

In the Environment Court of New Zealand  
Christchurch Registry

I Mua I Te Kōti Taiao o Aotearoa  
Ōtautahi Rohe

**ENV-**

Under the Resource Management Act 1991

In the matter of an appeal under Clause 27, Schedule 1 of the Resource  
Management Act 1991 on Plan Change 62 to the Selwyn  
District Plan

Between **D Marshall, B Hammett, L and A Martin, M and T Saunders**

Appellants

And **Selwyn District Council**

Respondent

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**Notice of Appeal**

27 May 2021

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**Appellant's solicitors:**

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**anderson  
lloyd.**

To the Registrar

Environment Court

Christchurch

- 1 D Marshall, B Hammett, L and A Martin, and M and T Saunders (the **Appellants**) appeal against part of the decision of the Selwyn District Council on Plan Change 62 (**PC62**) to the Selwyn District Plan.
- 2 The Appellants are members of the applicant group for PC62.
- 3 The Appellants are not trade competitors for the purposes of section 308D of the Resource Management Act 1991 (the **Act**).
- 4 The Appellants received notice of the decision on 14 April 2021.
- 5 The decision was made by Selwyn District Council, on recommendation of independent commissioner Dean Chrystal.
- 6 The part of the decision that the Appellants are appealing against is:
  - (a) The decision to decline of rezoning of areas of land identified as Areas A, B and C on the plan included as **Appendix A** to this notice of appeal, in favour of retention of Outer Plains zoning on the areas; and
  - (b) The location of the primary stormwater infrastructure as depicted on the Outline Development Plan (**ODP**).

#### *Background*

- 7 The PC62 Application (**Application**) sought to rezone approximately 60 hectares of land located to the west of the existing Leeston township, generally bounded by High Street, Harmans Road and Leeston Dunsandal Road, together with a portion of land to the north of Leeston Dunsandal Road (**Application Site**) from Living 1 (deferred), Living 2 (deferred) and Outer Plains, to Living 1 and Living 2.
- 8 The Council's decision on PC62 was to rezone part of the Application Site to Living 1 Zone. The Appellants do not seek to appeal this part of the decision to rezone land to Living 1 Zone.
- 9 The Appellants seek to rezone the land in which they hold an interest, to Living 1 Zone and Living 2 Zone, as shown on the plan attached at **Appendix A**, to relocate the larger stormwater management area from Living 1 zoned land to Outer Plains zoned land, and to make consequential amendments to the ODP.

### *Reasons for the Appeal*

- 10 The rezoning of this Areas A, B and C will enable the provision of housing capacity in a manner that is compatible with the urban form of the Leeston township, will improve amenity and connectivity, and will avoid adverse effects from ad-hoc development.
- 11 The land adjacent to Leeston Dunsandal Road is not suitable to be retained as Outer Plains Zone. The land is held in two titles, in separate ownership. The larger parcel (being a portion of Section 2 Survey Office Plan 534245) contains a new Council water supply bore and surrounding allotment (Section 1 Survey Office Plan 534245) at its centre, and the approximately half of the area which is subject to appeal falls within a groundwater protection zone. The second parcel (Lot 1 Deposited Plan 9138) has an area of 8094m<sup>2</sup>. At this size there are significant limitations on use of this land for economic and productive rural uses.
- 12 Rezoning of the land adjacent to High Street (a portion of Lot 1 Deposited Plan 82846) will provide additional housing capacity at both Living 1 and Living 2 densities, provide improved connectivity to the existing Living zoned land on the opposite side of High Street, and will provide a consolidated urban form on this entry to the Leeston township.
- 13 Provision of the stormwater management area on land that was within the Application Site but is now to retain its Outer Plains zoning will enable more efficient use and greater housing provision within the Living zoned land, will provide a buffer between rural and residential land uses in this location, and will enable the capacity of the stormwater infrastructure to be increased within the same facility should additional land towards Harmans Road be rezoned in the future.
- 14 The additional Living 1 and 2 zoning and the reconfiguration of the ODP sought will better:
  - (a) Achieve integrated management of effects of the use and development of land and associated natural and physical resources;
  - (b) Ensure there is sufficient housing capacity to meet the needs of the district and particularly the Leeston community;
  - (c) Give effect to the National Policy Statement on Urban Development and Canterbury Regional Policy Statement;
  - (d) Achieve the objectives and policies of the operative Selwyn District Plan; and
  - (e) Meet section 32 and Part 2 of the RMA.

15 The Appellants seek the following relief:

- (a) That the areas of land identified as Area A and Area B on the plan included as **Appendix A** to this notice of appeal to be rezoned from Outer Plains Zone to Living 2 Zone;
- (b) That the area of land identified as Area C on **Appendix A** to be rezoned from Outer Plains Zone to Living 1 Zone;
- (c) Amendments to the ODP as depicted in **Appendix A**, including relocation of the larger stormwater management area from land zoned Living 1 to land zoned Outer Plains, provision of an additional secondary road through land adjacent to High Street, and realignment of the primary road where it meets Leeston Dunsandal Road; and
- (d) Other such further or consequential relief as necessary to address the matters raised in this appeal.

16 I attach the following documents to this notice:

- (a) Appendix A: a plan identifying the relief sought;
- (b) Appendix B: a copy of the Application;
- (c) Appendix C: a copy of the relevant decision; and
- (d) Appendix D: a list of names and addresses of persons to be served with a copy of this notice.

Dated this 27<sup>th</sup> day of May 2021



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Sarah Eveleigh/Jessica Hardman  
Counsel for the Appellants

## **Advice to recipients of copy of notice of appeal**

### *How to become party to proceedings*

You may be a party to the appeal if you made a submission or a further submission on the matter of this appeal.

To become a party to the appeal, you must,—

- within 15 working days after the period for lodging a notice of appeal ends, lodge a notice of your wish to be a party to the proceedings (in form 33) with the Environment Court and serve copies of your notice on the relevant local authority and the appellant; and
- within 20 working days after the period for lodging a notice of appeal ends, serve copies of your notice on all other parties.

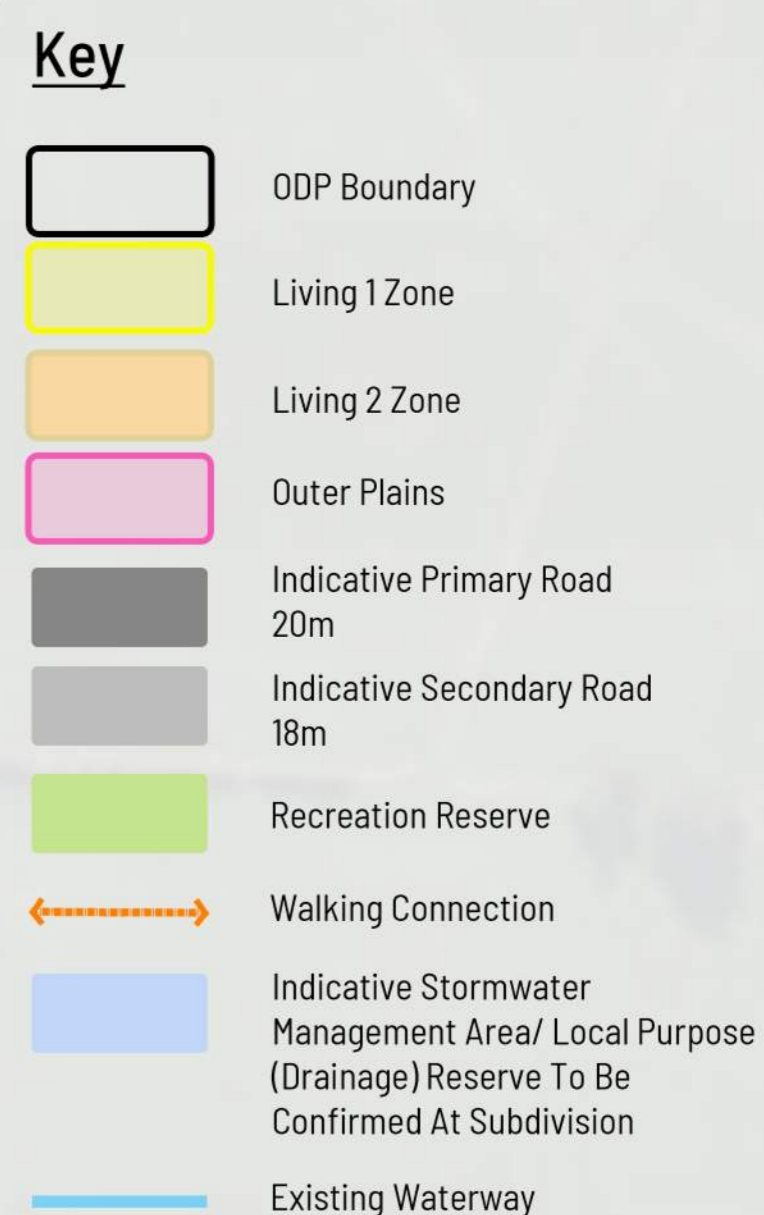
Your right to be a party to the proceedings in the court may be limited by the trade competition provisions in section 274(1) and Part 11A of the Act.

You may apply to the Environment Court under section 281 of the Act for a waiver of the above timing or service requirements (see form 38).

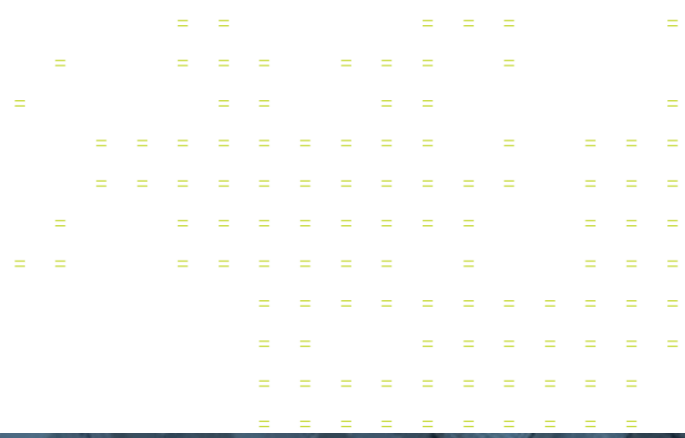
### *Advice*

If you have any questions about this notice, contact the Environment Court in Christchurch.

## **Appendix A: a plan identifying the relief sought**



**Appendix B: A copy of the application to which the Notice of Appeal relates**



## Private Plan Change Request

### Leeston Dunsandel Road, Harmans Road and High Street, Leeston



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#### CLIENT

Holly Farm

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#### ADDRESS

Leeston Dunsandel Road,  
Harmans Road and High Street,  
Leeston

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#### REFERENCE

6129

# Report Information

Reference:	6129
Title:	Private Plan Change Request
Client:	Holly Farm
Filename:	6129-PLN-APP-01-PLAN CHANGE VERSION 2
Version:	2
Date:	26/11/2019
Prepared by:	Adrianne Tisch 
Reviewed by:	Sally Elford 

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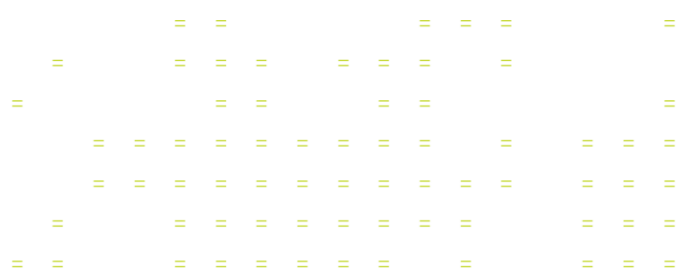
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A Level 1, 30 Maxwell Road,  
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## REQUEST TO CHANGE THE SELWYN DISTRICT PLAN UNDER CLAUSE 21 OF THE FIRST SCHEDULE OF THE RESOURCE MANAGEMENT ACT 1991

**Request by:** D Marshall, L Martin & A Formosa, M & T Saunders, B Hammett and J & S Howson  
C/- Baseline Group CLS Limited  
PO Box 8177, Riccarton, Christchurch, 8440  
Attn: Adrienne Tisch

**To:** Selwyn District Council  
**Involving the:** Selwyn District Plan

**Site Address:** Leeston Dunsandel Road, Harmans Road and High Street, Leeston.

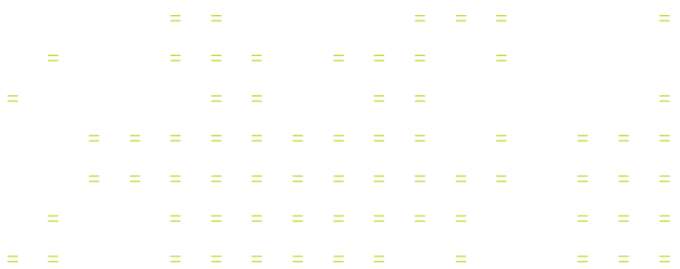
### The landowners and allotments to which the request relates:

Owner(s)	Address	Legal Description	Record of Title	Land Area (ha)
L Martin & A Formosa	85 Leeston Dunsandel Road	Lot 1 DP 9138	CB418/133	0.8093
D Marshall	Leeston Dunsandel Road	Lot 3 DP 82846	CB47D/695	20.00
J & S Howson	60 Leeston Dunsandel Road	Lot 2 DP 365379	264986	5.4440
B Hammett	45 Leeston Dunsandel Road	Lot 4 DP 82846	CB47D/696	0.6011
S Farrant	33-35 Leeston Dunsandel Road	Lot 2 DP 421172	574790	1.4757
T Anderson	31 Leeston Dunsandel Road	Lot 1 DP 451172	574789	0.1572
Cochranes of Canterbury	125a High Street	Lot 2 DP 319397	76388	2.23
D Marshall	High Street	Lot 1 DP 82846	CB47D/693	29.5500
M & T Saunders	149 High Street	Pt RSs 5482 & 5483	CB368/10	0.4047
Total				60.672

**The Plan Change Request** seeks to rezone the subject site from Living 1 (deferred) zone, Living 2 (deferred) zone and Outer Plains zone to Living 1 zone and Living 2 zone in accordance with the Outline Development Plan in Appendix 2.

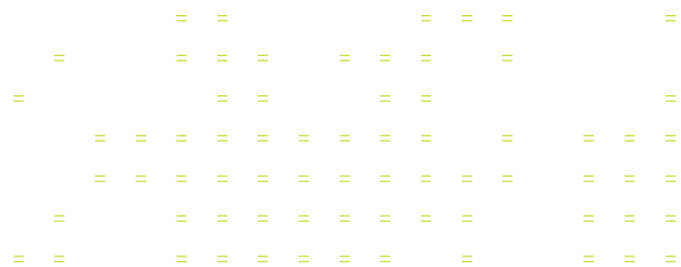
**The Plan Change Request** has been made under section 72(1), section 32, and the First Schedule of the Resource Management Act 1991.

1	Overview	1
1.1	Description of the Site and Surrounding Area.....	1
1.2	Purpose of the Private Plan Change Request.....	3
1.3	Reason for the Private Plan Change Request.....	4
2	Key Features of the Plan Change	5
2.1	Density .....	5
2.2	Outline Development Plan.....	5
2.3	Reserves .....	5
2.4	Stormwater .....	6
2.5	Urban Design .....	6
2.6	Transport .....	8
2.7	Services .....	8
2.8	Yield .....	10
2.9	Geotechnical Considerations.....	10
2.10	Flood Hazard .....	10
2.11	Preliminary Site Investigation.....	10
3	Proposed Amendments to the Selwyn District Plan	11
3.1	Planning Maps.....	11
3.2	Appendices.....	11
3.3	Issues, Objectives and Policies .....	11
3.4	Chapter 4 Living Zone Buildings .....	12
3.5	Chapter 12 Living Zone Subdivision.....	13
4	Statutory Framework	15
4.1	Functions of Section 31 .....	15
4.2	Part 2 Matters, Purpose and Principles.....	16
4.3	Section 32 Evaluation .....	18
4.4	District Plan Provisions.....	18
4.5	Canterbury Regional Policy Statement .....	18
4.6	Canterbury Land and Water Regional Plan .....	18
4.7	Mahaanui Iwi Management Plan 2013 .....	19
4.8	Selwyn 2031: District Development Strategy .....	20
4.9	Ellesmere Area Plan 2031.....	20
4.10	National Policy Statements .....	21
4.11	National Planning Standards .....	22
5	Description of Environmental Effects	23
5.1	Neighbourhood and Community Effects.....	23
5.2	Reverse Sensitivity Effects .....	23
5.3	Effects on Versatile Soils .....	24
5.4	Effects on Ecosystem .....	25
5.5	Effects on Infrastructure.....	26
5.6	Contamination effects.....	27
5.7	Positive Effects.....	27
6	Consultation	28



7 Conclusion 29

- Appendix 1: Records of Title
- Appendix 2: Outline Development Plan
- Appendix 3: Transport Assessment
- Appendix 4: Servicing Report
- Appendix 5: Geotechnical Investigation
- Appendix 6: Flood Hazard Assessment
- Appendix 7: Preliminary Site Investigation
- Appendix 8: Assessment of Selwyn District Plan Objectives and Policies
- Appendix 9: Mahaanui Kurataiao Consultation
- Appendix 10: Section 32 Evaluation
- Appendix 11: Assessment of Canterbury Regional Policy Statement Objectives and Policies
- Appendix 13: Assessment of the Land and Water Regional Plan
- Appendix 12: Assessment of the Mahaanui Iwi Management Plan



# 1 Overview

D Marshall, L Martin & A Formosa, M & T Saunders, B Hammett and J & S Howson (“the applicants”) apply for a Private Plan Change Request (“Plan Change”) to the Selwyn District Council (“Council”) pursuant to Section 21 of Schedule 1 of the Resource Management Act 1991 (“the Act”), to rezone approximately 60 ha of land west of Leeston township from Living 1 (deferred), Living 2 (deferred) and Outer Plains to 42 ha of Living 1 and 19 ha to Living 2.

The area subject to the Plan Change is bound by High Street to the south, Harmans Road to the west, Leeston Dunsandel Road to the north and residential activity to the east. A 5.4 ha land parcel lies north of Leeston Dunsandel Road. The land subject to the Plan Change will be referred to as “the site”.

This request has been made under Section 21 of Schedule 1 and has taken into account the matters listed in Section 74 of the Act.

This Plan Change has been made in accordance with Section 22 of Schedule 1 and outlines the purpose of, and reasons for, the Plan Change and an evaluation report prepared in accordance with Section 32 of the Act. Where environmental effects are anticipated as a result of implementing the Plan Change, they have been described in this report.

The Plan Change is considered to be an appropriate method to lift the deferral over the Living 1 (deferred) and Living 2 (deferred), and to rezone the site to enable residential development. It is considered to be consistent with the objectives and policies of the Selwyn District Plan (“the Plan”), Canterbury Regional Policy Statement (“the CRPS”) and Part 2 of the Act.

## 1.1 Description of the Site and Surrounding Area

Leeston township is approximately 40 km south west of Christchurch, and 20 km from Lincoln in the same direction. The township is surrounded by rural land and is approximately 6 km west of the shore of Lake Ellesmere / Te Waihora. Leeston is located between Christchurch and Rakaia and services surrounding towns such as Doyleston and Southbridge.

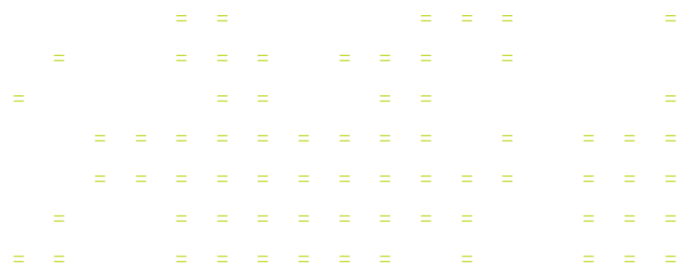
The site is located west of the existing urban form of Leeston and is bound by Leeston Dunsandel Road to the north, with a small area lying north of this road; Ellesmere College / Te Kāreti o Waihora and residential development to the east; High Street to the south and Harmans Road to the west. The site has an area of 60.622 ha, is held in nine Records of Title and owned by eight parties, as listed previously in this report. The Records of Title are attached as Appendix 1.

The site is predominately flat, with minor topographic relief. The majority of the site has historically been used for agricultural purposes (grazing and cropping) and rural-residential purposes. The site is held in separate ownership and contains seven dwellings located throughout the site as well as multiple accessory buildings. Ellesmere College / Te Kāreti o Waihora is a co-education secondary school (Year 7 to Year 13) with a student roll of 570 in 2019<sup>1</sup>. It is the only secondary school in Leeston, and services the wider Leeston and Selwyn area. The enrolment zone extends from Rakaia River in the south to the Selwyn River in the north, and inland approximately 10 km north of State Highway 1<sup>2</sup>.

The site adjoins the Living 1 zone west of Market Street, and dwellings accessed via Spring Place and Mountain View Place. An existing vacant allotment on Spring Place will form part of the ODP as a roading connection.

<sup>1</sup> Education Counts. (2019). *Ellesmere College – Student Population*. Accessed 19/06/2019. <https://www.educationcounts.govt.nz/find-school/school/population/year?district=62&region=13&school=349>

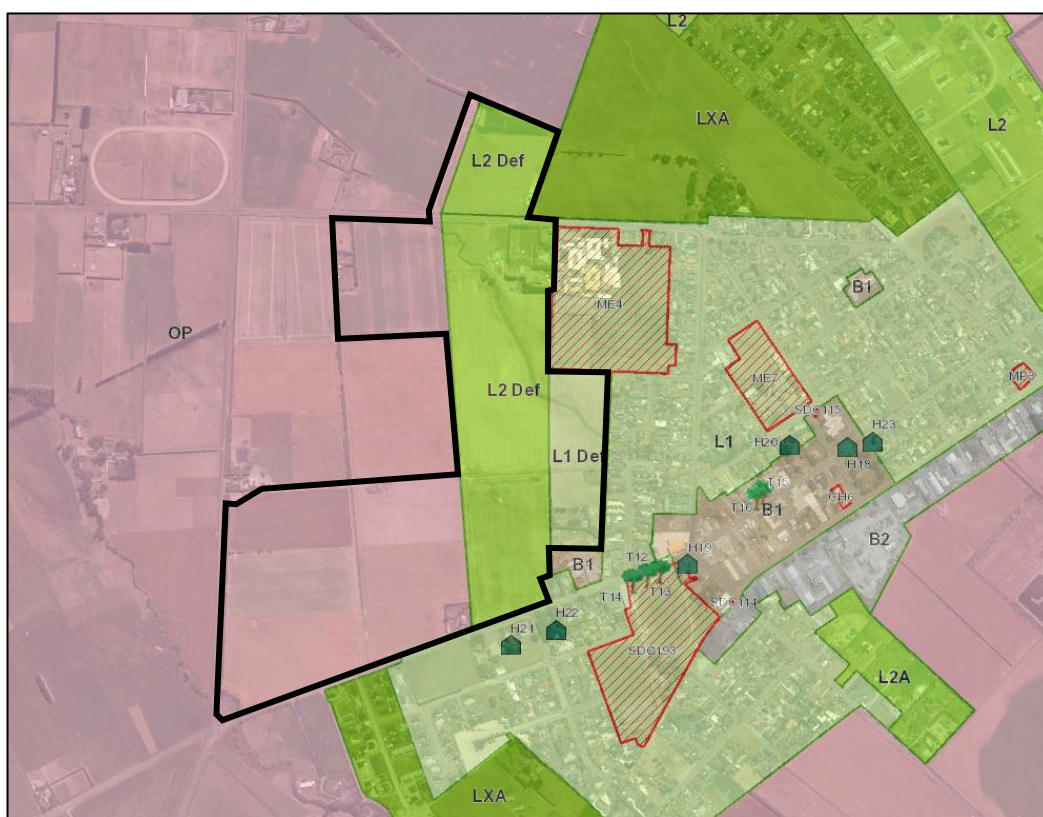
<sup>2</sup> Te Kete Iputangi. *Ministry of Education’s School Finder Service*. Accessed 19/06/2019. <https://nzschools.tki.org.nz/>



Leeston Creek runs northwest to southeast from Killinchy, through the site and between the Spring Place and Mountain View Place cul-de-sac heads. It then runs through the Market Street culvert to High Street. Leeston Creek often floods upstream of the Market Street Culvert in high rainfall and flood events as the Market Street culvert is undersized for the flows in these events<sup>3</sup>. This is the main reason for deferring development on the Living 1 and Living 2 zones.

Birdlings Brook is a stream that runs from Killinchy to Waitatari / Harts Creek and then into Te Waihora / Lake Ellesmere. Birdlings Brook runs through the southwest corner of the site near the intersection of High Street and Harmans Road. A public walkway “Marshall’s on Birdlings Brook” and associated planting has been provided along the banks of Birdlings Brook within the site. The walkway connects Harmans Road and High Street.

The site is shown in Figure 1, below.

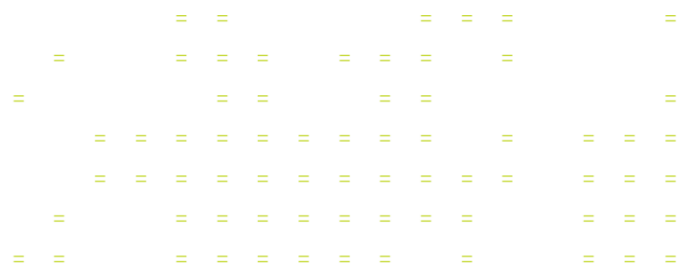


**Figure 1: Site and Surrounds, with the site identified with a black outline**

Leeston Dunsandel Road runs from Dunsandel township to Leeston township and turns into Market Street at the intersection of Leeston Dunsandel Road and Pound Road. Leeston Dunsandel Road is classified as an Arterial road under the Plan from Irvines Street (in Dunsandel) to Market Street (in Leeston). The eastbound speed limit reduces from 100 km/hr to 50 km/hr at the north west corner of 33 Leeston Dunsandel Road, approximately 100 m west of a vehicle entrance to Ellesmere College / Te Kāreti o Waihora. A traffic calming measure is located where the speed limit changes.

Harmans Road runs from Caldwells Road, northeast of Doyleston, to the southwest corner of the site and terminates at the intersection of Harmans Road, Feredays Road and High Street. Harmans Road is classified as a local road in the Plan and has a speed limit of 100 km/hr where it adjoins the site.

<sup>3</sup> Selwyn District Plan Township Volume. (2016). *Policy B4.3.54 Explanation and Reasons*.



Leeston Road turns into High Street at the 'T' intersection with Manse Road. High Street runs through the centre of Leeston township and along the commercial and retail strip and changes to Feredays Road at the intersection of Harmans Road, Feredays Road and Southbridge Leeston Road. High Street has a speed limit of 50 km/hr through Leeston township and increases to 100 km/hr approximately 130 m west of the intersection of High Street and Clausen Avenue.

The original intention of the Plan Change was to include Lot 2 DP 82846 (56 Harmans Road), however this allotment is no longer included in the Plan Change. The current owner of this allotment has been invited to participate in the Plan Change, as including this allotment is seen as best practise for re-zoning. However, they do not wish to participate in the Plan Change. Likewise, the owners of Lot 2 DP 451172 (33-35 Leeston Dunsandel Road) and Lot 2 DP 319397 (125A High Street) were invited to participate but did not wish to be included in the Plan Change. It is noted the owner of Lot 1 DP 451172 (31 Leeston Dunsandel Road) has not been consulted as part of this Plan Change process. A number of technical reports were completed when 56 Harmans Road was included in the Plan Change, and these reports have been unaltered where the removal of this allotment makes no material difference to the overall assessments as they relate to the remainder of the site.

The Plan Change seeks to lift the deferral on Lot 1 DP 451172 (31 Leeston Dunsandel Road), Lot 2 DP 451172 (33 - 35 Leeston Dunsandel Road) and Lot 2 DP 319397 (125a High Street) but does not seek to rezone the land. Leaving the deferral on this land is not seen to be appropriate in this case and instead, it is considered to be more appropriate to lift the deferral and retain the zoning.

## 1.2 Purpose of the Private Plan Change Request

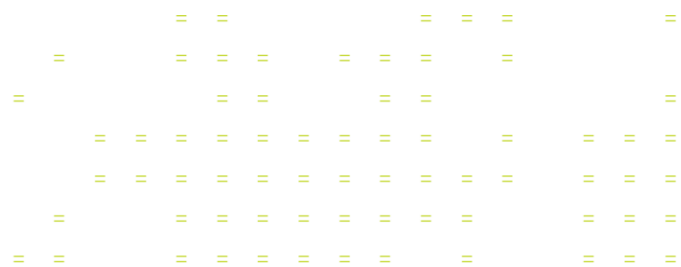
The purpose of this Private Plan Change Request is to lift the existing deferral on the Living 1 (deferred) and Living 2 (deferred) zones on the western edge of Leeston, and rezone approximately 60 ha of land from the current zoning of Living 1 (deferred), Living 2 (deferred) and Outer Plains, to Living 1 and Living 2 zones.

The Plan Change site is made up of 5.3 ha of Living 1 (deferred); 22.8 ha of Living 2 (deferred); and 31.2 ha of Outer Plains zoned land. The following changes are proposed:

- Lift the deferral on 5.3 ha of Living 1 (deferred) to be Living 1;
- Lift the deferral on 1.6 ha of Living 2 (deferred) to be Living 2;
- Rezone 22.8 ha of Living 2 (deferred) to be Living 1;
- Rezone 13.9 ha of Outer Plains to Living 1; and
- Rezone 17.3 ha of Outer Plains to Living 2.

The Plan Change seeks to amend the Plan and insert an Outline Development Plan ("ODP") with site specific requirements to facilitate the future development of approximately 410 allotments, made up of 380 Living 1 and 30 Living 2 zoned allotments. The ODP is attached to this application as Appendix 2. The Plan Change seeks to use the existing Living 1 and Living 2 density requirements, being 650 m<sup>2</sup> for Living 1 and 5,000 m<sup>2</sup> for Living 2 in Leeston.

Uplifting the deferral and rezoning the application site is considered to reflect a sustainable and efficient use of the site for the growth of future generations and to provide additional housing opportunities within Leeston Township. The ODP will provide guidance and requirements to implement the Leeston North Stormwater Bypass and stormwater management to ensure development of the site does not increase the existing stormwater issues in Leeston.



### 1.3 Reason for the Private Plan Change Request

#### Growth

Selwyn District was the fastest growing district in New Zealand until 2018<sup>4</sup>. Council's 2031 – District Development Strategy, predicts growth in Leeston to increase by 49% by the year 2031. By 2031, Leeston will have a population of 3,402 and require the number of households to increase from 813 to 1,215. The Ellesmere Area Plan has calculated the area of undeveloped residential zoned land can accommodate a further 953 residential allotments, and no new greenfield areas need to be re-zoned by Council to accommodate the projected growth. The Ellesmere Area Plan does however note areas suitable for rezoning and greenfield development.

Nevertheless, the Plan Change is seen as providing land for development for future generations beyond 2031. The Plan Change will require any future development to be in general accordance with the ODP and implement stormwater management prior to any development of the site, reducing the risk of ad-hoc development and ensuring stormwater is appropriately managed.

Leeston has been identified as being an important service township, key activity centre and a projected growth area in the Ellesmere Area Plan. The development of the Plan Change site will encourage development, financial investment, employment during construction and additional residents and rate payers to Leeston. The Living 1 (deferred) and Living 2 (deferred) zone has been identified by the Council as part of the preferred and potential growth options for Leeston (once stormwater issues are resolved). The Outer Plains zoned area of the site is identified for possible future development in the Ellesmere Area Plan.

#### Urban Form

Rezoning the site to Living 1 and Living 2 is seen as a natural progression and extension of the residential zones in the Leeston township and will enable efficient and sustainable residential activities to be established in this area without significant loss of the rural land resource. Extending the Living 1 and Living 2 zones will provide a range of residential living environments in this area, adjacent to the existing residential areas on Spring Place, Mountain View Place and south of High Street.

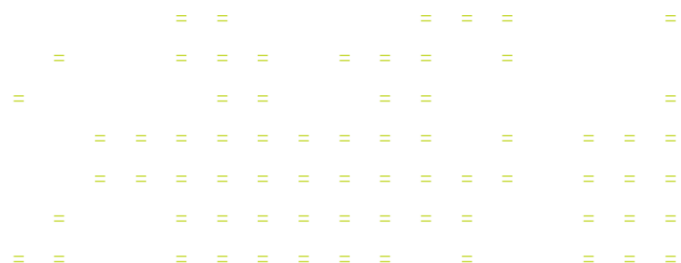
Rezoning the site will assist in providing a compact township form, in an area as that has been shown to be able to be serviced by connections to road infrastructure, potable water, sewage, stormwater, telecommunications and electricity. In addition, the zone's location will enable its residents to take advantage of nearby community facilities, employment opportunities, social interaction, schooling and other public services.

#### Case Law

The Environment Court Case *Operation Homer Ltd v Selwyn District Council* [C100/2007] concluded that significantly out-of-zone development should be subject to a rezoning proposal rather than a non-complying resource consent. Therefore, the Plan Change is considered to be more appropriate than a significant non-complying subdivision.

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<sup>4</sup> Selwyn District Council, *Selwyn's Potential Growth Path up to 2048*, accessed 19/06/2019, <https://www.selwyn.govt.nz/property-and-building/planning/population>



## 2 Key Features of the Plan Change

### 2.1 Density

It is proposed to change the zoning of the site from the current Living 1 (deferred), Living 2 (deferred) and Outer Plains to Living 1 and Living 2, creating average densities of 650 m<sup>2</sup> in the proposed Living 1 zone and 5,000 m<sup>2</sup> in the proposed Living 2 zone. The ODP includes specific guidance in terms of transport, reserves and stormwater networks. If implemented, the site could accommodate approximately 410 allotments, comprised of 380 Living 1 allotments and 30 Living 2 allotments.

The proposed re-zoning will align with the existing Living 1 and Living XA zones opposite the site, south of High Street. The alignment of the living zones on High Street will provide a more defined entrance and exit to the Leeston township when traveling along High Street.

### 2.2 Outline Development Plan

The ODP is an essential component of the Plan Change and has been prepared to provide guidance for the future development of the site. The ODP is attached in Appendix 2 and consists of five plans and associated text. The five plans show indicative transport, landuse, reserve and stormwater networks as well an overall plan.

The ODP also shows an indicative roading layout and reserve locations to guide any future development of the site. The final design of the development including the precise layout of the lots will be determined at the time of subdivision. However, any future subdivision of the site is required to be generally in accordance with the ODP.

The ODP will require the section of Leeston Creek that runs through the site to be vested to Council as reserve, providing a high level of amenity for residents.

The ODP indicates levels of service provided by the various roads and access ways, the proposed zoning for the entire area, existing features of importance and matters such as relevant servicing infrastructure, stormwater treatment areas and pedestrian ways and cycle ways.

### 2.3 Reserves

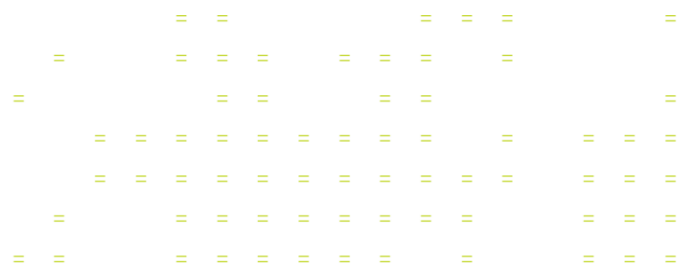
Several recreation and local purpose reserves are proposed as part of the Plan Change and outlined on the ODP.

#### Local Purpose Reserves

Three local purpose reserves are proposed for the purpose of stormwater management. A 20 m wide strip in the northern most section of the site is required for the Leeston North Stormwater Bypass. It will provide a connection for the Leeston Creek to flow through the site and to the adjoining land to the east of the site, known as the 'Martin' block, in accordance with Council's plan for the Leeston Stormwater Bypass. A pedestrian / cycle link will be required connecting the stormwater management area and the secondary road.

Another local purpose reserve for stormwater management is proposed within Leeston Creek. This area could be utilised for stormwater attenuation and retention, slowly releasing stormwater from this management area to Leeston Creek. Calculations and the design of the stormwater management area can be undertaken at subdivision stage.

The main stormwater management area is located in the south west quadrant of the site. It is intended this management area will accommodate most of the site south of Leeston Dunsandel Road and southwest of Leeston Creek. It will provide storage for stormwater before being discharged into the reticulated network on High Street. The design of the stormwater management area will be developed at the time of subdivision.



## Recreation Reserves

Three recreation reserves are proposed as part of the Plan Change and are shown on the ODP. The first recreation reserve will provide a wide pedestrian / cycle link between the northern area of the site to Leeston Dunsandel Road. This connection will align with the pedestrian / cycle link following Leeston Creek.

The second recreation reserve will follow the length of Leeston Creek inside the site and both sides of the Creek. A central play area will be provided, and a pedestrian / cycle pathway will follow the length of the Creek. Pedestrian / cycle links will also be provided from Leeston Creek reserve to the rest of the site – to Ellesmere College, primary and secondary roads and the northern section of the site. The secondary road will adjoin the reserve to provide passive surveillance and a sense of openness.

The third recreation reserve will be located in the southwest corner of the site, at the corner of High Street, Harmans Road and Southbridge Leeston Road intersection. Birdlings Brook runs through this section of the site and a public walkway (on private land) has been created 'Marshall's on Birdlings Brook'. The reserve is seen as an efficient way to protect the public walkway, while providing opportunities to enhance this southwest section as a recreation reserve.

## 2.4 Stormwater

The ODP outlines blue networks for stormwater management. A section along the northern boundary of Lot 2 DP 365379 (60 Leeston-Dunsandel Road) will be set aside for stormwater management required for the Leeston North Stormwater Bypass. This area will connect with the 'Martin' block and will divert stormwater from Leeston Creek, around Leeston, rather than through Leeston.

Should the bypass not be constructed prior to the site being developed, a minimum floor level rule is proposed and outlined in section 3. The proposed rule will ensure any new dwellings will be protected from flood events, should any new dwellings be constructed prior to the stormwater bypass being constructed.

A stormwater basin will be required for the stormwater from new residential development, an area for this has been shown on the ODP as being in the naturally low-lying area of the site. Additional stormwater management adjacent to Leeston Creek has been indicated i.e. stormwater ponds. Specific calculations will be required at the time of subdivision to ensure the flow of the Leeston Creek will be less than pre-development rates.

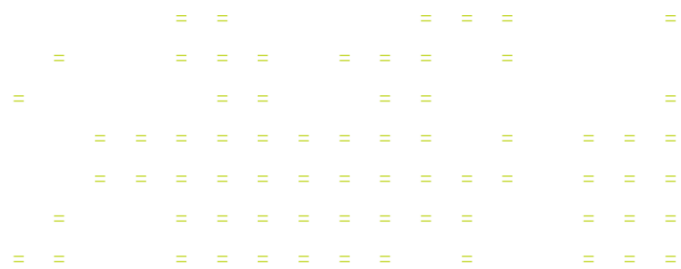
It is noted the Plan Change Request covers three allotments (125A High Street, 31 and 33-35 Leeston Dunsandel Road) which are not party to the request, but it is proposed to lift the current deferral from these allotments. These allotments do not contain any specific characteristics which would preclude stormwater quality and quantity being managed appropriately at the time of subdivision. These allotments are also subject to the requirements of the ODP, requiring stormwater to be appropriately managed and discharged. At the time of development, stormwater from the allotments could be discharged into the existing network (via Spring Place or Leeston Dunsandel Road), or the stormwater management areas within the site.

## 2.5 Urban Design

The New Zealand Urban Design Protocol (2005) identifies seven essential design qualities that can act as guiding considerations in the structure planning process. These are referred to as the seven Cs and are assessed as follows.

**Context** – seeing buildings, places and spaces as part of whole towns and cities

The ODP shows the development in west Leeston can be a coherent, natural extension of the township. Development within the ODP area can provide for allotments sufficient in size and orientation to be recognised as



an appropriate neighbourhood within Leeston. The reserves and cycle / pedestrian links will provide connections throughout the site and to the existing township.

### Character - reflecting and enhancing the distinctive character, heritage and identity of our urban environment

While a portion of the site is outside of the existing township urban boundaries, as defined in the Ellesmere Area Plan, the Plan Change provides Living 1 and Living 2 densities to continue the urban form of Leeston. The low density component of the plan change area (proposed Living 2 zone) will create its own distinctive character through the establishment of open sites with extensive space for gardens and landscaping. The proposed Living 1 zone could provide generous residential allotments which complement the existing form and character of Leeston.

### Choice - ensuring diversity and choice for people

The ODP provides for greater housing choice within Leeston township whereby sections of both Living 1 and 2 zones will be available for uptake west of the existing township. There will be good access to open spaces for all future residents provided by the reserve areas shown on the ODP and ample road and pedestrian access to these spaces. The green network provides an abundance of amenity and utility for residents to use and enjoy. The plan change will avoid future development occurring on an ad-hoc basis without the certainty of infrastructure and a confirmed growth pattern for the township.

### Connections - enhancing how different networks link together for people

Roading connections are indicated on the ODP as being from Leeston Dunsandel Road, Spring Place, High Street and Harmans Road. These roading links, particularly with Spring Place, will provide connection through to the existing roading network and the township centre. The pedestrian and cycle links will provide connections to the reserves, roading network, and Ellesmere College / Te Kāreti o Waihora. Future roading connections will be required through the ODP, providing connectivity for future development adjoining the site.

### Creativity - encouraging innovative and imaginative solutions

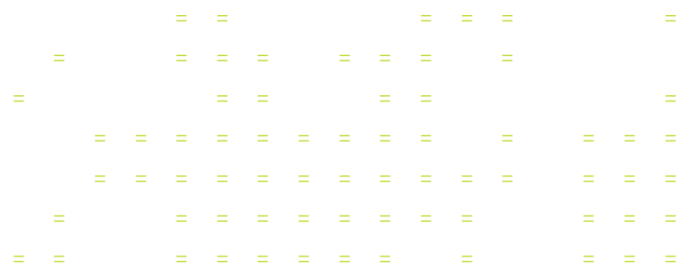
It is anticipated the future landowners will express their creativity through their individual requirements of house design. The plan change does not seek to limit such creativity beyond the existing provisions within the Plan.

### Custodianship - ensuring design is environmentally sustainable, safe and healthy

Implementation of the plan change will enhance the built environment by integrating with the existing pattern of development along High Street and adjoining Spring Place, whilst providing enhanced amenity through the natural features of the site including Leeston Creek, Birdlings Brook and connections to the township. The ODP will provide stormwater management guidance to ensure any future development does not exacerbate the flooding issues in Leeston.

### Collaboration - communicating and sharing knowledge across sectors, professions and with communities.

This Plan Change has been prepared based on the applicant's knowledge of the site and discussions with Council.



Wider consultation has not been undertaken as the site is anticipated for residential development through the Living 1 (deferred) and Living 2 (deferred) zones. The Outer Plains area has been noted in the Ellesmere Area Plan for potential future development.

## 2.6 Transport

A Transport Assessment, and additional comments and assessment have been prepared by Carriageway Consulting and are attached in Appendix 3. The Transport Assessment discusses the existing roading network; the potential increase in vehicle movements; and future compliance with the relevant transport rules of the Plan. It concludes the additional traffic and vehicle movements can be accommodated by the existing roading network and no upgrades are required to accommodate these. The additional comments and assessment relate to the increase in traffic volumes affecting the capacity of the High Street / Market Street intersection, if the plan change was implemented. It concludes the High Street / Market Street intersection will continue to operate with a good level of service with the additional vehicles as a result of the plan change, based on traffic survey data. The intersection fits within a Level of Service category C during the peak hour. The Traffic Assessment concludes a Level of Service C is not unreasonable for an urban intersection during the peak hours.

Two roading connections are proposed onto High Street. The first forming an intersection with High Street and Chapman Street and providing a spine that runs directly through the site to Leeston Dunsandel Road. The second access is proposed to form an intersection with High Street and Clausen Avenue. These indicative roads will provide north to south primary routes through the site.

An additional primary route will run east to west from Harmans Road to Spring Place. Secondary roads will provide connection between the north to south road and the east to west road and enable access to the land parcel north of Leeston Dunsandel Road. The secondary road connecting the north /south and west/east roads has been shown on the ODP as fully within the allotments party to the Plan Change, to strengthen the transport network and future-proof connections. The additional transport assessment concludes the High Street / Plan Change road intersection will function at a Level of Service Category A in the morning and evening peak hours.

Four future roading connections have been shown on the ODP to provide access to adjoining land not part of the Plan Change. Three connections to 56 Harmans Road along the property's southern and eastern boundaries. A fourth future connection is indicated to provide a link to the land zoned Living XA and known as the 'Martin' block north of Leeston Dunsandel Road.

Pedestrian and cycle links will provide access and linkages within the site, to Ellesmere College/ Te Kāreti o Waihora and to the town centre.

The Transport Assessment notes the speed limit is 100 km/hr along Harmans Road, part of Leeston–Dunsandel Road and High Street. The common trigger to reduce speed limits is development. Therefore, when development occurs the speed limit on Leeston–Dunsandel Road and High Street could be reduced to 50 km/hr west of Harmans Road. It is noted this is not a matter that can form part of the Plan Change and is not administered by the Act.

Overall, subject to the 100 km/hr speed limits being reduced (which could be achieved at subdivision stage), it is highly likely the Plan Change can be supported from a transportation perspective.

## 2.7 Services

A Servicing Report has been prepared by Baseline Group and is attached as Appendix 4. The Servicing Report identifies options for potable water supply, wastewater disposal, stormwater management, and confirmation of adequate telecommunications and power connections. The report concludes the site can be appropriately serviced by way of extending the existing service connections.



Orion and Chorus NZ Ltd have confirmed the site can be serviced with reticulated power and telecommunications from the existing networks. Details of connections can be confirmed at the time of subdivision. Confirmation letters are included in the Servicing Report.

The Plan Change, if implemented, could yield approximately 410 allotments (380 Living 1 allotments and 30 Living 2 allotments).

A Geotechnical Investigation Report has been prepared by Soil and Rock Consultants and is attached as Appendix 5. The report concludes the ground is suitable for subdivision, however further geotechnical investigation will be required at the subdivision stage to confirm Technical Categories of the site. The further investigation could provide recommended conditions or consent notices regarding the building foundations or site-specific geotechnical matters. It is considered a consent notice or conditions of consent relating to building foundations can be appropriately managed at subdivision stage.

The site is not identified within a flood hazard area under the Plan; however, flooding is a known issue in Leeston. A Flood Risk Report has been obtained from Environment Canterbury ("ECan") and is attached as Appendix 6. In addition, ECan has confirmed the 2017 data is the most up to date. This confirmation is also attached in Appendix 6. The report includes photos of how the site behaved during significant flooding events starting from 1986 to 2013. These images show there are specific areas of the site which are more susceptible to flooding and ponding in high rainfall and flood events. Other areas of the site are not subject to inundation in high rainfall and flood events and could be developed prior to the stormwater bypass being constructed.

The LiDAR map indicates the elevation of the site ranges from 20.5 – 24 m above mean sea level from the southeast corner to the northwest corner respectively, with a small portion of the site being 24 – 24.5 m above mean sea level in the west of the site along Harmans Road. The flood hazards on the site arise from flooding of the Leeston Creek. As discussed previously, the Servicing Report provides options for stormwater management on the site to reduce the risk of flooding and ensure the flow of the Leeston Creek is no more than pre-development flows.

A Preliminary Site Investigation (PSI) has been prepared by Malloch Environmental and is attached in Appendix 7. The PSI concludes there is evidence of activities listed on the Hazardous Activities and Industries List (HAIL) having been undertaken on the site previously. The activities include contractors' yard, farm pit and pre 1940s buildings and are noted in Figure 3 of the PSI. Due to HAIL activities being on the site, a Detailed Site Investigation (DSI) will be required at the time of subdivision. The presence of HAIL activities on the site is not considered to preclude the Plan Change.

The PSI was undertaken when 56 Harmans Road was included in the Plan Change and notes a chemical store; commercial chemical contractors' yard; nursery use and pre 1940s buildings on 56 Harmans Road. As this parcel is not included in the Plan Change, these HAIL activities are no longer considered relevant to the Plan Change.



## Amendment 5

Add an additional rule after Rule 4.1.1, and amend the matters of discretion as follows:

**Any dwelling located in the Living 1 and 2 zones, as identified on the Leeston Outline Development Plan in Appendix XX, shall have a minimum floor level 400 mm above the 0.5% Annual Exceedance Probability flood event.**

Rule 4.1.2 Under Rules **4.1.1 and 4.1.2** the Council shall restrict the exercise of its discretion to:

- 4.1.2.1 The nature of any flooding or land instability and whether this makes the site unsuitable to erect the proposed building or undertake the proposed earthworks.
- 4.1.2.2 Any effects of buildings or earthworks in displacing or diverting floodwater and increasing the potential risk of flooding elsewhere.
- 4.1.2.3 Any mitigation measures proposed.

## Amendment 6

Add an additional rule and matters of discretion after Rule 4.2.2 as follows:

**Where the Living 1 zone adjoins the Business 1 zone as identified on the Leeston Outline Development Plan in Appendix XX, any principal building shall be permitted where a 2 m landscape strip is provided along any boundaries which adjoin the Business 1 zone. The landscape strip shall be a minimum of 2 m wide and contain a minimum of one tree per 3 m. The trees shall be a minimum height of 1.5 m at the time of planting and shall be capable of reaching a minimum height of 3 m at maturity.**

Insert new matters of discretion after 4.2.6 as follows:

**4.2.7 Any activity which does not comply with Rule 4.2.X shall be a restricted discretionary activity. Council shall restrict the exercise of its discretion to the consideration of:**

**4.2.7.1 The extent to which the proposed landscaping provides visual screening from the Business 1 zone.**

**4.2.7.2 Whether other methods of visual screening are proposed and are effective to visually screen the Business 1 zone.**

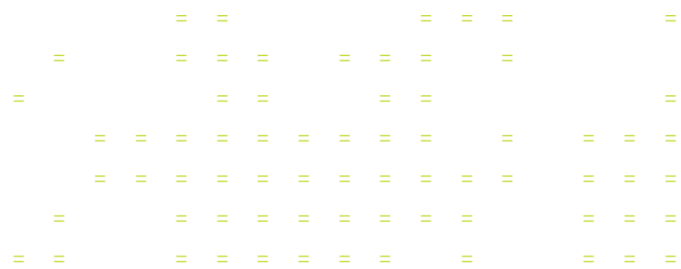
## Amendment 7

Amend Rule 4.2.3 as follows:

Any Fencing in the Living 3 Zone, **and** the Living 2A Zone in Darfield, as identified in Appendix 47, **and the Living 2 Zone in Leeston, as identified on the Leeston Outline Development Plan in Appendix XX, except on any property boundary adjoining a Living 1 Zone** shall be limited to a maximum height of 1.2m, be at least 50% open, and be post and rail, traditional sheep, deer fencing, solid post and rail or post and wire only;

Except that nothing in the above controls shall preclude:

- (i) the use of other fencing types when located within 10m of the side or rear of the principal building. Such fence types shall not project forward of the line of the front of the building.
- (ii) fencing required by an Outline Development Plan and/or rule in this Plan as a noise barrier.



## Amendment 8

Amend Rule 4.17.1 – Fences Adjoining Reserves as follows:

All development located within the Living Z zone or the High Street, Southbridge Outline Development Plan area (Appendix 45), **and the Living 1 and 2 zones, as identified on the Leeston Outline Development Plan (Appendix XX)** that shares a boundary with a reserve or walkway shall be limited to a single fence erected within 5 m of any Council reserve that is at least 50% visually transparent where it exceeds 1.2 m in height (which shall be applied to the whole fence in its entirety).

## 3.5 Chapter 12 Living Zone Subdivision

## Amendment 9

Delete references to Living 1(Deferred) and Living 2 (Deferred) in Table C12.1 as follows:

Township	Zone	Average Allotment Size Not Less Than
Leeston	Living 1	650 m <sup>2</sup>
	<b><u>Living 1(Deferred)</u></b>	<b><u>4ha until deferral lifted, then 650 m<sup>2</sup></u></b>
	Living 2	5,000 m <sup>2</sup>
	<b><u>Living 2(Deferred)</u></b>	<b><u>4 ha until deferment lifted, then 5,000 m<sup>2</sup></u></b>

## Amendment 10

Insert new rule 12.1.3.21 following Rule 12.1.3.20 as follows:

### **Leeston**

**12.1.3.21 In relation to the Living 1 and Living 2 zones in the Leeston Outline Development Plan in Appendix XX, any subdivision is to be in general accordance with the Outline Development Plan and shall comply with any standards referred to in that Outline Development Plan.**

## Amendment 11

Insert new rule 12.1.3.22 following Rule 12.1.3.21 (proposed above) as follows:

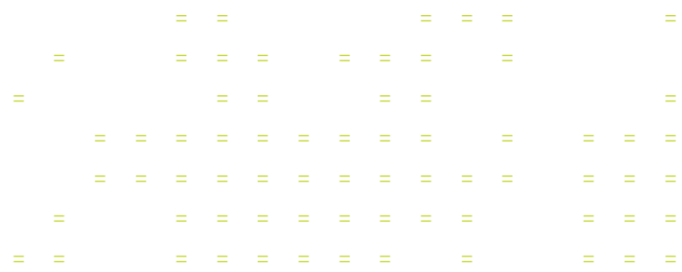
**12.1.3.22 In relation to the Living 1 and Living 2 zones in the Leeston Outline Development Plan in Appendix XX, no residential subdivision shall occur after the 80th residential allotment until such time as the Ellesmere Wastewater Treatment Plant has been upgraded and is capable of servicing additional allotments within the ODP.**

## Amendment 12

Insert new rules under 12.1.6 Discretionary Activities – Subdivision General:

**12.1.6.9 Any subdivision in the Leeston Outline Development Plan that is not in general accordance with the Outline Development Plan in Appendix XX.**

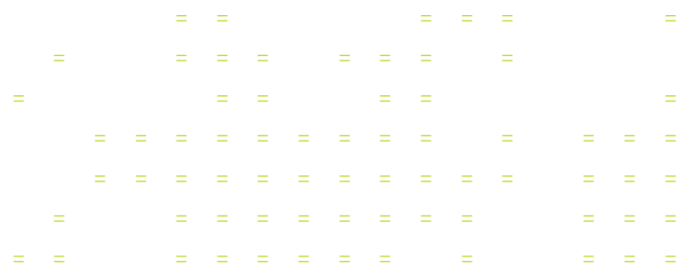
**12.1.6.10 Any subdivision in the Leeston Outline Development Plan which does not comply with Rule 12.1.3.21.**



## Amendment 13

Insert new rule under 12.1.7 Non-Complying Activities – Subdivision – General:

**12.1.7.9 Any subdivision that does not comply with Rule 12.1.3.22.**



## 4 Statutory Framework

Section 73(2) of the Act enables any person to request a change to a district plan. Changes are required to be undertaken in the manner set out in Schedule 1 of the Act. This Plan Change has been prepared in accordance with Schedule 1.

Section 74 and 75 set out the matters which must be considered when undertaking a plan change. Before a plan change can be incorporated into a district plan, the following matters must be considered and are assessed below:

- *The functions of a territorial authority under section 31;*
- *The provisions of Part 2;*
- *An evaluation report prepared in accordance with section 32;*
- *Consistency with other District Plan Provisions*
- *Any regional policy statement or regional plan;*
- *Any management plans and strategies including iwi management plans;*
- *Any national policy statement, coastal policy statement and national planning standard.*

### 4.1 Functions of Section 31

Section 31 of the Act outlines the functions of a territorial authority for the purpose of giving effects to the Act. The following functions are considered relevant when considering the Plan Change Request:

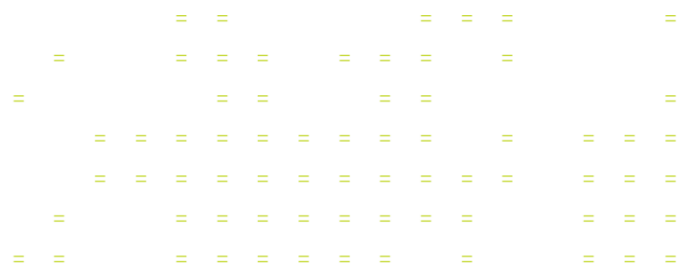
- (a) *the establishment, implementation, and review of objectives, policies, and methods to achieve integrated management of the effects of the use, development, or protection of land and associated natural and physical resources of the district:*
- (b) *the control of any actual or potential effects of the use, development, or protection of land, including for the purpose of—*
  - (i) *the avoidance or mitigation of natural hazards; and*
  - (ii) *[Repealed]*
  - (iia) *the prevention or mitigation of any adverse effects of the development, subdivision, or use of contaminated land;*
  - (iii) *the maintenance of indigenous biological diversity;*
- (d) *the control of the emission of noise and the mitigation of the effects of noise*
- (e) *the control of any actual or potential effects of activities in relation to the surface of water in rivers and lakes*

The Plan Change request includes an assessment of the objectives and policies in the Plan in Appendix 8. The proposed ODP will enable development controls to provide integrated management of the natural and physical resources on the site and provide direction regarding stormwater management, roading and pedestrian and cycle linkages.

The Plan Change site is currently zoned Living 1 (deferred), Living 2 (deferred) and Outer Plains. The Plan Change request seeks to lift the deferral of the Living 1 (deferred) and Living 2 (deferred) zones, and rezone the existing Living 2 (deferred) zone to Living 1 zone, as well as extend the Living 1 zone in the south of the site to be in line with the Living XA Zone on the south side of High Street. The Plan Change also seeks to re-zone part of the existing Outer Plains zone to the Living 2 zone. The surrounding area west of the site is currently zoned Outer Plains. The Living 1 zone adjoining the Outer Plains zone will be consistent with the surrounding Leeston Area; the Living XA zone south of the site directly adjoins the Outer Plains zone and the site north east of the site zoned Living XA and adjoins the Outer Plains zone.

Through the ODP, any future development of the site will be integrated with the surrounding residential environment in Leeston and is an efficient use of land identified for future development. Therefore, the Plan Change is consistent with Section 31(a) of the Act.





management areas and the ODP identifies land to be used for stormwater management to achieve an appropriate solution. In addition, a minimum floor level requirement is proposed to ensure dwellings and people are safe and protected from inundation.

Future development of the site can be serviced via upgraded connections to Council's potable water and wastewater networks. Stormwater can be managed at the time of subdivision as any subdivision will be required to be in accordance with the ODP. The rezoning of the site includes a section of 60 Leeston Dunsandel Road to be vested to Council through future subdivision and will play a vital role in the Leeston North Stormwater Bypass.

It is considered the result of the Plan Change will better achieve the purpose of the Act than retaining the land in its current form.

### Section 6 – Matters of National Importance

Section 6 of the Act requires all persons exercising functions and powers under it to recognise and provide for the certain matters of national importance. The preservation of the natural character of rivers and their margins is listed as a matter of national importance. Leeston Creek and Birdlings Brook are identified as recreation reserves within the ODP and will create a buffer between the waterways and development. The management of significant risks from natural hazards is also listed as a matter of national importance. As discussed, the ODP requires stormwater to be managed to reduce the risk of flooding in and around Leeston Creek. The minimum floor level requirement is considered appropriate to reduce the risk of natural hazards.

The Plan Change is considered to take into account and provide for the relevant matters of national importance.

### Section 7 – Other Matters

Section 7 sets out other matters that must be given particular regard in achieving the purpose of the Act. Not all the matters are relevant to the Plan Change. The following matters are considered relevant to the Plan Change:

- b) *The efficient use and development of natural and physical resources*
- c) *The maintenance and enhancement of amenity values*
- d) *Intrinsic values of ecosystems*
- f) *Maintenance and enhancement of the quality of the environment*
- g) *Any finite characteristics of natural and physical resources*

The proposal to utilise the land for a range of residential purposes is considered to be an efficient use of a natural and physical resource. It will enable a greater number of allotments to be created across the site than the current deferred and Outer Plains zoning. As the proposed site adjoins the Living 1 zone on Spring Place, Living XA zone north of Leeston Dunsandel Road and Living 1 and Living XA zones south of High Street, it will provide a logical extension to Leeston.

The rezoning will affect the amenity values of the site and adjoining sites as it will change from rural to residential. While the amenity of the existing environment will change, the proposal represents sustainable mixed density residential development in an area identified for future growth in Leeston.

Rural land is a finite resource and the site has been identified in the Ellesmere Area Plan as having high quality soils. However, the site has been identified for future growth and will provide a compact extension of Leeston.

### Section 8 Treaty of Waitangi

Section 8 of the Act requires all persons exercising functions and power under it to take into account the principles of the Treaty of Waitangi / Te Tiriti o Waitangi.

the Plan Change and provided comment. Their  
and recommendations are attached in Appendix 9.  
ed at the time of subdivision. Further consultation  
n, and this requirement forms part of the ODP. It is  
principles of the Treaty of Waitangi / Te Tiritiri o

red which identifies the objectives of the proposal to achieve the purpose of the Act. A Section 32 x 10.

ds for achieving the objectives of the Plan Change:

ate method.

s and policies of the Selwyn District Plan (Township  
es how the Plan Change is consistent with the  
e Plan. As the Plan Change seeks to rezone the site  
Township Volume are considered to be relevant and  
d.

consistent with the objectives and policies of the

give effect to regional policy statements, therefore, once changed, to give effect to the regional policy became operative on 15 January 2013 and provides a management issues and achieving the integrated priorities must give effect to the CRPS though District water; and Chapter 11 Natural hazards have been

the objectives and policies of the CRPS.

administered by ECan and its purpose is to identify the  
land and water resources in Canterbury to achieve the  
to achieve the objectives and provides direction in

LWRP:

- location zone;

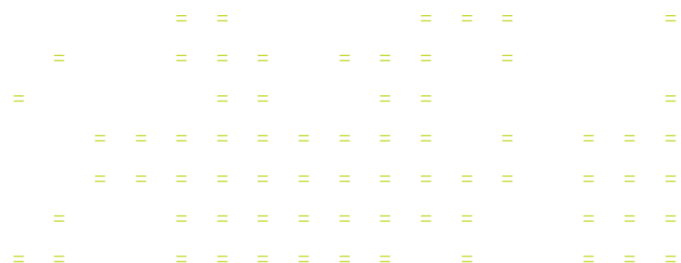
the provisions of the LWRP, or resource consents  
 Appendix 4 concludes servicing future sites in the plan  
 against the relevant objectives and policies of the LWRP  
 consistent with the objectives and policies of the

in February 2013. The IMP reflects the six Papatipu  
of land and water with the takiwā from the Hurunui  
Te Moana (the Southern Alps).

gards to resource management. It covers:

IP. In this case, the site is within the Te Waihora  
to be relevant, are contained in Chapter 5 of the IMP;

13. The assessment concludes the Plan Change is submitted to Mahaanui Kurataiao Limited to consult and recommendations. The consultation report is submitted at the time of development (subdivision) has



## 4.8 Selwyn 2031: District Development Strategy

The Selwyn 2031: District Development Strategy (Selwyn 2031) was adopted by Council in November 2014. The purpose of the Selwyn 2031 is to provide an overarching strategic framework for achieving sustainable growth across the district to 2031. The key actions in Selwyn 2031 relevant to the Plan Change include:

- Cater for projected residential and business growth until at least 2031 through the development of over 900 hectares of land rezoned and/or identified as a greenfield priority area within the Land Use Recovery Plan and District Plan;
- Strengthen key economic activities by protecting the function of Rolleston, Lincoln, Darfield and Leeston as Key Activity Centres;
- Safeguarding the continued operation of strategic infrastructure;
- Retain the district's sense of rural identity by adopting a consolidated approach to urban growth;
- Reinforce and enhance the character of each township by requiring outline development plans and the use of good urban design principles within new development areas;
- Provision of a range of housing types to meet the diverse range of social, cultural and economic needs of the community; and
- Achieve safe, functional and attractive living and business environments by requiring new development to occur in accordance with outline development plans, design guidelines and to give effect to higher strategic planning documents.

As a result of the Selwyn 2031, the Ellesmere Area Plan has been prepared to provide development guidance in Ellesmere. The Ellesmere Area Plan has been discussed below.

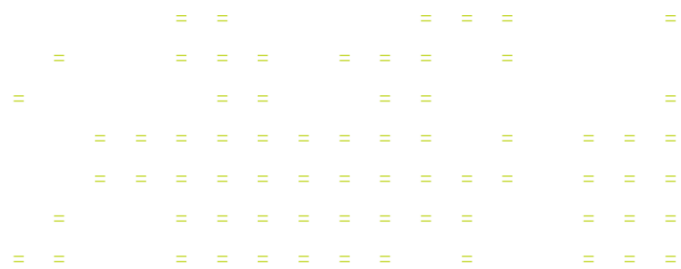
The Plan Change is considered to be consistent with, and will meet, the key actions of Selwyn 2031. Additional residential zoned land will encourage the growth and strengthen a Key Activity Centre, while providing stormwater management to enable the development of stormwater infrastructure. The Living 1 zone will align with the existing Living XA zone on the south side of High Street, providing a clear and consolidated urban form, particularly when entering and exiting Leeston on High Street. The Living 1 and Living 2 zones will provide a variety of housing and development options for Leeston.

## 4.9 Ellesmere Area Plan 2031

The Ellesmere Area Plan 2031 / Mahere-ā-Rohe o Waihora (EAP) was adopted by Council in September 2016. The EAP was developed to meet the key action item of developing Area Plans for Ellesmere and Malvern. The vision of the EAP is "To grow and consolidate Selwyn District as one of the most liveable, attractive and prosperous places in New Zealand for residents, business and visitors".

Leeston township is identified as a service township within the Ellesmere Area due to its central location, size, and its role as servicing the wider Ellesmere area. The EAP projected a 49% population growth in Leeston from 2,275 in 2015 to 3,402 in 2031 and notes areas for future development. The Living 1 (deferred) and Living 2 (deferred) zones are identified as LEE 1 in the Leeston Preferred Future Development Area Map; and the current Outer Plains zone is identified as an area for potential future low-density development.

The EAP notes the constraints of the LEE 1 area being stormwater management issues and localised flooding, servicing and loss of versatile soils. The ODP identifies areas to be utilised for stormwater management and the stretch of land to be vested to Council needed to complete the Leeston North Stormwater Bypass. Minimum floor levels have also been proposed to ensure people and property are protected from inundation. The Servicing Report concludes future development of the site can be serviced by Council's reticulated network for water supply and



wastewater disposal, subject to network extensions. While residential development may result in the loss of versatile soils, the Plan Change will lift the deferral on the Living 1 (deferred) and Living 2 (deferred) zones and provide for the anticipated residential development close to the Leeston town centre.

The Plan Change would also rezone part of the existing Outer Plains zone west of the Living 2 (deferred) zone and east of Harmans Road to a mixture of Living 1 and Living 2. This area is outside the existing township boundary and is an identified area for future low-density residential development. The Plan Change will, in most part, rezone the Outer Plains zone to Living 2; a low-density residential zone, as well as aligning the Living 1 zone with the Living XA zone on the south side of High Street, providing a clear entry and exit to and from Leeston township.

While the EAP notes Council does not need to rezone any areas for greenfield development, the Plan Change will provide mechanisms to lift the deferral on land anticipated for residential development and provide stormwater mitigation. The Plan Change will also provide for future residential development and the expansion of Leeston township beyond 2031. Taking into account the above, the Plan Change is considered to be in general accordance with the vision and objectives of the Ellesmere Area Plan.

## 4.10 National Policy Statements

The following National Policy Statements (NPS) are currently in place:

- NPS on Urban Development Capacity
- NPS on Freshwater Management
- NPS for renewable electricity generation
- NPS on Electricity Transmission
- New Zealand Coastal Policy Statement

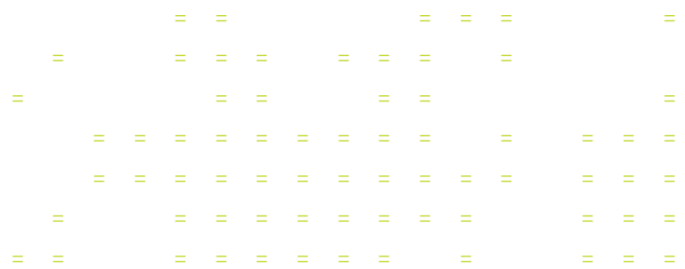
The NPS on Urban Development Capacity, and how it applies to the Plan Change is assessed below. None of the other operative National Policy Statements are relevant to the proposal.

### National Planning Statement on Urban Development Capacity

The National Policy Statement on Urban Development Capacity (NPS-UDC) is designed to focus local authorities to enable development to occur when there is demand for development in our fast growing cities. Importantly this policy directs local authorities to undertake assessments to determine if there are development pressures and to enable development where it is found development pressures exist. The aim of the NPS-UDC is to enable growth and market driven development to meet the housing and business land necessary to provide for current and future needs. There is direction in the policy statement for local authorities to ensure in high growth urban environments there is sufficient land with development capacity (i.e. infrastructure and zoning etc) for the short term, medium term and long term needs.

The NPS-UDC defines an Urban Environment as “an area of land containing, or intended to contain, a concentrated settlement of 10,000 people or more and any associated business land, irrespective of local authority or statistical boundaries.” The Ellesmere Area Plan (EAP) projects the population of Leeston to grow to 3,402 by 2031, which is less than 10,000 as defined in urban environments with the NPS-UDC.

Objectives OA1-OD2 in the NPS-UDC are applicable to urban environments and decision making by local authorities. As the plan change site is within an area which does not meet the definition of urban environments, the objectives of the NPS-UDC are not applicable to the plan change site.



The NPS-UDC includes a range of policies that apply only to urban environments (PA1-PA4), and decision making by local authorities (PB1-PD4). By specifically limiting Policies PA1-PA4 to apply only to urban environments, the NPS-UDC places greater importance on assessment when development is proposed or occurs in urban environments. As Leeston is not an urban environment (as defined by the NPS-UDC), these policies are not applicable to the plan change.

Policies PB1-PD4 require local authorities to carry out and publish assessments on housing and business development capacity. This research carried out by local authorities ensures planning decisions are evidence based and provide land for future development, if the evidence shows additional land is required.

Given Leeston is not classified as an urban environment, and the NPS-UDC is silent on development outside urban environments, and medium or high growth areas, the plan change does not need to be assessed against the objectives and policies of the NPS-UDC. For clarity, Leeston is not classified as a high or medium growth area.

4.11 National Planning Standards

In 2017 the New Zealand Government introduced legislation to establish national planning standards to provide a standard approach to district and regional plans. The first set of national planning standards included a standard approach to zones that can be adopted by Local Councils. The Living 1 and Living 2 zones proposed for the Plan Change will align with the current Plan zoning and it is not proposed to add an additional zone to the Plan.

## 5 Description of Environmental Effects

Clause 22 (2) of Schedule 1 of the Act requires that where environmental effects are anticipated from the implementation of a Plan Change, the effects shall be described in such detail that corresponds with the scale and significance of such effects. The following is a description of the environmental effects anticipated from implementing of the Plan Change.

The site is currently typical of rural properties in this general area, with areas of pasture interspaced with fences, lines of trees and a small number of houses. The site is rural in nature due to most of the site being subject a deferral. Uplifting the deferral and extending the Living 1 and Living 2 zones will ultimately generate a significantly more intensive residential land use over the site, which will alter the visual characteristics and nature of the site as well as the productivity of the land. However, the use of the land for a mix of densities for residential development adjoining and linking to an existing township will also help provide living areas for current and future generations and is seen as a sustainable use of land close to the existing township.

## 5.1 Neighbourhood and Community Effects

The site is zoned Living 1 (deferred), Living 2 (deferred) and Outer Plains. Considering this, residential development is anticipated in the Living deferred zones once the deferral is lifted. Therefore, effects on the neighbourhood arising from residential development are anticipated where the site is zoned Living 1 (deferred) and Living 2 (deferred). Residential density greater than one dwelling per 20 ha is not anticipated the Outer Plains zone and any development greater than this density will change the character of the existing Outer Plains and the visual outlook from adjoining properties.

The proposed Living 1 zone will align with the existing Living XA zone on the south side of High Street and provide a clear entrance and exit to Leeston township and will be a natural extension of the Leeston urban environment. The Living 1 zone will also connect to the existing Living 1 zone on Spring Place, thereby complementing the existing residential environment and ensuring connections to the centre of the town. Any increase in density across the site will, to a degree, give the site a more enclosed feeling and reduce the open space character experienced in traditional rural farmland.

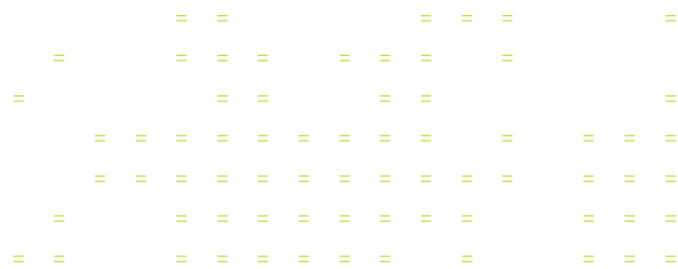
The proposed Living 2 zone will provide a visual and physical buffer (in the most part) between the Outer Plains zone and the Living 1 zone, particularly along Leeston Dunsandel Road and High Street as people enter and exit Leeston. Harmans Road will remain primarily rural, with the exception of the Living 2 zoned area on the south eastern portion of Harmans Road. The average allotment size in the Living 2 zone will be 5,000 m<sup>2</sup> and will be required to have rural fencing such as post and rail or fence and rail, retaining a sense of openness between the Living 1 and Outer Plains zone.

The location of the stormwater management area and Leeston Creek will create a high level of amenity, sense of openness and natural gathering areas for the neighbourhood. The proposed ODP provides a number of walking and cycling connections to these neighbourhood spaces and reserves.

## 5.2 Reverse Sensitivity Effects

Reverse sensitivity arises where a new incompatible activity is introduced into an environment, which has the potential to limit the operation of existing activities. In this case, there is potential for the Living 1 zone adjoining the Outer Plains zone to create reverse sensitivity issues.

Commonly, reverse sensitivity effects occur because of odour or noise generated from normal lawful farming activities, creating a disturbance for residents of newly developed sites, particularly if new residents are not familiar with normal farming practices. The Outer Plains zone is typically used for cropping or grazing for animals. Cropping activities could result in effects from spraying or harvesting and grazing of animals could result in noise



or odour effects. It is noted at the time of the Plan Change, all the adjoining sites (outside of the Plan Change site) zoned Outer Plains contain dwellings, accessory buildings and farm buildings closer to the respective road and access than to the site and noise coming from the sheds and machinery in the sheds is away from the site and proposed Living 1 zone.

Leeston is a rural town by nature and has an urban centre within a rural environment. Being 40 minutes from Christchurch and 20 minutes from Lincoln should lend itself to be a rural township. Having Living 1 or Living XA zoned sites adjoin the Outer Plains zone is not uncommon in Leeston. There are a number of areas where this occurs; north of the site where the land known as the 'Martin block' is zoned Living XA and adjoins an Outer Plains zone; and south east of the site where land zoned Living 1 and Living XA adjoins the Outer Plains zone for approximately 1,050 m. The existing planning and zone boundaries in Leeston indicate the Living 1 zone and Outer Plains zone are not incompatible in the rural environment.

The site currently contains Living 1 (deferred) and living 2 (deferred) zones adjoining the Business 1 zone at 125 High Street. The business located at 125 High Street is an agricultural machinery business 'Cochranes'. The Selwyn District Plan does not currently require mitigation or interface measures for Living zoned sites which adjoin a Business zone, with the exception of the Living Z zone adjoining the Business 2B zone, Springs Road, Lincoln and in Appendix 37 of the Township Volume, which requires a landscape buffer and acoustic fencing. It is noted however, this reverse sensitivity mitigation is between a Living Z zone and a Business 2B zone.

The deferred zoning of the plan change site shows future development is anticipated in this area. The Selwyn District Plan (Township Volume) notes under Objectives and Policies B3 Health Safety and Values, B3.4 Quality of the Environment "Business 1 zones are noisier and busier than Living zones. They are still pleasant areas for people to gather, live or work in, with good aesthetic values and few nuisance effects". Therefore, the Business 1 zone and Living zones are compatible without the need for reverse sensitivity measures.

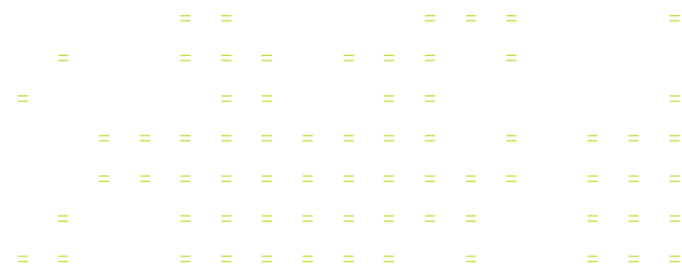
In addition, the surrounding Leeston environment shows the Business 1 zone and Living 1 zone are compatible without the need for interface for mitigation measures. This can be seen along High Street where the Business 1 zone north of high street directly backs onto the Living 1 zone on Selwyn Street; on the corner of Market Street and High Street, and on Pennington Street Business 1 zone.

Notwithstanding the above, residential development adjoining the activity at 125 High Street could increase the chances of reverse sensitivity effects with regards to visual amenity, given the higher densities surrounding 125 High Street. Therefore, an additional rule has been proposed in section 3 of this application requiring a 2 m wide landscape buffer where allotments adjoin the Business 1 zone. The landscape buffer is intended to provide visual screening between residential development and the existing activity.

### 5.3 Effects on Versatile Soils

The Pan Change will enable the development of the site from farmland into a mix of residential activities in the Living 1 and Living 2 zones. The change from rural to residential will have an effect on the site's soils resources. As residential development occurs in the Canterbury Plains, there is a threat to the amount of economically viable farmland remaining. Farmland is considered to be an important physical resource for the region as a whole, providing meat, milk, and fibre for national and international consumption.

It is for this reason regional and district policies, and strategies have been established to ensure development occurs in a manner that retains the farmland resource. The focus of many of these documents is to promote sustainable development within or adjoining existing settlements. The proposed plan change is located adjoining the existing township of Leeston. While there will be a loss of rural farmland as a result of the proposed rezoning, this loss of rural farmland will not have a significant adverse effect on the overall quality and area of rural farmland in the Selwyn District. Instead, will provide for future development and housing, without compromising larger more viable farming enterprises now and into the future.



The Plan Change will rezone land from Outer Plains to Living 1 and Living 2. The site has been identified in the Ellesmere Area Plan as having Class 2 and 3 soils. The Geotechnical Report concludes the site is appropriately defined as ‘deep soil site’ and Class D applies to the site. If the Plan Change is approved and implemented, approximately 30 ha of Outer Plains zoned land would be rezoned to Living 1 and 2 zones and would be developed in accordance with the zone requirements. Zoning approximately 17 ha of Outer Plains to Living 2 is not considered to preclude or eliminate small scale agriculture or horticulture activities on these sites.

The soils in this area are suited to cropping and grazing and, once rezoned, the land will be no longer be available for production. However, it is accepted that despite this environmental effect the land is well suited for residential development. This has been evidenced in part by the various planning processes undertaken to identify land as suitable for residential use over the last few years, in particular the Ellesmere Area Plan.

The location of the site in the immediate vicinity of Leeston and its proximity and ability to connect to services, together with the increased demand for safe land in proximity to Christchurch, are considered to mitigate any argument for the retention of soils for productive purposes in this case.

## 5.4 Effects on Ecosystem

Birdlings Brook runs through the site in the south west corner, is a tributary to Waitatari/ Harts Creek, and a public walkway forms part of the well-known walking block ‘Harmans Loop’. The public walkway along Birdlings Brook is planted with native vegetation and is fenced around the stream edge preventing any stock from accessing the water.

Birdlings Brook travels through Birdlings Reserve in a north west – south east direction, then underneath a large culvert on High Street and reappears on the southern side of High Street, eventually connecting with Harts Creek and then into Lake Ellesmere/Te Waihora. The *Te Waihora Catchment Flow Review; Ecological Values and Flow Recommendations at Minimum Flow Sites* report<sup>7</sup> notes that a portion of Birdlings Brook, recorded at Leggs Road and Lockhead Road, has low to moderate ecological values. No assessment of ecological value was undertaken where Birdlings Brook runs through the site.

The implementation of the Plan Change could have adverse effects on the ecosystem values of Birdlings Brook as stormwater will be discharged from the stormwater management area in the southern half of the site to the existing network that discharges into Birdlings Brook further south of the site. The stormwater management area will be required to provide treatment of stormwater from future development and any future discharge is likely to be a better quality than currently discharges into Birdlings Brook.

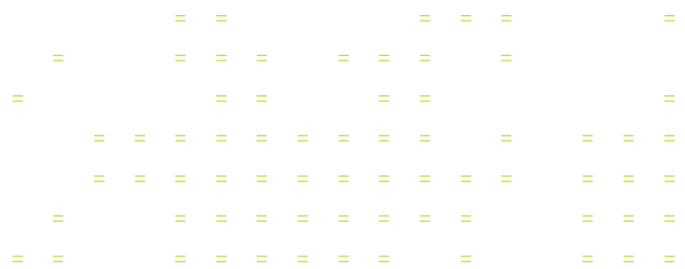
It is not proposed to alter the shape or form of Birdlings Brook, rather this area of the site has been identified as a potential reserve area and would be vested to Council at the time of subdivision. This would provide a high level of amenity for future the residential allotments within the site and for the wider community and residents whom exercise using the Harmans Loop down High Street, Harmans Road and Leeston Dunsandel Road.

The Leeston Creek runs through the site from northwest to southeast and through the existing residential area of Leeston. The Leeston Creek is required to be vested to Council as reserve, creating a high level of amenity for residents and a natural buffer between development and the creek.

There are no other known ecosystems of any significance on this site given its historical use for open pastoral land. Given the surrounding area is predominantly either residential to the east and south of the site or rural farmland to the north and west of the site, it is considered there are no other significant ecosystems in the surrounding area.

<sup>7</sup> Golder Associates for Environment Canterbury. May 2011. *Te Waihora Catchment Flow Review; Ecological Values and Flow Recommendations at Minimum Flow Sites*. Report No. R11/124.





implementation of the Plan Change and no changes or improvements to the existing roading network are required to accommodate the traffic flows.

Temporary

There is likely to be temporary effects arising at the time of development of the site through the construction phase of development such as visual effects, traffic effects arising from trucks and construction machinery, noise effects and potentially dust effects. However, given current building regulations, District Plan and ECan requirements relating to building and construction and the temporary nature of such development, it is considered any adverse effects arising from construction can be appropriately mitigated through conditions of consent at the time of residential development.

5.6 Contamination effects

The PSI concludes there is evidence of activities on the HAIL being undertaken on the site previously through agriculture, contractor’s yards and pre 1940s building. While these activities pose a potential risk to human health, a DSI and any remediation required can be undertaken at the time of subdivision. Contaminants could enter land or water from implementing the Plan Change from surface run-off. However, it is considered adverse effects arising from contaminants entering land or water can be appropriately mitigated through the subdivision process, remediation of potential existing contaminants and stormwater management.

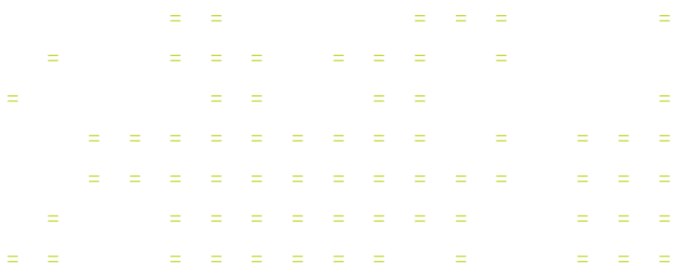
5.7 Positive Effects

Implementation of the Plan Change will result in a number of positive effects within the Leeston township and wider community. These have been described as follows;

The northern most portion of the site will be vested to Council to enable the Leeston North Stormwater Bypass to be constructed. The bypass will divert water from Leeston Creek to the Martin block and around Leeston township. This will reduce the flows in Leeston Creek and will reduce the risk of flooding in high rainfall events. Additional stormwater management areas are required as part of the ODP to ensure water flows in Leeston Creek are less than predevelopment flows.

Additional residential land in Leeston provides for additional housing and development opportunities. This has the potential to encourage new residents into Leeston and create more jobs during the construction phase. The site would provide residential land within close proximity to services and facilities, while maintaining a compact township form.

Walking and cycling linkages have been indicated on the ODP and will encourage walking, cycling and other non-vehicular modes of transport within the site. Walking and cycling connections have been made to Leeston Creek reserve, the stormwater management reserve and to Ellesmere College / Te Kāreti o Waihora.



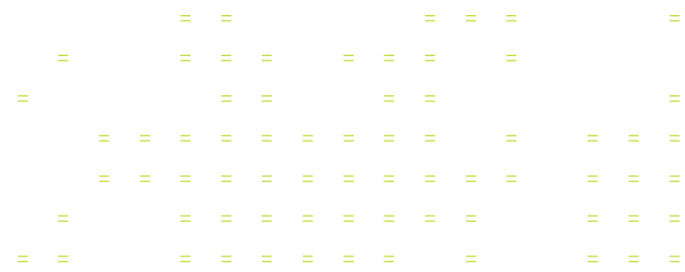
## 6 Consultation

Consultation has been carried out with Selwyn District Council staff throughout the preparation of the Plan Change, particularly when the Plan Change was first being contemplated in 2017 and in July 2019. Council staff did not raise concern over the proposal, rather offered suggestions with regards to stormwater management, servicing and roading connections. Some of the suggestions have been incorporated into the ODP.

The Plan Change initially included 56 Harmans Road, however this allotment is no longer included in the Plan Change due to a change of ownership. The new owner of this allotment has been consulted, however did not wish to partake in the Plan Change. Technical reports were completed when 56 Harmans Road was included in the Plan Change.

Consultation has been undertaken with the owners of 33 Leeston Dunsandel Road, 56 Harmans Road and 125a High Street in the initial stages of the Plan Change. No concerns were raised with the proposal; however, the parties did not wish to participate. The necessary area for stormwater management has been identified in the ODP to enable the deferral to be lifted and it is considered appropriate to lift the deferral on all properties that are subject to the deferral, rather than Council undertaking a Public Plan Change to lift the deferral.

The application was submitted to Mahaanui Kurataiao Limited to consult with the local Rūnanga, Taumutu, and provide comments and recommendations. The consultation report is attached in Appendix 9. The recommendation to consult with Taumutu at the time of development (subdivision) has been included in the ODP.



## 7 Conclusion

The Plan Change to rezone the site from Living 1 (deferred), Living 2 (deferred) and Outer Plains, to Living 1 and Living 2 zones is considered to be the best method to achieve the purpose of the Act, while being consistent with the objectives and policies of the Selwyn District Plan (Township Volume) and the Canterbury Regional Policy Statement. The Plan Change is considered to be a sustainable and effective way to lift the existing deferral, provide stormwater management areas for the site and provide for additional housing options in Leeston for future generations.

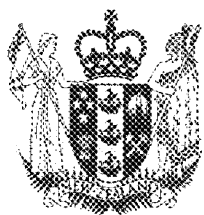
The Plan Change will result in an additional 60 ha of residential zoned land, being 42 ha of Living 1 zoned land and 19 ha of Living 2 zoned land. This could provide for an additional 410 residential allotments in Leeston. Any adverse effects that may arise from implementing the Plan Change are able to be appropriately avoided, remedied or mitigated through ODP and conditions of consent on future subdivision consents. The ODP will provide guidance and requirements for any future development of the site including stormwater management areas and recreation reserves.

Future development can be serviced with reticulated potable water and wastewater connections, subject to network extensions. Stormwater can be appropriately managed so that post development stormwater flow rates in Leeston Creek do not exceed pre-development flow rates.

Rezoning the site will enable the Living 1 zone to better align with the existing Living XA zone and urban boundary south of High Street. The Plan Change will provide a more defined urban boundary and township edge when traveling along High Street and Leeston Dunsandel Road and will provide residential allotments with close proximity to community, sport and education facilities, commercial activities and the town centre.


The Plan Change is considered to meet the purpose and principles of Part 2 of the Act and is seen as a sustainable and effective way to develop land for future generations.

# Appendix 1: Records of Title



**RECORD OF TITLE  
UNDER LAND TRANSFER ACT 2017  
FREEHOLD  
Search Copy**



  
R.W. Muir  
Registrar-General  
of Land

**Identifier** 885820  
**Land Registration District** Canterbury  
**Date Issued** 18 April 2019

**Prior References**

CB47D/695

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<b>Estate</b>	Fee Simple
<b>Area</b>	19.7308 hectares more or less
<b>Legal Description</b>	Section 2 Survey Office Plan 534245

**Registered Owners**

David Bell Marshall and Brant John Hammett

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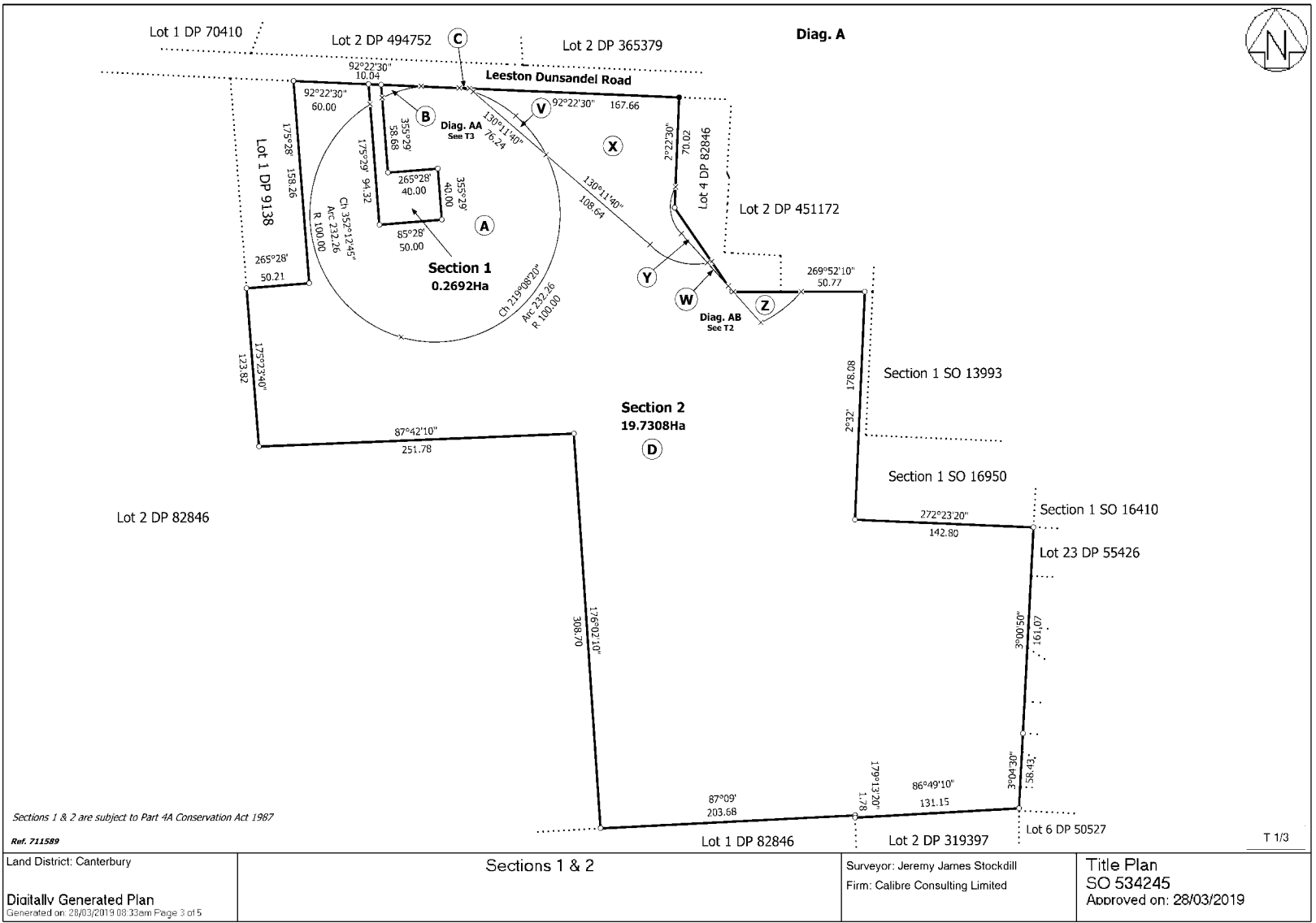
**Interests**

Subject to Part IV A Conservation Act 1987

Subject to Section 11 Crown Minerals Act 1991

A464240.8 Consent Notice pursuant to Section 221(1) Resource Management Act 1991 by The Selwyn District Council - 29.6.2000 at 12.25 pm

Land Covenant in Covenant Instrument 11408319.5 - 18.4.2019 at 4:35 pm



**CONO A464240.8 Conser**

Cpy - 01/01, Pgs - 002, 01/12/06, 15:59



DocID 211914682

IN THE MATTER

of the Resource Management  
Act 1991

AND

IN THE MATTER

of Subdivision Consent  
Application R304071

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

To: The District Land Registrar  
Canterbury Land Registration District

TAKE NOTICE that the land hereinafter described is subject to conditions in relation to a  
subdivision consent as follows:-

*" That the area marked "X & Y" on the survey plan not be used for  
the disposal of sewage effluent and the areas marked "W,Y & Z" not  
be used for the extraction of water. "*


AND THAT you are hereby requested to register the same pursuant to Section 221 of the Resource  
Management Act 1991.

**DESCRIPTION OF LAND**

All that piece of land containing 20.0000 Ha being Lot 3 DP 82846 (Canterbury Registry)

DATED this 12th day of May 2000

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

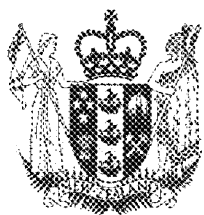


Authorised Officer

12.25 29.JUN00 A 464240 .8


PARTICULARS ENTERED IN REGISTER  
LAND REGISTRY  
FOR REGISTRAR





**RECORD OF TITLE  
UNDER LAND TRANSFER ACT 2017  
FREEHOLD  
Search Copy**



  
R.W. Muir  
Registrar-General  
of Land

**Identifier** **CB47D/693**  
**Land Registration District** **Canterbury**  
**Date Issued** 29 June 2000

**Prior References**

CB34B/33                      CB35D/108

---

<b>Estate</b>	Fee Simple
<b>Area</b>	29,5500 hectares more or less
<b>Legal Description</b>	Lot 1 Deposited Plan 82846

**Registered Owners**

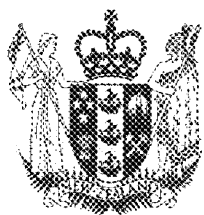
David Bell Marshall

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**Interests**


Subject to Part IV A Conservation Act 1987 (affects part formerly CT CB35D/108)  
Subject to Section 11 Crown Minerals Act 1991 (affects part formerly CT CB35D/108)  
9769661.2 Mortgage to Bank of New Zealand - 4.7.2014 at 1:19 pm





**RECORD OF TITLE  
UNDER LAND TRANSFER ACT 2017  
FREEHOLD  
Search Copy**



  
R.W. Muir  
Registrar-General  
of Land

**Identifier** **CB47D/696**  
**Land Registration District** **Canterbury**  
**Date Issued** 29 June 2000

**Prior References**

CB35D/108

---

<b>Estate</b>	Fee Simple
<b>Area</b>	6011 square metres more or less
<b>Legal Description</b>	Lot 4 Deposited Plan 82846

**Registered Owners**

Brant John Hammett

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**Interests**

Subject to Part IV A Conservation Act 1987

Subject to Section 11 Crown Minerals Act 1991

10120809.3 Mortgage to Bank of New Zealand - 30.7.2015 at 4:48 pm

**Approve**  
*David Marshall*  
Registered Owners  
I hereby certify that this plan was approved by the Selwyn District Council pursuant to Section 225 of the Resource Management Act 1991 on the 11th day of November 2000.

**Authorised Officer**  
*[Signature]*  
28/11/2000

Existing Easements		Document
Mature	Residual	
Lot No.	Lot No.	
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**Certificate of Title Allocated**  
Lot 1: H/D/696  
Lot 2: H/D/696  
Lot 3: H/D/696  
Lot 4: H/D/696

**Total Area** 73.0959ha  
**Comprised in A11 C.T. 24 B/33 B/35 D/100.**

**Colin Edgar Head**  
I, Colin Edgar Head, being a person entitled to practice as a registered surveyor, hereby declare that the survey in which this plan is contained is accurate and was conducted by me or under my direction in accordance with the Survey Act 1980 and the Survey Regulations 1980.  
All this plan is accurate and has been compiled in accordance with the Survey Regulations 1980.  
*[Signature]*  
Surveyor

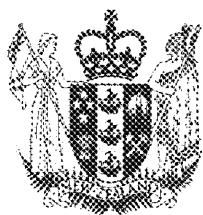
**Approved as to Survey**  
11/11/00  
*[Signature]*  
Deputy Chief Surveyor  
day of 11/11/00

**Registered General of Land**  
DP82846

LAND DISTRICT Canterbury  
SURVEY BLK. & DIST. XIII & XIV Leeston  
NZMS 261 SH1  
RECORD MAP No

**Lots 1-6 being Subdivision of  
Sections 1, 4, 5 & 8 & Pt Sec. 9 Leeston Sett.**

TERRITORIAL AUTHORITY Selwyn District  
Surveyed by Frizzell & Associates  
Scale 1:4,000  
Date November 1999



**RECORD OF TITLE  
UNDER LAND TRANSFER ACT 2017  
FREEHOLD  
Search Copy**



  
R. W. Muir  
Registrar-General  
of Land

**Identifier** **CB368/10**  
**Land Registration District** **Canterbury**  
**Date Issued** 28 August 1925

**Prior References**

DI 5C/S1804

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<b>Estate</b>	Fee Simple
<b>Area</b>	4047 square metres more or less
<b>Legal Description</b>	Part Rural Section 5482 and Part Rural Section 5483

**Registered Owners**

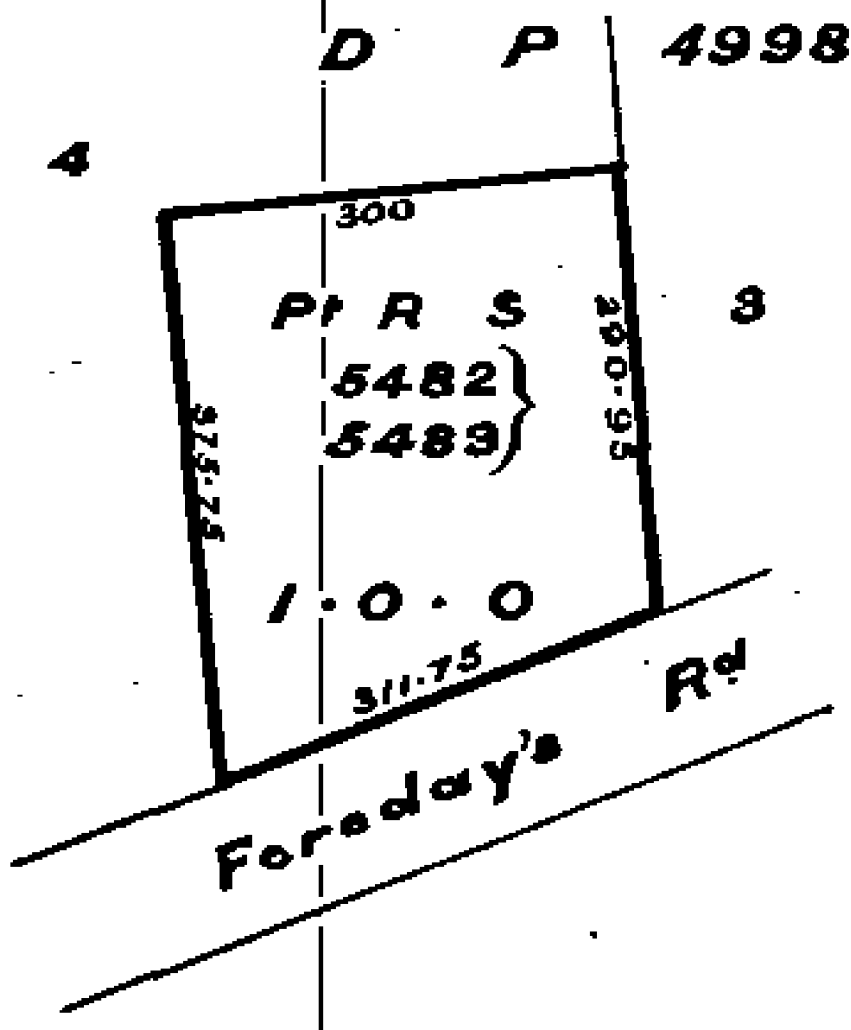
Mark Harcourt Saunders and Trudy Lee Saunders

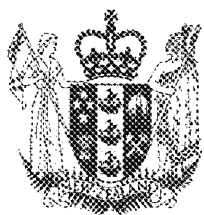
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**Interests**

A352619.3 Mortgage to ANZ Banking Group (New Zealand) Limited - 21.5.1998 at 12.46 pm


**Image Quality due  
to Condition  
of Original**





**RECORD OF TITLE  
UNDER LAND TRANSFER ACT 2017  
FREEHOLD  
Search Copy**



  
R.W. Muir  
Registrar-General  
of Land

**Identifier** **CB418/133**  
**Land Registration District** **Canterbury**  
**Date Issued** 28 June 1929

**Prior References**

CBPR88/17      WA 5C/190

---

<b>Estate</b>	Fee Simple
<b>Area</b>	8094 square metres more or less
<b>Legal Description</b>	Lot 1 Deposited Plan 9138

**Registered Owners**

Liam James Gilbert Martin and Alice Beatrice Formosa

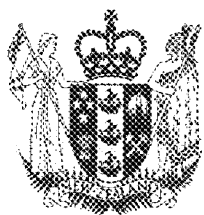
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**Interests**

Subject to Section 206 Land Act 1924


10517207.2 Mortgage to Bank of New Zealand - 12.8.2016 at 3:02 pm





**RECORD OF TITLE  
UNDER LAND TRANSFER ACT 2017  
FREEHOLD  
Search Copy**



  
R.W. Muir  
Registrar-General  
of Land

**Identifier** 264986  
**Land Registration District** Canterbury  
**Date Issued** 22 March 2006

**Prior References**

CB40D/900

---

<b>Estate</b>	Fee Simple
<b>Area</b>	5.4440 hectares more or less
<b>Legal Description</b>	Lot 2 Deposited Plan 365379

**Registered Owners**

John Leslie Howson, Sandra Helen Howson and Michael John Kirwin Lay

---

**Interests**

A220915.4 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 20.2.1996 at 10:55 am

Appurtenant hereto is a right to drain water created by Easement Instrument 6797244.3 - 22.3.2006 at 9:00 am

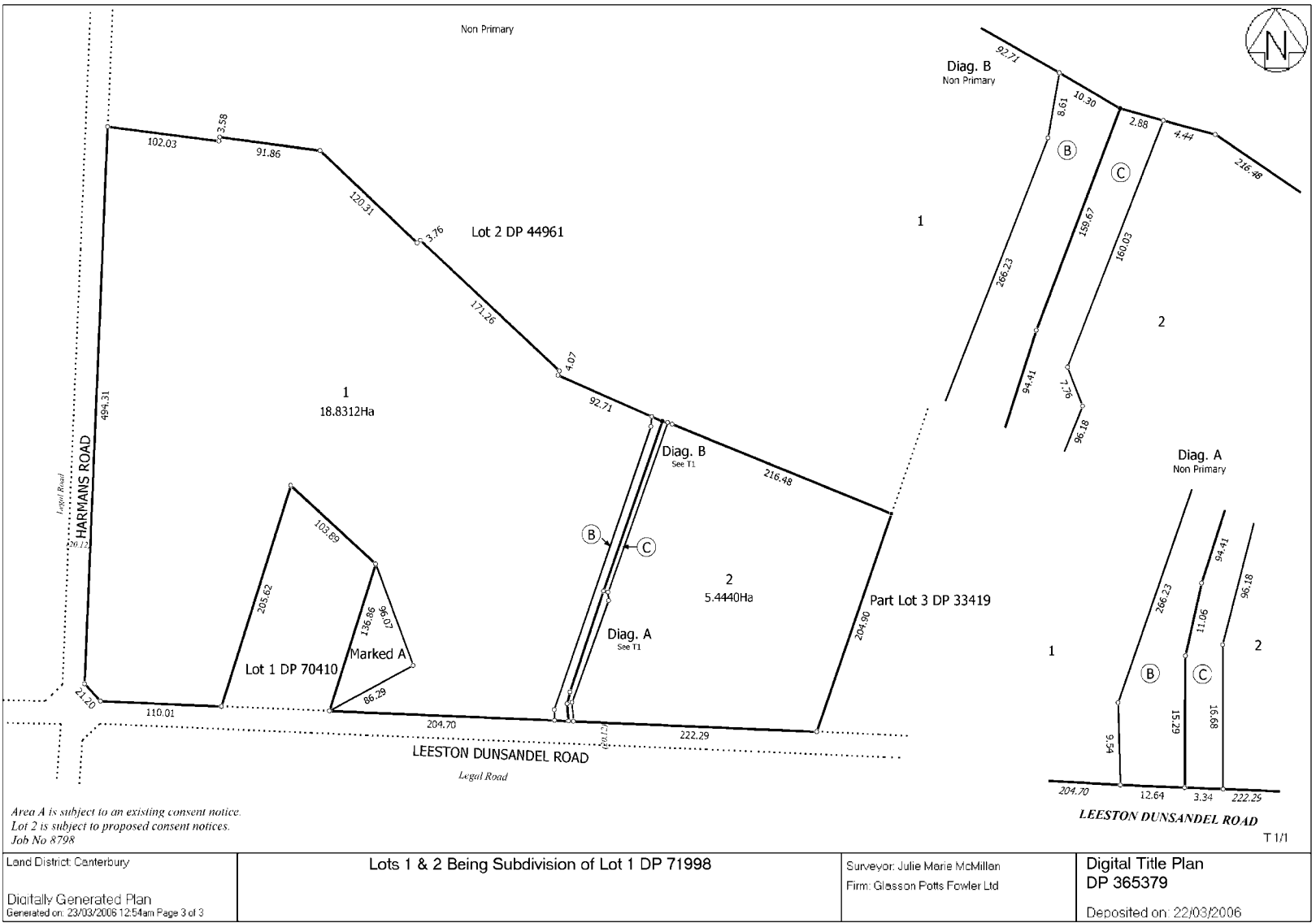
The easements created by Easement Instrument 6797244.3 are subject to Section 243 (a) Resource Management Act 1991

Subject to a right (in gross) to drain water over part marked C on DP 365379 in favour of Selwyn District Council created by Easement Instrument 6797244.4 - 22.3.2006 at 9:00 am

The easements created by Easement Instrument 6797244.4 are subject to Section 243 (a) Resource Management Act 1991

6797244.5 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 22.3.2006 at 9:00 am

7950559.2 Mortgage to Bank of New Zealand - 2.10.2008 at 10:36 am





IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of Subdivision Consent Application R301389

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

To: The District Land Registrar  
Canterbury Land Registration District

TAKE NOTICE that the land hereinafter described is subject to conditions in relation to a subdivision consent as follows:-

*"That the area shown marked "A" on the survey plan not  
be used for the disposal of sewage effluent."*

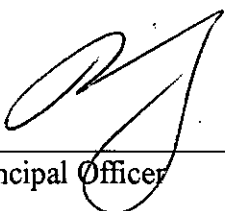
AND THAT you are hereby requested to register the same pursuant to Section 221 of the Resource Management Act 1991.

**DESCRIPTION OF LAND**

All that piece of land containing 24.2750 hectares being Part Lot 1 on DP 33419  
(Canterbury Registry)

DATED this 25 day of October 1995

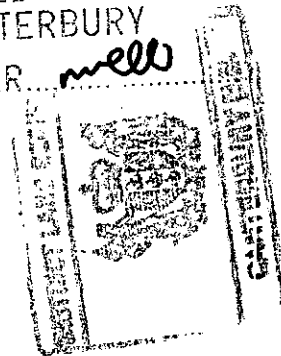
SIGNED for and on behalf of  
THE SELWYN DISTRICT COUNCIL  
pursuant to Section 252 of the  
Local Government Act 1974

  
Principal Officer

10.55 20.FEB96 A 220915/4

PARTICULARS ENTERED IN REGISTER  
LAND REGISTRY CANTERBURY  
ASSY LAND REGISTRAR *mell*

*6001900*





HIGH STREET, LEESTON  
PRIVATE BAG 1, LEESTON  
PH: (03) 324-8080 FAX: (03) 324-3531

**CONO 6797244.5 Consen**

Cpy - 01/01, Pgs - 001, 21/03/08, 16:18



DocID: 211691539

IN THE MATTER

REF No. ....  
of the Resource Management  
Act 1991

AND

IN THE MATTER

of Resource Consent Application  
R307631

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

To: The District Land Registrar  
Canterbury Land Registration District

TAKE NOTICE that the land hereinafter described is subject to conditions in relation to a subdivision consent as follows:-

*"That prior to any building consent being issued for the erection of a dwelling on Lot 2 that underground electricity supply and telecommunications be supplied to the net area of the lot.*

*That prior to the habitation of any dwelling, a vehicle crossing to serve Lot 2 is to be formed and sealed in accordance with the requirements of Appendix 13 (Transport) of the Proposed District Plan (Townships Volume). The position of the vehicle crossing is to receive the prior approval of the Council's Asset Manager.*

*That Lot 2 is required to be connected to the reticulated sewer system within six months of a connection becoming available.*

*That Lot 2 is required to be connected to the reticulated water system within six months of a connection becoming available.*

*That Lot 2 has been created as an unserviced site. There will be no credit for any reserve contribution for the underlying Certificate of Title.*

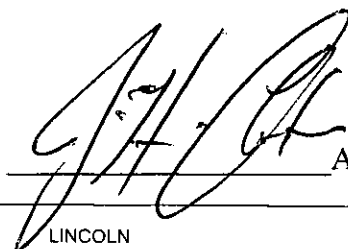
AND THAT you are hereby requested to register the same pursuant to Section 221 of the Resource Management Act 1991.

**DESCRIPTION OF LAND**

All that piece of land of 5.4918 hectares being Lot 2 DP 365379 (Canterbury Registry)

DATED this 10th day of February 2006

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

  
Authorised Officer

SERVICE  
CENTRES:

LEESTON  
HIGH STREET, LEESTON  
PH: (03) 324-8080

DARFIELD  
SOUTH TERRACE, DARFIELD  
PH: (03) 318-8338

LINCOLN  
GERALD STREET, LINCOLN  
PH: (03) 325-3288

ROLLESTON COMMUNITY CENTRE  
ROLLESTON DRIVE, ROLLESTON  
PH: (03) 347-9669



**RECORD OF TITLE  
UNDER LAND TRANSFER ACT 2017  
FREEHOLD  
Search Copy**



**Identifier** **76388**  
**Land Registration District** **Canterbury**  
**Date Issued** 07 February 2006

**Prior References**

37039 CB29B/337

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<b>Estate</b>	Fee Simple
<b>Area</b>	2.3033 hectares more or less
<b>Legal Description</b>	Lot 3 Deposited Plan 50527 and Lot 2 Deposited Plan 319397

**Registered Owners**

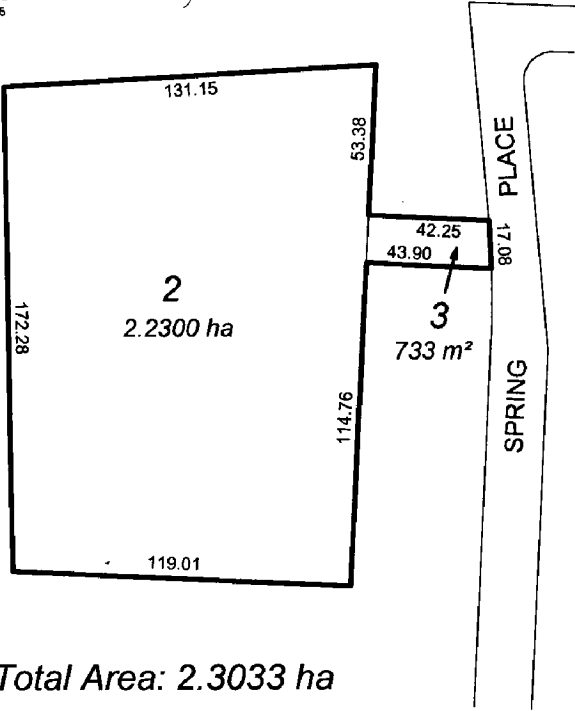
Cochranes of Canterbury Limited

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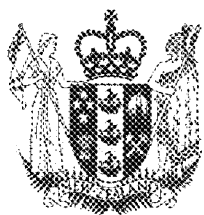
**Interests**

Land Covenant in Transfer 954069.2 - 9.9.1991 at 9.42 am (affects Lot 3 DP 50527)  
5289899.1 Mortgage to ANZ Banking Group (New Zealand) Limited - 19.7.2002 at 11:47 am  
Subject to Section 241(2) Resource Management Act 1991 (affects DP 319397)  
Appurtenant to Lot 2 DP 319397 is a right to convey electric power, water and telephonic communications created by Easement Instrument 6742330.3 - 7.2.2006 at 9:00 am  
Some of the easements created by Easement Instrument 6742330.3 are subject to Section 243 (a) Resource Management Act 1991  
8260956.1 Variation of Mortgage 5289899.1 - 25.8.2009 at 9:02 am

Title Diagram CT 76388  
Cpy - 01/01, Pgs - 001, 20/02/06, 11:02  
DocID: 211661515




Total Area: 2.3033 ha



**RECORD OF TITLE  
UNDER LAND TRANSFER ACT 2017  
FREEHOLD  
Search Copy**



  
R.W. Muir  
Registrar-General  
of Land

**Identifier** 574789  
**Land Registration District** Canterbury  
**Date Issued** 16 March 2012

**Prior References**

CB515/163

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<b>Estate</b>	Fee Simple
<b>Area</b>	1592 square metres more or less
<b>Legal Description</b>	Lot 1 Deposited Plan 451172

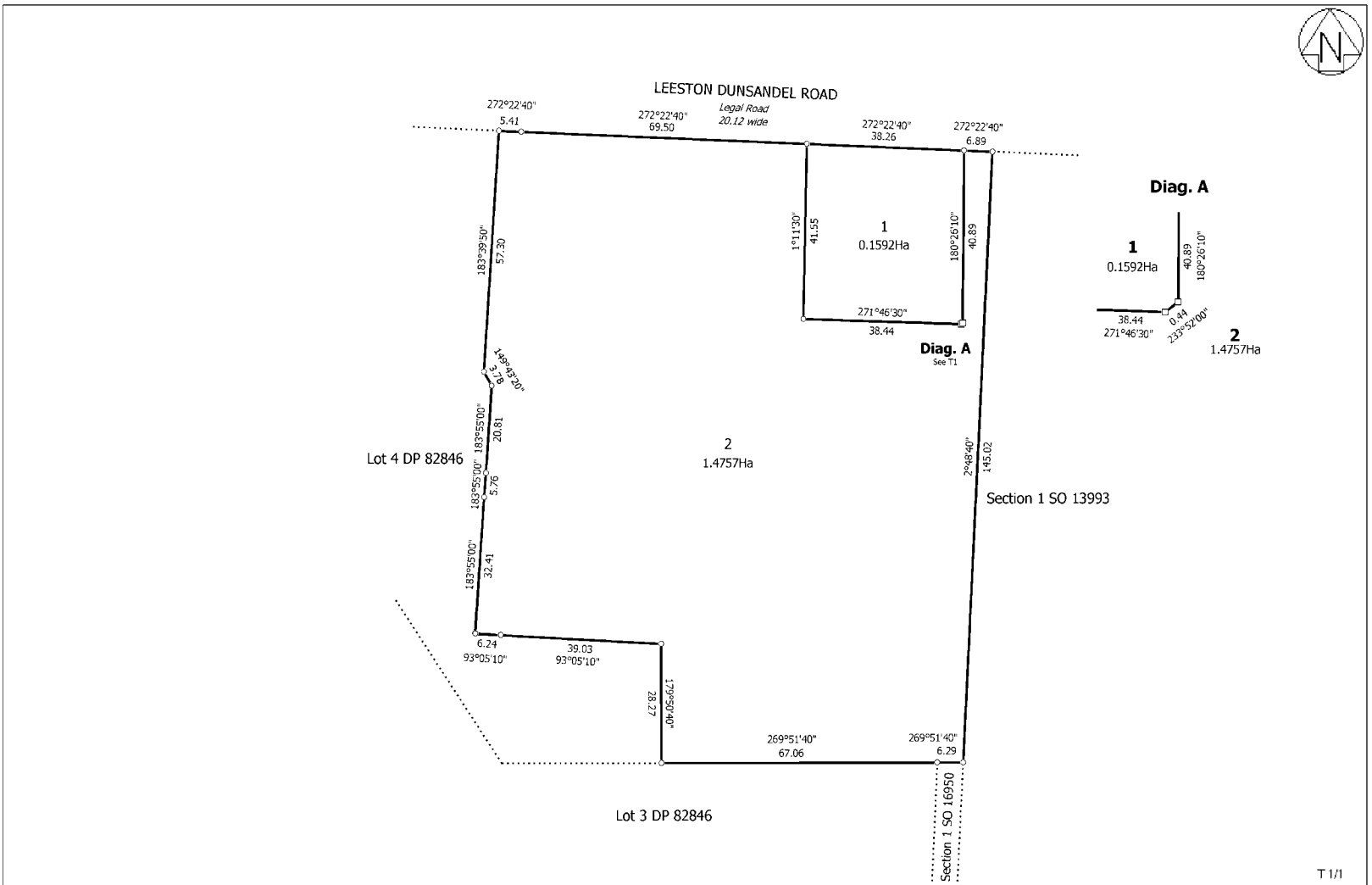
**Registered Owners**

Terrence John Anderson

---

**Interests**

Subject to Section 206 Land Act 1924  
Land Covenant in Easement Instrument 9183413.1 - 5.10.2012 at 9:29 am  
Fencing Covenant in Transfer 9186214.1 - 5.10.2012 at 3:08 pm  
10402539.3 Mortgage to Kiwibank Limited - 2.5.2016 at 2:50 pm



Land District: Canterbury	Lots 1 & 2 being Subdivision of Section 3A Leeston Settlement	Surveyor: Craig Martin Tinkler Firm: Clark Land Surveyors (2004) Ltd	Title Plan DP 451172 Deposited on: 16/03/2012
Digitally Generated Plan Generated on: 02/04/2012 09:44am Page 2 of 2			



**RECORD OF TITLE  
UNDER LAND TRANSFER ACT 2017  
FREEHOLD  
Search Copy**



  
R.W. Muir  
Registrar-General  
of Land

**Identifier** **574790**  
**Land Registration District** **Canterbury**  
**Date Issued** 16 March 2012

**Prior References**

CB515/163

---

<b>Estate</b>	Fee Simple
<b>Area</b>	1.4757 hectares more or less
<b>Legal Description</b>	Lot 2 Deposited Plan 451172

**Registered Owners**

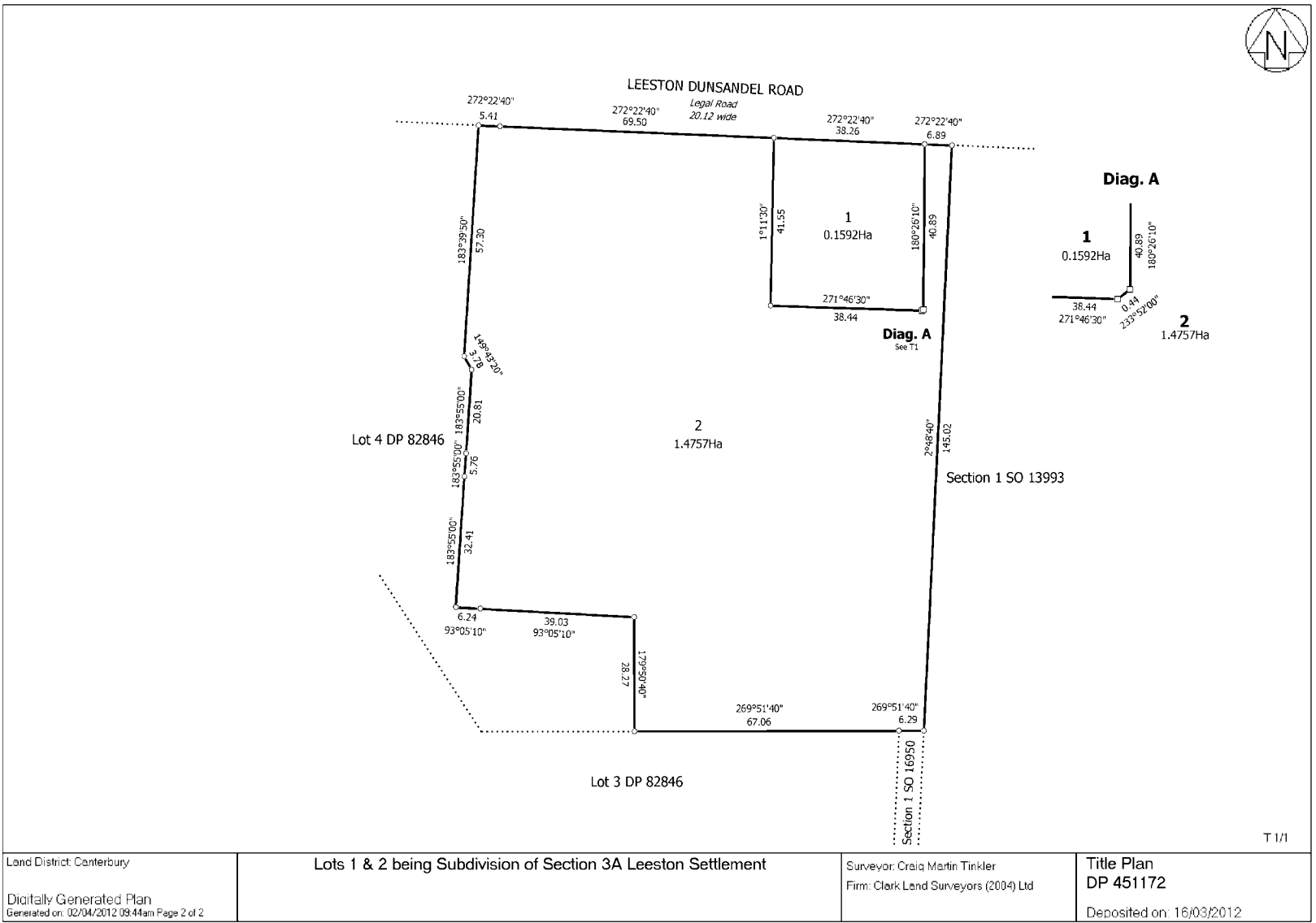
Sharon Ann Farrant

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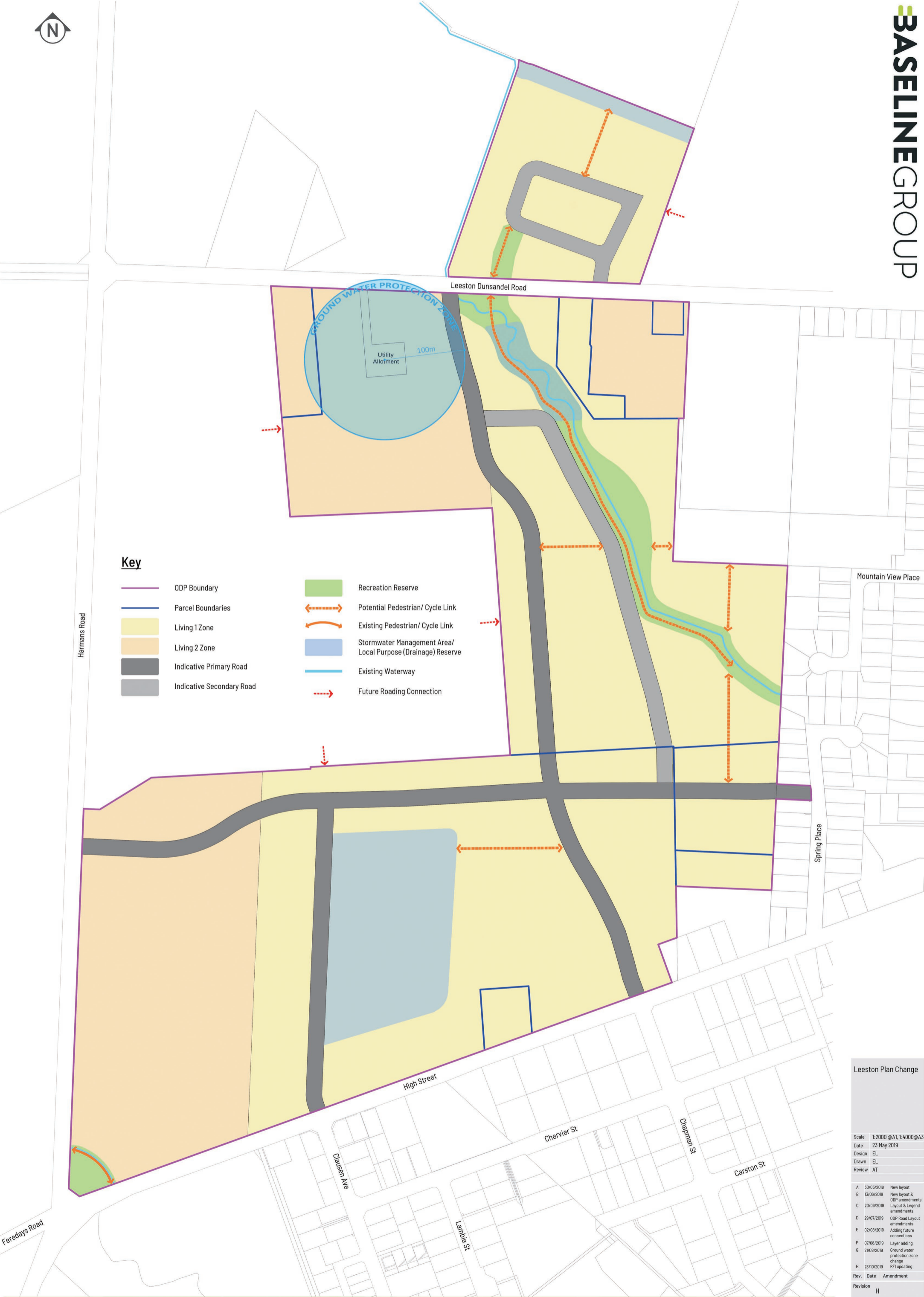
**Interests**

Subject to Section 206 Land Act 1924

Land Covenant in Easement Instrument 9183413.1 - 5.10.2012 at 9:29 am



# Appendix 2: Outline Development Plan



Key

- |  |                           |  |  |
|--|---------------------------|--|--|
|  | ODP Boundary              |  | Recreation Reserve   |
|  | Parcel Boundaries         |  | Potential Pedestrian/ Cycle Link                             |
|  | Living 1 Zone             |  | Existing Pedestrian/ Cycle Link                              |
|  | Living 2 Zone             |  | Stormwater Management Area/ Local Purpose (Drainage) Reserve |
|  | Indicative Primary Road   |  | Existing Waterway  |
|  | Indicative Secondary Road |  | Future Roading Connection                                    |

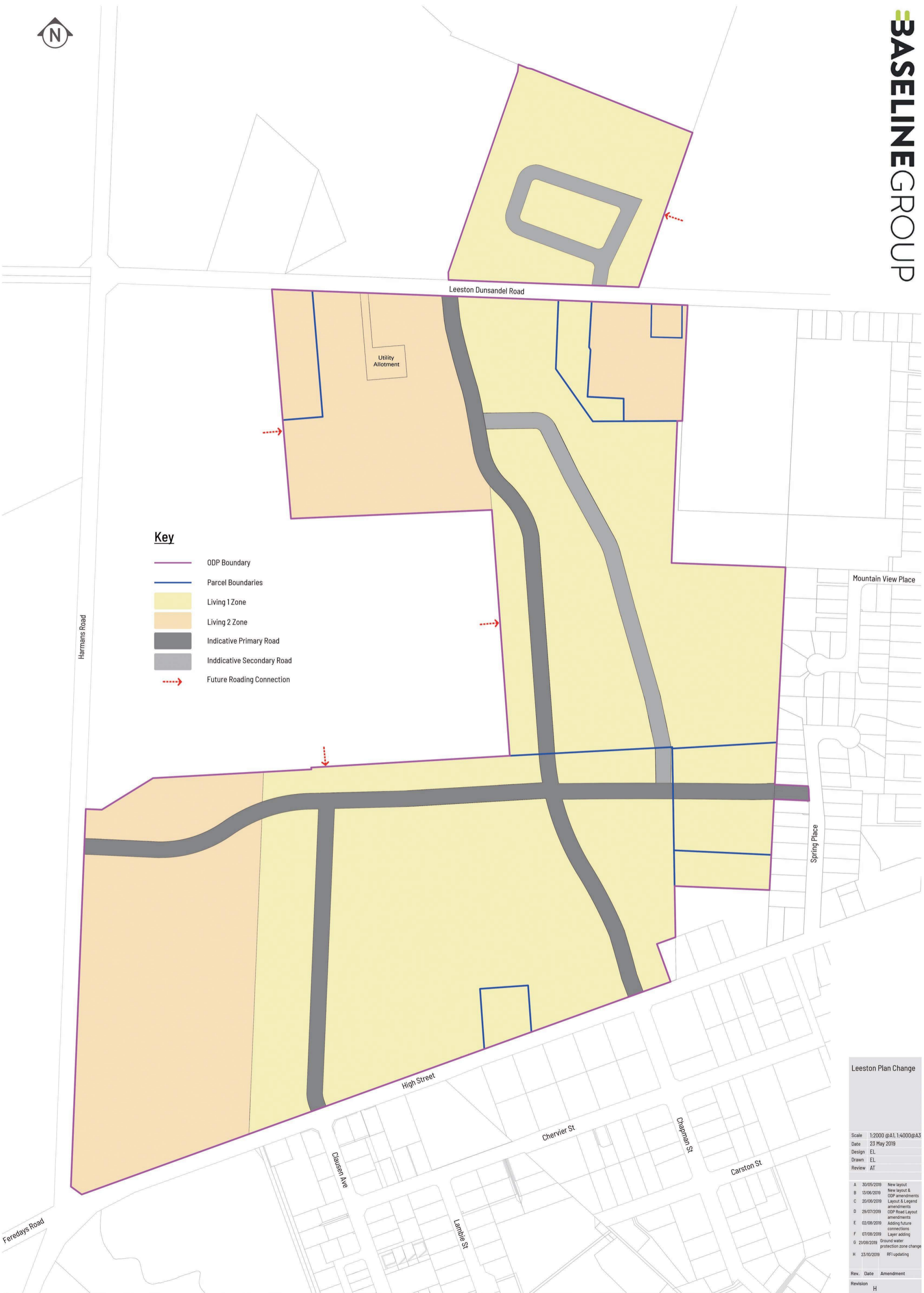
Leeston Plan Change

Scale	1:2000 @A1, 1:4000 @A3
Date	23 May 2019
Design	EL
Drawn	EL
Review	AT

A	30/05/2019	New layout
B	13/06/2019	New layout & ODP amendments
C	20/06/2019	Layout & Legend amendments
D	29/07/2019	ODP Road Layout amendments
E	02/08/2019	Adding future connections
F	07/08/2019	Layer adding
G	21/08/2019	Ground water protection zone change
H	23/10/2019	RFI updating

Rev.	Date	Amendment
Revision		H

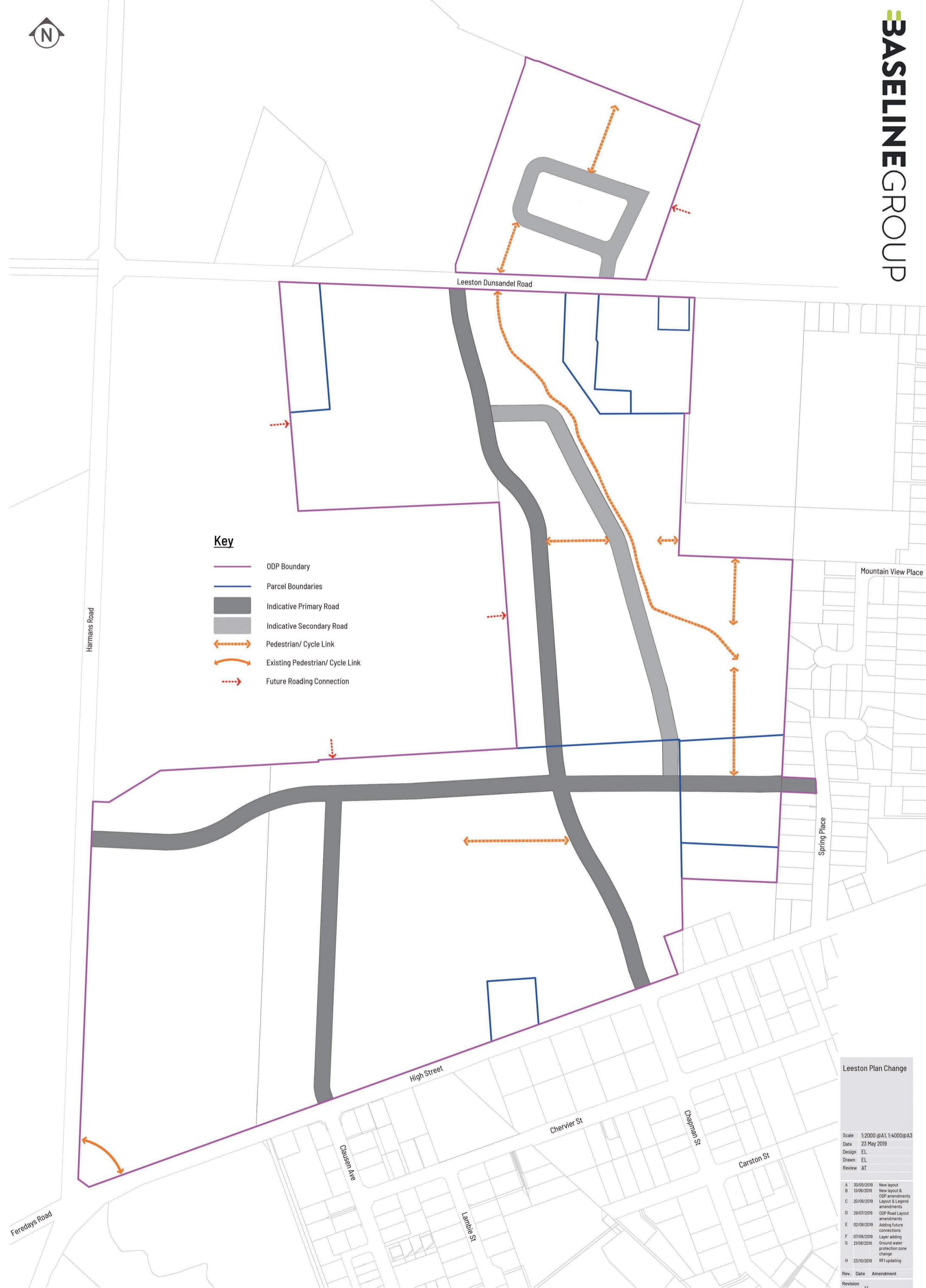
Sheet	1
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**Key**

- ODP Boundary
- Parcel Boundaries
- Living 1 Zone
- Living 2 Zone
- Indicative Primary Road
- Indicative Secondary Road
- Future Roading Connection

Leeston Plan Change			
Scale	1:2000 @A1, 1:4000 @A3		
Date	23 May 2019		
Design	EL		
Drawn	EL		
Review	AT		
A	30/05/2019	New layout	
B	13/06/2019	New layout & ODP amendments	
C	20/06/2019	Layout & Legend amendments	
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E	02/08/2019	Adding future connections	
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G	21/08/2019	Ground water protection zone change	
H	23/10/2019	RFI updating	
Rev.	Date	Amendment	
Revision	H		
Sheet	2		



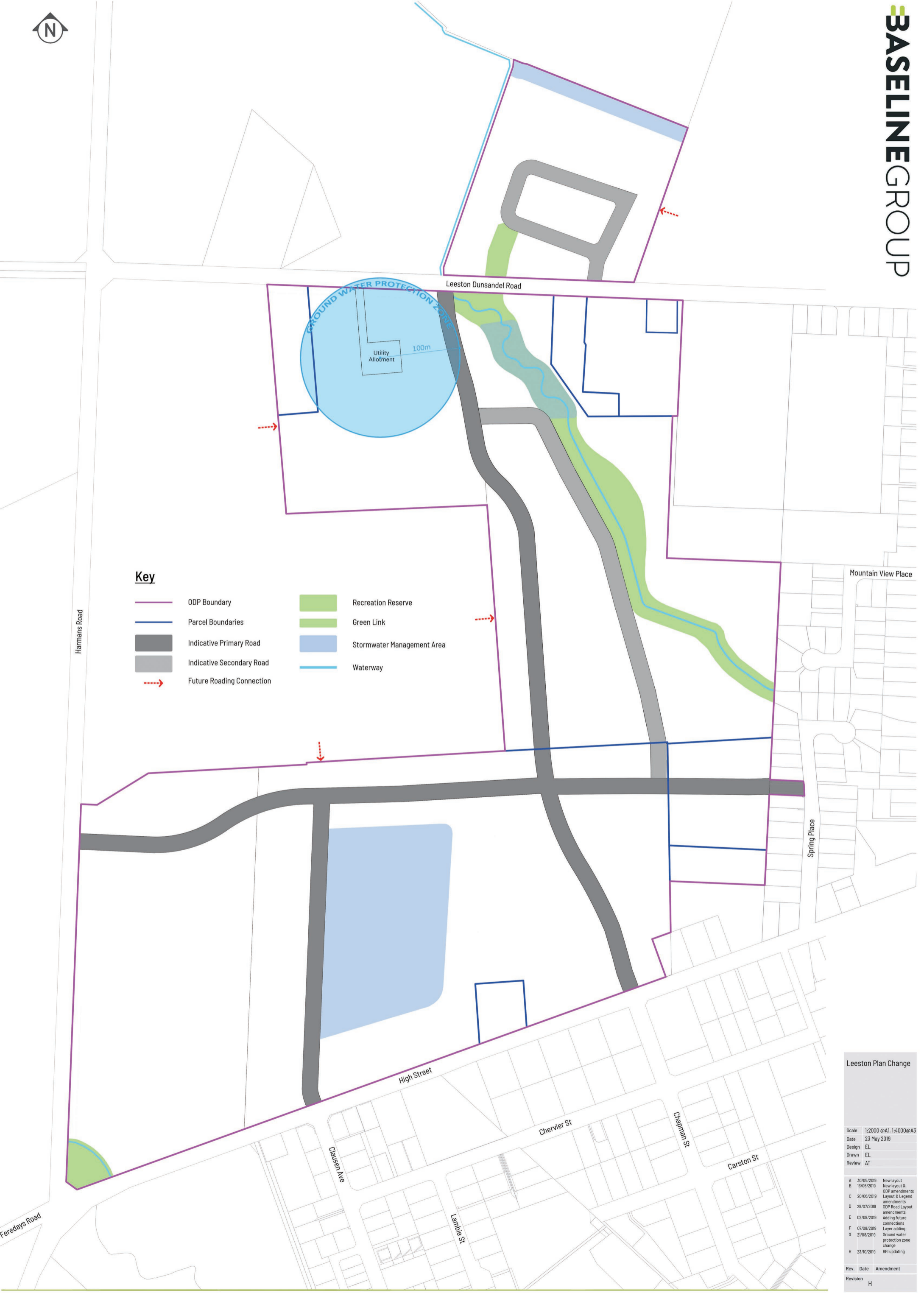
Leeston Plan Change

Scale	1:2000 @A1, 1:4000 @A3
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D	29/07/2019	ODP Road Layout amendments
E	02/08/2019	Adding future connections
F	07/08/2019	Layer adding
G	20/08/2019	Ground water protection zone change
H	23/10/2019	RFI updating

Rev.	Date	Amendment
Revision	H	

Sheet	3
-------	---



Key

- |  |                           |  |                            |
|--|---------------------------|--|----------------------------|
|  | ODP Boundary              |  | Recreation Reserve         |
|  | Parcel Boundaries         |  | Green Link                 |
|  | Indicative Primary Road   |  | Stormwater Management Area |
|  | Indicative Secondary Road |  | Waterway                   |
|  | Future Roading Connection |  |                            |

Mountain View Place

Spring Place

High Street

Chervier St

Chapman St

Carston St

Clausen Ave

Lamble St

Feredays Road

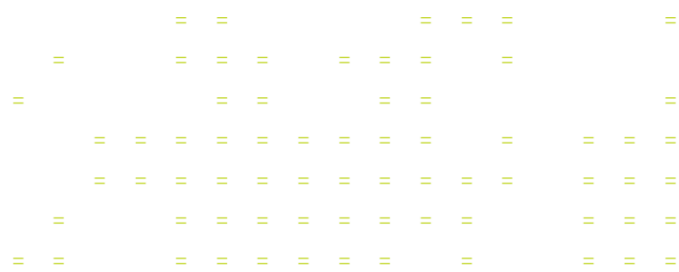
Leeston Plan Change

Scale	1:2000 @A1, 1:4000 @A3
Date	23 May 2019
Design	EL
Drawn	EL
Review	AT

A	30/05/2019	New layout
B	13/06/2019	New layout & ODP amendments
C	20/06/2019	Layout & Legend amendments
D	28/07/2019	ODP Road Layout amendments
E	02/08/2019	Adding future connections
F	07/08/2019	Layer adding
G	21/08/2019	Ground water protection zone change
H	23/10/2019	RFI updating

Rev.	Date	Amendment
Revision		H

Sheet	4
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## Introduction

This Outline Development Plan (ODP) is for the development of approximately 60 ha of land west of Leeston township. The development area is bound by Leeston Dunsandel Road to the north, with one section north of Leeston Dunsandel Road; Spring Place and Ellesmere College / Te Kāreti o Waihora to the east; High Street to the south and Harmans Road to the west.

The ODP has been broken down into four components – Land Use, Transport Network, Green Network and Blue Network.

## Land Use

The ODP area provides for residential development in accordance with the Living 2 zone and Living 1 zone standards.

## Movement Network

The movement network will provide connections to the existing roading network, residential areas and Leeston township. The ODP includes primary and secondary roads, as well as walkway and cycleway linkages throughout the ODP area. For the purposes of the ODP, the built standard for the 'Primary Road' will be the equivalent to the Plan standards for a Collector Road or Local-Major Road standards, and a 'Secondary Road' will be the equivalent to the Plan standards for a Local-Major or Local-Intermediate Road.

The ODP provides for an integrated transport network incorporating:

- A primary road following a north to south alignment from Leeston Dunsandel Road to High Street. This primary road will align with Chapman Street;
- A second primary road following a north to south alignment from the intersection of High Street and Clausen Avenue and meeting with the east to west primary road;
- A third primary road following an east to west alignment from Spring Place to Harmans Road. This road will connect with the north to south primary roads and will connect the rural and urban environments;
- Two secondary roads; one connection the north to south and east to west primary roads. The other secondary road will provide access to the northern block of the site north of Leeston Dunsandel Road; and
- Pedestrian, cycle and non-vehicular linkages to encourage alternative modes of transport and to provide connections throughout the ODP site and to Ellesmere College / Te Kāreti o Waihora.

The remaining roading network must be able to accommodate progressive development over time and roading connections must be arranged and aligned in a way that long term connectivity is achieved to provide a safe and efficient roading network and non-vehicular linkages.

## Green Network

A minimum of four reserves are required to be established throughout the development area. The reserves could be located as follows:

- Birdlings Brook in the south west corner of the site at the corner of Harmans Road and High Street;
- Stormwater management areas should be provided with surrounding reserve areas;
- Leeston Creek and its margins are to be vested to Council as reserve. The reserve should run for the entire length of Leeston Creek within the development site and should be provided with walkways along the Creek

- A reserve connecting the development block north of Leeston Dunsandel Road with Leeston Dunsandel Road and Leeston Creek reserve.

Council's open space requirements cited in the Long Term Plan and Activity Management Plans should be referred to during subdivision design.

Stormwater:

Stormwater management and attenuation areas must be designed by a suitably qualified engineer, so the impact of flooding is not increased. The stormwater management area has been located in the natural low point of the site. The stormwater management area should be connected to the surrounding roads through pedestrian and cycle links and should have sufficient street frontage to allow for passive surveillance, create a sense of openness, and provide a high level of amenity.

Upgrades to the existing wastewater infrastructure in Leeston will be required to service the site and discharge into the Ellesmere Treatment Plant after the 80<sup>th</sup> residential allotment to enable future development.

The water reticulation will be an extension of the existing reticulated network. Council owns a utility allotment within the site which will provide potable water for the future development.

The provision of infrastructure to service the ODP shall align with the Council's indicative infrastructure staging plan, unless an alternative arrangement is made by the landowner/developer and approved by Council.

Development of the site has the potential to effect Te Waihora / Lake Ellesmere, due to increased density and stormwater discharge. Te Waihora / Lake Ellesmere is an area of significance to local Rūnanga, Taumutu. Consultation with Taumutu should be undertaken when developing the site.

# Appendix 3: Transport Assessment

**Brant Hammett**

# **Proposed Private Plan Change Leeston**

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## **Transportation Assessment**

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**CARRIAGEWAY**  
CONSULTING

traffic engineering | transport planning



## Table of Contents

<b>Main Report</b>		<b>Page</b>
<b>1</b>	<b>Introduction</b>	<b>1</b>
<b>2</b>	<b>Site Overview</b>	<b>2</b>
	2.1 Location	2
	2.2 Road Hierarchy	3
<b>3</b>	<b>Current Transportation Networks</b>	<b>4</b>
	3.1 Road Network	4
	3.2 Non-Car Modes of Travel	10
<b>4</b>	<b>Current Transportation Patterns</b>	<b>11</b>
	4.1 Traffic Flows	11
	4.2 Non-Car Modes of Travel	12
	4.3 Road Safety	12
<b>5</b>	<b>Proposal</b>	<b>15</b>
<b>6</b>	<b>Traffic Generation and Distribution</b>	<b>17</b>
	6.1 Traffic Generation	17
	6.2 Trip Distribution	17
<b>7</b>	<b>Effects on the Transportation Networks</b>	<b>20</b>
	7.1 Rooding Network Capacity	20
	7.2 Intersection Capacity	20
	7.3 Potential Upgrading of Existing Roads	21
	7.4 Form of Access Intersections	22
	7.5 Non-Car Modes of Travel	22
	7.6 Road Safety	22
<b>8</b>	<b>District Plan Matters</b>	<b>24</b>
	8.1 Introduction	24
	8.2 Rule 5.1: Road and Engineering Standards	24
	8.3 Rule 5.2: Vehicle Accessways	24
	8.4 Rule 5.3: Vehicle Crossings	25
	8.5 Rule 5.4: Traffic Sight Lines – Road/Rail Crossings	26
	8.6 Rule 5.5: Vehicle Parking and Cycle Parking	26
	8.7 Summary	26
<b>9</b>	<b>Conclusions</b>	<b>27</b>



## Photographs

1	Harmans Road Looking North	4
2	Leeston Dunsandel Road / Harmans Road Intersection Looking East	4
3	Leeston Dunsandel Road Looking East	5
4	Urban Section of Leeston Dunsandel Road Looking East	5
5	Market Street Looking East	6
6	Aerial Photograph of Feredays Road / Harmans Road Intersection	7
7	Feredays Road Looking East	7
8	Feredays Road / Clausen Avenue Intersection Looking West	8
9	Feredays Road / Chapman Street Intersection Looking West	8
10	High Street / Spring Place Intersection Looking East	9
11	Southern Section of Spring Place Looking South	9
12	Footpath on Southern Side of Feredays Road / High Street	10
13	Location of Proposed Rooding Connection onto Spring Place	16
14	Transformer on Spring Place	23

## Figures

1	General Location of Plan Change Area	2
2	Aerial Photograph of Plan Change Area and Environs	2
3	Location and Nature of Crashes	12
4	Indicative Subdivision Plan (Extract from Baseline Group Drawing)	15
5	Traffic Generation, Morning Peak Hour	18
6	Traffic Generation, Evening Peak Hour	19

## Tables

1	Extract from Table 6.1 of Austroads Guide to Traffic Management Part 3 (Intersection Volumes below which Capacity Analysis is Unnecessary)	11
2	Traffic Generation of the Proposed Plan Change	17
3	Traffic Distribution of Proposed Plan Change	18
4	Traffic Flows on Adjacent Road Network	20
5	Assessment of High Street / Spring Place Intersection, with Full Development of Plan Change Area	20

CCL file reference	14379 leeston ta final
Status	Final
Issued	6 August 2019



## 1. Introduction

- 1.1. Brant Hammett proposes to submit a private plan change request to Selwyn District Council for rezoning an area of approximately 58.4ha of land at Leeston (**the plan change area, the site**). If the plan change is adopted, it will rezone the site from a mix of Living 1 Deferred, Living 2 Deferred and Outer Plans and to a mix of Living 1 and Living 2 zoning.
- 1.2. This Transportation Assessment sets out an evaluation of the transportation issues associated with the development of the plan change area including changes in travel patterns that are likely to arise. Where potential adverse effects are identified, possible ways in which these can be addressed are set out.
- 1.3. This report is cognisant of the guidance specified in the New Zealand Transport Agency's '*Integrated Transport Assessment Guidelines*' and although travel by private motor vehicle is addressed within this report, in accordance with best practice the importance of other transport modes is also recognised. Consequently, travel by walking, cycling and public transport is also considered.



## 2. Site Overview

### 2.1. Location

2.1.1. The development site is located on the western side of Leeston and as noted above is presently zoned as a mix of Living 1 Deferred, Living 2 Deferred and Outer Plans in the Selwyn District Plan (**District Plan**).

2.1.2. The location of the site in the context of the local area is shown in Figure 1 and in more detail in Figure 2.

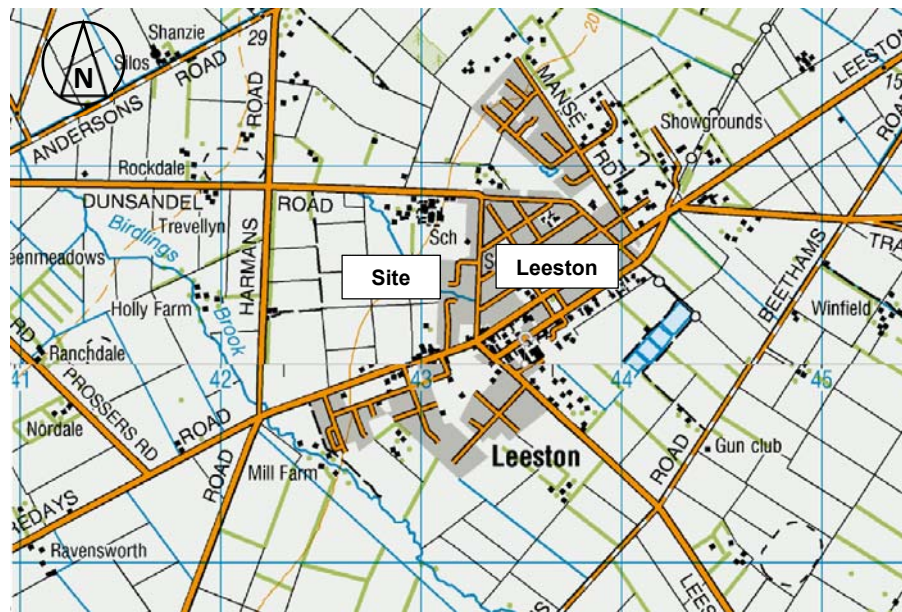


Figure 1: General Location of Plan Change Area

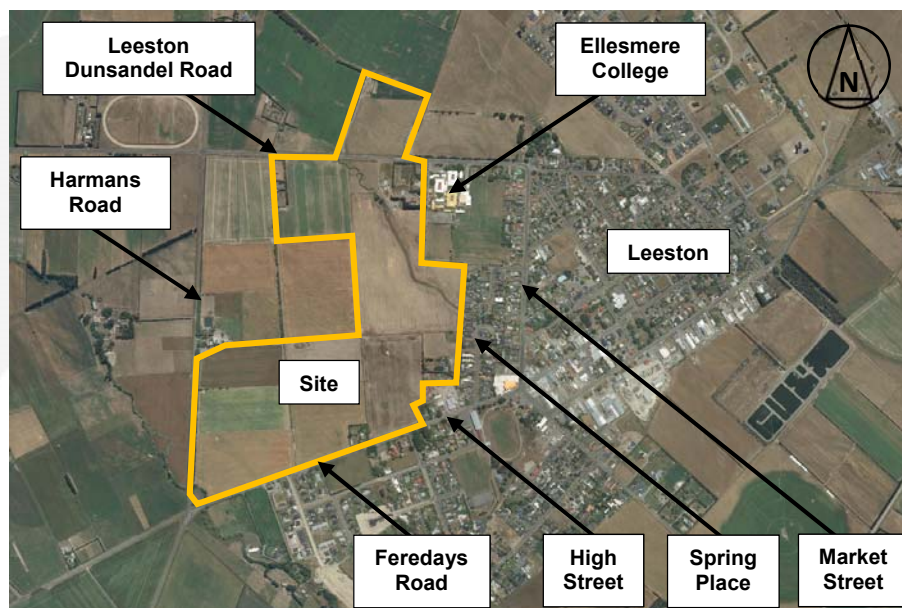


Figure 2: Aerial Photograph of Plan Change Area and Environs



## **2.2. Road Hierarchy**

- 2.2.1. The District Plan classifies Feredays Road and Leeston Dunsandel Road as Arterial Roads, which *“connect areas of district importance (and) connect the districts townships and other important places and activities together”*. These types of road are *“required to minimize, and control local road and property access to ensure they operate efficiently”* (District Plan, Definitions).
- 2.2.2. High Street and Market Street are Collector Roads which *“distribute and collect local traffic within and between neighbourhood areas”*. These roads *“balance the necessary traffic movement function against the property access function that they also need to provide”* (District Plan, Definitions).
- 2.2.3. Harmans Road and Spring Place are Local Roads and *“their primary function is to provide property access, and they generally have lower traffic volumes”* (District Plan, Definitions).



### 3. Current Transportation Networks

#### 3.1. *Roading Network*

- 3.1.1. Towards the west of the site, Harmans Road has a flat and straight alignment, with two traffic lanes but these are not marked with a centreline or edgeline markings. The seal is 6.5m wide with grassed verges of 8m on either side. The road is subject to a 100km/h speed limit.



**Photograph 1: Harmans Road Looking North**

- 3.1.2. Towards the northwest of the plan change area, Harmans Road meets Leeston Dunsandel Road at a 'stop' controlled crossroads where traffic on Leeston-Dunsandel Road retains the right of way. There are no auxiliary turning lanes, and sight distances are excellent in all directions. The speed limit on all intersection approaches is 100km/h.



**Photograph 2: Leeston Dunsandel Road / Harmans Road Intersection Looking East**

- 3.1.3. Leeston-Dunsandel Road has a flat and straight alignment, with two traffic lanes of 3.3m and sealed shoulders of less than 0.5m. It has a centreline and edgeline markings and the road is subject to a 100km/h speed limit.



**Photograph 3: Leeston Dunsandel Road Looking East**

- 3.1.4. At its eastern end, Leeston-Dunsandel Road becomes more urbanised and the speed limit reduces to 50km/h at a small threshold treatment adjacent to the current urban boundary. In this location the movement lanes remain at 3.3m each but there are parking lanes on each side. Ellesmere College is located on the southern side of the road, just east of the speed limit threshold.



**Photograph 4: Urban Section of Leeston Dunsandel Road Looking East**

- 3.1.5. Approximately 1km east of Harmans Road and 0.35km east of the speed limit threshold, Leeston Dunsandel Road meets Pound Road at a priority intersection. However the priority of the road is given to the west-south approaches, meaning that Pound Road traffic has to yield,



and the through traffic experiences are sharp 90-degree curve. Towards the south of the intersection the road is known as Market Street.

- 3.1.6. Market Street has two traffic lanes and an 11m seal width, and is kerbed. The alignment is flat and straight. Parking is permitted on both sides of the road although there is no formal parking lane, rather there is an intermittent grass verge which is sealed in locations to provide for parking. There are numerous private driveways on both sides which serve residential properties.



**Photograph 5: Market Street Looking East**

- 3.1.7. At its southern end, Market Street meets High Street at a priority ('stop') controlled intersection, with Leeston and Lake Road forming the southern approach. The intersection does not have any auxiliary tuning lanes.
- 3.1.8. Towards the southwest of the plan change area, Harmans Road meets Feredays Road at a 'stop' controlled crossroads where traffic on Feredays Road retains the right of way. There is an auxiliary turning lane for the east to south movement, due to the angle at which the southern approach meets the intersection, but no other auxiliary lanes. Sight distances are excellent in all directions. The speed limit on all approaches is 100km/h.



**Photograph 6: Aerial Photograph of Feredays Road / Harmans Road Intersection**

- 3.1.9. Feredays Road has a flat and straight alignment, with two traffic lanes of 3.5m and sealed shoulders of around 0.5m. It has a centreline and edgeline markings, and in most locations has a grassed verge of around 7m width. The western part of the road is subject to a 100km/h speed limit, but this reduces to 50km/h approximately 200m east of Harmans Road at a small speed threshold treatment.



**Photograph 7: Feredays Road Looking East**

- 3.1.10. There are several priority intersections on Feredays Road to the east of Harmans Road. Approximately 350m to the east of the Feredays Road / Harmans Road intersection, Clausen Avenue joins from the south. This serves the Millbridge Estate residential subdivision. The intersection is 'give-way' controlled and has kerbing on the southern side. There are no auxiliary lanes for turning traffic.



**Photograph 8: Feredays Road / Clausen Avenue Intersection Looking West**

3.1.11. Approximately 750m to the east of the Feredays Road / Harmans Road intersection, Chapman Street joins from the south. Chapman Street serves residential development, and is formed with two traffic lanes. The intersection is priority 'give-way' controlled and has excellent sight distances on each side. Immediately west of the intersection is a short parking lane of 2.7m width (potentially associated with parking for the church) but on the eastern side the grassed verge remains in place.



**Photograph 9: Feredays Road / Chapman Street Intersection Looking West**

3.1.12. Feredays Road changes its name to High Street and some 230m east of Chapman Street, Spring Place joins High Street from the north. The intersection does not have any signs or markings.



**Photograph 10: High Street / Spring Place Intersection Looking East**

3.1.13. Spring Place is a cul-de-sac which has two traffic lanes. The carriageway width varies, being 8.5m wide towards the north but towards the south there is a grassed berm located between the carriageway and the kerbs, meaning that carriageway width reduces to 5.7m. There are numerous private driveways on both sides of the road.



**Photograph 11: Southern Section of Spring Place Looking South**

3.1.14. The High Street / Market Street intersection is located approximately 150m east of Spring Place.



### **3.2. Non-Car Modes of Travel**

- 3.2.1. Since the plan change area is largely rural, there is limited infrastructure for non-car users in the immediate vicinity. However there is a footpath that runs along the southern side of High Street and Feredays Road as far as Clausen Avenue, where it then turns into the subdivision. This is 1.5m wide. There are also 1.5m footpaths on the eastern side of Spring Place, both sides of Market Street and on southern side of Leeston Dunsandel Road between Market Street and Ellesmere College.



**Photograph 12: Footpath on Southern Side of Feredays Road / High Street**

- 3.2.2. There is no specific infrastructure provided for cyclists or buses in the immediate area.





## 4. Current Transportation Patterns

### 4.1. Traffic Flows

#### *Prevailing Traffic Flows*

4.1.1. Selwyn District Council carries out regular traffic counts on the key vehicle routes throughout the district. Data recorded in the MobileRoad database shows that the current traffic flows are:

- Harmans Road: 250 vehicles per day;
- Feredays Road (east of Harmans Road): 3,100 vehicles per day;
- High Street (east of Spring Place): 4,060 vehicles per day
- Spring Place: 220 vehicles per day;
- Leeston Dunsandel Road: 600 vehicles per day; and
- Market Street: 1,000 vehicles per day.

4.1.2. The peak hour traffic flows on a road are typically no more than 15% of the daily volume, which suggests that in the peak hours the likely volumes are:

- Harmans Road: 35 vehicles (two-way);
- Feredays Road (east of Harmans Road): 470 vehicles (two-way);
- High Street (east of Spring Place): 610 vehicles (two-way);
- Spring Place: 33 vehicles (two-way);
- Leeston Dunsandel Road: 90 vehicles (two-way); and
- Market Street: 150 vehicles (two-way).

4.1.3. Since Leeston is a small town (recorded as less than 2,000 people in 2018), the low traffic flows are not unexpected. It can also be expected that ambient traffic growth is negligible since it will primarily be influenced by growth of the settlement, which has been limited.

4.1.4. The Austroads Guide to Traffic Management Part 3 ('*Traffic Studies and Analysis*') sets out a process by which the level of service of a road can be calculated. This shows that under these traffic flows, Harmans Road, Spring Place, Leeston Dunsandel Road and Market Street all provide Level of Service A, the best available. Feredays Road provides Level of Service B and High Street provides Level of Service C, both of which continues to represent a good level of service.

4.1.5. The Austroads Guide to Traffic Management Part 3 ('*Traffic Studies and Analysis*') also sets out thresholds regarding the need for detailed traffic analyses at intersections, and the traffic flows below which detailed analyses of unsignalised intersections are unnecessary. An extract from this is replicated below.

Major Road Type	Traffic Volumes (Vehicles Per Hour)	
	Major Road	Minor Road
Two lane road	400	250
	500	200
	600	100

**Table 1: Extract from Table 6.1 of Austroads Guide to Traffic Management Part 3 (Intersection Volumes below which Capacity Analysis is Unnecessary)**

- 4.1.6. Based on this, no analysis has been carried out at any of the intersections since the traffic flows fall below these thresholds and the intersections will therefore operate under free-flow conditions.

## 4.2. Non-Car Modes of Travel

- 4.2.1. Given that the area around the site is rural, it can reasonably be expected that it will be relatively infrequently used by pedestrians and cyclists. The small size of Leeston means that volumes of these road users will be small, other than around the college at the start and end of the academic day. As such, the current levels of provision are considered to be adequate.
- 4.2.2. There is one scheduled public transport services that operates in Leeston. This is a commuter service to and from Christchurch, which runs once a day. It departs Leeston at 7am and the return journey arrives in Leeston at 5:50pm. The bus stop is located on Chervier Street, meaning that the service passes along High Street adjacent to the plan change area.

## 4.3. Road Safety

- 4.3.1. The NZTA Crash Analysis System has been used to establish the location and nature of the recorded traffic crashes in the vicinity of the plan change area. In view of the low traffic flows, a ten-year period has been adopted and therefore all reported crashes between 2009 and 2019 were identified, for the area bounded by Harmans Road, Leeston Dunsandel Road, Market Street, High Street and Feredays Road (and including their respective intersections).
- 4.3.2. This showed that there have been 16 reported crashes.

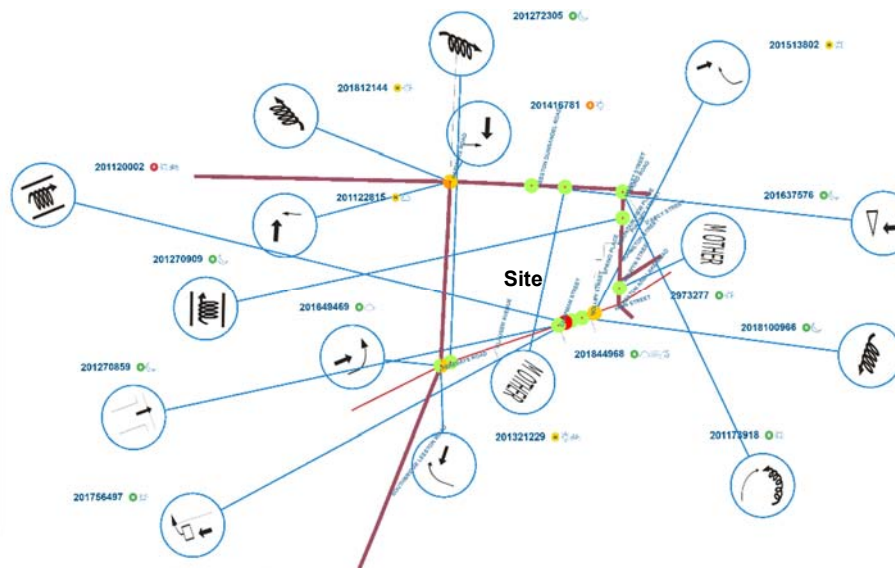


Figure 3: Location and Nature of Crashes

- 4.3.3. No crashes have been recorded on Harmans Road itself. However there have been two crashes at the Feredays Road / Harman Road intersection:
- One crash occurred when a car turning right from west to south was struck by a car travelling west to east which overtook them when turning. This did not result in any injuries;
  - One crash occurred when a car emerging from the southern approach to the intersection struck a cyclist travelling east to west on Feredays Road. This resulted in minor injuries.



4.3.4. Three crashes have been recorded at the Leeston Dunsandel Road / Harman Road intersection:

- Two crashes occurred when a car travelling from north to south on Harmans Road failed to stop and was struck by a car travelling from east to west. In one case brake failure was noted as a contributing factor. One crash resulted in minor injuries and the other resulted in serious injuries; and
- One crash occurred when an eastbound driver lost control, left the road and struck a powerpole. This resulted in minor injuries.

4.3.5. Three crashes have been recorded on Leeston Dunsandel Road:

- One crash occurred around 250m west of the college, when a vehicle struck a cow. This did not result in any injuries;
- One crash occurred immediately adjacent to the college, when a driver attempted a u-turn but skidded on ice and left the road. This did not result in any injuries;
- One crash occurred at the curve where Leeston Dunsandel Road becomes Market Street. A driver travelled around the curve too quickly, crossed the centreline and struck an oncoming vehicle. This did not result in any injuries.

4.3.6. Two crashes have been recorded on Market Street:

- One crash occurred on the northern section of Market Street when a driver struck a powerpole. The crash report notes that driver intoxication was a contributing factor, and the crash did not result in any injuries;
- One crash occurred on the southern section of Market Street when a driver carried out a u-turn movement too quickly, lost control and struck a parked vehicle. The crash did not result in any injuries.

4.3.7. Six crashes have been recorded on Feredays Road / High Street:

- One crash occurred just east of the Feredays Road / Harmans Road intersection when an eastbound driver lost control and left the road. The crash report notes that driver intoxication was a contributing factor, and the crash did not result in any injuries;
- One crash occurred at the Feredays Road / Chapman Street intersection, when a driver emerging from Chapman Road failed to turn and went straight ahead, leaving the road on the northern side. The crash report notes that driver intoxication was a contributing factor, and the crash did not result in any injuries;
- One crash occurred between Chapman Street and Spring Place when a driver swerved to avoid a cat and struck a concrete block by the side of the road. The crash did not result in any injuries;
- One crash occurred between Chapman Street and Spring Place when a driver turning from the east into a driveway was struck from the rear by a following vehicle. The crash did not result in any injuries;
- One crash occurred between Chapman Street and Spring Place when a cyclist fell off their cycle and was struck by a vehicle. The crash report notes that cyclist intoxication was a contributing factor, and the crash resulted in fatal injuries to the cyclist;
- One crash occurred at the High Street / Spring Place intersection when a driver turning right into Spring Place struck a vehicle travelling from west to east on High Street. The crash resulted in minor injuries.



- 4.3.8. The reported crashes took place at different locations and/or had different contributing factors. On this basis, it is considered that there are no safety-related deficiencies in the roading network.



## 5. Proposal

- 5.1. The proposed plan change will facilitate a change of activity to enable more intensive residential development to occur. The part of the plan change area to the north of Leeston Dunsandel Road is expected to have 41 residential lots with the bulk of the plan change area towards the south having 328 lots. An indicative subdivision plan for the area is shown below.



**Figure 4: Indicative Subdivision Plan (Extract from Baseline Group Drawing)**

- 5.2. It can be seen that the plan change area is expected to be well-connected to the adjacent roading networks. Two road links are shown onto Feredays Road / High Street, directly opposite Clausen Avenue and Chapman Street. Both of these form routes through the plan change area such that there is also a new road link onto Leeston Dunsandel Road towards the north. Photographs 7 and 8 above show the current configurations of these intersections.
- 5.3. With regard to the connection onto Spring Place, there is presently an allotment which is undeveloped of 16.5m width, where a roading connection is proposed.



**Photograph 13: Location of Proposed Rooding Connection onto Spring Place**

- 5.4. There are also connections to the east onto Harmans Road, and the northernmost part of the plan change area has one road connection onto Leeston Dunsandel Road.





## 6. Traffic Generation and Distribution

### 6.1. Traffic Generation

- 6.1.1. Traffic generated by residential developments is known to vary for a variety of reasons, with one such reason being the proximity (or otherwise) to employment and community facilities. Where a dwelling is some distance from these types of facilities, the traffic generation rates tend to be lower than for residences that are closer due to 'trip chaining', that is, the tendency of a resident to carry out multiple visits to different destinations during the same trip away from the dwelling.
- 6.1.2. In this case, it is likely that some traffic will be associated with employment locations in Leeston but there is also likely to be travel to/from local destinations also. As a result, it is likely that there will be commuting to/from the township. Accordingly, for this analysis a rate of 8 vehicle movements per day per residence has been used, with 1 vehicle movement per residence occurring in each of the peak hours.
- 6.1.3. In the morning peak hour, 90% of these vehicles are likely to be exiting the site, with 65% of the generated vehicle movements entering the plan change site in the evening peak hour.

Period	Area North of Leeston Dunsandel Road			Area South of Leeston Dunsandel Road		
	In	Out	Total	In	Out	Total
Morning Peak Hour	4	37	41	33	295	328
Evening Peak Hour	27	14	41	213	115	328
Per Day	164	164	328	1,312	1,312	2,624

Table 2: Traffic Generation of the Proposed Plan Change

### 6.2. Trip Distribution

- 6.2.1. In terms of the distribution of trips, residents travelling towards Rolleston, Lincoln and Christchurch (the greatest centres of employment) will travel eastwards, as routes towards the immediate north of the plan change area are indirect. Travel towards the west will only be towards locations such as Dunsandel and across the Rakaia River in the direction of Ashburton.
- 6.2.2. On this basis, it can be expected that around 10% of generated traffic will travel to/from the west with the balance traveling eastwards.
- 6.2.3. Drivers tend to select routes which minimise their journey time. Consequently it can be expected that people living in the northernmost part of the plan change area will use Leeston Dunsandel Road and Market Street to travel eastwards, rather than travelling through the site which is slightly longer and will be slower. Drivers living towards the south will use the route via High Street.
- 6.2.4. It is expected that volumes on Harmans Road will increase only slightly since there are few residences for which this is a convenient route (in the order of 20 residences). However, the connection through to Springs Road will be convenient for around 60-70 residences.
- 6.2.5. Overall then, for the purposes of this analysis, the following distribution has been used



Area	Number of Residences	Route	Morning Peak Hr		Evening Peak Hr	
			In	Out	In	Out
North of Leeston Dunsandel Road	40	10% west via Leeston Dunsandel Road	0	4	3	1
		90% east via Leeston Dunsandel Road	4	32	23	13
Eastern side	70	10% west via Spring Place and Feredays Road	1	6	5	2
		90% east via Spring Place and Feredays Road	6	57	41	22
Western side	20	10% north via Harmans Rd then west on Leeston Dunsandel Rd	0	2	1	1
		90% south via Harmans Road then east on Feredays Road	2	16	12	6
Northern side	50	10% west via Leeston Dunsandel Road	1	5	3	2
		90% east via Leeston Dunsandel Road	5	41	29	16
Southern side	190	10% west via Spring Place and Feredays Road	2	17	12	7
		90% east via Spring Place and Feredays Road	17	154	111	60
Total	370	-	38	334	240	130

Table 3: Traffic Distribution of Proposed Plan Change

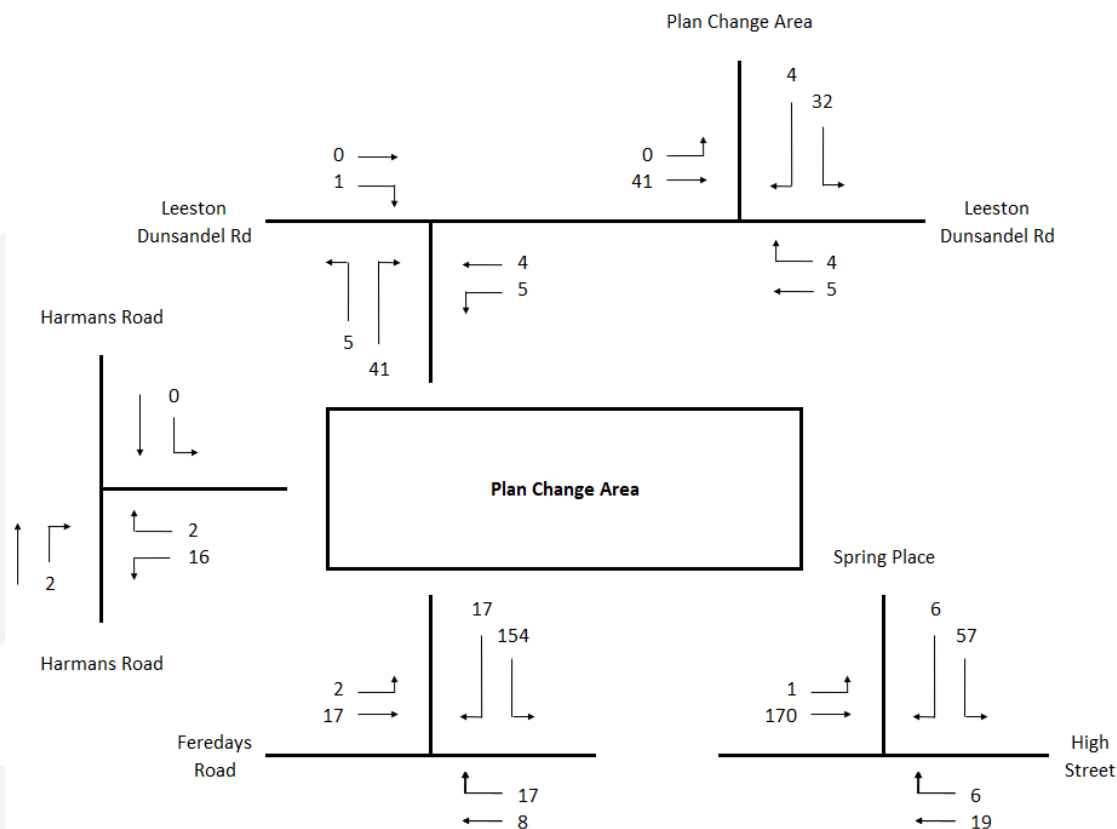


Figure 5: Traffic Generation, Morning Peak Hour

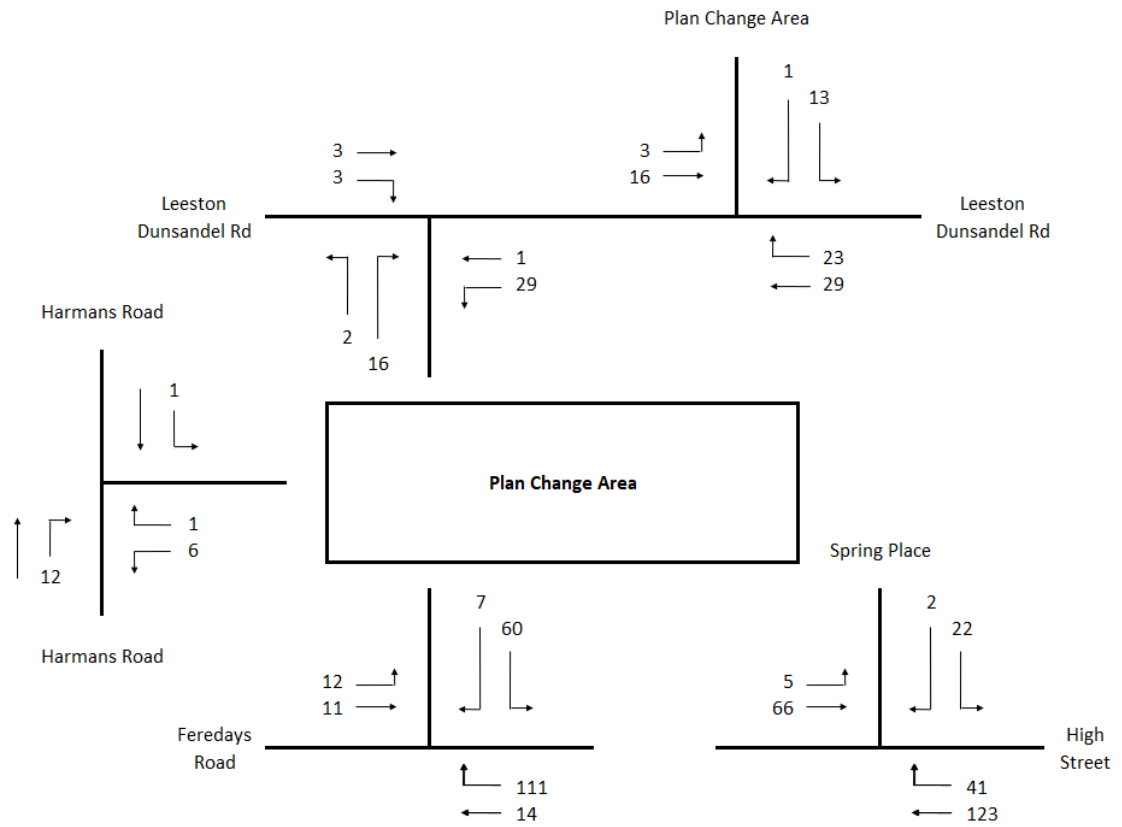


Figure 6: Traffic Generation, Evening Peak Hour



## 7. Effects on the Transportation Networks

### 7.1. Rooding Network Capacity

7.1.1. The changes in traffic flows are as follows:

Road	Current Traffic Volumes		Traffic Volumes Generated by Plan Change		Total Traffic Volumes with Plan Change	
	Per Day	Peak Hour	Per Day	Peak Hour	Per Day	Peak Hour
Harmans Road	250	35	144	18	394	53
Feredays Road (east of Harmans Road)	3,100	470	352	44	3452	514
High Street (east of Spring Place)	4,060	610	2,016	252	6076	862
Spring Place	220	33	560	70	780	103
Leeston Dunsandel Road (east)	600	90	656	82	1256	172
Leeston Dunsandel Road (west)	600	90	96	12	696	102
Market Street	1,000	150	656	82	1656	232

**Table 4: Traffic Flows on Adjacent Road Network**

7.1.2. The Austroads Guide to Traffic Management Part 3 (*Traffic Studies and Analysis*) has again been used to assess the level of service allowing for the traffic generated by the proposal. This shows that the roads will continue to provide the same levels of service other than Feredays Road which changes from Level of Service B to Level of Service C. This continues to represent a good level of service.

### 7.2. Intersection Capacity

7.2.1. The traffic volumes continue to fall below the thresholds at which there is a need for detailed traffic analyses at most locations, and therefore the intersections will continue to operate under free-flow conditions. The intersection with the heaviest traffic flows is at High Street / Spring Place and therefore this has been modelled using the computer software package Sidra Intersection and the results are summarised below.

Road and Movement		Morning Peak Hour			Evening Peak Hour		
		Avg Delay (secs)	95 %ile Queue (veh)	Level of Service	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service
High Street (east)	R	8.7	0	A	7.1	1	A
Spring Place	L	8.4	0	A	6.5	0	A
	R	10.6	0	B	11.1	0	B
High Street (west)	L	5.6	0	A	5.6	0	A

**Table 5: Assessment of High Street / Spring Place Intersection, with Full Development of Plan Change Area**



- 7.2.2. It can be seen that even at the most heavily-trafficked intersection, queues and delays remain low with excellent levels of service provided for each turning movement.

### **7.3. Potential Upgrading of Existing Roads**

- 7.3.1. The existing roads in the area have the following characteristics:

- Harmans Road: 20m legal width, 6.5m formed width, no footpath;
- Feredays Road / High Street: 20m legal width, 7.0m movement lanes, footpath on eastern section;
- Spring Place: 17m legal width, 5.7m to 8.5m movement lanes, footpath on eastern side;
- Leeston Dunsandel Road: 20m legal width, 6.6m movement lanes, footpath on eastern section;
- Market Street: 20m legal width, 11m movement lanes, footpath on both sides.

- 7.3.2. Since the plan change request will increase the traffic flows on these roads, an assessment has been carried out to ensure that they remain appropriate for the greater volumes.

- 7.3.3. At Harmans Road, the current carriageway width of 6.5m is appropriate for a Local Road, and the small increase in traffic associated with the plan change is unlikely to justify a change in status of the road. No changes are therefore considered necessary for Harmans Road.

- 7.3.4. As an Arterial Road, Feredays Road should have a carriageway width of at least 7.5m to meet the District Plan requirements. Although the movement lanes are marked as less than this, the seal width meets this requirement. Further, west of the plan change area, the increase in traffic is low (9% over the prevailing volumes) which is insufficient to justify any improvement. East of the accesses into the plan change, the increase in traffic is greater (more than 40%) but the overall traffic flow remains relatively low.

- 7.3.5. Leeston Dunsandel Road is similarly an Arterial Road requiring a 7.5m wide carriageway. Again, this is provided, although the movement lanes are marked as less than this. The increases towards the west of the plan change area are modest and although there is a doubling of the traffic flows to the east of the plan change area, the total volume of 180 vehicles (two-way) in the peak hour equates to an average of just one vehicle movement every 20 seconds. No changes are therefore considered necessary for Leeston Dunsandel Road.

- 7.3.6. High Street is presently a Collector Road and therefore should have a carriageway width of at least 11m with a footpath on both sides. This is not achieved, since there is a footpath only on the southern side, and the carriageway width is around 8.5m (including the shoulders). However this additional width appears to be related to the provision of a parking lane, which is not present on High Street. The proposed plan change will not affect parking in the immediate area, and the extent of frontage development on High Street means that significant on-street parking is unlikely to arise.

- 7.3.7. Market Street is also a Collector Road, but over much of its length currently meets the Council's requirements. There are localised sections where there is no parking lane in favour of a grassed verge being provided, but this does not appear to currently adversely affect the operation of the road.

- 7.3.8. Spring Place is presently a Local Road with a 5.7m to 8.5m formed width. In view of the number of lots that would be served, an appropriate classification would be as a Local Major road, for which a legal width of 17m is appropriate (as is provided) but which requires two traffic lanes plus a parking lane within an 8.5m carriageway. This will require the southernmost section of



Spring Place to be reconfigured slightly, with the removal of the grassed berms (which will replicate the cross-section of the road further north).

- 7.3.9. Overall then, it is considered that only Spring Place requires some amendment as a result of the traffic generated by the proposed plan change.
- 7.3.10. Within the site itself, there are no impediments to achieving compliance with the District Plan in respect of the legal or formed widths of the roads.

#### **7.4. Form of Access Intersections**

- 7.4.1. The intersection modelling undertaken above was carried out on the basis of the plan change area being served by priority intersections. Even assessing the intersection with the greatest traffic volumes, queues and delays were very low.
- 7.4.2. The legal widths of the frontage roads are sufficiently wide to accommodate priority intersections, and this form of provision would be consistent with the existing intersections in the immediate vicinity. The flat and straight alignments of the existing roading network mean that excellent sight distances will be achieved at the intersections
- 7.4.3. Accordingly it is considered that priority intersections are an appropriate general form of intersection to serve the plan change area.

#### **7.5. Non-Car Modes of Travel**

- 7.5.1. It is likely that the development will lead to increased volumes of walking and cycling in the area, but the location of Leeston means that these trips will either be within the township or for longer-distance recreational purposes.
- 7.5.2. As noted above, within the site there are no reasons why the appropriate levels of provision could not be made. Externally, the roads provided the appropriate level of provision for pedestrians.
- 7.5.3. In respect of cycling, the District Plan sets out that for urban roads, Collector and Arterial Roads should have specific provision for cyclists. However there is no provision made on Feredays Road, High Street, Market Street or Leeston Dunsandel Road. This is an existing deficiency on the roading network, but there are no reasons why provision could not be made on the relevant roads. It is considered that this is a matter than should be addressed at the time that land use or subdivision consent is sought.

#### **7.6. Road Safety**

- 7.6.1. The crash history in the vicinity of the plan change area does not indicate that there are particular features or factors that would be affected by the proposed plan change.
- 7.6.2. It is anticipated that the proposed roads and intersections associated with development of the plan change area will meet current guides and standards, and as such, can be expected to function safely.
- 7.6.3. Based on site visits, there are no deficiencies in respect of sight distances at any of the intersections onto the external roads. However at the proposed roading connection onto Spring Road there is a transformer located on the southwestern quadrant of the intersection. This may affect the sight distance in this location and thus may need to be relocated.



**Photograph 14: Transformer on Spring Place**

- 7.6.4. The proposal allows for new accesses into the plan change area to the immediate north of Clausen Avenue and Chapman Street, meaning that these would become crossroads. Both of these intersections lie within the 50km/h speed limit zone (meaning that they will not be high-speed crossroads) and in practice there will be little traffic crossing Feredays Road – rather, vehicles will turn to the east and west. Accordingly it is not considered that this form of intersection will result in any road safety concerns.



## **8. District Plan Matters**

### **8.1. Introduction**

- 8.1.1. The District Plan sets out a number of transportation-related Rules with which any development is expected to comply. Although this is a plan change request, a review against these has been undertaken in order to ensure that the proposal is able to comply with the relevant Rules, or whether exemptions to the Rules should be considered as part of the plan change provisions.
- 8.1.2. Since the proposal will extend the current urban area of Leeston, the review has been undertaken against the Township Volume of the District Plan.

### **8.2. Rule 5.1: Road and Engineering Standards**

- 8.2.1. The land is relatively flat and so the slope (Rule 5.1.1.1) and road gradients (Rule 5.1.1.2) will be compliant.
- 8.2.2. The road formation is required to meet Appendix E13.3.1 and E13.3.2. The first of these relates to the provision of new roads (as is expected to occur) and the 'green field' nature of the plan change area means that these provisions can be achieved.
- 8.2.3. Under Appendix E13.3.1.4, cul-de-sacs are restricted to a maximum length of 150m, but two of the four cul-de-sacs proposed are more than 200m in length. It is considered that this can be addressed through minor redesign of the subdivision plans in due course.
- 8.2.4. Appendix E13.3.2 addresses intersection spacing. The classification of roads within the plan change area has not yet been determined but it would be reasonable at this stage to expect that they will be Local Roads and as such, a separate between intersections of 75m is required. This is achieved.
- 8.2.5. For completeness, the two access intersections onto Feredays Road do not meet this requirement because they align with Clausen Avenue and Chapman Road. However this has been done as a specific aspect of the design

### **8.3. Rule 5.2: Vehicle Accessways**

- 8.3.1. The proposed lots will all have access onto a legal road (Rule 5.2.1.1) and all of the roads *within* the site onto which access is gained have the same classification meaning that there is no preference as to where the accessways should be located (Rule 5.2.1.2). Externally, vehicle crossings can connect to the most appropriate road as defined under this Rule.
- 8.3.2. The site is relatively flat so achieving appropriate gradients should not be problematic (Rules 5.2.1.3 and 5.2.1.4).
- 8.3.3. The crossings are required to meet Appendix E13.2.1, which stipulates the requirements for the minimum widths. These can all be achieved.
- 8.3.4. There is no reason why more than six lots should share a private accessway, rather than being accessed by a road (Rule 5.2.1.7).



#### **8.4. Rule 5.3: Vehicle Crossings**

- 8.4.1. Any vehicle crossing is required to meet Appendices E13.2.2, E13.2.3, E13.2.4 and E13.2.5.
- 8.4.2. Appendix E13.2.2 addresses the separation of accesses and intersections. For intersections between Local Roads, a 10m separation distance is required and there are no reasons why this cannot be achieved internally.
- 8.4.3. Externally, there are likely to be non-compliances with this Rule at Spring Road, where there are driveways proximate to the proposed roading connection. However there is no ability to relocate this point of access since the remaining lots are all developed.
- 8.4.4. One reason for this Rule (which is common to most District Plans) is to ensure that drivers do not become confused about the intentions of other drivers turning ahead of them (that is, whether they are unsure whether a driver is turning into an access or into an intersection). In this case, Spring Place is a Local Road and therefore drivers can be expected to have a high degree of familiarity with the layout. Speeds will also be low. Consequently, this non-compliance can be supported (although will require detailed assessment at the time of subdivision).
- 8.4.5. Appendix E13.2.3 addresses sight distances from vehicle crossings, and in this case 45m is required since the roads will be subject to a 50km/h speed limit. It is possible that compliance with this provision will not be achieved, because in some locations the sight distance will be constrained by the presence of intersections or curves in the road geometry, which limit the sightline. However the intersection or curve will also mean that drivers have to slow (and in the case of an intersection, potentially stop) which will result in speeds that are much lower than the maximum permitted. Accordingly, it is considered that the plan change provisions could seek to exempt certain lots from complying with this particular provision, or an assessment of the non-compliance could be made at the time a subdivision consent is applied for.
- 8.4.6. Appendix E13.2.4 addresses the design and siting of vehicle crossings. One crossing per site can be achieved (Appendix E13.2.4.2), and the distance between crossings and the crossing width can be achieved (Appendix E13.2.4.5).
- 8.4.7. Appendix E13.2.5 addresses the standard of vehicle crossings. Since residential activity is proposed, standard vehicle crossings are required and these can be provided.
- 8.4.8. The crossings can be sealed (Rule 5.3.1.2).
- 8.4.9. The subdivision plan indicates that direct access is proposed onto Leeston Dunsandel Road and Feredays Road. These are both Arterial Roads, and thus the arrangement is not permitted under Rule 5.3.1.4 unless the speed limit is 70km/h or less. In this case, there is proposed development to the west of the 50km/h / 100km/h speed limit threshold on both roads.
- 8.4.10. Speed limits are set based on a number of factors, but one aspect is the extent to which there is frontage development. As such, given that the site is currently rural, the frontage roads having a speed limit of 100km/h is not unusual nor unreasonable. However the presence of development means that there is a (technical) case for reducing the speed limit. Such an outcome is very common, for example, speeds around the Faringdon subdivision in Rolleston were 100km/h prior to the development of the area, and afterwards were reduced to 50km/h.



8.4.11. It is expected therefore that the speed limit thresholds will move further west as a result of the development of the proposed plan change area, such that both Arterial Roads will be subject to a 50km/h speed limit from immediately east of Harmans Road.

#### **8.5. Rule 5.4: Traffic Sight Lines – Road/Rail Crossings**

8.5.1. The site is not in close proximity to a road/rail crossing.

#### **8.6. Rule 5.5: Vehicle Parking and Cycle Parking**

8.6.1. The number of parking spaces per lot can be achieved and the spaces can be designed to be accessible at all times (Rule 5.5.1.1 / Appendices E13.1.1 and E13.1.2).

8.6.2. Regarding the design of the parking spaces and manoeuvring areas (Rule 5.5.1.2), there are no reasons why pedestrian areas will be obstructed (Appendix E13.1.5.2), garages can be of the appropriate size (Appendix E13.1.6), and the site is relatively flat and so gradients will not be exceeded (Appendices E13.1.7 and E13.1.8).

8.6.3. For on-site manoeuvring, the layouts are able to be designed to ensure that vehicles do not reverse from the site unless this is a permitted activity, and the parking spaces can be designed to be accessed with just one reverse movement (Appendix E13.1.9). Queuing space can be provided (Appendix E13.1.10) and illumination is not required (Appendix E13.1.11).

#### **8.7. Summary**

8.7.1. The layout of the plan change area is capable of complying with the bulk of the requirements of the District Plan, although there are a small number of exceptions.

- Appendix E13.3.1.4: there are two cul-de-sacs that are more than 200m in length compared to a requirement for 150m;
- Appendix E13.3.2: the two access intersections onto Feredays Road align with Clausen Avenue and Chapman Road rather than being separated by 75m;
- Appendix E13.2.2: there will be driveways on Spring Road that are closer than 10m from the proposed new road intersection;
- Appendix E13.2.3: sight distances are likely to be lower than required under the Plan for driveways close to intersections and curves; and
- Rule 5.3.1.4: Vehicle crossings onto Arterials Roads subject to a speed of more than 70km/h are not permitted.

8.7.2. For the reasons set out above, these non-compliances can be supported at this stage.



## 9. Conclusions

- 9.1. This report has identified, evaluated and assessed the various transportation matters of a proposed plan change to facilitate residential development within the settlement of Leeston.
- 9.2. Overall it is considered that the traffic generated by the development arising from the plan change can be accommodated on the adjacent roading network without capacity or efficiency issues arising, even when allowing for full site development. In most instances, traffic volumes remain below the thresholds at which a detailed traffic analysis is required of intersections, meaning that the intersections will operate under free-flow conditions. Even at the most heavily-trafficked intersection, queues and delays remain low with the plan change site developed.
- 9.3. The crash history in the vicinity of the plan change area does not indicate that there would be any adverse safety effects from the proposal. New transportation infrastructure which will be provided will meet appropriate guides and standards (or exemptions from the District Plan will be sought when land use and subdivision consents are applied for).
- 9.4. The indicative subdivision plan will largely meet (or is capable of meeting) the majority of transportation requirements of the District Plan. At this stage, five likely non-compliances with the Plan have been identified but at this stage, all can be supported. One matter to highlight is that in order for development of the plan change area to progress, the speed limit thresholds on both Feredays Road and Leeston Dunsandel Road will need to move to just east of Harmans Road such that those sections of road are subject to a 50km/h rather than the current 100km/h. This is a common outcome of development, but nevertheless, is outside the remit of the RMA.
- 9.5. Overall, and subject to the preceding comments, the proposed plan change can be supported from a traffic and transportation perspective.

Carriageway Consulting Limited  
August 2019



**CARRIAGEWAY**  
**CONSULTING**

traffic engineering | transport planning

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17 October 2019

Adrianne Tisch  
Baseline Group Limited

**By e-mail only: [adrianne@blg.nz](mailto:adrianne@blg.nz)**

Dear Adrianne

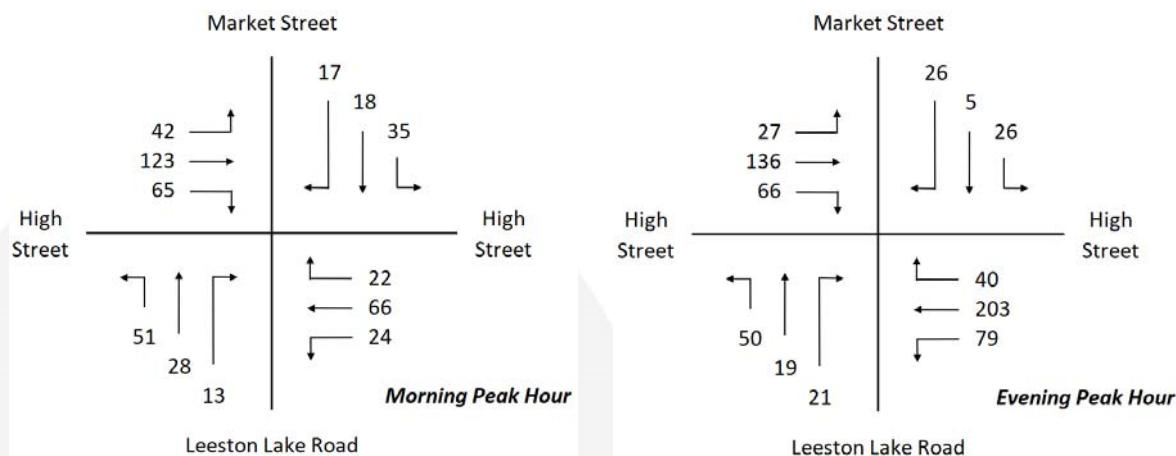
### Proposed Plan Change, Leeston: Response to Council Request for Further Information

Further to e-mails and our discussions, we have reviewed the Request for Further Information (RFI) issued by Selwyn District Council dated 19 September 2019. There are two matters relating to traffic issues, and we respond to both below.

#### Assessment of Market Street / High Street Intersection

In the Transportation Assessment, we noted that the traffic volumes generally fell below the threshold at which a formal intersection assessment was justified, even with the plan change area fully developed. However in view of the RFI, we have undertaken a more detailed assessment of the Market Street / High Street intersection.

To determine the existing traffic volumes, we surveyed the intersection during October 2019, and the results are shown below.



**Figure 1: 2019 Peak Hour Traffic Volumes at Market Street / High Street Intersection**

By way of a check, in the Transportation Assessment we identified that the traffic flows on High Street (west) were expected to be around 610 vehicles in the peak hour. The survey showed 508 vehicles in the peak hour, indicating that the Transportation Assessment used conservatively high values.

We then modelled the existing performance of the intersection (that is, without the plan change area being developed) using the computer software package Sidra Intersection, and the results are summarised below.

Road and Movement		Morning Peak Hour			Evening Peak Hour		
		Avg Delay (secs)	95 %ile Queue (veh)	Level of Service	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service
Leeston Lake Road (south)	L	8.5	0.2	A	9.1	0.2	A
	T	10.9	0.3	B	13.5	0.4	B
	R	12.0	0.3	B	15.2	0.4	C
High Street (east)	L	5.9	0.2	A	5.9	0.4	A
	R	6.1	0.2	A	6.3	0.4	A
Market Street (north)	L	8.7	0.1	A	8.8	0.1	A
	T	10.7	0.2	B	13.9	0.3	B
	R	12.5	0.2	B	15.3	0.3	C
High Street (west)	L	5.6	0.0	A	5.6	0.0	A
	R	5.9	0.2	A	6.7	0.2	A

**Table 1: Existing (2019) Peak Hour Levels of Service at the Market Street / High Street Intersection**

The results show low queues and delays. This aligns with our initial assessment, and also our observations on site during the surveys.

Figures 5 and 6 of the Transportation Assessment show the extent of traffic increase on High Street (west) arising from full development of the plan change area. However no assessment was included within the Transportation Assessment of the directions that these vehicles would travel. In this regard, we consider that few vehicles will be associated with Market Street, because any driver travelling in this direction is more likely to travel through the site and use Leeston-Dunsandel Road instead. Leeston Lake Road serves relatively little development, but High Street provides a route to major employment locations. Consequently for the purposes of our assessment, we have assigned all generated traffic to the east-west route.

By way of further discussion, the greatest delays at any priority intersection arise for the right-turn movement from the minor approaches. In this case though, the plan change does not increase the volume of traffic making this turn. Consequently, the greatest effect of the plan change traffic relates to the obstruction of the existing right-turn movements, and this arises from increases in the east-west traffic flow. Overall then, assigning all generated traffic to the east-west route results in a robust (that is, worst case) assessment of the intersection.

The traffic flows arising from development of the plan change area are:

- Morning peak hour:
  - 227 vehicles eastbound;
  - 25 vehicles westbound
- Evening peak hour:
  - 88 vehicles eastbound;
  - 164 vehicles westbound

We have added these vehicles into the traffic models and the results are summarised below.

Road and Movement		Morning Peak Hour			Evening Peak Hour		
		Avg Delay (secs)	95 %ile Queue (veh)	Level of Service	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service
Leeston Lake Road (south)	L	8.6	0.2	A	10.2	0.2	B
	T	14.9	0.4	B	19.3	0.6	C
	R	17.0	0.4	C	22.7	0.6	C
High Street (east)	L	6.7	0.3	A	6.1	0.5	A
	R	7.3	0.3	A	6.8	0.5	A
Market Street (north)	L	10.0	0.1	A	9.2	0.1	A
	T	14.6	0.4	B	20.0	0.5	C
	R	18.0	0.4	C	22.8	0.5	C
High Street (west)	L	5.6	0.0	A	5.6	0.0	A
	R	6.0	0.2	A	7.6	0.3	A

**Table 2: Peak Hour Levels of Service at the Market Street / High Street Intersection with Full Development of Plan Change Area**

Road and Movement		Morning Peak Hour			Evening Peak Hour		
		Avg Delay (secs)	95 %ile Queue (veh)	Level of Service	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service
Leeston Lake Road (south)	L	+0.1	-	-	+1.1	-	A to B
	T	+4.0	+0.1	-	+5.8	+0.2	B to C
	R	+5.0	+0.1	B to C	+7.5	+0.2	-
High Street (east)	L	+0.8	+0.1	-	+0.2	+0.1	-
	R	+1.2	+0.1	-	+0.5	+0.1	-
Market Street (north)	L	+1.3	-	-	+0.4	-	-
	T	+3.9	+0.2	-	+6.1	+0.2	B to C
	R	+5.5	+0.2	B to C	+7.5	+0.2	-
High Street (west)	L	-	-	-	-	-	-
	R	+0.1	-	-	+0.9	+0.1	-

**Table 3: Change in Peak Hour Levels of Service at the Market Street / High Street Intersection with and without Full Development of Plan Change Area**

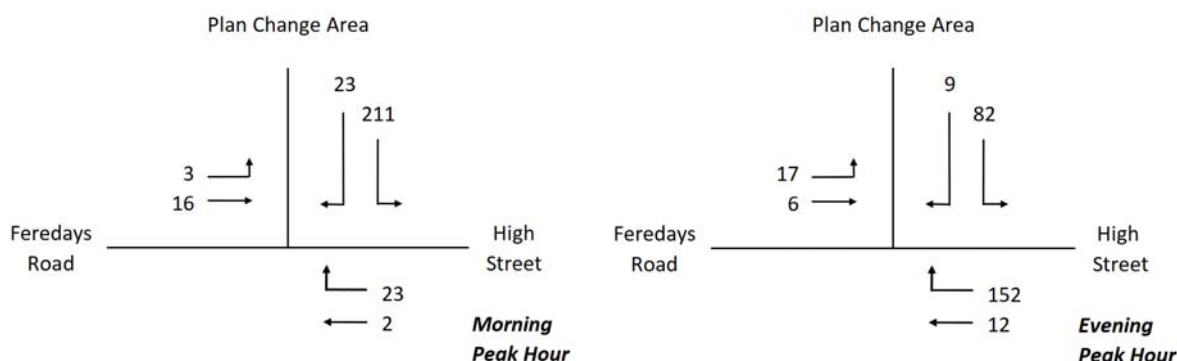
The modelling shows that there is very little change in queue length on any approach, and with regard to the delay, the greatest increase is 7.5 seconds. Overall, we consider that the intersection continues to operate with a good level of service, and Level of Service C (the lowest on any approach) is not unreasonable for an urban intersection in the peak hours.

### ***Assessment of Effects if Connection to Spring Place is not Formed***

The RFI queries the contingency plan if the connection through to Spring Place cannot be formed.

Based on the information provided, we understand that if the Spring Place connection is not in place, then there will be a secondary road that runs along the western side of the proposed reserve, and traffic will instead use the main north-south route through the site. As such, these vehicles would then join the external roading network at the new Feredays Road / Plan Change Area Access intersection.

One outcome of this is that this intersection would experience a greater traffic flow than set out in the Transportation Assessment (where some traffic used Spring Place). For completeness we have shown the expected traffic flows below (with full development of the plan change area):



**Figure 2: Traffic Generation from Plan Change Area onto Feredays Road (No Spring Place Access)**

Allowing for the traffic flows on Feredays Road (as set out in Section 4.1.2 of the Transportation Assessment), this leads to the following intersection performance (assuming a priority intersection):

Road and Movement		Morning Peak Hour			Evening Peak Hour		
		Avg Delay (secs)	95 %ile Queue (veh)	Level of Service	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service
High Street (east)	T	0.3	0.2	A	0.6	1.3	A
	R	6.9	0.2	A	6.7	1.3	A
Plan Change Area Access	L	6.9	0.8	A	6.3	0.3	A
	R	7.9	0.1	A	8.9	0.0	A
Feredays Road (west)	L	5.6	0.0	A	5.6	0.0	A
	T	0.0	0.0	A	0.0	0.0	A

**Table 4: Peak Hour Levels of Service at the Feredays Road / Plan Change Area Site Access Intersection with Full Development of Plan Change Area**

The intersection provides an excellent level of service with low queues and delays, even under the expected traffic loading. In the event that the intersection was to be a roundabout (as we understand has been suggested), queues and delays would remain similarly small.

I trust that this responds to the Council's RFI, but please do not hesitate to contact me if you require anything further or clarification of any issues.

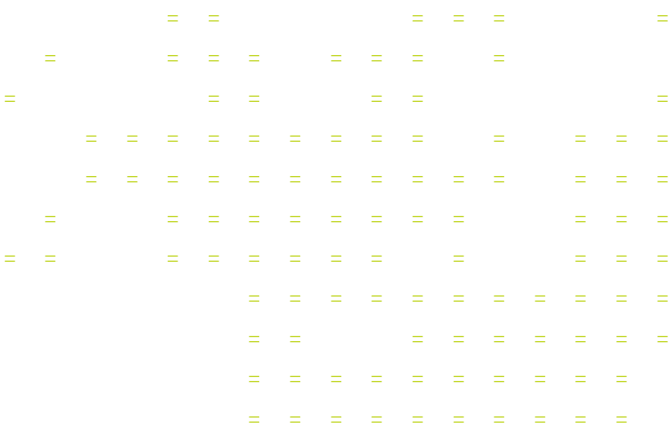
Kind regards  
**Carriageway Consulting Limited**



Andy Carr  
**Traffic Engineer | Director**

Mobile 027 561 1967  
 Email andy.carr@carriageway.co.nz

Appendix 4: Servicing Report



# Engineering Servicing Report

## Leeston Plan Change



**CLIENT**

Holly Farm

**ADDRESS**

High Street, Harmans Road and  
Leeston Dunsandel Road, Leeston

**REFERENCE**

6129

# Report Information

Reference:	6129
Title:	Engineering Servicing Report
Client:	Holly Farm
Filename:	6129 – ENG-RPT-Servicing Report
Version:	6
Date:	November 27, 2019
Prepared by:	James Hopkins
Reviewed by:	Clayton Fairbairn

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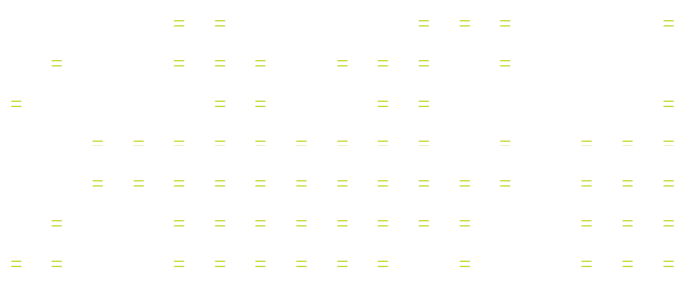
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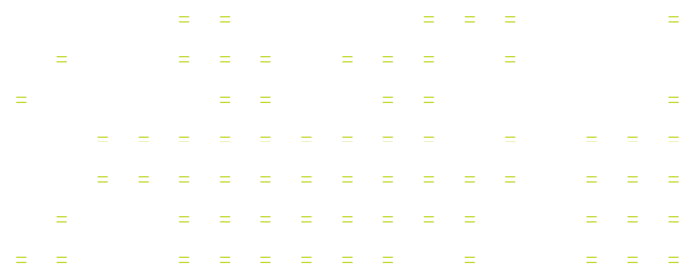


## Contents

1	Introduction	1
2	Wastewater	2
2.1	Existing Infrastructure .....	2
2.2	Potential Disposal Methods .....	2
2.3	Preferred Options .....	3
2.4	Plan change area predicted flow rates.....	3
3	Stormwater	5
3.1	Existing Infrastructure .....	5
3.2	Leeston North Stormwater Bypass .....	5
3.3	Flooding .....	5
3.4	Pre-development Flows .....	5
3.5	Post-development Flows.....	5
3.6	Proposed Stormwater System effects .....	6
4	Water Supply	7
4.1	Existing Infrastructure .....	7
4.2	Proposed Servicing .....	7
4.3	Water Supplies for Firefighting .....	7
5	Roading	8
5.1	Integrated Transport Assessment.....	8
5.2	Existing Infrastructure .....	8
5.3	Proposed Internal Roads .....	8
6	Electrical and Telecommunications	9
7	Conclusion	10

Appendix 1: Outline Servicing Plan

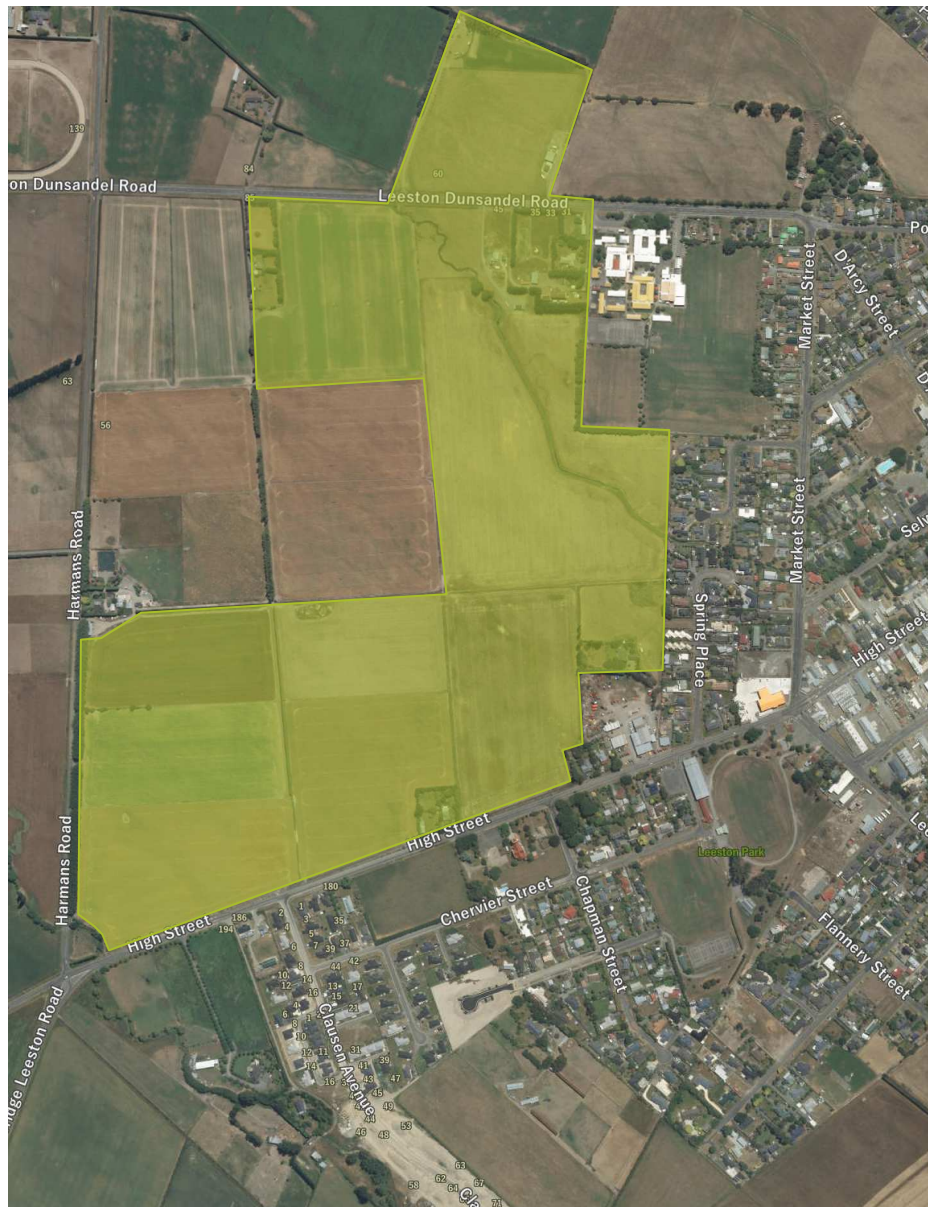
Appendix 2: Confirmation of Power and Telecommunications network capacity



# 1 Introduction

This purpose of this report is to demonstrate the serviceability of the proposed plan change area in north-west Leeston as indicated in Figure 1, below.

The proposed plan change area will have the potential to comprise approximately 410 new lots. Currently the area is zoned a mixture of Living 1 and Living 2 zone (both with deferred status) and outer plains zone in Selwyn District Council Plan. The proposed plan change will address the servicing issues that led to the deferred zoning as well as increasing the density of the zoning. Furthermore additional lower density land is included in the plan change area. The proposed plan change area is shown in green in Figure 1 below.



**Figure 1: Plan Change Area**

## 2.1 Existing Infrastructure

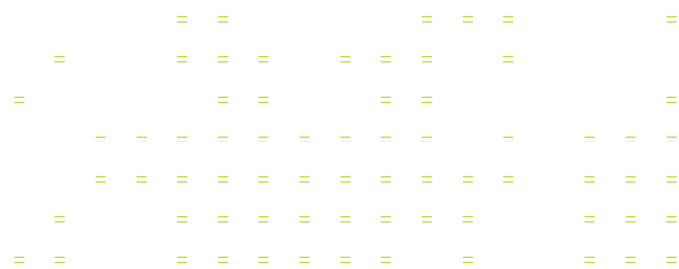
The existing disposal system for the Ellesmere treatment plant is limited in capacity, especially at times of high groundwater. The proposed plan change would exceed the capacity remaining in the current disposal system. Therefore it is proposed that a trigger rule, requiring an upgrade to the disposal system upon development within the plan change area exceeding the current remaining capacity. The trigger rule will require upgrade(s) to the disposal of treated wastewater after the 80<sup>th</sup> allotment has been created.

There is currently no wastewater reticulation servicing the plan change area itself, however surrounding existing dwellings are connected to the existing Leeston gravity sewer network. The following is a discussion of four options for wastewater disposal from the proposed plan change area. Two options are proposed to service the subject site. The general layout showing key components of the wastewater system servicing the plan change area can be seen in the Outline Serving Plan in Appendix A.

Sewer from each lot would discharge via gravity laterals and gravity wastewater mains in the street to a new communal pump station within the plan change area. The pump station would be owned and operated by the Selwyn District Council (Council) and would pump flows which would discharge via a new rising main into the existing trunk sewer or existing rising main as appropriate and subsequently onto the existing wastewater treatment plant. Gravity networks are generally preferred due to their inherently lower operations and maintenance costs.

In locations where standard gravity infrastructure is not viable a common alternative is low pressure wastewater systems utilising individual pump stations on each lot, pumping via a shared small diameter rising main. With low pressure systems in new developments Council typically would own and maintain the pressure pipe within the road reserve, while the pump stations would be the responsibility of the individual property owners. Low pressure systems are particularly beneficial in sites where:

- There is insufficient natural fall for gravity network without an excessive number of municipal pump stations; or
- Weak or soft ground conditions may result in settlement of pipes resulting in loss of grade; or
- Seismically induced ground settlement may result in settlement of pipes resulting in loss of grade; or
- Ground conditions make excavation for deep gravity pipes expensive or dangerous.



Low pressure systems have a potential secondary benefit of managing peak flows. Individual pump stations can be controlled by a control module that communicate with a central system that can manage individual pump operation times to avoid or minimise pumping during peak flows in the downstream network, thus typical diurnal flow peaks are practically eliminated in medium to large scale low pressure systems.

### Option 3: Vacuum Sewer

The option of vacuum sewer, was not investigated as it is difficult to economically justify in developments of fewer than 400 lots and they are better suited to substantially worse ground conditions than encountered in the plan change area.

### Option 4: On site treatment and disposal

Due to high groundwater conditions in the proposed plan change area the option of on site treatment and disposal is not viable.

## 2.3 Preferred Options

Both options 1 and 2 are viable options for wastewater disposal for the plan change area. At the time of subdivision consent the advantages and disadvantages of each option can be assessed in detail and the best option selected.

Regardless of the internal reticulation method, wastewater from the proposed plan change area would be transported via gravity pipes to the existing wastewater network in High Street. The wastewater main in High Street joins the main trunk sewer in Leeston and Lake Road. The trunk sewer subsequently turns northeast to the wastewater treatment plant.

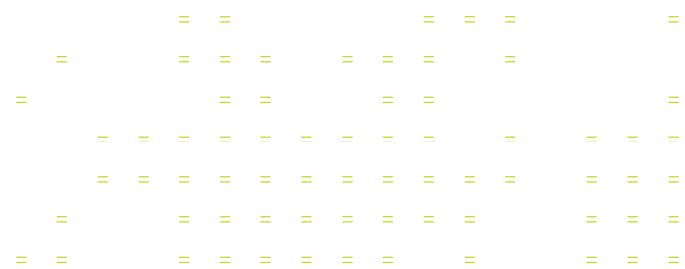
## 2.4 Plan change area predicted flow rates

Design flows have been calculated following Selwyn District Council's Engineering Code of Practice (SDC ECoP).

The following assumptions have been used in the calculations:

- Average sewer flow (ASF) of 220L/person/day (0.00255 L/s);
- Average population density of 2.7 persons/lot;
- Peak flow factor of 2.5;
- Wet weather flow factor of 2.0;
- Number of lots = 410;
- The average dry weather flow from the plan change area is calculated as 2.8 L/s; and
- The design maximum flow (MF) for the plan change area is estimated to be 14.1 L/s.

Note that if a low pressure solution is adopted the peak flow (MF) will not be subject to the same wet weather and peak flow factors. The sealed pressurised nature of low pressure systems substantially reduces inflow and infiltration. Furthermore diurnal peaks are naturally flattened due to the buffering effect of the individual pump station chambers. The actual peak can be further controlled and modified by applying logic to when each pump unit will operate to avoid multiple pumps operating at the same time.



The Ellesmere Area Plan has identified an expected growth in population of 49% by 2031 compared to 2015 (an average rate of 3% per annum for 16 years). It has also been identified at a pre-application meeting with Council that the existing infrastructure will not have sufficient capacity for this growth without further capital investment. Discussions with Council staff has identified that the existing wastewater treatment plant disposal system needs to be upgraded to accommodate the projected growth. It is expected that this would be managed via the trigger rule that require upgrade(s) to the disposal system prior to any development of any allotments beyond the 80<sup>th</sup> allotment.

### 3.1 Existing Infrastructure

### 3.2 Leeston North Stormwater Bypass

### 3.3 Flooding

### 3.4 Pre-development Flows

In longer duration events the critical duration is governed by the time of concentration (Tc) to critical locations in the greater stormwater network. Typically this is at the downstream end of the network and the critical duration is in the order of hours rather than minutes. As there is adequate land set aside in the proposed Outline Development Plan (ODP) to construct a stormwater attenuation basin this is not considered critical for the plan change.

### 3.5 Post-development Flows

In general, fully developed residential land has a runoff coefficient of 0.55 (as stated in the SDC ECOP Section 5.12.3). time of concentration is expected to reduce from approximately 30 minutes to 25 minutes. Therefore there is a 57% increase ( $0.55/0.35$ ) in runoff in the 10% AEP event. However the presence of a stormwater attenuation basins designed for long duration events would mitigate the alteration in time of concentration and runoff coefficient for short duration events. The primary discharge from the stormwater management pond would be to the existing DN600 culvert at Chapman Place.

### 3.6 Proposed Stormwater System effects

The proposed gravity stormwater network would discharge to a newly constructed stormwater treatment facility. The treatment facility would include an attenuation pond that would attenuate runoff to pre-development flow rates prior to discharge. Birdlings Brook also has no residual capacity to accept an increase of stormwater flows resulting from increased hardstand. Council requires stormwater from a 2% AEP storm to be attenuated. Attenuation can be provided in the form of an attenuation basin located in the southern portion of the plan change area which is the natural low lying area.

Pipes would be designed based on stormwater volume discharging from the catchment area. First flush runoff from the hardstand areas of the proposed plan change area would drain via kerb and channel to sumps. Sumps would be constructed with a nominal storage depth below the outlet pipe to promote settling of sediment and be fitted with submerged outlets to reduce hydrocarbons discharged to the downstream system.

Each sump would discharge into the attenuation pond via designed pipes. Stormwater from the roof would also pass through designed stormwater pipes to the attenuation pond located at the south of the subdivision. Stormwater would then be discharged into the existing gravity network in Chapman place (where the peak flow rate would be less than the undeveloped flow rates for events up to and including the critical duration for the Birdlings Brook).

The attenuation basin would be sized to manage long duration events (in the order of several hours) where flow rates are substantially lower than in the shorter duration events. A significant positive side effect of this design criteria is that shorter duration events (typically less than 1 hour) become over-attenuated, meaning the flows in shorter duration events would be substantially less than predeveloped. In longer duration events the existing DN600 pipe would not be operating at its peak flow rate so there would be no flooding impact on the downstream pipe network.

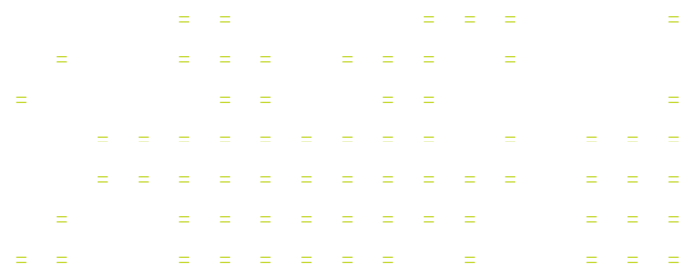
Secondary flows from the stormwater management ponds would be split two ways, with some flows being directed towards Chapman Place, with the balance being directed west towards the existing 2,300 x 1,900 box culvert.

Overall the proposed centralised stormwater management area will provide the following key benefits:

- No additional flows are directed towards the Leeston Creek
- Long duration events will be attenuated to ensure post-development flows are less than pre-development flows, ensuring no increase in flooding to the existing pipe networks immediately downstream of the plan change areas, as well as the Leeston Creek or Birdlings Brook.
- Short duration events will be over-attenuated, meaning the flows in the local pipe networks immediately downstream of the plan change area will reduce compared to the natural runoff from the undeveloped land in its current state.
- First flush runoff will be treated to current best practice standards to minimise contaminants such as hydrocarbons, heavy metals and total solids are captured within the treatment facilities and therefore do not result in reduction in downstream water quality.

The general layout of the proposed stormwater system showing key connection points is shown in the outline service plan in Appendix A.





## 5 Roothing

### 5.1 Integrated Transport Assessment

Carriageway Consulting has been contacted for Integrated Transport Assessment (ITA) to evaluate the effects of the proposed Plan Change on the adjacent transportation networks. Roothing and traffic matters that are covered by ITA are not discussed further in this report.

### 5.2 Existing Infrastructure

The site is bound by High Street on the south, Harmans Road on the west, Leeston Dunsandel Road on the north and existing residential development on the east. Ellesmere College bounds the plan change area in the north eastern corner. A small portion of the site lies north of Leeston Dunsandel Road.

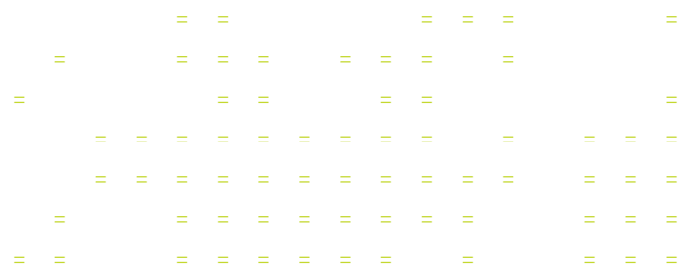
As there has been a separate transport assessment the nature and suitability of the existing roading network is not discussed further in this report.

### 5.3 Proposed Internal Roads

A network of new roads within the plan change area would be formed with kerb and channel, cycle lanes (as appropriate), footpaths and grass berms in general accordance with the SDC ECoP. Linkages would be provided for pedestrians and cyclists in accordance with the ODP at the time of subdivision. The internal roads would have connections with Harman Road to the west, Leeston Dunsandel Rd to the north, Spring St to the East and two connections to High Street to the south.

To the north of Leeston Dunsandel Rd a semi-detached block of the plan change area would have a separate internal ring road connecting to Leeston Dunsandel Rd.

The key roads in the proposed plan change area can be seen in the ODP.

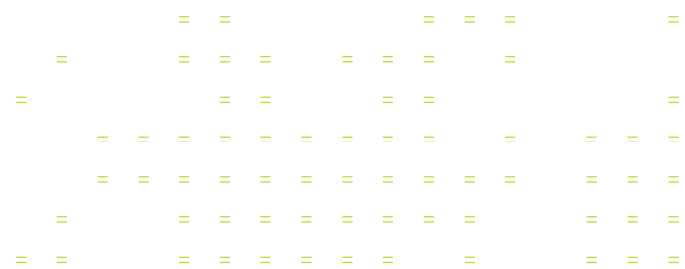


## 6 Electrical and Telecommunications

Orion have confirmed that the plan change area can be serviced with reticulated power from the existing network. A copy of the letter from Orion confirming is attached in Appendix 2.

Chorus NZ Ltd have confirmed that the plan change area can be serviced with reticulated power from the existing network. A copy of the letter from Chorus confirming the ability to connect is attached in Appendix 2.

Each lot can be serviced by underground utilities.



## 7 Conclusion

This servicing report has been prepared to accompany the proposed plan change application. Based on the preliminary design and discussions to date, the proposed plan change area can be serviced in general accordance with the requirements of SDC ECOP, NZS 4404:2010 and good engineering practice.

Wastewater can be reticulated via gravity or low pressure network and can be discharged via the existing trunk main to the existing wastewater treatment facility. A trigger rule requiring an upgrade to the wastewater disposal system upon development of any allotments after the 80<sup>th</sup> allotment will be required.

Stormwater can be collected via a gravity pipe network and directed to stormwater treatment and attenuation basins prior to discharging to Birdlings Brook.

Water supply can be full pressure mains, with a new bore and pump located within the plan change area to augment the existing Leeston water supply network. Fire fighting capacity can be provided with new hydrants in accordance with SNZ PAS 4509:2003.

Appendix 1: Outline Servicing Plan



# Appendix 2: Confirmation of Power and Telecommunications network capacity

**Chorus Network Services**

PO Box 9405  
Waikato Mail Centre  
Hamilton 3200  
Telephone: 0800 782 386  
Email: [tsg@chorus.co.nz](mailto:tsg@chorus.co.nz)



Sub Div Ref: LSN41929

14 August 2017

Your Ref:

Baseline Group

Attention: Jalesh  
Dear Sir / Madam

**SUBDIVISION RETICULATION – LSN: 56 Harmans Road, Leeston. 375 Lots (Simple Estimate)**

Thank you for your enquiry regarding the above subdivision.

Chorus is pleased to advise that, as at the date of this letter, we would be able to provide ABF telephone reticulation for this subdivision. In order to complete this reticulation, we require a contribution from you to Chorus' total costs of reticulating the subdivision. Chorus' costs include the cost of network design, supply of telecommunications specific materials and supervising installation. At the date of this letter, our estimate of the contribution we would require from you is \$690,000.00 (including GST).

We note that (i) the contribution required from you towards reticulation of the subdivision, and (ii) our ability to connect the subdivision to the Chorus network, may (in each case) change over time depending on the availability of Chorus network in the relevant area and other matters.

If you decide that you wish to undertake reticulation of this subdivision, you will need to contact Chorus (see the contact details for Chorus Network Services above). We would recommend that you contact us at least 3 months prior to the commencement of construction at the subdivision. At that stage, we will provide you with the following:

- confirmation of the amount of the contribution required from you, which may change from the estimate as set out above;
- a copy of the Contract for the Supply and Installation of Telecommunications Infrastructure, which will govern our relationship with you in relation to reticulation of this subdivision; and
- a number of other documents which have important information regarding reticulation of the subdivision, including - for example - Chorus' standard subdivision lay specification.

Yours faithfully

A handwritten signature in black ink, appearing to read "Hollie Jackson".

Hollie Jackson  
Network Services Coordinator

18 August 2017  
Re: 56 Harmans Road

C/O  
Jalesh Devkota  
Baseline Group  
Level 1 140 Welles Street  
Christchurch 8011

[jalesh@blg.nz](mailto:jalesh@blg.nz)

Dear Sir,

**Proposed sub-division connection to the Orion network  
Lots 1-4 DP 82846, Lot 1 DP 9138, Lot 2 DP 365379, Lot 2 DP 319397 and part RS 5482,5483  
Harmans and Dunsandal Leeston roads, Leeston**

I refer to your letter and the above-named property(s). I have investigated your request and comment as follows;

1. Orion has the capacity on the network to meet your request
2. There are no specific connections available for this sub division; however,
3. A connection could be made available for one or more dwellings with an alteration to the Orion network.
4. There will be costs associated with providing the connection(s). These costs will be the responsibility of the property owner, not Orion.
5. To comply with Orion's network security conditions an alternative feed from adjoining developments may also be required.
6. This type of work would be a typical design build project. If you decide to proceed; have your designer forward their proposal to Orion for approval. Orion will forward Terms and Conditions for acceptance.

The terms and conditions presented to the applicant will encompass Orion's policies and practices current at the time.

Please don't hesitate to contact me on (03) 363 9722 if you have any questions, or email me at [Craig.marshall@oriongroup.co.nz](mailto:Craig.marshall@oriongroup.co.nz).

Yours faithfully



Craig Marshall  
Reticulation Support Engineer

# Appendix 5: Geotechnical Investigation



# GEOTECHNICAL INVESTIGATION REPORT

**PROPOSED LAND USE CHANGE  
LEESTON**

PREPARED FOR LOUISE AND BRENT HARKERS

C17120  
6 OCTOBER 2017

## Document Control Record

### Document Prepared By:

Soil & Rock Consultants  
Unit 11, 114 Sawyers Arms Road  
Papanui



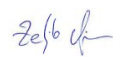
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### Document Control

<b>Document Title</b>	Geotechnical Investigation Report		
<b>Project</b>	Proposed Land Use Change	<b>Project Number</b>	C17120
<b>Client</b>	Louise and Brent Harkers	<b>Revision</b>	A
<b>Prepared By</b>		Callum Nicholas Engineering Geologist	
<b>Reviewed By</b>		Matthew Naylor Principal Geotechnical Engineer	
<b>Authorised By</b>		Zeljko Viljevac Senior Hydrogeologist/Engineering Geologist (MSc)	

### Revision History

Rev	Date	Amendment	Prepared By		Reviewed By		Authorised By	
A	06/10/2017	Issued to Client	CN		MN		ZV	

### DISTRIBUTION:

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## Table of Contents

1	Introduction	1
1.1	Project Brief	1
1.2	Scope of Works	1
2	Site Description	2
3	Proposed Development	3
4	Site History	3
5	Geological Model	3
5.1	Published Regional Geology	3
5.2	Nearby Geotechnical Data	3
5.3	Site Specific Investigation	4
5.4	Site Subsurface Conditions	5
5.5	Groundwater	5
5.6	Site Subsoil Classification	5
6	Geotechnical Assessment	5
6.1	Lateral Displacement	5
6.1.1	Global Lateral Movement & Lateral Spreading	5
6.2	Expected Future Land Performance	5
7	Resource Management Act Requirements	6
8	Geotechnical Ultimate Bearing Capacity	6
9	Recommendations	7
9.1	Preliminary Foundation Options	7
9.1.1	NZS3604:2001 TC1 foundation options	7
	For the majority of land founded on shallow gravel above 1m, and above the groundwater table:	7
9.1.2	TC2 type foundations as given within Part A of the MBIE December 2012 guidelines.	7
	These foundation options may be suitable for the south-west corner where the gravel is deeper. These consist of various slab-on-grade reinforced concrete foundations:	7
9.2	Pavement Areas	7
10	Further Geotechnical Involvement	8
11	Conclusions	8
12	Limitations	8
13	References	9
	Appendix A. Test Location Plan	
	Appendix B. Test Pit, Hand Augerhole & Scala Penetrometer Logs	

## **1 Introduction**

### **1.1 Project Brief**

Soil & Rock Consultants have been engaged by Mike Vincent of Baseline Group Ltd on behalf of Louise and Brent Harkers to undertake a geotechnical investigation in connection with a proposed subdivision and development of land north-west of Leeston ('the site'). The purpose of this investigation is to develop a geological model of the site, assess its future land performance providing comment on the suitability to subdivide the land, and address the requirements of Section 106 of the Resource Management Act 1991.

Where relevant, reporting has been conducted in accordance with the Ministry of Business, Innovation and Employment December 2012 'Repairing and Rebuilding Houses Affected by the Canterbury earthquakes' Guidance (MBIE Guidelines) and relevant updates and clarifications.

This report summarises our findings and recommendations and may be used to support a Building Consent application to the Selwyn District Council.

### **1.2 Scope of Works**

The following work has been undertaken for this geotechnical investigation:

- A site walk-over to assess site conditions;
- Review of the New Zealand Geotechnical Database (NZGD) and other available relevant geological or geotechnical information;
- Shallow geotechnical testing comprising 16 hand augerholes (AH) and Scala Penetration Tests (DCP);
- Geotechnical testing comprising one Test Pits (TP) excavated with machine excavator along with Dynamic Cone Penetrometer test (DCP - Scala) carried out beside TP to a target depth of 3.0m;
- Assessment against Section 106 of the RMA and comment on the suitability to subdivide;
- Recommendations for new residential foundations; and
- Preparation of this report detailing all the above.



### 3 Proposed Development

Soil & Rock Consultants were not in receipt of any preliminary drawings showing the proposed development. However, based on the correspondence we understand a residential subdivision with associated roads, drainage, and infrastructure is proposed. No plans have been received showing the number of lots to be divided into.

### 4 Site History

Aerial photographs of the site were assessed from Canterbury Maps website (<https://mapviewer.canterburymaps.govt.nz/>). Photographs showed the site in 1946 was similar to its present day condition and was used as pastoral and agricultural land. Between 1967 and 1975, a shed has been built on Lot 2 DP 365379 otherwise the site was unchanged. Between 1990 and 1994 some residential development of the dwelling on Lot 2 DP 82846 and surrounding area has took place.

### 5 Geological Model

#### 5.1 Published Regional Geology

The regional geological Maps (GNS – Geology of the Christchurch Area, 2008) indicates the site is underlain by grey river alluvium beneath plains or low-level terraces (Q1a).

#### 5.2 Nearby Geotechnical Data

Geotechnical data was taken from nearby ECan Wells and Boreholes and is summarised in Table 1 below.

**Table 1: Nearby Geotechnical Data**

Borehole	Distance from Site (m)	Depth to Gravel (m)	Gravel Thickness (m)
M36/7817	Onsite	1.2	> 12.8
M36/5682	42	1.2	> 9.8
M36/2992	61	Unconfirmed	> 28.0
M36/2149	75	0.9	> 10.7
M36/2064	123	0.6	> 52.4
M36/0781	156	0.6	> 51.0

### 5.3 Site Specific Investigation

Following an initial site walkover and location of services the Soil & Rock site investigation comprised:

- 16 hand augerholes with Scala penetrometer tests undertaken through the augerholes from surface namely;
  - (i) Four across Lot 3 DP 82846;
  - (ii) Four across Lot 2 DP 82846; and
  - (iii) Eight across Lot 1 DP 82846.
- One test pit with Scala penetrometer test located in Lot 2 DP 365379

Originally fieldwork was to consist of 17 test pits but wet weather and soft ground made machine access to test pit locations impractical. After discussions with Selwyn District Council geotechnical engineer Ian McCahon, it was agreed to switch to hand augers for the remainder of the testing with an understanding that later phases will undergo further site investigation deep testing.

A visual-tactile field classification of the subsoils encountered during hand augerhole drilling was carried out in accordance with 'Guidelines for the Field Classification and Description of Soil and Rock for Engineering Purposes' (NZGS, 2005) and Scala Penetrometer testing was carried out in accordance with NZS 4402:1988, Test 6.5.2, 'Dynamic Cone Penetrometer'.

Investigation details are provided in Table 2. The tests were positioned to provide the most effective coverage of the site. Test locations and relative levels (RL) were recorded by handheld GPS and are therefore approximate only.

**Table 2: Site Specific Investigation**

Test ID.	RL(m)	Termination Depth (m bgl)	Notes
AH01	26	0.7	Gravel Obstruction. Groundwater not encountered.
AH02	26	0.5	Gravel Obstruction. Groundwater not encountered.
AH03	25	0.9	Gravel Obstruction. Groundwater not encountered.
AH04	26	0.6	Gravel Obstruction. Groundwater not encountered.
AH05	26	0.5	Gravel Obstruction. Groundwater not encountered.
AH06	24	0.5	Gravel Obstruction. Groundwater not encountered.
AH07	25	0.6	Gravel Obstruction. Groundwater not encountered.
AH08	26	1.0	Gravel Obstruction. Groundwater not encountered.
AH09	26	0.7	Gravel Obstruction. Groundwater not encountered.
AH10	25	0.6	Gravel Obstruction. Groundwater not encountered.
AH11	25	1.4	Gravel Obstruction. Groundwater at 1.1m
AH12	26	1.5	Gravel Obstruction. Groundwater not encountered.
AH13	25	0.8	Gravel Obstruction. Groundwater not encountered.
AH14	24	1.2	Gravel Obstruction. Groundwater not encountered.
AH15	26	1.7	Gravel Obstruction. Groundwater at 0.7m
AH16	26	1.6	Gravel Obstruction. Groundwater not encountered.
TP01	26	1.6	Gravel Obstruction. Groundwater not encountered.

All test locations are presented on drawing C17120 /1 in Appendix A and hand augerhole and Scala Penetrometer results showing detailed soil descriptions, test pit results and blows per 100mm penetration are presented in Appendix B.

## 5.4 Site Subsurface Conditions

Subsurface conditions based on those encountered within the hand augerholes and the test pit site are summarised in Table 3.

**Table 3: Simplified soil profile**

Soil Type	Depth to Top of Layer (m)	Layer Thickness (m)	Relative Density / Consistency
SILT, trace sand, trace gravel (Topsoil/non engineered fill)	0.0	0.3 – 0.7	Very soft to firm
SILT, trace to minor sand, trace to minor gravel	0.3 – 0.7	0.2 – 1.2	Soft to firm
<sup>1</sup> PEAT, minor silt	1.7	1.5	Soft
GRAVEL	0.5 – 1.8	> 10	Dense

<sup>1</sup>PEAT encountered in AH15

1.8 meters to gravel in the south-west corner of the site.

## 5.5 Groundwater

Groundwater was measured within augerholes AH11 and AH15 on the day of our investigation at 0.7m and 1.1m and 0.6m in TP01. Groundwater is expected to vary seasonally and due to irrigation abstraction. It should be noted that fieldwork was undertaken shortly after heavy rainfall and flooding in the area.

## 5.6 Site Subsoil Classification

NZS 1170.5:2004 outlines criteria for the assessment of different site subsoil classes. The alluvial soils of the Canterbury plains are generally classified as either 'Class D' or 'Class E' subsoil due to the considerable depth to bedrock (locally from 100m to in excess of 1km). In accordance with the standard Class D applies to this particular site defining it as a 'deep soil site'.

# 6 Geotechnical Assessment

## 6.1 Lateral Displacement

### 6.1.1 Global Lateral Movement & Lateral Spreading

The site is not mapped on the NZGD for global lateral movement and lateral spreading but a creek that runs through Lot 3 DP 82846 which is approximately 0.5m deep and 5m wide. This may potentially cause lateral spread adjacent to its banks.

## 6.2 Expected Future Land Performance

The site may have a potential for liquefaction based on the deeper natural silts within the south-west corner. Further deep testing with a CPT rig is likely to be required for a subdivision consent application for quantitative liquefaction assessment and to help determine a MBIE Technical Category.

## 7 Resource Management Act Requirements

Section 106 of the Resource Management Act 1991 states a consent authority may refuse to grant a subdivision consent, or may grant a consent subject to specific consent conditions if the land is likely to be subject to erosion, falling debris, subsidence, slippage or inundation.

- The site is not located near any major water ways but a creek flows north-east through Lot 3. As a result some lower lying areas may be susceptible to erosion adjacent to the creek.
- Falling debris from upslope land slippage or rock fall is unlikely at this site in the absence of any elevated land in proximity to the site.
- Slope stability is not considered to be a significant hazard. Earthquake-induced lateral movement is considered to be minor to moderate, in accordance with the MBIE criteria (December 2012). Lateral ground movement is most likely to occur within the land immediately surrounding the creek and inside bends. The rest of the site is well removed from the areas of land highlighted as susceptible to lateral spreading and the risk is considered minimal.
- Limited subsidence and inundation by ejected matter (i.e. sand, silt and water) could occur from future liquefaction of the site soils from a future large earthquake. Subsidence is expected to be within the limits of Technical Category 1 across most of the site. In south-west corner subsidence might be within TC2 limits in accordance with the most recent MBIE criteria (December 2012).
- Peat long term differential settlement due to consolidation of the peat in south-west corner.
- Assessment of inundation from flooding is not part of our current brief and has therefore not been assessed. If according to Selwyn District Council held records the site has the potential to be flooded we recommend a flood assessment be carried out by a suitably experienced Engineer.

## 8 Geotechnical Ultimate Bearing Capacity

With reference to Scala Penetrometer results an Ultimate Bearing Capacity (UBC) of 150kPa is available within the natural soil at 0.3m – 0.6m and 300kPa is available at a depth of 0.45m to 1.7m bgl in accordance with (Stockwell 1977). A Strength Reduction Factor of  $\Phi = 0.5$  should be applied to the Ultimate Bearing Capacity, which should then equal or exceed the factored Ultimate Limit State design actions. Foundations should be founded below topsoil, fill or peat within good ground as defined by NZS3604.

## **9 Recommendations**

### **9.1 Site Zoning and Preliminary Foundation Options**

The current scope of field investigations and assessments were primarily intended to support the currently proposed Plan Change and Subdivision Consent application. Based on the results of the desk study and field work, we consider the ground across the site to be suitable for construction of typical residential building in accordance with NZS3604:2011. Across most of the site, these may be supported on TC1 foundations. In the south-west corner of the site the deeper foundations and /or TC2 foundations will be required in accordance with the MBIE December 2012 guidelines.

At this initial stage, the following residential foundation preliminary options are considered appropriate:

#### **9.1.1 TC1 foundation options as per NZS3604:2001**

For the majority of land founded on shallow gravel above 1m, and above the groundwater table:

- Type A, timber floor suspended on shallow piles;
- Type B, timber floor suspended on shallow piles with concrete perimeter foundation; and
- Type C, Concrete slab.

#### **9.1.2 TC2 type foundations as given within Part A of the MBIE December 2012 guidelines.**

These foundation options may be suitable for the south-west corner where the gravel is deeper. These consist of various slab-on-grade reinforced concrete foundations:

- Option 1 comprising 800mm granular fill supporting NZS3604:2011 reinforced concrete slabs or Construction Considerations
- Options 2, 3 and 4 comprising robust stiffened slab and beam foundations) or typical NZS3604:2011 suspended timber floor sub-floor and foundation systems with stiffened perimeter footings.
- Deep posthole foundations or short piles in areas of peat, founded on natural gravel to support suspended floors.

### **9.2 Pavement Areas**

Vegetation, any organic or deleterious material, topsoil and non-engineered fill should be removed from the site under pavement areas prior to aggregate placement. Based on our observations during testing we consider the natural ground at the site should provide an adequate subgrade for the proposed pavement areas. We recommend for preliminary design a CBR value of 2% or a modulus of subgrade reaction of 20kPa/mm, for flexible or rigid pavements respectively with adequate subgrade drainage.

The thickness of the basecourse would depend on the final CBR/modulus of subgrade reaction used for the subgrade and the traffic loads anticipated. The compaction of the basecourse should be carried out with a static roller of appropriate static weight and energy.

## **10 Further Geotechnical Involvement**

Following development of subdivision plan, the site should be subject to further geotechnical investigation to better define the TC1 and TC2 zones. This investigation would support the subdivision consent application, as well as the preparation of an earthworks specification. During the earthworks and civil engineering works, geotechnical observations will lead to the issue of an earthworks completion report, back by a Statement of Professional Opinion. Following completion of the earthworks, Lot specific geotechnical assessment can be carried to the TC of each lot and recommend an appropriate foundation design. We recommend geotechnical, civil and structural engineers liaise closely during the detailed design stage for building foundations.

## **11 Conclusions**

We consider the site is geotechnically suitable to subdivide for a residential development. Based on our investigation we consider that the ground performance can be considered equivalent to residential Technical Category 1 (TC1) for most of the site and TC2 in the south-west corner, while the site is considered to have minor to moderate global lateral movement and lateral stretch potential for ULS events. Future dwelling foundations should comprise TC1 and TC2 foundation options provided within Part A of the MBIE December 2012 guidelines.

## **12 Limitations**

This report has been prepared for the sole benefit of our Client, Louise and Brent Harkers, with respect to the particular brief given to us. The reliance by other parties on the information or opinions contained within this report shall, without our prior review and agreement in writing, be at such parties' sole risk.

The recommendations given in this report are based on site data from discrete locations. Inferences about the subsoil conditions away from the test locations have been made, but cannot be guaranteed. We have inferred a geotechnical model that can be applied for our analyses, however, variations in ground conditions from those described in this report could exist across the site. Should conditions differ to those outlined in this report we ask that we be given the opportunity to review the continued applicability of our recommendations.

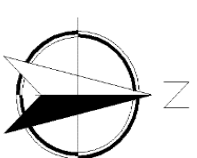
Investigation and analysis of seismic events has resulted in modifications to building codes including MBIE Guidelines, and further changes are expected with time. The findings and recommendations of this report may require modification to accommodate any changes before building works are implemented. It is recommended that the findings of this report be reviewed if there is any delay in the implementation of building works beyond the immediate future.

The investigation was confined to geotechnical aspects of the site and did not involve assessment or testing for environmental contaminants or flooding potential. Our investigation and assessments have also not taken into account possible fault rupture that may cause deformations and displacements of the ground directly below the site. This is outside of the scope of our engagement and beyond the realms of geotechnical investigation and assessment, and from recent accounts nearly impossible to predict.

### 13 References

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## APPENDIX A TEST LOCATION PLAN



Approximate True  
North Direction

**Legend:**



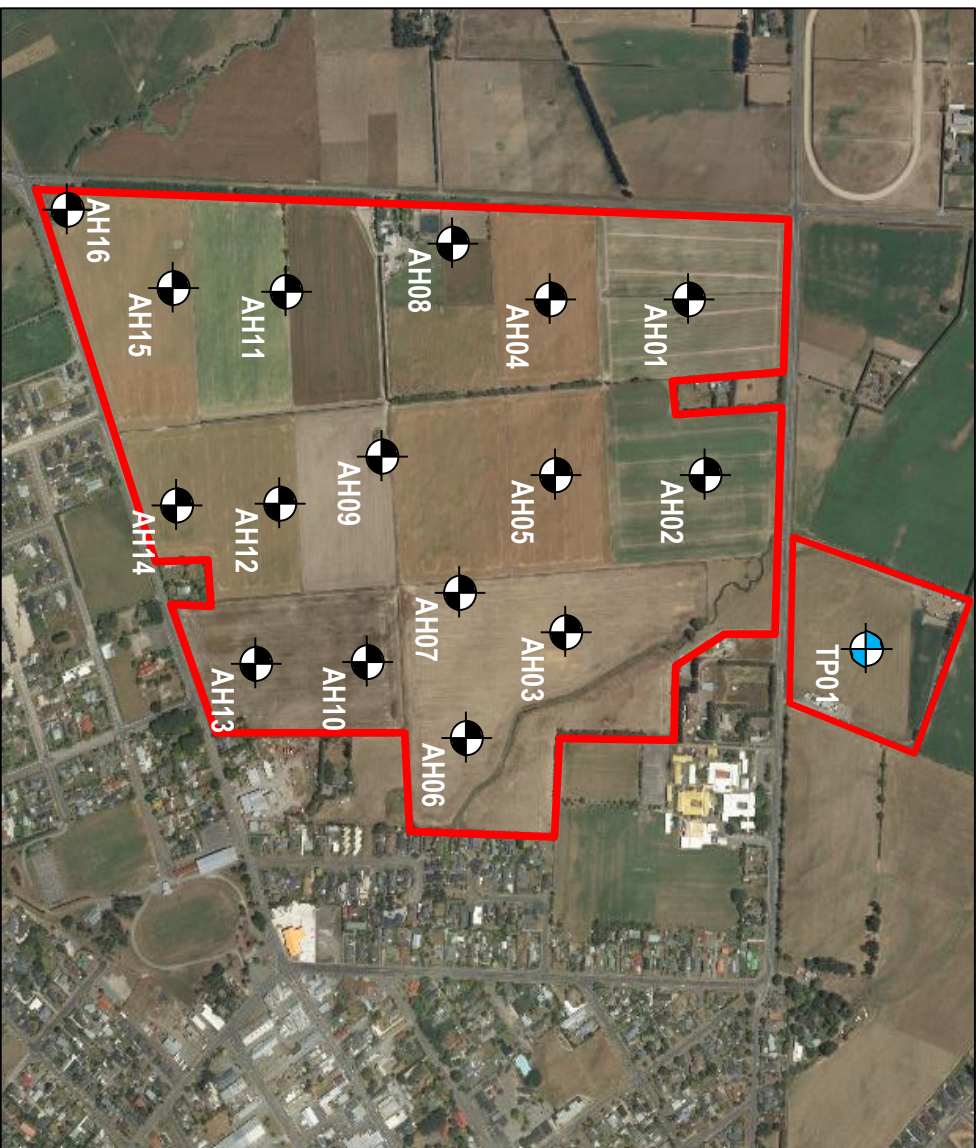
Approx. Location of Hand  
Augerholes completed by  
Soil & Rock Consultants



Approx. Property Boundaries



Approx. Location of Test  
Pit completed by  
Soil & Rock Consultants



**Notes:**

1. Soil & Rock Consultants Test Location Plan adapted from Google Maps
2. Locations of features are approximate only
3. Original sheet size A4
4. Buried services to be located prior to construction



**Soil & Rock Consultants**  
*For well-grounded solutions*

**SITE PLAN**

**GEOTECHNICAL INVESTIGATION**

**LEESTON PLAN CHANGE**

**CHRISTCHURCH**

DRAWING NO:

**C17120/TLP**

SHEET 1 OF 1

**APPENDIX B**  
**HAND AUGERHOLE, TEST PIT**  
**&**  
**SCALA PENETROMETER LOGS**



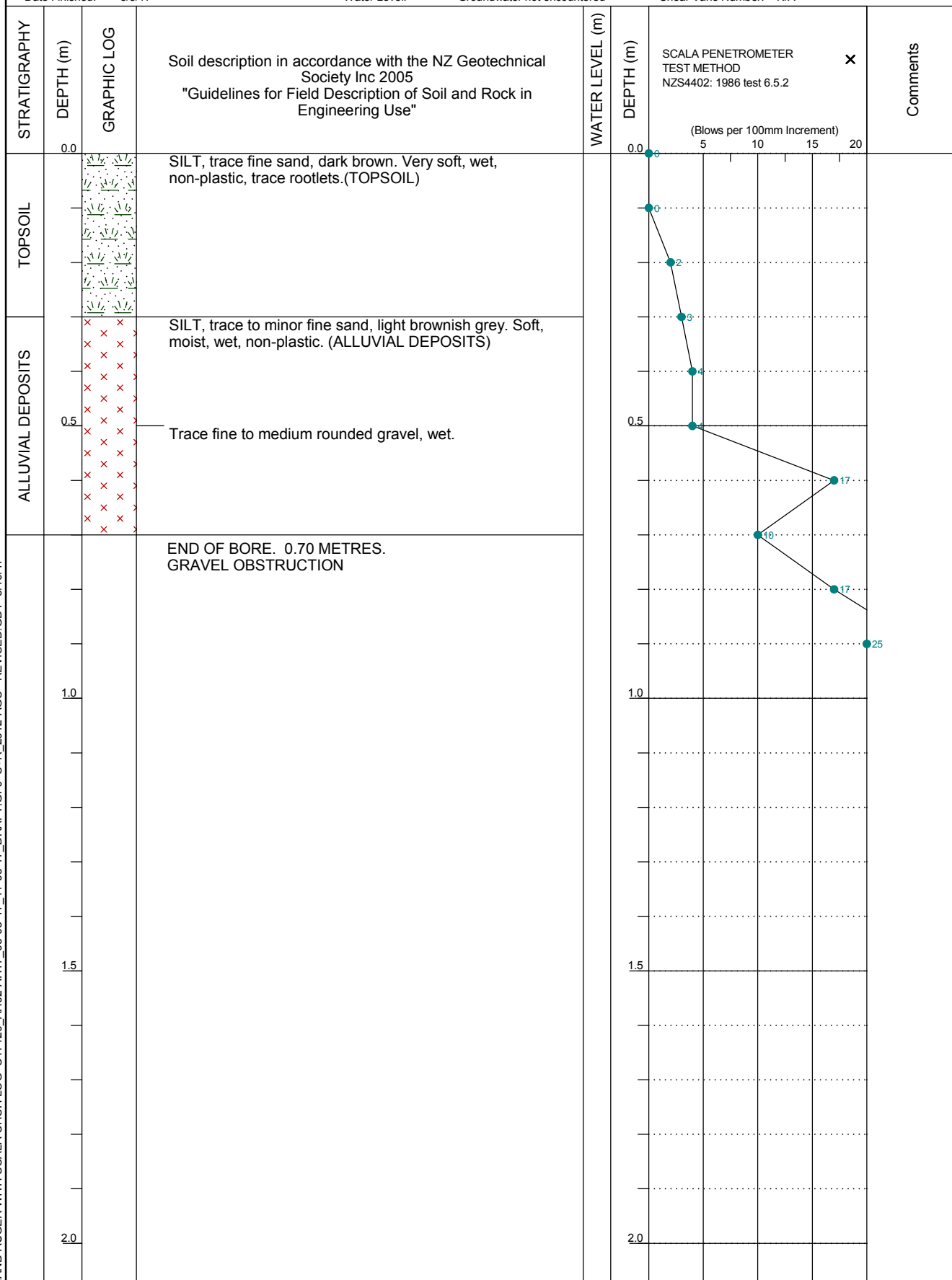
**Soil & Rock Consultants**  
For well-grounded solutions

CLIENT: Louise and Brent Harkerss  
PROJECT: Geotechnical Investigation, Leeston

Auger Hole No: AH01  
Sheet 1 of 1

Drill Type: 50mm Hand Auger	Project No: C17120	Logged By: CN
Drilled By: MG	Coordinates: 1542345 E, 5154731 N	Reviewed By: MN
Date Started: 8/8/17	Ground Elevation: 26m	Surface Conditions: Near Level, Pasture
Date Finished: 8/8/17	Water Level: Groundwater not encountered	Shear Vane Number: N/A

HAND AUGER WITH SCALA CHCH LOG C17120\_AH02-AH17\_08-08-17\_11-08-17\_DRAFT.GPJ S+R\_2012-AGS - REVISED.GDT 5/10/17



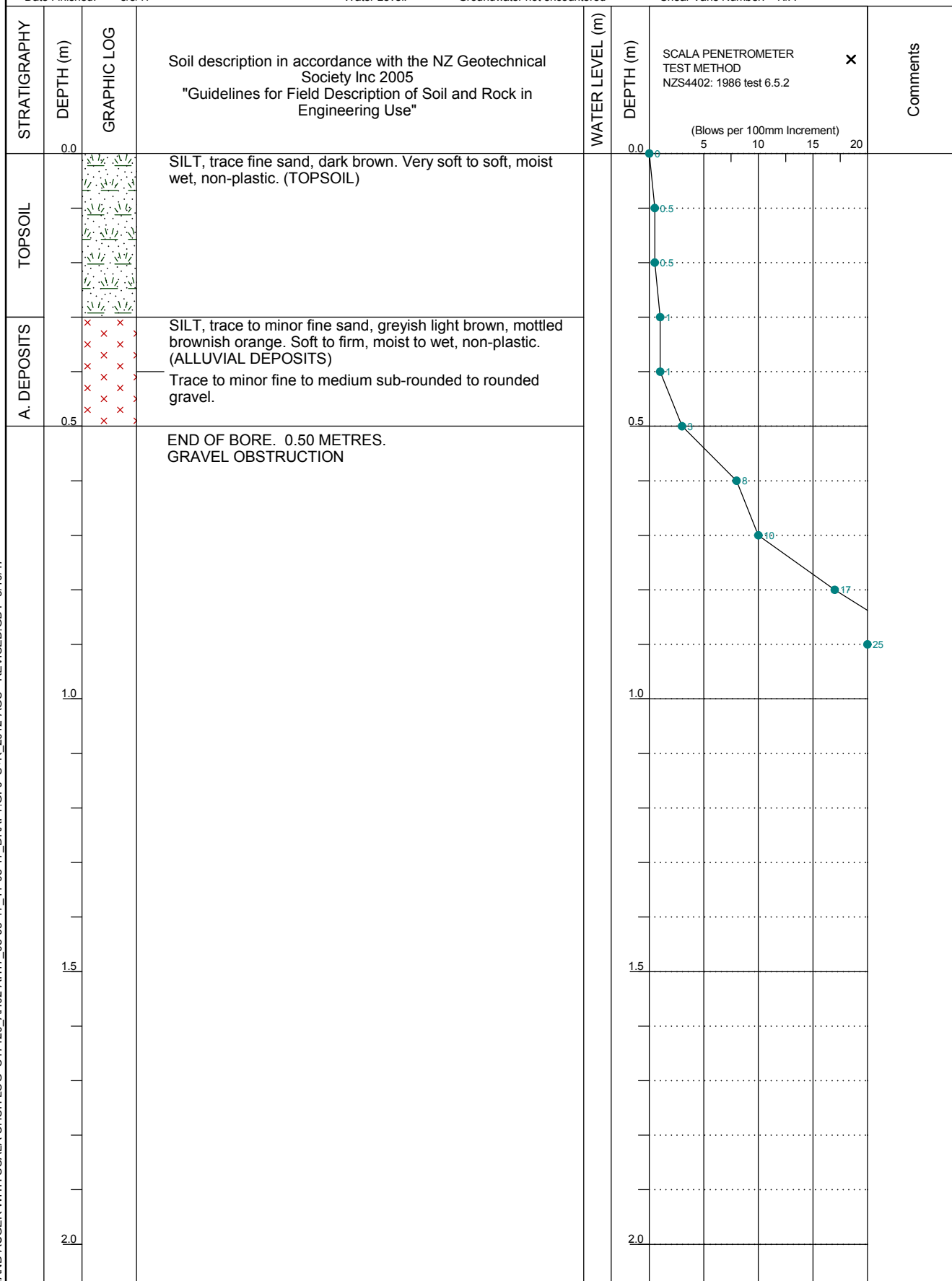


**Soil & Rock Consultants**  
For well-grounded solutions

CLIENT: Louise and Brent Harkerss  
PROJECT: Geotechnical Investigation, Leeston

Auger Hole No: AH02  
Sheet 1 of 1

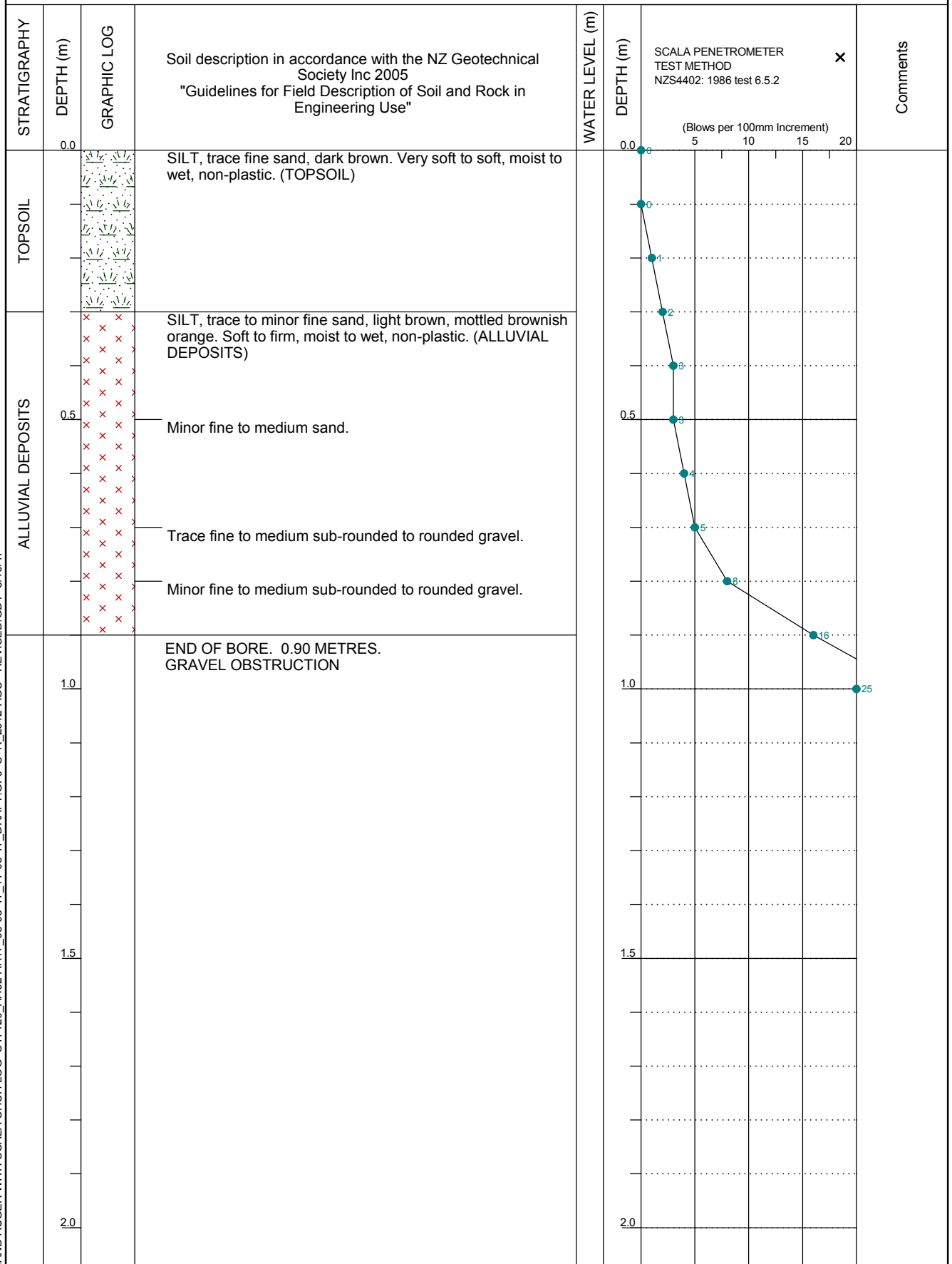
Drill Type: 50mm Hand Auger	Project No: C17120	Logged By: MG
Drilled By: CN	Coordinates: 1542595 E, 5154760 N	Reviewed By: MN
Date Started: 8/8/17	Ground Elevation: 26m	Surface Conditions: Near Level, Soil
Date Finished: 8/8/17	Water Level: Groundwater not encountered	Shear Vane Number: N/A



HAND AUGER WITH SCALA CHCH LOG C17120\_AH02-AH17\_08-08-17\_11-08-17\_DRAFT.GPJ S+R\_2012-AGS - REVISED.GDT 5/10/17

Drill Type: 50mm Hand Auger	Project No: C17120	Logged By: MG
Drilled By: CN	Coordinates: 1542850 E, 5154542 N	Reviewed By: MN
Date Started: 8/8/17	Ground Elevation: 25m	Surface Conditions: Near Level, Grass
Date Finished: 8/8/17	Water Level: Groundwater not encountered	Shear Vane Number: N/A

HAND AUGER WITH SCALA CHCH LOG C17120\_AH02-AH17\_08-08-17\_11-08-17\_DRAFT.GPJ S+R\_2012-AGS - REVISED.GDT 5/10/17





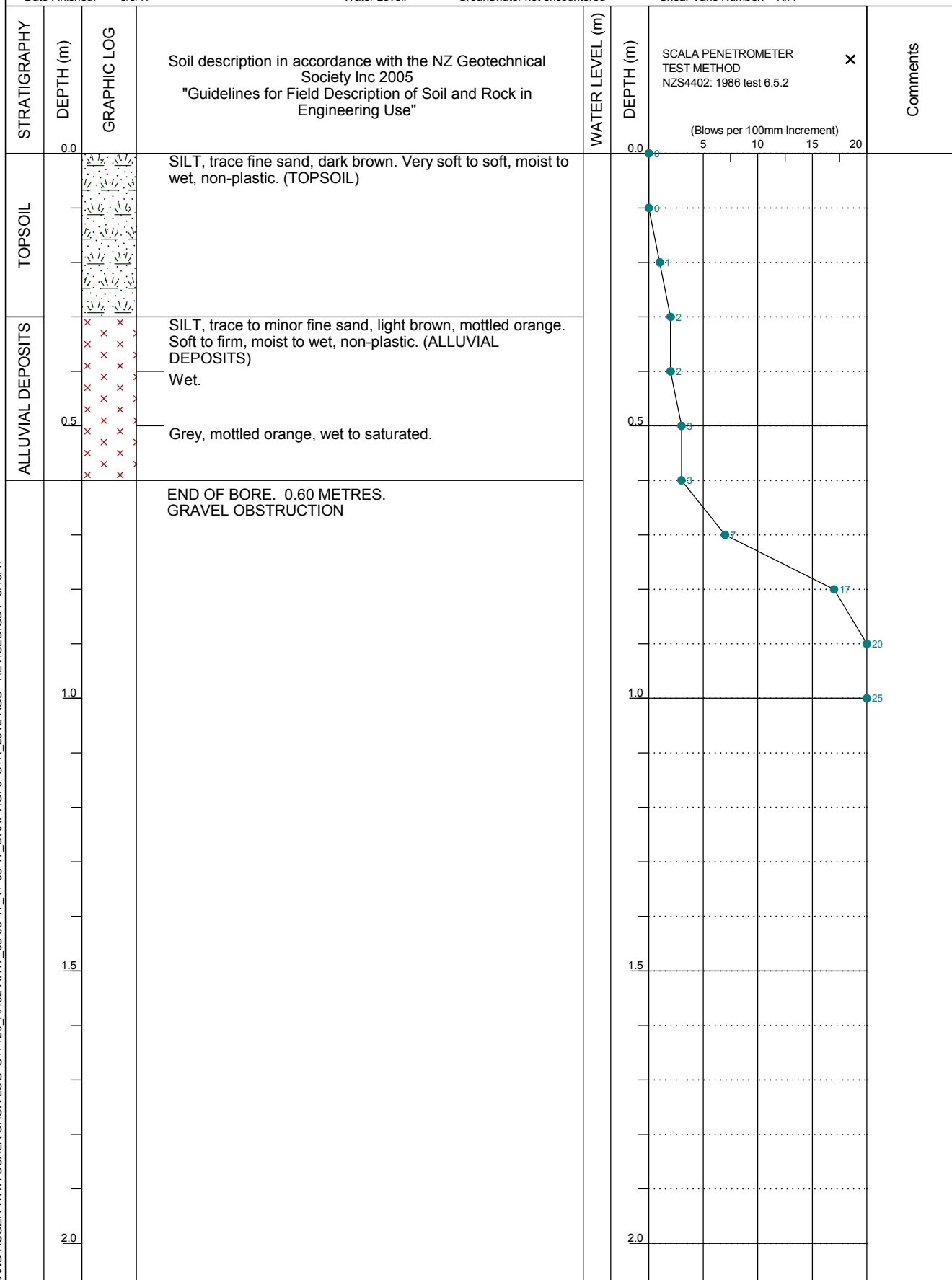
**Soil & Rock Consultants**  
For well-grounded solutions

CLIENT: Louise and Brent Harkerss  
PROJECT: Geotechnical Investigation, Leeston

Auger Hole No: AH04  
Sheet 1 of 1

Drill Type: 50mm Hand Auger	Project No: C17120	Logged By: MG
Drilled By: CN	Coordinates: 1542343 E, 5154525 N	Reviewed By: MN
Date Started: 8/8/17	Ground Elevation: 26m	Surface Conditions: Near Level, Soil
Date Finished: 8/8/17	Water Level: Groundwater not encountered	Shear Vane Number: N/A

HAND AUGER WITH SCALA CHCH LOG C17120\_AH02-AH17\_08-08-17\_11-08-17\_DRAFT.GPJ S+R\_2012-AGS - REVISED.GDT 5/10/17





**Soil & Rock Consultants**  
For well-grounded solutions

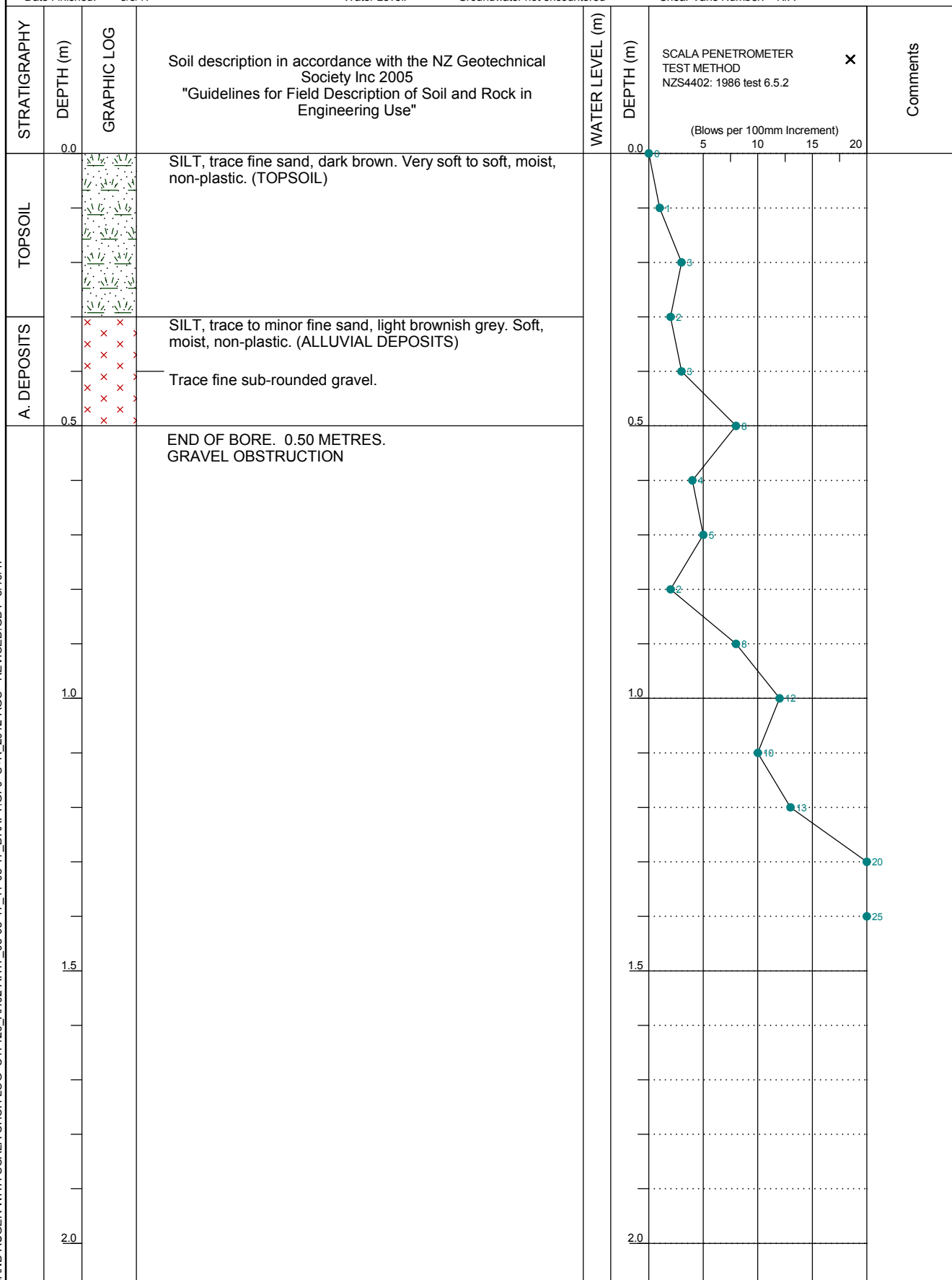
CLIENT: Louise and Brent Harkerss  
PROJECT: Geotechnical Investigation, Leeston

Auger Hole No: AH05  
Sheet 1 of 1

Drill Type: 50mm Hand Auger  
Drilled By: MG  
Date Started: 8/8/17  
Date Finished: 8/8/17

Project No: C17120  
Coordinates: 1542593 E, 5154544 N  
Ground Elevation: 26m  
Water Level: Groundwater not encountered

Logged By: CN  
Reviewed By: MN  
Surface Conditions: Near Level, Soil  
Shear Vane Number: N/A



HAND AUGER WITH SCALA CHCH LOG C17120\_AH02-AH17\_08-08-17\_11-08-17\_DRAFT.GPJ S+R\_2012-AGS - REVISED.GDT 5/10/17

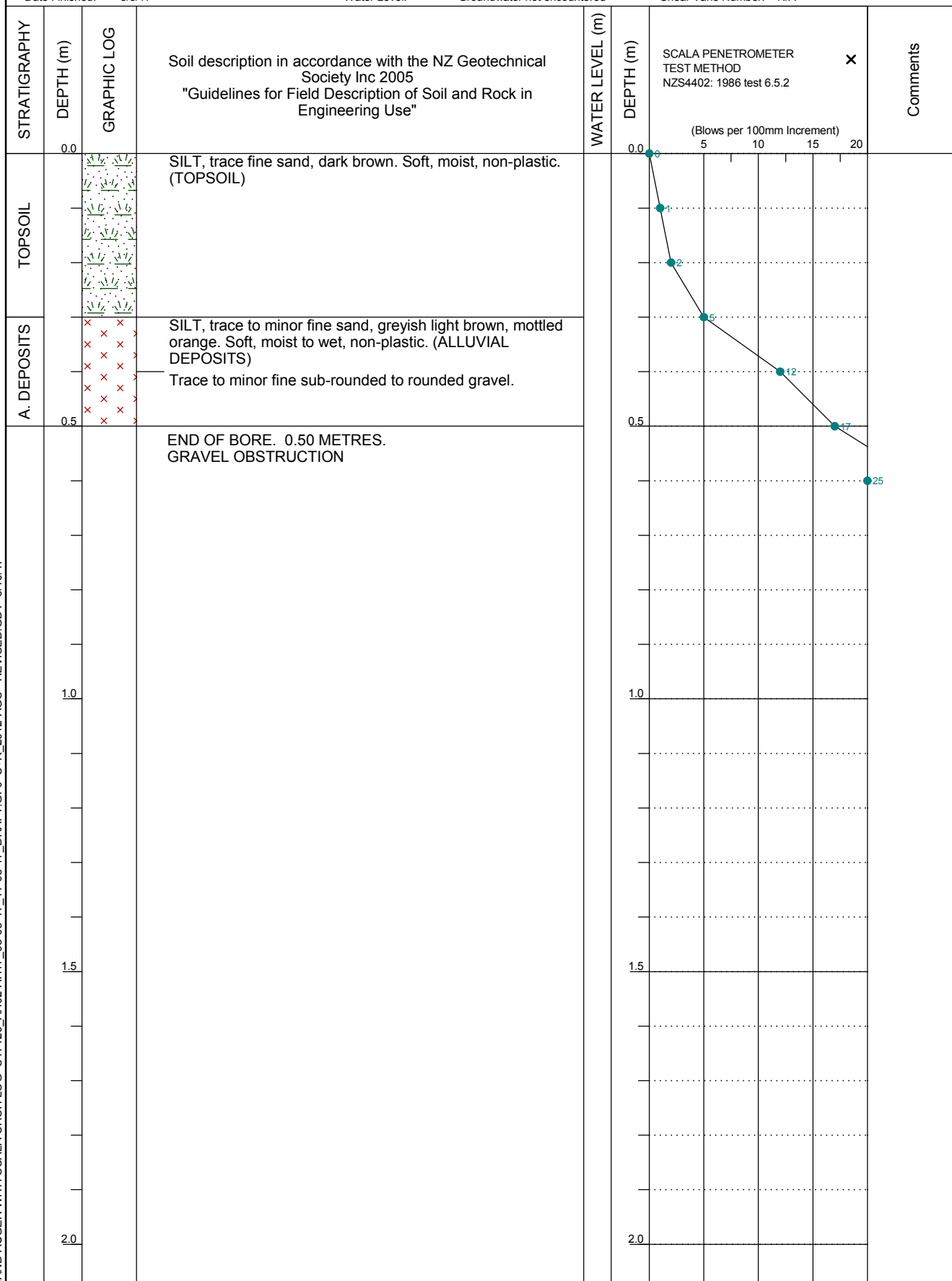


**Soil & Rock Consultants**  
For well-grounded solutions

CLIENT: Louise and Brent Harkerss  
PROJECT: Geotechnical Investigation, Leeston

Auger Hole No: AH06  
Sheet 1 of 1

Drill Type: 50mm Hand Auger	Project No: C17120	Logged By: CN
Drilled By: MG	Coordinates: 1542948 E, 5154408 N	Reviewed By: MN
Date Started: 8/8/17	Ground Elevation: 24m	Surface Conditions: Near Level, Grass
Date Finished: 8/8/17	Water Level: Groundwater not encountered	Shear Vane Number: N/A



HAND AUGER WITH SCALA CHCH LOG C17120\_AH02-AH17\_08-08-17\_11-08-17\_DRAFT.GPJ S+R\_2012-AGS - REVISED.GDT 5/10/17

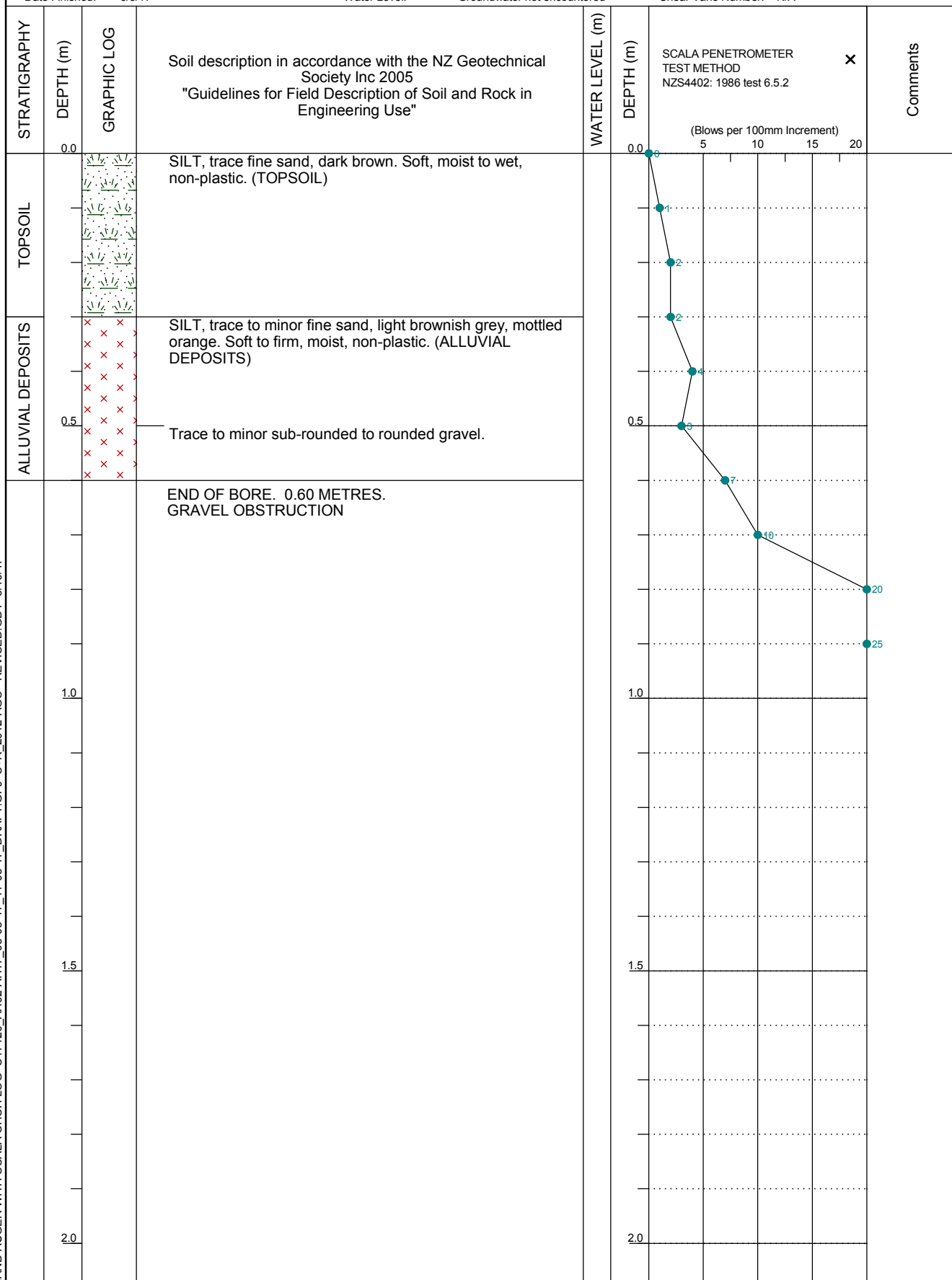


**Soil & Rock Consultants**  
For well-grounded solutions

CLIENT: Louise and Brent Harkerss  
PROJECT: Geotechnical Investigation, Leeston

Auger Hole No: AH07  
Sheet 1 of 1

Drill Type: 50mm Hand Auger	Project No: C17120	Logged By: CN
Drilled By: MG	Coordinates: 1542747 E, 5154395 N	Reviewed By: MN
Date Started: 8/8/17	Ground Elevation: 25m	Surface Conditions: Near Level, Grass
Date Finished: 8/8/17	Water Level: Groundwater not encountered	Shear Vane Number: N/A



HAND AUGER WITH SCALA CHCH LOG C17120\_AH02-AH17\_08-08-17\_11-08-17\_DRAFT.GPJ S+R\_2012-AGS - REVISED.GDT 5/10/17



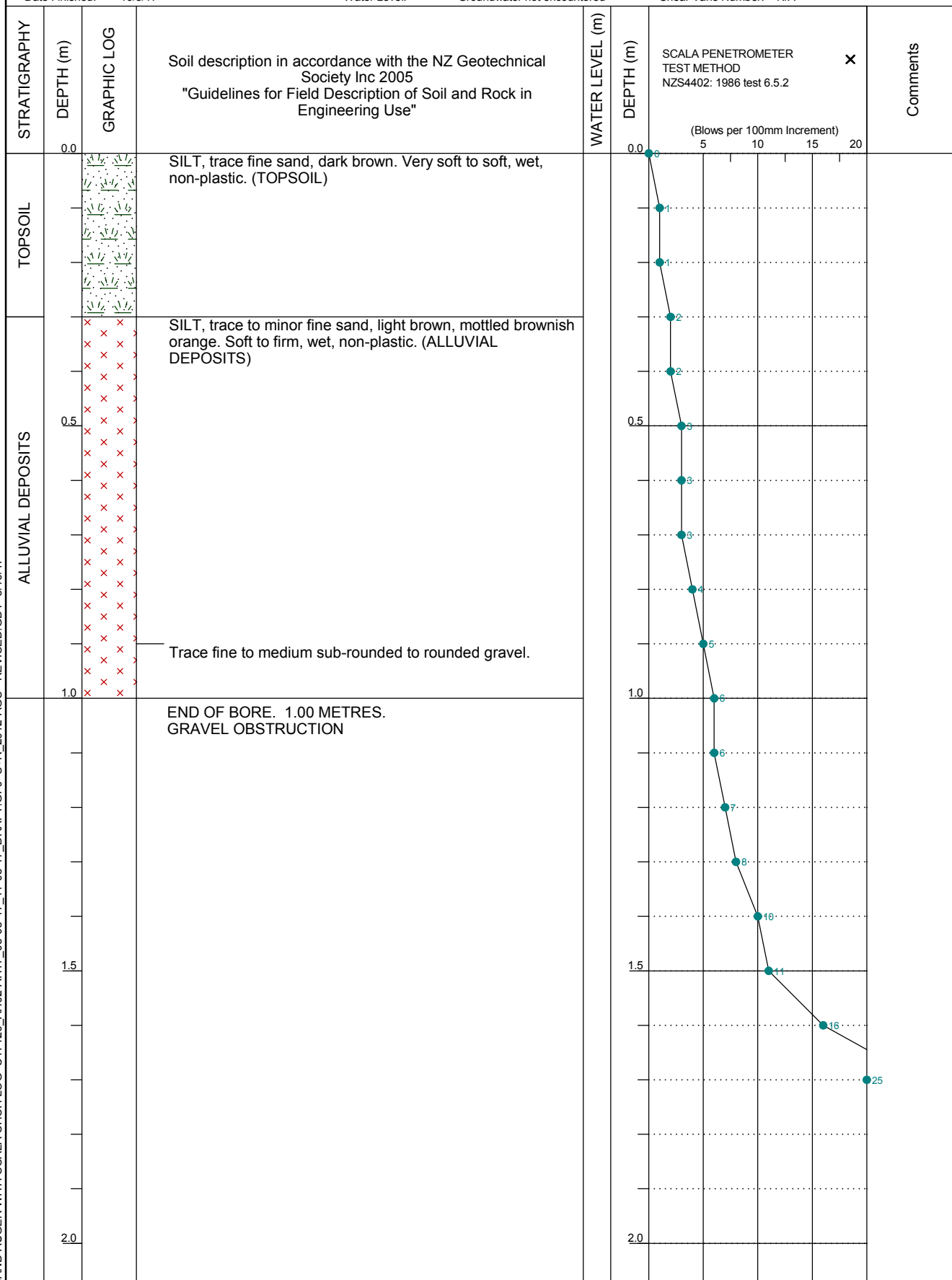
**Soil&Rock Consultants**  
For well-grounded solutions

CLIENT: Louise and Brent Harkerss  
PROJECT: Geotechnical Investigation, Leeston

Auger Hole No: AH08  
Sheet 1 of 1

Drill Type: 50mm Hand Auger	Project No: C17120	Logged By: MG
Drilled By: MG	Coordinates: 1542271 E, 5154356 N	Reviewed By: MN
Date Started: 10/8/17	Ground Elevation: 26m	Surface Conditions: Near Level, Grass
Date Finished: 10/8/17	Water Level: Groundwater not encountered	Shear Vane Number: N/A

HAND AUGER WITH SCALA CHCH LOG C17120\_AH02-AH17\_08-08-17\_11-08-17\_DRAFT.GPJ S+R\_2012-AGS - REVISED.GDT 5/10/17





**Soil & Rock Consultants**  
For well-grounded solutions

CLIENT: Louise and Brent Harkerss  
PROJECT: Geotechnical Investigation, Leeston

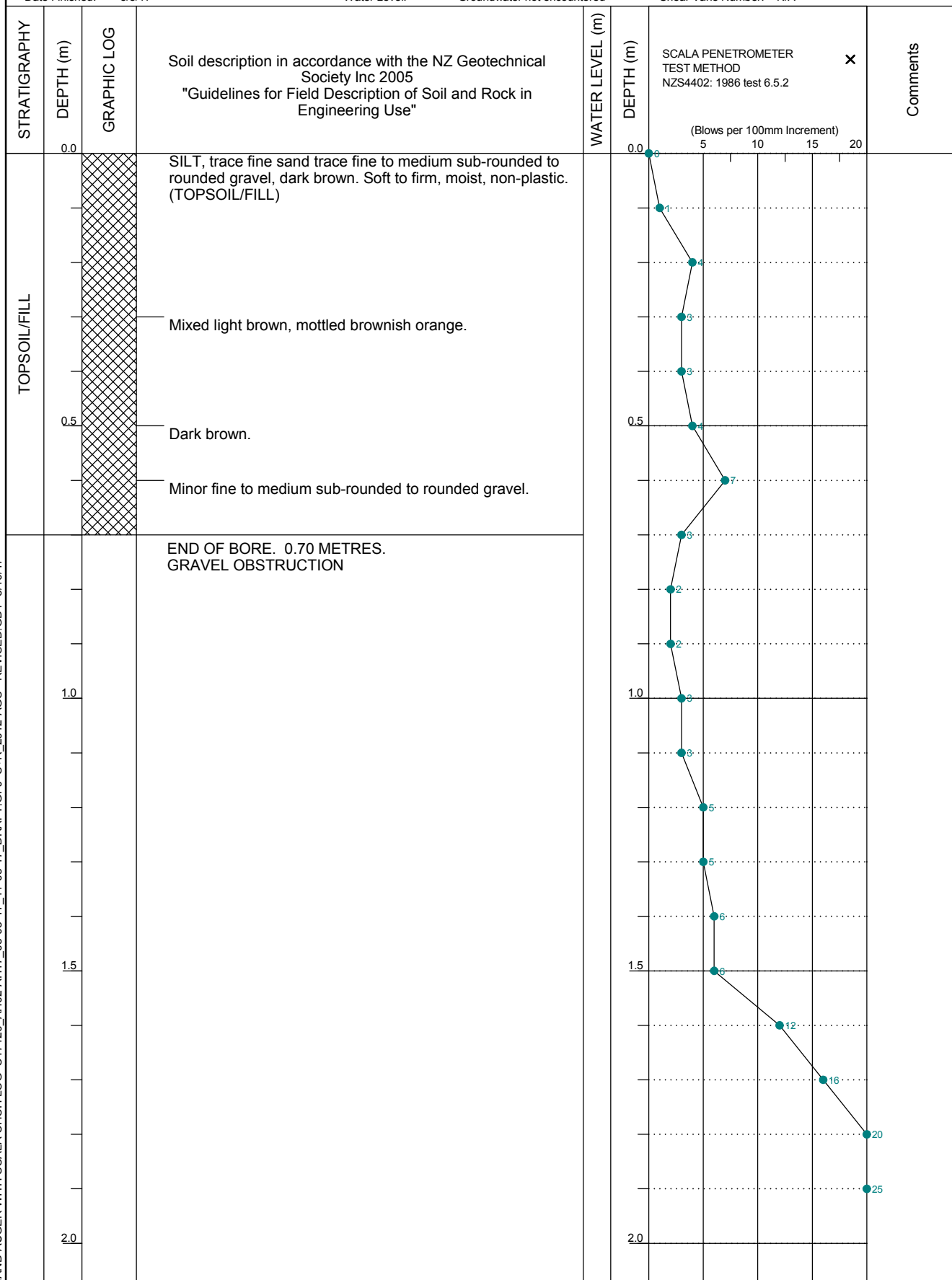
Auger Hole No: AH09  
Sheet 1 of 1

Drill Type: 50mm Hand Auger  
Drilled By: CN  
Date Started: 8/8/17  
Date Finished: 8/8/17

Project No: C17120  
Coordinates: 1542555 E, 5154262 N  
Ground Elevation: 26m  
Water Level: Groundwater not encountered

Logged By: MG  
Reviewed By: MN  
Surface Conditions: Near Level, Grass  
Shear Vane Number: N/A

HAND AUGER WITH SCALA CHCH LOG C17120\_AH02-AH17\_08-08-17\_11-08-17\_DRAFT.GPJ S+R\_2012-AGS - REVISED.GDT 5/10/17



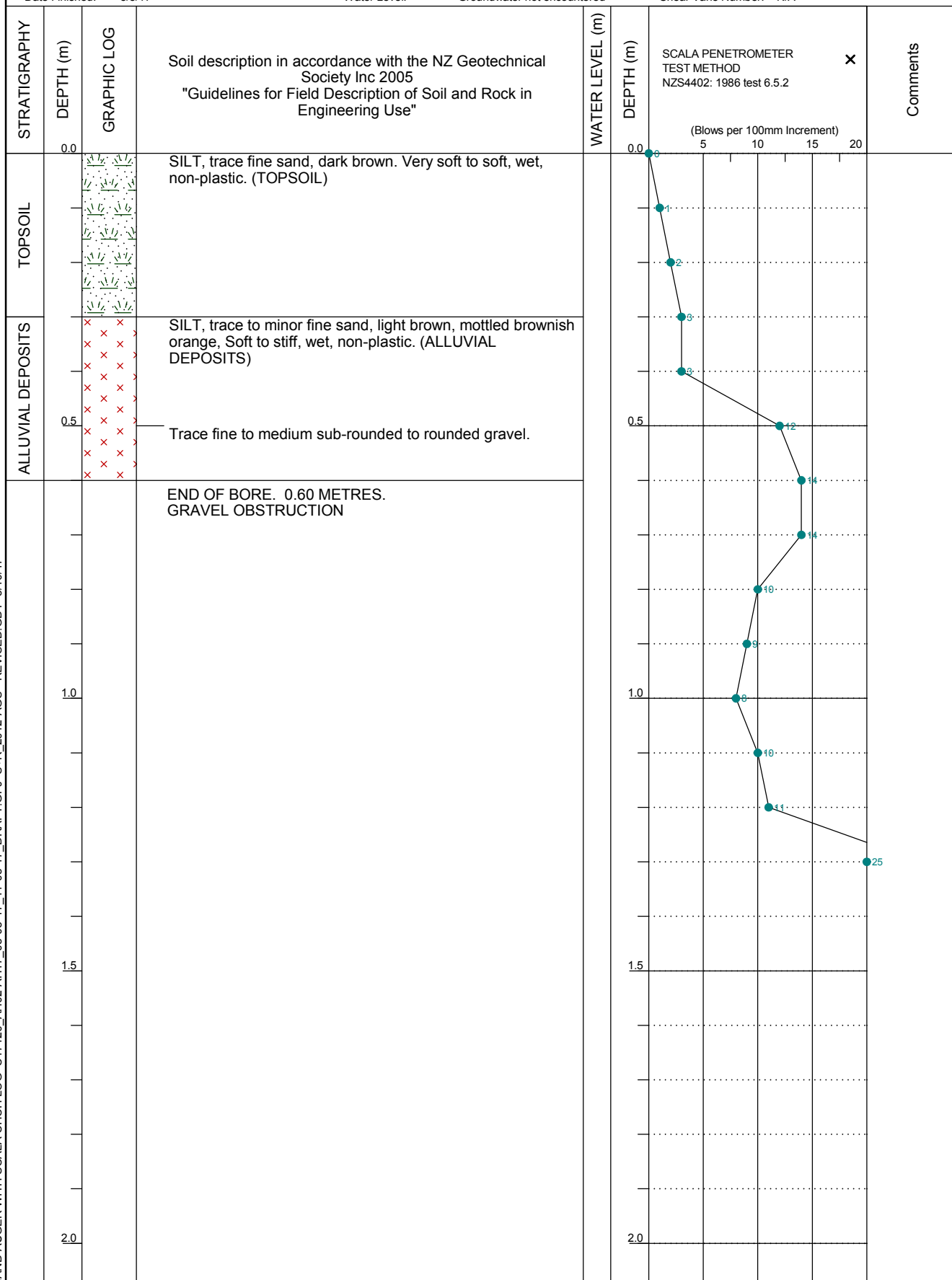


**Soil & Rock Consultants**  
For well-grounded solutions

CLIENT: Louise and Brent Harkerss  
PROJECT: Geotechnical Investigation, Leeston

Auger Hole No: AH10  
Sheet 1 of 1

Drill Type: 50mm Hand Auger	Project No: C17120	Logged By: MG
Drilled By: CN	Coordinates: 1542837 E, 5154266 N	Reviewed By: MN
Date Started: 8/8/17	Ground Elevation: 25m	Surface Conditions: Near Level, Grass
Date Finished: 8/8/17	Water Level: Groundwater not encountered	Shear Vane Number: N/A



HAND AUGER WITH SCALA CHCH LOG C17120\_AH02-AH17\_08-08-17\_11-08-17\_DRAFT.GPJ S+R 2012-AGS - REVISED.GDT 5/10/17



**Soil & Rock Consultants**  
For well-grounded solutions

CLIENT: Louise and Brent Harkerss  
PROJECT: Geotechnical Investigation, Leeston

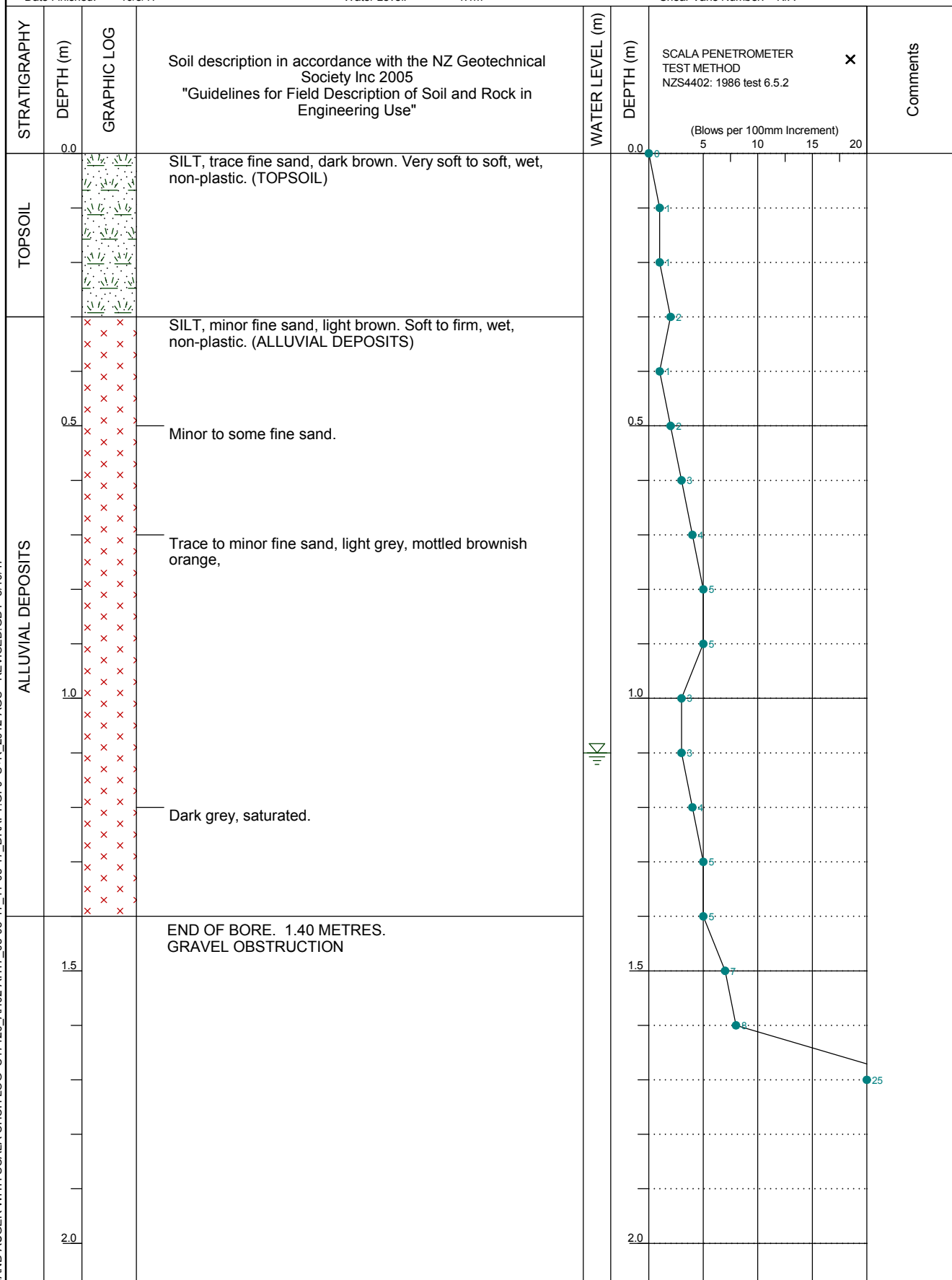
Auger Hole No: AH11  
Sheet 1 of 1

Drill Type: 50mm Hand Auger  
Drilled By: MG  
Date Started: 10/8/17  
Date Finished: 10/8/17

Project No: C17120  
Coordinates: 1542352 E, 5154126 N  
Ground Elevation: 26m  
Water Level: 1.1m

Logged By: MG  
Reviewed By: MN  
Surface Conditions: Near Level, Pasture  
Shear Vane Number: N/A

HAND AUGER WITH SCALA CHCH LOG C17120\_AH02-AH17\_08-08-17\_11-08-17\_DRAFT.GPJ S+R 2012-AGS - REVISED.GDT 5/10/17



Logged By:	MG
Reviewed By:	MN
Surface Conditions:	Near Level, Pasture
Shear Vane Number:	N/A

HAND AUGER WITH SCALA CHCH LOG C17120 AH02-AH17 08-08-17 11-08-17 DRAFT.GPJ S+R 2012-AGS - REVISED.GDT 5/10/17



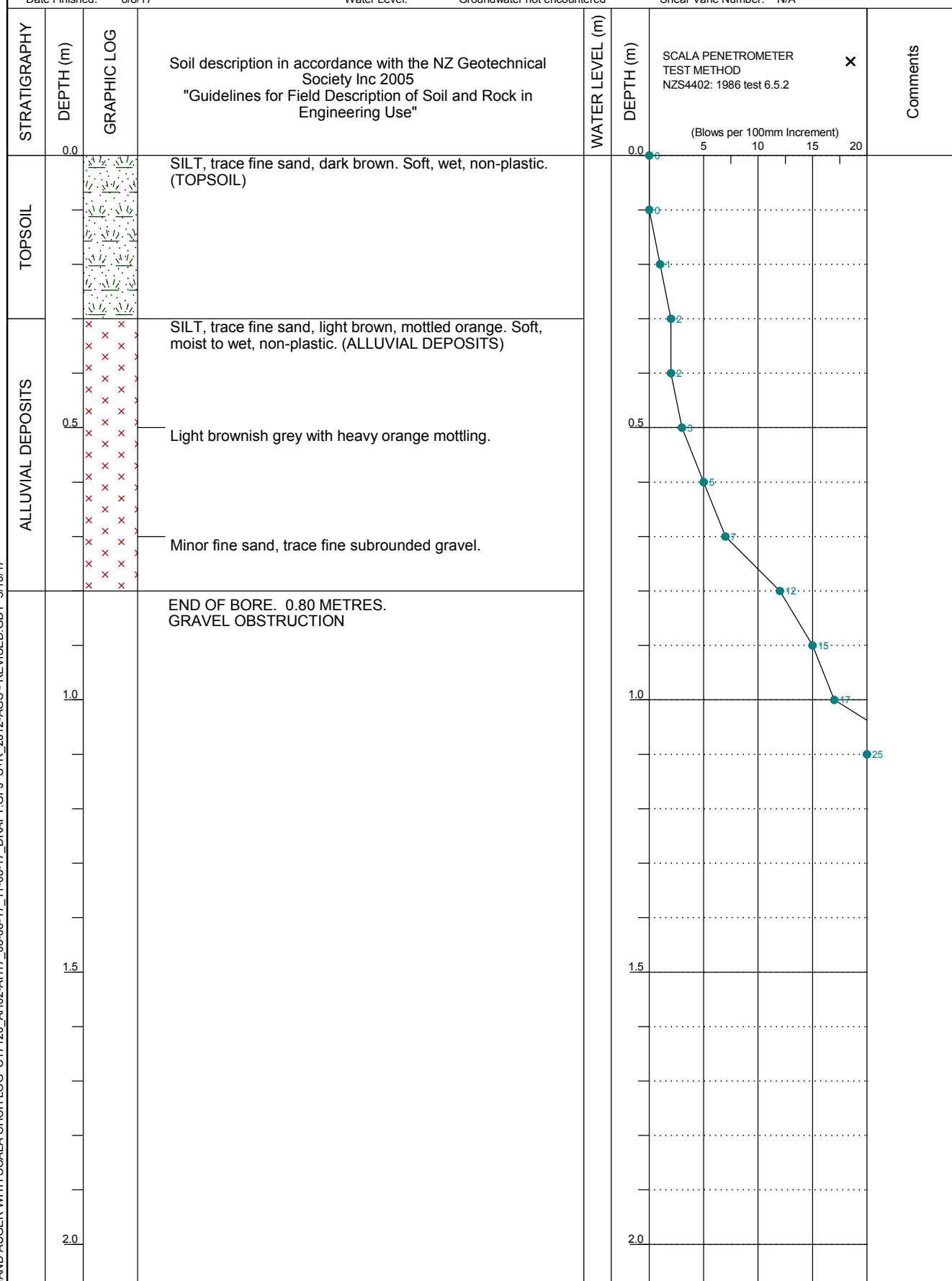
**Soil & Rock Consultants**  
For well-grounded solutions

CLIENT: Louise and Brent Harkerss  
PROJECT: Geotechnical Investigation, Leeston

Auger Hole No: AH13  
Sheet 1 of 1

Drill Type: 50mm Hand Auger	Project No: C17120	Logged By: CN
Drilled By: MG	Coordinates: 1542846 E, 5154103 N	Reviewed By: MN
Date Started: 8/8/17	Ground Elevation: 25m	Surface Conditions: Near Level, Grass
Date Finished: 8/8/17	Water Level: Groundwater not encountered	Shear Vane Number: N/A

HAND AUGER WITH SCALA CHCH LOG C17120\_AH02-AH17\_08-08-17\_11-08-17\_DRAFT.GPJ S+R\_2012-AGS - REVISED.GDT 5/10/17





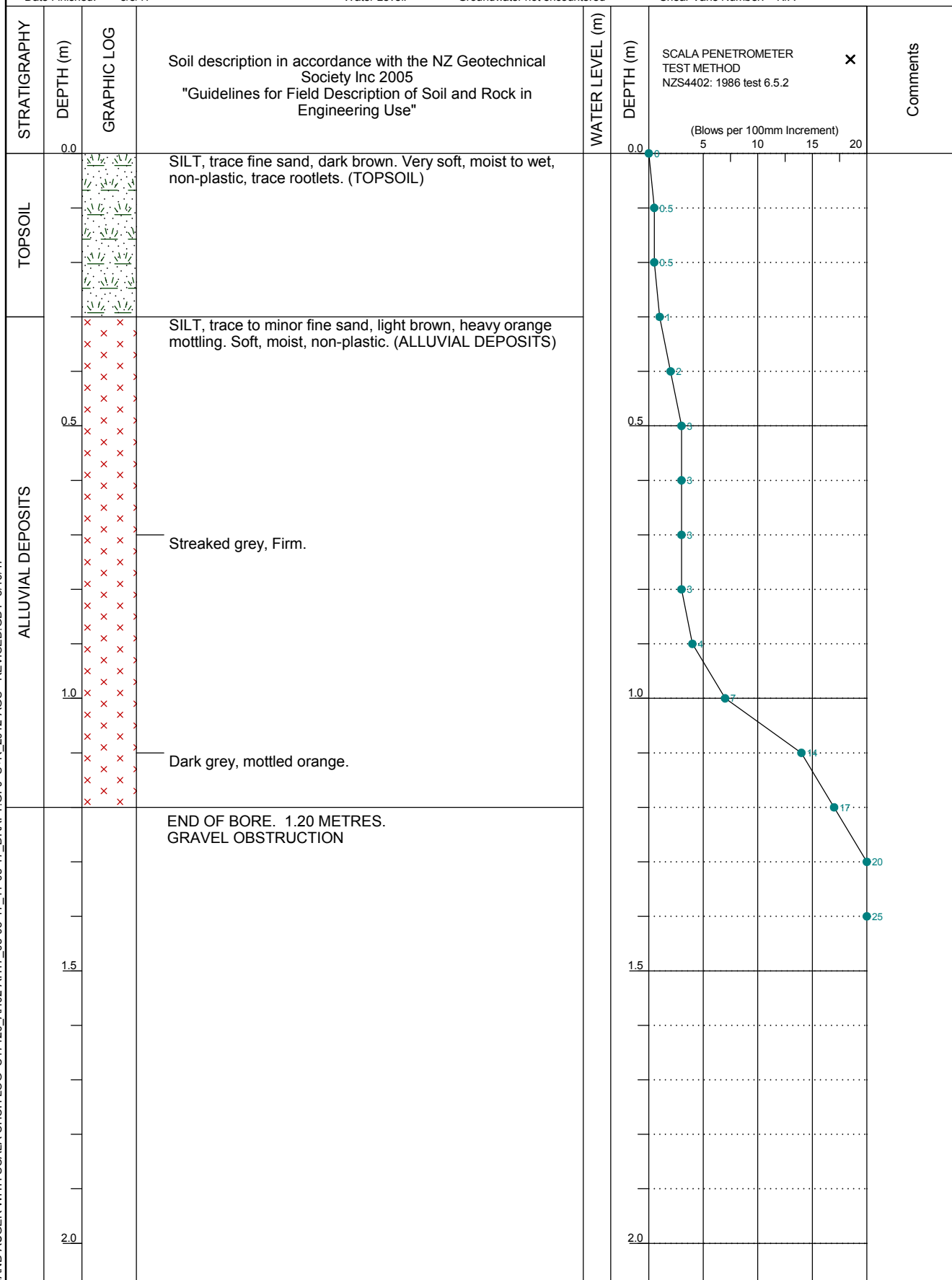
**Soil&Rock Consultants**  
For well-grounded solutions

CLIENT: Louise and Brent Harkerss  
PROJECT: Geotechnical Investigation, Leeston

Auger Hole No: AH14  
Sheet 1 of 1

Drill Type: 50mm Hand Auger	Project No: C17120	Logged By: CN
Drilled By: MG	Coordinates: 1542632 E, 5153991 N	Reviewed By: MN
Date Started: 8/8/17	Ground Elevation: 24m	Surface Conditions: Near Level, Pasture
Date Finished: 8/8/17	Water Level: Groundwater not encountered	Shear Vane Number: N/A

HAND AUGER WITH SCALA CHCH LOG C17120\_AH02-AH17\_08-08-17\_11-08-17\_DRAFT.GPJ S+R 2012-AGS - REVISED.GDT 5/10/17





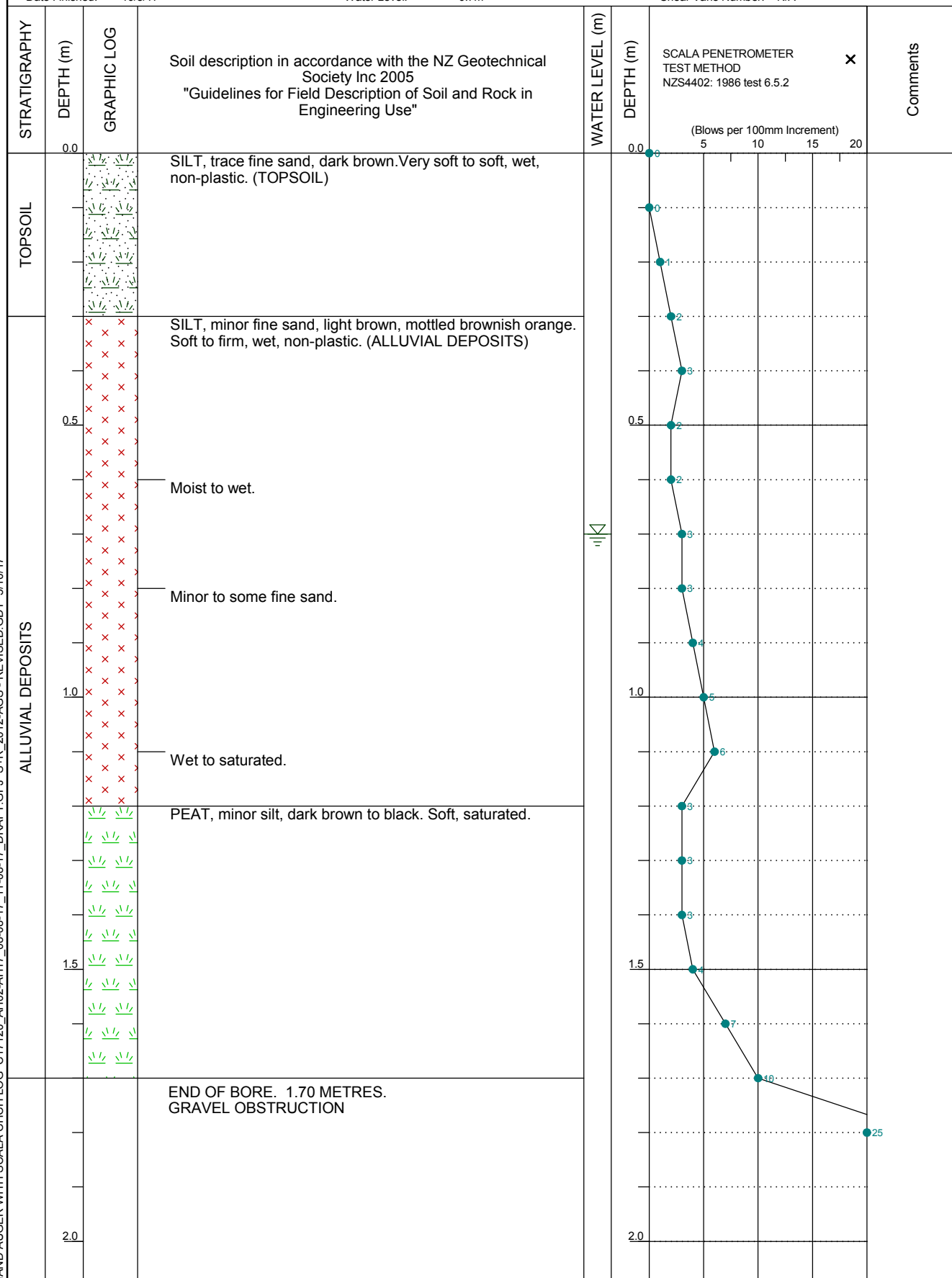
**Soil & Rock Consultants**  
For well-grounded solutions

CLIENT: Louise and Brent Harkerss  
PROJECT: Geotechnical Investigation, Leeston

Auger Hole No: AH15  
Sheet 1 of 1

Drill Type: 50mm Hand Auger	Project No: C17120	Logged By: MG
Drilled By: MG	Coordinates: 1542333 E, 5153916 N	Reviewed By: MN
Date Started: 10/8/17	Ground Elevation: 26m	Surface Conditions: Near Level, Pasture
Date Finished: 10/8/17	Water Level: 0.7m	Shear Vane Number: N/A

HAND AUGER WITH SCALA CHCH LOG C17120\_AH02-AH17\_08-08-17\_11-08-17\_DRAFT.GPJ S+R 2012-AGS - REVISED.GDT 5/10/17





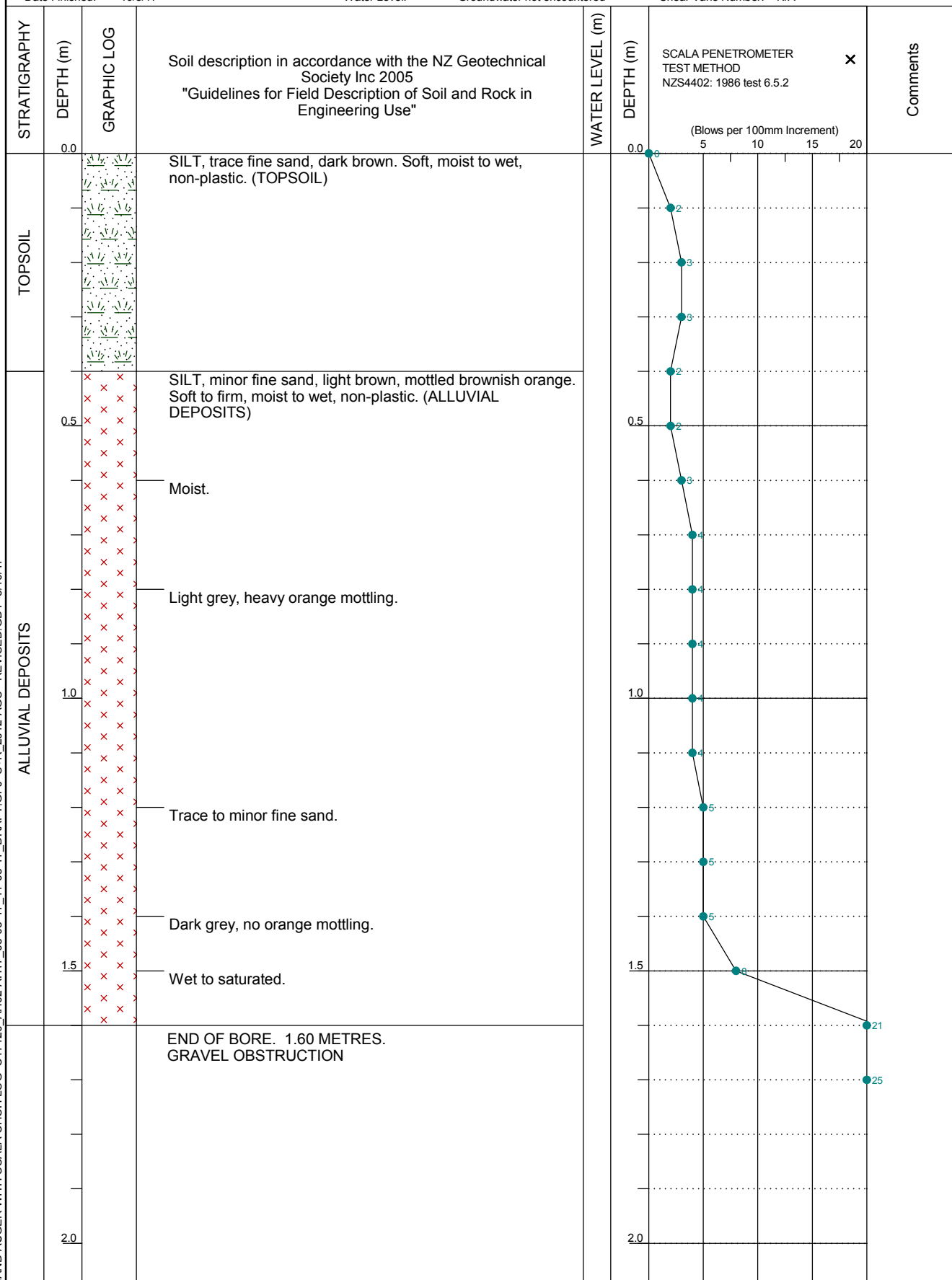
**Soil & Rock Consultants**  
For well-grounded solutions

CLIENT: Louise and Brent Harkerss  
PROJECT: Geotechnical Investigation, Leeston

Auger Hole No: AH16  
Sheet 1 of 1

Drill Type: 50mm Hand Auger	Project No: C17120	Logged By: MG
Drilled By: MG	Coordinates: 1542215 E, 5153782 N	Reviewed By: MN
Date Started: 10/8/17	Ground Elevation: 26m	Surface Conditions: Near Level, Grass
Date Finished: 10/8/17	Water Level: Groundwater not encountered	Shear Vane Number: N/A

HAND AUGER WITH SCALA CHCH LOG C17120\_AH02-AH17\_08-08-17\_11-08-17\_DRAFT.GPJ S+R\_2012-AGS - REVISED.GDT 5/10/17





CLIENT: Louise and Brent Harkerss  
PROJECT: Geotechnical Investigation, Leeston

Test Pit No: TP01  
Sheet 1 of 1

Drill Type: 16 Tonne Wheeled Excavator	Project No: C17120	Logged By: CN
Drilled By: Densem Contractors Ltd	Coordinates: 1542833 E, 5154999 N	Reviewed By:
Date Started: 8/8/17	Ground Elevation: 26m	Surface Conditions: Near Level, Grass
Date Finished: 8/8/17	Water Level: 0.6m	Shear Vane Number: N/A

STRATIGRAPHY	DEPTH (m)	GRAPHIC LOG	Soil description in accordance with the NZ Geotechnical Society Inc 2005 "Guidelines for Field Description of Soil and Rock in Engineering Use"	WATER LEVEL (m)	DEPTH (m)	SCALA PENETROMETER TEST METHOD NZS4402: 1986 test 6.5.2 (Blows/100mm)	LABORATORY TESTS
TOPSOIL	0.0		SILT, trace fine sand, dark brown. Soft, moist, non-plastic, trace rootlets. (TOPSOIL)	0.6	0.0		
ALLUVIAL DEPOSITS	0.5		SILT, trace fine sand, light brownish grey, mottled orange, Soft to firm, moist, non-plastic. (ALLUVIAL DEPOSITS)		0.5		
	1.0		Fine to coarse sandy fine to coarse sub-rounded to rounded GRAVEL, trace silt, grey, Dense, saturated.		1.0		
	1.5				1.5		
	2.0		END OF TEST PIT. 1.6 METRES. HOLE COLLAPSE		2.0		
	2.5				2.5		
	3.0				3.0		
COMMENTS:							

TEST PIT LOG C17120\_TP01\_08-08-17\_DRAFT.GPJ S+R\_2012-AGS - REVISED.GDT 5/10/17

# Appendix 6: Flood Hazard Assessment

15 August 2017

Baseline Group  
40 Welles Street  
Christchurch Central  
Christchurch 8011  
Attn: Jalesh Devkota

Dear Jalesh

**LOT 1, 2, 3, & 4 DP 82846, LOT 1 DP 9138, LOT 2 DP 319397, LOT 2 DP 365379, PART RS 5482 & 5483, SECTION 7 LEESTON SETT – HIGH STREET, LEESTON**

### **Flood Risk**

The property is located in an area that can be affected by surface water runoff and ponding during local rainfall events.

The property has not been regularly monitored by Environment Canterbury following local rainfall events, and information on past flooding is limited to photographs taken in 1986 and 2013.

Photograph No. **621** was taken on 24/08/1986 following a rainfall event where 72.7 mm was recorded at Greenpark, 81.3 mm at Lincoln, 96.8 mm at Burnham and 105.1 mm at Dunsandel in the 72 hours to 9 am on 23/08/1986. The return period of the rainfall at Greenpark and Lincoln is estimated at 2 - 5 years, with the slightly heavier rainfall at Burnham and Dunsandel having an estimated return period of 5 - 10 years. Antecedent conditions at the time were relatively wet due to rainfall earlier in the month.

Photographs No. **0393, 0408, 0421, 0788, and 0802** were taken on 23/06/2013 following a rainfall event where 117.6 mm was recorded at Leeston in the 72 hours to 9 am on 22 June 2013. This rainfall had a return period of approximately 10 years, however this was following a rainfall of more than 60 mm earlier in the week.

The photographs show rainfall runoff flowing across the property and ponding behind barriers to flow and in natural depressions. Note that in both cases the photographs were taken 24 hours or more after the bulk of the rain had fallen, and therefore will not show flooding at its peak. In larger flood events it is likely that more extensive areas than those shown as flooded in the photographs will be affected.

The property is within part of the Selwyn District that has been flown by LiDAR; an airborne laser system that maps the ground topography. The accuracy of this topographical survey is considered to be in the order of  $\pm 150$  mm or better. Enclosed for your information is a **map showing ground level variations** at the property derived from LiDAR data obtained in 2015. These levels are presented in meters above mean sea level (m.a.m.s.l.) – Lyttelton 1937 Datum.

Selwyn District Council have begun modelling of rainfall runoff across the district and this investigation is due to be completed early next year. Until this work is completed, the best available information about rainfall runoff at the property is limited to the flooding photographs and LiDAR data.

**Our Ref:** HAZA/FLD/ASS/CHC/17556  
**Your Ref:**  
**Contact:** Callum Margetts

Chapter 11 of the Canterbury Regional Policy Statement provides a framework for managing natural hazard risk in Canterbury. Policy 11.3.2 of this document states that development should be avoided in areas subject to inundation in a 200 year return period flood event unless a range of conditions are met. These include the requirement for new buildings to have a floor level above the 200 year return period design flood level.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Callum Margetts', written in a cursive style.

Callum Margetts

**Natural Hazards Analyst**

Encl.      Photograph No. 621 (24/08/1986)  
             Photographs No. 0393, 0408, 0421, 0788, & 0802 (23/06/2013)  
             2015 LiDAR Map



621. Leeston. (West)

24/08/1986

0393 - Leeston. Looking west - 23-06-2013



0408 - Leeston. Looking south toward Leeston Dunsandel Road - 23-06-2013



0421 - Leeston. Looking north-east along High Street - 23-06-2013







0802 - Looking south-west at Leeston Dunsandel Road, just west of Ellesmere College - 23-06-2013

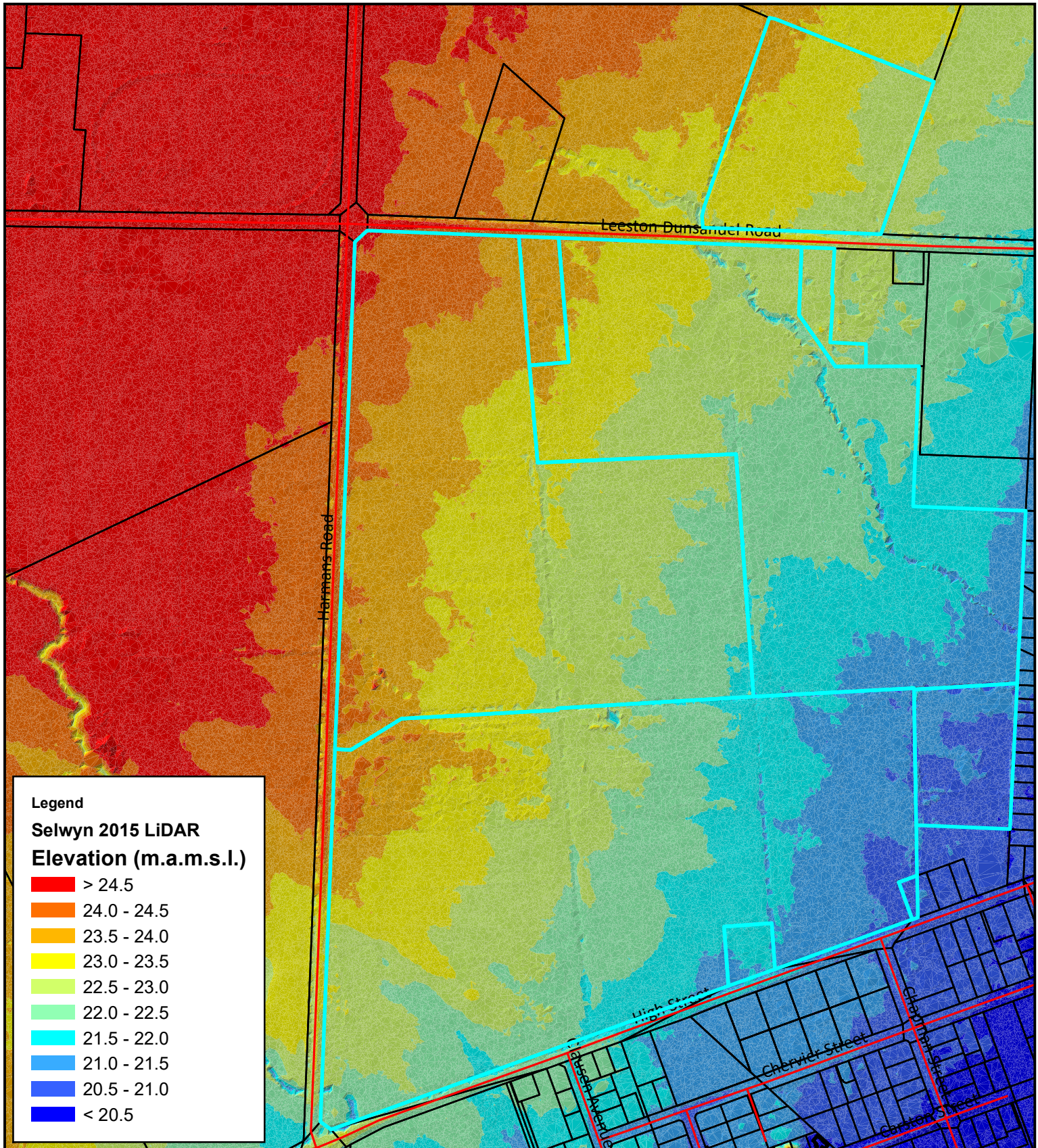
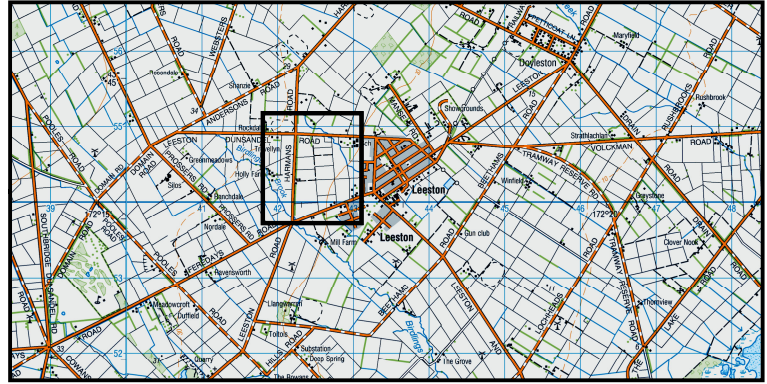


# High Street, Leeston - 2015 LiDAR Map

## Legend

-  Roads
-  Land Parcels

0 100 200 400  
Metres



## Adrianne Tisch

---

**From:** Callum Margetts <Callum.Margetts@ecan.govt.nz>  
**Sent:** Wednesday, 25 September 2019 8:24 AM  
**To:** Adrianne Tisch  
**Cc:** Alice Butler  
**Subject:** RE: [BLG-6129] Flood Hazard Assessment for Leeston

Hi Adrianne

As discussed on the phone, the 2015 LiDAR is the most up to date LiDAR

Let me know if you have any further questions.

Regards  
Callum

# Appendix 7: Preliminary Site Investigation

***Soil Contamination Risk  
Stage 1 - Preliminary Site Investigation Report***

***Proposed Plan Change  
Leeston Dunsandel Road, Harmans Road and  
High Street, Leeston***

*July 2017*



***Malloch Environmental Ltd***

*801 East Maddisons Road, Rolleston 7614*

*021 132 0321*

*[www.mallochenviro.co.nz](http://www.mallochenviro.co.nz)*

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*Asbestos Surveys • Soil Contamination Investigations • Environmental Planning*

## CONTENTS

1	Executive Summary.....	3
2	Objectives of the Investigation .....	3
3	Scope of Work Undertaken.....	3
4	Site Identification .....	4
5	Site Description and Surrounding Environment .....	5
6	Geology and Hydrology.....	5
7	Site History.....	5
7.1	Previous Site Ownership and Use .....	5
7.2	District Council Records .....	6
7.3	Regional Council Records.....	7
7.4	LINZ Records.....	7
7.5	Review of Historic Aerial Photographs .....	7
7.6	Local Information .....	8
7.7	Site Visit.....	8
8	HAIL Uses and Possible Types of Contaminants Associated with Past Use .....	12
9	Basis for Soil Guideline Values (SGV) .....	14
9.1	Activity Description .....	14
9.2	Zoning.....	14
9.3	Soil Guideline Values.....	14
10	Site Characterisation and Recommendation .....	14
11	Planning Status.....	15
12	Conclusion.....	15
13	Limitations.....	16

## APPENDICES

A	Historic Certificates of Title List
B	Historic Aerial Photographs
C	LLUR Statement

## **1 Executive Summary**

The subject site involves seven adjacent rural lots in western Leeston, totalling approximately 79ha, mostly bounded by Leeston Dunsandel Road, Harmans Road and High St, Leeston, Canterbury. It is proposed to apply for a plan change that will eventually allow residential development of the area. This will ultimately result in a change of use following subsequent subdivision and disturbance of soils. The Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Health) Regulations 2011 (NЕСS) require an assessment of the likelihood of soil contamination being present. It is noted also that Malloch Environmental Ltd is obligated to consider the requirements of Section 10 (4) of the Health and Safety at Work (Asbestos) Regulations 2016. This report details the work undertaken to assess the risks.

The vast majority of the plan change area has been used for pastoral uses all its known history and it is highly unlikely that there would be a risk to human health if these areas were to be developed for an eventual residential use.

However, a variety of current and historic HAIL uses have been confirmed on a number of smaller areas within the proposed plan change area. The uses on these areas include a commercial agrichemical applicators yard, contractor's yards, a possible farm pit and a number of locations with pre 1940's buildings, which pose a significant lead risk. All of these uses have the potential to have caused contamination of soil that may pose a risk to human health, and further detailed investigations would be required for these areas at subdivision stage. It is expected that even if contamination is present, the logistical and financial costs to remediate any contamination would not be so onerous to preclude eventual residential development and use.

In terms of the proposed plan change the site does not have any significant risks that could not be worked through during the subsequent subdivision and development stages.

In terms of planning status at the time of writing of this report, the NESCS does apply to the site and resource consent is required if any of the activities outlined in the NESCS are proposed that involve the identified risk areas.

## **2 Objectives of the Investigation**

This report has been prepared in accordance with the Ministry for the Environment's "Contaminated Land Management Guidelines No 1: Reporting on Contaminated Sites in New Zealand". This report includes all requirements for a Stage 1 preliminary site investigation report. This is one of the methods described in Section 6(3) of the NESCS to establish whether the regulations apply. The objective is to determine whether there is any risk of potential contamination that would warrant further investigation.

## **3 Scope of Work Undertaken**

The scope of the work undertaken has included:

- Review of Selwyn District Council property files
- Obtaining ECan data from the Listed Land Use Register (LLUR)
- Search of LINZ NZ orchard database
- Review of historic aerial photos
- Review of historic titles
- Site visit
- Interviews with former and current owners
- Preparation of report in accordance with MfE guidelines

#### 4 Site Identification

The site is located to the west of the township of Leeston, generally in the area bounded by Leeston Dunsandel Road, Harmans Road and High St, Leeston, Canterbury, as shown on the plan in **Figure 1** below. The site is legally described as Lots 1 - 4 DP 82846, Lot 2 DP 365379, Lot 1 DP 9138, Pt RS 5482 and Pt RS 5483 and has a total area of approximately 79 ha.

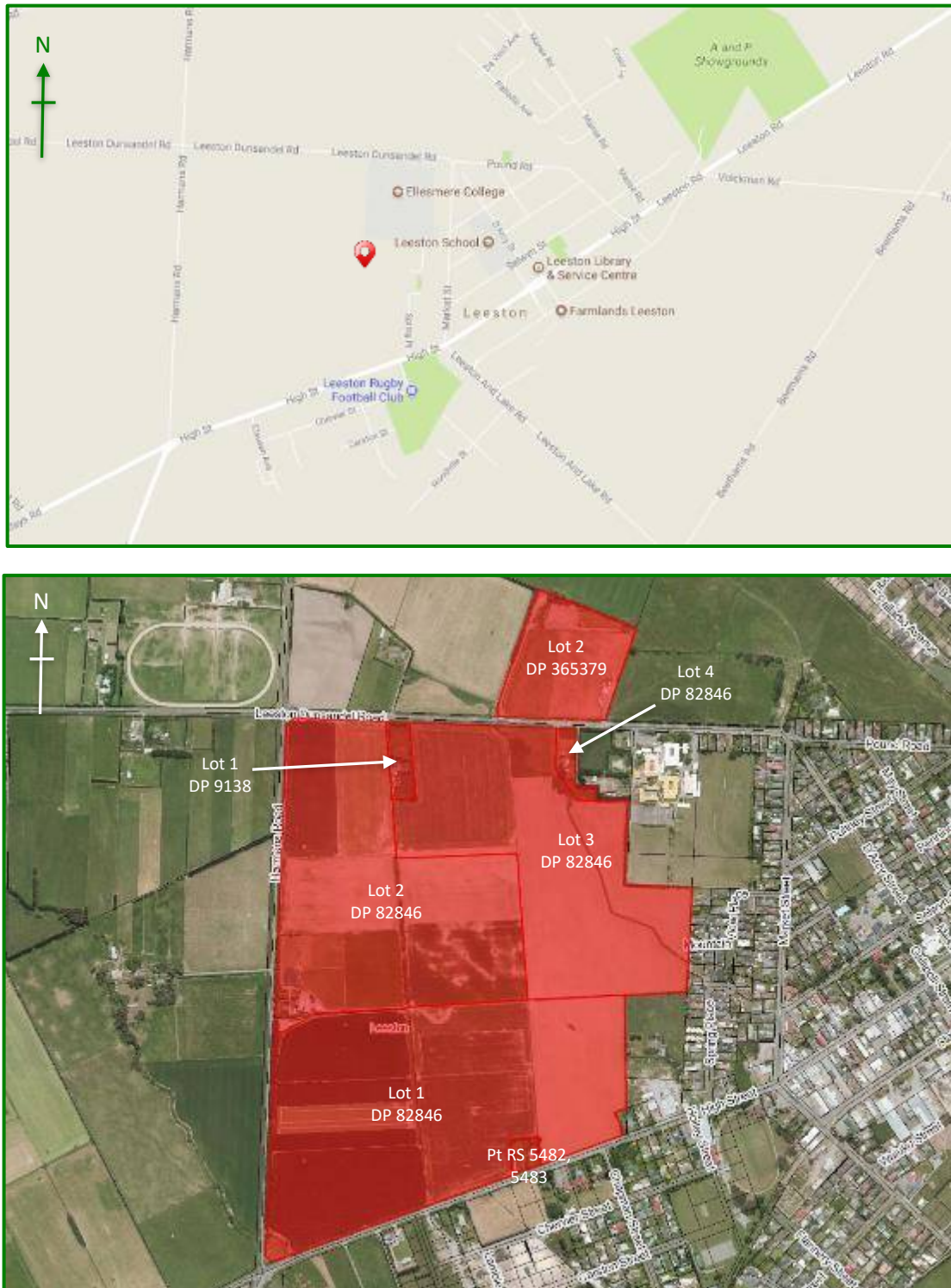


Figure 1 – Location Plan

## 5 Site Description and Surrounding Environment

The subject site is flat rural land on the outskirts of the township of Leeston. There are dwellings and associated outbuildings on Lot 4 DP 82846, Lot 1 DP 9138, Lot 2 DP 82846 and Pt RS 5482/3. Lot 2 DP 365379 has a number of sheds on it, including a large commercial type shed. The remaining lots have no buildings or structures on them and are in pasture. Leeston Creek runs through the eastern part of Lot 3 DP 82846. The subject site is clearly defined by existing hedges and fences. The surrounding area is residential to the east and south, with Ellesmere College to the north-east of the subject site. There is similar rural farmland to the north and west. The main street of Leeston lies approximately 300m to the east.

## 6 Geology and Hydrology

The ECan GIS describes the soils and soil trace elements as shown below:

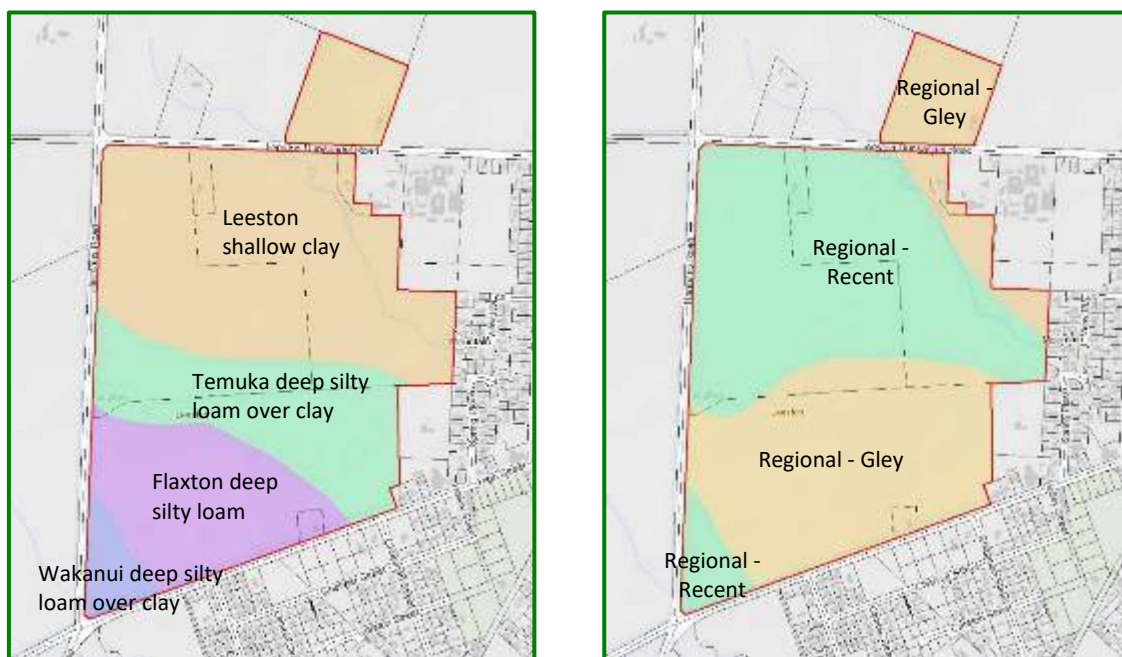


Figure 2 – Soils Plan

Wells in the area indicate that topsoils are underlain by a one metre layer of clay and then sandy gravels. The site lies over the unconfined/semi-confined gravel aquifer system. Ground water levels recorded on nearby bore logs are between 0.8m and 2.8m deep. The direction of ground water flow is generally in a south-easterly direction. There are a number of active domestic supply wells within close proximity of the subject site, including one on the subject site. The nearest active downgradient community supply well is approximately 400m to the south-east. Leeston Creek runs through Lot 3 DP 82846. There are open drains which run down the northern side of Leeston Dunsandel Rd, the western side of Harmans Rd and the northern side of High St. Birdlings Brook also passes through the south-western corner of Lot 1 DP 82846. There are various farm drains across the property.

## 7 Site History

### 7.1 Previous Site Ownership and Use

Historic Certificates of Title were searched for each lot on the subject site. Due to the complexity and number of titles, reproducing a summary for each lot in this report would involve multiple pages and does not add value to the reader. Accordingly, a brief summary only is provided. Full

details of the ownership history can be provided by request to Malloch Environmental Ltd if required.

The lots have been owned mostly by farming families since the early 1900s. The occupations listed have almost exclusively been farming related for all of the lots.

A summary of the Historic Titles viewed is included in **Appendix A**.

## **7.2 District Council Records**

The Selwyn District Council property file was searched and no references directly related to soil contamination risk were found. Building permits/consents included:

### **Lot 2 DP 365379**

1973 – Erect a haybarn

### **Lot 2 DP 82846**

1971 – Install septic tank  
1978 – House extension additional bedrooms  
1988 – House repairs  
1989 – Solid fuel heater  
1990 – Cover over stockyards  
1991 – 128m<sup>2</sup> car shed  
1992 – Hayshed  
1996 – Upgrade garage to sleepout

### **Lot 4 DP 82846**

1980 – House extension – washhouse and toilet  
1985 – Garage  
2001 – Solid fuel heater  
2002 – Double garage

### **Lot 1 DP 9138**

1963 – House extension – washhouse and bathroom  
1965 – Polite storage shed  
1966 – Garage  
1967 – Implement shed  
1974 – House extension  
1975 – Tanker room  
1977 – Septic tank and drainage  
1982 – Solid fuel heater  
1987 – Reclad dwelling in stucco  
1992 – Double garage  
2011 – Solid fuel heater

### **Pt RS 5482 & 5483**

1966 – Machinery shed  
1968 – Septic tank  
1996 – Solid fuel heater  
1998 – House extension – additional bedrooms

### 7.3 Regional Council Records

The ECan Listed Land Use Register Statement lists Lot 2 DP 82846, 56 Harmans Rd, on the subject site for 'A10 - Persistent pesticide bulk storage or use' with horticultural activities noted in the 2003 to present day aerial photographs. The site is listed as 'not investigated'.

There are also adjacent sites listed on the LLUR. Ellesmere College at 21 Leeston Dunsandel Rd is listed for 'A10 - Persistent pesticide bulk storage or use' with sports fields noted in the 1984 to present day aerial photographs. Holley House at 125A High St is listed for 'G3 - Landfill sites' with a pit noted. WH Cochrane and Sons Ltd, also at 125A High St, is listed for 'A17 - Storage tanks or drums for fuel, chemicals or liquid waste' with a diesel storage tank noted in the 1950s/1960s. All of these adjacent sites are listed as 'not investigated'. See LLUR Statement in **Appendix C**.

Resource consent information was sourced from the GIS mapping system. There is an active resource consent for Lot 2 DP 82846 on the subject site for bore water take. Adjacent sites have resource consents for earthworks in the Leeston Creek and storm water discharge.

### 7.4 LINZ Records

The LINZ Orchard layer does not show the subject site or adjacent sites as having listed orchards.

### 7.5 Review of Historic Aerial Photographs

A total of seven aerial photos (see copies in **Appendix B**) have been used to assess the historic use of the site as detailed below:

- The earliest photo is from **1942** and has been sourced from ECan's GIS. The subject site is mostly in farming pasture. There is a dwelling, sheds and what appears to be some animal pens on Lot 4 DP 82846. There is a dwelling, garage and sheds on Lot 1 DP 9138. There are also dwellings and sheds in the south-western corner of Lot 2 DP 82846 and on Pt RS 5482/3. The surrounding land is similar rural farmland. The township of Leeston can be seen to the east. To the east of Lot 4 DP 82846 a larger building can be seen which is the old flax mill being used as a boot manufacturing factory. A shallow depression in the ground can be seen beyond the subject site, below the southern boundary of the dogleg part of Lot 3 DP 82846.
- A photo from **1966** is sourced from ECan's GIS and shows that an additional shed has been built in the southern part of Lot 4 DP 82846. The dwelling on Lot 1 DP 9138 has been replaced and some sheds have been constructed to the south of the dwelling. The shallow depression seen on adjacent land has been excavated further. There are no other significant changes on the subject site or the surrounding area.
- A photo from **1975** is sourced from ECan's GIS and shows that a shed has been built on Lot 2 DP 365379 and a shed built on Pt RS 5482/3. The dwelling has been extended and a garage built on Lot 1 DP 9138. There are no other significant changes on the subject site or the surrounding area.
- A photo from **1984** is sourced from ECan's GIS and shows no changes to the subject site. Ellesmere College has been built to the east of the subject site. The pit below the southern boundary of the dogleg of Lot 3 DP 82846 appears to have been increased in size.

- A photo from **1994** is sourced from ECan's GIS shows that additional sheds have been built to the east and south of the dwelling on Lot 2 DP 82846. There are no other significant changes on the subject site or the surrounding area.
- A photo from **2004** is sourced from ECan's GIS and shows that a tunnel house has been built to the north of the dwelling on Lot 2 DP 82846. An extension has been added to the rear of the dwelling at Lot 4 DP 82846, along with a shed to the south of the dwelling. There are no other significant changes on the subject site or the surrounding area.
- The most recent aerial photo reviewed, dated **2012**, sourced from ECan's GIS shows that the shed on Lot 2 DP 365379 has been replaced by a larger shed along with some smaller sheds. The area around these sheds appears to be used for the storage of building materials or machinery. There is also machinery or building materials stored at the north-western corner of this lot, as well as some sort of market gardening occurring in the northern part of the lot. A garage has been built to the east of the dwelling on Lot 4 DP 82846. More sheds have been built on Lot 2 DP 82846 and there is machinery stored around these sheds, as if it was being used as a contracting yard.

## 7.6 Local Information

An interview with a former owner of the site, Murray Marshall, was conducted on the 17<sup>th</sup> July, 2017. The subject site was the location of the family farm where Murray grew up. Murray recalls that the family home was on Harmans Rd, opposite Holly Farm. He remembers that Lot 1 DP 9138 and Pt RS 5482/5483 were always separate lots and not part of the family farm. The farm was one of the first dairy farms in the district and ran a few dozen cows as well as growing crops. He doesn't recall seeing any sheep farming or any sheep yards on the site. There was also no farm pit as the family used the pit at Holly farm on the opposite side of Harmans Rd.

## 7.7 Site Visit

A site visit was carried out on 18<sup>th</sup> July 2017. The following points of interest were noted:

- **Pt RS5482/5483, 149 High Street** – An older dwelling and outbuildings exist on this lot. The site appears to be used for a lifestyle rural residential use.
- **Lot 1 DP 9138, 85 Leeston Dunsandel Road** – An older dwelling and outbuildings exist on this lot. The site appears to be used for a lifestyle rural residential use.



- **Lot 4 DP 82846, 45 Leeston Dunsandel Road** - An older dwelling and outbuildings exist on this lot. A number of the outbuildings were in a very deteriorated state. The site appears to be used for a lifestyle rural residential use. A number of the fences included recycled old painted corrugated iron.



- **Lot 2 DP 365379, 60 Leeston Dunsandel Road** – the area containing buildings appears to be the work yard for contractors. The shed was unlocked and open when visited but no-one was present to advise on uses. The site had two above ground fuel tanks. One was a newer looking petrol tank, and the other an older tank likely for diesel. At the north west corner, it appeared to be used as a transport yard of some sort. The gate to access that area was locked so close inspection was not possible.





Petrol tank



Diesel tank appears plumbed into garage



Main shed, mix of concrete and dirt floor



Transport yard??? North western corner

- Lot 2 DP 82846, 56 Harmans Road – This address is the residential and commercial base for Ellesmere Chemical Applicators, and also grows and sells camellias and rhododendrons. The surrounding paddocks are also under the same ownership. The



current owner Brent Harkerss was interviewed. He advised they had been at the site for about 16 years and prior to that the various outbuildings were solely farm related. The site includes the older original dwelling, which has had significant repairs and partial replacement following a fire. An adjacent sleepout is clad in cement board which is likely to contain asbestos. The cladding was in good condition. Various outbuildings exist to house vehicles and machinery. A raised shed contained the hazardous chemical store and adjacent to that was concrete pad used for a chemical mixing and wash down area. These discharged to a large yard sump which drained to an underground store tank. This tank had an overflow pipe running into the adjacent drain. A modern diesel tank sat outside one of the sheds. The paddocks have been used for grazing stock and it is thought there was some sort of small farm pit or old quarry in the north of the south-eastern paddock. Mr Harkerss said the grass grew well in this area due to the claypan having been removed and was visually different to the surrounding paddock.



Camelia and rhododendron nursery



Outbuildings adjacent to nursery



Sleep out clad in cement board



Dwelling



Diesel tank



Chemical store



Chemical mixing and washdown area



Underground washdown tank



Overflow pipe to drain



Portable tank, various storage of containers



Former hay shed, now vehicle store

## 8 HAIL Uses and Possible Types of Contaminants Associated with Past Use

The Hazardous Activities and Industries List (HAIL) compiled by The Ministry for the Environment include the following categories (*in italics*) that could be associated with the historical uses of the site with a summary of the risk of these activities having been carried out on the site.

### ***A - Chemical manufacture, application and bulk storage***

1. *Agrichemicals including commercial premises used by spray contractors for filling, storing or washing out tanks for agrichemical application*

- 10. Persistent pesticide bulk storage or use including sport turfs, market gardens, orchards, glass houses or spray sheds*
- 17. Storage tanks or drums for fuel, chemicals or liquid waste*

The majority of the subject site, currently in paddocks, has been used for pastoral activities for its known history. The normal uses of fertilisers and pastoral weed controls associated with these uses are unlikely to have caused soil contamination which would pose a risk to human health.

However, the area around the dwelling and sheds on Lot 2 DP 82846 has been and is still currently being used as chemical spraying contracting business. There is a chemical storage shed in this yard, as well as a washdown area and washdown water storage tanks. There is a possibility that chemical spillage and leakage could have contaminated the soils in this area. Contaminants of concern include heavy metals, organophosphorus/nitrogen pesticides (ONP), and acidic herbicides.

There is also a small nursery to the north of the dwelling on Lot 2 DP 89846 which is used for the growing of camellias and rhododendrons since at least 2004. Given the recent nature of this activity, it is unlikely that persistent organochlorine pesticides (OCP) have been used. It is likely that modern chemicals have been used in this area that may have caused contamination of the soils. Contaminants of concern include heavy metals and ONP.

There are currently fuel storage tanks on Lot 2 DP 82846 and Lot 2 DP 365379. Leakage and spillage of fuels may have contaminated the soils in these areas. It is likely that fuel tanks have existed in other locations on the site over the years, as is normal for a farm working yard area. Contaminants of concern include heavy metals and hydrocarbons.

#### ***G - Cemeteries and waste recycling, treatment and disposal***

##### ***3. Landfill sites***

There is evidence to suggest that there is a former farm pit in the eastern part of Lot 1 DP 82846. It cannot be ruled out that uncontrolled dumping has occurred in the pit. Contaminants of concern include heavy metals, hydrocarbons, asbestos and OCP.

#### ***I - Any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment***

There have been dwellings and farm buildings on all of the lots except Lot 2 365379 and Lot 1 DP 82846, from at least the 1940s. There is a high risk that lead paint has been used on those buildings. Any natural deterioration or intentional removal, prior to the modern-day risk mitigating methods, may have caused contamination of the soil. Contaminants of concern are heavy metals.

There have also been multiple buildings constructed during the 1970s and 1980s when the use of asbestos containing materials was commonplace. There is a possibility that asbestos from construction of the buildings and deterioration over time may have contaminated the soils around these buildings.

## **9 Basis for Soil Guideline Values (SGV)**

### **9.1 Activity Description**

This report has been written for the following potential activities:

- Plan change and future subdivision of the site for residential use,
- Soil disturbance associated with the future residential development of the site.

### **9.2 Zoning**

The subject site is currently zoned Rural – Outer Plains in the western part of the site and Residential - Living 2 deferred in the eastern part of the site.

### **9.3 Soil Guideline Values**

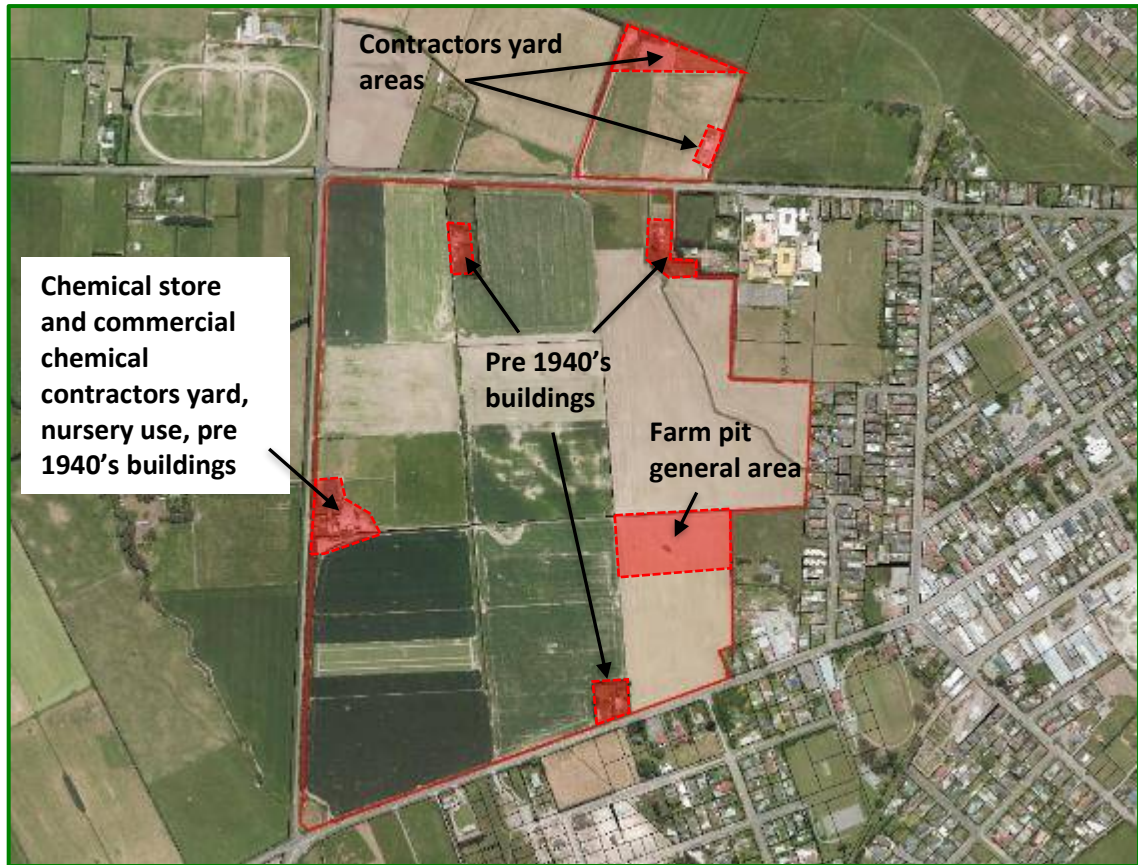
Human health soil contaminant standards for a group of 12 priority contaminants were derived under a set of five land-use scenarios, and are legally binding under The Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Health) Regulations 2011 (NESC). These standards have been applied where applicable. For contaminants, other than the 12 priority contaminants, the hierarchy as set out in the Ministry for the Environment Contaminated Land Management Guidelines No 2 has been followed. For soil, guideline values are predominantly risk based, in that they are typically derived using designated exposure scenarios that relate to different land uses. For each exposure scenario, selected pathways of exposure are used to derive guideline values. These pathways typically include soil ingestion, inhalation and dermal adsorption. The guideline values for the appropriate land use scenario relate to the most critical pathway.

The land-use scenarios applicable for this site would be ‘residential 10% produce’, and ‘outdoor/maintenance workers’ as a proxy for construction workers disturbing soils.

## **10 Site Characterisation and Recommendation**

The investigations undertaken have revealed that the subject site has been used for a variety of sheep, beef, dairy and crop farming for its known history. There is evidence of pre-1940s buildings, chemical storage, fuel storage and a farm working and maintenance yard. All of these uses pose a risk of contamination of the soil that may pose a risk to human health.

It is recommended that a detailed site investigation is carried out on the risk areas outlined in the plan below, at the subdivision stage.



**Figure 3 – Risk Area Plan**

For the remainder of the subject site there is no evidence of HAIL activities or industries having occurred, now or in the past. The area of the subject site that is not highlighted as a risk area is considered suitable for residential development with no further investigations required.

## 11 Planning Status

In terms of the NESCS section 5 (7) states that the land is considered to be covered if an activity or industry described in the HAIL is being undertaken on it; or has been undertaken on it; or it is more likely than not that an activity is being or has been undertaken on it. Section 6 describes the methods for determining whether the land is as described in section 7. Method 6 (3) is to rely on a Preliminary Site Investigation.

This Preliminary Site Investigation has found that there is evidence of HAIL activities having occurred on the site and resource consent is required should any of the activities outlined in the NESCS be proposed that involve the identified risk areas.

## 12 Conclusion

The vast majority of the plan change area has been used for pastoral uses all its known history and it is highly unlikely that there would be a risk to human health if these areas were to be developed for an eventual residential use.

However, a variety of current and historic HAIL uses have been confirmed on a number of smaller areas within the proposed plan change area. The uses on these areas include a commercial agrichemical applicators yard, contractor's yards, a possible farm pit and a number of locations with pre 1940's buildings, which pose a significant lead risk. All of these uses have

the potential to have caused contamination of soil that may pose a risk to human health, and further detailed investigations would be required for these areas at subdivision stage. It is expected that even if contamination is present, the logistical and financial costs to remediate any contamination would not be so onerous to preclude eventual residential development and use.

In terms of the proposed plan change the site does not have any significant risks that could not be worked through during the subsequent subdivision and development stages.

### 13 Limitations

Malloch Environmental Limited has performed services for this project in accordance with current professional standards for environmental site assessments, and in terms of the client's financial and technical brief for the work. Any reliance on this report by other parties shall be at such party's own risk. It does not purport to completely describe all the site characteristics and properties. Where data is supplied by the client or any third party, it has been assumed that the information is correct, unless otherwise stated. Malloch Environmental Limited accepts no responsibility for errors or omissions in the information provided. Should further information become available regarding the conditions at the site, Malloch Environmental Limited reserves the right to review the report in the context of the additional information.

Opinions and judgments expressed in this report are based on an understanding and interpretation of regulatory standards at the time of writing and should not be construed as legal opinions. As regulatory standards are constantly changing, conclusions and recommendations considered to be acceptable at the time of writing, may in the future become subject to different regulatory standards which cause them to become unacceptable. This may require further assessment and/or remediation of the site to be suitable for the existing or proposed land use activities. There is no investigation that is thorough enough to preclude the presence of materials at the site that presently or in the future may be considered hazardous.

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Report written by:



Chris Peacock  
Environmental Engineer

Report reviewed and certified by a suitably qualified and experienced practitioner as prescribed under the NESCS (soil):



Nicola Peacock, CEnvP  
Principal Environmental Engineer



---

## Appendix A – Historic Certificates of Title List

 264986.pdf	 CB322-3.pdf	 CB47D-696.PDF
 CB13F-980.pdf	 CB341-98.pdf	 CB502-34.pdf
 CB15K-422.pdf	 CB34B-33.pdf	 CB521-198.pdf
 CB209-18.pdf	 CB35D-108.pdf	 CB521-200.pdf
 CB26K-792.pdf	 CB368-10.pdf	 CB529-173.pdf
 CB301-174.pdf	 CB409-27.pdf	 CB541-175.pdf
 CB302-149.pdf	 CB40D-900.pdf	 CB541-205.pdf
 CB302-94.pdf	 CB418-133.pdf	
 CB313-121.pdf	 CB47D-693.pdf	
 CB322-139.pdf	 CB47D-694.PDF	
	 CB47D-695.PDF	

## ***Appendix B – Historic Aerials***

Information in this map has been derived from various sources including the Kaikoura District, Hurunui District, Waimakariri District, Christchurch District, Environment Canterbury Regional Council, Selwyn District, Ashburton District, Waimate District, Mackenzie District, Timaru District and Waitaki District's databases.

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0 0.1 0.2 0.3 0.4 Kilometres

Scale: 1:7,000 @A4

Map Created by Malloch Environmental Ltd on 2:46:51 p.m.



Information in this map has been derived from various sources including the Kaikoura District, Hurunui District, Waimakariri District, Christchurch District, Environment Canterbury Regional Council, Selwyn District, Ashburton District, Waimate District, Mackenzie District, Timaru District and Waitaki District's databases.

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0 0.1 0.2 0.3 0.4 Kilometres

Scale: 1:7,000 @A4

Map Created by Malloch Environmental Ltd on 2:48:42 p.m.



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0 0.1 0.2 0.3 0.4 Kilometres

Scale: 1:7,000 @A4

Map Created by Malloch Environmental Ltd on 3:00:00 p.m.



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0 0.1 0.2 0.3 0.4 Kilometres

Scale: 1:7,000 @A4

Map Created by Malloch Environmental Ltd on 3:03:25 p.m.



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0 0.1 0.2 0.3 0.4 Kilometres

Scale: 1:7,000 @A4

Map Created by Malloch Environmental Ltd on 3:04:28 p.m.



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0 0.1 0.2 0.3 0.4 Kilometres

Scale: 1:7,000 @A4

Map Created by Malloch Environmental Ltd on 3:05:05 p.m.



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0 0.1 0.2 0.3 0.4 Kilometres

Scale: 1:7,000 @A4

Map Created by Malloch Environmental Ltd on 3:07:59 p.m.



## ***Appendix C – LLUR Statement***

# Property Statement from the Listed Land Use Register

Visit [www.ecan.govt.nz/HAIL](http://www.ecan.govt.nz/HAIL) for more information about land uses.



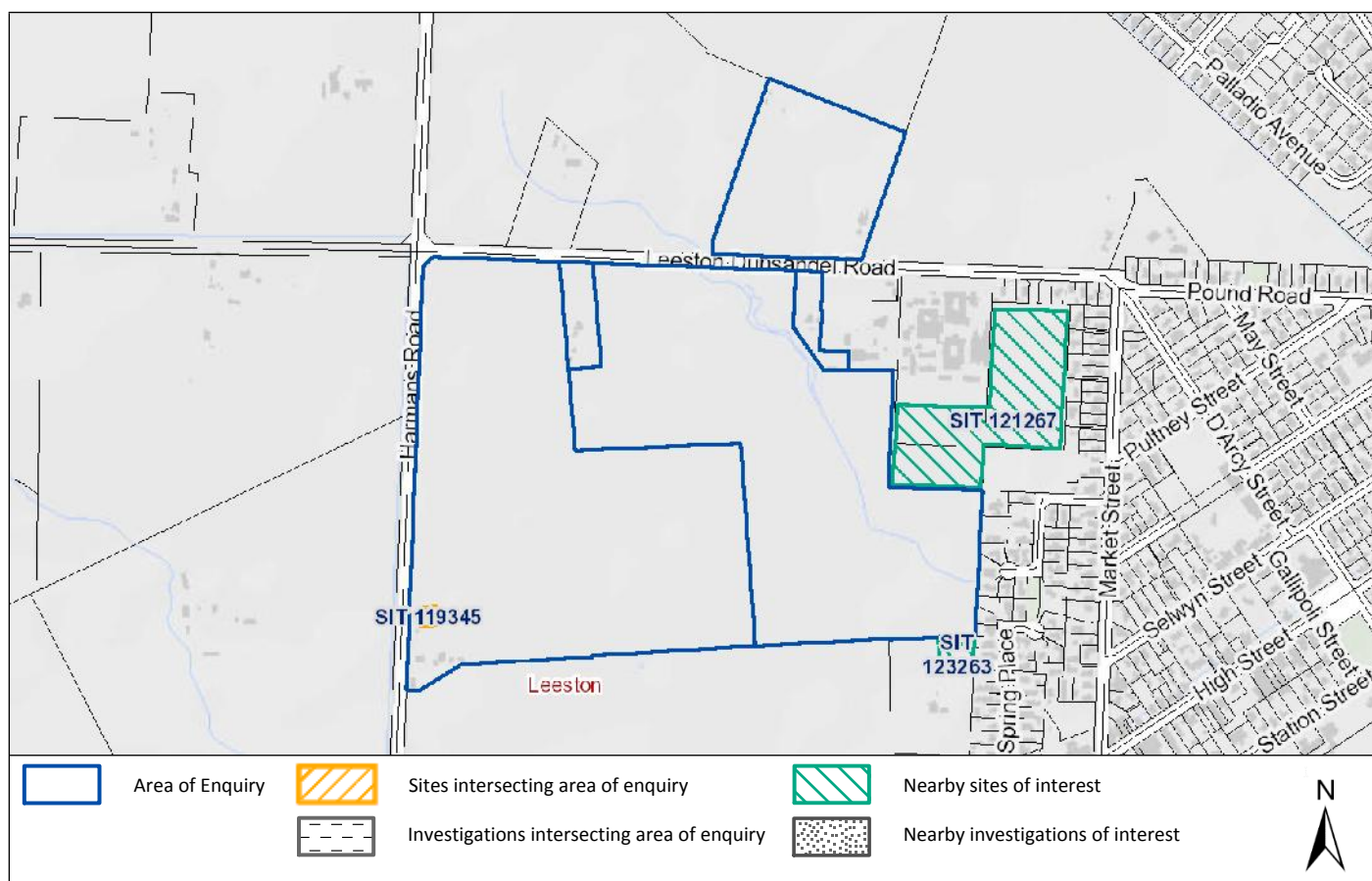
Customer Services  
P. 03 353 9007 or 0800 324 636

PO Box 345  
Christchurch 8140

P. 03 365 3828  
F. 03 365 3194  
E. [ecinfo@ecan.govt.nz](mailto:ecinfo@ecan.govt.nz)

[www.ecan.govt.nz](http://www.ecan.govt.nz)

<b>Date:</b>	17 July 2017	
<b>Land Parcels:</b>	Lot 4 DP 82846	Valuation No(s): 2410011300
	Lot 2 DP 82846	Valuation No(s): 2410011600
	Lot 1 DP 9138	Valuation No(s): 2410011500
	Lot 3 DP 82846	Valuation No(s): 2410011303
	Lot 2 DP 365379	Valuation No(s): 2410010801



*The information presented in this map is specific to the area within a 100m radius of property you have selected. Information on properties outside the search radius may not be shown on this map, even if the property is visible.*

## Summary of sites:

Site ID	Site Name	Location	HAIL Activity(s)	Category
119345	56 Harmans Road, Leeston	56 Harmans Road, Leeston	A10 - Persistent pesticide bulk storage or use;	Not Investigated
121267	Ellesmere College	Section 2 SO 13993, Leeston Dunsandel Road	A10 - Persistent pesticide bulk storage or use;	Not Investigated
123263	Spring Place, Leeston	Spring Place, Leeston	G3 - Landfill sites;	Not Investigated

*Please note that the above table represents a summary of sites and HAILs intersecting the area of enquiry within a 100m buffer.*

## Information held about the sites on the Listed Land Use Register

---

**Site 119345: 56 Harmans Road, Leeston** (Intersects enquiry area.)

<b>Site Address:</b>	56 Harmans Road, Leeston
<b>Legal Description(s):</b>	Lot 2 DP 82846

<b>Site Category:</b>	Not Investigated
<b>Definition:</b>	Verified HAIL has not been investigated.

Land Uses (from HAIL):	Period From	Period To	HAIL land use
	2004	Present	Persistent pesticide bulk storage or use including sports turfs, market gardens, orchards, glass houses or spray sheds

---

**Notes:**

<b>11 Nov 2015</b>	This record was created as part of the Selwyn District Council 2015 HAIL identification project.
<b>11 Nov 2015</b>	Area defined from 2003 to present aerial photographs. Horticultural activities (persistent pesticides) were noted in aerial photographs reviewed.

---

**Investigations:**

There are no investigations associated with this site.

---

**Site 121267: Ellesmere College** (Within 100m of enquiry area.)

<b>Site Address:</b>	Section 2 SO 13993, Leeston Dunsandel Road
<b>Legal Description(s):</b>	Section 1 SO 13993,Section 1 SO 16950,Section 2 SO 13993

<b>Site Category:</b>	Not Investigated
<b>Definition:</b>	Verified HAIL has not been investigated.

Land Uses (from HAIL):	Period From	Period To	HAIL land use
	1984	Present	Persistent pesticide bulk storage or use including sports turfs, market gardens, orchards, glass houses or spray sheds

---

**Notes:**

<b>28 Jan 2016</b>	This record was created as part of the Selwyn District Council 2015 HAIL identification project.
<b>28 Jan 2016</b>	Area defined from 1984 to present aerial photographs. Sports fields (persistent pesticides) were noted in aerial photographs reviewed.

---

**Investigations:**

There are no investigations associated with this site.

---

**Site 123263: Spring Place, Leeston** (Within 100m of enquiry area.)

<b>Site Address:</b>	Spring Place, Leeston
<b>Legal Description(s):</b>	Lot 2 DP 319397

<b>Site Category:</b>	Not Investigated
<b>Definition:</b>	Verified HAIL has not been investigated.

Land Uses (from HAIL):	Period From	Period To	HAIL land use
	?	?	Landfill sites

---

**Notes:**

5 Nov 2014

This record was created as part of the Selwyn District Council 2015 HAIL identification project.

5 Nov 2014

Pit (to check)

---

### Investigations:

There are no investigations associated with this site.

---

## Information held about other investigations on the Listed Land Use Register

For further information from Environment Canterbury, contact Customer Services and refer to enquiry number ENQ171189.

**Disclaimer:** *The enclosed information is derived from Environment Canterbury's Listed Land Use Register and is made available to you under the Local Government Official Information and Meetings Act 1987 and Environment Canterbury's Contaminated Land Information Management Strategy (ECan 2009).*

*The information contained in this report reflects the current records held by Environment Canterbury regarding the activities undertaken on the site, its possible contamination and based on that information, the categorisation of the site. Environment Canterbury has not verified the accuracy or completeness of this information. It is released only as a copy of Environment Canterbury's records and is not intended to provide a full, complete or totally accurate assessment of the site. It is provided on the basis that Environment Canterbury makes no warranty or representation regarding the reliability, accuracy or completeness of the information provided or the level of contamination (if any) at the relevant site or that the site is suitable or otherwise for any particular purpose. Environment Canterbury accepts no responsibility for any loss, cost, damage or expense any person may incur as a result of the use, reference to or reliance on the information contained in this report.*

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# Property Statement from the Listed Land Use Register

Visit [www.ecan.govt.nz/HAIL](http://www.ecan.govt.nz/HAIL) for more information about land uses.



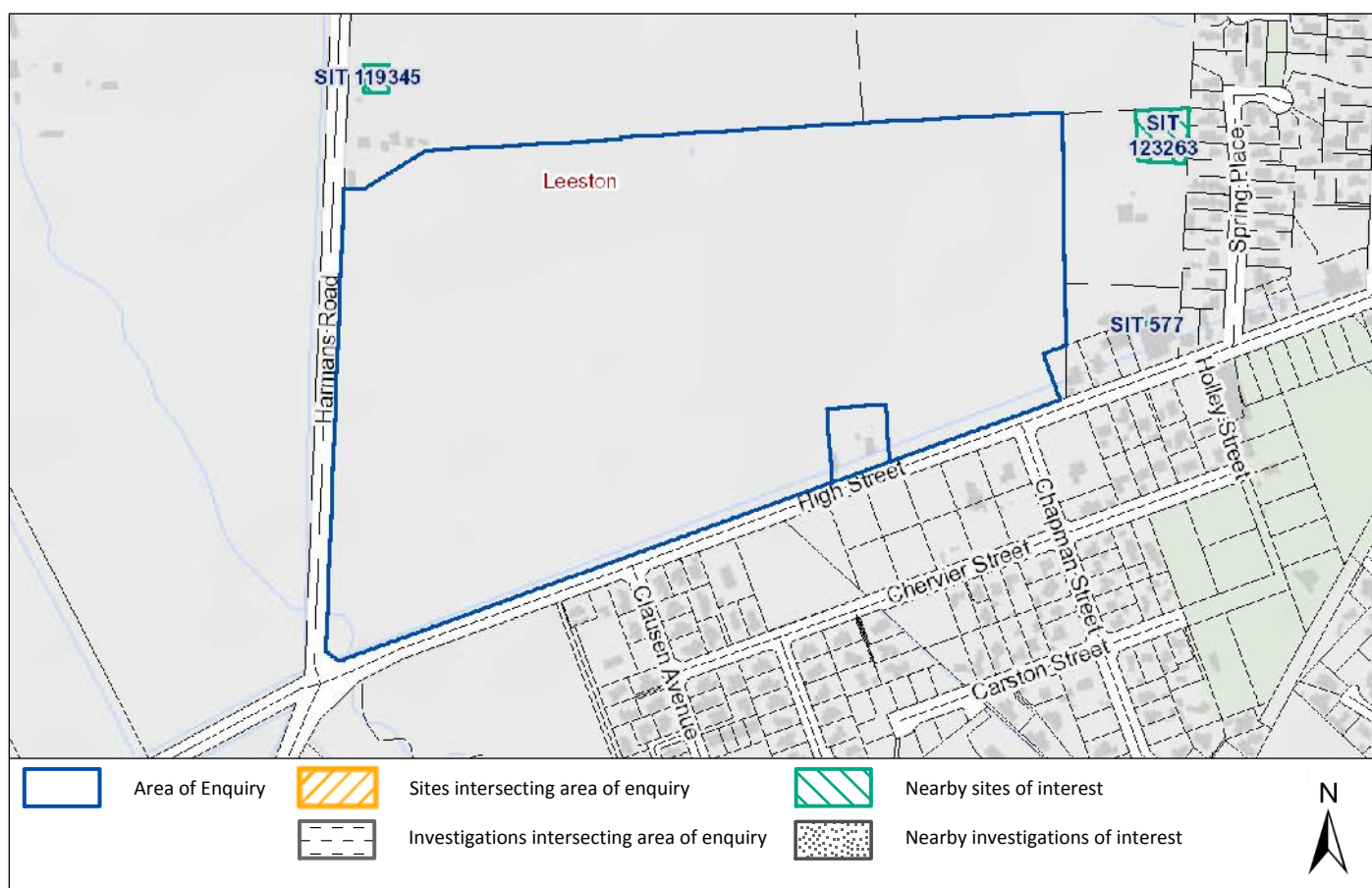
Customer Services  
P. 03 353 9007 or 0800 324 636

PO Box 345  
Christchurch 8140

P. 03 365 3828  
F. 03 365 3194  
E. [ecinfo@ecan.govt.nz](mailto:ecinfo@ecan.govt.nz)

[www.ecan.govt.nz](http://www.ecan.govt.nz)

Date:	17 July 2017		
Land Parcels:	Part RS 5482,5483	Valuation No(s): 2416020600	
	Lot 1 DP 82846	Valuation No(s): 2410011302	



*The information presented in this map is specific to the area within a 100m radius of property you have selected. Information on properties outside the search radius may not be shown on this map, even if the property is visible.*

## Summary of sites:

Site ID	Site Name	Location	HAIL Activity(s)	Category
577	WH Cochrane and Sons Ltd	High St, Leeston	A17 - Storage tanks or drums for fuel, chemicals or liquid waste;	Not Investigated
119345	56 Harmans Road, Leeston	56 Harmans Road, Leeston	A10 - Persistent pesticide bulk storage or use;	Not Investigated
123263	Spring Place, Leeston	Spring Place, Leeston	G3 - Landfill sites;	Not Investigated

*Please note that the above table represents a summary of sites and HAILS intersecting the area of enquiry within a 100m buffer.*

## Information held about the sites on the Listed Land Use Register

---

**Site 577: WH Cochrane and Sons Ltd** (Within 100m of enquiry area.)

<b>Site Address:</b>	High St, Leeston
<b>Legal Description(s):</b>	Lot 1 DP 319397

<b>Site Category:</b>	Not Investigated
<b>Definition:</b>	Verified HAIL has not been investigated.

<b>Land Uses (from HAIL):</b>	<b>Period From</b>	<b>Period To</b>	<b>HAIL land use</b>
	1950s/60s	Current	Storage tanks or drums for fuel, chemicals or liquid waste

---

**Notes:**

**25 Mar 1998** One UST in the ground, was installed after the 1950s, probably in the 1960s. It held about 4500 litres of diesel

---

**Investigations:**

There are no investigations associated with this site.

---

**Site 119345: 56 Harmans Road, Leeston** (Within 100m of enquiry area.)

<b>Site Address:</b>	56 Harmans Road, Leeston
<b>Legal Description(s):</b>	Lot 2 DP 82846

<b>Site Category:</b>	Not Investigated
<b>Definition:</b>	Verified HAIL has not been investigated.

<b>Land Uses (from HAIL):</b>	<b>Period From</b>	<b>Period To</b>	<b>HAIL land use</b>
	2004	Present	Persistent pesticide bulk storage or use including sports turfs, market gardens, orchards, glass houses or spray sheds

---

**Notes:**

**11 Nov 2015** This record was created as part of the Selwyn District Council 2015 HAIL identification project.

**11 Nov 2015** Area defined from 2003 to present aerial photographs. Horticultural activities (persistent pesticides) were noted in aerial photographs reviewed.

---

**Investigations:**

There are no investigations associated with this site.

---

**Site 123263: Spring Place, Leeston** (Within 100m of enquiry area.)

<b>Site Address:</b>	Spring Place, Leeston
<b>Legal Description(s):</b>	Lot 2 DP 319397

<b>Site Category:</b>	Not Investigated
<b>Definition:</b>	Verified HAIL has not been investigated.

<b>Land Uses (from HAIL):</b>	<b>Period From</b>	<b>Period To</b>	<b>HAIL land use</b>
	?	?	Landfill sites

---

**Notes:**

**5 Nov 2014** This record was created as part of the Selwyn District Council 2015 HAIL identification project.

**5 Nov 2014** Pit (to check)

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**Investigations:**

There are no investigations associated with this site.

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**Information held about other investigations on the Listed Land Use Register**

**For further information from Environment Canterbury, contact Customer Services and refer to enquiry number ENQ171190.**

**Disclaimer:** *The enclosed information is derived from Environment Canterbury's Listed Land Use Register and is made available to you under the Local Government Official Information and Meetings Act 1987 and Environment Canterbury's Contaminated Land Information Management Strategy (ECan 2009).*

*The information contained in this report reflects the current records held by Environment Canterbury regarding the activities undertaken on the site, its possible contamination and based on that information, the categorisation of the site. Environment Canterbury has not verified the accuracy or completeness of this information. It is released only as a copy of Environment Canterbury's records and is not intended to provide a full, complete or totally accurate assessment of the site. It is provided on the basis that Environment Canterbury makes no warranty or representation regarding the reliability, accuracy or completeness of the information provided or the level of contamination (if any) at the relevant site or that the site is suitable or otherwise for any particular purpose. Environment Canterbury accepts no responsibility for any loss, cost, damage or expense any person may incur as a result of the use, reference to or reliance on the information contained in this report.*

*Any person receiving and using this information is bound by the provisions of the Privacy Act 1993.*

# Appendix 8: Assessment of Selwyn District Plan Objectives and Policies

## B1 – Natural Resources

*Adverse effects on people, and their activities, ecosystems and land and soil resources from contaminated soil or unstable land, are minimised.*

*New residential or business activities do not create shortages of land or soil resources for other activities in the future.*

- the land is appropriate for other activities; and
- there are other areas adjoining the township which are appropriate for new residential or business development which do not contain versatile soils.

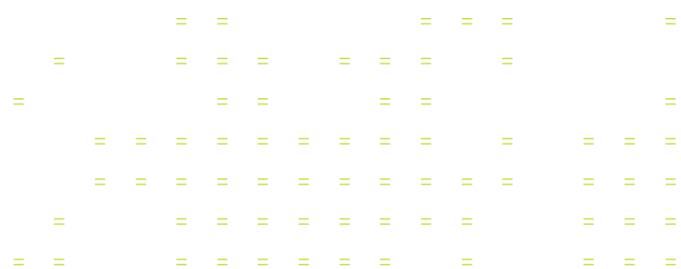
As discussed previously, most of the land around Leeston Township is reasonably versatile by virtue of being located on the Canterbury Plains, and therefore arguably may not meet the first limb of the test in Policy B1.1.8. However, given the location of the site adjoining the existing development of the township, and given this area is not more or less versatile than other areas adjoining the township, it is considered the proposal site is an appropriate location for the expansion of the township. Further, it is noted a proportion of the site has been identified as appropriate for residential activity as evidenced by the deferred zoning status attributed to the land and in the Ellesmere Area Plan. It is for these reasons the proposal is consistent with the second limb of the test in Policy B1.1.8.

While the proposal does constitute a minor loss in versatile soils, it is considered to be an appropriate area for the development of Leeston due to its location, because it represents a consolidated township form and the site is able to be serviced. Therefore, the application is considered to be generally consistent with Objective B1.1.2 and Policy B1.1.8.

*Expansion of townships in Selwyn District maintains or enhances the quality of ground or surface water resources.*

*Ensure land rezoned to a Living or Business zone can be serviced with a water supply and effluent and stormwater disposal without adversely affecting groundwater or surface waterbodies.*





stormwater, however the volume of flow will be at a significantly reduced rate due to the effect of the stormwater diversion. The ODP illustrates the area around Leeston Creek is to be vested as recreation reserve with provision for walking and cycle access. Any bridge infrastructure over Leeston Creek will be required to be designed to avoid adverse effects on the flow of the Leeston Creek.

Birdlings Brook is located in the south west corner of the site, has been planted along the banks and is publicly accessible due to the walkway 'Marshall's on Birdlings Brook'. Due to the location of Birdlings Brook through the site and the desire to retain the nature of the stream, the land between Birdlings Brook and the intersection of Harmans Road and High Street will be required to be vested to Council as reserve. Further down the stream at Leggs and Lockheads Road, Birdlings Brook has been recognized as having had high trout spawning values, however these have declined since the 1980s<sup>8</sup>. Stormwater currently discharges to Birdlings Brook, and any stormwater management and discharge will be required to be treated in a manner that does not adversely affect Birdlings Brook.

The remainder of the site does not contain any wetlands, lakes or other waterbodies. The proposal is therefore consistent with Objectives B1.3.1 and B1.3.2 and Policy B1.3.1.

#### Objective B1.4.1

*The expansion of townships does not adversely affect the values of outstanding natural features and landscapes.*

The site is not within any identified area of outstanding natural landscape and does not contain any identified outstanding natural features. It is considered that the proposal is consistent with Objective B1.4.1.

#### Objective B1.4.4

*The distinction between the landscapes of the rural area and townships on the Canterbury Plains is maintained.*

The Plan Change will enable a variety of residential densities adjoining an existing township in a consolidated urban form. The proposed Living 1 zone will align with the existing Living XA zone on the south side of High Street. The Plan Change creates a distinct rural and township boundary as people enter and exit Leeston via Leeston Dunsandel Road and High Street. Therefore, the Plan Change is consistent with Objective B1.4.4.

### Physical Resources

#### Objective B2.1.1

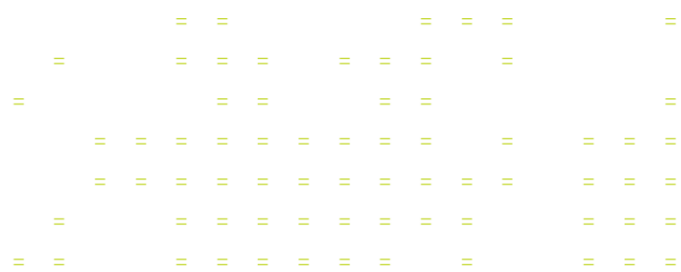
*An integrated approach to land use and transport planning to ensure the safe and efficient operation of the District's roads, pathways, railway lines and airfields is not compromised by adverse effects from activities on surrounding land or by residential growth.*

#### Policy B2.1.12

*Address the impact of new residential or business activities on both the local roads around the site and the District's road network, particularly Arterial Road links with Christchurch City.*

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<sup>8</sup> Te Waihora Catchment Ecological Flows Report 2012



#### Policy B2.1.13

*Minimise the effects of increasing transport demand associated with areas identified for urban growth by promoting efficient and consolidated land use patterns that will reduce the demand for transport.*

#### Policy B2.1.14

*Encourage people to walk or cycle within and between townships by providing a choice of routes for active transport modes and ensuring there is supporting infrastructure such as parking for cycles, at destinations.*

#### Policy B2.1.15

*Require pedestrian and cycle links in new and redeveloped residential or business areas, where such links are likely to provide a safe, attractive and accessible alternative route for pedestrians and cyclists, to surrounding residential areas, business or community facilities.*

The Transport Assessment concludes the existing roading network including intersections can accommodate the additional traffic flows and vehicle movements arising from the implementation of the Plan Change with no upgrades or improvements required. The roading network as outlined in the ODP provides connections to the existing urban area of Leeston as well as future roading connections to ensure future development can be connected to the site. The ODP includes non-vehicular linkages to reserves, Ellesmere College / Te Kāreti o Waihora, and throughout the site, which will encourage greater use of these modes of transport. It is considered that the proposal is consistent with Policies B2.1.14 and B2.1.15

### Utilities

#### Objective B2.2.3

*The provision of utilities where any adverse effects on the receiving environment and on people's health, safety and wellbeing is managed having regard to the scale, appearance, location and operational requirements of the facilities.*

#### Policy B2.2.1

*Require that the need to supply utilities and the feasibility of undertaking is identified at the time a plan change request is made to rezone land for residential or business development.*

#### Policy B2.2.5

*Avoid potential 'reverse sensitivity' effects of activities on the efficient development, use and maintenance of utilities.*

The ODP shows a utility allotment for the purpose of drilling a well for potable water. There is a 100 m ground water protection zone to avoid any reverse sensitivity effects towards the water bore. The Servicing Report outlines and discusses options for servicing any future development of the site and it is considered servicing options can be further investigated and designed at the time of subdivision. It is considered that the proposal is consistent with Objective B2.2.3 and Policies B2.2.1 and B2.2.5.

*Residents have access to adequate community facilities.*

*Community facilities do not adversely affect residential amenity values or other parts of the environment.*

*Encourage co-ordination between the provision of community facilities, and new residential and business development.*

*Ensure residents in Selwyn District have access to sufficient reserve areas to meet their needs for space for active and passive recreation*

## Waste Disposal

*Adverse effects on the environment from the collection, treatment, storage or disposal of waste are reduced.*

*Ensure land rezoned for new residential or business development has a regular solid waste collection and disposal service available to residents.*

## Natural Hazards

*Ensure activities do not lead to or intensify the effects of natural hazards.*

*Ensure potential loss of life or damage to property from natural hazards is mitigated.*

*Ensure methods to mitigate natural hazards do not create or exacerbate adverse effects on other people or the environment.*

*Avoid allowing new residential or business development in areas known to be vulnerable to a natural hazard, unless any potential risk of loss of life or damage to property is adequately mitigated.*

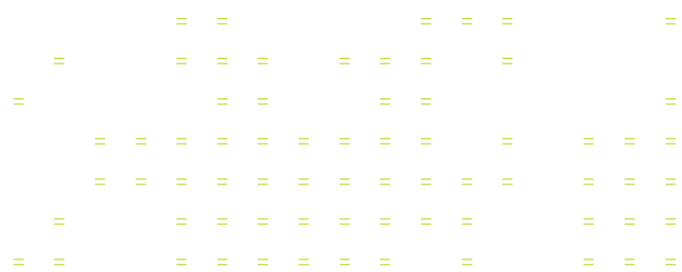
*Avoid locating dwellings and other principal building in the following areas:*  
*Between any waterbodies and any stopbanks designed or used to contain floodwater from that waterbody; or*  
*Within the bed of any lake or river.*

*Ensure any new residential or business development does not adversely affect the efficiency of the District's land drainage system or the risk of flooding from waterbodies.*

The site does not contain any stop banks to contain floodwater. Therefore, it is considered that the Plan Change is consistent with Objectives B3.1.1, B3.1.2 and B3.1.3, and Policies B3.1.2, B3.1.3, and B3.1.7.

*A partnership for heritage protection is fostered between landowners, Tāngata whenua, community groups and the Council.*

*Sites of Wāhi tapu and other importance to Tāngata whenua are protected.*



#### Policy B3.3.4

*Protect areas identified in the Plan as Wāhi Taonga Sites, Wāhi Taonga Management Areas and Mahinga Kai Sites, from inappropriate damage or destruction.*

The application was submitted to Mahaanui Kurataiao Limited to consult with the local Rūnanga, Taumutu, and provide comments and recommendations. The consultation report is attached in Appendix 9. The recommendation to consult with Taumutu at the time of development (subdivision) has been included in the ODP.

#### Objective B3.4.1

*The District's townships are pleasant places to live and work in.*

#### Objective B3.4.2

*A variety of activities are provided for in townships, while maintaining the character and amenity values of each zone.*

#### Objective B3.4.3

*"Reverse sensitivity" effects between activities are avoided.*

It is considered that rezoning the site to enable development in accordance with Living 1 and Living 2 zones and residential activities on the western edge of Leeston will provide for a variety of section sizes within Leeston and enhance the Leeston township. Rezoning the site and future development will change the character of the site from rural to urban, changing the amenity and visual outlook of the site. However, if the site is rezoned residential and development is undertaken in accordance with the ODP, future development will maintain and enhance the character and amenity of the residential and urban area and create a new neighbourhood that is a pleasant place to work and live. It is considered that the proposal is consistent with Objective B3.4.1 and B3.4.2.

The south east corner of the proposal borders a Business 1 zone. Residential development is anticipated in the area above the Business 1 zone after the deferral is lifted and therefore, and reverse sensitivity effects have been considered by Council when the site was zoned Living 1(deferred). However, to avoid any potential reverse sensitivity effects, a landscape buffer is required at the time of residential development. The proposal is therefore consistent with Objective B3.4.3

#### Objective B3.4.4

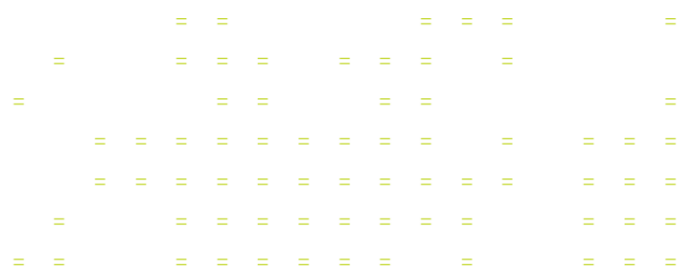
*Growth of existing townships has a compact urban form and provides a variety of living environments and housing choices for residents, including medium density housing typologies located within areas identified in an Outline Development Plan.*

#### Objective B3.4.5

*Urban growth within and adjoining townships will provide a high level of connectivity both within the development and with adjoining land areas (where these have been or are likely to be developed for urban activities or public reserves) and will provide suitable access to a variety of forms of transport*

#### Policy B3.4.3

*To provide Living zones which:*



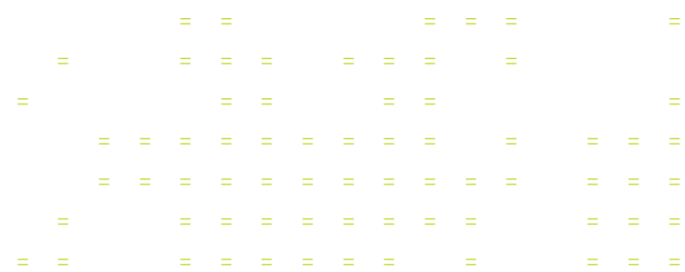
- are pleasant places to live in and provide for the health and safety of people and their communities;
- are less busy and more spacious than residential areas in metropolitan centres;
- have safe and easy access for residents to associated services and facilities;
- provide for a variety of living environments and housing choices for residents, including medium density areas identified in Outline Development Plans;
- ensure medium density residential areas identified in Outline Development Plans are located within close proximity to open spaces and/or community facilities and
- ensure that new medium density residential developments identified in Outline Development Plans are designed in accordance with the following design principles:
  - access and connections to surrounding residential areas and community facilities
  - and neighbourhood centres are provided for through a range of transport modes;
  - block proportions are small, easily navigable and convenient to encourage cycle and pedestrian movement;
  - streets are aligned to take advantage of views and landscape elements;
  - section proportions are designed to allow for private open space and sunlight admission;
  - a subdivision layout that minimises the number of rear lots;
  - layout and design of dwellings encourage high levels of interface with roads, reserves and other dwellings;
  - a diversity of living environments and housing types are provided to reflect different lifestyle choices and needs of the community;
  - a balance between built form and open spaces complements the existing character and amenity of the surrounding environment and;
  - any existing natural, cultural, historical and other unique features of the area are incorporated where possible to provide a sense of place, identity and community.

The Plan Change and ODP have been designed to provide a range of residential densities across the site to provide for lifestyle choices and needs of the community. The low density land provides for spacious, open section sizes. The Living 1 zone provides a diversity of living environments in proximity to the local school and other recreational and community facilities. Key pedestrian and cycle links will ensure safe access to facilities and services within Leeston township. As the implementation of the Plan Change could accommodate larger allotments, the Living 2 zone would be quieter than metropolitan areas. The Transport Assessment concludes no upgrades or improvements to the existing roading infrastructure is required to accommodate the additional vehicle movements as a result of the Plan Change. It is considered that the proposal is consistent with Objectives B3.4.4 and B3.4.5 and Policy B3.4.3.

#### Policy B3.4.38

*Avoid rezoning land for new residential development adjoin or near to existing activities which are likely to be incompatible with residential activities, unless any potential 'reverse sensitivity' effects will be avoided, remedied or mitigated.*

The rezoned Living 1 and Living 2 zones will adjoin the existing Outer Plains zone to the west. It is not uncommon within the Leeston township for Living 1 or Living XA zones to directly adjoin the Outer Plains zone. Approximately 900 m of Living 1 and Living XA zoned land southeast of the site and south of High Street adjoin the outer Plains zone. North east of the site is the site known as the Martin block. The Martin block is zoned Living XA, where allotments can be an average of 650 m<sup>2</sup> and directly adjoins the Outer Plains zone for approximately 360 m. Therefore, it is considered and evident that there are cases where Outer Plains zoned land and adjoining Living 1 and Living XA zones can be compatible without mitigation for any reserve sensitivity. Therefore, the proposal is consistent with Policy B3.4.38.



## Growth of Townships

### Objective B4.1.1

*A range of living environments is provided for in townships, while maintaining the overall 'spacious' character of Living zones, except within Medium Density areas identified in an Outline Development Plan where a high quality, medium density of development is anticipated.*

### Objective B4.1.2

*New residential areas are pleasant places to live and add to the character and amenity values of townships.*

#### *Policy B4.1.1(a)*

*Provide for a variety of allotment size for erecting dwellings in Living 1 Zones, while maintaining average section size similar to that for existing residential areas in townships, except within the Living 2 Zone, including any Medium Density area identified in an Outline Development Plan where a higher density of development is anticipated.*

### Policy B4.1.3

*To allow, where appropriate, the development of low density living environments in locations in and around the edge of townships where they will achieve the following;*

*A compact township shape;*

- Consistent with preferred growth options for townships;*
- Maintains the distinction between rural areas and townships;*
- Maintains a separation between townships and Christchurch City boundary;*
- Avoid the coalescence of townships with each other;*
- Reduce the exposure to reverse sensitivity effects;*
- Maintain the sustainability of the land, soil and water resource;*
- Efficient and cost-effective operation and provision of infrastructure.*

The provision of Living 1 and Living 2 zones will provide a variety of environments within Leeston. The Living 2 zone will provide sections that will maintain the spacious character. The proposal is consistent with Objective B4.1.1.

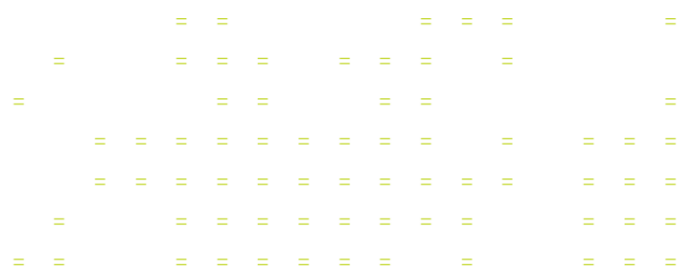
The proposal, through the ODP seeks to provide a range of allotments sizes in the Living 1 zone, to accommodate the anticipated urban growth of the township. Combined with the layout of the internal roading network, the average allotment size will represent a residential density more spacious than high density metropolitan areas.

The proposal site is located on the western urban limit of Leeston and incorporates land which has been identified as appropriate for residential activities as indicated by the deferred zoning status. The Plan Change also includes land further west of the deferred zoning, currently zoned Outer Plains. The servicing report has confirmed the extension of the Living 1 and 2 zones can be connected to Council's reticulated services, subject to the required upgrades. The extension of the Living 1 zone will align with the developed Living XA zone, providing a clear transition from rural to urban along High Street. The Plan Change is consistent with Objective B4.1.2 and Policy B4.1.3.

### Policy B4.2.10

*Ensure that new residential blocks are small in scale, easily navigable and convenient to public transport services and community infrastructure such as schools, shops, sports fields and medical facilities, particularly for pedestrians and cyclists.*





as a result of the Plan Change the site zoned Outer Plains on the corner of Harmans and Leeston Dunsandel Road will adjoin existing Outer Plains zone on the opposite side of Leeston Dunsandel Road and Harmans Road and the Living 1 and 2 zones.

### Policy B4.3.3

*Avoid zoning patterns that leave land zoned Rural surrounded on three or more boundaries with land zoned Living or Business.*

### Policy B4.3.6

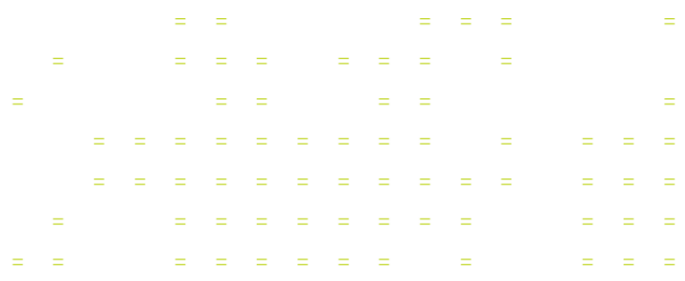
*Encourage townships to expand in a compact shape where practical.*

Rezoning the site will result in neighbouring land zoned Outer Plains adjoining the Living 1 and 2 zones. The Plan Change will result in the Outer Plains zoned land adjoining the Living 1 and 2 zones on the east and south boundaries, with the north and west boundary adjoining land zoned Outer Plains and being separated by Leeston Dunsandel Road and Harmans Road. The intention of Policy B4.3.3 is to ensure rural zoned land is not surrounded by living zones. The adjoining Outer Plains zoned land is also considered appropriate for future low density development. Therefore, this could be developed in the future. As the Outer Plains site will still adjoin rural land on the opposite sides of Leeston Dunsandel Road and Harmans Road, rezoning the site to Living 1 and 2 is considered to be consistent with Policy B4.3.3.

### Policy B4.3.8

*Each Outline Development Plan shall include*

- *Principal through roads, connection and integration with the surrounding road network and strategic infrastructure;*
- *Any land to be set aside for*
  - *community facilities or schools;*
  - *parks and land required for recreation or reserves;*
  - *any land to be set aside for business activities;*
  - *the distribution of different residential densities;*
  - *land required for the integrated management of water systems, including stormwater treatment, secondary flow paths, retention and drainage paths; and*
  - *land reserved or otherwise set aside from development for any other reason, and the reasons for its protection.*
- *Demonstrate how each ODP area will achieve a minimum net density of at least 10 lots or household units per hectare*
- *Identify any cultural (including tangata whenua values), natural, and historic or heritage features and values and show how they are to be enhanced or maintained;*
- *Indicate how required infrastructure will be provided;*
- *Set out the phasing and co-ordination of subdivision and development in line with the phasing shown on the Planning Maps and Appendices;*
- *Demonstrate how effective provision is made for a range of transport options, including public transport systems, pedestrian walkways and cycle ways, both within and adjoining the ODP area;*
- *Include any other information which is relevant to an understanding of the development and its proposed zoning;*
- *Demonstrate that the design will minimise any reverse sensitivity effects.*



The information provided within the ODP and this application provides all of the information set out in this policy. It is considered that the proposal is consistent with Policy B4.3.8.

Leeston Specific Growth Policies

Policy B4.3.54

*Ensure any land rezoned for new residential or business development does not cause, or exacerbate, a natural hazard by increasing the rate of stormwater runoff into the Leeston main drain.*

Stormwater management will be required for any future development to be undertaken and guidelines for the stormwater management are included in the ODP. The Leeston Creek will be naturalised and the ODP will require stormwater to be managed in a way that does not exacerbate the risk to flooding, and will be managed so that the rate of the runoff into the Leeston Creek will not be increased above pre development flows, or it will be managed where the Creek is able to accommodate a greater flow without increasing flood risks.

*Policy B4.3.55*  
*Ensure that land that is zoned for residential development but is presently subject to surface flooding is not developed for its zoned purpose until provision is made for the amelioration of that constraint.*

Provision has been made to improve the stormwater management of Leeston Creek. A piece of land has been identified in the ODP to be vested to Council for stormwater management and to implement the Leeston North Stormwater Bypass. The bypass will divert water from Leeston Creek at the northern most area of the site into the bypass to be created on the Martin block. The bypass has not yet been completed but is provided for in the Long Term Annual Plan. Therefore, the proposal is consistent with Policy B4.3.55.



**Mahaanui  
Kurataiao Ltd**  
Manawhenua Environmental Services

17 Allen Street, Central Christchurch, Telephone: +64 3 377 4374 Website: [www.mkt.co.nz](http://www.mkt.co.nz)

3/10/2019

To: Brant Hammett c/o Adrienne Tisch  
ATTN: [adrienne@blg.nz](mailto:adrienne@blg.nz)

## **Leeston Private Plan Change Application**

### **Manawhenua Statement**

Ngāi Tahu are tangata whenua of the Canterbury region, and hold ancestral and contemporary relationships with Canterbury. The contemporary structure of Ngāi Tahu is set down through the Te Rūnanga o Ngāi Tahu Act 1996 (TRoNT Act) and, through this structure and this Act, sets the requirements for recognition of tangata whenua in Canterbury.

Te Taumutu Runanga hold manawhenua over the project's location, as it is within their takiwā.

The natural resources – water (waterways, waipuna (springs), groundwater, wetlands); mahinga kai; indigenous flora and fauna; cultural landscapes and land - are taonga to manawhenua and they have concerns for activities potentially adversely affecting these taonga. These taonga are integral to the cultural identity of ngā rūnanga manawhenua and they have a kaitiaki responsibility to protect them. The policies for protection of taonga that are of high cultural significance to ngā rūnanga manawhenua are articulated in the Mahaanui Iwi Management Plan (IMP).

### **Assessment of Proposal**

- The applicant has applied for a private plan change to rezone land for residential subdivision.
- The plan change seeks to rezone approximately 60 ha of land west of Leeston township from Living 1 (deferred), Living 2 (deferred) and Outer Plains to 42 ha of Living 1 and 19 ha to Living 2 to allow for a residential subdivision.
- The applicant plans to use the land for a residential subdivision which could accommodate approximately 410 allotments, comprised of 380 Living 1 allotments and 30 Living 2 allotments.
- The site is located west of the existing urban form of Leeston and is bound by Leeston Dunsandel Road to the north, with a small area lying north of this road.
- The site is prone to surface flooding and is also located within Environment Canterbury's Phosphorus Sediment Risk Area.

- The applicant undertook a preliminary site investigation which found evidence that the site could be contaminated from previous agriculture, contractor's yards and pre 1940s building.
- Birdlings Brook, a tributary to Waitatari/Harts Creek, runs through the site in the south west corner.
- The area subject to the Plan Change is bound by High Street to the south, Harmans Road to the west, Leeston Dunsandel Road to the north and residential activity to the east. A 5.4 ha land parcel lies north of Leeston Dunsandel Road.
- The applicant plans to use the land for a residential subdivision which could accommodate approximately 410 allotments, comprised of 380 Living 1 allotments and 30 Living 2 allotments.
- Services:
  - Wastewater: The Ellesmere Treatment Plant and reticulated wastewater services Leeston township. The applicant states that the plant has capacity to accommodate wastewater from the site. As the site is not currently serviced, and existing pipe networks terminate prior to the site, the pipe network would need to be extended to supply the site.
  - Stormwater: A stormwater basin will be required for the stormwater from new residential development, an area for this has been shown on the ODP as being in the naturally low-lying area of the site. Additional stormwater management within the Leeston Creek has been indicated i.e. stormwater ponds.
  - Potable water: The current water supply network in Leeston does not have capacity, and a new water source would be required. SDC have purchased a utility allotment within the site and are in the process of installing a bore for potable water supply.

### Evaluation in relation to Mahaanui Iwi Management Plan (MIMP)

The matters that are relevant to this particular proposal have been identified as:

**WM12.7** To require all esplanade reserves and esplanade strips established on subdivisions to incorporate native riparian planting.

**P4.1** To work with local authorities to ensure a consistent approach to the identification and consideration of Ngāi Tahu interests in subdivision and development activities, including:

- (a) Encouraging developers to engage with Papatipu Rūnanga in the early stages of development planning to identify potential cultural issues; including the preparation of Cultural Impact Assessment reports;
- (b) Ensuring engagement with Papatipu Rūnanga at the Plan Change stage, where plan changes are required to enable subdivision;
- (c) Requiring that resource consent applications assess actual and potential effects on tāngata whenua values and associations;
- (d) Ensuring that effects on tāngata whenua values are avoided, remedied or mitigated using culturally appropriate methods;

(e) Ensuring that subdivision consents are applied for and evaluated alongside associated land use and discharge consents; and

(f) Requiring that 'add ons' to existing subdivisions are assessed against the policies in this section.

**P4.3** To base tāngata whenua assessments and advice for subdivision and residential land development proposals on a series of principles and guidelines associated with key issues of importance concerning

such activities, as per Ngāi Tahu subdivision and development guidelines (see next page).

**TW4.1** To require that the management of land and water in the Te Waihora catchment recognises and provides for the relationship between catchment land use, tributary flow, drain management, water quality, the coastal environment and the cultural health of Te Waihora.

**TW4.3** To advocate for the development of an integrated surface water/groundwater/lake-water management plan for the Te Waihora catchment, recognising and giving effect to:

(a) Mauri and mahinga kai as first order priorities;

(b) The relationship between groundwater and surface water;

(c) The relationship between tributary water quality and flow and the health of Te Waihora; and

(d) Effects of land use on water quality and quantity, particularly farm run-off.

**P10.1** The management of contaminated land must recognise and provide for specific cultural issues, including:

(a) The location of contaminated sites;

(b) The nature of the contamination;

(c) The potential for leaching and run-off;

(d) Proposed land use changes; and

(e) Proposed remediation or mitigation work.

## Conclusion

The proposal was brought to the Taumutu Rūnanga representatives at a hui on the 27th of September 2019. Any activities that have a potential to effect Te Waihora in any way are of a high concern to Taumutu due to the significance of the lake. Various recommendations were made and are listed below.

## Recommendations

### Recommendation 1

That any future subdivision plans/consents within the area must be consulted on independently, as the location of the site presents a high risk to negatively impact water quality in Te Waihora.

## **Recommendation 2**

Leeston is the nearest town to Taumutu/Ngāti Moki. However, there is an absence of manawhenua identity in the town. Development in this area presents an important opportunity to reflect cultural identity and values.

## **Recommendation 3**

Any future developments within the area sought for rezoning should be undertaken in accordance with the Ngāi Tahu Subdivision and Development Guidelines, with a particular emphasis on water efficiency measures such as greywater re-use systems, and establishment of indigenous biodiversity. These guidelines could be integrated into the Outline Development Plan through rules and advice notes. For example, subdivision in the area could be a controlled activity with the integration of these guidelines as a matter of control.

## **Recommendation 4**

If any new streets are to be established and named, Te Taumutu wish to be consulted and given an opportunity to provide names that reflect the history and values of the hapū

## **Recommendation 5**

The rūnanga are concerned about the potential impact on waipuna, as there are several in the Leeston area. Canterbury maps only shows springs outside the plan change area, however, there may be unknown springs affected and this should be reflected in ongoing plans within the subject site.

## **Recommendation 6**

The applicant should be encouraged to consider planting locally sourced indigenous vegetation to enhance indigenous biodiversity values on the area as part of landscaping (as appropriate)

Mahaanui Kurataiao and its staff are available to discuss this report further or assist in direct engagement with rūnanga if desired.

Report Prepared by:

Jason Eden

Environmental Advisor | Team Leader

Peer Reviewed By:

Brad Thomson

Environmental Advisor

Approved for release by:

Jason Eden

Environmental Advisor | Team Leader

Appendix 10: Section 32 Evaluation

f section 32 of the Act. Section 32 states:

- e proposal being evaluated are the most appropriate  
 re the most appropriate way to achieve the objectives  
 ble options for achieving the objectives; and  
 nness of the provisions in achieving the objectives; and  
 on the provisions; and  
 cale and significance of the environmental, economic,  
 rom the implementation of the proposal.
- nvironmental, economic, social, and cultural effects  
 e provisions, including the opportunities for—  
 l to be provided or reduced; and  
 e provided or reduced; and  
 rred to in paragraph (a); and  
 ncertain or insufficient information about the subject
- ard, statement, national planning standard, regulation,  
 exists (an existing proposal), the examination under
- oposal; and  
 t that those objectives –  
 mending proposal; and  
 al were to take effect.

red), Living 2 (deferred), and Outer Plains, to an area residential purposes.

the Living 1 and Living 2 deferred zones by providing stormwater Bypass to be completed, and rezoning part of Leeston.

en and is attached as Appendix 8 and the Plan Change  
es of the Plan. No new objectives and policies are  
nd additions to rules, and amendments to specified  
e objectives and policies of the Plan, it is considered  
vide for future generations.

development of the site in a manner which is appropriate, and which promotes social cohesion.

ing Place and Mountain View Place, and to the south, adjoining residential zone and allow for a progression of urban development that can be serviced.

Living 2 densities through the deferred zoning of the identified as potential low density future development public consultation process.

Three alternative options have been considered and are discussed below.

This option involves retaining the existing Living 1 (deferred), Living 2 (deferred) and Outer Plains zone - where land use across the deferred zoning will continue to be deferred until the stormwater issues are resolved, and the rural zoned area will continue to be used for cropping and other agricultural uses.

A private plan change request to lift the deferral and rezone the site to Living 1 and Living 2 zones to enable residential development of the site. In order to meet the requirements of Policy B4.3.55, the Leeston Creek and Market Street capacity issues would need to be provided for and an ODP inserted into the Plan.

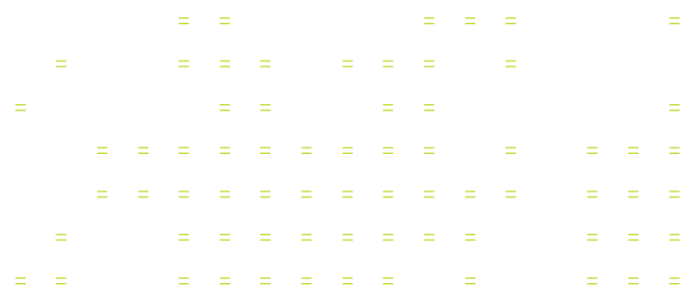
An alternative approach is to apply for a non-complying resource consent for a subdivision and residential activity to achieve the same outcome of the Plan Change. Subdivision of the site for rural residential and residential development would be assessed as a non-complying activity under the rules of the Plan. Given the non-complying status and extensive amount of information required to undertake such a resource consent, it is considered that there are both legal and practical difficulties with this option. The proposal would have to pass one of the threshold tests in Section 104(D) of the Act, and it is possible that it would fail both of these tests when considered against the underlying zone rules. Furthermore, since *Operation Homer Ltd v Selwyn District Council* [C100/2007], the Court and Council both accept that significantly out-of-zone development should be subject to a rezoning proposal rather than a non-complying resource consent.

Section 32(2) of the Act requires an assessment to identify benefits and costs anticipated from the above options, taking into account environmental, economic, social, cultural effects. The assessment is as follows.

Option	Benefits / Advantages	Costs / Disadvantages	Efficiency / Effectiveness
<b>Option 1</b> Retain the status quo (do nothing)	<ul style="list-style-type: none"> <li>• No time and money spent on the plan change process.</li> <li>• Rural production activities and rural land would be retained.</li> <li>• Rural outlook and amenity would be retained.</li> <li>• Limited to nil reverse sensitivity effects.</li> <li>• No requirement to upgrade infrastructure for servicing.</li> </ul>	<ul style="list-style-type: none"> <li>• The strip of land on Lot 2 DP 365379 would not be available for stormwater management.</li> <li>• Stormwater issues resulting from the Leeston Creek would not be improved and flooding would still occur in high rainfall events.</li> <li>• Loss of opportunity to provide an integrated development on this site.</li> <li>• Increase potential for future ad-hoc development from a lack of ODP guidance.</li> <li>• Encourage development in areas less appropriate than the site.</li> <li>• The sites potential to provide for future growth will be unrealised.</li> <li>• Unrealised economic opportunity to develop land beyond farming purposes.</li> <li>• The demand for mixed density is not met, this may increase the price of residential sections due to supply and demand constraints.</li> <li>• Would not utilise the area of land identified as appropriate for residential development.</li> </ul>	Low This is not an effective option as the stormwater issues in Leeston would remain and flooding could occur in high rainfall events. The deferred living zones have been identified as appropriate for residential development subject to stormwater solutions and are required to accommodate the projected growth of Leeston.
<b>Option 2</b> Undertake a Plan Change to uplift the	<ul style="list-style-type: none"> <li>• Stormwater management will be implemented and flooding in Leeston will be reduced when the stormwater management is implemented.</li> </ul>	<ul style="list-style-type: none"> <li>• Time and cost to undertake the plan change process.</li> <li>• There will be loss of productive</li> </ul>	Moderate - High Meets the provisions for the growth of

Option	Benefits / Advantages	Costs / Disadvantages	Efficiency / Effectiveness
deferral and rezone the site (the current proposal).	<ul style="list-style-type: none"> <li>Provides for additional housing supply and a variety of section sizes in Leeston township.</li> <li>Provides for development opportunities in an area identified as appropriate for residential development and future development.</li> <li>Infrastructure can be extended and provided to the site at the time of residential development.</li> <li>Compatibility with the consolidated urban form of Leeston and a clearer township, particularly along High Street, where the Living 1 zone will align with the existing Living XA zone on the south side of High Street.</li> <li>The landowners will be able to realise the full potential of their land providing for approximately 410 allotments across the site.</li> <li>Will encourage investment to Leeston and additional community members and rate payers.</li> <li>Birdlings Brook will be vested as a reserve, ensuring its protection.</li> <li>Future employment opportunities will be provided at the time of residential development and the construction phase.</li> <li>Leeston Creek and its margins will be vested to Council as reserve, providing a high level of amenity.</li> <li>Development of the site will be guided by an Outline Development, reducing the chance of ad-hoc development.</li> </ul>	<p>rural land.</p> <ul style="list-style-type: none"> <li>Some loss of amenity during construction phase, due to noise, increased traffic volumes.</li> <li>May result in reverse sensitivity effects on the rural and business zones.</li> </ul>	<p>Leeston as set out in Policy B4.3.54 – 55.</p> <p>Provides and extends the outcome sought by the Plan including stormwater management.</p>

<p><b>Option 3</b></p> <p>Subdivide the site through a non-complying subdivision consent.</p>	<ul style="list-style-type: none"> <li>Any proposal for residential development would be scrutinised through the resource consent process.</li> <li>Can apply for resource consent to subdivide and develop the site.</li> <li>Would provide additional housing supply and sections in Leeston.</li> </ul>	<ul style="list-style-type: none"> <li>Inappropriate method of developing the site and highly likely to be contrary to the objectives and policies of the Plan and, based on case law, could be declined and may be appealed to the Environment Court.</li> <li>Subdivision consent would not be guided by an ODP and may result in a poor integration of roading, section layout, services and stormwater management.</li> <li>Less control over the scope of the application including allotment size and shape or methods to mitigate reverse sensitivity.</li> <li>If consent is granted, integrity of the Plan may be challenged.</li> <li>Cost of preparing application and potential Environment Court case which adds significant cost, time and delay.</li> <li>Loss of structured growth plan for township including consequential effects on ability to strategically plan for infrastructural works.</li> <li>Increased risk of ad-hoc development as the site is comprised of multiple land parcels owned by separate land owners.</li> </ul>	<p>Low</p> <p>Inconsistent with statutory provisions, meaning application is likely to be declined and potentially appealed to the Environment Court.</p> <p>The desired outcome may be achieved through the resource consent process and would therefore be somewhat effective. However, the resource consent would only grant a specific development proposal and would restrict alternative layouts being identified which may have lesser environmental effects, this reducing the efficiency of the resource consent process.</p>
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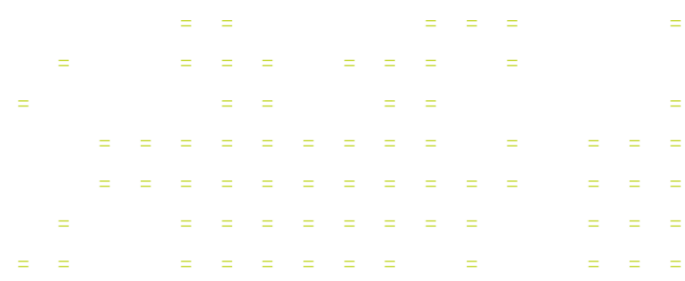
Conclusion

The retention of the current situation is not considered to be efficient and efficient use of the site. The stormwater management issues surrounding Leeston Creek and the Market Street Culvert will not be resolved and flooding will continue to occur in high rainfall events. Therefore, the deferred Living 1 and Living 2 zones would not be developed, as anticipated by the Plan until such time as the stormwater management issues are resolved.

A non-complying subdivision would result in the integrity of the Plan being questioned and could set precedent for other non-complying subdivisions similar in nature. A non-complying subdivision would likely result in poorly integrated servicing, layout and would require land use consents to enable residential development. The stormwater management issue would also not be resolved, as there would be no requirement to do so if the deferral was not being lifted, which would have the potential to increase stormwater runoff into the Leeston Creek and cause increased stormwater issues and flooding.

Lifting the deferral and rezoning the from Living 1 (deferred), Living 2 (deferred) and Outer Plains to Living 1 and Living 2 is considered to be the most appropriate and efficient option to best achieve the purpose of the Act. The proposed stormwater management will reduce the flooding risk and stormwater issues and will create a more sustainable and efficient stormwater system for the Leeston township. The Plan Change includes an ODP and will provide an integrated and strategic approach to any future development and stormwater guidelines and requirements to ensure flooding of Leeston Creek is mitigated.

# Appendix 11: Assessment of Canterbury Regional Policy Statement Objectives and Policies



The following is an assessment of the Plan Change against the objectives and policies of the Canterbury Regional Policy Statement.

## Chapter 5 – Land Use and Infrastructure

### Objective 5.2.1 – Location, design and function of development (Entire Region)

*Development is located and designed so that it functions in a way that:*

1. *achieves consolidated, well designed and sustainable growth in and around existing urban areas as the primary focus for accommodating the region's growth; and*
2. *enables people and communities, including future generations, to provide for their social, economic and cultural well-being and health and safety; and which:*
  - (a) *maintains, and where appropriate, enhances the overall quality of the natural environment of the Canterbury region, including its coastal environment, outstanding natural features and landscapes, and natural values;*
  - (b) *provides sufficient housing choice to meet the region's housing needs;*
  - (c) *encourages sustainable economic development by enabling business activities in appropriate locations;*
  - (d) *minimises energy use and/or improves energy efficiency;*
  - (e) *enables rural activities that support the rural environment including primary production;*
  - (f) *is compatible with, and will result in the continued safe, efficient and effective use of regionally significant infrastructure;*
  - (g) *avoids adverse effects on significant natural and physical resources including regionally significant infrastructure, and where avoidance is impracticable, remedies or mitigates those effects on those resources and infrastructure;*
  - (h) *facilitates the establishment of papakāinga and marae; and*
  - (i) *avoids conflicts between incompatible activities.*

The Plan Change will provide for the long-term future growth needs for Leeston beyond 2031. The Plan Change will lift the deferral of the Living 1 and Living 2 zones by providing appropriate stormwater management guidelines as part of the ODP including land to vest to Council for the Leeston North Stormwater Bypass. The Living 1 zone will be extended to align with the existing and partially developed Living XA zone south of High Street, and the proposed Living 2 zone will provide a buffer and transition (in part) between the Living 1 zone and the (Outer Plains zone. The site is located west of the existing Living 1 zone in Leeston and will be an extension of the existing urban form of the township.

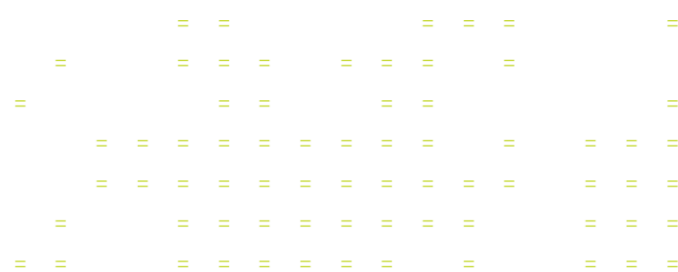
The ODP outlines the requirement for walkways, reserves and stormwater management areas, thereby providing a high level of amenity within the Plan Change neighbourhood. The Plan Change includes Living 1 and Living 2 zones, providing for a range of section sizes and lifestyle choices. Because the site adjoins an existing Living 1 zone, residential development of the site will be within close proximity to community and education facilities, reserves and the commercial centre.

Many Living 1 or Living XA zoned sites in Leeston directly adjoin the Outer Plains zone, and it is common for the Living 1 zone to create the towns boundary between the urban and rural areas. Therefore, based on the existing form of Leeston between the urban and rural areas, the Plan Change is considered to be compatible with the rural zone and is consistent with the existing rural/urban boundaries in Leeston.

### Objective 5.2.2 – Integration of land-use and regionally significant infrastructure

*In relation to the integration of land use and regionally significant infrastructure:*

1. *To recognise the benefits of enabling people and communities to provide for their social, economical and cultural well-being and health and safety and to provide for infrastructure that is regionally significant to the extent that it promotes sustainable management in accordance with the RMA.*



2. *To achieve patterns and sequencing of land-use with regionally significant infrastructure in the wider region so that:*
  - a. *development does not result in adverse effects on the operation, use and development of regionally significant.*
  - b. *adverse effects resulting from the development or operation of regionally significant infrastructure are avoided, remedied or mitigated as fully as practicable.*
  - c. *there is increased sustainability, efficiency and liveability.*

The subsequent residential development arising from the implementation of the Plan Change can be serviced with connections to the Leeston wastewater network as outlined in the Servicing Report. The Transport Assessment has concluded the proposed re-zoning and subsequent development will not adversely affect the local Leeston transport network or wider Selwyn roading network. The ODP requires pedestrian and cycle links throughout the future development of the site, both to the existing township and Ellesmere College / Te Kāreti o Waihora. The naturalisation of Leeston Creek along with the pedestrian and cycle links will provide liveability and encourage walking, cycling and non-vehicular modes of transport.

### Objective 5.2.3 – Transport network (Wider Region)

*A safe, efficient and effective transport system to meet local regional, inter-regional and natural needs for transport, which:*

1. *supports a consolidated and sustainable urban form;*
2. *avoids, remedies or mitigates the adverse effects of transport use and its provision;*
3. *provides an acceptable level of accessibility; and*
4. *is consistent with the regional roading hierarchy identified in the Regional Land Transport Strategy.*

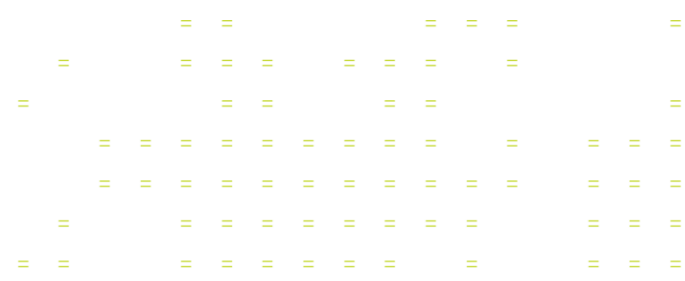
The ODP outlines the primary and secondary roads and connections for the future development of the site. The roading network will provide for connections throughout the site as well as provide for walking and cycle networks and connections. Future roading connections are required as part of the ODP to ensure the development can connect to future development of adjoining allotments. The proposed roading network is considered to be appropriate for the development of the site.

### Policy 5.3.1 – Regional growth (Wider Region)

*To provide, as the primary focus for meeting the wider region's growth needs, sustainable development patterns that:*

1. *ensure that any*
  - (a) *urban growth; and*
  - (b) *limited rural residential development**occurs in a form that concentrates, or is attached to, existing urban areas and promotes a coordinated pattern of development;*
2. *encourage within urban areas, housing choice, recreation and community facilities, and business opportunities of a character and form that supports urban consolidation;*
3. *promote energy efficiency in urban forms, transport patterns, site location and subdivision layout;*
4. *maintain and enhance the sense of identity and character of the region's urban areas; and*
5. *encourage high quality urban design, including the maintenance and enhancement of amenity values.*

The site is located on the western edge of Leeston township and seeks to provide an area of mixed residential densities with clear links to the township and wider community. The use of the Living 2 zoning will create an appropriate transition between the rural zone and urban environment when travelling to and from Leeston along High Street and Leeston Dunsandel Road. Use of the Living 1 zone encourages a continuation of the existing township character. By developing this area, there will be greater choice for housing types within the township, and the



development will provide for future growth of the area while promoting energy efficiency through links to transport networks and appropriate urban form.

### Policy 5.3.2 – Development conditions (Wider Region)

*To enable development including regionally significant infrastructure which:*

1. *ensure that adverse effects are avoided, remedied or mitigated, including where these would compromise or foreclose:*
  - (a) *existing or consented regionally significant infrastructure;*
  - (b) *options for accommodating the consolidated growth and development of existing urban areas;*
  - (c) *the productivity of the region’s soil resources, without regard to the need to make appropriate use of soil which is valued for existing or foreseeable future primary production, or through further fragmentation of rural land;*
  - (d) *the protection of sources of water for community supplies;*
  - (e) *significant natural and physical resources;*
2. *avoid or mitigate:*
  - (a) *natural and other hazards, or land uses that would likely result in increases in the frequency and / or severity of hazards;*
  - (b) *reverse sensitivity effects and conflicts between incompatible activities, including identified mineral extraction areas; and*
3. *integrate with:*
  - (a) *the efficient and effective provision, maintenance or upgrade of infrastructure; and*
  - (b) *transport networks, connections and modes so as to provide for the sustainable and efficient movement of people, goods and services, and a logical, permeable and safe transport system.*

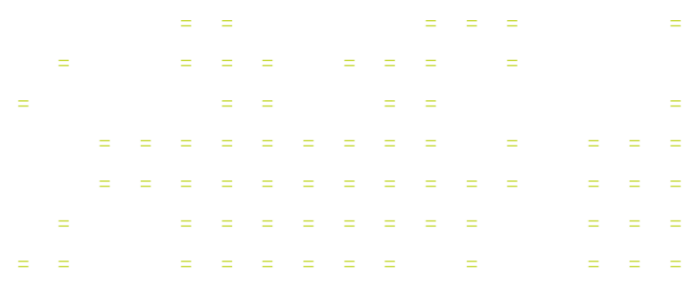
The proposal adjoins the existing urban form of Leeston, thus not fragmenting rural land. It is noted that the Plan Change will result in a block of rural land zoned Outer Plains (Lot 2 DP 82846) being surrounded on the east and south boundaries by residential zoned land. However, the rural block will be adjacent to existing rural land to the north and west and the block will be 22 ha, providing adequate land area for rural activities. Therefore, the proposal is not considered to fragment rural land. The site can be connected to Council’s potable water and wastewater networks, as detailed in the Servicing Report. Wastewater will be discharged to the Ellesmere Treatment Plant and will not adversely affect the potable water network. The site is located outside any identified natural hazard area, and the larger residential sections, required setbacks and existing rules for the Living 2 zone will mitigate potential reserves sensitivity effects. The proposal includes opportunities for linkages to existing infrastructure and current transport networks.

### Policy 5.3.3 – Management of development (Wider Region)

*To ensure that substantial developments are designed and built to be of a high-quality, and are robust and resilient:*

1. *through promoting, where appropriate, a diversity of residential, employment and recreational choices, for individuals and communities associated with the substantial development; and*
2. *where amenity values, the quality of the environment, and the character of an area are maintained, or appropriately enhanced.*

If implemented, the Plan Change could accommodate over 400 allotments with varying densities on the urban edge of Leeston, attracting a range of employment opportunities both within the immediate environment and beyond. Walk and cycle linkages will ensure that recreational opportunities will contribute to the overall high-quality design of the area. The proposal maintains amenity values, the quality of the environment and the character of the area by providing



for a range of allotment sizes and associated landscaping provisions that are consistent with development of the surrounding environment. Therefore, the proposal is consistent with Policy 5.3.3.

#### Policy 5.3.5 – Servicing development for potable water, and sewage and stormwater disposal (Wider Region)

*Within the wider region, ensure development is appropriately and efficiently served for the collection, treatment, disposal or re-use of sewage and stormwater, and the provision of potable water, by:*

- 1. avoiding development which will not be served in a timely manner to avoid or mitigate adverse effects on the environment and human health; and*
- 2. requiring these services to be designed, built, managed or upgraded to maximise their ongoing effectiveness.*

#### Policy 5.3.6 – Sewerage, stormwater and potable water infrastructure (Wider Region)

*Within the wider region:*

- 1. Avoid development, which constrains the ongoing ability of the existing sewerage, stormwater and potable water supply infrastructure to be developed and used.*
- 2. Enable sewerage, stormwater and potable water infrastructure to be developed and used, provided that, as a result of its location and design:*
  - (a) the adverse effects on significant natural and physical resources are avoided, or where this is not practicable, mitigated; and*
  - (b) other adverse effects on the environment are appropriately controlled.*
- 1. Discourage sewerage, stormwater and potable water supply infrastructure which will promote development in locations which do not meet Policy 5.3.1*

Options for servicing future development of the site are identified and discussed in the Servicing Report. The Servicing Report concludes the site can be connected to reticulated potable water and wastewater, subject to the required upgrades. Stormwater management is required as part of the ODP to mitigate stormwater effects and reduce the risk of flooding. It is considered that the proposed plan change gives effect to Policy 5.3.5 and 5.3.6.

#### Policy 5.3.8 – Land use and transport integration (Wider Region)

*Integrate land use and transport planning in a way:*

- 1. that promotes:*
  - (a) the use of transport modes which have low adverse effects;*
  - (b) the safe, efficient and effective use of transport infrastructure, and reduces where appropriate the demand for transport;*
- 1. that avoids or mitigates conflicts with incompatible activities; and*
- 2. where the adverse effects from the development, operation and expansion of the transport system:*
  - (a) on significant natural and physical resources and cultural values are avoided, or where this is not practicable, remedied or mitigated; and*
  - (b) are otherwise appropriately controlled*

The proposal has been designed to connect to and integrate pedestrian and cycle ways into existing transport networks. The Transport Assessment concludes the existing roading network, including intersections will be able to accommodate the development of the site without any upgrades or improvements. It is therefore considered that the proposal gives effect to Policy 5.3.8.

ing to Canterbury's overall rural productive economy  
 mary production, by:

- of that land for primary production; and / or  
 r precludes primary production.  
 ment in rural areas, provided that it:  
 activities, and an open rural environment;  
 rural activities, rural resources or raw material inputs  
 t (including that associated with industrial activities)  
 sourced from within the rural area; and  
 ry focus for accommodating growth in consolidated,  
 atterns. and;  
 ntribute to significant cumulative adverse effects on

High Street. While one allotment zoned Outer Plains  
 pment of the site is not considered to preclude rural  
 will adjoin rural land north of Leeston Dunsandel Road  
 ed land to adjoin the Outer Plains zone. Southeast of  
 A land directly adjoins the Outer Plains one. Directly  
 s zone. Therefore, it is considered that the proposed  
 atible.

to enable people and communities to provide for their  
 rising water for irrigation, hydro-electricity generation  
 energy values, and any economic and social activities

- indigenous species and their associated freshwater  
ed;  
s and their margins are preserved and these areas are  
opment and where appropriate restored or enhanced;  
community and stockwater supplies and customary

Character of fresh water

and their margins in the region and to:

- state of natural character;
- valued but highly degraded; and
- degraded to unacceptable levels;

water body is provided for as part of an integrated plan with Policy 7.3.9, which addresses remedying and restoring character values.



- hazard; and
4. is not likely to exacerbate the effects of the natural hazard; or
  5. Outside of greater Christchurch, is proposed to be located in an area zoned or identified in a district plan for urban residential, industrial or commercial use, at the date of notification of the CRPS, in which case the effects of the natural hazard must be mitigated.

### Policy 11.3.2 Avoid development in area subject to inundation

*In areas not subject to Policy 11.3.1 that are subject to inundation by a 0.5% AEP flood event; any new subdivision, use and development (excluding critical infrastructure) shall be avoided unless there is no increased risk to life, and the subdivision, use or development:*

1. is of a type that is not likely to suffer material damage in an inundation event; or
2. is ancillary or incidental to the main development; or
3. meets all of the following criteria:
  - (a) new buildings have an appropriate floor level above the 0.5% AEP design flood level; and
  - (b) hazardous substances will not be inundated during a 0.5% AEP flood event; provided that a higher standard of management of inundation hazard events may be adopted where local catchment conditions warrant (as determined by a cost/benefit assessment).

*When determining areas subject to inundation, climate change projections including sea level rise are to be taken into account.*

The Leeston Creek flows through the site. Due to stormwater constraints, the Leeston Creek can overflow and flood in high rainfall and flood events. The ODP requires stormwater management areas to be provided prior to any residential development of the site. The proposed stormwater management within the ODP will provide a stormwater basin in the southern portion of the site. The proposed Leeston North Stormwater Bypass will significantly lessen the prospect of water from Killinchy entering the proposal site and the township as a whole. It is considered that the flooding natural hazard can be mitigated through the stormwater diversion and stormwater management areas required by the ODP, and therefore the proposal is consistent with Objective 11.2.1.

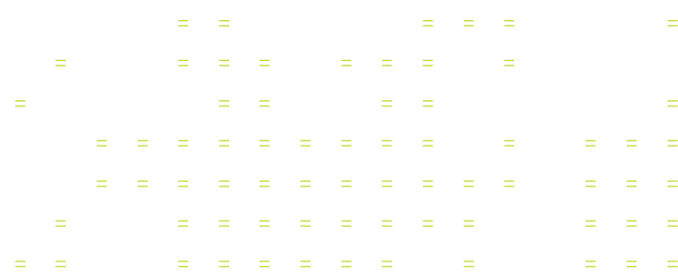
It is difficult to determine whether the proposal site is classified as a High Hazard Area, as Environment Canterbury does not hold any data to determine the water depth (metres) and velocity (metres per second) for a 1 in 500 year event. As mentioned above the proposed Leeston North Stormwater Bypass, will establish a hydrological bypass for any overflow of water entering the Leeston Creek from the Killinchy area, thereby significantly reducing the velocity and volume of water travelling through Leeston Creek and the Market Street Culvert. Given this, it is considered that the proposal is consistent with Policy 11.3.1.

The ECan Flood Risk Report, attached in Appendix 6 shows parts of the site being subject to inundation in high rainfall and flood events. The policy seeks to avoid development in areas subject to inundation by the 0.5% AEP unless there is no increased risk to life. The policy states development can occur where the development meets the criteria listed in clause 3(a) and (b) of the policy inferring that by meeting these conditions there will not be an increased risk to life. The proposed additional rule (see section 3 – Proposed Amendments to the Selwyn District Plan) requiring minimum floor levels will ensure any development of the site will meet subclause (a) of the policy. With regards to subclause (b), no hazardous substances are anticipated to be stored on site as a result of any future residential development, thus will not be inundated during flooding. Taking into account the above, the plan change is considered to be consistent with Policy 11.3.2.

### Conclusion

Overall, the proposal is considered to be consistent with the objectives and policies of the Canterbury Regional Policy Statement.

## Appendix 12: Assessment of the Mahaanui Iwi Management Plan



The following is an assessment of the Plan Change against the Mahaanui Iwi Management Plan (IMP). The Papatūānuku and Te Waihora Chapters are considered to be the most relevant to the Plan Change request, assessed as follows:

### Papatūānuku Ngā Paetae / Objectives

- (1) *The mauri of land and soil resources is protected mō tātou, ā, mō kā uri ā muri ake nei.*
- (2) *The ancestral and contemporary relationship between Ngāi Tahu and the land is recognised and provided for in land use planning and decision making.*
- (3) *Land use planning and management in the takiwā reflects the principle of Ki Uta Ki Tai.*
- (4) *Rural and urban land use occurs in a manner that is consistent with land capability, the assimilative capacity of catchments and the limits and availability of water resources.*
- (5) *Inappropriate land use practices that have a significant and unacceptable effect on water quality and quantity are discontinued.*
- (6) *Ngāi Tahu has a prominent and influential role in urban planning and development.*
- (7) *Subdivision and development activities implement low impact, innovative and sustainable solutions to water, stormwater, waste and energy issues.*
- (8) *Ngāi Tahu cultural heritage values, including wāhi tapu and other sites of significance, are protected from damage, modification or destruction as a result of land use.*

The IMP defines the principle of Ki Uta Ki Tai as land management that recognises the relationship and connections between land, water, biodiversity and the sea. The Plan Change will promote stormwater management principles to mitigate the risk of flooding and will more appropriately management stormwater of future development through the stormwater management areas. The servicing report has confirmed future development can be serviced by Council's reticulated wastewater and potable water subject to upgrades.

### Papatūānuku

*Issue P1: Basic principles of land management, from a Ngāi Tahu perspective.*

### Ngā Kaupapa / Policy

#### *Policy P1.1*

*To approach land management in the takiwā based on the following basic principles:*

- (a) *Ki Uta Ki Tai;*
- (b) *Mō tātou, ā, mō kā uri ā muri ake nei; and*
- (c) *The need for land use to recognise and provide for natural resource capacity, capability, availability, and limits, the assimilative capacity of catchments.*

*As a means to:*

- (a) *Protect eco-cultural systems;*
- (b) *Promote catchment based management and a holistic approach to managing resources;*
- (c) *Identify and resolve issues of significance to tāngata whenua, including recognising the relationship between land use and water quality and water quantity;*
- (d) *Provide a sound cultural and ecological basis for assessments of effects of particular activities; and*
- (e) *Recognise and provide for the relationship between healthy land, air and water and cultural well-being.*

The Plan Change will implement principles of Ki Uta Ki Tai, as discussed above. Lifting the deferral from the existing Living 1(deferred) and Living 2 (deferred) zones and rezoning the site will provide long term development and housing opportunities for future generations, while being provided with reticulated potable and wastewater services. Stormwater will be managed through the ODP requirements and guidelines and naturalising the stormwater management areas will encourage wildlife and habitats. The Servicing Report has confirmed capacity of the Council's reticulated potable water and wastewater networks, subject to upgrades.

*Issue P4: Subdivision and development can have significant effects on tāngata whenua values, including sense of place, cultural identity, indigenous biodiversity, mahinga kai, and wāhi tapu and wāhi taonga, but can also present opportunities to enhance those values.*

### Policy P4.1

- (a) Encouraging developers to engage with Papatipu Rūnanga in the early stages of development planning to identify potential cultural issues; including the preparation of Cultural Impact Assessment reports;
- (b) Ensuring engagement with Papatipu Rūnanga at the Plan Change stage, where plan changes are required to enable subdivision;
- (c) Requiring that resource consent applications assess actual and potential effects on tāngata whenua values and associations;
- (d) Ensuring that effects on tāngata whenua values are avoided, remedied or mitigated using culturally appropriate methods;
- (e) Ensuring that subdivision consents are applied for and evaluated alongside associated land use and discharge consents; and
- (f) Requiring that 'add ons' to existing subdivisions are assessed against the policies in this section.

## Stormwater

## Ngā Kaupapa / Policy

### Policy P6.1

- (b) Reducing volume entering system – implementing measures that reduce the volume of stormwater requiring treatment (e.g. rainwater collection tanks);
- (c) Reduce contaminants and sediments entering system – maximising opportunities to reduce contaminants entering stormwater e.g. oil collection pits in carparks, education of residents, treat the water, methods to improve quality; and
- (d) Discharge to land based methods, including swales, stormwater basins, retention basins, and constructed wetpools and wetlands (environmental infrastructure), using appropriate native plant species, recognising the ability of particular species to absorb water and filter waste.

*Policy P6.2*

*Policy P6.3*

6129-PLN-APP-01-PLAN CHANGE VERSION 2 | 26/11/2019

#### *Policy P6.5*

*To encourage the design of stormwater management systems in urban and semi urban environments to provide for multiple uses: for example, stormwater management infrastructure as part of an open space network that provides for recreation, habitat and customary use values.*

Stormwater management can be designed and managed at the time of subdivision. The ODP has outlined the requirement for stormwater management areas to mitigate flooding in high rainfall events.. Stormwater from future development is not anticipated to enter the reticulated wastewater network, rather is anticipated to be treated in the stormwater management areas and discharged into Birdlings Brook and the existing stormwater system on Chapman Street. The Plan Change is considered to be not contrary to the stormwater policies of the IMP.

### Discharge to Land

*Issue P8: Discharge to land can utilise the natural abilities of Papatūānuku to cleanse and filter contaminants but must still be managed to avoid adverse effects on soil and water resources.*

#### Ngā Kaupapa / Policy

##### *Policy P8.1*

*To require that discharge to land activities in the takiwā:*

- (a) Are appropriate to the soil type and slope, and the assimilative capacity of the land on which the discharge activity occurs;*
- (b) Avoid over-saturation and therefore the contamination of soil, and/or run off and leaching; and*
- (c) Are accompanied by regular testing and monitoring of one or all of the following: soil, foliage, groundwater and surface water in the area.*

The Geotechnical Report notes the site is above a high groundwater table. Stormwater management areas have been identified in the ODP to mitigate flooding of Leeston Creek and to capture stormwater, so the flows of the Leeston Creek does not exceed predevelopment flow rates. The Servicing Report has concluded the site can be serviced by Council's reticulated potable and wastewater networks.

### Earthworks

*Issue P11: Earthworks associated with land use and development need to be managed to avoid damaging or destroying sites of significance, and to avoid or minimise erosion and sedimentation.*

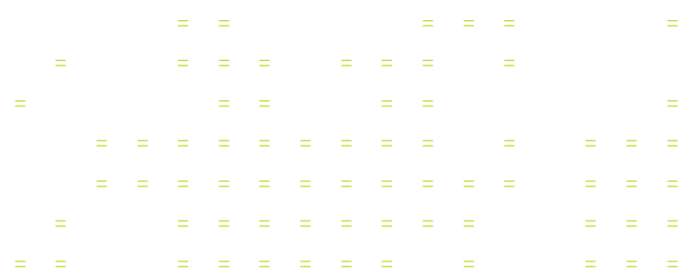
#### Ngā Kaupapa / Policy

##### *Policy P11.1*

*To assess proposals for earthworks with particular regard to:*

- (a) Potential effects on wāhi tapu and wāhi taonga, known and unknown;*
- (b) Potential effects on waterways, wetlands and waipuna;*
- (c) Potential effects on indigenous biodiversity;*
- (d) Potential effects on natural landforms and features, including ridge lines;*
- (e) Proposed erosion and sediment control measures; and*
- (f) Rehabilitation and remediation plans following earthworks*

Earthworks will be required for the future development of the site and can be appropriately managed through conditions of consent the time of development.



## Te Waihora

### Ngā Paetae / Objectives

- (1) *Ngāi Tahu are active co-governors of Te Waihora and its catchment.*
- (2) *Land and water management in the catchment effectively provides for the Treaty partner status of Ngāi Tahu, and the taonga status of Te Waihora.*
- (3) *The cultural health of Te Waihora is restored, including the restoration of mahinga kai species abundance and diversity to a level to enable customary use.*
- (4) *The customary rights of Ngāi Tahu whānui associated with mahinga kai and Te Waihora are protected mō tātou, ā, mō kā uri ā muri ake nei.*
- (5) *Land and water use in the catchment respects the boundaries, availability and limits of our freshwater resources and the need to protect soil and water resources for future generations.*
- (6) *The relationship between land use, groundwater, surface water and Te Waihora is recognised and provided for according to the principle of Ki Uta Ki Tai.*
- (7) *Lake management, including lake level management, reflects living with the lake, rather than forcing the lake to live with us.*
- (8) *The cultural health of lowland waterways is restored, through the restoration of water quality and quantity and riparian margins.*
- (9) *Wetlands and waipuna are recognised and protected as wāhi taonga, and there is an overall net gain of wetlands in the catchment.*
- (10) *All waterways have healthy, planted riparian margins and are protected from stock access.*
- (11) *The discharge of contaminants to the lake and waterways in the catchment is eliminated.*

The above objectives of the Te Waihora Chapter relate mainly to the governance of Te Waihora and the goal to restore the health of the Lake. The Plan Change will not adversely affect the governance of Te Waihora and servicing any future development of the site can be accommodated by Council's reticulated potable water and wastewater networks, as well as stormwater management areas and reserves. Naturalisation of the waterways is anticipated to assist in improving water quality in Leeston Creek and this water ends up in Te Waihora. The Plan Change is considered to be not contrary to the objectives of the Te Waihora Chapter of the IMP

# Appendix 13: Assessment of the Land and Water Regional Plan

## Section 3 – Objectives

### Policy 3.1

### Policy 3.2

### Policy 3.5

### Policy 3.8

*Policy 3.8A*

### Policy 3.19

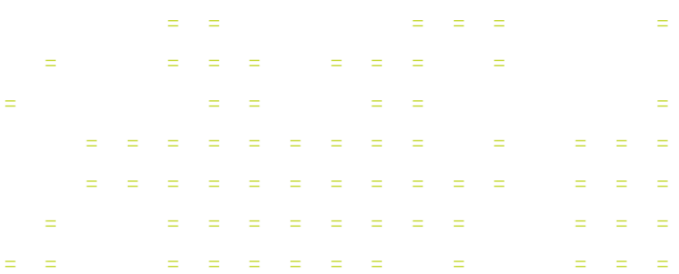
### Policy 3.24

The Plan Change will enable the development of potentially 410 residential allotments and will cater for future residential development and housing for future generations. The catchment of the Leeston Creek will be managed in a manner that will reduce the risk of flooding through the stormwater management. The servicing report has confirmed the site and future development can be serviced with potable water.

The following is an assessment of the Plan Change against the policies in Section 11 – Te Waihora of the LWRP.

### Policy 11.4.1

*Manage water abstraction and discharges of contaminants within the entire Selwyn Te Waihora sub-region to avoid, remedy or mitigate adverse cumulative effects on the water quality of Te Waihora/Lake Ellesmere, rivers and shallow groundwater; and the flow of water in springs and tributaries flowing into Te Waihora/Lake Ellesmere and achieve, in combination with non-regulatory actions, the freshwater objectives and outcomes for the sub-region.*



*Policy 11.4.2*  
*In recognition of the importance of the entire catchment to Ngāi Tahu, actively manage the Selwyn Te Waihora sub-region to enable Ngāi Tahu to exercise kaitiakitanga in the management of fresh water.*

*Policy 11.4.5*  
*Recognise the value of the Te Waihora/Lake Ellesmere catchment for its recreational and amenity values.*

A PSI has been undertaken on the site which has concluded there are areas on the site where HAIL activities have taken place. A Detailed Site Investigation will be required at the time of subdivision and any remediation as required. If the site is required to be remediated for residential development, the only contaminants anticipated to enter water are contaminants from stormwater runoff, which can be appropriately managed through conditions of any future subdivision consent. Selwyn District Council have purchased an area of the Plan Change site for the purpose of water abstraction. A zone of influence is noted on the ODP to ensure the water abstracted from this point is protected.

The application was submitted to Mahaanui Kurataiao Limited to consult with the local Rūnanga, Taumutu, and provide comments and recommendations. The consultation report is attached in Appendix 9. The recommendation to consult with Taumutu at the time of development (subdivision) has been included in the ODP.

The Plan Change will enable residential development in Leeston, in close proximity to Te Waihora and a short drive will enable residents to enjoy the lake.

**Managing Land Use to Improve Water Quality**

*Policy 11.4.7*  
*Reduce the total nitrogen load entering Te Waihora/Lake Ellesmere by restricting the losses of nitrogen from farming activities, industrial and trade processes and community sewerage systems in accordance with the target (the limit to be met over time) and limits in Tables 11(i) and 11(j).*

The Plan Change will rezone land currently utilised for grazing and pasture for residential activity, reducing the agriculture practises that are currently being undertaken on the site. The servicing report has confirmed the reticulated wastewater network can accommodate future development of the site.

Overall, the Plan Change is considered to be consistent with the objectives and policies of the LWRP.

## **Appendix C: A copy of the relevant decision**

**RESOURCE MANAGEMENT ACT 1991**

**SELWYN DISTRICT COUNCIL**

**SELWYN DISTRICT PLAN**

**PROPOSED DISTRICT PLAN CHANGE NUMBER 62**

**BY**

**D MARSHALL, L MARTIN AND A FORMOSA, M AND T SAUNDERS, B HAMMETT AND  
J AND S HOWSON**

**TO**

**TO UPLIFT DEFERRED LIVING 1 (5.3HA) AND LIVING 2 (22.8HA) ZONED LAND AND  
REZONE 31.2HA OF RURAL (OUTER PLAINS) LAND TO THE WEST SIDE OF LEESTON**

**Final Recommendation by  
Commissioner Dean Chrystal**

**Hearings held on 15<sup>th</sup> September 2020**

**Appearances:**

**Council:**

**Ms Jocelyn Lewes, Council Planner**

**Mr Murray England, Council Asset Manager – Water Services**

**Mr Andrew Mazey, Council Asset Manager - Transportation**

**Applicant:**

**Ms Sarah Eveleigh (Legal Counsel)**

**Mr Andrew Carr (Traffic Engineer)**

**Mr James Hopkins (Engineer)**

**Mr Michael Vincent (Planning Consultant)**

**Submitters**

**Mrs Carey Barnett for Harts Creek Streamcare Group and Ellesmere Sustainable Agriculture Inc**

**Mr Stuart McLachlan**

**Mrs Jane West for Cochranes of Canterbury (Planning Consultant)**

**Ms Emily Allan for Christchurch City Council (Planner)**

## 1.0 Introduction

- 1.1 Pursuant to instruction from the Selwyn District Council (the Council) I was appointed to conduct a hearing and make a recommendation on Proposed Change 62 (PC62) to the Selwyn District Plan (District Plan) together with submissions thereon. A hearing was held at the Leeston Service Centre on the 15<sup>th</sup> of September 2020.
- 1.2 I subsequently issued an Interim Report on the 23<sup>rd</sup> of November 2020 which is attached as **Appendix A**. In that interim report I said that having considered PC62 and all the relevant evidence and documentation I was of the opinion for the reasons set out in that report that PC62 in its fullness, had the potential to generate adverse effects, was inconsistent with the preferred growth direction in the Area Plan, was not appropriate in terms of the s32 tests and overall did not meet the purpose and principles set out in Part 2 of the Act in promoting sustainable management of natural and physical resources. I also indicated that my conclusion on the deferred land associated with the plan change on its own would be different.
- 1.3 I reached a conclusion that it would not be appropriate in the circumstances to decline the Plan Change outright and that the deferred Living 1 and Living 2 zones should be uplifted and that whole area, aside from 31 Leeston Dunsandel Road (which would remain Living 2 due to a scope reason) should be zoned Living 1. In reaching that conclusion I was conscious that changes would be required to the rules proposed, the ODP and the planning map. I also considered that the rural/urban interface needed to be addressed, although I did not suggest densities at a Living 2 zone level should be imposed along this interface.
- 1.4 The purpose of issuing the interim report was to enable further input from the Applicant on the following:
  - The provision of a revised Outline Development Plan (ODP) covering the deferred land only.
  - The inclusion of provisions or mechanisms for the Living 1 zone at the rural/urban interface to address potential reverse sensitivity. These might include larger lot sizes, dwelling setbacks and/or covenants.
  - The inclusion of acoustic fencing or mounding to a height of 1.8m in proposed Rule 4.2.5 and an additional associated matter of discretion in Rule 4.2.8.
  - The updating of all other rules and the planning map to reflect the Living 1 zoning of the deferred land only.
- 1.5 In issuing an interim report I accepted that it may take some time to address the above matters and therefore I did not impose a strict timeframe for that to occur but indicated that I thought a response by the 14<sup>th</sup> of December 2020 could be achieved so that I could issue my final recommendation to the Council prior to Christmas.
- 1.6 I subsequently received a response from the Applicant on the 18<sup>th</sup> of December 2020, however I then received correspondence from the Council on the 23<sup>rd</sup> of December 2020 that the Applicant wished to place the plan change process on hold while they considered other options.
- 1.7 On the 4<sup>th</sup> of February 2021 I received further correspondence superseding that provided on the 18<sup>th</sup> of December 2020. I then provided the Council with an opportunity to provide comments on the response which they did so on the 15<sup>th</sup> of February. The Applicant then provided a final response on the 18<sup>th</sup> of February 2021.

## **2.0 Brief Background**

- 2.1 PC62 is a privately initiated plan change by D. Marshall, L. Martin & A. Formosa, M. & T. Saunders, B. Hammett and J. & S. Howson. The plan change seeks to uplift the present deferral of 5.3ha of Living 1 and 22.8ha of Living 2 zoned land, rezoning some 22.8ha of Living 2 to Living 1, and to rezone Living 1 and Living 2 some 31.2ha of Rural (Outer Plains) zoned land on the western side of Leeston. The proposal involves the deletion of one policy (Policy B4.3.55) and a number of changes to, and the addition of, rules and includes an ODP to guide development.
- 2.2 PC62 was publicly notified on the 21<sup>st</sup> of January 2020, to which 18 submissions and four further submissions were received. Of the 18 submissions, 10 were opposed in some form, four were in support, three were neutral and one did not state its position. I accepted one late submission and accepted that a submission by Mr Peter Martin represented trade competition pursuant to s74(3) of the Resource Management Act and therefore I did not have regard to it.
- 2.3 The issues raised in submissions included:
- Township form and character;
  - Infrastructure servicing, including stormwater; the impact on fire-fighting ability and wastewater
  - Versatile soils;
  - Transport safety and efficiency;
  - Land stability and geotechnical risk;
  - Cultural values; and
  - Greater Christchurch Partnership.
- 2.4 A s42A report prepared by Ms Lewes had concluded that PC62 could be approved.
- 2.5 Details of Ms Lewes report, the Applicants case, the case of submitters and my assessment are contained in the interim report in Appendix A.

## **3.0 Responses**

### Applicant

- 3.1 The Applicants response of the 4<sup>th</sup> of February 2021 addressed the matters in the interim report. The response indicated that the Applicant accepted my recommendation to re-zone the deferred zone only (Option 1), however also presented an alternative option (Option 2) for the stormwater basin to be contained within the Rural (Outer Plains) zone.
- 3.2 Option 1 addressed the matters raised in my Interim Report including on the ODP the provision of a 920m long 10m wide landscaped buffer strip along the Living 1/Rural (Outer Plains) interface along with a 20m setback from the zone boundary for a new dwelling or principal building, the re-siting of the stormwater management areas and adjusting the road alignment to accommodate the building setback. It was noted that this provided

for larger sections adjoining the Rural (Outer Plains) interface, increasing the amenity of these sites and reducing the potential for reverse sensitivity.

- 3.3 Option 2 provides the same layout as Option 1 but showed the stormwater basin located within the Rural (Outer Plains) zone.
- 3.4 The Applicant also sought that 149 High Street, legally described as Pt RS 5482/5483, be rezoned Living 1 on the basis that this site was effectively a residential site, rather than an active rural site and that the owners of this site are party to the application. This site is some 4046m<sup>2</sup> and contains a dwelling and shed.
- 3.5 The response also provided rules associated with the rural interface and acoustic fencing and revised rules where necessary to eliminate reference to the Living 2 zone.

Council

- 3.6 The Council reply of the 15<sup>th</sup> of February to the Applicants response identified the following concerns in relation to the rural buffer strip:
- The Council did not support either the buffer strip or proposed Rule 12.1.7.10 considering there was no need for a public walkway associated with the landscape buffer along the rural edge as a walking connection was already proposed along the waterway within the site and further it would not meet CPTED principles and could create safety issues for both walkway users and private property owners in terms of property security, and Council in terms of maintenance.
  - Should the buffer strip be required, then the Council considered that this should be formalised by way of land to be vested as reserve and any reserve should conform to Council's reserves policy.
- 3.7 The Council did support the 20m 'no build' setback rule and recommended that this rule be applied to the full extent of the zone boundary interface, including the land on the northern side of Leeston Dunsandel Road, where is also sought that the potential future roading connection to the east shown on the ODP presented to the hearing be reinstated.
- 3.8 The Council also supported the inclusion of 149 High Street within the Living 1 zone and ODP.

Applicant

- 3.9 The Applicant responded to the Councils reply on the 15<sup>th</sup> of February indicating that they had considered the reply and supported the proposed amendments put forward by Council as it relates to the urban/rural interface, acoustic fencing, inclusion of 149 High Street as Living 1 zone and subsequent renumbering and amendments to the District Plan. This included removing the landscape buffer between the Rural (Outer Plains) and Living 1 zone and providing for the stormwater management areas within the ODP.

#### 4.0 Discussion and Recommendation

- 4.1 Based on the above I did not consider the hearing needed to be reconvened nor comments sought from submitters and that I was able to reach a final recommendation on the basis of the latest information before me.
- 4.2 Having addressed and reached the substantive recommendation in my Interim Report (attached as **Appendix A**) I am left to decide upon the revised ODP and rules and whether 149 High Street should be included as part of the Living 1 zone and subsequently on the ODP.
- 4.3 In terms of the matters that I sought to be addressed I am satisfied that the 20m setback rule from the Rural (Outer Plains) zone for a new dwelling or principal building is sufficient to address the potential reverse sensitivity issue at the rural/urban interface. I also agree with the Council that this should apply to the full extent of the zone boundary interface.
- 4.4 I am also satisfied with the proposed rule requiring acoustic fencing at the interface with the Business 1, including its relocation to the subdivision chapter. In my view this rule will reduce the potential for noise effects to impact on new residential development in the developing subdivision.
- 4.5 In terms of 149 High Street, I acknowledge that this site is historical and below the minimum subdivision standards for the Rural zone. Given that it would now adjoin the new Living 1 zone boundary I accept that it is logical to include it as part of the Living 1 zone and within the ODP.
- 4.6 For the foregoing reasons I **recommend** to the Selwyn District Council as follows:
1. That pursuant to clause 10 of Schedule 1 to the Resource Management Act 1991 the Council approve that part of Plan Change 62 to the Selwyn District Plan which seeks to uplift the present deferred Living zoning and rezoning it Living 1 (with the exception of 31 Leeston Dunsandel Road which would be Living 2) along with 149 High Street and associated provisions as set out in Appendix B.
  2. That pursuant to clause 10 of Schedule 1 to the Resource Management Act 1991 the Council reject that part of Plan Change 62 seeking to rezone Rural (Outer Plains) land apart from 149 High Street.
  3. That for the reasons set out in the Interim Report the Council accordingly either accept, accept in part or rejected the submissions listed in Appendix C.



Commissioner D Chrystal

3<sup>rd</sup> March 2021

**APPENDIX A**

**INTERIM REPORT**

**RESOURCE MANAGEMENT ACT 1991**

**SELWYN DISTRICT COUNCIL**

**SELWYN DISTRICT PLAN**

**PROPOSED DISTRICT PLAN CHANGE NUMBER 62**

**BY**

**D MARSHALL, L MARTIN AND A FORMOSA, M AND T SAUNDERS, B HAMMETT AND**

**J AND S HOWSON**

**TO**

**TO UPLIFT DEFERRED LIVING 1 (5.3HA) AND LIVING 2 (22.8HA) ZONED LAND AND  
REZONE 31.2HA OF RURAL (OUTER PLAINS) LAND TO THE WEST SIDE OF LEESTON**

**Interim Report by**

**Commissioner Dean Chrystal**

**Hearings held on 15<sup>th</sup> September 2020**

**Appearances:**

**Council:**

**Ms Jocelyn Lewes, Council Planner**

**Mr Murray England, Council Asset Manager – Water Services**

**Mr Andrew Mazey, Council Asset Manager - Transportation**

**Applicant:**

**Ms Sarah Eveleigh (Legal Counsel)**

**Mr Andrew Carr (Traffic Engineer)**

**Mr James Hopkins (Engineer)**

**Mr Michael Vincent (Planning Consultant)**

**Submitters**

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**Mr Stuart McLachlan**

**Mrs Jane West for Cochranes of Canterbury (Planning Consultant)**

**Ms Emily Allan for Christchurch City Council (Planner)**

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- 1.3 PC62 was publicly notified on the 21<sup>st</sup> January 2020, to which 18 submissions and four further submissions were received, including one late submission from Harts Creek Streamcare Group. Council Planner Jocelyn Lewes did not consider that the late submission unduly delayed the hearing, nor affected any party. I note that the Applicant's did not oppose the late submission and I agree it can be accepted.
- 1.4 Ms Lewes considered the submission by Mr Peter Martin was a trade competition submission which pursuant to s74(3) of the Resource Management Act (the Act or the RMA) the territorial authority must not have regard. Both the Applicants legal counsel Ms Eveleigh and planner Mr Vincent concurred with this although Ms Eveleigh couched her words carefully when she said the submission "*primarily relates to trade competition*". I have considered Mr Martin submission and acknowledge that as an owner of residentially zoned land and in seeking a deferred zoning of the plan change site until existing zoned land (including his own) is under development he has placed himself in the position, perhaps unwittingly, of being a trade competitor. There is an element of his submission, which I take Ms Eveleigh was eluding to, which steps outside the trade competition ambit, involving his reference to the limited number of sections being sold in Leeston. At the end of the day I have decided that the submission does represent trade competition due to the decision being sought and the way it was framed.
- 1.5 Of the 18 submissions, 10 were opposed in some form, four were in support, three were neutral and one did not state its position.
- 1.6 The issues raised in submissions included:
  - Township form and character;
  - Infrastructure servicing, including stormwater; the impact on firefighting ability and wastewater
  - Versatile soils;
  - Transport safety and efficiency;
  - Land stability and geotechnical risk;
  - Cultural values; and
  - Greater Christchurch Partnership.

- 1.7 Prior to and after the hearing I undertook site visits where I was able to view the site from various locations and get an understanding of its position with regards the surrounding environment.

## **2.0 Section 42A Report**

- 2.1 Pursuant to s42A of the RMA Ms Lewes produced a report addressing the proposed plan change and a range of matters she considered were covered by submitters as set out below.

### **Township form and character**

- 2.2 Ms Lewes summarised the submissions relating to the township form and character issue as (a) whether there is a need for further growth in Leeston, (b) whether the Plan Change will result in a loss of amenity, (c) the reverse sensitivity effects of the Plan Change on established businesses in the Leeston township and (d) the appropriateness of alternative zoning requests.
- 2.3 In regard to the need for further growth in Leeston, Ms Lewes made reference to the Ellesmere Area Plan (2016) (Area Plan), specifically noting that the Area Plan anticipates a 49% increase in the population of Leeston and an increase of 402 households. Notably, the Area Plan identifies that there is existing zoned capacity to accommodate up to 953 households within the boundary of the township (which includes the land with a deferred zoning). Ms Lewes concluded that the Area Plan supports growth to the west of the existing Leeston township (towards Harmans Road) and accordingly, considers that the Plan Change is supported by the intent of the Area Plan and provides a logical expansion of the Leeston township. She also notes that the zonings proposed through this plan change is an efficient use of land and will enable provision of a range of housing typologies.
- 2.4 In regard to the loss of amenity arising from the PC62, Ms Lewes noted that the change of use and character of land closest to the existing urban area is anticipated by the underlying Living zoning, accordingly it is unreasonable to expect a continued rural amenity.
- 2.5 Ms Lewes addressed reverse sensitivity effects both generally and specifically (in relation to a further submission by Cochranes of Canterbury). With regards to reverse sensitivity effects generally, Ms Lewes noted that the sort of rural-urban interface proposed always occurs at the edge of townships. She said that urban growth plan changes simply shift the boundary of this interface and there was nothing about the plan change site that would appear to make it more sensitive than typical rural-urban interfaces found in Leeston specifically, or throughout the District more generally. She considered that consistent with the current approach of the Plan, no specific provisions were required to address reverse sensitivity effects at the rural-urban interface. However, with regards to the interface between the existing activity at 125 and 125a High Street and the proposed residential development, Ms Lewes considers that the rule proposed by the applicant requiring 2m wide landscape buffer where allotments adjoin the Business 1 zone sufficiently addresses the reverse sensitivity issue raised by Cochranes of Canterbury.
- 2.6 Lastly, Ms Lewes addressed two submissions that requested an alternative zonings for their sites; specifically, Cochranes of Canterbury requested that a portion of 125 High Street be rezoned to Business 1, while Sharon

Farrant requested that 33 – 35 Leeston Dunsandel Road be rezoned to Living 1. Ms Lewes concluded that these submissions are outside the scope of the Plan Change application and that she is unable to support them.

**Infrastructure Servicing**

- 2.7 Ms Lewes' infrastructure servicing assessment was supported by the assessment of Mr Murray England. Overall, they concluded that there are no wastewater, stormwater or water supply reasons why the plan change should not be granted.

*Flooding and Stormwater*

- 2.8 Ms Lewes summarised the progress of the Leeston North Stormwater bypass project noting that Stages 1 and 2 of the project were complete, Stage 3 is underway and a final stage has been budgeted for (which includes land identified in the proposed ODP as 'Stormwater Management Area'. Ms Lewes then went on to summarise the stormwater water management approach proposed as part of the Plan Change, noting that the detailed design would be assessed as part of the subdivision consent process and any necessary regional consenting process. Ms Lewes concluded that specific rules should be included in the Plan to ensure that flooding effects are appropriately managed.

*Wastewater*

- 2.9 Ms Lewes (and Mr England) acknowledged that the existing Ellesmere Wastewater Treatment Plan has limited capacity at this time, but following its upgrade, would have sufficient capacity to service the development within the Plan Change area. To address this interim constraint, Ms Lewes supported the applicants proposed rule that would restrict subdivision within the Plan Change area to 80 lots until such time as the required upgrade(s) to the treatment and/or disposal system has been undertaken.

*Water supply*

- 2.10 Ms Lewes (and Mr England) acknowledged the current water supply has limited spare capacity to allow for additional connections in Leeston and to address this, Council were seeking resource consent from the Regional Council for a new bore. This new bore would be able to service the water demands of the development within the Plan Change area. Accordingly, Mr England has proposed a rule that would make subdivision beyond the 80th lot non-complying until such time as the Leeston water supply system is capable of servicing the additional allotments within the Plan Change area.

With regards to water supply and firefighting requirements, Ms Lewes acknowledges the submission made by Fire and Emergency New Zealand (FENZ), but did not consider that an additional rule requiring development within the Plan Change area to comply with New Zealand Firefighting Code of Practice SNZ/PAS 4509:2008 was necessary. She noted that there were already sufficient measures in the District Plan to ensure adequate water volumes and pressure are provided for firefighting purposes.

**Transport safety and efficiency**

- 2.11 Ms Lewes transportation assessment was supported by the assessment of Mr Andrew Mazey. Overall, they concluded that there are no traffic reasons why the Plan Change should not be granted.

*Connectivity*

- 2.12 While the roading connection to the Plan Change area from Spring Place had met with opposition from residents in that street, Mr Mazey generally supported the link. However in recognition of the opposition, Mr Mazey had recommended that the access (at 18 Spring Place) be downgraded and formed in line with the District Plan's requirements for a Local Intermediate Road as this he considered would remove the attractiveness of this connection being used as a primary access to the Plan Change area.

*Transport safety*

- 2.13 Mr Mazey confirmed that he was generally comfortable with the impact on traffic safety following the development of the land within the Plan Change area. He however noted that there were a number of minor upgrades that would be appropriate should the Plan Change proceed. Ms Lewes advised that any upgrades could be satisfactorily dealt with at the subdivision stage.

*Transport effects*

- 2.14 Christchurch City Council (CCC) submitted that the proposed Plan Change would result in higher commuter volumes into Christchurch City contributing to congestion and emissions. Ms Lewes and Mr Mazey considered a number of issues with the matter raised, including: the 2013 commuter data referenced by CCC reflected a post-earthquake situation that may not reflect current commuter figures, the data did not conclusively indicate that traffic commuting from Leeston was entirely destined for Christchurch City, and there was no analysis presented that showed how Leeston commuters used the road network to access their destination. Ms Lewes and Mr Mazey also noted that the traffic safety matter raised by CCC is governed by the Greater Christchurch Partnership.

**Versatile Soils**

- 2.15 Ms Lewes concurred with the Applicant that the Plan Change would not have a significant effect on the overall quality and availability of rural land in the Selwyn District. She went on to note that the Plan Change would provide for urban development without compromising larger, more viable farms.

**Land Stability and Geotechnical Risk**

- 2.16 On the basis of a peer review carried out by Mr McCahon of Geotech Consulting Ltd, Ms Lewes concluded that there were no geotechnical reasons that the Plan Change should not be granted, and that the existing subdivision provisions provide appropriate scope for the Council to assess matters such as liquefaction and lateral spread at the time a subdivision consent application is received.

**Cultural Values**

- 2.17 Ms Lewes noted that Mahaanui Kurataiao Limited (MKT) reviewed the plan change request and did not identify any wahi tapu or wahi taonga sites of cultural significance within the PC62 area. The review acknowledged the potential for residential development of the site and provided several cultural recommendations related to the future subdivision of the site. However, MKT did identify that the future subdivision of the site presented a high risk to water quality in Te Waihora / Lake Ellesmere as well as any unknown springs in the Plan Change area.

Ms Lewes considered that the concerns raised by MKT could be addressed at subdivision stage, but overall cultural values had been appropriately considered and addressed by the applicant.

**Greater Christchurch Urban Development Strategy (UDS)**

- 2.18 Ms Lewes addressed the submission of CCC which raised concerns regarding the impact that PC62 may have on the UDS. Ms Lewes considers that this submission raised matters that are beyond the scope of the plan change and also noted that the site falls outside the area of concern of the UDS, was not recognised in the settlement pattern update or considered in the Our Space recommendations for changes to the Canterbury Regional Policy Statement (CRPS). Ms Lewes considered PC62 was consistent with the current, operative, higher order documents and to decline it on the basis that it may not align with future work, the outcomes of which were not currently known, was inconsistent with the principles of natural justice.

**Statutory Analysis**

- 2.19 Ms Lewes went onto undertake a statutory analysis of the District Plan and other relevant planning documents, including the National Policy Statement on Urban Development (which she did not consider relevant); the Proposed National Policy Statement on Highly Productive Land (which she did not consider relevant); and the National Environmental Standard for Assessing and Managing Contaminations in Soil to Protect Human Health (which she considered could be appropriately assessed at the subdivision stage).
- 2.20 Ms Lewes noted that PC62 was to be considered under Chapter 5 of the CRPS and considered that the outcomes required in this chapter could be achieved and that PC62 was able to 'give effect' to the CRPS. She also considered that the plan change could be efficiently and effectively serviced in a manner that maintained water quality and quantity and was consistent with the outcomes sought by the Land and Water Regional Plan (LWRP).
- 2.21 Ms Lewes considered the values set out in the Mahaanui Iwi Management Plan 2013 (MIMP) will not be compromised and noted that MKT and the rūnanga had made a number of recommendations that were more appropriately addressed at the time of subdivision consent.
- 2.22 With regard to the District Plan, Ms Lewes turned her attention primarily to the urban growth provisions in sections B3.4 Quality of the Environment and B4 Growth of Townships. She concluded that the proposed plan change sits reasonably comfortably against these provisions and that overall, the application had addressed the necessary objectives and policies of the District Plan and concurs that the Plan Change is consistent with the relevant policy framework.
- 2.23 Ms Lewes also concurred with the conclusion that PC62 was consistent with the key actions identified in the Selwyn 2013: District Development Strategy and the Area Plan in that it provides for growth in an integrated and consolidated manner.

**Proposed Amendments**

- 2.24 Ms Lewes set out the changes to the District Plan including her proposed amendments in Appendix 1 of her s42A report should PC62 be approved, which included:

- a) Amendments to the Planning Maps (Township Volume) and Planning Maps (Rural Volume) to incorporate the zone changes into the planning maps.
- b) Inserting the Leeston Outline Development Plan to the Township Volume.
- c) Deleting Policy B4.3.55 and associated explanation.
- d) A series of rules addressing the flood hazard, reverse sensitivity effects on the Business 1 land, amendments to the rules on fencing and boundary treatment adjoining reserves, and rules associated with the ODP and subdivision which include restricting development until water and wastewater upgrades have occurred.
- e) Consequential amendments

### **Conclusion**

- 2.25 Ms Lewes concluded that PC62, at a strategic level, better achieves the District Plans' objectives than the existing provisions, is consistent with the provisions regarding urban growth management, gives effect to the objectives and policies of higher order documents and is in accordance with the Area Plan. She noted that the proposal is an efficient use of land, part of which is already identified for residential use and will form a logical expansion to the Leeston township and that servicing of PC62 is technically feasible through on-site management of stormwater, and (in time) connection to the Council's reticulated water and wastewater network.

## **3.0 Hearing**

### **Pre-hearing Information**

- 3.1 Prior to the hearing I had issued a Minute seeking information from the Council on the take up of sections and households in Leeston in the period since 2016 so as to provide me with a better understanding of the growth situation in the township. Ms Lewes responded with evidence confirming that the Area Plan anticipates an increase of 402 households (49%) to 2031, and the existing zoned capacity within the town boundary provides for an additional 953 dwellings. The expected household increase (of 402) would yield 26 households a year or 115 to May 2020 (assuming a linear distribution). However, Ms Lewes noted that only 79 dwellings have been consented between 2016 and May 2020. Ms Lewes advised that there were two large Living zoned land parcels in Leeston that remain undeveloped; one had held consent but this had now lapsed, and the other currently has an application with Council to subdivide but it has been placed on hold at the request of the applicant due issues associated with Development Contributions.

### **Applicant**

- 3.2 **Ms Eveleigh** provided a summary of the Plan Change, including the proposed provisions. With respect to the two submissions that sought alternative zonings, Ms Eveleigh referred to *Clearwater Resort Limited v Christchurch City Council*<sup>1</sup> and *Palmerston North City Council v Motor Machinists Limited*<sup>2</sup>, but noted that the

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<sup>1</sup> *Clearwater Resort Limited v Christchurch City Council*, AP34/02

<sup>2</sup> *Palmerston North City Council v Motor Machinists Limited*, [2013] NZHC 1290

applicants do not have a particular view on the amendments sought. She concurred with the assessment of Ms Lewes that the submission of Mr Peter Martin primarily relates to trade competition and should not be considered further. Ms Eveleigh then turned her attention to the key issues of flooding, stormwater and effects on waterways (making particular note of the need for regional consents), the Leeston development capacity (noting the disparity between plan enabled capacity and what is actually supplied to market) and transport matters. Ms Eveleigh concluded that the Plan Change will meet the necessary statutory tests.

- 3.3 In response to my questions Ms Eveleigh said that there was no direction to consider the Proposed National Policy Statement for Highly Productive Land and that the Area Plan was a matter to have regard to but that the decision doesn't have to be consistent with it. She also considered that Policy B4.3.3 should not be considered in isolation and that an assessment was required 'in the round'. In terms of Policy 5.3.1 of the CRPS Ms Eveleigh noted that in itself it did not talk about avoiding development.
- 3.4 In his evidence, **Mr Carr** provided a summary of the traffic related matters pertaining to the Plan Change and updated the transportation data acknowledging the time that had lapsed between his original report and this hearing. Mr Carr addressed all submissions relating to traffic generation, traffic safety, construction traffic and pedestrian safety. Finally, Mr Carr responded to the comments of Mr Mazey. He agreed that road improvements could be addressed at the subdivision stage and that it is appropriate for the Spring Place connection to be downgraded and formed as a secondary road (in response to submissions). However, he disagreed with Mr Mazey that a roundabout be installed at the proposed High Street / Clausen Avenue / Site Access intersection because he considers that the proposed priority intersection has ample capacity to serve the Plan Change area and noted challenges and limitations with both a complying and non-complying roundabout design in this location. Mr Carr concluded that there are no transportation reasons why the Plan Change request could not be recommended for approval.
- 3.5 In responding to my questions Mr Carr said that he saw the Spring Place connection as a secondary route and that engineering solutions could be used to make it less attractive. He considered the principle of a linkage in some form however to be a good one.
- 3.6 **Mr Hopkins** provided a summary of the stormwater management system to service the site, including consideration of the flooding affecting the area, contaminant loadings, stormwater volumes and quality and best practice stormwater design. Mr Hopkins then went on to address the submissions that raised stormwater (including flooding) as an issue. Finally, Mr Hopkins responded to Mr England's report noting the Council's planned water supply and wastewater improvements would fully address the requirements of the Plan Change area and while he generally agrees with Mr England's assessment of the adequacy of the proposed stormwater management, he noted that regardless of the configuration of such measures on the ODP, there are robust processes in place at subdivision and stormwater discharge resource consent stages to ensure that appropriate management is adopted.
- 3.7 Mr Hopkins provided a supplementary statement in order to respond to the evidence of Ms Barnett. He advised that concentrations of heavy metals in modern residential developments are substantially lower than that of established urban environments. To support this, he made reference to monitoring from a new residential

development in Lincoln, which recorded copper and zinc levels well within ANZECC guidelines. With respect to TSS, he noted that these can be a problem during construction, but there are a wide variety of accepted and effective management solutions. The risk of new development contributing to TSS reduces over time as subdivision is built out and exposed soils are less common. Mr Hopkins briefly noted that phosphorus is not typically an issue for modern residential developments. Mr Hopkins considered that there is a wide variety of solutions to managing stormwater contaminants and typical treatment trains are very effective. Mr Hopkins considered that many of the issues raised by Ms Barnett can be satisfactorily addressed at the subdivision and regional consenting phase.

- 3.8 Mr Hopkins indicated that the stormwater ponds would likely be required to be cleaned out periodically (around every 10 years) but that would be dependent on the system used. He was confident that the stormwater system could be created to address any potential groundwater issues.
- 3.9 **Mr Vincent** provided planning evidence in support of the Plan Change. He outlined the changes to the ODP, including the showing of indicative stormwater management area notations, changes to the potential pedestrian and cycle links and amending the Spring Place connection to a secondary road. By in large, Mr Vincent acknowledged support for the recommended amendments to the PC62 provisions but sought to amend Ms Lewes proposed Rule 12.1.4.106 to ensure that the hazard being managed in the Plan Change area was flooding.
- 3.10 Mr Vincent then went on to address the issues as broadly categorised by Ms Lewes. By in large he drew conclusions consistent with that of Ms Lewes but provided more in-depth commentary on the matter of CCC's concerns about carbon emissions from commuter traffic including noting the role that smaller settlements (including Leeston) played in the Christchurch earthquake recovery, the role that public transport and emerging technologies will play in carbon reductions and the framework for the growth of Leeston signalled by the Area Plan.
- 3.11 Mr Vincent provided a summary of the statutory framework, noted his agreement with Ms Lewes' assessment, the appropriateness of the initial planning assessment that accompanied the Plan Change request (including the s32 assessment), and the appropriateness of the amendments to the PC62 provisions. Overall, he concluded the purpose of the Act was best achieved by the approval of the Plan Change.
- 3.12 In a supplementary statement, Mr Vincent summarised the amendments to the ODP and proposed rule provisions, and also provided a summary of the known development activity within Leeston by comparing google images from 2011, 2013, 2015 and 2018. He noted that development in this time was concentrated in Wheatsheaf Drive / Barley Mow, Monticello, Friars Lane, Showground Place and Millbridge.
- 3.13 In response to my questions Mr Vincent said that he looked for direction from the Area Plan in his analysis as to the direction for growth. He also emphasised that the Plan Change took a long-term view and considered the Area Plan took a medium to long-term view. He said the PC62 was more efficient in terms of yields and services and would serve Leeston for a good number of years. In terms of reverse sensitivity and Policy B4.3.3 Mr Vincent said there were other examples in the District such as Dunns Crossing Road where the urban/rural interface wasn't uniform and while he accepted there was an inconsistency with this policy and a potential for

reverse sensitivity effects he noted that the Area Plan goes beyond the existing proposal and included the “gap land”. He also suggested there remained an opportunity for mitigation, although I was unclear what that entailed.

**Submitters**

- 3.14 **Ms Barnett** (representing Harts Creek Streamcare Group and Ellesmere Sustainable Agriculture Incorporated) provided a summary of the organisations that she was speaking on behalf of. She raised concerns about the potential for development in the proposed Plan Change area to result in the following: increased contaminants entering surface and ground water; increased water flows in Birdlings Brook; and increased adverse effects resulting from the Leeston Stormwater North Bypass. Ms Barnett considers that the proposal was not consistent the Area Plan.
- 3.15 Ms Barnett went onto say that the ODP did not seem to be prepared in accordance with Policy B4.3.8 in that it did not identify all the requirements of that policy including such things as secondary flow paths for stormwater. She also considered that to have a full understanding of the impacts of PC62 on the surrounding streams an ecological assessment was necessary, saying that if there is going to be a level of contamination what is the likely effect on Birdlings Brook for example.
- 3.16 **Mr McLachlan** said he was concerned about the access onto Spring Place which in his view would change the character of this cul-de-sac. He also raised concerns about the potential for flooding of his rural land adjacent to Harts Creek and Birdlings Brook to be exacerbated by the development of the PC62 area. He went onto explain how flood water can build up on his property in heavy rain events due to downstream drainage problems. Mr McLachlan went on to express concerns about the ability of the Leeston wastewater system to handle increased housing development.

**Council Response**

- 3.17 Mr Mazey said that connectivity with the existing urban area was important, however he considered the connection to Spring Place could be downgraded through the use of thresholds and speed humps. He indicated that the Spring Place intersection with High Street needed to be upgraded and that a path was required on the north side of Spring Place. He said the roundabout at the High Street / Clausen Avenue / Site Access intersection was about creating a western threshold to the town and that the speed limit would determine the roundabout design.
- 3.18 Mr England indicated that the consent for the new water supply was expected later in the year and that the Council hoped to have the supply available by the middle of next year. A subsequent memo was received from Mr England on 8 October confirming that consent to take and use groundwater had been granted by Environment Canterbury.
- 3.19 In response to my questions regarding wastewater and stormwater Mr England indicated that an upgrading of the wastewater system would be required to cater for increased development, however this was to some extent dependent on demand. He also said that the current consent for the diversion of stormwater around Leeston was on hold, but that it covered the existing urban area.

- 3.20 In her response Ms Lewes produced a land capacity calculation sheet which had been used to determine the figures in Area Plan. I note here that it became clear at the hearing that there were some problems with this sheet which Mr Vincent subsequently responded to.
- 3.21 Ms Lewes went onto say that she considered the Area Plan figures were quite rudimentary and showed a more theoretical capacity. She considered there was a lack of section supply in Leeston due to there presently being no available land consented for subdivision.
- 3.22 Ms Lewes considered Living 2 zoning was an inefficient use of land and that the Plan Change promoted the most efficient use. She also did not see the need for buffer areas to be included as a rule with regards the Cochrane site. Ms West then noted that such a rule would only deal with visual aspects.
- 3.23 In terms of Policy B4.3.3 Ms Lewes said that it was clear that the policy was to avoid residential development on three boundaries, and she agreed that was its intent, however she noted that in terms of the rural/urban transition there was no requirement for any form of mitigation. In response to my questions around Policy B4.3.4 which encourages development to occur on vacant land in existing Living zone if available and appropriate, Ms Lewes referred to it as “an interesting policy in a District Plan” and said that the PC62 deferred land would be consistent with it and that the rezoning of the rural land goes beyond what the policy is seeking to do. However, she said she would look at policies in terms of obtaining a broader view.
- 3.24 Turning to the CRPS Ms Lewes considered Policy 5.3.1 was trying to stop growth jumping outside and beyond urban areas. She also said that in terms of versatile soils that this site was not different than any other around Leeston and that it was a balancing exercise in determining whether the soil class was enough to restrict the expansion of the township. She considered a wider rural area could be protected by zoning this area and that the Plan Change was consistent with Policy B1.1.8.

**Right of Reply**

- 3.25 At the end of the hearing I adjourned to enable the applicant to provide a right of reply. This was received on the 23<sup>rd</sup> of September 2020 and included further evidence from Mr Vincent. As a result, I issued a further minute enable the parties the ability to comment on this new evidence.
- 3.26 In his evidence Mr Vincent responded to Ms Lewes land capacity calculation sheet. He noted that a number of sites (including the hospital and schools) should not be included in the calculation for infill potential (resulting in a reduction in available infill land of 12.5ha, or 115 sections). He also noted that the infill calculation does not take into account the likelihood of infill subdivision occurring and highlighted that only five addition infill allotments had been created between 2016 and 2019 (I note his Table 2 appeared to actually show 8 allotments). With respect to infill subdivision capacity, Mr Vincent concluded that the rate of infill subdivision within Leeston was very low. Mr Vincent then turned his attention to the yield potential of greenfield subdivision and noted that the now lapsed subdivision consent for land north of Leeston Dunsandel Road achieved 163 lots, whereas the Council’s calculations estimated of 194 lots. Lastly, Mr Vincent recalculated the capacity of the Leeston deferred zones to be 78 lots (compared to the Council’s calculation of 244 lots). As a result of the recalculations undertaken by Mr Vincent, he advised that there is an identified capacity in Leeston of 672 lots.

- 3.27 Ms Eveleigh in the right of reply emphasised that Policy 5.3.1 of the CRPS seeks to ensure (amongst other things) that any urban growth occurs in a form that concentrates or is attached to existing urban areas. She noted that the Courts<sup>3</sup> have cautioned that explanatory statements do not override the wording of the objectives, policies and rules and should be considered in the broader context of the plan. Ms Eveleigh conceded that PC62 was not consistent with Policy B4.3.3, but on balance the Plan Change achieves the objectives of the District Plan regarding the growth of townships. Ms Eveleigh advised that it is within the scope of submissions to only rezone the deferred land, but advised there are a number of reasons why rezoning the whole Plan Change area is more appropriate, including enabling better provision of services and integration of development. With regards to development capacity, Ms Eveleigh stated that the need for additional development capacity is not a necessary pre-requisite to rezoning land, and also that there is no effects-based reason associated with development capacity for declining the plan change. She also referred to the NPS-UD and the applicability of Clause 1.3 (Application), stating that it could arguably apply, but regardless there are a number of NPS clauses that apply to PC62 and overall PC62 is in accordance with the NPS-UD direction.
- 3.28 Ms Barnett provided a right of reply dated 6 October, in which she noted that regardless of the development capacity being debated there is inadequate 'environmental capacity' and the submitters remain concerned with any potential adverse environmental effects on surface water and groundwater quality and quantity down gradient and downstream of Leeston Township.
- 3.29 The hearing was close via a minute issued on the 23<sup>rd</sup> October 2020.

#### **4.0 Statutory Tests**

- 4.1 The general approach for the consideration of changes to district plans was initially summarised in the Environment Court's decision in Long Bay<sup>4</sup>, which has due to various amendments to the RMA been superseded by the Colonial Vineyards decision<sup>5</sup>. The relevant requirements in this case are set out below:
- (a) The plan change should be designed to accord with and assist the Council to carry out its functions under section 31 and to achieve the purpose of the Act (s74(1)(a) and (b)).
  - (b) The plan change must give effect to any national policy statement, a national planning standard and the operative regional policy statement (s75(3)(a), (ba) and (c)).
  - (c) The plan change shall have regard to the actual or potential effects on the environment of activities including, in particular, any adverse effects (s76(3)).
  - (d) The plan change shall have regard to any relevant management plans and strategies under other Acts (s74(2)(b)(i)) and must take into account any relevant planning document recognised by an iwi authority and lodged with the territorial authority, to the extent that its content has a bearing on the resource management issues of the district (s74(2A)).

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<sup>3</sup> Waterfront Watch Inc v Wellington City Council [2018] NZHC 3453

<sup>4</sup> Long Bay – Okura Great Park Society Inc v North Shore City Council A 078/08

<sup>5</sup> Colonial Vineyards Ltd v Marlborough District Council [2014] NZEnvC 55

(e) Finally, section 32 requires that rules are to implement the policies and are to be examined, having regard to their efficiency and effectiveness, as to whether they are the most appropriate method for achieving the objectives of the District Plan taking into account:

- (i) the benefits and costs of the proposed policies and methods (including rules); and
- (ii) the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods; and
- (iii) if a national environmental standard applies and the proposed rule imposes a greater prohibition or restriction than that, then whether that greater prohibition or restriction is justified in the circumstances.

4.2 Overall, the s32 test is one of appropriateness (i.e. not necessity) and the requirement is to achieve the objectives of the District Plan.

## **5.0 Assessment**

### **Scope Issues**

5.1 Before I address the wider issues associated with the Plan Change there is a question of scope associated with the submissions lodged by Cochranes of Canterbury (Cochranes) and Sharon Farrant.

5.2 Cochranes has requested that a portion of the land at 125a High Street be zoned Business 1, in keeping with the historical use of that area as part of the existing business operating from the site.

5.3 Ms Farrant is supportive of the proposal to lift the deferral over her property at 33-35 Leeston Dunsandel Road but has requested that the zoning be changed from Living 2 to Living 1. The effect of the Plan Change as proposed would be to leave Ms Farrant's property at 33-35 Leeston Dunsandel Road, along with the property at 31 Leeston Dunsandel Road owned by a third party, surrounded by more intensive Living 1 development.

5.4 As referred to by Ms Eveleigh leading cases is this situation are Motor Machinists Limited and before that Clearwater Resort Limited, and the question is whether the submission is 'on' the plan change or not. The submission must reasonably be said to fall within the ambit of the Plan Change.

5.5 In my view Ms Farrant's submission falls within the ambit of the plan change and can clearly be considered to be 'on' the Plan Change and therefore within scope. The submitter is seeking a zoning the same as that proposed for the land surrounding their site i.e. Living 1. The fact that she did not participate in the Plan Change process is of little relevance. Finally, I do not consider there is any risk that a person directly or potentially directly affected by the additional zoning has been denied an effective opportunity to respond. As I understood it all landowners in the deferred area were approached about the rezoning.

5.6 The Cochranes situation is however different because the submission is seeking quite a different zone i.e. a Business zone, from that associated with the Plan Change. The Plan Change is not promoting any form of Business zoning and in my view therefore the submission by Cochranes is not 'on' the plan change and is not within scope.

- 5.7 At this point I acknowledge that there is no submission dealing with 31 Leeston Dunsandel Road and any changes to this site would have to be dealt with via the District Plan Review.

**Plan Change Components**

- 5.8 While there is a high degree of integration, PC62 can be for the purpose on my considerations divided into component parts.
- 5.9 The first part is the deferred land. The reasons for the deferral are set in the District Plan (Policy B4.3.55) as being the area is subject to surface flooding at times of heavy rain which relates to the limited capacity of the Market Street Culvert which requires remediation. The explanation and reasons to the policy state that *“once a remedy has been decided upon and implemented, the ‘deferred’ notation and subdivision restriction will be removed by Plan Change”*. A determination in terms of the deferred land itself is therefore limited to considering whether stormwater and its associated issue has been satisfactorily addressed. A second consideration in terms of the deferred land, should the first be overcome, then relates to the density of development which requires a broader assessment than simply a focus on stormwater.
- 5.10 The rezoning of the rural land to urban land also requires a much broader assessment again and there are a number of objectives and policies which address and provide guidance on this.

**Development Capacity**

- 5.11 The issue of existing development capacity was not particularly addressed by either the Applicant in the Plan Change documentation or by Ms Lewes s42A report which I found in the circumstances somewhat surprising. As a result, I had issued a Minute seeking information on the take up of sections and households in Leeston in the period since 2016 (the period since the Area Plan had been adopted) so as to provide me with a better understanding of the growth situation in the township. The subsequent information provided by Ms Lewes showed consents for new dwellings grew substantially in the post Christchurch Earthquake period jumping from 11 in 2010 to a peak of 61 in 2013. Since then the number of consents has steadily declined with 23 in 2017, 9 in 2018 and only 3 in 2019. Up until May 2020 there had been four dwellings consented. The evidence therefore points to the fact that Leeston experienced a significant uptake in residential development in the post-earthquake period, but that development has now dropped back to similar levels experience in the pre-earthquake period.
- 5.12 Ms Lewes suggested that the drop in consented dwellings could be due to the lack of available sections. Mr Vincent had also provided a letter from Mr Stephan Knowler a real estate agent in Leeston who said that the supply of sections in the town had been exhausted and that he had a list of prospective purchasers. Just what the level of demand is was clear to me, nevertheless any current lack of available sections does not appear to be due to a shortage of zoned land. As Ms Lewes pointed out in her further information the Area Plan identified that there is existing zoned capacity to accommodate a significant number of households within the boundary of the township.
- 5.13 Ms Lewes provided further information at the hearing in the form of a sheet detailing the Ellesmere Land Capacity Calculations for Leeston. It was apparent that there were some issues with the calculations and

subsequently Mr Vincent undertook a helpful analysis of the Area Plan and the Land Capacity Calculations which identified some sites (Including Ellesmere College and Ellesmere Primary School) which simply were not realistically suitable to be counted in the land capacity calculations along with errors in the calculations. He also questioned the level of infill housing anticipated and noted that only eight lots had been created within the Living 1 zone in the past four years. His revised calculation was 672 households including the deferred land (78 households) at its current zoning. While I acknowledge this is based on 2015 data and is now 5 year old it is still a substantial figure for a town the size of Leeston and of course it doesn't take into account the 'up-zoning' now sought in PC62 for a large proportion of the deferred land nor the proposed rezoning of the rural land.

- 5.14 I have looked at the more recent data referenced in the application documentation - Selwyn's Potential Growth Path up to 2048 – Table 3. That begins with population and household forecasts from 2018/19 through to 2047/48. Bringing it up to the present date (2020/21) the projection indicate that 362 households (an average of 33 per year) will be required in the 11 year period through until 2030/31, a further 340 (an average of 34 per year) in the next 10 year period to 2040/41 and a further 238 (an average of 34 per year) in the seven year period to 2047/48. That is a total of 940 households over the next 28 years period. Given the current level of development over the past five years these figures seem now to be optimistic, noting that the number of actual dwellings consented over the last two years will have fallen well short of the predicted 30 dwellings in Table 3.
- 5.15 In terms of undeveloped zoned land there is presently some 32.5ha of vacant Living XA zoned land left in two separate location on the north (Leeston Dunsandel Road) and south (Carsten Street) sides of the town. Both sites appear to me to be integral to creating a consolidated urban form. Using the Councils figure of 40% for reserves and services<sup>6</sup> this would equate to a capacity figure of some 300 allotments. I was informed that both these sites had been the subject of subdivision consents with the formers consent having lapsed in 2018 after 10 years and the latter being on hold since 2018, possibly due to issues associated with development contributions. Given that both sites have had subdivision consents sought and one had been granted there can be no suggestion of land banking occurring in Leeston. Quite why neither has been able to get sections to the market was unclear.
- 5.16 In terms of the Living 1 zone I acknowledge the point made by Mr Vincent and I agree there is some level of uncertainty as to just how much infill development (Mr Vincent's revised figure was 198 households) within the Living 1 zone will occur. Yet having driven around Leeston and looked on aerial photographs it seems to me that there are some reasonably large undeveloped or limited developed sites within the town and there also appears to have been a certain amount of infill development occur. In my view it is difficult to put a realistic figure on this but having considered Mr Vincent's additional evidence I consider something in the range of 100-150 households is reasonable.
- 5.17 In terms of the Living 2 and 2A zones it is difficult to understand what level of land capacity remains and I have therefore assumed a conservative figure of 10 households.

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<sup>6</sup> The Ellesmere Area Plan Land Capacity Calculations have assumed 40% of land will be required for reserves and services giving a formula of gross land area x 6/10 = Net. The Net is then divided by the minimum lot size to give a capacity figure.

- 5.18 Overall, therefore I consider the existing land development capacity for Leeston can be described as follows:

Living XA	300 households
Living 1	100-150 Households
Living 2 & 2A	10 Households
Living deferred	78 households
<b>Total</b>	<b>488 – 538 Households</b>

- 5.19 In addition to the above the PC62 application proposes that some 28.1ha of deferred Living 2 land be rezoned Living 1, 1.6ha of deferred Living 2 land be rezoned Living 2 (this is land whose owners did not take part in the application) and that some 31.2ha of Rural (Outer Plains) be split between Living 1 (13.9ha) and Living 2 (17.3ha). The application indicates that in total this would provide approximately 410 allotments. This would therefore add a further 332 households to the above figures (i.e. 410 minus 78). Given my decision on scope above the 1.5ha block of Ms Farrant's would at a Living 1 zone add an additional 11 dwellings net.
- 5.20 On the basis of the above, the implementation of PC62 would therefore provide for a development capacity for Leeston of between 831 and 881 households.
- 5.21 While I acknowledges Ms Eveleigh submission that the need for additional development capacity is not a necessary pre-requisite to rezoning land, and also that there is no effects based reason associated with development capacity for declining the plan change, I consider consideration of development capacity is relevant in the context of servicing, urban growth, the policy framework of the District Plan and the National Policy Statement – Urban Development.

#### **Actual or Potential Effect on the Environment**

- 5.22 I considered the key effects associated with the PC62 can be broken down into the following areas, being the infrastructure servicing (water, stormwater and wastewater), density, character and urban form, reverse sensitivity and, transportation and connectivity. These have been dealt with in turn below.
1. Infrastructure servicing
    - (i) Water
- 5.23 With the consent for the new water supply now being approved I consider the issue surrounding sufficient water supply has been addressed and that this goes some way to addressing the concerns expressed by FENZ regarding the impact on firefighting ability. I accept that it may take some time to connect the new bore to the wider water supply system and until that time a restriction of development within the Plan Change area remains appropriate.
- 5.24 As to whether a specific provisions should be included in the District Plan to cover the PC62 area to ensure compliance with the New Zealand Firefighting Code of Practice SNZ/PAS 4509:2008 or an alternative on-site firefighting water supply be provided, as I stated in my recommendation on PC60 I do not consider the inclusion of provisions as sought by FENZ would meet the s32 test of efficiency and effectiveness and I consider the risk of not including them is limited give the existing provisions in the District Plan and the Council's subdivision

Code of Practice. As discussed in the PC60 recommendation, in my opinion there are alternative options which could be pursued.

(ii) Wastewater

5.25 Mr England acknowledged that growth at Leeston could result in exceedance of current wastewater resource consent conditions and require additional capital expenditure and he supported a restriction of up to 80 allotments at this point in time within the Plan Change area. From what I understood there is funding for the upgrade of the Ellesmere Wastewater Treatment Plant in the year 2023/24, but there are future requirements the Council will need to meet including reducing Total Nitrogen concentrations which will necessitate expanding the area the effluent is applied to.

5.26 There was no evidence to suggest that the required upgrading of the Ellesmere Wastewater Treatment Plant could not be achieved or that problems could arise with the rezoning of the PC62 land. I am therefore confident on the basis of Mr England's evidence that wastewater issues can be addressed in the fullness of time and that in the interim a cap of development is appropriate.

(iii) Stormwater

5.27 The issue of flooding and the potential for development of the PC62 land to exacerbate this assumed some importance in hearing. Mr England noted that flooding issues in Leeston are well known, and it was for this reason that part of the Plan Change area has an existing deferred zoning. The Council has been implementing in stages the Leeston North Stormwater bypass which is designed to divert flood flows away from Leeston township and the Plan Change area thus providing it with a greater level of protection from flooding. The final stage is in the pre-construction phase and Mr England noted that the Stormwater Management Area along the northern boundary of the property above Leeston Dunsandel Road which forms part of the PC62 area was critical to allowing the provision of the final stage of the bypass.

5.28 Ms Barnett expressed concerns that further development in Leeston would exacerbate flood effects for farmers to the north-east and east of the township and further contaminate Birdlings Brook and that the proposal did not address adequately adverse environmental effects on surface water and groundwater quality and quantity. She also pointed to wider issues associated with existing stormwater disposal where there may already be significant adverse effects occurring.

5.29 Mr England's view was that the stormwater management area shown on the ODP appeared to be adequately sized, however he considered additional stormwater management areas may be required to ensure all discharges are adequately managed. While Mr Hopkins concurred with this, he suggested the absence of additional areas did not in any way reduce the obligation of individual developers to provide any and all stormwater management necessary. He considered showing additional (smaller) areas could introduce a level of detail in the ODP that could then complicate or even hinder a developer in providing appropriate stormwater management if a solution was identified that did not closely align with one of the (smaller) areas shown on the ODP. In this regard I accept that unless detailed design is undertaken it can be difficult within the ambit of an ODP to show all the details associated with stormwater (and other matters) on an ODP, however while I am not convinced leaving everything to the subdivision stage is necessarily the correct approach either, I accept that

there are parallel processes involving Environment Canterbury which will necessitate addressing the quantity issues in detail raised by Ms Barnett. There is an inherent fine line in plan change processes seeking rezoning as to the level of detail necessary to address actual or potential effects on the environment, particularly where a further process is necessary from another jurisdiction. In my opinion the relevant experts have provided sufficient detail and evidence to convince me that the effects associated with stormwater quantity on the environment are able to be addressed. I also note that rules are proposed internally to the Plan Change area to address the issue of the flood hazard by requiring raised floor levels.

- 5.30 In terms of stormwater quality, I accept Mr Hopkins detailed evidence that the concentrations of heavy metals in modern residential developments is substantially lower than that of established urban environments and that modern treatment systems and management of construction are able to achieve acceptable water quality levels so that downstream water bodies are not adversely affected. Ultimately this too will be tested via consents required from Environment Canterbury but for the purposes of this Plan Change I am satisfied that there are solutions available to address stormwater quality before it is released into the wider environment.

## 2. Density, character and urban form

- 5.31 PC62 proposes to increase the density of development on the deferred land by rezoning it all Living 1. Some submitters have expressed concerns about the increase in density and potential effects it brings, including noise, privacy, character and stormwater run-off, with the latter already being addressed above.
- 5.32 The deferred part of the site has, subject to addressing the stormwater issue, already been identified for urban development. The question then becomes whether a denser form of development is more appropriate for this part of the site or would create a higher level of adverse effects. I accept that intensifying an area that is zoned for residential use, albeit deferred, is a more efficient use of land and that this area represents a logical expansion to Leeston township. Indeed, that latter fact could be said to have already been determined.
- 5.33 As referred to by Ms Lewes it is somewhat inevitable that if approved the Plan Change will result in changes in character for existing residents along the present interface with the adjoining farmland. That change has essentially been signalled for many years with the deferred Living zonings and therefore in this circumstance can reasonably be anticipated. I can therefore only conclude that the effects on the character and amenity of the existing residential areas in this context are acceptable.
- 5.34 In terms of urban form, I agree that connecting to the existing Living 1 zone on Spring Place complements the existing residential environment and ensures connections to the centre of the town. I also accept that the proposed extension of the Living 1 and 2 zones along High Street would align somewhat with the existing residential development on the south side of High Street and could be seen as a natural extension of the Leeston urban environment. However, that argument does have its downside in that unless expansion is symmetric with the opposite side of the road it opens the door to the same argument to be applied again. In this case there is a pocket of rural land on the south side of High Street where this would apply.
- 5.35 However, in terms of the shape of the outer zone boundary to the south of Leeston Dunsandel Road I do not consider it creates a particularly good urban form with the surrounding of the Rural zone. While I acknowledge that this was not the original intention the fact remains it is what is in front of me. In the context

of urban form itself I do not consider this is fatal, however when coupled with the reverse sensitivity issue below it becomes in my view a major issue in terms of potential effects on the environment.

### 3. Reverse sensitivity

5.36 In the context of a Plan Change the guidance in a District Plan is to be found within the objectives and policies and in terms of reverse sensitivity this is to be found in the Quality of the Environment and Growth of Townships sections (B3 and B4).

5.37 The issue of reverse sensitivity on the adjoining rural land was not particularly addressed in any detailed way by either planner. While this may have been because there was no submission raising it, that does not extinguish it from being a potential effect on the environment.

5.38 In this regard Objective B3.4.3 seeks that “reverse sensitivity effects between activities are avoided” while Policy B3.4.39 seeks to “*avoid rezoning land for new residential development adjoining or near to existing activities which are likely to be incompatible with residential activities, unless any potential ‘reverse sensitivity’ effects will be avoided, remedied or mitigated*”. The explanation and reasons state:

*Rezoning land for new residential development around townships should not create ‘reverse sensitivity’ issues with existing activities in any zone. Policy B3.4.39 does not preclude rezoning of land for residential development adjoining ... sites in the Rural Zone which have activities with incompatible effects provided appropriate methods are used to address potential ‘reverse sensitivity’ issues.*

5.39 Policy B4.3.3 then seeks to “*avoid zoning patterns that leave land zoned Rural surrounded on three or more boundaries with land zoned Living or Business*”. The explanation and reasons state:

*The new zoning pattern should also avoid leaving a patch of land zoned ‘Rural’ surrounded by Living or Business zones. Such a land zoning pattern can increase the potential for ‘reverse sensitivity’ issues between the site and adjoining zones.*

5.40 The District Plan also discusses potential mitigation measures for addressing reverse sensitivity issues. The explanations and reasons to Objectives B4.1.1 and B4.1.2 for example state:

*At some locations around townships, a low density Living 2 environment may be appropriate on the edge of towns. Within such low density living environments particular regard should be had to reducing the potential for reverse sensitivity by increasing the size of allotments at the rural interface, reducing the number of people exposed to potential reverse sensitivity effects and in turn providing an appropriate buffer between the rural area proper and the more concentrated township areas.*

5.41 Policy B4.1.3 states “... Elsewhere in the District to allow, where appropriate, the development of low density living environments in locations in and around the edge of townships where they achieve the following:

- *Reduce the exposure to reverse sensitivity effects;”*

5.42 Again, the explanations and reasons to this policy state that “*Effort should be made to reduce the potential for reverse sensitivity effects by increasing lot sizes and reducing the number of people exposed to effects*”.

- 5.43 Having reviewed the above, in my view the District Plan provides a high level of guidance on reverse sensitivity in urban growth situations including potential mitigation options.
- 5.44 The shape of the zoning proposed in my opinion significantly elevates the potential for reverse sensitivity effects particularly on that part of the rural property which is surrounded on three sides by Living zoning when compared to a linear boundary, by increasing the interface. While I acknowledge Mr Vincent's comment about a similar scenario on Dunns Crossing Road that does not mean that those properties are in any better situation. The District Plan's guidance in my view it relatively clear in that reverse sensitivity issues are to be avoided or reduced and in my opinion having reviewed the plan change I find that there has been very little attempt to address this aside from the Living 2 zoning along some parts of the rural boundary. Indeed, I consider a zone boundary shape of this nature is not supported by the District Plan, is simply inappropriate and raises the potential for adverse effects.
- 5.45 Turning to the Cochrane land, with respect to Ms Lewes, Mr Vincent and the application documentation I do not agree that the District Plan does not currently require mitigation or interface measures for Living zoned sites which adjoin a Business 1 zone. Again, there is policy guidance to be found in Policy B3.4.39 (referred to above) which I consider is clear. While I except there is some ambiguity in the explanation and reasons even then they refer to *"rezoning land for new residential development around townships should not create 'reverse sensitivity' issues with existing activities in any zone"*. [my emphasis]
- 5.46 Having said that, I consider the rule proposed as part of the plan change goes as far as it can in terms of the Cochrane land in addressing reverse sensitivity effects. The residual Cochrane land is zoned Living and it was unclear as to whether there was any resource consent for the activities occurring on it. However, I consider given the industrial nature of the Cochrane site the rule should cover more than just landscaping. The further submission from Cochranes was clearly concerned about noise in suggesting mounding and fencing in addition to planting to minimise reverse sensitivity effects and I agree that either one of these should be required to address as far as practical noise.

#### 4. Transportation and connectivity

- 5.47 The primary transportation issue identified was the connection through to Spring Place. While I understand the concerns expressed by residents of the street given it is a cul-de-sac it would appear from the evidence of Mr Mazey that a connection into the PC62 area has always been a proposition. In my view the connectivity provided by this connection is warranted in provided a more integrated urban form and I consider the downgrading of the road link and associated in-road measures would reduce the vehicle traffic impact on Spring Place.
- 5.48 In terms of the other transportation matters raised regarding roading upgrades and a roundabout I consider these are beyond those which I need address in terms of a Plan Change.

#### **National Policy Statement for Freshwater Management 2020**

- 5.49 The National Policy Statement for Freshwater Management 2020 (NPS-FM) came into effect on the 3 September 2020 and I am bound to consider it. Having reviewed the objective and policies I do not consider

there is anything specifically in them that PC62 does not give effect to. That is not to say however that matters associated with the NPS-FM might not arise in any subsequent consenting process when details of the discharge regimes in particular are developed.

**National Policy Statement for Urban Development**

- 5.50 I have previously considered the interpretation of Clause 1.3 and the definition of ‘urban environment’ and reached a conclusion that the National Policy Statement for Urban Development (NPS-UD) is not relevant to townships less than 10,000 people. Ms Eveleigh has suggested however that the NPS-UD is relevant albeit acknowledging the clause 1.3 is unclear. She has identified Objective 2 and Policy 2 as being relevant because they do not refer to ‘urban environments’ along with Clause 3.2 of Part 3 Implementation, Subpart 1 – Providing development capacity.
- 5.51 In the circumstances therefore I have decided to consider those provisions referred to above. In this context I note that the NPS-UD in clause 1.4 defines the following:
- Short term means within the next 3 years
  - Short-medium term means within the next 10 years
  - Medium term means between 3 and 10 years
  - Long term means between 10 and 30 years
- 5.52 Objective 2 seeks that “*planning decisions improve housing affordability by supporting competitive land and development markets*”, while Policy 2 requires “*Tier 1, 2, and 3 local authorities, at all times, provide at least sufficient development capacity to meet expected demand for housing and for business land over the short term, medium term, and long term*”.
- 5.53 Clause 3.2 - **Sufficient development capacity for housing** of the Implementation section requires that:
- (1) *Every tier 1, 2, and 3 local authority must provide at least sufficient development capacity in its region or district to meet expected demand for housing:*
    - (a) *in existing and new urban areas; and*
    - (b) *for both standalone dwellings and attached dwellings; and*
    - (c) *in the short term, medium term, and long term.*
  - (2) *In order to be sufficient to meet expected demand for housing, the development capacity must be:*
    - (a) *plan-enabled (see clause 3.4(1)); and*
    - (b) *infrastructure-ready (see clause 3.4(3)); and*
    - (c) *feasible and reasonably expected to be realised (see clause 3.26); and*
    - (c) *for tier 1 and 2 local authorities only, meet the expected demand plus the appropriate competitiveness margin (see clause 3.22).*
- 5.54 I have considered these NPS-UD provisions with particular reference to the section above on development capacity.

- 5.55 My analysis in paragraph 5.18 concluded that the current existing land development capacity for Leeston, assuming the deferred land was enabled as is, was between 488 – 538 Households. The up-zoning of all the deferred land to Living 1 (some 29.7ha which includes the 1.5ha site) would add an additional 196 households (i.e. 274 minus 78) bringing the development capacity to between 684 – 734 households, while the full extent of PC62 would add an additional 343 households (again including the 1.5ha site) bringing the development capacity to between 831 – 881 households
- 5.56 There is little doubt that whatever the configuration, PC62 would increase the land supply and support a more competitive land and development market, so the Objective 2 would be met. The key question in Policy 2 and Clause 3.2 is whether there is sufficient development capacity in Leeston to meet expected demand for housing over the short term, medium term, and long term.
- 5.57 Using the Council's yearly growth figure of 34 households, which now seem somewhat doubtful, there is currently sufficient development capacity for the next 14 – 16 years. Therefore, the requirements of Policy 2 and Clause 3.2 in this regard are already met for short, medium and long-term development. The up-zoning of the deferred land would extend the capacity out to 20–22 years, while the full PC62 proposal would extend the capacity out to 24–26 years.
- 5.58 Overall, I consider while the requirements of the NPS-UD as they relate to Leeston are largely met by the present situation, PC62 in whatever form would clearly enhance that situation.

**Canterbury Regional Policy Statement**

- 5.59 PC62 is required to give effect to the Canterbury Regional Policy Statement (CRPS) and in my opinion the relevant provisions are those located in Chapter 5.
- 5.60 The relevant provisions of Chapter 5 provide an overview of significant resource management issues and in particular in relation to PC62, provisions seek to achieve consolidated, well designed and sustainable growth in and around or attached to existing urban areas and promote a coordinated pattern of development and energy efficiency in urban form, transport patterns and site location (Objective 5.2.1 and Policy 5.3.1).
- 5.61 I considered PC62 is generally consistent with the various elements of these provisions. It is consistent with all but one of the subclause in Objective 5.2.1, that being *i. avoids conflicts between incompatible activities* and it meets the requirements of Policy 5.3.1 to be attached to an existing urban area and generally promotes a co-ordinated pattern of development. Further, there is nothing to suggest it does not or will not achieve the remaining clauses of the policy.
- 5.62 Policy 5.3.2 sets out the development conditions which include:
1. ensuring adverse effects are avoided, remedied or mitigated including where these would compromise or foreclose:
    - options for accommodating the consolidated growth and development of existing urban areas:
    - the productivity of the region's soil resources; and
    - the protection of sources of water for community supplies.

2. avoiding or mitigating natural hazards; and reverse sensitivity effects and conflicts between incompatible activities.
  3. integrating with infrastructure and transport networks.
- 5.63 The explanation and reasons state that Policy 5.3.2 establishes the standards to be met for development within the wider region, regardless of whether such development is located within, or outside of, existing urban areas and indicate that the approach in Policy 5.3.1 is to ensure that urban development outside of existing urban areas is to be avoided, so as not to compromise the efficient form and development of existing settlements as the primary focus for meeting the region's growth needs.
- 5.64 With regards this policy I consider PC62 would, to the extent that the rural zone land is lost and in the context of the development capacity available, foreclose the productivity of the region's soil resources and that reverse sensitivity effects and conflicts between incompatible activities have not been avoided or mitigated. The Plan Change does not however particularly foreclose options for accommodating the consolidated growth and development of the existing urban area of Leeston as far as I can tell or compromise the protection of the community water supply. It also mitigates the flood hazard and integrates with the transport network.
- 5.65 In terms of the explanation and reasons Ms Eveleigh pointed out that the Courts have cautioned that explanatory statements do not override the wording of the objectives, policies and rules and should be considered in the broader context of the plan. I accept this and have given little weight to the reference to Policy 5.3.1 having an approach ensuring that urban development outside of existing urban areas is to be avoided because that is simply not the case. As Ms Eveleigh stated in the right of reply *"Policy 5.3.1 does not seek to avoid urban growth beyond existing urban areas. To the contrary, it explicitly provides for urban growth that is attached to (and therefore not within) existing urban areas"*.
- 5.66 Policy 5.3.5 seeks to ensure development is appropriately and efficiently serviced with potable water, and sewage and stormwater disposal, while Policy 5.3.6 seeks the avoidance of development which constrains the on-going ability of these services to be developed and used and discourages them where they will promote development in locations which do not meet Policy 5.3.1.
- 5.67 I accept that the new water supply will be available to efficiently service the PC62, that the stormwater issues are able to be appropriately addressed and that the wastewater system can in time be upgraded and in the meantime development would be restricted. In this context PC62 is consistent with these two policies.
- 5.68 Finally, I accept that PC62 meets the intent of Policy 5.3.8 which seeks the integration of land use and transport.
- 5.69 The question therefore does PC62 give effect to the CRPS. While there are matters of inconsistency with some provisions my conclusion is that on balance PC62 does give effect to the CRPS.

**Land and Water Regional Plan**

- 5.70 I do not consider the PC62 is inconsistent with the Land and Water Regional Plan, however I note that future subdivision and development would generate the need for consents under this plan, which would need to comprehensively address matter such as stormwater.

**Other Relevant Documents**

5.71 The other relevant planning documents to be considered in evaluating PC62 under section 74 include:

- (i) Mahaanui Iwi Management Plan 2013
- (ii) Ellesmere Area Plan
- (iii) Proposed Selwyn District Plan

*Mahaanui Iwi Management Plan 2013*

5.72 The application documentation included an assessment of the Mahaanui Iwi Management Plan (IMP) undertaken by Mahaanui Kurataiao Limited. The assessment makes six recommendations all of which appear to me to be matters that would need to be addressed at future subdivision and consenting stages. On this basis I accept that PC62 will not compromise the values set out in the IMP.

*Ellesmere Area Plan*

5.73 The Area Plan assumed a degree of importance in PC62, principally for two reasons. Firstly, it identified the deferred land as an area where more intensive development may be able to occur<sup>7</sup>. Secondly, it identified the rural land beyond the deferred Living Zones out to Harmans Road as “Possible Future Area for Low Density Residential Development” on the map entitled “Leeston Preferred Future Development Areas”<sup>8</sup>.

5.74 The Area Plan was adopted in September 2016 and states that in 2015 the population of Leeston was 2,275 people (813 households), with this population projected to grow to 3,402 by 2031 (1,215 households) which represents an estimated increase of 1,127 people (402 households). This was taken from the Selwyn Growth Model.

5.75 For Leeston the Area Plan indicates that “overall, there is considered to be sufficient available land to accommodate projected population growth through to 2031 without Council proactively zoning additional residential ‘greenfield’ land. The maximum potential yield for infill subdivision of the Living zoned land in Leeston (including Deferred zoned land), could amount to as many as 953 additional sections. There are also a number of undeveloped residential sections within existing established neighbourhoods in Leeston”<sup>9</sup>. It also states that “at this point in time there appear to be too many constraints and insufficient demand to actively zone additional greenfield land under the District Plan Review. The strong uptake of available land, resolution of infrastructure servicing constraints and reduction in hazard risks may warrant additional land being considered for residential zoning in the medium to long term timeframes”<sup>10</sup>.

5.76 The Area Plan highlights that there are issues that need to be addressed to facilitate additional growth, including:

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<sup>7</sup> Figure 9 of the Area Plan, page 27 and Preferred future development areas, page 28

<sup>8</sup> Figure 9 of the Area Plan, page 27

<sup>9</sup> Residential land capacity, page 22

<sup>10</sup> Population, growth capacity and urban form, page 25

- *infrastructure constraints relating to integrated stormwater management, access to potable water and the limited capacity of the Leeston wastewater treatment plant, should significant growth occur*
- *natural hazard risks, including specifically flooding and land inundation that may be exacerbated by increased storm events arising as a consequence of climatic cycles and the potential for increased groundwater levels, and*
- *the need to manage growth to avoid any adverse impacts this may have on cultural sites and the mana whenua values attributed to the area or the water quality of drains and tributaries to Te Waihora/Lake Ellesmere<sup>11</sup>.*

5.77 I consider that the evidence shows that these matters are able to be resolved.

5.78 The Area Plan concludes that *“the retention of the current township boundary through to 2031 is consistent with the principles contained in Chapter 5 of the Canterbury Regional Policy Statement, the District Growth Strategy Directions and the Area Plan Principles, which reinforce the need to manage growth in an integrated and consolidated manner, while avoiding the social, economic and environmental impacts associated with dispersed settlement patterns”*. It goes on to say that it *“does not preclude any additional greenfield land from being considered for zoning through privately initiated plan change requests under the RMA, but signals that there is sufficient capacity within the township to accommodate growth through to 2031 without the need for the Council to proactively zone additional land through the District Plan Review (DPR)”<sup>12</sup>.*

5.79 Mr Vincent’s further evidence has brought into question some of the assumption contained in the Area Plan particularly around capacity. His analysis of the ‘Ellesmere Area Plan Land Capacity Calculation’, presented by Ms Lewes at the hearing has shown that some sites, such as Ellesmere College, included in the calculations were more theoretical than realistic and other sites such as the PC62 site were wrongly calculated. Quite why this was done and how it occurred is unclear, but in my view, it is unhelpful when the Area Plan is being used in the context of these and presumably other proceedings including clearly the District Plan Review.

5.80 Mr Vincent’s revised calculations were that there was an identified capacity of 672 lots (as at April 2015) which included 198 lots of infill within the Living 1 zone and 78 lots are within deferred zones which are part of the PC62 site. This compares with the 953 identified by the Area Plan.

5.81 I note that the Area Plan indicated that the Living 2 deferred land (subject to this application) could be intensified to standard residential densities<sup>13</sup> and that is what is essentially proposed by PC62. As referred to above that would add around 196 households to Leeston’s development capacity.

5.82 One of the difficulties with the Area Plan’s growth strategy is its seemingly ‘bob each way’ approach. By that I mean on the one hand it is saying that there is sufficient capacity and no new areas are required for residential purposes to accommodate the projected growth of Leeston through until 2031 and as a result there is no need for the Council to proactively zone additional land through the District Plan Review. That sentiment remains intact even with Mr Vincent’s revised figures in that the 402 households projected to be required is still easily

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<sup>11</sup> Conclusion, page 29

<sup>12</sup> Conclusion, page 29

<sup>13</sup> Leeston Area 1, page 28

achieved. Yet on the other hand it states that the consideration of additional greenfield land for residential purposes is not precluded.

- 5.83 Nevertheless, the Area Plan does provide direction in terms of growth. While Ms Lewes suggested that the Area Plan does not identify a preferred growth option for Leeston,<sup>14</sup> with respect I do not consider that is correct. The Area Plan in my view clearly identifies the next areas for future residential growth being LEE1 (intensification of the Living 2 land within the PC62 site), LEE 2 and LEE 4. The Area Plan states:

*Figure 9 shows preferred areas for future 'greenfield' growth that could accommodate residential development either beyond 2031 or more immediately through a privately initiated plan change process, Figure 9 also illustrates areas where more intensive development may be able to occur and explains the advantages and disadvantages of each respective area, and also shows other possible areas for future development.* [emphasis added]

- 5.84 LEE 2 and LEE 4 are clearly the "preferred areas of future 'greenfield' growth" and along with LEE 1 have been analysed in the Area Plan as to their advantages and disadvantages. I note that LEE 2 and LEE 4 have subsequently been identified in the Proposed Selwyn District Plan (PSDP) as growth area overlays. Conversely, the Area Plan other than identifying part of the rural area subject to PC62 in map form contains no other analysis of this area, which one might have expected, and simply refers to it as a "possible future area for low density residential development". I therefore do not believe what is proposed by PC62 is consistent with the direction for growth contained within and anticipated by the Area Plan.

- 5.85 In my opinion PC62 is reasonably consistent with the intentions of the Area Plan in terms of the deferred land in promoting intensification and addressing the flooding hazard, however in terms of the rural land which is not identified as a preferred areas of future 'greenfield' growth there is in my view a reasonably high degree of inconsistency particularly in terms of the preferred direction for growth around Leeston, but also in the type of growth proposed where around 40% is at a density which would be considered greater than the low density<sup>15</sup> referred to by the Area Plan.

*Proposed Selwyn District Plan*

- 5.86 As discussed in my Minute 5 I consider that the PSDP should be given little weight. The only reference I have made to it is to note the inclusions of the LEE 2 and LEE 4 areas from the Area Plan as growth area overlays in the PSDP.

*Greater Christchurch Urban Development Strategy*

- 5.87 For the avoidance of doubt, I confirm that I do not consider the Greater Christchurch Urban Development Strategy of any relevance to these proceedings.

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<sup>14</sup> Paragraph 7.6 of s42A report

<sup>15</sup> Objective B4.1.2 refers to the Living 2 zone as being low density

## **Section 32**

### *Proposed Amendments*

- 5.88 The proposed amendments to the District Plan are outlined in detail in Appendix 1 of Ms Lewes s42A report subject to some further amendments proposed by Mr Vincent.
- 5.89 The changes include the deletion of Policy B4.3.55 and the associated Explanation and Reasons, with which I agree, the inclusion of a number of rules and an ODP and changes to the Planning Maps.
- 5.90 In terms of the rules I generally support their intent subject to the amendments proposed by Mr Vincent to rule 12.1.4.106 and the inclusion of a requirement for mounding or fencing in proposed Rule 4.2.5 and a consequential addition to the Rule 4.2.8 to add a further matter of discretion. However, for the reasons outlined below associated with my conclusions further amendments will be necessary.
- 5.91 In terms of the ODP and Planning Maps again as a result of my conclusions amendments to these will be necessary.

### *Objectives and Policies*

- 5.92 PC62 does not propose any alteration of to the objectives of the District Plan. It is therefore incumbent on me to determine whether the proposal rezoning's are the most appropriate means of achieving the relevant objectives of the District Plan and whether it implements the policies having regard to their efficiency and effectiveness and taking into account the benefits and costs and the risks of acting or not acting.
- 5.93 Having considered the objectives and policies identified in the plan change application I consider the following are of particular relevance to my considerations and I have started with the key growth provision in section B4 because of their direct relevance.
- 5.94 Objective B4.1.1 promotes a range of living environments, while maintaining the overall 'spacious' character of Living zones, while Objective B4.1.2 seeks that new residential areas are pleasant places to live and add to the character and amenity values of townships. The only real policy of relevance in this situation is the second part of Policy B4.1.3 which requires that *elsewhere in the District to allow, where appropriate, the development of low density living environments in locations in and around the edge of townships where they achieve the following:*
- i. A compact township shape;*
  - ii. Consistent with preferred growth options for townships;*
  - iii. Maintains the distinction between rural areas and townships;*
  - iv. Maintains a separation between townships and Christchurch City boundary;*
  - v. Avoid the coalescence of townships with each other;*
  - vi. Reduce the exposure to reverse sensitivity effects;*
  - vii. Maintain the sustainability of the land, soil and water resource;*

viii. *Efficient and cost-effective operation and provision of infrastructure.*

5.95 In my view PC62 is consistent with elements of this policy but not with others. It is obviously consistent with iii, iv and v and in my view aside from the 'rural gap' achieves i to an acceptable level, however I consider zoning the rural component of the plan change Living is inconsistent with ii and vi for the reasons I have already outlined and for those reasons there is a degree of inconsistency with vii in terms of the sustainability of land and soil. Finally, if the Councils preferred growth area is to the north then potentially there is an inconsistency with viii, however due to a lack of evidence around this I consider this criterion is neutral.

5.96 Objectives B4.3.1 seeks that township expansion does not adversely effect, amongst other things, natural and physical resources, other activities and the amenity values of the township, while Objective B4.3.2 seeks that new residential development adjoins existing townships at compatible urban densities or at a low density around townships to achieve a compact township shape which is consistent with the preferred growth direction for townships and other provisions in the Plan. The other relevant objective in this suite is Objective B4.3.4 which requires that new areas for residential development support the timely, efficient and integrated provision of infrastructure, including appropriate transport and movement networks through a coordinated and phased development approach.

5.97 In terms of Objective B4.3.1 other activities would include rural activities and my conclusions are that there is a reasonable potential for reverse sensitivity effects on the adjoining rural land particularly as a result of the zoning configuration. While I consider the PC62 achieves to a large extent the first part of Objective B4.3.2 in term of adjoining an existing townships at a compatible urban density, I am not convinced overall it fully achieves a compact township shape given the configuration of the rural urban interface nor given what is contained in the Area Plan is it consistent with the preferred growth direction for the township. In terms of Objective B4.3.4 there was nothing to suggest this would not be achieved.

5.98 Post the above objectives and at the beginning of the section entitled Residential and Business Development — Town Form Policies the District Plan states:

*Policies B4.3.1 to B4.3.10 of this section apply to rezoning of land for residential or business development in addition to the general policies in, Part B, Sections 1.1 to 4.2 and 4.4. Any variation or plan change request should be consistent with each and every relevant policy in these two parts of the Plan or seek to change those policies with which it is not consistent. [my emphasis]*

5.99 This appears to be a note in the District Plan rather than any sort of provision and I am reluctant to provide it with any great weight other than to note that the policies identified are the core ones associated with growth and that Plan Change has not sought to change any of them.

5.100 The policies of relevance which implement the above objectives are B4.3.1, B4.3.2, B4.3.3, B4.3.4 and B4.3.6. These are assessed below. Policy B4.3.8 was also identified by Ms Barnett as being relevant and not properly complied with and indeed the Applicant also refers to it in Appendix 8 concluding that PC62 is consistent with its intent. Having reviewed Policy B4.3.8 and the policy preceding it (B4.3.7) there is a major question mark in my mind as whether it is actually relevant in this case and instead only relates to the Living Z zone. I note Ms Lewes did not refer to it at all. In my opinion Policy B4.3.8 is at best a guide as to what should be included in

an ODP, however I do not consider having reviewed the District Plan that there is a policy framework that requires an ODP in this situation.

- 5.101 Policy B4.3.1 seeks to ensure that new residential development either: complies with the Plan policies for the Rural Zone; or the land is rezoned to an appropriate Living Zone that provides for rural-residential activities (as defined within the Regional Policy Statement) in accordance with an Outline Development Plan incorporated into the District Plan; or the land is rezoned to an appropriate Living zone. PC62 would in the main be seen to be consistent with this latter criterion.
- 5.102 Policy B4.3.2 requires that any land rezoned for new residential development adjoin, along at least one boundary, an existing Living or Business zone in a township, except that low density living environments need not adjoin a boundary provided they are located in a manner that achieves a compact township shape. PC62 achieves this policy.
- 5.103 Policy B4.3.3 requires the avoidance of zoning patterns that leave land zoned Rural surrounded on three or more boundaries with land zoned Living or Business. This is a very directive provisions and it is generally accepted that the use of the word “avoid” has as a result of case law taken on a stronger meaning. Ms Eveleigh acknowledged that PC62 was inconsistent but referred me to the explanations and reasons and submitted that no issue has arisen in relation to the provision of utilities and services and that the ODP identifies locations for future road connections with the adjacent land if it is rezoned in the future.
- 5.104 In terms of reverse sensitivity, Ms Eveleigh noted that:
- (a) Areas of Living 2 zoned land are proposed, which provides for a lower density of development and therefore a reduced risk of reverse sensitivity effects;
  - (b) The landowner of the adjacent land has not raised concerns regarding potential for reverse sensitivity effects through this process; and
  - (c) Ms Lewes noted that it is a common feature of the development pattern throughout Selwyn for Living zoned land (including at higher densities such as Living 1) to be located adjacent to Rural land with no form of buffer.
- 5.105 I do not consider the explanation and reasons particularly help because they simply explain some of the implications of this land zoning pattern and while I acknowledge the zoning pattern might not have implications for the provision of utilities and services the issue around reverse sensitivity remains and the fact that the adjacent landowner has not raised concerns is of little relevance in a policy context. I have already acknowledged the Living 2 zoning along some parts of the rural boundary however the majority is the denser Living 1 zone and even if it were all Living 2 I do not consider the policy would actually support this. I accept that there may be instances where Living 1 zoned land is located adjacent to Rural land with no form of buffer, whether that is historic or not was not explained. Nevertheless, the policy framework does not generally support this as I have already referred to (see discussions around Objectives B4.1.1 and B4.1.2 and Policy B4.1.3).

5.106 In terms of Policy B4.3.3, there is little doubt in my view that PC62 fails to achieve this policy and therefore it is inconsistent and even contrary to it.

5.107 Policy B4.3.4 seeks to “encourage new residential or business development to occur on vacant land in existing Living or Business zones if that land is available and appropriate for the proposed activity”. The explanation and reasons state:

*Many townships in Selwyn District have sites within existing Living or Business zones that may be able to be used for new residential or business activities. The Council encourages use of sites, in existing zones, in the first instance, to encourage a consolidated township area. Consolidated Living or Business areas may have the following benefits:*

- *Reduced potential ‘reverse sensitivity’ issues with activities in the Rural zone by reducing the ‘interface’ of the zones.*
- *More efficient utilisation of infrastructure, especially reticulated utilities.*
- *Fostering of a ‘village’ atmosphere.*

5.108 Firstly, I agree with Ms Lewes that the deferred area would fall to be an “existing Living zone” for the purposes of this policy. Taking that into account there is between the deferred land and the Living XA Zone some 62ha of vacant greenfield land which as I understood it is, and if enabled by this Plan Change, would be available and appropriate for residential development. On top of that there is a level vacant land within the exiting urban area which may also well be available although the certainty of that was less clear. As I have already discussed that quantity of land based on current projections is sufficient to meet long term capacity demands. I therefore do not consider the zoning the rural land in PC62 is consistent with the intent of this policy. I note that Ms Eveleigh in paragraph 13 of her right of reply agrees that PC62 is not consistent with Policy B4.3.4 and I took from the comments of Ms Lewes that she accepted that there was an inconsistency.

5.109 Policy B4.3.6 encourages townships to expand in a compact shape where practical. The explanations and reasons state that for new residential development, Policy B4.3.6 promotes shapes and situations that foster a compact or consolidated town shape. Compact means zones of similar lengths and widths, rather than long, thin strips of land following a particular road, waterbodies or other feature. A compact shaped township helps mitigate adverse effects in the following ways:

- *Reduction of the number of allotments that share a boundary with the Rural Zone, and therefore the area for potential conflicts between incompatible activities.*
- *Facilitating of cost-effective provision of services such as reticulated water, sewage, roads and footpaths because more connections are provided, or houses served, per kilometre of pipe or road.*
- *Reduction in the distance of houses to businesses and community facilities, which may encourage people to walk or cycle rather than use motor vehicles for short trips. It may also help to facilitate the ‘village’ atmosphere of townships, such that the shopping centre and community facilities are close to all houses.*

- *Reduction in the impacts on the road network, and more opportunity to impose lower speed limits in the township (refer to Part B, Section 2.1).*
- *Maintenance of the visual distinction between the rural area and townships (refer to Part B, Section 3.4).*

*Policy B4.3.6 recognises that a compact shaped zone may not always be practical if there is a constraint to a zone expanding in a particular direction(s). Such constraints may include (but are not limited to) geographical features such as mountains, waterbodies, and transport routes.*

- 5.110 In my view PC62 generally meets the intent of this policy, it is reasonably compact except for the 'rural gap' and aside from the first bullet point addresses the remaining features of the explanation and reasons.
- 5.111 With the proposed deletion of Policy B4.3.55, Policy B4.3.54 is the only relevant policy specific to Leeston. The policy seeks to ensure any land rezoned for new residential development does not cause, or exacerbate, a natural hazard by increasing the rate of stormwater runoff into the Leeston main drain. Given the evidence before me on the developing Leeston North Stormwater bypass and the ability to retain stormwater through onsite retention I consider PC62 in consistent with this policy.
- 5.112 The natural resources land provisions in particular Objective B1.1.2 seeks that new residential activities do not create shortages of land or soil resources for other activities in the future and Policy B1.1.8 requires the avoidance of rezoning land which contains versatile soils for new residential development if:
- *the land is appropriate for other activities;*
  - *and there are other areas adjoining the township which are appropriate for new residential or business development which do not contain versatile soils.*
- 5.113 Canterbury Maps show that Leeston is surrounded by Class 2 and 3 soils. The Class 2 soils are to the west and encompasses much of the PC62 land and the Class 3 soils are to the north and east. My simple understanding of the classifications is that the lower the numerical value the higher the versatility. In assessing these provisions, the application document in Appendix 8 states:
- "... most of the land around Leeston Township is reasonably versatile by virtue of being located on the Canterbury Plains, and therefore arguably may not meet the first limb of the test in Policy B1.1.8. However, given the location of the site adjoining the existing development of the township, and given this area is not more or less versatile than other areas adjoining the township, it is considered the proposal site is an appropriate location for the expansion of the township.*
- 5.114 I agree that the first limb of the policy is not met in that the land is appropriate for other activities, although I would note that an extensive part of the PC62 area is already zoning for residential purposes albeit presently deferred. In terms of the second limb both Class 2 and 3 soils are versatile however the Class 2 soils have a higher versatility and there appears to less of them in the wider Selwyn and indeed Canterbury context. This would suggest that from a purely versatile soils perspective the preference for growth around Leeston should

be to the north and east which is where the Area Plan (and now PSDP) proposes. There is therefore in my view some degree of inconsistency with these provisions.

- 5.115 The natural resources water provisions in particular Objective B1.2.1 and Policy B1.2.1, B1.2.2, B1.2.4 and B1.2.5 relate to protecting the quality of, and avoiding effects on, ground or surface water resources from services; ensuring rezoned land can be serviced; and providing protection around water supply bores. PC62 is generally consistent with these provisions.
- 5.116 Objectives B1.3.2 and B1.4.1 look for the natural character of rivers and their margins to be recognised, protected and enhanced, where appropriate, in townships and that the expansion of townships does not adversely affect the values of outstanding natural features and landscapes. In my opinion the treatment of the Leeston Creek running through the site is appropriate and there are no outstanding natural features and landscapes that need to be taken into account.
- 5.117 The physical resources transport provisions in particular Objective B2.1.1 and Policies B2.1.13, B2.1.14 and B2.1.15 promote an integrated approach to land use patterns and transport to manage effects, encourage walking and cycling and the impacts on the roading network. I consider PC62 is generally consistent with these provisions. I also consider PC62 is consistent with the relevant utilities provisions (Objectives B2.2.3, B2.3.1 and B2.4.2 and Policies B2.2.1, B2.3.1 and B2.4.4).
- 5.118 Objectives B3.1.1, B3.1.2, and B3.1.3 seek to ensure activities do not lead to or intensify the effects of natural hazards, that potential loss of life or damage to property is mitigated and that mitigation measures do not create or exacerbate adverse effects on other people or the environment, while Policy B3.1.2 requires the avoidance of new residential development in areas known to be vulnerable to a natural hazard, unless any potential risk of loss of life or damage to property is adequately mitigated. In my view PC62 achieves these provisions through the mechanisms proposed.
- 5.119 The Quality of the Environment objectives (B3.4.1, B3.4.3, B3.4.4 and B.4.5) promotes a pleasant place to live and work, the avoidance of reverse sensitivity effects, a compact urban form and provision of a variety of living environments and housing choices and a high level of connectivity. Policy B3.4.39 requires the avoidance of rezoning land for new residential development adjoining or near to existing activities which are likely to be incompatible with residential activities, unless any potential 'reverse sensitivity' effects will be avoided, remedied or mitigated. I accept that the boundary with the Business 1 zone is able to be mitigated albeit with some additional control that I have recommended. In terms of the rural boundary there is no specific activity such as a poultry farm which needs to be mitigated against however general agricultural activity and the times it operates can generate complaints and thus reverse sensitivity effects. While I accept that there is always going to be some form of rural/urban interface, in this case the shape of the zone exacerbates in my opinion the potential for reverse sensitivity and there has been little attempt to mitigate this. There is therefore in my opinion an inconsistency with Objective B3.4.3 and Policy B3.4.39.
- 5.120 In terms of the other features covered by the objectives referred to above, I consider the Plan Change meets their intent.

*Benefits and Costs*

- 5.121 I accept that PC62 provides for a greater density of development across the current deferred land and there are inherent benefits in such an approach in terms of efficiency of land use, greater connectivity and sense of community, increased housing choice and capacity and greater support for community facilities and business services.
- 5.122 The costs of PC62 appear to be a loss of versatile soils, a future need to upgrade the wastewater treatment facilities in order to release to full potential of the PC62 land, a potential for the duplication of infrastructure given the amount of zoned but undeveloped land and those experienced by the Applicant in pursuing the plan change and the potential need for minor road upgrading. As the Council were already pursuing an upgrade of the water supply, I do not consider this can be seen as a cost associated with PC62.

*Risk of Acting or Not Acting*

- 5.123 The risk associated with PC62 relate to the potential for reverse sensitivity effects as outlined and that growth occurs in a direction which is not preferred. On the other side the risks of not allowing for PC62 at least in part is that urban zoned land will not be developed due to its continued deferment.

*Alternatives*

- 5.124 The s32 accompanying the application did not appear to consider the alternative growth options identified in the Area Plan nor did it evaluate the option of simply up-zoning all the deferred land to Living 1 and not rezoning Rural land. This seems to me to be a flaw in the Applicant's case and I would have thought both those alternatives were pertinent to any consideration of alternatives in this case.

*Conclusion*

- 5.125 Having considered the objective and policy framework and in particular those focussed on urban growth I do not consider that the rezoning of the rural land in PC62 is moving in the direction sought by the District Plan and the Area Plan in terms of the management of urban growth. In my view this is a case where there are specific provisions which relate directly to the matter at hand, being urban growth, which just cannot be ignored. Put simply there are just too many key objectives and policies within the primary growth of townships section with directive guidance which are not met by the rural component of PC62 for me to overlook them in favour of a broader overall judgement.
- 5.126 While I accept that there are some benefits, particularly in terms of providing for denser development, integration, connectivity and further increasing housing capacity there are also a series of costs and the potential for adverse effects, in particular those associated with reverse sensitivity. I have therefore reached a conclusion that PC62 in full is not the most appropriate means of achieving the relevant objectives of the District Plan. However, I consider the uplifting of the deferred zoning and its up-zoning to Living 1 would be an appropriate means of achieving the relevant objectives of the District Plan.

**Sections 31**

- 5.127 I consider that in terms of servicing and continuity of development PC62 would in part achieve integrated management of effects, however I do not consider as a whole it is necessary in ensuring that there is sufficient development capacity for housing in Leeston. Further, I am not convinced PC62 would be achieved without creating any actual or potential effects on the environment and the unnecessary loss of Class 2 versatile soils.

**Part 2 of the RMA**

- 5.128 Overall, I consider the most relevant objectives of the District Plan will not be achieved as a result of the changes proposed as part of PC62, particularly in relation to the rezoning of the rural land. Nevertheless, I have gone onto consider the matters contained in Part 2 of the Act.

*Section 6*

- 5.129 Section 6 of the Act relates to matters of national importance. I agree with Ms Lewes that there are no section 6 matters of specific relevance at play in this case.

*Section 7*

- 5.130 Section 7 of the Act sets out other matters I am to have particular regard to. Of particular relevance are section 7(b) concerning the efficient use and development of natural and physical resources; section 7(c) relating to the maintenance and enhancement of amenity values; and section 7(f) in terms of the maintenance and enhancement of the quality of the environment.
- 5.131 I acknowledge that part of the PC62 site has already been identified for urban development i.e. that which is deferred. For this part of the site what is being considered here is whether a denser form of development is more appropriate for this site. In this context there is a distinction to be made between rezoning urban land to enable a higher density and rezoning rural land. In this case the former represents in my opinion a more efficient use of the land resource given its current zoning and its proximity to the existing urban area. Furthermore, of the competing potential land uses i.e. residential development at Living 2 or Living 1 densities I again consider the latter is the more efficient use. If all the deferred land (29.6ha i.e. including the 1.5ha) were zoned Living 1 this would equate to some 270 households.
- 5.132 I am not convinced however that the use of the rural component of the plan change area is an efficient use of land. In addition to the deferred land there is already a significant amount of greenfield land zoned for residential development for a township of Leestons size and there is potential for infill growth. This is couple this a declining demand in recent years and thus some doubt around the current growth projections. Given these circumstances alongside the direction anticipated for growth in the Area Plan (and now in the PSDP) I consider there is a degree of caution needed in assessing the continued expansion of residential development into the rural area. There are also potential inefficiencies in terms of infrastructure provisions. Overall, in my opinion a more efficient use of this rural land is to enable it to continue to be used for rural farming activity.
- 5.133 In terms of the maintenance and enhancement of amenity values and the quality of the environment I consider PC62 would generally achieve those.

*Section 8*

- 5.134 Section 8 of the Act requires that the principles of the Treaty of Waitangi (Te Tiriti o Waitangi) be taken into account. I accept that there are no specific section 8 matters at play in this case.

*Section 5*

- 5.135 The ultimate purpose of the plan change is to achieve the purpose of the Act as defined in section 5. In the case of a plan change that purpose is usually subsumed in the greater detail and breadth of the operative objectives and policies, the principal ones of which are not sought to be changed. That is the situation in these proceedings.
- 5.136 Therefore having considered the Plan Change and all the relevant evidence and documentation I am of the opinion for the reasons set out above that PC62 in its fullness, has the potential to generate adverse effects, is inconsistent with the preferred growth direction in the Area Plan, is not appropriate in terms of the s32 tests and overall does not meet the purpose and principles set out in Part 2 of the Act in promoting sustainable management of natural and physical resources. As I have already indicated my conclusion on the deferred land alone would be different.

**6.0 Decision**

- 6.1 This has proven to be a complex decision to get to this point and it has taken me some time, and numerous paragraphs and assessment to get to my decision. My options in these circumstances are as follows:
- i. Decline the Plan Change outright
  - ii. Allow the Plan Change in part i.e. the deferred area only
- 6.2 I have reached a conclusion that it would not be appropriate in the circumstances to decline the Plan Change outright and that the deferred Living 1 and Living 2 zones should be uplifted and that whole area, aside from 31 Leeston Dunsandel Road (which would remain Living 2) should be zoned Living 1. In reaching that conclusion I am conscious that changes will be required to the rules proposed, the ODP and the planning map. I also consider that the rural/urban interface needs to be addressed, although I am not suggesting densities at a Living 2 zone level be imposed.
- 6.3 I am therefore issuing an interim report (as suggested by Ms Eveleigh if I reached this point) to enable further input from the Applicant on the following:
- i. The provision of a revised ODP covering the deferred land only.
  - ii. The inclusion of provisions or mechanisms for the Living 1 zone at the rural/urban interface to address potential reverse sensitivity. These might include larger lot sizes, dwelling setbacks and/or covenants.
  - iii. The inclusion of acoustic fencing or mounding to a height of 1.8m in proposed Rule 4.2.5 and an additional associated matter of discretion in Rule 4.2.8.
  - iv. The updating of all other rules and the planning map to reflect the Living 1 zoning of the deferred land only.

- 6.4 I accept that this may take some time to address and therefore I have not imposed a strict timeframe for that to occur. However, I would hope that the above can be addressed by at least by the 14<sup>th</sup> of December so that I can issue my final recommendation to the Council prior to Christmas.
- 6.5 Finally, I would like to thank those involved in this process for their input and I acknowledge for the Applicant there will be a degree of disappointment with this decision, however as I have set out I consider there are strong reasons for my decision.



**Commissioner DM Chrystal**

**23<sup>rd</sup> November 2020**

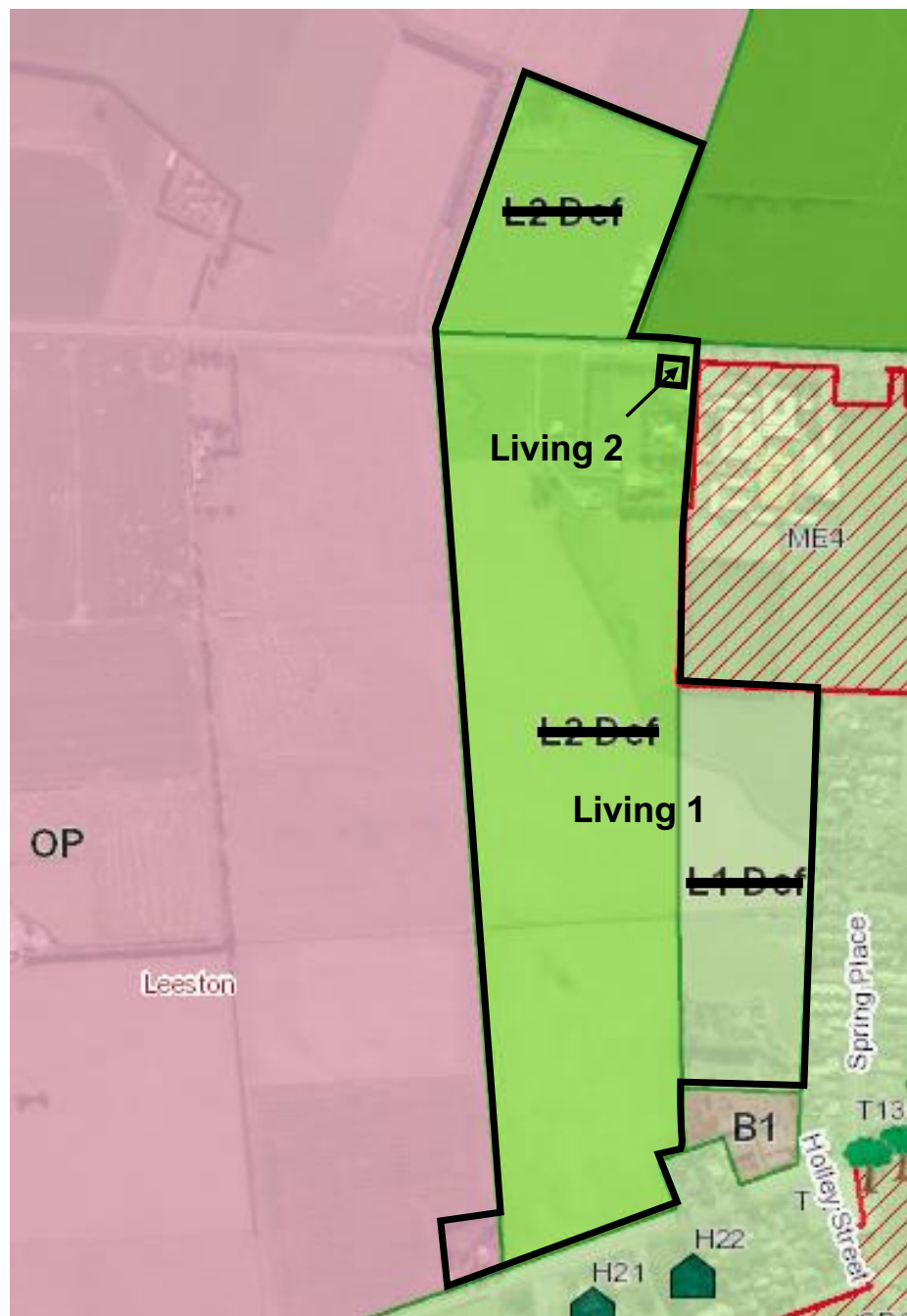
## APPENDIX B

### CHANGES TO THE SELWYN DISTRICT PLAN

#### Planning Maps

##### Amendment 1

Amend Planning Maps by rezoning the area shown below Living 1 and 31 Leeston Dunsandel Road Living 2





## Issues, Objectives and Policies

### Amendment 3

Delete Policy B4.3.55 and the associated Explanation and Reasons as follows:

#### **Policy B4.3.55**

~~Ensure that land that is zoned for residential development but is presently subject to surface flooding is not developed for its zoned purpose until provision is made for the amelioration of that constraint.~~

#### ~~Explanation and Reasons~~

~~Some land to the west of Leeston is presently subject to surface flooding at times of heavy rain. The principal reason for this is the presently limited capacity of the Market Street Culvert. From an engineering point of view there are several ways in which this problem can be ameliorated and some of these depend upon development decisions yet to be made. In order to ensure that residential development of the land affected does not proceed before this problem has been remedied the areas affected have been given a 'deferred' zoning that brings into play a restriction on subdivision. It is intended that, once a remedy has been decided upon and implemented, the 'deferred' notation and subdivision restriction will be removed by Plan Change.~~

## Chapter 4 Living Zone Buildings

### Amendment 4

Add a new rule:

**4.1.1(B) The establishment of any dwelling or other principal building on land located in the Living 1 Zone at Leeston shown in the ODP at Appendix 51 where the floor level does not provide a minimum freeboard height of 400mm above the 0.5% Annual Exceedance Probability flood event shall be a restricted discretionary Activity**

### Amendment 5

Add an additional rule after Rule 4.2.4 as follows:

**4.2.5 Where the Living 1 zone adjoins the Business 1 zone as identified on the Leeston Outline Development Plan in Appendix 51, any dwelling or other principal building shall be permitted where a 2m landscape strip is provided along any boundaries which adjoin the Business 1 zone. The landscape strip shall be a minimum of 2m wide and contain a minimum of one tree per 3m. The trees shall be a minimum height of 1.5m at the time of planting and shall be capable of reaching a minimum height of 3m at maturity.**

Renumber Rules 4.2.5, 4.2.6 and 4.2.7 to 4.2.6, 4.2.7 and 4.2.8 respectively

Insert new matters of discretion after Rule 4.2.8 as follows:

**4.2.9 Any activity which does not comply with Rule 4.2.5 shall be a restricted discretionary activity. Council shall restrict the exercise of its discretion to the consideration of:**

**4.2.9.1 The extent to which the proposed landscaping provides visual screening from the Business 1 zone.**

**4.2.9.2 Whether other methods of visual screening are proposed and are effective to visually screen the Business 1 zone.**

## Amendment 6

Amend Rule 4.9.22 as follows:

4.9.22 Any dwelling **in Leeston** in the:

- (i) Living 1 zone shown within Appendix 51 (Leeston Outline Development Plan) shall have a setback from any rural zone boundary of not less than 20 metres.**
- (ii) Living 2A Zone ~~at Leeston~~ shall have a setback from any Business Zone boundary of not less than 20 metres.**

## Amendment 7

Amend Rule 4.17.1 – Fences Adjoining Reserves as follows:

4.17.1 All development located within the Living Z zone or the High Street, Southbridge Outline Development Plan area (Appendix 45), **and the Living 1 zone shown within Appendix 51 (Leeston Outline Development Plan)** that shares a boundary with a reserve or walkway shall be limited to a single fence erected within 5 m of any Council reserve that is at least 50% visually transparent where it exceeds 1.2 m in height (which shall be applied to the whole fence in its entirety).

## Chapter 12 Living Zone Subdivision

## Amendment 8

Delete references to Living 1 (Deferred) and Living 2 (Deferred) in Table C12.1 as follows:

Township	Zone	Average Allotment Size Not Less Than
Leeston	Living 1	650m <sup>2</sup>
	<del>Living 1 (Deferred)</del>	<del>4ha until deferral lifted, then 650m<sup>2</sup></del>
	Living 2	5,000m <sup>2</sup>
	<del>Living 2 (Deferred)</del>	<del>4 ha until deferment lifted, then 5,000m<sup>2</sup></del>

## Amendment 9

Insert new rules 12.1.3.62 and 12.1.3.63 following Rule 12.1.3.61 as follows:

**Leeston**

**12.1.3.62 In relation to the Living 1 zone shown within Appendix 51 (Leeston Outline Development Plan), any subdivision is to be in general accordance with the Outline Development Plan and shall comply with any standards referred to in that Outline Development Plan.**

**12.1.3.63 Prior to the development of land for Living 1 purposes, within Appendix 51 (Leeston Outline Development Plan) along the boundary with the Business 1 zone, an acoustic fence shall be constructed to a height no less than 1.8m above ground level at a mass of 8 – 10kg / m<sup>2</sup>.**

## Amendment 10

Insert new rule 12.1.3.64 following new Rule 12.1.3.63 (proposed above) as follows:

**12.1.3.64 In relation to the Living 1 zone shown within Appendix 51 (Leeston Outline Development Plan), no residential subdivision shall occur after the 80th residential allotment until such time as the Ellesmere Wastewater Treatment Plant has been upgraded and is capable of servicing additional allotments within the ODP.**

Amendment 11

Insert new rule 12.1.4.106 following Rule 12.1.4.105 as follows:

**Leeston**

**12.1.4.106 In relation to the flooding effects in the Living 1 zone shown within Appendix 51 (Leeston Outline Development Plan):**

- (a) Whether the subdivision of land or subsequent use of the land is likely to cause or exacerbate potential risk to people or damage to property; and**
- (b) Any measures proposed to mitigate the effects of a potential natural hazard, including:**
  - i. Building platforms within each allotment, of sufficient size to accommodate a dwelling and associated curtilage; and**
  - ii. The filling (with inert hardfill) of any low-lying area; and**
  - iii. Proposed methods and locations for flood offset areas; and**
- (c) How adequate and appropriate any such mitigation measures may be, and the mechanisms to secure any such measures.**

Amendment 12

Amend Rule 12.1.6.2 Discretionary Activities – Subdivision General as follows:

12.1.6.2 Any subdivision subject to Rule 12.1.1 which does not comply with Rule 12.1.3.13 or **Rule 12.1.3.62.**

Amendment 13

Insert new rule under 12.1.7 (12.1.7.10 or subsequent number as may be appropriate) Non-Complying Activities – Subdivision – General:

**12.1.7.10 Any subdivision that does not comply with Rule 12.1.3.64.**

## **Appendix 2 – Proposed Outline Development Plan (Appendix 51)**

### **Introduction**

This Outline Development Plan (ODP) is for the development of approximately 29 ha of land west of Leeston township. The development area is bound by Leeston Dunsandel Road to the north, with one section north of Leeston Dunsandel Road; Spring Place and Ellesmere College / Te Kāreti o Waihora to the east; High Street to the south and rural zoned land to the west. The ODP has been broken down into four components – Land Use, Transport Network, Green Network and Blue Network.

### **Land Use**

The ODP area provides for residential development in accordance with the Living 1 zone standards.

### **Movement Network**

The movement network will provide connections to the existing roading network, residential areas and Leeston township. The ODP includes primary and secondary roads, as well as walkway and cycleway linkages throughout the ODP area. For the purposes of the ODP, the built standard for the 'Primary Road' will be the equivalent to the Plan standards for a Collector Road or Local-Major Road standards, and a 'Secondary Road' will be the equivalent to the Plan standards for a Local-Major or Local-Intermediate Road.

The ODP provides for an integrated transport network incorporating:

- A primary road following a north to south alignment from Leeston Dunsandel Road to High Street. This primary road will align with Chapman Street;
- Three secondary roads to facilitate circulation around the ODP; and
- Pedestrian, cycle and non-vehicular linkages to encourage alternative modes of transport and to provide connections throughout the ODP site and to Ellesmere College / Te Kāreti o Waihora.

The remaining roading network must be able to accommodate progressive development over time and roading connections must be arranged and aligned in a way that long term connectivity is achieved to provide a safe and efficient roading network and non-vehicular linkages.

### **Green Network**

A minimum of three reserves are required to be established throughout the development area. The reserves could be located as follows:

- Stormwater management areas should be provided with surrounding reserve areas;
- Leeston Creek and its margins are to be vested to Council as reserve. The reserve should run for the entire length of Leeston Creek within the development site and should be provided with walkways along the Creek and a central play area. Any bridge infrastructure over Leeston Creek shall be designed to avoid adverse effects on the flow of the Leeston Creek; and
- A reserve connecting the development block north of Leeston Dunsandel Road with Leeston Dunsandel Road and Leeston Creek reserve.

The reserves can be accessed by road, pedestrian and cycle linkages.

Council's open space requirements cited in the Long Term Plan and Activity Management Plans should be referred to during subdivision design.

### **Blue Network**

Stormwater:

The ODP area is subject to high ground water level and localised flooding in high rainfall events. Detailed stormwater solutions are to be determined by the developer in collaboration with Council at the time of subdivision. Stormwater management areas have been identified at the northern most part of the site to be

vested to Council for the purposes of the Leeston North Stormwater Bypass; Leeston Creek; and the naturally low point of the site for stormwater attenuation.

Stormwater management and flow rates will need to be detailed at the time of subdivision to ensure Leeston Creek and the Market Street Culvert can accommodate the stormwater without resulting in flooding or ponding. Most of the stormwater from the site will need to be managed using the north strip and the low point management areas, rather than Leeston Creek, however Leeston Creek could be utilised for stormwater management provided the flows remain at pre-development rates.

Stormwater management and attenuation areas must be designed by a suitably qualified engineer, so the impact of flooding is not increased. The stormwater management area has been located in the natural low point of the site. The stormwater management area should be connected to the surrounding roads through pedestrian and cycle links and should have sufficient street frontage to allow for passive surveillance, create a sense of openness, and provide a high level of amenity.

#### Sewer:

Upgrades to the existing wastewater infrastructure in Leeston will be required to service the site and discharge into the Ellesmere Treatment Plant after the 80th residential allotment to enable future development.

#### Water:

The water reticulation will be an extension of the existing reticulated network. Council owns a utility allotment west of the site which will provide potable water for the future development. The provision of infrastructure to service the ODP shall align with the Council's indicative infrastructure staging plan, unless an alternative arrangement is made by the landowner/developer and approved by Council.

#### Cultural Values

Development of the site has the potential to effect Te Waihora / Lake Ellesmere, due to increased density and stormwater discharge. Te Waihora / Lake Ellesmere is an area of significance to local Rūnanga, Taumutu. Consultation with Taumutu should be undertaken when developing the site.

## Recommended Decisions on Submissions

## APPENDIX C

Sub. Point	Name	Oppose/Support	Summary of Submissions	Recommended Decision
1.	John and Juliet England	Support	Supports the plan change	Accept in part
2	Alan and Janet Manning	Oppose	D2.1 Opposes vehicle access from Spring Place to the proposed plan change area	Accept in part
			D2.2 Concerned that increased development will make flooding worse	Accept in part
FS2	Canterbury Regional Council	Support D2.2		Accept in part
3	Rachael Prestidge	Oppose in part	Concerned that increased development will increase flooding over property	Accept in part
4	Cochranes of Canterbury	Support in part	Seeks a portion of the proposed plan change being zoned Business 1, to reflect the historical use of property	Reject
FS1	Cochranes of Canterbury	Support		Accept in part
5	Robert and Jean Milne	Oppose	D5.1 Concerned that the waste water system does not have enough capacity to service the proposed plan change area	Reject
			D5.2 Concerns about the impact that traffic movements through Spring Place may have on amenity and on the intersection with High Street	Accept in part
6	Christchurch City Council	Support in part	D6.1 Seeks that the plan change relating to the rural zone land is refused due to the effects on the significant wider transport network.	Accept
			D6.2 Seeks that the plan change relating to the deferred zoned land is accepted in part, with the deferred zoning confirmed with no intensification.	Reject
			D6.3 Concerned about the wider transport effects on Christchurch City from the potential increase in commuter traffic volumes into the City from Leeston and the implications that this will have in terms of increased emissions, congestion and longer journey times. Would like to see the transport effects assessment consider alternative transport options and the transport effects on the wider region.	Reject
			D6.4 Concerned that the release of land beyond the forecast growth models has the potential to undermine the higher order documents, prepared by various agencies, which have been developed to enable growth to occur in the wider Canterbury region in an integrated and consolidated manner.	Accept in part

			D6.5 Concerned that lodgement of the proposed plan change ahead of the likely gazetting of the proposed National Policy Statement for Highly Productive Land (NPS-HPL) has the potential to undermine the intent of the NPS-HPL.	Accept in part
			D6.6 Concerned that there is a risk to the implementation of the Urban Development Strategy from urban development beyond the UDS boundary, and questions whether the Greater Christchurch Partnership has a view on whether the partnership boundary needs to be extended to cover a wider area	Reject
7	Rachael Marriott	Oppose	D7.1 Concerns about the impact that traffic movements through Spring Place may have on amenity and on the intersection with High Street	Accept in part
			D7.2 Concerned that increased development will make flooding worse	Accept in part
			D7.3 Concerned about the impact on the towns water supply	Reject
FS2	Canterbury Regional Council	Support D7.2		Accept in part
8	Graham MacKenzie	Oppose	D8.1 Opposes vehicle access from Spring Place to the proposed plan change area	Accept in part
			D8.2 Concerned that the town does not have sufficient infrastructure to support additional homes	Reject
9	Katherine McQuillan	Oppose	Opposes vehicle access from Spring Place to the proposed plan change area as will impact on amenity of the street and enjoyment of existing residents	Accept in part
10	Sharon Farrant	Support	D10.1 Seek to have Lot 2 DP 451172 included in Living 1 zone	Accept
			D10.2 Seeks inclusion of walkways and cycleways included on the ODP	Accept
11	Nicki Warren	Oppose	D11.1 Concerned that the proposed plan change fails to address a known landfill site on 125A High Street, Leeston	Reject
			D11.2 Seeks that the landfill site be vested as reserve rather than developed for residential purposes	Reject
			D11.3 Concerned that the proposed plan change does not consider population demographics and more progressive residential housing options	Accept in part
			D11.4 Concerned that the town does not have sufficient infrastructure to support additional homes	Reject
			D11.5 Concerned that increased development will make flooding worse	Accept in part
			D11.6 Concerned about effect of increase in traffic movements on intersection of High Street, Southbridge Leeston Road, Feredays Road and Harmans Road	Accept in part

			D11.6 Concerned about impact that future development may have on existing amenity values, and pets	Reject
FS2	Canterbury Regional Council	Supports D11.4 and D11.5		Reject Accept in part
FS3	Harts Creek Streamcare Group	Support D11.5		Accept in part
FS4	Ellesmere Sustainable Agriculture Inc	Support D11.5		Accept in part
12	Toby and Lisa Pullen	Oppose	<p>D12.1 Concerned that the proposed plan change will result in loss of views and privacy</p> <p>D12.2 Concerned about the likelihood of increased flooding</p> <p>D12.3 Concerned about the likelihood of noise during development and ongoing occupation of proposed plan change area</p> <p>D12.4 Concerned that an increase in traffic will increase the possibility of accidents</p> <p>D12.5 Concerned that the town does not have sufficient infrastructure to support additional homes</p>	<p>Reject</p> <p>Accept in part</p> <p>Reject</p> <p>Reject</p> <p>Reject</p>
FS2	Canterbury Regional Council	Support D12.2		Accept in part
13	Peter Martin	Oppose	Seeks to have the plan change deferred until existing residential land is developed.	Reject
14	Fire and Emergency New Zealand	Neutral	Seeks an amendment to address provision of adequate quantities and pressure of water for fire fighting purposes	Accept
15	Canterbury Regional Council	Neutral	Seeks a through assessment of the suitability of the plan change area for residential development in light of direction contained in Canterbury Regional Policy Statement and proposed National Policy Statement for Highly Productive land.	Accept in part
16	Ministry of Education	Neutral	<p>D16.1 Seeks to be consulted on potential traffic effects including proposed pedestrian cycle link</p> <p>D16.2 Seeks assurances that there are no adverse effects on the Ellesmere College site in respect of flooding as a result of development on the proposed plan change area</p>	<p>Accept in part</p> <p>Accept in part</p>
17	Stuart and June McLachlan	Oppose	<p>D17.1 Concerned about the likelihood of increased flooding</p> <p>D17.2 Concerned about the impact that the future development of the proposed plan change area may have on water quality of Birdlings Brook and Harts Creek</p> <p>D17.3 Concerns about the impact that traffic movements through Spring Place may have on amenity</p>	<p>Accept in part</p> <p>Accept in part</p> <p>Accept in part</p>

			D17.4 Would support a subdivision that provided for larger sections	Reject
FS2	Canterbury Regional Council	Support D17.1 and D17.2		Accept in part Accept in part
FS3	Harts Creek Streamcare Group	Supports D17.1 and D17.2		Accept in part Accept in part
18	Harts Creek Streamcare Group	Oppose	D18.1 Concerned about the impact that the future development of the proposed plan change area may have on water quality of Birdlings Brook and Harts Creek  D18.2 Would like to be consulted on the proposed plan change	Accept in part  N/A
FS2	Canterbury Regional Council	Support D18.1		Accept in part
FS3	Harts Creek Streamcare Group	Supports D18.1 and D18.2		Accept in part N/A
FS4	Ellesmere Sustainable Agriculture Inc	Supports D18.1 and D18.2		Accept in part N/A

**Appendix D: a list of names and addresses of persons to be served with a copy of this notice**

Submitter	Physical Address	Email Address
<b>John and Juliet Angland</b>	PO Box 39 Leeston 7656	<a href="mailto:john@anglands.co.nz">john@anglands.co.nz</a>
<b>Alan and Janet Manning</b>	9 Spring Place Leeston 7632	<a href="mailto:janet.alan@xtra.co.nz">janet.alan@xtra.co.nz</a>
<b>Rachael Prestidge</b>	178 High Street Leeston 7632	<a href="mailto:gummygill@hotmail.com">gummygill@hotmail.com</a>
<b>Cochranes of Canterbury</b>	c/- Jane West 50 Selwyn Lake Road RD3 Leeston 7683	<a href="mailto:jane@jwest.co.nz">jane@jwest.co.nz</a>
<b>Robert and Jean Milne</b>	15 Spring Place Leeston 7632	<a href="mailto:bobjean@slingshot.co.nz">bobjean@slingshot.co.nz</a>
<b>Christchurch City Council</b>	c/- Emily Allan PO Box 7016 Christchurch 8154	<a href="mailto:Emily.allan@ccc.govt.nz">Emily.allan@ccc.govt.nz</a>
<b>Rachael Marriott</b>	11 Spring Place Leeston 7632	<a href="mailto:alamoderach@gmail.com">alamoderach@gmail.com</a>
<b>Graham MacKenzie</b>	7 Spring Place Leeston 7632	<a href="mailto:grizzamack@gmail.com">grizzamack@gmail.com</a>
<b>Katherine McQuillan</b>	7 Spring Place Leeston 7632	<a href="mailto:kathlovestravel@hotmail.com">kathlovestravel@hotmail.com</a>
<b>Sharon Farrant</b>	33 Leeston Dunsandel Road Leeston 7632	<a href="mailto:sharonfarrant@xtra.co.nz">sharonfarrant@xtra.co.nz</a>
<b>Nicki Warren</b>	24 Spring Place Leeston 7632	<a href="mailto:nickiwarren@hotmail.com">nickiwarren@hotmail.com</a>
<b>Toby and Lisa Pullen</b>	26 Mountain View Place Leeston 7632	<a href="mailto:tobiaslayby@hotmail.com">tobiaslayby@hotmail.com</a>

<b>Peter Martin</b>	James Martin Estate c/- Peter Martin 150 Cryers Road Leeston 7683	n/a
<b>Fire and Emergency New Zealand</b>	c/- Beca Ltd PO Box 13960, Armagh Street Christchurch 8141	<a href="mailto:Nicolle.Vincent@beca.com">Nicolle.Vincent@beca.com</a>
<b>Canterbury Regional Council</b>	c/- Sam Leonard PO Box 345 Christchurch 8140	<a href="mailto:sam.leonard@ecan.govt.nz">sam.leonard@ecan.govt.nz</a>
<b>Ministry of Education</b>	c/- Beca Ltd PO Box 13960, Armagh Street Christchurch 8141	<a href="mailto:morgan.fallowfield@beca.com">morgan.fallowfield@beca.com</a>
<b>Stuart and June McLachlan</b>	44 Bluetts Road RD3 Leeston 7683	<a href="mailto:daffodils@xtra.co.nz">daffodils@xtra.co.nz</a>
<b>Harts Creek Streamcare Group</b>	C/- C.M. Barnett 217 Harts Road RD3 Leeston 7683	<a href="mailto:carey.barnett@xtra.co.nz">carey.barnett@xtra.co.nz</a>
<b>Selwyn District Council</b>	2 Norman Kirk Drive, Rolleston, 7643	contactus@selwyn.govt.nz Jocelyn.Lewes@selwyn.govt.nz