary site investigation concludes that it is 'less than likely' that hazardous substances have been used on the site; therefore, the requirements of the National Environmental Standard for managing contaminates in soil have been met.
- The use of reticulated services where possible will ensure that servicing to all the 12 residential lots will be in accordance with the relevant District Plan standards. Stormwater management has been particularly addressed to address the issues that currently apply to the Sefton urban area

LOCAL GOVERNMENT ACT 2002 – REQUIREMENT FOR A DEVELOPMENT CONTRIBUTION

Pursuant to section 198 of the Local Government Act 2002, the consent holder shall \$180,124.50 including GST at 15.0%; this amount is based on the following contributions:

Description	Area	Units/ Lots	Factor	Amount	Amount
			(excluding GST)	(excluding GST)	(inclusive GST)
			Per Unit/Lot	Total	Total
			\$	\$	\$
Reserves	Business & Residential Zone	10	11,087.00	110,870.00	127,500.50
Roading	District	10	4,576.00	45,760.00	52,624.00
Total				156,630.00	180,124.50

REASONS FOR LGA 2002 DECISION

- a) The charging of development contributions is consistent with the Council's adopted development contributions policy as required by Section 198(2) of the Local Government Act 2002.
- b) The monies collected from development contributions pay for the cost of public infrastructure that is needed to meet the additional demand from growth.

Note: The above development contribution is payable to the Council prior to the issuing of the Section 224(c) approval for this subdivision consent.

DATED at Rangiora this 24th Day of May 2017



SIGNED by John Cook
CONSULTANT RESOURCE MANAGEMENT PLANNER

NOTES

- Subdivision proposal plan only.
- Areas and dimensions subject to final survey.
- Plan prepared for the purpose of obtaining a Resource Consent.

Note : Scandlyn Surveying accepts no responsibility for the use of this plan for any other purpose other than that intended (obtaining a Resource Consent)

Note : All buildings other than those on Lot 10 are to be removed.

Note : Lots 13 and 14 are to vest as road on deposit.

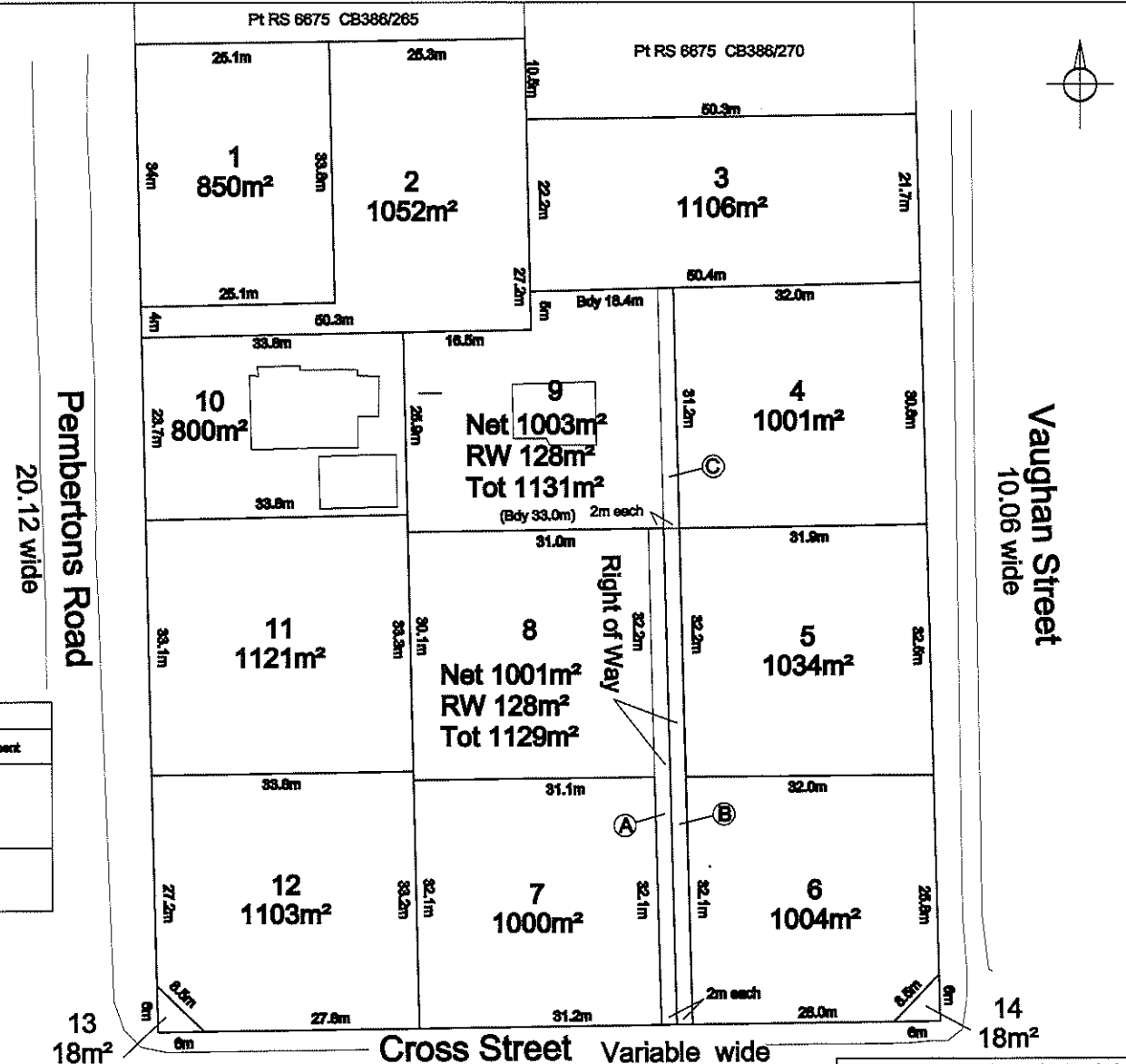
WAIMAKARIRI DISTRICT COUNCIL
APPROVED APPLICATION

RC165152

23/5/2017

V.M. Pasley
AUTHORISED OFFICER

PROPOSED EASEMENTS			
Nature	Serv Tenement		Dom Tenement
	Lot	Shown	
Right of Way	A	8	Lot 9
Right to convey telephonic communications, water and electricity	B	9	Lot 8
Right to convey telephonic communications, water and electricity	B	9	Lots 3,4,5
	C	9	



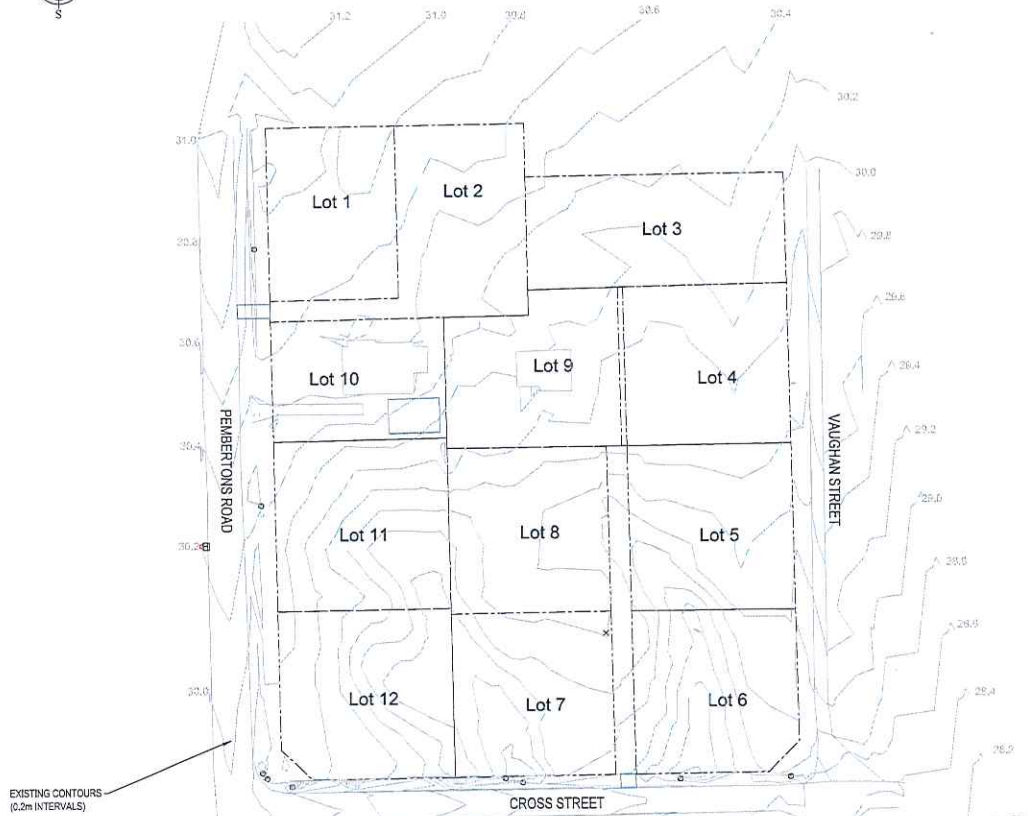
Waimakariri District Council
Comprised in CB064/20 and CB232/118
Scale 1:500 Format (A3)

Lots 1-14 being a Subdivision of Parts RS 6675

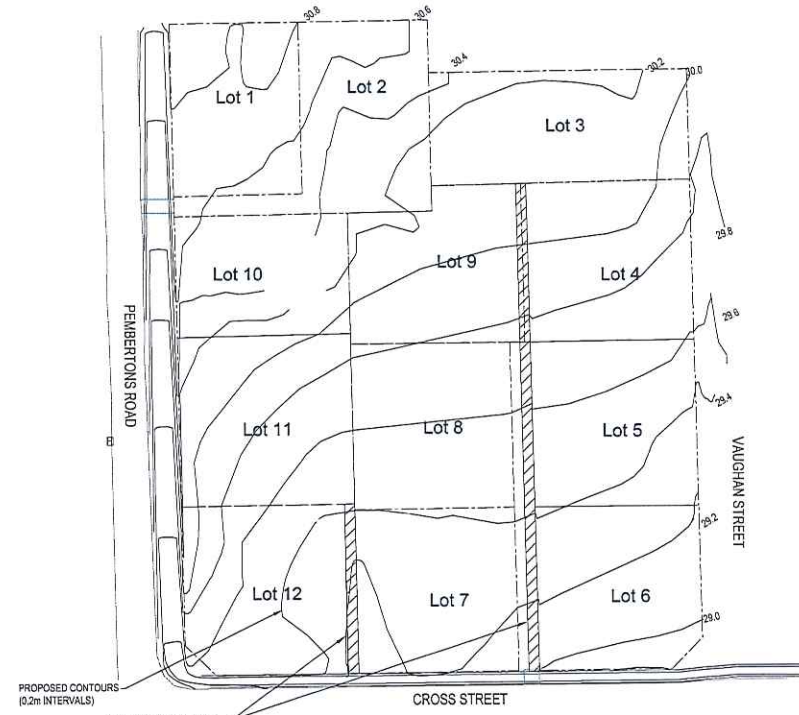
Prepared by: Scandlyn Surveying Ltd
18 Durham Street, RANGIORA
(murray@scandlyn.co.nz)
Reference: 1005 R1 14 April 2018
Ph 033131272, Fax 033131274



EXISTING CONTOURS




PROPOSED CONTOURS



EARTHWORKS NOTES

1. WORKS ARE TO BE CONDUCTED IN ACCORDANCE WITH THE RESOURCE CONSENT, ENGINEERING APPROVAL CONDITIONS, PRIVATE DRAINAGE IS TO BE IN ACCORDANCE WITH BUILDING CODE AND BUILDING CONSENT CONDITIONS.
2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR DEMOLITION OF EXISTING BUILDING AND DISCONNECTION FROM EXISTING SERVICES/UTILITIES. SITE CLEARANCE SHALL INCLUDE ALL EXISTING SITE FEATURES AS NECESSARY TO PERMIT CONSTRUCTION OF THE ENGINEERING WORKS AND HOUSE CONSTRUCTION.
3. BULK EARTHWORKS SHALL BE CONDUCTED GENERALLY IN ACCORDANCE WITH NZS431:1989. ALL FILL IMPORTED TO THE SITE SHALL BE A SUITABLE CLEAN CLAY FREE OF CONTAMINATION. FILL SHALL ONLY BE PLACED OVER GROUND THAT HAS BEEN PREPARED AND PASSED BY THE ENGINEER. ALL TOPSOIL, ORGANIC MATERIAL AND OTHERWISE UNSUITABLE GROUND SHALL BE UNDERCUT BEFORE PLACEMENT OF FILL.
4. COHESIVE FILL IF REQUIRED SHALL BE PLACED IN LAYER OF 150MM AT A SUITABLE MOISTURE CONTENT AND COMPACTED WITH A PAD-FOOT ROLLER OR SIMILAR HEAVY MECHANICAL PLANT. COMPACTION SHALL BE UNDERTAKEN UNTIL FILL HAS A MINIMUM SHEAR STRENGTH OF 140KPA AND MAXIMUM AIR VOIDS OF 10%. A MINIMUM SCALES PENETROMETER RESISTANCE OF 3100MM WILL BE REQUIRED FOR ALL CONTROLLED FILL AREAS. HARD FILL SHALL BE COMPACTED TO A MINIMUM CLEGG IMPACT VALUE OF 30 IN GENERAL AREAS AND 30 FOR TRENCHES BELOW THE EXISTING ROAD.
5. ALL UNSUITABLE AND EXCESS MATERIAL AS WELL AS STOCKPILES ETC SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR AT A SUITABLE LOCATION TO LEAVE THE SITE IN A TIDY CONDITION.
6. ALL SURROUNDING AREAS DISTURBED BY THE CONTRACTOR SHALL BE REINSTATED TO A CONDITION SIMILAR TO EXISTING. REINSTATEMENT OF ROAD AREAS WILL REQUIRE ACCEPTANCE FROM AUCKLAND TRANSPORT. NOTE ADDITIONAL PERMITS FOR CROSSINGS AND ROAD WORKS INCLUDING SUITABLE TRAFFIC MANAGEMENT WILL NEED TO BE OBTAINED BY THE CONTRACTOR.
7. ALL SETTING-OUT SHALL BE CONDUCTED BY THE CONTRACTOR WITH REVIEW FROM THE ENGINEER ON SITE. SOME ADJUSTMENTS TO THE FORMATION LEVELS ETC MAY BE POSSIBLE AND/OR REQUIRED SUBJECT TO REVIEW ON SITE TO SUIT THE ACTUAL CONDITIONS.
8. THE CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING SERVICES AT THE SITE DURING EARTHWORKS AND RETAINING WALL CONSTRUCTION.
9. THE CONTRACTOR SHALL OPERATE AN EROSION AND SEDIMENT CONTROL PLAN TO MINIMISE THE RISK OF DOWNSTREAM POLLUTION. THIS WORK TO BE GENERALLY IN ACCORDANCE WITH ARC TP90.

PLEASE DO NOT SCALE FROM THIS DRAWING

WAIMAKARIRI DISTRICT COUNCIL
APPROVED APPLICATION
RC165152 23/5/2017

AUTHORISED OFFICER

KEY	
SITE BOUNDARY	---
PROPOSED CONTOURS	---
EXTENT OF EARTHWORKS	---

DATE	REVISION	BY	CHK
B 15/12/2016	FOR CONSENT	MW	AC
A 04/05/2016	FOR ENGINEERING APPROVAL	MW	AC


ENGINEERING DESIGN CONSULTANTS
 CIVIL | STRUCTURAL | GEOTECHNICAL | ENVIRONMENTAL | FIRE
 Auckland Office: 1st Floor, Unit 1, 101 Bush Road, Albany 0632 (PO Box 116, Albany Village 0755). Ph: 09 451 9044 Fax: 09 415 1280
 Christchurch Office: 1st Floor, 39 Carlyle Street, Sydenham 8023 (PO Box 7534, Sydenham, Christchurch 8240). Ph: 03 355 5559
 Email: team@edc.co.nz Website: www.edc.co.nz

PROJECT: **PROPOSED RESIDENTIAL DEVELOPMENT AT 36 PEMBERTON ROAD, SEFTON FOR TAYLOR HOMES LTD.**
 DRAWING TITLE: **PROPOSED AND EXISTING CONTOURS**

DESIGNED	AC
DRAWN	MW
REVIEWED	AC
DATE	DEC 2016

A1 SCALE	1:500
A3 SCALE	1:1000
PAPER SPACE SIZE	1:1 @ A1

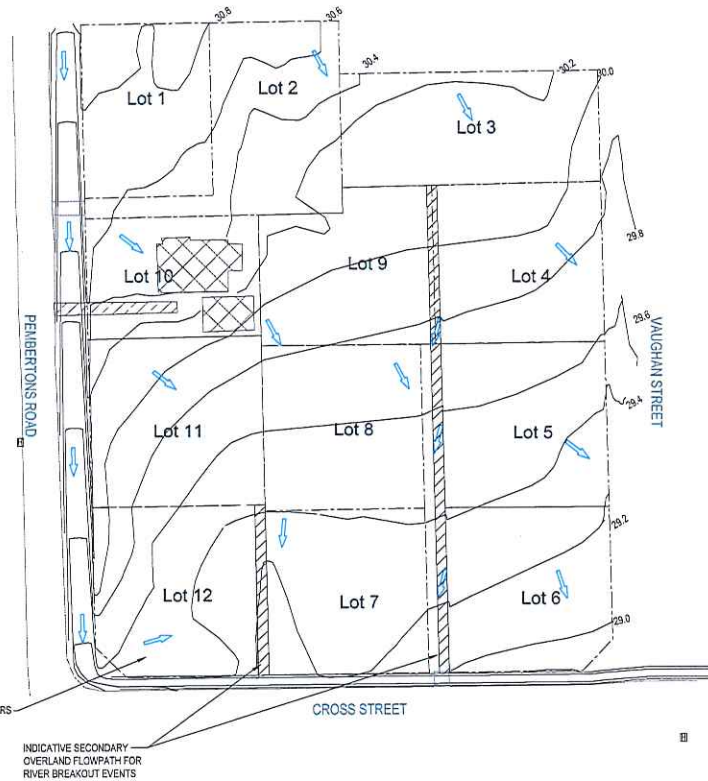
FOR CONSENT
 PROJECT: **46029** SPANS: **C200** RESOUR: **B**
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KEY	
PROPOSED DWELLING (INDICATIVE LOCATION AND SIZE)	
EXISTING BUILDINGS TO REMAIN	
EXISTING DRIVEWAY TO REMAIN	
PROPOSED DRIVEWAY (INDICATIVE SIZE AND LOCATION)	
EXISTING FENCELINE	

WAIMAKARIRI DISTRICT COUNCIL
 APPROVED APPLICATION
 RC16S1S2 23/5/17

 AUTHORIZED OFFICER



EXISTING AND PROPOSED CONTOURS
 (0.2m INTERVALS)

INDICATIVE SECONDARY
 OVERLAND FLOWPATH FOR
 RIVER BREAKOUT EVENTS

PLEASE DO NOT SCALE FROM THIS DRAWING

NO.	DATE	FOR ENGINEERING APPROVAL	BY
A	18/05/2016	FOR ENGINEERING APPROVAL	MW AC
		REVISION	BY CHK

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 Email: team@edc.co.nz Website: www.edc.co.nz

PROJECT: **PROPOSED RESIDENTIAL DEVELOPMENT AT 36 PEMBERTONS ROAD, SEFTON FOR TAYLOR HOMES LTD.**
 DRAWING TITLE: **PROPOSED SITE STORMWATER SECONDARY FLOW PATHS**

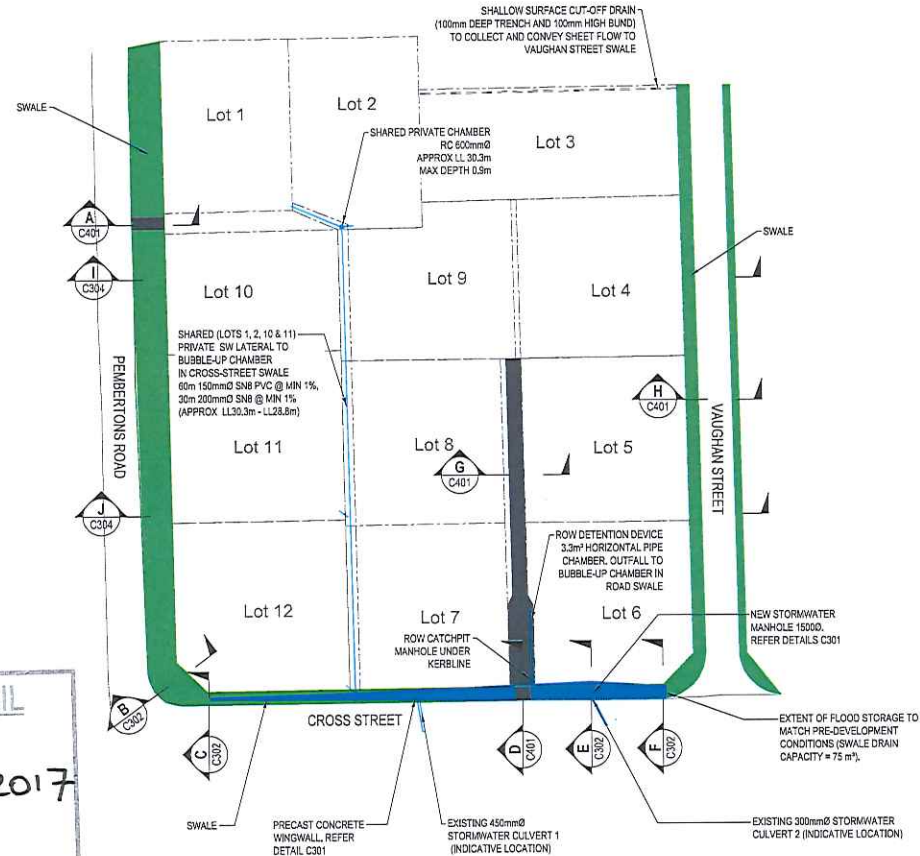
DESIGNED	MW
DRAWN	MW
REVIEWED	AC
DATE	MAY 2016

A1 SCALE	1:500
A3 SCALE	1:1000
PAPER SPACE SIZE	
1:1 @ A1	

FOR CONSENT
 PROJECT: **46029** DRAWING: **C102** REVISION: **A**
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- DRAINAGE NOTES**
1. ALL PUBLIC WORKS ARE TO BE CONDUCTED IN ACCORDANCE WITH THE ENGINEERING APPROVAL CONDITIONS, WDC INFRASTRUCTURE DESIGN STANDARDS. PRIVATE DRAINAGE WORK SHALL BE IN ACCORDANCE WITH THE BUILDING CODE.
 2. ALL PVC STORMWATER PIPE SHALL BE DESIGNED TO AS/NZS 1300, INSTALLED AND TESTED IN ACCORDANCE WITH AS/NZS 3032 AND AS/NZS 2566 Pt 2. MINIMUM PIPE RATING FOR PUBLIC PIPES SHALL BE MINIMUM 500mm COVER REQUIRED UNDER TRAFFICABLE AREAS.
 3. COMPACTED HARDFILL ABOVE BEDDING ZONE FOR ALL PUBLIC AND PRIVATE PIPES INDICATED ON DRAWINGS.
 4. THE CONTRACTOR SHALL SET OUT THE STORMWATER DRAINAGE IN ACCORDANCE WITH BEST PRACTICE AND VERIFY DESIGN GRADES AND DIPS ARE SUITABLE FOR THE ACTUAL SITE CONDITIONS AS THE WORKS PROGRESS. REPORT ANY ANOMALIES TO THE ENGINEER FOR FURTHER INSTRUCTION.
 5. ALL CONNECTIONS REQUIRE 3M6 PIPE, DETAILS INCLUDING MARKER POSTS ETC TO WDC REQUIREMENTS. MANHOLE LIDS TO BE HEAVY DUTY LIDS.
 6. THE CONTRACTOR TO ARRANGE A PRE-START MEETING WITH THE COUNCIL REPRESENTATIVE AND THE ENGINEER. THE CONTRACTOR SHALL ENSURE INSPECTIONS ARE UNDERTAKEN DURING ALL WORK AS PER CONSENT REQUIREMENTS AND IN ACCORDANCE WITH ANY ADVICE GIVEN AT THE PRE-START MEETING.
 7. THE CONTRACTOR IS TO CONDUCT AN AIR TEST WITH THE ENGINEER AND WDC DEVELOPMENT ENGINEER PRESENT AND REMEDY ANY FAULTS AS NECESSARY UNTIL A SUCCESSFUL TEST IS COMPLETED.
 8. THE CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING SERVICES AT THE SITE DURING CONSTRUCTION WORK FOR THE NEW WATER SUPPLY NETWORK.
 9. ALL TRENCH EXCAVATED MATERIAL SURPLUS TO REQUIREMENTS SHALL BE REMOVED FROM THE SITE AND THE AREAS AFFECTED BY DRAINAGE WORKS REINSTATED TO A SUITABLE STANDARD GENERALLY MATCHING EXISTING CONDITIONS.



WAIMAKARIRI DISTRICT COUNCIL
 APPROVED APPLICATION
 RC165152 23.5.2017
M. Pusley
 AUTHORISED OFFICER

KEY

- PROPOSED STORMWATER LINE
- PROPOSED STORMWATER MANHOLE
- FLOOD STORAGE
- STORMWATER SECONDARY FLOW PATH ARROWS

PLEASE DO NOT SCALE FROM THIS DRAWING

DATE	REVISION	BY	CHK
D 28/03/2017	CHANGES TO ROW & PRIVATE PIPES	AC	-
C 21/11/2016	FOR CONSENT	MW	AC
B 04/10/2016	REVISED SOUTHERN SWALE DESIGN	RK	AC
A 04/05/2016	FOR ENGINEERING APPROVAL	MW	AC

EDC ENGINEERING DESIGN CONSULTANTS

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 Email: team@edc.co.nz Website: www.edc.co.nz

PROJECT: **PROPOSED RESIDENTIAL DEVELOPMENT AT 36 PEMBERTON'S ROAD, SEFTON FOR TAYLOR HOMES LTD.**

DRAWING TITLE: **PROPOSED DRAINAGE PLAN**

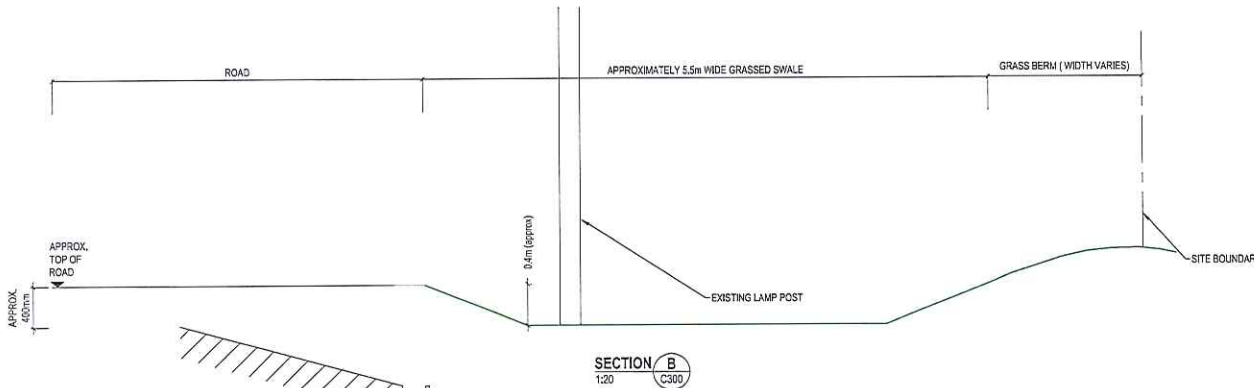
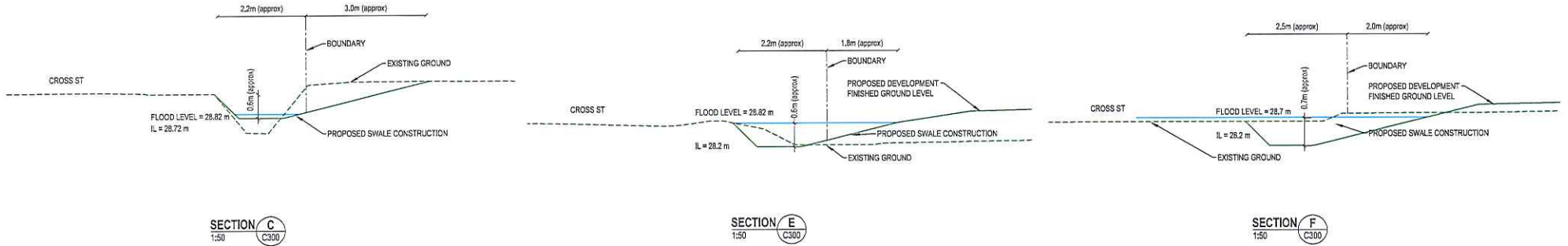
DESIGNED	AC
DRAWN	MW
REVIEWED	AC
DATE	NOV 2016

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PAPER SPACE SIZE	1:1 @ A1

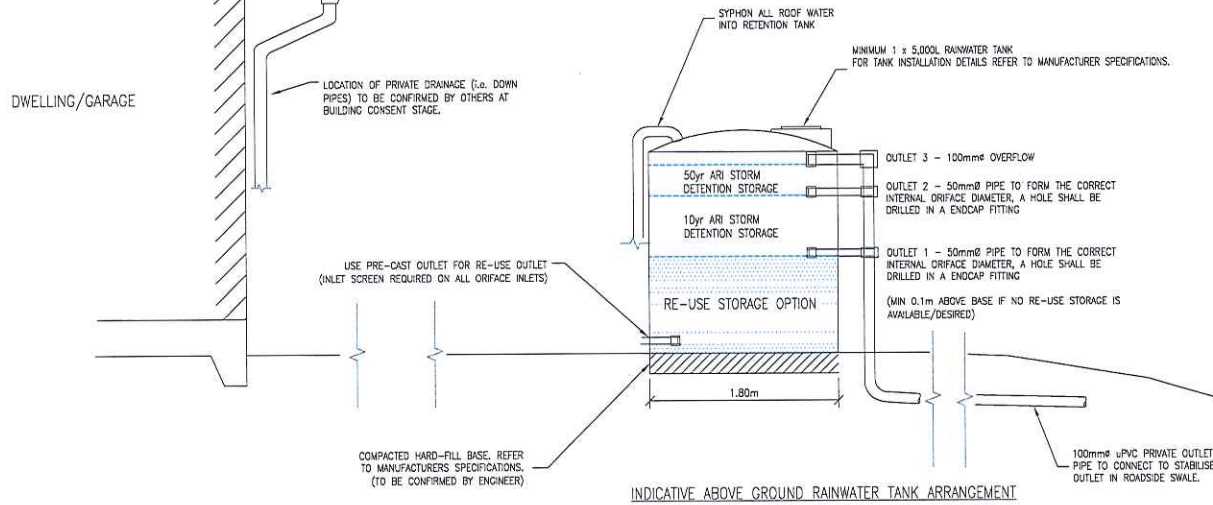
FOR CONSENT

PROJECT: **46029** DRAWING: **C300** REVISION: **D**

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WAIMAKARIRI DISTRICT COUNCIL
 APPLIED APPLICATION
 RC165152 23/05/2017
W. Pasley
 AUTHORISED OFFICER



NOTE:
 - DETAILED DESIGN OF DETENTION TANKS NEEDS TO BE CONFIRMED AT BUILDING CONSENT STAGE
 - EACH OUTLET REQUIRES A BOX FILTER SCREEN TO BE FITTED AROUND THE OUTLET, MINIMUM SIZING FOR A 50mm PIPE IS 100mm x 100mm x 100mm

PLEASE DO NOT SCALE FROM THIS DRAWING


NO.	DATE	REVISION	BY	CHK
F	24/04/2017	ABSD DIMENSIONS	AC	-
E	12/03/2017	REVISED SWALE DIMENSIONS	AC	-
D	26/01/2017	ADDITIONAL TANK SECTION	MW	AC
C	21/11/2016	FOR CONSENT	MW	AC
B	04/10/2016	REVISED SOUTHERN SWALE DESIGN	RK	AC
A	10/05/2016	FOR ENGINEERING APPROVAL	MW	AC

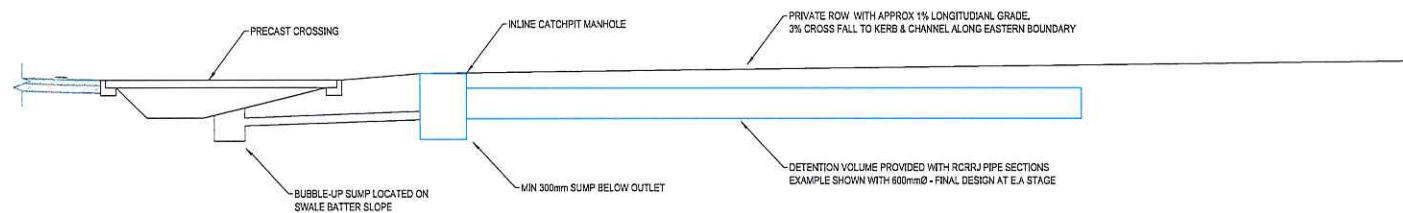
EDC ENGINEERING DESIGN CONSULTANTS
 CIVIL | STRUCTURAL | GEOTECHNICAL | ENVIRONMENTAL | FIRE
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 Email: team@edc.co.nz Website: www.edc.co.nz

PROJECT: **PROPOSED RESIDENTIAL DEVELOPMENT AT 36 PEMBERTONS ROAD, SEFTON FOR TAYLOR HOMES LTD.**
 DRAWING TITLE: **TYPICAL PRIVATE DRAINAGE DETAILS**

DESIGNED	AC	A1 SCALE	NTS
DRAWN	MW	A3 SCALE	NTS
REVIEWED	AC	PAPER SPACE SIZE	1:1 @ A1
DATE	NOV 2016		

FOR CONSENT
 PROJECT: **46029** DRAWING: **C302** REVISION: **F**
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WAIMAKARIRI DISTRICT COUNCIL
 APPROVED APPLICATION
 RC165152 23/05/2017

 AUTHORIZED OFFICER



ELEVATION: STORMWATER DETENTION TANK - ROW
 1:50

PLEASE DO NOT SCALE FROM THIS DRAWING

DATE	REVISION	BY	CHK
A 28/03/2017	FOR RESOURCE CONSENT	AC	-

EDC ENGINEERING DESIGN CONSULTANTS

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 Christchurch Office: 1st Floor, 30 Carlyle Street, Sydenham 8023 (PO Box 7534, Sydenham, Christchurch 8240), Ph: 03 355 5559
 Email: team@edc.co.nz Website: www.edc.co.nz

PROJECT: PROPOSED RESIDENTIAL DEVELOPMENT AT 36 PEMBERTONS ROAD, SEFTON FOR TAYLOR HOMES LTD.

DRAWING TITLE: ROW DETENTION TANK ELEVATION & DETAILS

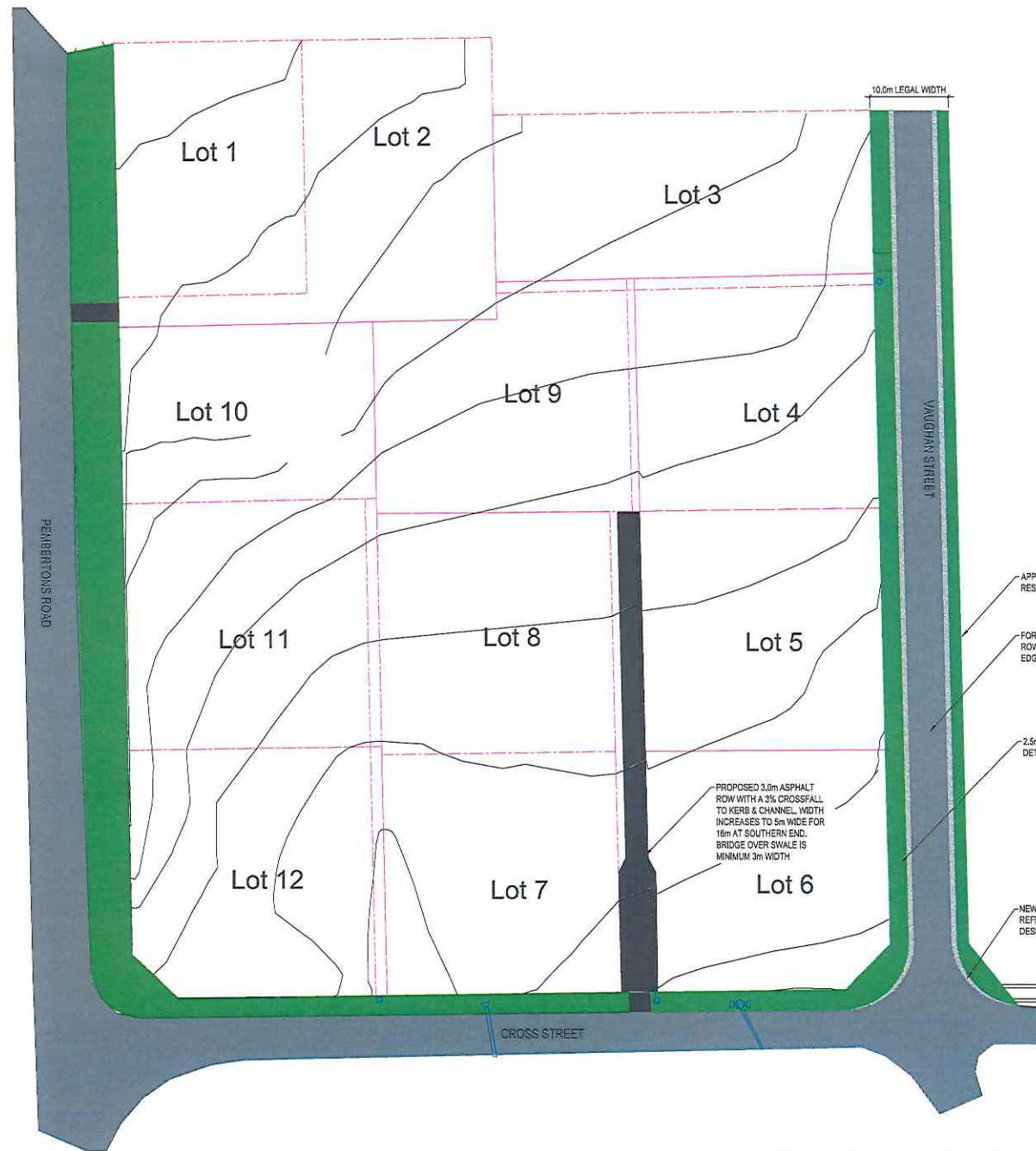
DESIGNED	AC
DRAWN	MW
REVIEWED	AC
DATE	NOV 2016

A1 SCALE	1:5
A3 SCALE	1:10
PAPER SPACE SIZE	1:1 @ A1

FOR CONSENT

PROJECT	46029	DRAWING	C305	REGION	B
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- CONSTRUCTION NOTES**
- THIS SECTION IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING ENGINEERING DRAWINGS.
 - ALL CIVIL WORKS SHALL COMPLY WITH RESOURCE & BUILDING CONSENT CONDITIONS AND THE WAIMAKARIRI DISTRICT COUNCIL DESIGN STANDARDS AS APPLICABLE.
 - HARDFILL MATERIAL IS FROM AN APPROVED SOURCE, FREE OF ORGANIC AND RUBBISH MATERIAL, SUITABLY GRADED, AND FREE OF CONTAMINATION.
 - COMPACTION OF HARDFILL IS TO BE COMPLETED USING APPROPRIATELY SIZED COMPACTION PLANT, WITH ADEQUATE MOISTURE CONTENT, AND IN LAYERS NO GREATER THAN 150mm THICK (ACHIEVE A MIN CLEGG HAMMER RESULT OF 20 BLOWS FOR SUBGRADE).
 - ENGINEERING COMPACTION TESTING IS REQUIRED TO THE SATISFACTION OF THE ENGINEER PRIOR TO PLACEMENT OF BASECOURSE AND CONCRETE/ASPHALT PLACEMENT.
 - APPROVED SEDIMENT AND EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED PRIOR TO COMMENCING SITE EXCAVATION.
 - CONSULT ENGINEER BEFORE IMPLEMENTING ANY CHANGES FROM THIS DESIGN.
 - ALL WORK IS TO BE UNDERTAKEN IN ACCORDANCE WITH THE HEALTH AND SAFETY ACT 1992.
 - ALL SETTING OUT TO BE CONDUCTED BY THE CONTRACTOR AND AGREED ON SITE WITH THE ENGINEER. THE FORMATION LEVEL AND FALLS ETC SHALL BE AGREED ON SITE WITH SOME VARIATIONS POSSIBLE TO BEST SUIT SITE CONDITIONS. ENSURE GOOD SURFACE DRAINAGE WITH NO DIPS OR SHARP CRESTS IN THE FINAL SURFACE.
 - ALL SERVICES TRENCHES BELOW THE FUTURE DRIVEWAY AREA SHALL BE BACKFILLED WITH WELL COMPACTED HARDFILL BEFORE ANY CONCRETE PREPARATION.
 - ALL CHIP SEALING WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT PARTS OF TNZ P117 EXCEPT WHERE SUPERSEDED BY CCC CSS PART 10.
 - THE CONTRACTOR SHALL DESIGN BINDER APPLICATION RATES FROM THE BINDER TYPE, CHIP GRADE AND ESTIMATED TRAFFIC VOLUMES SUPPLIED AND RATES SHALL BE PROVIDED TO THE ENGINEER PRIOR TO STARTING WORK. THE BINDER APPLICATION RATE WORKSHEET SHALL BE PROVIDED TO THE ENGINEER PRIOR TO ALL FIRST COAT SEALS.
 - ALL SPRAYERS SHALL MEET THE REQUIREMENTS OF SCA E2 AND HAVE A CURRENT E2 CERTIFICATE.
 - SEALING RECORDS FOR FIRST COAT SEALS SHALL BE SUPPLIED TO THE ENGINEER WITHIN 5 WORKING DAYS OF SPRAYING, REFER TO CCC CSS PART 10 FOR DETAILS.
 - ALL SURPLUS CHIP STOCKPILES ON THE ROAD RESERVE SHALL BE REMOVED IMMEDIATELY FOLLOWING THE COMPLETION OF EACH DAY'S WORK, UNLESS OTHERWISE APPROVED.
 - THE CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING SERVICES AT THE SITE DURING CONSTRUCTION.
 - THE CONTRACTOR SHALL REINSTATE ALL SURFACE AND FEATURES ADJOINING THE NEW DRIVEWAY SUCH AS GRASS, EX CONCRETE AND FENCES ETC.
 - THE CONTRACTOR IS TO ENSURE THE ENGINEER AND COUNCIL WHERE APPLICABLE ARE ADVISED ON PROGRAMME AND GIVEN SUITABLE OPPORTUNITY TO INSPECT THE WORKS DURING CONSTRUCTION.

APPROXIMATE ROAD RESERVE BOUNDARY

FORM NEW 5.0m WIDE SEALED ROW WITH 0.7m FEATHERED EDGES AS PER DETAIL B C401

2.5m WIDE SWALE AS PER DETAIL B C401

PROPOSED 3.0m ASPHALT ROW WITH A 3% CROSSFALL TO KERB & CHANNEL. WIDTH INCREASES TO 5m WIDE FOR 16m AT SOUTHERN END. BRIDGE OVER SWALE IS MINIMUM 3m WIDTH

NEW INTERSECTION WITH 9.0m RADIUS. REFER AUSTRROADS GUIDE TO ROAD DESIGN PART 4, TABLE 5.1.

WAIMAKARIRI DISTRICT COUNCIL
APPROVED APPLICATION

RC165152

23/05/2017

M. Bealey
AUTHORISED OFFICER

KEY

STORMWATER SECONDARY FLOW PATH ARROWS	
PROPOSED ASPHALT ROW	
PAVED ROAD	
PROPOSED GRASSED AREAS	

PLEASE DO NOT SCALE FROM THIS DRAWING

DATE	FOR ENGINEERING APPROVAL	REVISION	BY	CHK
15/12/2016	FOR CONSENT		MW	AC
21/11/2016	FOR CONSENT		MW	AC
05/05/2016	FOR ENGINEERING APPROVAL		MW	AC
12/03/2017	REVISED ROW		AC	-



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Christchurch Office: 1st Floor, 39 Carlyle Street, Sydenham 8023 (PO Box 7534, Sydenham, Christchurch 8240), Ph: 03 355 5559
Email: team@edc.co.nz Website: www.edc.co.nz

PROJECT: **PROPOSED RESIDENTIAL DEVELOPMENT AT 36 PEMBERTONS ROAD, SEFTON FOR TAYLOR HOMES LTD.**

DRAWING TITLE: **PROPOSED ROW/ROADING PLAN**

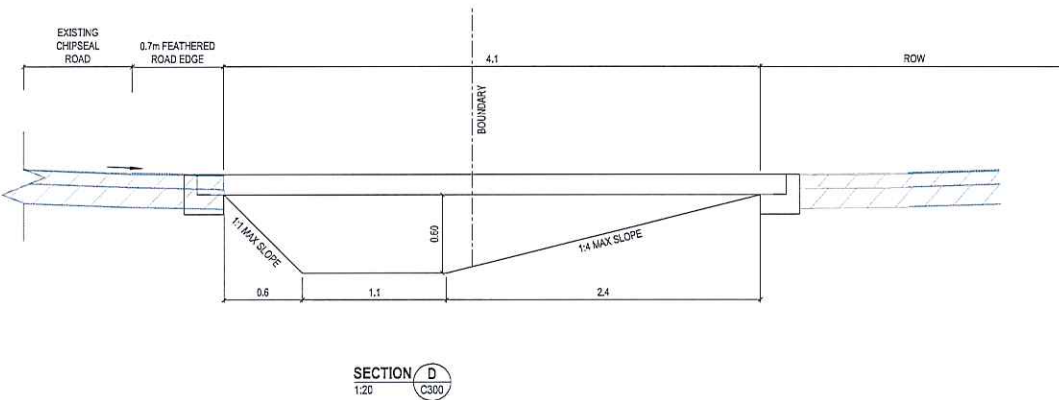
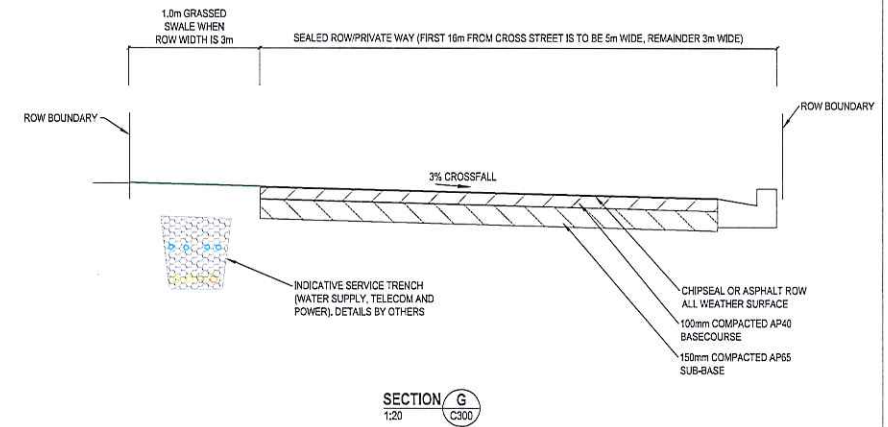
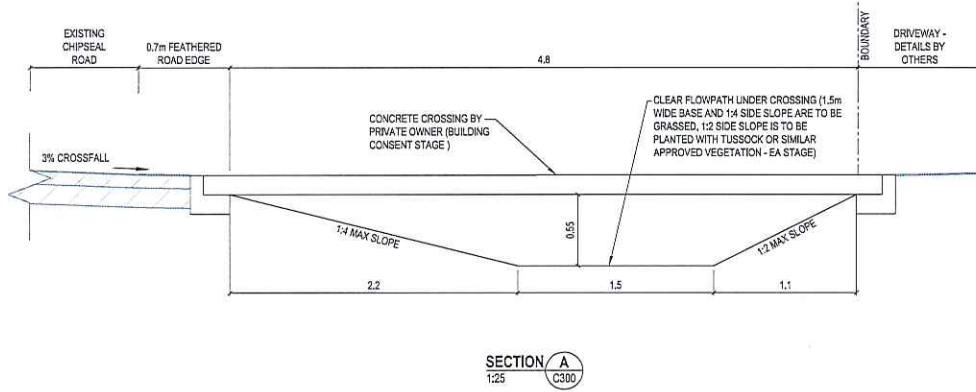
DESIGNED	AC
DRAWN	MW
REVIEWED	AC
DATE	DEC 2016

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A3 SCALE	1:600
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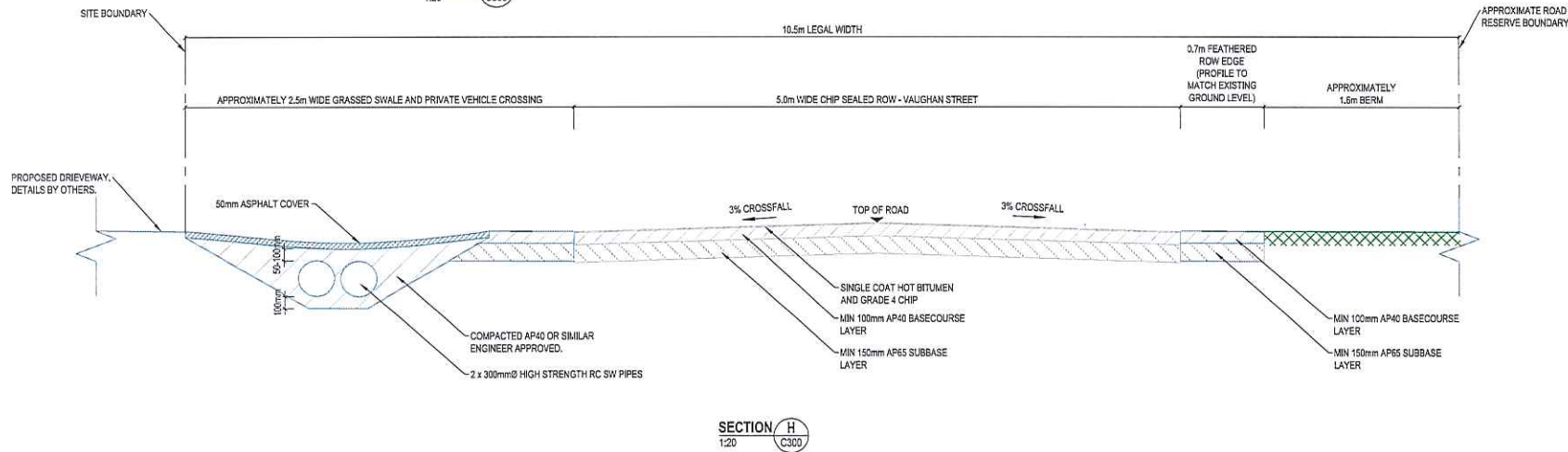
FOR CONSENT

PROJECT: **46029** ENGINEERING: **C400** RECORD: **C**

THIS DRAWING AND DESIGN SHALL NOT BE REPRODUCED IN ANY FORM WITHOUT THE WRITTEN AUTHORITY OF ENGINEERING DESIGN CONSULTANTS LIMITED - ALL RIGHTS RESERVED



WAIMAKARIRI DISTRICT COUNCIL
 APPROVED APPLICATION
 RC165152 23/01/2017
M. Pusey
 AUTHORISED OFFICER



NOTE:
 TREE REMOVAL IS LIKELY TO BE REQUIRED ON
 THE EASTERN SIDE OF VAUGHAN STREET

PLEASE DO NOT SCALE FROM THIS DRAWING

NO.	DATE	REVISION	BY
E	12/03/2017	AMENDED ROW & SWALE CROSSING SECTIONS	AC
D	15/12/2016	FOR CONSENT	MW
C	14/12/2016	FOR CONSENT	AC
B	21/11/2016	FOR CONSENT	MW
A	05/05/2016	FOR ENGINEERING APPROVAL	MW
	DATE	REVISION	BY

EDC ENGINEERING DESIGN CONSULTANTS

CIVIL | STRUCTURAL | GEOTECHNICAL | ENVIRONMENTAL | FIRE
 Auckland Office: 1st Floor, Unit 1, 100 Bush Road, Albany 0632 (PO Box 118, Albany Village 0755), Ph: 09 451 8944 Fax: 09 415 1280
 Christchurch Office: 1st Floor, 30 Gortals Street, Sycamore 8023 (PO Box 7534, Sycamore, Christchurch 8240), Ph: 03 355 6550
 Email: team@edc.co.nz Website: www.edc.co.nz

PROJECT: **PROPOSED RESIDENTIAL DEVELOPMENT AT 36 PEMBERTONS ROAD, SEFTON FOR TAYLOR HOMES LTD.**
 DRAWING TITLE: **TYPICAL ROW CROSS-SECTION**
 DESIGNED: AC
 DRAWN: MW
 REVIEWED: AC
 DATE: DEC 2016

A1 SCALE: NTS
 A3 SCALE: NTS
 PAPER SPACE SIZE: 1:1 @ A1

FOR CONSENT
 FILE NO: 46029
 DRAWING NO: C401
 REGION: D
 THIS DRAWING AND DESIGN SHALL NOT BE REPRODUCED IN ANY FORM WITHOUT THE WRITTEN AUTHORITY OF ENGINEERING DESIGN CONSULTANTS LIMITED - ALL RIGHTS RESERVED

Our Reference: RC165152 / 210414059875
Valuation Reference: 2144019500

14 April 2021

Taylor Homes Limited
PO Box 578
RANGIORA 7440

Dear Sir

**TAYLOR HOMES LIMITED - 36 PEMBERTONS ROAD, SEFTON
SECTION 223 – SIGNED E SURVEY PLAN – LT 557597**

Please find enclosed a copy of the E survey plan and the 223 certification for the above subdivision, which has been signed electronically on Landonline, pursuant to section 223 of the Resource Management Act 1991.

Should you have any queries regarding the above, please do not hesitate to contact me on 0800 965-468.

Yours faithfully

Sally Fear

Sally Fear
PLANNING SECRETARY

CC: Murray Scandlyn

Encl



TA Approvals

Territorial Authority	Waimakariri District Council TA Certification Division	TA Reference	RC165152
Survey Number	LT 557597	Survey Purpose	LT Subdivision
Surveyor Reference	1605 Taylor	Land District	Canterbury
Surveyor	Murray Trevor Scandlyn		
Surveyor Firm	Scandlyn Surveying Ltd		
Dataset Description	Lots 1-13 being subdivision of Parts RS 6675		

TA Certificates

I hereby certify that plan LT 557597 was approved by the Waimakariri District Council pursuant to section 223 of the Resource Management Act 1991 on the 14th day of April 2014.

The approval of the Council under Section 223 of the Resource Management Act 1991 is subject to the granting or reserving of the easement(s) set out in the Memorandum of Easements attached as a supporting document to plan LT 557597

Signature

Signed by Yvonne Sally Fear, Authorised Officer, on 14/04/2021 11:37 AM

Receipt Information

Transaction Receipt Number	14251244
Signing Certificate (Distinguished Name)	Fear, Yvonne Sally
Signing Certificate (Serial Number)	1603486844
Signature Date	14/04/2021

*** End of Report ***



Title Plan - LT 557597

Survey Number LT 557597
Surveyor Reference 1605 Taylor
Surveyor Murray Trevor Scandlyn
Survey Firm Scandlyn Surveying Ltd
Surveyor Declaration

Survey Details

Dataset Description Lots 1-13 being subdivision of Parts RS 6675
Status Initiated
Land District Canterbury **Survey Class** Class A
Submitted Date **Survey Approval Date**
Deposit Date

Territorial Authorities

Waimakariri District

Comprised In

RT CB654/20 Ltd
 RT CB232/116

Created Parcels

Parcels	Parcel Intent	Area	RT Reference
Lot 1 Deposited Plan 557597	Fee Simple Title	0.0851 Ha	976839
Lot 2 Deposited Plan 557597	Fee Simple Title	0.1038 Ha	976840
Lot 3 Deposited Plan 557597	Fee Simple Title	0.1080 Ha	976841
Lot 4 Deposited Plan 557597	Fee Simple Title	0.1019 Ha	976842
Lot 5 Deposited Plan 557597	Fee Simple Title	0.1019 Ha	976843
Lot 6 Deposited Plan 557597	Fee Simple Title	0.0837 Ha	976844
Lot 7 Deposited Plan 557597	Fee Simple Title	0.0913 Ha	976845
Lot 8 Deposited Plan 557597	Fee Simple Title	0.1104 Ha	976846
Lot 9 Deposited Plan 557597	Fee Simple Title	0.1139 Ha	976847
Lot 10 Deposited Plan 557597	Fee Simple Title	0.0812 Ha	976848
Lot 11 Deposited Plan 557597	Fee Simple Title	0.1115 Ha	976849
Lot 12 Deposited Plan 557597	Fee Simple Title	0.1031 Ha	976850
Lot 13 Deposited Plan 557597	Vesting on Deposit for Road	0.0395 Ha	
Area A Deposited Plan 557597	Easement		
Area B Deposited Plan 557597	Easement		
Area C Deposited Plan 557597	Easement		
Area D Deposited Plan 557597	Easement		
Area E Deposited Plan 557597	Easement		
Area F Deposited Plan 557597	Easement		
Area G Deposited Plan 557597	Easement		
Area H Deposited Plan 557597	Easement		
Area I Deposited Plan 557597	Easement		



Title Plan - LT 557597

Created Parcels

Parcels	Parcel Intent	Area	RT Reference
Area J Deposited Plan 557597	Easement		
Area K Deposited Plan 557597	Easement		
Total Area		<u>1.2353 Ha</u>	

Schedule / Memorandum

CANTERBURY	DP 557597	1605
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Territorial Authority (the Council)		Council Ref
Waimakariri District		RC195068

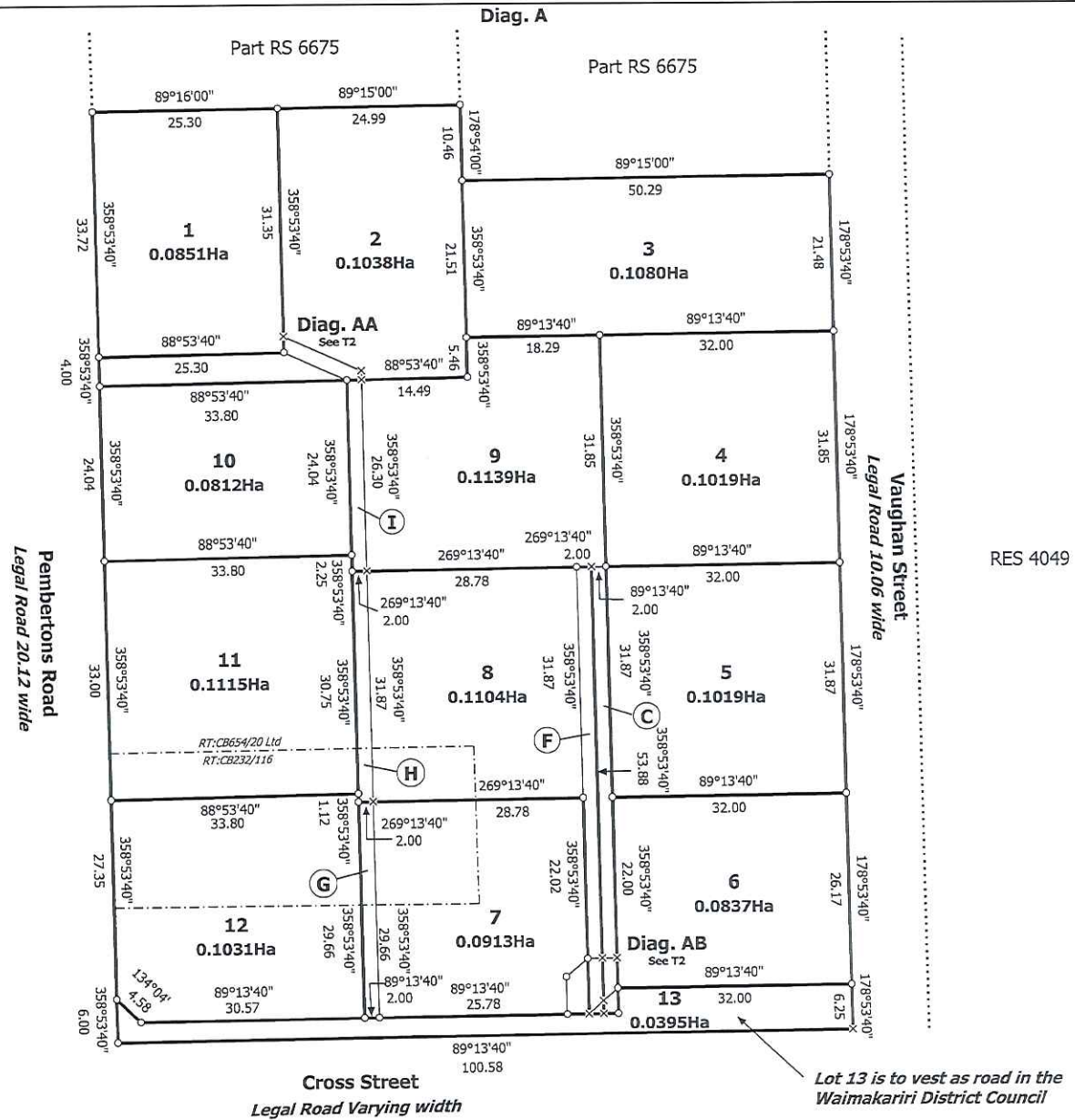
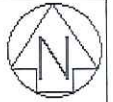
MEMORANDUM OF EASEMENTS			
Purpose	Servient Tenement		Dominant Tenement
	Shown	Lot	
Right of way, right to convey electricity, telecommunications and water.	A, B, C	Lot 9	Lots 7-8
	D, E, F	Lot 8	Lots 7, 9
	K	Lot 7	Lots 8-9
Right to drain water.	G	Lot 7	Lots 1-2, 8-11
	H	Lot 8	Lots 1-2, 9-11
	I	Lot 9	Lots 1-2, 10
	J	Lot 2	Lot 1
Right to convey electricity.	A, B, C	Lot 9	Lot 5
	D, E, F	Lot 8	

MEMORANDUM OF EASEMENTS IN GROSS			
Purpose	Servient Tenement		Grantee
	Shown	Lot	
Right to convey telecommunications in gross.	A, B, C	Lot 9	Chorus NZ Limited
	D, E, F	Lot 8	
	K	Lot 7	
Right to convey water in gross.	A	Lot 9	Hurunui District Council
	D	Lot 8	

ROAD TO VEST

Lot 13 hereon is to vest as road in the Waimakariri District Council.

Y:\1605 TAYLOR SEFTON\LINZ\1605 LT 557597 SCHEDULE 210407.DOCX



T 1/2

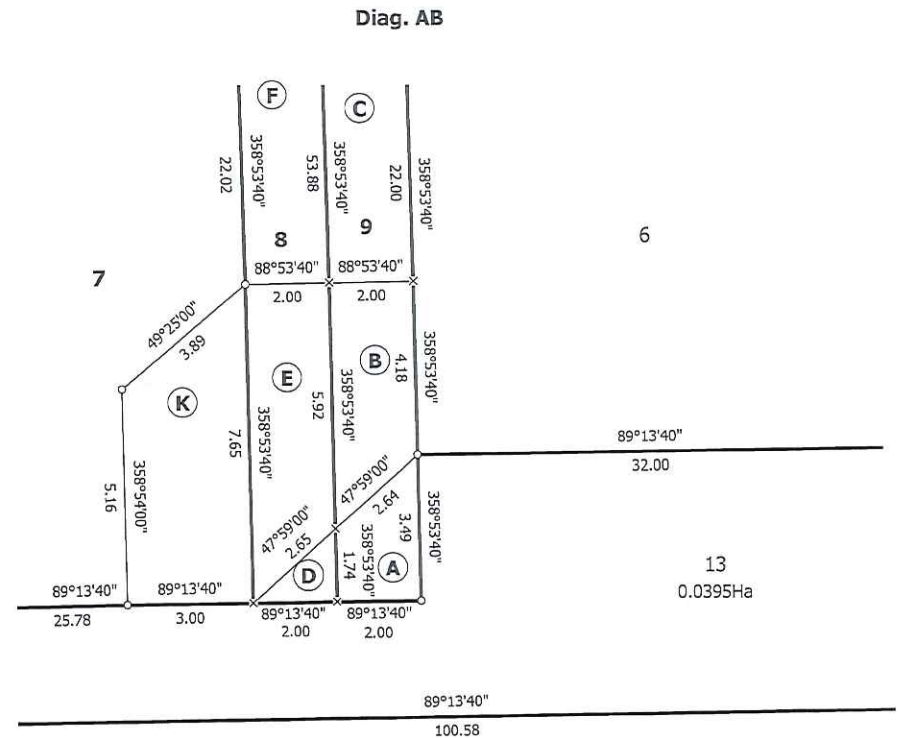
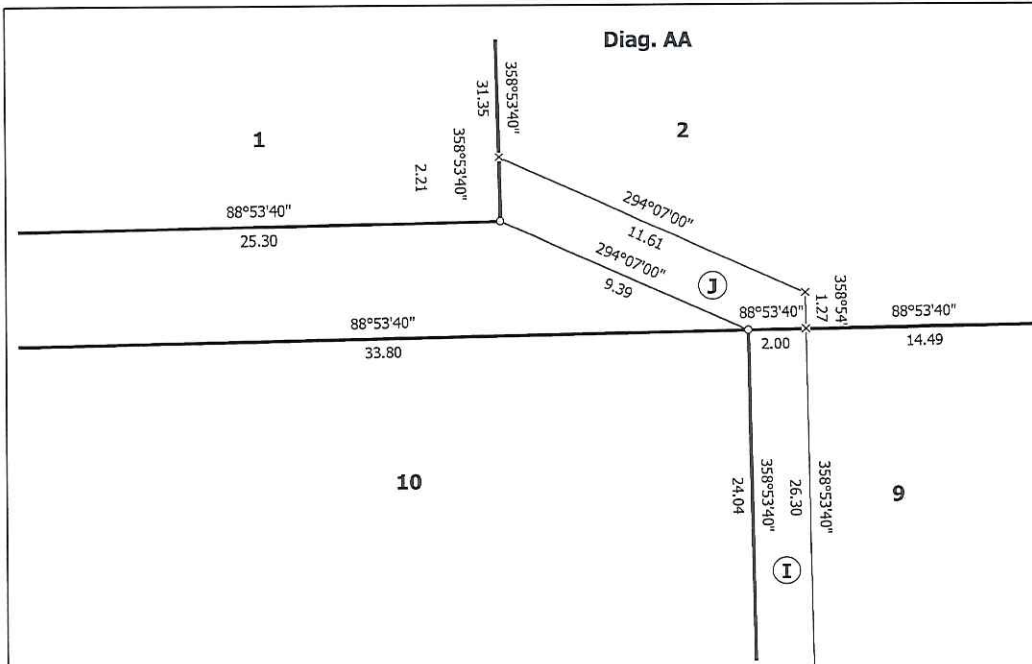
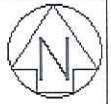
Land District: Canterbury

Lots 1-13 being subdivision of Parts RS 6675

Surveyor: Murray Trevor Scandlyn
Firm: Scandlyn Surveying Ltd

Title Plan
LT 557597
DRAFT

Digitally Generated Plan
Generated on: 13/04/2021 2:02pm Page 4 of 5



Cross Street

Land District: Canterbury

Lots 1-13 being subdivision of Parts RS 6675

Surveyor: Murray Trevor Scandlyn
Firm: Scandlyn Surveying Ltd

Title Plan
LT 557597
DRAFT

Our Reference: RC165152/210526084854
Valuation Reference: 2144019500

26 May 2021

Taylor Homes Limited
PO Box 578
RANGIORA 7440

Dear David

**TAYLOR HOMES LIMITED – 36 PEMBERTONS ROAD, SEFTON
SECTION 224(C) CERTIFICATE OF COMPLIANCE AND CONSENT NOTICES (3)**

Please find enclosed a copy of the Certificate of Compliance for the above mentioned subdivision, signed electronically on Landonline, pursuant to Section 224(c) of the Resource Management Act 1991.

Also enclosed are three (3) consent notices, signed pursuant to section 221 of the Resource Management Act 1991, in respect to conditions imposed on subdivision consent RC165152.

If you have any queries regarding the above, or if I can be any further assistance, please do not hesitate to contact me on 0800 965-468.

Yours faithfully

Sally Fear

Sally Fear
PLANNING SECRETARY

Encl

CC: *Justine Grey*



TA Approvals

Territorial Authority	Waimakariri District Council TA Certification Division	TA Reference	RC165152
Survey Number	LT 557597	Survey Purpose	LT Subdivision
Surveyor Reference	1605 Taylor	Land District	Canterbury
Surveyor	Murray Trevor Scandlyn		
Surveyor Firm	Scandlyn Surveying Ltd		
Dataset Description	Lots 1-13 being subdivision of Parts RS 6675		

TA Certificates

Pursuant to Section 224(c) Resource Management Act 1991 I hereby certify that some of the conditions of the subdivision consent have been complied with to the satisfaction of the Waimakariri District Council TA Certification Division and that three (3) consent notices have been issued in respect of those conditions that have not been complied with. Dated this 27th day of May 2021.

Signature

Signed by Yvonne Sally Fear, Authorised Officer, on 27/05/2021 07:57 AM

Receipt Information

Transaction Receipt Number	14379853
Signing Certificate (Distinguished Name)	Fear, Yvonne Sally
Signing Certificate (Serial Number)	1603486844
Signature Date	27/05/2021

*** End of Report ***

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of an application by Taylor Homes Limited to subdivide land into 12 lots

CONSENT NOTICE PURSUANT TO SECTION 221 OF THE RESOURCE MANAGEMENT ACT 1991

TO: The District Land Registrar
Canterbury Land Registry

TAKE NOTICE that the land described in the Schedule below is subject to a condition in relation to a subdivision consent as follows:

- The Consent Holder shall install a stormwater detention tank or tanks on each of Lots 1-12 to restrict the stormwater outflow collected from impervious roof areas. The storage shall provide hydraulic neutrality for 10% AEP and 2% AEP storm events up to storm durations of 24 hours. The stormwater detention tanks shall be sized according to the following table based on roof and hard stand and pervious areas:

		Drive Area (sq.m)					
		50	70	90	110	130	150
Roof Area (sq.m)	300	4.3	4.5	4.8	5.0	5.8	6.5
		8.8	9.0	9.3	9.5	9.7	10.0
	275	4.0	4.2	4.5	5.0	5.7	6.4
		8.1	8.3	8.6	8.8	9.1	9.5
	250	3.7	3.9	4.1	4.9	5.6	6.4
		7.4	7.7	7.9	8.1	8.4	9.4
	225	3.4	3.6	4.1	4.8	5.5	6.4
		6.7	7.0	7.2	7.5	8.2	9.4
	200	3.0	3.3	4.0	4.7	5.5	6.3
		6.1	6.3	6.5	7.0	8.1	10.0
	175	2.7	3.2	3.9	4.6	5.9	x
		5.4	5.6	5.9	6.9	8.6	x
	150	2.4	3.1	3.8	5.0	x	x
		4.7	4.9	5.7	7.2	x	x
		Cells indicate minimum storage required for 10% AEP storm event.					
		Cells indicate minimum storage required for 2% AEP storm event.					
		Cells marked "x" indicate unacceptable roof/driveway areas					

Note: the scenarios indicated in the table above are to provide options for detention tank sizing based on various sized lots and potential house/driveway impervious areas. These have been modelled for 10% AEP and 2% AEP storm events (based on NIWA HIRDS3 intensity rates +16% to allow for climate change) to determine run-off flow rates and detention tank sizing to ensure that the existing flow rates off the site are maintained.

2. Prior to the erection of a new dwellinghouse on Lots 1 to 12 each stormwater detention tank shall be fitted with 2 outlets with restricted orifices; one for each of the 10% AEP and 2% AEP storm event flows, and a further unrestricted overflow with the discharges being to the Lot Stormwater Reticulation for Lots 1, 2, and 7-12, and the kerb and channel for Lots 3-6. The restricted orifice sizing shall be determined at building consent stage depending on tank dimensions and in general accordance with the EDC Engineering Design Consultants Report prepared for this development having the reference 46029.SW Rev E. and dated 28 March 2017.
3. Operations and Maintenance Manual shall be provided for each detention tank installed on Lots 1-12. This manual shall include at least those matters as contained in section 5.2.4 (Tank Maintenance) in the EDC Engineering Design Consultants Report prepared for this development having the reference 46029.SW Rev E. and dated 28 March 2017.
4. The Consent Holder shall submit to Council for approval detailed engineering plans and calculations, for any stormwater detention tank to be prepared by a Chartered Professional Engineer prior to any building works commencing on-site.

The above conditions shall be subject to a Consent Notice pursuant to Section 221 of the Resource Management Act 1991 to be registered on the Certificate of Title/ Computer Freehold Registers for Lots 1-12 ensuring that these conditions are met at the time of establishing any building on the lots.

AND YOU are requested to register this Consent Notice as prescribed by Section 221 of the Resource Management Act 1991.

SCHEDULE

Estate in fee simple and being Lots 1 - 12 Deposit Plan 557597 and being a subdivision of Parts RS 6675, Records of Title CB654/20 Ltd & CB232/116.

Dated this 26th day of May 2021.

SIGNED for and on behalf of
the **WAIMAKARIRI DISTRICT COUNCIL**



Sally Fear
AUTHORISED OFFICER

IN THE MATTER of the Resource
Management Act 1991

AND

IN THE MATTER of an application by
Taylor Homes Limited to subdivide
land into 12 lots

**CONSENT NOTICE PURSUANT TO SECTION 221 OF THE
RESOURCE MANAGEMENT ACT 1991**

TO: The District Land Registrar
Canterbury Land Registry

TAKE NOTICE that the land described in the Schedule below is subject to a condition in relation to a subdivision consent as follows:

1. For Lots 1 – 5 and Lots 7 – 12, the minimum floor level of any new dwellinghouse erected shall be set no lower than 380mm above the centre line level of the Cross Street/Buller Street intersection, or 225mm above the ground level adjacent to the dwelling. All areas adjoining the dwelling shall drain freely away from the house without any ponding whatsoever.

The above condition, as it relates to Lots 1 – 5 and Lots 7 – 12, shall be subject to a consent notice pursuant to Section 221 of the Resource Management Act 1991 to be registered on the computer freehold registers of Lots 1 – 5 and Lots 7 – 12.

AND YOU are requested to register this Consent Notice as prescribed by Section 221 of the Resource Management Act 1991.

SCHEDULE

Estate in fee simple and being Lots 1 – 5 and Lots 7 – 12 Deposit Plan 557597 and being a subdivision of Parts RS 6675, Records of Title CB654/20 Ltd & CB232/116.

Dated this 26th day of May 2021.

SIGNED for and on behalf of
the **WAIMAKARIRI DISTRICT COUNCIL**



Sally Fear
AUTHORISED OFFICER

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of an application by **Taylor Homes Limited** to subdivide land into 12 lots

CONSENT NOTICE PURSUANT TO SECTION 221 OF THE RESOURCE MANAGEMENT ACT 1991

TO: The District Land Registrar
Canterbury Land Registry

TAKE NOTICE that the land described in the Schedule below is subject to a condition in relation to a subdivision consent as follows:

1. For Lot 6, the minimum floor level of any new dwellinghouse erected shall be 380mm above the centreline level of the Cross Street/Buller Street intersection.

The above condition, as it relates to Lot 6, shall be subject to a consent notice pursuant to Section 221 of the Resource Management Act 1991 to be registered on the Record of Title of Lot 6.

AND YOU are requested to register this Consent Notice as prescribed by Section 221 of the Resource Management Act 1991.

SCHEDULE

Estate in fee simple and being Lot 6 Deposit Plan 557597 and being a subdivision of Parts RS 6675, Records of Title CB654/20 Ltd & CB232/116.

Dated this 26th day of May 2021.

SIGNED for and on behalf of
the **WAIMAKARIRI DISTRICT COUNCIL**



Sally Fear
AUTHORISED OFFICER



Our Reference: RC195068 RC165152 / 200108001498
Valuation Reference: 21440-196-00

8 January 2020

Taylor Homes Limited
C/- Resource Consent Services
5 Koromiko Close
OXFORD 7430

Dear Sir

**DECISION ON RESOURCE CONSENT APPLICATION (VARIATION TO RC165152)
TAYLOR HOMES LIMITED – 32 & 36 PEMBERTONS ROAD, SEFTON**

Please find enclosed a copy of the decision reached by the Planning Manager under delegated authority from the Council on the above application.

For your reference, attached to the back of this variation decision is a full clean copy of the RC decision.

We also enclose information relating to rights of appeal, lapsing of consent (where applicable), and other legal requirements.

Yours faithfully

A handwritten signature in black ink, appearing to be "Garry Blay".

Garry Blay
RESOURCE MANAGEMENT PLANNER

Encl

CC:
Taylor Homes Limited
PO Box 578
RANGIORA 7440



RC195068/RC165152

2144019600

WAIMAKARIRI DISTRICT COUNCIL

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of an application lodged by **Taylor Homes Limited** for a resource consent under Section 88 of the aforementioned Act.

APPLICATION

The applicants sought a resource consent to vary land use consent RC165152 to provide for a differing stormwater management system to that originally approved. The system originally proposed largely retained the overland flow paths existing in the pre-development scenario, providing for this by requiring gaps to be left under fences and for on-site detention tanks to collect roof run-off to as a method to mitigate additional flows.

This variation proposes a different stormwater management system involving an existing swale along Pembertons Road, and guttering along Vaughan Street, to capture and direct stormwater flows to a detention pond located alongside Cross Street, which would then discharge to Buller Street

Following assessment by Council Engineers and subsequent ongoing discussions, the details of the stormwater management approach have been further amended to ensure appropriate stormwater management outcomes are achieved, and these are reflected in the amendments as recommended.

DECISION

The Planning Manager, on the 8th January 2020, approved:

THAT pursuant to Section 127 of the Resource Management Act 1991, consent be granted to amend, delete or add conditions of RC165152 to subdivide Pt RS 6675 into Lots 1 to 14 at 32 and 36 Pembertons Road, Sefton, as follows:

Amend Condition 1 to read as follows:

1. Except where required to give effect to the following conditions, the activity shall be carried out in accordance with the approved application plans stamped RC195068.

Add a new Condition 3 to read as follows:

3. **Land to Vest**

Lot 13 shall vest in the Waimakariri District Council as Road Reserve.

Amend original Condition 3 to become condition 4 and to read as follows:**4. Easements**

- 4.1 All services, including open drains, access ways and water pipelines serving more than one lot or traversing lots other than those being served and not situated within a public road or proposed road, shall be protected by easements. All such easements shall be granted and reserved.

Amend original Condition 4 to become condition 5 and to read as follows:**5. Power and Telephone**

- 5.1 Appropriate network utility operator(s) at the Consent Holder's expense shall provide new underground electrical and telephone reticulation to the main body of Lots 1 – 9, 11 & 12.
- 5.2 The Consent Holder shall provide written evidence from the relevant authority(ies) that the required service reticulation has been installed into Lots 1 – 9, 11 & 12 in accordance with their respective requirements.

Delete original Condition 6**Add a new condition 6 to read:****6. Stormwater – Reticulation and storage**

- 6.1 The Consent Holder shall, at their cost, construct a stormwater system which will provide hydraulic neutrality with respect to flows from the development for 20% AEP, 10% AEP and 2% AEP storm events.
- 6.2 The Consent Holder shall construct a retention basin with a minimum volume of 200m³ and outlet structure between the sealed surface of Cross Street and the southern boundary of Lot 6 sufficient to ensure the hydraulic neutrality mentioned in 6.1.
- 6.3 The Consent Holder shall construct a DN300 Class 4 RCRRJ concrete pipe between the outlet structure and the upstream head of the swale on the west side of Buller Street.
- 6.4 The Consent Holder shall construct a private stormwater pipe to convey the discharge from the on-site attenuation tanks and the ground level impervious surfaces to a culvert (hereinafter referred to as Culvert A) in the swale on the north side of Cross Street east of the entrance to Lot 12. The outlet from this private stormwater pipework shall terminate at the wall of Culvert A. The private stormwater pipework serving Lots 1, 2, 8, 9, 10, 11, and 12 shall be designed to discharge water relating to the 2% AEP critical duration storm event without over- topping.
- 6.5 The Consent Holder shall construct lateral connections for Lots 3 – 6 for primary stormwater tank discharge to the kerb and channel of Vaughan Street.
- 6.6 The Consent Holder shall construct a new DN300 pipe from Culvert A to the retention basin outlet structure along the north edge of the Cross Street

formation.

- 6.7 The Consent Holder shall submit detailed engineering plans and calculations prepared by a Chartered Professional Engineer to Council for approval in writing, prior to any of the reticulation, swale and/or retention basin construction work commencing.
- 6.8 The Consent Holder shall provide written evidence from MainPower that its existing 11kV infrastructure has been accommodated within the engineering design to its satisfaction with respect to the formation of the Pembertons Road swale and Cross Street retention pond.
- 6.9 The Consent Holder shall, at their cost, remove the 7.4m power pole and Council street light from the corner of Vaughan Street and Cross Street and supply and install a 7.4m steel pole with curved outreach street light at a location agreed with MainPower.
- 6.10 The Consent Holder shall install all stormwater reticulation to service each lot within the subdivision in accordance with the approved plans and specifications.

Delete original Condition 7

Amend original Condition 5 to become new condition 7 and to read as follows:

7. Stormwater – Dwelling Detention Tanks

- 7.1 The consent holder shall install a stormwater detention tank or tanks on each of Lots 1- 12 to restrict the stormwater outflow collected from impervious roof areas. The storage shall provide hydraulic neutrality for 10% AEP and 2% AEP storm events up to storm durations of 24 hours. The stormwater detention tanks shall be sized according to the following table based on roof and hard stand and pervious areas:

		Drive Area (sq.m)					
		50	70	90	110	130	150
Roof Area (sq.m)	300	4.3	4.5	4.8	5.0	5.8	6.5
		8.8	9.0	9.3	9.5	9.7	10.0
	275	4.0	4.2	4.5	5.0	5.7	6.4
		8.1	8.3	8.6	8.8	9.1	9.5
	250	3.7	3.9	4.1	4.9	5.6	6.4
		7.4	7.7	7.9	8.1	8.4	9.4
	225	3.4	3.6	4.1	4.8	5.5	6.4
		6.7	7.0	7.2	7.5	8.2	9.4
	200	3.0	3.3	4.0	4.7	5.5	6.3
		6.1	6.3	6.5	7.0	8.1	10.0
	175	2.7	3.2	3.9	4.6	5.9	x
		5.4	5.6	5.9	6.9	8.6	x
	150	2.4	3.1	3.8	5.0	x	x
		4.7	4.9	5.7	7.2	x	x

Cells indicate minimum storage required for 10% AEP storm event.					
Cells indicate minimum storage required for 2% AEP storm event.					
Cells marked "x" indicate unacceptable roof/driveway areas					

Note: the scenarios indicated in the table above are to provide options for detention tank sizing based on various sized lots and potential house/driveway impervious areas. These have been modelled for 10% AEP and 2% AEP storm events (based on NIWA HIRDS3 intensity rates +16% to allow for climate change) to determine run-off flow rates and detention tank sizing to ensure that the existing flow rates off the site are maintained.

- 7.2 Prior to the erection of a new dwellinghouse on Lots 1 to 12, each stormwater detention tank shall be fitted with 2 outlets with restricted orifices; one for each of the 10% AEP and 2% AEP storm event flows, and a further unrestricted overflow with the discharges being to the Lot Stormwater Reticulation for Lots 1, 2, and 7-12, and the kerb and channel for Lots 3 - 6. The restricted orifice sizing shall be determined at building consent stage depending on tank dimensions and in general accordance with the EDC Engineering Design Consultants Report prepared for this development having the reference 46029.SW Rev E. and dated 28 March 2017.
- 7.3 An Operations and Maintenance Manual shall be provided for each detention tank installed on Lots 1-12. This manual shall include at least those matters as contained in section 5.2.4 (Tank Maintenance) in the EDC Engineering Design Consultants Report prepared for this development having the reference 46029.SW Rev E. and dated 28 March 2017.
- 7.4 The Consent Holder shall submit to Council for approval detailed engineering plans and calculations, for any stormwater detention tank to be prepared by a Chartered Professional Engineer prior to any building works commencing on-site.
- 7.5 Conditions 7.1 - 7.4 shall be subject to a Consent Notice pursuant to Section 221 of the Resource Management Act 1991 to be registered on the Certificate of Title/ Computer Freehold Registers for Lots 1 - 12 ensuring that these conditions are met at the time of establishing any building on the lots.
- 7.6 Conditions 7.1 - 7.4 as they apply to Lot 10 shall be met prior to the issue of a s.224(c) certificate in relation to the buildings remaining on the lot.

Delete original Condition 8

Add a new Condition 8 to read:

8. Stormwater from 0.5% AEP storm

- 8.1 The Consent Holder shall widen the existing roadside swales along Pemberton's Road and Cross Street to cater for the effects on existing flows resulting from the development and from flows from the east side of

Pembertons Road upstream of the development.

- 8.2 Along the east side of Pembertons Road the Consent Holder shall confirm the existence, or otherwise construct a roadside shoulder of 300mm minimum width, and shall form a swale as per approved construction drawings with grassed slopes typically of 15% maximum slope. The swale bed shall be constructed of materials which will not erode during a 2% AEP 20 minute duration storm. A 1.5m wide platform shall be formed along the eastern edge of the swale (next to the Lot boundaries) so that it is 50mm higher than the adjacent centreline level of Pembertons Road.
- 8.3 Along the north side of Cross Street the Consent Holder shall confirm the existence, or otherwise construct a roadside shoulder of 300mm minimum width, and shall form a swale as per approved construction drawings with grassed slopes typically of 15% maximum slope. The swale bed shall be constructed of materials which will not erode during a 2% AEP 20 minute duration storm. The Consent Holder shall prove to the Engineers satisfaction by the submission of plans and calculations for approval that the land on Lots 7 and 12 falls towards the swale and is at least 50mm higher than the adjacent centreline level of Cross Street.
- 8.4 Along the west side of Vaughan Street the Consent Holder shall prove to the Council's Engineers satisfaction, by the submission of plans and levels, that the land in Lots 3 – 6 fall towards the kerb and channel to be constructed along the street.
- 8.5 The Consent Holder shall submit detailed engineering plans and calculations prepared by a Chartered Professional Engineer for any earthworks and structures to the Council for approval in writing, prior to any of the swale upgrading work commencing.
- 8.6 The Consent Holder shall consult with Council Greenspace staff on how the two existing street trees in the Pembertons Road berm along the subject property will be managed as part of the swale widening so as to ensure their continued survival, whether in their existing location or elsewhere within the Block.

Delete original Condition 9

Add a new condition 9 to read:

9. Entrance Structures

- 9.1 The Consent Holder shall provide entrance structures across the Pembertons Road swale and Cross Road swale to provide access to:
- a) 44 Pembertons Road;
 - b) The existing house at 36 Pembertons Road;
 - c) Lots 1, 2, 10, and 11 off Pembertons Road;
 - d) Lot 12.
- 9.2 Each entrance structure shall be designed and constructed as per the Waimakariri District Council ECOP and have at least 5.0m width at the edge closest to the edge of seal of the adjoining road.
- 9.3 The vehicle accessways, excluding the precast concrete stormwater pipes,

between the existing sealed road and structure and between the structure and the Lot boundary, shall be formed and surfaced in asphalt according to plans approved in writing by the Council.

- 9.4 The Consent Holder shall submit detailed engineering plans and calculations prepared by a Chartered Professional Engineer to the Council for approval in writing, prior to any of the culvert construction work commencing.

Delete Original Condition 10

Add a new Condition 10 to read:

10. Vehicle Crossings off Vaughan Street

- 10.1 The Consent Holder shall at their expense construct vehicle crossings/access to Lots 3, 4, 5, and 6 between the edge of kerb of Vaughan Street and the lot boundaries, in accordance with the Council's Engineering Code of Practice Standard Drawing 600-211B Issue A.
- 10.2 The Consent Holder shall form and surface in 20mm asphaltic cement the area between the west edge of the crossing and the Lot boundary of Lots 3 - 6. Alternatively, the crossing may be extended to the lot boundary in concrete as per WDC Engineering Code of Practice SD600-211A Issue E or hotmix as per WDC Engineering Code of Practice SD600-211B Issue A.
- 10.3 The Consent Holder shall Clegg Hammer test the access/all accesses prior to sealing. A measured Clegg Impact Value of at least 25 for footpaths and residential crossings shall be obtained to assure adequate compaction and pavement strength prior to sealing. Documentation shall be supplied to the Council confirming the test results obtained.

Delete Original Condition 11

Amend original Condition 13 to become new condition 11 and to read as follows:

11. Right of Way

- 11.1 The Consent Holder shall form and seal the right of way serving Lots 7, 8, and 9 to accord with the requirements of the Waimakariri District Council Engineering Code of Practice Standard Drawing 600-274 Issue D.
- 11.2 The Consent Holder shall Clegg Hammer test the rights of way prior to sealing. A measured Clegg Impact Value of at least, 25 for footpaths and residential crossing shall be obtained to assure adequate compaction and pavement strength prior to sealing. Documentation shall be supplied to Council confirming the test results obtained.

Delete Original Condition 12

Amend original Condition 14 to become new condition 12 and to read as follows:

12. Minimum Dwelling Floor Levels:

- 12.1 For Lots 1 – 5 and 7 – 12 the minimum floor level of any new dwellinghouse erected shall be set no lower than 380mm above the centre line level of the Cross Street/Buller Street intersection, or 225mm above the ground level adjacent to the dwelling. areas adjoining the dwelling shall drain freely away from the house without any ponding.
- 12.2 For Lot 6 the minimum floor level shall be 380mm above the centreline level of the Cross Street/Buller Street intersection.
- 12.3 Condition 12.1 shall be subject to a consent notice pursuant to Section 221 of the Resource Management Act 1991 to be registered on the computer freehold registers of Lots 1 – 5 and 7 - 12.
- 12.4 Condition 12.2 shall be subject to a consent notice pursuant to Section 221 of the Resource Management Act 1991 to be registered on the computer freehold register of Lot 6.

Amend original Condition 15 to become new condition 13 and to read as follows:

13. Vaughan Street (North-south leg) Upgrading

- 13.1 The Consent Holder shall construct kerb and channel in accordance with the Council's Engineering Code of Practice Standard Drawing 600-201A Issue D, and form and asphalt Vaughan Street along the full length of the frontages of Lots 3 – 6. The asphalt width shall be 4.0m minimum with a 300mm shoulder on the eastern side. The road shall be sealed in accordance with the Council's Engineering Code of Practice.
- 13.2 The Consent Holder shall construct an extension to the kerb and channel at the northern end of Lot 3 to ensure the stormwater from the swale is captured and directed to flow along the new kerb and channel
- 13.3 The Consent Holder shall submit detailed engineering plans and calculations prepared by a Chartered Professional Engineer to the Council for approval in writing, prior to any of the construction work on the north-south leg of Vaughan Street commencing.
- 13.4 The Consent Holder shall carry out Benkelman Beam tests or other approved in situ formation bearing tests following completion of the base course layer and prior to sealing. The Consent Holder shall submit the test results to the Council for approval.

Add new condition 14 to read:

14. Water Supply

- 14.1 The Consent Holder shall provide a reticulated water supply to all lots including connections to existing lines and extra hydrants, in accordance with plans approved by the Hurunui District Council.
- 14.2 The Consent Holder shall engage the Hurunui District Council to carry out

any required new or modified connections to the water supply.

- 14.3 The Consent Holder shall install the reticulation to meet the following minimum requirements for Lots 1 to 9 and Lots 11 & 12. The Consent Holder shall also confirm that the existing dwelling on Lot 10 meets the following minimum requirements:
- Separate 15mm diameter laterals from the main to the toby box
 - Toby boxes, restrictors and valves installed at the road frontage
 - Individual 20mm/15mm laterals from the toby box to the storage tank, which shall be located a minimum of 1m within the main body of the Lots, or if access is via a right of way, individual 25mm laterals from the toby box to the storage tank, which shall be located a minimum of 1 metre within the main body of the Lots)
 - A supply of a minimum of 1.8m³/day of water, including pipework, restrictors, fittings and storage tanks with a minimum capacity of 5,400 litres.
- 14.4 The Consent Holder shall provide an adequate reticulated domestic water supply to each of Lots 1 to 12 from the Ashley Rural Water Supply, providing a minimum of 1 unit (1.8m³/day). This is a restricted supply.
- 14.5 The Consent Holder shall provide written evidence from the Hurunui District Council that the required reticulation has been installed in accordance with its requirements.

Amend original Condition 16 to become new condition 15 and to read as follows:

15. **Maintenance**

- 15.1 The Consent Holder shall be responsible for the maintenance of all subdivision and associated works for a period of twelve months for Civil works and twenty-four months for landscaping works from the date of issue of the 224(c) Conditions Certificate. A bond equal to 5% of the cost of construction works shall be lodged with the Council for the same period.
- 15.2 The Consent Holder shall submit a civil works maintenance programme covering the twelve month period for Council approval prior to issue of the 224(c) Conditions Certificate.
- 15.3 The Consent Holder shall submit a landscaping maintenance programme covering the 24 month period for Council approval prior to issue of the 224(c) Conditions Certificate.
- 15.4 Maintenance shall include:
- a) Appropriate and regular mowing of grass and watering of the two street trees currently in Pembertons Road, together with the replacement of any dead specimens.
 - b) Repair of any damage or defects in any works or services associated with the development of the subdivision as consented.
 - c) Full operation of the maintenance programme noted in Condition 15.1

Amend original Condition 24 to become new condition 22 and to read as follows:

22. **Works Conditions**

A certificate under Section 224(c) of the Resource Management Act 1991 will not be issued until Conditions 1 – 21 above have been met to the satisfaction of the Waimakariri District Council, at the expense of the Consent Holder.

AMEND ADVICE NOTES TO READ:

1. The Consent Holder is advised that development contributions apply to this subdivision and that these will be levied in accordance with the Council's Development Contributions Policy. Development Contributions will be advised in a letter separate to the resource consent decision. Payment of development contributions is required prior to the completion of the 224(c) process, under section 208 of the Local Government Act 2002.
2. Ashley Rural Water Supply is managed by Hurunui District Council. To avoid delays relating to water supply connections the Consent Holder should contact the water service unit at Hurunui District Council on 03 314 8816 and advise of the subdivision. For any enquiries regarding Ashley Rural Water Supply locations or to agree any required new or modified connections to the water supply, please contact Hurunui District Council. Please note that the Ashley Rural Water Supply is a flow-restricted scheme.
3. For any enquiries regarding Ashley Rural Water Supply locations or to agree any required new or modified connections to the water supply, please contact Hurunui District Council. Please note that the Ashley Rural Water Supply is a flow-restricted scheme.
4. The Erosion & Sediment control Toolbox for Canterbury can be found on the ECan website link <http://escscanterbury.co.nz/>
5. No excavation may commence within a public road reserve without the prior receipt and approval of a Corridor Access Request (CAR).
6. Prior to construction of a dwelling the applicant will be required to provide evidence of the building site being able to support building loads and not subject to material damage due to any erosion, falling debris, subsidence, slippage or inundation.
7. The requirement for power and telephone to be confirmed as having capacity to service the subdivision does not guarantee that power or telephone connections are provided to potential allotments. On rural lots, the service authorities will not install submains to individual lots until the location of the house site is determined. Prospective purchasers of these lots should be advised to contact the relevant service authorities to ascertain the likely costs of servicing any specific lots to the purchaser's requirements.
8. The consent is a resource consent in terms of the Resource Management Act 1991. It is not a consent under any other Act, Regulation or Bylaw.
9. The Consent Holder is advised that Traffic Management Plan forms can be sourced from Council Service Centres, or on-line at: <https://www.waimakariri.govt.nz/home>

10. The Waimakariri District Council will undertake works to increase the capacity of the drain from Criglingtons Road.

ALL OTHER CONDITIONS TO REMAIN UNCHANGED EXCEPT AS REQUIRED FOR RE-NUMBERING.

REASONS FOR THE DECISION

Pursuant to Section 113 of the Act the Council was satisfied that:

- No person is deemed to be adversely affected by the proposal.
- The environmental effects will be less than minor.
 - Stormwater management will be to a higher level than that previously approved under RC165152.
- The variation sought will be consistent with the outcomes sought by the Policies and Objectives of the District Plan.

DATED at Rangiora this 8th Day of January 2020



SIGNED by Garry Blay
RESOURCE MANAGEMENT PLANNER

FULL REVISED CONSENT – ORIGINAL = RC165152/ VARIED = RC195068**1 Application**

- 1.1 Except where required to give effect to the following conditions the activity shall be carried out in accordance with the attached approved application plans stamped RC195068.

2 Standards

- 2.1 All stages of design and construction shall be in accordance with the following standards (and their latest amendments) where applicable:
- Waimakariri District Council Engineering Code of Practice
 - NZS 4404:2010 Land Development and Subdivision Infrastructure
 - NZS 4431:1989 Earthfill for Residential Development

3 Land To Vest

- 3.1 Lot 13 shall vest in the Waimakariri District Council as Road Reserve.

4 Easements

- 4.1 All services, including open drains, access ways and water pipelines serving more than one lot or traversing lots other than those being served and not situated within a public road or proposed road, shall be protected by easements. All such easements shall be granted and reserved.

5 Power and Telephone Connections

- 5.1 Appropriate network utility operator(s) at the Consent Holder's expense shall provide new underground electrical and telephone reticulation to the main body of Lots 1 – 9, 11 & 12.
- 5.2 The Consent Holder shall provide written evidence from the relevant authority(ies) that the required service reticulation has been installed into Lots 1 – 9, 11 & 12 in accordance with their respective requirements.

6 Stormwater – Reticulation and Storage

- 6.1 The Consent Holder shall at their cost construct a stormwater system which will provide hydraulic neutrality with respect to flows from the development for 20% AEP, 10% AEP and 2% AEP storm events.
- 6.2 The Consent Holder shall construct a retention basin with a minimum volume of 200m³ and outlet structure between the sealed surface of Cross Street and the southern boundary of Lot 6 sufficient to ensure the hydraulic neutrality mentioned in 6.1.

- 6.3 The Consent Holder shall construct a DN300 Class 4 RCRRJ concrete pipe between the outlet structure and the upstream head of the swale on the west side of Buller Street.
- 6.4 The Consent Holder shall construct a private stormwater pipe to convey the discharge from the onsite attenuation tanks and the ground level impervious surfaces to a culvert (hereinafter referred to as Culvert A) in the swale on the north side of Cross Street east of the entrance to Lot 12. The outlet from this private stormwater pipework shall terminate at the wall of Culvert A. The private stormwater pipework serving Lots 1, 2, 8, 9, 10, 11, and 12 shall be designed to discharge water relating to the 2% AEP critical duration storm event without over- topping.
- 6.5 The Consent Holder shall construct lateral connections for Lots 3 – 6 for primary stormwater tank discharge to the kerb and channel of Vaughan Street.
- 6.6 The Consent Holder shall construct a new DN300 pipe from Culvert A to the retention basin outlet structure along the north edge of the Cross Street formation.
- 6.7 The Consent Holder shall submit detailed engineering plans and calculations prepared by a Chartered Professional Engineer to Council for approval in writing, prior to any of the reticulation, swale and/or retention basin construction work commencing.
- 6.8 The Consent Holder shall provide written evidence from MainPower that its existing 11kV infrastructure has been accommodated within the engineering design to its satisfaction with respect to the formation of the Pemberton's Road swale and Cross Street retention pond.
- 6.9 The Consent Holder shall, at their cost, remove the 7.4m power pole and Council street light from the corner of Vaughan Street and Cross Street and supply and install a 7.4m steel pole with curved outreach street light at a location agreed with MainPower.
- 6.10 The Consent Holder shall install all stormwater reticulation to service each lot within the subdivision in accordance with the approved plans and specifications.

7 Stormwater – Dwelling Detention Tanks

- 7.1 The Consent Holder shall install a stormwater detention tank or tanks on each of Lots 1- 12 to restrict the stormwater outflow collected from impervious roof areas. The storage shall provide hydraulic neutrality for 10% AEP and 2% AEP storm events up to storm durations of 24 hours. The stormwater detention tanks shall be sized according to the following table based on roof and hard stand and pervious areas:

		Drive Area (sq.m)					
		50	70	90	110	130	150
f Area a (sq)	300	4.3	4.5	4.8	5.0	5.8	6.5
		8.8	9.0	9.3	9.5	9.7	10.0

	275	4.0	4.2	4.5	5.0	5.7	6.4
		8.1	8.3	8.6	8.8	9.1	9.5
	250	3.7	3.9	4.1	4.9	5.6	6.4
		7.4	7.7	7.9	8.1	8.4	9.4
	225	3.4	3.6	4.1	4.8	5.5	6.4
		6.7	7.0	7.2	7.5	8.2	9.4
	200	3.0	3.3	4.0	4.7	5.5	6.3
		6.1	6.3	6.5	7.0	8.1	10.0
	175	2.7	3.2	3.9	4.6	5.9	x
		5.4	5.6	5.9	6.9	8.6	x
	150	2.4	3.1	3.8	5.0	x	x
		4.7	4.9	5.7	7.2	x	x
Cells indicate minimum storage required for 10% AEP storm event.							
Cells indicate minimum storage required for 2% AEP storm event.							
Cells marked "x" indicate unacceptable roof/driveway areas							

Note: the scenarios indicated in the table above are to provide options for detention tank sizing based on various sized lots and potential house/driveway impervious areas. These have been modelled for 10% AEP and 2% AEP storm events (based on NIWA HIRDS3 intensity rates +16% to allow for climate change) to determine run-off flow rates and detention tank sizing to ensure that the existing flow rates off the site are maintained.

- 7.2 Prior to the erection of a new dwellinghouse on Lots 1 to 12 each stormwater detention tank shall be fitted with 2 outlets with restricted orifices; one for each of the 10% AEP and 2% AEP storm event flows, and a further unrestricted overflow with the discharges being to the Lot Stormwater Reticulation for Lots 1, 2, and 7-12, and the kerb and channel for Lots 3-6. The restricted orifice sizing shall be determined at building consent stage depending on tank dimensions and in general accordance with the EDC Engineering Design Consultants Report prepared for this development having the reference 46029.SW Rev E. and dated 28 March 2017.
- 7.3 An Operations and Maintenance Manual shall be provided for each detention tank installed on Lots 1-12. This manual shall include at least those matters as contained in section 5.2.4 (Tank Maintenance) in the EDC Engineering Design Consultants Report prepared for this development having the reference 46029.SW Rev E. and dated 28 March 2017.
- 7.4 The Consent Holder shall submit to Council for approval detailed engineering plans and calculations, for any stormwater detention tank to be prepared by a Chartered Professional Engineer prior to any building works commencing on-site.

- 7.5 Conditions 7.1 - 7.4 shall be subject to a Consent Notice pursuant to Section 221 of the Resource Management Act 1991 to be registered on the Certificate of Title/ Computer Freehold Registers for Lots 1-12 ensuring that these conditions are met at the time of establishing any building on the lots.
- 7.6 Conditions 7.1 - 7.4 as they apply to Lot 10 shall be met prior to the issue of a s.224(c) certificate in relation to the buildings remaining on the lot.

8 Stormwater from 0.5% AEP Storm

- 8.1 The Consent Holder shall widen the existing roadside swales along Pembertons Road and Cross Street to cater for the effects on existing flows resulting from the development and from flows from the east side of Pembertons Road upstream of the development.
- 8.2 Along the east side of Pembertons Road the Consent Holder shall confirm the existence, or otherwise construct a roadside shoulder of 300mm minimum width, and shall form a swale as per approved construction drawings with grassed slopes typically of 15% maximum slope. The swale bed shall be constructed of materials which will not erode during a 2% AEP 20 minute duration storm. A 1.5m wide platform shall be formed along the eastern edge of the swale (next to the Lot boundaries) so that it is 50mm higher than the adjacent centreline level of Pembertons Road.
- 8.3 Along the north side of Cross Street the Consent Holder shall confirm the existence, or otherwise construct a roadside shoulder of 300mm minimum width, and shall form a swale as per approved construction drawings with grassed slopes typically of 15% maximum slope. The swale bed shall be constructed of materials which will not erode during a 2% AEP 20 minute duration storm. The Consent Holder shall prove to the Engineers satisfaction by the submission of plans and calculations for approval that the land on Lots 7 and 12 falls towards the swale and is at least 50mm higher than the adjacent centreline level of Cross Street.
- 8.4 Along the west side of Vaughan Street the Consent Holder shall prove to the Council's Engineers satisfaction, by the submission of plans and levels, that the land in Lots 3 – 6 fall towards the kerb and channel to be constructed along the street.
- 8.5 The Consent Holder shall submit detailed engineering plans and calculations prepared by a Chartered Professional Engineer for any earthworks and structures to the Council for approval in writing, prior to any of the swale upgrading work commencing.
- 8.6 The Consent Holder shall consult with Council Greenspace staff on how the two existing street trees in the Pembertons Road berm along the subject property will be managed as part of the swale widening so as to ensure their continued survival, whether in their existing location or elsewhere within the Block.

9 Entrance Structures

- 9.1 The Consent Holder shall provide entrance structures across the Pembertons Road swale and Cross Road swale to provide access to:-
- a) 44 Pembertons Road;
 - b) The existing house at 36 Pembertons Road;
 - c) Lots 1, 2, 10, and 11 off Pembertons Road;
 - d) Lot 12.
- 9.2 Each entrance structure shall be designed and constructed as per the Waimakariri District Council ECOP and have at least 5.0m width at the edge closest to the edge of seal of the adjoining road.
- 9.3 The vehicle accessways, excluding the precast concrete stormwater pipes, between the existing sealed road and structure and between the structure and the Lot boundary, shall be formed and surfaced in asphalt according to plans approved in writing by the Council.
- 9.4 The Consent Holder shall submit detailed engineering plans and calculations prepared by a Chartered Professional Engineer to the Council for approval in writing, prior to any of the culvert construction work commencing.

10 Vehicle Crossings off Vaughan Street

- 10.1 The Consent Holder shall at its expense construct vehicle crossings/access to Lots 3, 4, 5, and 6 between the edge of kerb of Vaughan Street and the lot boundaries, in accordance with the Council's Engineering Code of Practice Standard Drawing 600-211B Issue A.
- 10.2 The Consent Holder shall form and surface in 20mm asphaltic cement the area between the west edge of the crossing and the Lot boundary of Lots 3 - 6. Alternatively the crossing may be extended to the Lot boundary in concrete as per WDC Engineering Code of Practice SD600-211A Issue E or hotmix as per WDC Engineering Code of Practice SD600-211B Issue A.
- 10.3 The Consent Holder shall Clegg Hammer test the access/all accesses prior to sealing. A measured Clegg Impact Value of at least 25 for footpaths and residential crossings shall be obtained to assure adequate compaction and pavement strength prior to sealing. Documentation shall be supplied to the Council confirming the test results obtained.

11 Right of Way

- 11.1 The Consent Holder shall form and seal the right of way serving Lots 7, 8, and 9 to accord with the requirements of the Waimakariri District Council Engineering Code of Practice Standard Drawing 600-274 Issue D.
- 11.2 The Consent Holder shall Clegg Hammer test the rights of way prior to sealing. A measured Clegg Impact Value of at least, 25 for footpaths and residential crossing shall be obtained to assure adequate compaction and pavement strength prior to sealing. Documentation shall be supplied to Council confirming the test results obtained.

12 Minimum Dwelling Floor Levels

- 12.1 For Lots 1 – 5 and 7 – 12 the minimum floor level of any new dwellinghouse erected shall be set no lower than 380mm above the centre line level of the Cross Street/Buller Street intersection, or 225mm above the ground level adjacent to the dwelling. All areas adjoining the dwelling shall drain freely away from the house without any ponding whatsoever.
- 12.2 For Lot 6 the minimum floor level shall be 380mm above the centreline level of the Cross Street/Buller Street intersection.
- 12.3 Condition 12.1 shall be subject to a consent notice pursuant to Section 221 of the Resource Management Act 1991 to be registered on the computer freehold registers of Lots 1 – 5 and 7 - 12.
- 12.4 Condition 12.2 shall be subject to a consent notice pursuant to Section 221 of the Resource Management Act 1991 to be registered on the computer freehold register of Lot 6.

13 Vaughan Street (North-South Leg) Upgrading

- 13.1 The Consent Holder shall construct kerb and channel in accordance with Council's Engineering Code of Practice Standard Drawing 600-201A Issue D, and form and asphalt Vaughan Street along the full length of the frontages of Lots 3 – 6. The asphalt width will be 4.0m minimum with a 300mm shoulder on the eastern side. The road shall be sealed in accordance with the Engineering Code of Practice.
- 13.2 The Consent Holder shall construct an extension to the kerb and channel at the northern end of Lot 3 to ensure the stormwater from the swale is captured and directed to flow along the new kerb and channel
- 13.3 The Consent Holder shall submit detailed engineering plans and calculations prepared by a Chartered Professional Engineer to the Council for approval in writing, prior to any of the construction work on the north-south leg of Vaughan Street commencing.
- 13.4 The Consent Holder shall carry out Benkelman Beam tests or other approved in situ formation bearing tests following completion of the base course layer and prior to sealing. The Consent Holder shall submit the test results to the Council for approval.

14 Water Supply

- 14.1 The Consent Holder shall provide a reticulated water supply to all Lots including connections to existing lines and extra hydrants, in accordance with plans approved by the Hurunui District Council.
- 14.2 The Consent Holder shall engage the Hurunui District Council to carry out any required new or modified connections to the water supply.

- 14.3 The Consent Holder shall install the reticulation to meet the following minimum requirements for Lots 1 to 9 and Lots 11 & 12. The Consent Holder shall also confirm that the existing dwelling on Lot 10 meets the following minimum requirements:
- Separate 15mm diameter laterals from the main to the toby box
 - Toby boxes, restrictors and valves installed at the road frontage
 - Individual 20mm/15mm laterals from the toby box to the storage tank, which shall be located a minimum of 1 metre within the main body of the lots, or if access is via a right of way, individual 25mm laterals from the toby box to the storage tank, which shall be located a minimum of 1m within the main body of the Lots)
 - A supply of a minimum of 1.8m³/day of water, including pipework, restrictors, fittings and storage tanks with a minimum capacity of 5,400 litres.
- 14.4 The Consent Holder shall provide an adequate reticulated domestic water supply to each Lot from the Ashley Rural Water Supply, providing a minimum of 1 unit (1.8m³/day). This is a restricted supply.
- 14.5 The Consent Holder shall provide written evidence from the Hurunui District Council that the required reticulation has been installed in accordance with its requirements.

15 Maintenance

- 15.1 The Consent Holder shall be responsible for the maintenance of all subdivision and associated works for a period of twelve months for Civil works and twenty four months for landscaping works from the date of issue of the 224(c) Conditions Certificate. A bond equal to 5% of the cost of construction works shall be lodged with the Council for the same period.
- 15.2 The Consent Holder shall submit a civil works maintenance programme covering the twelve month period for Council approval prior to issue of the 224(c) Conditions Certificate.
- 15.3 The Consent Holder shall submit a landscaping maintenance programme covering the 24 month period for Council approval prior to issue of the 224(c) Conditions Certificate.
- 15.4 Maintenance shall include:
- a) Appropriate and regular mowing of grass and watering of the two street trees currently in Pembertons Road, together with the replacement of any dead specimens.
 - b) Repair of any damage or defects in any works or services associated with the development of the subdivision as consented.
 - c) Full operation of the maintenance programme noted in Condition 15.1

16 Earthworks

- 16.1 The Consent Holder shall carry out bulk earthworks across the development site shaped to fill in existing channels and create practical building platforms.

- 16.2 Any stockpiles of excavated and/or fill material within the site shall be managed to ensure they do not cause a public nuisance. The height of any stockpiles shall be limited to a maximum of 2.0m above surrounding ground level and shall not be located within 15 metres of any neighbouring property.
- 16.3 Any filling shall be installed and compacted to be in compliance with the following New Zealand Standards
- NZS4431 – Code of Practice for Earth Filling in Residential Development
 - NZS4402 – Methods of Testing Soils for Civil Engineering Purposes; and
 - NZS4404 – Land Development and Subdivision Engineering
- 16.4 The filling shall be completed to the requirements of the Consent Holder's geotechnical and/or structural engineer, who shall provide certification that all filling has been installed to the required standards. As-built plans of the earthworks undertaken shall be prepared for submission to the Council on completion.
- 16.5 Earthworks, reshaping or fill shall not alter the natural ground level by more than 300mm above existing ground where it is carried out within 2 metres of the northern boundaries of Lots 1, 2, and 3, or by more than 600mm above existing ground where it is carried out between 2 metres and 20m of the northern boundaries of Lots 1, 2, and 3.
- 16.6 All rubbish, organic and any other unsuitable material for filling shall be removed and appropriately disposed off-site.
- 16.7 The Consent Holder shall submit detailed engineering plans and calculations prepared by a Chartered Professional Engineer to Council for approval in writing, prior to on-site works commencing.

17 Construction Environmental Management

- 17.1 Prior to any works commencing on-site the Consent Holder shall provide to the Council an Environmental Management Plan ("EMP") detailing the methodology of works and the environmental controls in place to limit effects from issues involving flooding, dust, noise, refuelling operations, stockpiling of materials, measures for handling and disposal off site of waste materials, wildlife etc.
- 17.2 The EMP shall specifically discuss proposed measures that shall be in place to prevent sediment migration from the site.
- 17.3 Site works shall cease when winds are of such magnitude to create a dust nuisance, or wet weather events create a sediment mobilisation issue, and appropriate control measures shall be employed.
- 17.4 Construction noise shall not exceed the recommended limits specified in, and shall be measured and assessed in accordance with, the provisions of NZS6803:P1999 "Measurement and Assessment of Noise from

Construction, Maintenance, and Demolition Work.” Adjustments and exemptions provided in Clause 6 of NZS6803:P1999 shall apply.

- 17.5 Hours of operation for undertaking works on-site shall be limited to 7.00am to 6.00pm Monday to Saturday. No works shall be carried out on Sundays or public holidays.
- 17.6 No site works shall commence until the Council has approved the Environmental Management Plan.

18 Traffic Management

- 18.1 The Consent Holder shall submit for approval a Traffic Management Plan detailing traffic control works (including sketch layout and control signs.) This plan shall be submitted prior to the works commencing on or in Pembertons Road, Cross Street, and Vaughan Street. Traffic Management shall be Level 1, as described in the NZTA Code of Practice for Temporary Traffic Management.

19 As-Built Plans

- 19.1 “As-Built” plans setting out in detail the location of all services shall be provided to the Council immediately following completion of the works. Two sets of plans (hard copy and electronic form) shall be provided at a scale of 1:200 or 1:250.
- 19.2 The Consent Holder shall provide an asset register for all assets to be vested in Council, including pipes, valves, fittings, manholes, structures and the like. The asset register shall include construction costs.

20 Removal of Existing Buildings

- 20.1 All the existing buildings and associated structures, other than those on the Lot 10, shall be totally removed from the site.

21 Conditions Auditing

- 21.1 The Council will audit compliance with the conditions of consent by both site inspections and checking of associated documentation to the extent necessary to ensure the utility reticulation aspects are completed in accordance with the approved plans and to the Council’s standards.
- 21.2 The Council will undertake inspections and checking. The Consent Holder, or its authorised agent, shall notify Council at least one working day prior to commencing various stages of the works to enable audit inspections required by the consent to be carried out.
- 21.3 The minimum level of inspection shall be as follows:

Water

- At completion of installation by the Hurunui District Council.
- Access/Right of Way/Roading/Culverts
- Upon excavation to subgrade.

- Prior to final surfacing.

Roading

- Following shaping of roading sub grade prior to placement of sub base material
- Following metalling up, prior to pouring of kerb and channel
- Following compaction of base course prior to sealing. The carriageway shall be tested with a Benkleman Beam and the kerb and channel with a Clegg Hammer. The results shall be submitted to Council for approval.

drawings

Drainage (excluding entrance structures)

- Upon excavation to subgrade.
- During installation of piping and headwalls
- At the completion of the works

Entrance Structures

- Upon excavation to subgrade
- Pre-pour of base
- Pre-pour of deck (where appropriate)
- Prior to final surfacing

Street Trees (Pembertons Road)

- At completion of the works

Whole Works

- Prior to issue of a certificate under Section 224(c) of the Resource Management Act.

21.4 Where repeat inspections are required because of faulty workmanship or work not being ready contrary to the receipt of notification such inspections will be carried out at the current hourly rate for staff time and vehicle running costs for kilometres travelled.

22 Works Conditions

22.1 That a certificate under Section 224(c) of the Resource Management Act 1991 will not be issued until Conditions 1 – 21 above have been met to the satisfaction of the Waimakariri District Council, at the expense of the Consent Holder.

Advice Notes

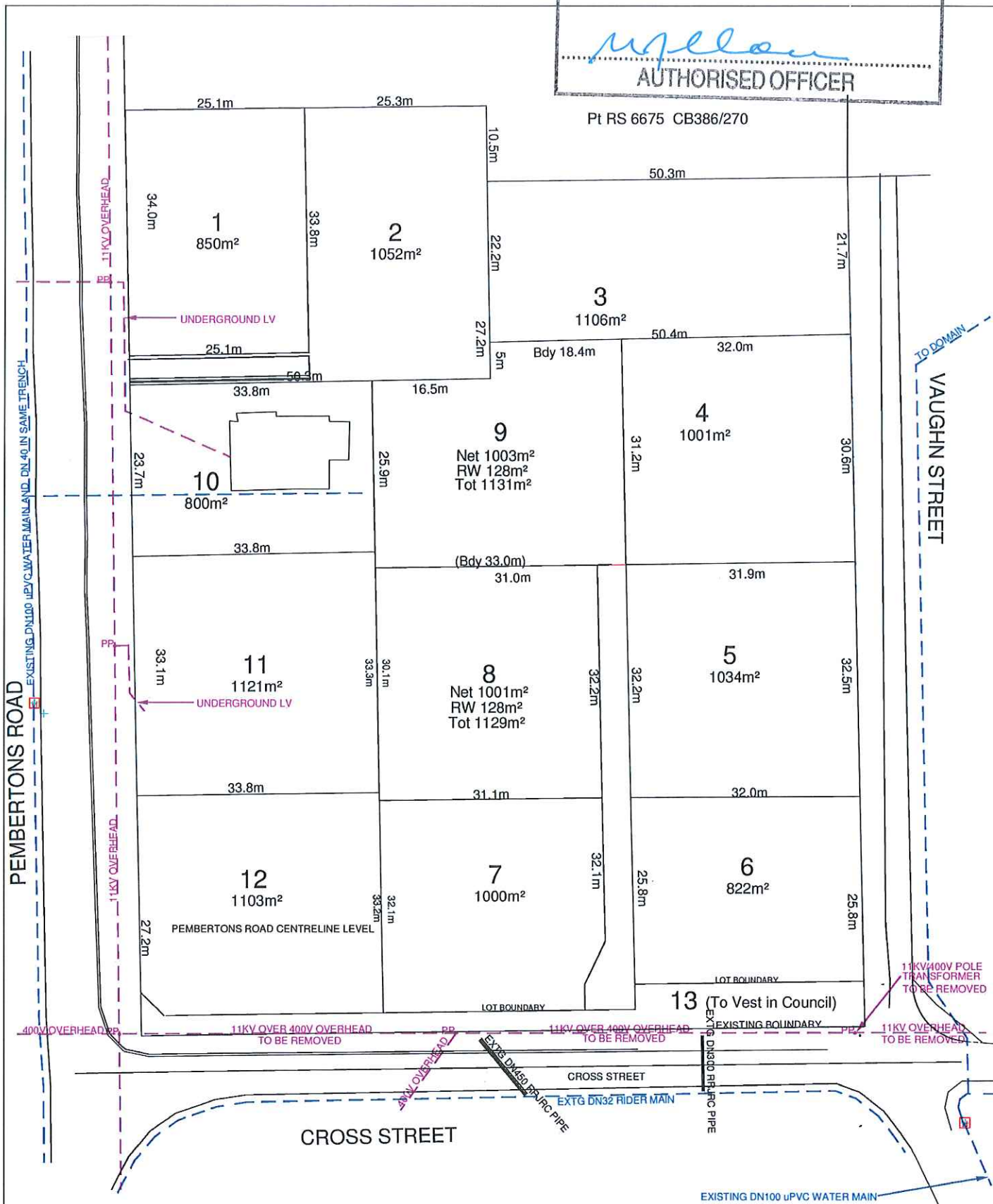
- a) The Consent Holder shall be advised that development contributions apply to this subdivision and that these will be levied in accordance with the Council's Development Contributions Policy. Development Contributions will be advised in a letter separate to the resource consent decision. Payment of development contributions is required prior to the completion of the 224(c) process, under section 208 of the Local Government Act 2002.

- b) Ashley Rural Water Supply is managed by Hurunui District Council. To avoid delays relating to water supply connections the Consent Holder should contact the water service unit at Hurunui District Council on 03 314 8816 and advise of the subdivision. For any enquiries regarding Ashley Rural Water Supply locations or to agree any required new or modified connections to the water supply, please contact Hurunui District Council. Please note that the Ashley Rural Water Supply is a flow-restricted scheme.
- c) For any enquiries regarding Ashley Rural Water Supply locations or to agree any required new or modified connections to the water supply, please contact Hurunui District Council. Please note that the Ashley Rural Water Supply is a flow-restricted scheme.
- d) The Erosion & Sediment control Toolbox for Canterbury can be found on the ECan website link <http://escscanterbury.co.nz/>
- e) No excavation shall commence within a public road reserve without the prior receipt and approval of a Corridor Access Request (CAR).
- f) Prior to construction of a dwelling the applicant will be required to provide evidence of the building site being able to support building loads and not subject to material damage due to any erosion, falling debris, subsidence, slippage or inundation.
- g) The requirement for power and telephone to be confirmed as having capacity to service the subdivision does not guarantee that power or telephone connections are provided to potential allotments. On rural lots, the service authorities will not install submains to individual lots until the location of the house site is determined. Prospective purchasers of these lots should be advised to contact the relevant service authorities to ascertain the likely costs of servicing any specific lots to the purchaser's requirements.
- h) The consent is a resource consent in terms of the Resource Management Act 1991. It is not a consent under any other Act, Regulation or Bylaw.
- i) The Consent Holder is advised that Traffic Management Plan forms can be sourced from Council Service Centres, or on-line at: <https://www.waimakariri.govt.nz/home>
- j) The Waimakariri District Council will undertake works to increase the capacity of the drain from Criglingtons Road.

M. J. J. J.

AUTHORISED OFFICER

Pt RS 6675 CB386/270



Rev	Description	Approved	Date
0	For Council Approval	MWMC	15/11/18
1	For Council Appr, Pre-Construction	MWMC	21/11/19

Cornwall Civil Engineering Ltd.

7 Pimlico Place., RANGIORA 7400 Phone:- (03) 310 6492
email:- info@cornwallcivil.co.nz Mobile:- 027 247 4455

Development of
36 Pembertons Rd, Sefton
Taylor Homes Ltd.

Existing Services and
Proposed Lots

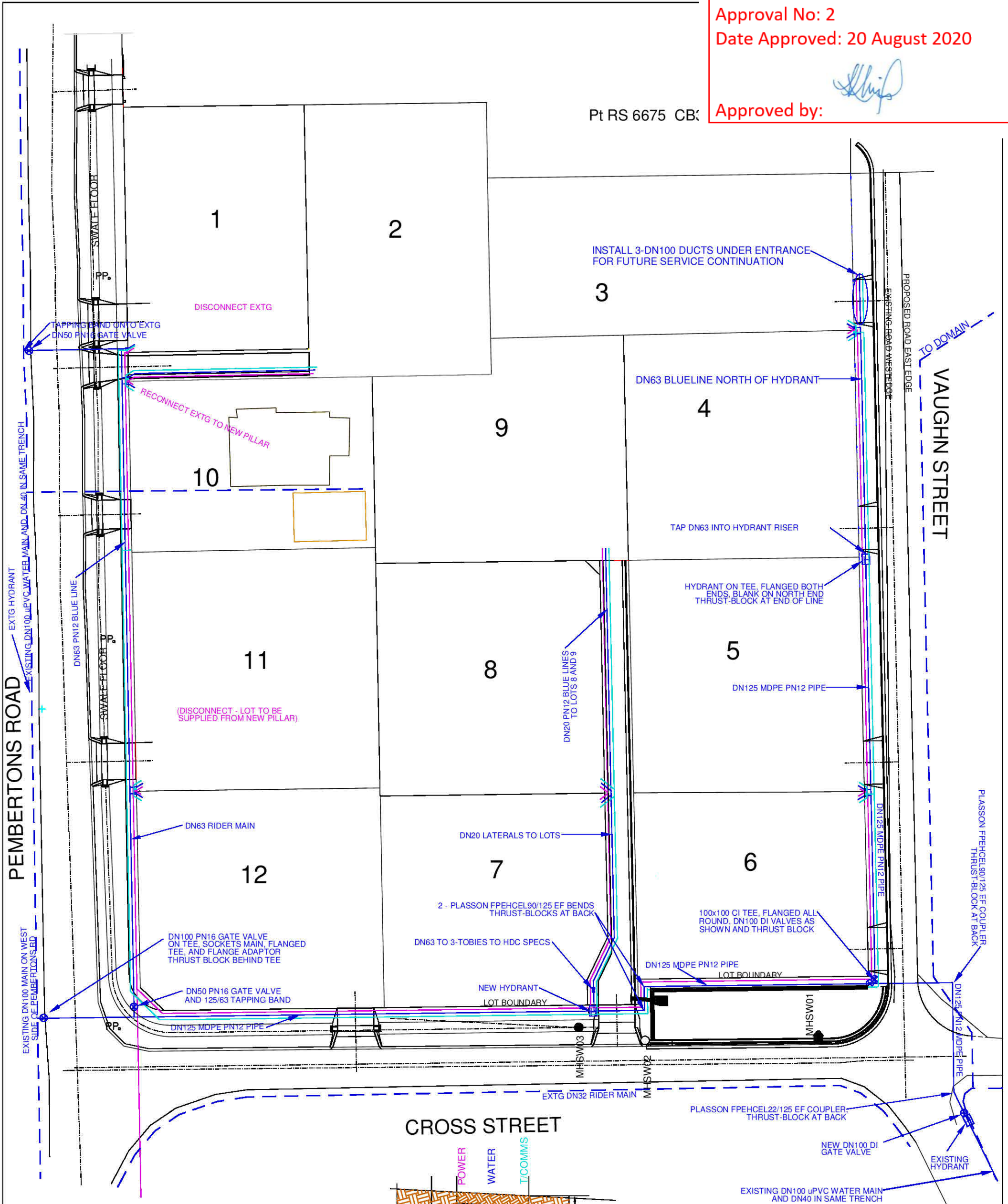
File:- 1053

Scale:- 1:500

Drawing No.:-

1053/01

Pt RS 6675 CB



Rev	Description	Approved	Date
0	For Council Approval	MWMC	15/11/18
1	For Council Approval, Pre-consent	MWMC	13/11/19
2	For Approval, Post HDC Discussions	MWMC	27/11/19
3	For Approval, PE Pipe Throughout	MWMC	13/01/20

NOTES:-

- a) ALL JOINTS BETWEEN DN125 MDPE PIPE AND DI FITTINGS & VALVES SHALL BE VIA STUB FLANGES ON THE PE PIPE AND FLANGED ENDS ON THE FITTINGS & VALVES
- b) THRUST BLOCKS TO BE PRECAST WITH SIZING AS APPROVED BY HDC WATER UNIT
- c) ALL PE PIPE TO BE SUPPLIED FULL LENGTH, WITH EF COUPLERS TO BE USED ONLY WHERE SHOWN, UNLESS SPECIFICALLY APPROVED BY THE HDC WATER UNIT.

Cornwall Civil Engineering Ltd.

7 Pimlico Place., RANGIORA 7400
 email:- info@cornwallcivil.co.nz Phone:- (03) 310 6492
 Mobile:- 027 247 4455

Development of
 36 Pembertons Rd, Sefton
 Taylor Homes Ltd.

Power, Water, and
 T/Com Services

File:- 1053
 Scale:- 1:500
 Drawing No.:-
1053/07



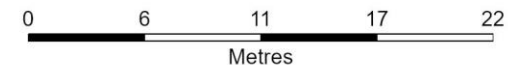
- Land Parcel
- Property Boundary

Author: Diana Willetts

Date: 6/12/2023

Scale 1:358

Original page size: A4



Disclaimer:

Land and property boundary information is sourced from and derived using Land Information New Zealand (LINZ) Land Parcels licensed for re-use by LINZ under the Creative Commons Attribution 4.0 International licence. The Waimakariri District Council does not give and expressly disclaims any warranty as to the accuracy or completeness of this information or its fitness for any purpose. Information on this map may not be used for legal disputes and should be independently verified before taking any action reliant upon it.

Credits:

Waimakariri District Council, Land Information New Zealand, 2023 Urban Aerial Imagery, 2023 Birch Hill Cemetery UAV Imagery, 2022 Rural Aerial Imagery, 2022 Cust Anglican Cemetery UAV Imagery, Waimakariri District Council

Form 7

Code Compliance Certificate BC210957

Section 95, Building Act 2004

The building

Street address of building: 9 Vaughan Street SEFTON

Legal description of land where building is located: LOT 4 DP 557597 0.101900 Ha

Valuation number: 2144019504

Building name:

Location of building within site/block number:

Level/unit number: 1

Current, lawfully established, use: Housing - Detached dwellings

Year first constructed: 2022

The owner

Name of owner: Aaron J Flynn & Emma D K Flynn

Contact person:

Mailing address: 579 Currags Road RD 6 Christchurch 7676

Street address/registered office:

Phone number: Landline: Mobile:021837882

Email address: info@maximusapparel.co.nz

First point of contact for communications with the council/building consent authority: Aaron
Jamie Flynn Emma Dorothy Kate Flynn

Building work

Building consent numbers: BC210957; BC210957.02 & BC210957.03

Consent description: DWELLING WITH LOG BURNER AND ATTACHED GARAGE WITH
SEPTIC TANK 9 VAUGHAN STREET SEFTON LOT 4 DP 557597

Issued by: Waimakariri District Council

Code compliance

The building consent authority named below is satisfied, on reasonable grounds, that —

(a) the building work complies with the building consent



Mike Rowe
Building Consent Officer

On behalf of Waimakariri District Council

Date: 28 September 2022.

/Users/amesmorgans/Design/Build/Drawings/1 - Jobs/2021/2112 - Aaron Flynn - Lot 4 - 36 Pemberton Rd Sefton/3 - Working Drawings/1 - PLAN/2112 - Aaron Flynn - Lot 4 - 36 Pemberton Rd Sefton/3 - W.D7.pln 26/08/21 Pablo Silva

GENERAL NOTES	
Site Area	1002m ²
Site Coverage Area (over Cladding incl. Covered Areas, Gutter)	219.05 m ²
Site Coverage	21.89% (35% Allowable)
Impervious Surface Area	98.26 m ²
Ground Floor Area over Framing	189.27 m ²
Ground Floor Area over Foundation	197.44 m ²
Exposure Zone	C
Wind Zone	High
Earthquake Zone	2
Snow Zone	N4, 1.5kPa
Territorial Authority	WAIMAKARIRI DISTRICT COUNCIL
Planning Zone	RESIDENTIAL 3
General:	All dimensions to be confirmed on site
Foundation Type:	Engineered
Site Information:	Position of road crossing, services locations, street trees, lamp posts, parking bays, pedestrian islands etc. is unknown - to be confirmed.
Landscaping:	This plan is indicative only. Landscaping to be confirmed by the client. All Fencing to comply with the relevant Covenants.
Earthworks:	Refer to Earthworks Plan No Earthworks proposed
Site Services:	Stormwater: Council Connection at Boundary/Retention Tank Sewer Connection: Connection at Septic Tank Gas: Bottled

7. Stormwater - Dwelling Detention Tanks

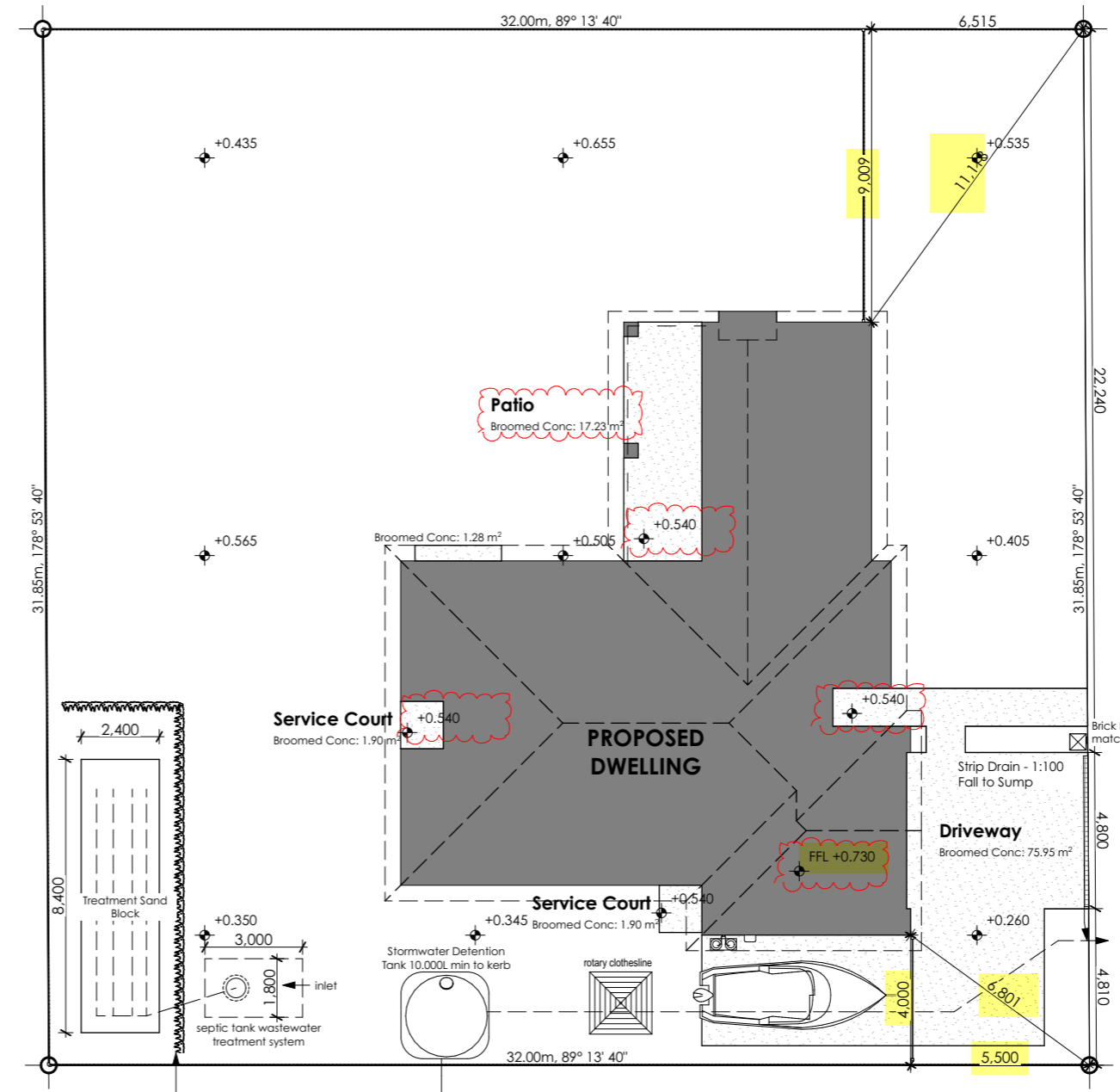
7.1 Stormwater Detention Tank to restrict the stormwater outflow collected from impervious roof areas. The storage shall provide hydraulic neutrality for 10% AEP and 2% AEP storm events up to storm durations of 24 hours. The stormwater detention tank sized according to table based on roof and hard stand and pervious areas:

Roof Area 249.14 sq.m
Drive Area 98.26sq.m
4.9 minimum storage required for 10% AEP storm event*
8.1 minimum storage required for 2% AEP storm event.

7.2 - Stormwater shall be fitted with 2 outlets with restricted orifices; one for each of the 10% AEP and 2% AEP storm event flows, and a further unrestricted overflow with the discharge to kerb and channel. The restricted orifice sizing shall be in general accordance with the EDC Engineering Design Consultants Report 49029.SW Rev. E

Steps & Paths:
A Step/s or appropriate landscaping is to be provided if drop from external doors is greater than 190mm from FFL to FGL. All access routes must provide a non-slip surface in accordance to NZBC D1/AS Table 2. Convey surface water from sealed drive to an appropriate approved outfall.

Hard Landscaping Falls:
- Driveway falls @ 1:100
- Paving falls @ 1:100
- Service Court Area falls @ 1:100



I hereby confirm that the building has been set out in accordance with consented site plans and the finished floor level complies with the minimum level indicated.

Signed Dated

Name

LBP No.

The perimeter of land application system shall be clearly demarcated by vegetation and/or signage and the consent holder shall ensure that there is no activity undertaken on top of the land application system that may cause damage to the disposal system (for example: stock grazing, car parking or deep rooted trees).

WAIMAKARIRI DISTRICT COUNCIL
Plans and specifications APPROVED in accordance with the Building Act 2004, clause 49 and the Building Regulations 1992, Clause 3
BC210957 30/08/2021 michaelmo

IMPORTANT NOTE: ALL LANDSCAPING, PLANTING, LIGHTING AND FENCING IS SHOWN FOR IMAGING PURPOSES ONLY. REFER TO BUILDING CONTRACT AND "FIXTURES AND FITTINGS" FOR LANDSCAPING INCLUSIONS

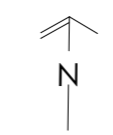


JOB TITLE:
FLYNN RESIDENCE

LAYOUT NAME:
Site Plan

LEGAL DESCRIPTION:
LOT: 4
DP:

Vaughan Street,
Sefton Park-
SEFTON



REVISIONS:
P2

26/08/21
SUBJECT TO COUNCIL APPROVAL
ALL MEASUREMENTS TO BE CONFIRMED ON SITE
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SCALE: 1:200
JOB # 2112 P2

SHEET:
A1.01

/Users/amesmorgans/R&B Design & Build Dropbox/5 - Design/RNB/1 - Jobs/2021/2112 - Aaron Flynn - Lot 4 - 36 Pemberton Rd Sefton/CPT/2 WD7/pln 26/08/21 Pablo Silva

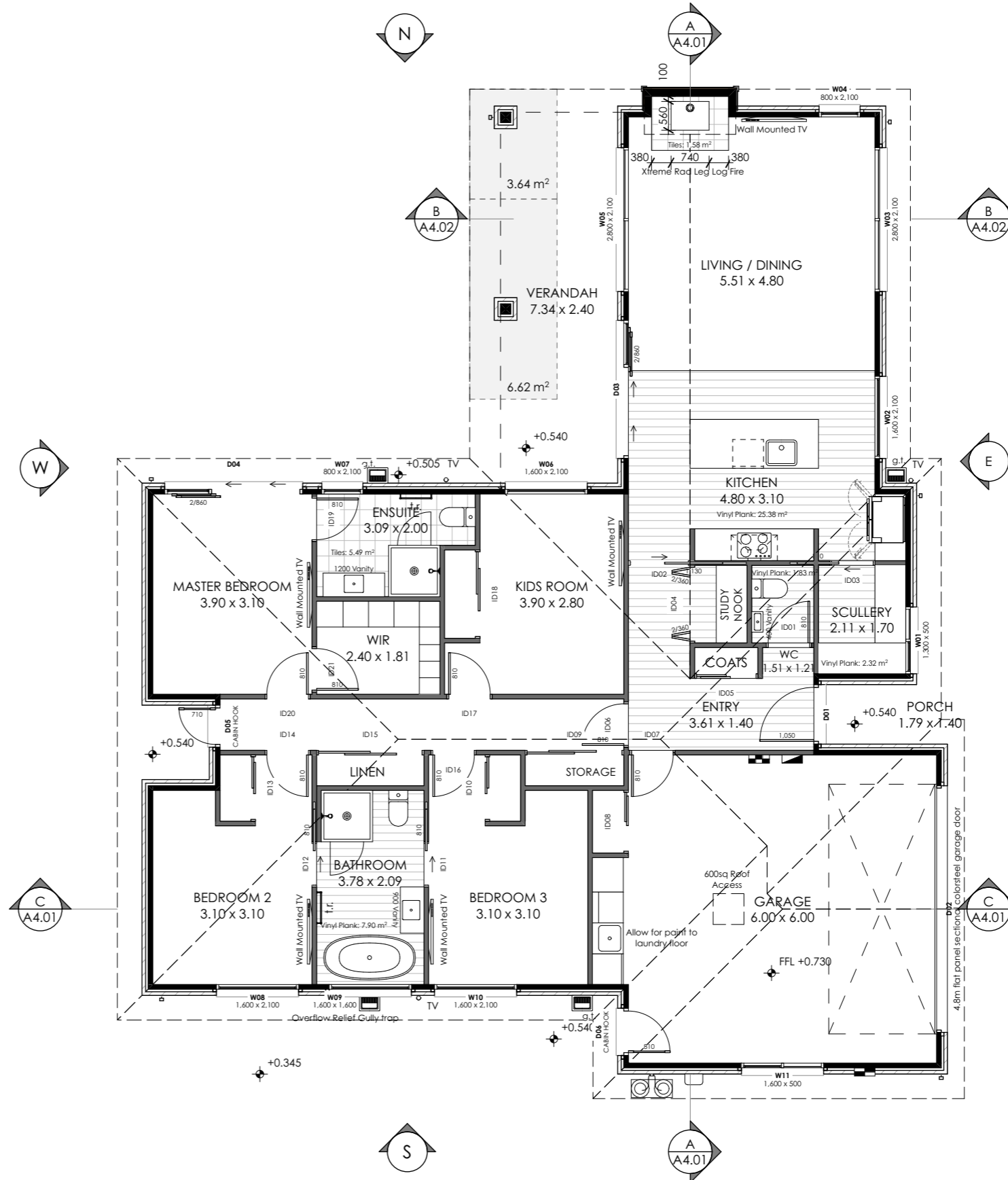
GENERAL NOTES

Ground Floor Area over Framing	189.27 m ²
Ground Floor Area over Foundation	197.44 m ²
Roof Pitch	27°
Eaves Width	600mmmm
Gable Width	450mmmm
Height To Underside of Truss	2455mmmm
Soffit Type	Flat
Internal Door Leaf Height	Standard
Linings	GIB
Ceiling Battens	35mm Metal ceiling battens @ 600mm crs
Ceiling Vents:	Bathroom & Ensuite to vented directly to exterior Laundry Room/Area to vent directly to exterior Range Hood to exit through soffit lining
Smoke Alarms:	Required within 3m of all sleeping areas, change in level & entry/exits as per NZS 4514 & BRANZ Bulletins No's 606

KEY

Meter Board	
Distribution Board	
Comms Panel	
Gully Trap	
Hose Tap	
Downpipe	
Internal Heat Pump	
External Heat Pump	
Panel Heater	
2x45kg Gas Bottles	
Gas Califont	

WAIMAKARIRI DISTRICT COUNCIL
 Plans and specifications APPROVED in accordance
 with the Building Act 2004, clause 49 and the Building
 Regulations 1992, Clause 3
 BC210957 30/08/2021 michaelmo



ADDITIONAL FLOOR PLAN NOTES:

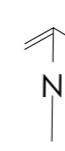
- All glazing to comply with NZS4223
- All hard floor finishes to comply with NZBC D1/AS Table 2. Floor tiles to be non-slip & have a slip coefficient value of 0.35 - 0.65 for grit finished ceramic tiles.
- Hot water pipes to be sized according to NZBC G12 & NZS4305:1996. Mains pressure: 15mm dia... allows 12m max. pipe length. Pipe length beyond this must be lagged.
- Satin enamel wall finish to bathroom, ensuite & those walls adjacent to sinks etc... in kitchen & laundry.
- Impervious lining to be used above basins, vanities & benches. Bottom edge to be filled with fungus/mould resistant sealant.



JOB TITLE:
FLYNN RESIDENCE

LAYOUT NAME:
Ground Floor Plan

LEGAL DESCRIPTION:
LOT: 4
DP:
Vaughan Street,
Sefton Park-
SEFTON



REVISIONS:
P2

26/08/21

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SCALE: 1:100

JOB # 2112

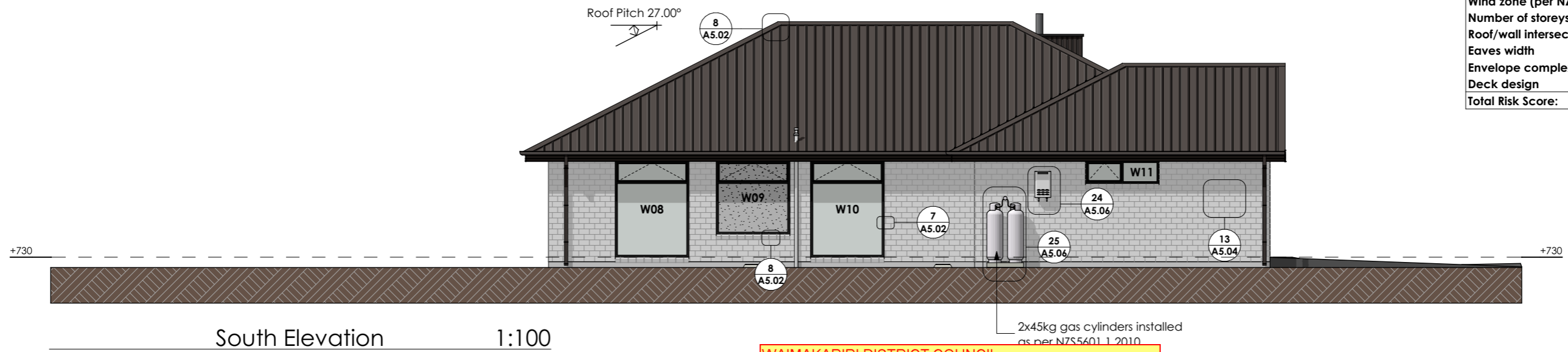
SHEET:
A2.01

P2

BUILDING ENVELOPE RISK MATRIX		
North Elevation		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Very high risk	5
Eaves width	Low	0
Envelope complexity	Medium risk	1
Deck design	Low	0
Total Risk Score:		7



BUILDING ENVELOPE RISK MATRIX		
South Elevation		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Very high risk	5
Eaves width	Low	0
Envelope complexity	Medium risk	1
Deck design	Low	0
Total Risk Score:		7



WAIMAKARIRI DISTRICT COUNCIL
MINOR VARIATION to Plan and/or Specifications APPROVED
BC210957.03 7/03/2022 michaelmo
Change of cladding from Linea Oblique to Vert shiplap only

GLAZING NOTES:
Glazing and glazed openings to comply with NZS 4223.3:2016 Glazing in buildings - Part 3: Human impact safety requirements, NZS 4211:2008: Specification for performance of windows and New Zealand Building Code Clauses: F2 Hazardous Building Materials & F4: Safety from Falling.

C:\Users\Keripencemene\OneDrive\Documents\Build Dropbox\5 - Design\RN\1 - Jobs\2021\#2112 - Aaron Flynn - Lot 4 - 36 Pemberton Rd Sefton\3 - Working Drawings\1 - PLNS\2112 - Aaron Flynn - Lot 4 - 36 Pemberton Rd Sefton\pin 22/02/2022 Keripencemene



JOB TITLE:
FLYNN RESIDENCE

LAYOUT NAME:
Elevations

LEGAL DESCRIPTION:
LOT: 4
DP:

Vaughan Street,
Sefton Park-
SEFTON

REVISIONS:
P3 JSC/Lunawood cladding change

SUBJECT TO COUNCIL APPROVAL
ALL MEASUREMENTS TO BE CONFIRMED ON SITE
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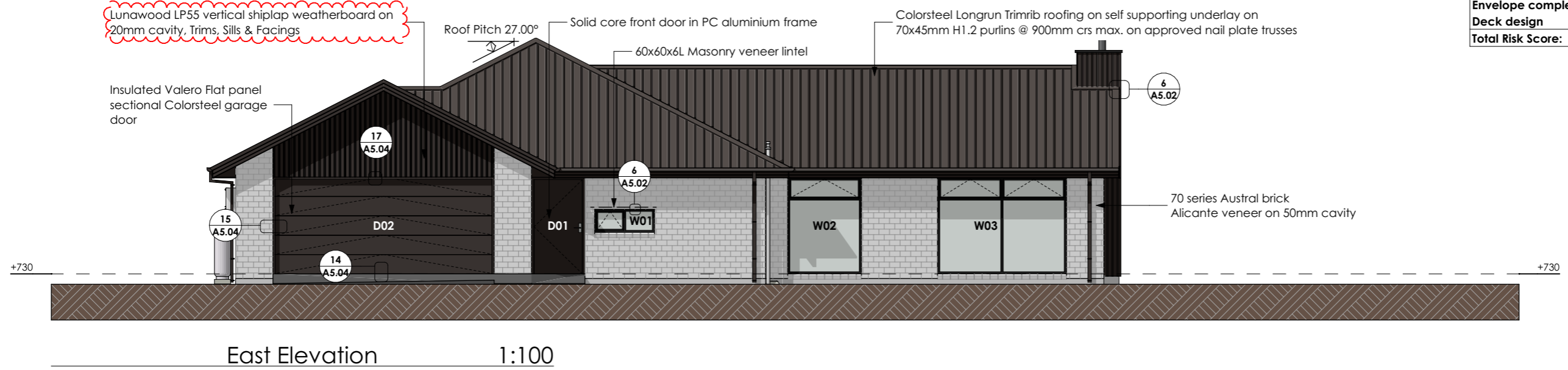
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SCALE: 1:100

JOB # 2112 P3

SHEET:
A3.01

BUILDING ENVELOPE RISK MATRIX		
East Elevation		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Very high risk	5
Eaves width	Low	0
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		7



BUILDING ENVELOPE RISK MATRIX		
West Elevation		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Very high risk	5
Eaves width	Low	0
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		7



WAIMAKARIRI DISTRICT COUNCIL
MINOR VARIATION to Plan and/or Specifications APPROVED
BC210957.03 7/03/2022 michaelmo
Change of cladding from Linea Oblique to Vert shiplap only

GLAZING NOTES:
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JOB TITLE:
FLYNN RESIDENCE

LAYOUT NAME:
Elevations

LEGAL DESCRIPTION:
LOT: 4
DP:

Vaughan Street,
Sefton Park-
SEFTON

REVISIONS:
P3 JSC/Lunawood cladding change

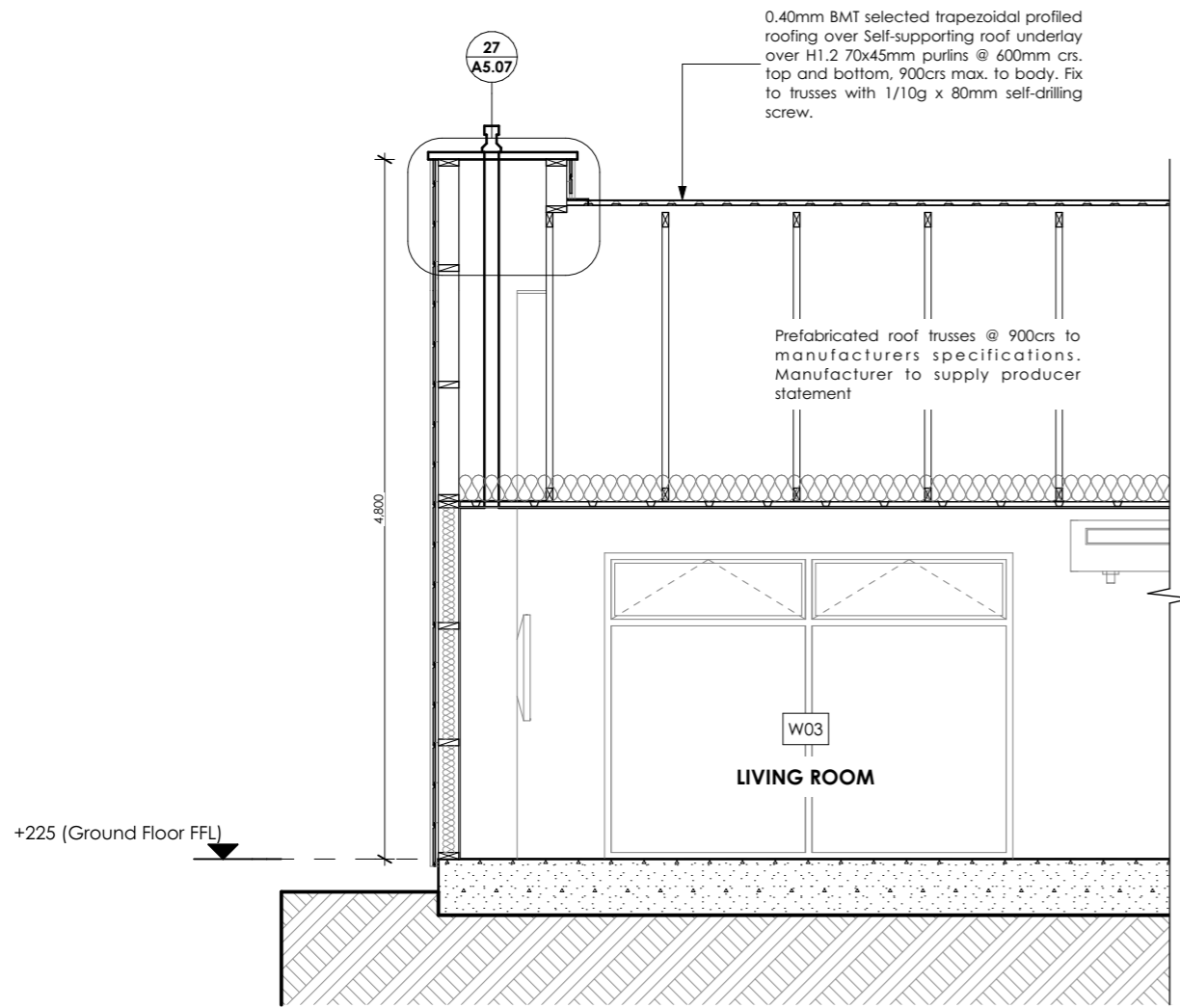
22/02/2022

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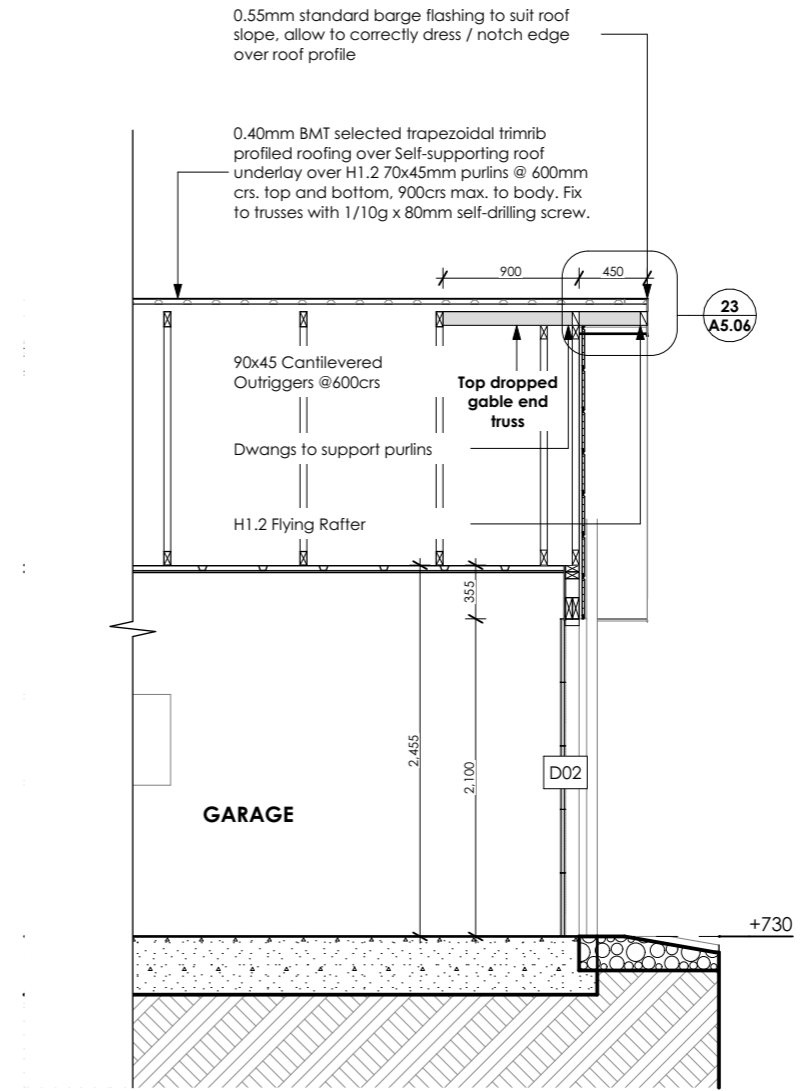
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SCALE: 1:100
JOB # 2112 P3

SHEET:
A3.02

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A2.01 Section A 1:50



A2.01 Section C 1:50

WAIMAKARIRI DISTRICT COUNCIL
Plans and specifications APPROVED in accordance
with the Building Act 2004, clause 49 and the Building
Regulations 1992, Clause 3
BC210957 30/08/2021 michaelmo



JOB TITLE:
FLYNN RESIDENCE

LAYOUT NAME:
Cross Section

LEGAL DESCRIPTION:
LOT: 4
DP:

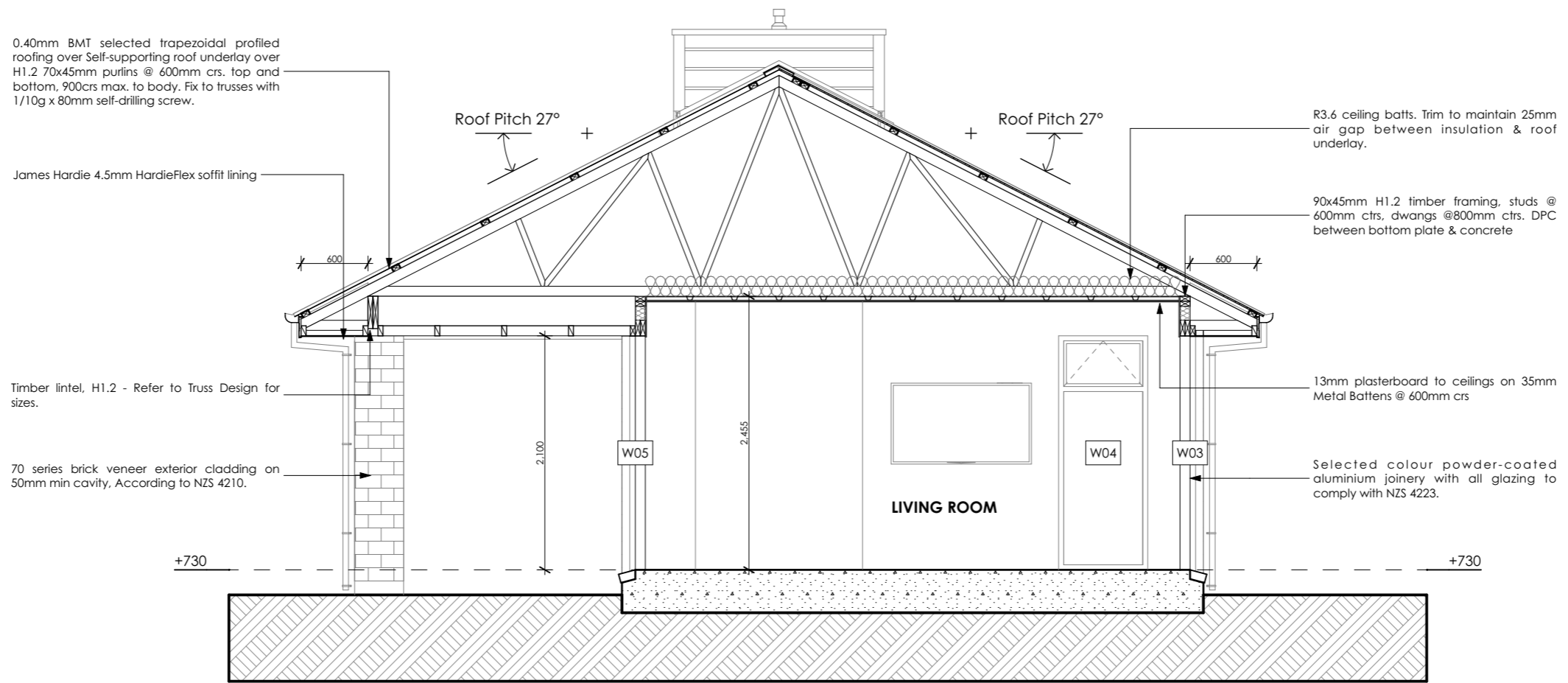
Vaughan Street,
Sefton Park-
SEFTON

REVISIONS:
P2

26/08/21

- SUBJECT TO COUNCIL APPROVAL
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SCALE: 1:50
JOB # 2112 P2

SHEET:
A4.01

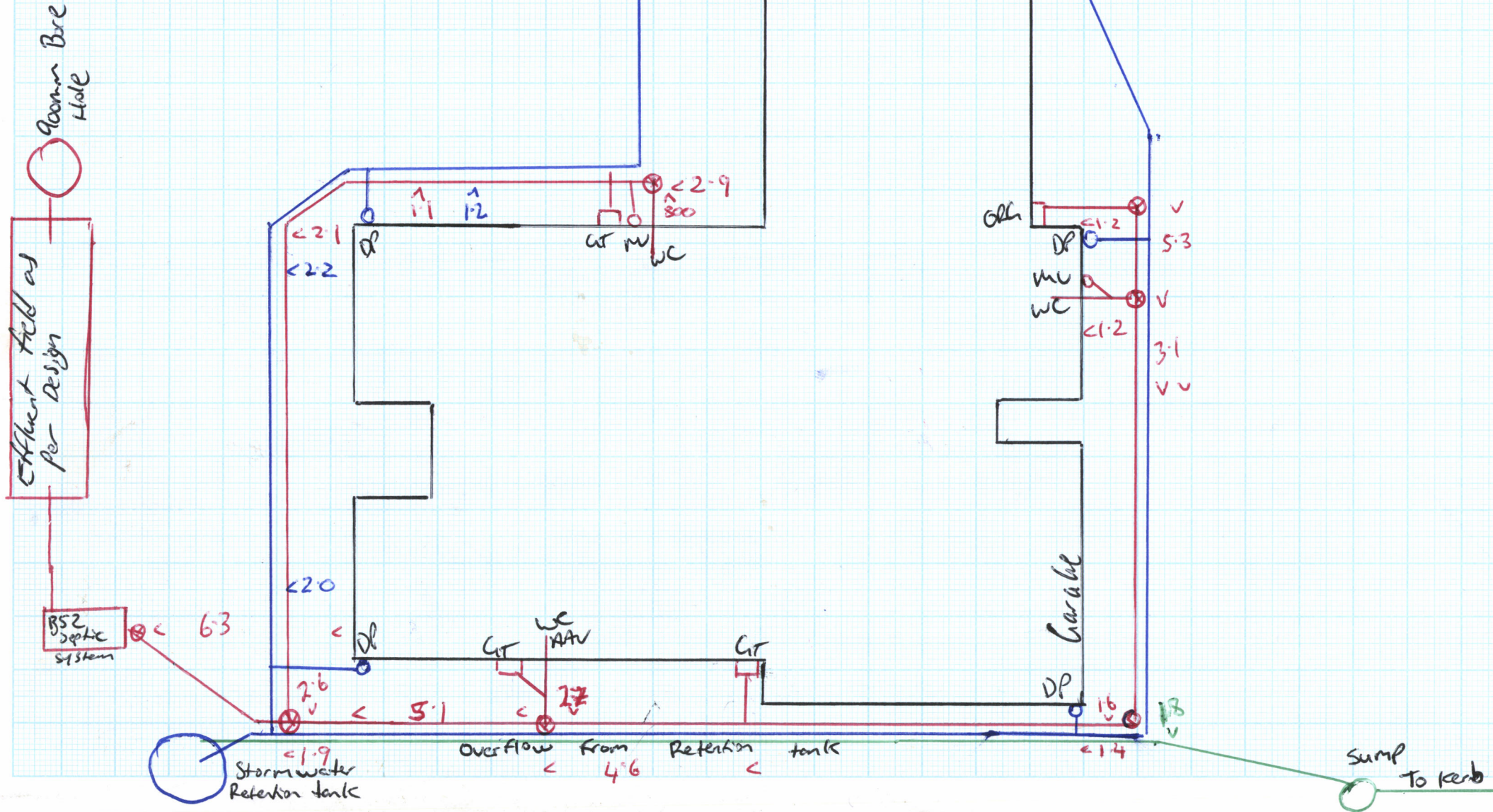


A2.01 Section B 1:50

WAIMAKARIRI DISTRICT COUNCIL
Plans and specifications APPROVED in accordance with the Building Act 2004, clause 49 and the Building Regulations 1992, Clause 3
BC210957 30/08/2021 michaelmo

/Users/jamesmorgan/R&B Design & Build Dropbox/5 - Design/RNB/1 - Jobs/2021/#2112 - Aaron Flynn - Lot 4 - 36 Pemberton Rd Sefton/3 - Working Drawings/1 - PLAN/2112 - Aaron Flynn - Lot 4 - 36 Pemberton Rd Sefton OPT.2 WD7.pln 26/08/21 Pablo Silva

Date: 26-5-2022
 B-C Number: 210957
 Sewer Grade: 1:90
 Sewer connection depth: 600mm
 Stormwater Grade: 1:90
 Cert No - J. McAuliffe - 26218
 Address - lot 4, 9 Vaughan Street, Sefton



A4 1 mm

GASFITTING CERTIFICATE OF COMPLIANCE & GAS SAFETY CERTIFICATE

JOB INFORMATION

Reference / Job#: 9 vaughan street sefton
Installation address: 9 Vaughan Street, Sefton, 7477

CUSTOMER INFORMATION

Name: emma flynn **Email:** info@maximusapparel.co.nz **Phone:**
Postal address: 9 Vaughan Street, Sefton, 7477 **Mobile:**

GASFITTER INFORMATION

Name: Charl Philipse **Registration:** 25003
Company Name: dw gas **Phone:**
Email: info@dwpg.co.nz

WORK DETAILS

Date Started: 4/08/2022 **Date Completed:** 4/08/2022 **ICP:**
Gas Supply Pressure (kPa): 2.75 kpa **Gas Type:** LPG **Risk Classification:** General
Applies to: Whole Installation
Work has been done in accordance with: AS/NZS 5601.1 sections 3 to 6

DESCRIPTION OF WORK DONE

45 kg gas bottle station , rheem 26 gas hot water heater 189 mjh belling gas hob bgh604wbg 31.1 mjh

CERTIFICATION OF WORK

I certify that I am satisfied that the work described in this certificate of compliance has been done lawfully and safely, and that the information on this certificate is correct.

Has been done in accordance with a certified design *	✓
The work relies on manufacturer's instructions *	✓
All parts of the installation are safe to connect to a gas supply, if NOT, please detail what parts ARE safe to connect	✓

** References, where applicable, can be found on the additional information sheet.*

Certified Worker's Signature

Charl Philipse

Date: 4/08/2022

GAS SAFETY CERTIFICATE

I certify that the work described in this Gas Safety Certificate, and the installation or part installation, is connected to a gas supply and is safe to use.

Name: Charl Philipse **Registration:** 25003
Issue Date: 4/08/2022 **Connection Date:** 4/08/2022
Certifier Signature:

Charl Philipse



This Gas Safety Certificate confirms that the gasfitting work complies with the building code for the purposes of Section 19(1)(e) Version 1.01 of the Building Act 2004.

This is an important document and should be retained for a minimum of seven years.

Details for CRC170607

RMA Authorisation Number	CRC170607	Client Name	Taylor Homes Limited
Consent Location	corner of Pembertons Road and Cross Street, Sefton	State	Issued - Active
To	To discharge contaminants in domestic wastewater to land from a 12 lot subdivision.		
Commencement Date	15 Aug 2016		
Date This Consent Number Issued	15 Aug 2016		
Expiry Date	15 Aug 2031		

Please note there has been a change to how we represent the date fields. The 'Date This Consent Number Issued' is the date this version of the consent was issued. The 'Commencement Date' is when the original version of this consent was issued as per s116 of the Resource Management Act 1991.

- 1

The discharge shall be only domestic wastewater originating from 12 lots within the proposed subdivision of the property with legal description Part RS 6675 located on the corner of Pembertons Road and Cross Street, Sefton, as shown on Plan CRC170607A and Plan CRC170607B, attached to and forming part of this resource consent.

- **Wastewater Treatment and Disposal**

- 2

There shall be a maximum of 12 individual on-site domestic wastewater discharges from a maximum of 12 residential dwellings, each with a maximum of four bedrooms.

- 3

The volume of wastewater discharged per day shall not exceed:

- 1000 litres for a three bedroom dwelling; or
- 1400 litres for a four bedroom dwelling.

- 4

The wastewater shall be discharged into land via the land application system located within the Land Application System Envelope labelled on Plan CRC170607B, attached to and forming part of this consent.

- 5

Prior to discharge to the land application system, the wastewater discharged from each dwelling shall:

- receive primary treatment in a septic tank wastewater treatment system, or an alternative treatment system which provides the same or better quality treatment; and
- pass through a proprietary effluent filter.

- 6

Each wastewater treatment system and land application system shall not include chlorine disinfection.

• 7

For each dwelling, after exiting the treatment system the wastewater shall be pumped to a land application system constructed in accordance with the design shown on either Plan CRC170607C(i) or Plan CRC170607C(ii), attached to and forming part of this resource consent, and as described below:

- a. A layer of sand, of a grade that fits within the 2A envelope shown on Diagram One, attached to and forming part of this resource consent, shall be installed beneath the base of the distribution pipes;
- b. The land application system shall have a minimum area of:
 - i. 20 square metres for a three bedroom dwelling; or
 - ii. 28 square metres for a four bedroom dwelling;
- c. The layer of graded sand shall be a minimum depth of 600 millimetres;
- d. The base of the 2A sand layer shall be a maximum of 1200 millimetres below ground level;
- e. A collection pipe shall be located beneath the base of the 2A sand layer in the land application system;
- f. A soakage shaft(s) shall be located adjacent to the 2A sand trench and terminate in free draining shingle.

• 8

The wastewater shall be evenly dosed over each land application system at a rate not exceeding 50 millimetres per day.

• 9

The perimeter of each land application system shall be clearly demarcated by vegetation and/or signage and the consent holder shall ensure that there is no activity undertaken on top of the land application system that may cause damage to the disposal system (for example: stock grazing, car parking or deep rooted trees).

• 10

Each wastewater treatment and land application system shall ensure that the concentration of faecal coliform bacteria in the discharge at the base of the 2A sand layer shall be less than 1000 colony forming units per hundred-millilitre sample.

• 11

There shall be no ponding of treated or untreated wastewater on the land surface and no overland discharge of treated or untreated wastewater.

• 12

There shall be no discharge:

- a. within 20 metres of any surface water body; and
- b. to surface water as a consequence of the exercise of this consent.

• 13

There shall be no discharge within 50 metres in any direction, of any authorised and/or existing bores.

• 14

The discharges shall not occur into land where any other discharge of contaminants to land is occurring, or has occurred in the previous three months.

- **Installation**

- **15**

Within one month of the installation of each treatment and land application system, the consent holder shall provide to the Canterbury Regional Council, Attention Regional Leader - Monitoring and Compliance, the following:

- a. A signed copy of a compliance certificate certifying:
 - i. that the installation of the wastewater treatment system, land application system, any ancillary treatment devices and associated pipework has been installed by a person with at least two years' experience in the installation of such systems; and
 - ii. the installed wastewater treatment system is capable of achieving the treatment standard specified in condition (5) of this consent; and
 - iii. that the system has been installed in accordance with the conditions of this consent.
- b. A copy of a signed 'as built plan' which clearly shows the location of the installed wastewater treatment system and land application system, and the separation to property boundaries and surface water bodies; and
- c. Photographs which show:
 - i. the height of the installed distribution lines relative to ground level; and
 - ii. signage and/or vegetation demarcating the perimeter of the land application system.

- **Maintenance**

- **16**

Each wastewater treatment and land application system shall be serviced and maintained at least once every twelve months by a qualified person with at least two years' experience in the maintenance of such systems. The maintenance shall include but not be limited to:

- a. Ensuring that the lid(s) of the wastewater treatment system are readily accessible at all times;
- b. Measuring the depth of solids and scum in the wastewater treatment system(s);
- c. Pumping out the wastewater treatment tank(s) if the solids and scum layers combined are greater than one half the depth of the wastewater treatment tank(s);
- d. A visual inspection of the components outlined in the clauses below, and cleaning, repairing or replacing as required:
 - i. proprietary effluent filter;
 - ii. electrical parts;
 - iii. audible alarms; and
 - iv. the distribution pump;
- e. Flushing the distribution lines;
- f. Inspection of the distribution pipes at the site of the land application system to ensure that they are operating correctly and replacing as required.

- **17**

Within one month of the installation of each wastewater treatment and land application system, the consent holder shall provide to the Canterbury Regional Council, Attention Regional Leader - Monitoring and Compliance, a signed copy of a maintenance contract or agreement. The maintenance contract:

- a. Shall be with the system supplier or an alternative contractor experienced in the maintenance of the wastewater treatment and land application system;
- b. Shall specify details of the maintenance required under condition (16) of this consent; and
- c. If the contract changes during the duration of this consent, a new contract in accordance with (a) and (b) of this condition shall be forwarded to the Canterbury Regional Council, Attention Regional Leader - Monitoring and Compliance, within one month of the contract being signed.

- **18**

Following every service a written report shall be prepared and kept by the consent holder. In addition, the consent holder shall keep written records of all repairs made to any part of the wastewater treatment and land application system. The consent holder shall forward a copy of the written reports and records of repairs to the Canterbury Regional Council, Attention Regional Leader - Monitoring and Compliance, on request.

- **Administration**

- **19**

The Canterbury Regional Council may, once per year, on any of the last five working days of May or November, serve notice of its intention to review the conditions of this consent for the purposes of:

- a. Dealing with any adverse effect on the environment that may arise from the exercise of the consent or
- b. Requiring the adoption of the best practicable option to remove or reduce any adverse effect on the environment.

- **20**

If this consent is not exercised before 30 September 2021 it shall lapse in accordance with section 125 of the Resource Management Act 1991.

Water Supply

- Rural Main
- Road Or Stream Crossing
- - - Rural Service Connection
- - - Rural Sub Main
- Water Tank
- H Fire Hydrant
- ⊕ Restrictor
- + Valve less than or equal to 50mm
- ▲ Valve greater than 50mm

Other

- Parcel
- Waimakariri Rating Unit

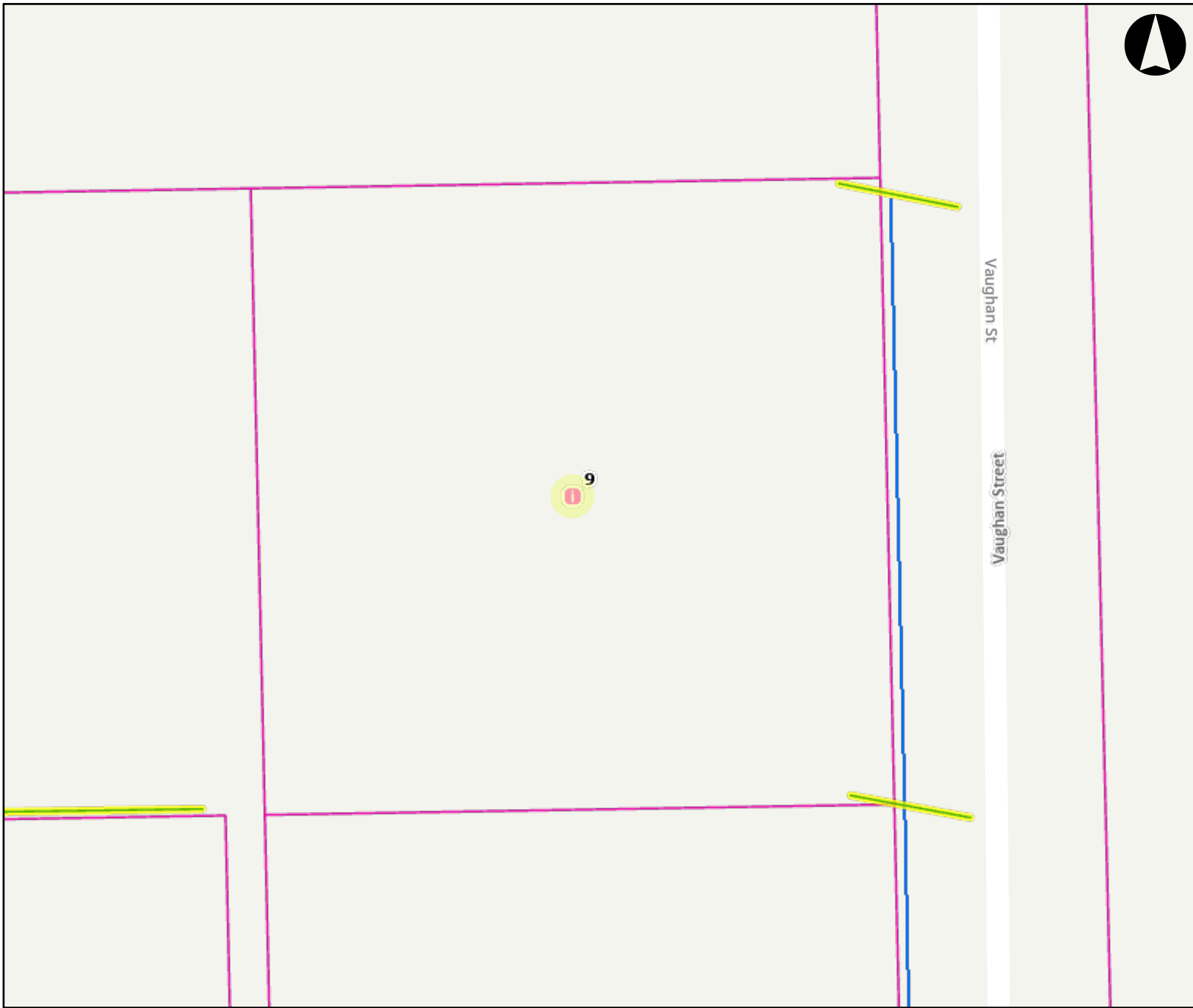


9 Vaughan Street

Hurunui District Council does not guarantee that the data in this map is without flaw of any kind and disclaims all liability for any errors, loss or other consequences which may arise from relying on any information depicted. Cadastral and topographic data sourced from LINZ. Crown Copyright Reserved.

Date:	6/12/2023
Scale:	1:2,257
Print Size:	A4 Landscape
Projection:	NZTM
Produced by:	arcservice





- Override 1
- Stormwater Service Lines
- Stormwater - PRIVATE Ownership Pipes
- Hurunui Water
- 9 Properties < 1 ha
- Property Boundaries with Attributes
 - Current Property
 - Deposited Land Parcels
- Road Names

diana.willets@wmk.govt.nz
 Waimakariri District Council
 Date: 6/12/2023
 Scale 1:282 Original page size: A4

0 5 9 14 18
 Metres

Disclaimer:
 Land and property boundary information is sourced from and derived using Land Information New Zealand (LINZ) Land Parcels licensed for re-use by LINZ under the Creative Commons Attribution 4.0 International licence. The Waimakariri District Council does not give and expressly disclaims any warranty as to the accuracy or completeness of this information or its fitness for any purpose. Information on this map may not be used for legal disputes and should be independently verified before taking any action reliant upon it.

Credits:
 Waimakariri District Council approved access only, Waimakariri District Council, Land Information New Zealand, Waimakariri District Council

While we try our best to capture up-to-date existing information, the accuracy of the utility plans cannot be guaranteed. Therefore you are responsible for confirming the location of the underground services on site. You must arrange your own underground services detection and pot-holing. If while locating services you come across difference to the utilities plan, please seek advice from one of our Utilities Officers.

Please make sure you take the appropriate industry-standard precautions, as you will be liable for any damage to Hurunui District Council utilities infrastructure attributed to works carried out by you or your contractor. Hurunui District Council will not carry out underground services location or pot-holing on your behalf, however many qualified contractors are available to provide this service.

PH 03 314 8816 Fax 03 314 9181

Web hurunui.govt.nz

Mail PO Box 13, Amberley 7441



“ Making our district even better”

You are on a “restricted water supply”



What does
that even mean?

Remember

A full tank is a quiet tank. You should not be able to hear the water coming in, when the ballcock is off. Please confirm the tank is not full before reporting as a fault.

Remember

Leaking tanks and pipes waste water than you have already paid for

Remember

It is your responsibility to manage your own water



HURUNUI
District Council

Contact us:

03 314 8816

info@hurunui.govt.nz

Snap Send Solve

The easy and efficient way to notify local councils, utilities or other authorities of issues that need addressing in our community





If you suspect you are not getting the correct amount of water, please conduct a flow check

Simply measure the amount of time it takes to fill a 1 Litre jug through your ballcock, or inlet pipe

LM250 1859 08/12/2023 Page 82

For Balmoral and Amuri Plains, one unit equals 1 Litre in 87 seconds (1000L per unit)

For all of the other schemes, one unit equals 1 Litre in 48 seconds (1800L per unit)

Check with us if you are unsure which scheme you are on, or how many units you receive.

If you find you are not getting correct flows, please call us and we will arrange an officer to fix the fault.

Did you Know?

The Hurunui Council manages 13 water schemes

Accessibility

Ensure that the toby or restrictor box is free from debris, and easily accessible.

Trees and other plants

Don't allow plants to grow around your tank, as they attract insects and also hinder access for maintenance. If your tree roots cause damage to council pipes, you may be liable for the cost of repairs.

Excavation Work

Please check with www.beforeudig.co.nz before undertaking any excavation work, including planting trees, to find out whether any underground pipes may be in the area. You can also phone beforeudig on 0800 248 344 or email them at: contactus@beforeudig.co.nz. If you cause damage to council pipework, because you haven't located our services, you may be liable for the cost of repairs

Installing a tank

We recommend installing a tank that is large enough to hold at least 3 days water storage. During installation, your tank must be fitted with an overflow pipe. See instructions on the council website.

"Tell-tale" float

Float lowers as water level lowers

"Halfway outlet"

Bottom valve is turned off until needed



Another great idea is installing a halfway outlet. This enables you to use the water in the top half, and then if you accidentally leave a hose on, or stock knock off a ballcock you will not lose your entire water storage. If this does happen you and switch to the bottom half

What is a restricted water supply?

Restricted water supplies do just that. They restrict the flow of water going onto the holding tanks on each property to a maximum flow, to ensure all consumers receive a consistent supply.

Water is provided to consumers as "units". For Balmoral and Amuri Plains one unit is 1000L per 24 hours. For all the other schemes, one unit is 1800L per 24 hours

Maintenance

Keep a lid on it

A secure lid prevents bugs, birds and dust from contaminating your water.

Stock damage and frost protection

Check that the connection is protected from stock being able to damage it. In the cooler months, ensure that the pipe work supplying your tank(s) is adequately frost protected. You are liable for repairs arising from stock damage, or inadequate frost protection



If you don't have a float or halfway outlet, we strongly recommend that you get these retrospectively fitted. It is possible to fit these to an existing tank, however much easier to do when you are installing a new tank.

05 August 2021

12818

Aaron Flynn

Email: info@maximusapparel.co.nz

Dear Aaron,

**SOIL BEARING INVESTIGATION
LOT 4 VAUGHAN STREET, SEFTON**

WAIMAKARIRI DISTRICT COUNCIL
Plans and specifications APPROVED in accordance
with the Building Act 2004, clause 49 and the Building
Regulations 1992, Clause 3
BC210957 30/08/2021 michaelmo

Testing & Results

We confirm that a soil bearing investigation was completed on 04 August 2021 at the above property and now report as follows.

The section is located on the Western side of Vaughan Street. The section is a relatively flat, grass covered site in a rural setting.

The investigation consisted of four penetrometer tests and two Hand Augers to determine the underlying soil conditions and allowable bearing capacity. The locations and results of the scala penetrometer tests are recorded on the attached plan and 'soil investigation record' sheets.

The static water table was not encountered in the scala penetrometers at the time of this investigation.

Hand auger at test location '1' and '3' revealed topsoil to approximately 200mm overlying dark brown silts with traces of organics to approximately 400mm. The scala penetrometer results varied across the site with low bearing capacity at the surface and refusal at shallow depths at test locations '2' and '3'. Test locations '1' and '4' found medium bearing capacity at the surface, generally increasing with depth to 2.0m.

The penetrometer results showed that an ultimate bearing capacity of **200kPa** is available at approximately **400mm** below existing ground level, beneath the topsoil layer.

Other Information Reviewed

The geotechnical report by EDC dated 27 May 2016, Ref: 46029 – Rev 0, has classified the site as TC1 with reference to the MBIE guidance document "Repairing and rebuilding houses affected by the Canterbury earthquakes".

Conclusion

Based on the testing results and other information reviewed, the site does not comply with the "good ground" criteria of NZS3604:2011. Therefore specific engineering design will be required for foundations onsite.

We would infer that foundation details similar to NZS3604:2011 can be utilised for this site, however specific engineering design will be required due to the reduced bearing capacity.

Cont...

Christchurch Office:

6/75 Peterborough Street, Christchurch 8013
PO Box 21381, Christchurch 8143
Phone 03 365 3243 Email cory@constructure.co.nz

Auckland Office:

Suite 2.1, 63 Ponsonby Road, Auckland 1011
PO Box 21381, Christchurch 8143
Phone 09 320 5226 Email james@constructure.co.nz

Cont...

All rubbish, noxious and organic matter as outlined in NZS3604:2011 Clause 3.5.1 should be removed from the building area and the ground brought back up to formation using compacted hardfill if required prior to pouring the foundation slab. An engineer should inspect the foundations at the time of excavation to ensure adequate bearing throughout.

Please note that my recommendations are based on a limited number of penetrometer tests and the nature and continuity of subsoil conditions is inferred. It should be appreciated that actual conditions could vary from the tests results.

Please contact me should any further information be required.

Yours faithfully



Cory Bedford

BEng (HONS) CEngNZ CPEng IntPE (NZ)

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6/75 Peterborough Street, Christchurch 8013
PO Box 21381, Christchurch 8143
Phone 03 365 3243 Email cory@constructure.co.nz

Auckland Office:

Suite 2.1, 63 Ponsonby Road, Auckland 1011
PO Box 21381, Christchurch 8143
Phone 09 320 5226 Email james@constructure.co.nz



soil investigation record

Project:	LOT 4 VAUGHAN STREET, SEFTON	No.:	1 OF 5
Ref:	12818	Date:	5/08/2021
By:	CH	Checked:	CB

Test Location 1

Depth (m)	Bore Log (Hand Auger)		Scala Penetrometer (Blows/100mm)
	Symbol	Description	
GL		Topsoil	
0.2		Brown Silt with trace of organics	
0.4		End of Hand Auger	
0.6			
0.8			
1.0			
1.2			
1.4			
1.6			
1.8		End (Drop-weight Bounced)	
2.0			
2.2			
2.4			
2.6			
2.8			
3.0			
3.2			
3.4			
3.6			
3.8			
4.0			

Notes:

- Refer to attached site plan for location.
- Based on Stockwell, M.J. , 1997: Determination of allowable bearing pressure under small structures, New Zealand Engineering (32:6), dated 15 June 1977, using a factor of safety of three to back calculate the UBC.
- The allowable bearing pressure has been calculated using a factor of safety = 3.
- 100 kPa allowable bearing pressure corresponds to the NZS 3604:2011 requirements for "Good ground".
- 65 kPa allowable bearing pressure corresponds to the MBIE Guidelines requirements for use of foundation options 1-4 (TC2).



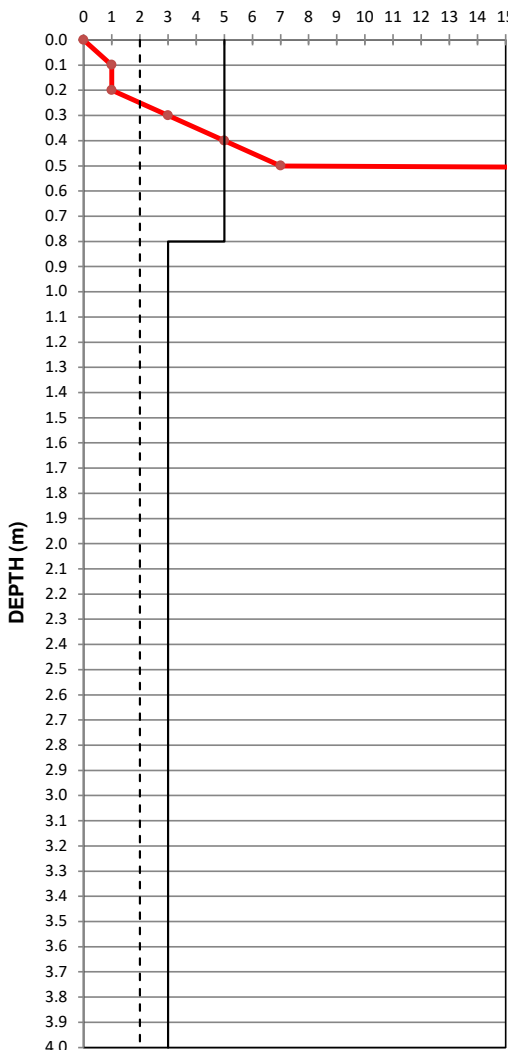


soil investigation record

Project:	LOT 4 VAUGHAN STREET, SEFTON	No.:	2 OF 5
Ref:	12818	Date:	5/08/2021
By:	CH	Checked:	CB

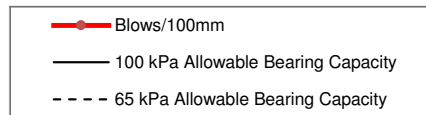
Test Location 2

Depth (m)	Bore Log (Hand Auger)		Scala Penetrometer
	Symbol	Description	(Blows/100mm)
GL			
0.2			
0.4			
0.6		End (Drop-weight Bounced)	
0.8			
1.0			
1.2			
1.4			
1.6			
1.8			
2.0			
2.2			
2.4			
2.6			
2.8			
3.0			
3.2			
3.4			
3.6			
3.8			
4.0			



Notes:

- Refer to attached site plan for location.
- Based on Stockwell, M.J. , 1997: Determination of allowable bearing pressure under small structures, New Zealand Engineering (32:6), dated 15 June 1977, using a factor of safety of three to back calculate the UBC.
- The allowable bearing pressure has been calculated using a factor of safety = 3.
- 100 kPa allowable bearing pressure corresponds to the NZS 3604:2011 requirements for "Good ground".
- 65 kPa allowable bearing pressure corresponds to the MBIE Guidelines requirements for use of foundation options 1-4 (TC2).





soil investigation record

Project:	LOT 4 VAUGHAN STREET, SEFTON	No.:	3 OF 5
Ref:	12818	Date:	5/08/2021
By:	CH	Checked:	CB

Test Location 3

Depth (m)	Bore Log (Hand Auger)		Scala Penetrometer (Blows/100mm)
	Symbol	Description	
GL		Topsoil	
0.2		Brown Silt with trace of organics	
0.4		End (Drop-weight Bounced)End of	
0.6			
0.8			
1.0			
1.2			
1.4			
1.6			
1.8			
2.0			
2.2			
2.4			
2.6			
2.8			
3.0			
3.2			
3.4			
3.6			
3.8			
4.0			

Notes:

- Refer to attached site plan for location.
- Based on Stockwell, M.J. , 1997: Determination of allowable bearing pressure under small structures, New Zealand Engineering (32:6), dated 15 June 1977, using a factor of safety of three to back calculate the UBC.
- The allowable bearing pressure has been calculated using a factor of safety = 3.
- 100 kPa allowable bearing pressure corresponds to the NZS 3604:2011 requirements for "Good ground".
- 65 kPa allowable bearing pressure corresponds to the MBIE Guidelines requirements for use of foundation options 1-4 (TC2).



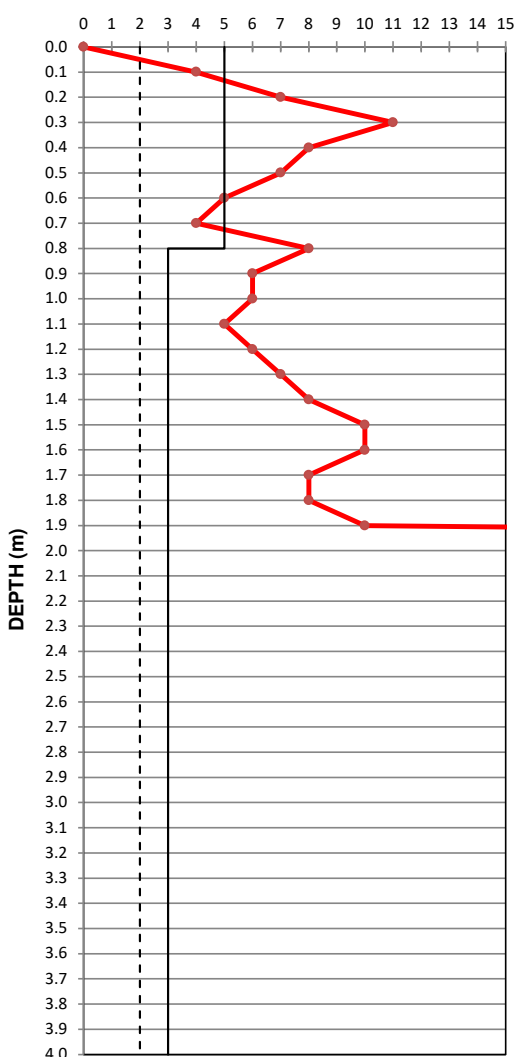


soil investigation record

Project:	LOT 4 VAUGHAN STREET, SEFTON	No.:	4 OF 5
Ref:	12818	Date:	5/08/2021
By:	CH	Checked:	CB

Test Location 4

Depth (m)	Bore Log (Hand Auger)		Scala Penetrometer
	Symbol	Description	(Blows/100mm)
GL			
0.2			
0.4			
0.6			
0.8			
1.0			
1.2			
1.4			
1.6			
1.8			
2.0		End of test	
2.2			
2.4			
2.6			
2.8			
3.0			
3.2			
3.4			
3.6			
3.8			
4.0			



Notes:

- Refer to attached site plan for location.
- Based on Stockwell, M.J. , 1997: Determination of allowable bearing pressure under small structures, New Zealand Engineering (32:6), dated 15 June 1977, using a factor of safety of three to back calculate the UBC.
- The allowable bearing pressure has been calculated using a factor of safety = 3.
- 100 kPa allowable bearing pressure corresponds to the NZS 3604:2011 requirements for "Good ground".
- 65 kPa allowable bearing pressure corresponds to the MBIE Guidelines requirements for use of foundation options 1-4 (TC2).



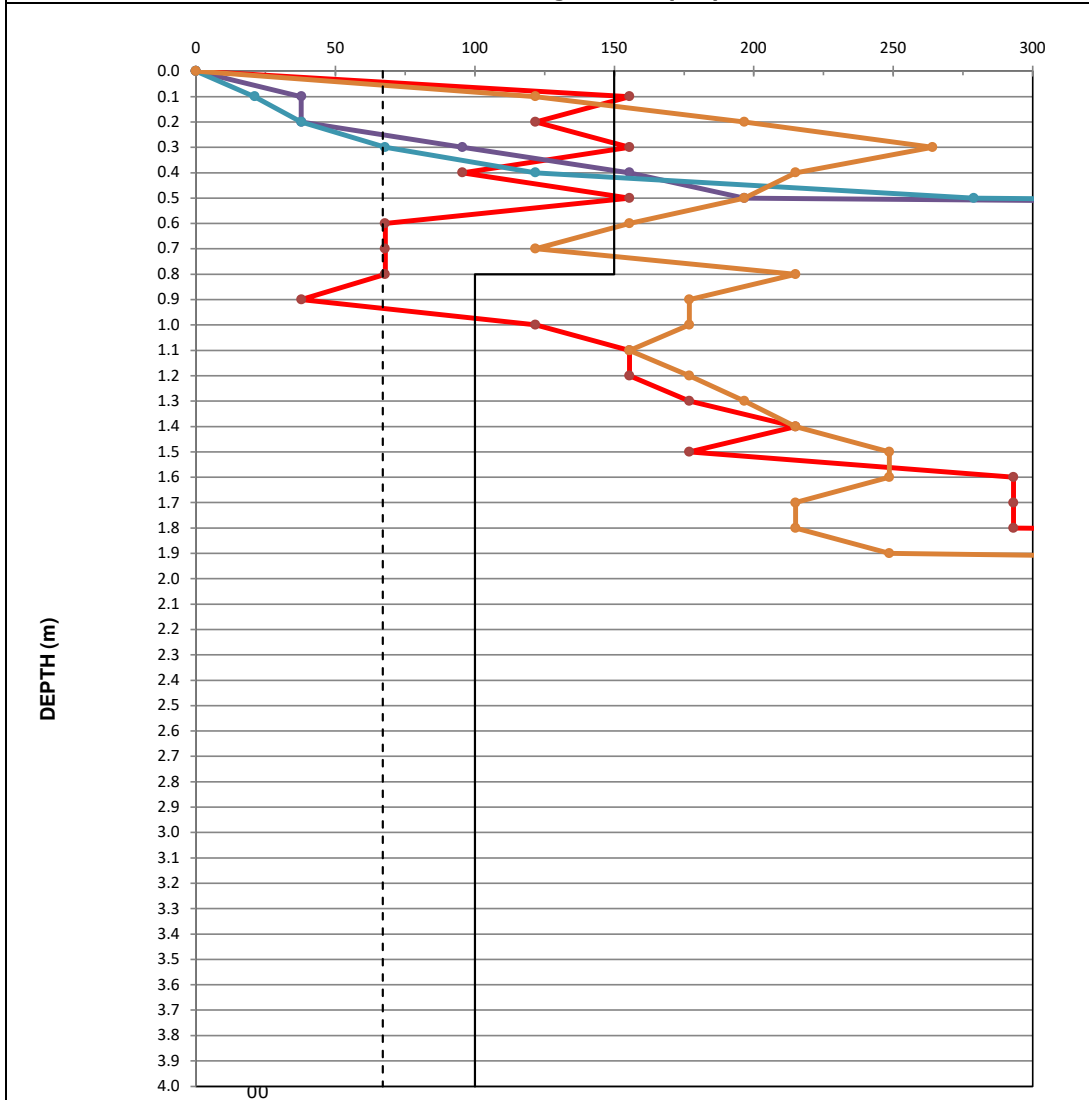


soil investigation record

Project:	LOT 4 VAUGHAN STREET, SEFTON	no.	5 OF 5
Ref:	12818	date	5/08/2021
By:	CH	checked	CB

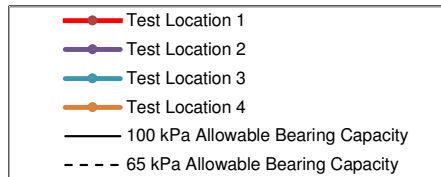
Scala Penetrometer

Allowable Bearing Pressure (kPa)



Notes:

- Based on Stockwell, M.J. , 1997: Determination of allowable bearing pressure under small structures, New Zealand Engineering (32:6), dated 15 June 1977, using a factor of safety of three to back calculate the UBC.
- The allowable bearing pressure has been calculated using a factor of safety = 3.
- 100 kPa allowable bearing pressure corresponds to the NZS 3604:2011 requirements for "Good ground".
- 65 kPa allowable bearing pressure corresponds to the MBIE Guidelines requirements for use of foundation options 1-4 (TC2).





36 Pembertons Road,
Sefton

Combined Geotechnical, Soakage & Preliminary Site Investigation Report

Prepared for David Taylor

WAIMAKARIRI DISTRICT COUNCIL
Plans and specifications APPROVED in accordance
with the Building Act 2004, clause 49 and the Building
Regulations 1992, Clause 3
BC210957 30/08/2021 michaelmo

Project: 46029 - Rev. 0 - 27/05/2016

Engineering Design Consultants Ltd

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Combined Geotechnical, Soakage & Preliminary Site Investigation Report
36 Pembertons Road, Sefton

EDC File: 46029 - Rev. 0

Revision	Date	Engineer	Description
0	27/05/2016	BG, GL and GW	Original

REPORT PREPARED BY:



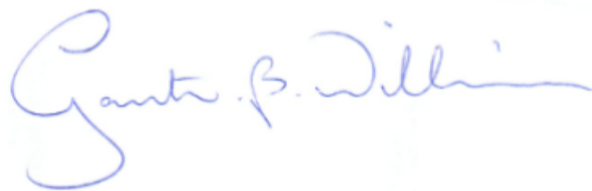
Blair Griffiths
Dip Civil Eng GIPENZ
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REPORT CHECKED BY:



Giles Learman
BSc (Hons) CGeol FGS
Geotechnical Team Leader - Canterbury

REPORT AUTHORISED BY:



Gareth B Williams
MSc(Eng) CPEng MIPENZ IntPE(NZ) MInstD MEIANZ
Senior Geotechnical Engineer, Director

Limitations of Report

Except where required by law, the findings presented as part of this report are for the sole use of our client, as noted above. The findings are not intended for use by other parties, and may not contain sufficient information for the purposes of other parties or other uses.

Our professional services are performed using a degree of care and skill normally exercised, under similar circumstances, by reputable consultants practicing in this field at this time. No other warranty, expressed or implied, is made as to the professional advice presented in this report; in regard to its accuracy or completeness.

The recommendations and opinions contained in this report are based on our visual reconnaissance of the site, information from council and other external sources. The accuracy of this information cannot be guaranteed.

This report has been prepared for the particular project described to us and no responsibility is accepted for the use of any part of this report in any other context or for any other purposes. Our opinions and recommendations are based on our comprehension of the current regulatory standards and must not be considered legal opinions. For legal advice, please consult your solicitor. This opinion is not intended to be advice that is covered by the Financial Advisors Act 2010.

The attached appendices should be read in conjunction with the main part of the report and this report should not be considered complete without them.

EXECUTIVE SUMMARY

Geotechnical

The proposed development area generally comprises slightly undulating, grassed land. A cluster of trees is located along the northern boundary and several other trees/bushes are located within the property. There are seven existing structures on the site.

The site is underlain by 'Grey to brown fan alluvium of the undifferentiated Late Quaternary Age'.

The general soil profile is variable and consists of topsoil, underlain by silt with variable amounts of sand and gravel, or gravel with variable amounts of silt and sand, 2.0m – 2.5m deep. From this depth, the soil profile is mainly gravel with varying amounts of sand up to 4.5m depth, although three of the ten intrusive holes had estuarine like silt from 2.9m through to termination depth.

Groundwater (ingress) was encountered in several of the intrusive holes between 2.6m – 3.7m. It is considered likely that this water is perched.

Based on the desk study and intrusive works information the risk of liquefaction related surface damage / settlement on the site is considered **Low and** future land performance of is likely to be within the limits of CERA land classification Technical Category 1 (**TC1**).

Flooding

It is considered that the existing ground profile should be re-contoured to remove the defined flowpaths through the site which result from overflow of the Pembertons Road swale. As part of this work, the low-lying land on the southern boundary shall be filled in to reduce the ponding and flooding risk to the proposed lots adjacent to Cross Street. As such a Civil/Drainage engineer should be engaged to establish a scheme that mitigates this risk and the risk posed by the 100yr and 200yr flood event.

FFL's shall be in accordance with the WDC District Plan rules.

Resource Management Act Assessment

It is considered, under Section 106 (1) of the RMA, that there are no reasons from a geotechnical perspective that the site is considered unsuitable for development, provided any development is undertaken with appropriate engineering design measures and takes consideration of the comments in Section 7.0.

Percolation Test Results

It is considered likely that shallow soakaways are the most feasible drainage option for proposed Lots 1, 2, 3, 5 & 6. A percolation rate of 38 L/m²/min can be used for design in these lots as a conservative figure, however as part of this design a reduction factor should be applied to allow for reduced infiltration due to ingress of fine sediment.

Shallow soakaways should be located in the gravel/sand layer and should be located a minimum 15m from proposed house platforms and boundaries to avoid saturating the soils underlying the house foundations.

We recommend that Lot 4 and Lots 7 - 12 have deep boreholes drilled at Building Consent stage to enable stormwater soakage to the underlying deep gravels. This is expected to be in the order of 6 - 8m deep. Drilling at Building Consent stage will allow the soakage chamber to be appropriately positioned for the eventual house and driveway design layout.

Environmental

The desk study information indicates that the land has been used for lifestyle block since the 1950's.

The desktop study did not indicate any potential HAIL or other potentially contaminative activities having occurred on-site or on adjacent land.

No visual or olfactory evidence of soil contamination was noted during our site walkover.

Therefore, the qualitative contamination assessment suggests that it is highly unlikely that there will be an unacceptable risk to residential end-users, with no significant potential contamination sources identified.

Based on the information referenced above, it is currently considered more likely than not that HAIL activities have not occurred on the proposed.

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Combined Geotechnical, Soakage & Preliminary Site Investigation Report
36 Pembertons Road, Sefton

EDC File: 46029 - Rev. 0

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Historical Aerial Photographs

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Probability of Risk and Potential Severity Explanation

1.0 INTRODUCTION

1.1 Terms of Reference

Engineering Design Consultants Ltd (EDC) was commissioned by Taylor Homes Ltd in April 2016 to provide a combined Resource Consent stage Geotechnical (including percolation testing) & Preliminary Site Investigation (PSI) Report for the purpose of subdividing the parcel of land at 36 Pembertons Roads in Sefton (Waimakariri District), henceforth referred to as 'the site'.

1.2 Objective and Scope of Investigation

The objective of this report was to describe ground conditions, provide appropriate geotechnical advice, determine if the land is potentially (or actually) affected by contaminants, determine permeability/percolation rates of the natural ground for a proposed stormwater drainage system, assess the site against section 106 of the Resource Management Act (RMA) to determine if it is suitable for the proposed (residential) development.

In order to achieve the outlined objectives this investigation comprised the following scope:

- A geotechnical desktop study.
- Site walkover.
- Excavation and logging of Test Pits (TP).
- Excavation and logging of Soakage Test Pits (STP), then to undertake falling head percolation testing.
- Resource Management Act Section 106 (1) Assessment and provision of a Geotechnical Statement of Professional Opinion.
- Assessment of potential for historic activities to have resulted in ground contamination at the site.
- Document review of: Historic Certificate of Title, Council Property Files, Aerial Photos and Anecdotal Records.
- Definition of the Conceptual Site Model.
- Characterisation of the site and determination of whether a Detailed Site Investigation (DSI) is required.
- Production of an interpretive report that documents the above and provides foundation options/recommendations and possible geotechnical constraints to the proposed development.

The Geotechnical aspect of this investigation was completed in accordance with the MBIE guidance document '*Guidelines for the investigation and assessment of subdivisions on the flat in Canterbury*' (Ministry of Business, Innovation and Employment, Dec 2012)

The Environmental sections have been prepared by suitably qualified practitioners, in general accordance with national guidance and standards for conducting ground contamination-related desk study investigations in New Zealand. This includes

compliance with the general format described in the Ministry for the Environment (MfE) Contaminated Land Management Guideline No 1 'CLMG No. 1' (Ministry for the Environment, 2001 (Revised 2011)) .

The soakage/percolation testing assessment was completed in accordance with the Auckland City Soakage Design Manual (Pattle Delamore Partners Ltd., 2003).

1.3 Proposed Development Works

It is proposed to subdivide the existing land parcel into 12 new lots of approximately 800m² to 1,120m².

The existing property will be subdivided so that all parcels will be suitable for residential use. Lot 10 has an existing dwelling and garage, with no anticipated change to land use.

An access ROW is proposed for Lots 8 and 9 from Cross Street near the southeast corner of the site.

A proposed subdivision plan has been drafted by Scandlyn Surveying Ltd (No Ref) and provided by the client, as shown below:



Figure 1: Proposed subdivision layout

2.0 SITE IDENTIFICATION

2.1 Legal Description and Location

The land is located on the east side of Pembertons Road, near the northern extent of Sefton Township. The legal description of the site is Part RS 6675 and it covers an approximate area of 1.78 hectares.

Neighbouring properties to the north, south and west are used for residential purposes and to the east is a racetrack.

The property is currently accessed centrally along the west boundary (for the existing dwelling) and in the southeast corner (for the remaining undeveloped land).

The topography is slightly undulating with two distinct area low areas in the east and west portions of the site where historical overland flow paths ran.

Stoney Creek is located west of the site, approximately 175m, and runs north to south.

Below is a recent aerial photograph of the site outlining these features:



Figure 2: Site Identification Plan

2.2 Site Walkover

The majority of the site is undeveloped grassed land, sloping from northwest to southeast. A cluster of trees is located along the northern boundary and several other trees/bushes are located within the property.

There are three existing structures on the site. A single-storey dwelling and double garage are located centrally along the western boundary and are accessed from Pembertons Road. The dwelling appears to be founded on a concrete slab and both structures appear to be of light-weight build. A water tower and two small storage sheds are located behind the dwelling and two further storage sheds are along the western boundary.

No earthquake related ground damage was evident when EDC visited the site on the 19 February 2016. It is however reasonable to assume that if ground damage had occurred it is unlikely to be visible after 5 years.

Photographs taken during site walkover are shown below:



Figure 3: View of the existing structures (taken from Pembertons Road, looking north)



Figure 4: View of the double garage and above ground water tank



Figure 5: View of the storage sheds at the rear of the dwelling



Figure 6: View of the storage sheds along the northern boundary



Figure 7: View of the site along the western boundary (looking north)



Figure 8: View of the site near the northern boundary (looking east)



Figure 9: View of the site from the southeast corner (looking northwest)

3.0 GEOTECHNICAL DESKTOP STUDY

3.1 Geology

According to the GNS map (Forsyth, Barrell, & Jongends, 2008), the site is underlain by 'Grey to brown fan alluvium of the undifferentiated Late Quaternary Age' (IQa).

3.2 Nearby Geological Investigation Data

The following is a summary of information obtained from the Canterbury Geotechnical Database (Earthquake Commission, 2014) & the ECan GIS Database (Environment Canterbury, 2014), from previous investigations within the local area:

Borehole Reference	Location	Depth	Summary
M34/0118	~130m South	59.7m	Soil & Clay 0.0m – 7.0m Gravel 7.0m – 9.5m Alternating layers of clay and gravel 9.5m – 40.5m Peat 40.5m – 41.8m Alternating layers of clay and gravel 41.8m – 59.7m
M34/0106	~250m Southeast	142.3m	Clay 0.0m – 1.8m Clay and stone 1.8m – 13.7m Alternating layers of clay and gravel 9.5m – 38.4m Peat and clay 38.4m – 40.2m Alternating layers of clay and gravel 40.2m – 111.6m Peat 111.6m – 113.4m Alternating layers of clay and gravel 113.4m – 122.8m Clay, sand and gravel 122.8m – 142.3m
HA-DCP_22457	~1200m Northeast	2.4m	Topsoil 0.0m – 0.3m Sandy silt 0.3m – 1.5m Silt with trace sand 1.5m – 2.4m Termination due to practical refusal

3.3 Groundwater Springs

The ECan GIS database does not indicate that any groundwater springs are located within vicinity of the site.

3.4 ECan Ground Water Data

The ECan database piezometric contours suggest a groundwater level of approximately 9.5m Above Mean Sea Level (AMSL) near the southeast corner of the site, and up to 10.5m AMSL near the northwest corner.

Land contours indicate the site has an approximate ground level of 18.0m AMSL in the southeast corner and 19.0m AMSL in the northwest corner.

This suggests that groundwater is approximately 8.5m below typical existing ground level across the site.

The piezometric contours indicate a hydraulic gradient of approximately 1:190 (v:h) in an east-southeast direction.

3.5 Liquefaction

The following information has been collected in order to assess the risk to the site from liquefaction and lateral spreading in a future earthquake event:

3.5.1 CERA

The land status map from the CERA website indicates the subject site is classified "Green" in a "N/A – Rural & Unmapped" zone as at 14 April 2016.

3.5.2 Liquefaction Assessment Areas

A technical report by GNS Science (Brackley, 2012) for Environment Canterbury reviews Liquefaction Hazard information for the eastern Canterbury area. Figure 2.1 of this report (Pg.6) shows the two delineated zones of Canterbury where '*Liquefaction assessment (is) needed*' and '*Damaging liquefaction (is) unlikely*'.

This map does not include the subject site, however the nearest indicated zone is located 330m southeast which is a zone where '*Damaging liquefaction (is) unlikely*'. However just beyond this, the land is within the zone where '*Liquefaction assessment (is) needed*'.

3.5.3 GNS Observed Liquefaction Maps

GNS observed liquefaction maps sourced from the CGD were released following the 04 September 2010 and 22 February 2011 earthquake events. Areas were mapped and tagged according to the features visually identified in the satellite images and aerial photography.

These maps identified no observed features on-site or within a 500m radius of the site.

3.5.4 Liquefaction Study for the Waimakariri District Council Information

In 2008 ECan commissioned Geotech Ltd to undertake a Liquefaction Study for the Waimakariri District Council (Geotech Consultants Ltd., 2008).

This map indicates that the site is located within 'Zone 3', described as 'areas of alluvium older than Holocene age with a very small risk of liquefaction of local, isolated areas.'

3.6 Seismicity

3.6.1 Geological Fault-lines

The nearest known active fault is the 'Loburn fault', located approximately 4.2km southwest of the site.

3.6.2 Recorded Peak Ground Accelerations

GNS records indicate that the nearest Strong Motion Sensor location is at Ashley School (located approximately 6.4km southwest of the site). The following table shows the recorded Peak Ground Accelerations (PGA's) observed at this sensor during the significant earthquakes in the area during 2010 and 2011:

Earthquake event	Peak Ground Acceleration (PGA)
	Ashley School
04 September 2010	0.17g
22 February 2011	0.09g
13 June 2011	0.05g
23 December 2011	0.05g

Notes: Although these PGA's were measured at the sensor locations, it is considered more likely than not that the site could have been affected by PGA's that were lower or higher.

3.6.3 Seismic Site Subsoil Classification

Based on the above and general knowledge of the Canterbury Plains and surrounding area, EDC consider that the seismic site subsoil classification 'Class D – Deep or soft soil sites', as defined in NZS 1170.5 is appropriate for the site.

3.7 Flooding & Water Bodies

3.7.1 Waimakariri District Council Flood Models

The Waimakariri District Council (WDC) was contacted with regards to the flood risk at the site.

Chris Bacon replied via email and provided a flood modelling map for 100yr and 200yr Annual Recurrence Interval (ARI) events, showing estimated flood depths (50yr not available for this area).

These maps indicate the majority of the site is at minor risk from flooding in both 100yr and 200yr events (100mm – 250mm deep). Furthermore, the central southern portion of the site is at moderate risk from flooding in 200yr event (250mm – 500mm deep).

The 100yr and 200yr estimated flood depth maps from the WDC are included as Appendix A.

3.7.2 Water Courses

An upper tributary of Stony Creek is located 175m west of the site.

Important Notice

This section (Section 3.0) and information where CGD has been referenced in this report was created from maps and/or data extracted from the Canterbury Geotechnical Database (<https://canterburygeotechnicaldatabase.projectorbit.com>), which were prepared and/or compiled for the Earthquake Commission (EQC) to assist in assessing insurance claims made under the Earthquake Commission Act 1993. The source maps and data were not intended for any other purpose. EQC and its engineers, Tonkin & Taylor, have no liability for any use of the maps and data or for the consequences of any person relying on them in any way. This "Important notice" must be reproduced wherever this information or any derivatives are reproduced.

4.0 GEOTECHNICAL SITE INVESTIGATION

4.1 Rationale

The proposed subdivision is to be developed for residential use. The MBIE Subdivision Guidelines (Ministry of Business, Innovation and Employment, Dec 2012) suggests that one Test Pit (TP) should be excavated every 4 lots with a changing land use (i.e. Lots 1 to 9, 11 & 12).

In view of the above a total of 5 test pits on a domino five pattern was considered appropriate to provide adequate understanding of the ground profile for Resource Consent. In addition the soak test pits supplement the spread of shallow ground investigation.

4.2 Shallow Geotechnical Testing

4.2.1 Test Pits

Five Test Pits (TP 101 to 105) were excavated within the proposed development area, using a 12 tonne excavator, under the supervision of EDC on 19 April 2016.

The following table's summaries the depths below existing ground level (begl) reached by the TP's:

Test Reference	Depth Reached (begl)	Groundwater Encountered	Water Type and Depth Encountered
TP 101	4.4m	Yes	Ingress at 3.6m
TP 102	3.9m	Yes	Ingress at 3.5m
TP 103	4.5m	Yes	Ingress at 4.3m
TP 104	4.3m	No	-
TP 105	3.9m	Yes	Ingress at 2.8m

All TP's reached their target depth.

Side walls of the TP's were generally stable, although TP 102 and 105 became slightly unstable from 2.2m and 2.8m begl (respectively) in wet gravel.

The approximate locations of the TP's are indicated on Figure 10.

The TP logs are included in Appendix B and photographs of the TP's are included in Appendix C.

4.2.2 Soakage Test Pits

Five Soakage Test Pits (STP's) were excavated within the proposed development area, also using the 12T excavator and under the supervision of EDC on 19 April 2016.

The following table's summaries the depths reached by the STP's:

Test Reference	Depth Reached (begl)	Adequate Soakage Material Found
SPT 101	3.6m	No
SPT 102	2.2m	Yes
SPT 103	3.7m	No
SPT 104	1.9m	Yes
SPT 105	3.9m	No

The approximate locations of the STP's are also indicated on Figure 10.

The STP logs are included in Appendix D and photographs of the STP's are included in Appendix C.

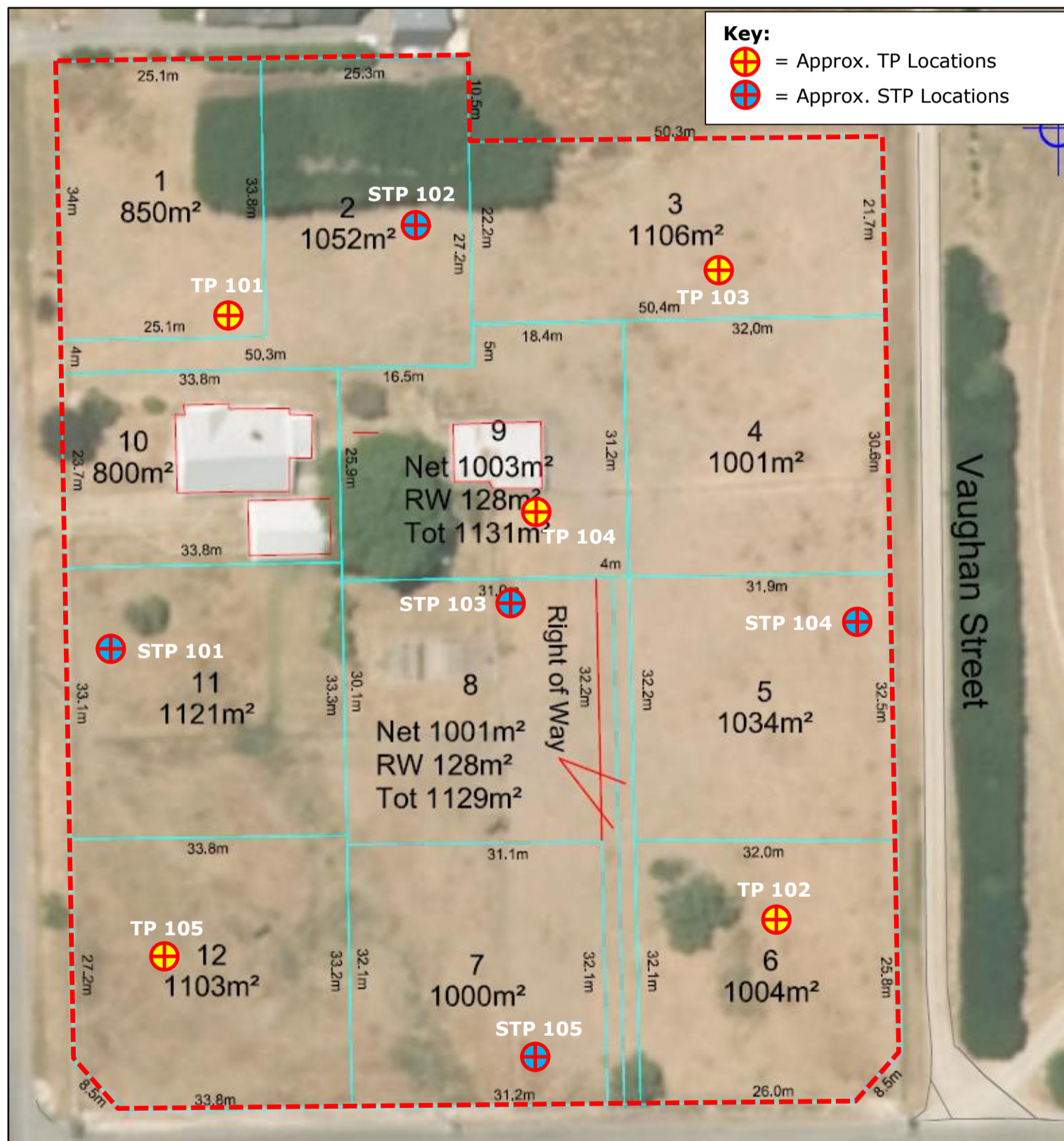


Figure 10: Geotechnical and Percolation Investigation Locations

4.3 Summary of Soil Profile

This intrusive investigation indicates that the shallow soil profile is highly variable. A brief summary of the ground make up is described below:

- The ground profile typically comprises surface topsoil with some gravel up to 0.4m begl, underlain by either firm to stiff silt with occasional sand and clay or medium dense to dense fine to coarse gravel with varying amounts of silt and sand within the upper 2.0m – 2.5m. Below this, the soil profile generally comprises medium dense sandy gravel to termination depth (between 3.9m – 4.5m begl), with the exception being in the locations of TP 103, 104 and STP 103, where a bluish grey soft to firm silt with varying amounts of clay, sand, gravel and occasional organic content was encountered from approximately 2.9m through to termination depth.

5.0 SOIL PERCOLATION

The use of shallow soakaways is the preferred method of disposing stormwater for the proposed development.

Due to the variable geological layers encountered on-site and groundwater ingress was encountered in three of the five STP's, falling head percolation testing was only possible in STP's 102 and 104.

5.1.1 Soakage Test Pit Geology

Below is a summary of the geological layers encountered in the STP's:

Test Reference	Geology	Groundwater Ingress
SPT 101	Topsoil 0.0m – 0.4m Gravelly sand 0.4m – 0.7m Sand with some silt and occasional gravel 0.7m – 2.6m Gravel with some sand 2.6m – 3.6m	3.0m
SPT 102	Topsoil 0.0m – 0.3m Silty gravel with some fine sand 0.3m – 0.7m Silty fine sand with occasional gravel 0.7m – 1.3m Sand/Gravel 1.3m – 2.2m	None
SPT 103	Topsoil 0.0m – 0.4m Silt with some fine sand and occasional gravel 0.4m – 2.9m Silt with some clay and occasional wood/organics 2.9m – 3.7m	3.7m
SPT 104	Topsoil 0.0m – 0.3m Gravelly silt 0.3m – 0.8m Gravel with some fine sand 0.8m – 1.9m	None
SPT 105	Topsoil 0.0m – 0.3m Silt with minor fine sand and clay 0.3m – 1.4m Silt with some gravel and trace sand 1.4m – 2.9m Sandy silt with some gravel 2.9m – 3.3m Sand/gravel 3.3m – 3.9m	3.9m

5.2 Percolation Test Results

Percolation testing & analysis was undertaken in general accordance with the Auckland City Soakage Design Manual (Pattle Delamore Partners Ltd., 2003) for Falling Head Percolation Testing, where possible.

The Percolation Test results indicate the following soil percolation rate for each soak:

Test Reference	Soak 1	Soak 2	Soak 3
SPT 101	No soakage available	No soakage available	No soakage available
SPT 102	~250 L/m ² /min	~250 L/m ² /min	~250 L/m ² /min
SPT 103	No soakage available	No soakage available	No soakage available
SPT 104	43.86 L/m ² /min	45.77 L/m ² /min	37.59 L/m ² /min
SPT 105	No soakage available	No soakage available	No soakage available

The above results indicate a minimum soil percolation rate of 250 L/m²/min at STP 102 and 38 L/m²/min at STP 104.

A soil percolation rate was not able to be calculated at STP 102's location as the excavated hole could not be filled (1,000L – 1,500L of water in approximately 120 – 240 seconds drained away). Therefore, an assumed minimum soil percolation rate at this tests location is 250 L/m²/min.

A copy of the percolation test results for STP 104 is attached in Appendix E.

The following table indicates the expected soil percolation rate in each proposed new lot, based on the nearby soakage tests:

Proposed Lot	Test Reference	Expected Percolation Rate	Soakage Depth	Expected Geological Stata
1	TP 101 & STP 102	~38 L/m ² /min	1.1m – 3.0m	Gravel with some sand
2	STP 102	~38 L/m ² /min	1.3m – at least 2.2m	Sand and gravel
3	STP 102 & TP 103	~38 L/m ² /min	1.5m – 3.6m	Silty gravel (1.5m – 2.4m) & Sandy gravel (2.4m – 3.6m)
4	TP 103, 104 & STP 103	Unlikely to achieve shallow soakage	-	Silt (possible sandy gravel from ~1.5m)
5	STP 104	38 L/m ² /min	0.5m – at least 1.9m	Gravel with some sand
6	TP 102 & STP 104	~38 L/m ² /min	0.9m – 2.7m	Gravel with some silt (becoming occasional) and sand
7	STP 105	No shallow soakage available	-	Silt
8	STP 103	No shallow soakage available	-	Silt

Proposed Lot	Test Reference	Expected Percolation Rate	Soakage Depth	Expected Geological Stata
9	TP 104 & STP 103	Unlikely to achieve shallow soakage	-	Silt (possible sandy gravel from ~1.9m)
11	STP 101	No shallow soakage available	-	Sand with occasional gravel (saturated from 2.8m)
12	TP 105	No shallow soakage available	-	Sand and gravel mixtures (wet from 1.6m)

5.3 Soakage Comments

Based on the above it is considered likely that shallow soakaways are a feasible drainage option for proposed Lots 1, 2, 3, 5 & 6. A percolation rate of 38 L/m²/min can be used for design in these lots as a conservative figure (Lots 1, 2 & 3 are likely to achieve a faster soakage rate, as water drained too quickly to obtain a specific rate).

Shallow soakaways should be located in the gravel/sand layer (generally from 0.5m/1.5m to 2.7m/3.6m of the soil strata) and should be located a minimum 15m from proposed house platforms and boundaries to avoid saturating the soils underlying the house foundations.

We recommend that Lot 4 and Lots 7-12 have deep boreholes drilled at Building Consent stage to enable stormwater soakage to the underlying deep gravels. This is expected to be in the order of 6-8m deep. Drilling at Building Consent stage will allow the soakage chamber to be appropriately positioned for the eventual house and driveway design layout.

It is expected that any overflow from stormwater soakage in storm events greater than 10yr ARI can discharge to the kerbline.

6.0 GEOTECHNICAL ASSESSMENT

6.1 Liquefaction Assessment

For liquefaction to occur there needs to be three preconditions:

- Young (Holocene or less than 10,000 years old) sediments;
- The soils include fine-grained and non-cohesive (silts and sands);
- The soils are saturated (below the water table).

The soils at the site are of the undifferentiated late Quaternary Age (11,500yo – 24,000yo).

The general soil profile is variable and consists of topsoil, underlain by silt with variable amounts of sand and gravel, or gravel with variable amounts of silt and sand, 2.0m – 2.5m deep. From this depth, the soil profile is mainly gravel with varying amounts of sand up to 4.5m begl, although three of the ten intrusive holes had estuarine like silt from 2.9m through to termination depth. The silt in the upper 2.0/2.5m was firm to stiff and the gravel was generally medium dense to dense (except for at STP 104, where it was loose to medium dense). The silt below 2.9m was soft to firm.

Nearby borehole information suggests that gravel deposits extend to at least 9.5m begl and that alternating clay and gravel layers with very occasional peat extend to at least 142.3m begl.

The desktop study suggests that groundwater is likely to be 8.5m begl across the site. Groundwater (ingress) was encountered in several of the intrusive holes between 2.6m – 3.7m. It is considered unlikely that large variations would occur in the water table and in view of the variable shallow soil conditions it is considered likely that this water is perched.

Based on the above comments, the risk of liquefaction related surface damage / settlement on the site is considered **Low**.

6.2 Technical Category Classification

Based on the information available to date and referenced above, it is considered that future land performance of proposed Lots 1 to 9, 11 & 12 is likely to be within the limits of CERA land classification Technical Category 1 (**TC1**).

In our opinion, given the desktop study information provided above, and the shallow investigation, that deep (>15m) drilling and liquefaction analysis is not warranted.

7.0 RESOURCE MANAGEMENT ACT ASSESSMENT

Section 106 (1) of the Resource Management Act (RMA) states:

'A consent authority may refuse to grant a subdivision consent, or may grant a subdivision consent subject to conditions, if it considers that—

(a) the land in respect of which a consent is sought, or any structure on the land, is or is likely to be subject to material damage by erosion, falling debris, subsidence, slippage, or inundation from any source; or

(b) any subsequent use that is likely to be made of the land is likely to accelerate, worsen, or result in material damage to the land, other land, or structure by erosion, falling debris, subsidence, slippage, or inundation from any source; or

(c) sufficient provision has not been made for legal and physical access to each allotment to be created by the subdivision'

Our assessment considers parts (a) and (b) of the above Section 106 1(c) is not relevant to a geotechnical assessment.

Hazard	Potential Susceptibility	
	Current (part a)	Post Development (part b)
Erosion	No erosion is evident on the site and owing to its flat generally flat nature it is considered that risk of significant erosion damage is very low.	It is not anticipated that the proposed development will accelerate or worsen the erosion rates if appropriate stormwater collection and disposal methods are implemented.
Falling Debris	N/A = Site and surrounds are relatively flat and therefore no issues are anticipated.	
Slippage	The site is not located on a hillside or located close to any abrupt changes in topography. As such the risk of slippage is considered very low.	There is no anticipated change to the slippage risk as a result of the proposed development.
Subsidence	No significantly compressible soils were noted in the TP's and the risk of underground voiding is considered to be negligible. The site should be considered to be within the CERA TC 1 category for ground performance in an SLS or ULS earthquake event. In view of the above the risk of subsidence is considered to be very low.	Provided that foundations are located on a suitable bearing stratum, and to an engineered design, the risk of subsidence is unlikely to be worsened as a result of the proposed development.
Inundation - Liquefaction	Based on our assessment the risk of inundation from liquefaction in a future SLS level earthquake is considered very low and the site can be considered to be within the CERA TC 1 category for	There is no anticipated change to the inundation risk as a result of the proposed development.

Hazard	Potential Susceptibility	
	Current (part a)	Post Development (part b)
	ground performance in an SLS or ULS earthquake event.	
Inundation - Flooding	Waimakariri District Council has identified several areas within the site that are at risk of flooding in a 100yr and 200yr floor event. Refer to Appendix A.	It is proposed that bulk earthworks will be carried out onsite to reduce the risk posed by the existing overland flowpath and ponding relating to large storm events (as shown in modelling of the 100yr and 200yr flood events). FFL shall be in accordance with the WDC District Plan rules.

It is considered, under Section 106 (1) of the RMA, that there are no reasons from a geotechnical perspective that the site is considered unsuitable for development, provided any development is undertaken with appropriate engineering design measures and takes consideration of the above comments.

8.0 PSI REGULATORY IMPLICATIONS

8.1 Regulatory Framework

The key legislation and planning controls around this site include:

- Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES).
- Waimakariri District Council District Plan.

These regulatory requirements form the basis of our assessment of the requirement for contamination remediation and contamination related consents relevant to the site development.

8.2 NES

The NES came into effect on 1 January 2012. Each Territorial Authority implements the NES in accordance with Section 31 of the Resource Management Act (RMA) 1991.

The NES applies to assessing and managing the actual or potential adverse effects of contaminants in soil on human health from five activities: subdivision, land-use change, soil disturbance, soil sampling, and removing fuel storage systems. The NES only applies to land affected by or potentially affected by soil contaminants. This is if an activity or industry on the Hazardous Activities or Industries List (HAIL) has been, is, or is more likely than not to have been undertaken on that land.

If the NES applies, then consent may be required if any of the activities listed above are proposed to take place on the site.

8.3 Waimakariri District Plan

The NES supersedes the District Plan except where the District Plan has rules regarding effects not covered in the NES.

Section 32.1.3 (Subdivision – Rules) of the Waimakariri District Plan – Consent is required as a controlled activity for subdivisions which have been historically contaminated by a HAIL activity.

Therefore, if a potential HAIL activity has been identified, a Resource Consent will be required.

9.0 HISTORICAL REVIEW

Historical information relating to the site has been collected from a variety of sources including current and historical certificates of title, historic aerial photographs, the Waimakariri District Council (WDC) property file and a contamination enquiry (Listed Land Use Register). The history focuses on on-site activities, except for the aerial photograph review, where comments are also provided on readily observable surrounding land use, and the council contamination enquiry, where a search is undertaken for consents issued within a 100m radius of the site.

9.1 Listed Land Use Register

The Listed Land Use Register (LLUR) holds information about Hazardous Activities or Industries (HAIL) that have historically (and/or currently) taken place on the site or within the vicinity of the site.

The LLUR does not indicate any known HAIL activities occurring on-site or on any land within a 100m radius of the sites boundaries.

9.2 Anecdotal Evidence

David Taylor (client), is looking to buy the property and was able to provide the following information regarding the sites historic uses:

- The Cameron's have owned the land for 50+ years.
- They used the land primarily as a residential lifestyle block.
- No animal farming has taken place on the land as far as Mr Taylor is aware, only a few horses have been kept on the property from time to time.
- Mr Taylor was not able to provide any information relating to possible chemicals and/or fuels being stored, mixed or applied to the land.
- Mr Taylor was also not able to provide any information on possible chemicals and/or fuels being stored, mixed or applied to adjacent land, however he did indicate that the property to the north was once a church (now residential) and surrounding land has also been residential for a long time.

9.3 Site Ownership

EDC conducted a review of current and historic certificates of title.

These documents are generally legible and date back to 1926. From what can be discerned, these documents make no reference to any potentially hazardous land uses on the site.

9.4 Council Property Files

The WDC property file for the site was reviewed to identify potential HAIL activities or sources of contamination on site.

No relevant information was discovered throughout the documents, which generally contained building plans, building consents, subdivision requirements and installing records of services.

Therefore, no indication of potential HAIL activities were identified in the property files.

9.5 Historical Aerial Photos

Below is a summary of the historic site and adjacent land uses, based on historic aerial photography:

Date - Source	Site Observations	Surrounding Land Features
1942 - ECan	This photo is unclear and does not include the northern portion of the site. From what can be discerned, the existing dwelling and a second dwelling along the southern boundary area present on-site.	A residential lot can be seen to the southwest. No other features can be discerned.
1950 - V. C. Browne & Son	The existing dwelling and storage sheds behind the dwelling area present. A garage (possibly existing) is located to the south of the existing dwelling. A second dwelling and a storage shed can also be seen along the southern boundary. The remaining land is mostly grassed, although there is a garden to the south of the existing dwelling.	The majority of the surrounding land (that can be seen) is developed for residential use. The existing race track is also present to the east.
1980 - ECan	This photo is also unclear; however it is evident that the dwelling and storage shed along the southern boundary has been removed.	No significant changes are evident surrounding the site.
1994 - ECan	The garage along the southern side of the dwelling is confirmed as the existing garage. No other significant changes evident at the site.	No significant changes are evident surrounding the site.
2004 - ECan	No significant changes are evident within the site.	No significant changes are evident surrounding the site, except for residential development to the south and west.
2011 - ECan	No significant changes are evident within the site.	No significant changes are evident surrounding the site.
2015 - Google Earth	No significant changes are evident within the site.	No significant changes are evident surrounding the site.

These historical aerial photographs are included as Appendix F.

Owing to the long residential history of the site (pre 1942), there is a risk that there are rubbish pits on the site which have not been identified in this report. Burying rubbish is common practice in rural areas. However, no rubbish pits were identified during the site

walkover or in any of the intrusive investigations. If such features are encountered during development, an environmental engineer should be contacted to assess any associated risks to human health and potentially groundwater.

10.0 CONCEPTUAL SITE MODEL

This section provides a qualitative risk assessment of the risk posed from potential on and off-site contamination sources, identified by the information presented in the previous sections.

The conceptual model below has been developed based on the commonly adopted source-pathway-receptor model.

10.1 Potential Sources of Contamination

The term contaminant refers to a substance that is not normally present in the environment (or exceeding naturally occurring soil/water concentrations). This report cannot confirm if contamination exists, merely it comments on the likelihood that a potentially contaminating HAIL activity is likely to have occurred. If such an activity has occurred, a DSI would be undertaken to qualify and quantify if soil contamination has occurred.

There is no evidence to suggest any use or bulk storage of hazardous chemicals or fuels occurring on-site or within the surrounding area.

No cropping, market gardens, orchards or any other land use which may have resulted in ground contamination has been identified historically or presently on-site or on adjacent land.

The site walkover did not identify any olfactory or visual evidence of contamination sources on-site.

As such, it is considered that there is not a significant risk of ground contamination at the subject site from historical land uses or from adjacent land parcels.

10.2 Potential Pathways

Pathways may exist via dermal contact, ingestion or inhalation of soil particles during any future development.

10.3 Potential Receptors

Receptor		Additional Information
Human Health	Future site users	A female child will be regarded as the critical receptor; a female child being generally lower body weight than a male of the same age.
Human Health	Construction workers	A female worker will be regarded as the critical receptor.
Human Health	Groundwater	Groundwater may be present from approximately 3.0m below existing ground level.
Human Health	Neighbouring site users	The site is surrounded by residential properties.

10.4 Pollutant Linkages

The table below considers the proposed development area of the site:

Pollutant Linkage	Source	Pathway	Receptor	Probability of risk	Potential Severity	Risk
1	Contaminated Soils	Ingestion of soil, dermal contact, inhalation of dust, inhalation of vapours	Humans - end users	Unlikely	Medium	Low
2	Contaminated Soils	Ingestion of soil, Dermal contact; Inhalation of dust.	Construction workers	Unlikely	Medium	Low
3	Contaminated Soils	Inhalation of soil dust	Members of the public adjacent to the site during construction	Unlikely	Medium	Low
4	Contaminated Water Supplies	Ingestion of water, Migration of organic contaminants via pipes	Humans - end users	Unlikely	Medium	Low
6	Contaminated Water	Groundwater	Humans - end users	Unlikely	Mild	Low

The terms used for probability of risk, potential severity and risk are explained in full in Appendix G.

10.5 Model Summary

Source - There is no evidence to suggest that HAIL activities have occurred on-site. **NO SOURCE HAS BEEN IDENTIFIED.**

Pathway - Direct contact with soil during construction or residence including oral ingestion/dermal exposure/inhalation by humans. **PATHWAYS PRESENT.**

Receptor - The land is to be used for residential purposes and the surrounding land includes other residential dwellings. **RECEPTOR PRESENT.**

Given the site specific information outlined above, we consider that, in accordance with the NES, a Detailed Site Investigation (DSI) is not warranted at the subject site and that the site is suitable for the proposed development.

11.0 CONCLUSIONS & RECOMMENDATIONS

11.1 Geotechnical

The proposed development area generally comprises slightly undulating, grassed land. A cluster of trees is located along the northern boundary and several other trees/bushes are located within the property. There are seven existing structures on the site. A single-storey dwelling and double garage are located centrally along the western boundary and are accessed from Pembertons Road. A water tower and two small storage sheds are located behind the dwelling and two further storage sheds are along the western boundary.

11.1.1 Ground and Soil Characteristics

The site is underlain by 'Grey to brown fan alluvium of the undifferentiated Late Quaternary Age' (IQa).

The general soil profile is variable and consists of topsoil, underlain by silt with variable amounts of sand and gravel, or gravel with variable amounts of silt and sand, 2.0m – 2.5m deep. From this depth, the soil profile is mainly gravel with varying amounts of sand up to 4.5m begl, although three of the ten intrusive holes had estuarine like silt from 2.9m through to termination depth. The silt in the upper 2.0/2.5m was firm to stiff and the gravel was generally medium dense to dense (except for at STP 104, where it was loose to medium dense). The silt below 2.9m was soft to firm.

The desktop study suggests that groundwater is likely to be 8.5m begl across the site. Groundwater (ingress) was encountered in several of the intrusive holes between 2.6m – 3.7m. It is considered unlikely that large variations would occur in the water table and in view of the variable shallow soil conditions it is considered likely that this water is perched.

Based on the desk study and intrusive works information the risk of liquefaction related surface damage / settlement on the site is considered **Low and** future land performance of is likely to be within the limits of CERA land classification Technical Category 1 (**TC1**).

The intrusive site investigation indicates that the shallow soil profile may meet the NZS: 3604 definition of 'Good Ground' though this will need to be assessed using Scala penetrometer testing.

Provided that foundations are located on a suitable bearing stratum, and to an engineered design, the risk of static subsidence is considered low.

EDC consider that the seismic site subsoil classification 'Class D – Deep or soft soil sites', as defined in NZS 1170.5 is appropriate for the site.

11.1.2 Flooding

It is considered that the existing ground profile should be re-contoured to remove the defined flowpaths through the site which result from overflow of the Pembertons Road swale. As part of this work, the low-lying land on the southern boundary shall be filled in

to reduce the ponding and flooding risk to the proposed lots adjacent to Cross Street. As such a Civil/Drainage engineer should be engaged to establish a scheme that mitigates this risk and the risk posed by the 100yr and 200yr flood event. All land filling practices, supervision, testing and certification shall be accordance with NZS 4431:1989 Code of Practice for Earth fill for Residential Development.

FFL's shall be in accordance with the WDC District Plan rules.

11.1.3 Resource Management Act Assessment

It is considered, under Section 106 (1) of the RMA, that there are no reasons from a geotechnical perspective that the site is considered unsuitable for development, provided any development is undertaken with appropriate engineering design measures and takes consideration of the comments in Section 7.0.

11.2 Percolation Test Results

It is considered likely that shallow soakaways are the most feasible drainage option for proposed Lots 1, 2, 3, 5 & 6. A percolation rate of 38 L/m²/min can be used for design in these lots as a conservative figure, however as part of this design a reduction factor should be applied to allow for reduced infiltration due to ingress of fine sediment.

Shallow soakaways should be located in the gravel/sand layer (generally from 0.5m/1.5m to 2.7m/3.6m of the soil strata) and should be located a minimum 15m from proposed house platforms and boundaries to avoid saturating the soils underlying the house foundations.

We recommend that Lot 4 and Lots 7-12 have deep boreholes drilled at Building Consent stage to enable stormwater soakage to the underlying deep gravels. This is expected to be in the order of 6-8m deep. Drilling at Building Consent stage will allow the soakage chamber to be appropriately positioned for the eventual house and driveway design layout.

11.3 Environmental

The desk study information indicates that the land has been used for lifestyle block since the 1950's.

The desktop study did not indicate any potential HAIL or other potentially contaminative activities having occurred on-site or on adjacent land.

No visual or olfactory evidence of soil contamination was noted during our site walkover.

Therefore, the qualitative contamination assessment suggests that it is highly unlikely that there will be an unacceptable risk to residential end-users, with no significant potential contamination sources identified.

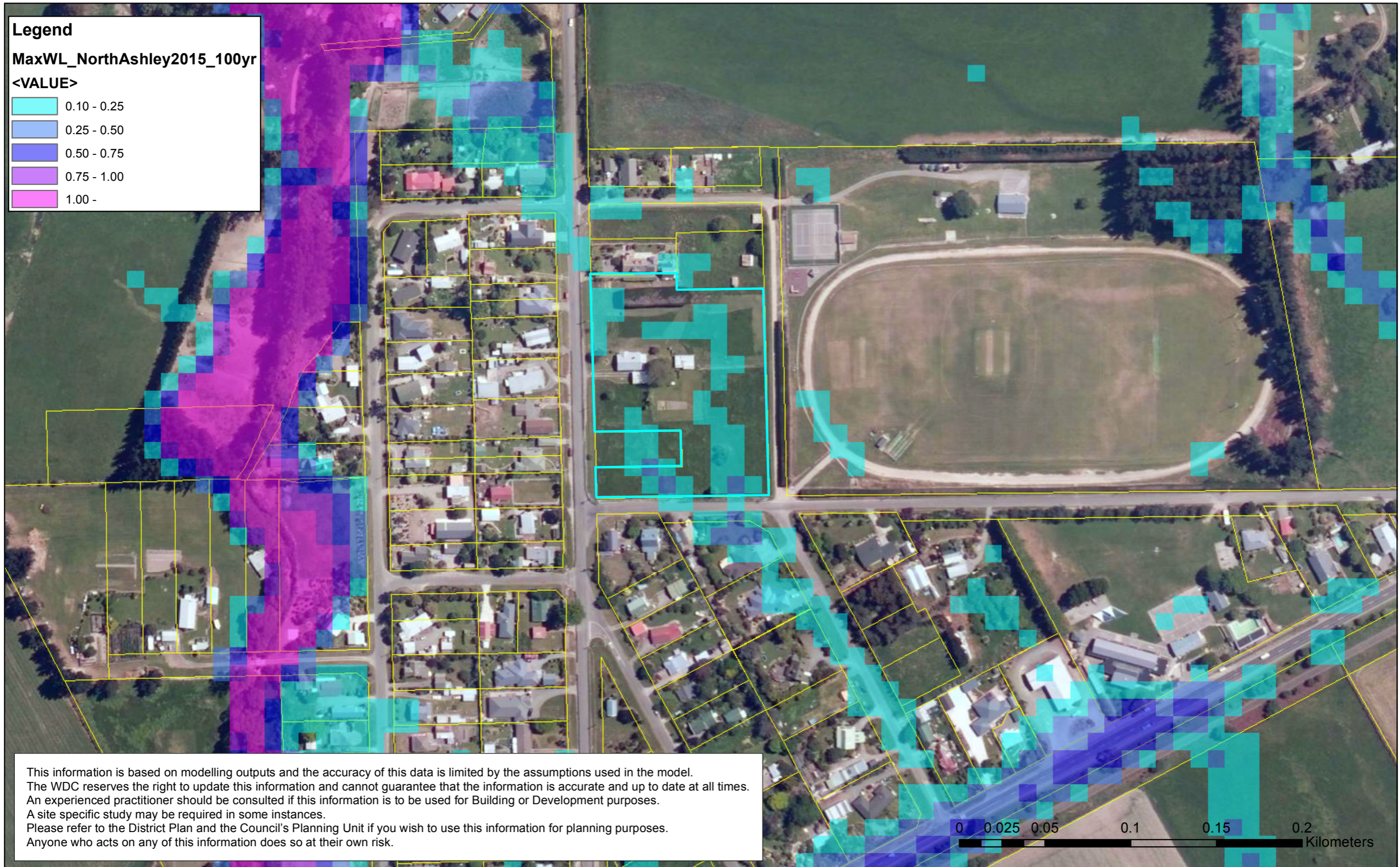
Based on the information referenced above, it is currently considered more likely than not that HAIL activities have not occurred on the proposed.

12.0 REFERENCES

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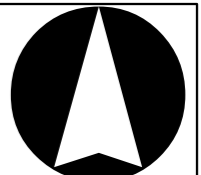
APPENDIX A

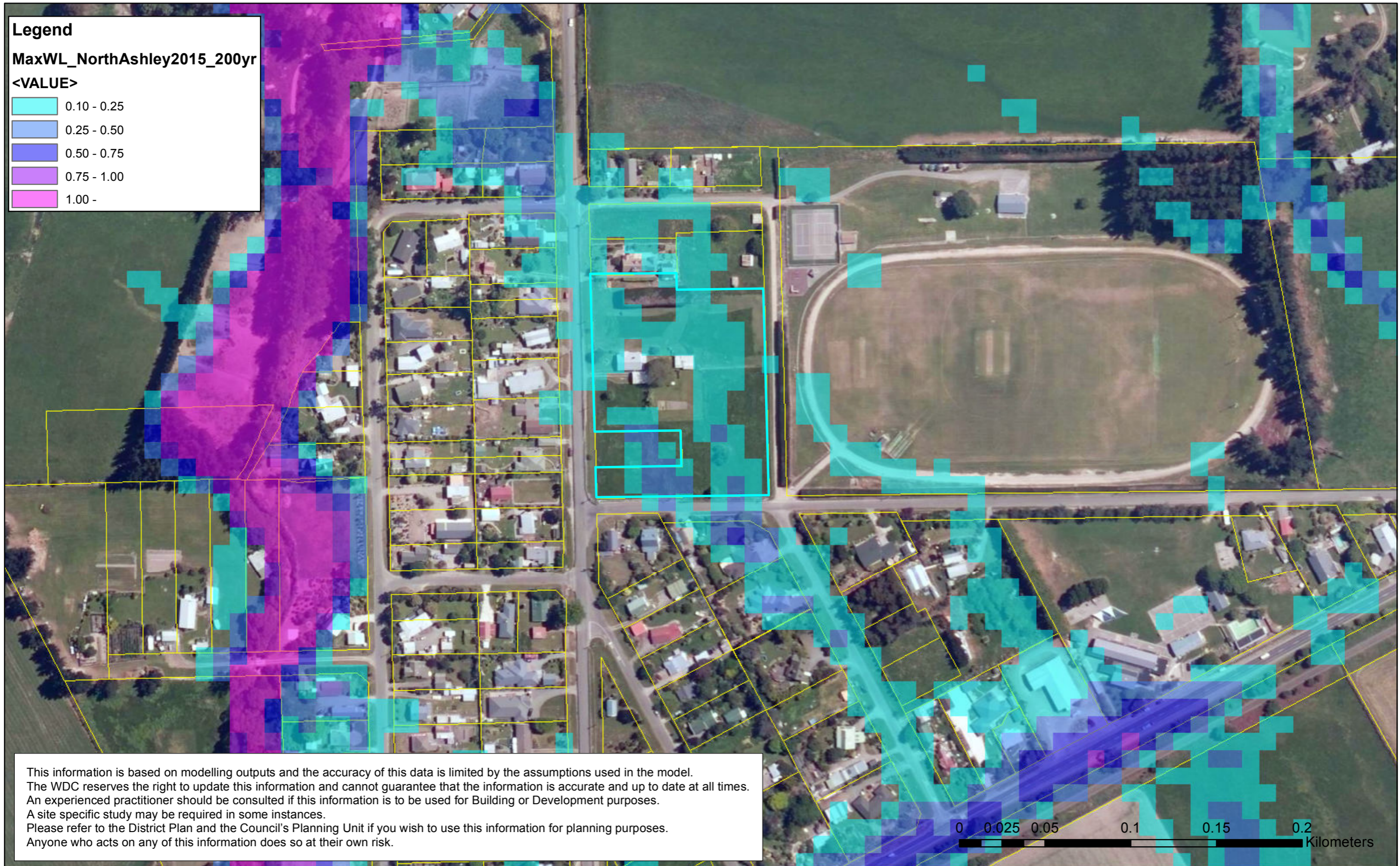
Waimakariri District Council Estimated Flood Depths



36 Pembertons Road
100 Year ARI Maximum Flood Depth
Data derived from 2015 WDC North Ashley Model

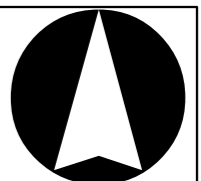
SCALE (A3)	1:2,000
DATE	15/04/2016






36 Pembertons Road
200 Year ARI Maximum Flood Depth
Data derived from 2015 WDC North Ashley Model

SCALE (A3)	1:2,000
DATE	15/04/2016




APPENDIX B


Test Pit Logs

		DRILLED: 19/04/2016 FILE: 46029		TEST PIT NO.: TP 101			
PROJECT: Geotechnical Investigation CLIENT: Taylor Homes Ltd				SHEET 1 OF 1			
ADDRESS: 36 Pembertons Road, Sefton				LOGGED BG	PROCESSED MW	CHECKED GL	
BH LOCATION: COORDS:		RL GROUND:		SHEAR VANE ID#: -			
DEPTH (m)	SOIL DESCRIPTION	Strength/density, colour, structure, minor, MAJOR, plasticity, moisture content, other comments	LEGEND	GROUND WATER	SHEAR STRENGTH (kPa) ○ Residual ● Peak	SOIL SENSITIVITY	SCALA BLOWS (PER 50 mm)
GL					40 80 120 160		5 10 15
1	TOPSOIL - Firm, grey & brown gravelly TOPSOIL, dry. Gravel is fine to coarse		TS				
	Loose to medium dense, grey/brown SILT, some gravel, some sand, dry. Sand and gravel are fine to coarse		TS				
	Medium dense to dense, fine to coarse GRAVEL, some sand, dry. Sand is fine to coarse, gravel is rounded to sub-rounded		TS				
2							
3	becomes sandy and moist						
	becomes wet						
4	becomes saturated						
End of Test Pit (Target depth reached)			EOH @ 4.40 m				
NOTES: Water ingress at 3.6m, ponding in the base of the hole. Sides of the TP stable. The southern wall of the TP comprised sandy silt to ~2.0m in the western half (diagram included below)							
ENGINEERING DESIGN CONSULTANTS LTD					CIVIL, STRUCTURAL, ENVIRONMENTAL, GEOTECHNICAL AND FIRE ENGINEERS		
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		DRILLED: 19/04/2016 FILE: 46029		TEST PIT NO.: TP 102			
PROJECT: Geotechnical Investigation CLIENT: Taylor Homes Ltd				SHEET 1 OF 1			
ADDRESS: 36 Pembertons Road, Sefton				LOGGED BG	PROCESSED MW	CHECKED GL	
BH LOCATION: COORDS:		RL GROUND:		SHEAR VANE ID#: -			
DEPTH (m)	SOIL DESCRIPTION	Strength/density, colour, structure, minor, MAJOR, plasticity, moisture content, other comments	LEGEND	GROUND WATER	SHEAR STRENGTH (kPa) ○ Residual ● Peak	SOIL SENSITIVITY	SCALA BLOWS (PER 50 mm)
GL					40 80 120 160		5 10 15
1	TOPSOIL - Firm to stiff, brown topsoil, some gravel, dry. Gravel is fine to coarse		TS				
	Stiff, grey/brown SILT, minor sand, dry. Sand is fine		X				
	Medium dense, grey & brown fine to coarse GRAVEL, some silt, some sand, dry. Sand is fine to coarse, gravel is rounded to subangular		◇				
2	becomes sandy, no silt, moist						
	occasional silty pockets, wet						
3	becomes saturated, some sand, no silty pockets						
				← IN			
End of Test Pit (Target depth reached)			EOH @ 3.90 m				
NOTES: Water ingress at 3.5m. Sides of the TP stable until 2.2m from where the sides became unstable.							
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		DRILLED: 19/04/2016 FILE: 46029		TEST PIT NO.: <h3 style="text-align: center;">TP 103</h3>						
		PROJECT: Geotechnical Investigation CLIENT: Taylor Homes Ltd		SHEET 1 OF 1						
ADDRESS: 36 Pembertons Road, Sefton		LOGGED BG		PROCESSED MW	CHECKED GL					
BH LOCATION: COORDS:		RL GROUND:		SHEAR VANE ID#: -						
DEPTH (m)	SOIL DESCRIPTION	Strength/density, colour, structure, minor, MAJOR, plasticity, moisture content, other comments	LEGEND	GROUND WATER	SHEAR STRENGTH (kPa)		SOIL SENSITIVITY	SCALA BLOWS (PER 50 mm)		
					Residual	Peak		5	10	15
GL										
1	TOPSOIL - Firm, brown gravelly topsoil, dry. Gravel is fine to coarse		TS							
	Stiff/very stiff, grey/brown mottled orange SILT, minor sand and clay, dry. Sand is fine		X							
	Medium dense to dense, grey/brown mottled orange silty fine to coarse GRAVEL, some sand, minor clay, dry. Sand is fine to coarse, gravel is sub-rounded to sub-angular		○							
	Medium dense, grey & brown sandy GRAVEL, trace silt, moist. Sand is fine to coarse, gravel is rounded to sub-angular		○							
3										
	Soft/firm, bluish grey mottled orange CLAY and SILT, some sand, wet. Sand is fine to medium		X							
4										
	End of Test Pit (Target depth reached)			EOH @ 4.50 m						
NOTES: Water ingress at 4.3m. Sides of TP were stable.										
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		DRILLED: 19/04/2016 FILE: 46029		TEST PIT NO.: TP 104						
PROJECT: Geotechnical Investigation CLIENT: Taylor Homes Ltd				SHEET 1 OF 1						
ADDRESS: 36 Pembertons Road, Sefton				LOGGED BG	PROCESSED MW	CHECKED GL				
BH LOCATION: COORDS:		RL GROUND:		SHEAR VANE ID#: -						
DEPTH (m)	SOIL DESCRIPTION	Strength/density, colour, structure, minor, MAJOR, plasticity, moisture content, other comments	LEGEND	GROUND WATER	SHEAR STRENGTH (kPa)		SOIL SENSITIVITY	SCALA BLOWS (PER 50 mm)		
					Residual	Peak		5	10	15
GL										
1	TOPSOIL - Firm, brown gravelly topsoil, trace sand, dry. Sand is fine, gravel is fine to coarse		TS							
	Firm/stiff, grey/brown SILT, some sand and gravel, dry. Sand is fine, gravel is fine to coarse		TS							
	Firm, grey/brown sandy SILT, occasional gravel seams, dry. Sand is fine, gravel is fine to coarse		TS							
2	Medium dense, grey/brown fine to coarse GRAVEL, some sand, moist. Sand is fine to coarse, gravel is sub-rounded to rounded									
	becomes wet and sandy									
3	becomes saturated									
	Soft/firm, bluish grey, sandy SILT, minor rootlets and trace peat, saturated. Sand is fine, peat is amorphous									
4										
End of Test Pit (Target depth reached)			EOH @ 4.30 m							
NOTES: No groundwater was encountered. Sides of the TP were stable.										
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		DRILLED: 19/04/2016 FILE: 46029		TEST PIT NO.: TP 105			
PROJECT: Geotechnical Investigation		CLIENT: Taylor Homes Ltd		SHEET 1 OF 1			
ADDRESS: 36 Pembertons Road, Sefton				LOGGED BG	PROCESSED MW	CHECKED GL	
BH LOCATION: COORDS:		RL GROUND:		SHEAR VANE ID#: -			
DEPTH (m)	SOIL DESCRIPTION	Strength/density, colour, structure, minor, MAJOR, plasticity, moisture content, other comments	LEGEND	GROUND WATER	SHEAR STRENGTH (kPa) ○ Residual ● Peak	SOIL SENSITIVITY	SCALA BLOWS (PER 50 mm)
GL					40 80 120 160		5 10 15
1	TOPSOIL - Firm, grey & brown gravelly topsoil, trace sand, dry. Sand is fine, gravel is fine to coarse		TS				
	Firm/stiff, grey/brown SILT, minor sand, dry. Sand is fine						
	Medium dense, grey/brown fine to coarse GRAVEL, minor sand, dry. Sand is fine to coarse, gravel is sub-rounded to rounded						
	Medium dense to dense, grey and brown fine to coarse SAND and GRAVEL, occasional silt, moist. Gravel is subrounded to subangular						
2	Firm, grey/brown mottled orange sandy SILT, wet. Sand is fine						
	Medium dense, grey and brown sandy fine to coarse GRAVEL, occasional silt pockets, wet. Sand is fine to coarse, gravel is sub-rounded to subangular						
3	becomes saturated			IN			
	End of Test Pit (Target depth reached)			EOH @ 3.90 m			
NOTES: Water ingress from 2.8m. Sides of the TP stable until 2.8m from where they became unstable.							
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APPENDIX C

Test Pit & Soakage Test Pit Photographs



Photo 1: View of the soil profile (west face) of TP 101. On the right hand side of the photo is a sand dominated soil while the left is a gravel dominated soil. Likely a historical flow path



Photo 2: View at the surface of TP 102



Photo 3: View of the soil profile in TP 102



Photo 4: View of the soil profile of TP 103



Photo 5: View of the soil profile of TP 104



Photo 6: View of the soil profile of TP 105



Photo 7: View at the surface of STP 103



Photo 8: View at the surface and soil profile of STP 102




Photo 9: View at the surface of STP 101




Photo 10: View at the surface of STP 103

APPENDIX D


Soakage Test Pit Logs

		DRILLED: 19/04/2016 FILE: 46029		TEST PIT NO.:			
				STP 101			
PROJECT: Geotechnical Investigation		CLIENT: Taylor Homes Ltd		LOGGED	PROCESSED	CHECKED	
ADDRESS: 36 Pembertons Road, Sefton				BG	MW	GL	
BH LOCATION: COORDS:		RL GROUND:		SHEAR VANE ID#: -			
DEPTH (m)	SOIL DESCRIPTION	Strength/density, colour, structure, minor, MAJOR, plasticity, moisture content, other comments	LEGEND	GROUND WATER	SHEAR STRENGTH (kPa) ○ Residual ● Peak	SOIL SENSITIVITY	SCALA BLOWS (PER 50 mm)
GL					40 80 120 160		5 10 15
	TOPSOIL - Firm, brown gravelly topsoil, minor sand, dry. Sand is fine		TS				
	Medium dense, grey/brown fine to coarse GRAVEL, some sand, trace silt, dry. Sand is fine						
1	Medium dense, grey/brown fine SAND, some silt, moist						
	some gravel, minor silt, occasional gravel seems. Gravel is fine to coarse						
2							
	Medium dense, brown and grey fine to coarse GRAVEL, some sand, occasional silt, moist. Sand is fine to coarse, gravel is sunrounded to subangular						
3	wet			IN			
End of Soakage Test Pit (Target depth reached)			EOH @ 3.60 m				
NOTES: Water ingress at 3.0m. Sides of TP stable until gravel at 2.6m at where the sides became slightly unstable.							
ENGINEERING DESIGN CONSULTANTS LTD				CIVIL, STRUCTURAL, ENVIRONMENTAL, GEOTECHNICAL AND FIRE ENGINEERS			
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		DRILLED: 19/04/2016 FILE: 46029		TEST PIT NO.: <h3 style="text-align: center;">STP 102</h3>			
PROJECT: Geotechnical Investigation CLIENT: Taylor Homes Ltd		SHEET 1 OF 1			LOGGED	PROCESSED	CHECKED
ADDRESS: 36 Pembertons Road, Sefton					BG	MW	GL
BH LOCATION: COORDS:		RL GROUND:		SHEAR VANE ID#: -			
DEPTH (m)	SOIL DESCRIPTION	Strength/density, colour, structure, minor, MAJOR, plasticity, moisture content, other comments	LEGEND	GROUND WATER	SHEAR STRENGTH (kPa) ○ Residual ● Peak	SOIL SENSITIVITY	SCALA BLOWS (PER 50 mm)
GL					40 80 120 160		5 10 15
	TOPSOIL - Firm, brown, topsoil, minor sand, some gravel, dry. Sand is fine, gravel is fine to coarse		TS				
	Medium dense, grey and orange silty GRAVEL, some sand, dry						
1	Medium, grey/brown, fine silty SAND, occasional gravel and rootlets, dry						
2	Loose to medium dense, grey and brown SAND and GRAVEL. Sand is fine to coarse, gravel is fine to medium						
End of Soakage Test Pit (Target depth reached)			EOH @ 2.20 m				
NOTES: No groundwater was encountered. Sides of TP stable.							
ENGINEERING DESIGN CONSULTANTS LTD				CIVIL, STRUCTURAL, ENVIRONMENTAL, GEOTECHNICAL AND FIRE ENGINEERS			
www.edc.co.nz team@edc.co.nz		1st FLOOR, UNIT 1, 100 BUSH ROAD, ALBANY, AUCKLAND PO BOX 118 ALBANY, AUCKLAND 0755		PH (09) 451 9044 FAX (09) 415 1280		1st FLOOR, UNIT 1, 100 BUSH ROAD, ALBANY, AUCKLAND PH (09) 451 9044	


Produced With GERO Core-GS

		DRILLED: 19/04/2016 FILE: 46029		TEST PIT NO.: STP 103			
PROJECT: Geotechnical Investigation CLIENT: Taylor Homes Ltd				SHEET 1 OF 1			
ADDRESS: 36 Pembertons Road, Sefton				LOGGED BG	PROCESSED MW	CHECKED GL	
BH LOCATION: COORDS:		RL GROUND:		SHEAR VANE ID#: -			
DEPTH (m)	SOIL DESCRIPTION	Strength/density, colour, structure, minor, MAJOR, plasticity, moisture content, other comments	LEGEND	GROUND WATER	SHEAR STRENGTH (kPa) ○ Residual ● Peak	SOIL SENSITIVITY	SCALA BLOWS (PER 50 mm)
GL					40 80 120 160		5 10 15
	TOPSOIL - Firm, brown very gravelly TOPSOIL, minor sand, dry. Gravel is fine to coarse, sand is fine		TS				
	Firm, grey/brown SILT, some sand, dry. Sand is fine						
1	becomes grey/brown mottled orange, occasional gravel, moist. Gravel is fine to medium						
2							
3	Soft/firm, bluish grey SILT, some clay, some gravel seams, minor sand, occasional wood, organic smell, wet. Sand is fine, gravel is fine to coarse						
End of Soakage Test Pit (Target depth reached)			EOH @ 3.70 m				
NOTES: Water ingress at base of hole (3.7m). Sides of TP stable.							
ENGINEERING DESIGN CONSULTANTS LTD				CIVIL, STRUCTURAL, ENVIRONMENTAL, GEOTECHNICAL AND FIRE ENGINEERS			
www.edc.co.nz team@edc.co.nz		1st FLOOR, UNIT 1, 100 BUSH ROAD, ALBANY, AUCKLAND PO BOX 118 ALBANY, AUCKLAND 0755		PH (09) 451 9044 FAX (09) 415 1280		1st FLOOR, UNIT 1, 100 BUSH ROAD, ALBANY, AUCKLAND	PH (09) 451 9044

Produced With GERO Core-GS

		DRILLED: 19/04/2016 FILE: 46029		TEST PIT NO.: STP 104			
PROJECT: Geotechnical Investigation		CLIENT: Taylor Homes Ltd		SHEET 1 OF 1			
ADDRESS: 36 Pembertons Road, Sefton				LOGGED BG	PROCESSED MW	CHECKED GL	
BH LOCATION: COORDS:		RL GROUND:		SHEAR VANE ID#: -			
DEPTH (m)	SOIL DESCRIPTION	Strength/density, colour, structure, minor, MAJOR, plasticity, moisture content, other comments	LEGEND	GROUND WATER	SHEAR STRENGTH (kPa)	SOIL SENSITIVITY	SCALA BLOWS (PER 50 mm)
GL					Residual Peak 40 80 120 160		5 10 15
1	TOPSOIL - Firm, gravelly topsoil, dry Soft to firm, grey and brown gravelly SILT, dry. Gravel is fine to coarse Medium dense, grey/brown fine to coarse GRAVEL, some sand, dry. Sand is fine to coarse, gravel is rounded to subangular		TS 				
End of Soakage Test Pit (Target depth reached)			EOH @ 1.90 m				
NOTES: No groundwater was encountered. Sides of TP stable.							
ENGINEERING DESIGN CONSULTANTS LTD					CIVIL, STRUCTURAL, ENVIRONMENTAL, GEOTECHNICAL AND FIRE ENGINEERS		
www.edc.co.nz team@edc.co.nz		1st FLOOR, UNIT 1, 100 BUSH ROAD, ALBANY, AUCKLAND PO BOX 118 ALBANY, AUCKLAND 0755		PH (09) 451 9044 FAX (09) 415 1280		1st FLOOR, UNIT 1, 100 BUSH ROAD, ALBANY, AUCKLAND PH (09) 451 9044	

Produced With GERO Core-GS

		DRILLED: 19/04/2016 FILE: 46029		TEST PIT NO.: <h3 style="text-align: center;">STP 105</h3>						
		PROJECT: Geotechnical Investigation CLIENT: Taylor Homes Ltd		SHEET 1 OF 1						
ADDRESS: 36 Pembertons Road, Sefton		LOGGED: BG		PROCESSED: MW	CHECKED: GL					
BH LOCATION: COORDS:		RL GROUND:		SHEAR VANE ID#: -						
DEPTH (m)	SOIL DESCRIPTION	Strength/density, colour, structure, minor, MAJOR, plasticity, moisture content, other comments	LEGEND	GROUND WATER	SHEAR STRENGTH (kPa)		SOIL SENSITIVITY	SCALA BLOWS (PER 50 mm)		
					Residual	Peak		5	10	15
GL	TOPSOIL - Firm, grey & brown gravelly topsoil, minor sand, occasional rootlets, dry. Sand is fine									
1	Stiff, grey/brown mottled orange SILT, minor sand and clay, dry. Sand is fine									
	trace sand, no clay									
	becomes moist, minor gravel									
2	some fine to coarse gravel and sand									
	Stiff, grey/brown mottled orange sandy SILT, some gravel, dry. Sand is fine to coarse, gravel is fine to coarse									
3	Medium dense, grey & brown fine to coarse GRAVEL and SAND, minor silt, wet									
	End of Soakage Test Pit (Target depth reached)			EOH @ 3.90 m						
NOTES: Some water ingress at the base of the hole (3.9m). Sides of TP stable.										
ENGINEERING DESIGN CONSULTANTS LTD					CIVIL, STRUCTURAL, ENVIRONMENTAL, GEOTECHNICAL AND FIRE ENGINEERS					
www.edc.co.nz team@edc.co.nz		1st FLOOR, UNIT 1, 100 BUSH ROAD, ALBANY, AUCKLAND PO BOX 118 ALBANY, AUCKLAND 0755		PH (09) 451 9044 FAX (09) 415 1280		1st FLOOR, UNIT 1, 100 BUSH ROAD, ALBANY, AUCKLAND		PH (09) 451 9044		

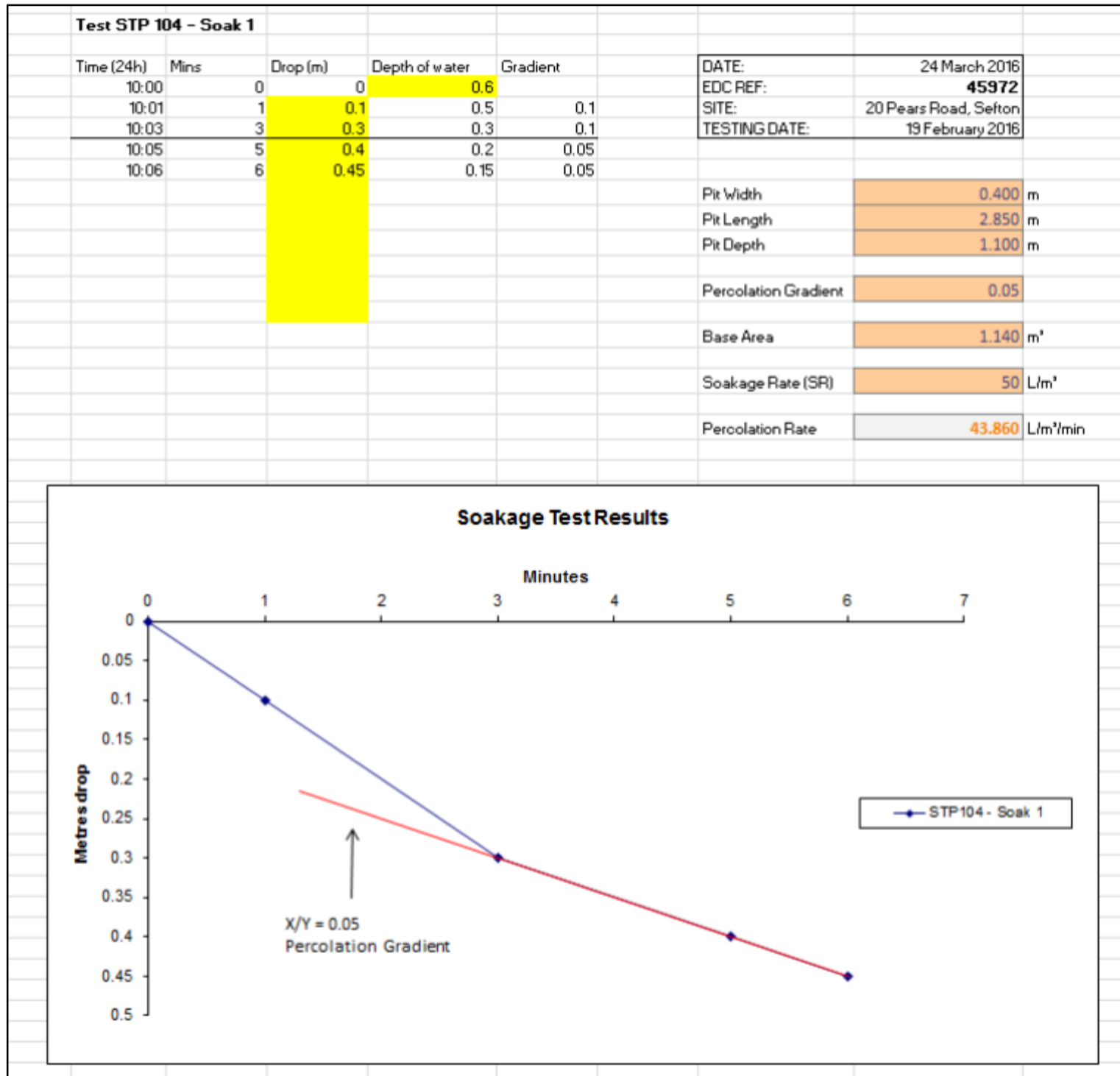
Produced With GEROCC Core-GS

APPENDIX E

Percolation Test Results

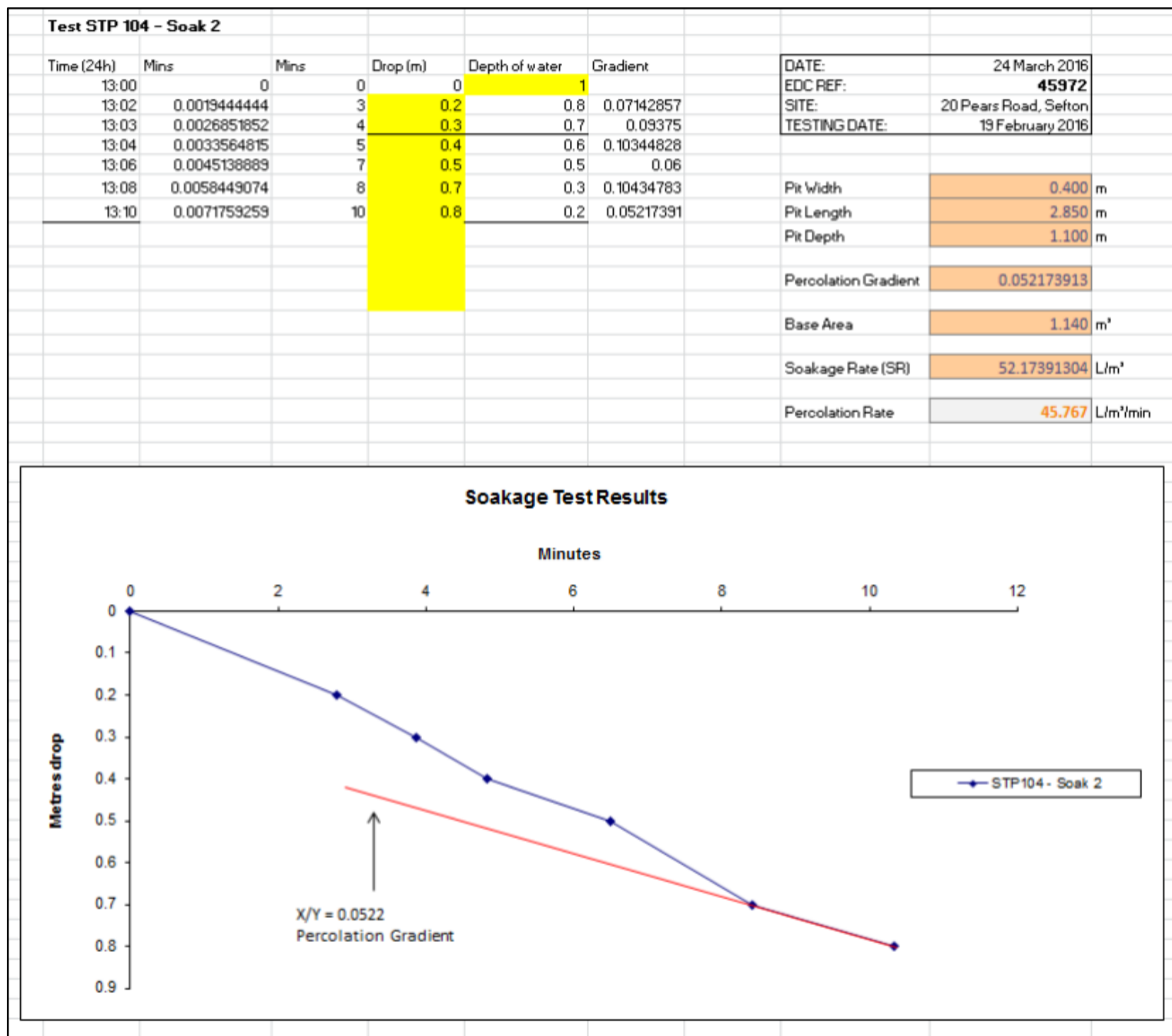
Percolation Test Results
36 Pembertons Road, Sefton

EDC File: 46029



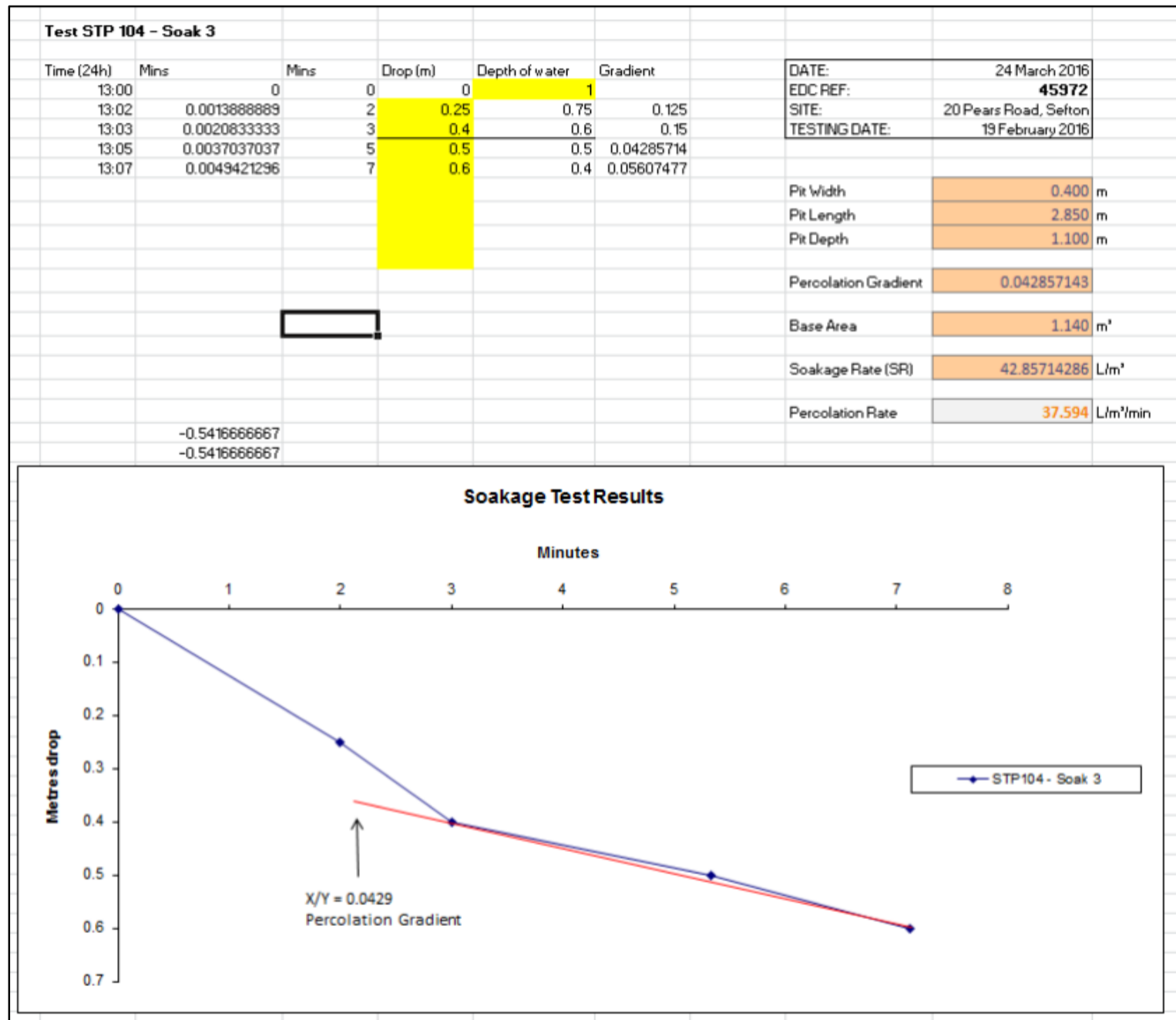
Percolation Test Results
36 Pembertons Road, Sefton

EDC File: 46029



Percolation Test Results
36 Pembertons Road, Sefton

EDC File: 46029



APPENDIX F

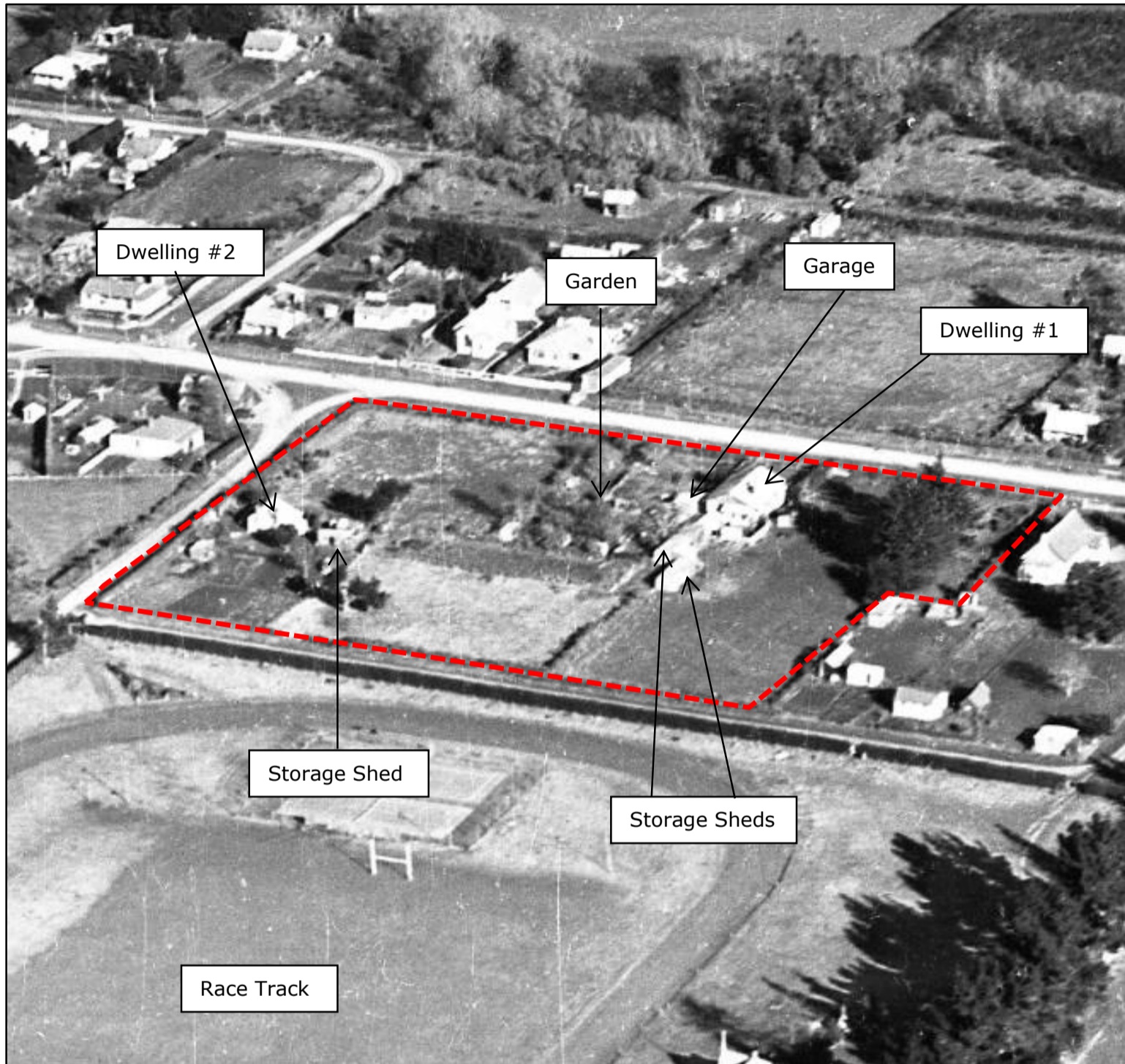
Historical Aerial Photographs



1942 Aerial Photograph (ECan)

Geotechnical & PSI Report
36 Pembertons Road, Sefton

EDC File: 46029



1950 Aerial Photograph (V. C. Browne)

Geotechnical & PSI Report
36 Pembertons Road, Sefton

EDC File: 46029



1980 Aerial Photograph (ECan)

Geotechnical & PSI Report
36 Pembertons Road, Sefton

EDC File: 46029



1994 Aerial Photograph (ECan)

Geotechnical & PSI Report
36 Pembertons Road, Sefton

EDC File: 46029



2004 Aerial Photograph (ECan)

Geotechnical & PSI Report
36 Pembertons Road, Sefton

EDC File: 46029



2011 Aerial Photograph (ECan)

Geotechnical & PSI Report
36 Pembertons Road, Sefton

EDC File: 46029



2015 Aerial Photograph (Google Earth)

APPENDIX G

Probability of Risk and Potential Severity Explanation

Contaminated Land Risk Assessment Matrix

The likelihood of an event can be classified on a four-point system using the following terms and definitions based on CIRIA C552:

- **Highly likely:** the event appears very likely in the short term and almost inevitable over the long term or there is evidence at the receptor of harm or pollution.
- **Likely:** it is probable that an event will occur or circumstances are such that the event is not inevitable, but possible in the short term and likely over the long term.
- **Low likelihood;** circumstances are possible under which an event could occur, but it is not certain even in the long term that an event would occur and it is less likely that in the short term.
- **Unlikely:** circumstances are such that it is improbable the event would occur even in the long term.

The severity can be classified using a similar system also based on CIRIA C552. The terms and definitions relating to severity are:

- **Severe:** Short term (acute) risk to human health likely to result in 'significant harm'. Short term risk of pollution of sensitive water resources. Catastrophic damage to buildings or property. Short-term risk to an ecosystem or organism forming part of that ecosystem.
- **Medium;** chronic damage to human health, pollution of sensitive water resources, significant change in an ecosystem or organism forming part of that ecosystem.
- **Mild:** Pollution of non-sensitive water resources. Minor damage to structures and services.
- **Minor:** Non-permanent human health effects easily prevented by use of personal protective clothing. Easily repairable damage to buildings, structures and services.

Once the likelihood of an event occurring and its severity have been classified, a risk category can be assigned from the table below:

		Consequences			
		Severe	Medium	Mild	Minor
Probability	Highly likely	Very high	high	Moderate	Moderate / low
	Likely	High	Moderate	Moderate / low	Low
	Low likelihood	Moderate	Moderate / low	Low	Very low
	Unlikely	Moderate / low	Low	Very low	Very low

Definitions of these risk categories are as shown below with an assessment of the further work that might be required:

- **Very high:** there is a high probability that severe harm could occur or there is evidence harm is currently happening. This risk, if realised, could result in substantial liability and urgent investigation and remediation are likely to be required;
- **High:** harm is likely to occur. Realisation of the risk is likely to present a substantial liability and urgent investigation is required and remedial works may be necessary in the short term and are likely over the long term;
- **Moderate:** it is possible that harm could arise, but it is unlikely that the harm would be severe and it is more likely that harm would be relatively mild. Investigation is normally required to clarify the risk and determine the liability. Some remedial works may be required in the longer term;
- **Low:** it is possible that harm could occur, but it is likely that if realised this harm would at worst normally be mild; and
- **Very Low:** there is a low possibility that harm could occur and if realised the harm is likely to be sever.



Building Code Clause(s).....**B1**.....

PRODUCER STATEMENT – PS1 – DESIGN

(Guidance notes on the use of this form are printed on page 2)

ISSUED BY: **CONSTRUCTURE LIMITED**

(Design Firm)

TO: **AARON FLYNN**

(Owner/Developer)

TO BE SUPPLIED TO: **WAIMAKARIRI DISTRICT COUNCIL**

(Building Consent Authority)

IN RESPECT OF: **NEW DWELLING**

(Description of Building Work)

WAIMAKARIRI DISTRICT COUNCIL
Plans and specifications APPROVED in accordance with the Building Act 2004, clause 49 and the Building Regulations 1992, Clause 3
BC210957 30/08/2021 michaelmo

AT: **LOT 4, 36 VAUGHAN STREET, SEFTON.**

(Address)

LOT

4

DP

SO

We have been engaged by the owner/developer referred to above to provide **Structural Engineering Design and Construction Monitoring of reinforced concrete waffle foundation slab, wall bracing (bracing elements D-1, D-2, D-3, D-4, D-5, F-1 & F-2) and ceiling bracing only** services in respect of the requirements of

(Extent of Engagement)

Clause(s) **B1 (STRUCTURE)**;.....of the Building Code for

All or Part only (as specified in the attachment to this statement), of the proposed building work.

The design carried out by us has been prepared in accordance with:

Compliance Documents issued by the Ministry of Business, Innovation & Employment **B1/VM1; B1/VM4;**

(verification method / acceptable solution) OR

Alternative solution as per the attached schedule... **Repairing & rebuilding houses affected by the Canterbury earthquake December 2012**

The proposed building work covered by this producer statement is described on the Constructure Limited drawings titled **Lot 4, 36 Vaughan Street, Sefton.** and numbered **as per title sheet 12818 dated 18 August 2021** together with the specification, and other documents set out in the schedule attached to this statement.

On behalf of the Design Firm, and subject to:

(i) Site verification of the following design assumptions **ground conditions as per Constructure Limited soil bearing investigation dated 05 August 2021.**

(ii) All proprietary products meeting their performance specification requirements;

I **believe on reasonable grounds** that a) the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the attached schedule, will comply with the relevant provisions of the Building Code and that b), the persons who have undertaken the design have the necessary competency to do so. I also recommend the following level of construction monitoring/observation:

CM1 CM2 CM3 CM4 CM5 (Engineering Categories) or as per agreement with owner/developer (Architectural)

I, **CORY JOHN BEDFORD** am:

(Name of Design Professional)

CPEng # **238134**

Reg Arch #.....

I am a Member of : Engineering NZ NZIA and hold the following qualifications: **BEng (Hons) CMEngNZ CPEng IntPE(NZ)**

The Design Firm issuing this statement holds a current policy of Professional Indemnity Insurance no less than \$200,000*.

The Design Firm is a member of ACENZ:

SIGNED BY **CJ BEDFORD** ON BEHALF OF **CONSTRUCTURE LIMITED**

(Design Firm)

Date **23/08/2021 – Rev1**

(signature)

Note: This statement shall only be relied upon by the Building Consent Authority named above. Liability under this statement accrues to the Design Firm only. The total maximum amount of damages payable arising from this statement and all other statements provided to the Building Consent Authority in relation to this building work, whether in contract, tort or otherwise (including negligence), is limited to the sum of \$200,000*.

This form is to accompany **Form 2 of the Building (Forms) Regulations 2004** for the application of a Building Consent.

GUIDANCE ON USE OF PRODUCER STATEMENTS

Producer statements were first introduced with the Building Act 1991. The producer statements were developed by a combined task committee consisting of members of the New Zealand Institute of Architects, Institution of Professional Engineers New Zealand, Association of Consulting Engineers New Zealand in consultation with the Building Officials Institute of New Zealand. The original suit of producer statements has been revised at the date of this form as a result of enactment of the Building Act (2004) by these organisations to ensure standard use within the industry.

The producer statement system is intended to provide Building Consent Authorities (BCAs) with reasonable grounds for the issue of a Building Consent or a Code Compliance Certificate, without having to duplicate design or construction checking undertaken by others.

PS1 Design Intended for use by a suitably qualified independent design professional in circumstances where the BCA accepts a producer statement for establishing reasonable grounds to issue a Building Consent;

PS2 Design Review Intended for use by a suitably qualified independent design professional where the BCA accepts an independent design professional's review as the basis for establishing reasonable grounds to issue a Building Consent;

PS3 Construction Forms commonly used as a certificate of completion of building work are Schedule 6 of NZS 3910:2013 or Schedules E1/E2 of NZIA's SCC 2011²

PS4 Construction Review Intended for use by a suitably qualified independent design professional who undertakes construction monitoring of the building works where the BCA requests a producer statement prior to issuing a Code Compliance Certificate.

This must be accompanied by a statement of completion of building work (Schedule 6).

The following guidelines are provided by ACENZ, IPENZ and NZIA to interpret the Producer Statement.

Competence of Design Professional

This statement is made by a Design Firm that has undertaken a contract of services for the services named, and is signed by a person authorised by that firm to verify the processes within the firm and competence of its designers.

A competent design professional will have a professional qualification and proven current competence through registration on a national competence based register, either as a Chartered Professional Engineer (CPEng) or a Registered Architect.

Membership of a professional body, such as the Institution of Professional Engineers New Zealand (IPENZ) or the New Zealand Institute of Architects (NZIA), provides additional assurance of the designer's standing within the profession. If the design firm is a member of the Association of Consulting Engineers New Zealand (ACENZ), this provides additional assurance about the standing of the firm.

Persons or firms meeting these criteria satisfy the term "suitably qualified independent design professional".

*Professional Indemnity Insurance

As part of membership requirements, ACENZ requires all member firms to hold Professional Indemnity Insurance to a minimum level.

The PI Insurance minimum stated on the front of this form reflects standard, small projects. If the parties deem this inappropriate for large projects the minimum may be up to \$500,000.

Professional Services during Construction Phase

There are several levels of service which a Design Firm may provide during the construction phase of a project (CM1-CM5 for Engineers³). The Building Consent Authority is encouraged to require that the service to be provided by the Design Firm is appropriate for the project concerned.

Requirement to provide Producer Statement PS4

Building Consent Authorities should ensure that the applicant is aware of any requirement for producer statements for the construction phase of building work at the time the building consent is issued as no design professional should be expected to provide a producer statement unless such a requirement forms part of the Design firm's engagement.

Attached Particulars

Attached particulars referred to in this producer statement refer to supplementary information appended to the producer statement.

Refer Also:

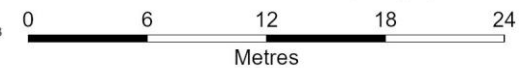
- 1 Conditions of Contract for Building & Civil Engineering Construction NZS 3910: 2013
- 2 NZIA Standard Conditions of Contract SCC 2011
- 3 Guideline on the Briefing & Engagement for Consulting Engineering Services (ACENZ/IPENZ 2004)
- 4 PN Guidelines on Producer Statements

www.acenz.org.nz
www.ipenz.org.nz
www.nzia.co.nz



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INCORPORATED





Notes on Flood Hazard Mapping

The attached plan shows the result of a flood mapping exercise that has been carried out by the Waimakariri District Council.

There are a number of notes that need to be considered when using this information.

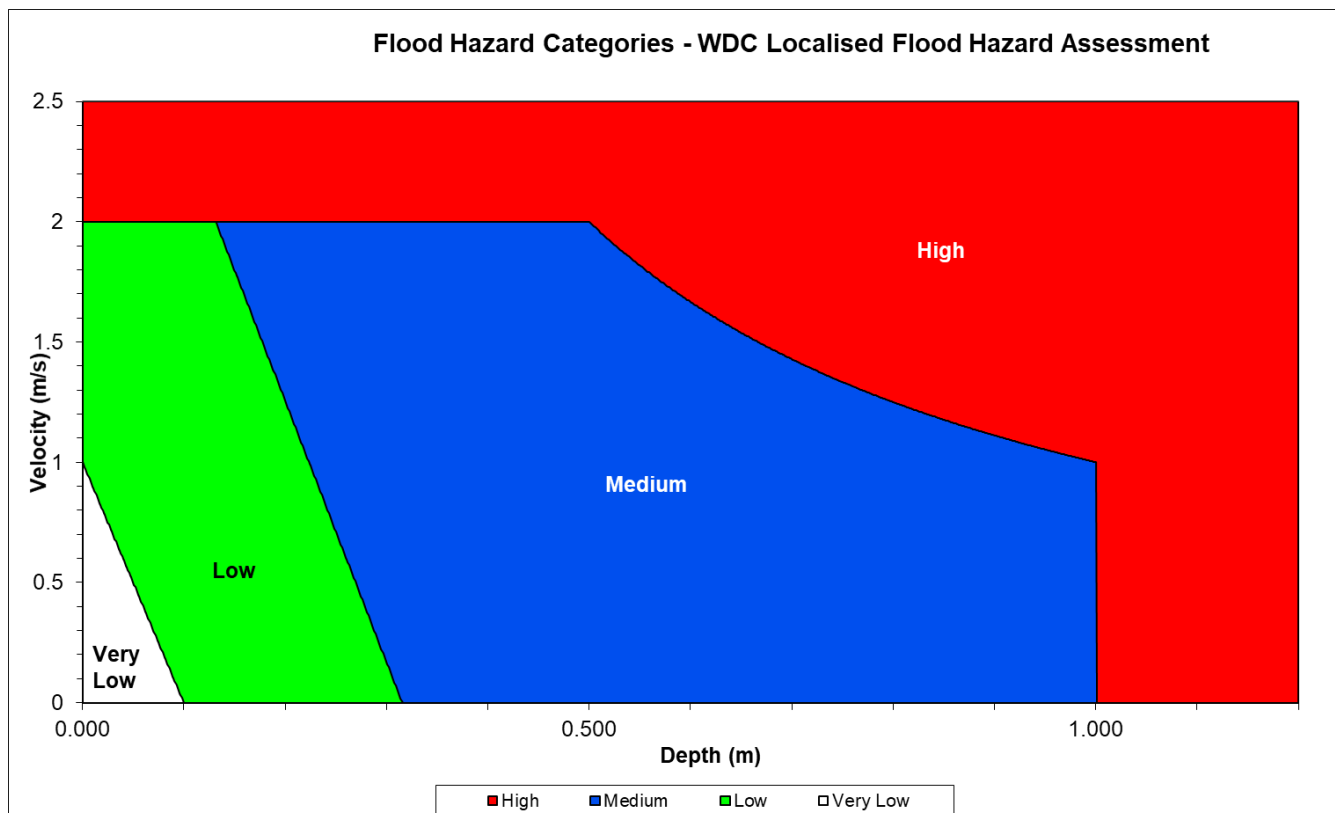
1. Annual Exceedence Probability.

The rainfall used in this mapping is the 0.5% Annual Exceedence Probability (AEP) rainstorm. This is based on there being a 0.5% probability in any one year that there will be a rainstorm of this severity. This is sometimes referred to as the 1 in 200 year storm.

Note that if a property has flood hazard shown in the 0.5% AEP it will likely be subject to flooding in more frequent events.

2. Flood Hazard Categories.

The flood hazard categories are based on both the depth and velocity of the flood water as shown on the following diagram.



3. Flood Modelling

This flood modelling shows the combined effects of:

- Localised Flooding, flooding in response to rainfall
- Ashley Breakout, flooding in response to a breakout event on the Ashley River
- Coastal Inundation, flooding in response to storm surge, sea level rise and river flows

Detailed information on the flood models including the technical modelling reports are available on the Council's Natural Hazards Portal on the Council website.

4. Generalised Flooding

This flood modelling is for generalised, area wide, flooding risk mapping only. It does not take into account all site specific flood risks that may occur on individual properties. There may be areas of ponding or overland flow that occur but are not shown on this flood modelling. This may be due to local topographical characteristics or due to the location and levels of building floors in relation to the surrounding ground. This flood mapping has been carried out to help identify areas that may be at an increased risk of flooding, it is not an accurate prediction of flood levels.

5. Land Changes

The results from this exercise will be less accurate in areas where major development or significant changes in the shape of the land has occurred since 2005. This is particularly important to note in new subdivision areas where new roads have been constructed or filling has occurred. The eastern area of the district including Rangiora, Kaiapoi and Woodend uses ground information updated in 2014. In some cases more recent subdivision areas have been included where information was available.

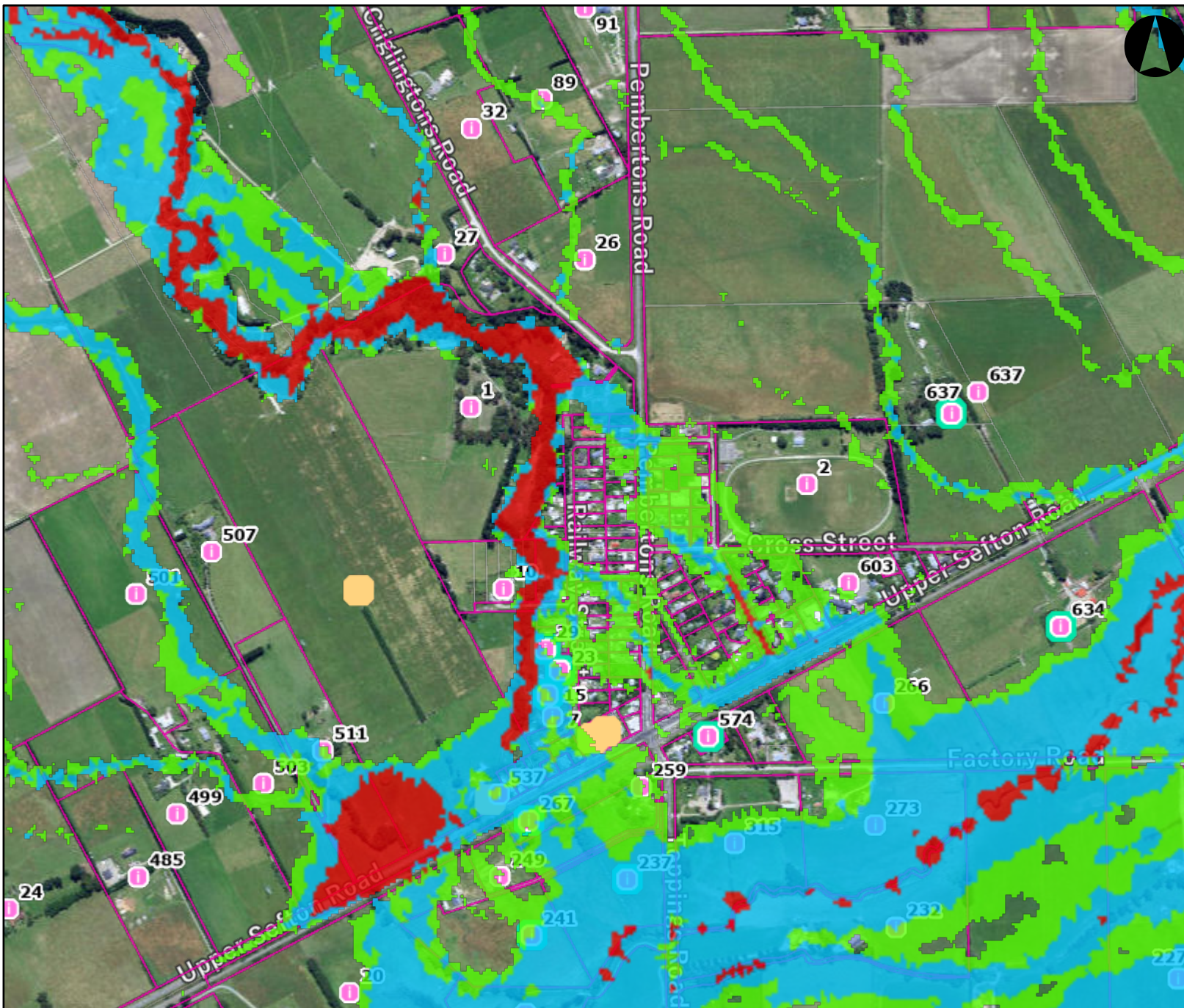
6. District Plan

The attached Flood Map, published in 2020, is based on recent flood modelling work. This flood mapping has been formally adopted by Council and included in the Proposed Waimakariri District Plan.

7. Further Information

To find further information on flooding and flood hazard please refer to the following links:

- <https://www.waimakariri.govt.nz/environment/natural-hazards>
- <https://www.ecan.govt.nz/your-region/your-environment/natural-hazards/floods/>
- <https://www.cdemcanterbury.govt.nz/hazards/floods/>
- <https://niwa.co.nz/natural-hazards/hazards/floods>



Legend
 M2301859 08/12/2023 Page 161
 All Flooding Hazard 200 year

- 0
- 1
- Low
- Medium
- High
- Properties > 1 ha
- Related Address
- Future Address

- Property Boundaries with Attributes
- Current Property
 - Deposited Land Parcels

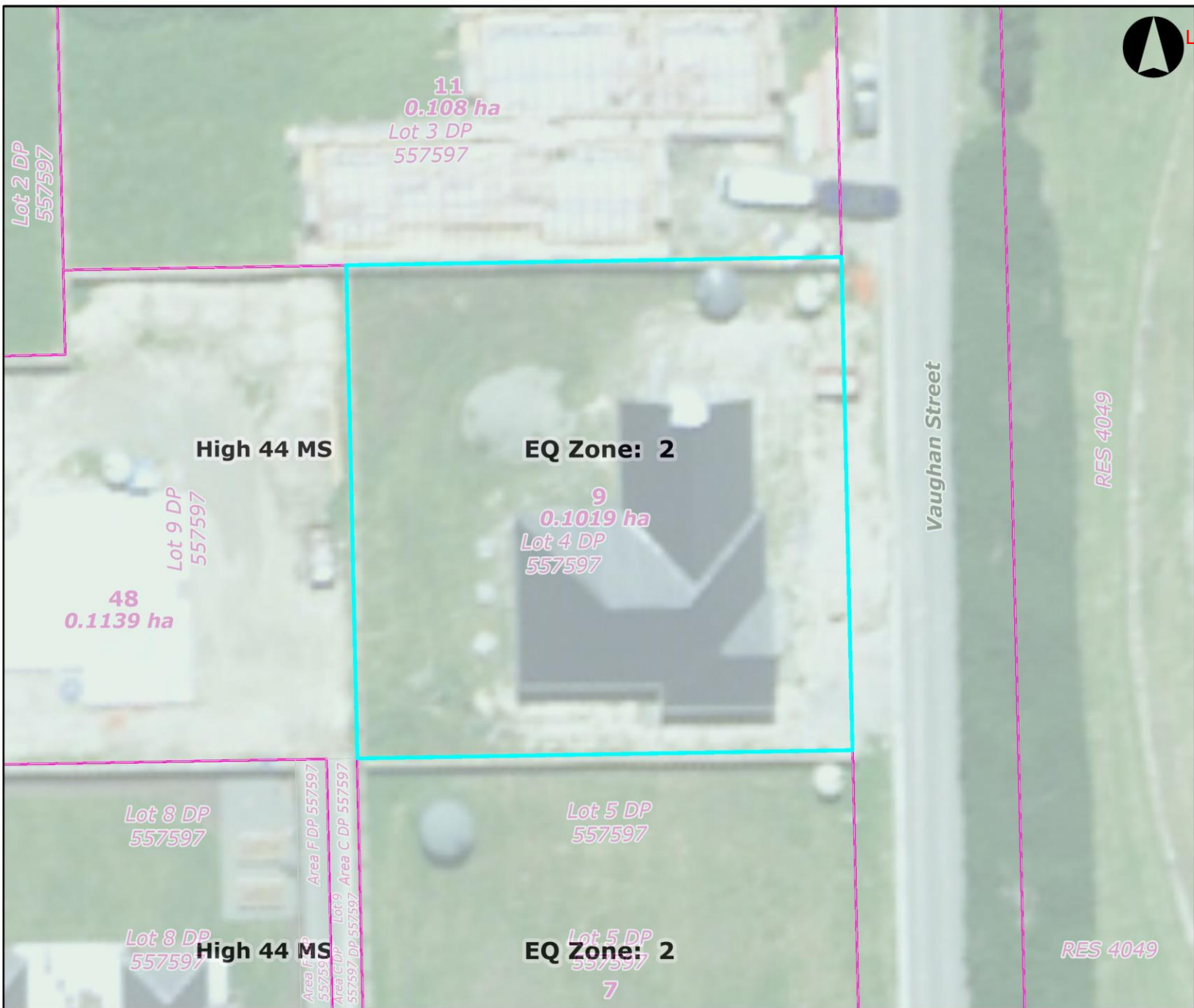
diana.willets@wmk.govt.nz
 Waimakariri District Council
 Date: 6/12/2023
 Scale 1:9,028 Original page size: A4
 0 140 280 420 560
 Metres

Disclaimer:
 Land and property boundary information is sourced from and derived using Land Information New Zealand (LINZ) Land Parcels licensed for re-use by LINZ under the Creative Commons Attribution 4.0 International licence. The Waimakariri District Council does not give and expressly disclaims any warranty as to the accuracy or completeness of this information or its fitness for any purpose. Information on this map may not be used for legal disputes and should be independently verified before taking any action reliant upon it.

Credits:
 Waimakariri District Council, Land Information New Zealand, 2023 Urban Aerial Imagery, 2023 Birch Hill Cemetery UAV Imagery, 2022 Rural Aerial Imagery, 2022 Cust Anglican Cemetery UAV Imagery, Waimakariri District Council



- Legend**
- Land Parcel
 - Property Boundary
 - NZS3604:2011
 - High 44 MS
 - NZS3604:2011
 - ZONE**
 - 2

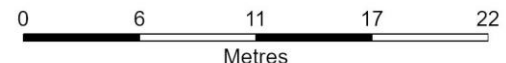


Author: Diana Willetts

Date: 6/12/2023

Scale 1:358

Original page size: A4



Disclaimer:

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Credits:

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This property is eligible for the Council's kerbside collection service. This includes collection of recycling and an optional organics and rubbish wheelie bin service. Information on these services is available at:

<https://www.waimakariri.govt.nz/services/recycling-rubbish-and-organics>

New property owners may swap the size of bins allocated to their property within 3 months of taking possession, without paying a bin delivery/removal fee, by telephoning the Customer Services Team on 0800 965 468.



Waimakariri District Council
215 High Street
Private Bag 1005
Rangiora 7440, New Zealand
Phone 0800 965 468

Our Reference: CUS-03-04/190626090676

1 July 2019

Kerbside Bins – Information for New property Owners

The Council's optional kerbside rubbish and organics collection service was introduced on 1 July 2019 to complement the existing wheelie bin recycling collection.

If there are rubbish and/or organics bins at your property, your annual rates will include the rubbish and/or organics service. These rates are set for the financial year and vary according to the size of the bin supplied.

Organics (green lid) and Rubbish (red lid) bins at the property

As a new property owner, you have the opportunity to join the wheelie bin rubbish and organics collection. Also for a limited time, you may change the bin selections made by the previous owner of your property.

If you have rubbish and/or organics wheelie bins at your property and these are not suitable for your use, you are able to change the size of the bin or bins within 3 months of the sale settlement date without paying a delivery/removal fee or the cost of additional capacity. You may also cancel the service.

Contact Customer Services to arrange a swap of bin sizes or to send the bins back. *Please remember that there is no adjustment to your rates until next 1 July, and if your request is received more than 3 months after settlement, a fee for additional capacity will be payable if you are upsizing the bin, and a delivery/removal fee will be payable per set of bins.*

Joining the Organics and Rubbish bin collection

To join the optional services, contact Customer Services to request the bin or bins you require. You will be asked to pay a proportion of the cost of the collection service for the remainder of the rating year, and a bin delivery fee per set of bins. The fees will need to be paid before the bins are ordered. The cost of the collection will be added to your rates from the start of the next rating year.

Ohoka/Swannanoa/Mandeville area have Recycling and Rubbish bin collections only

As part of the new kerbside service a wheelie bin rubbish collection service is available to those properties in this area that currently have a recycling wheelie bin. Please let us know if you would like to have a fortnightly wheelie bin rubbish collection. The rubbish **bag and organics** collection is not available here. You can see if your property is inside the collection area by using our interactive map on waimakariri.govt.nz/rethinkrubbish.



More about the Service

The services offered are outlined on our website, together with costs, collection day calendars and information on what is accepted for collection in each bin.

Sign up for alerts and collection day reminders using our new website tool feature – waimakariri.govt.nz/rethinkrubbish

You can make your choice by talking to Customer Services at any Council Service Centre, sending an email to office@wmk.govt.nz or phone us on 0800 965 468

Landlords

As the ratepayer, you are the only person who can request the Organics and Rubbish bin kerbside collection services as the chosen services will directly affect your rates. Your tenants may wish to talk to you about their preferred choice and may be willing to pay extra for a bin service.

Kerbside Recycling

If you decide not to choose any of the rubbish or organics wheelie bin options, you will still have a recycling wheelie bin allocated to your property. Collection is fortnightly, and this service is funded by the annual Kerbside Collection Rate. *You may also swap the size of this bin for free within 3 months of your property sale settlement. Outside this time a delivery/removal fee will apply.*

If your property is a new build you may need to order your recycling wheelie bin from Customer Services.

Find out more...

Have a look at the information on our website, then if you have any questions, please call us on 0800 965 468.

Yours faithfully

Customer Services