

Land Information Memorandum

Application

Colin M Cromie
 14 Hayfield Terrace
 RD 1
 RANGIORA 7471

No.	LM2601166
Application date	22 June 2026
Issue date	25 June 2026

Property

Valuation No.	2158021211
Location	14 Hayfield Terrace SPRINGBANK
Legal description	Lot 10 DP 460298
Owner	Colin Mervyn Cromie, Johanna Elisabeth Cromie, Richard Jan Bruin
Area (hectares)	4.137400

Rates

Rating Valuation

Land	\$580,000
Capital Value	\$1,430,000
Improvements	\$850,000
Date of Last Revaluation	1 June 2025

Current Rates Year 1st July 2025 to 30th June 2026

Annual Rates	\$3,652.24
Current Instalment	\$912.94
Current Year – Outstanding Rates	\$0.00
Arrears for Previous Years	\$0.00
Next Instalment Due	20 August 2026

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 Council has undertaken a review of the Operative District Plan and through this process it has developed a New District Plan ('The Partially Operative District Plan') which provides clear objectives, policies and rules on how people use, subdivide and develop land, what and where they can build and what kind of activities they can undertake. The Plan also controls any adverse effects an activity could have on the neighbourhood and protects the uniqueness of our district by looking after our heritage, cultural values, outstanding landscapes and coastal environment. It also incorporates any changes in legislation, national and regional policy statements, environmental standards and other regulations.

The period for lodging appeals against decisions on the Partially Operative District Plan has closed and the Council released the Appeals Version of the Partially Operative District Plan. Many provisions in Partially Operative District Plan – Appeals Version are now beyond challenge and are operative/treated as operative.

The Operative District Plan (2005) now only applies where a relevant provision in the Partially Operative District Plan remains subject to an appeal.

For more information, please refer to the links below:

<https://www.waimakariri.govt.nz/council/district-development/district-plan>

Please note that if you lodge a building consent application, the Council will assess your project against the District Plan rules that apply at the time. If your proposed activity doesn't need a building consent, please contact the Council's Duty Planner by email

duty.planner@wmk.govt.nz to find out if any new rules apply to your proposal or site.

Link to find out the zoning and rules in the 'Partially Operative District Plan- Appeals Version (2025)':

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

Link to find out the zoning and rules in the District Plan (Operative 2005):

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

25/10/2012 RESOURCE CONSENT RC125093 : 25 LOT SUBDIVISION, copy attached. A Certificate of Conditions and Consent Notices issued 26/02/13, copies attached.

11/11/2013 RESOURCE CONSENT RC135392 : BOUNDARY ADJUSTMENT BETWEEN LOT 19 & LOT 10 TO RECTIFY A DRAFTING ERROR, copy attached. A certificate of conditions was issued on 25/11/13, copy attached.

No other information located

Land Use on Contiguous Properties

No information located

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Building

13/09/2013	<u>BUILDING CONSENT BC131491</u>	ERECT A SHED. A Code of Compliance Certificate was issued 26/11/2013, copy attached.
28/11/2013	<u>BUILDING CONSENT BC131744</u>	ERECT A DWELLING WITH ATTACHED GARAGE, RINNAI COMPACT 2 INBUILT GAS FIRE AND AN OASIS 2000 SEPTIC TANK SYSTEM. A Code of Compliance Certificate was issued 11/04/2014, 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, foundation & drainage plans and elevations are attached.

Sewer and Water

Sewer No Council service available.

Field Service Report of 17/09/25 from Oasis Clearwater, copy attached.

Water No Council supply available.

Council records indicate a well numbered BW23/0095 is located on this property. Further information regarding this well is available at

<https://www.ecan.govt.nz/data/well-search/>

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 build over 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.

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://www.waimakariri.govt.nz/consents-and-licences/building-consents-and-information/swimming-pools-and-barriers/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/consents-and-licences/building-consents-and-information/swimming-pools-and-barriers> 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

Vehicle Crossing VC130326 : Passed all inspections.

The installation of vehicle crossings is the responsibility of the owner of the property to be accessed; vehicle crossings may not be constructed on 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/0012/141330/20250721-QD-RDG-Information-002-Vehicle-Crossing-Information-Pack.PDF

Special Land Features

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

Licences/Environmental Health

No Information located

Natural Hazards

The Waimakariri District Council supplies the following information in accordance with Section 44B of the Local Government Official Information and Meetings Act 1987. Section 44B: inserted, on 1 July 2025, by [section 8](#) of the Local Government Official Information and Meetings Amendment Act 2023 (2023 No 41).

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:

[Waimakariri District Natural Hazards Interactive Viewer \(arcgis.com\)](https://waimakariri.govt.nz/natural-hazards-interactive-viewer)

This Land Information Memorandum includes natural hazard information deemed by Waimakariri District Council and Environment Canterbury to be the most up-to-date, useful, and relevant, and is provided in accordance with the Local Government (Natural Hazard Information in Land Information Memoranda) Regulations 2025. All due care has been taken to ensure current information required to be provided under the regulations is presented below.

Environment Canterbury may hold superseded or less reliable natural hazards information relating to the land that has not been included in this Land Information Memorandum. Please contact Environment Canterbury if you would like to enquire about this information.

Coastal Hazards - No additional information located.

Earthquakes

Comprehensive district-scale earthquake fault mapping commissioned by Environment Canterbury has not identified a fault deformation hazard on the property. However, it is possible there are some faults in Canterbury that are yet to be identified because they are not visible at the ground surface. More information on fault deformation is available on Environment Canterbury's fault deformation map at

<https://mapviewer.canterburymaps.govt.nz/?webmap=b5f859bd18ee4912828cb092bef6c449>.

Technical report information:

Title: General distribution and characteristics of active faults and folds in the Waimakariri District, North Canterbury

Date: July 2013

Author: D Barrell, J Begg (GNS Science)

Commissioned by: Environment Canterbury

Purpose of report: To map and describe known and suspected faults within Waimakariri District to indicate where fault deformation may occur in future. For use in land use policy and planning, infrastructure planning, emergency management planning and community education.

Study area: Waimakariri District

Accessible at: <https://www.ecan.govt.nz/document/download?uri=1811999>

Areas where there was evidence of liquefaction were mapped following the 2010/11 Canterbury earthquakes by Tonkin & Taylor for the Earthquake Commission (urban areas) and by a group of researchers for Environment Canterbury (rural, commercial and industrial areas). These are available on Environment Canterbury's liquefaction map at

<https://storymaps.arcgis.com/stories/aa738ffd2e6d42c4b94eb183e218ed97>.

Technical report information:

Title: Review of liquefaction hazard information in eastern Canterbury, including Christchurch City and parts of Selwyn, Waimakariri and Hurunui Districts

Date: December 2012

Author: H Brackley (compiler)

Commissioned by: Environment Canterbury

Purpose of report: To collate liquefaction occurrence during the 2010/11 Canterbury earthquakes, and to determine liquefaction vulnerability. For use in land use planning, subdivision and building consenting.

Study area: Coastal Canterbury from the Waipara River mouth to the Rakaia River mouth, including Banks Peninsula, and inland to Rangiora, Aylesbury, Selwyn and Southbridge.

Accessible at: <https://www.ecan.govt.nz/document/download?uri=1702192>.

Flooding -

Photographs showing the property during or following past flood events may be available. Flood photographs are available on Environment Canterbury's flood imagery register at

<https://apps.canterburymaps.govt.nz/FIR>.

You can request a new site-specific flood hazard assessment for the property from Environment Canterbury at: <https://www.ecan.govt.nz/do-it-online/property-information/flood-hazard-assessments>

Landslides

An earthquake hazard assessment for infrastructure commissioned by Environment Canterbury in 2009 included a regional-scale map of earthquake-induced landslide susceptibility and locations of known rock avalanches. This report can be downloaded from the Environment Canterbury website at <https://www.ecan.govt.nz/document/download?uri=1182107>.

Technical report information:

Title: Earthquake hazard assessment for Waimakariri District

Date: September 2009

Author: M Yetton and I McCahon (Geotech Consulting Ltd)

Commissioned by: Environment Canterbury

Purpose of report: To assess earthquake hazards and their potential impacts on engineering lifelines (infrastructure) in Waimakariri District. For use in infrastructure and emergency management planning.

Study area: Waimakariri District

Accessible at: <https://www.ecan.govt.nz/document/download?uri=1182107>

Subsidence - No additional information located.

Tsunamis

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>

Tsunami modelling commissioned by Environment Canterbury shows the property is not affected by flooding in any modelled tsunami scenarios. The modelling considers a range of tsunami sources and events with an average recurrence interval of up to 2500 years. More information is available on Environment Canterbury's tsunami modelling results webapp at <https://experience.arcgis.com/experience/1f01c50c3df84a9b8cd41a0353d24785>.

Technical report information:

Title: Multiple scenario tsunami modelling for northern Pegasus Bay and northern Banks Peninsula bays

Date: November 2020

Author: J Roger, C Mueller, X Wang (GNS Science)

Commissioned by: Environment Canterbury

Purpose of report: To model inundation from many different local, regional and distant source tsunamis for average recurrence intervals up to 2500 years. For use in emergency management planning, including creating tsunami evacuation zones.

Study area: Northern Banks Peninsula bays from Godley Head to Le Bons Bay, and northern Pegasus Bay from the Waimakariri River mouth to the Waipara River mouth

Accessible at: <https://www.ecan.govt.nz/document/download?uri=3996252>

Volcanic and Geothermal Hazards - No additional information located.

Wind - No additional information located.

Other - No additional information located.

There are national datasets that could hold relevant information for the property that are not part of Council information. These include:

Natural Hazard Commission (formerly Earthquake Commission) claims at

<https://www.naturalhazardsportal.govt.nz/s/claims-map>

The New Zealand National Seismic Hazard Model (earthquake shaking) at

<https://nshm.gns.cri.nz/HazardMaps>

Earth Science New Zealand's Landslide Database at <https://data.gns.cri.nz/landslides/>

Earth Science New Zealand's National Flood Tool at

<https://niwa.maps.arcgis.com/apps/dashboards/8c1db2b8e37841f29a57a38675388897>

Network Utility Operators

Contact Mainpower for power availability.

Contact Chorus for phone availability.

Other Information

Lot 10 Test Pit & Penetrometer Report from BLS Consulting, copy attached.

Subdivision Geotechnical Report from Eliot Sinclair, copy attached.

Subdivision Flood Assessment Report information from Eliot Sinclair, copy attached.

Subdivision Contamination Report information from Envirochem, 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/>

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: 25 June 2026

Signed on Behalf of Council

TONY MEIER – PROPERTY INFORMATION OFFICER

RC125093/121025074658

21580-212-00

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

The applicants sought a resource consent to create 25 rural allotments each having a minimum area of 4 ha, and Road to Vest (Lot 26). Four sets of reciprocal right of way easements are to be created to provide legal access to those allotments that are not required to have direct access onto Oxford Road.

Each of the new allotments will be provided with an independent well for their domestic water supply. An existing public water race passes through the subject property but is not reliant for a water supply.

The existing dwelling will be contained within the proposed Lot 25 with some remaining accessory buildings remaining on Lot 5.

DECISION

The District Plan Manager, on the 25th October 2012, approved:

THAT pursuant to Sections 104C of the Resource Management Act 1991, consent be granted to subdivide Lot 1 LT 453032 (Lot 1 Subdivision consent RC125060) into Lots 1 – 25 (minimum of 4.0 ha) and Lot 26 (Road to Vest) at 1199 Oxford Road, Springbank, as a discretionary activity (restricted) subject to the following conditions which are imposed under Section 108 of the Act:

1. The activity shall be carried out in accordance with the attached approved application plan.
2. **Easements**
 - 2.1 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.
 - 2.2 Specific easements shall be granted and reserved over the water race that

traverses across the subject property

3. **Water Supply**

- 3.1 The subdivider shall provide an adequate domestic water supply to Lots 1 - 25 inclusive providing a minimum of 2.0 cubic metres per day.

- 3.2 Were new wells are installed on proposed Lots 1 - 24 inclusive, the subdivider shall prove that the water can be readily made potable by recognised and practical treatment methods to the satisfaction of the Council. Tests carried out by a IANZ registered laboratory shall demonstrate whether the chemical and bacteriological water quality complies with the guideline values set out in the publication, 'Drinking Water Standards for New Zealand 2005'. The subdivider shall specify any correction, which may be required to achieve compliance. The tests shall be accompanied by the results of well pump tests, which demonstrate, to the satisfaction of Council, that the quantity of water available from these new wells can adequately supply the water requirements of the lot.

Samples from the water source shall be taken by the laboratory carrying out the analysis. (Such treatment will subsequently be required to be installed by the landowner before a building consent for a dwelling is finalised and the dwelling occupied).

- 3.3 The existing well on proposed Lot 25 shall be confirmed as a potable water supply. Tests shall be carried out by an IANZ accredited laboratory and demonstrate whether the chemical and bacteriological water quality complies with the guidelines values set out in the publication, "Drinking Water Standards for New Zealand 2005 shall be submitted to the Council. The subdivider shall specify and install any correction, which is required to achieve compliance. The tests shall be accompanied by the results of well pump tests, which demonstrate, to the satisfaction of Council, that the quantity of water available from the well can adequately supply the water requirements of the lots.

Samples from the water source shall be taken by the laboratory carrying out the analysis. (Such treatment will subsequently be required to be installed by the subdivider prior to the issue of a Section 224(c) Conditions Certificate for the subdivision.).

- 3.4 The top 0.5 m of all wells, including existing wells that will provide a secure domestic water supply shall be concreted. A concrete pad of at least 0.3-metre radius and 0.1 metre thickness shall be constructed around any bore head used to provide the domestic water for proposed Lots 1 – 25 inclusive. The concrete pad is to be constructed at ground or at pump-house floor level to prevent leakage or ponding around the casing. The pad shall be cast so as to slope away from the bore. The top of the bore shall be capped to prevent contaminants entering the bore and underlying ground water.

- 3.5 Conditions 3.1, 3.2 and 3.4 as they apply to Lots 1 – 24 inclusive, shall be subject to a consent notice pursuant to Section 221 of the Resource Management Act 1991, to be registered on the new computer freehold registers for Lots 1 – 24 inclusive to ensure that the conditions are met by the consent holder prior to the erection of a dwelling on any of these allotments.

4. Access – Vehicle Crossings

- 4.1 The subdivider shall upgrade and seal the existing access to the proposed right of way serving Lots 5 and 25 to accord with Waimakariri District Council Standard Drawing 600-217 issue D.
- 4.2 The subdivider shall form and seal the accesses to Lots 1 and 2 that shall be located adjoining each other at their common allotment boundary to accord with Waimakariri District Council Standard Drawing 600-217 issue D.
- 4.3 The subdivider shall form and seal the accesses to Lots 3 and 4 that shall be located adjoining each other at their common allotment boundary to accord with Waimakariri District Council Standard Drawing 600-217 issue D.
- 4.4 The subdivider shall form and seal the access serving Lots 6 and 24 to accord with Waimakariri District Council Standard Drawing 600-217 issue D.
- 4.5 The subdivider shall form and seal the access to the right of way serving Lots 7, 8, 9 and Lots 20 - 23 inclusive to accord with Waimakariri District Council Standard Drawing 600-217 issue D.
- 4.6 The subdivider shall form and seal the access to the right of way serving Lots 11 and 12 to accord with Waimakariri District Council Standard Drawing 600-217 issue D.

5. Right of Ways

- 5.1 The subdivider shall upgrade the existing right of way (Area 'A') serving Lots 5 and 25 to accord with Waimakariri District Council Standard Drawing 600-273 issue D. Passing bays shall be installed at 90 metre intervals.
- 5.2 The subdivider shall form the right of way (Area 'B') serving Lots 6 and 24 to accord with Waimakariri District Council Standard Drawing 600-273 issue D. Passing bays shall be installed at 90 metre intervals.
- 5.3 The subdivider shall form the right of way (Areas 'C' – 'G') serving Lots 7 - 9 inclusive and Lots 20 - 23 inclusive to accord with Waimakariri District Council Standard Drawing 600-273 issue D. Passing bays shall be installed at 90 metre intervals.

- 5.4 The subdivider shall form the right of way serving Lots 11 and 12 (Area 'H') to accord with Waimakariri District Council Standard Drawing 600-273 issue D. Passing bays shall be installed at 90 metre intervals.

6. Water Race Culverts

At each right of way and the Road to Vest crossing of the existing water race, the subdivider shall install 450 mm diameter culverts complete with precast concrete headwalls.

7. Roading.

- 7.1 The subdivider shall form and seal the Road to Vest (Lot 26) having a carriageway 6.0 metres wide and be constructed in accordance with the requirements of the Waimakariri District Councils Engineering Code of Practice. The design shall include provision of a Standard Rural T intersection at Oxford Road to accord with WDC Standard Drawing 600-262A issue F.
- 7.2 The subdivider shall submit to the Council for approval three potential names for the new Road to Vest, prior to the Section 223 certification of the survey plan, and shall then install the street name sign and pole at the new intersection.

8. Stormwater

- 8.1 The subdivider shall install appropriate measures to control the stormwater runoff from Lots 5 - 12 inclusive onto the lower terraces or adjoining properties, scouring from the run off and disposal of runoff water.
- 8.2 The applicant shall supply in writing to the Council for approval the required engineering information to ensure compliance with Condition 8.1 prior to these works being undertaken.

9. Building platforms / Floor levels

- 9.1 Any dwelling erected on Lots 1 - 4 inclusive, when located on the lower terrace, shall be constructed with a finished floor level of at least 400 mm above the adjacent ground level.
- 9.2 Condition 9.1 shall be subject to a consent notice to be registered on the computer freehold registers for Lots 1 - 4 inclusive to ensure that this condition is met when any dwelling is erected on these lots.
- 9.3 Any dwelling erected on Lots 13 - 25 inclusive shall be constructed with a finished floor level of at least 400 mm above the adjacent ground level, with any dwelling on Lot 16 also having a minimum floor level of at least 150 mm above the crown level of Oxford Road.

- 9.4 Condition 9.3 shall be subject to a consent notice to be registered on the computer freehold registers for Lots 13 - 25 inclusive. The consent notice shall ensure that the condition is met when any dwelling is erected on these allotments.
- 9.5 Any building erected on Lots 15, 16, 18, 21 and 22 shall be erected outside the potential flooding zone as shown on the 50 year ARI Flood Level Assessment Diagram (Appendix G) in the Eliot Sinclair and Partners Report having the reference 348903 and dated 18 July 2012.
- 9.6 Condition 9.5 shall be subject to a consent notice to be registered on the computer freehold registers for Lots 15, 16, 18, 21 and 22. The consent notice shall ensure that this condition is met when any buildings are erected on these lots.

10. **Power and Telephone**

The subdivider shall provide evidence in writing from the relevant service utility providers that the existing electrical and telephone reticulation has the capacity to provide service connections to Lots 1 – 25 inclusive.

11. **Traffic Management Plan**

The subdivider shall submit for approval a comprehensive Traffic Management Plan (*format* attached) detailing traffic control works (including sketch layout and control signs). This plan shall be submitted prior to work commencing on or in Oxford Road. Traffic Management shall be to Level 1, as described in the TNZ & LTSA Code of Practice for Temporary Traffic Management.

12. **Development Contributions**

Pursuant to section 198 of the Local Government Act 2002, the consent holder shall pay **\$78,770.40** (including GST at 15.0%); this amount is based on the following contributions:

Description	Area	Units/ Lots	Factor (excluding GST) Per Unit/Lot \$	Amount (excluding GST) Total \$	Amount (inclusive GST) Total \$
Reserves	Rural & Res 4 Zone	24	1,561.00	37,464.00	43,083.60
Roading	District	24	930.00	22,320.00	25,668.00
Community Infrastructure	District - Pool	24	230.00	5,520.00	6,348.00
Community Infrastructure	District - Library Extension	24	133.00	3,192.00	3,670.80
Total				68,496.00	78,770.40

13. Soil Contamination

- 13.1 A finalised Detailed Site Investigation Report shall be prepared by Envirochem Consultants. All areas of contaminated land identified in the report shall be remediated prior to the issue of the Section 224c Conditions Certificate.
- 13.2 The remediation works shall be approved by Council in writing prior to works commencing on-site and shall include a methodology for the removal and disposal of the contaminated soil, including certification from the receiving disposal site operator, and the backfilling and compaction of the excavated areas.
- 13.3 The subdivider shall provide an "As Built" plan showing remediated areas on any of the lots, including backfilling compaction test results and certification of the fill.
- 13.4 Council reserves the right to have the finalised Detailed Site Investigation Report to be prepared by Envirochem Consultants, peer reviewed by the Council. All costs incurred by the Council by having this peer review process undertaken shall be met by the subdivider.

14. Restricting Access onto Oxford Road

- 14.1 Lots 16, 17, 21, 22, 24 and 25 shall not have direct vehicle access onto Oxford Road.
- 14.2 Condition 16.1 shall be subject to a consent notice to be registered on the computer freehold registers for Lots 16, 17, 21, 22, 24 and 25 to ensure that future owners of these allotments are aware of this requirement.

15. Road to Vest

- 15.1 Lot 26 shall vest in the Council as Road.

16. Effluent Spreading Restriction

- 16.1 Any dwellings established on Lots 1 and 2 shall be located beyond the 250 metre effluent spreading buffer zone that applies in respect of effluent spreading being undertaken on properties on the western side of Garterys Road as noted on the Council's Effluent Spreading Database.
- 17.2 Condition 17.1 as it applies to Lots 1 and 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 registers for Lots 1 and 2 to ensure that this condition is met prior to the erection of a dwelling on either of these allotments.

17. Conditions Auditing

- 17.1 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 work is completed in accordance with the approved plans and specifications and to the Council's standards. The Council will

undertake inspections and checking. The subdivider, 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.

The minimum level of inspection shall be as follows:

Access / Right of Ways

- On completion of excavation to sub-grade.
- Following compaction of base course prior to final surfacing.

Whole Works

- Prior to the issue of a certificate under section 224(c) of the Resource Management Act 1991.

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

18. Maintenance

- 18.1 The subdivider shall be responsible for the maintenance of all roading works for a period of twelve months following the date of issue of the Council's 'Condition Certificate'. A bond equal to 5% of the cost of construction works shall be lodged with Council for the same period

Maintenance shall include:

- The repair of any damage or defects in any of the works or services associated with the development of the subdivision as consented to.

19. Works Conditions

- 19.1 That a certificate under Section 224(c) of the Resource Management Act 1991 will not be issued until Conditions 1 to 18 above have been met to the satisfaction of the Waimakariri District Council, at the expense of the consent holder.

ADVICE NOTES

- a) All amounts shown are G.S.T inclusive.
- b) The requirements and conditions listed are a statement of the Council's minimum standards. Where the subdivider proposes higher standards or more aesthetically acceptable alternatives these shall be submitted to the Council for approval.

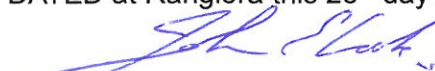
- c) The requirement for power and telephone to be confirmed as having capacity to service the subdivision does not guarantee that power or telephone connections are provided to potential house sites. On rural lots, the service authorities will not install submains to individual lots until the location 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.
- d) In addition to the specific he finished floor level of any dwelling should be set at a height to prevent inundation from a 1 in 50 year (2% AEP) storm, as required by the Building Act.
- e) Geotech Consulting notes in their report prepared for this subdivision proposal: *"that there was one test pit per lot, in a location which may be well away from some of the final building sites. Additional testing is recommended at building consent stage at the location of each house"*.

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. .
- Any environmental effects arising will be no more than minor and are within the realm of effects contemplated by the District Plan with the proposed allotments all being a minimum of 4 ha.
- The proposal is in accordance with the District Plan for the undertaking of subdivisions as a discretionary activity (restricted).
- Each future dwelling to be established on the new allotments will be provided with a domestic water supply.
- The appropriate geotechnical assessment has been undertaken to confirm that the subject property is overall suitable for establishing dwellings.
- A finalised site investigation report is required to be undertaken to ascertain the existence of any potential contaminated soil that could be injurious to human health.
- Adequate dwelling setbacks for Lots 1 and 2 are being provided from the effluent spreading being undertaken on the west side of Garterys Road.
- The necessary conditions of approval have been approved to take into account potential flooding on low lying portions of the subject property.

DATED at Rangiora this 25th day of October 2012



SIGNED by John Cook
PLANNING OFFICER



SCHEDULE OF EASEMENTS

Nature	Servient Tenement		Dominant Tenement
	Lot	Shown	
Right of way and services	25	A	Lot 5
	6	B	Lot 24
	22	C	Lots 20-21, 23, 7-9
	21	D	Lots 20, 22-23, 7-9
	20	E	Lots 23, 7-9
	23	F	Lots 20, 7-9
	8	G	Lots 7, 9
	12	H	Lot 11

NOTES

Reference to DP453032

DP453032 is a proposed subdivision of CB47D/196

Lot 26 to vest as road (1.38ha)

Water race easements to be added at time of survey

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)

Scale 1:8000 Format (A3)

50m*50m possible building platform

120m*120m shape factor

WAIMAKARIRI DISTRICT COUNCIL
APPROVED APPLICATION

RC125093

M. Puseley 25/10/12
AUTHORISED OFFICER

SGN
DEVELOPMENTS

SPRINGBANK DOWNS
Lots 1-26 being Subdivision of Lot 1 DP 453032

Prepared by: Scandlyn Surveying Ltd
18 Durham Street, RANGIORA
(office@scandlyn.co.nz)
Reference: 1148 R10 20121023
Ph 033131272, Fax 033131274



**WAIMAKARIRI
DISTRICT COUNCIL
technical services**

NOT TO SCALE

SHEET TITLE

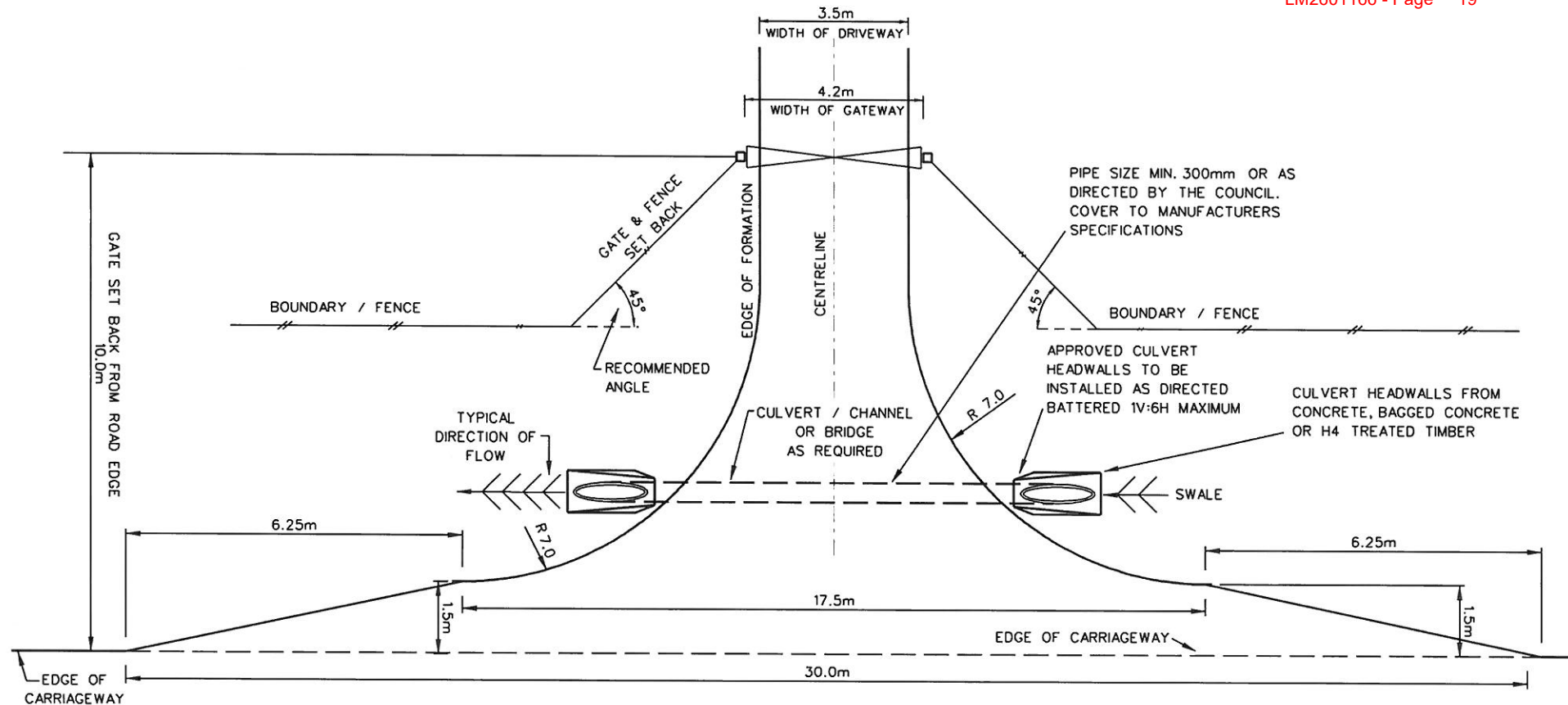
Typical
Rural Zone
Entranceway

PROJECT TITLE

Standard Drawings

ISSUE	PLAN No.
D	600

217



MINIMUM FORMATION STANDARDS

The formation shall extend down to a suitable subgrade which shall be free of organic material. As a minimum requirement, the formation shall comprise of a 150 mm compacted layer of screened river run sub base (AP65) overlaid with a 100 millimeter compacted layer of crushed base course (AP40).

The top surfacing course shall be applied as follows:

- (a) Where the adjacent road formation is sealed, the entrance formation shall be overlaid with a coat of chip seal consisting of hot bitumen sprayed at a rate of 1.8 litres / square metre and Grade 4 chip.
- (b) Where the adjacent road formation is metalled, the new entrance formation shall be overlaid with AP20 running course.
- (c) Clay stabilised metalcourse will not be approved in the road reserve.



WAIMAKARIRI
DISTRICT COUNCIL
technical services

NOT TO SCALE

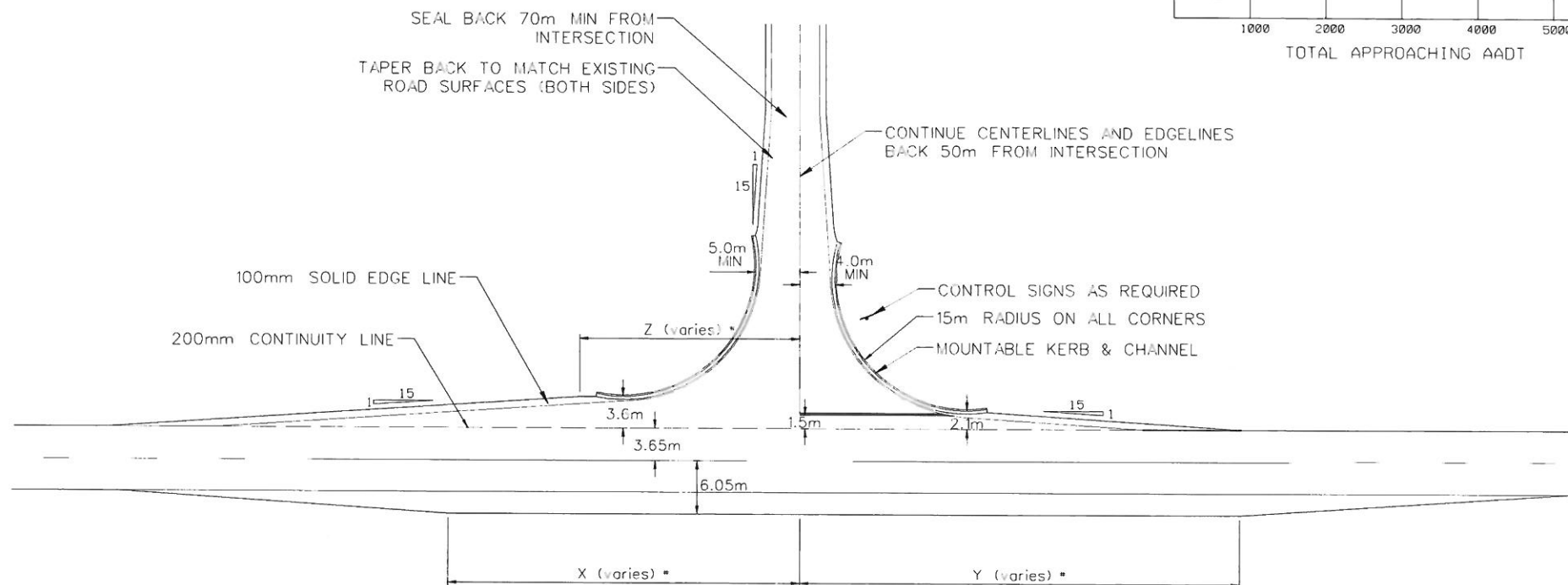
SHEET TITLE
**STANDARD RURAL
"T" JUNCTION
TYPE B**

PROJECT TITLE
**STANDARD
DRAWINGS**

SHEET
262A
ISSUE
F
PLAN No.
600

NOTES:

- 1) Minimum pavement markings shall consist of solid intersection lines on the through road and appropriate intersection controls on the side road.

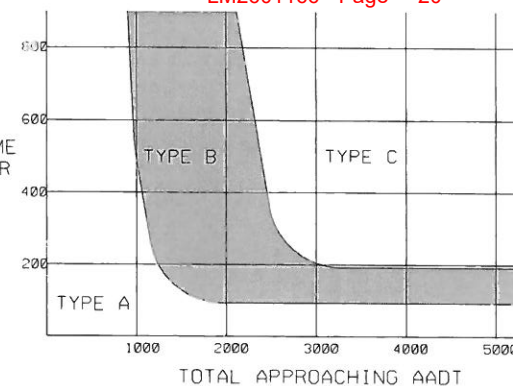


* DRAWN FOR 80KM/H TREATMENT, REFER TO TABLE FOR OTHER SPEEDS

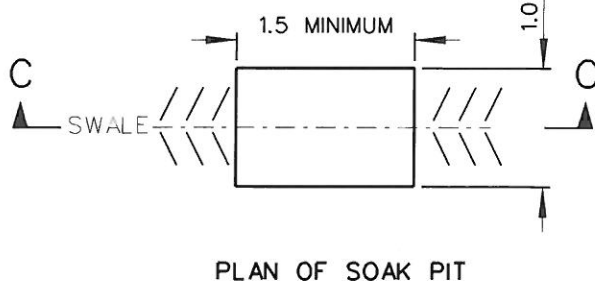
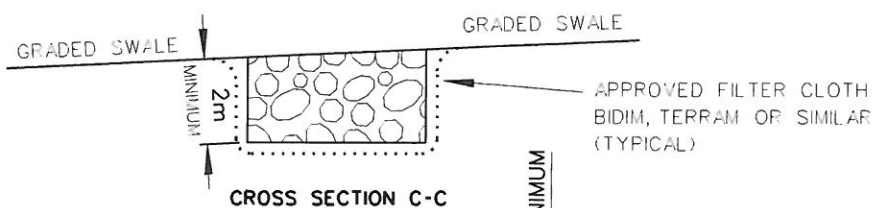
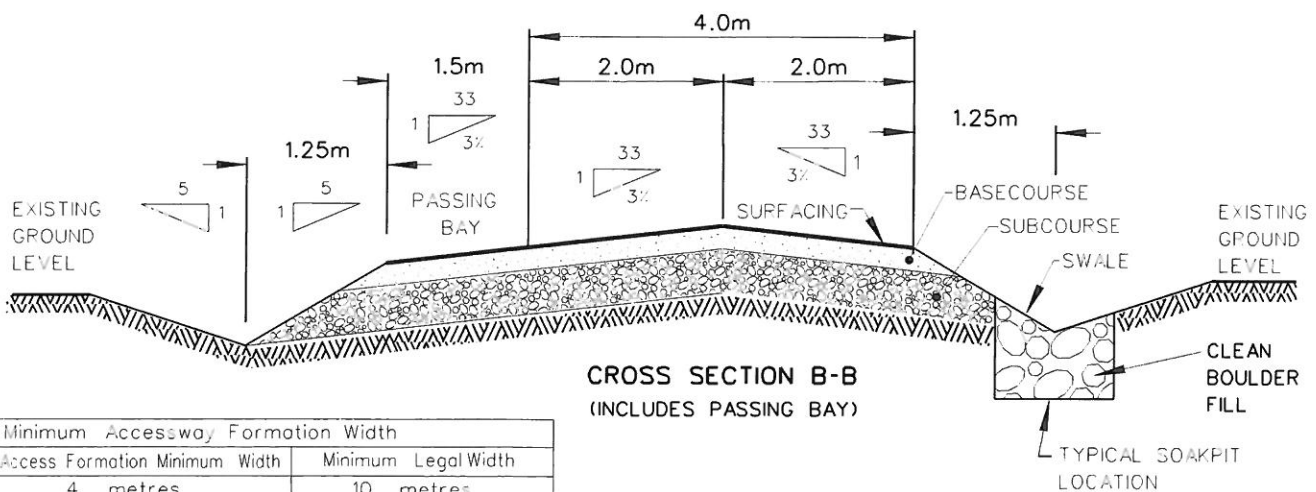
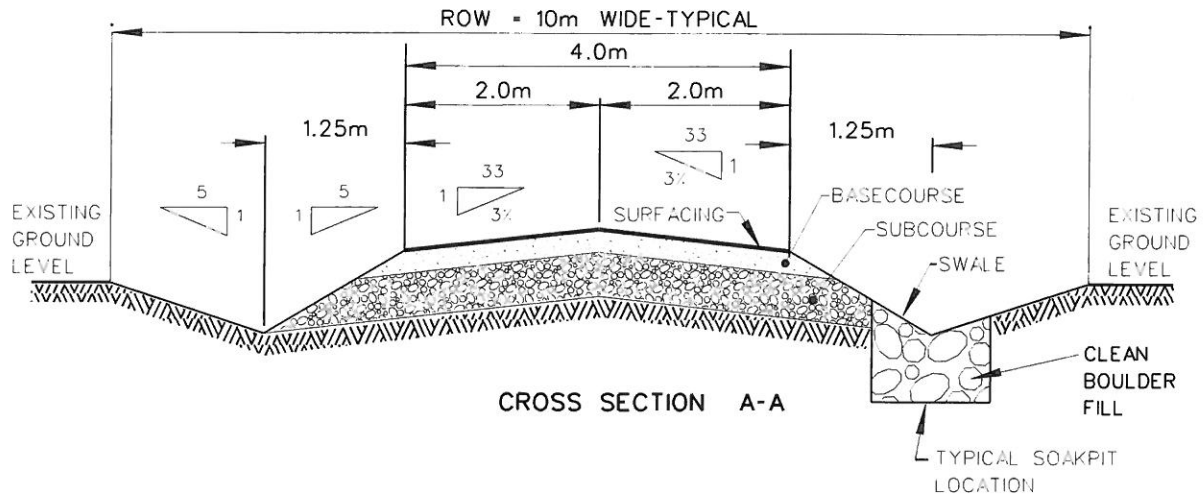
DIMENSION	OPERATING SPEED (km/h)		
	80	90	100
X	40m	45m	55m
Y	50m	55m	65m
Z	25m	30m	35m

LM2601166 - Page 20

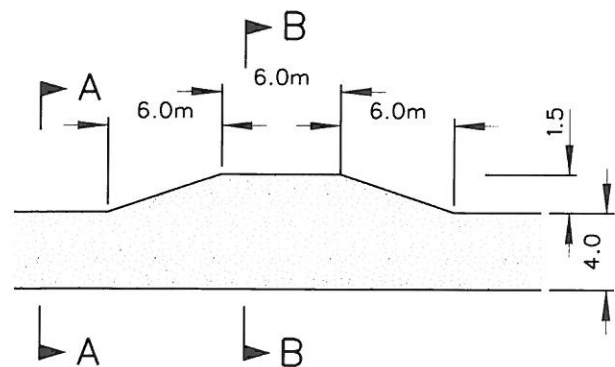
TURNING VOLUME
(VEHICLES PER
DAY)



- NOTES**
1. Surfacing : Single coat hot bitumen and grade 4 chip or 50mm AP20 running course.
 2. Basecourse : Minimum of 100mm TNZ M/4 AP40.
 3. Subcourse : Minimum of 150mm TNZ M/5 AP65.



Soak Pits shall be installed where appropriate. Spacing of Soak Pits shall not be greater than 100m intervals and should be installed in all low points of swales. The minimum depth of Soak Pits is 2.0m.



Where the length of the ROW exceeds 100m and there are 2 or more lots serviced by the ROW then Passing Bays shall be installed at not more than 90m intervals.



WAIMAKARIRI
DISTRICT COUNCIL
technical services

NOT TO SCALE

SHEET TITLE

**TYPICAL RURAL
CROSS-SECTION
RIGHT-OF-WAY**

PROJECT TITLE

**STANDARD
DRAWINGS**

SHEET

273

ISSUE
D

PLAN No.
600



TA Approvals

Territorial Authority	Waimakariri District Council TA Certification Division	TA Reference	RC125093
Survey Number	LT 460298	Survey Purpose	LT Subdivision
Surveyor Reference	1148 SNG	Land District	Canterbury
Surveyor	Murray Trevor Scandlyn		
Surveyor Firm	Scandlyn Surveying Ltd		
Dataset Description	Lots 1 - 26 being subdivision of Lot 1 DP 453032		

TA Certificates

I hereby certify that plan DP 460298 was approved by the Waimakariri District Council pursuant to section 223 of the Resource Management Act 1991 on the 26th day of February 2013. ☒

The approval of the Council under Section 223 of the Resource Management Act 1991 is subject to the granting or reserving of the easements set out in the Memorandum of Easements attached as a supporting document to plan DP 460298. ☒

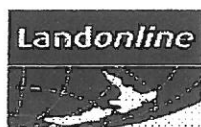
Signature

Signed by Yvonne Sally Fear, Authorised Officer, on 26/02/2013 01:52 PM

Receipt Information

Transaction Receipt Number	6901295
Signing Certificate (Distinguished Name)	Fear, Yvonne Sally
Signing Certificate (Serial Number)	1292396701
Signature Date	26/02/2013

*** End of Report ***



Title Plan - LT 460298

Survey Number LT 460298
Surveyor Reference 1148 SNG
Surveyor Murray Trevor Scandlyn
Survey Firm Scandlyn Surveying Ltd
Surveyor Declaration

Survey Details

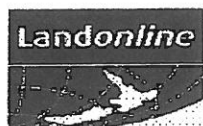
Dataset Description Lots 1 - 26 being subdivision of Lot 1 DP 453032
Status Initiated
Land District Canterbury
Survey Class Class B
Submitted Date
Survey Approval Date
Deposit Date

Territorial Authorities

Waimakariri District

Created Parcels

Parcels	Parcel Intent	Area	CT Reference
Lot 1 Deposited Plan 460298	Fee Simple Title	4.0236 Ha	603126
Lot 2 Deposited Plan 460298	Fee Simple Title	4.0051 Ha	603127
Lot 3 Deposited Plan 460298	Fee Simple Title	4.0079 Ha	603128
Lot 4 Deposited Plan 460298	Fee Simple Title	4.0866 Ha	603129
Lot 5 Deposited Plan 460298	Fee Simple Title	4.0048 Ha	603130
Lot 6 Deposited Plan 460298	Fee Simple Title	4.2456 Ha	603131
Lot 7 Deposited Plan 460298	Fee Simple Title	4.0906 Ha	603132
Lot 8 Deposited Plan 460298	Fee Simple Title	4.0779 Ha	603133
Lot 9 Deposited Plan 460298	Fee Simple Title	4.3064 Ha	603134
Lot 10 Deposited Plan 460298	Fee Simple Title	4.1374 Ha	603135
Lot 11 Deposited Plan 460298	Fee Simple Title	4.1191 Ha	603136
Lot 12 Deposited Plan 460298	Fee Simple Title	4.0450 Ha	603137
Lot 13 Deposited Plan 460298	Fee Simple Title	4.1760 Ha	603138
Lot 14 Deposited Plan 460298	Fee Simple Title	4.0118 Ha	603139
Lot 15 Deposited Plan 460298	Fee Simple Title	4.0054 Ha	603140
Lot 16 Deposited Plan 460298	Fee Simple Title	4.0082 Ha	603141
Lot 17 Deposited Plan 460298	Fee Simple Title	4.0076 Ha	603142
Lot 18 Deposited Plan 460298	Fee Simple Title	4.0126 Ha	603143
Lot 19 Deposited Plan 460298	Fee Simple Title	4.1087 Ha	603144
Lot 20 Deposited Plan 460298	Fee Simple Title	4.0049 Ha	603145
Lot 21 Deposited Plan 460298	Fee Simple Title	4.0070 Ha	603146
Lot 22 Deposited Plan 460298	Fee Simple Title	4.0075 Ha	603147
Lot 23 Deposited Plan 460298	Fee Simple Title	4.0260 Ha	603148



Title Plan - LT 460298

Created Parcels

Parcels	Parcel Intent	Area	CT Reference
Lot 24 Deposited Plan 460298	Fee Simple Title	4.0052 Ha	603149
Lot 25 Deposited Plan 460298	Fee Simple Title	4.0421 Ha	603150
Lot 26 Deposited Plan 460298	Vesting on Deposit for Road	1.3824 Ha	
Area WA Deposited Plan 460298	Easement		
Area WB Deposited Plan 460298	Easement		
Area WC Deposited Plan 460298	Easement		
Area WD Deposited Plan 460298	Easement		
Area A Deposited Plan 460298	Easement		
Area B Deposited Plan 460298	Easement		
Area C Deposited Plan 460298	Easement		
Area D Deposited Plan 460298	Easement		
Area E Deposited Plan 460298	Easement		
Area F Deposited Plan 460298	Easement		
Area H Deposited Plan 460298	Easement		
Area G Deposited Plan 460298	Easement		
Area I Deposited Plan 460298	Easement		
Area J Deposited Plan 460298	Easement		
Area PA Deposited Plan 460298	Easement		
Area PB Deposited Plan 460298	Easement		
Area PC Deposited Plan 460298	Easement		
Area WB Deposited Plan 460298	Easement		
Area WF Deposited Plan 460298	Easement		
Area WG Deposited Plan 460298	Easement		
Area WH Deposited Plan 460298	Easement		
Area WI Deposited Plan 460298	Easement		
Area WJ Deposited Plan 460298	Easement		
Area WK Deposited Plan 460298	Easement		
Area WL Deposited Plan 460298	Easement		
Area WM Deposited Plan 460298	Easement		
Area WN Deposited Plan 460298	Easement		
Area WO Deposited Plan 460298	Easement		
Area WP Deposited Plan 460298	Easement		
Area WQ Deposited Plan 460298	Easement		
Area WR Deposited Plan 460298	Easement		
Area WS Deposited Plan 460298	Easement		
Area WT Deposited Plan 460298	Easement		
Area CA Deposited Plan 460298	Land Covenant		
Area CB Deposited Plan 460298	Land Covenant		



Title Plan - LT 460298

Created Parcels

Parcels	Parcel Intent	Area	CT Reference
Area XA Deposited Plan 460298	Easement		
Area XB Deposited Plan 460298	Easement		
Area XC Deposited Plan 460298	Easement		
Area XD Deposited Plan 460298	Easement		
Area XE Deposited Plan 460298	Easement		
Area XF Deposited Plan 460298	Easement		
Area XG Deposited Plan 460298	Easement		
Area XH Deposited Plan 460298	Easement		
Area XI Deposited Plan 460298	Easement		
Area XJ Deposited Plan 460298	Easement		
Area XK Deposited Plan 460298	Easement		
Total Area		102.9554 Ha	

Schedule / Memorandum

Land Registration District	Plan Number	Surveyor Ref
CANTERBURY	DP 460298	1148

Territorial Authority (the Council)	Council Ref
Waimakariri District	RC125093

MEMORANDUM OF EASEMENTS IN GROSS			
Purpose	Servient Tenement		Grantee
	Shown	Lot	
Right to convey water in gross	WA	Lot 1	Waimakariri District Council
	WB	Lot 2	
	WC	Lot 3	
	WD	Lot 4	
	WG, WE, B	Lot 25	
	WF	Lot 5	
	WH, WJ	Lot 6	
	WI	Lot 24	
	WK	Lot 7	
	WL	Lot 23	
	WM	Lot 8	
	WN	Lot 20	
	WO	Lot 19	
	WP	Lot 18	
	WQ, WS	Lot 14	
	WR	Lot 15	
	WT	Lot 13	
Right to convey electricity in gross	PA	Lot 23	Mainpower NZ Ltd
	PB	Lot 15	

Schedule / Memorandum

Right to convey electricity in gross	A, B, C	Lot 25	Mainpower NZ Ltd
	D, WH	Lot 6	
	E	Lot 22	
	F	Lot 21	
	G	Lot 20	
	H	Lot 23	
Right to convey telecommunications and computer media in gross	A, B, C	Lot 25	Chorus NZ Ltd
	D, WH	Lot 6	
	E	Lot 22	
	F	Lot 21	
	G	Lot 20	
	H	Lot 23	
	WM, I	Lot 8	

MEMORANDUM OF EASEMENTS			
Purpose	Servient Tenement		Dominant Tenement
	Shown	Lot	
Right of way, right to convey electricity, telecommunications and computer media	A, B, C	Lot 25	Lot 5
	E	Lot 22	Lots 20, 21, 23 7, 8, 9
	F	Lot 21	Lots 20, 22, 23 7, 8, 9
	G	Lot 20	Lots 23, 7, 8, 9
	H	Lot 23	Lots 20, 7, 8, 9

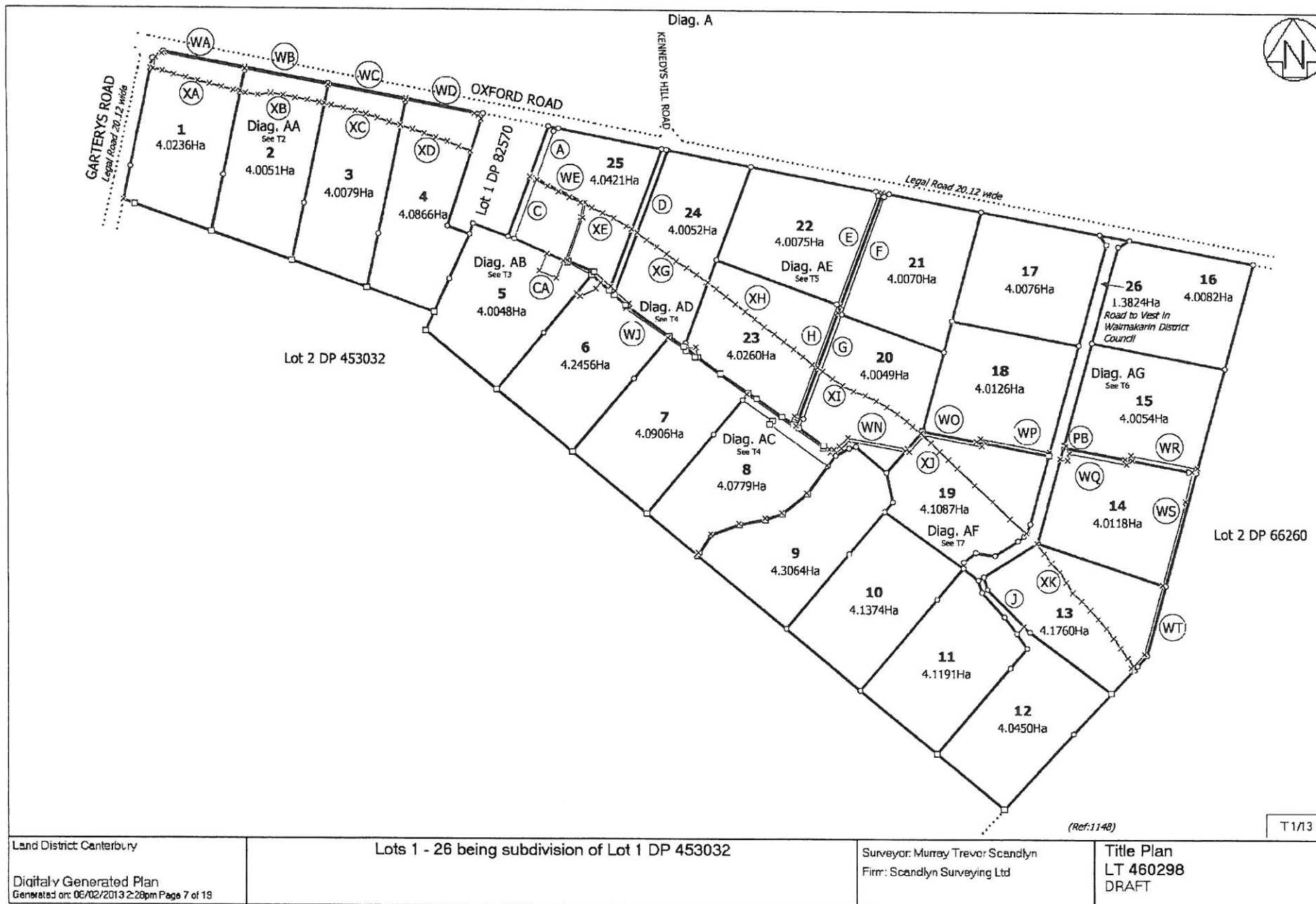
Schedule / Memorandum

	WM, I	Lot 8	Lots 7 & 9
Right of way	J	Lot 12	Lot 11
	D	Lot 6	Lot 24
Right to convey electricity	H	Lot 23	Lot 2 DP 453032 587645
	G	Lot 20	
	WM, I, PC	Lot 8	

SCHEDULE OF EXISTING EASEMENTS			
Purpose	Servient Tenement		Document
	Shown	Lot	
Right to convey water	XA	Lot 1	T.110079
	XB	Lot 2	
	XC	Lot 3	
	XD	Lot 4	
	XE	Lot 25	
	XF	Lot 6	
	XG	Lot 24	
	XH	Lot 23	
	XI	Lot 20	
	XJ	Lot 19	
	XK	Lot 13	

NOTE:

Areas CA and CB are to be subject to Consent Notices



Land District: Canterbury

Lots 1 - 26 being subdivision of Lot 1 DP 453032

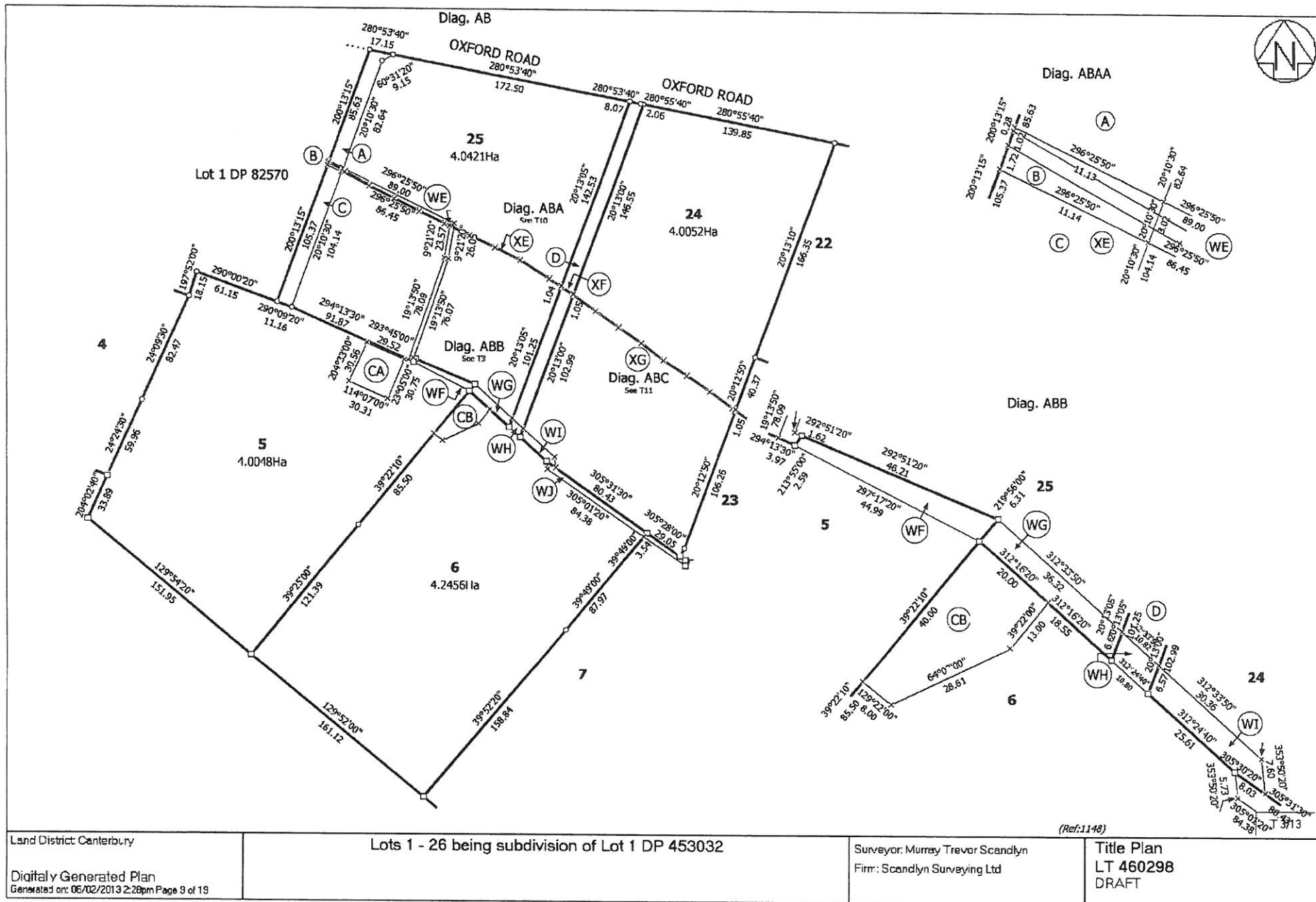
Surveyor: Murray Trevor Scandlyn
Firm: Scandlyn Surveying Ltd

Title Plan
LT 460298
DRAFT

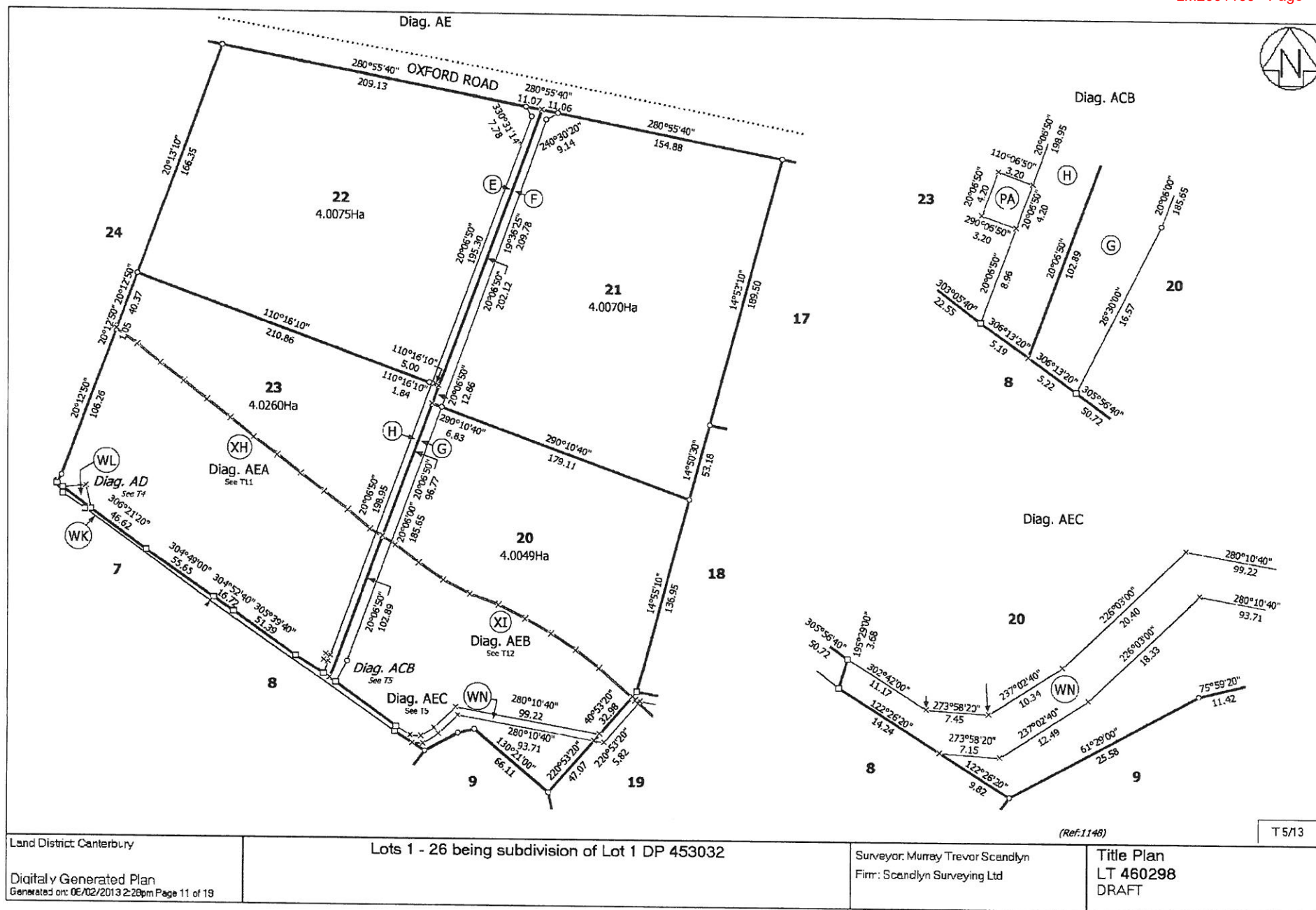
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Generated on: 06/02/2013 2:28pm Page 7 of 19

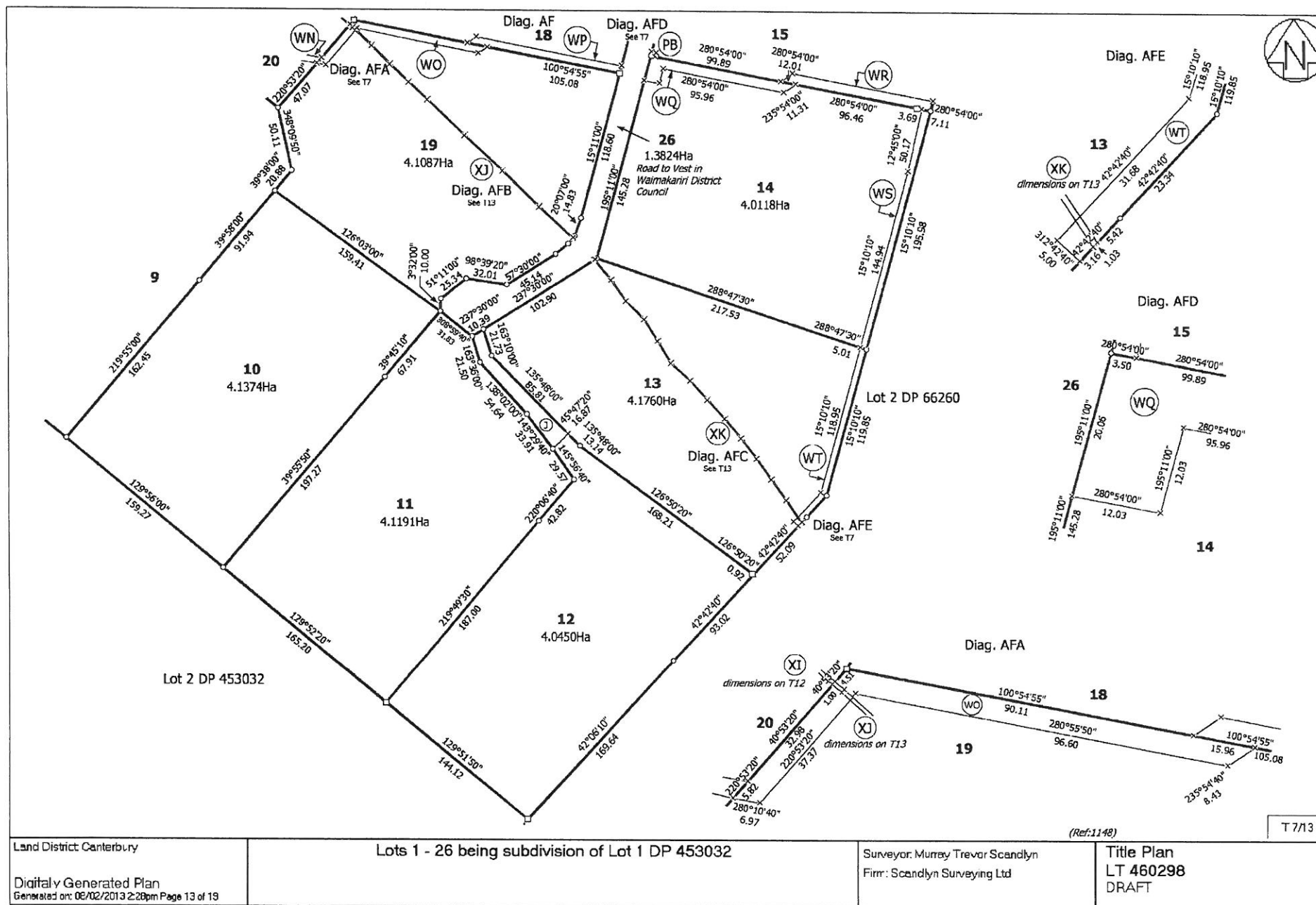


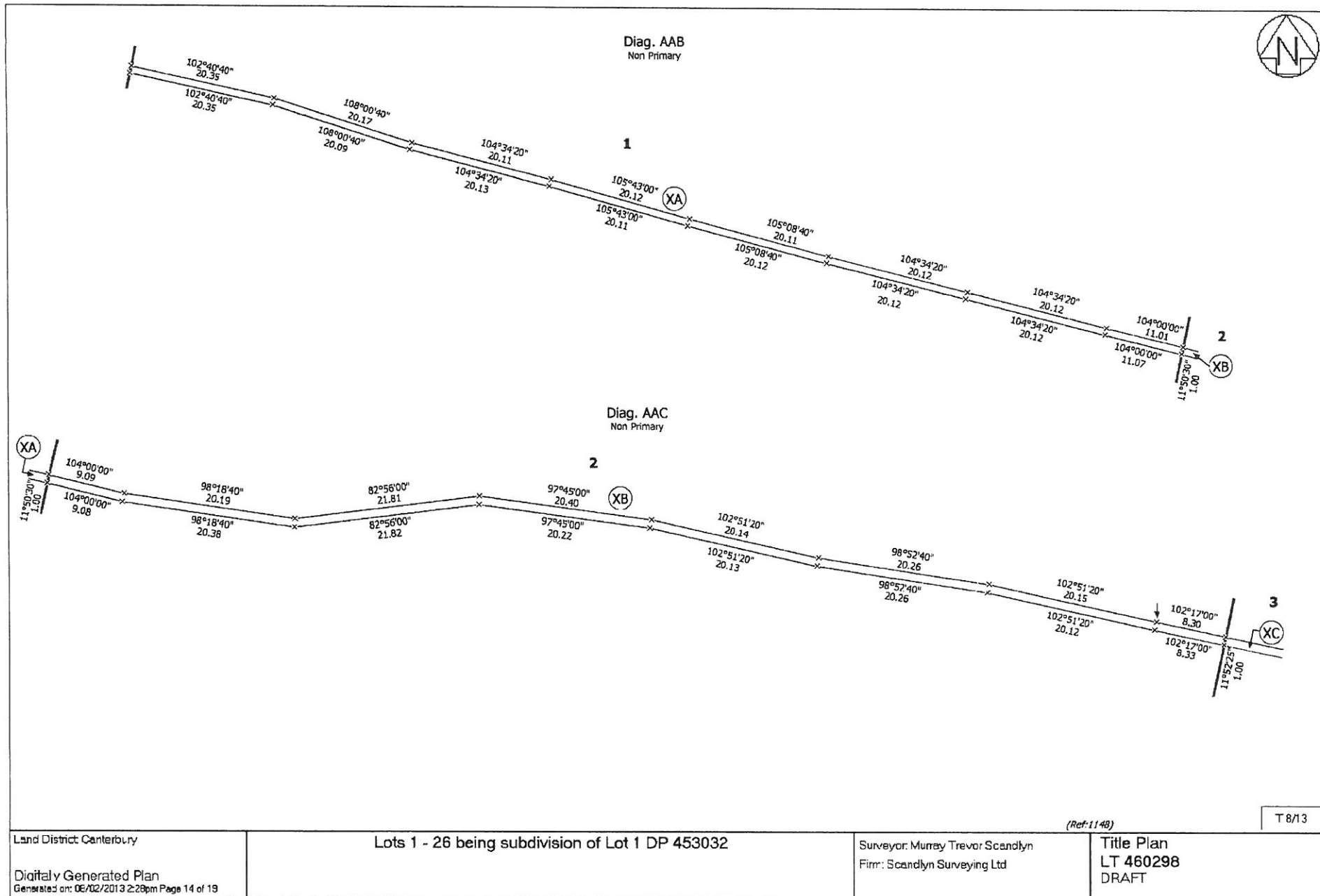


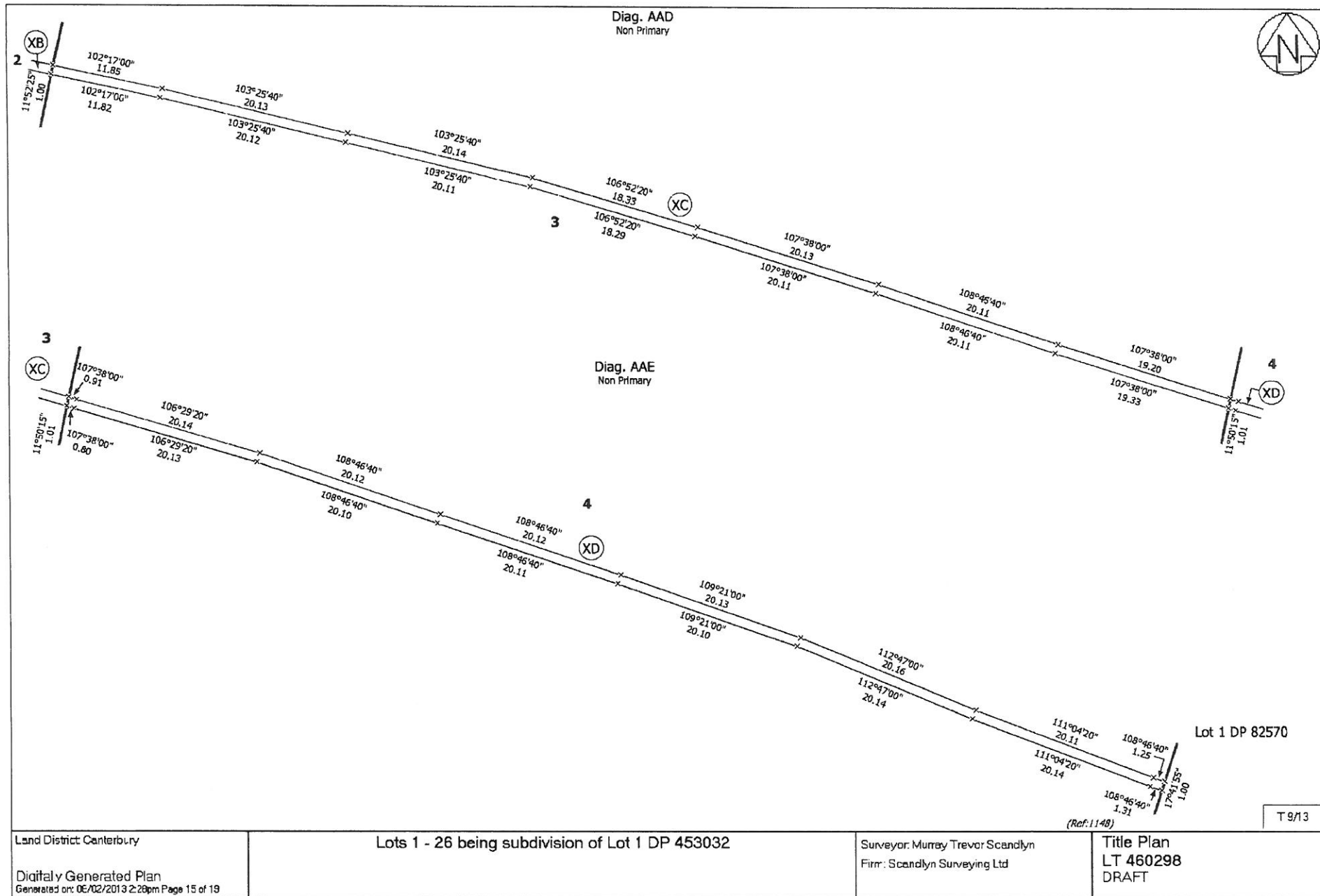


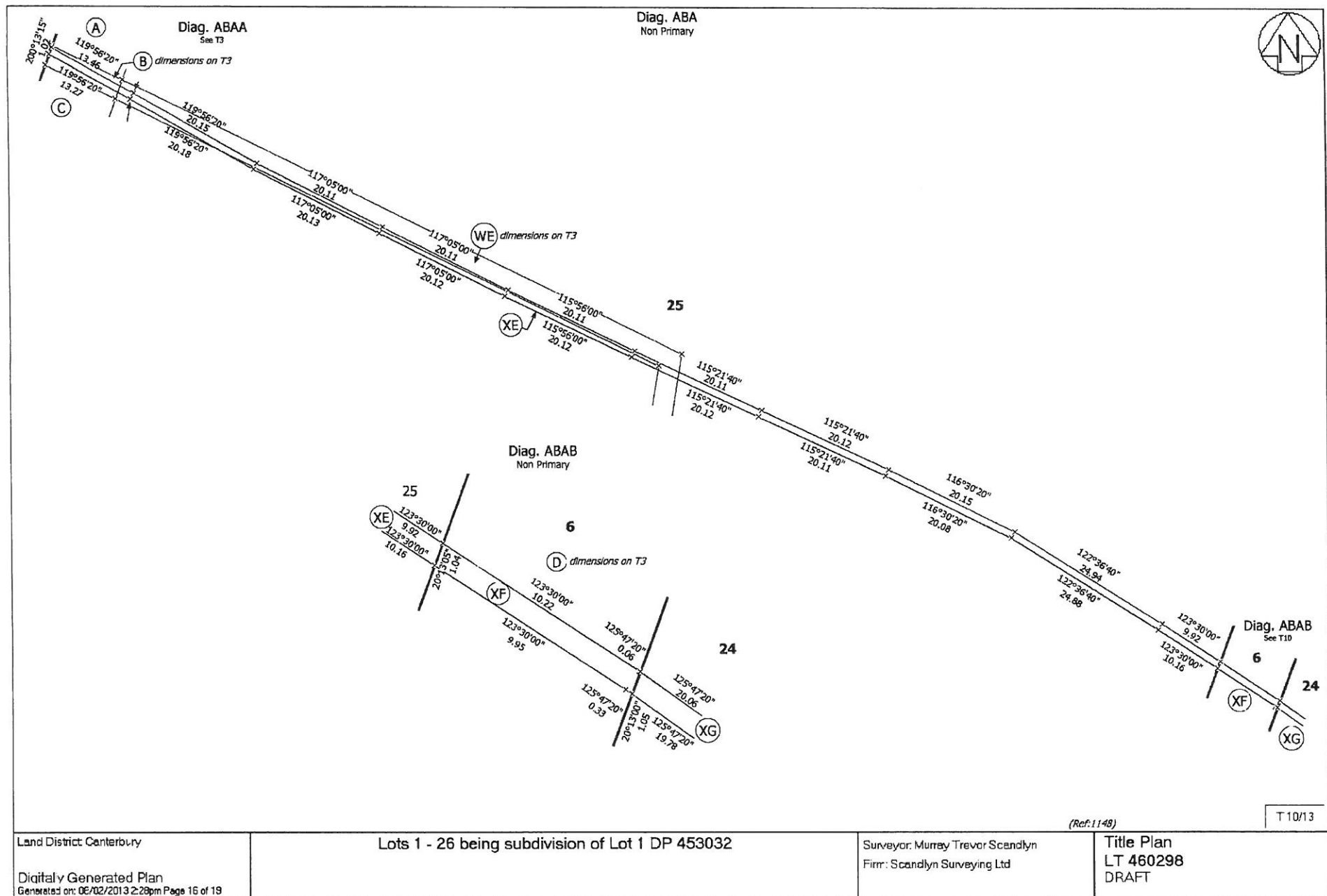




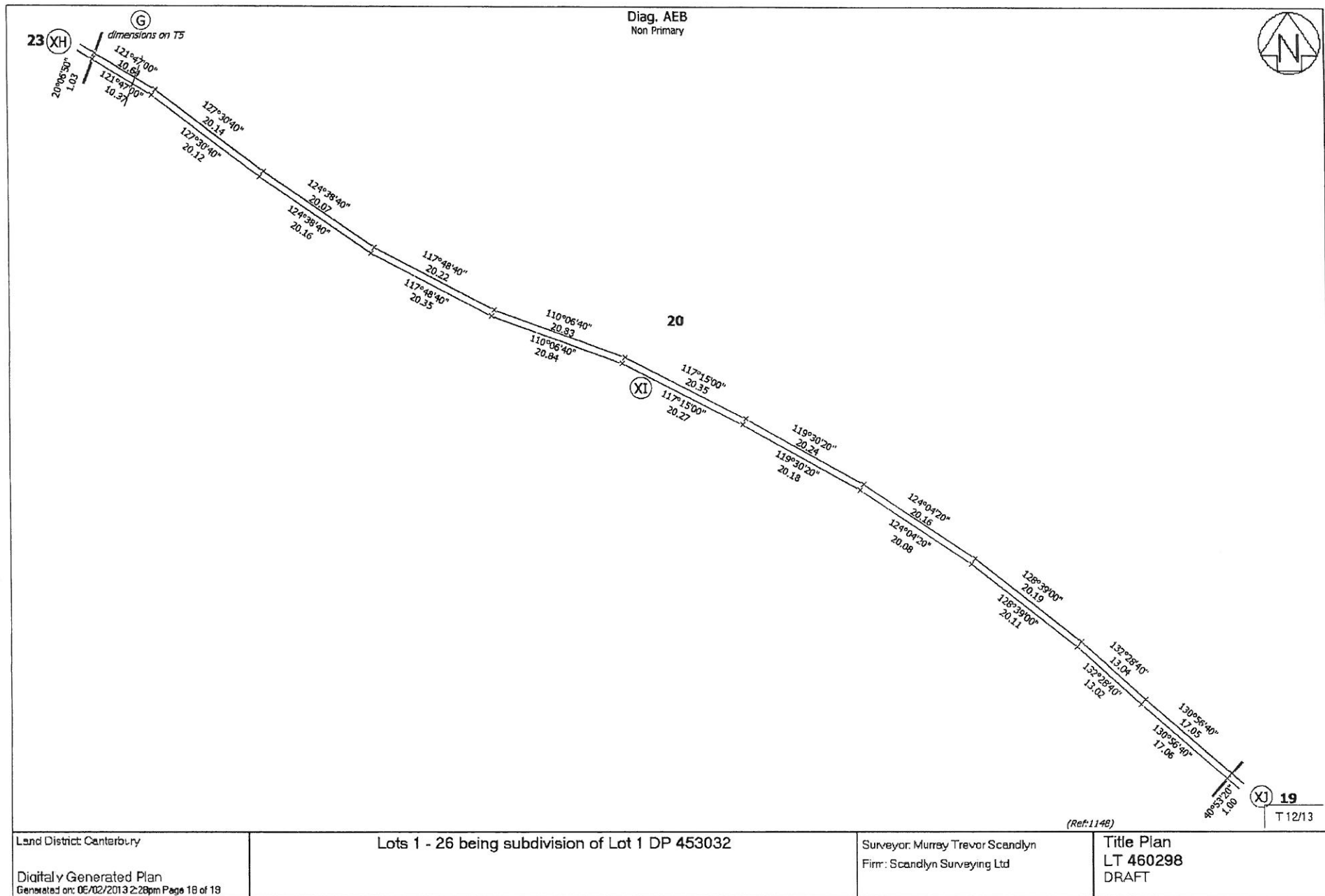


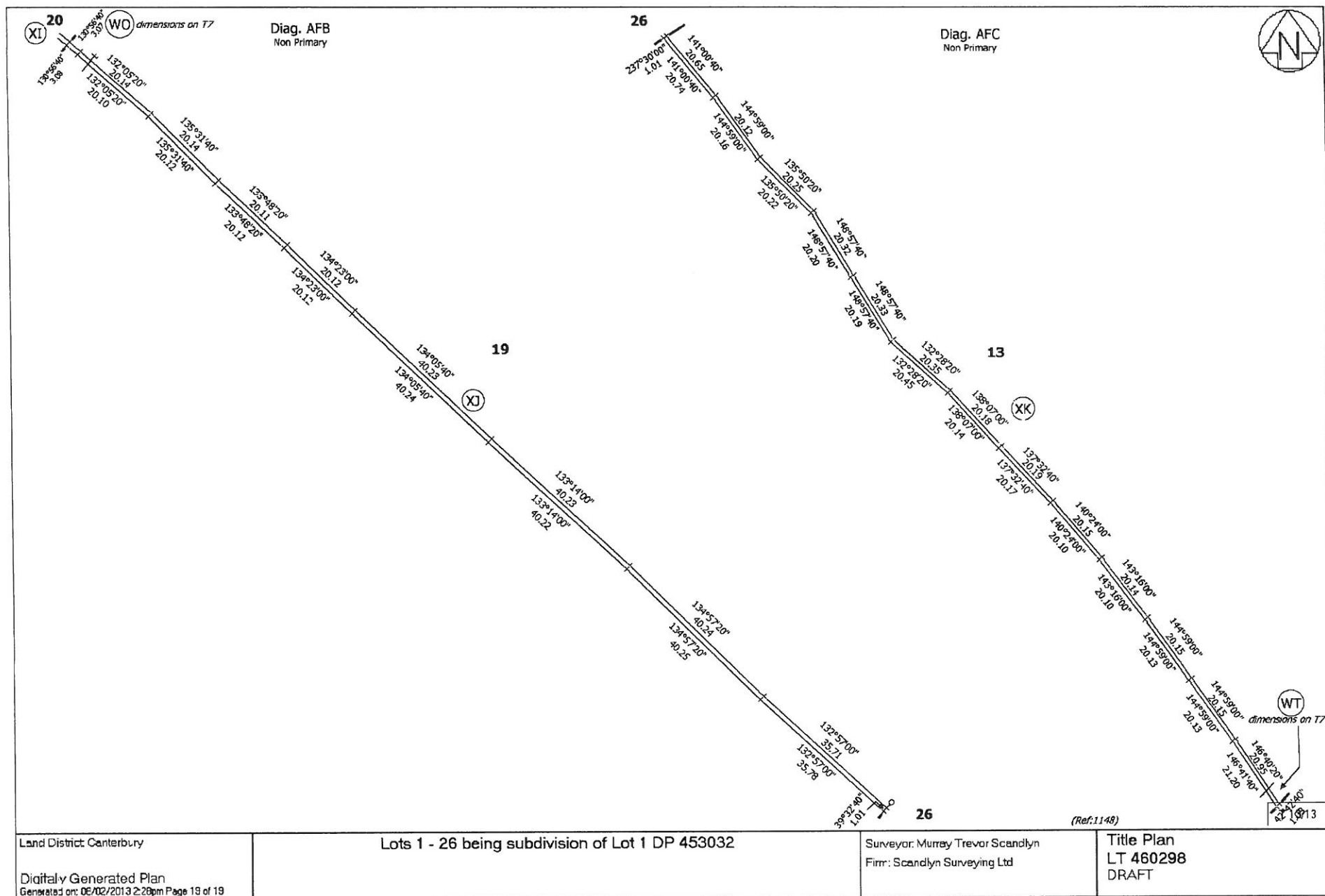












TA Approvals

Territorial Authority	Waimakariri District Council TA Certification Division	TA Reference	RC125093
Survey Number	LT 460298	Survey Purpose	LT Subdivision
Surveyor Reference	1148 SNG	Land District	Canterbury
Surveyor	Murray Trevor Scandlyn		
Surveyor Firm	Scandlyn Surveying Ltd		
Dataset Description	Lots 1 - 26 being subdivision of Lot 1 DP 453032		

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 Plan and that six (6) consent notices have been issued in respect of those conditions that have not been complied with. Dated this 26th day of February 2013.



Signature

Signed by Yvonne Sally Fear, Authorised Officer, on 26/02/2013 01:57 PM

Receipt Information

Transaction Receipt Number	6901311
Signing Certificate (Distinguished Name)	Fear, Yvonne Sally
Signing Certificate (Serial Number)	1292396701
Signature Date	26/02/2013

*** End of Report ***

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of an application by **SGN Developments** to subdivide land into 25 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. The consent holder shall provide an adequate domestic water supply to Lots 1 – 24 inclusive providing a minimum of 2.0 cubic metres per day.
2. Where new wells are installed on proposed Lots 1 - 24 inclusive, the consent holder shall prove that the water can be readily made potable by recognised and practical treatment methods to the satisfaction of the Council. Tests carried out by a IANZ registered laboratory shall demonstrate whether the chemical and bacteriological water quality complies with the guideline values set out in the publication, 'Drinking Water Standards for New Zealand 2005'. The consent holder shall specify any correction, which may be required to achieve compliance. The tests shall be accompanied by the results of well pump tests, which demonstrate, to the satisfaction of Council, that the quantity of water available from these new wells can adequately supply the water requirements of the lot. Samples from the water source shall be taken by the laboratory carrying out the analysis. (Such treatment will subsequently be required to be installed by the landowner before a building consent for a dwelling is finalised and the dwelling occupied).
3. The top 0.5 m of all wells, including existing wells that will provide a secure domestic water supply shall be concreted. A concrete pad of at least 0.3-metre radius and 0.1 metre thickness shall be constructed around any bore head used to provide the domestic water for proposed Lots 1 – 24 inclusive. The concrete pad is to be constructed at ground or at pump-house floor level to prevent leakage or ponding around the casing. The pad shall be cast so as to slope away from the bore. The top of the bore shall be capped to prevent contaminants entering the bore and underlying ground water.

The above conditions, as they apply to Lots 1 – 24 inclusive, shall be subject to a consent notice pursuant to Section 221 of the Resource Management Act 1991, to be registered on the new computer freehold registers for Lots 1 – 24 inclusive to ensure that the conditions are met by the consent holder prior to the erection of a dwelling on any of these allotments.

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 - 24 Deposit Plan 460298 and being a subdivision of Lot 1 DP 453032.

Dated this 26th day of February 2013

SIGNED for and on behalf of
the **WAIMAKARIRI DISTRICT COUNCIL**
pursuant to Section 252 of the
Local Government Act 1974



AUTHORISED OFFICER

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of an application by **SGN Developments** to subdivide land into 25 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. Any dwelling erected on Lots 1 - 4 inclusive, when located on the lower terrace, shall be constructed with a finished floor level of at least 400 mm above the adjacent ground level.

The above condition, as it applies Lots 1 – 4 inclusive, shall be subject to a consent notice pursuant to Section 221 of the Resource Management Act 1991, to be registered on the new computer freehold registers for Lots 1 – 4 inclusive to ensure that the condition is met when any dwelling is erected on these 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 - 4 Deposit Plan 460298 and being a subdivision of Lot 1 DP 453032.

Dated this 26th day of February 2013

SIGNED for and on behalf of
the **WAIMAKARIRI DISTRICT COUNCIL**
pursuant to Section 252 of the
Local Government Act 1974



AUTHORISED OFFICER

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of an application by **SGN Developments** to subdivide land into 25 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. Any dwelling erected on Lots 13 - 25 inclusive shall be constructed with a finished floor level of at least 400 mm above the adjacent ground level, with any dwelling on Lot 16 also having a minimum floor level of at least 150 mm above the crown level of Oxford Road.

The above condition, as it applies Lots 13 – 25 inclusive, shall be subject to a consent notice pursuant to Section 221 of the Resource Management Act 1991, to be registered on the new computer freehold registers for Lots 13 – 25 inclusive to ensure that the condition is met when any dwelling is erected on these allotments.

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 13 - 25 Deposit Plan 460298 and being a subdivision of Lot 1 DP 453032.

Dated this 26th day of February 2013

SIGNED for and on behalf of
the **WAIMAKARIRI DISTRICT COUNCIL**
pursuant to Section 252 of the
Local Government Act 1974



AUTHORISED OFFICER

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of an application by **SGN Developments** to subdivide land into 25 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. Any building erected on Lots 15, 16, 18, 21 and 22 shall be erected outside the potential flooding zone as shown on the 50 year ARI Flood Level Assessment Diagram (Appendix G) in the Eliot Sinclair and Partners Report having the reference 348903 and dated 18 July 2012..

The above condition, as it applies Lots 15, 16, 18, 21 and 22, shall be subject to a consent notice pursuant to Section 221 of the Resource Management Act 1991, to be registered on the new computer freehold registers for Lots 15, 16, 18, 21 and 22 to ensure that the condition is met when any dwelling is erected on these allotments.

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 15, 16, 18, 21 and 22 Deposit Plan 460298 and being a subdivision of Lot 1 DP 453032.

Dated this 26th day of February 2013

SIGNED for and on behalf of
the **WAIMAKARIRI DISTRICT COUNCIL**
pursuant to Section 252 of the
Local Government Act 1974



AUTHORISED OFFICER

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of an application by **SGN Developments** to subdivide land into 25 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. Lots 16, 17, 21, 22, 24 and 25 shall not have direct vehicle access onto Oxford Road.

The above condition, as it applies Lots 16, 17, 21, 22, 24 and 25, shall be subject to a consent notice pursuant to Section 221 of the Resource Management Act 1991, to be registered on the new computer freehold registers for Lots 16, 17, 21, 22, 24 and 25.

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 16, 17, 21, 22, 24 and 25 Deposit Plan 460298 and being a subdivision of Lot 1 DP 453032.

Dated this 26th day of February 2013

SIGNED for and on behalf of
the **WAIMAKARIRI DISTRICT COUNCIL**
pursuant to Section 252 of the
Local Government Act 1974



AUTHORISED OFFICER

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of an application by **SGN Developments** to subdivide land into 25 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. Any dwellings established on Lots 1 and 2 shall be located beyond the 250 metre effluent spreading buffer zone that applies in respect of effluent spreading being undertaken on properties on the western side of Garterys Road as noted on the Council's Effluent Spreading Database.

The above condition, as it applies Lots 1 & 2, shall be subject to a consent notice pursuant to Section 221 of the Resource Management Act 1991, to be registered on the new computer freehold registers for Lots 1 and 2 to ensure that this condition is met prior to the erection of a dwelling on Lots 1 and 2.

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 & 2 Deposit Plan 460298 and being a subdivision of Lot 1 DP 453032.

Dated this 26th day of February 2013

SIGNED for and on behalf of
the **WAIMAKARIRI DISTRICT COUNCIL**
pursuant to Section 252 of the
Local Government Act 1974



AUTHORISED OFFICER



Our Reference: RC135392/131125108599
Valuation Reference: 21580-212-11

25 November 2013

Scandlyn Surveying
C/- Resource Consent Services
2 Campbell Lane
OXFORD 7430

Attention: Kevin Felstead

Dear Kevin

**DECISION ON RESOURCE CONSENT APPLICATION
SCANDLYN SURVEYING – 14 HAYFIELD TERRACE SPRINGBANK**

Please find enclosed a copy of the decision reached by the District Plan 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



Jamie Woods
PLANNING OFFICER

Encl

CC: Murray Scandlyn



RC135392/131125108599

21580-212-11

WAIMAKARIRI DISTRICT COUNCIL

IN THE MATTER of the Resource Management Act 1991

AND

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

APPLICATION

The applicants sought a resource consent for a boundary adjustment to rectify a drafting error on DP460298 which incorrectly showed the north internal boundary of Lot 10 as aligning to the wrong survey mark, thereby excluding legal access to Lot 10. Building consent BC131744 for the erection of a dwelling on Lot 10 is currently being processed.

By amending the plan to include the correct alignment of the north boundary to Lot 10 legal access from the neck of the Hayfield Terrace cul de sac is attained, but resulting in a transfer of 673m² from Lot 19 to Lot 10.

The resulting lot areas will remain in excess of 4.0 ha.

DECISION

The District Plan Manager, on the 11th November 2013, approved:

THAT pursuant to Section 104B of the Resource Management Act 1991, consent be granted to undertake a boundary adjustment being the transfer of 673m² from Lot 19 to Lot 10 at 10 Hayfield Terrace and 14 Hayfield Terrace, Springbank, being Lot 19 LT460298 and Lot 10 LT460298 as a discretionary activity subject to the following conditions which are imposed under Section 108 of the Act:

1. The activity shall be carried out in accordance with the attached approved application plan.

REASONS FOR THE DECISION

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

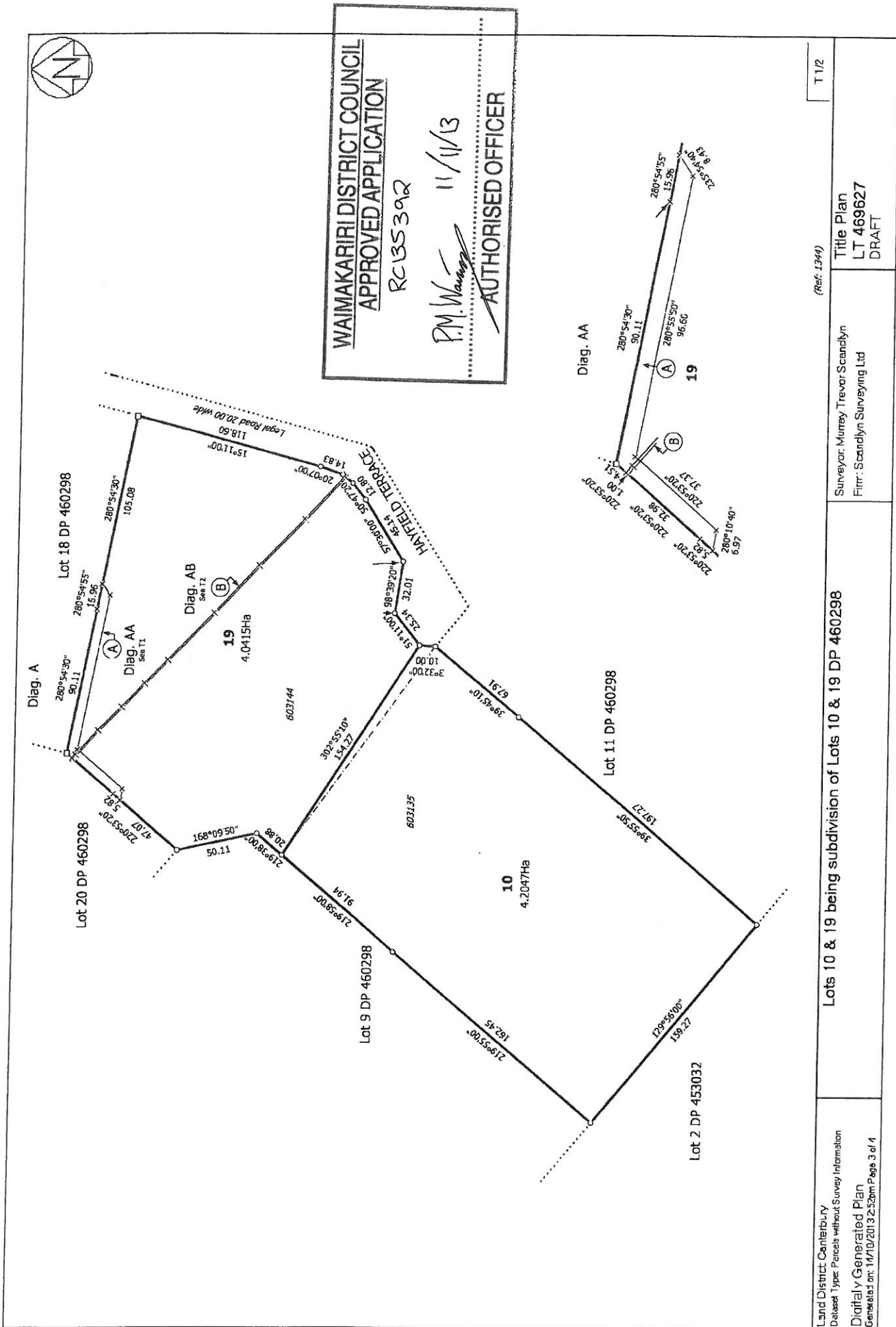
- Persons deemed to be adversely affected by the proposal have provided their consent.

- Conditions of the original Subdivision RC125093 have been completed and titles issued.

DATED at Rangiora this 25th day of November 2013



SIGNED by Jamie Woods
PLANNING OFFICER





WAIMAKARIRI

DISTRICT COUNCIL

RESOURCE MANAGEMENT ACT 1991

RIGHTS OF OBJECTION

The applicant may, within 15 working days after the decision being received by them, lodge an objection with the Council against one or more conditions of consent, in accordance with Section 357 of the Resource Management Act 1991.

The objection is required to be made by notice in writing to:

*The District Plan Manager
Waimakariri District Council
Private Bag 1005
RANGIORA 7440*

If you are in any doubt, as to the procedure to be followed, or any matter arising out of the same, it is strongly recommended that you seek professional advice.

LAPSING OF CONSENT

Attention is drawn to Section 125 of the Resource Management Act 1991 which provides that a resource consent shall lapse **five years** from the date of commencement of the consent or after the expiry of such shorter or longer period as is expressly provided for in the consent unless:

- (a) The consent is given effect to; or
- (b) An application is made to the consent authority to extend the period after which the consent lapses, and the consent authority decides to grant an extension after taking into account:-
 - (i) whether substantial progress or effort has been, and continued to be, made towards giving effect to the consent; and
 - (ii) whether the applicant has obtained approval from persons who may be adversely affected by granting of the extension; and
 - (iii) the effort of the extension on the policies and objectives of any plan or proposed plan.

OTHER LEGAL REQUIREMENTS

Section 23 of the Resource Management Act 1991 provides that compliance with the Resource Management Act 1991 (eg; by obtaining of an appropriate resource consent) does not remove the need to comply with all other applicable Acts, Regulations, Bylaws and rules of law.

Our Reference: RC135392/131202111168
Valuation Reference: 21580-212-11

2 December 2013

Scandlyn Surveying Ltd
P O Box 454
RANGIORA

Attention: M Scandlyn

Dear Murray

**SCANDLYN SURVEYING LTD – 14 HAYFIELD TERRACE, SPRINGBANK
SECTION 223 & 224C CERTIFICATION**

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

The 224c certification was also signed on the face of the plan.

Should you have any queries regarding the above, please do not hesitate to contact me on (03) 311-8900 ext 8885.

Yours faithfully



Sally Fear
PLANNING SECRETARY/ASSISTANT

Encl





Title Plan - LT 469627

Survey Number LT 469627
Surveyor Reference 1344
Surveyor Murray Trevor Scandlyn
Survey Firm Scandlyn Surveying Ltd
Surveyor Declaration

Survey Details

Dataset Description Lots 10 & 19 being subdivision of Lots 10 & 19 DP 460298
Status Initiated
Land District Canterbury
Survey Class Class B
Submitted Date
Survey Approval Date
Deposit Date

Territorial Authorities

Waimakariri District

Comprised In

CT 603144
 CT 603135

Created Parcels

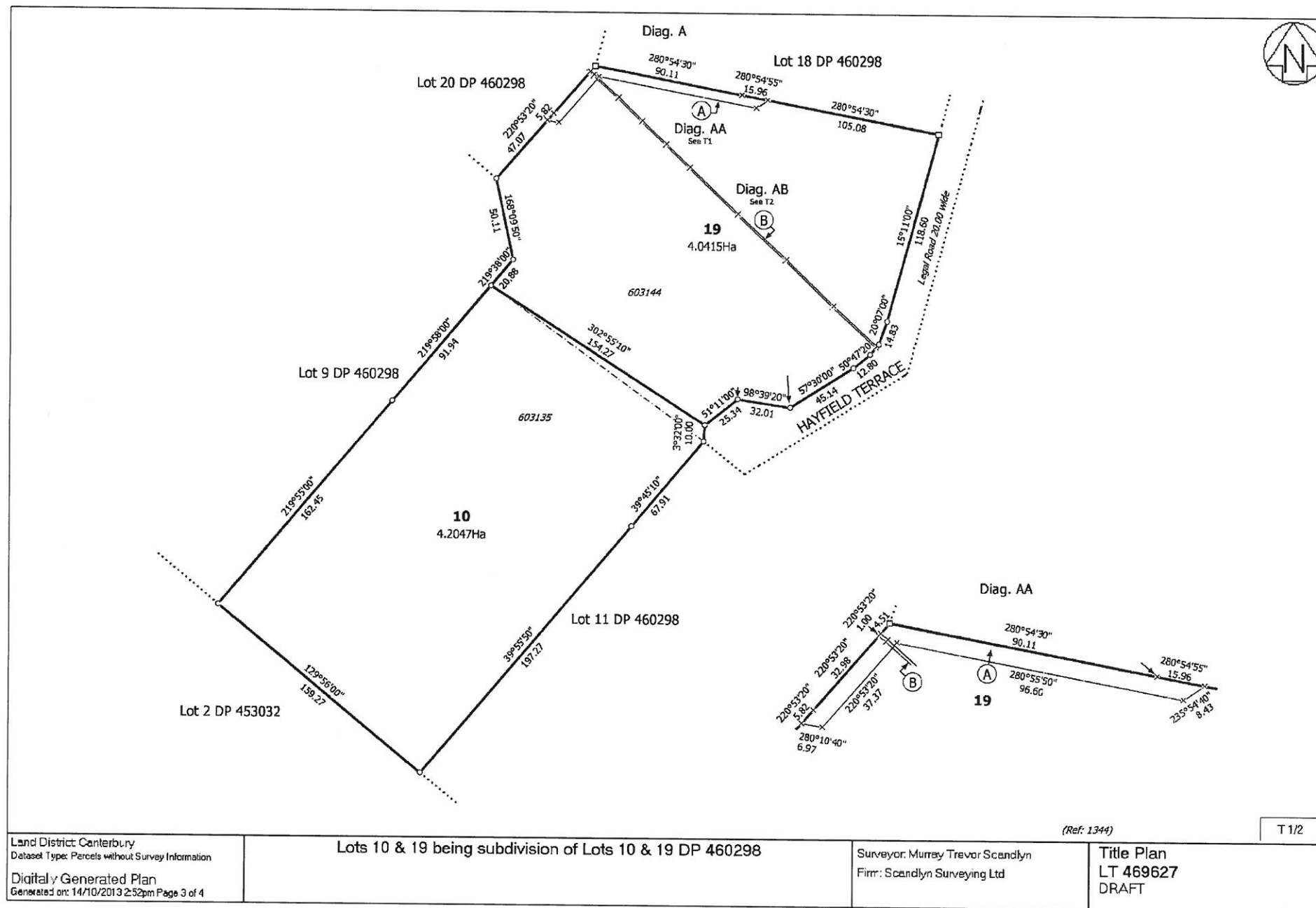
Parcels	Parcel Intent	Area	CT Reference
Lot 10 Deposited Plan 469627	Fee Simple Title	4.2047 Ha	632617
Lot 19 Deposited Plan 469627	Fee Simple Title	4.0415 Ha	632618
Area A Deposited Plan 469627	Easement		
Area B Deposited Plan 469627	Easement		
Total Area		8.2462 Ha	

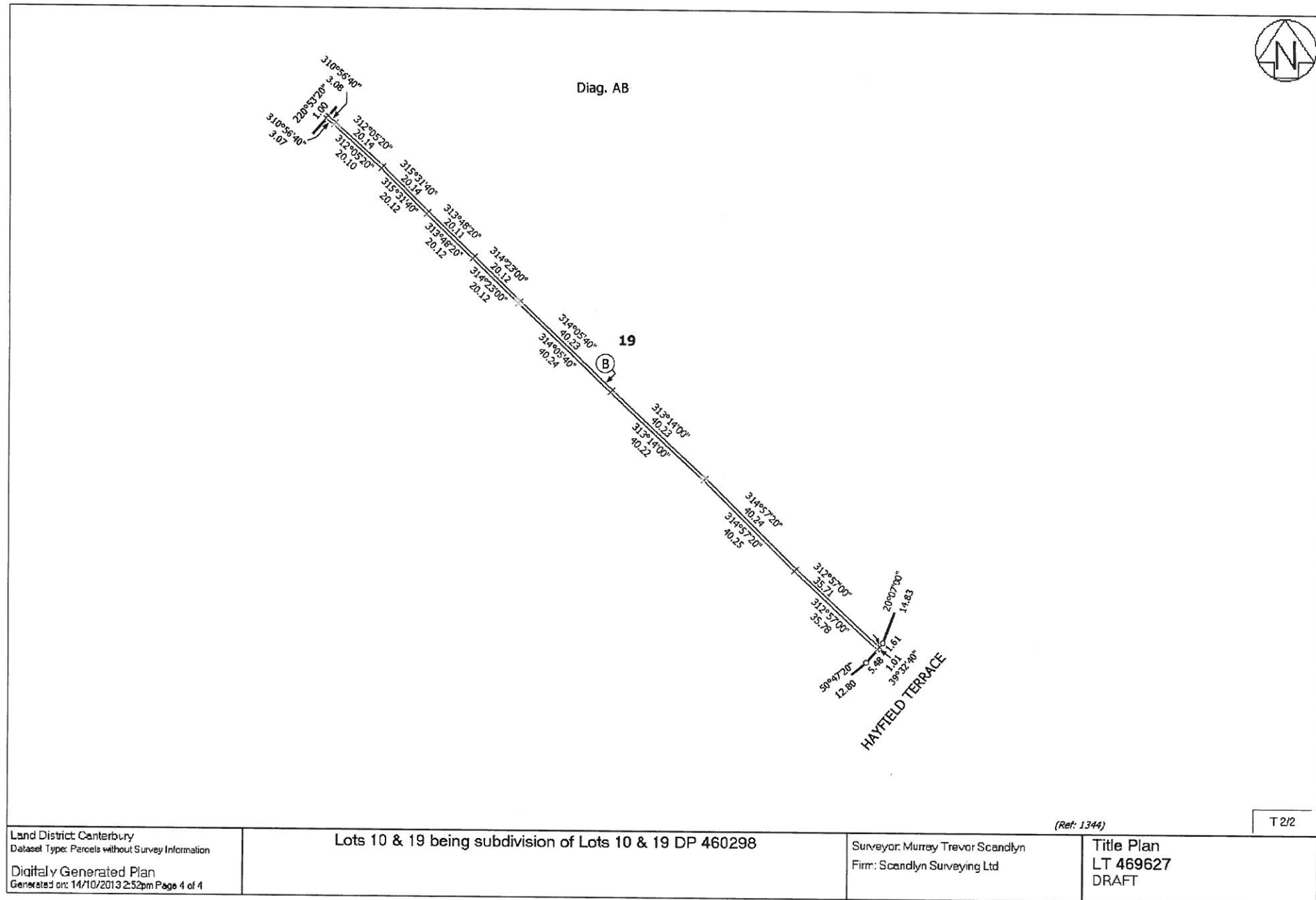
Schedule / Memorandum

Land Registration District	Plan Number	Surveyor Ref
CANTERBURY	DP 469627	1344

Territorial Authority (the Council)	Council Ref
Waimakariri District	

SCHEDULE OF EXISTING EASEMENTS			
Purpose	Servient Tenement		Document
	Shown	Lot	
Right to convey water	B	Lot 19	T 110079
Right to convey water in gross	A	Lot 19	EI 9326184.2







TA Approvals

Territorial Authority	Waimakariri District Council TA Certification Division	TA Reference	SGN Lot 10 & 19
Survey Number	LT 469627	Survey Purpose	LT Subdivision
Surveyor Reference	1344	Land District	Canterbury
Surveyor	Murray Trevor Scandlyn		
Surveyor Firm	Scandlyn Surveying Ltd		
Dataset Description	Lots 10 & 19 being subdivision of Lots 10 & 19 DP 460298		

TA Certificates

I hereby certify that plan DP 469627 was approved by the Waimakariri District Council pursuant to section 223 of the Resource Management Act 1991 on the 25th day of November 2013. ☒

Pursuant to Section 224(c) Resource Management Act 1991 I hereby certify that all the conditions of the subdivision consent have been complied with to the satisfaction of the Waimakariri District Council Dated this 25th day of November 2013. ☒

Signature

Signed by Yvonne Sally Fear, Authorised Officer, on 25/11/2013 08:47 AM

Receipt Information

Transaction Receipt Number	7571051
Signing Certificate (Distinguished Name)	Fear, Yvonne Sally
Signing Certificate (Serial Number)	1292428233
Signature Date	25/11/2013

*** End of Report ***



Legend

LM2601166 - Page 61

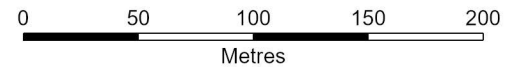
- Land Parcel
- Property Boundary

Author: Anthony Meier

Date: 25/06/2026

Scale 1:3,289

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, 2025 Urban and Rural Aerial Imagery, 2023 Birch Hill Cemetery UAV Imagery, 2022-23 Cust Cemeteries UAV Imagery, Waimakariri District Council

Form 7

Code compliance certificate 131491

Section 95, Building Act 2004

The building

Street address of building: 14 Hayfield Terrace, Springbank

Legal description of land where building is located: Lot 10 DP 460298

Valuation number: 2158021211

Building name:

Location of building within site/block number:

Level/unit number:

Current, lawfully established, use:

Year first constructed:

The owner

Name of owner: Cromie Colin Mervyn & Cromie Rosemary Patricia

Contact person: Colin Cromie

Mailing address: Trustees of the Colin Cromie Family Trust, PO Box 381, Rangiora 7440

Street address/registered office:

Phone number: Landline:

Mobile: 0273338989

Daytime:

After hours:

Facsimile number:

Email address: colin@rangvet.co.nz

Website:

First point of contact for communications with the council/building consent authority:

As above

Building work

Building consent number: 131491

Consent description: Shed

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

A handwritten signature in black ink, appearing to be 'SSmh', positioned above a horizontal line.

Signature

Building Administration

On behalf of: Waimakariri District Council

Date: 26/11/13

20.10.13

ISSUED CONSENT BC131491

Proposed Building C. Cromie

SITE PLAN

BC131491
LM2601166 - Page 64

Boundary 254 m.

131203112146

BC131491.02



TRIM Record Number

137 m.

North

Boundary 155 m

WAIMAKARIRI DISTRICT COUNCIL
Plans and specifications APPROVED in accordance
with the Building Act 2004, clause 49 and the Building
Regulations 1992, Clause 3
131491 13/09/2013 nicolah

137 m.

128 m.

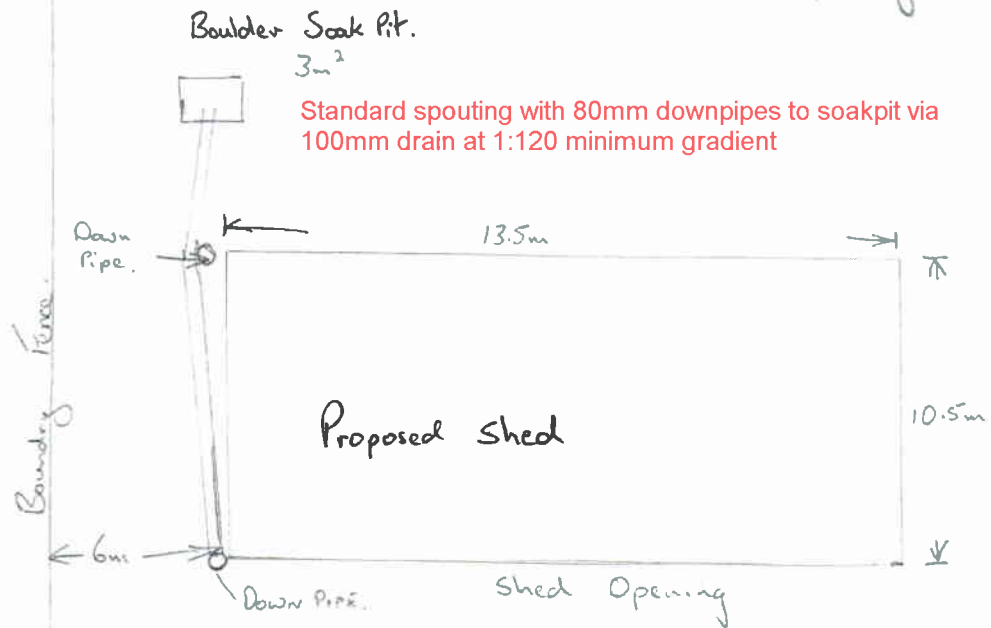
6 m.

Boundary 265 m.

Entrance

Proposed Stormwater plan for
14 Hayfield Terrace
Springbank Downs

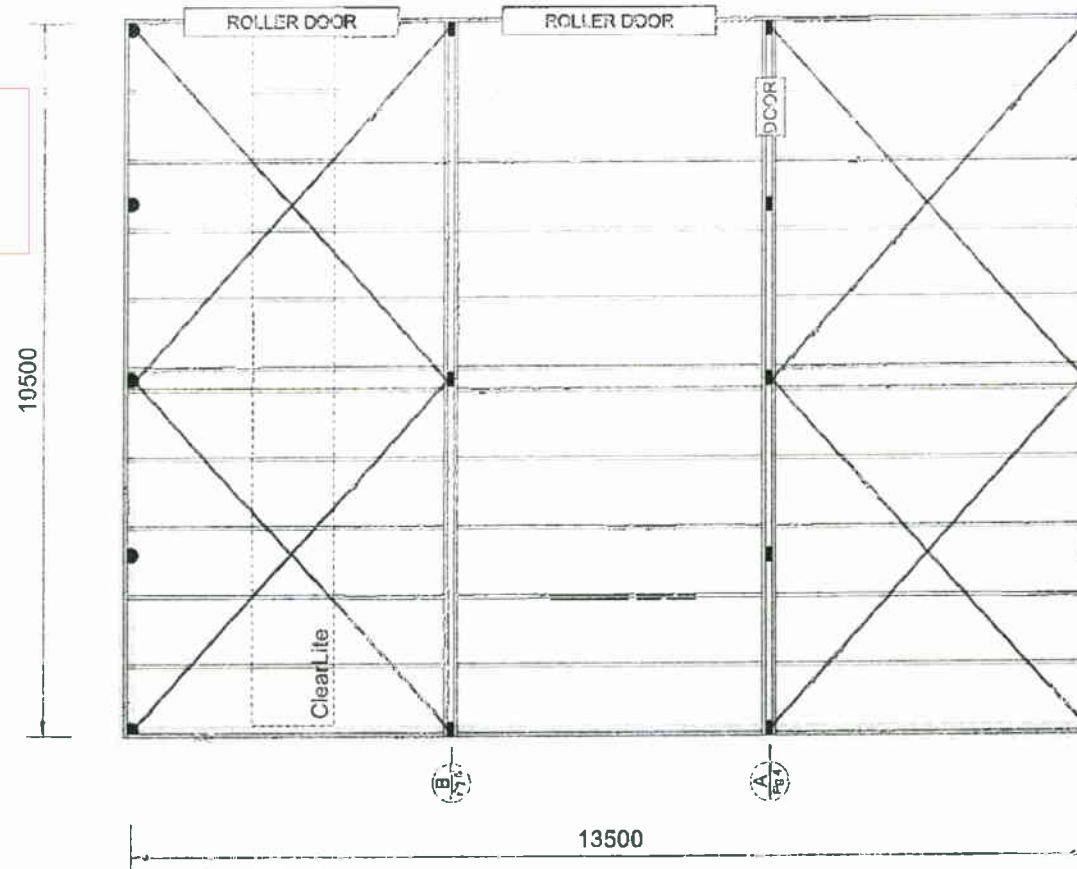
Colin & Anna Crowie.



WAIMAKARIRI DISTRICT COUNCIL
Plans and specifications APPROVED in accordance
with the Building Act 2004, clause 49 and the Building
Regulations 1992, Clause 3
131491 13/09/2013 nicolah

11

WAIMAKARIRI DISTRICT COUNCIL
Plans and specifications APPROVED in accordance
with the Building Act 2004, clause 49 and the Building
Regulations 1992, Clause 3
131491 13/09/2013 nicolah



Pitch = 3.27 deg. by others.

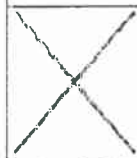
Revision	Date	Amendment
A	5/08/13	- Dimensions Corrected
B	3/09/13	- Address modified

Regarding any future alterations to this shed:

If at any time the cladding (internal or external) needs to be removed from a wall along a rafter, rafter props must be added.

If this is the case please contact MiTek Farm Buildings for further information.

= CLAD WALLS



Single row of tensioned Multibrace laid over purlins. Fix at each end with 11x30x3.15 nails and 3 at each purlin crossing.

● POLE □ COLUMN

Wind Load: Very High

Sg = 1.35 kPa

Earthquake Zone: 2

Rafter Span: 5050mm

Pole/Bay Spacing: 4500mm

Girt Size: 200 x 50mm

Girt Centres: 1100mm

Purlin Size: 200 x 50mm

Purlin Centres: 980mm

Rafter Size: 300 x 50mm

Pole Size: 175mm SED

Pole Embedment Depth: 1200mm

Column Type: Round Pole

Int. Pole Size: 150mm

Props Required: 1 per span

Max. Pole Height: 4200mm

Lower Pole Height: 3900mm

Floor Type: Earth

Rough Sawn Heartland Verified Grade



MiTek New Zealand Ltd.

AUCKLAND
PO Box 8814, Ormerod Road
Phone: 09 274 2100
Fax: 09 274 2101

CRETECHURCH
PO Box 103, Harewood
Phone: 0438 8281
Fax: 0438 8284

1 KING OF GANG-NAIL BUILDING SYSTEMS

Job Name: C CROMIE

Job Site: 14 Hayfield Tce, Springbank

Client Name:

Newble Timber ITM

Client Reference Number:

4978

PLAN

Designed by:

C Richards

Date:

1 / 08 / 13

Checked by:

Scale:

Drawings to scale

Job Number:

LT24885 B

Sheet Number:

1

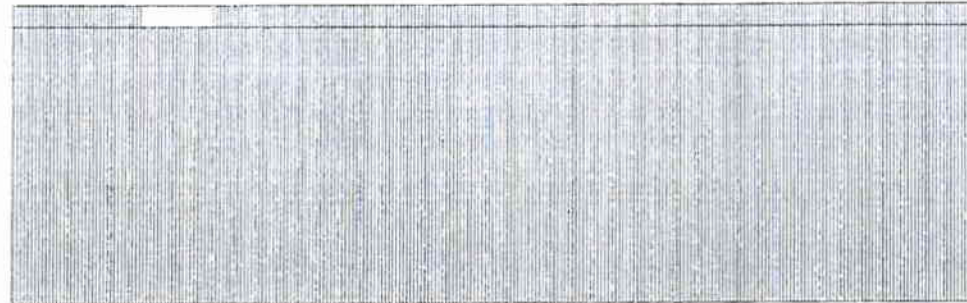
NOTES:

Exterior Cladding
Corrugated Colorsteel
endura.

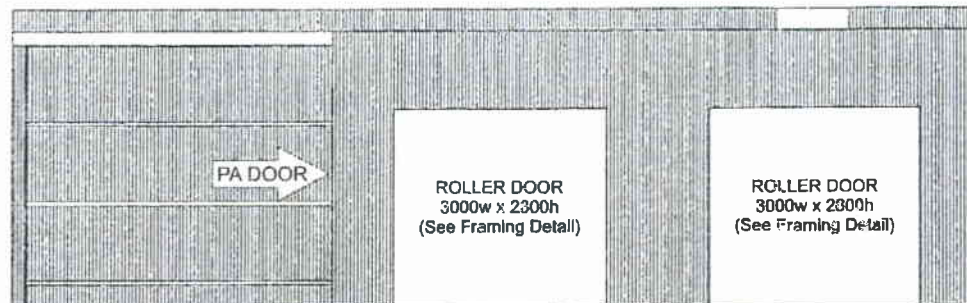
Poles H5 Treatment
All other timber H3.2
Treatment.

Marley Spouting with
80mm outlet.

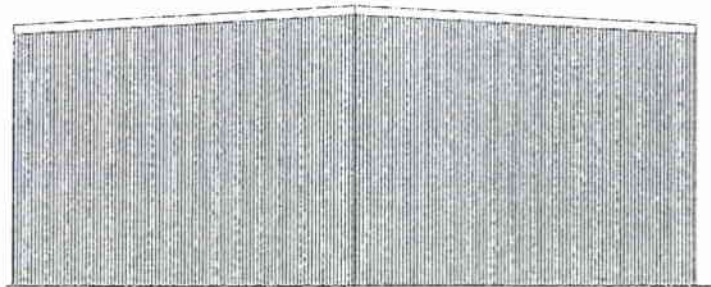
N.B. This design does not include any
design or detail of flashing requirements.



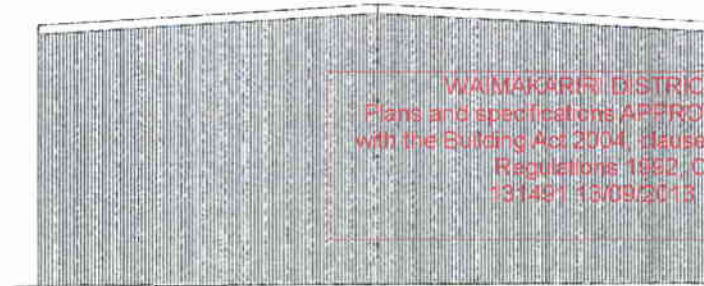
REAR ELEVATION



FRONT ELEVATION



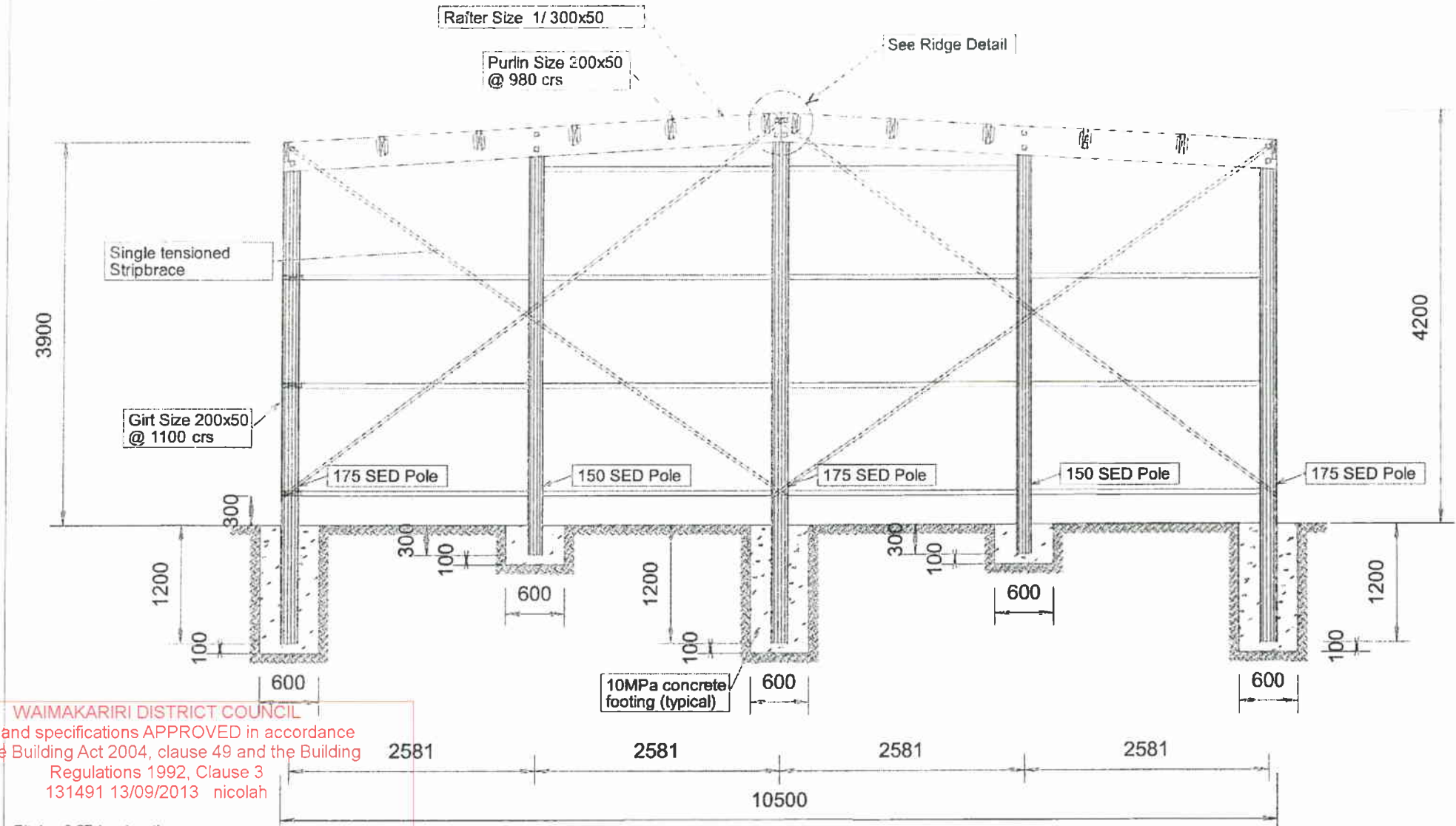
LEFT END ELEVATION



RIGHT END ELEVATION

WAIMAKARIRI DISTRICT COUNCIL
Plans and specifications APPROVED in accordance
with the Building Act 2004, clause 49 and the Building
Regulations 1982, Clause 3
131491 13/09/2013 nicolah

Note: Girt pattern may vary, as long as spacings do not exceed 1100.



WAIMAKARIRI DISTRICT COUNCIL

Plans and specifications APPROVED in accordance with the Building Act 2004, clause 49 and the Building Regulations 1992, Clause 3 131491 13/09/2013 nicolah

Pitch = 3.27 deg. by others.



MITek New Zealand Ltd.

AUCKLAND
103-105 Broadfield, Commercial Centre
Phone: 09 234 1111
Fax: 09 234 1111

CHRISTCHURCH
100-102 Main Street, The Arcade
Phone: 03 366 0000
Fax: 03 366 0000

MAKING OF GANG-NAIL BUILDING SYSTEMS

Job Name: C CROMIE

Job Site: 14 Hayfield Tce, Springbank

Client Name:

Newble Timber ITM

Client Reference Number:

4978

LEFT END ELEVATION

Detailed by:
C Richards

Date:
1 / 08 / 13

Checked by:

Scale:
Drawings to scale

Job Number:

LT24885 B

Sheet Number:

3

Pitch = 3.27 deg. by others.

**MITek New Zealand Ltd.**

AUCKLAND
P.O. Box 90-872, Onehunga Rd.
Phone: 674 7113
Fax: 674 7113

DEFUSITION
1500m 400, 1100m 400
1700m 100 305 0500
1800 100 304 0504

ONE OF GANG-NAIL® BUILDING SYSTEMS

Job Name: C CROMIE

Job Site: 14 Hayfield Tce, Springbank

Client Name:

Newble Timber ITM

WAIMAKARIRI DISTRICT COUNCIL

Plans and specifications APPROVED in accordance
with the Building Act 2004, clause 49 and the Building
Regulations 1992, Clause 3

013 nicolah
C Richards

Checked by:

Client Reference Number:
4978

CENTRE SECTION A

Date: 1 / 08 / 13

Scale:
Drawings to scale

Job Number:

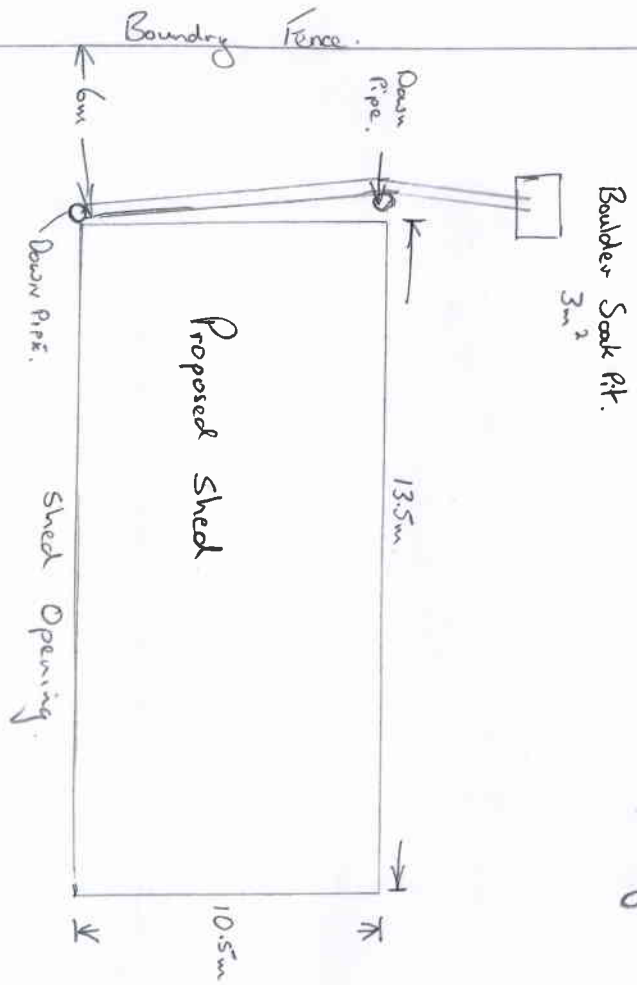
LT24885 B

Sheet Number:	
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4

Proposed Stormwater Plan for
14 Hayfield Terrace
Springbank Downs.

Colin & Anna Cromie.



7

Form 7

Code compliance certificate 131744

Section 95, Building Act 2004

The building

Street address of building: 14 Hayfield Terrace, Springbank

Legal description of land where building is located: Lot 10 DP 460298

Valuation number: 2158021211

Building name:

Location of building within site/block number:

Level/unit number:

Current, lawfully established, use:

Year first constructed:

The owner

Name of owner: Cromie Colin Mervyn & Court Rosemary Patricia

Contact person:

Mailing address: Trustees of the C. M Cromie Family Trust, PO Box 381, Rangiora 7440

Street address/registered office:

Phone number: Landline:

Mobile: 0273338989

Daytime:

After hours:

Facsimile number:

Email address: colinc@rangvet.co.nz

Website:

First point of contact for communications with the council/building consent authority:

Full Name: Taylor Homes Ltd

Mailing Address: PO Box 578, Rangiora 7440

Phones:: 0273133044

Fax: 033139277

Email: david@taylorhomes.co.nz

Building work

Building consent number: 131744

Consent description: Dwelling With Attached Garage And Rinnai Compact 2 Inbuilt Gas Fire

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

A handwritten signature in black ink, appearing to be 'SS mh', is written above a horizontal line.

Signature

Building Administration

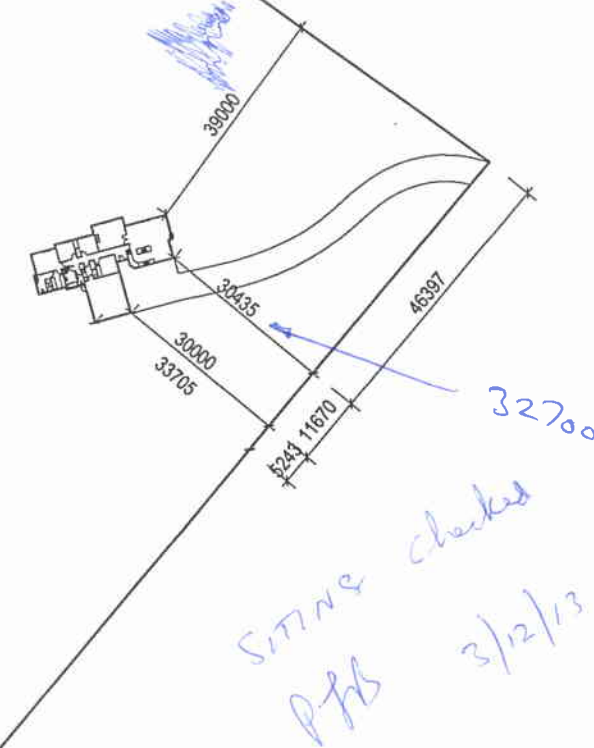
On behalf of: Waimakariri District Council

Date: 11/04/14



Lot 10
DP 460298

Oxford Road
CUST



WAIMAKARIRI DISTRICT COUNCIL
Plans and specifications APPROVED in accordance
with the Building Act 2004, clause 49 and the Building
Regulations 1992, Clause 3
BC131744 28/11/2013 kathys

Copyright: The copyright of this drawing is the property of TAYLOR HOMES. No part of it may be reproduced by photocopying or by any other means and must not be passed on to a third party without prior written consent of the manager of TAYLOR HOMES

	job title: CROMIE HOUSE	drawing title: LOCATION PLAN	legal description: LOT 10 DP 460298 Oxford Road CUST	WORKING DRAWINGS SUBJECT TO COUNCIL APPROVAL ALL MEASUREMENTS TO BE CONFIRMED ON SITE BY CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORK DO NOT SCALE FROM DRAWINGS UNDER ANY CIRCUMSTANCES	scale: 1:1250	page: 01 of: 20 DATE: 09/09/13
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SANITARY FIXTURE	MIN PIPE DIA	MIN GRADE
Basin	32mm	1:20
Bath	40mm	1:40
Washing Machine	40mm	1:40
Kitchen Sink / Dish Washer	50mm	1:40
Laundry Sink	40mm	1:30
Shower	40mm	1:40
WC	100mm	1:60
SEWER PIPE	100mm	1:60
STORMWATER PIPE	100mm	1:120

SANITARY FIXTURE	FLOW RATE/TEMP	PIPE DIAMETER
Bath	0.3 at 45°C	15mm
Sink	0.2 at 60°C (hot)	15mm
	0.2 (cold)	15mm
Laundry Tub	0.2 at 60°C (hot)	15mm
	0.2 (cold)	15mm
Basin	0.1 at 45°C	10mm
Shower	0.1 at 42°C	20mm

PIPE DIAMETER	MAXIMUM DISTANCE BETWEEN SUPPORTS (mm)	
	VERTICAL PIPE	GRADED PIPE
32 to 50	1000	500
65 to 100	1200	1000
Greater than 100	1800	1200

Fall Drive towards Gardens
& Grassed areas as much as
possible for water run off

ALLOW FOR STEPS OR LANDSCAPING TO
ALL EXTERNAL DOORS SO STEP FROM FFL
NO GREATER THAN 190mm (100mm min)

CLEARANCES:

FFL to Ground = 200mm min (Brick)
FFL to Ground = 225mm min (Linea)

Fall Ground away from building at 1:30 for atleast 1m

FFL to Paving = 150mm min
Fall Paving away from building

Anti-slip: on all access routes both internal &
external, provide Anti-slip surface complying with
NZBC D1/AS Table 2 (except surfaces in side Entry
Doors of housing maybe considered dry areas)

Relief GT - top of GT to be + 0.225 = FFL
150mm below overflow level - 0.020 = Shower recess
of lowest sanitary fixture. - 0.150 = Shower Recess to Top GT
FGL around Relief GT to be no - 0.100 = Top GT to FGL
higher than -0.045 (0.025 if paved) - 0.045 = FGL

Soak Pit
139.3m² Roof Area
2m² Min Base Area

Soak Pit
133.3m² Roof Area
2m² Min Base Area

EACH SOAKPIT TO BE 1.2m MIN DIAMETER 2.4m
DEEP AS NOTED BY BRIAN SPENCE ENGINEER

VENT PIPES:
Discharge Pipes upto 40mm dia = 32mm Vent Pipe
Discharge Pipes over 40mm dia = 40mm Vent Pipe
Main Drain Vent Pipe = 80mm Vent Pipe

Main Vent (MV) to terminate either:
- 3.0m above ground level
- 600mm above windows / openings
- 150mm above roof
- 600mm above eaves / parapets

HWC Relief Drain = 20mm Copper Pipe

All pipes in Concrete to have Densio Tape (synthetic fabric based tape
impregnated and coated with organic petroleum based compounds)
applied

Pipes shall incorporate expansion joints in accordance with Chapter 8 of
NZS7643

Hot water pipes to be sized according to NZBC G12 & NZS 4305:1196.
Mains Pressure: 15mm dia allows 12m max pipe length. Pipe length
beyond this must be lagged

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Taylor Homes
Dream. Plan. Build.

job title:
CROMIE HOUSE

drawing title:
SITE PLAN

legal description:

LOT 10 DP 460298
Oxford Road
CUST

WORKING DRAWINGS
SUBJECT TO COUNCIL APPROVAL

ALL MEASUREMENTS TO BE CONFIRMED
ON SITE BY CONTRACTOR PRIOR TO
THE COMMENCEMENT OF WORK

DO NOT SCALE FROM DRAWINGS UNDER ANY
CIRCUMSTANCES

scale:

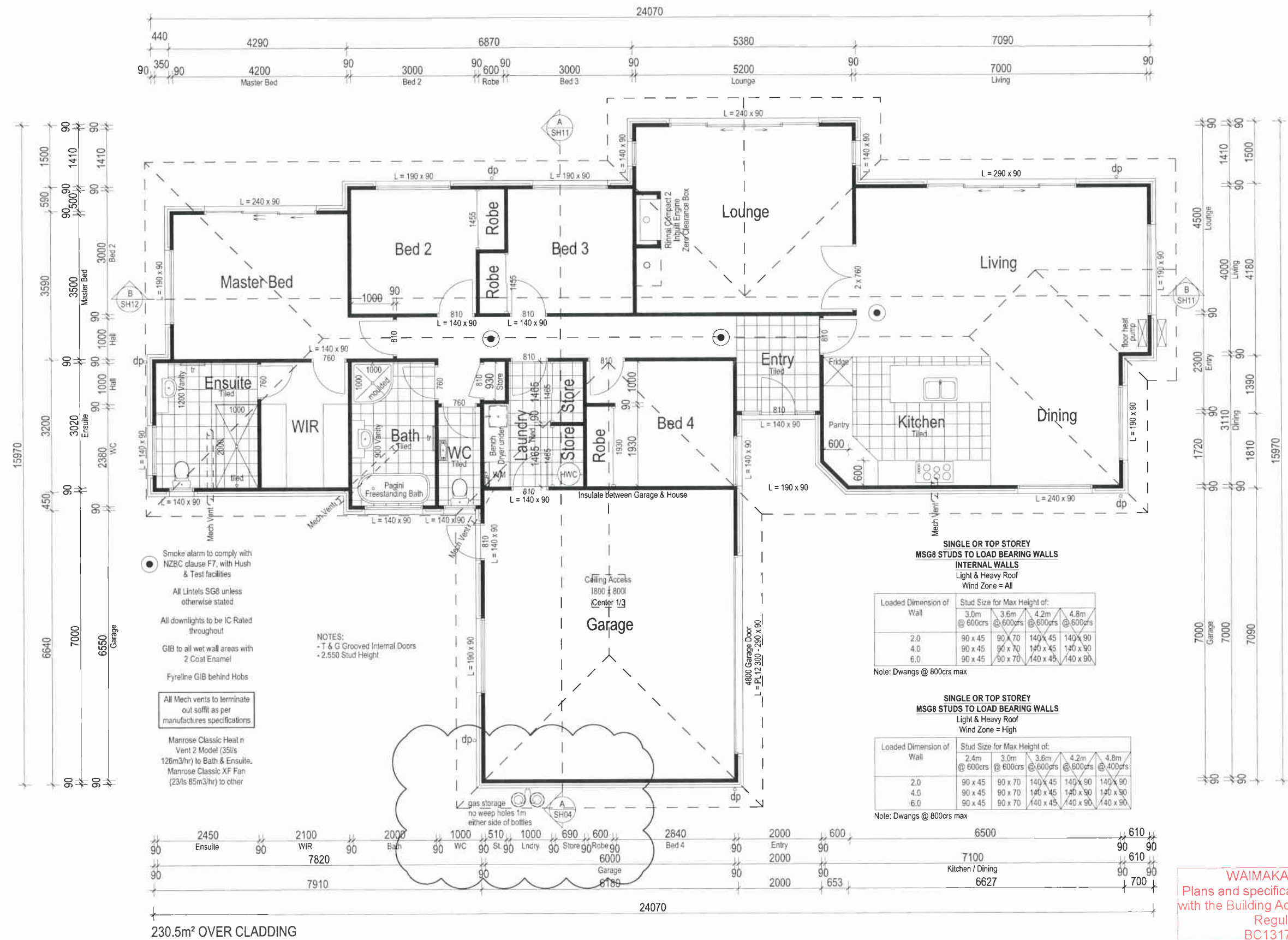
1:200

page:

02
of 20

DATE: 09/09/13

Building Consent BC131744
Received 7/11/2013



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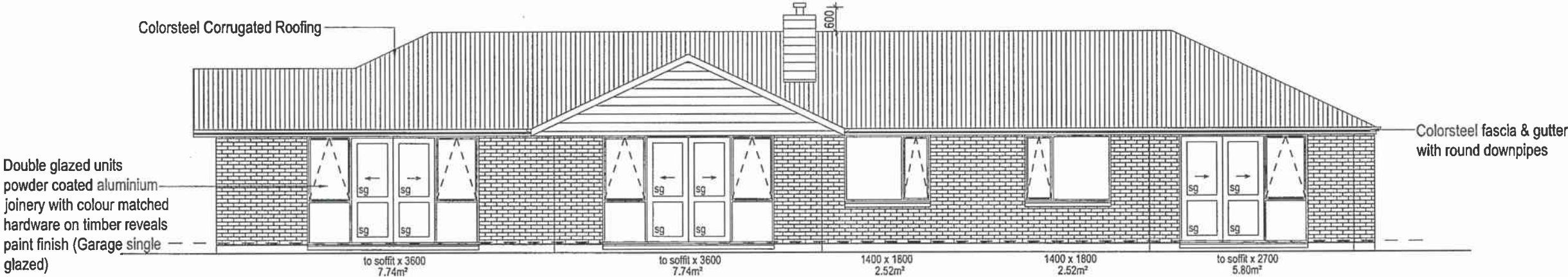
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EAST ELEVATION
Window Area: 8.33m²

- "A Grade" safety glass (sg)
- WANZ support bar to all doors & windows
- Brick ties to be Hot Dip Galvanised at 600crs Horizontal & 350crs Vertical max
- Tyvek Straps horizontally 300mm crs max to prevent insulation bulging

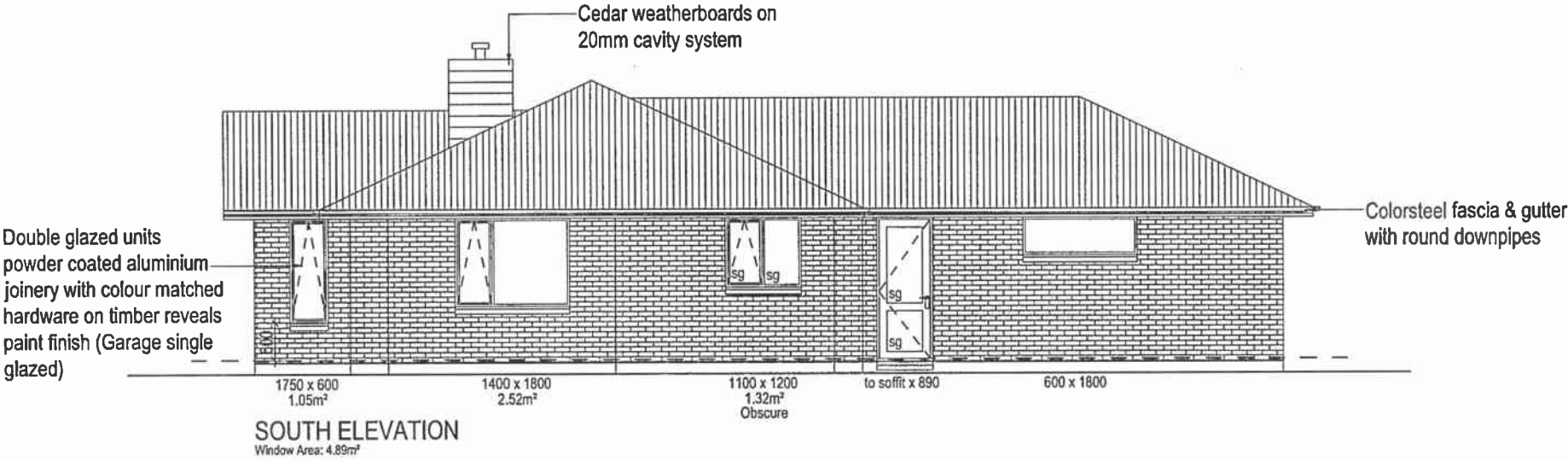
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NORTH ELEVATION
Window Area: 26.32m²

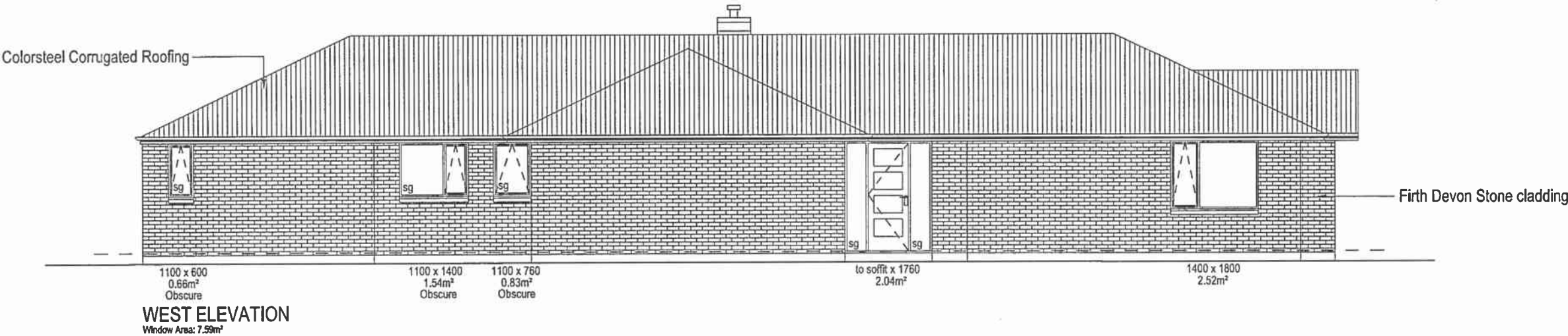
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- "A Grade" safety glass (sg)
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job title:
CROMIE HOUSE

drawing title:
ELEVATIONS

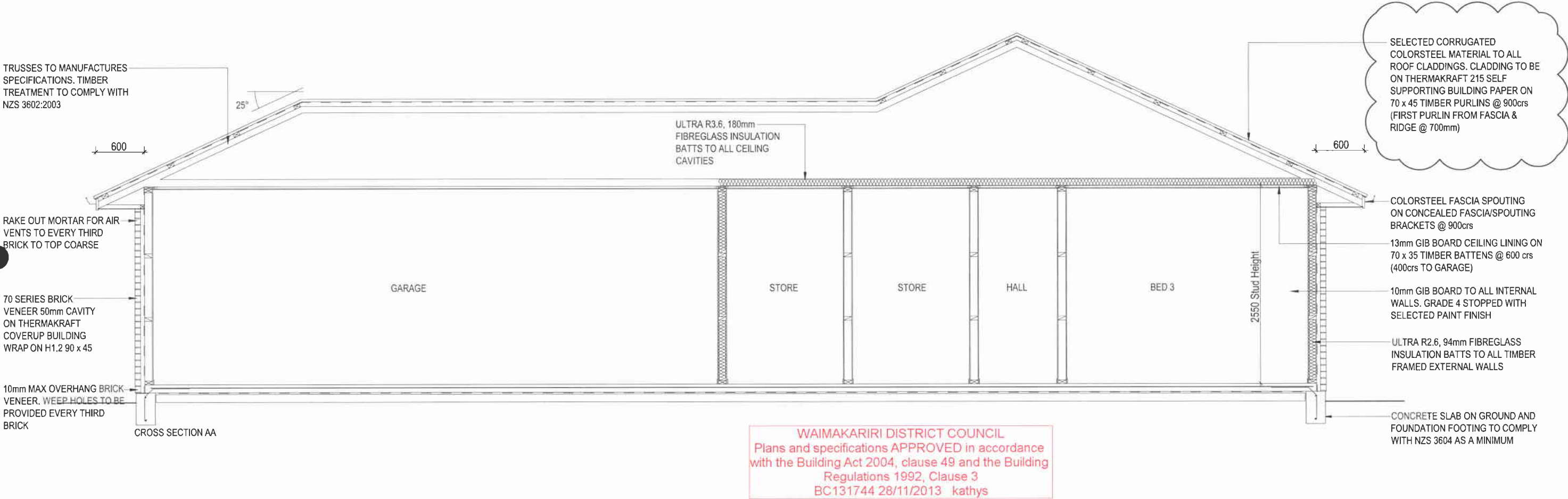
legal description:
LOT 10 DP 460298
Oxford Road
CUST

WORKING DRAWINGS
SUBJECT TO COUNCIL APPROVAL
ALL MEASUREMENTS TO BE CONFIRMED
ON SITE BY CONTRACTOR PRIOR TO
THE COMMENCEMENT OF WORK
DO NOT SCALE FROM DRAWINGS UNDER ANY
CIRCUMSTANCES

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of: 20
DATE: 09/09/13

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SPECIFIC SCHEDULE OF TIMBER TREATMENT			
ELEMENT	SPECIES	TREATMENT	ELEMENT
ROOF FRAMING, TRUSSES	KILN DRIED & GAUGED RADIATA PINE	H1.2	- ALL TIMBER USED IS TO BE TREATED AS REQUIRED BY NZS3602:2003, THIS TABLE IS INTENDED AS A SUMMARY OF THESE REQUIREMENTS ONLY. - TREATMENT LEVELS SHOWN ARE THE MINIMUM LEVEL REQUIRED. HIGHER TREATMENT LEVELS MAY BE USED IF APPROPRIATE.
INTERIOR WALL FRAMING	KILN DRIED & GAUGED PINUS SPECIES	H1.2	
EXTERIOR WALL FRAMING (REFER TO NZS3602:2003 FOR CLARIFICATION)	RADIATA PINE	H1.2 H3.1 Bottom Plate	
WALL CAVITY BATTENS	RADIATA PINE	H3.1	
ALUMINIUM WINDOW REVEALS	RADIATA PINE	H3.1	

TIMBER TYPE:
EXTERIOR & LOAD
BEARING FRAMING = SG 8
INTERIOR NON LOAD
BEARING FRAMING = SG6
LINTELS = SG 8
TRUSSES = SG 8

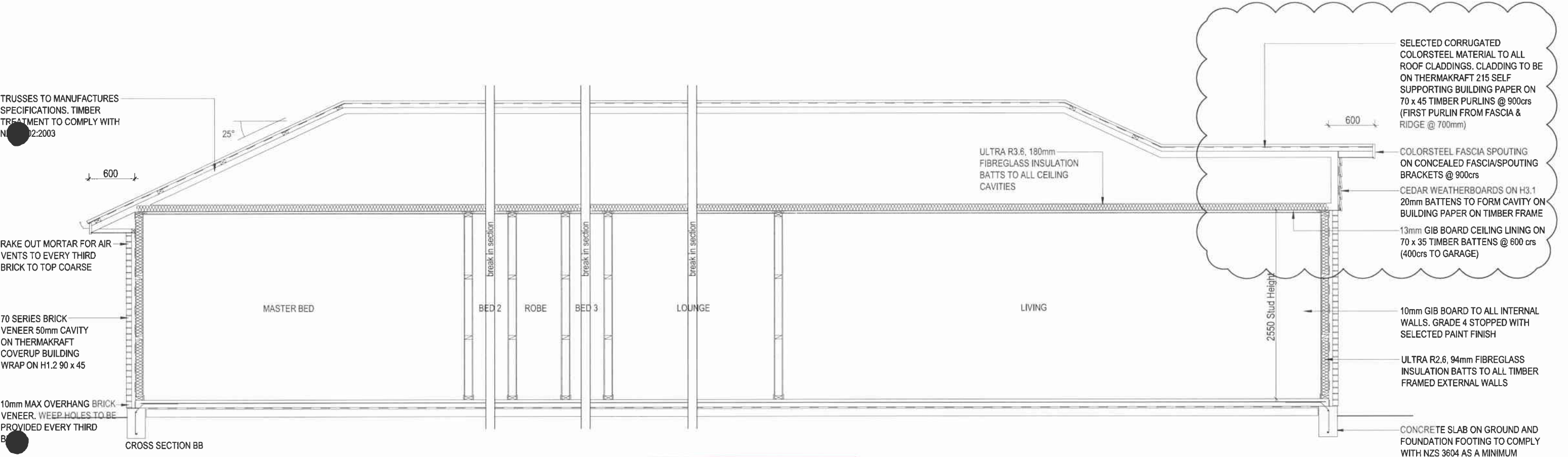
TRIMMED INSULATION AREA (90mm rafter & R3.6 batts 180mm)				
Roof Pitch	Cut Height	Cut Width	% of batt cut	New R Value
15	80	372	44.44%	1.6
20	87	255	48.33%	1.74
25	95	182	52.78%	1.9
30	105	130	58.33	2.1

STEEL PROTECTION FOR FIXINGS & FASTENINGS - ZONE B & C		
FIXING FASTENING	ENVIRONMENT	MATERIAL
Nail Plates	Closed & Roof Space	Continuously coated galv steel
Wire Dogs & Bolts	Closed & Roof Space	Hot-dipped galv steel
All strutral fixings	Sheltered	Hot-dipped galv steel
	Exposed	Type 304 stainless steel
Nail/Screw for bracing		Galv steel
Nail/Screw for non-structural cladding		Galv steel
Nail/Screw for framing	Closed & Roof Space	Mild steel
	Sheltered	Galv steel
	Exposed	Galv steel

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	CROMIE HOUSE	SECTION AA 23/10/13 REV A - Notes updated	LOT 10 DP 460298 Oxford Road CUST	SUBJECT TO COUNCIL APPROVAL ALL MEASUREMENTS TO BE CONFIRMED ON SITE BY CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORK DO NOT SCALE FROM DRAWINGS UNDER ANY CIRCUMSTANCES	1:50	11a of: 20 DATE: 09/09/13

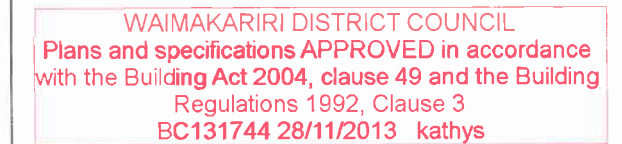
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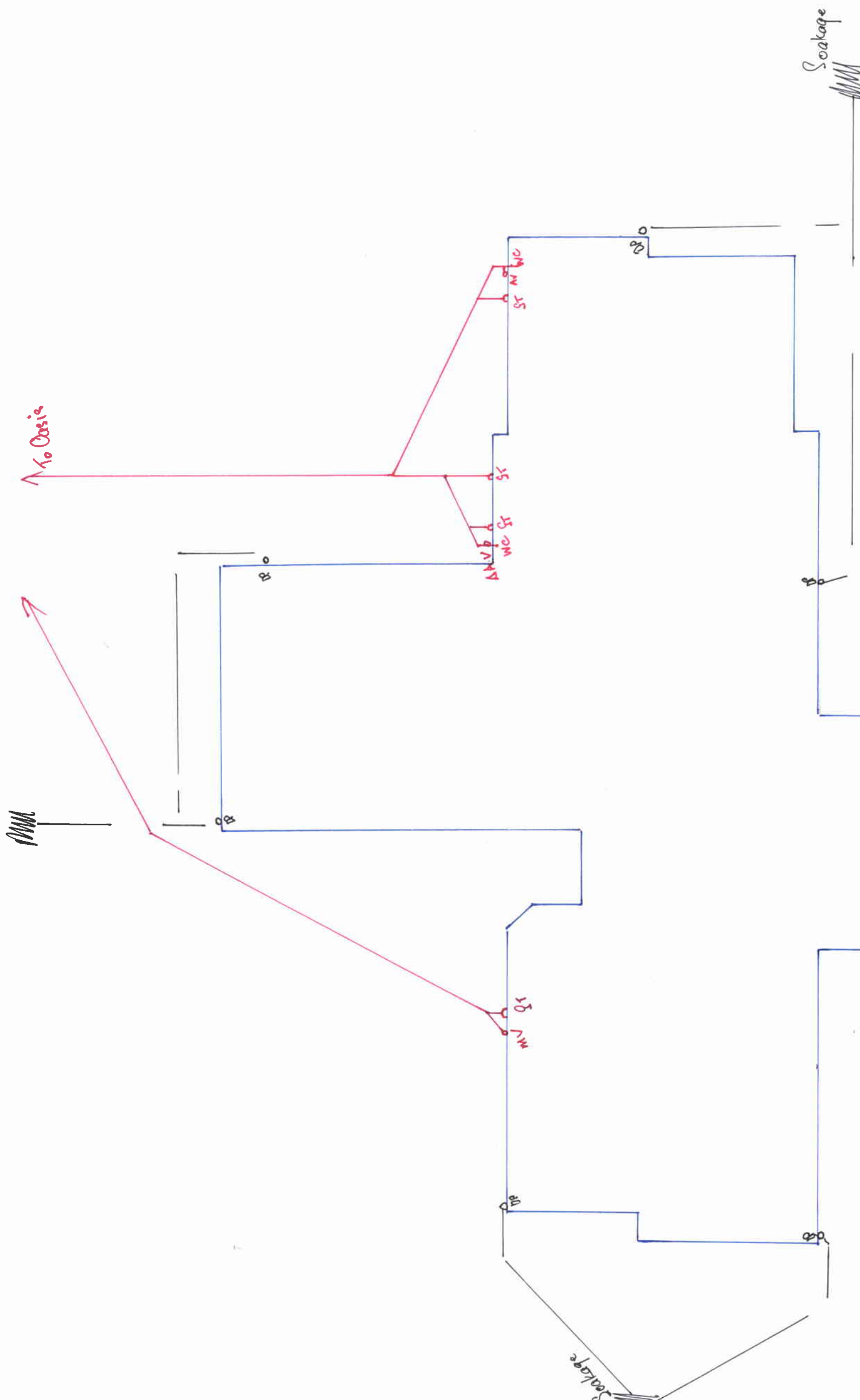
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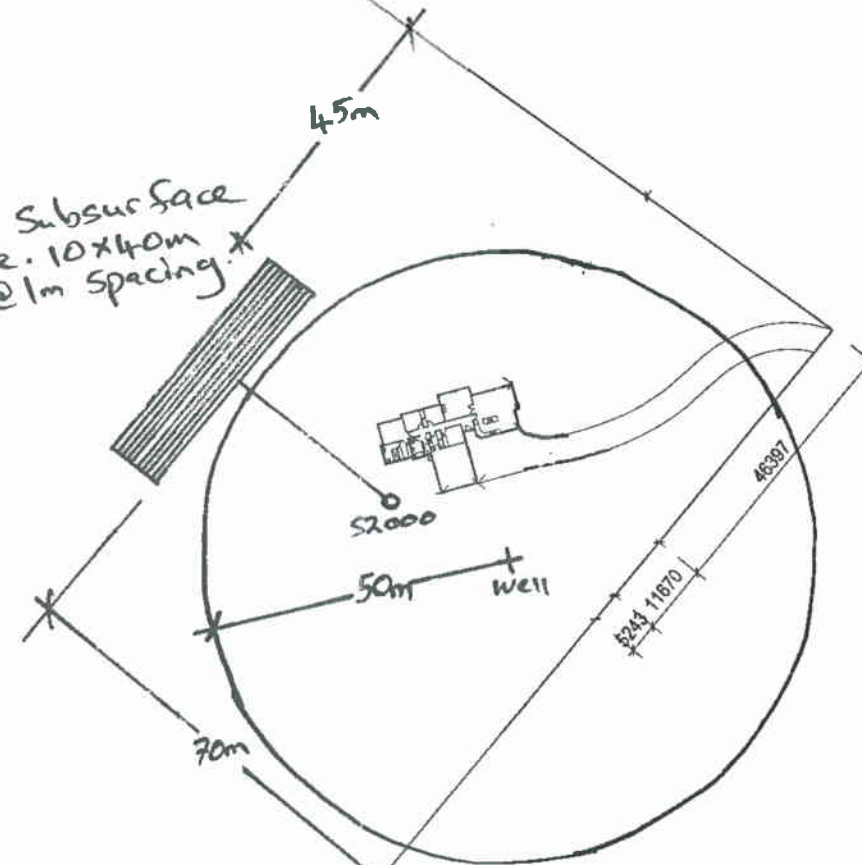
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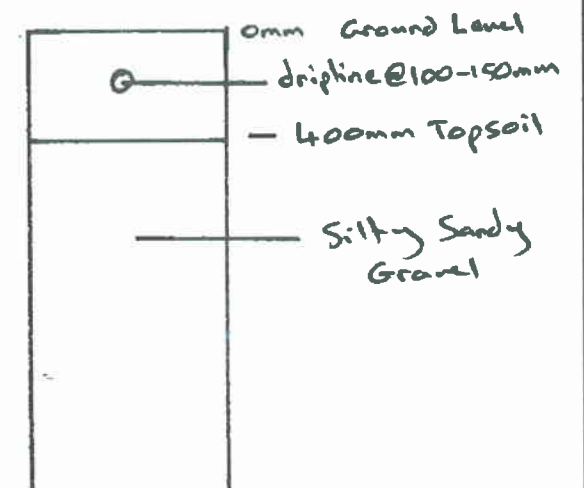
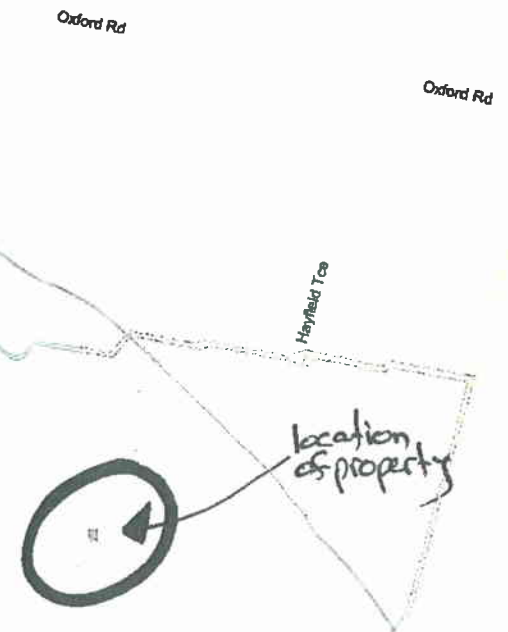
DATE: 09/09/13



LEGEND: SEWER ——— STORMWATER ———		DRAINAGE PLAN	
SCALE: 1 - 100		DRAWN BY: <i>Les Crosswell</i>	
NAME: <i>C. Cromie</i>		JOB N°: <i>131744</i>	
ADDRESS: <i>14 Hayfield Terrace Springbank lot 10</i>		VAL N°: <i>2158021211</i>	
DRAINLAYER: <i>B Norton 12037</i>		INSPECTED: <i>J. M'S.</i>	
		DATE DRAWN: <i>22. 4. 14</i>	

Building Consent BC131744
Received 30/10/2013Lot 10
DP 460298Oxford Road
CUST400m Subsurface
dripline. 10x40m
lines @ 1m spacing.

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Christchurch Head Office
PO Box 16-276 Hornby
CHRISTCHURCH 8441
Phone: 03 344 0262
Fax: 03 344 0267
DISTRIBUTORS NATIONWIDE

The Contractor shall
verify all dimensions
before starting work.

C Cromie
14 Hayfield Terrace
Lot 10 DP 460298

ENG. DM
DRN. DM
SCALE: 1:1250
DATE: 23/10/13

JOB NUMBER:

5295

REVISION



GAS SAFETY CERTIFICATE

(Pursuant to the Building Act 2004)

This certificate is not transferable

www.certsonline.co.nz

PHS Plumbing and Heating
Services

Tel 0276460040

93, Riverside Road, Okuku,
RD3 Rangiora, 7444, NZ

Consumer: Colin Cromie Certificate Number: 18932-11 Test Result: 7 min Duration
 Installation Address: 14, Hayfield Terrace Gas Supplier: Rockgas 29.3kPa test pressure
 Spring Bank Category: Gasfitters 0.0kPa Loss / Gain
 Rangiora Type (Regulation 44(1)): New 28.4kPa Working pressure
 Vehicle Registration: Gas Type: LPG Other Testing:
 Vessel Registration: Certification Date: 2014-03-25 Test/Completion Date: 2014-03-25

DESCRIPTION OF GASFITTING TO WHICH THIS CERTIFICATE APPLIES

- ☒ Includes Pipework Installation
☐ Includes work on an appliance or fitting, imported or manufactured, for consumers own use
☒ This certificate relates to the whole of the gas installation or ☐ Just to specified parts of it

Qty	Item Type	Item Location	Make/Model	Input Rate	Flue Type	Flue Location	Vent Type	Vent Location
1	Decorative fires	Lounge	Rinnai Compact	25mj/h	Natural Draught Flue (Open)	Roof	Natural	
1	Freestanding cooker	Kitchen	De Longhi DEF905GW1	38.9mj/h	Unflued		Natural	

I certify that:

- I Certify that all appliances and fittings worked on by me or by persons working under my supervision are safe to connect to a gas supply and that all work carried out was in accordance with all applicable requirements of the Gas Act 1992 and Gas (Safety and Measurement) Amendment Regulations 2012
- I Certify that work required complies with standards in addition to AS/NZS 5601.1 or AS/NZS 5601.2 (as applicable), and are referenced in the Additional Information text.
- I Certify that all Gasfitting Work has been done in accordance with sections 3 to 6 of AS/NZS 5601.1
- I Certify that all Gasfitting Work has been done in accordance with the certified design and/or manufacturer's instructions for the gas installation or part installation and the manufacturer's and/or certified design compliance documents are attached, or an electronic location referenced on this Certificate.
- The gasfitting work has been done lawfully & safely and is connected to a gas supply & all information entered in this certificate is correct.
- I Certify that all Gasfitting Work has been done in accordance with sections 3 to 9 of AS/NZS 5601.2.

Installer(s) supervised by certifier

Name: Chris Davies (18932)

Certificate Owner

Name: Davies Christopher
Edward(18932)Employer 18932
License No:Company: PHS Plumbing and
Heating Services

Certifier

Name: Davies Christopher
Edward(18932)Employer
License 18932

No:

Signed:

Managing a Private Water Supply Well



This brochure provides information for private water supply well owners in the Waimakariri District, to help ensure the water supplied to their home is safe to drink.

Managing the water supply for yourself, your family and others is a significant responsibility and it is important that you consider this information.

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Domestic self-supply or drinking-water supplier?

The Water Services Act (2021) lays out the duties of those who own or operate a drinking-water supply.

In the August 2025 amendments to the Water Services Act (2021), household supplies (also called shared domestic supplies or domestic self-supplies) that provide water to 25 people or fewer are no longer considered drinking-water suppliers and do not need to register with the Water Services Authority—Taumata Arowai. A domestic self-supplier is not a drinking-water supplier and does not have any legal duties under the Water Services Act (2021).

Other types of non-domestic supplies that serve 25 or fewer people still need be registered by November 2028 to ensure public health is appropriately safeguarded. This includes unregistered supplies:

- that provide drinking water to buildings used by the community or public (e.g. marae and community halls)
- managed by businesses that supply drinking water as part of their operations.

If the drinking-water supply situation is not covered under the 'domestic self-supply' definition, it is recommended that the property owner or organisation responsible for providing drinking-water confirm with the Water Services Authority—Taumata Arowai whether they meet the Water Services Act (2021) definition of a 'drinking-water supplier'.

Drinking-water suppliers have compliance obligations under the Water Services Act (2021) including ensuring the drinking-water supplied is compliant with the Drinking Water Standards for New Zealand and meets the legal

definition of 'safe'. Other obligations include the duties to register the supply and prepare, and put into practice, a drinking-water safety plan and a source water risk management plan.

Drinking-water suppliers have until November 2028 to register any unregistered supplies and until November 2030 to meet the full legal responsibilities for these supplies (the fundamental responsibility to supply safe drinking water already applies).

Any drinking water supplier with new supplies set up since the Water Services Authority—Taumata Arowai was established on 15 November 2021 must be registered and meet all relevant legal responsibilities from the time they are established.

Drinking-water suppliers who are responsible for drinking-water supplies providing drinking-water to less than 500 people, or for farm use, are eligible to adopt an 'Acceptable Solution' as the means of meeting many of the requirements of the Water Services Act (2021). Acceptable Solutions are not applicable for domestic self-suppliers, however could be useful for guidance, or if intending to become a drinking-water supplier.

The Water Services Authority—Taumata Arowai website provides further details regarding the 'Acceptable Solutions' available for different drinking-water supply arrangements including mixed-use rural, small to medium networks, and self-supplied buildings.

Further information regarding duties of drinking-water suppliers under the Water Services Act (2021) and the 'Acceptable Solutions' can be obtained from the Water Services Authority—Taumata Arowai website: **taumataarowai.govt.nz**

Managing an existing private well

Microbiological contaminants

Microbiological contaminants are microscopic bugs – bacteria, protozoa, viruses or other organisms – that can lead to illness. There are a wide variety of these organisms that can affect drinking-water, but we can't test for all of them.

Instead, we usually test for one bacteria, *E. coli*, which is a good indicator that water has been contaminated with faecal material. If *E. coli* is present in the water, there is a good chance that other harmful organisms are also present, and the water should not be considered safe to drink.

Total coliforms is another indicator organism. While in itself it does not present a safety risk, it is a sign of living organisms in the water and indicates that the supply may not be secure from microbiological contamination.

Microbiological contaminants can come from waste disposal, septic systems, or grazing animals.

Regular testing of your water for *E. coli* is a good way to help understand the risks of microbiological contamination.

However, even wells that have had no *E. coli* in the past, can become contaminated at any time as conditions underground or on the surface change, for example after a rainfall event or a flood, or a change in land use in the surrounding area.



Water quality monitoring and management

While all the steps included within this brochure are provided to minimise the risk of contaminants entering your water supply, this risk can never be eliminated entirely.

It is therefore important that you monitor your water quality to ensure that it is free of contaminants, and you consider the need for treatment to further reduce this risk.

The most common chemical contaminants in Canterbury groundwater are:

- **Nitrate:** high nitrate concentrations in groundwater are generally caused by farming activities or wastewater disposal.
- **Arsenic:** Arsenic occurs naturally in parts of Canterbury. It can also come from old sheep dips, pesticides, or industry.
- **Iron and manganese:** These metals naturally occur in groundwater. They can cause nuisance staining of sinks and laundry, and at higher concentrations, manganese can pose a health threat.
- **Cadmium, lead, and other heavy metals:** These metals are seldom detected in groundwater unless there is a contamination source nearby, such as industry or a landfill.
- **Organic chemicals:** These include petrochemicals, industrial solvents, pesticides, and a range of other man-made chemicals. As with heavy metals, they are seldom found in groundwater unless there is a source nearby.

Maps for areas of high arsenic, iron, manganese and nitrate are provided at the back of the document.

Treatment and well depth

As a general rule, the deeper the well, the lower the risk of contamination. However, no well can be considered completely safe from contamination, regardless of depth.

Therefore, by far **the best way to manage the risk of microbiological contamination is to provide treatment.** That way you can be confident that your water is safe, regardless of whether conditions change without your knowledge.

Positive E.coli result?

If you don't have treatment to manage the microbiological safety of your well, you should sample and test your well regularly. Any positive *E. coli* result should trigger the need to install treatment, and water should be boiled before drinking until a suitable treatment system can be installed.

Chemical contaminants

There are many chemicals that can contaminate groundwater and many industrial or agricultural activities that could be a source of chemical contaminants. Environment Canterbury's website has a contaminated land tool, the Listed Land Use Register, that can help you identify whether any of these activities have been carried out on or near your property.



Taking a water sample at a wellhead

How to test your water?

For peace of mind home-owners should consider undertaking microbial testing every three months and chemical testing annually. Records of test results are important and should be kept together in a safe place.

If possible, we recommend that you carry out microbiological and chemical testing when you purchase a property or drill a new well as an initial screening for contaminants, or right after a large rainfall event when temporary contamination can occur.

It is prudent to do a follow up test 6–12 months after the initial test to see if anything has come through

after more regular use of the well that may not have shown up in the initial test and to account for seasonal fluctuations.

Choose a laboratory experienced in analysing water in your area and ask for an estimate of the work to be done.

Sample containers and instructions on how to correctly take drinking water samples should be provided by the laboratory.

The Water Services Authority—Taumata Arowai has information on accredited laboratories—hinekorako.taumataarowai.govt.nz/publicregister/laboratories/



Most recognised laboratories will offer a standard test suite for parameters to look for in drinking-water.

The results of the tests are compared to the Drinking Water Standards for New Zealand, in particular the Maximum Acceptable Values (the MAV). You can also contact laboratories for advice on water analysis and interpretation.

What if something is elevated?

If anything is found at a concentration greater than the MAV, the water should not be consumed and a suitable treatment system used or an alternative source found.

Domestic self-suppliers are not required to demonstrate on-going compliance against the Drinking Water Standards for New Zealand, but are strongly encouraged to do so.

If something is found at a concentration less than the MAV but more than 50% of the MAV, then more regular testing should be carried out to track whether the concentration increases over time. The testing should be done approximately quarterly to capture any seasonal variations.

The Waimakariri District Council's standard test suite can be found here:
waimakariri.govt.nz/services/3-waters/water-supply/private-bore-water-supplies

If you are concerned about the quality of your drinking-water supply, contact a Health Protection Officer at your local public health unit or Waimakariri District Council.

Maximum Acceptable Values for microbiological and chemical parameters

The following table explains the MAV (maximum acceptable values), AV (aesthetic values) and health consequence of some common contaminants to be mindful of:

To determine what the MAV of a certain parameter is, the Drinking Water Standards for New Zealand should be referred to:

www.legislation.govt.nz/regulation/public/2022/0168/latest/whole.html

Parameter	MAV	Health Considerations
<i>E. coli</i>	<1 per 100mL	Any trace of <i>E. coli</i> indicates that the water has been affected by faecal contamination and is not safe to drink.
Total Coliforms	No MAV	There is no MAV for total coliforms, as total coliforms alone are not considered unsafe. However, they are an indicator of living organisms in the water supply, and suggest that the supply is not secure and is at risk of microbiological contamination occurring in the future.
Nitrate	50 mg/L as nitrate (NO ₃ ⁻) Note: this is equivalent to 11.3 mg/L as nitrate-nitrogen. It is important when looking at results to understand which unit has been used to avoid confusion.	Sometimes high amounts of nitrate can enter groundwater from sources such as fertilisers, animal wastes, unreticulated sewage disposal and industrial and food processing waste. Nitrate levels above the MAV can pose a risk to babies less than six months old who are formula fed, or the unborn foetus of pregnant women. Adults with rare metabolic disorders may also be at risk.
Arsenic	0.01 mg/L	Arsenic can be naturally occurring in some groundwater sources, or can be introduced as a result of some industrial activities. Long term exposure to arsenic above the MAV can lead to cancer and skin lesions.
Iron	0.3 mg/L AV can cause laundry staining and other aesthetic issues	Iron and manganese are more likely to cause aesthetic (taste, odour, staining) issues rather than health issues, but still need to be considered to avoid these aesthetic problems.
Manganese	0.4 mg/L MAV. 0.04 mg/L AV can cause laundry staining 0.10 mg/L AV can cause taste issues	
Other (heavy metals, organic chemicals etc)	Seek specialist advice, depending on parameter detected	

Should you need any advice interpreting your test results please contact the Waimakariri District Council.

Treatment systems

Most of the contaminants that you might find in your private well can be treated.

It is important that:

1. You purchase the right kind of treatment system for the contaminants you have found in your water or are concerned about.
2. The treatment system meets the right standards so that you know it can be relied upon.

Some basic guidance is given in the table below:

Contaminant Type	Common Treatment Methods	Relevant Standards
Microbiological, as indicated by <i>E. coli</i> or total coliforms	Filtration followed by UV disinfection	New Zealand Standard: • AS/NZS 3497:1998 A1 Or equivalent international standards such as: • NSF/ANSI 55-2002 Class A • DVGW Technical Standard W294 • oNORM M5873-1
Nitrate or Arsenic	Reverse Osmosis/Ion Exchange	No Australian/New Zealand standard – seek specialist water treatment advice
Iron, Manganese or other	Seek specialist advice	

Note that some filters may only treat taste aspects, but not provide microbiological treatment. Make sure that your treatment system is fit for purpose.

Monitoring of turbidity levels is recommended prior to installing a UV disinfection unit. High turbidity can affect UV treatment, and may also need specific filtration treatment.

Ensure that maintenance records are kept, particularly of dates when servicing is carried out. This allows you to check you are meeting the recommended frequency for your water treatment system.

It should also be noted that treatment systems will only remain effective if they are maintained correctly. You should ensure regular maintenance is carried out as per the equipment supplier's recommendations.

Well head protection

There are generally two ways that contaminants could enter the water supply via the well head:

1. Contaminated surface water entering down the outside of the well casing, **or**
2. Contaminants entering via the well head structure itself.



Good design of your wellhead can protect against contamination

These risks can be managed as follows:

- **Grouting:** The outside of the well casing should be grouted to ensure that the water from the surface cannot travel down the outside of the casing. This should ideally be done at the time of drilling, but if you are not sure if this has been done, this can be done retrospectively by a drilling company.
- **Casing:** The well casing should extend above the ground surface to ensure that surface runoff water cannot flow directly into the top of the well.
- **Concrete Apron:** A concrete apron should be constructed that ensures that water flows away from the well casing itself and does not pond around the well head.

- **Backflow Preventer:** A backflow preventer should be installed on the well head to stop any potential contaminants from travelling back down the well riser into the aquifer.
- **Fencing:** The land surrounding the well head should be fenced off to prevent livestock from accessing this immediate area. It is recommended that at least a 5m perimeter surrounding the well be fenced off.
- **Maintenance:** Ensure that the condition of the well head protection is maintained over time.

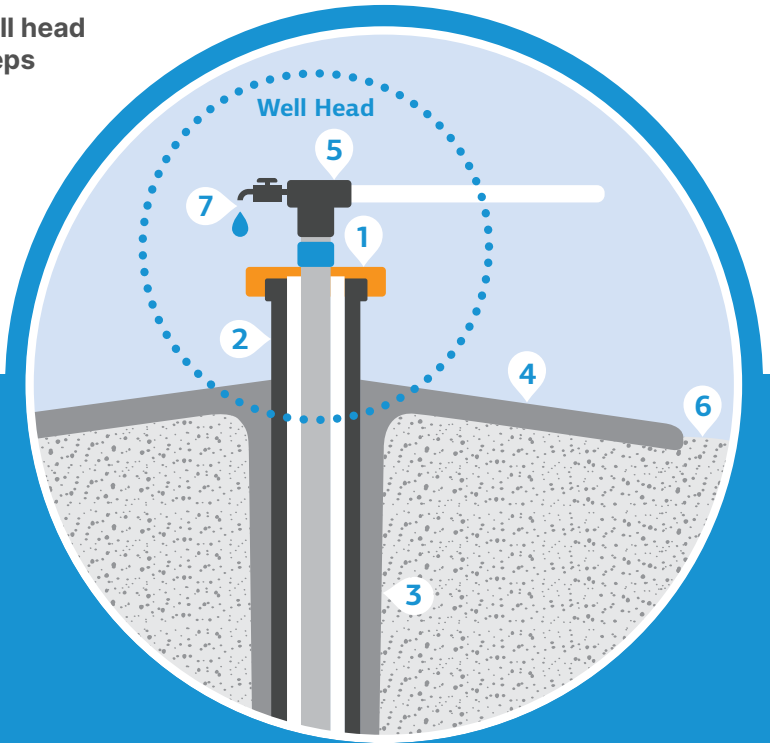
What is a backflow prevention device?

Backflow prevention devices stop contaminated water from flowing back into the household water supply.

Examples of activities which may require backflow prevention are:

- You use water for washing equipment like vehicles or machinery that has been exposed to chemicals.
- You operate appliances that require high water pressure.
- You mix water with other substances on your property.
- You have a cross connection of your private water supply (e.g. well/tank) to pipes that are also connected to the public supply.

For a secure well head follow these steps



1. Well cap

Install a secure well cap and seal between the casing and any hoses or cables going down the well.

2. Well casing (above ground)

Ensure the well casing is elevated at least half a metre above the ground surface or above the 100 year flood level (whichever is highest).

3. Well casing (below ground)

Install a bentonite seal around the casing.

4. Concrete apron

Seal between the well casing and the surrounding ground with a concrete apron.

5. Back-flow preventer

Install a back-flow preventer to stop contaminants siphoning back into your well.

6. Area around well

Keep the area around the well head clear of animals, pesticides, fertilisers, compost and rubbish.

7 Sample point

Have your groundwater supply tested regularly and following any large rainfall events or change in land use activities.

Tank maintenance

Tank maintenance

Ensure that the tank lid is secure, with no gaps for dust or insects and other vermin to get in. Check that any connecting pipes or hoses are protected from stock being able to damage them. In the cooler months, ensure that pipes are adequately protected from freezing. Check that future access for maintenance is not blocked when planting any trees nearby.

Cleaning and disinfecting your tank

The Council recommends you inspect your tank annually, and clean it out if necessary.

Ideally tank cleaning should be carried out by tank cleaning contractors. A Google search should direct you to tank cleaning providers in your area.

WARNING: If you enter the tank to clean it, please ensure there is adequate ventilation and another person is present. Please exercise due care in using ladders to gain access to the tank, as these can be treacherous when wet.

Steps to clean and disinfect your tank:

1. Turn off the water supply into the tank.
2. Drain the tank completely.
3. Clean out the inside of the tank of all accumulated matter.
4. Liberally spray chlorine-based bleach product over the internal floor and walls of the tank.
5. Check the strength of chlorine in bleach.
Assuming it is 4% sodium hypochlorite; refill the tank adding 0.3 litres of chlorine bleach per 1000 litres (220 imperial gallons) of tank volume.
6. Allow this water to stand in the tank for at least 30 minutes.
7. Drain the tank completely flushing with clean water.
8. Refill the tank with fresh water.

The use of chlorine bleach in steps 4 and 5 will ensure that the tank is adequately sterilised and suitable for holding drinking water. It is important that the tank is completely drained at step 6 as the strong chlorine concentration will make the water extremely unpleasant to drink.

For more information on water collection tanks and safe household water, please refer to this Ministry of Health factsheet health.govt.nz/products/water-collection-tanks-and-safe-household-water

Remember, you plan to drink the water at the completion of the cleaning so be very careful with the cleanliness of all items entering the tank.

For more information on tank disinfection, read the report 'Household Water Supplies'. This is available online at: phfscience.nz/digital-library/household-water-supplies-the-selection-operation-and-maintenance-of-individual-household-water-supplies/



Drilling a new private well

Planning a new well

If you have a property that has no water supply, the first thing to consider is whether you can connect to a public supply, or whether you will need to provide your own source of water.

It would always be recommended to connect to the public supply if this is feasible, as a well-managed public water supply will be safer than a private well. You should contact Waimakariri District Council on 0800 965 468 (0800WMKGOV) to see if a connection to the public supply is possible.

If a connection to a public supply is not possible, then the next best source of water may be from a well (depending on the area and availability of good groundwater sources).

Determining where a good source may be found

You will have a higher chance of finding a good groundwater source if there is evidence of other nearby properties with good wells in the area. There are a few places you can look to help inform yourself of where water sources have been found, and the suitability of the water for drinking:

- **Drillers:** Local drilling contractors will likely have knowledge on where suitable water sources have been found.
- **This brochure:** Included in the back of this brochure are maps of the Waimakariri District showing where key chemical parameters have been found in water sources, and at what level. While each value presented may only represent the sample at a particular time, this should give some idea of what contaminants may be more or less likely to be found in a given area.
- **Well search database:** You can look at bore logs using the Environment Canterbury Well Search database to see what depth water has been found at, and potentially water quality information.
- **Local knowledge:** Get to know your neighbours and ask how they source their water, and whether they have any water quality results from their own supply.
- **Flood levels:** A well may be more prone to contamination during a flood event. You should plan your well so that it is not located in a flood prone area, as this could put the well at additional risk if it becomes inundated.
- **Surrounding sources of contamination:** Think about where your well is located in relation to other activities that may introduce contaminants into the groundwater system.

Common ways this could occur are via septic tanks, historic contaminated sites, ponds, or any other farming or industrial activity or process that may cause contaminants to be discharged to ground. It is advisable to avoid wells in the vicinity of these types of activities, or if these activities have existed, to ensure the well is located upstream from them.

As a very general rule of thumb, groundwater follows surface topography and flows downhill, but this may vary near rivers or where the topography is complex.



Checking consenting requirements

The Land and Water Regional Plan (published by Environment Canterbury) is the key document that sets out where bores can and can't be drilled, whether a consent is needed to drill the well, and whether water can be taken from the well as a permitted activity without a consent, or whether a consent is required.

A link to the full Land and Water Regional Plan document can be found at ecan.govt.nz

Key sections are:

- 5.103 – 5.110: Sets out requirements for drilling wells.
- 5.113 - 5.114: Sets out requirements to be allowed to take groundwater without the need for a consent.

Drilling a well

Once you have decided where you want your well, what depth you are targeting, and what the consenting requirements are, you will need to engage a driller. It is important that whoever does this is suitably qualified and experienced, and that care is taken during the drilling process.

Rule 5.103 of the Land and Water Regional Plan (LWRP) states that installing a bore or gallery is a permitted activity if:

- the bore or gallery is installed by a member of the Canterbury Regional Council (CRC) bore installers programme; and
- all the other conditions of rule 5.103 of the LWRP are met.

A list of drillers on the CRC bore drillers programme can be found here (follow link then click tab “current members of the CRC bore installers programme”):

ecan.govt.nz/your-region/your-environment/water/crc-bore-installers-programme/

Well head protection

Once you have a well drilled, you then need to consider the well head arrangement and how this is managed to protect your water supply from potential contamination.

Information on well head protection is included in ‘Managing an Existing Private Well’ earlier in this document.



Purchasing a property with a private well

What to consider when purchasing a new property?

Anyone purchasing a new property should enquire about the water supply. You can request a LIM from Waimakariri District Council, which will include whatever information Council holds on the water supply.

In order to gain more knowledge on the water supply, it is recommended that further questions be asked from the seller, such as:

- Does the water come from a public supply or a private well?

If the answer is that it is from a private well then the following information should be obtained:

- How deep is the well?
- Is the well head sealed, and the surrounding area fenced to protect it from livestock?
- Is the water from the well pumped to a tank, and what is the condition of the tank?
- What type of treatment system do they have (if any) and has it been regularly maintained?
- How regularly is the well tested, and are the results available?
- What state is the well in? Are there any records of maintenance of the well or pump?

- Does the well have an Environment Canterbury well number? If so, additional information about the well may be available through the Well Search page on Environment Canterbury's website: ecan.govt.nz/data/well-search/

Answers to these questions will help you to determine how safe the water supply is. If the seller is not able to demonstrate that the water is safe and that sufficient treatment is in place, the need for any upgrades to the water supply should be considered before making an offer on the property.

Who to contact for further information?

Drinking-water safety is the joint responsibility of the territorial authority (Waimakariri District Council), the Regional Council (Environment Canterbury), Community and Public Health (Te Mana Ora) and the Water Services Authority—Taumata Arowai. Please refer below for which agency to contact for different issues or questions:

Environment Canterbury:

Manages the quality of both surface and ground water quality in the water body or aquifer. This is



achieved by managing who can take water from the ground or a surface water body, and what can be discharged into or onto the ground or land/water surface.

They hold information on existing bores such as depth, yield and in some cases quality.

Waimakariri District Council:

For public supplies, Waimakariri District Council manages the quality of the water coming out of the tap. This is through management of the source, treatment, storage and distribution network.

For private supplies, Waimakariri District Council ensures that there is a potable water supply, through the issuing of a resource consent

for subdivision of land (which will specify how water is to be sourced) and issuing of a building consent for new dwellings. These however only confirm that there is a potable water source at the time of issuing the consent.

**Community and Public Health,
Te Mana Ora:**

Provides advice regarding the impacts of water quality on public health.

**Water Services Authority—
Taumata Arowai:**

The Water Services Authority—Taumata Arowai is responsible for drinking water regulation related activities in New Zealand/Aotearoa.

Waimakariri District groundwater quality maps

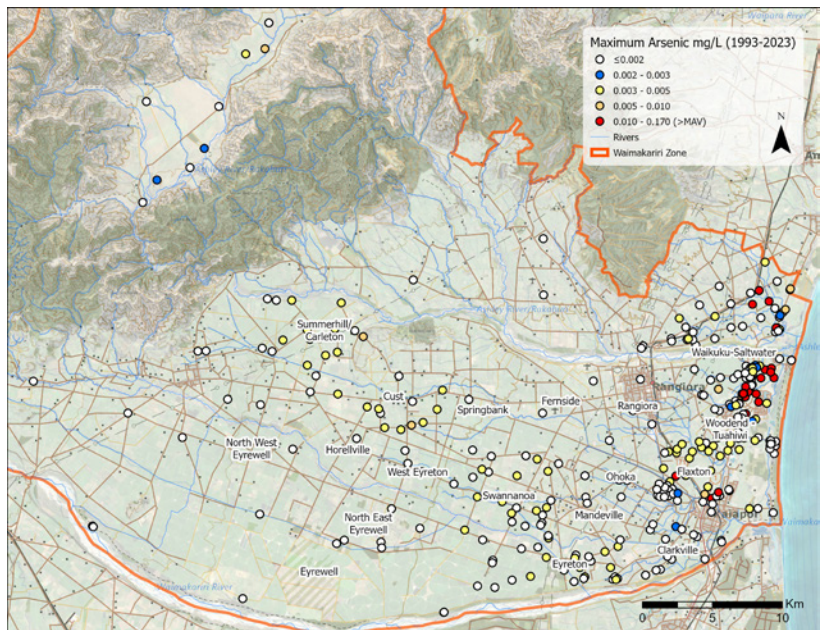
This information is to illustrate the likely groundwater quality that might be found in the area. However water quality in your well may vary from the information provided and groundwater quality also changes over time.

The data included in these groundwater quality maps is limited to the maximum contaminant result for each well sampled, between 1993-2023. Wells included are within the Waimakariri District, for any well use, all depths, active and inactive wells.

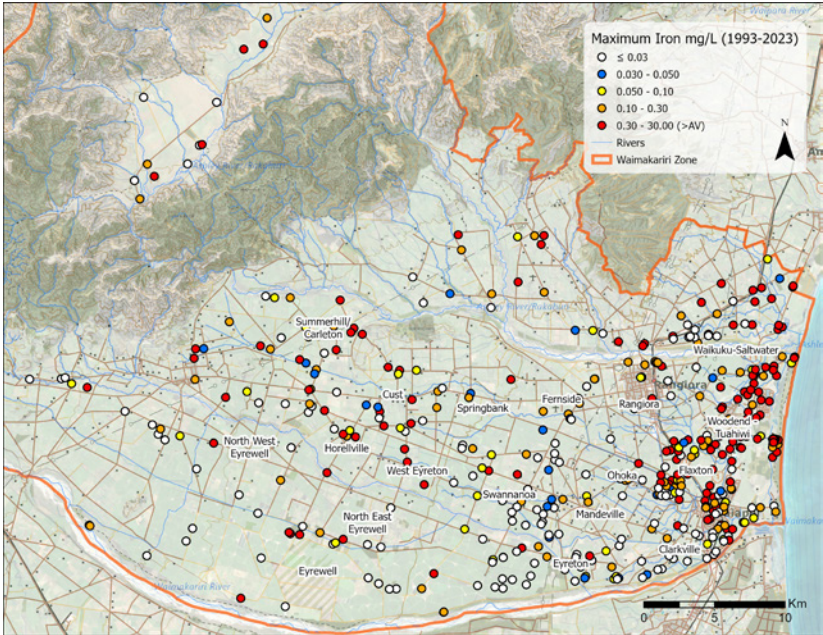
The data is limited to that in the Environment Canterbury groundwater quality database or the Waimakariri District Council source database.

The Maximum Acceptable Value (MAV) and Aesthetic Values (AV) are set by the Water Services (Drinking Water Standards for New Zealand) Regulations 2022. If a MAV is exceeded, this means that the water is considered unsafe to drink. If an AV is exceeded, this means that there may be some aesthetic issues with the water such as taste or discolouration.

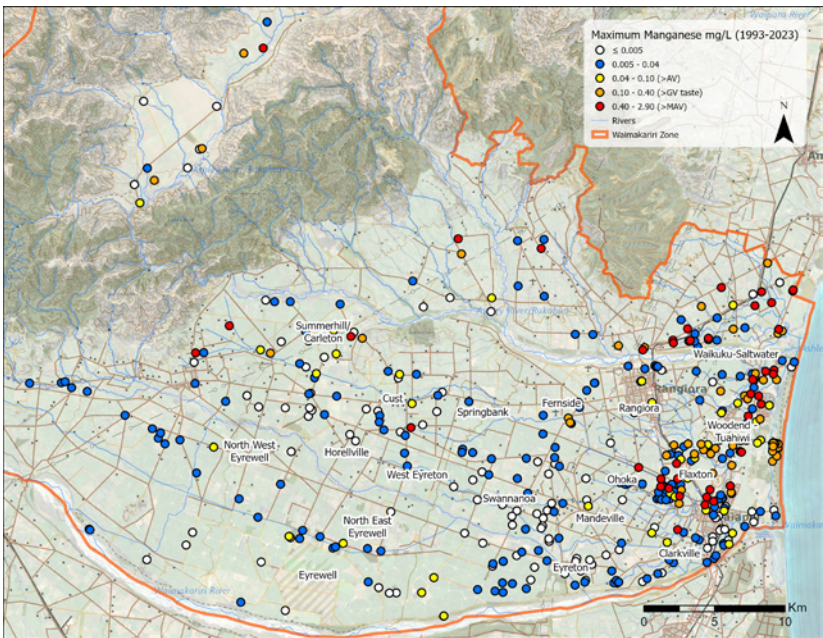
Arsenic maximum



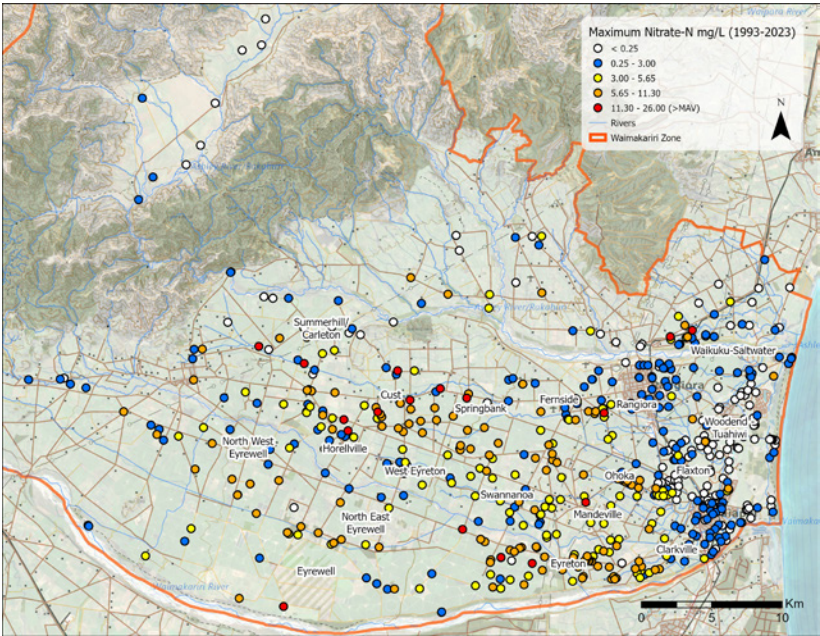
Iron maximum



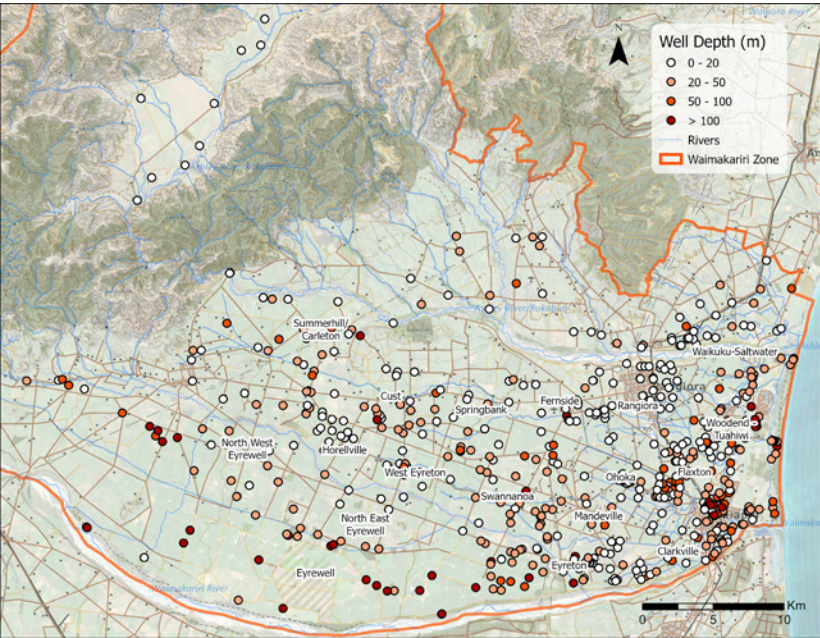
Manganese maximum



Nitrate-Nitrogen maximum



Well depth





For more information please contact

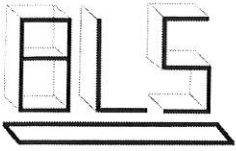
Water Environment Advisor

Waimakariri District Council

Phone: 0800 965 468 (0800 WMK GOV)

Email: office@wmk.govt.nz

Find out more at waimakariri.govt.nz



CONSULTING LIMITED
Civil & Structural
Engineer

Building Consent BC131744
Received 30/10/2013

200 Heywards Rd, Kaiapoi R.D.2
P.O. Box 3268 Christchurch 8140

Ph (03) 327 8062
Fax (03) 327 8021

21 October 2013

2539

Taylor Homes
P O Box 578
RANGIORA 7440

Attention: David Taylor

Email: david@taylorhomes.co.nz

Dear David

RE: CROMIE HOUSE : LOT 10, 1199 OXFORD ROAD (HAYFIELD TERRACE)

Further to my inspection of test pits excavated adjacent to the above proposed house site (14 October 2013) and receipt of geotechnical report for the subdivision, I provide the following:-

1. Foundation Conditions

The location of the three excavated test pits are shown on marked up Site Plan (attached).

These pits extend to some 1.2 m depth, and establish consistent sub surface soils exist across the site, and this also applies to the water well area South of the house site.

The sub surface soil profile is as follows:-

0	-	250/300 mm	Topsoil
300	-	700 mm	Light Brown/Fawn Silts with Sands and some Gravels.
700	-	1200 mm	Silt bound Gravels. Well Graded, up to 125 mm stone size.

The above profile is consistent with the access road cutting observed within the embankment, North of the site; and also the geotechnical report for the subdivision as a whole. (Note, this applies to the random testing carried out at each Lot, but not necessarily at the house sites).

For this Lot 10, the geotechnical investigation was apparently carried out at the lower river terrace level which is some 15 – 20 m below the upper terrace where the house is to be sited.

2.

Building Consent BC131744
Received 30/10/2013

However, the lower level test site is consistent with the observations within the test pits at the house site, and as summarized above.

Clearly, Gravels exist close to the surface and as established by deep drilling, and water well sinking; these Gravel soils extend to significant depth (over 70 m), and the water table is relatively low.

Scala Penetrometer testing was attempted, but discontinued because of the existence of Gravels within the Silt stratum (400 deep) below the Topsoils.

In situations such as these, there is no point in continuing with such testing because the tip of the Scala Penetrometer comes into contact with a Stone, or Gravel particle, and erroneous results arise because of the refusal to penetrate further.

The soil bearing conditions are therefore very good at this site, and an Ultimate Limit State bearing values of at least 300 kPa exists (i.e. "Good Ground" exists as for NZS 3604). Standard (NZS 3604) foundations are, obviously, satisfactory for this site, and the proposed light-weight timber framed (single storey) dwelling.

As indicated in the geotechnical report, foundations and the floor slab details, including reinforcing should follow the recommendations introduced by MBIE for house foundations within the Canterbury region (i.e. ductile steels and mesh reinforcing in accordance with NZS 4671 : 2001).

2. Stormwater Soakage (E1/VM1, NZBC)

I have assessed the soak pit requirements for the dwelling, based on the provisions of the two soakage pits/chambers shown on Site Plan.

As decided, the carrying out of percolation tests at this site is somewhat impracticable and costly, and therefore the following analysis of soakage volumes required is based on assuming volume for soakage (V_{soakage}) is very small.

Observations at the site established it is possible the Silt bound Gravels may not be as free draining as one would normally expect, but nevertheless, these soils will provide reasonable soakage capability.

Based on E1/VM1; paragraph 9.0.5;

$$V_{\text{storage}} = R_c - V_{\text{soakage}}$$

Where $R = 10CIA$, and $C = 0.90$ (Table 1), $I = 23 \text{ mm/hr}$ (1 hr storm duration) and $A = 140/10,000 \text{ Ha}$.

$$\therefore R = 10 \times 0.90 \times 23 \times 0.014 = \underline{2.9 \text{ m}^3}$$

If a 1050 mm manhole riser is used (Area = 0.86 m²), a length of some 3 m would be required. Given no account has been made of soakage volume, this will be a little conservative.

3.

You can obtain above in concrete, or use Helcor pipe (ex Humes). A suitable cover would need to be provided. You may also approach Hynds.

Unless the soakage rate (percolation) is significantly high, the volume of storage required will not decrease substantially.

For example, with a 1200 mm diameter soak hole, and a percolation rate of say 50 mm/hour,

$$\begin{aligned} V_{\text{soakage}} &= A_s S_r / 1000 \\ &= 1.13 \times 50 / 1000 \\ &= \underline{0.056 \text{ m}^3} \quad (\text{small!}) \end{aligned}$$

Therefore, I recommend you consider using a 1.2 m diameter section, with an effective depth of 2.4 m. (Note, no problems of high water table exist at this site).

The drawings should be amended to indicate the size and depth of soakage chambers chosen.

I trust this assists with these two issues.

Yours faithfully



BRIAN L. SPENCE
CPEng 36224, Int. P.E.

Encl.

TEST PIT LOCATIONS, THUS.

Building Consent BC131744
Received 30/10/2013

SANITARY FIXTURE	MIN PIPE DIA	MIN GRADE
Bath	32mm	1:20
Bath	40mm	1:40
Washing Machine	40mm	1:40
Kitchen Sink / Dish Washer	50mm	1:40
Laundry Sink	40mm	1:30
Shower	40mm	1:40
WC	100mm	1:80
SEWER PIPE	100mm	1:80
STORMWATER PIPE	100mm	1:120

SANITARY FIXTURE	FLOW RATE/TEMP	PIPE DIAMETER
Bath	0.3 at 45°C	15mm
Bath	0.2 at 60°C (hot)	15mm
Laundry Tub	0.2 (cold)	15mm
Laundry Tub	0.2 at 60°C (hot)	15mm
Bath	0.2 (cold)	15mm
Shower	0.1 at 45°C	10mm
Shower	0.1 at 42°C	20mm

PIPE DIAMETER	MAXIMUM DISTANCE BETWEEN SUPPORTS (mm)
32 to 50	1000
65 to 100	1200
Greater than 100	1800

Fall Drive towards Gardens & Grassed areas as much as possible for water run off

ALLOW FOR STEPS OR LANDSCAPING TO ALL EXTERNAL DOORS SO STEP FROM FFL NO GREATER THAN 190mm (100mm min)

CLEARANCES:

FFL to Ground = 200mm min (Brick)
FFL to Ground = 225mm min (Linea)

Fall Ground away from building at 1:30 for atleast 1m

FFL to Paving = 150mm min
Fall Paving away from building

Anti-slip: on all access routes both internal & external, provide Anti-slip surface complying with NZBC D1/AS Table 2 (except surfaces in side Entry Doors of housing maybe considered dry areas)

Relief GT - top of GT to be +0.225 = FFL
150mm below overflow level -0.020 = Shower recess
of lowest sanitary fixture -0.150 = Shower Recess to Top GT
FGL around Relief GT to be no -0.100 = Top GT to FGL
higher than -0.045 (0.025 if paved) -0.045 = FGL

Soak Pit
138.3m² Roof Area
2m² Min Base Area

Soak Pit
133.3m² Roof Area
2m² Min Base Area

VENT PIPES:
Discharge Pipes upto 40mm dia = 30mm Vent Pipe
Discharge Pipes over 40mm dia = 40mm Vent Pipe
Main Drain Vent Pipe = 80mm Vent Pipe

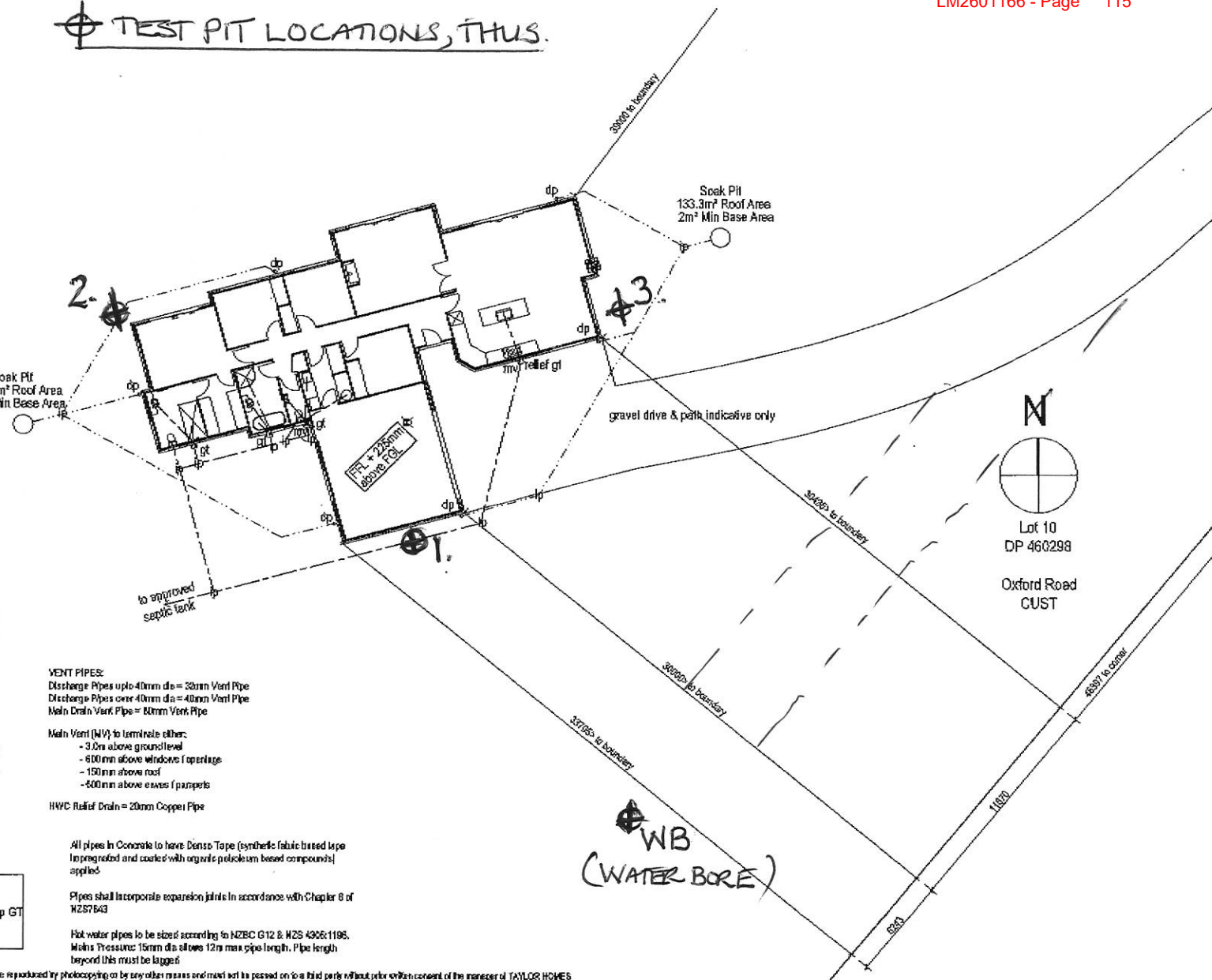
Main Vent (MV) to terminate either:
- 300mm above ground level
- 600mm above windows / openings
- 150mm above roof
- 600mm above eaves / parapets

HWC Relief Drain = 20mm Copper Pipe

All pipes in Concrete to have Densol Tape (synthetic fabric based tape impregnated and coated with organic petroleum based compounds) applied

Pipes shall incorporate expansion joints in accordance with Chapter 8 of NZS8543

Hot water pipes to be sized according to NZBC G12 & NZS 4396:1195. Min Pressure: 15mm dia allows 12m max pipe length. Pipe length beyond this must be lagged.



Copyright: The copyright of this drawing is the property of TAYLOR HOMES. No part of it may be reproduced by photocopying or by any other means and must not be passed on to a third party without prior written consent of the manager of TAYLOR HOMES

	job title: CROMIE HOUSE	drawing title: SITE PLAN	legal description: LOT 10 OF 460298 OXFORD ROAD CUST	WORKING DRAWINGS SUBJECT TO COUNCIL APPROVAL ALL MEASUREMENTS TO BE CONFIRMED ON SITE BY CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORK. DO NOT SCALE FROM DRAWINGS UNDER ANY CIRCUMSTANCES	scale: 1:200	page: 02 of 20 DATE: 08/01/13
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Eliot Sinclair and Partners Ltd.

Geotechnical Report for proposed subdivision
1199 Oxford Road, Springbank

GEOTECHNICAL REPORT FOR PROPOSED SUBDIVISION

1199 Oxford Road, Springbank

QUALITY CONTROL CERTIFICATE

All relevant information is identified, has been reviewed, and is approved for release.

Reviewed and approved release by:	 John Aramowicz Associate, Civil/Geotechnical Engineer	BE(Hons), MIPENZ, CPEng. IntPE(NZ)
Date:	24 February 2012	
Reference:	348902_11355170229_Geotech_Report_jta	
Status:	FINAL	
Distribution:	2 x copies 1 x file copy	SGN Developments Ltd Eliot Sinclair

Limitations

This report has been prepared for SGN Developments Ltd according to their instructions, for the particular objectives described in the report. The information contained in the report should not be used by anyone else or for any other purposes.

WAIMAKARIRI DISTRICT COUNCIL
Plans and specifications APPROVED in accordance
with the Building Act 2004, clause 49 and the Building
Regulations 1992, Clause 3
132254 3/01/2014 Keegan

Eliot Sinclair and Partners Ltd.

Geotechnical Report for proposed subdivision
1199 Oxford Road, Springbank

1 INTRODUCTION

Eliot Sinclair have been engaged by SGN Developments Ltd to undertake a geotechnical investigation and report for a proposed subdivision of Lot 1 DP 4523 at 1199 Oxford Road, Oxford in relation to the hazards outlined by Section 106 of the Resource Management Act (1991).

2 SCOPE OF WORK

The scope of work for the geotechnical assessment of the proposed subdivision was;

- Review published geology,
- Review Environment Canterbury's well card database for nearby bore log data,
- Review of GNS Science's strong motion data for 4 September 2010 and 22 February 2011 earthquakes,
- Undertake 27 X Scala penetrometer tests and 27 X Machine excavated test pits across the site,
- Reporting and recommendations.

3 DISCLAIMER

Comments made in this geotechnical report are based on test records obtained from Scala penetrometer testing, machine excavated test pits and a detailed site inspection undertaken in January 2012, and published geological and bore log information.

Whilst every care was taken during our investigation and interpretation of subsurface conditions, there may well be subsoil strata and features that were not detected. Additionally, on-going seismicity in the general area may lead to deterioration or additional ground settlement that could not have been anticipated at time of writing of this report.

The exposure of such conditions, or occurrence of additional strong seismicity, may require a review of our recommendations.

This report has been prepared for the benefit of SGN Developments Ltd, and the Waimakariri District Council. No liability is accepted by this company or any employee of this company with respect to the use of this report by any other party.

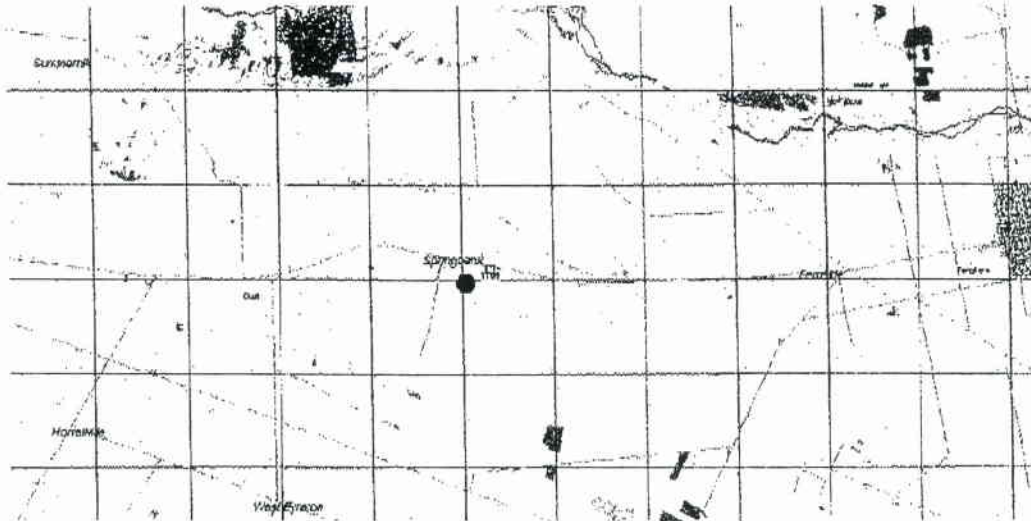
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Geotechnical Report for proposed subdivision
1199 Oxford Road, Springbank

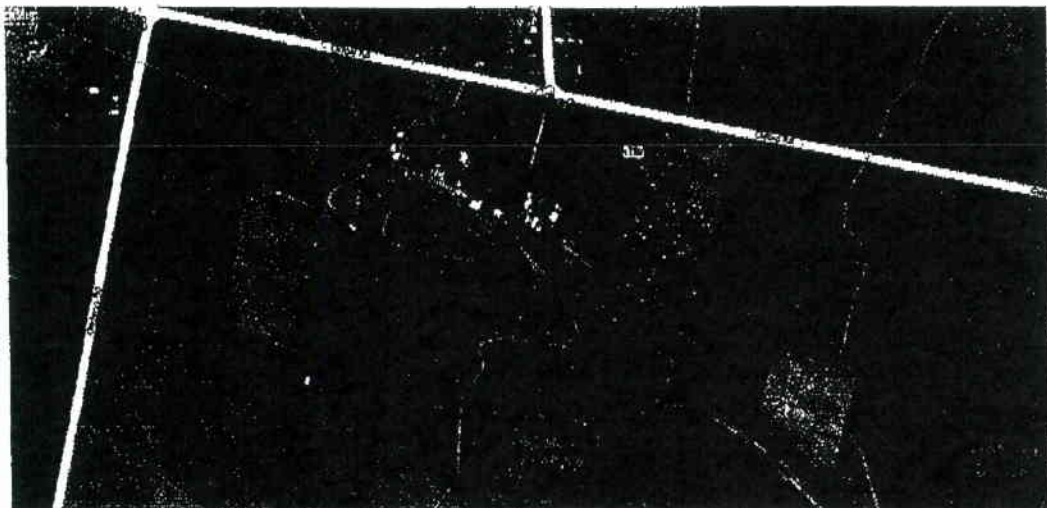
6 SITE DESCRIPTION

6.1 Topography

The site is located at 1199 Oxford Rd, Springbank and is legally described as Pt Lot 1 DP 4523 and is 13km west of Rangiora.



The southern part of the site, encompassing proposed Lots 5 to 12 and balance Lot 26 is a historic river terrace that is generally flat, and is located around 10-20m above the lower northeast part of the site in the area of Lots 13 to 25. Refer to photo 1.



A gently sloping gully drains down from the southwest to the northeast across Lot 9, refer to photo 2. There is also a pond at the northern end of Lot 9 which is approximately 60 m long and 15 m wide, refer to photo 3, and appears to capture surface flows of stormwater from the gully. It is constructed across the lower flat part of the site.

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Geotechnical Report for proposed subdivision
1199 Oxford Road, Springbank

Photo 5: Old gravel pit at Lot 4 (Jan 2012)



Photo 6: Water race with vegetation over (Jan 2012)

6.1 Gravel Pit

There was a small gravel pit located in the area of Lot 4, and reveals the presence of shallow sandy and silty gravels. It has been formed by excavation into the gentle slope, with greatest depth at its southern extent. Refer to photo 5.

6.2 Buildings

There is currently a series of farm sheds and outbuildings located across Lots 6, 7 and 24 and an existing house on Lot 25.

6.3 Land Classification

On the 28th October 2011, the Canterbury Earthquake Recovery Authority (CERA) released site-specific classification for Christchurch properties. As part of this, the Department of Building and Housing (DBH) developed three new technical categories for residential foundation design as part of its guidance for repairing and rebuilding earthquake damaged homes in Canterbury. These new categories apply to liquefaction prone flat land in the green zone in the greater Christchurch urban area and surrounding communities.

This site has not been classified by CERA, as it is deemed rural/NA.

The site is located outside of the potentially liquefiable ground zone identified in the Waimakariri District Council Liquefaction and/or lateral spread Map dated 1 July 2011.

7 SITE INVESTIGATION

7.1 Test Pits

One machine excavated test pit to 3m depth below ground level was excavated at each Lot, and located in a manner to provide a good spread across the whole of the site.

Test pits generally encountered shallow topsoil over compact sandy and silty gravels.

Ellot Sinclair and Partners Ltd.

Geotechnical Report for proposed subdivision
1199 Oxford Road, Springbank

The new guidelines set out typical requirements for geotechnical investigations, assessment and reporting primarily for Plan Change and Subdivision Consent application.

The guidelines suggest that one test/investigation location be undertaken per house site (rural) for subdivision consent reporting, and the site investigation is in accordance with this guideline. The testing undertaken for the proposed 26 lots included:

- 27 Scaia penetrometer tests across the site to 0.3m to 0.8m depth, and
- 27 machine excavated test pits across the site, each to 3m depth.

In summary, we are satisfied that the results of our site investigation, along with supporting information from geological maps, and Environment Canterbury well logs that show gravels to at least 73m depth, provides sufficient evidence of the underlying ground conditions and natural hazards of the site, and site specific deep geotechnical testing is not required.

8 SEISMIC HAZARD

8.1 Ground motion parameters

The seismic hazard factor for the design of all buildings at this site is $Z=0.34$.

The Department of Building and Housing revised the seismic hazard for Christchurch and Canterbury on 19 May 2011. The effect of this was to impose a minimum hazard of $Z=0.30$ across Canterbury, and therefore does not increase the hazard factor adopted for this site.

The serviceability limit state return period factor, R_s , for Canterbury was revised on 1 August 2011 and *'in the Canterbury earthquake region, the risk factor for the serviceability limit state shall not be taken less than $R_s = 0.33$ '*.

Table 3.2 of NZS1170.0:2002 notes single-family dwellings as Importance Level 2.

Table 3.3 of NZS1170.0:2002 sets out that the annual probability of exceedance for of an Importance Level 2 building is 1/25 for the serviceability limit state, and 1/500 for the ultimate limit state.

$$R_s \text{ (SLS, 1/25)} = 0.33 \text{ (Ref: Amendment 11, 2.2.14c as amended by DBH, 1 August 2011)}$$

$$R_u \text{ (ULS, 1/ 500)} = 1.00$$

The site is underlain by deep alluvial soils, and are considered Type D in terms of NZS1170.5:2004. NZGS guidelines specifies;

$$C=1.12 \text{ for Type D soils.}$$

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Geotechnical Report for proposed subdivision
1199 Oxford Road, Springbank

8.5 Liquefaction Potential

We note that the peak horizontal ground accelerations measured in Oxford and Swannanoa from 4 September 2010 earthquake were 0.16g and 0.24g respectively and these values exceeded the Structural Design Action Standard NZS 1170.5:2004 Serviceability Limit State (SLS) design parameter, without any visible land damage.

Due to the extensive gravels underlying the site and the large depth to groundwater we consider that the site is not likely to be subject to liquefaction in either a SLS or ULS earthquake.

8.6 Lateral spreading

Due to the depth to groundwater, and the absence of any significant watercourses, the site is generally not at risk of liquefaction induced lateral spreading.

It is possible that minor spreading and or settlement of the banks to the pond, which we presume to be constructed of uncontrolled fill, could occur as a result of intense earthquake shaking. As the pond is constructed across the lower flat part of the site, should minor spreading or settlement of the banks of the pond is not likely to affect the stability of building foundations or pose a risk of inundation to the land below.

8.7 Land Classification

Based on our assessment, we consider that the geotechnical conditions across that site are consistent with a TC1 classification, i.e. *'Future land damage from liquefaction is unlikely'*.

9 RMA (1991) SECTION 106

9.1 Erosion, falling debris or landsliding

A building platform is available at each of Lots 1 to 25 that is not likely to be subject to material damage due to erosion, falling debris or landsliding.

9.2 Subsidence (Liquefaction)

Well logs and geological maps indicate the presence of sandy and silty gravels to significant depth, with large depth to groundwater, and therefore subsidence due to liquefaction is not likely.

9.3 Inundation from any source

The gentle slopes between the upper and lower terrace areas, and the presence of the gently sloping gully at Lot 9, may cause minor sheet flow or concentration of stormwater from intense or long duration rainfall.

All building floor levels should be set above surrounding ground levels to avoid risk of entry of stormwater, and the general requirements of the NZBC will be sufficient to address this.

Ellot Sinclair and Partners Ltd.

Geotechnical Report for proposed subdivision
1199 Oxford Road, Springbank

There is sufficient area at each Lot for a disposal field where discharges of treated effluent into land from an on-site wastewater systems can occur as a Permitted Activity, providing the requirements of Environment Canterbury's NRRP (July 2011) Rule WQL9 are complied with.

10.4 Vehicle access

Construction of a vehicle access to each lot will be relatively straightforward, and is likely to required only minimal stripping of surface topsoil and placement of compacted metalcourse.

11 SUMMARY

The site investigation indicates the presence of silty and stony topsoil over shallow gravels. ECan bore logs indicate gravels to at least 73m depth in the area.

Scala penetrometer testing at each Lot indicates high bearing conditions across the site.

Based on the results of the machine excavated test pits, the ECan bore logs, and the Scala penetrometer tests across the site, we consider that a stable building platform can be provided at each lot.

Providing the requirements of this report are followed, and in accordance with the assumptions outlined in this report, we are satisfied that the site will not be subject to the matters outlined by Section 106 (1 a & b) of the Resource Management Act 1991, and from a geotechnical perspective, the site is suitable for the proposed rural subdivision.

Bore or Well No: M35/8340**Well Name:****Owner:** LAMERS, H**Street of Well:** KENNEDYS HILL ROAD**File No:** CO6C/15413**Locality:** RANGIORA**Allocation Zone:** Cust**NZGM Grid Reference:** M35:6446-6646 QAR 3**NZGM X-Y:** 2484480 - 5766460**Location Description:****Uses:** Domestic and Stockwater**ECan Monitoring:****Well Status:** Active (exist, present)**Drill Date:** 10 Mar 1999**Water Level Count:** 0**Well Depth:** 40.00m -GL**Strata Layers:** 6**Initial Water Depth:** -9.80m -MP**Aquifer Tests:** 0**Diameter:** 150mm**Isotope Data:** 0**Yield/Drawdown Tests:** 1**Measuring Point Alt:** 97.50m MSD QAR 4**Highest GW Level:****GL Around Well:** -0.20m -MP**Lowest GW Level:****MP Description:** ToC**First Reading:****Driller:** Smiths Welldrilling**Last Reading:****Drilling Method:** Rotary Rig**Calc. Min. GWL:****Casing Material:** STEEL**Last Updated:** 12 May 1999**Pump Type:****Last Field Check:****Yield:** 2 l/s**Screens:****Drawdown:** 1 m**Screen Type:** Stainless steel**Specific Capacity:** 2.21 l/s/m**Top GL:** 38.50m**Bottom GL:** 40.00m**Aquifer Type:****Aquifer Name:**

Date	Comments
23 Apr 1999	Screen details: slot size 0.100, diameter 5.5", length 1.5 m.
23 Apr 1999	Leader length 1.5 m, set at 38-38.5 m.
11 May 1999	Depth of suction pipe 19.5 m.
11 May 1999	Bore development after drilling by air for 2 hours.

Borelog for well M35/11905 page 1 of 2

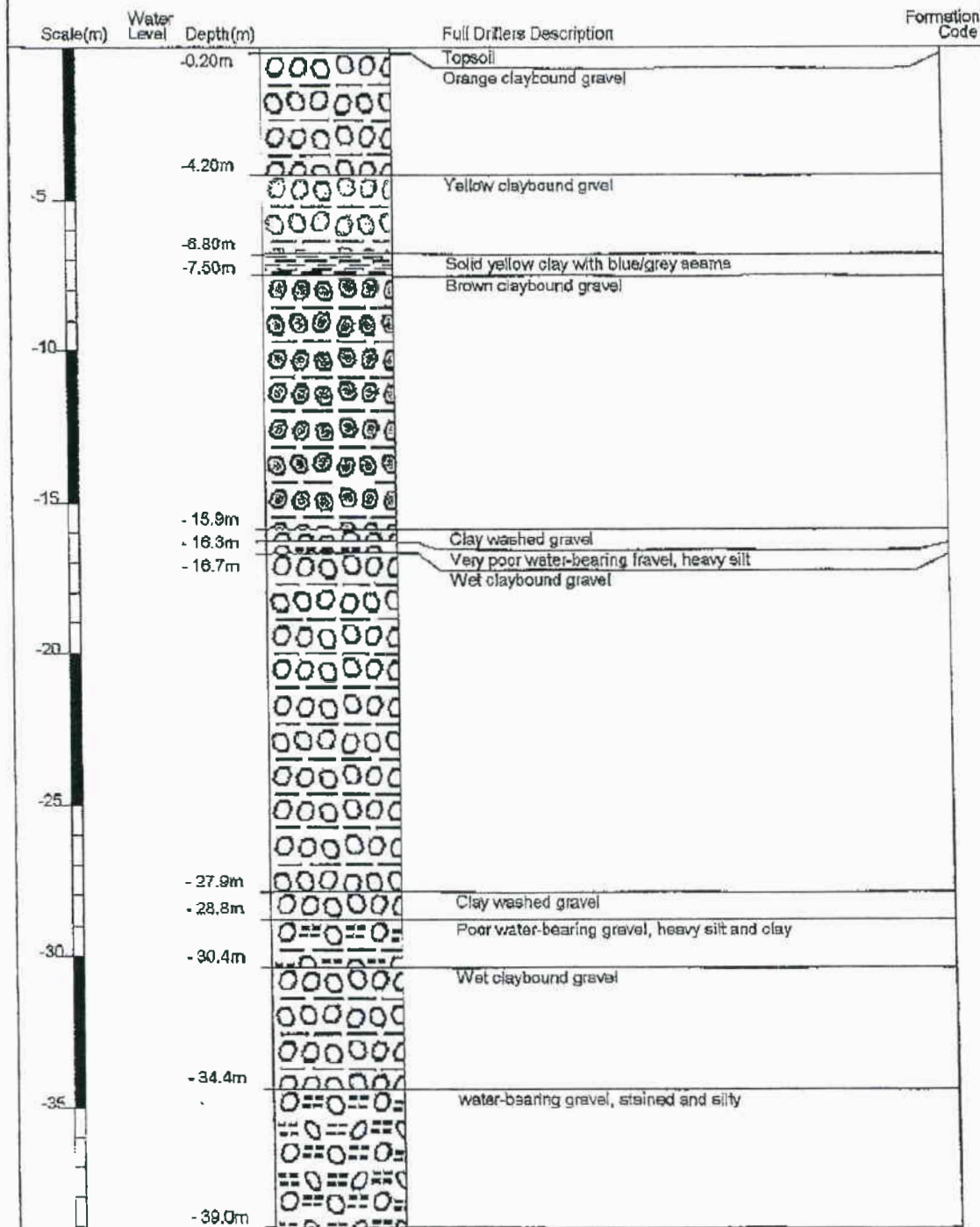
Gridref: M35:62804-65278 Accuracy: 2 (1=high, 5=low)

Ground Level Altitude: 117.01 +MSD

Driller: Clemence Drilling Contractors

Drill Method: Rotary/Percussion

Drill Depth: -78m Drill Date: 7/04/2008



Bore or Well No: M35/10914**Well Name:****Owner:** MR NEIL GARY GRANT**Street of Well:** 1035 OXFORD ROAD**File No:** CO6C/23880**Locality:** SPRINGBANK**Allocation Zone:** Cust**NZGM Grid Reference:** M35:6530-6529 QAR 3**NZGM X-Y:** 2465300 - 5765290**Location Description:****Uses:** Domestic and Stockwater**ECan Monitoring:****Well Status:** Active (exist, present)**Drill Date:** 05 Nov 2006**Water Level Count:** 0**Well Depth:** 36.00m -GL**Strata Layers:** 5**Initial Water Depth:****Aquifer Tests:** 0**Diameter:** 150mm**Isotope Data:** 0**Yield/Drawdown Tests:** 0**Measuring Point Alt:** 89.26m MSD QAR 4**Highest GW Level:****GL Around Well:** 0.00m -MP**Lowest GW Level:****MP Description:****First Reading:****Last Reading:****Driller:** Giltrap Drilling**Calc. Min. GWL:****Drilling Method:** Rotary Rig**Last Updated:** 30 Apr 2008**Casing Material:** Steel**Last Field Check:****Pump Type:****Screens:****Yield:****Screen Type:****Drawdown:****Top GL:****Specific Capacity:****Bottom GL:****Aquifer Type:****Aquifer Name:****Date****Comments**

30 Apr 2008

Gridref changed from: M35:6538-6547 BCR confirms

Eliot Sinclair and Partners Ltd.

Geotechnical Report for proposed subdivision
1199 Oxford Road, Springbank

13 APPENDIX B - AERIAL PHOTO

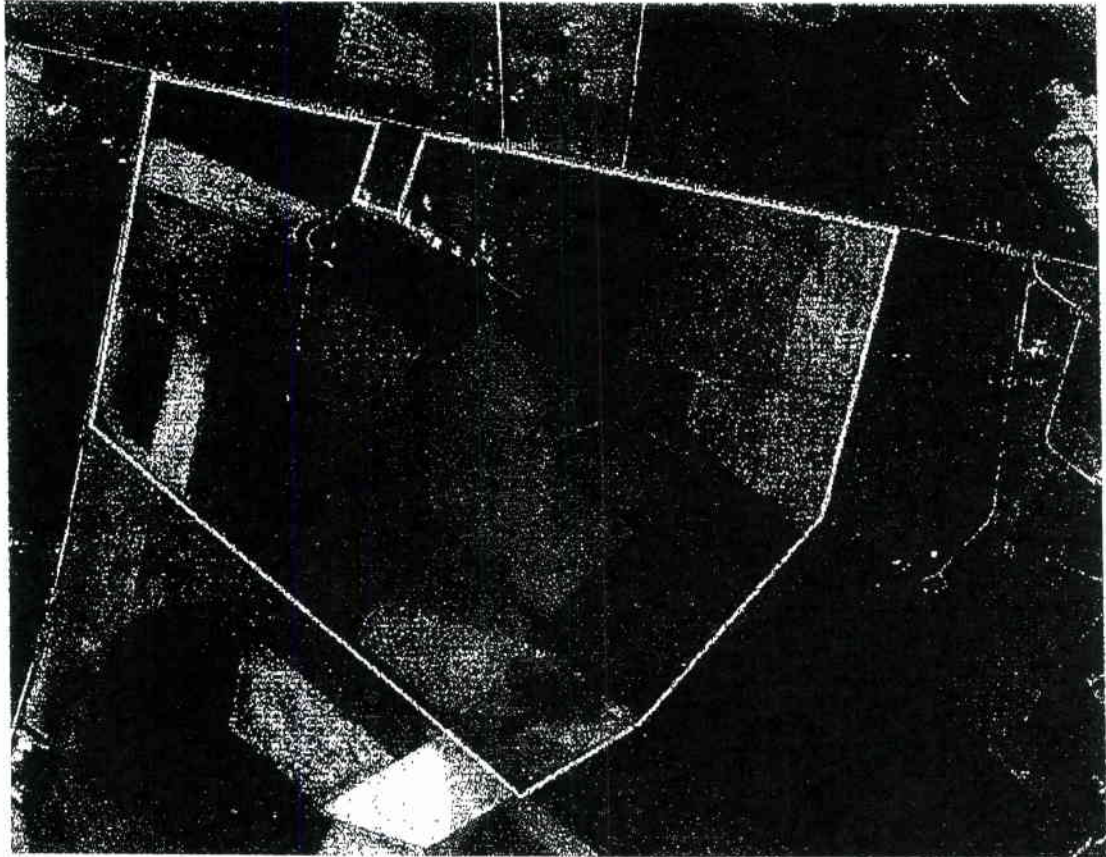
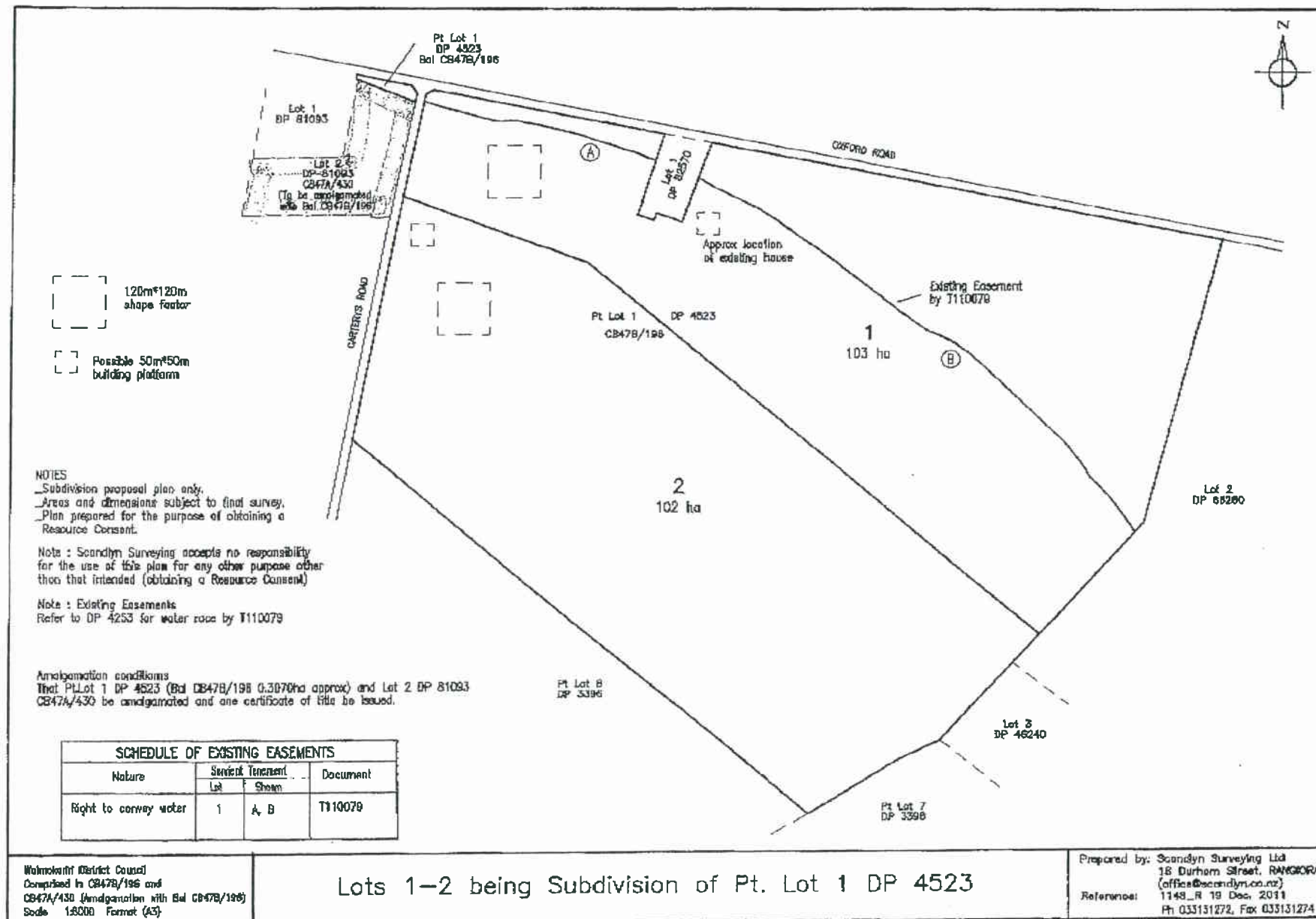


Photo 1: Aerial Photo of site and surrounding land (source: Google Maps, February 2012)



Eliot Sinclair and Partners Ltd.

Geotechnical Report for proposed subdivision
1199 Oxford Road, Springbank

15 APPENDIX D – SITE INVESTIGATION RECORDS

WAIMAKARIRI DISTRICT COUNCIL
Plans and specifications APPROVED in accordance
with the Building Act 2004, clause 49 and the Building
Regulations 1992, Clause 3
132254 3/01/2014 Keegan

Eliot Sinclair

surveyors | engineers | planners

Unit 4, 502 Walrakel Road, Christchurch
PO Box 4597, Christchurch N.Z.
Ph. (03) 379-4014 Fax (03) 365-2448

Job Number

348902

Date Tested

31-Jan-2012

1 of 1

SITE INVESTIGATION RECORD

D.P.

Lot 2

Project No.

Client

SGN Developments Ltd

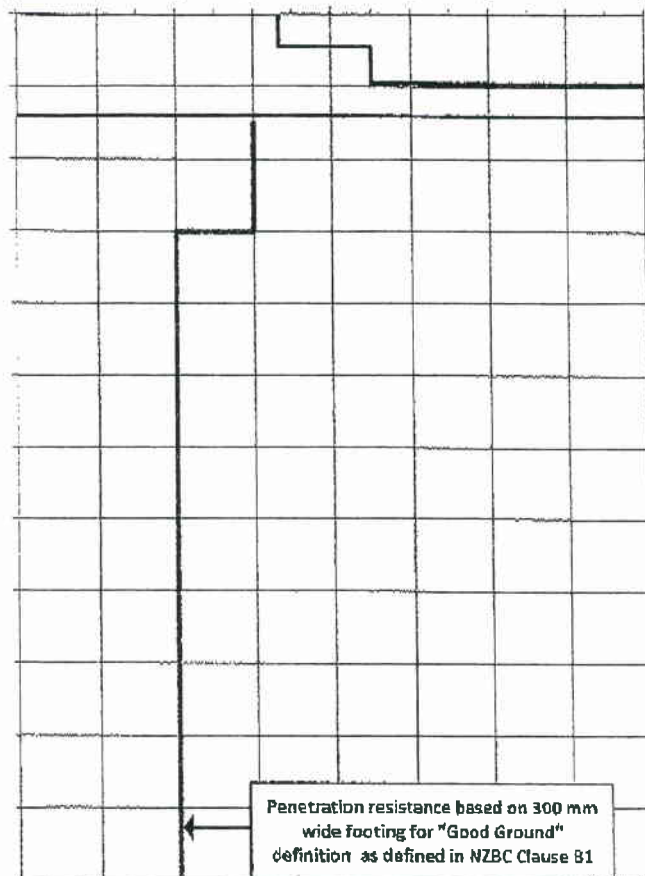
Site

1199 Oxford Road, Rangiora

SCALA PENETROMETER TESTS

Number of Blows per 75mm

0 1 2 3 4 5 6 7 8



P1

SITE PLAN (Not to Scale)

North

See attached site plan

DEPTH

[m]

Hand Auger



Machine Auger



Test Pit



BORE LOGS

(Test Pit)

GL

0.2

0.4

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

Dark brown stoney silty TOPSOIL

Light brown silty GRAVEL with some sand, compact, cry

Greyish brown sandy GRAVEL with some cobbles and boulders, moist, heavy iron staining

Greyish brown coarse sandy GRAVEL with some cobbles, wet, iron staining

STOP

COMMENTS

Civil Engineer

Date:

24/2/2012

Eliot Sinclair

surveyors | engineers | planners

Unit 4, 502 Wairakei Road, Christchurch
PO Box 4587, Christchurch N.Z.
Ph. (03) 379-4014 Fax. (03) 365-2449

Job Number

348902

Date Tested

31-Jan-2012

Page 1 of 1

D.P.

Lot 4

Project No.

SITE INVESTIGATION RECORD

Client

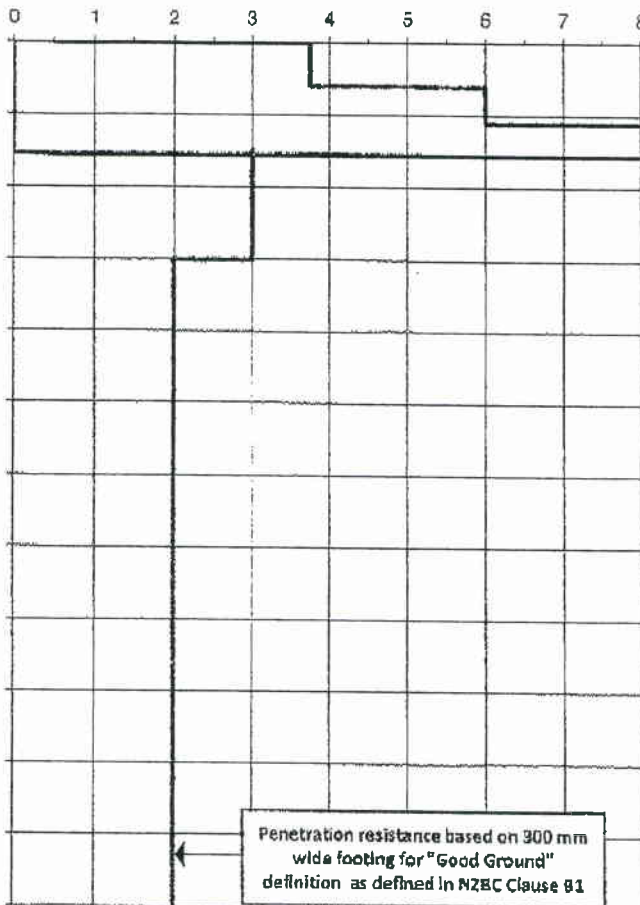
SGN Developments Ltd

Site

1199 Oxford Road, Rangiora

SCALA PENETROMETER TESTS

Number of Blows per 75mm



P1

DEPTH

[m]

GL

0.2

0.4

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

BORE LOGS

Hand Auger

☐

Machine Auger

☐

Test Pit

☒

(Test Pit)

Brown stoney silty TOPSOIL

Light brown silty GRAVEL with some sand, compact, dry

Greyish brown sandy GRAVEL with some cobbles, moist, heavy iron staining

Greyish brown coarse sandy GRAVEL with some cobbles, wet, heavy iron staining

STOP

SITE PLAN (Not to Scale)

North

See attached site plan

COMMENTS

Civil Engineer

Date: 24/2/2012

Eliot Sinclair

surveyors | engineers | planners

Unit 4, 502 Wairakei Road, Christchurch
PO Box 4597, Christchurch N.Z.
Ph. (03) 379-4014 Fax. (03) 385-2449

Job Number

348902

Date Tested

31-Jan-2012

Page 1 of 1

D.P

Lot 6

Project No.

SITE INVESTIGATION RECORD

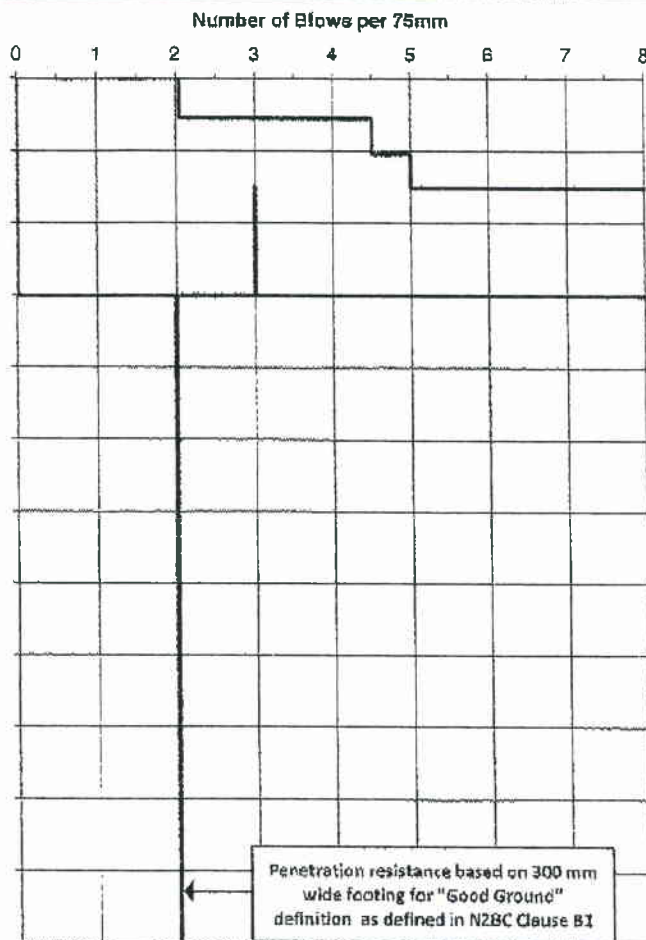
Client

SGN Developments Ltd

Site

1199 Oxford Road, Rangiora

SCALA PENETROMETER TESTS



P1

DEPTH

(m)

Hand Auger

Machine Auger

Test Pit

☒

BORE LOGS

GL

0.2

0.4

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

Brown silty TOPSOIL

Light brown silty sandy GRAVEL with some cobbles, dry, iron staining

Grey silty GRAVEL with some sand and cobbles, moist, heavy iron staining

Greyish brown sandy GRAVEL with some cobbles, moist, heavy iron staining

Brown silty GRAVEL with some sand and cobbles, wet, heavy iron staining

STOP

(Test Pit)

SITE PLAN (Not to Scale)

North

See attached site plan

COMMENTS

Civil Engineer

Date: 24/2/2012

Eliot Sinclair

surveyors | engineers | planners

Unit 4, 502 Walrakeri Road, Christchurch
PO Box 4597, Christchurch N.Z.
Ph. (03) 379-4014 Fax. (03) 365-2449

Job Number

348902

Date Tested

31-Jan-2012

Page 1 of 1

D.P

Lot 8

Project No.

SITE INVESTIGATION RECORD

Client

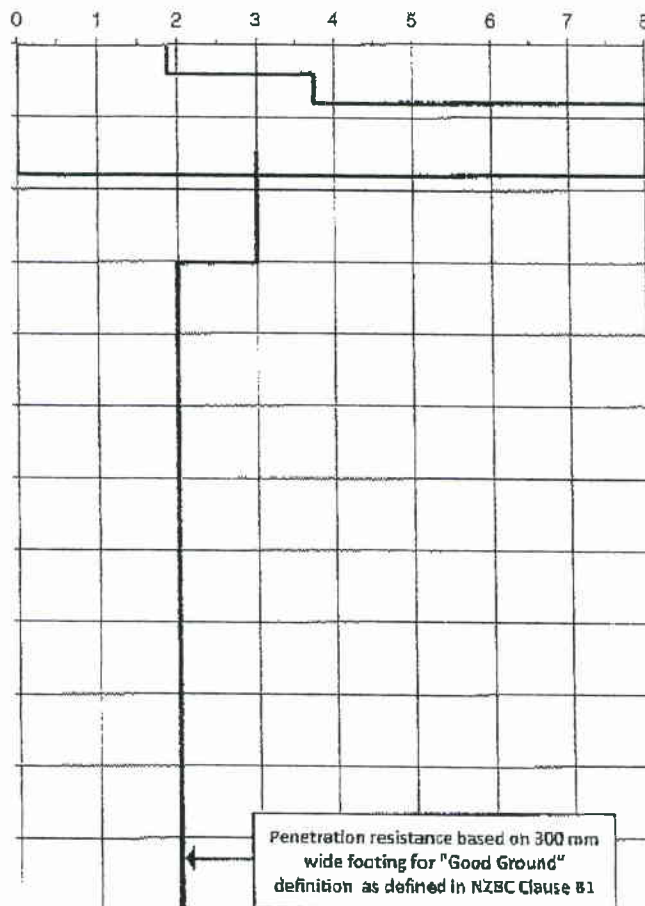
SGN Developments Ltd

Site

1199 Oxford Road, Rangiora

SCALA PENETROMETER TESTS

Number of Blows per 75mm



P1

DEPTH

[m]

Hand Auger



Machine Auger



Test Pit



BORE LOGS

(Test Pit)

GL

0.2

0.4

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

Brown silty TOPSOIL with some stones

Light brown sandy GRAVEL with some silt and cobbles, dry

Light brown sandy GRAVEL with some silt and cobbles, moist, heavy iron staining

Light greyish brown silty GRAVEL, moist, heavy iron staining

Light brown sandy GRAVEL, iron staining

STOP

SITE PLAN (Not to Scale)

North

See attached site plan

COMMENTS

Civil Engineer

Date:

24/2/2012

Eliot Sinclair

surveyors | engineers | planners

Unit 4, 502 Wairekei Road, Christchurch
PO Box 4597, Christchurch N.Z.
Ph. (03) 379-4014 Fax. (03) 365-2449

Job Number

348902

Date Tested

31/1/12

Page 1 of 1

D.P.

Lot 10

Project No.

SITE INVESTIGATION RECORD

Client

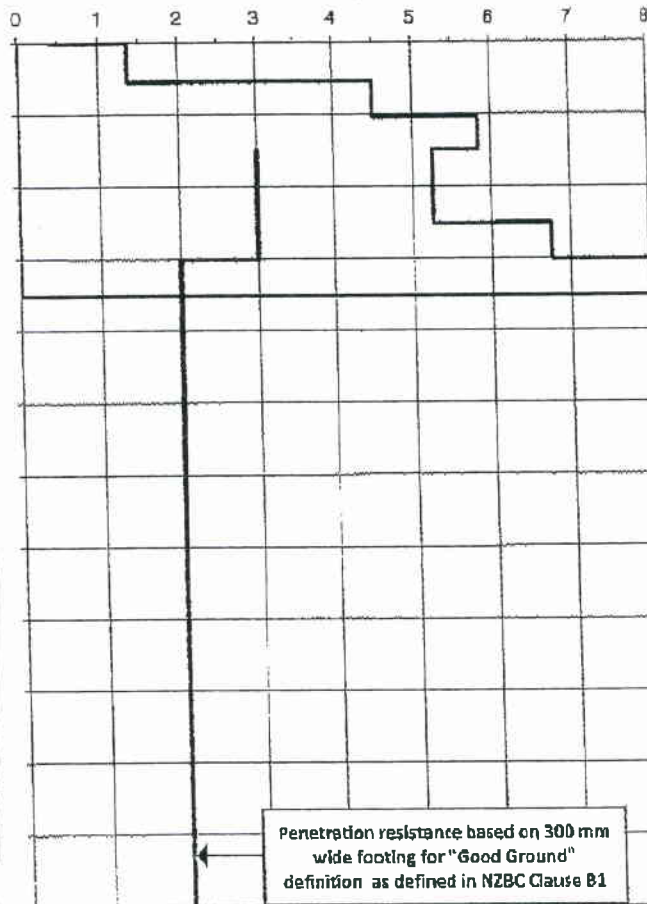
SGN Developments Ltd

Site

1199 Oxford Road, Rangiora

SCALA PENETROMETER TESTS

Number of Blows per 75mm



P1

SITE PLAN (Not to Scale)

North

See attached site plan

DEPTH

[m]

Hand Auger

Machine Auger

Test Pit

☒

GL

0.2

0.4

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

Brown silty TOPSOIL with some stones

Light brown silty sandy GRAVEL, dry

Greyish brown sandy GRAVEL with some cobbles, moist, iron staining

Light greyish brown gravelly SAND, wet, Iron staining

STOP

COMMENTS

Civil Engineer

Date:

24/2/2012

Eliot Sinclair

surveyors | engineers | planners

Unit 4, 502 Wairakei Road, Christchurch
PO Box 4597, Christchurch N.Z.
Ph. (03) 379-4014 Fax. (03) 385-2449

Job Number
348902

Date Tested
31-Jan-2012

Page 1 of 1

SITE INVESTIGATION RECORD

Client **SGN Developments Ltd**

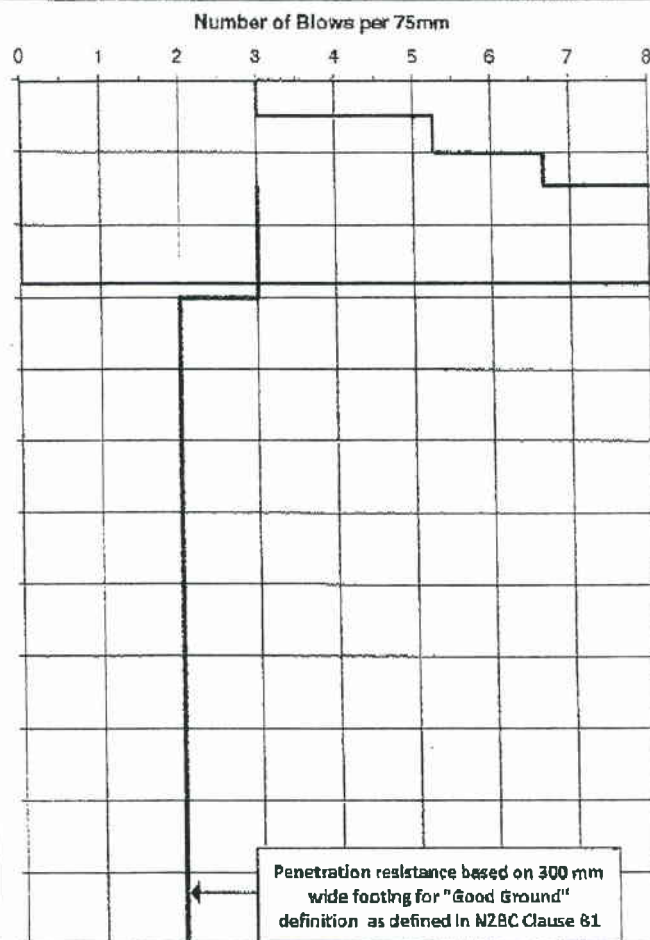
Site **1199 Oxford Road, Rangiora**

D.P.

Lot 12

Project No.

SCALA PENETROMETER TESTS



DEPTH

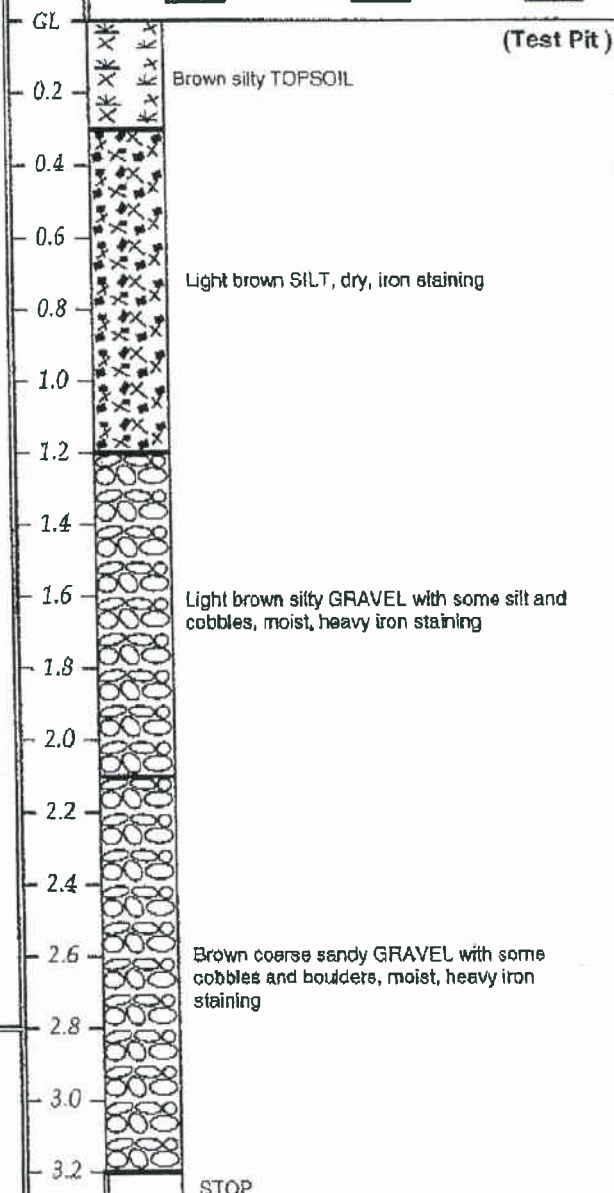
[m]

Hand Auger ☐

Machine Auger ☐

Test Pit ☒

BORE LOGS



SITE PLAN (Not to Scale)

North

See attached site plan

COMMENTS

Civil Engineer

Date:

24/2/2012

Eliot Sinclair

surveyors | engineers | planners

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PO Box 4597, Christchurch N.Z.
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Job Number
348902

Date Tested
31-Jan-2012

Page 1 of 1

D.P

Lot 14

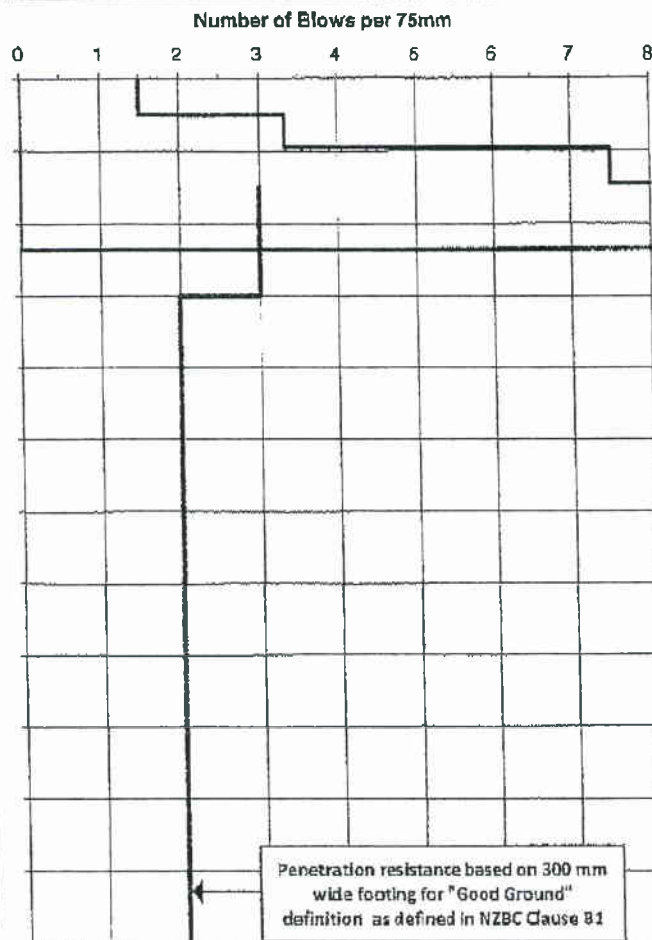
Project No.

SITE INVESTIGATION RECORD

Client SGN Developments Ltd

Site 1199 Oxford Road, Rangiora

SCALA PENETROMETER TESTS



P1

DEPTH

[m]

Hand Auger

Machine Auger

Test Pit

GL

0.2

0.4

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

BORE LOGS

(Test Pit)

Dark brown silty sandy TOPSOIL with some stones

Light brown sandy GRAVEL with some silt, dry

Light brown coarse sandy GRAVEL, moist, heavy iron staining

Light greyish brown coarse sandy GRAVEL, wet, heavy iron staining

STOP

SITE PLAN (Not to Scale)

North

See attached site plan

COMMENTS

Civil Engineer

Date:

24/2/2012

Eliot Sinclair

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PO Box 4597, Christchurch N.Z.
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Job Number
348902

Date Tested
31-Jan-2012

Page 1 of 1

D.P.
Lot 16

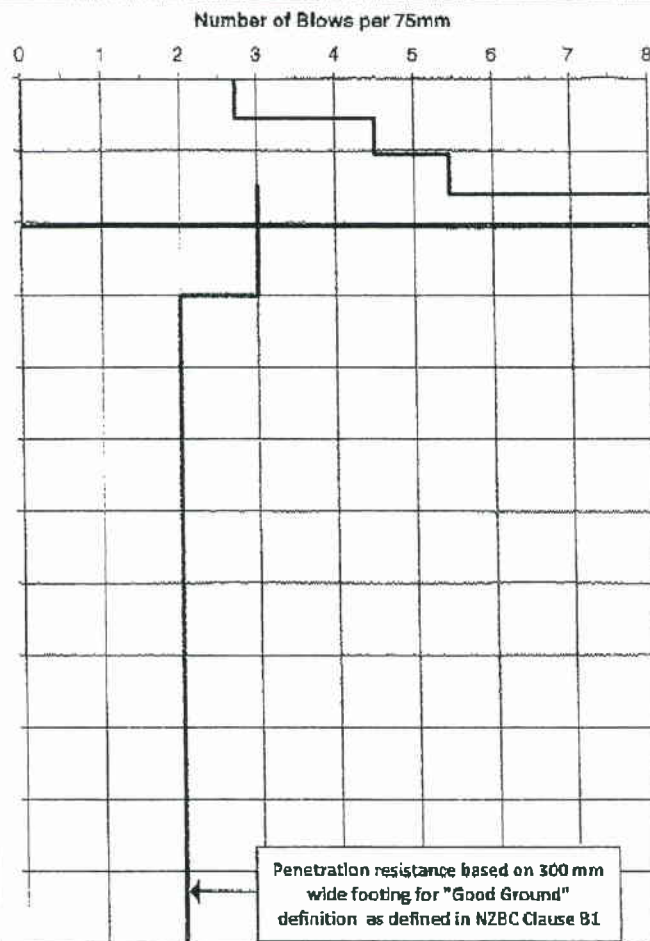
Project No.

SITE INVESTIGATION RECORD

Client SGN Developments Ltd

Site 1199 Oxford Road, Rangiora

SCALA PENETROMETER TESTS



— P1

DEPTH

[m]

Hand Auger ☐

Machine Auger ☐

Test Pit ☒

BORE LOGS

GL

0.2

0.4

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

(Test Pit)

Dark brown silty TOPSOIL with some sand and stones

Light brown sandy GRAVEL with some cobbles, compact, dry

Brown sandy GRAVEL with some cobbles, moist

Grey silty GRAVEL, moist, iron staining

Brown sandy GRAVEL with some cobbles, moist

Brown silty GRAVEL with some cobbles, moist, iron staining

STOP

SITE PLAN (Not to Scale)

North

See attached site plan

COMMENTS

Civil Engineer

Date:

24/2/2012

Eliot Sinclair

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Unit 4, 502 Wairakei Road, Christchurch
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Job Number

348902

Date Tested

31-Jan-2012

Page 1 of 1

D.P.

Lot 18

Project No.

SITE INVESTIGATION RECORD

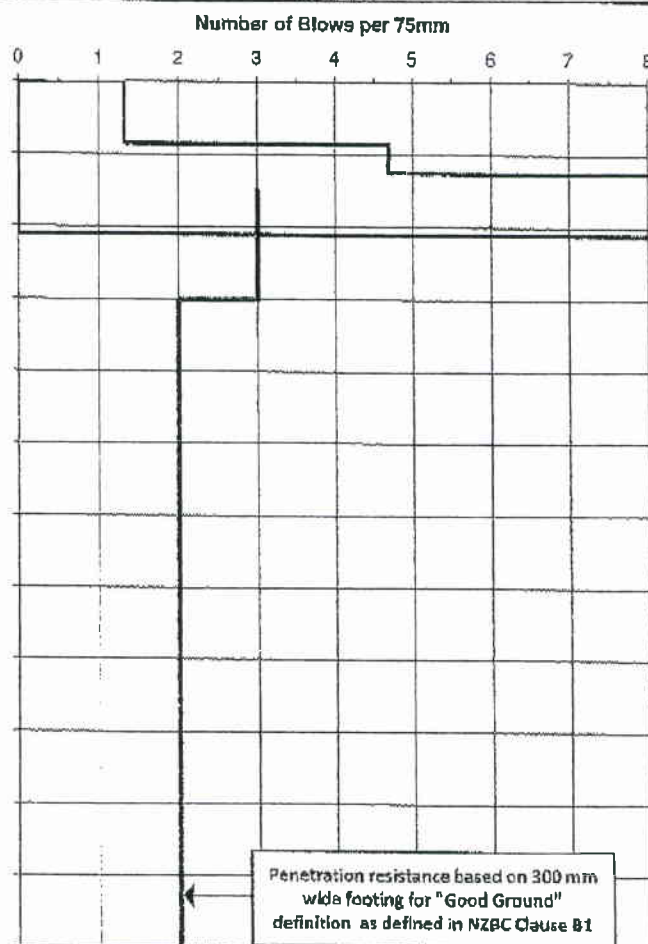
Client

SGN Developments Ltd

Site

1199 Oxford Road, Rangiora

SCALA PENETROMETER TESTS



— P1

DEPTH

[m]

Hand Auger

Machine Auger

Test

Fit

BORE LOGS

(Test Pit)

GL

0.2

0.4

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

Brown silty TOPSOIL with some stones

Light brown silty GRAVEL, dry

Brown sandy GRAVEL with some cobbles, compact, moist

Grey sandy GRAVEL with some cobbles, wet

STOP

SITE PLAN (Not to Scale)

North

See attached site plan

COMMENTS

Civil Engineer

Date:

24/2/2012

Eliot Sinclair

surveyors | engineers | planners

Unit 4, 502 Walrakel Road, Christchurch
PO Box 4597, Christchurch N.Z.
Ph. (03) 379-4014 Fax (03) 365-2449

Job Number

348902

Date Tested

31-Jan-2012

Page 1 of 1

D.P

Lot 20

Project No.

SITE INVESTIGATION RECORD

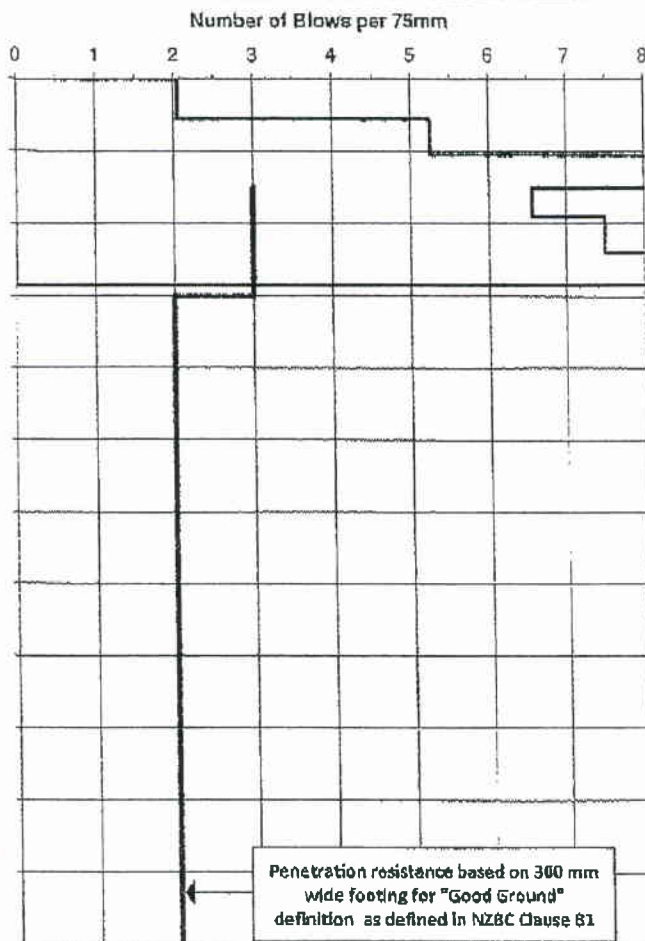
Client

SGN Developments Ltd

Site

1199 Oxford Road, Rangiora

SCALA PENETROMETER TESTS



P1

SITE PLAN (Not to Scale)

North

See attached site plan

DEPTH

[m]

Hand Auger

Machine Auger

Test Pit

GL

0.2

0.4

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

BORE LOGS

(Test Pit)

Brown silty TOPSOIL with some stones

Light brown silty GRAVEL with some sand, dry

Brown sandy GRAVEL with some cobbles, moist

Greyish brown sandy GRAVEL with some cobbles, moist

STOP

COMMENTS

Civil Engineer

Date:

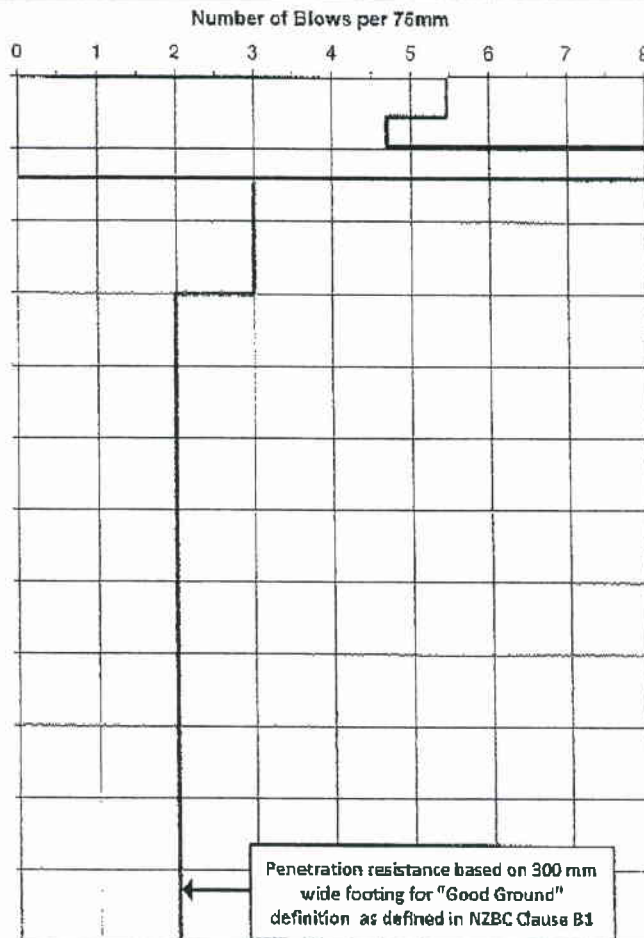
24/2/2012

SITE INVESTIGATION RECORD

Client SGN Developments Ltd

Site 1199 Oxford Road, Rangiora

SCALA PENETROMETER TESTS



— P1

SITE PLAN (Not to Scale)

North

See attached site plan

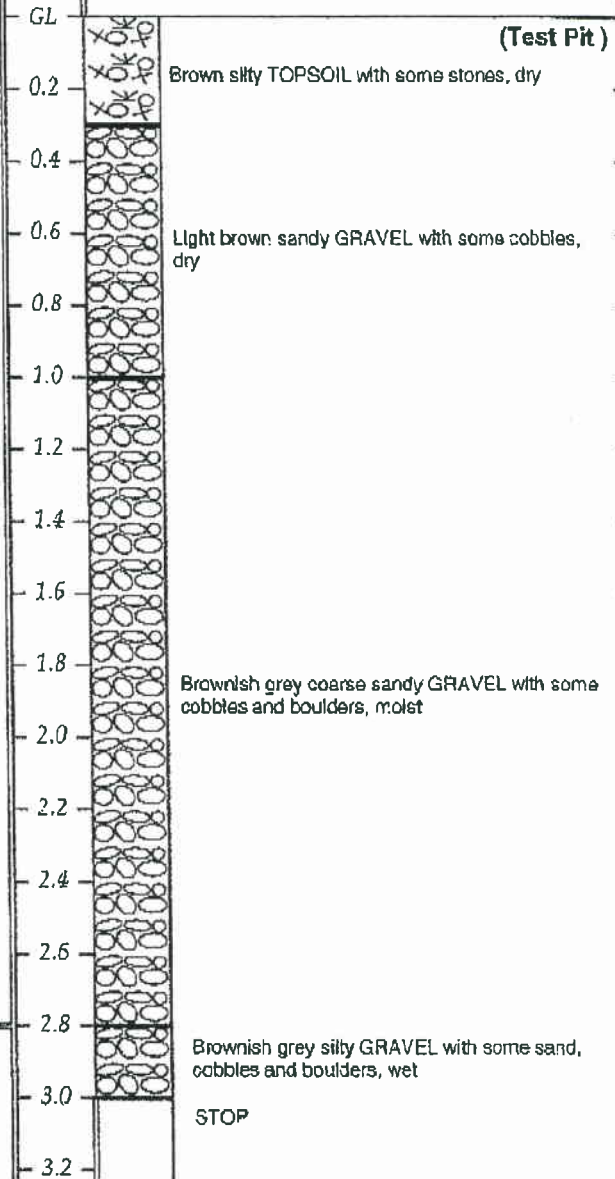
DEPTH
[m]

BORE LOGS

Hand Auger ☐

Machine Auger ☐

Test Pit ☒



COMMENTS

Civil Engineer

Phil Anwar

Date: 24/2/2012

Eliot Sinclair

surveyors | engineers | planners

Unit 4, 502 Wairakei Road, Christchurch
PO Box 4597, Christchurch N.Z.
Ph. (03) 379-4014 Fax (03) 365-2449

Job Number

348902

Date Tested

1-Feb-2012

Page 1 of 1

D.P.

Lot 24

Project No.

SITE INVESTIGATION RECORD

Client

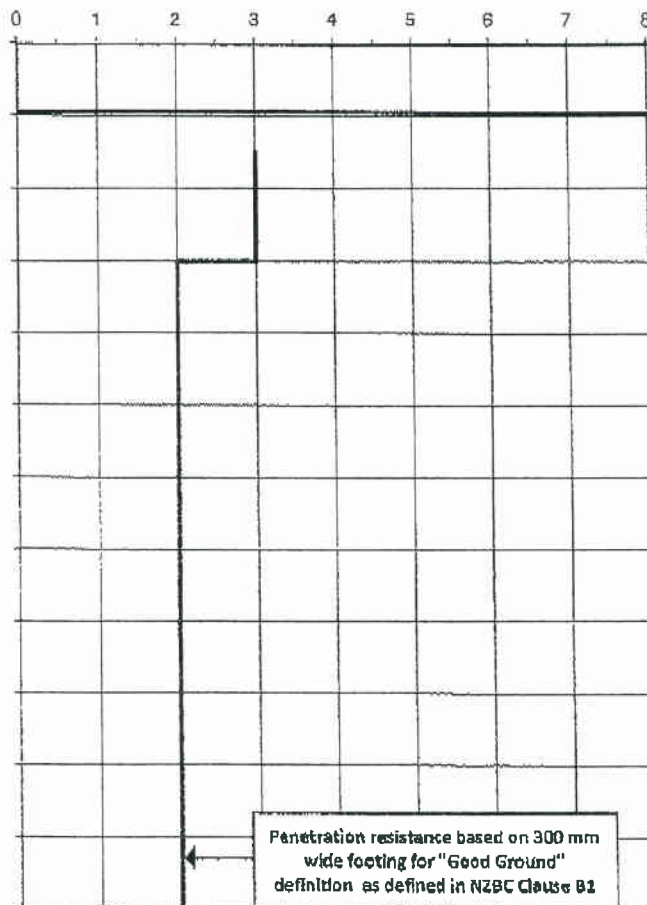
SGN Developments Ltd

Site

1199 Oxford Road, Rangiora

SCALA PENETROMETER TESTS

Number of Blows per 75mm



Penetration resistance based on 300 mm
wide footing for "Good Ground"
definition as defined in NZBC Clause B1

P1

DEPTH

[m]

Hand
AugerMachine
AugerTest
Pit☒

GL

0.2

0.4

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

BORE LOGS

Brown silty stoney TOPSOIL

Light brown fine silty sandy GRAVEL, dry

Brown coarse sandy GRAVEL with some
cobbles, moist, iron staining

STOP

SITE PLAN (Not to Scale)

North

See attached site plan

COMMENTS

Civil Engineer

Date:

24/2/2012

Eliot Sinclair

surveyors | engineers | planners

Unit 4, 502 Wairakei Road, Christchurch
PO Box 4587, Christchurch N.Z.
Ph. (03) 579-4014 Fax. (03) 365-2449

Job Number
348902

Date Tested
1-Feb-2012

Page 1 of 2

D.P.

Lot 26

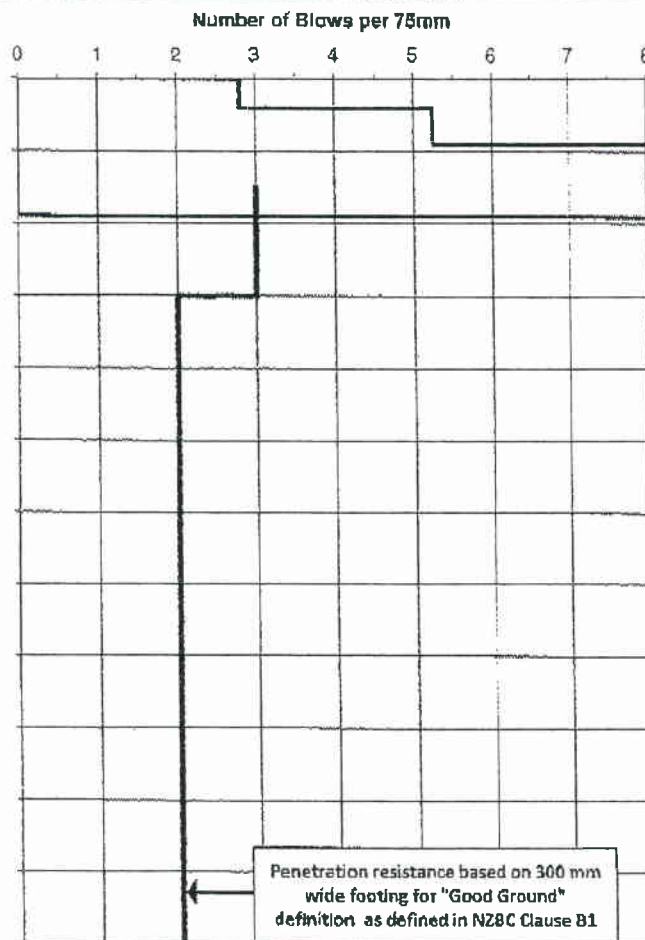
Project No.

SITE INVESTIGATION RECORD

Client SGN Developments Ltd

Site 1199 Oxford Road, Rangiora

SCALA PENETROMETER TESTS



DEPTH

[m]

BORE LOGS

Hand Auger ☐

Machine Auger ☐

Test Pit ☒

GL

0.2

0.4

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

(Test Pit @ A)

Brown silty TOPSOIL with some stones

Light brown silty GRAVEL with some fine SAND, compact, dry, iron staining

Light brown silty sandy GRAVEL, moist, heavy iron staining

STOP

SITE PLAN (Not to Scale)

North

See attached site plan

COMMENTS

John Oramon
Civil Engineer

Date: 24/2/2012



PRODUCER STATEMENT – PS1 – DESIGN

ISSUED BY: Gavin Robertson Engineering Design
(Design Firm)

TO: T & G De Boer
(Owner/Developer)

TO BE SUPPLIED TO: Waimakariri District Council
(Building Consent Authority)

IN RESPECT OF: New Residence
(Description of Building Work)

AT: 9 Hayfield Tce
(Address)

..... LOT DP SO

We have been engaged by the owner/developer referred to above to provide **computations, design and routine inspection** services in respect of the requirements of Clause(s) **B1** 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 Department of Building & Housing B1/VM1
(verification method / acceptable solution)

or

Alternative solution as per the attached schedule

The proposed building work covered by this producer statement is described on the drawings titled; *Timberworks Mohawk Valley Barn* and numbered *E2-E6* 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
 - a. **Site conditions comply with the requirements set out in NZS 3604, Section 3**
- (ii) All proprietary products meeting their performance specification requirements;

I **believe on reasonable grounds** 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.

I, **Gavin Robertson** am:
(Name of Design Professional)

CPEng #215642

Reg Arch #

I am a Member of: **IPENZ NZIA** and hold the following qualifications: **BE Civil**.

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

SIGNED BY **GAVIN ROBERTSON** ON BEHALF OF **Gavin Robertson Engineering Design**

Date...20/11/13..... (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.

WAIMAKARIRI DISTRICT COUNCIL
Plans and specifications APPROVED in accordance
with the Building Act 2004, clause 49 and the Building
Regulations 1992, Clause 3
132254 3/01/2014 Keegan

Schedules to PS1 – Design for DeBoer

We have been engaged by the owner/developer to provide **Computations, Design and Routine Inspection** services for the following parts of the proposed building works:

- (i) **Timberworks Frame Structure (Gravity Only, Bracing by others).**
- (ii) **Precast Concrete Retaining for basement.**
- (iii) **Traydec Suspended slab.**

Schedule of inspections.

The following inspections must be carried out by the Gavin Robertson or his representative:

- (i) **All specific design elements and fixings prior to covering with linings.**
- (ii) **Excavations for retaining foundation.**
- (iii) **Reinforcing for retaining foundation and wall prior to placing concrete.**



WAIMAKARIRI DISTRICT COUNCIL
Plans and specifications APPROVED in accordance
with the Building Act 2004, clause 49 and the Building
Regulations 1992, Clause 3
132254 3/01/2014 Keegan

FLOOD ASSESSMENT REPORT

1199 Oxford Road, Springbank Downs Subdivision, Rangiora

SGN Developments Ltd

July 2012

Eliot Sinclair
surveyors | engineers | planners

8 Recommendations

1. Based on this flood assessment it is recommended that land at 1199 Oxford Road is suitable for subdivision with respect to inundation hazards. No further site investigation is considered necessary.
 2. It is recommended that a 'building zone', as marked on **Figure 7** and **Attachment G** be placed as a covenant on the titles for Lot 15, 17, 21 and 22. The building zone has a freeboard of 0.5m above the modelled 50-year flows.
 3. It is recommended that buildings on Lot 16 shall be constructed with a finished floor level of at least 150mm above the level of Oxford Road (95.0m asl).
33. Specific design and resource consent are required if buildings or disposal fields are proposed in the area subject to inundation outlined in **Figure 7**.

Envirochem

**DESKTOP
INVESTIGATION:-1199
OXFORD ROAD,
SPRINGBANK, CUST**

**Confidential
Client Report**

**Prepared For
SGN Developments Ltd**

By

**Dahya M Budhia
Environmental Scientist
Envirochem
March 2012**



*Envirochem, P O Box 28-103, Christchurch, 8242 Ph 027 2230-580
Email: Envirochem@xtra.co.nz*

The desktop investigation indicates that the areas where the sheep dip and chemical store were located at the Randlea farm are the most likely regions that could have been adversely impacted by sheep dip chemicals such as lead arsenate and DDT and other agricultural chemicals.

3.0 CONCLUSION

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Therefore further an investigation should be conducted to determine the level of soil contamination by historical sheep dip and agricultural chemicals in the areas directly

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Therefore further an investigation should be conducted to determine the level of soil contamination by historical sheep dip and agricultural chemicals in the areas directly

associated with the sheep dip and chemical store. Also since the water race was used to flush the sheep dip the sediment downstream of where the sheep dip was located should also be analysed for residual sheep dip and agricultural chemicals in any site investigation

Parts of the farm which have been used for cropping and rearing of livestock may have been impacted upon by the disposal of animal effluent. It is thought that the practice of land disposal of animal effluent is unlikely to have caused any adverse contamination of the land. It is also considered that the historical spraying of pastures and crops with insecticides such as DDT and other related agricultural chemicals unlikely to have a significant level of impact to be a risk to human health.

4.0 LIMITATIONS

The desktop investigation of the farm located at 1199 Oxford Road, Cust has been compiled from information supplied by WDC, ECan and through speaking with people associated with the farm and on-site observations.

Therefore any interpretation should take into consideration the limitation of such as exercise.

Envirochem does not take any liability for incorrect information given by any third party.

5.0 REFERENCES

“Contaminated Land Management Guidelines, Reporting on Contaminated Sites in New Zealand”, Ministry for the Environment, 2001

6.0 APPENDICES

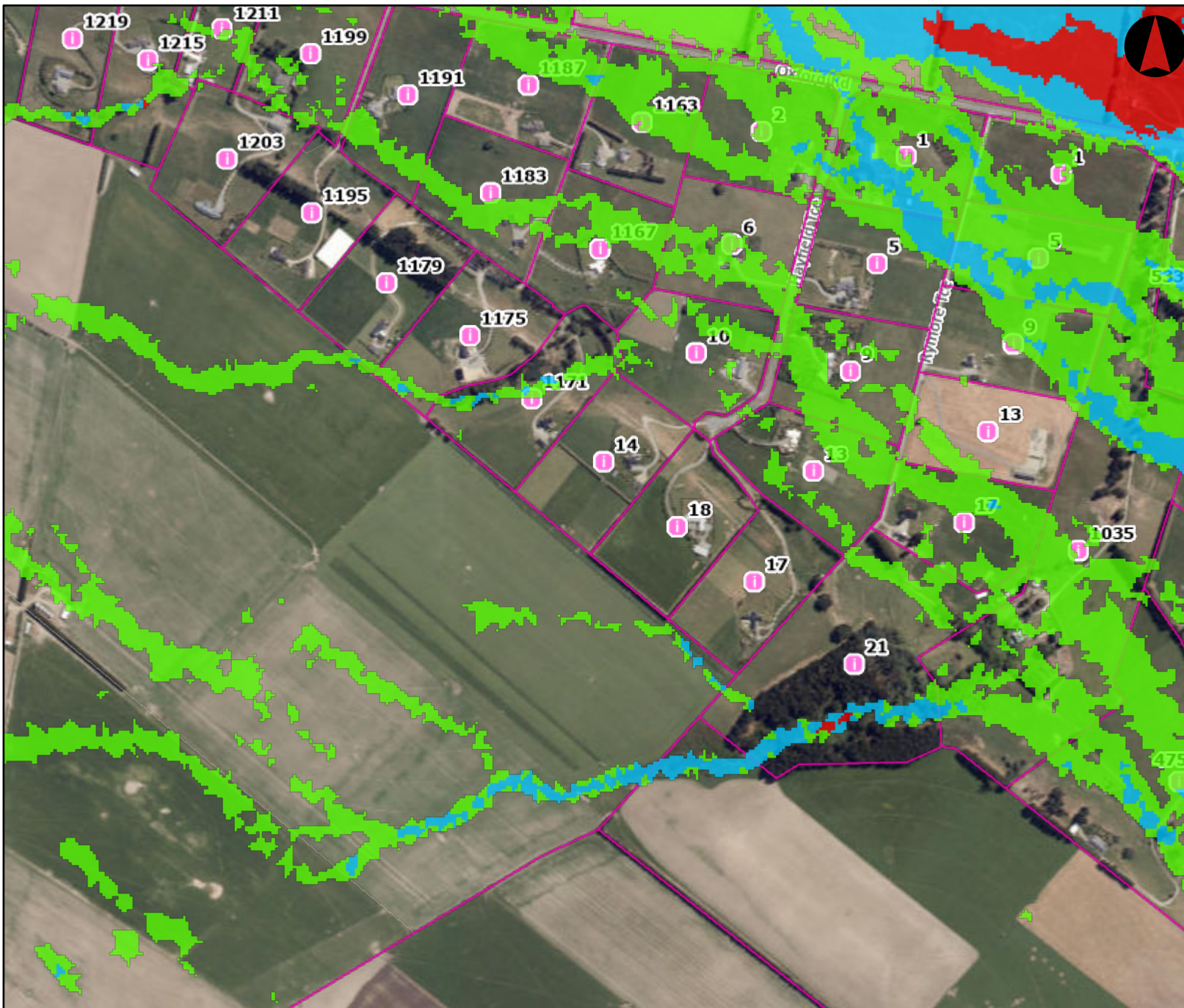
Appendix A: Diagrams

Appendix B: Photographs

Appendix C: Relevant Parts of WDC LIM Report

Appendix D: ECan LLUR Report





Legend

LM2601166 - Page 150

All Flooding Hazard 200 year

ClassName

- Low
- Medium
- High

Properties > 1 ha

Property Boundaries with Attributes

- Current Property
- Deposited Land Parcels

Road Names

tony.meier@wmk.govt.nz

Waimakariri District Council

Date: 25/06/2026

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, 2025 Urban and Rural Aerial Imagery, 2023 Birch Hill Cemetery UAV Imagery, 2022-23 Cust Cemeteries UAV Imagery, Waimakariri District Council, Waimakariri District Council

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.

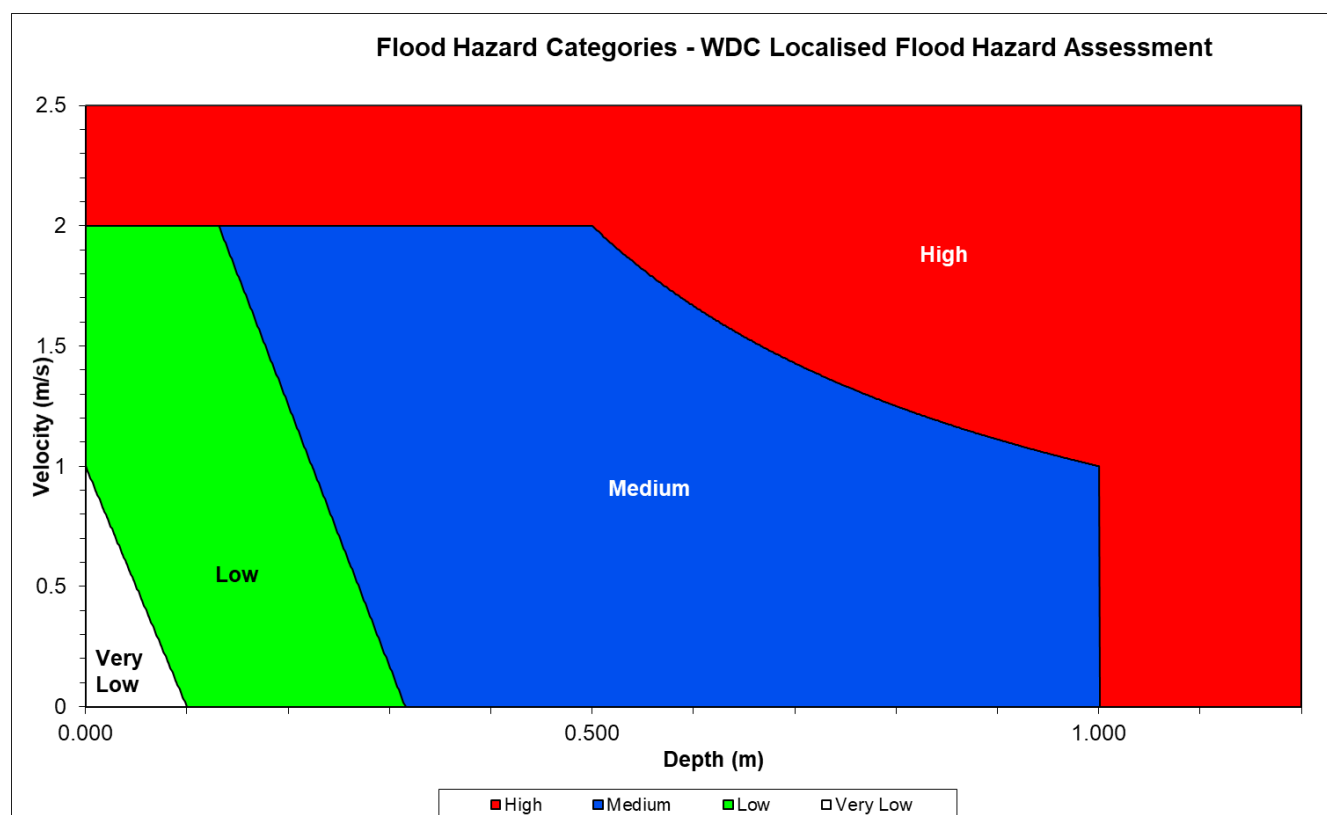
1. Annual Exceedence Probability.

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

- LM2601166 - Page 153
- Land Parcel
- Property Boundary
- NZS3604:2011
- High 44 MS
- NZS3604:2011
- ZONE
- 2

Author: Anthony Meier

Date: 25/06/2026

Scale 1:3,289 Original page size: A4



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