APPLICATION FOR SUBDIVISION AND LAND USE CONSENTS

Dianne Reid

505 SADDLE HILL ROAD DUNEDIN

Prepared By

Cubitt Consulting Ltd

August 2016

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FORM 9
APPLICATION FOR A RESOURCE CONSENT UNDER SECTION 88 OF THE RESOURCE MANAGEMENT ACT, 1991

To: Manager - Resource Consents
Dunedin City Council
PO Box 5045
Dunedin 9058

Dianne Reid hereby applies for the resource consents described below:

1. **The current owner of the site is:**

   Dianne Lylian Reid

2. **The location to which this application relates is:**

   The property is described in Council's rates book data as 505 Saddle Hill Road Saddle Hill, (Valuation Number 27901-13900) and is legally described as Lot 1 DP 12954, Lots 2 and 3 DP 19043, Lots 1 and 2 DP 19273 (CFR OT10C/237).

3. **The type of resource consent sought is:**

   Subdivision and Land use consent.

4. **A description of the activity to which the application relates:**

   Land use and subdivision resource consent is sought to enable the development of a number of rural living opportunities within the property. The proposed subdivision will create the following lots for residential development:

   - Lot 1 – 7400m^2
   - Lot 2 – 4800m^2
   - Lot 3 – 6100m^2
   - Lot 4 – 1.1 hectares

   Land use consent for residential activity is sought for these four allotments. All buildings, including accessory buildings, are to be located within the identified building platforms. A maximum height of 5m is also proposed for built development.

   A further allotment, Lot 5, of 9.4 hectares will be created from the balance of Lot 2 DP 19043. This allotment will be amalgamated with the residue of the title (being Lot 1 DP 12954, Lot 3 DP 19043, and Lots 1 and 2 DP 19273). The residue title will have an area of 80.6 hectares.

   The activity is fully described in the attached application at section 1.2.

5. **The following additional resource consents are required in relation to this proposal and have been applied for:**

   Not applicable.

6. **We attach an assessment of effects that the proposed activity may have on the environment in accordance with Section 88 and the Fourth Schedule of the Act.**

7. **We attach other information required to be included in the application by the District Plan or Regional Plan or Regulations**

   (a) Site Plans

   (b) A Statutory and District Plan Assessment is incorporated in the AEE.

   (c) Landscape, Geo-technical and Ecological reports

   (d) The deposit for notified application will be paid by applicant upon invoice.

Dated at Dunedin 3 August 2016

Signed _____

Allan Cubitt, Director of Cubitt Consulting Ltd
As Agent for **DL Reid**

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1. Description of Proposal

1.1 Description of the Site

The property is described in Council's rates book data as 505 Saddle Hill Road Saddle Hill, (Valuation Number 27901-13900) and is legally described as Lot 1 DP 12954, Lots 2 and 3 DP 19043, Lots 1 and 2 DP 19273 (CFR OT10C/237). The property has a total area of 83.5 hectares. Legal and formed frontage to the property is available to Saddle Hill and Scurr Roads. Saddle Hill is sealed while Scurr Road is of metalled construction.

The site is situated approximately 15 km west of central Dunedin and is located on the upper southern slopes of the coastal hills behind Ocean View and Brighton. The applicants dwelling and some associated sheds are located near Saddle Hill Road in the north-western part of the site. The property essentially drops to the south, towards the coast, from Saddle Hill Road, which is more or less on the summit ridge.

The site encompasses much of a valley system between Scoggs Hill and the spur on which Scurr Road is located. The various gullies within the property form part of the catchment of Taylor Creek, which meets the sea at Ocean View. The majority of the property is covered in largely regenerating indigenous forest or gorse dominated scrub, reflecting a transition from grazed pasture back to native forest. There is however areas of pasture on the spur landforms near the dwelling. The broad scale landscape pattern is therefore one of pasture and exotic scrub dominating the gentle spur forms and regenerating indigenous forest within the valley forms. Scattered throughout the site are stands of mature radiata pine, along with a number of individual trees, within the regenerating bush.

With respect to the wider environment, the site is adjoined by rural residential sites to the north and east. Of note however is the fact that the lot sizes in the area directly across Saddle Hill Road ranges in size from 4000m^2 up to 1.1 hectares, with most around 6000m^2.

1.2 Proposed Activity

Land use and subdivision resource consent is sought to enable the development of a number of rural living opportunities within the property. The proposed subdivision will create the following lots for residential development:

- Lot 1 – 7400m^2
- Lot 2 – 4800m^2
- Lot 3 – 6100m^2
- Lot 4 – 1.1 hectares

Land use consent for residential activity is sought for these four allotments. All buildings, including accessory buildings, are to be located within the identified building platforms. A maximum height of 5m is also proposed for built development.

A further allotment, Lot 5, of 9.4 hectares will be created from the balance of Lot 2 DP 19043. This allotment will be amalgamated with the residue of the title (being Lot 1 DP 12954, Lot 3 DP 19043, and Lots 1 and 2 DP 19273). The residue title will have an area of 80.6 hectares and will contain the property's existing dwelling. Hence the DLR will need to be consulted on the practicality of the following amalgamation condition:

"That pursuant to section 220(1)(b)(ii), Lot 5 hereon and Lot 1 DP 12954, Lot 3 DP 19043, and Lots 1 and 2 DP 19273 (residue OR10C/237) shall be held in the same Computer Register"

To minimize built impact on the local rural environment a number of conditions have been recommended by Mr Mike Moore. These are as follows:

(a) All buildings, including accessory buildings, are to be located within the identified building platform.

(b) All buildings shall be a maximum of 5m height above existing ground level.

(c) All buildings shall be finished in naturally weathered timber or locally appropriate stone, or in colours that have low levels of contrast with the colours of the bushland setting. Painted surfaces will have light reflectivity ratings of no more than 15%.

(d) All services are to be located below ground

(e) Driveways are to retain an informal rural character with gravel surface and soft edges (i.e. no kerbs). Monumental gates and driveway lighting is not permitted.

(f) Water tanks will be sited, and / or buried and / or screened (by planting) to have minimal visual impact from beyond the property.

(g) Fencing is to be confined to standard rural post and wire construction or stone walls using locally appropriate rock.

(h) With the exception of plantings below 1.5m in mature height above the bush protection line, all plantings on the property will be confined to indigenous species appropriate to the character of the site. No golden or variegated plants are to be used anywhere on the site. Recommended indigenous species are listed in Appendix A.

(i) The pest plants listed in Appendix 10B of the 2GP as well as Chilean flame creeper (Tropaeolum speciosum) are prohibited, to avoid issues of ecological weed invasion.

(j) Locally appropriate indigenous screen planting will be established within a 6m wide strip adjacent to Saddle Hill Road, as shown in Figure 9(a) of Mike Moore's report. The species to be used and initial plant densities shall be as specified in Appendix B. This area will be managed to control weed plants and animal pests and to encourage successful establishment of the planted species and natural regeneration of indigenous species on an ongoing basis.

Mr Moore and Mr Lloyd also promote a number of conditions in relation to the management of the indigenous vegetation on the balance of the site. Having regard to the matters they have raised, the following conditions are proposed:

(a) Stock shall be permanently excluded from all areas within the 'bush protection area' shown in Figure 9 of Mike Moore's report.

(b) A covenant in accordance with section 108(2)(d) of the Resource Management Act 1991, to which the Dunedin City Council shall be party, shall be prepared and attached to the title for the balance of the property to protect areas of indigenous vegetation and ecological habitat within the 'bush protection area' shown in Figure 9 of Mike Moore's report. The exact wording of this covenant shall be submitted to Dunedin City Council at the time of certifying under Section 224(c) of the Act. The covenant is to be registered onto the title simultaneously with the issue of titles. Proof of registration of the covenant is required to be submitted to Council within 6 weeks of the title being issued.

(c) Within 6 months of the consent date, the consent holder shall prepare and submit to the Councils Resource Consents Manager "Pest & Indigenous Vegetation Management Strategy" for the 'bush protection area' shown in Figure 9 of Mike Moore's report that achieves the following objectives:

- *Establishment of the processes to protect and enhance the indigenous vegetation within the area.*
- *Establishment of a programme for undertaking and monitoring the control of noxious weeds, including woody weeds such as elder, hawthorn, and holly, identified in the Ecological Assessment report prepared by Wildlands (March 2016) to enhance native vegetation cover.*
- *Establishment of a programme to progressively remove all pinus radiata trees within the area that identifies the methods appropriate to minimise the damage to the surrounding native species and the timeframe to carry out this work.*

Access to the buildings platforms is from Saddle Hill Road. The location of these driveways is to be in accordance with the recommendations of Mr Andy Carr, a Traffic Engineer with Carriageway Consulting, as set out his report attached. The sites will be self-serviced with respect to water supply and effluent and stormwater disposal.

1.3 Status of Activities

The property zoned **Rural** in the Dunedin City District Plan. It also lies within the Saddle Hill Landscape Conservation Area (SHLCA).

Under the operative District Plan, subdivision in the Rural Zone is permitted provided that each resulting site has an area of at least 15ha [Rule 18.5.1(i)]. Under the Proposed Dunedin City District Plan ("PDP"), the site is within the Rural Coast Zone. Rule 16.7.4 in the PDP requires a minimum site size in this zone of 40ha and has immediate effect. Because not all lots comply with this minimum, the proposed subdivision is a **non-complying** activity in accordance with Rule 16.7.4.3 of the PDP.

Residential activity is only permitted in the Rural zone if the site has an area of at least 15 hectares [Rule 6.5.2(iii)]. Again as Lots 1 to 4 fall short of the minimum area, the proposed residential use of those allotments is therefore a **non-complying** activity in accordance with Rule 6.5.7(i). As consent is also sought for "Landscape Building Platforms" within Lots 1 to 4, future development on these sites will be subject to Rule 14.6.1(a) of the District Plan which requires a further resource consent as a controlled activity. The erection of buildings and structures within these building platforms is controlled in respect of the impact arising from the size, design and appearance of the building or structure and associated site development on the landscape qualities and character of the setting.

In the PDP a residential activity is permitted on a 15 hectare site in the Rural Coast zone. Density exceeding this is a noncomplying activity. However this rule is not currently operative.

2. Assessment of Environmental Effects

2.1 *Introduction*

Section 6.7 of the Rural zone and Section 18.6.1 of the Subdivision section of the District Plan contain a range of criteria in respect to the assessment of activities in the zone. Section 14.7 contains a range of assessment criteria in relation to assessing the impacts of proposal in relation to the SHLCA. The Transportation section's assessment matters (section 20.6) are also pertinent with respect to the proposed vehicle access arrangements and the Environmental Issues section (section 21.6) includes specific assessment matters relating to self-servicing of rural sites. All of these have provided the foundation of our assessment of effects. Having regard to those matters and our visits to the site, and after considering all potential effects of the activity, we believe the following are the main issues that need to be addressed and assessed:

- Amenity values
- Landscape character
- Hazards
- Provision for water supply and disposal of stormwater and sewage
- Transportation
- Easements
- Earthworks
- Productive potential of rural land
- Reverse sensitivity and conflict
- Cultural effects
- Indigenous vegetation habitats
- Cumulative effects.

2.2 *Amenity values, Character of the area (Assessment Matters 6.7.3, 6.7.13, 6.7.17 and 18.6.1(q)) and Residential Units (Assessment Matters 6.7.15)*

Many of the issues that need to be addressed in the context of this proposal are contained within the assessment criteria 6.7.15 'Residential Units'. That provision requires the consideration of the following matters:

> *(i) The cumulative effects of an increased density of residential development in this location.*

(ii) *The potential for conflict between adjoining land uses or reverse sensitivity issues arising from the location of the proposed residential activity.*

(iii) *The extent to which soil will be covered by hard surfaces.*

(iv) *The extent to which a residential unit on the site affects the amenity and economic well-being of neighbouring properties.*

(v) *The degree to which amenities relating to the open nature of the environment are compromised.*

(vi) *The degree to which the productive potential of the site and adjoining properties and their future sustainable use is compromised.*

The matters within (ii), (iii), (iv) and (vi) are addressed below in different sections of this assessment. The matters dealt with in (i) and (v) are considered to be the most significant issues in relation to the impact of the proposal on amenity values.

Assessment matter (i) looks to address the cumulative effects of "*increased density of residential development in this location*". This matter needs to be assessed in the context of the density of development anticipated for the area by the District Plan. In terms of the operative District Plan, a property of 83.5 hectares could contain 5 dwellings at a 15 hectare average. Under this scenario, the proposal complies with the density standard albeit with sections that are significantly smaller than the 15 hectare minimum.

However the key point to note is that the subdivision proposal has purposely promoted smaller lot sizes to reflect the adjoining development and to reduce rural land fragmentation. This approach will ensure the existing open landscape character of the wider site is not compromised and will enable the indigenous vegetation on the site to be better managed under one large title as opposed to 5 titles at an average size of 16.7 hectares. On that basis the proposal has addressed the assessment criteria in (v) in a positive way. It is important to note that the subdivision could have been configured to comply with Rule 18.5.1 of the operative Plan by creating an average site size of 17.6, would have seen the proposed classified as a restricted Discretionary Activity.

Under the density provisions of the PDP, the minimum site area is 20 hectares for the first dwelling, while 80 hectares is needed for the a second dwelling and 120 hectares for third. With or without subdivision, the title only enables 2 dwellings under the PDP. As a consequence the proposal exceeds the density of the PDP by three dwellings.

However Mr Mike Moore has assessed the proposal and concludes that "*Whilst the site is within a Landscape Management Area, there is already rural residential development present and the proposed development will result in a minor extension of rural residential character in an area that is currently gorse covered and sandwiched between rural residential properties and bushland. As such, it will not significantly alter the character or amenity of the rural landscape or give rise to significant cumulative adverse effects. Mitigation measures are proposed to ensure that the visual impact of additional dwellings is minimal and that development has minimal adverse effect on rural character and the amenity of adjoining properties. There are significant positive effects associated with the proposal in that a large*

swathe of indigenous bushland will have enhanced legal and physical protection and that natural character enhancement measures will be carried out."

On this basis, we consider that overall the proposal will have positive effects on rural amenity due to the enhanced legal and physical protection of the large area of indigenous vegetation within the property.

2.3 *Landscape Values*

The building platforms are located within a "landscape conservation area", not an "outstanding landscape" in terms of section 6(b) of the Act. We note that this has not been carried through to the PDP.

The District Plan describes such areas as "... *areas which have particular impact on landscape quality due to high levels of visibility from major public viewing locations and/or the presence of particular landscape character and values. The areas are generally the higher land visually containing the most densely settled urban and rural areas of Dunedin.*"

These landscapes are generally called "amenity landscapes" and are not afforded any particular status under the Act. Section 7(f) requires local authorities "to have particular regard" to the "maintenance and enhancement of amenity values". This imposes a duty to be "on enquiry" but does not require applicants "to recognise and provide for" such values as Section 6 requires. In the context of the LCA's identified in Dunedin, this is important as given their location (*the higher land visually containing the most densely settled urban and rural areas of Dunedin)* there are many other competing issues and it is not appropriate to retain the status quo purely for landscape reasons.

Mr Moore has identified the landscape values of the site and has assessed the proposal against these values, along with assessing the visual effects of the proposal from various viewpoints.

He identifies the landscape effects of the proposal as follows:

> *The primary effect of the proposed development on landscape character will be four additional houses, extending the rural residential character by about 350m along the southern side of Saddle Hill Road in the area opposite the Sproull Drive intersection. The houses will be built in areas that are primarily covered in gorse at present and it is my assumption that much of the gorse within the road reserve will be cleared as part of the development. In my assessment, the mitigation measures proposed will ensure that the effects of this development on natural character and rural amenity values will be minor. The buildings will be sited at least 20m from the existing road formation, will controlled as to height and colour, and will be screened progressively, by the proposed native screen plantings. I believe that they will integrate readily both with the adjacent rural residential character and with the bushland setting.*
>
> *The other key longer term landscape character effects are the positive impacts of legal and physical protection of the bushland. This provides for ongoing enhancement, both of the extent of native forest cover (i.e. succession of gorse to indigenous forest) and the natural character and values of the bushland, as exotic weed species are removed and controlled. The removal of the currently quite visually dominant pine trees, will have significant positive natural landscape character effects in the medium – longer term in my opinion.*

As can be seen from this, Mr Moore considers that the proposal will readily integrate with the existing character of the area, with adverse effects that will be no more than minor. However in the longer term, he believes landscape effects of the proposal will be positive. This is also consistent with his opinion when the proposal is assessed from the key viewpoints, including the neighbouring rural residential area. In his view initial adverse effects are no more than minor but become positive as the benefits of the enhancement work become apparent.

Based on Mr Moore's assessment, we consider the proposal will maintain and enhance the values of the SHLCA.

2.4 *Hazards*

(i) Stability

While the location of the building platforms has not been identified as being potentially unstable under the PDP, Dr Jon Lindqvist has carried out geotechnical investigations in order to confirm this. Dr Lindqvist advises that no landslides have been mapped adjacent to or within the area under consideration. He concludes from the previous geological mapping of the wider area and his examination of limited rock and subsoil exposures within the proposed subdivision that all four lots are underlain at depth by variably altered schist rock, and near-surface Taratu Formation sediment or Quaternary loess. He notes this geological condition generally has sufficient bearing strength for housing development.

However because the heavy cover of vegetation over the property precluded a thorough analysis of the ground surface, he does recommend a thorough check is made during the preparation of each platform for possible weak subsoils that are particularly likely to be found near the schist\Taratu Formation contact.

This matter can be appropriately dealt with by way of conditions.

(ii) National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health

A HAIL search has been requested for the subject land but has not yet been received. As far as we are aware, the site has not been used for a hazardous activity or industry in the past and given its ground cover, we consider this unlikely.

2.5 *Transportation (Assessment matters 6.7.24, 18.6.1(m), 20.6.1, 20.6.5, 20.6.7 and 20.6.10)*

Saddle Hill Road is a Collector Road under the operative Dunedin City District Plan and as such it has a role of providing for both local property access and through traffic. In this location the road has a carriageway width of 5.2m providing one traffic lane in each direction, plus sealed shoulders of 0.3m width on each side. The road also has a gravelled berm of around 0.5m in width. The carriageway has a centreline and edgeline markings, and there are edge marker posts and road studs on each side to delineate the edge of the seal.

Of particular note is that there are a series of crests and dips in the vertical alignment, and there are two relatively sharp horizontal curves to the east and west

of the section onto which the new driveways are proposed. The easternmost of these curves has an advisory speed limit of 55km/h but there is no advisory speed on the western curve despite this having a smaller radius.

Mr Andy Carr, of Carriageway Consulting has assessed the viability and impact of the proposed allotments accessing this road. Mr Carr assessment was carried out on an earlier version of the concept plan included in Mr Moore's report. Mr Carr concluded that:

- *Having reviewed the proposed layout, we consider that the sight distances at the easternmost and westernmost driveways are appropriate for the prevailing speeds.*

- *The current locations of the centre-west and centre-east driveways presently have slight shortfalls in the available sight distances. However relocating them (by 28m and 7m respectively) will result in the sight distances being appropriate for the prevailing speeds.*

On the basis of this assessment the centre-west and centre-east driveway locations were altered on his advice. These are now represented in Mr Moore's Figure 9(a).

Mr Carr did not raise any other concerns with the proposal. As a consequence any effects of the proposal on the operation of the transportation network will be less than minor.

2.6 *Provision of water supply and disposal of stormwater and sewage (Assessment matters 6.7.10, 18.6.1(n), (o), (p) and 21.6.5)*

The primary source of potable water will be rainwater collection from roof surfaces. The applicants are aware of the potential health issues with this form of water collection. Care will be taken to protect the water storage from contamination and the system will be regularly cleaned and maintained. The new development will include measures necessary to comply with the New Zealand Fire Service's Code of Practice for Fire Fighting Water Supplies

Effluent disposal can be dealt with on-site by the use of septic tanks and disposal fields. A number of systems are available to deal with this issue. Whichever system is ultimately selected for use on these sites, they will ensure all sewage and wastewater will be treated and disposed of within the boundaries of the allotment and that they comply with the New Zealand Building Code.

Stormwater from the buildings will be directed to roading network via the vehicle access. It will not be allowed to cause nuisance to other property or the road.

The proposal will not generate adverse environmental effects as a result of servicing the proposed dwellings.

2.7 *Easements*

The title for the property is free from encumbrances. No easements will be required upon subdivision.

As noted above, an amalgamation condition will be necessary. The conditions relating to indigenous vegetation protection and management will need to be attached to the residue title.

2.8 *Earthworks*

The extent of earthworks for the building platforms and access tracks within the development are not yet known. Should future earthworks on-site breach the performance standards of Section 17 of the District Plan, further consent will be required.

All earthworks and the control of sediment will need to be undertaken in accordance with industry best practice. We envisage Council will impose a standard set of conditions to address earthworks at the time any dwelling or access track is constructed.

Earthworks have the potential to create effects in terms of machinery noise, vibration and dust creation. However such works are temporary in nature and we anticipate the construction noise standard NZS 6803:1999 to be attached as a condition to any consents granted.

There are no services in the vicinity of the proposed earthworks. Hence there will be no impact on Council infrastructure or the National Grid.

2.9 *High Class Soil and Productive potential of rural land (Assessment matter 6.7.15)*

The site does not have high class soils. With respect to the productive potential of the land, the farm is a very marginal economic unit as the majority of it is covered in indigenous vegetation. Freeing up some capital through the subdivision will assist in ensuring the maintenance and enhancement of this resource into the future. Having said that, the subdivision has been designed to minimise the impact on the areas of farm that are productive. The dwellings are to be located in an area that cannot be grazed and that has become weed infested while the grazing areas will be kept in the large residue title associated with the applicants dwelling.

Overall, the proposal will have limited impact on the productivity of the farm and is considered to be the best approach to retaining its productive use and enhancing the indigenous vegetation on the site while enabling rural residential living the area.

2.10 *Reverse sensitivity and conflict (Assessment matters 6.7.15 and 6.7.26)*

Consideration is required of the extent to which the proposal will conflict with existing rural activities or affect their ability to continue to operate. As has been noted above, rural residential development adjoins the location of the proposed subdivision. Hence there is no conflict with adjoining land uses.

Any activity taking place on the operational farms in the wider area will be sufficiently distant from the sites so that there is unlikely to be any conflict. The existing residences on neighbouring sites all coexist comfortably with any other land use. Reverse sensitivity is not likely to arise.

2.11 *Archaeological and Cultural Effects.*

The operative District Plan does not identify any archaeological sites within the property. Regardless of this, we are happy for the standard 'Accidental Discovery Protocol' to be attached as condition on the any consent granted.

The PDP also identifies a Wahi Tupuna Site ("Views of upper slopes of Scroggs Hill and Saddle Hill"). Mr Moore took into account the cultural values ascribed to the area in his assessment and did not raise any concerns.

2.12 *Indigenous Vegetation and Habitats*

Wildland Consultants were commissioned to undertake an ecological assessment of the site, including an assessment of the condition and significance of indigenous vegetation and habitats at the site, any potential adverse effects of subdivision, and provision of advice on the management requirements of the area of indigenous forest. Their report is attached.

The report identifies and maps the vegetation and habitat pattern within the property, which is comprised of the following:

- Kānuka forest (50.8 ha)
- Podocarp/broadleaved forest (3 ha)
- Broadleaved forest (2 ha)
- Regenerating indigenous forest (0.4 ha)
- Gorse scrub (14.7 ha)
- Exotic forest (6.5 ha)
- Exotic pasture (7 ha)

Wildlands recorded a relatively high number of indigenous plant species (84) at the site along with 27 exotic species. One of the recorded indigenous species, the grass *Agrostis petriei*, has a threat classification of At Risk-Naturally Uncommon (de Lange *et al.*2013), while miro, kahikatea, rimu, matai, pokaka, and Hall's totara are all listed as important native tree species in Appendix B of the Dunedin City District Plan and in Table 10A.2 of the PDP. However none of the 'protected indigenous species' listed in the PDP were recorded at the site.

A range of avifauna was recorded at the site however none of the indigenous bird species are classified as 'Threatened' or 'At Risk'.

Wildlands assessed the ecological significance of vegetation and habitats on the property using the updated ecological significance criteria in Schedule A1.2 of the PDP. They concluded that the "*Indigenous vegetation on the site is significant in terms of its rarity in relation to threatened environments, its distinctive assemblage of indigenous grasses, and the representative example of podocarp/broadleaved forest. The site has moderate value for ecological context, diversity and pattern, and size*".

In terms of the proposals impact on these values, Wildlands noted that there would be a small loss (<0.1 ha) of kānuka and broadleaved forest as the result of clearing the building sites while the addition of four residences, directly adjacent to the indigenous forest, would add to the existing risk of weed escape and invasion from residential sources.

However the report concluded that if legal protection of indigenous forest, weed control, and prohibition of planting of invasive weeds occurred as proposed, the result would be a significant net gain in conservation value

As advised in Section 1.2 above, the applicant is promoting conditions that will achieve these outcomes. As a consequence of this, the proposal will have significant positive ecological benefits. Overall we believe that this will ensure the rural character and amenity values of the site are enhanced by the proposal.

2.13 Cumulative effects (Assessment matters 6.7.4 and 6.7.15)

This assessment matter requires consideration as to how much subdivision and development of the density proposed can be accommodated before an unacceptable threshold is reached in terms of rural character amenity values and the natural character qualities associated with Landscape Management Areas. In Mr Moore's opinion, the proposal is unlikely to give rise to cumulative effects of significance and that overall effects will be positive given the proposal will have significant positive ecological benefits.

2.14 Summary of effects on the environment

The above assessment leads us to conclude that, at worst, the overall adverse effects of the proposal will be no more than minor. When the environmental enhancement package is considered, the proposal is considered to have significant positive environmental benefits. The overall density of the dwellings proposed is in keeping with what is anticipated in this location under the ODP (but not the PDP) and the subdivision has been designed to ensure the development will visually integrate with the surrounding environment.

3. District Plan Policy Framework

The key sections of the District Plan are Sustainability, Rural Zones, Subdivision, Landscape, and Transportation Issues. Each of these sections is considered below.

3.1 Sustainability

We note the sustainability provisions seek to ensure that infrastructure is sufficient to cater for the activity without compromising the demands of future generations. They also encourage the protection of the natural and physical resources (Objective 4.2.4) and the maintenance or enhancement of amenity values. Policy 4.3 8 seeks to avoid the mixing of incompatible activities.

In our opinion, the proposal is consistent with the provisions of the Sustainability section. Our assessment concludes that the natural and physical resources (native vegetation), landscape and amenity values will be enhanced by the proposal. Mr Moore has also reached this conclusion. The proposed activities are also compatible with the surrounding, similar land uses.

3.2 Rural zones

The relevant objectives and policies of the Rural Zones section chiefly seek to protect the productive potential of the zone, public infrastructure, and rural character and amenity values.

As already discussed, the productive value of the farm is limited but is being maintained by the subdivision layout. The proposal is not considered contrary to objectives 6.2.1 and 6.2.6, and with policies 6.3.1, 6.3.2 and 6.3.10.

With regard to public infrastructure [objective 6.2.4 and policy 6.3.8], the proposal will be self-supporting in terms of water supply and wastewater disposal. We have assessed the effects on the roading network to be less than minor.

Those objectives and policies that relate to protection of the rural character and amenity values seek to ensure that adverse effects of activities are sufficiently avoided or minimised so that the character and amenity is maintained or enhanced [objective 6.2.2 and policies 6.3.5, 6.3.6 and 6.3.12]. Effects on landscape and amenity values have been assessed as minor by Landscape Architect, Mr Mike Moore.

Objective 6.2.5 and Policy 6.3.12 seek to avoid conflict between activities. We have outlined above the reasons why there should be little conflict in this location. The surrounding land uses to the east, north and west are predominantly residential in nature.

In summary, we consider the proposal is not contrary to relevant objectives and policies of the Rural Zones and consistent with many of them.

3.3 Subdivision

The objectives and policies of the Subdivision section seek to ensure that subdivision is coordinated and sustainable, with physical limitations and potential land uses taken into account to ensure that adverse effects are avoided, remedied or mitigated. All necessary infrastructure should be provided by the developer to avoid the need for unsustainable upgrades of public services [Objective 18.2.7 and Policy 18.3.7].

The application seeks consent for the subdivision and the future land use activity on all allotments and is therefore coordinated and holistic. No physical limitations that will affect the future use of the new allotments have been identified through the assessment of effects. The geotechnical assessment confirms that there are no constraints in this regard. The development proposed has been determined appropriate given the surrounding activities. The residential activity will be self-serviced and will not give rise to adverse effects on the roading infrastructure.

The proposal is consistent with the objectives and policies of the Subdivision section.

3.4 Landscape

Mr Moore has undertaken a comprehensive review of the subdivision against the relevant landscape objectives and policies. The two relevant objectives of Section 14 Landscape are Objective 14.2.3 ('Ensure that land use and development do not adversely affect the quality of the landscape') and Objective 14.2.4 ('Encourage the maintenance and enhancement of the quality of Dunedin's landscape.') Mr Moore concludes that:

"*The development involves provision for four rural residential scale lots in an area that is currently gorse covered and adjacent to existing rural residential development. In my assessment, it will result in enhancement of the quality of the landscape and will integrate seamlessly with the existing character. This is*

because it will be carefully controlled to ensure that buildings nestle into a more dominant bushland setting and because the indigenous forest will be legally protected and managed to enhance its natural character values. Natural elements will remain strongly dominant and the mitigation measures proposed will ensure that any adverse effects on the natural character of the skyline as viewed from the south, are negligible."

In summary, we consider the proposal supports all relevant landscape objectives and policies of the District Plan.

3.6 *Conclusion – Objectives and Policies*

Having considered the relevant objectives and policies of the District Plan, it is concluded that the proposal is not contrary to the policy framework and is consistent with many elements of it.

4. Proposed District Plan

The proposed District Plan was notified on the 26th September 2015 and hearings have yet to be completed. Hence very little weight can be given to the provisions of that plan. However some regard must be given to the policy framework of the proposed plan. The PDP addresses similar issues to that of the operative District Plan. Mr Moore has addressed the key natural environment and rural amenity provisions and finds the proposal to be consistent with the outcomes sought. We agree with that assessment. Overall the proposal is considered consistent with the policy framework of the PDP.

5. Section 104D of the Act and the notion of 'True Exception'

Section 104D of the Act sets out a test that non-complying activities must pass before they can be considered for consent. The test has two limbs, being that the activity must have no more than a minor adverse effect on the environment or that it must not be contrary to the policy framework of the District Plan. The conclusion reached above is that the proposal passes both these tests. Consequently Council can consider the proposal for consent.

Given that the activity passes both limbs of the section 104D test, the only other issue that needs to be considered is the question of plan integrity and precedent. The 2009 Environment Court decision *Protect Piha Heritage Soc Inc v Auckland RC A015/09* noted that the RMA makes no reference to the integrity of planning instruments, precedent or to the coherence of and public confidence in the District Plan. While these are useful concepts that may be applied in appropriate cases, the Court stated that the need to apply them is less necessary where the plan provisions are effects based and the proposal does not generate adverse effects which are more than minor.

The Environment Court in *Berry v Gisborne DC W20/07* made it quite clear from that there will be very few cases where "Plan integrity will be imperilled to the point of dictating that the instant application should be declined".

In our view this proposal does not offend the effects based policies of the District Plan and does not generate adverse effects that are any more than minor. In fact we have concluded that overall the effects will be positive because of the significant ecological benefits that will be gained.

In terms of the 'true exception' test often applied by the DCC, we believe the ecological positives of the proposal are significant in this assessment. We also note

that the rural residential development adjoining the site is not in accordance with the zone rules but is at a similar density as that proposed here.

Consequently it is our view that granting consent to this proposal would not create difficulties for Council in administering the District Plan consistently.

6. Affected Persons and Notification

The applicant has not consulted with neighbouring property owners on the basis that we anticipate that Council will notify the application. On that basis we request that Council notify the application as soon as possible.

7. Conclusion

In our view both limbs of the Section 104D tests for non-complying activities are satisfied and Council can therefore consider the proposal for consent. Because of the character of this particular location, the design of the subdivision layout and the environmental enhancement proposed, the proposed development does not compromise the integrity of the District Plan and nor does it create an undesirable precedent. We are of the view that the proposal promotes the purpose of the Act, being the sustainable management of the natural and physical resources and ask that consent be granted accordingly.

COMPUTER FREEHOLD REGISTER UNDER LAND TRANSFER ACT 1952

Search Copy

R.W. Muir
Registrar-General of Land

Identifier	**OT10C/237**
Land Registration District	**Otago**
Date Issued	10 February 1986

Prior References
OT10B/355 OT9C/1431

Estate	Fee Simple
Area	83.5107 hectares more or less
Legal Description	Lot 1 Deposited Plan 12954, Lot 2 and Lot 3 Deposited Plan 19043 and Lot 1 and Lot 2 Deposited Plan 19273

Proprietors
Dianne Lylian Reid

Interests

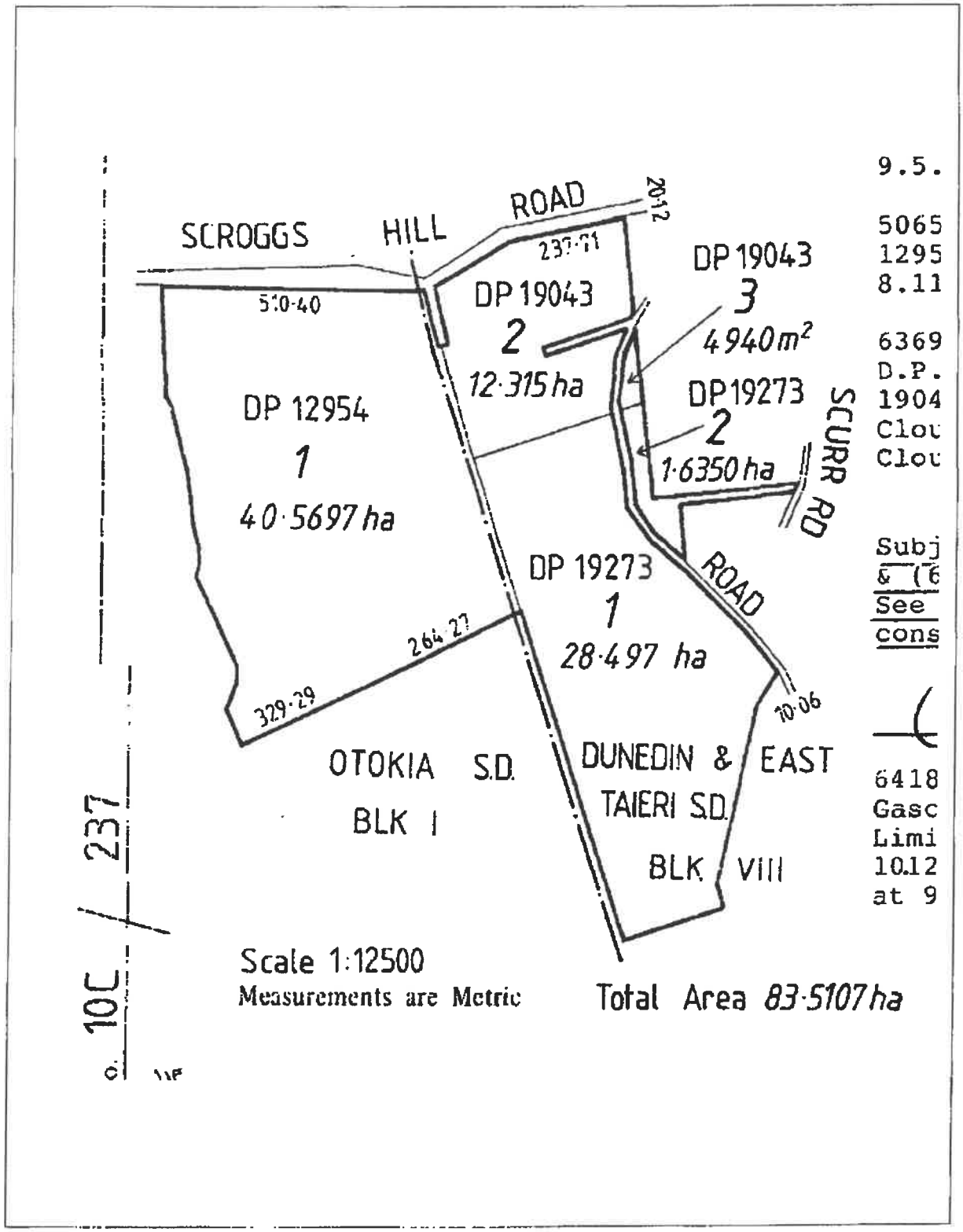
The part Section 4A Block VIII Dunedin and East Taieri District herein is subject to Section 8 Mining Act 1971

The part Section 4A Block VIII Dunedin and East Taieri District herein is subject to Section 5 Coal Mines Act 1979

Subject to Section 308 (4), (5) & (6) Local Government Act 1974 (see DPs 19043 and 19273)

790484.3 STATUTORY LAND CHARGE PURSUANT TO SECTION 465 LOCAL GOVERNMENT ACT 1974 - 17.10.1991 AT 9.34 AM (AFFECTS PART)

6028345.2 Mortgage to Robert James Reid - 3.6.2004 at 9:00 am


SCROGGS HILL ROAD
20.12
237.71
510·40
DP 19043
2
12·315 ha
DP 19043
3
4940m²
DP 19273
2
1·6350 ha
SCURR RD
DP 12954
1
40·5697 ha
DP 19273
1
28·497 ha
ROAD
264·27
329·29
10·06
OTOKIA S.D.
BLK I
DUNEDIN & EAST TAIERI S.D.
BLK VIII
237
10C
Scale 1:12500
Measurements are Metric
Total Area 83·5107 ha
9.5.
5065
1295
8.11
6369
D.P.
1904
Clou
Clou
Subj
& (6
See
cons
6418
Gasc
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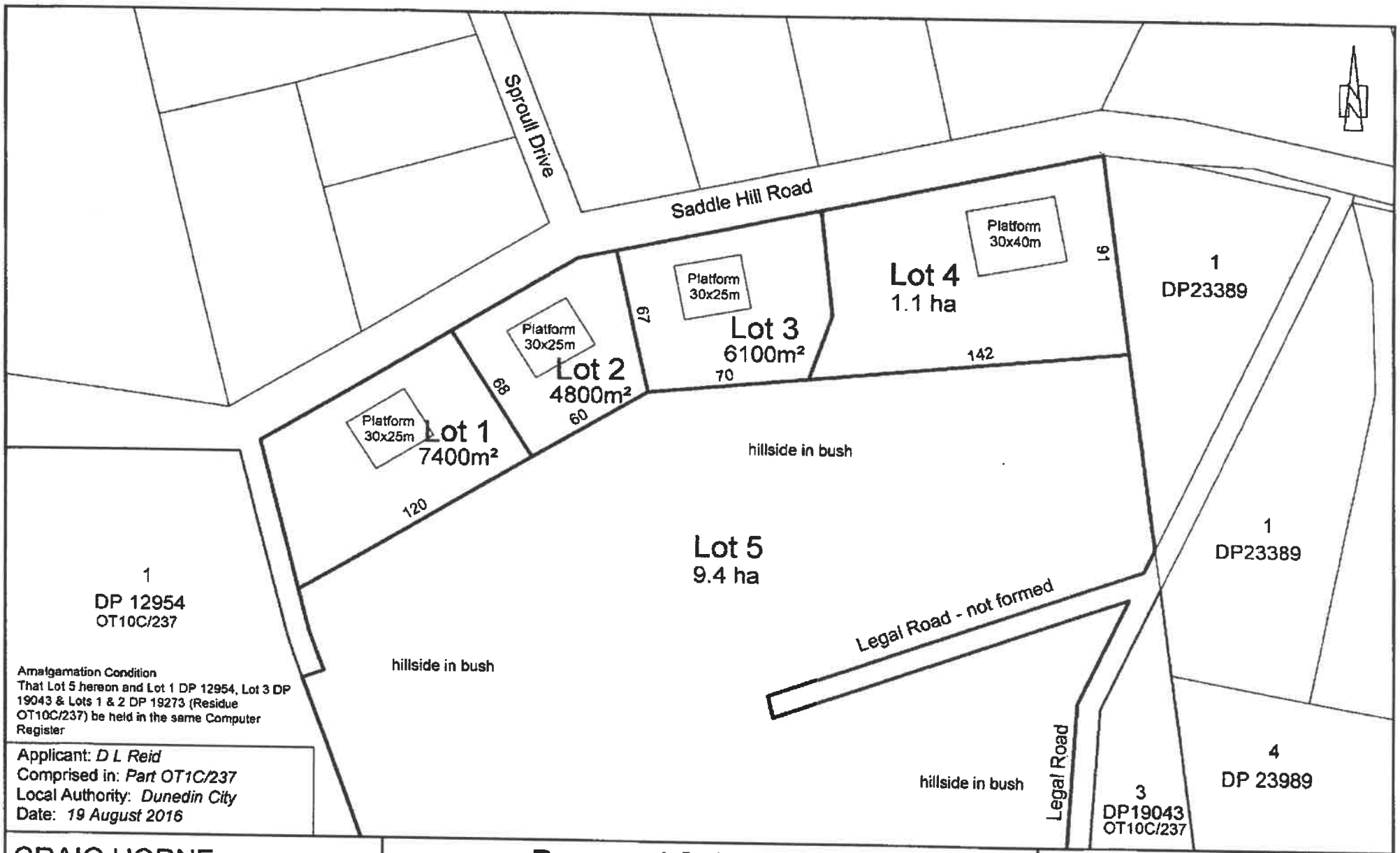
10.12
at 9



Amalgamation Condition
That Lot 5 hereon and Lot 1 DP 12954, Lot 3 DP 19043 & Lots 1 & 2 DP 19273 (Residue OT10C/237) be held in the same Computer Register

Applicant: *D L Reid*
Comprised in: *Part OT1C/237*
Local Authority: *Dunedin City*
Date: *19 August 2016*

CRAIG HORNE
Registered Surveyor
5 MAIN SOUTH ROAD EAST TAIERI
P.O. BOX 56 MOSGIEL
PH (03) 4847008
FAX (03) 4847009

Proposed Subdivision of Lot 2 DP 19043

505 Saddle Hil Road, Mosgiel

Ref: Reid P55

1 OF 3

Drawn CH	Checked	A3 SCALE
Traced		1:1500

CCL Ref: 14189-200216-cubitt

20 February 2016

CARRIAGEWAY
CONSULTING

A. PO Box 29623, Christchurch, 8540
P. 03 377 7010
E. office@carriageway.co.nz

Allan Cubitt
Cubitt Consulting Limited

By e-mail only: allan@cubittconsulting.co.nz

Dear Allan

Proposed Subdivision: 505 Saddle Hill Road

Further to recent e-mails, we have carried out a site visit to the location of the proposed subdivision at Saddle Hill Road and evaluated the sight distances available from each of the proposed driveway locations as requested. Our assessment is set out below, and is based on the drawing issued by e-mail on 19 January 2016 ('505 Saddle Hill Rd 25-11-15').

Overview

The site is located on the southern side of Saddle Hill Road, and we understand that it is proposed to subdivide this into four lots each of which will have its own access.

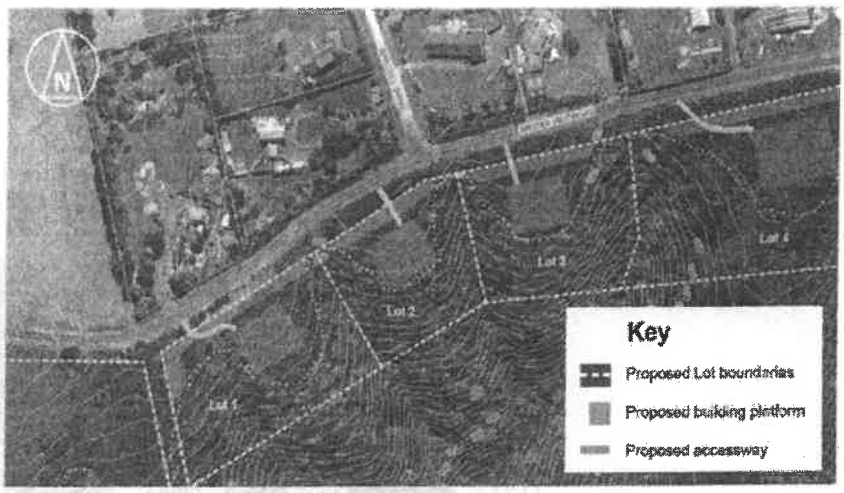


Figure 1: Site Location and Subdivision Plan

Saddle Hill Road Geometry

Saddle Hill Road is a Collector Road under the operative Dunedin City District Plan, meaning that it has a role of providing both for local property access and also through traffic. In this location it has a carriageway width of 5.2m providing one traffic lane in each direction, plus sealed shoulders of 0.3m width on each side plus a gravelled berm of around 0.5m in width. The carriageway has a centreline and edgeline markings, and there are edge marker posts and road studs on each side to delineate the edge of the seal.

Photograph 1: Typical Layout of Saddle Hill Road (Proposed Subdivision Site on Left)

Of particular note is that there are a series of crests and dips in the vertical alignment, and there are two relatively sharp horizontal curves to the east and west of the section onto which the new driveways are proposed. The easternmost of these curves has an advisory speed limit of 55km/h but there is no advisory speed on the western curve despite this having a smaller radius.

Traffic Volumes and Vehicle Speeds

Traffic flows on Saddle Hill Road are in the order of 150 vehicles per day.

The nominal speed limit of the road is 100km/h, but in view of the horizontal and vertical alignments, in our view it is highly unlikely that this maximum speed could be attained. While on site, we attempted to measure the prevailing speeds, but over the course of an hour we only obtained 5 readings due to the low traffic flows. Our results showed an 85th percentile speed of 60km/h and that the maximum speed observed was 74km/h. We subsequently drove along the route at varying speeds, and in our view a design (85th percentile) speed of 70km/h is appropriate. This is because we found that it was not possible to achieve an average speed of 80km/h on this section of road without driving very aggressively around the two sharp curves and then accelerating harshly while on the straighter part.

Road Safety

We have reviewed the reported accidents on this section of road over the past ten years. The NZTA Crash Analysis System shows that just one accident has been recorded over this time, and this took place at the sharp curve at the western end of the study area when a driver described as "inattentive" was travelling in the direction of Dunedin and failed to negotiate the curve, leaving the road on the southern side.

Sight Distance Requirements

The operative Dunedin City District Plan does not include any requirements for sight distances at private driveways. However, the City Council has historically sought to ensure that sight distances are provided in accordance with the Austroads Guide to Road Design. Such provisions have now

been included within the Council's second generation plan (Rule 6.6.3b) which although not operative, shows that for a 70km/h design speed, a sight distance of 92m is appropriate[1].

Westernmost Driveway

This driveway is located immediately opposite the driveway for 450 Saddle Hill Road, approximately 145 west of Sproull Drive.

Photographs 2 and 3: Sight Distance to the Left and Right at Westernmost Driveway

Our on-site measurements showed that the sight distances are:

- towards the left (west): 105m, being restricted by the boundary of a paddock; and
- towards the right (east): 145m, being restricted by the crest curve at Sproull Drive.

The sight distances are therefore appropriate for the prevailing speed environment.

Centre-West Driveway

This driveway is located 25m to the west of Sproull Drive

Photographs 4 and 5: Sight Distance to the Left and Right at Centre-West Driveway

[1] This provision is also set out in Table 3.1 of the Austroads Guide to Road Design Part 4A ('Unsignalised and Signalised Intersections')

Our on-site measurements showed that the sight distances are:

- towards the left (west) :120m, being restricted by the grassed bank near to 450 Saddle Hill Road; and
- towards the right (east): 65m, being restricted by the crest curve at Sproull Drive.

The sight distance towards the east presently falls below requirements. However if the driveway was relocated 28m towards the west, then a sight distance of at least 92m would be provided in each direction. Our assessment shows that this location would align with the western side of the proposed building platform.

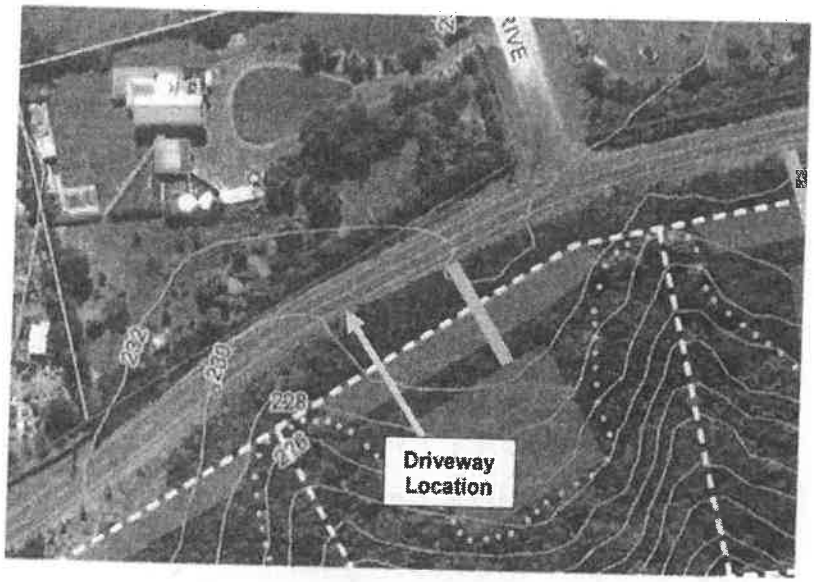
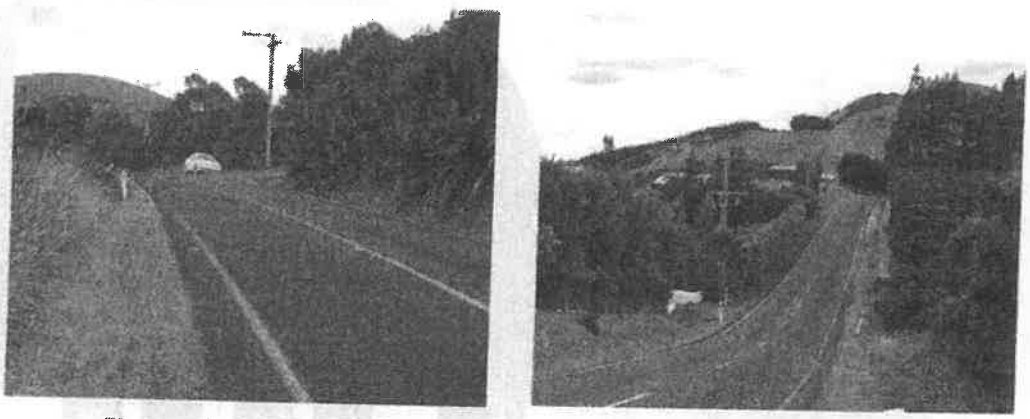


Figure 2: Potential Location for Driveway

Centre-East Driveway

This driveway is located 45m to the east of Sproull Drive.



Photographs 6 and 7: Sight Distance to the Left and Right at Centre-East Driveway

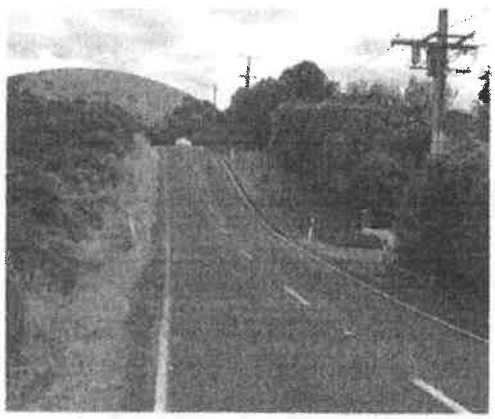
Our on-site measurements showed that the sight distances are:

- towards the left (west) 85m, being restricted by the crest curve close to Sproull Drive; and
- towards the right (east): 180m, being restricted by a horizontal curve.

The sight distance towards the west presently falls below requirements, but relocating the driveway by 7m or more to the east will increase the sight distance to at least 92m.

Easternmost Driveway

This driveway is located mid-way between the driveways to 426 and 430 Saddle Hill Road, and approximately 140m east of Sproull Drive.



Photographs 8 and 9: Sight Distance to the Left and Right at Easternmost Driveway

Our on-site measurements showed that the sight distances are:

- towards the left (west): 150m, being restricted by the crest curve at Sproull Drive; and
- towards the right (east): 105m, being restricted by a horizontal curve.

The sight distances are therefore appropriate for the prevailing speed environment.

Summary

Having reviewed the proposed layout, we consider that the sight distances at the easternmost and westernmost driveways are appropriate for the prevailing speeds.

The current locations of the centre-west and centre-east driveways presently have slight shortfalls in the available sight distances. However relocating them (by 28m and 7m respectively) will result in the sight distances being appropriate for the prevailing speeds.

I trust that this review is of assistance, 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

DUNEDIN CITY COUNCIL

Development Contributions Assessment Tool

Results: Development Contributions Summary Table

Area of Benefit: Dunedin Metro WS - Tahuna WW

Activity	Existing Demand - Credits (EHU)	Proposed Future Demand (EHU)	Additional Demand (EHU)	Standard Development Contribution -$/EHU (Ex GST)	Development Contribution (Ex GST)	GST	Development Contribution (Inc GST)
Water Supply (TAH-1)	1.00	1.50	0.50	$1,680.00	$840.00	$126.00	$966.00
Wastewater (TAH-2)	1.00	1.50	0.50	$3,500.00	$1,750.00	$262.50	$2,012.50
Stormwater (TAH-3)	1.00	1.50	0.50	$180.00	$90.00	$13.50	$103.50
Transportation (TAH-4)	1.00	1.50	0.50	$490.00	$245.00	$36.75	$281.75
Reserves (TAH-5)	1.00	1.50	0.50	$340.00	$170.00	$25.50	$195.50
Community Infrastructure (TAH-6)	1.00	1.50	0.50	$50.00	$25.00	$3.75	$28.75
Total Development Contribution					**$3,120.00**	**$468.00**	$3,588.00

Disclaimer: It should also be noted that the results do not apply if the development is in one of the Mosgiel Plan Change Areas.

This tool was built for simple single land use developments. More complicated developments with multiple land use categories must be assessed in stages.

Development contributions are required for the additional demand on reserves, network infrastructure, and/or community infrastructure created by a proposal over and above the demand from the existing land use. The additional demand is calculated by subtracting the existing demand from the proposed future demand. Refer Table 3 of the Development Contributions Policy to see how Equivalent Household Units are determined for each Land Use Category.

The existing demand from the current land use has been calculated using the following:
- Existing Land Use Category: Residential Units (Existing Use)
- Number of Residential Units - 3 or more habitable rooms/Number of Lots: 1

The proposed future demand resulting from the development has been calculated using the following:
- Service Connections: Water - Connecting; Wastewater - Connecting
- Proposed Land Use Category: Residential Units
- Number of Residential Units - 3 or more habitable rooms/Number of Lots: 1
- Number of Residential Units - 1 habitable room: 1

ECOLOGICAL ASSESSMENT OF A PROPOSED RURAL SUBDIVISION AT 505 SADDLE HILL ROAD, DUNEDIN

providing
outstanding
ecological
services to
sustain
and improve our
environments

Wildlands

R3919

ECOLOGICAL ASSESSMENT OF A PROPOSED RURAL SUBDIVISION AT 505 SADDLE HILL ROAD, DUNEDIN

Matai tree in a forest gully at the site.

Contract Report No. 3919

March 2016

Project Team:
Kelvin Lloyd - Field assessment and report author

Prepared for:
Diane Reid
C/- Gallaway Cook Allan Lawyers
Dunedin

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CONTENTS

Reviewed and approved for release by:

W.B. Shaw
Director/Principal Ecologist
Wildland Consultants Ltd

1. INTRODUCTION

Ms Diane Reid intends to subdivide a 90 ha rural property at 505 Saddle Hill Road, Dunedin, into four residential lots, adjacent to Saddle Hill Road. Substantial parts of the property have a cover of exotic pasture, gorse scrub, and exotic forest. The property also includes a substantial area of indigenous forest in gullies below the road (Figure 1). As residential subdivision is a non-complying activity, protection and enhancement of areas of indigenous forest would help to mitigate adverse effects and thus improve the chances of resource consent being granted.

Ms Reid commissioned Wildland Consultants to undertake an ecological assessment of the site, including an assessment of the condition and significance of indigenous vegetation and habitats at the site, any potential adverse effects of subdivision, and provision of advice on the management requirements of the area of indigenous forest. This report describes the ecological assessment of the property.

2. METHODS

A visit to the site was undertaken on 24 February 2016.

Representative parts of the property were traversed on foot, including forest vegetation. The large size and dissected nature of the gully systems means that not all areas were visited, particularly in the southern part of the site

Vegetation and habitats were mapped (Figure 1).

Vascular plant species and fauna observed during the site visit were recorded. A list of the vascular plant species identified at the site is provided in Appendix 1.

Options to avoid or mitigate potential adverse effects were evaluated.

3. SITE CONTEXT

3.1 Ecological Districts

The site lies in the Tokomairio Ecological District, which is part of the Coastal Otago Ecological Region. Tokomairiro Ecological District is characterised by alluvial plains, wetlands, and coastal hills, with the latter being the landform at the subject property.

Rainfall is 600-700 mm annually, and the Ecological District has warm summers and cool winters (McEwen 1987). Tokomairiro Ecological District is notable for a transition on the coastal hills from southern rata (*Metrosideros umbellata*)-kamahi (*Weinmannia racemosa*) forest in the south, to podocarp/broadleaved forest north of Taieri Mouth.

Current vegetation in Tokomairiro Ecological District largely comprises exotic grassland (90,713 ha), exotic forest (40,943 ha), and moderately large areas of

indigenous broadleaved forest (8,085 ha), mānuka and kānuka (8,586 ha), gorse and broom (3,282 ha), and herbaceous freshwater vegetation (2,853 ha).

3.2 Protected areas

Hope Hill Scenic Reserve and associated conservation areas are located on similar coastal hill topography approximately four kilometres to the southwest of the property. Several QEII covenants are located to the north and east of the property. One of these covenants (Number 5-12-181) includes just under 10 ha of kānuka forest with scattered emergent conifers in a gully less than 500 m to the east of the site.

Another QEII covenant (Number 5-12-144) of 5.5 ha is located only 300 m north of the property, in a north-facing gully, and appears to contain kōwhai (*Sophora microphylla*) forest and some kānuka (*Kunzea robusta*) forest.

Approximately two kilometres northeast of the site, on the slopes of Saddle Hill, a 15.5 ha QEII covenant (Number 5-12-016) protects kowhai forest.

Finally, an additional 24.5 ha of kowhai and kānuka forest in a gully to the northeast of Saddle Hill is protected by a QEII covenant (Number 5-12-022) some three kilometres from the site.

4. VEGETATION AND HABITATS

4.1 Overview

The property has a history of pastoral grazing and parts are still used for this purpose. The areas still in exotic grassland are located adjacent to Saddle Hill Road, along with an existing house and ancillary buildings and gardens in the northwest corner of the property. The vegetation and habitat pattern is mapped in Figure 1, and the following are present:

- Kānuka forest (50.8 ha)
- Podocarp/broadleaved forest (3 ha)
- Broadleaved forest (2 ha)
- Regenerating indigenous forest (0.4 ha)
- Gorse scrub (14.7 ha)
- Exotic forest (6.5 ha)
- Exotic pasture (7 ha)

Descriptions of each of these types are set out in the sections below.

Significant proportions of the property are still in exotic pasture (7 ha - 8%) or gorse scrub that has replaced previous pasture (14.7 ha - 16%), together comprising nearly one quarter of the property. A very large proportion of the property - more than 50 percent - comprises secondary forest that has regenerated following previous clearance: kānuka forest (50.8 ha -56%) and regenerating indigenous forest (0.4 ha - 0.4%).

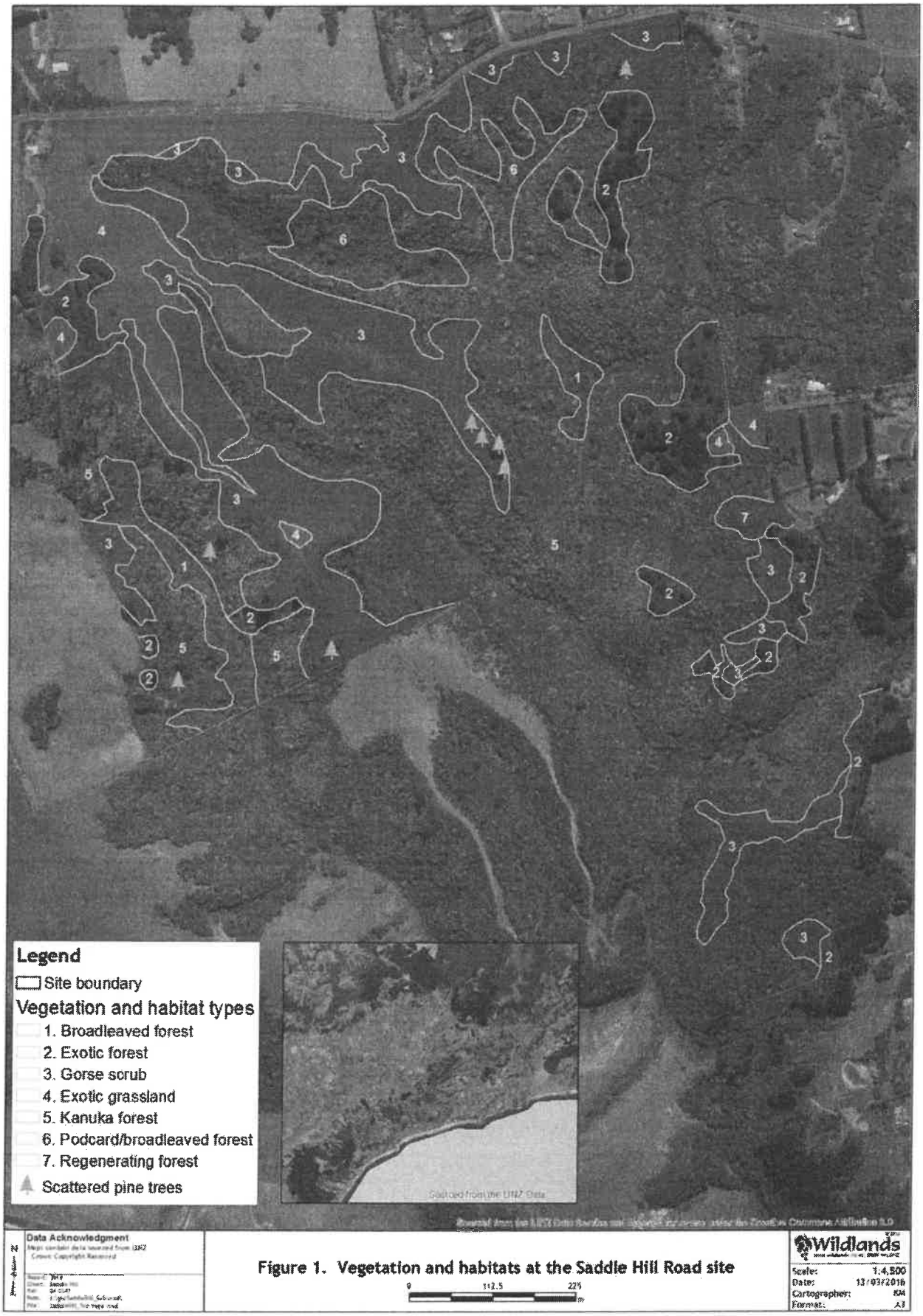

Figure 1. Vegetation and habitats at the Saddle Hill Road site

Remnant primary forest - podocarp/broadleaved forest (3 ha - 3.3%) and broadleaved forest (2 ha - 2.2%) - are also present, along with 6.5 ha (7.2%) of exotic pine forest.

4.2 Kānuka forest (50.8 ha)

Kānuka forest is the most extensive forest type at the site. Vegetation composition varies beneath the canopy, with more heavily browsed sites adjacent to pasture having a sparse understorey and ground cover, but more remote sites having a more dense and diverse understorey and ground cover. Kānuka dominates the canopy, but species such as broadleaf (*Griselinia littoralis*) and māhoe (*Melicytus ramiflorus*) are also occasionally present in the canopy (Plate 1). The main subcanopy species are broadleaf, māhoe, māpou (*Myrsine australis*), kōhūhū (*Pittosporum tenuifolium*), horoeka (lancewood; *Pseudopanax* crassifolius), and *Coprosma linariifolia*. These species also occur as smaller individuals in the understorey, though broadleaf is less common, and *Coprosma rhamnoides* and *C. crassifolia* are also often present, with occasional silver fern (*Cyathea dealbata*). Where stock browsing has been more intense, the ground layer is sparse, with occasional *Poa matthewsii* and *Stellaria parvifolia* and extensive bare ground. On dry spurs, the ground layer is sometimes quite diverse, and notable for a relatively rich flora of indigenous grasses (Plate 2), including *Poa matthewsii*, *Dichelachne crinita*, *Rytidosperma gracile*, *Echinopogon ovatus*, *Deyeuxia avenoides*, *Microlaena stipoides*, and *Agrostis petriei*. Other ground layer species in these dry sites include hound's tongue fern (*Microsorum pustulatum*), *Asplenium appendiculatum*, *Lagenophora strangulata*, *Uncinia scabra*, and *Stellaria parvifolia*.

Plate 1: Large broadleaf tree within kānuka forest.

Plate 2: Indigenous grasses on thin soils in dry kānuka forest.

4.3 Podocarp/broadleaved forest (3 ha)

Patches of forest in the northern part of the site are notable for emergent old growth trees (Plate 3) of Hall's totara (*Podocarpus laetus*), miro (*Prumnopitys ferruginea*), rimu (*Dacrydium cupressinum*), matai (*Prumnopitys taxifolia*), kahikatea (*Dacrycarpus dacrydioides*), and pokaka (*Elaeocarpus hookerianus*). The site thus has representatives of most of the emergent tree species that occur in the Dunedin area. The broadleaved canopy in these areas is dominated by māhoe and fuchsia (*Fuchsia excorticata*), with occasional tarata (*Pittosporum eugenioides*) and broadleaf. Coprosma rotundifolia and horopito (*Pseudowintera colorata*) are the main understorey species, but wheki-ponga (*Dicksonia fibrosa*), wineberry (*Aristotelia serrata*), and soft tree fern (*Cyathea smithii*) occur frequently. Ferns, including shield fern (*Polystichum vestitum*), kiwakiwa (*Blechnum fluviatile*), crown fern (*B. discolor*), *B. chambersii*, and *Leptopteris hymenophylloides* are the main ground layer species.

4.4 Broadleaved forest (2 ha)

Broadleaved forest is restricted to gullies (Figure 1). The vegetation is a similar to that of the podocarp/broadleaved forest described above, but lacks emergent old growth trees.

Plate 3: A large matai tree in podocarp/broadleaved forest.

Plate 4: Broadleaved forest in a gully, dominated by fuchsia and māhoe.

4.5 Regenerating forest (0.4 ha)

A small area has been mapped as regenerating forest (Figure 1) where the gorse scrub canopy is being overtopped by kānuka and broadleaved tree saplings. This represents gorse scrub in a more advanced state of succession, and the pathway that other areas of gorse scrub will likely take if not disturbed.

4.6 Gorse scrub (14.7 ha)

Gorse scrub is common on forest margins in the northern part of the site, and in previously-disturbed areas within kānuka forest in the south of the site, with a dense canopy 2-3 m tall. Radiata pines are emergent from gorse scrub in places, and kānuka and broadleaved tree species are occasionally present (Plate 5), and will become more common over time.

4.7 Exotic forest (6.5 ha)

More dense stands of radiata pine have been mapped as exotic forest. They mainly occur on the western and eastern margins of the site. In these stands, pine trees of a range of maturity stages are emergent above a matrix of either kānuka forest or gorse scrub.

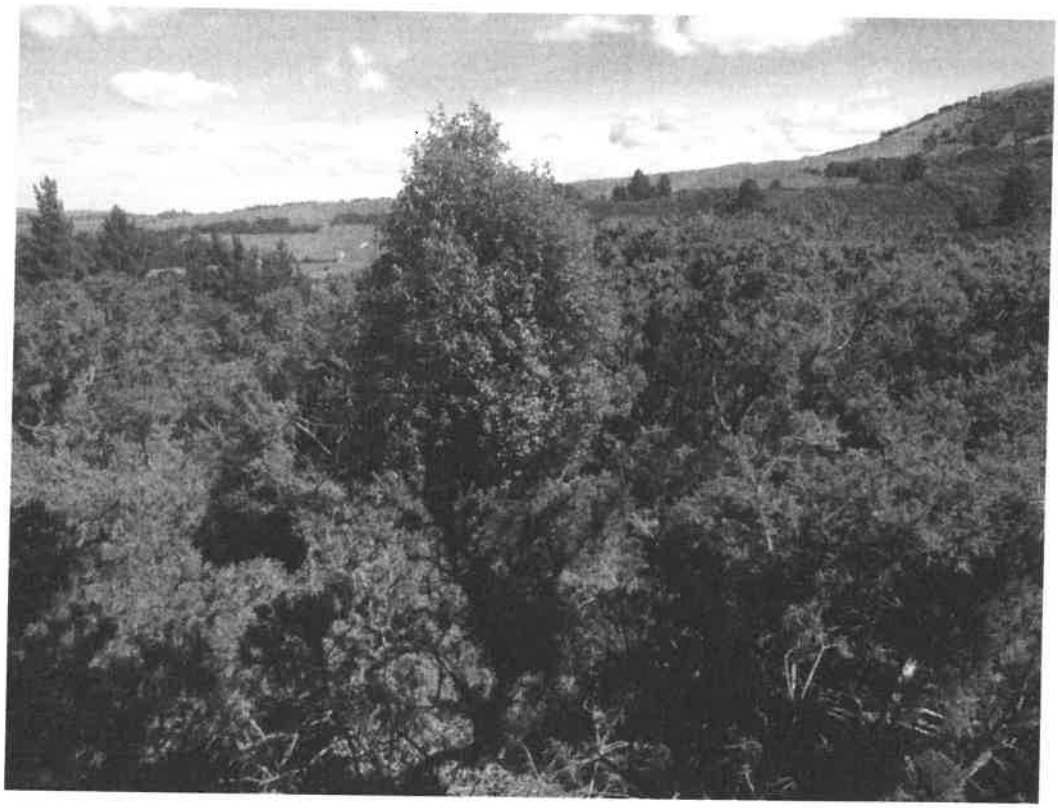

Plate 5: A young kōhūhū tree emerging from mature gorse scrub.

4.8 Exotic pasture (7 ha)

Exotic pasture is present on the upper slopes of the site near Saddle Hill Road. It was not assessed in detail but is likely to be dominated by browntop (*Agrostis capillaris*), sweet vernal (*Anthoxanthum odoratum*), cocksfoot (*Dactylis glomerata*), and white clover (*Trifolium repens*).

5. FLORA

5.1 Indigenous species

A relatively high number of 84 indigenous plant species was recorded at the site, and 27 exotic species (Appendix 1). One of the indigenous species recorded at the site, the grass *Agrostis petriei*, has a threat classification of At Risk-Naturally Uncommon (de Lange *et al.*2013), while miro, kahikatea, rimu, matai, pokaka, and Hall's totara are all listed as important native tree species in Appendix B of the Dunedin City District Plan and in Table 10A.2 of the 2nd generation Dunedin District Plan (2GP). None of the 'protected indigenous species' listed in 2GP Table 10A.1 were recorded at the site.

The assemblage of indigenous grasses within dry forest at the site is a special feature (Table 1). These grasses were found on thin, dry soils on ridges and steep sunny slopes beneath the kānuka canopy.

Table 1: Indigenous grass species present at the property.

Species	Common Name	Abundance
Agrostis petriei		Occasional
Deyeuxia avenoides	Oat grass	Occasional
Dichelachne crinita	Plume grass	Rare
Echinopogon ovatus	Hedgehog grass	Rare
Microlaena stipoides	Patiti	Rare
Poa matthewsii		Frequent
Rytidosperma gracile	Danthonia	Occasional

Hall's totara was the most commonly observed emergent tree at the site (Table 2). There were also frequent matai, and occasional miro and rimu. Only single trees of kahikatea and pokaka were observed. These observations represent minimum numbers, as not all parts of the site were traversed. Regenerating individuals of kahikatea, Hall's totara, and miro were also observed.

Table 2: Indigenous emergent trees present at the site.

Species	Common Name	Number Observed	Regeneration Present?
Dacrycarpus dacrydioides	Kahikatea	1	Yes
Dacrydium cupressinum	Rimu	3	
Elaeocarpus hookerianus	Pokaka	1	
Podocarpus laetus	Hall's totara	10	Yes
Prumnopitys ferruginea	Miro	3	Yes
Prumnopitys taxifolia	Matai	6	

5.2 Pest plants

Various ecological weeds are present. The most serious of these is radiata pine, which is displacing secondary indigenous forest vegetation in parts of the site, both by overtopping indigenous canopy trees, and forming a deep litter of decaying pine needles which inhibits the indigenous understorey and ground cover (Plate 6). Other weedy exotic trees are hawthorn (*Crataegus monogyna*), elder (*Sambucus nigra*), and holly (*Ilex aquifolium*), all of which are shade-tolerant and able to establish and persist in kānuka-dominant forest.

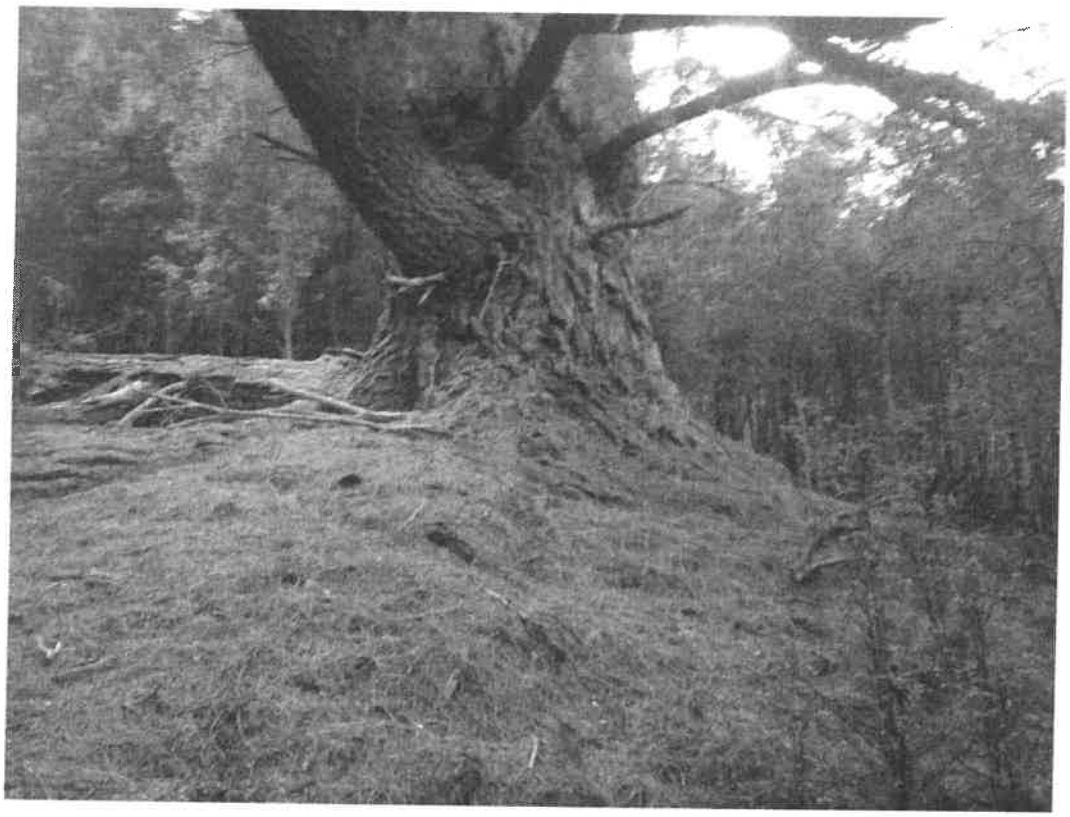

Plate 6: A large radiata pine tree in the north-east of the site, displacing indigenous canopy, understorey, and ground layer vegetation.

6. FAUNA

6.1 Avifauna

The forest birds bellbird (*Anthornis melanura*), grey warbler (*Gerygone igata*), brown creeper (*Mohoua novaeseelandiae*), fantail (*Rhipidura fuliginosa*), and kereru (*Hemiphaga novaeseelandiae*) were commonly observed within the site, while silvereye (*Zosterops lateralis*), tui (*Prosthemadera novaeseelandiae*), and tomtit (*Petroica macrocephala*) were commonly observed in vegetation along and adjacent to the proposed road alignment, while the exotic bird species blackbird (*Turdus merula*) and chaffinch (*Fringilla coelebs*) were seen occasionally. None of the

indigenous bird species are classified as Threatened or At Risk (Robertson *et al.* 2013).

6.2 Pest animals

Possum (*Trichosurus vulpecula*) sign was observed. Rabbits (*Oryctolagus cuniculus*) and hares (*Lepus europaeus*) are also likely to be present. Other pest animals, including feral cats (*Felis catus*), mustelids (*Mustela* spp.), hedgehogs (*Erinaceus europaeus*), rats (*Rattus* spp.), and mice (*Mus musculus*) are likely to be present.

7. ECOLOGICAL SIGNIFICANCE

The ecological significance of vegetation and habitats on the property has been assessed below using the updated ecological significance criteria in Dunedin District Plan 2GP Schedule A1.2. The criteria are given in italics with an assessment of the site values against each criterion in turn.

Protected Areas: *Existing protected areas: habitat or indigenous vegetation that has been specially set aside by statute or covenant for protection and preservation of indigenous biodiversity.*

The site does not include any protected areas.

Recognised Sites*: Sites within the Dunedin City boundaries that are listed in an operative Otago Regional Council Regional Plan as having significant indigenous biodiversity value.*

The site is not listed as having significant indigenous biodiversity value in an operative Otago Regional Council Regional Plan.

Rare species: *the site provides habitat for indigenous species that are nationally Threatened, or At Risk, or uncommon within an ecological district or region, including those listed in Appendix 10A.1. For mobile fauna and categories of At Risk other than 'Declining', the site must provide important habitat for the species, such as a site supporting large numbers of individuals, or providing refuge from predation, or key habitat for migration, feeding, breeding, or resting.*

None of the species listed in 2GP Appendix 10A.1 were recorded at the site. The At Risk-Naturally Uncommon species *Agrostis petriei* was recorded at the site. *Agrostis petriei* is typically found inland in Otago and Canterbury basins, so the population at the Reid property is unusual and important. Matai and kahikatea are locally uncommon in Dunedin.

Rare ecosystems and vegetation/habitats*: the site contains indigenous vegetation and/or fauna habitat types that are rare or uncommon within the relevant ecological district, or indigenous vegetation/habitat in an historically rare ecosystem.*

No rare habitat types or historically rare ecosystems were observed within the property.

***Acutely and Chronically Threatened land environments**: the site contains at least 0.5 ha of indigenous vegetation on Acutely Threatened level IV land environments (with less than 10% of their original vegetation cover remaining) or at least 1 ha of indigenous vegetation on Chronically Threatened level IV land environments that have less than 20% of their original vegetation cover remaining.*

The site easily meets this criterion. Figure 2 shows the representation of threatened land environments across the property. Overall, 26.7 ha of Acutely Threatened and 57 ha of Chronically Threatened land environments are present, comprising 30 percent and 63 percent respectively. Acutely Threatened habitats mostly cover gorse scrub and pasture, but at least 0.5 ha of indigenous forest also lie within these environments (Figure 2). Most of the indigenous vegetation is within Chronically Threatened environments (Figure 2).

***Distinctiveness**: Indigenous vegetation or an association of indigenous species that is distinctive, of restricted occurrence, contains a species distribution limit, or has developed as a result of an unusual environmental factor or combination of factors.*

The assemblage of indigenous grasses at the site is a distinctive feature. Most dry kānuka forests in the Dunedin area support only one or two indigenous grass species, whereas the Reid site supports seven. The assemblage of six emergent trees species is also a distinctive feature of the site, with few other areas of forest having this many emergent tree species.

***Representativeness**: Indigenous vegetation or indigenous fauna assemblages that are representative, typical or characteristic (as determined by their structure and/or composition) of the natural diversity of the relevant ecological district. This can include degraded examples where they are some of the best remaining examples of their type, or represent all that remains of indigenous biodiversity in particular environments.*

Podocarp/broadleaved forest at the site is a representative example of relatively dry podocarp/broadleaved forest. The assemblage of forest birds recorded at the site is moderately representative.

***Ecological context:** The site provides an important buffering function, an important connection to another site or population, or provides important habitat for indigenous fauna with respect to cover, shelter, food, resting, nesting, or refuge from predation or disturbance.*

The site is part of a network of sites that provide important habitat for indigenous forest birds in the local area.

***Diversity and pattern**; the site contains:*

1. *A relatively high number of species of indigenous plant and/or fauna species for the type of vegetation or habitat, or*

2. *A relatively high number of vegetation and /or habitat types, or*
3. *A relatively intact ecological sequence involving at least three vegetation and/or habitat types.*

The site has moderately high plant and bird species richness for a forested site.

Size: *the site is a large example of as type of vegetation, habitat, or ecosystem, or supports a large population of indigenous fauna, within the relevant ecological district.*

The site contains approximately 56 ha of indigenous forest vegetation, and if maintained under conservation management would increase in size as areas of gorse scrub develop into indigenous forest. It is a moderately large site in the local area.

Significance Summary

Indigenous vegetation on the site is significant in terms of its rarity in relation to threatened environments, its distinctive assemblage of indigenous grasses, and the representative example of podocarp/broadleaved forest. The site has moderate value for ecological context, diversity and pattern, and size.

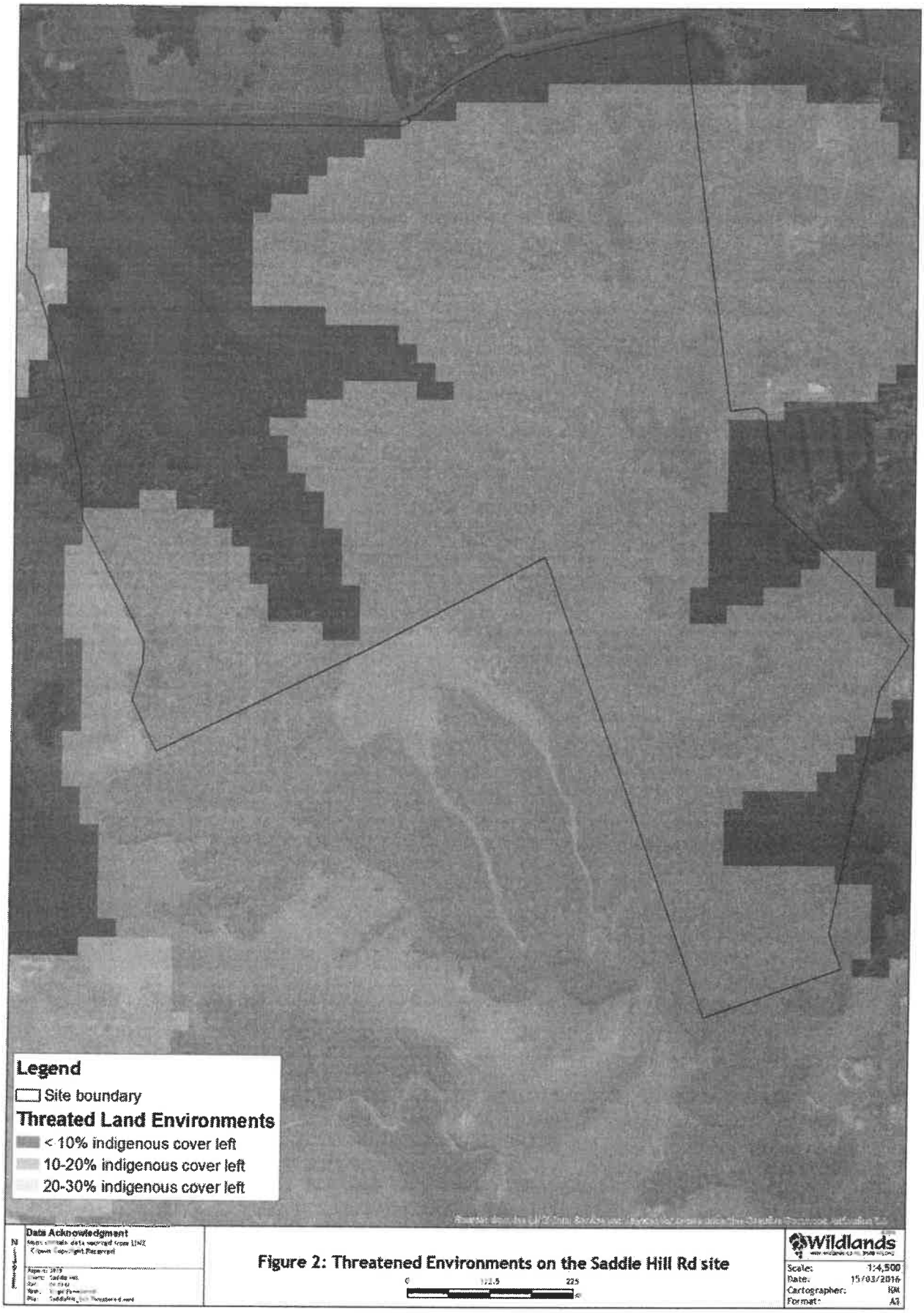

Figure 2: Threatened Environments on the Saddle Hill Rd site

8. POTENTIAL EFFECTS OF RESIDENTIAL DEVELOPMENT

Building platforms for the proposed subdivision are shown in the draft subdivision concept for 505 Saddle Hill Road, prepared my Mike Moore Landscape Architect. Platform sites are located primarily in gorse scrub, but development of Lot 2 and Lot 4 would result in small amounts (<0.1 ha) of kānuka and broadleaved forest being cleared.

Weed escape from residential gardens is a significant problem for adjacent lowland indigenous forests. The Reid property already has residential development and gardens on two sides, and these may be the source of species such as holly and *Nemesia floribunda*, which were found within forest at the site. An additional four residences, directly adjacent to the indigenous forest, would add to the existing risk of weed escape and invasion from residential sources.

9. AVOIDANCE AND MITIGATION OF POTENTIAL ADVERSE EFFECTS

If all remaining areas of indigenous forest on the property were to be legally protected and fenced to exclude stock, clearance of a small amount of indigenous forest vegetation around the residential building platforms would be mitigated to such a degree that a net conservation gain would occur. The legally protected area could include areas of gorse scrub, as being adjacent to indigenous forest seed sources, these areas of gorse scrub will develop into indigenous forest within two or three decades.

If radiata pine trees are felled, and other woody weeds such as elder, hawthorn, and holly are controlled, this would add considerable value to the legal protection.

The risk of weed invasion from the new residences can be reduced if conditions are attached to the titles prohibiting the planting or maintenance of the ecological weeds listed in Appendix 10B of the 2GP, and also prohibiting the planting and maintenance of Chilean flame creeper (*Tropaeolum speciosum*), which is not listed in Appendix 10B.

If these activities are implemented - legal protection of indigenous forest, weed control, and prohibition of planting of invasive weeds - the result would be a significant net gain in conservation value.

10. CONCLUSION

The Reid property supports a significant area of indigenous forest vegetation and habitat that is notable for areas of representative podocarp/broadleaved forest, a diverse assemblage of indigenous grass and emergent tree species, and good habitat for indigenous forest birds. The indigenous forest is moderately large and diverse, and occurs on Chronically Threatened and Acutely Threatened land environments.

The effects of proposed residential activity adjacent to Saddle Hill Road - small amounts of indigenous vegetation clearance and potential weed invasion - would easily be mitigated by a combination of legal protection, woody weed control, and restrictions on the planting of invasive weeds, such that a significant net gain in conservation value would occur.

ACKNOWLEDGMENTS

Chris Timbs and Bridget Irving (Gallaway Cook Allan Lawyers) are thanked for project liaison and provision of information, while the landholder Diane Reid is thanked for useful advice on access within the forest block.

REFERENCES

de Lange P., Rolfe J., Champion P., Courtney S., Heenan P., Barkla J., Cameron E., Norton D. and Hitchmough R. 2013: Conservation status of New Zealand indigenous vascular plants, 2012. *New Zealand Threat Classification Series 3*. Department of Conservation, Wellington. 70 pp.

APPENDIX 1

VASCULAR PLANT SPECIES RECORDED AT THE PROPERTY

Asterisks indicate exotic species.

Species	Common Name	Plant Type
Acaena novae-zelandiae	Bidibidi	Dicot herb
*Agrostis capillaris**	Browntop	Grass
Agrostis petriei		Grass
*Anthoxanthum odoratum**	Sweet vernal	Grass
Aristotelia serrata	Wineberry	Tree
Asplenium appendiculatum	Ground spleenwort	Fern
Asplenium bulbiferum	Hen and chicken fern	Fern
Asplenium flabellifolium	Necklace fern	Fern
Asplenium flaccidum	Hanging spleenwort	Fern
Asplenium hookerianum	Hooker's spleenwort	Fern
Astelia fragrans	Kakaha	Monocot herb
Blechnum chambersii	Lance fern, rereti	Fern
Blechnum discolor	Crown fern	Fern
Blechnum fluviatile	Kiwakiwa	Fern
Blechnum penna-marina		Fern
Blechnum procerum	Kiokio	Fern
Cardamine debilis		Dicot herb
Carpodetus serratus	Putaputaweta	Tree
*Cirsium vulgare**	Scotch thistle	Dicot herb
Clematis marata		Vine
Clematis paniculata	Puawananga	Vine
Coprosma crassifolia		Shrub
Coprosma dumosa		Shrub
Coprosma linariifolia		Tree
Coprosma lucida	Shining karamu	Tree
Coprosma propinqua	Mingimingi	Shrub
Coprosma rhamnoides		Shrub
Coprosma rotundifolia		Shrub
*Cotoneaster simonsii**	Khasia berry	Shrub
*Crataegus monogyna**	Hawthorn	Tree
*Critesion murinum**	Barley grass	Grass
Cyathea dealbata	Silver fern	Fern
Cyathea smithii	Soft tree fern	Fern
*Cytisus scoparius**	Scotch broom	Shrub
Dacrycarpus dacrydioides	Kahikatea	Tree
Dacrydium cupressinum	Rimu	Tree
*Dactylis glomerata**	Cocksfoot	Grass
Deyeuxia avenoides	Oat grass	Grass
Dianella nigra	Turutu	Monocot herb
Dichelachne crinita	Plume grass	Grass
Dicksonia fibrosa	Wheki-ponga	Fern
Dicksonia squarrosa	Wheki	Fern
*Digitalis purpurea**	Foxglove	Dicot herb
*Dryopteris filix-mas**	Male fern	Fern
Echinopogon ovatus	Hedgehog grass	Grass
Elaeocarpus hookerianus	Pokaka	Tree
Fuchsia excorticata	Tree fuchsia, kotukutuku	Tree
Gaultheria antipoda	Bush snowberry	Shrub

Species	Common Name	Plant Type
Grammitis heterophylla	Comb fern	Fern
Griselinia littoralis	Broadleaf	Tree
Helichrysum aggregatum		Shrub
Hydrocotyle heteromeria	Waxweed	Dicot herb
Hydrocotyle moschata		Dicot herb
Hymenophyllum demissum	Filmy fern	Fern
*Hypochaeris radicata**	Catsear	Dicot herb
Hypolepis ambigua		Fern
*Ilex aquifolium**	Holly	Tree
*Jacobaea vulgaris**	Ragwort	Dicot herb
Kunzea robusta	Kanuka	Tree
Lagenophora strangulata		Dicot herb
*Leontodon taraxacoides**	Hawkbit	Dicot herb
*Lepidium pseudotasmanicum**		Dicot herb
Leptolepia novae-zelandiae	Lace fern	Fern
Leptopteris hymenophylloides	Heruheru	Fern
Libertia ixioides	Mikoikoi	Monocot herb
Luzula species	Woodrush	Rush
Lycopodium volubile	Climbing clubmoss	Fern
Melicytus ramiflorus	Mahoe	Tree
Metrosideros diffusa	White climbing rata	Vine
Microlaena avenacea	Bush rice grass	Grass
Microlaena stipoides	Meadow rice grass / patiti	Grass
Microsorum pustulatum	Hound's tongue fern	Fern
Muehlenbeckia australis	Pohuehue	Vine
*Mycelis muralis**	Wall lettuce	Dicot herb
Myrsine australis	Mapou	Tree
*Nemesia floribunda**		Dicot herb
Parsonsia heterophylla	Native jasmine	Vine
Pennantia corymbosa	Kaikomako	Tree
*Pinus radiata**	Radiata pine	Tree
Pittosporum eugenioides	Tarata	Tree
Pittosporum tenuifolium	Kohuhu	Tree
*Plantago lanceolata**	Narrow-leaved plantain	Dicot herb
Poa matthewsii		Grass
Podocarpus laetus	Halls totara	Tree
Polystichum neozelandicum		Fern
Polystichum vestitum	Shield fern	Fern
Prumnopitys ferruginea	Miro	Tree
Prumnopitys taxifolia	Matai	Tree
*Prunella vulgaris**	Selfheal	Dicot herb
Pseudopanax colensoi	Three finger	Tree
Pseudopanax crassifolius	Lancewood / horoeka	Tree
Pseudowintera colorata	Horopito	Tree
Pteridium esculentum	Bracken	Fern
Pyrrosia eleagnifolia	Leatherleaf fern	Fern
Ranunculus reflexus	Hairy buttercup	Dicot herb
Rubus cissoides	Lawyer	Vine
*Rubus fruticosus**	Blackberry	Shrub
Rytidosperma gracile	Danthonia	Grass
*Sambucus nigra**	Elder	Tree
Schefflera digitata	Pate / seven-finger	Tree
Schizeilema trifoliolatum		Dicot herb
Senecio minimus	Native fireweed	Dicot herb
*Stellaria alsine**	Bog stitchwort	Dicot herb
*Stellaria media**	Chickweed	Shrub
Stellaria parviflora	Native chickweed	Dicot herb

Species	Common Name	Plant Type
*Trifolium repens**	White clover	Dicot herb
*Ulex europaeus**	Gorse	Shrub
Uncinia banksii	Hooked sedge	Sedge
Uncinia scabra	Hooked sedge	Sedge
Uncinia uncinata	Hooked sedge	Sedge
*Urtica urens**	Nettle	Dicot herb

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Geotechnical Assessment of Proposed Subdivision, 505 Saddle Hill Road, Dunedin

Report prepared for

Dianne Reid

3 June, 2016

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1 Introduction

The writer was requested to evaluate the geotechnical conditions of 505 Saddle Hill Road where the owner plans to subdivide a portion of the land adjacent to Saddle Hill Road into four housing lots (Figure 1). I examined the property on the 18th and 19th of March, 2016.

2 Topography & Geology

The proposed subdivision is located on the southeast flank of a broad ridge between Saddle Hill and Scroggs Hill. The four proposed lots are centered on lateral ridges that extend to the south of the main east-west trending ridge. Except for a narrow cleared strip along the road frontage of Proposed Lot-1 and opposite the residential property at 405 Saddle Hill Road, the more elevated portions of each lot are covered in dense mature gorse which precluded close examination of the ground surface and shallow geological features. Gullies between the ridges contain mixed native bush.

As shown in the geological bedrock map of McKellar (1990), the proposed subdivision is underlain at depth by schist metamorphic rock together with a small area of Taratu Formation beneath part of Lot-4 at the eastern end of the subdivision (Figure 2). The patch of Taratu Formation was likely mapped around an exposure of quartz sandstone, conglomerate or quartz pebbles overlying the schist.

Examined by hand auguring within the roadside clearing of Proposed Lot-1, the immediate subsoil material below 20-25 cm of topsoil is yellow-brown clayey-silt loess of Last Glacial wind-blown dust origin. As indicated in a cutting on the south side of Saddle Hill Road, 150 m to the west (Figure 3), the loess subsoil may be up to 1.6 m thick over highest levels of the proposed subdivision.

Exposures of insitu foliated schist were found 40 m south of Saddle Hill Road in the gully between Lots 2 & 3 (Figures 4 & 5), and near north end of Sproull Drive, confirming the mapping of McKellar (1990). The schist in the gully between Lots 2 & 3 is slightly weathered internally to a mid brown colour. The weathering is likely due

to proximity of the geological contact between schist basement and alluvial beds of the overlying Taratu Formation.

3 Land Stability & Seismic Risk

Although no signs of land instability have been identified, nor suspected within the proposed subdivision, the heavy cover of vegetation over the property has precluded a thorough analysis of the ground surface. No landslides have been mapped adjacent to or within the area under consideration for housing development in other studies (e.g. City Consultants, 1998). The underlying geology and the relatively thin, well-drained soil cover indicate that the property has a low susceptibility to earthquake shaking amplification.

4 Conclusions and Recommendations

A Previous geological mapping of the wider area and examination of limited rock and subsoil exposures within the proposed subdivision indicates that all four proposed lots are underlain at depth by variably altered schist rock, and near-surface Taratu Formation sediment or Quaternary loess that generally has sufficient bearing strength for housing development. The schist has a localized cover of Taratu Formation and possibly up to 1.5 m of compact loess clay/silt subsoil.

B No landslides have been mapped adjacent to or within the area under consideration for housing development.

C. It is recommended that a thorough check is made during the preparation of each platform for possible weak subsoils that are particularly likely to be found near the schist\Taratu Formation contact but difficult to determine in detail before earthworks are undertaken.

5 References

McKellar, I. C. 1990: Southwest Dunedin urban area. Geological map of New Zealand Miscellaneous Series Map 22, 1:50000 scale. DSIR Wellington

City Consultants, 1998: Landslide Hazards [Dunedin urban area map]. Page 3.24: http://www.civildefence.govt.nz/assets/Uploads/publications/dunedin-lifelines-report-1999-chapter-3-4.pdf

Figures 1-5 appended

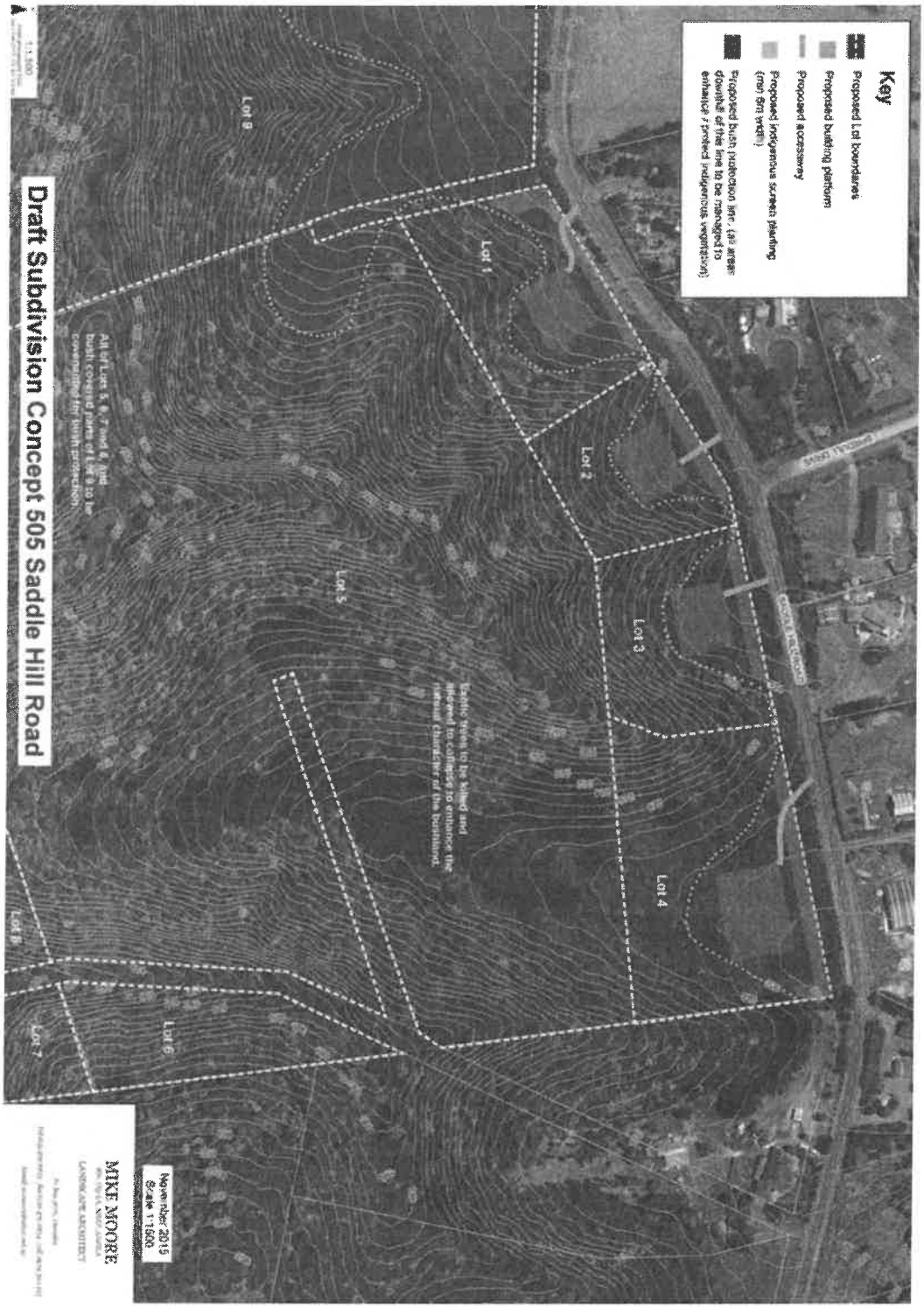

Figure 1 Proposed layout of the subdivision by M. Moore 11-2015. Not reproduced at original scale.

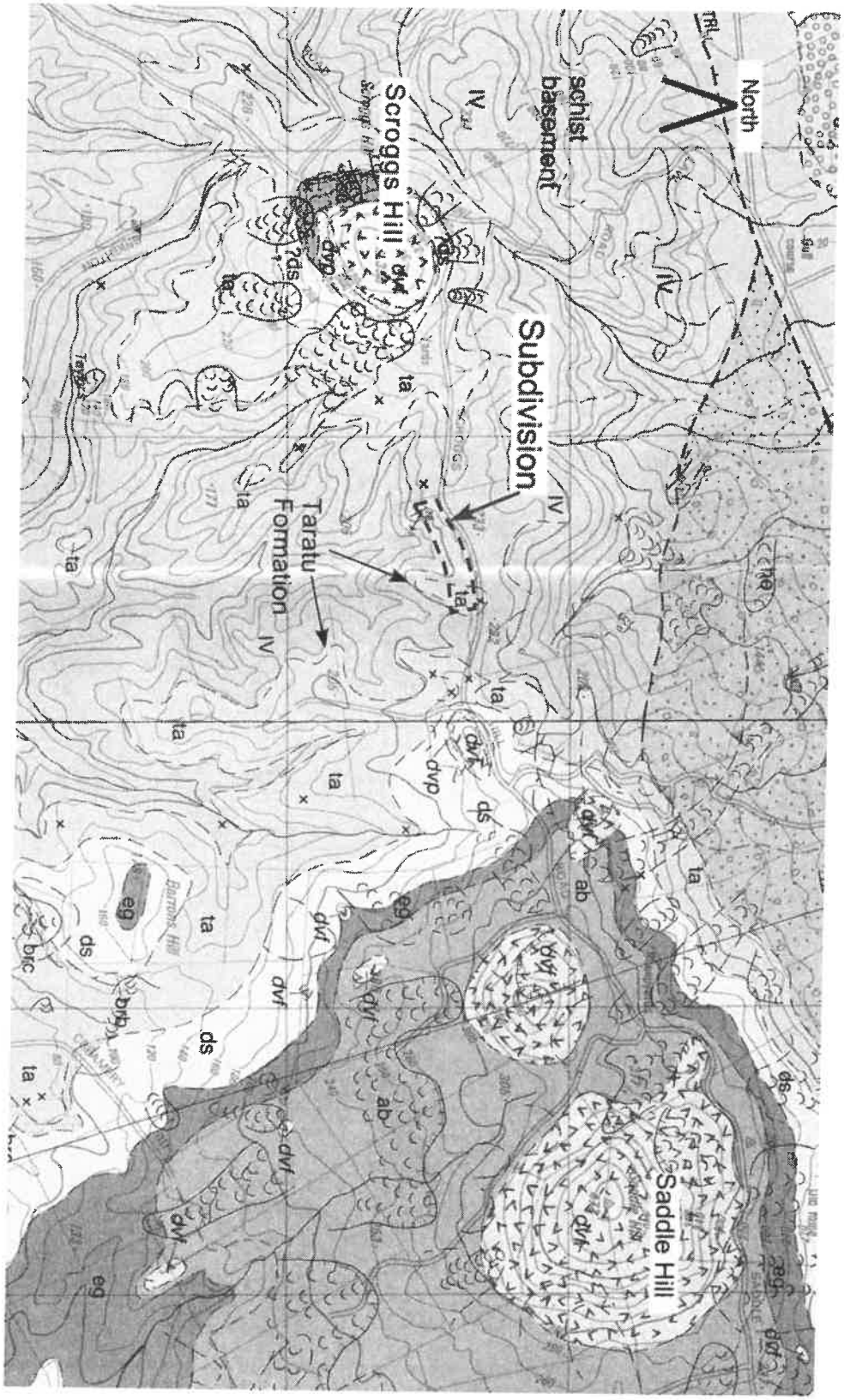

Figure 2 Geological location of the proposed subdivision. Geological base map extracted from McKellar (1990).

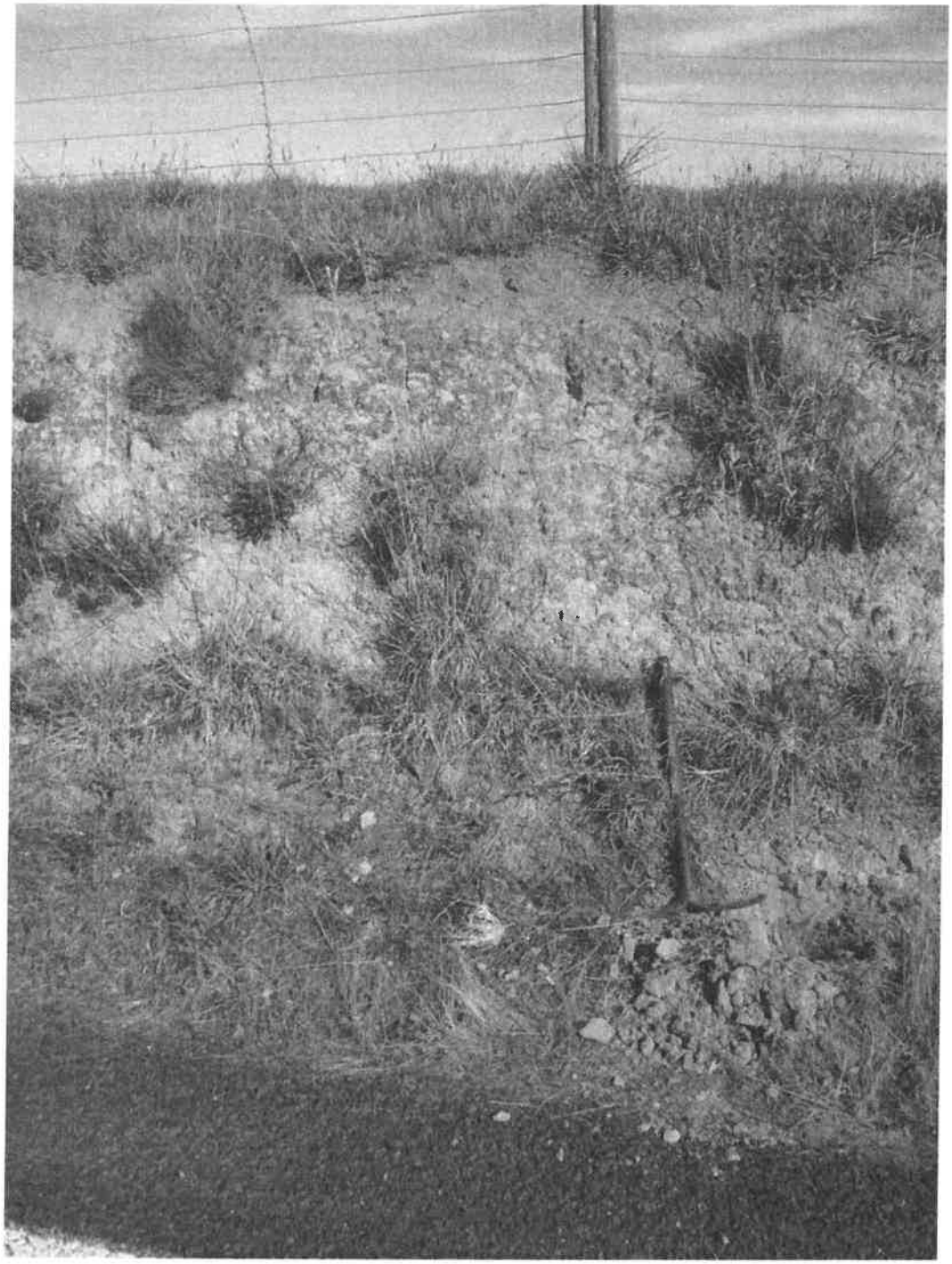

Figure 3 Geological profile exposed south side of Saddle Hill Road, 150 m west of the proposed subdivision, comprises: topsoil and transition zone (30 cm), clayey silt loess subsoil (1.6 m), underlain by strongly leached sandy schist (beneath pick-head). Pick is 85 cm high.

Figure 4 Schist exposed in the gully between Proposed Lot-2 & Lot-3.

Figure 5 Close-up view of schist in Figure 4.

Proposed Subdivision 505 Saddle Hill Road, Dunedin

Landscape and Visual Assessment Report

24 June 2016

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Introduction

Dianne Reid proposes to subdivide a small portion of her 83.51 ha property at 505 Saddle Hill Road into four undersized rural lots of between approximately 5250m2 and 1.1ha. The site is zoned Rural in the Operative Dunedin City District Plan but is bordered by Rural Residential zoned land to the east, and across Saddle Hill Road to the north. It is also overlain by the Saddle Hill Landscape Conservation Area. In terms of Rule 18.5.2, the proposed development is a non-complying activity.

This report provides a landscape and visual assessment of the proposed development along with a landscape mitigation plan. It is structured as follows:

- Site and area description
- The landscape values
- The proposed development and mitigation measures
- Landscape effects
- Visual effects
- Statutory Planning Assessment
- Conclusion

Site and area description

As illustrated in Figure 1, the property is located on the upper southern slopes of the coastal hills behind Ocean View and Brighton. It is bordered on its northern side by Saddle Hill Road, which is more or less on the summit ridge, and the site encompasses much of a valley system between Scoggs Hill and the spur on which Scurr Road is located. The underlying geology is schist and the topography is characterised by the broad spur and dissected gully landform typical of the Otago peneplain. The various gullies within the property form part of the catchment of Taylor Creek, which meets the sea at Ocean View.

The applicants dwelling and some associated sheds are located near Saddle Hill Road in the north-western part of the site on gentle spur landforms. In this area, there is also grazed pasture. The majority of the property however, is covered in largely regenerating indigenous forest or gorse dominated scrub, reflecting a transition from grazed pasture back to native forest. The broad scale landscape pattern is pasture and exotic scrub dominating the gentle spur forms and regenerating indigenous forest within the valley forms. As more thoroughly described in the Ecological Assessment report (Wildland Consultants, 2016), the indigenous forest cover is dominated by Kanuka forest but also contains smaller areas of Podocarp / broadleaved forest and Broadleaved forest which include emergent old growth trees. A notable feature is the presence of stands or scattered individuals, of mature radiata pine within the generating bush, probably planted as shelter trees originally. The area proposed for development is largely covered in gorse.

The landscape context of the site is the summit ridgeline and upper slopes of the coastal hills between (and including) Saddle, Jaffray and Scroggs Hills. These volcanic hill forms are distinctive landscape features. The landscape pattern is characterised by open rural pastureland on the gentle ridge and spur tops (including scattered buildings and shelter plantings), with Kanuka dominated regenerating forest on the steeper slopes and gully areas below, on both sides of the main ridge. There are also blocks of exotic forestry in places which tend to dilute the pattern and landform coherence.

Directly adjacent to the site, to the north and east, are areas with rural residential character (and zoning). Lot sizes in these areas range from approximately 0.4 – 3.0ha. These rural residential areas have a smaller scale and more variable character in terms of buildings and plantings, than the surrounding rural environment. Whilst the rural residential development reduces the openness of the ridge and spur top environment, built impact is generally well mitigated by shelter and amenity plantings, particularly from lower elevation viewpoints.

Figures 2 - 8 illustrate the character of the site and area.

Landscape Values

Landscape values associated with this property and its wider landscape context are as follows:

The significance of Saddle Hill as a 'prominent volcanic landform' is recognised in the 'Inventory and maps of important geological sites and landforms in the Otago Region' (Hayward and Kenny, 1998). The presence of coastal broadleaf podocarp forest on Saddle Hill is another recognized natural value (listed as an ASCV in both the Operative and Proposed Dunedin City District Plans). Whilst not identified in the District Plans, the remnant and regenerating indigenous forest present on the subject site, also has ecological values of significance, as outlined in the ecological assessment report (Wildlands, 2016).

The volcanic hill forms of Saddle, Jaffrays and Scroggs Hills are expressive of their volcanic origins and have landmark values. Aesthetically, it is my assessment that the landscape has moderate natural character values, based on a moderate degree of landform legibility and the presence of significant areas of indigenous forest, but modified by incoherence associated with exotic tree blocks, the effects of quarrying on Jaffray Hill and rural residential 'clutter' in places.

In terms of tangata whenua values, Pukemakamaka and Turimakamaka (Saddle and Jaffrays Hills) represent the reposed remains of the taniwha Matamata, who created the Taieri River. The values ascribed to these as noted in the Proposed Dunedin City District Plan (2GP) include mauka, wahi taoka and wahi tohu. More generally, the upper slopes and peaks of Scroggs and Saddle Hills are also culturally important, having wahi tohu and wahi taoka values.

This area is visually prominent, forming part of the hill backdrop to the northern end of the Taieri Plain (including Mosgiel), and to the Brighton area. Apart from an area of Rural residential zoning, the hilltop areas are zoned Rural in the Operative Dunedin City District Plan, and as such, amenity values generally associated with rural character are also relevant. 'Key elements of rural character' mentioned under Objective 6.2.2 and Policy 6.3.5 in the Plan include a predominance of natural over human made features, a

high ratio of open space relative to the built environment, significant areas of pasture, crops, forestry or indigenous vegetation, the presence of farmed animals and the absence of urban elements (infrastructure / sealed roads etc).

This area is overlain by the Saddle Hill Landscape Conservation Area (SHLCA) in the Operative Dunedin City District Plan. This is described as including the higher slopes of Saddle Hill and Chain Hills and contributing to the 'setting, visual containment and skyline' for the Taieri Plain and Lower Kaikorai areas'. The 'features and characteristics to be conserved' are listed and are essentially those elements and attributes which contribute to natural character. 'Inappropriate siting, design, scale, density and finish of structures such that they become visually prominent from public viewpoints', is listed as a 'principal threat to visual quality'.

In the 2GP, this area is within the Coastal Rural zone and the values described for this zone essentially include those associated with natural character and its visual contribution to the qualities of the coastal landscape. The area is also included within a landscape overlay in the 2GP, this time called the Saddle Hill Significant Natural Landscape (SHSNL). The boundaries of this overlay differ from those of the SHLCA and, surprisingly in my opinion, exclude the subject property. The uppermost slopes of Saddle and Jaffray Hills are identified as an outstanding natural feature in this plan on the basis of their natural and cultural values (already discussed) and historic significance for being named by Captain James Cook in 1769.

The proposed development and mitigation measures

It is proposed to subdivide the property to create four undersized rural lots adjacent to Saddle Hill Road in the area opposite the existing rural residential development. These lots will range in size from between approximately 5250m2 and 1.1ha, roughly similar in scale range to those in the adjacent rural residential zone. Building platforms, accessed from Saddle Hill Road, have been identified. These are 25 x 30m in area for Lots 1 – 3 and 30 x 40m in area for Lot 4 (reflecting the greater room available). The building platforms have been located to provide for 12m front yards for consistency with Rural

residential zone provisions and the pattern of development across Saddle Hill Road. Figures 9 and 9(a) illustrate the proposed development concept.

Mitigation measures for Lots 1 – 4, proposed to ensure that development integrates acceptably and minimizes any adverse landscape and visual effects, are as follows:

(a) All buildings, including accessory buildings, are to be located within the identified building platform.

(b) All buildings shall be a maximum of 5m height above existing ground level.

(c) All buildings shall be finished in naturally weathered timber or locally appropriate stone, or in colours that have low levels of contrast with the colours of the bushland setting. Painted surfaces will have light reflectivity ratings of no more than 15%.

(d) All services are to be located below ground

(e) Driveways are to retain an informal rural character with gravel surface and soft edges (i.e. no kerbs). Monumental gates and driveway lighting is not permitted.

(f) Water tanks will be sited, and / or buried and / or screened (by planting) to have minimal visual impact from beyond the property.

(g) Fencing is to be confined to standard rural post and wire construction or stone walls using locally appropriate rock.

(h) With the exception of plantings below 1.5m in mature height above the bush protection line, all plantings on the property will be confined to indigenous species appropriate to the character of the site. No golden or variegated plants are to be used anywhere on the site. Recommended indigenous species are listed in Appendix A.

(i) The pest plants listed in Appendix 10B of the 2GP as well as Chilean flame creeper (Tropaeolum speciosum) are prohibited, to avoid issues of ecological weed invasion.

(j) Locally appropriate indigenous screen planting will be established within a 6m wide strip adjacent to Saddle Hill Road, as shown in Figure 9(a). The species to be used and initial plant densities shall be as specified in Appendix B. This area will be managed to control weed plants and animal pests and to encourage successful establishment of the planted species and natural regeneration of indigenous species on an ongoing basis.

(k) All areas below the 'bush protection line' shown in Figure 9(a) are to be managed to protect and enhance the extent and quality of indigenous vegetation. Any woody weed species (as discussed in the Ecological Assessment report, Wildlands, 2016) are to be removed within 2 years of resource consent being granted, and thereafter controlled to avoid re-establishment.

An additional mitigation measure, applying to the balance area is proposed, as follows:

(a) All areas within the 'bush protection area' shown in Figure 9 are to be protected by fencing, and managed to protect and enhance the extent and quality of indigenous vegetation. All pinus radiata trees within this area are to be killed within 5 years of resource consent being granted. Other woody weed species (as discussed in the Ecological Assessment report, Wildlands, 2016) are to be removed or controlled on an ongoing basis, to ensure that the natural values of the indigenous vegetation are conserved or enhanced.

The recommended method for removal of the pine trees is poisoning to kill, and allowing them to collapse. Whilst this creates the unsightly effect of dead trees for a few years, it creates less damage to the native species surrounding than felling, and provides better for recovery of the indigenous canopy in the medium – long term.

Landscape effects

The primary effect of the proposed development on landscape character will be four additional houses, extending the rural residential character by about 350m along the southern side of Saddle Hill Road in the area opposite the Sproull Drive intersection. The houses will be built in areas that are primarily covered in gorse at present and it is my assumption that much of the gorse within the road reserve will be cleared as part of the development. In my assessment, the mitigation measures proposed will ensure that the effects of this development on natural character and rural amenity values will be minor. The buildings will be sited at least 20m from the existing road formation, will controlled as to height and colour, and will be screened progressively, by the proposed native screen plantings. I believe that they will integrate readily both with the adjacent rural residential character and with the bushland setting.

The other key longer term landscape character effects are the positive impacts of legal and physical protection of the bushland. This provides for ongoing enhancement, both of the extent of native forest cover (i.e. succession of gorse to indigenous forest) and the natural character and values of the bushland, as exotic weed species are removed and controlled. The removal of the currently quite visually dominant pine trees, will have significant positive natural landscape character effects in the medium – longer term in my opinion.

Visual effects

Saddle Hill Road adjacent to the site

The proposed development will result in the clearance of the gorse to the south of the road and the development of four dwellings on the pockets of flatter, spur top land, along with associated driveways, any accessory buildings, and plantings. Until the proposed screen planting is well established, houses will be visible, approximately 20m back or more, from the edge of the formed carriageway, separated by the tongues of bush in the intervening gully forms and with a bush backdrop. The land drops away toward the south and the lower elevation relative to the road will assist in minimizing the visual

prominence of the buildings. Screen planting is proposed adjacent to the road boundary, and this will progressively mitigate the visual impact of houses as it establishes and matures. Effective screening will be possible within 10 years. Figures 3 and 4 illustrate views from this area.

It is my assessment that considering the proposed screening, the lower elevation of the building sites, the setback of the building platforms and the design and appearance controls, the proposed development will not be unduly visually prominent and will integrate with its bushland setting. I also believe that considering the existing rural residential character of the area across Saddle Hill Road and directly to the east of the property, residential development at the density proposed will integrate acceptably. The removal of the gorse in itself will be a positive visual effect and the removal of the pine trees some of which are significantly visible from this viewpoint will have positive natural character effects. Overall, I rate the visual effects of the proposed development on natural character and rural amenity values from this viewpoint as adverse but minor.

Saddle Hill Road to the east of the site

As illustrated in Figures 5 and 6, the subdivision site is visible from a number of slightly more elevated viewpoints on Saddle Hill Road to the east of the property, at distances of between approximately 350 – 800m. From these viewpoints, the site is seen in the context of the adjacent rural-residential development and the pine trees within the bush are relatively dominant elements. Buildings on the proposed building platforms will have very little visibility from these viewpoints given the distance, screening by vegetation and the more dominant bush setting. Where visible, the proposed colour controls will ensure that visual impacts are minimal. The proposed killing of the pine trees will result in the adverse visual impact of decaying trees for a number of years but in the medium – long term the natural character of the bush will be significantly enhanced. Overall, I rate the visual effects of the proposal from these viewpoints as minor adverse in the short – medium term and moderate positive in the medium – long term (i.e. 5 – 10 years and more).

Saddle Hill Road to the west of the site

The proposed subdivision site is visible from Saddle Hill Road to the west at a distance of around 600m and slightly higher elevation, as Figure 7 illustrates. From this viewpoint, the rural-residential development is visible but well softened by plantings and the pines on the subject property are relatively dominant elements. Development on the proposed building platforms will have minimal visual impact due to screening by intervening vegetation or because of the proposed building height and colour controls. The most visually significant effect of the development will be the proposed demise of the pine trees which will have unsightly short term effects but long term positive effects on the naturalness of the bushland. Overall, I rate the visual effects of the proposal from this viewpoint as minor adverse in the short – medium term and moderate positive in the medium – long term (i.e. 5 – 10 years and more).

Lower elevation viewpoints to the south

As illustrated in Figure 8, the ridgeline site of the proposed subdivision is visible from as far away as approximately 2.6km near Brighton. The proposed buildings may be just visible as minor skyline elements but their impact will be negligible due to the viewing distance, and height and colour controls, to blend with the dominant bush context. The more significant effect will be the medium term demise of the pine trees which are emergent above the kanuka bushland canopy. The loss of these trees will enhance the naturalness of the bushland and give a more natural skyline. Overall, I rate the visual effects of the proposal from this viewpoint as minor adverse in the short – medium term, and minor positive in the medium – long term (i.e. 5 – 10 years and more).

Surrounding residential viewpoints

Properties directly opposite the proposed new lots on Saddle Hill Road, and the property adjacent to proposed Lot 4 to the east (405 Saddle Hill Road) are potentially impacted visually by the development. The effects from these viewpoints will be much as described for Saddle Hill Road adjacent except that viewing distances are greater and there is more of a buffer between the viewpoints and the site due to boundary plantings. It can be expected that the natural primary outlook from these properties would be from

the sunny side of the dwellings, northward and away from the site. In my assessment, the proposed 12m yards, lower elevation of the proposed building platforms, design and appearance controls (including height restrictions) and proposed screen plantings will appropriately mitigate any adverse amenity effects from the adjacent properties.

Statutory planning assessment

Operative Dunedin City District Plan

The Operative Dunedin City District Plan provisions relevant to the landscape and visual effects of this application are found in the Rural, Landscape and Subdivision sections of the plan. Brief comment on these is provided below as follows:

Rural Section

Objective 6.2.2
Maintain and enhance the amenity values associated with the character of the rural area

Objective 6.2.3
Provide for rural residential development in a sustainable manner to avoid as much as practicable:
Locations subject to potential natural hazards; or locations within Landscape Management Areas;
Or areas that are identified on District Plan Maps 75, 76 and 77 as containing 'high class soils';
Or areas where development may result in adverse effects on the sustainable provision of infrastructure.

Policy 6.3.4
Locate Rural Residential Zones in specific areas which are able to accommodate such development without significantly altering the character or adversely affecting the amenity of the rural area and to avoid as much as practicable;
Locations subject to potential natural hazards;
Or locations within Landscape Management Areas;
Or areas that are identified on District Plan Maps 75, 76 and 77 as containing 'high class soils';
Or areas where development may result in adverse effects on the sustainable provision of infrastructure.

Policy 6.3.5

Require rural subdivision and activities to be of a nature, scale, intensity and location consistent with maintaining the character of the rural area and to be undertaken in a manner that avoids, remedies or mitigates adverse effects on rural character. Elements of the rural character of the district include, but are not limited to:

(a) A predominance of natural features over human made features,
(b) High ratio of open space relative to the built environment,
(c) Significant areas of vegetation in pasture, crops, forestry and indigenous vegetation,
(d) presence of large numbers of farmed animals,
(e) noises, smells and effects associated with the use of rural land for a wide range of agricultural, horticultural and forestry purposes,
(f) low population densities relative to urban areas,
(g) generally unsealed roads,
(h) absence of urban infrastructure.

Policy 6.3.6

Avoid, remedy or mitigate the adverse effects of buildings, structures and vegetation on the amenity of adjoining properties.

Policy 6.3.7

Recognise and maintain significant landscapes within the Rural Zone by limiting the density of development within Landscape Management Areas

Policy 6.3.14

Subdivision or land use activities should not occur where this may result in cumulative adverse effects in relation to:

(a) amenity values
(b) rural character
(e) landscape management areas or Areas of Significant Conservation Values.

Irrespective of the ability of a site to mitigate adverse effects on the immediately surrounding environment.

Assessment matters

6.7.3 Amenity values

(i) The effect that the activity will have on amenity values

6.7.4 Cumulative Effect

The cumulative effect of the activity on the natural and physical resources of the City including, but not limited to, cumulative adverse effects in relation to:

(i) Amenity values

(ii) Rural character

(vi) Landscape Management Areas or Areas of Significant Conservation Values

6.7.9 Bulk and location

The bulk and location of buildings and their effect upon the amenity values of the site, adjoining sites, adjoining roads and the surrounding areas.

6.7.13 Visual impact

(i) The visual impact arising from an activity on the character of the rural landscape, visual amenity and significant views.

(ii) The potential effect of structures on significant views from public viewpoints, including visibility from State Highway 1.

(iii) The effect of an activity on the open amenity of the rural area

6.7.15 Residential Units

(i) The cumulative effects of an increased density of residential development in this location

(iv) The extent to which a residential unit on the site affects the amenity and economic well-being of neighbouring properties.

(v) The degree to which amenities relating to the open nature of the environment are compromised.

6.7.21 Trees

The objectives and policies of the Trees Section

6.7.22 Indigenous Vegetation and Habitats

(i) The cumulative effects of the incremental loss or modification of areas of indigenous vegetation and habitats of indigenous fauna.

(ii) The potential for the enhancement of indigenous habitat or vegetation.

6.7.25 Landscape

The objectives, policies and assessment matters of the Landscape Section.

Comment

Whilst the site is within a Landscape Management Area, there is already rural residential development present and the proposed development will result in a minor extension of rural residential character in an area that is currently gorse covered and sandwiched between rural residential properties and bushland. As such, it will not significantly alter the character or amenity of the rural landscape or give rise to significant cumulative adverse effects. Mitigation measures are proposed to ensure that the visual impact of additional dwellings is minimal and that development has minimal adverse effect on rural character and the amenity of adjoining properties. There are significant positive effects associated with the proposal in that a large swathe of indigenous bushland will have enhanced legal and physical protection and that natural character enhancement measures will be carried out.

Landscape Section

Objective 14.2.3

Ensure that land use and development do not adversely affect the quality of the landscape.

Objective 14.2.4

Encourage the maintenance and enhancement of the quality of Dunedin's landscape

Policy 14.3.3

Identify those characteristics which are generally important in maintaining landscape quality in the rural area (as listed in part 14.5.3 of this section) and ensure they are conserved.

Policy 14.3.4

Encourage development which integrates with the character of the landscape and enhances landscape quality

Assessment Matters

14.7.1 Visibility

The effects of the visibility of the proposed activity or development from the main public viewpoints.

14.7.2 Adverse Effects

The extent to which any adverse effects on the landscape can be avoided, remedied or mitigated

14.7.3 Sympathetic Siting and Design

The extent to which the activity or development is sympathetic to the forms, character and scale of the landscape in its siting and design.

14.7.4 Landscape Features and Characteristics

The extent to which the activity or development impacts upon the important landscape features and characteristics to be protected, preserved or conserved (identified in part 14.5 of this section) within the relevant landscape management area.

14.7.5 Compatibility of Scale and Character

The extent to which the activity or development is compatible with its landscape setting in terms of its scale and character

14.5.3 (c) (ii) Saddle Hill Landscape Conservation Area - Features and characteristics to be conserved.

- *The visual dominance of natural landform and other natural elements (such as remaining indigenous vegetation) over cultural or human-made landscape elements e.g. buildings or plantations.*
- *The extent, integrity, coherence and natural character of the major natural elements such as landform, streams and areas of indigenous vegetation.*
- *The extent and quality of views from the principal public routes and viewpoints.*
- *The skyline generally defined by natural elements.*
- *The following significant landform features listed in the NZ Geological Society Geopreservation Inventory for the Otago Region:*
  - *Saddle Hill.*

Comment

The development involves provision for four rural residential scale lots in an area that is currently gorse covered and adjacent to existing rural residential development. In my assessment, it will result in enhancement of the quality of the landscape and will integrate seamlessly with the existing character. This is because it will be carefully controlled to ensure that buildings nestle into a more dominant bushland setting and because the indigenous forest will be legally protected and managed to enhance its natural character values. Natural elements will remain strongly dominant and the mitigation measures proposed will ensure that any adverse effects on the natural character of the skyline as viewed from the south, are negligible.

Subdivision Section

18.6.1 Assessment Matters

(a) When considering subdivision applications:

- In the ... Landscape Management areas .... The Council will have regard to the objectives, policies and rules of those areas ...

(g) The appropriateness of retaining amenity planting or planting trees and other vegetation on the site to maintain or enhance the amenity of the area and the need for conditions relating to landscape planting and maintenance

(h) ...In Landscape Management Areas, the appropriateness of identifying a "Landscape Building Platform", which may include:

- *Restrictions on floor area and height of buildings and associated site development and*
- *Requirements for landscaping the site*

(m) Property access to and within subdivision including:

- *Any impact of roading and access on water bodies, ecosystems, drainage patterns and the amenities of adjoining properties.*

(q) Lot Size and Dimension including:

- *The siting of each allotment in terms of the topography*
- *The effects that the layout and access have on the landform*

(s) Natural Character and Heritage Values, including:

- *Whether subdivision enhances the retention of the character and values of these features*

Comment

I believe that it is appropriate (and necessary) to require planting, identify building platforms and to impose conditions to enforce the recommended mitigation measures, in order to ensure acceptable integration with the landscape and to conserve natural character and rural amenity values. The subdivision design ties in well with the land use pattern in the adjacent rural residential zone, minimizes fragmentation of the area of bushland, and the boundaries are located to relate to the landform. Development is proposed on the gentle spur tops and there will be no significant adverse effects on water courses, landform or ecosystems. In my assessment, the proposal will result in significant enhancement of the natural character of the bushland.

Dunedin City 2GP

Under the Proposed Dunedin City District Plan (2GP), the site is within the Rural Coastal Zone but is excluded from the Saddle Hill SNL overlay. Rule 16.7.4 in the 2GP requiring a minimum site size in this zone of 40ha has immediate effect so must be considered along with the Operative Plan provisions. Because the 2GP is at an early stage in the submission and decision making process, limited weight should be given to it.

The objectives and policies in the 2GP that are relevant to the landscape and visual effects of this proposal, along with brief comment, are outlined below:

Rural Zones

Objective 16.2.2

The potential for conflict between activities within the rural zones, and between activities within the rural zones and adjoining residential zones is minimized through measures that ensure:

- *The potential for reverse sensitivity effects from more sensitive land uses (such as residential activities) on other permitted activities in the rural zones is minimized*
- *The residential character and amenity of adjoining residential zones is maintained; and*
- *A reasonable level of amenity for residential activities in the rural zones.*

Policy 16.2.2.3

Require all new buildings to be located an adequate distance from site boundaries to ensure a good level of amenity for residential activities on adjoining sites.

Objective 16.2.3

The rural character values and amenity of the rural zones are maintained or enhanced, elements of which include:

A predominance of natural features over human made features;

A high ratio of open space, low levels of artificial light, and a low density of buildings and structures;

Buildings that are rural in nature, scale and design, such as barns and sheds;

A low density of residential activity, which is associated with rural activities;

A high proportion of land containing farmed animals, pasture, crops and forestry;

Significant areas of indigenous vegetation and habitats for indigenous fauna; and

Other elements described in the character descriptions of each rural zone located in Appendix A7.

Policy 16.2.3.1

Require buildings, structures and network utilities to be set back from boundaries and identified ridgelines, and of a height that maintains the rural character values and visual amenity of the rural zones.

Policy 16.2.3.2

Require residential activity to be at a density that maintains the rural character values and visual amenity of the rural zones.

Policy 16.2.3.8
Only allow subdivision activities where the subdivision is designed to ensure any associated future land use and development will maintain or enhance the rural character and visual amenity of the rural zones

Policy 16.2.3.9
Require activities to be designed and operated to ensure that adverse effects from light spill on rural character and amenity, and the ability of people to view the night sky, would be insignificant.

Comment

The amenity of properties in the area adjacent to the site will be well protected by a combination of the mitigation measures proposed as well as features of the site itself. These include the siting of the building platforms to provide appropriate setbacks from boundaries, the falling landform, proposed building height and colour controls, and measures to protect rural character and screen plantings. As discussed, whilst the proposal adds another four dwellings to the area and extends the extent of the rural residential landscape to a small extent, the mitigation measures will ensure minimal visual impact of buildings and the natural character of the bushland will be enhanced and better protected.

The 2GP includes a ridgeline notation in this vicinity that appears to be incorrectly mapped, as it is located below the ridgeline of the hills to the north of this property, and is discontinuous. Effects of the proposed development on the natural character of the ridgeline and the skyline as viewed from lower viewpoints, will be minimal. This is because there is already rural residential development in this area and the proposal will have less impact than what is existing due to the mitigation measures proposed. The proposal potentially impacts the skyline defining the wider coastal landscape in the Brighton area, but any effects on natural ridgeline character will be negligible due to the combination of viewing distances, height and colour controls and the dominant bushland setting.

It is my assessment that the proposed development will integrate well with the character of its setting, given the adjacent rural residential land use. It also supports the maintenance and enhancement of the natural values of a large area of indigenous

forest. Any effects of additional lightspill will be minimal given the density of existing housing in the area.

Saddle Hill Significant Natural Landscape

The 2GP provisions in relation to the Saddle Hill SNL are not technically relevant, given that the plan does not include this property within the SNL overlay. It is my opinion however that the attributes of the property are such that it should have been included, and that its exclusion may have been the result of a mapping error. This being the case, it is appropriate to make a few comments in relation to the Saddle Hill SNL provisions in the proposed plan. The relevant objectives and policies are as follows:

Objective 10.2.5
Outstanding Natural Features (ONFs), Outstanding Natural Landscapes (ONLs) and Significant Natural Landscapes (SNLs) are protected from inappropriate development and their values, as identified in Appendix A3, are maintained or enhanced.

Policy 10.2.5.11
Only allow subdivision activities in Outstanding Natural Feature (ONF), Outstanding Natural Landscape (ONL), and Significant Natural Landscape (SNL) overlay zones where the subdivision is designed to ensure that any future land use or development will maintain the landscape values identified in Appendix A3 and will be in accordance with policies 10.2.5.1 – 10.2.5.9.

The values for this area listed in Appendix A3 can be summarized as the distinctive volcanic landforms, natural character associated with forest remnants, the manawhenua associations with Saddle and Jaffray Hills (previously discussed) and the values ascribed to the upper slopes of the hills, the natural character of the skyline, and the natural character and rural amenity values associated with the highly visible upper slopes.

The proposed development will have no effect whatsoever on the volcanic hill forms and any effect on the natural character of the skyline and rural amenity values of the upper hill slopes will be negligible, as previously discussed. The indigenous forest on the property will be better protected, and its natural character considerably enhanced. It is

my assessment that the proposed development is consistent with conservation of the SNL values.

Conclusion

The property is located on the upper southern slopes of the coastal hills behind Ocean View and Brighton. The landscape significance of this area is recognized by the Saddle Hill Landscape Conservation Area, and the Saddle Hill Significant Natural Landscape overlays in the operative and proposed Dunedin City District Plans, respectively. These overlays essentially seek to conserve the natural character, rural amenity, and cultural values of the upper hill slopes.

The proposed development involves the subdivision of the property to create four undersized rural lots adjacent to Saddle Hill Road and an existing area of rural residential land use. The lots proposed, are similar in scale to the rural residential sections adjacent and the application essentially represents a minor extension of the existing rural residential character into a presently gorse covered area between Saddle Hill Road and a large swathe of regenerating indigenous forest. A comprehensive suite of mitigation measures are proposed, to ensure that development has minimal adverse effect on natural character and rural amenity values. A significant positive effect of the proposed development will be the better protection and management to enhance natural values, of approximately 56 ha of regenerating forest.

It is my assessment that the landscape and visual effects of the development will be no more than minor, or positive. I believe that it is generally consistent with the relevant objectives and policies in the Operative Dunedin City District Plan and the 2GP, as far as landscape and visual effects are concerned.

Mike Moore

Landscape Architect

References

Hayward B W and Kenny J A, 1998, Inventory and Maps of important geological sites and landforms in the Otago region, Geological Society of New Zealand Miscellaneous Publication 99.

Wildland Consultants Ltd, 2016, Ecological assessment of a proposed rural subdivision at 505 Saddle Hill Road, Dunedin.

Appendix A : Recommended indigenous species for planting, Lots 1 – 4.

Botanical name	Common name
Acaena novae-zelandiae	Bidibidi
Asplenium bulbiferum	Hen and chicken fern
Asplenium flabellifolium	Necklace fern
Aristotelia serrata	Wineberry
Astelia fragrans	Kakaha
Blechnum chambersii	Lance fern
Blechnum discolor	Crown fern
Blechnum fluviatile	Kiwakiwa
Blechnum pennamarina	
Blechnum procerum	Kiokio
Carpodetus serratus	Putaputaweta
Clematis paniculata	Puawananga
Coprosma crassifolia	
Coprosma dumosa	
Coprosma linariifolia	
Coprosma lucida	Shining karamu
Coprosma propinqua	Mingimingi
Coprosma rhamnoides	
Coprosma rotundifolia	
Cordyline australis	Cabbage tree
Dacrydium cupressinum	Rimu
Dianella nigra	Turutu
Fuchsia excorticata	Tree Fuchsia
Griselinia littoralis	Broadleaf
Hebe salicifolia	Koromiko
Kunzea robusta	Kanuka
Leptospermum scoparium	Manuka
Libertia ixioides	Mikoikoi
Melicytus ramiflorus	Mahoe
Myrsine australis	Mapou
Phormium tenax	Flax
Pittosporum eugenoides	Lemonwood

Pittosporum tenuifolium	Kohuhu
Podocarpus laetus	Halls totara
Polystichum vestitum	Prickly shield fern
Prumnopitys taxifolia	Matai
Pseudopanax colensoi	Three finger
Pseudopanax crassifolius	Lancewood
Pseudowintera colorata	Horopito
Schefflera digitata	Pate
Uncinia uncinata	Hooked sedge

Appendix B : Screen planting specification, proposed Lots 1 – 4.

The following species are to be planted within the 6m wide 'indigenous screen planting' strip shown in Figure 9(a) to provide screening and mitigation of the visual effects on rural character, of residential development on proposed Lots 1 – 4. The species included have been selected to ensure final plant height is not so great as to create significant shading to the building platforms.

Botanical name	Common name	% of planting
Austroderia richardii	Toetoe	10
Carpodetus serratus	Putaputaweta	5
Coprosma lucida	Shining karamu	5
Coprosma propinqua	Mingimingi	5
Cordyline australis	Cabbage tree	10
Fuchsia excorticata	Tree Fuchsia	5
Griselinia littoralis	Broadleaf	5
Hebe salicifolia	Koromiko	5
Leptospermum scoparium	Manuka	5
Myrsine australis	Mapou	5
Olearia fragrantissima		5
Phormium tenax	Flax	10
Pittosporum tenuifolium	Kohuhu	10
Pseudopanax colensoi	Three finger	5
Pseudopanax crassifolius	Lancewood	5
Schefflera digitata	Pate	5

Planting maintenance and management

1. Where required, fencing should be carried out to protect the areas to be planted from grazing by stock.
2. The areas to be planted are to be sprayed to kill existing grasses using a non-residual systemic herbicide.
3. Planting densities are to be approximately 1.5m
4. Plant grades are to be Pb3 or equivalent, minimum.

5. One slow release fertilizer tablet will be used per plant.
6. A circle of mulch (100mm deep woodchip or sacking or similar) is to be applied around each plant to assist in plant establishment and weed suppression.
7. The area around each plant is to be maintained weed free until well established by hand weeding or spraying where this is possible without adversely affecting the plants.
8. Plants should be watered as / if required during dry spells until well established.
9. Survival should be monitored and any dead plants replaced immediately. Animal pests should be controlled and if required, plants should be provided with an eco-shelter for protection against rabbit and possum browse.
10. The plantings are to be managed to ensure their ongoing health and vitality, and that their screening / mitigating function is maintained.

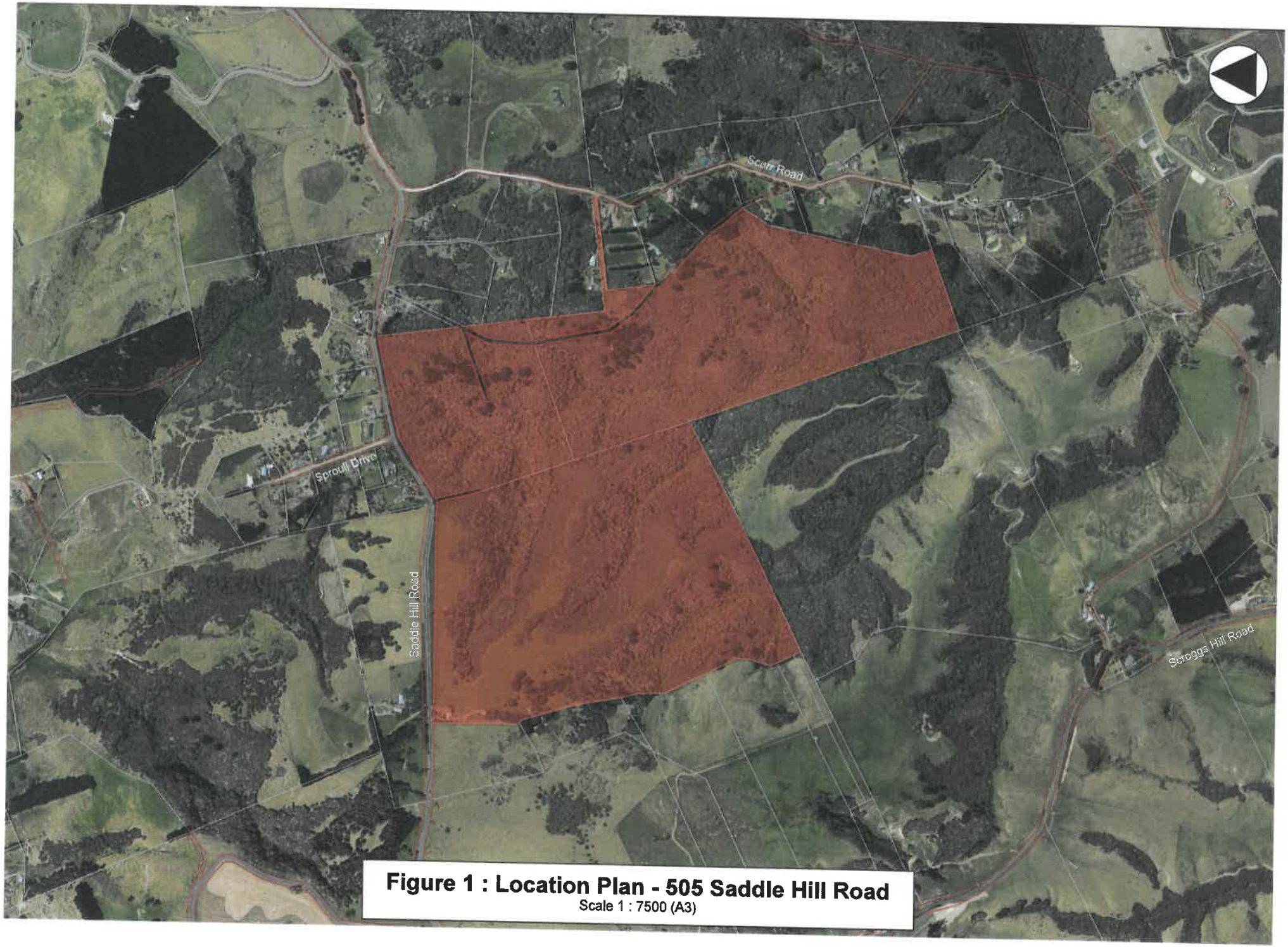

Figure 1 : Location Plan - 505 Saddle Hill Road
Scale 1 : 7500 (A3)

Figure 2 : Oblique Aerial view over 505 Saddle Hill Road

Figure 3 : View westward along Saddle Hill Road from its intersection with Sproull Drive

Figure 4 : View eastward along Saddle Hill Road from its intersection with Sproull Drive

Figure 5 : View westward toward the property from approximately 840m to the east on Saddle Hill Road.

Figure 6 : View westward toward the property from the Saddle Hill Road, Scurr Road intersection

Figure 7 : View eastward toward the subdivision site from approximately 420m to the west on Saddle Hill Road

Figure 8 : View northward toward the site from Scroggs Hill Road near Brighton

Figure 7 : View eastward toward the subdivision site from approximately 420m to the west on Saddle Hill Road

Figure 8 : View northward toward the site from Scroggs Hill Road near Brighton

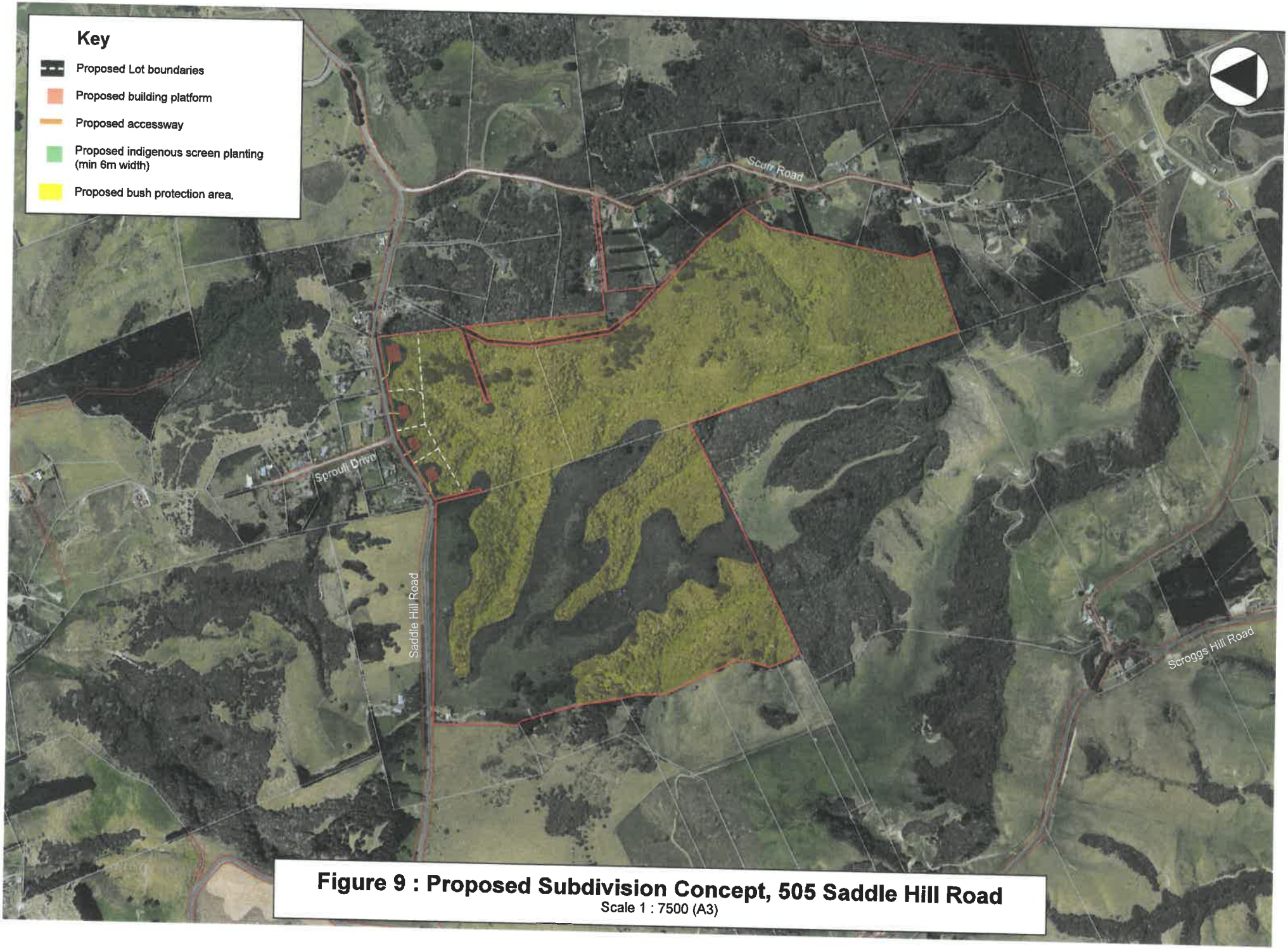

Figure 9 : Proposed Subdivision Concept, 505 Saddle Hill Road
Scale 1 : 7500 (A3)

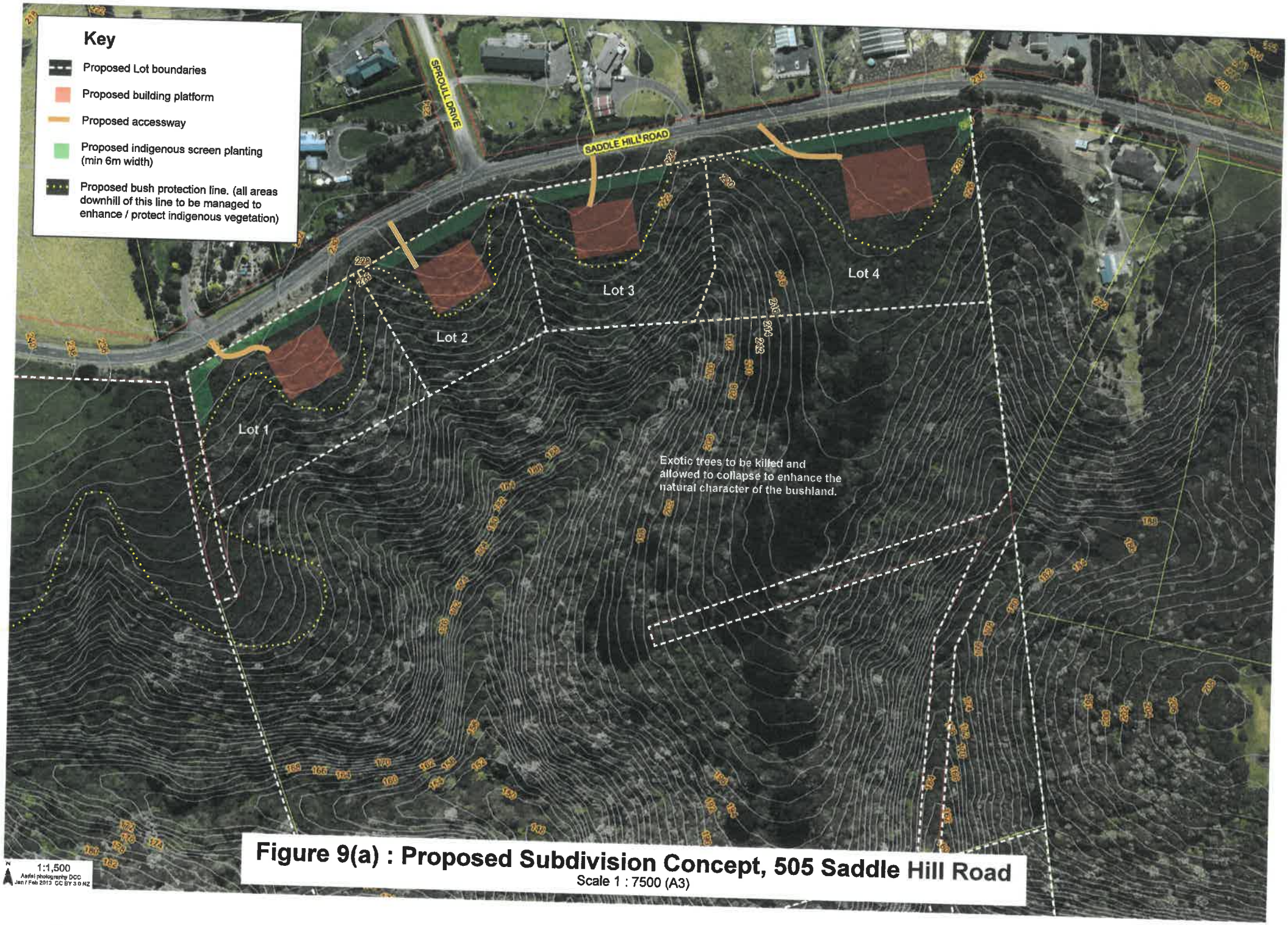

Figure 9(a) : Proposed Subdivision Concept, 505 Saddle Hill Road

Scale 1 : 7500 (A3)