Annexure Five: Transport Assessment

novogroup

Planning · Traffic · Development

Transportation Assessment prepared for

Park Lane Estates Ltd

1535 Main South Road, Rolleston

April 2013

Land Use Consent Application prepared for

Park Lane Estates Ltd

1535 Main South Road, Rolleston
April 2013

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INTRODUCTION

1. Park Lane Estates Ltd has commissioned Novo Group to prepare a Transportation Assessment (TA) for the proposed rural residential development at 1535 Main South Road, Rolleston.

2. This report provides an assessment of the transportation aspects of the proposed development. It also describes the traffic environment in the vicinity of the site, describes the traffic related components of the proposal and identifies compliance issues with the traffic provisions in the City Plan. It has been prepared broadly in accordance with the Integrated Transportation Assessment Guidelines specified in New Zealand Transport Agency Research report 422, November 2010.

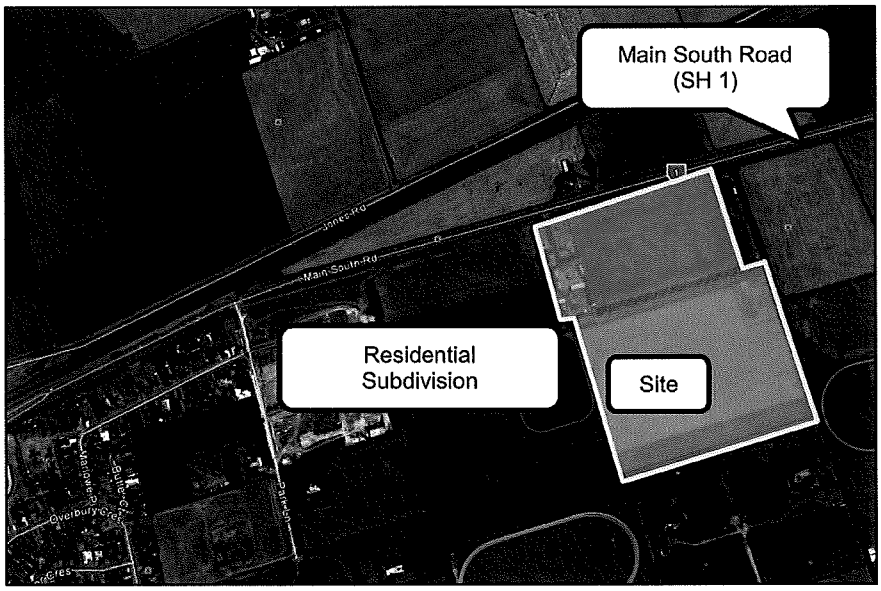
THE PROPOSAL

3. It is proposed to rezone the site at 1535 Main South Road for rural residential use. The site is currently zoned ***Rural Inner Plains*** and ***Living 2 zoning*** is sought. This is anticipated to enable development of approximately 36 rural residential allotments.

4. The proposed road network will connect to two new roads being created as part of the Park Lane Estates residential development[1] to the west of the site. These roads generally run east-west across the site. Two roads on a north-south alignment are also proposed as well as a short culs de sac to service around 6 properties located centrally within the site.

THE TRAFFIC ENVIRONMENT

5. The application site has frontage to State Highway 1, however vehicle access will be via the residential zoned area immediately to the west of the site. The location of the site and surrounding road layout is shown in Figure 1 below.



[1] For more detail on the development to the west of the site refer to the District Plan, Township Volume, Part E – Appendix 38 and Outline Development Plans of areas 3 and 8.

Figure 1: Location of site and surrounding road network [source: Google earth]

Main South Road (SH1)

6. The site has frontage (but no vehicle access) to Main South Road which forms part of the State Highway network (SH1). Main South Road generally has one traffic lane in each direction however near the application site two lanes are provided in each direction providing a passing area. NZTA traffic volume counts indicate that SH1 is carrying around 19,900 vehicles per day (2012 count south of intersection with Weedons Ross Road).

Planned Road Network

7. A residential subdivision is currently being developed on the land west of the site. This includes provision of new local roads. These roads primarily connect to the surrounding collector / arterial roads (for example Levi Road). The remainder of the planned roads will be *Local* area and *Neighbourhood* type streets. The *local* area streets are able to accommodate future bus routes. Cycle lanes are proposed for the avenues (main roads connecting with collectors / arterials) with provision for shared use on other roads. Pedestrian access is primarily provided by the road network (footpaths on at least one side of the road) and supported by off-road paths, for example, through open spaces.

8. The outline development plans for the area to the west of the site are included in Part E - Appendix 38 of the District Plan (Township Volume). Areas 3 and 8 are relevant to this application. Figure 2 below shows extracts of the proposed road network of area 3 and 8.

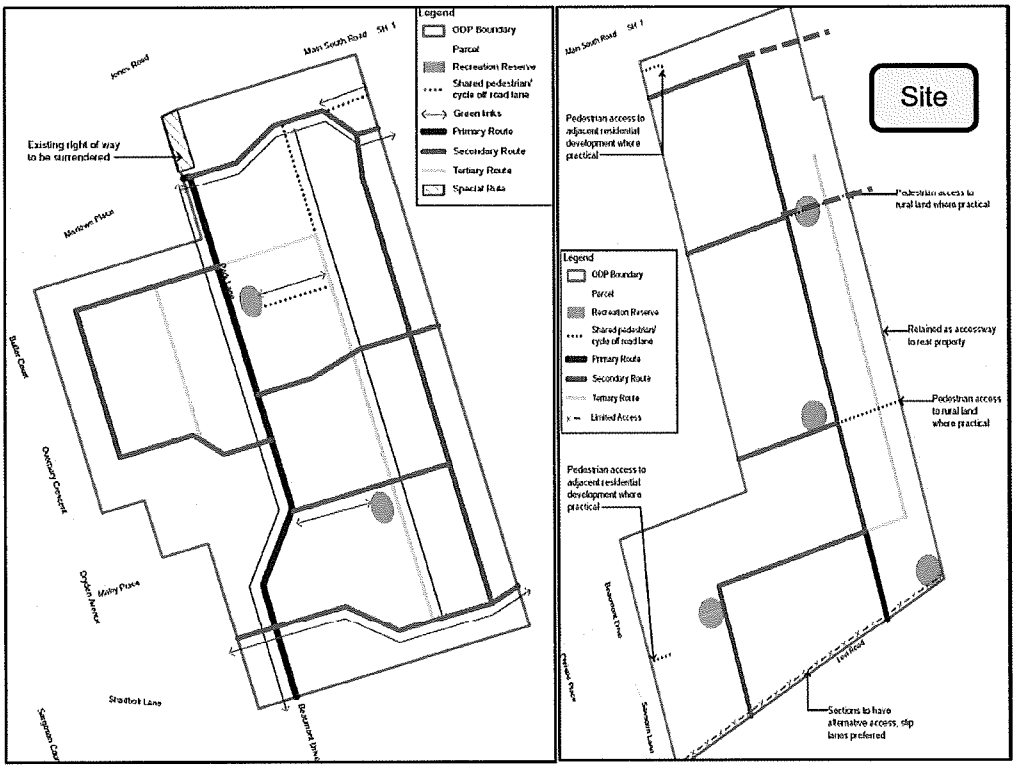


Figure 2: Outline development plans for adjoining residential development west of site

9. The northern end of this residential development is known as Park Lane Estates. The blue dashed lines on the top right corner of Figure 2 indicate the location of the two road connections to the proposed rural residential development (i.e., through Park Lane Estates).

10. Access for the proposed rural residential development will occur through this new residential development. Connections to the existing road network include Marlowe Place, Mahy Place, Shadbolt Lane, Beaumont Drive and Levi Road.

11. Access to the classified road network includes Levi Road (arterial road), Masefield Drive (collector), Rolleston Drive (collector), and Dryden Avenue (collector).

Public Transport

12. Two bus routes currently service Rolleston, including the 820 (Burnham / Lincoln) and the 88 (Rolleston). The closest bus stops are located on Rolleston Drive and Masefield Drive. Consideration has also been given to road design capable of accommodating future bus routes through the residential development west of the site. This will enable bus services to be provided closer to the site in the future.

Relevant Statutory Documents

13. A summary of the relevant statutory documents as they relate to this Plan Change is outlined below.

Regional Land Transport Strategy (RLTS) 2012-2042

14. The RLTS sets the direction for land transport in the Canterbury Region over the next 10 years. The RLTS is prepared under the requirements of the *Land Transport Act* 1998, as amended by the *Land Transport Management Act* 2003. The RLTS seeks the following outcomes:

- *Reduced greenhouse gas emissions from use of the domestic transport system.*
- *Improved land use and transport integration*
- *Reduction in fatal and serious injuries for all modes*
- *Improved health from increase in time spent travelling by active means*
- *Reduced community exposure to vehicle pollutants, noise and vibration.*
- *Increased proportion of the population travelling by active means.*
- *Increased energy efficiency per trip.*
- *Connectedness is enhanced.*
- *Increased travel choices for households to access urban and suburban centres*

Canterbury Regional Policy Statement (RPS)

15. The RPS provides an overview of significant regional resource management issues and the identification of policies and methods to achieve integrated, sustainable management of natural and physical resources within the region. The following objectives are of particular relevance:

Objective 5.2.3 – Transport network (Wider Region)

A safe, efficient and effective transport system to meet local regional, inter-regional and national needs for transport, which:

(1) supports a consolidated and sustainable urban form;

(2) avoids, remedies or mitigates the adverse effects of transport use and its provision;

(3) provides an acceptable level of accessibility; and

(4) is consistent with the regional roading hierarchy identified in the Regional Land Transport Strategy.

Policy 5.3.1 – Regional growth (Wider Region)

To provide, as the primary focus for meeting the wider region's growth needs, sustainable development patterns that:

(1) ensure that any (a) urban growth; and (b) limited rural residential development occur in a form that concentrates, or is attached to, existing urban areas and promotes a coordinated pattern of development;

(3) promote energy efficiency in urban forms, transport patterns, site location and subdivision layout;

Policy 5.3.7 – Strategic land transport network and arterial roads (Entire Region)

In relation to strategic land transport network and arterial roads, the avoidance of development which:

(1) adversely affects the safe efficient and effective functioning of this network and these roads, including the ability of this infrastructure to support freight and passenger transport services; and

(2) in relation to the strategic land transport network and arterial roads, to avoid development which forecloses the opportunity for the development of this network and these roads to meet future strategic transport requirements.

Policy 5.3.8 –Land use and transport Integration (Wider Region)

Integrate land use and transport planning in a way:

(1) that promotes:

(a) the use of transport modes which have low adverse effects;

(b) the safe, efficient and effective use of transport infrastructure, and reduces where appropriate the demand for transport;

Recovery Strategy for Greater Christchurch

16. The Recovery Strategy for Greater Christchurch (the Recovery Strategy) prepared by CERA under the Canterbury Earthquake Recovery Act became operative on 1 June 2012. It is a statutory document that must be "read together with, and forms part of" other relevant legislation within the greater Christchurch area. The City and District Plans (and a number of other statutory documents) must not be interpreted or applied in a way that is inconsistent with the Recovery Strategy. Only Sections 3-8 of the Strategy have statutory effect.

17. The Recovery Strategy sets out the vision, supporting goals, and priorities for the recovery of Greater Christchurch. The following goals are of particular relevance:

5. Develop resilient, cost effective, accessible and integrated infrastructure, buildings, housing and transport networks - by:

5.4 developing a transport system that meets the changed needs of people and businesses and enables accessible, sustainable, affordable and safe travel choices;

5.5 zoning sufficient land for recovery needs within settlement patterns consistent with an urban form that provides for the future development of greater Christchurch;

5.6 having a range of affordable housing options connected to community and strategic infrastructure that provides for residents participation in social, cultural and economic activities; and

Land Use Recovery Plan

18. The land use recovery plan contains several provisions relating to rural residential development including the following which are of relevance to transport.

Issue 6.1.6 - Rural residential impacts

Rural-residential development, if unconstrained, has the potential to change the character of rural areas and to create adverse effects on established rural, farming (including agricultural research farms) and quarrying activities through reverse sensitivity. It also can result in dispersed settlement patterns and the inefficient provision of services.

Explanation:

Many of the rural western areas of Greater Christchurch remained undamaged during the earthquakes and are also located out of the area identified as being prone to liquefaction, making them more desirable locations to live. However, rural residential development is associated with reverse sensitivity effects and can also give rise to requests for the extension of urban services and exacerbates dispersed settlement patterns, leading to inefficient use of infrastructure and impacts on rural production. This can lead to pressures for future urbanisation, which is difficult to achieve in an effective manner given that the land use pattern has been established for a different purpose.

Objective 6.2.4 – Integration of transport infrastructure and land use

Ensure that the planning of transport infrastructure is prioritised so that it maximises integration with the priority development areas and new settlement patterns and facilitates the movement of goods and provision of services in Greater Christchurch, while: (1) managing network congestion; (2) reducing dependency on private motor vehicles; (3) reducing emission of contaminants to air and energy use; and (4) promoting the use of active transport modes.

Principal reasons and explanation:

Land use patterns that are integrated with transport infrastructure minimise energy use through network optimisation, operation and maintenance, and provide for the social and economic wellbeing of the community, and peoples' health and safety. Recovery development that is not well integrated with transport infrastructure can result in increased car dependency, higher energy use, greater traffic volumes, and inefficient freight movement.

Discussion

19. The site is located along the eastern edge of the Rolleston township and can be serviced through existing and new roads within the urban area. This makes efficient use of transport infrastructure to accommodate the demand for rural residential growth.

20. The development of rural residential growth on the outskirts of the township will enable future residents easy access (by car and active modes) to the economic goods and services, and social / cultural activities within the Rolleston township. The site represents consolidation of rural residential growth around the urban limit, reducing the amount of travel between rural residential areas and destinations within townships. Residents will be within 2-3 km of the Rolleston town centre which makes travel by cycle and other active transport modes feasible. It will also enable reasonable access (closest existing route within approximately 2km) to public transport services for travel within the region (including to and from Christchurch City). As shown in Figure 2 the location of the site is such that the proposed road network is well integrated with the existing and planned road network servicing the Township.

21. The location of rural residential growth around the township also avoids the need for new connections to the State Highway (or any rural arterial roads) enabling optimisation of and efficient planning for expansion of the strategic road network. This site also consolidates rural residential growth on the same side of the State Highway (and main south rail line) as the existing township.

22. Overall the proposed plan change is therefore considered to be generally consistent with the above aspects of the relevant statutory documents.

DISTRICT PLAN PROVISIONS

23. The site is currently located in the ***Inner Plains zone*** as specified on Planning Map 13 in the District Plan. It is proposed to rezone the site for rural-residential purposes.

24. It is noted that any residential development on the proposed allotments could comply with all the relevant transport related requirements of the District Plan. This includes adequate parking, access and manoeuvring for each new property. Failure to comply with any of these standards would result in the requirement for additional resource consent approval to be considered separately to the Plan Change application that is the subject of this report.

Objectives and Policies

25. Section 32 of the Resource Management Act requires an assessment of whether the proposed methods are the most appropriate way in which to efficiently and effectively achieve the objectives of the Plan. The objectives and policies relating to transportation aim to provide for a more sustainable land transport system, better urban form and to cater for future transport networks. They place a strong emphasis on integration between transport and land use; promotion of multiple transport modes, including active transport (cycling and walking) and public transport; and ensuring good connectivity between existing and proposed development areas.

26. Key relevant objectives and supporting policies are outlined below.

Objective B2.1.1
An integrated approach to land use and transport planning to ensure the safe and efficient operation of the District's roads...is not compromised by adverse effects from activities on surrounding land or by residential growth.

Objective B2.1.2
An integrated approach to land use and transport planning to manage and minimise adverse effects on the transport networks on adjoining land use, and to avoid "reverse sensitivity" effects on the operation of transport networks.

Policy B2.1.2
Manage effects of activities on the safe and efficient operation of the District's existing and planned road network, considering the classification and function of each road in the hierarchy.

Policy B2.1.5
Ensure the development of new roads is:
— integrated with existing and future transport networks and landuses; and
— is designed and located to maximise permeability and accessibility; through achieving a high level of connectivity within and through new developments to encourage use of public and active transport; whilst having regard to the road hierarchy.

Policy B2.1.12
Address the impact of new residential or business activities on both the local roads around the site and the District's road network, particularly Arterial Road links with Christchurch City.

27. The site is located along the eastern edge of the Rolleston township and can be serviced through existing and planned transport network which makes efficient use of transport infrastructure to accommodate the demand for rural residential growth. This will ensure good access to the goods, services and facilities within the Rolleston township. No access is proposed to Main North Road (SH1) which will protect the safety and efficiency of the State Highway.

28. The objectives and policies outlined above form the basis for the following assessment of effects.

ASSESSMENT OF EFFECTS

29. An application for a zone change enables all potential effects to be considered. In terms of traffic related issues, these effects relate to issues such as the geometric layout of the site and the effects of site generated traffic on the capacity of the surrounding road network.

30. On this basis the following assessment of effects will consider:

- The daily and peak hour volume of traffic estimated to be generated by the proposal and its distribution onto the surrounding road network; and
- The ability of the surrounding road network to cater for increased traffic flow.
- Design and layout of the ODP and connection with the adjoining transport network.

Daily Traffic Generation

31. It is understood that rural residential development of the site would result in approximately 36 allotments.

32. There is a substantial library of research on the traffic generation of residential developments. This data reveals a range of 6-14 trips per day per dwelling unit.

33. The traffic generation research indicates that the trip generation per dwelling unit is influenced by proximity to non-residential activities (shopping, schools, work places and general entertainment and other amenities), and the separation distance from the primary commercial district for the wider area (research indicates that increased separation distance from a major CBD results in more trip linking and a lower overall generation rate per dwelling unit). The location of the site on the edge of the Rolleston Township suggests that the bulk of dwellings will encompass a range of residential travel patterns (including some commuting to and from Christchurch), and therefore a generation rate of 8 (or less) trips per day per unit is considered appropriate.

34. It therefore follows that the site with say 36 rural residential allotments could generate around 288 vehicle trips per day (36 allotments x 8 trips each per day = 288). Peak hour traffic generation is typically around 10 percent of the daily traffic, in order to be conservative a peak hour traffic generation rate of 1 trip per allotment is adopted. This suggests around 36 trips in the peak hour.

35. This peak hour generation is likely to be tidal in nature where most of the peak hour traffic would be exiting the subdivision during the morning peak hour and then returning during the evening peak hour.

Road Network

36. All vehicle access is through the residential development to the west of the site as shown in Figure 2 above. This avoids the creation of any new road intersections with Main South road (SH1).

37. Connections to the existing road network include Marlowe Place, Mahy Place, Shadbolt Lane, Beaumont Drive and Levi Road (all connected via new roads to be created as part of the residential development of the land to the west of the site).

38. Access to the classified road network includes Levi Road (arterial road), Masefield Drive (collector), Rolleston Drive (collector), and Dryden Avenue (collector).

39. Given the location of the site relative to the town centre and the closest intersection with SH1 it is likely that most trips will occur through Marlowe Place, Dryden Avenue and Rolleston Drive. Given the collector road status of both Dryden Avenue and Rolleston Drive, this is considered to be an appropriate route.

40. It is likely that this route will also be used by future residents in Areas 3 and 8, particularly those located towards the northern end of the development. It is difficult to estimate future traffic volumes on these roads however for the purposes of this assessment it is conservatively estimated that these areas could accommodate around 720 households (assuming around 72ha and 10 households per ha). This would equate to some 720 trips in the peak hour (using the assumption above that peak hour traffic will equate to one trip per household). If it is assumed that around one third to one half of trips occur via the Dryden Avenue route (240-360 trips) then it is clear that the 38 trips in the peak hour associated with the proposed rural residential development are unlikely to be noticeable above that of the residential traffic from Areas 3 and 8.

41. Even when existing traffic volumes on these roads are allowed for (CAS estimate of 1,600vpd (assumingly 160 vph) on Dryden Avenue near intersection with Rolleston Drive) it is noted that traffic volumes would remain relatively low (160 vph existing + 360 vph Areas 3 and 8 + 38 proposed = 558 vph) and well below the physical capacity for a two lane road (around 1,800 vehicles per hour).

42. This level of traffic is not significant in the context of anticipated traffic volumes on collector roads.

43. The intersection of Dryden Avenue and Rolleston Drive is a T intersection and is stop controlled on Dryden Avenue. Dedicated right and left turn lanes are provided on Rolleston Drive. This is considered to be an appropriate design and layout for the intersection of two collector roads.

Design and Connection

44. The proposed road layout includes two road connections to the west which connect to the Area 3 and 8 developments. These are linked by two north-south roads. This provides good access to all future allotments. The provision of two road connections to the adjoining road network provides a degree of resilience in terms of enabling access in the event that one of the road connections is temporarily damaged or blocked.

45. The two roads provide a continuation of roads within the northern part of the adjoining Area 3 development (Park Lane Estates). This avoids the need for new intersections onto the adjoining roads. Two 'T' intersections will be created within the rural residential development. These will be able to meet the sight distance and separation requirements of the District Plan (assuming a future speed limit of 80 km/h or less).

46. The internal roads will be designed and formed in accordance with the District Plan standards for rural residential roads (Living 2 zone) as specified in Table E13.8 including a legal width of 18-20 metres, and a carriageway width of 6.0-6.5 metres. This legal and formed width will be sufficient to cater for the likely traffic volumes and site access and will be sufficient to accommodate the more detailed design aspects which are determined at subdivision stage.

CONCLUSIONS

47. The proposal to rezone the site at 1535 Main South Road for rural residential use would result in around 36 allotments equating to around 288 vehicle trips per day and around 36 trips in the peak hour. The proposed road layout is sufficient to cater for all likely traffic generation and provide efficient property access. The site has two road connections to residential development located west of the site. This provides suitable access to the wider road network and particularly to existing collector roads such as Dryden Avenue and Rolleston Drive.

48. The site is located along the eastern edge of the Rolleston township and can be serviced through existing and planned transport network which makes efficient use of transport infrastructure to accommodate the demand for rural residential growth.

49. The development of rural residential growth on the outskirts of the township will enable future residents easy access (by car and active modes) to the economic goods and services, and social / cultural activities within the Rolleston township. It will also enable reasonable access to public transport services for travel within the region (including to and from Christchurch City). The location of the site is such that the road network is well integrated with the existing and planned road network servicing the Township.

50. For the reasons outlined above any transport related adverse effects are considered to be less than minor and as such the proposal can be supported from a traffic perspective.

Annexure Four: Landscape Report

PLAN CHANGE

COLES RURAL RESIDENTIAL SUBDIVISION, ROLLESTON

Landscape Assessment

Prepared by:
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17 April 2013

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Introduction

1. The Coles parcel of land at Rolleston requires a Plan Change to become rural-residential land. This land is located east of Park Lane subdivision and south of SH1.

2. This landscape assessment is required to determine the effects of rezoning Lot 4 to L3 (rural residential). The Selwyn District Council has not specified a lot size for the L3 zone, so the lot sizes will be determined by the Outline Development Plan. However, Proposed Change 1 to the Canterbury Regional Policy Statement and the Draft Land Use Recovery Plan specify that rural residential lots must average between 1-2 dwellings per hectare. A complete description of the proposal is set out in the Plan Change Request document.

Rural Character

3. The rural landscape character for the surrounding area of Rolleston is typical of the Canterbury Plains landscape. It is a simple composition of hedgerows and shelter belts (mainly conifers, eucalyptus and poplars), homesteads, farm dwellings and sheds surrounded by shelter belts and large trees, flat and open fields of pasture and crops. Roads are generally straight, linear and directional.

4. Common to the home block is a tree-lined driveway from which one enters a more gardenesque landscape in contrast to the landscape beyond the dwellings.

5. It is a very simple and uncluttered landscape yet utilitarian and well defined to meet the conditions of the plains. There is also little elaboration to the simplicity of the landscape and the geometry is based around fence alignments.

6. This is the landscape one encounters in the area between Park Lane and Weedons Road, and SH1 and Levi Road. It is therefore important that any relevant landscape elements be retained for the development, but more importantly that such elements as shelter belts, large trees, open fences and hedges be incorporated into the subdivision design, thereby reinforcing the landscape character of the existing rural environment.

Site Context and Character

7. As with most of the rural land surrounding Rolleston it is flat and open punctuated by the depressions of old river courses and shelter belts. Pastoral farming, cropping and isolated farm dwellings surrounded by shelter belts completes the picture of this typical plains landscape.

8. There are no unique features about the location other than this land and its activities contribute to the overall pattern of the Canterbury Plains.

9. This Coles site is on the perimeter of Rolleston township. The site is open pasture with a dwelling and farm sheds near to SH1. From the highway half the site is highly visible with panoramic views to adjacent land, where the land use activity is of a similar type.

10. Currently this rural land abuts the Coles residential site where smaller residential lots and reserves have been proposed.

Proposed Plan Change

11. The proposed rezoning and ODP will result in an alteration to the existing rural environment. The existing house adjacent to SH1 will

remain but everything else will be removed or change its use. The average lot size will be 5000m^2 and they range from 2500m^2 to 1.05ha.

12. Shelter trees do exist on the site. Macrocarpa trees perform this function adjacent to the existing house and farm buildings. However, these will be removed because they are considered to be inappropriate trees for the close proximity to the proposed location of houses. The only other shelter trees is a belt of poplars aligned in an east-west direction, located part way within the site. Many of these trees will be retained because they are located on new allotment boundaries.

13. Generally the larger lots are located within the centre of the subdivision, these being located within the internal roading structure. The outer allotments on the south and east sides of the subdivision will all have a rural outlook. To the north, trees along SH1 will screen the development from travellers, while on the west side the proposed residential development of the Coles block will be apparent.

14. The roading network consists of a ring road with two entrance and exit points. All road reserves are 18m in width within which will be a carriageway (8 to 10m), stormwater swale, grass berm and tree planting. Although there are no reserves the amenity component of the subdivision rests with each allotment having sufficient open space, trees and setback to create an impression of rural character, as well as some allotments having views over rural land.

15. Some large poplar trees will be retained around the existing house, but the existing shelter belts will be removed. Due to the large allotment size, there is potential for many trees within the allotments. Within the road environs the applicant will plant trees such as oak, plane, elm and poplar, all of which are hardy to the Rolleston conditions, of large dimension and assist to capture the rural

character within the subdivision. These trees, wide berms, plus the generous setbacks of houses will give a relaxed impression to the street scene.

16. Adjacent to SH1 a strip of approximately 20m wide will be planted with poplar and oak trees to give a bucolic appearance to the subdivision for passing motorists. This will augment the existing line of oak trees which currently screens views into the proposed subdivision. The appearance of the allotments will be controlled by numerous provisions for rural residential subdivision. These will include building height, site coverage and boundary setbacks, boundary fencing, and the road reserve appearance.

17. The allotment size in many ways determines the amenity of the development. The large sized allotments will allow residents to have amenities of open space, privacy and seclusion from neighbours, views of the rural environment to the east and south from the larger peripheral allotments and large vegetable and amenity gardens.

Southern Motorway

18. The proposed southern motorway will join SH1 at the northeast corner of this subdivision. In order to safeguard the rural landscape amenity and character of the subdivision large trees will be planted as a shelter belt along the east boundary. This will maintain the visual outlook for the occupants of the allotments on the east boundary, and reduce the appearance of potential car movements.

Landscape and Visual Effects

19. The landscape and visual effects of the subdivision on the rural character and amenity of the surroundings will now be assessed.

20. We are mainly concerned about....."*the appreciation of pleasantness, aesthetic coherence and cultural and recreational attributes*" (s 7c). For this site relevant elements are openness, unimpeded long distance views, and a planar and geometrical appearance of the landscape.

21. The site will change from an open and pastoral space to a modified one of built structures. This development will form an appropriate transition to the rural land beyond. Given the very low residential density and open space, the natural character will still be a dominant feature. Those who will be affected by this change will be travellers on SH1, neighbours in Park Lane Estate and Coles residential block subdivision and adjacent rural properties.

22. A summary of the landscape and visual effects of these changes due to the proposed Plan Change will include the following:

    - Loss of some long distance views of a pastoral landscape
    - Creation of a modified landscape with built structures and associated driveways and roading
    - Removal of some shelter belts and grassland
    - New appearance of a more diverse landscape with the addition of large trees, gardens and lawns and roading
    - Soft landscape frontage to SH1 creating a foreground landscape for travellers to appreciate, as well as the retention of oak trees

23. Rural residential developments generally create a high amenity environment. Further, given the advent of time, say 7 to 10 years, the growth of trees and shrubs will partially screen and soften this rural residential development.

Viewpoints

State Highway 1

24. The main view to the site is gained from the state highway from both northerly and southerly directions. It is a 100km/h zone, and for the subdivisions length, and beyond, the view is only a filtered one for much of the year due to a long line of oak trees, spaced at 5.0m centres. The dense foliage from September to May assists to create this effect. The travellers view therefore is focused in a forward direction either on the trees or the road ahead, rather than experiencing lateral views across pastoral farmland or a potential subdivision. With the loss of leaves from the oaks trees in winter time then the view over the site is more apparent. This is a good reason why views should be even more filtered by large trees planted within the subdivision.

Coles Residential

25. From the future streets and allotments of the adjoining Coles residential (LZ) subdivision (west side of the proposed site) views will be gained of the site. The only direct views will be from those 15 allotments on the eastern boundary of the residential subdivision. These views will be punctuated by lawn, trees and shrubs and open space between houses allowing a more appealing amenity than in a residential subdivision. Otherwise the views will be from the connecting streets between the two subdivisions.

Other locations

26. There are no other public viewpoints, although views from two other houses on the periphery will be experienced.

27. On the northeast boundary of the subdivision adjacent to SH1 is a private house and allotment. Although there are shelter trees on the house sites western boundary, from upstairs within the house, views

will be gained over the adjacent proposed subdivision. However, the view will be out to two large sections of 1.05ha and 0.8ha. This will allow views between houses where trees, shrubs and lawns will exist. It will be a changed view from the current one the residents experience, but there will be a lot of open space which will result in a rural amenity, albeit with the addition of a built pattern of development.

Internal Effects

28. The landscape and visual effects occuring from within the subdivision will be determined by the elements of the development, such as allotments size, roading, setback of houses, street amenity, road width and berm treatment. As well, over a period of time, the effects of a greater density of buildings to what currently exists will be softened by leafy trees and developing gardens.

29. The internal appearance will include a number of very large allotments ranging from 3000m² to over 1ha. Generally there are large allotments on the periphery or the subdivision, these relating to the wider rural landscape.

30. The allotments will manifest themselves with a large amount of open space, generous setbacks from the internal road, a diversity of large trees and shrubs so as to soften and partially screen buildings, as well as assisting to integrate the development into the rural environment.

31. The outlook from the peripheral allotments could be either introspective, (lawns, trees, shrubs) or outward (to the rural land beyond), while the outlook from the centrally located sites will be more introspective. Having said that, the latter type allotments are of a good size. The central lots (located 'inside' of the internal road) range

from 4100m^2 – 6000m^2 with just one at 3500m^{2}This allows for a reasonable amount of open space with lawn, trees and gardens and will create a pleasant amenity for the occupants.

32. The outlook from the 6 allotments adjacent to the residential subdivision (western boundary) is of a lesser quality, mainly because of the smaller allotment size (2530 to 2960m²) and outlook to the west being into small allotments resulting in the close proximity of neighbours and the road. However, the allotment size is sufficient for large gardens with trees, shrubs and lawn. With a 20m setback of the house from the road the appearance from the internal road will be one of grass berms extending into the private allotments, giving a spacious appearance from the road.

33. The overall appearance and amenity from within the subdivision will be a pleasant and spacious environment in which to live. The built structures will be offset by lawns, trees and gardens within the allotments as well as the streetscape of large trees at regular intervals and wide berms.

34. The specific rules of the Plan Change are concerned with maintaining the rural character and amenity. The best method of achieving this is with appropriate landscape treatment on each allotment. This will assist to make the built structures recessive elements in the natural environment. The proposed framework planting of large rural type trees will reinforce allotment boundaries and road alignments, act like shelterbelts throughout the subdivision, reduce the overall visual appearance of the built environment and create a more comfortable environment in which to live. Large trees such as those outlined in Appendix 1 will assist to maintain a rural-residential appearance and the retention of the internal shelterbelt will give a ready-made rural character. Other methods that will contribute to creating this effect will be:

- 20m front yard setbacks
- 15m side and backyard setbacks
- Rural style fencing

35. These provisions will assist to reduce the visual appearance of buildings from the roadway and allow vistas to hills and mountains beyond and provide vegetation between buildings so as to create a more informal rural character with high visual amenity. This will be different to the regimented pattern of residential subdivision development.

Statutory Requirements

36. Under the Selwyn District Plan, Plan Change 32, the objectives and policies are set out for Rural-Residential development. The following is an assessment that shows that this Plan Change is consistent with Plan Change 32's approach to Rural-residential development.

37. Policy 3.4.3 (b) sets out a number of amenity outcomes that should exist in rural residential living areas:
    - Easy and safe traffic movement
    - Openness and rural character
    - Avoid the collective effects of high densities of built form
    - Avoid reserves, walkways etc
    - Avoid kerb and channel, paved footpaths, large entrance features and ornate street furniture and lighting, but promote wide berms
    - Fencing and hedging styles to respond to a rural vernacular.

38. All of these policies have been met with the design of the subdivision. The informality of the details will reflect the rural character such as open grassed swales for stormwater collection, wide grassed berms and an avoidance of footpaths, street furniture, reserves, dense

housing and entrance ways. The overall appearance will be simple and bold and lacking in ornate detailing.

39. The same applies to Rule 12.14, which sets out more detail for proposed rural residential subdivisions. Specific rules apply to the following design components:

- Maintenance of open space which contributes to rural character. Large setbacks (20m), grassed berms, generous spaces between houses (min. of 30m), large trees such as poplars, oaks, limes and large allotments are all components that will assist to maintain the ruralness of the location.
- Transparent fencing – boundary and internal fences could be post and wire or post and rail. This will allow the openness to continue throughout the subdivision, without it being segmented.
- That the overall housing density reflects the rural environment. Low density housing with an average allotment of 5000m² will allow components of the rural environment to be incorporated into this subdivision.
- Appropriate roading cross sections and typologies will be applied. These will be of an informal and rural nature with wide grass berms in which to incorporate stormwater swales and large trees. No kerb and channel and foot paths have been included in the design.
- Maintain existing vegetation where appropriate. Parts of the central shelter belt of poplars will be maintained so as to reduce the visual appearance of the whole of the subdivision, and to retain an element typical of the rural scene.
- The form and layout of the subdivision requires integration into its surroundings so as to retain view shafts into the rural landscape. By including rural landscape components (wide berms, generous housing setbacks, large trees, shelterbelts) then the built structures will become integrated and partially

screened to become recessive to the rural landscape. View shafts will exist between buildings and out to the rural landscape such as to the Port Hills in an eastward direction and long distance views to the mountain foothills. These long distance views will be retained from many allotments.

- Urban elements of ornate lighting, kerb and channel and footpaths will be avoided so as to maintain the simple and bold rural landscape character.
- Maintenance of rural-residential character by low density housing with the proposed average density being 5000m^2.
- To reduce potentially adverse landscape and visual effects. The southern motorway could contribute to this effect so to avoid this occurring dense planting along the eastern boundary will assist to reduce movement and glare.

Conclusion

40. A change in landscape character and amenity will occur to this parcel of land. The modification will be from an open pastoral landscape to a more built up environment. However, there will be a considerable amount of open land to incorporate elements that are prevalent in the surrounding rural environment such as large amenity trees and gardens, wide berms, shelter trees, farm fences and grassed stormwater swales.

41. Within a timeframe of 7 to 10 years the new landscape will soften, screen, and integrate the built elements. The development will be a transition between the residential development of Park Lane and Coles, and others on Rolleston-Lincoln and Levi Roads to the open rural landscape beyond.

Appendix

Large rural type trees to be used as framework planting for road reserves and allotments:

Liriodendron tulipifera	tulip tree
Populus yunanensis	Chinese poplar
P. tremula	aspen poplar
Platanus orientalis	plane tree
Quercus canariensis	Algerian oak
Q. cerris	Turkey oak
Q. palustris	pin oak
Q. petraea	sessile oak
Tilia plataphyllos	large leafed lime
T. petiolaris	weeping silver lime
Ulmus glabra	wych elm

Plan Change

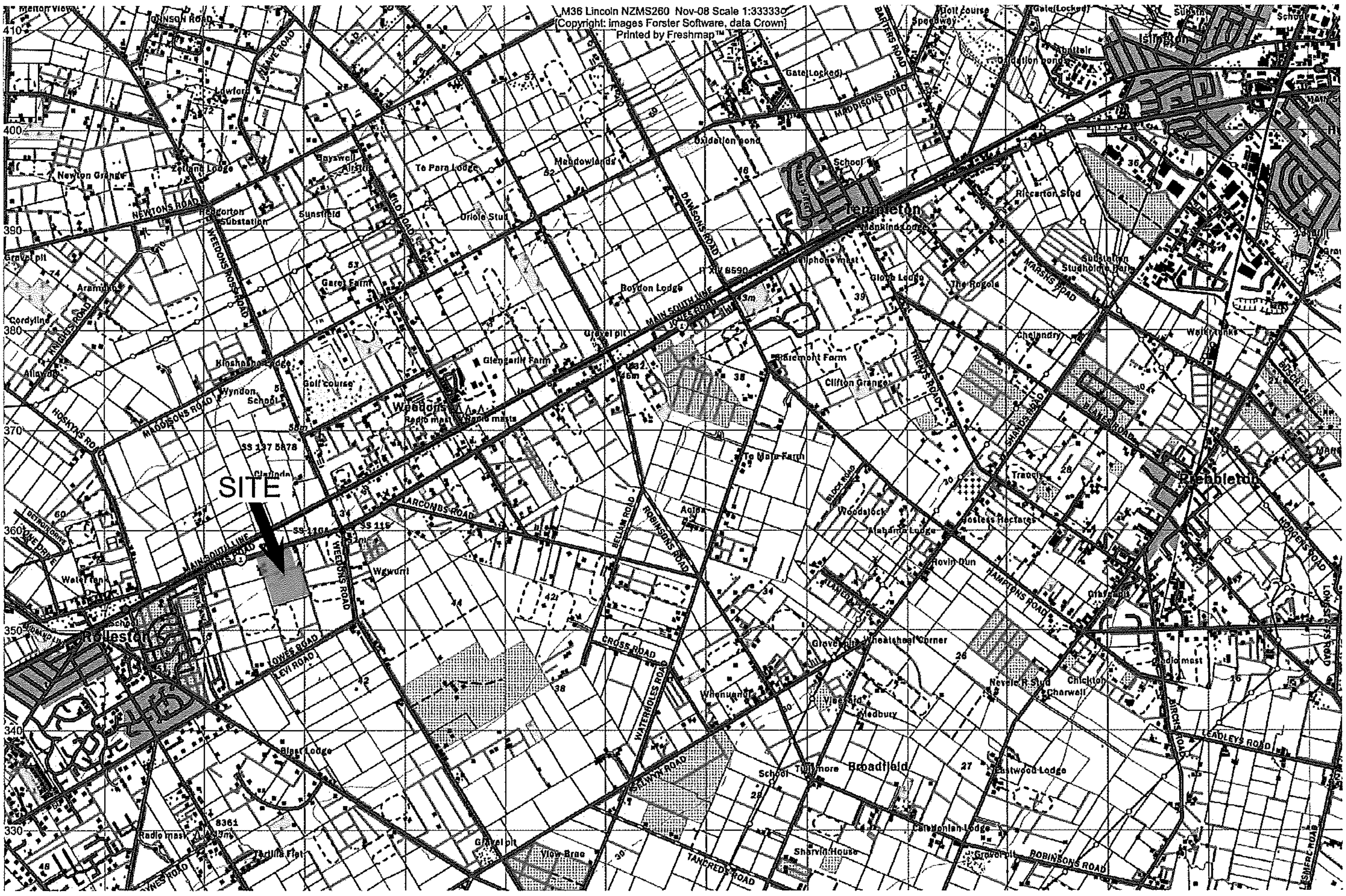
Coles Rural-Residential Subdivision, Rolleston

Landscape Assessment

Graphic Supplement

17 April 2013

Chris Glasson Landscape Architects Ltd
Christchurch 8141
P.O Box 13162
Ph. 03 3654599
www.chrisglasson.com

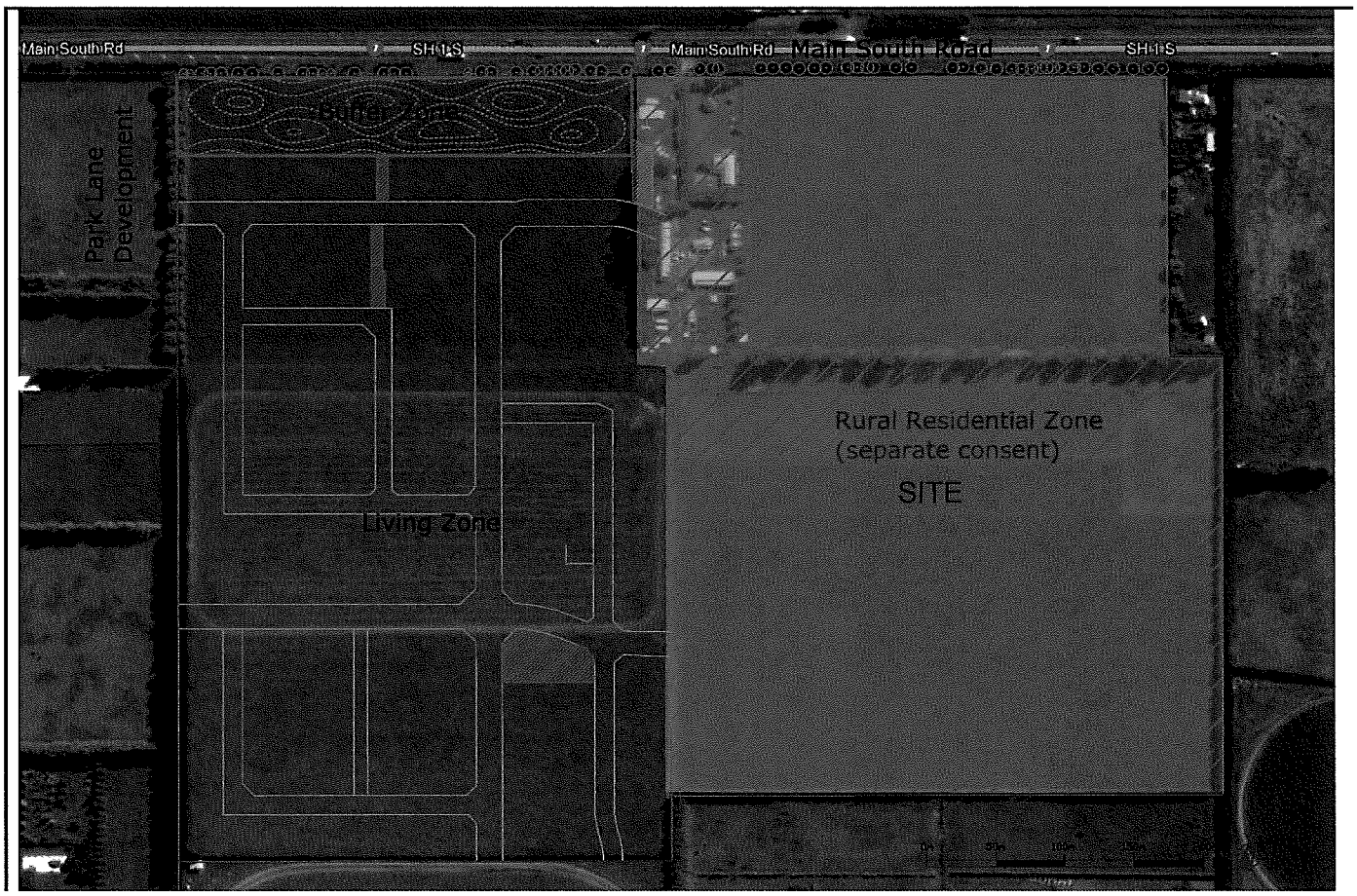


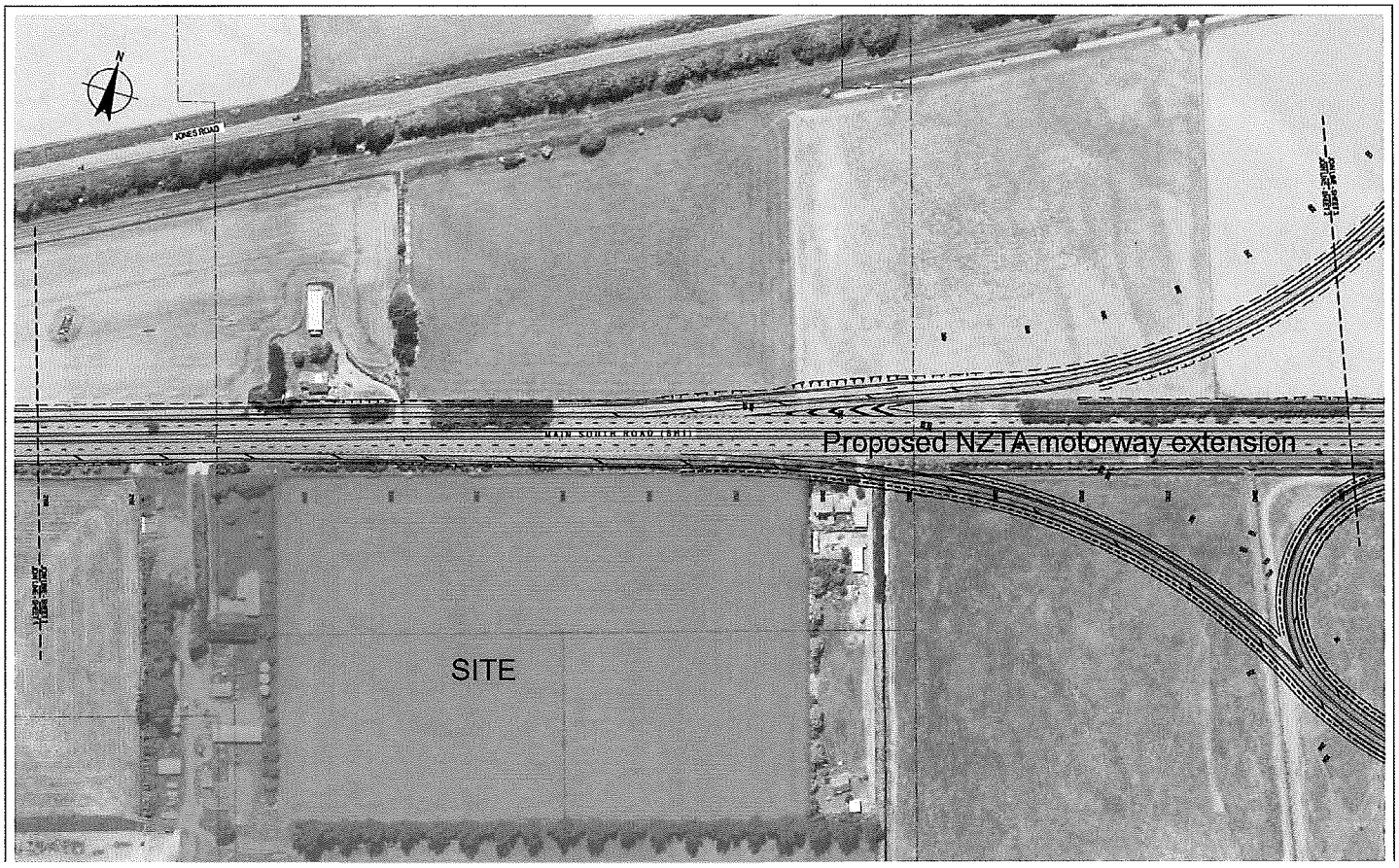
CHRIS GLASSON
Landscape Architects Ltd

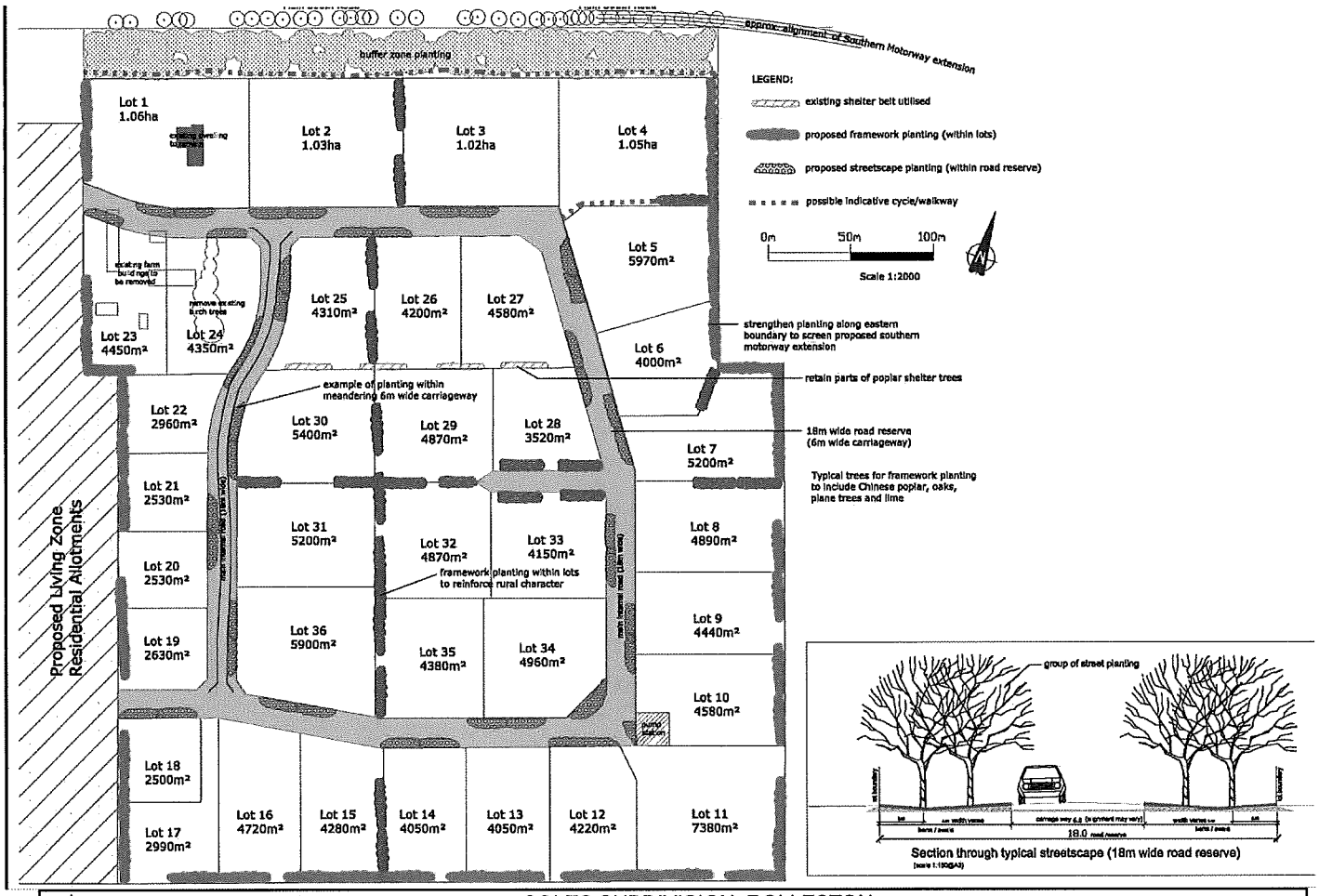
COLES SUBDIVISION, ROLLESTON
Rural-Residential Development

1.0 Location Map

Landscape Assessment
April 2013


Main South Rd
SH 1 S
Main South Rd
Main South Road
SH 1 S
Buffer Zone
Park Lane Development
Rural Residential Zone
(separate consent)
SITE
Living Zone


N
JONES ROAD
Proposed NZTA motorway extension
SITE

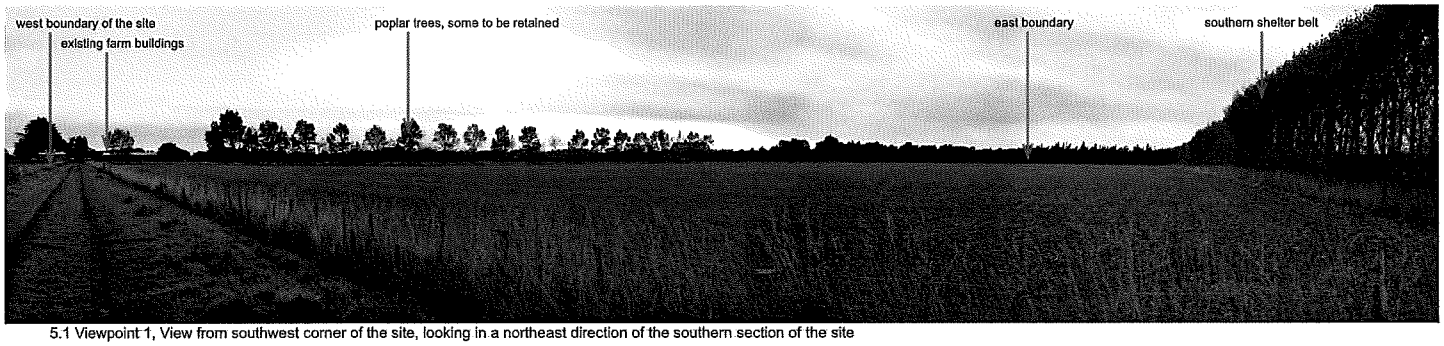


CHRIS GLASSON
Landscape Architects Ltd

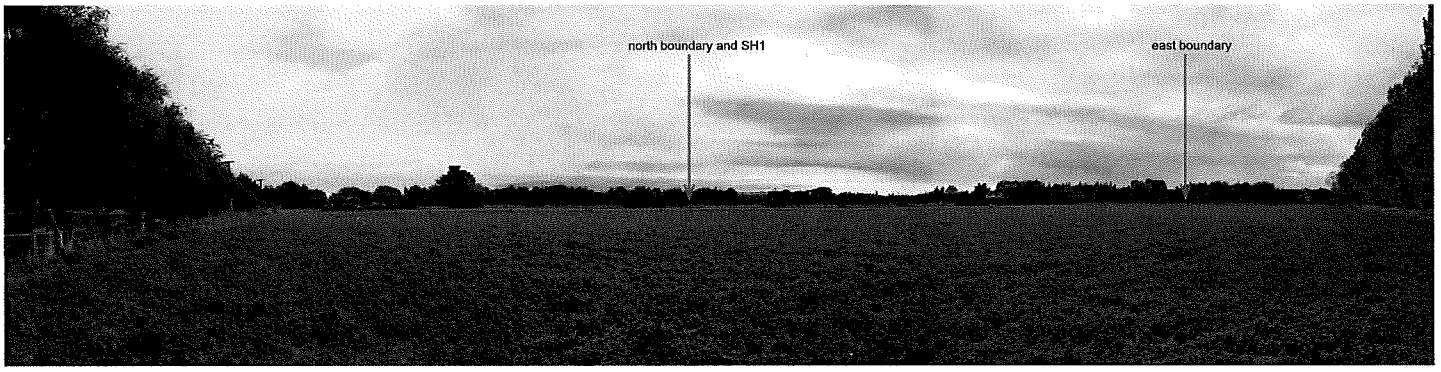
COLES SUBDIVISION, ROLLESTON
Rural-Residential Development

4.0 Indicative Landscape Scheme

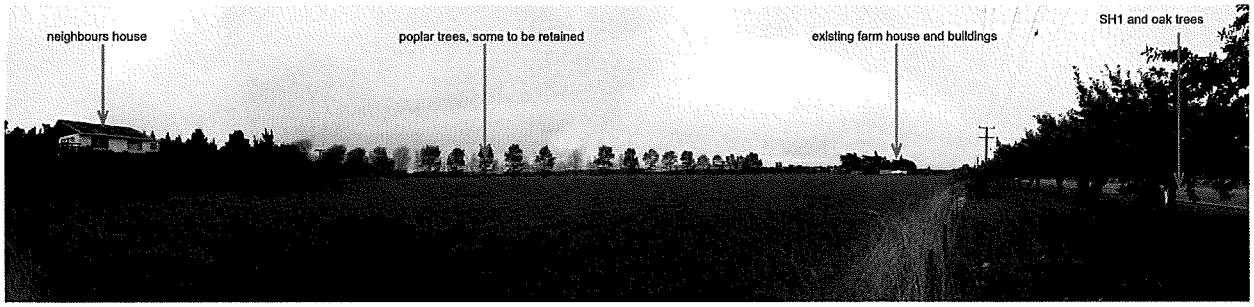
Landscape Assessment
April 2013



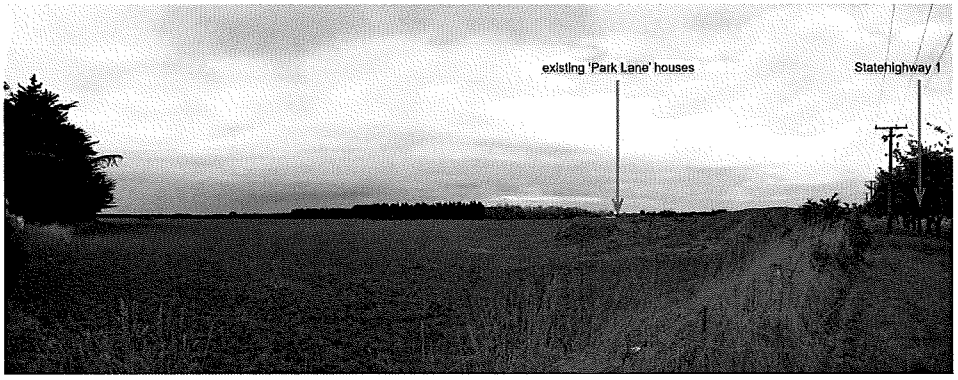
5.1 Viewpoint 1, View from southwest corner of the site, looking in a northeast direction of the southern section of the site



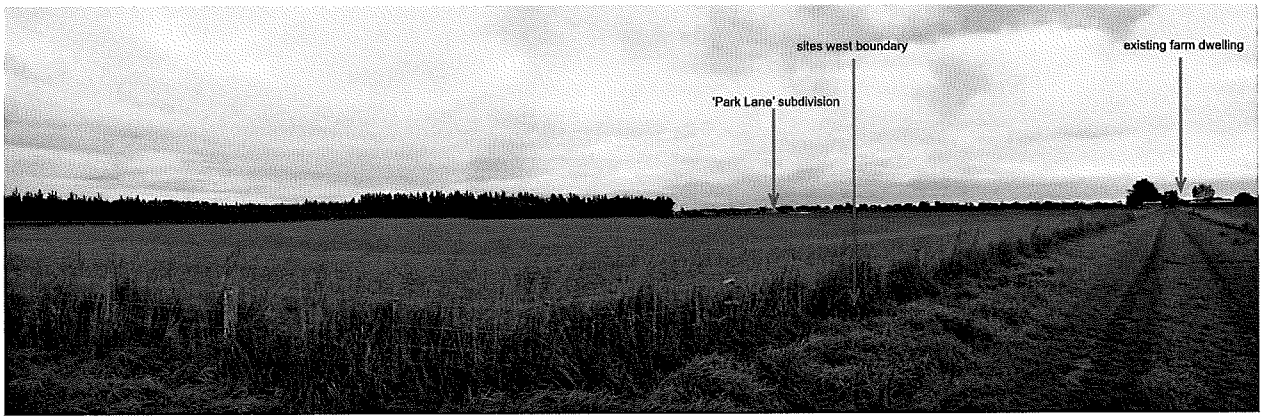
5.2 Viewpoint 2, View from farm buildings looking in a northeast direction of the northern section of the site



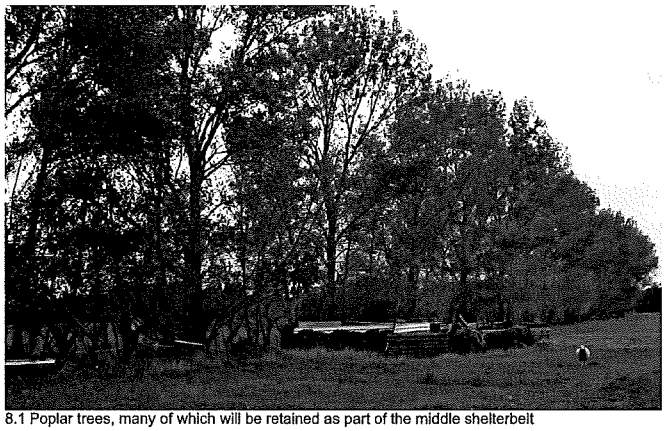
6.1 Viewpoint 3, View from northeast corner of the site looking in a southwest direction of the northern section of the site



6.2 Viewpoint 4, View from northwest corner of the site looking to the southwest across the future residential site



7.1 Viewpoint 5, View from southwest of the site, looking to the northwest across the future residential site



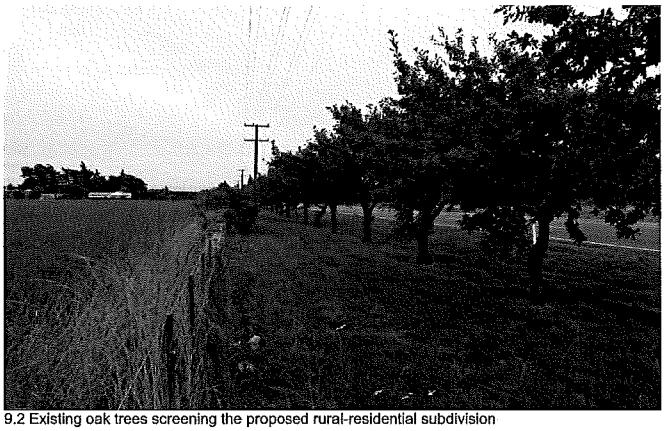
8.1 Poplar trees, many of which will be retained as part of the middle shelterbelt

8.2 Existing house

8.3 Existing farm buildings

8.4 Existing farm buildings

9.1 Existing oak trees screening the proposed rural-residential subdivision



9.2 Existing oak trees screening the proposed rural-residential subdivision

9.3 Existing oak trees screening the proposed rural-residential subdivision

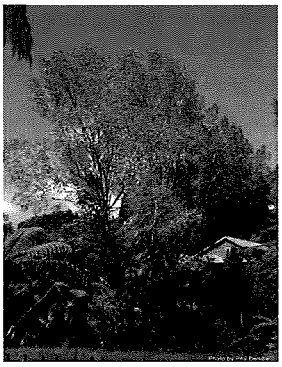
10.1 Locality Character

10.2 Locality Character

10.3 Locality Character

10.4 Locality Character

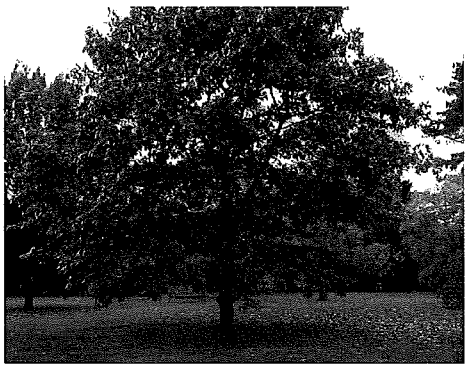
tulip tree



Chinese poplar

large leafed lime

Turkey oak



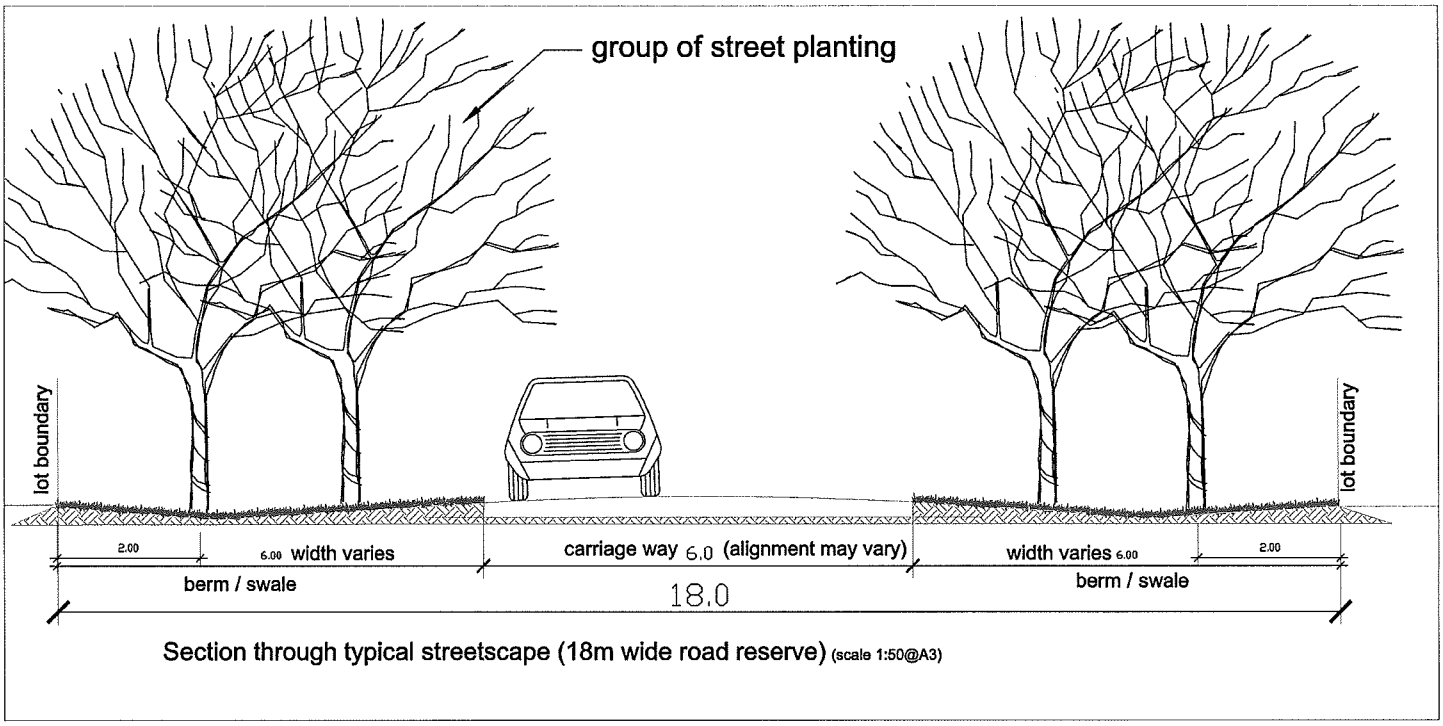
pin oak

wych elm

12.1 Post and rail fence

12.2 Post and rail fence

12.3 Post and wire horse fence



Appendix 42: Outline Development Plan - Living 3 Zone, East Rolleston, Road Section

Annexure Nine: SDC Letter re Pre-Application Meeting

Selwyn DISTRICT COUNCIL

24 October 2012

Coles Family Trust
c/- Robin Schulz, Director
Nimbus Group
P O Box 8394
CHRISTCHURCH 8440

Dear Sir/Madam,

RURAL RESIDENTIAL PLAN CHANGE: PRE-APPLICATION MEETING

The following letter summarises the general points that were discussed at the meeting held on Thursday 18th October 2012. This letter also aims to outline the matters Council would expect to be contained within any request seeking a rezoning of the subject site from its existing Rural (Inner Plains) zone to a Living 3 zone to support rural residential development. I have not summarised any of the points discussed at the same meeting with respect to the adjoining balance of your clients that is zoned Living Z, which my colleague Cameron Wood will respond to in due course.

Strategic management of rural residential development

As you will be aware, rural residential development has been managed in the District historically, with the basis of the recent proposed changes to the District Plan (Plan Changes 17 and 32[1]) being driven by amendments to the Regional Policy Statement (RPS) through Change 1. There have been a number of process issues associated with the formalisation of the RPS with respect to managing development within Greater Christchurch that has meant that a definitive framework at the Regional level has yet to be finalised. As you will be aware, Chapter 12A has recently been withdrawn from the Operative RPS in response to a successful judicial review process, with all appeals on the Change 1 decision having been returned to the Environment Court for consideration. However, the judicial review decision is subject to an appeal to the Court of Appeal, so there remains a possibility that Chapter 12A may be reinstated into the Operative RPS. Despite the above, it is important that any private plan change request demonstrate the extent to which any given proposal will deliver the prescribed household allocations (Policy 6) and development criteria (Policy 14) espoused in Change 1.

The Rural Residential Background Report (RRBR) and the District Plan Growth of Township provisions have strongly influenced Council's Plan Change 32 (32), which promotes rural residential typologies in peri-urban locations adjoining Townships. This is to achieve infrastructure efficiencies, preserve rural productivity and amenity and achieve sustainable rural residential nodes.

Council would expect any request to address the 'preferred location criteria' contained within the RRBR, which have been prepared to assist in determining the appropriateness of any given site for accommodating rural residential densities. The following matters should also be addressed in the request:

- Methods to deliver an appropriate rural residential character, form and function
- the preparation of an Outline Development Plan (ODP) to identify how the site is proposed to be integrated with adjoining land use activities, reference any historic,

[1] PC 17 has been withdrawn and replaced by PC 32, which has been publicly notified and submissions/further submissions received

cultural or ecological values within the site, confirm the road network, stormwater treatment and disposal areas, walking and cycling connections and network utilities

- determine densities through in-depth contextual analysis to ensure all constraints and opportunities associated with the site have been identified and responded to

I will forward through a copy of the withdrawn PC 17, which supported the subject block for rezoning to Living 3 densities and contains assessments as requested. However, it is important to note that PC 17 has been formally withdrawn so cannot be given any statutory weight in considering the merits of any future private plan change request.

I take this opportunity to emphasise that the number of rural residential households are managed tightly to reflect the Council's current position that rural residential forms of development are a less sustainable typology when compared to consolidated residential patterns of growth. The first in first served regime currently in place is contingent upon private land owners pursuing District Plan zone changes. Therefore, it is important that promulgators of private plan change requests consider the risks and economic viability of pursuing a rezoning proposal under the current circumstances, where there are limited households Council is able to allocate and no surety that a rezoning will be successful.

Plan Change 32

Council has publicly notified Plan Change 32 (PC 32) to the Selwyn District Plan to incorporate additional objectives, policies and rules into the Living 3 Zone (Rural Residential), the preparation of which was informed by the RRBR and Change 1.

Several proposed objectives and policies within PC 32 are directly relevant to the substantive consideration of a plan change request seeking a Living 3 zone, including the following:

- *Zone description* – Identifies the anticipated form, function and character of the Living 3 Zone;
- *Objective B3.4.6* – Reinforces the preference for peri-urban consolidated growth, the need to achieve efficiencies in the provision of infrastructure servicing and to identify methods to achieve sustainable outcomes through in-depth analysis of the sites context;
- *Policy B3.4.3 (b)* – Sets out the various requirements for any given development proposal, including ODP's, servicing, amenity outcomes, density, layout and connectivity;
- *Policy B4.3.68 and Policy B4.3.69* – Incorporates the Living 3 Zone into the Preferred Growth Option for Rolleston, including specifically the need to avoid conflict with the South Island Main Trunk Line (SIMTL), State Highway One (SH1), I-Zone Business Park and the Christchurch International Airport Noise Contour.
- *Subdivision assessment matters* – Identifies the various assessment matters required to be addressed at subdivision stage.

Development site

The following summary outlines the context of the site in respect to the District Plan Growth of Township provisions and other strategic planning documents prepared by the Council to assist in determining the appropriateness of locations to support rural residential development.

The urban form of Rolleston, as established through the Rolleston Structure Plan process, is now reflected in the Growth of Township policies and the relating Living Z zone. As you are aware, the subject site is not within the Metropolitan Urban Limit for Rolleston, but does directly adjoin an area zoned Living Z. The site also avoids the identified airport noise contour and is some distance from the I-Zone business park. However, methods will need to be developed to avoid any potentially adverse reverse sensitivity effects associated with the adjoining SH1 and SIMTL.

Once again, specific reference should be made in any plan change request to the Township Study Area Assessments, 'preferred location criteria' and the Study Area Assessment Plans

contained within Appendix 6 of the RRBR, which contain useful information that is directly relevant to the planning context of the proposed development area.

The stability of the ground to support rural residential densities and its susceptibility to liquefaction during large earthquake events will need to be investigated if a rezoning proposal is pursued. This is a mandatory requirement under the Recovery Strategy for Greater Christchurch[2].

Development proposal

The general development area is bound by the Rural (Inner Plains) Zone to the north and west, undeveloped Living Z zone to the south and State Highway 1 to the west. A plan identifying an initial scheme for the development block was tabled at the meeting for discussion, which identified a yield of 36 households sections at an average density of 2hh/ha. This scheme plan differs slightly from the proposal that was tabled during the PC 17 process, with the amendments supported because they better respond to the surrounding context of the site, such as the provision of larger lots adjoining the State Highway and adjoining rural blocks. The range of lot sizes and the containment of the smaller parcels within the centre of the site to internalise any related effects is also supported from an urban design perspective.

Several points of clarification were raised and responded to, including the following:

- The road cross sections for the Living 3 zone have been confirmed through the PC 12 process, which provide wide berms, reduced sealed widths and street lights, encourage swales as opposed to kerb and channelling to achieve an overall rural residential appearance and function
- A concern was raised around the reduced buildable area associated with the 0.3ha parcels where the PC 32 setbacks rules are applied – these setbacks are a more generic development control to achieve a rural residential form, function and character, which contrasts to specific development controls that may be promulgated for specific development proposals to avoid, remedy or mitigate potentially adverse effects associated with small parcels within the Living Z zone
- It was confirmed that any future setback and building restrictions from the State Highway are likely to be consistent with what has been established for the adjoining Living Z zone, with Cameron Wood to respond accordingly
- Confirmation was provided that Council did not necessarily support additional open space reserves or a peripheral walkway, as confirmed in previous meeting notes provided on the proposed development of the land
- Consideration was given to deferring some of the household numbers already allocated to the District under Change 1, but are contained within the undeveloped Living 3 zone in Rolleston. Any deferral would require the buy-in from the land owner and would need to be formalised into the District Plan or through some other legally binding instrument

Plan change request

At this point in time, all private plan change requests must demonstrate that the District Plan would continue to 'give effect' to the RPS should it be formalised, including specifically the prescribed household allocations and development criteria identified previously.

Any inconsistency with the objectives and policies of the District Plan, or any amendments to it proposed through PC 32, would not be grounds for Council to reject the request[3]. Rather, I consider that these matters would need to be weighed up in a substantive assessment of the overall appropriateness of any proposed zoning for consideration at any subsequent hearing.

---

[2] www.cera.govt.nz

[3] Clause 25 (4) of the 1st Schedule of the Resource Management Act 1991

The following technical reports are anticipated to accompany any private plan change request to rezone rural land to Living 3 Zone densities, although this would ultimately be determined by the scale of the final proposal and characteristics of the site:

- Urban design/ landscape analysis
- Infrastructure servicing (water, wastewater, stormwater and utilities)
- Transportation
- Contaminated land assessment[4]
- Geotechnical analysis
- Environmental health and environmental effects assessments

Council also recommends that the applicant consult with Te Taumutu Rununga through Mahaanui Kurataiao Limited (MKT) to identify any cultural values and to establish options to protect and enhance ecosystems and indigenous biodiversity. The contact at MKT is Frania Zygadlo – Environmental Advisor (03 377 4374 - frania.zygadlo@ngaitahu.iwi.nz).

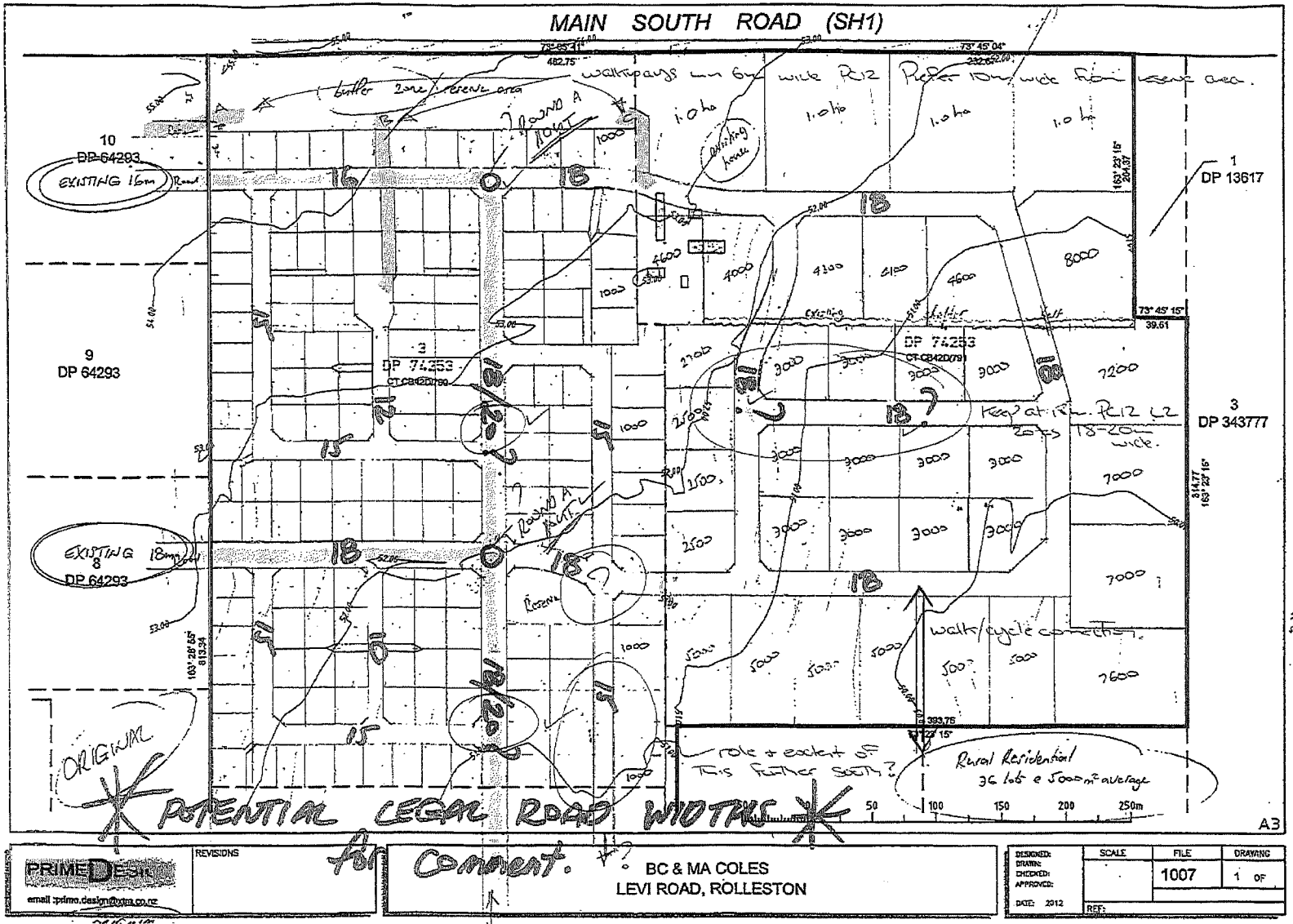
I would also strongly encourage you to lodge a draft plan change request if you choose to proceed so that it can be circulated to all relevant staff within Council for comment.

Please feel free to contact me should you have any further queries.

Yours faithfully

Craig Friedel
Policy Planner

[4] A desktop based contaminated land assessment is required to determine the appropriateness of the land for intensification based on the new requirements of National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health



10-12m wide Local Minor
13-15m Local Intermediate

main primary route as per ODP S. Keep north/south @ 20m wide.

Annexure One – Certificate of Title

COMPUTER FREEHOLD REGISTER
UNDER LAND TRANSFER ACT 1952

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**CB42D/791**
Land Registration District	**Canterbury**
Date Issued	11 October 1999

Prior References
CB40A/789

Estate	Fee Simple
Area	20.5900 hectares more or less
Legal Description	Lot 4 Deposited Plan 74253

Proprietors
Bruce Cedric Coles and Michelle Anne Coles

Interests

677874 Gazette Notice declaring No.1 State Highway (Awanui-Bluff) fronting the within land to be limited access road - 23.8.1966 at 3.00 pm

A174497.7 Mortgage to (now) Westpac New Zealand Limited - 24.5.1995 at 12.09 pm

A428756.3 Easement Certificate specifying the following easements - 11.10.1999 at 1.50 pm

Type	Servient Tenement	Easement Area	Dominant Tenement	Statutory Restriction
Right of way	Lot 3 Deposited Plan 74253 - CT CB42D/790	A DP 74253	Lot 4 Deposited Plan 74253 - herein	

The above easements will be subject to Section 243 (a) Resource Management Act 1991 when created

Transaction Id *18389505*
Client Reference *ksmith013*

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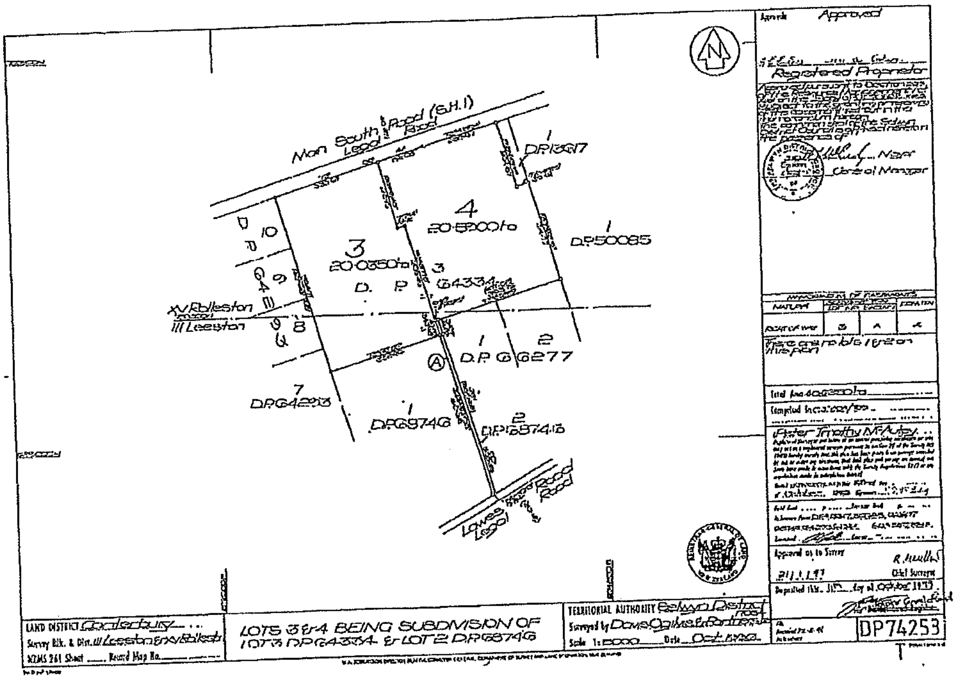
Register Only


Approved
Registered Proprietor
Main South Road (S.H.1)
4
20·5200ha
3
20·0350ha
D. P. 64334
DP50085
D.P.66277
DP68746
DP64223
Lowes Road
LOTS 3 & 4 BEING SUBDIVISION OF LOT 3 DP64334 & LOT 2 DP68746
DP74253

Annexure Seven: Site Contamination Preliminary Site Assessment

GEOSCIENCE
A proud member of ENGEO

Preliminary Environmental Site Inspection

1535 MAIN SOUTH ROAD
ROLLESTON, CHRISTCHURCH

SUBMITTED TO:

NIMBUS GROUP
22 FOSTER ST
PO BOX 8394
RICCARTON
Christchurch

7 February 2013

DISTRIBUTION

1 Copy	–	Nimbus Group
1 Copy	–	Geoscience Consulting (NZ) Ltd

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www.nzgeoscience.co.nz

ACENZ

CONTENTS

FIGURES

APPENDICES

1 INTRODUCTION

Geoscience Consulting (NZ) Ltd (Geoscience) was requested by Nimbus Group to undertake a preliminary environmental site inspection (PSI) at 1535 Main South Road, Rolleston, Christchurch.

Figure 1 indicates the location of the property. Geoscience understands that the 40.6 ha site is to be subdivided and requires a preliminary site inspection to satisfy Selwyn District Council requirements

This PSI was undertaken in accordance with Ministry for the Environment (MfE) 2001, Guidelines for Reporting on Contaminated Sites[1].

1.1 Objectives of the Assessment

The objective of this PSI was to assess the potential for contaminants to have been deposited at the site as a result of historic activities undertaken within or in the immediate vicinity of the property and report on the potential risk posed to future site users.

1.2 Approach

To satisfy the objectives, Geoscience undertook the following scope of work:

1.2.1 Review of Site Information

A number of sources were contacted for information relating to the site regarding its past and present uses and to identify any other environmental issues which may be on record. This included contacting Canterbury Regional Council (CRC) to determine if there were any records on the Listed Land Use Register (LLUR) and reviewing records held by Selwyn District Council including the property file and dangerous goods file. A review of a number of historic and current aerial photographs was also undertaken using images from NZ Aerial Mapping and Google Earth.

1.2.2 Site Inspection

A brief site walkover was undertaken on 24th January 2013 by Hazel Atkins of Geoscience Consulting Ltd. Objective evidence was collected through discussions with the site owner, Bruce and Michelle Coles, as well as observations of activities and conditions present at the site.

2 SITE DESCRIPTION

A summary of the site identification information is given in Table 1 below:

Table 1: Summary of Site Description

Item	Description
Location:	1535 Main South Road, Rolleston
Legal Description:	Lot 3 and Lot 4 DP74253
Current Owner:	Bruce and Michelle Coles
Current Site Use:	Agricultural and residential
Proposed Site Use:	Living Z on Lot 3 and Rural Residential on Lot 4. The site is to be subdivided into 36 sections.
Site Area:	40.6 ha
Building Construction:	Residential building and attached double garage: weatherboard; iron roof;

Item	Description
	concrete perimeter footings. Four farm buildings/hay barns: corrugated iron. Grain stores. Old school building (used for storage): weatherboard, light iron. Feed/animal shelters: light iron.
Local Authority:	Selwyn District Council
Zoning:	Lot 3 is Living Z. Lot 4 is Inner Plains

2.1 Site Setting

A summary of the site's setting is given in Table 2 below:

Table 2: Site Setting

Item	Description
Topography	Site is flat
Local Setting	The surrounding is agricultural with a residential subdivision to the south west.
Surface Water Receptors	Unnamed land drains to the north of the site
Geology[2]	Alluvial gravel
Hydrogeology[3]	Groundwater flow is predominantly to the south east. The site is over an unconfined or semi-confined aquifer.
Groundwater Abstractions[3]	There is one current groundwater abstraction located on the site: M36/0259: Coles; Main South Road; irrigation and water level observation. CRC011085: Coles; Main South Road; to take and use groundwater. There are a number of groundwater abstractions located within 150m of the site: M36/4040: N Welbeloved; Main South Road; domestic supply. M36/7763: Lowes Road Holdings Ltd; Lowes Road; domestic and stockwater irrigation.
Discharge Consents[3]	There are no current discharge consents located on the site. There are a number of discharge consents located within 150 m of the site. These are for the Park Lane Estate subdivision, which is located east of the site, and are for the discharge of stormwater to land.

3 SITE HISTORY

A number of sources were used to investigate the past uses of the site. The findings of these information searches have been summarised in this section.

Table 3: Site History

Item	Description
Discussion with site owner	A letter received from the Coles states that they have been on the property since 1990. They originally farmed pigs but changed to sheep grazing when they realised the land was better suited to them. They occasionally grow peas, for their own consumption, and oats. Horses are

Item	Description
	also grazed on the site. The main use of the site is for hay making. The site historically has been used for sheep grazing.

Table 4: Review of Selwyn District Council Property File

Date	Description
10/12/1984	Building consent to install a tractor/equipment shed
16/09/1993	Application for a septic tank effluent disposal system
12/10/1994	Application for a solid fuel heater

Table 5: Summary of Canterbury Regional Council Listed Land Use Register (CRC LLUR)

Period From	Period To	HAIL Activity (s)	LLUR Category
-	-	None	None
Additional Information		There is one report associated with the site, as it has not yet been audited; the site has not been awarded a LLUR category. The report is by Tonkin and Taylor and is dated January 2011. The report is a desk-based ground contamination assessment for Selwyn District Council regarding planned land zone changes. The report investigated 6 sites around the Rolleston area and identified possible contaminants. No specific contaminants were listed for the site.	

Aerial photographs dating from 1942 to 2011 have been reviewed (refer to Figures 2 and 3). In summary the aerial photographs show:

Table 6: Aerial Photographs

Date	Figure No.	Description
1942	2	The site is being used for both agricultural and residential purposes. The residential and farm buildings are located in the north-eastern corner of the site. The remainder of the site is used for grazing and cropping purposes. There are a number of feeding areas which can be seen in the paddocks. The surrounding area is predominantly agricultural with associated residential buildings.
1974	3	The site is being used for both agricultural and residential purposes. The residential and farm buildings remain in the north-eastern corner. The remainder of the site is still used for grazing and cropping purposes. The feeding areas can no longer be seen. The surrounding area is predominantly agricultural with associated residential buildings.
2012	Google Earth	The site is predominantly agricultural with the residential property and farm buildings situated in the north-eastern corner. The surrounding area is mainly residential to the west of the site and agricultural to the north, south and east.

4 CURRENT SITE CONDITIONS

A site inspection was undertaken on the 24th January 2013 by Hazel Atkins of Geoscience Consulting Ltd. The information gathered is summarised below:

Table 7: Current Site Conditions

Site Condition	Comments
Visible signs of contamination	No visible signs of contamination were noted at the site.
Surface water appearance	No surface water observed at the site.
Current surrounding land use	Surrounding land use is a mix of agricultural and residential with the land to the west of the site being redeveloped as a residential subdivision.
Condition of buildings and roadways	Buildings and roadways in good condition.
Local sensitive environments	There are no sensitive environments.
Visible signs of plant stress	No visible signs of plant stress were noted at the site.
Conditions at site boundary	Stable with no signs of erosion.
Additional Observations (if any)	Two above ground storage tanks (ASTs) were observed on the site with the pumps located directly beneath them. The location of the tanks can be seen in Figure 1. No staining was observed around the tanks. The site also has a horse trotting track of approximately 1 year old. The track comprised mainly sand with some gravel.

5 POTENTIAL HAIL LIST ACTIVITIES

Activities included on the Hazardous Activities and Industries List (HAIL)[4] trigger the requirement for a contaminated land investigation prior to development. The two above ground storage tanks represent a HAIL activity; A17 – Storage tanks or drums for fuel, chemical or liquid waste.

6 CONCEPTUAL SITE MODEL

A contamination conceptual site model consists of three primary components to allow the potential for risk to be determined, these are:

- Source of contamination;
- Pathway to allow the contamination to mobilise; and
- Sensitive receptors which may be impacted by the contamination.

Table 8: Conceptual Site Model

Source	Pathway	Receptor
Above-ground Storage Tanks - hydrocarbons	Surface/groundwater Direct contact, inhalation, and ingestion.	Current/Future residents, future site workers and development contractors.
Risk of Contamination	Low - Medium – The above-ground storage tanks located on the site are a potential source of contamination. The tanks were in good condition with only slight rusting visible. There is no information on the LLUR of their existence.	

The above ground storage tanks are located south of the residential buildings on the site. After discussions with the client, Geoscience understands that this area is to remain as residential/agricultural land. Therefore, the area to be subdivided into residential land is considered to have a low risk of contamination due to the distance and lack of pathways which could transport the contamination onto the development site.

7 CONCLUSIONS

The information collected and the historic aerial photographs indicate an agricultural grazing and residential past. There is no reported evidence which suggests the presence of sheep dips, large scale pesticide application or waste disposal operations at the site.

The information reviewed indicates that the surrounding area is a mix of residential and agricultural.

The CRC LLUR found no specific listed land uses on the site. The Selwyn District Council property file has no records indicating that any potentially contaminative activity has occurred on the property.

During the site inspection, two above-ground storage tanks were observed south of the residential property. The tanks contained diesel and petrol and are used for farm machinery. The ASTs are listed on the HAIL as category A17 – Storage tanks or drums for fuel, chemicals or liquid waste. Discussions with the client about the subdivision revealed that this area is to remain agricultural/residential. Therefore, the risk to the future subdivision of the land to residential land use is considered low due to the distance and lack of pathways which could transport the contamination onto the development site.

Based on the information gathered, we conclude that the potential for soil and water contamination at the site, in its existing state, is low and is suitable for the intended residential land use.

The area that is remaining agricultural/residential will need further investigation if its land use is to be changed in the future.

8 RECOMMENDATIONS

No further environmental work is required on the land to be subdivided for residential end use at 1535 Main South Road, Rolleston.

Information about the ASTs should be added to the CRC LLUR, the locations are shown in Figure 1.

9 REFERENCES

1 MfE 2011: Contaminated Land Management Guidelines No.1 : Reporting on Contaminated Sites in New Zealand;

2 Forsyth, P.J.; Barrell, D.J.A; Jongens, R. 2008: Sheet 16 - Geology of the Christchurch Area 1:250,000. Institute of Geological and Nuclear Sciences, Lower Hutt.

3 ECan 2012: Environment Canterbury on-line GIS Database. http://ecan.govt.nz/services/online-services/gis-mapping/Pages/enter-gis.aspx

4 MfE Oct 2011: Ministry for the Environment Hazardous Activities and Industries List.

10 LIMITATIONS

i. We have prepared this report in accordance with the brief as provided. This report has been prepared for the use of our client, Nimbus Group, their professional advisers and the relevant Territorial Authorities in relation to the specified project brief described in this report. No liability is

accepted for the use of any part of the report for any other purpose or by any other person or entity.

ii. The recommendations in this report are based on the ground conditions indicated from published sources, site inspections and subsurface investigations described in this report based on accepted normal methods of site investigations. Only a limited amount of information has been collected to meet the specific financial and technical requirements of the Client's brief and this report does not purport to completely describe all the site characteristics and properties. The nature and continuity of the ground between test locations has been inferred using experience and judgement and it must be appreciated that actual conditions could vary from the assumed model.

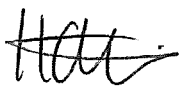
iii. Subsurface conditions relevant to construction works should be assessed by contractors who can make their own interpretation of the factual data provided. They should perform any additional tests as necessary for their own purposes.

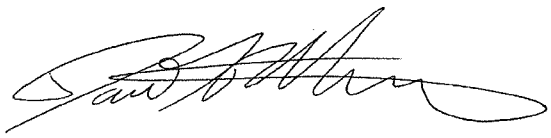
iv. This Limitation should be read in conjunction with the IPENZ/ACENZ Standard Terms of Engagement.

v. This report is not to be reproduced either wholly or in part without our prior written permission.

We trust that this information meets your current requirements. Please do not hesitate to contact the undersigned on 03 328 9012 if you require any further information.

For and on behalf of Geoscience Consulting (NZ) Ltd,





Hazel Atkins
Engineering/Environmental Geologist

Dave Robotham
Senior Environmental Consultant

GEOSCIENCE
A proud member of ENGEO

FIGURES

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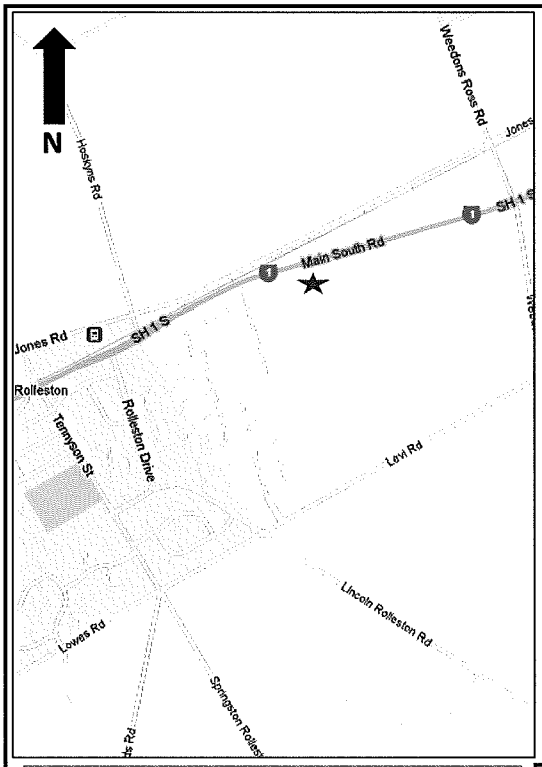
www.nzgeoscience.co.nz

ACENZ



Note: Location map sourced from Google
Aerial Photograph sourced from Koordinates

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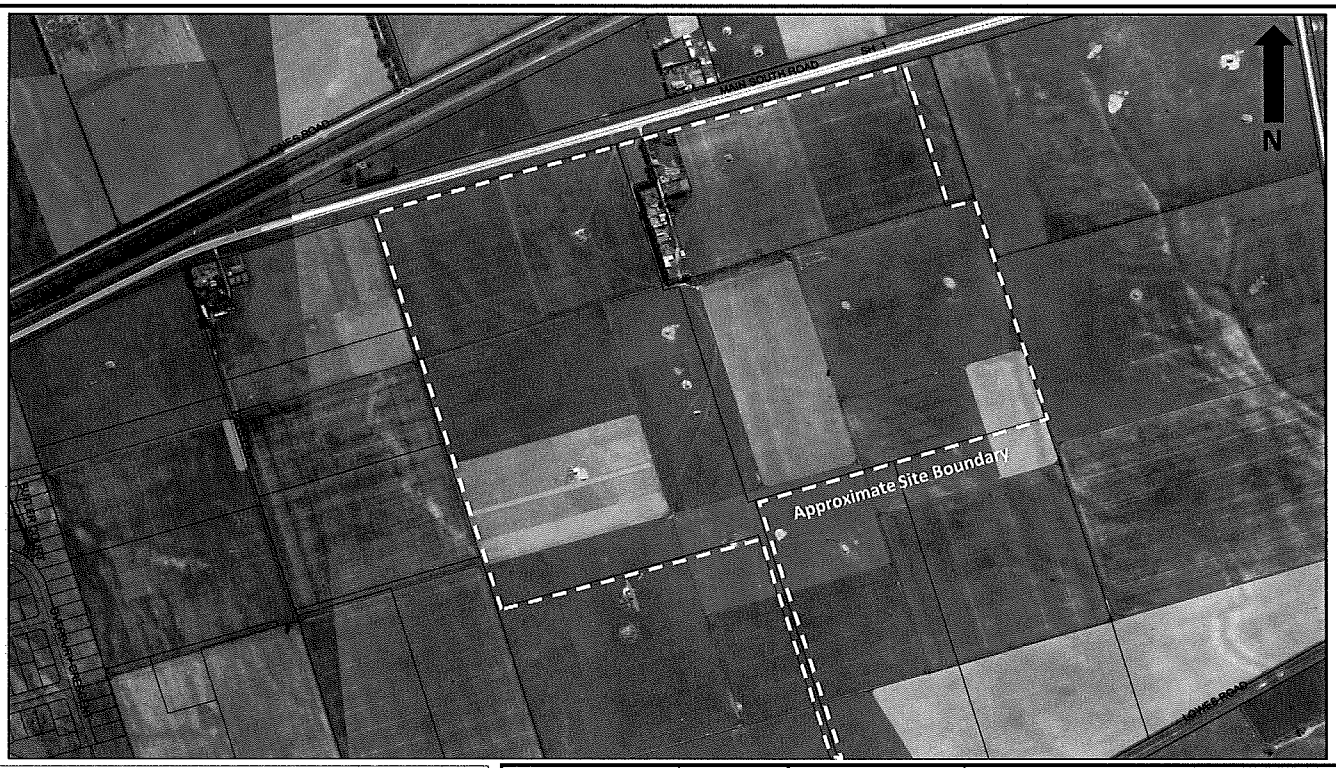
Date	Jan-13	Client	K & J Adcock		
Drawn by	HA	Project	1535 Main South Road, Rolleston		
Approved by	DR	Description	Site Location Plan		
Scale	NTS	Figure Number	1	Project Number	09954_1



Note: Aerial photographs sourced from NZ Aerial Mapping

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Date	Jan-13	Client	K & J Adcock		
Drawn by	HA	Project	1535 Main South Road, Rolleston		
Approved by	DR	Description	1942 Aerial Photograph		
Scale	NTS	Figure Number	2	Project Number	09954_1

Note: Aerial photographs sourced from V C Browne

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Date	Jan-13	Client	K & J Adcock		
Drawn by	HA	Project	1535 Main South Road, Rolleston		
Approved by	DR	Description	1973 Aerial Photograph		
Scale	NTS	Figure Number	3	Project Number	09954_1

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APPENDIX 1
CRC LLUR Statement

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5 Norwich Quay, Lyttelton 8062, New Zealand
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www.nzgeoscience.co.nz

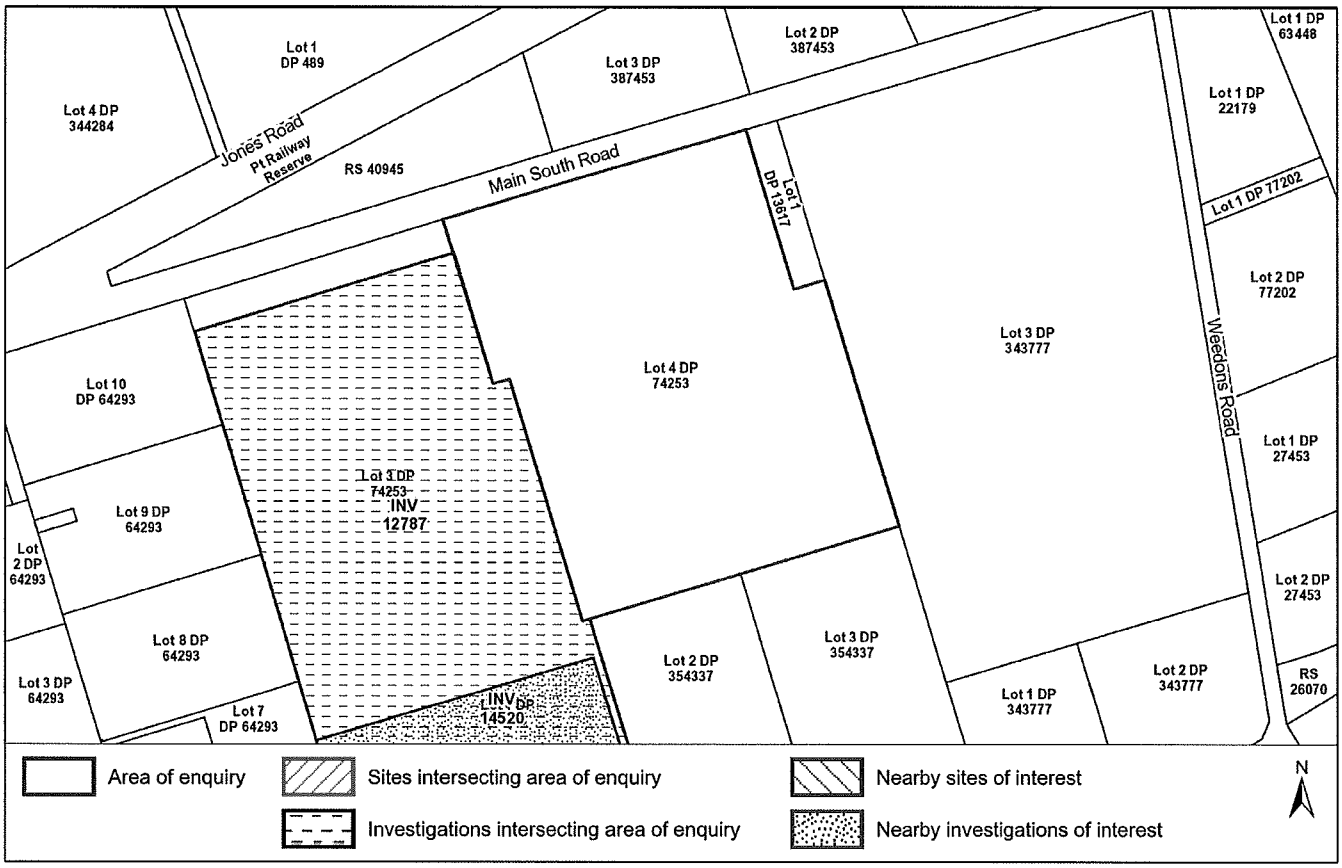
ACENZ

Statement from the Listed Land Use Register

Environment Canterbury Regional Council
Kaunihera Taiao ki Waitaha

58 Kilmore Street, PO Box 345, Christchurch
General enquiries: 03 365 3828 Customer services: 03 353 9007
Fax: 03 365 3194 or: 0800 EC INFO (0800 324 636)
Email: ecinfo@ecan.govt.nz Website: www.ecan.govt.nz

Date:	14 January 2013
Land Parcels:	• Lot 4 DP 74253 Valuation No(s): 2405500700



Summary of sites:

There are no sites associated with the area of enquiry.

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

Information held about other investigations on the Listed Land Use Register

1 Jan 2011	**INV 12787: Desk-Based Ground Contamination Assessment Plan Change 7 Area** Tonkin and Taylor Ltd
23 Nov 2012	**INV 14520: GW Rolleston Ltd - Preliminary Site Investigation Report - 116 Levi Road, Rolleston** Spiire

Summary of above Investigations

Report(s) have not yet been audited.

For further information from Environment Canterbury, contact the Contaminated Sites Officer and refer to enquiry number 14639.

Disclaimer:

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

This information reflects Environment Canterbury's current understanding of this site, which is based only on the information thus far obtained by it and held on record concerning this site. It is released only as a copy of those records and is not intended to provide a full, complete or totally accurate assessment of the site. As a result, Environment Canterbury is not in a position to warrant that the information is complete or without error and accepts no liability for any inaccuracy in, or omission from, this information.

Any person receiving and using this information is bound by the provisions of the Privacy Act 1993.

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APPENDIX 2
Site Photographs

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ACENZ

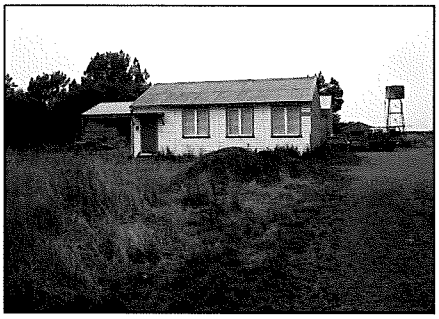

Photo 1: Old school house used for storage

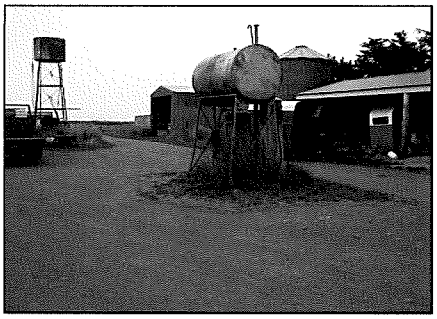

Photo 2: Above ground diesel tank

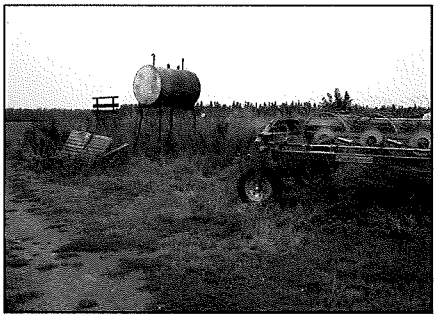

Photo 3: Above ground petrol tank

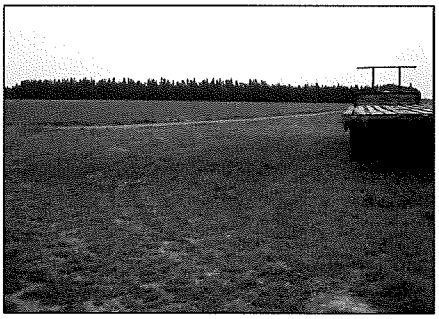

Photo 4: Site looking south-west

Photo 5: Horse trotting track

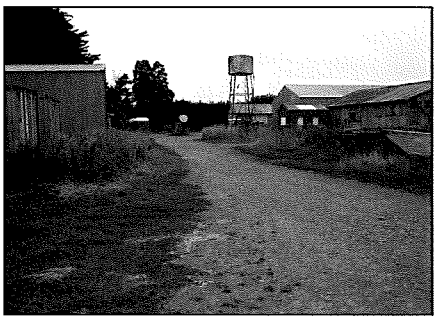

Photo 6: Agricultural farm area

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Date taken	Jan-12	**Client**	**Nimbus Group Limited**		
Taken by	HA	**Project**	**1535 Main South Road, Rolleston**		
Approved by	DR	**Description**	**Site Photographs**		
Scale	N/A	**Photo No.**	1 to 6	**Project Number**	9954

Annexure Ten: Matson & Allan Letter

MATSON & ALLAN
REAL ESTATE LIMITED

19 April 2013

Chief Executive
Environment Canterbury
P O Box 345
CHRISTCHURCH 8140

Dear Sir/Madam

RE: SUBMISSION – SELWYN DISTRICT RURAL RESIDENTIAL LAND

1. Matson & Allan have been involved in the Rural Residential market in Canterbury for in excess of 50 years.

2. This company has an active involvement in the Selwyn District and has its main office in Rolleston in the Central Business District specialising in Rural, Rural Residential and Residential sales and marketing.

3. We have been asked to comment on the demand/availability of small Rural Residential lots which we confirm are in the area of between 3000m^3 and 1ha in area, and in particular as to the effect of the recent Christchurch earthquakes on this particular market.

4. Over the last 14 years since Selwyn District has shown rapid expansion, there has always been a steady and strong demand for Rural Residential lots as opposed to larger 4ha lots, of which the latter are really the only option available for a person looking for a semi rural lifestyle property.

5. Our experience is that of the 4ha lots that have sold on the current market, over 60-65% of those purchasers would have preferred smaller lots, but have been unable to purchase them as they are not available.

6. Our view is that the 4ha lots are uneconomic and a totally unproductive means of providing a rural option with most buyers generally looking for a small area for extra land for grazing a horse, sheep, or a building for rural storage type purposes.

7. Our experience has been since the Christchurch earthquakes that a large number of people affected by the earthquakes are seeking a rural option at a market value level equal to what they had invested in their house affected by the earthquakes. Our knowledge is that there are minimal and limited options, which is putting pressure on other markets and the ripple down effect of not having small rural residential options is compressing that end of the market.

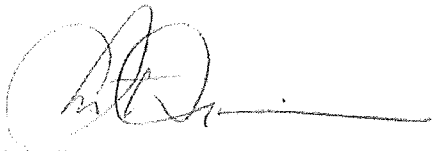
Matson & Allan Real Estate Limited, Licensed under the REA Act 2008
92 Rolleston Drive, Rolleston 7614 Ph +64 3 347 9949 | F +64 3 347 7284 | rolleston@marealestate.co.nz
South Terrace, P.O Box 41, Darfield 7510 Ph +64 3 318 8204 | F +64 3 318 8104 | darfield@marealstate.co.nz
70 High Street, Leeston 7632 Ph +64 3 324 3704 | F +64 3 324 3703 | leeston@marealestate.co.nz
www.marealestate.co.nz

8. It is our experience and view that the properties in the middle to higher priced bracket would come from the second and third home buyers who want to move up the property ladder and make available their present home, but there are not the options available given the limited availability of land.

9. In the red zone resultant from the earthquake there have been a significant number of higher valued and quality homes destroyed. We have experienced a number of these parties looking for a Rural Residential option, but due to the lack of supply they are not able to be satisfied.

10. It is our view that the availability of Rural Residential lots in the Selwyn District would be in strong demand.

Yours faithfully
MATSON & ALLAN REAL ESTATE LTD



Chris Flanagan, AREINZ
Director

Annexure Eleven: Assessment Against Rural Residential Background Report Preferred Rural Residential Criteria