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# Statement of Geotechnical Suitability: 51 Heberden Avenue

## 1 Site Location and Description

51 Heberden Avenue is located on the lower slopes of Scarborough Hill above the seaside village of Sumner, approximately 15 km east of Christchurch. Residential areas exist downhill of the site and on the opposite side of Heberden Avenue. The site encompasses moderate to steeply sloping ground (30 - 80°). Access to the lower extremity of the property is via an existing shared driveway.

The overall site is relatively large (2757 m<sup>2</sup>) and has the potential land area to be subdivided into 3 separate sections (refer to the attached Possible Subdivision Plan).

## 2 Walkover Observations & Geotechnical Investigations

Site walkover and preliminary geotechnical investigations were completed by Opus throughout July and August 2014. The site walkover mapped geological hazards, identified feasible building platforms and confirmed investigation locations.

The following key observations are considered relevant to the site's development:

- Several surficial rock outcrops were identified that could pose an unacceptable level of risk that may require remediation (e.g. deconstruction and removal); and,
- Non-engineered rockfall barriers are present at the lower boundary of the site and are considered inadequate. However, these barriers would be deemed redundant should scaling of the site be undertaken and may present an opportunity for cost-sharing of hazard removal works with affected parties (i.e. downslope property owners).

Geotechnical hazard maps indicating the location of geological features pertinent to the future development at this site are presented in Figure 1. Locations of geotechnical investigation and testing are also indicated.

Geotechnical investigations comprised two hand auger boreholes and four Scala penetrometer tests. The site is typically underlain by 0.3 - 0.7 m of dark brown, Firm to Stiff, Sandy SILT overlying bedrock of the Lyttelton volcanic group. This profile is expected to be consistent across the site with localised variations in thickness.

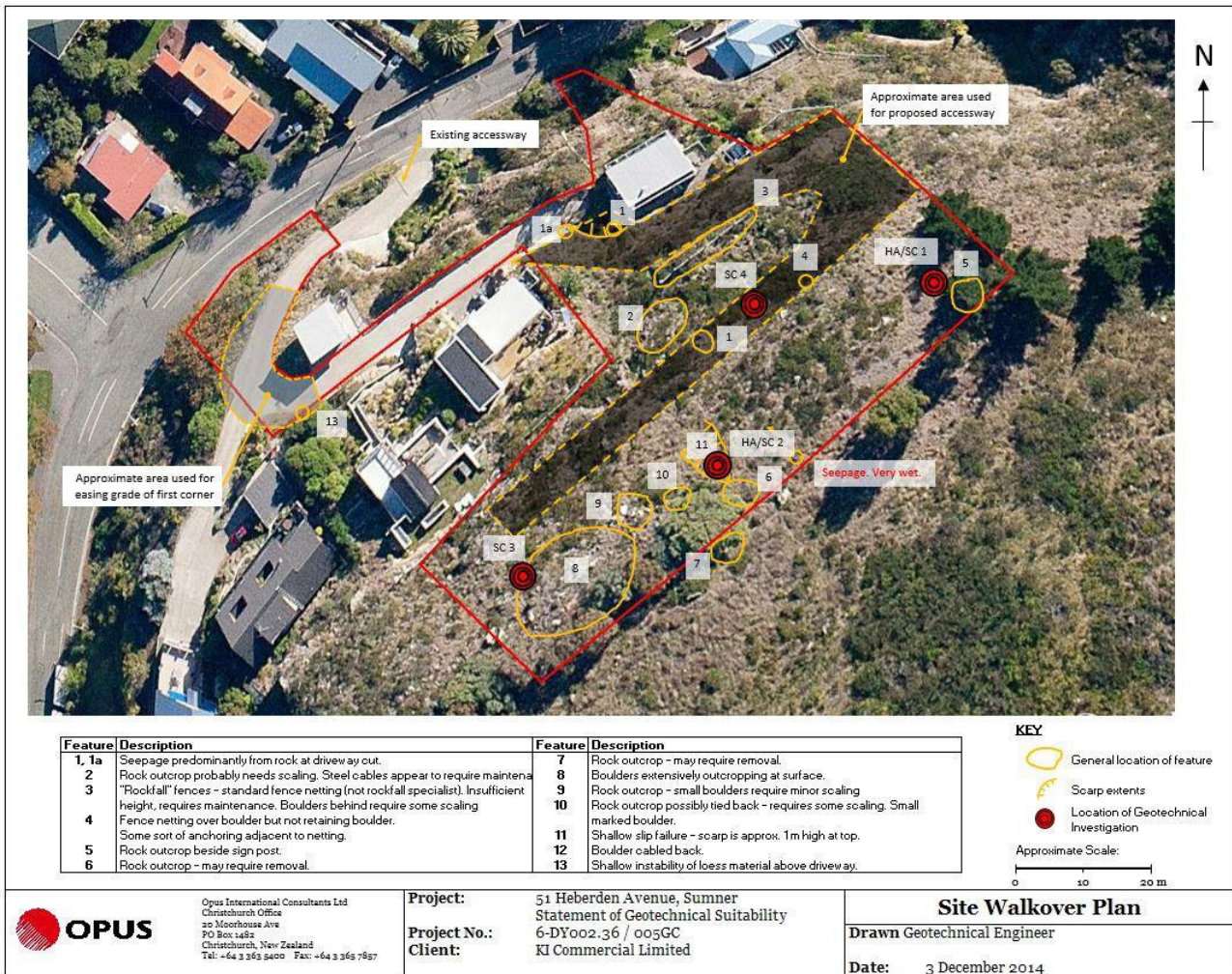


Figure 1: Site Walkover and Indicative Accessway Plan

### 3 Development Considerations

#### 3.1 CCC District Plan Constraints

Seismically induced land instability (e.g. Boulder Roll, Cliff Collapse and Mass Movement) have become a significant issue throughout the Port Hills and wider Banks Peninsula since the Darfield earthquake of 2010.

Recent proposed changes to the CCC District Plan indicate that the site is not directly impacted by any additional land instability issues as a result of the recent investigations.

#### 3.2 Access Requirements

Appropriately engineered access (e.g. maximum gradient = 20 %, minimum movement lane = 2.5 m as required by NZS 4404) for a private road / private way could theoretically be developed by extending the current access to the rear of the existing residential properties.

The necessary investigations, concept designs and outline plans are currently being undertaken. The options with the least economic impact are subject to neighbour and regulatory authority approvals (i.e. easements).

In addition, the sharp corner of the existing driveway (refer to the attached Site Survey of the existing driveway) could be eased by utilising land that is subject to a recently negotiated lease agreement of 99 years (see attached agreement).

### 3.3 Building Locations

Suitable locations for residential sections are toward the uppermost (south-east) boundary of the site, where the gradient is less steep and outcropping rock is at a minimum. **Note:** the upper boundary of the site is currently incorrectly shown on CCC records and is in the process of being re-defined (refer attached letter by Davie Lovell-Smith Ltd, dated 31<sup>st</sup> July 2006).

### 3.4 Foundation Options

Neighbouring structures provide good evidence of suitable foundation systems at this locality, which typically require benching / terracing of the bedrock (i.e. founding on competent material) and supporting any overhanging structures on poles / columns.

There has been no observed or reported structural damage to the existing dwellings as a result of the recent earthquakes. Given the proximity of this site to the epicentres of the February and June 2011 aftershock events this is considered a good indication of suitability.

Volcanic rock, such as the rock that exists at 51 Heberden Avenue, has a bearing capacity in the order of 5 MPa to 10 MPa (provided the rock is competent). Therefore, and in general, the foundation conditions likely to be encountered are considered almost certain to meet the 100 kPa *Allowable Bearing Capacity* (i.e. 'Good Ground') requirements for typical residential dwellings in New Zealand.

## 4 Limitation

This report has been prepared solely for the benefit of KI Commercial Limited with respect to our Offer of Service dated 2nd July 2014. Data or opinions in this document may not be relied upon or used out of context, by any other party or for any other purpose without further reference to the Christchurch Geotechnical Section of Opus International Consultants Ltd.

It is recognised that the passage of time affects the information and assessment provided in this Document. Opus's opinions are based upon information that existed at the time of the production of this Preliminary Geotechnical Appraisal. It is understood that the Services provided allowed Opus to form no more than an opinion on the actual conditions of the site at the time the site was visited and cannot be used to assess the effect of any subsequent changes in the quality of the site, or its surroundings or any laws or regulations.

Brett Menefy

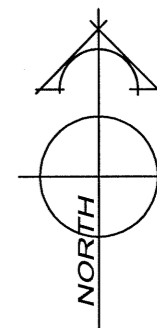


**Graduate Geotechnical Engineer**  
AIPENZ, CertEtn

Mark Easton



**Senior Geotechnical Engineer**  
MIPENZ, CPEng



HERBERDEN AVENUE

possible turning deck

76m<sup>2</sup>

possible garage site

269m<sup>2</sup>

Proposed right of way on foot / cable car.

92m<sup>2</sup>

Area subject to consent notice

( 942m<sup>2</sup> )

Areas subject to consent notices

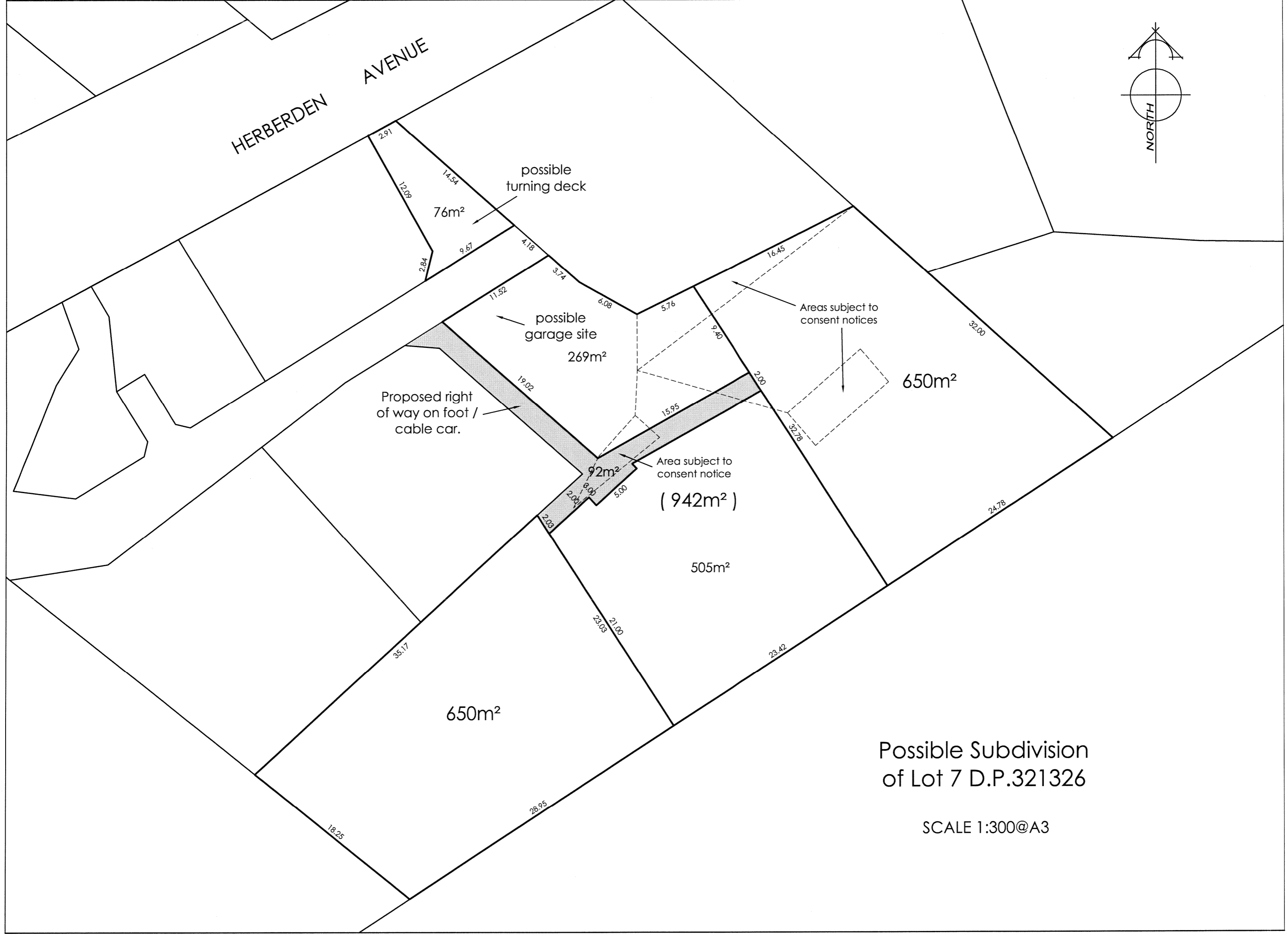
650m<sup>2</sup>

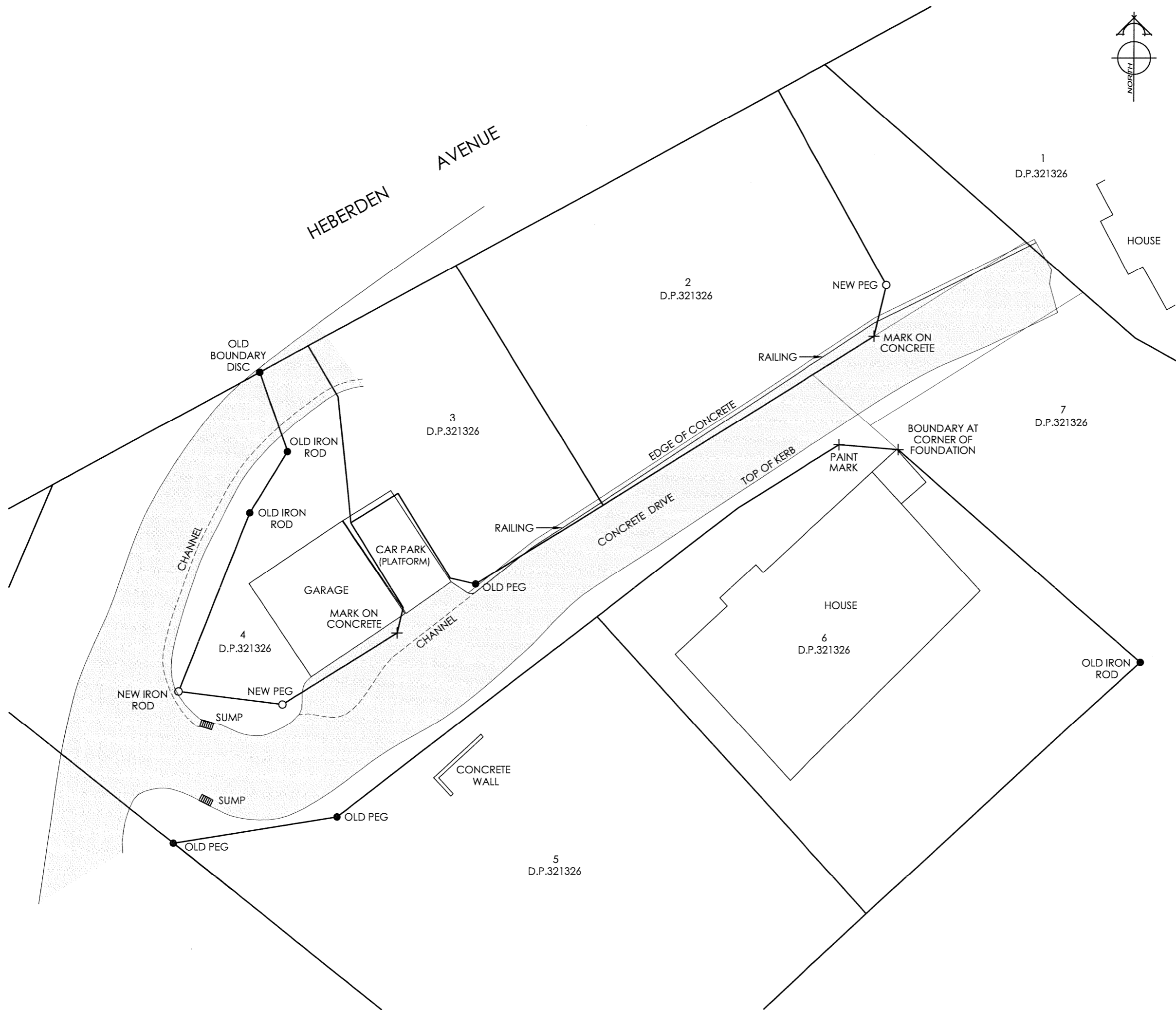
505m<sup>2</sup>

650m<sup>2</sup>

Possible Subdivision  
of Lot 7 D.P.321326

SCALE 1:300@A3





NOTES :

- 1) This plan has been prepared for Site Survey purposes only. No liability is accepted if the plan is used for any other purpose.
- 2) Any measurements taken from information which is not dimensioned on the electronic copy are at the risk of the recipient.



**DAVIE LOVELL SMITH**  
 PLANNING SURVEYING ENGINEERING

79 Cambridge Terrace P O Box 679 Christchurch 1. New Zealand  
 Telephone: 03 379-0793 Fax: 03 379-5664 E-mail: office@davies.co.nz

JOB TITLE :  
**Keung Heberden Avenue**

SHEET TITLE :  
**Site Survey**

DRAWING STATUS

SCALE : 1:200 @ A3 DATE : 29/03/07

CAD FILE : J:\15943\Bldg ROW fix.dwg REVISION :

DRAWING No : **S.15943** SHEET No : 1

Dated 10<sup>th</sup> November 2005

**LICENCE FOR OCCUPATION OF LEGAL ROAD  
ROCK RETAINING WALL AND DRIVEWAY**

**The Council  
CHRISTCHURCH CITY COUNCIL**

**The Licensee  
KEUNG DEVELOPMENTS LIMITED**



**CHRISTCHURCH**  
CITY COUNCIL • YOUR PEOPLE • YOUR CITY

CIVIC OFFICES • 163-173 TUAM STREET • PO BOX 237 • CHRISTCHURCH  
NEW ZEALAND • TELEPHONE (03) 941-8999 • FAX (03) 941-6441

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**PARTIES**

- (1) **CHRISTCHURCH CITY COUNCIL** at Christchurch ("Council")
- (2) **KEUNG DEVELOPMENT LIMITED** at Christchurch ("Licensee")

**BACKGROUND**

- A. The Council owns Heberden Avenue ("the Road").
- B. The Licensee owns the property at 51 Heberden Avenue held and comprised in Certificate of Title 173308 ("Licensee's Property").
- C. The Licensee acknowledges that the rock retaining wall and driveway encroach onto that part of the Road shown on the plan annexed as Schedule A ("the Structures").
- D. Pursuant to Section 357(1) of the Local Government Act 1974 the Council is empowered to authorise encroachments on the Road.
- E. The parties wish to set out the terms and conditions whereby the Licensee can retain and use Structures encroaching on the Road.

**WITNESSES AS FOLLOWS:**

- 1. **Interpretation**
  - 1.1 Expressions defined in the main body of this Licence have the defined meaning in the whole of this Licence including the background.
  - 1.2 Clause and other headings are for ease of reference only and do not form any part of the context nor affect the interpretation of this Licence.
  - 1.3 Words importing the singular number shall include the plural and vice versa.
  - 1.4 References to clauses are references to clauses of this Licence.
  - 1.5 The schedules of this Licence and the provisions and conditions contained in such schedules, shall have the same effect as if set out in the body of this Licence.
  - 1.6 A reference to any Act, Regulation or Bylaw shall unless the context otherwise requires, include references to all subsequent Acts, Regulations or Bylaws made in amendment hereof or in substitution therefor and for the time being in force.
  - 1.7 Any obligation not to do any thing shall be deemed to include an obligation not to suffer, permit or cause that thing to be done.

**2. Grant of Licence**

- 2.1 Subject to Clause 2.2 the Licensee shall have the non exclusive right to retain and use that part of the Structures that encroach on the Road during the term of this Licence.
- 2.2 The Licensee acknowledges that the Council shall be permitted to licence the use of the Structures to other users of the Structures on terms and conditions as the Council shall deem fit.

**3. Term**

- 3.1 This Licence shall come into force on the date of execution of this Licence and shall continue in force until the sale of the Licensee's Property or the Licence is cancelled in accordance with this Licence.

**4. Licence Fee**

- 4.1 During the term of this Licence, the Licensee shall pay an annual licence fee of \$1.00 ("the Annual Licence Fee") (inclusive of Goods and Services Tax) to the Council.
- 4.2 The Annual Licence Fee shall become due and payable on 1 April in each year. The Annual Licence Fee shall be apportioned between the Council and the Licensee in respect of periods current at the commencement and termination of this Licence.
- 4.3 The Council may increase the Annual Licence Fee at any time upon seven days notice in writing to the Licensee.
- 4.4 If the Licensee fails to pay the Annual Licence Fee or any other money payable under this Licence for 14 days after the due date of payment or if there is no due date, for 14 days after the date of demand by the Council, then the Licensee shall on demand pay interest at the default rate of 15 per cent per annum on the money unpaid from the due date for payment or, if there is no due date for payment from the date of demand by the Council, down to the date of payment.

**5. Use of Structures**

- 5.1 The Licensee shall use the Structures for their intended and natural purpose and for no other purpose without the previous written consent of the Council. Such consent may be given or withheld by the Council in its sole and absolute discretion, and if granted may be subject to any conditions, including the imposition of a further licence fee, as it may think fit.
- 5.2 The Licensee shall be responsible (including for all costs incurred) for the stability, safety and maintenance of the Structures and any associated formation work.
- 5.3 The Licensee shall retain and use the Structures in a safe, clean and orderly manner and at all times to the satisfaction of the Council.
- 5.4 The Licensee shall maintain the Structures to the satisfaction of the Council. The Council may at any time require the Licensee (at the Licensee's cost) to carry out any repairs the Council considers necessary to the satisfaction of the Council.
- 5.5 The Licensee shall ensure that:
  - (a) no excavation is undertaken on the Structures without the prior consent in writing of the Council. Such consent may be given or withheld by the Council in its sole and absolute discretion;
  - (b) no "hazardous substances" (as defined in Section 2 of the Hazardous Substances and New Organisms Act 1996) are stored in or on the Structures otherwise than in



accordance with the provisions of the Hazardous Substances and New Organisms Act 1996 and all regulations made thereunder;

- (c) The driveway is not used for the purpose of washing a motor vehicle unless satisfactory provision for the discharge of water and interception of solid matter is made to the satisfaction of the Council;
- (d) Placards, posters or advertising matter are not displayed on the Structures without the prior written consent of the Council, such consent may be given or withheld by the Council at its sole and absolute discretion.
- (e) The driveway is used for the purposes of ingress and egress only and not for the parking of motor vehicles.

5.6 The Licensee shall permit officers of the Council to inspect the Structures while it is being used by the Licensee for the purpose of examining the condition of the Structures as to maintenance and compliance with the terms of this Licence.

## **6. Financial Liability**

- 6.1 The Licensee shall make good at his expense all damage to the Structures.
- 6.2. The Licensee shall pay all taxes, rates and assessments from time to time charged, assessed or imposed in respect of the Structures.
- 6.3 The Licensee shall bear all costs incidental to the operation of the Licence.
- 6.4 Where any works shall be executed by the Council at the expense of the Licensee in accordance with the provisions of this Licence the certificate of the Council as to the cost of those works shall be conclusive and the costs so certified shall be payable forthwith to the Council by the Licensee.

## **7. No Assignment**

- 7.1 The Licensee shall not assign, sub-licence, mortgage or charge any of the rights granted to the Licensee under this Licence. Any attempt to breach this clause shall be void.

## **8. Compliance with Statutory Obligations**

- 8.1 The Licensee shall at all times comply with all statutes, regulations, bylaws and the Council's district plan affecting the use and occupation of the Structures.

## **9. Indemnify**

- 9.1 The Licensee shall be responsible for and keep the Council indemnified from and against all actions, suits, proceedings, claims, costs and demands which may be made or brought against the Council (including legal fees and costs incurred) by reason of the permission granted to the Licensee and including damage or injury to any person or property arising from any act of the Licensee's agents, employees, contractors or invitees.

## **10. Cancellation**

- 10.1 The Council may cancel this Licence upon service of a notice in writing to the Licensee, without prejudice to any accrued claim that the Council may have against the Licensee:

- (a) If the Annual Licence Fee has not been paid within 28 days after 1 April in any year;
- (b) in case of breach or default by the Licensee of any clause of this Licence (other than a breach provided for elsewhere in this clause) and the Licensee fails to remedy such breach or default within 14 days of service of a written notice specifying such breach or default given to the Licensee by the Council;
- (c) If the Licensee shall make or enter into or endeavour to make or enter into any composition, assignment or other arrangement with or for the benefit of the Licensee's creditors;
- (d) In the event of the bankruptcy of the Licensee;
- (e) in the event of the issuance by any Court of competent jurisdiction of any injunction in any way preventing or restraining the use of the Garage;
- (f) in the event of non-compliance with Clause 5.1; and
- (g) In the event of non-compliance with Clause 7.

10.2 In addition to the rights of cancellation specified in clause 10.1, the Council may cancel this Licence at any time for any reason by giving 6 months notice in writing to the Licensee.

10.3 At any time after the cancellation of this Licence, the Council may remove the Structures (including any part thereof standing on land belonging to the Licensee and for this purpose the Licensee shall permit the Council, by its officers or agents, to enter upon the Licensee's land) at the expense of the Licensee and dispose of the materials as the Council sees fit without any liability for compensation to the Licensee.

#### **11. Sale of Licensee's Property**

11.1 The Licensee will, at a time prior to transferring ownership of the Licensee's Property, advise the purchaser that it will be necessary for him or her to make application to the Council's Transport and City Streets Manager for the right to continue using the Structures. The Licensee will also advise the Council's Transport and City Streets Manager the name of the purchaser of the Licensee's Property.

#### **12. No Waiver**

12.1 The failure by the Council to enforce at any time or for any period one or more of the terms or conditions of this licence shall not be a waiver of them or of the rights at any time subsequently to enforce all terms and conditions of this licence.

#### **13. The Council acting as Territorial Authority**

13.1 The Licensee acknowledges that:

- (a) The Council, in its capacity as a territorial authority, is required to carry out its statutory functions under the Building Act 2004, the Resource Management Act 1991 and the Local Government Act 1974 and 2002 in accordance with the provisions of those statutes.
- (b) The granting by the Council of any consent or approval by the Council as territorial authority under either of those Acts will not of itself be deemed to be a consent or approval by the Council under this Licence.

- (c) The Council is bound by statutory obligations to exercise its powers, including discretionary powers and duties under either of those Acts without regard to any relationship it may have with the Licensee under this Licence.

#### **14. Notices**

- 14.1 Any notice to be served on either of the parties by the other shall be in writing and may be given to a party at the address set out in this Licence or at such address as a party may notify to the other not less than seven days prior to the giving of such notice. A notice shall be sent by prepaid mail or personal delivery and shall be deemed to have been served:

- (a) If sent by courier or personal delivery, on the actual date of delivery;
- (b) If sent by prepaid mail, three days after the date of posting.

- 14.2 Any notice may be signed on behalf of the Council by the Chief Executive Officer or the Transport and City Streets Manager or any person for the time being performing the duties of those persons or a solicitor.

- 14.3 Address for notices to the Council:

Christchurch City Council  
163-173 Tuam Street  
Christchurch  
Attention: Transport and City Streets Manager

- 14.4 Address for notices to the Licensee:

51 Heberden Avenue  
Christchurch

#### **15. Dispute Resolution Notice**

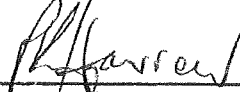
- 15.1 In the event of any dispute or difference arising between the parties at any time as to the interpretation of this Agreement, or as to any matter or thing arising out of or in connection with this Agreement, either party may serve to the other written notice adequately identifying the subject matter of that dispute or difference ("Dispute Resolution Notice"). The giving of this notice will be a condition precedent to the commencement by either party of proceedings (whether by way of mediation, arbitration or litigation) in respect of any dispute or difference. This clause does not, however, limit the right of either party to seek urgent interlocutory relief by way of Court proceedings.

#### **16. Arbitration**

- 16.1 Where either party serves to the other a Dispute Resolution Notice, the parties shall attempt to resolve the dispute or difference by negotiation.
- 16.2 If the dispute or difference has not been resolved within 14 days of service of the Dispute Resolution Notice, the dispute or difference shall be referred to the arbitration of a single arbitrator if one can be agreed upon by the parties. If the parties cannot agree to the appointment of an arbitrator within 14 days, the dispute or difference shall be submitted to a single arbitrator appointed by the President for the time being of the Canterbury District Law Society.
- 16.3 Any arbitration in terms of this clause 15 shall be conducted in accordance with the provisions of the Arbitration Act 1996 or any re-enactment or modification of that Act.

In witness of which this Licence has been executed.

THE COMMON SEAL of the )  
CHRISTCHURCH CITY COUNCIL )  
was hereto affixed in the presence of: )

  
\_\_\_\_\_  
Mayor/Councillor

  
\_\_\_\_\_  
Authorised Officer

EXECUTED by the said \_\_\_\_\_ )  
KEUNG DEVELOPMENTS LIMITED )  
in the presence of: )

  
\_\_\_\_\_  
Director

\_\_\_\_\_  
Director/Authorised Person

Signature of Witness:

  
\_\_\_\_\_

Full Name of Witness:

Stephen Roger Gray

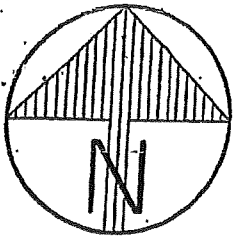
Occupation of Witness:

Programmer

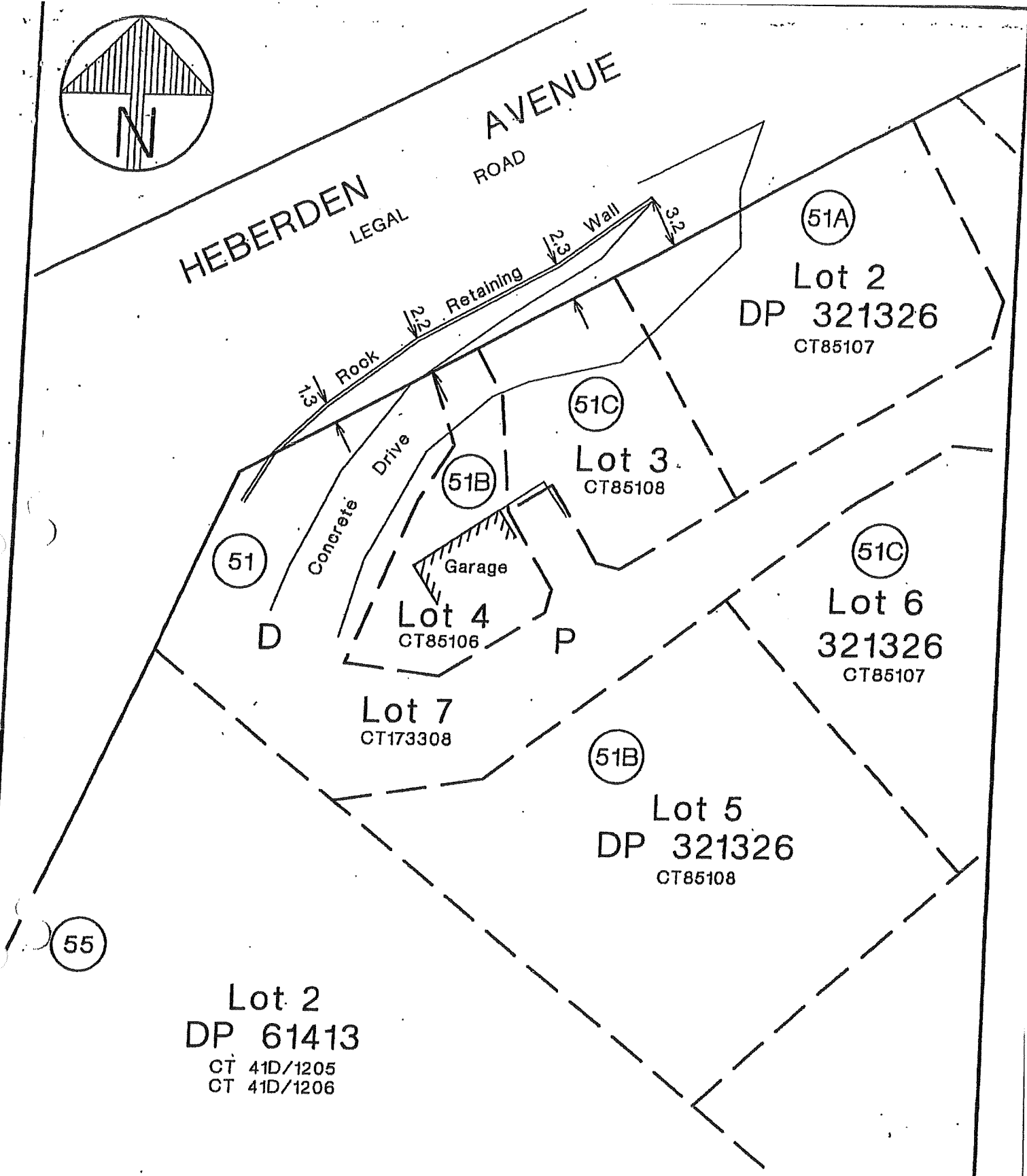
Address of Witness:

6 Merries St Sumner

**SCHEDULE A – THE STRUCTURES**



HEBERDEN  
LEGAL  
ROAD AVENUE



Lot 2  
DP 61413  
CT 41D/1205  
CT 41D/1206

51A  
Lot 2  
DP 321326  
CT85107

51C  
Lot 3  
CT85108

51C  
Lot 6  
321326  
CT85107

51B  
Lot 5  
DP 321326  
CT85108

Lot 7  
CT173308

Garage  
Lot 4  
CT85106

Areas and Dimensions Subject to Survey

ISSUE	AMENDMENTS	SIGNED	DATE
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RETAINING WALL ON LEGAL ROAD  
51 - 55 HEBERDEN AVENUE



SURVEYED	M Reid	CONTRACT NUMBER	ORIGINAL SHEET SIZE A4	SCALES
DRAWN	L Hay	FILE REFERENCE		1:300
DATE	06/2005	254/26392		
© COPYRIGHT CHRISTCHURCH CITY COUNCIL			DRAWING NUMBER	SHEET
AERIAL PHOTOGRAPHY © COPYRIGHT TERRALINK INTERNATIONAL LIMITED			SM1478-06	OF



## DAVIE LOVELL·SMITH

PLANNING SURVEYING ENGINEERING

Davie, Lovell-Smith Ltd  
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PO Box 679, Christchurch,  
New Zealand  
Telephone (03) 379-0793,  
Facsimile (03) 379-5664,  
E-mail:  
office@daviels.co.nz

31 July 2006

Keung Investments Limited  
P O Box 4474  
**CHRISTCHURCH**

**EMAILED**

**Attention Paul Keung**

Dear Paul

### **ZONE BOUNDARY AT 51 HEBERDEN AVENUE**

We have looked into the issue of the split zoning within your property at 51 Heberden Avenue, Sumner and spoken to the City Council on your behalf.

The property at present is partly within the Living Hills Zone and partly within the Rural Hills Zone of the City Plan. It is somewhat unusual for an individual property to be split zoned, particularly where the property is not large. It appears that the Council simply did not take the existing property boundaries into account when the City Plan was first notified.

The Council advises that the subdivisions team have already brought the issue of the split zoning in this area to the City Plan team's notice and are keen for the boundary to be tidied up by way of plan change as soon as possible. In effect then the Council is likely to move the zone boundary so that your property sits entirely within the Living Hills Zone. It is however one of several hundred plan changes that are sitting waiting to be dealt by the Council and it is unlikely that the issue will be addressed anytime in the near future.

If you wish to further subdivide your property in accordance with the Living Hills Zone rules, you have three options:

1. We can meet with the head of the City Plan team and encourage him to make this plan change a higher priority;
2. We can bring forward a private plan change – this effectively means that a plan change can be instigated immediately, but that you would carry all the costs involved in that process;
3. We can submit a resource consent application for a non-complying subdivision, based on the existing zoning.

We suggest the best option, if you wish to subdivide further in the near future, would be a combination of options 1 and 3. Essentially this means approaching the Council to encourage them to sort out the issue as soon as possible, but not relying a plan change to occur. We do not advise pursuing option 2 as it is typically a long and expensive process and is unlikely to be cost effective for a small development.

If you wish to discuss your options further, please do not hesitate to contact us.

Yours sincerely

**DAVIE LOVELL-SMITH LIMITED**

**KIM SEATON**

J://15943/let\_310706\_zone boundary options.doc