Baseline Assessment

Versatile Soils (DW015)

1.0 Introduction

When land is used to develop houses and associated infrastructure the land, and the soil it comprises, is no long available for other uses. This is a potential issues as the amount of versatile soils in the district is finite. However, whether this is a resource management issue requires further evaluation.

The purpose of this report is to review the provisions relevant to versatile soils in the Selwyn District in:

- The Resource Management Act 1991, and relevant case law;
- The Canterbury Regional Policy Statement and the Canterbury Land and Water Regional Plan;
- Strategic documents prepared by Selwyn District Council; and
- The Operative Selwyn District Plan (the District Plan).

From this review, an approach to the extent to which the matters related to the management of versatile soils may need to be reflected within the Proposed District Plan is then recommended.

It is noted that, following the release of the Our Land 2018 report by the Ministry for the Environment, the Minster for the Environment instructed officials to develop a National Policy Statement for Versatile Land and High-Class Soils (NPS for Highly Productive Soils). While work has commenced on the problem statement and potential options for the NPS, as yet there is no indication as to when the NPS will be gazetted or directions the Council will have to give effect to.

2.0 What are versatile soils?

The New Zealand Land Resource Inventory (NZLRI) is a national database of physical land resource information. It comprises two sets of data compiled using aerial photography, published and unpublished reference material, and extensive field work, being:

1. An inventory of five physical factors (rock type, soil, slope, present type and severity of erosion, and vegetation); and
2. A Land Use Capability (LUC) rating of the capacity of land to sustain long term production, based on an assessment of the factors above and climate, the effects of past land use, and the potential for erosion. It is used in the sense of suitability of land for productive use or uses after taking into account the physical limitations of the land.[1]

The productive capacity of any area of land depends largely on the physical qualities of that land, the soil and the environment. These factors can also impose limitations on the land, which can affect productivity, the number and complexity of corrective practices needed, and the intensity and manner of land use. These limitations can be susceptibility to erosion, flooding, wetness or drought, steepness of slope, salinity, depth of soil, soil texture, structure and nutrient supply and climate.

There are eight Land Use Capability (LUC) classes, with limitations to use increasing, and versatility of use decreasing, from LUC Class 1 to LUC Class 8.

[1] Land Use Capability Survey Handbook 3rd Edition 2009, Landcare Research New Zealand Ltd.

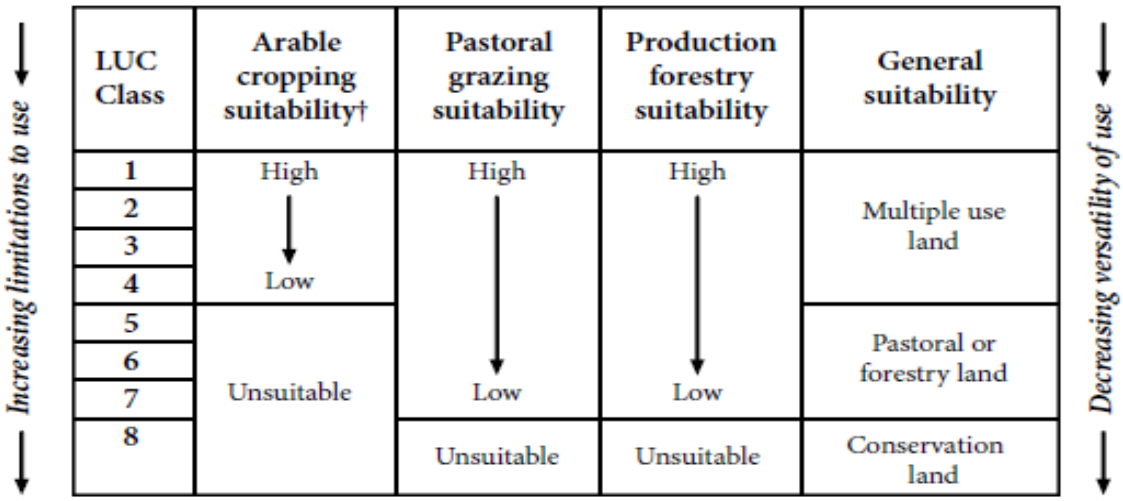

Figure 1 – Land use capability system classes

LUC Classes 1-4 are suitable for arable and vegetable cropping, horticulture, pastoral grazing, tree crop or production forestry use. LUC Classes 5-7 are suitable for pastoral grazing, tree crop or production forestry. LUC Class 8 land is unsuitable for productive uses and is best managed for conservation or biodiversity purposes.

Class 1 land is considered the most versatile multiple-use land, with minimal physical limitations to arable use and as being suitable for a wide variety of uses. It is generally comprised of flat or gently undulating land, with deep, resilient and easily worked soils and is well drained, well supplied by plant nutrients and responsive to fertilisers.

Class 2 is very good land with slight limitations to arable use which are readily controlled by management and soil conservation practices. Most Class 2 land is flat or gently undulating, with moderate soil depth. The most common limitations which may occur include unfavourable soil structure, difficulties in working the land and susceptibility to erosion and flooding.

Drawing on the above elements that give rise to the classification of land, it can be seen that soil is but one element that makes up the capability and versatility of land. However, ***soil*** and ***land*** are commonly used interchangeably, as are the words ***versatile*** and ***high class*** when discussing the best soils for growing food crops.

At present, there is not one clear, national definition of versatile soils. There was a request to include a definition in the proposed National Planning Standards, but a policy decision was taken by the Ministry for the Environment not include one at this time as it was considered that there was significant local variation that was important to take into account when defining versatile soils and it could not be based solely on the LUC system. However, currently, the LUC system provides a consistent and objective evaluation of the country's land resources and allows for decisions to be based on good science and a transparent and robust method of assessment.[2]

Based on the LUC system, versatile soils, being land classified Class 1 or 2, account for only about 5.5% (about 1.39 million ha) of the country, and are considered rare in New Zealand.[3]

[2] Ministry for the Environment 2018 *Proposed National Planning Standards Evaluation Report 2018: Part 2C – Definitions*. p.145

[3] Te Ara – The Encyclopaedia of New Zealand, '*Soils – what makes a good soil?*'

3.0 Versatile Soils in the Selwyn District

Within the Selwyn District there are 6,522 hectares of Class 1 land and 46,111 hectares of Class 2 land.

Within the Malvern ward, the majority of the townships (Lake Coleridge, Springfield, Whitecliffs, Glentunnel, Coalgate, Hororata and Kirwee) are located predominantly on other land classes. In Darfield, Class 2 lands are present along the western boundary of the township. Sheffield and Waddington lie on Class 2 land.

In the Ellesmere ward, Dunsandel lies on Class 2 land, as does the eastern part of Rakaia Huts. Southbridge predominately lies on Class 2 land, with Class 1 land being present to the north and east of the township. Class 2 land is present in the southwestern part of Leeston while Doyleston is situated on Class 3 land.

In the Selwyn Central and Springs wards, there is a greater prevalence of Class 1 and 2 land. Lincoln, Tai Tapu and Prebbleton all lie on Class 1 and 2 land, while Springston lies on Class 2 land. Class 2 land is present along the northern boundary of West Melton and the northeastern boundary of Rolleston.

The location of Class 1 and 2 land is shown in greater detail in the figures following.

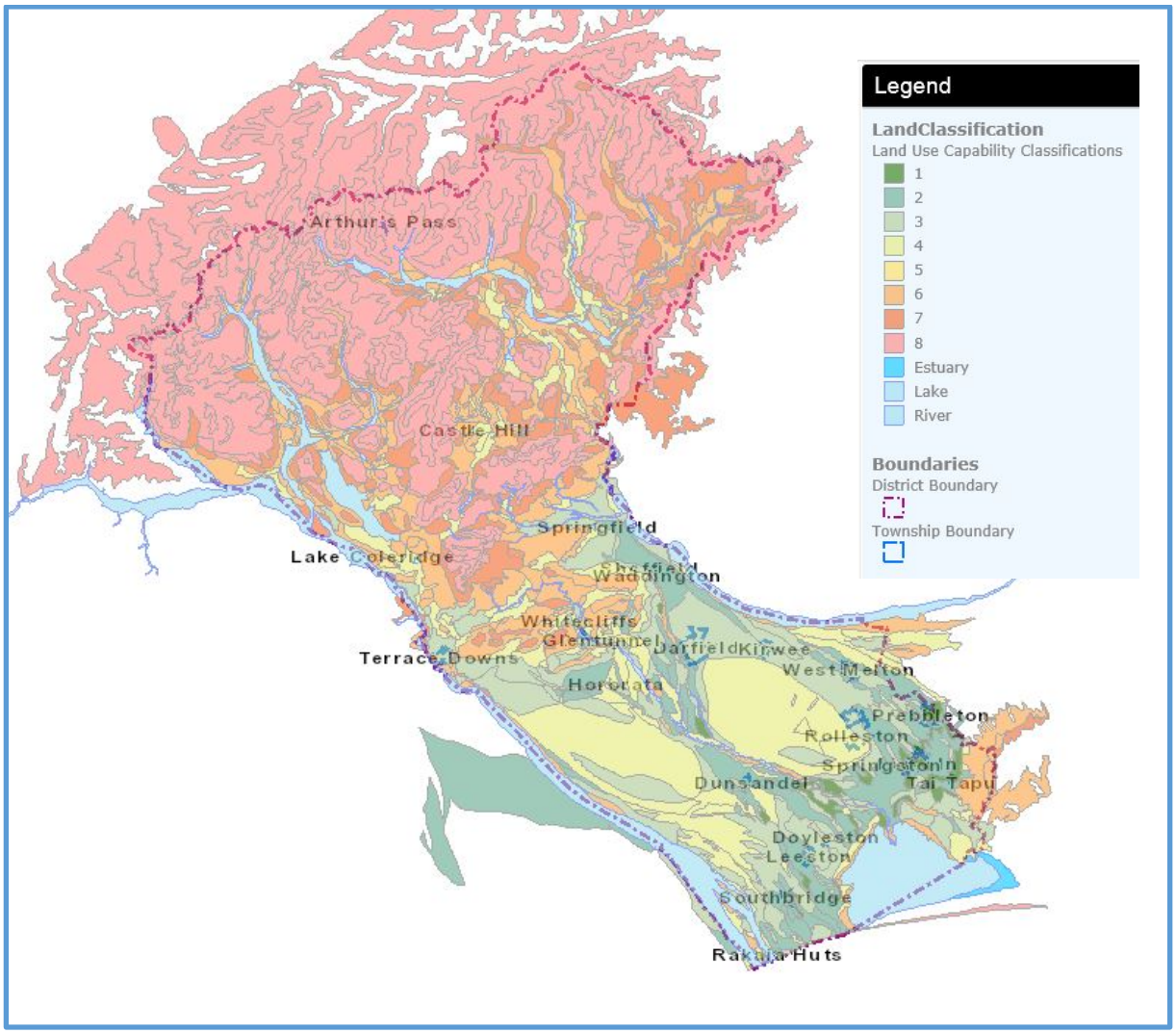

Figure 2 – Overview of Soils in the Selwyn District based on the Land Use Capability Classifications

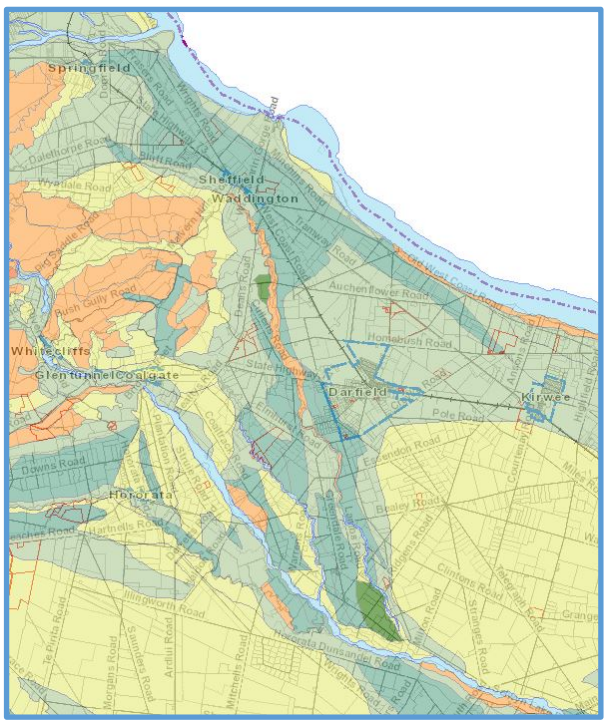

Figure 3 – Overview of Soils in Malvern Ward area

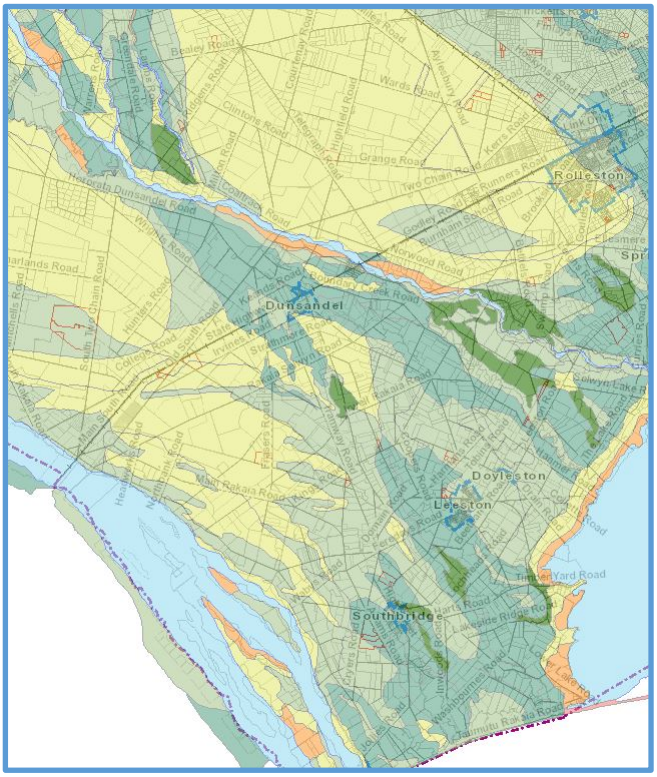

Figure 4 – Overview of Soils in Ellesmere Ward area

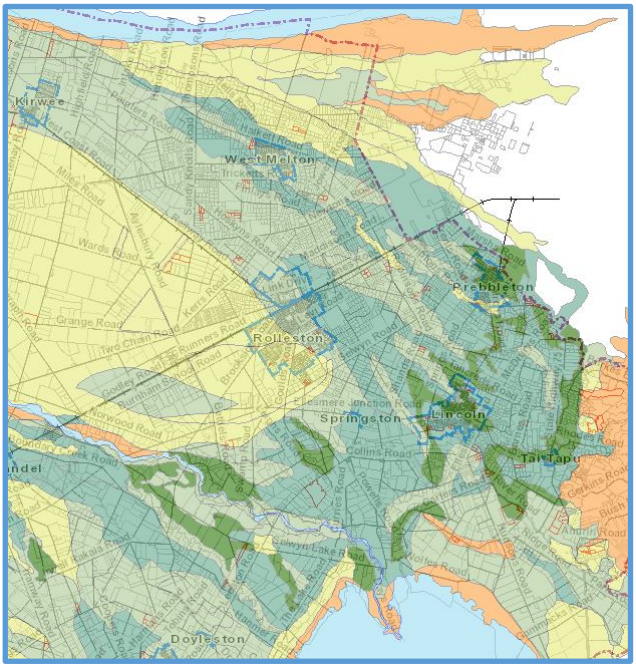

Figure 5 – Overview of Soils in Selwyn Central Ward and Springs Ward areas

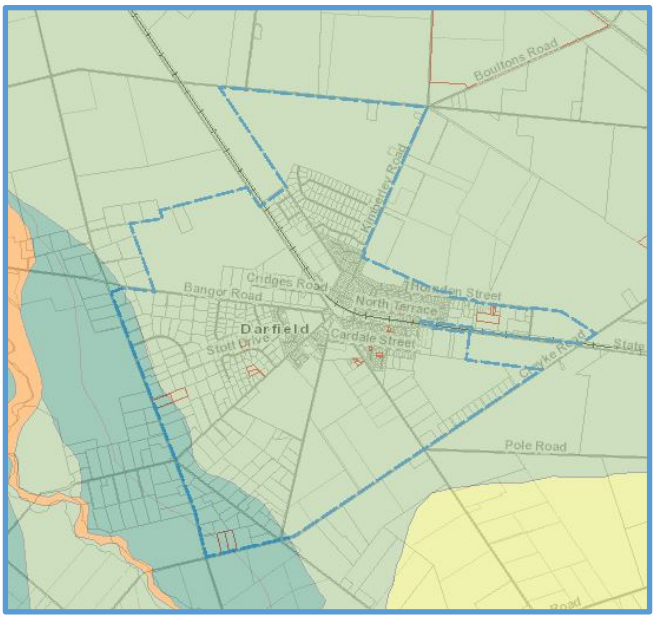

Figure 6 – Darfield

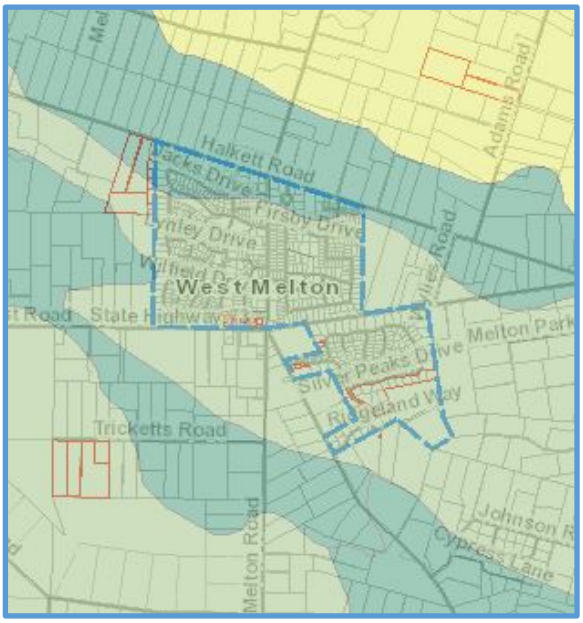

Figure 7 – West Melton

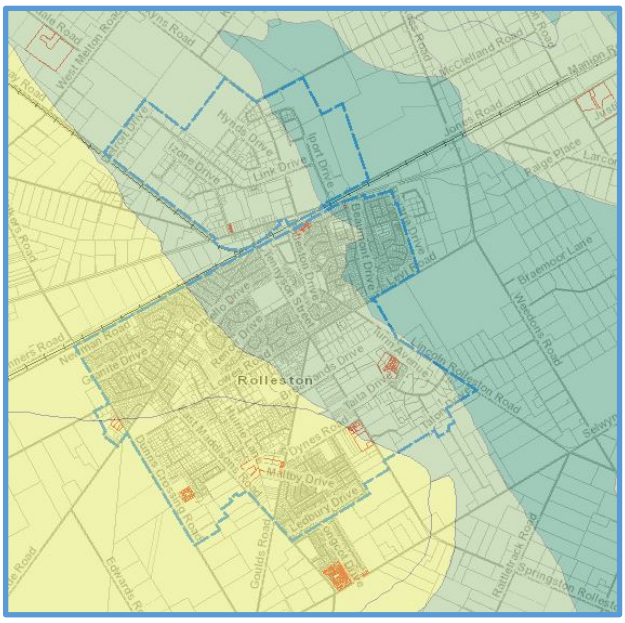

Figure 8 – Rolleston

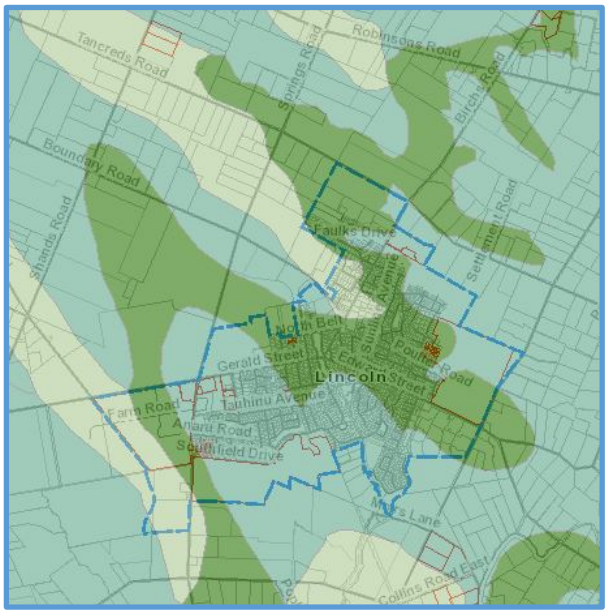

Figure 9 – Lincoln

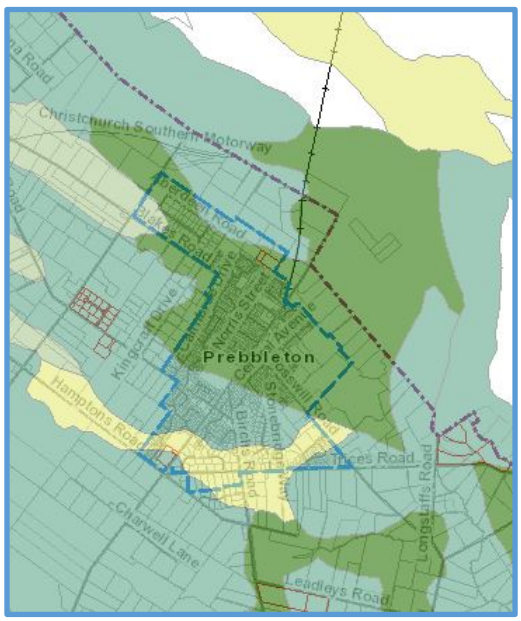

Figure 10 – Prebbleton

4.0 Statutory Framework

The Councils' statutory obligations in relation to soils are contained in both legislation and other higher order documents. The following sections provide a broad summary of these documents. While the focus of this report is on versatile soils, as mentioned previously, soil and land are often used interchangeably, and the documents referenced below have been reviewed in this context.

4.1. Legislative Framework

4.1.1. Resource Management Act 1991

In terms of the District Plan, the primary legislative direction is provided by the Resource Management Act 1991 (RMA).

In Part 2 – Purpose and principles, soils are referred to in Section 5 paragraph 2 (b):

> *(2) In this Act, sustainable management means managing the use, development, and protection of natural and physical resources, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being, and for their health and safety while:*
>
> *(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
>
> *(b) safeguarding the life-supporting capacity of air, water, **soil**, and ecosystems; and*
>
> *(c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.*

Beyond s.5(2), further mentions of **soil** in the RMA relate to *soil conservation*, which is defined as *avoiding, remedying, or mitigating soil erosion and maintaining the physical, chemical, and biological qualities of soil*.

Soils are not specifically listed in s.6 of the RMA which lists matters of national importance, nor are they specifically identified in s.7. However s.7 does direct that:

> *(7) In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to—*
>
> *(b) the efficient use and development of natural and physical resources:*
>
> *(g) any finite characteristics of natural and physical resources:*

The Act defines *natural and physical resources* as including ***land**, water, air, **soil**, minerals, and energy, all forms of plants and animals (whether native to New Zealand or introduced), and all structures*.

Section 5 of the Act does not place the focus of primary resources on 'soil' or 'land'. Rather it is concerned with 'natural and physical resources' generally. It does not elevate one resource over another. This is left to 'people and communities' to determine through such processes as regional and district plans. The Act is also concerned with ensuring that present 'people and communities' do not consume or destroy the existing natural and physical resources, such that it deprives future generation of the ability to meet their needs. In this regard, s.5(2)(b) is concerned with safeguarding soil as a means of sustaining life in general, rather than as a resource in its own right.

Overall, the RMA does not refer versatile soils or land, unlike the Town and Country Planning Act 1977, but uses the more generic expression 'resource'. Soil/land is a resource and must be considered in terms of

both s.5 and s.7 of the RMA, in relation to both present and future generations. However, the versatility of soil is not a reason for protection in its own right, but must be balanced, taking into account the needs of people and communities to provide for their '*social, economic, and cultural well-being, and for their health and safety*'.

4.1.2. Interpretation through Case Law

A number of Court decisions have considered the weight that should be given to the protection of versatile soils, having regard to s.5 of the RMA.

Canterbury Regional Council v Selwyn District Council [1997] NZRMA 25

This case concerned a private plan change seeking a change of zoning from rural to residential of a 7 ha lot immediately abutting the township of Lincoln. The Regional Council appealed the plan change on the ground that the land contained areas of soils of high versatility for horticulture.

The Court held that "*the protection of versatile land is no longer recognised by the RMA as of national importance*". The Court accepted evidence that, in considering whether the land is of high versatility, it needs to be assessed in the perspective of its setting, and soil quality is but one factor. Further, while the protection of high values soils was a matter for consideration, it was not the only consideration and did not enjoy any special place or primacy.

Judge Treadwell provided a comprehensive list of factors that required consideration in determining if land is productive and these factors are much broader than Land Use Capability. They include a wide range of bio-physical, social, and economic factors such as soil (texture, structure, water holding capacity, stability, slope and drainage), temperature, aspect, wind exposure and shelter, transport (ease and distance), proximity to labour, electricity, irrigation water and effects of the use on neighbours and the neighbours on the use. He concluded that "*one can have an extremely good soil which would be disqualified for a farming use by one or several of the factors above*".

The Court acknowledged that the site already had a low productive value because of reverse sensitivity effects from existing residential urban developments and concluded that the rezoning of the land to residential, "*as opposed to retaining it for the foreseeable needs of future generations for food production is totally inconsequential*" having regard to the size of the land area in question and the demonstrated need for urban expansion and the logical extension on the subject land given existing development.

Becmead Investments Ltd v Christchurch City Council [1997] NZRMA 1

This case concerned an application to rezone two separate areas of land, one of 21 ha and the other of 15 ha, on the fringe of Christchurch City, from rural to residential. The predominant soils on both sites were classified as Class 1 and 2 and the Court was satisfied that both blocks could be utilised for certain types of horticulture. However, for this to happen, appropriate drainage improvements and management steps would have to be introduced, measures which the land owners had failed to introduce to date. It was also noted that the adjoining residential development and large active urban-related recreational areas also affected the productive potential of the land.

The Court refused to give the protection of soils recognised under s 5(2)(b) an absolute meaning that soils could not be developed and stated:

> *"Section 5(2)(b) … it is not be taken as meaning that land containing soil of good quality, whatever its location, size and other features, is effectively proscribed from use in any circumstance for residential development and activity."*

The Court held that s5(2)(b) speaks of life supporting capacity of air, water soil and ecosystems in a general sense, not soil quality as such, and that the Act did not require the protection of high value soils per se but depending on the circumstances in each case that may be an outcome that is most consistent with the Act's purpose. In other cases the soil quality may not be the determining factor. In this instance, considering urban growth pressures and the blocks' location between existing development and reserves, the rezoning application was approved.

Canterbury Regional Council v Waimakariri District Council & J Scott C9/2002

The core issue raised by the Regional Council in the Environment Court was that the 4 hectare average lot size proposed by the WDC was inconsistent with the then Regional Policy Statement, particularly in relation to Chapter 7 'Soils and Land Use', and specifically regarding consideration of use, development or protection of land comprising versatile soils. The CRC stated the issues, as they related to versatile soils, as being whether there is any irreversible loss of versatile soils to rural production as a result of the plan change, and whether the proposed rezoning (as per the plan change) better achieved the purposes of the RMA than would be achieved by protection of versatile soils.

The Courts concern was the percentage of versatile soils removed from re-use, which led to the question of minimum development size. The Court found that the total area of versatile soil loss per lot (from the building platform and associated driveways) was 500m^2, or approximately 1.5% of the total area (for the proposed subdivision). It was the Courts view that the versatile soil loss was negligible and that the proposed lot size in the WDC District Plan met the provisions of the Act with their reasoning given that other performance standards could ensure a development minimised any impact on versatile soils.

4.2. Regional Framework

4.2.1. Canterbury Regional Policy Statement (CRPS)

The Canterbury Regional Policy Statement (CRPS) became operative in January 2013. It gives an overview of the significant resource management issues facing the region, including issues of resource management significance to Ngāi Tahu. The purpose of the CRPS is to set out objectives, policies and methods to resolve those resource management issues and to achieve the integrated management of the natural and physical resources of Canterbury.

In the CRPS, versatile soils are defined as "*land classified as Land Use Capability 1 or 2 in the New Zealand Land Resource Inventory*".

Soils are specifically addressed in Chapter 15 of the CRPS. This chapter acknowledges that soils have both extrinsic and intrinsic values and ensuring the good management of soils is of regional significance. While the CRPS refers to soil versatility as an expression used to describe the land use capability of soils, soil quality and soil erosion are identified as the main issues for the region.

Degradation in the quality and life supporting capacity of soil can limit the productive capability of the land and reduce its ability to provide for the wellbeing of people and communities. Objective 15.2.1 and Policy 15.3.1 relate to the maintenance of the elements of soil quality, which also determines the versatility of soil and the economic benefits able to be derived from it.

In order to give effect to the objectives and policies, the CRPS indicates that Environment Canterbury should identify Canterbury's important areas of soil that require management of their development through land use changes, including urbanisation, to preserve or enhance their primary production capacity. The CRPS also directs territorial authorities to set out objective and policies in their district plans that help ensure land use activities and land management practices do not cause significant long-term adverse effects on soil quality.

Chapter 5 focuses on land-use and infrastructure. This chapter recognises that development is important to enabling people and communities to provide for their well-being, both in urban and rural areas but, where not appropriately managed, can result in significant adverse effects on the environment, affecting the ability of people to provide for their needs, both in the present and in the long term.

Objectives and policies in Chapter 5 look to ensure that the natural and physical resources which contribute to Canterbury's economy are maintained and enhanced, particularly in areas which are valued for existing and future primary production, by avoiding development which may compromise or foreclose the ability to appropriately use land for primary production. This includes the need to have regard to the prospect of the reduced productivity of the region's soil resources, through further fragmentation or a move to a more urban character.

The CRPS recognises that there is a need to match land use with land use capability and that versatile soils are a finite resource that can enable highly efficient primary production. As such it is desirable to ensure that resource is available for those kind of uses, for present and future generations. However, while land use practices such as urban development, may impact on the quality of soil or limit the opportunity for soil to be used for primary productive purposes, the CRPS also recognises that the protection of soil quality is not absolute.

4.2.2. Canterbury Land and Water Regional Plan (CLWRP)

The purpose of the Canterbury Land and Water Regional Plan (the CLWRP) is to identify the resource management outcomes or goals for managing land and water resources in Canterbury to achieve the purpose of the RMA. The CLWRP became operative in September 2015.

While the primary purpose of the CLWRP is on the integrated management of land and water, CLWRP does not contain any specific provisions that address the protection or use of versatile soils, and as such there is no overlap with the District Plan. There is limited direction provided in Objective 3.5 (*Land uses continue to develop and change in response to socio-economic and community demand*) and 3.23 (*Soils are healthy and productive, and human-induced erosion and contamination are minimised*), however there are no relevant policies or rules contained in the CLWRP.

Soil specific policies address activities that may affect the stability of soil and sedimentation of water bodies (Policies 4.20-4.22).

4.2.3. Mahhanui Iwi Management Plan

The Mahaanui Iwi Management Plan (IMP) provides a statement of Ngāi Tahu objectives, issues and policies for natural resources and environmental management. Although no specific policies relating to versatile soils are mentioned in the plan, it does seek to ensure that the mauri of land and soil resources is protected and that rural and urban land uses occur in a manner that is consistent with land capability as well as the capacity of catchments and the availability of water.

The IMP recognises that the mauri of soil resources can be compromised by inappropriate land use and development and that soils should be recognised for their life supporting capacity and be valued as taonga and as natural capital, providing essential ecosystems services. The IMP provides support for land use to be matched with land capability, however this policy aims to address the maintenance or improvement of soil organic matter and soil nutrient balance, and the prevention of soil erosion and soil contamination, and not the protection or otherwise of versatile soils.

4.3. Council Strategic Framework

Various statutory and non-statutory strategies and plans have been prepared by the Council that may also have an impact on the District Plan. This section provides a brief summary of each of those relevant documents.

4.3.1. Selwyn 2031: District Development Strategy (2014)

The purpose of Selwyn 2031: District Development Strategy (Selwyn 2031) is to provide an overarching strategic framework for achieving sustainable growth across the District to 2031.

Selwyn 2031 is a broad scale, long-term, land-use strategy prepared under the Local Government Act 2002 (LGA). It is intended to be used to guide the future development of the district and inform Council's investment decisions. The Strategy is to be implemented through tools such as the Selwyn District Plan under the RMA; the Long Term Plan prepared under the LGA and associated Activity Management Plans; and other LGA strategic plans, such as Structure Plans, Master Plans and Area Plans.

There are a number of strategic directions for the Selwyn District which are relevant to the use and development of versatile soils. Strategic Direction 1 *A more sustainable urban growth pattern* seeks to provide sufficient zoned land to accommodate projected household and business growth, and to promote consolidation and intensification within the existing townships to maintain a clear urban/rural interface and minimise the loss of productive farmland. This direction is strengthened by Strategic Direction 5 *Sustainably managing our rural and natural resources* which seeks to explore opportunities for enhancing natural resources while managing the effects of urban growth.

The Strategy identifies the avoidance of urban development on high quality soils as an issue, to address which the Council will take into account the presence of high quality soils, together with other development constraints, when considering the future growth of townships.

4.3.2. Ellesmere Area Plan Mahere-ā-Rohe o Waihora 2031 and Malvern Area Plan Mahere-ā-Rohe 2031 (2016)

The purpose of the Ellesmere and Malvern Area Plans are to provide high-level planning direction to guide the growth and sustainable management of each of the townships in the Ellesmere and Malvern areas through to the year 2031. As previously identified in Section 3, land in around a number of townships covered by the Area Plans has been identified as compromising Class 1 or 2 soils.

Both Area Plans reach the conclusion that there is sufficient available land to accommodate projected population growth within each township through to 2031 without the need to rezone any additional land for residential or business needs. The Area Plans do identify potential areas for further intensification beyond 2031 for the majority of the townships and, in the case of Leeston, Dunsandel, Southbridge, Sheffield and Waddington, some options for the direction of growth is likely to encroach on land that it identified as comprising Class 1 or 2 soils.

4.3.3. Rural Residential Strategy (2014)

The primary purpose of this document is to provide guidance and policy direction on how best to manage rural residential development within the eastern portion of the Selwyn District that is generally recognised as the commuter belt to Christchurch City.

The strategy acknowledges the intensification and diversification of rural lands presents some potentially adverse effects, including the degradation of the life supporting capacity of versatile soils and the subsequent loss of productive capacity of rural land. It is recognised however that the subdivision of rural farmland does not immediately result in the loss of productive soils as often the area lost is restricted to

the building platforms, hard surface areas and roads, while the remainder of the soil resource can still be utilised.

The document contained a criteria to assist in determining the optimal locations for rural residential development. One of the criterion was the consideration of the extent to which any locations may contain Class 1 and 2 versatile soils and determining the impact, if any, that the loss of these high quality soils would have on the productive capacity of the Canterbury Plains when balanced against the preferred urban form of townships.

4.3.4. Lincoln Structure Plan (2008)

The purpose of the Lincoln Structure Plan is to outline an urban design vision for the future development of Lincoln Township. Versatile soils or the productive capacity of the soil resource surrounding Lincoln was not considered when the structure plan was prepared. Rather, the makeup soil was only considered in relation to its stormwater infiltration capacity.

The structure plan only considered development within the current township boundary, and recommendations for rezoning additional greenfield land outside of the current township boundary to address an increasing population were not made.

4.3.5. Rolleston Structure Plan (2009)

The purpose of the Rolleston Structure Plan is to identify principles for the future development of the town including good urban design and sustainability, creating a framework to guide development.

While the structure plan identifies that there are Class 2 versatile soils interspersed through the township and beyond, particularly on the western side of the township, the loss of versatile soils or the loss of productive capacity was not listed as a key issue, constraint or opportunity.

4.3.6. Prebbleton Structure Plan (2010)

The purpose of the Prebbleton Structure Plan is to provide a framework for coordinating development and other changes in Prebbleton in order to achieve a high standard of town planning and urban design. The loss of versatile soils or the productive capacity of the soil resource was not addressed as an issue within the structure plan.

This leaves a gap in the assessment of future development for Prebbleton as the majority of the land outside of the existing township boundary is comprised of Class I and 2 soils.

5.0 Operative District Plan Provisions

Soil provision are currently divided between the Township and Rural Volumes of the Operative District Plan, with a slightly different focus in each volume.

5.1. Township Volume

In the Township Volume, the District Plan acknowledges that land, and the soils which comprise it, are resources for a variety of uses and that the permanent use for one activity may preclude it from use as another activity. Therefore, before land is rezoned, soil types on the site are required to be established and the impacts of the use of those soils for residential or business developments is to be assessed.

Objective B1.1.2 seeks to ensure that the Plan achieves s.5(2) of the RMA by ensuring that new residential or business activities do not create shortages of land or soil resources for other activities in the future. It is considered that by using the words ‘land or soil’, the Plan recognises that the use of one may have an

impact on the other. In other words, if land is used for residential activities it may prevent the use of soil for productive purposes or, conversely, soil used for productive purposes may prevent the expansion of residential activities over the land.

While the District Plan contains a number of policies related to soil, only one addresses the issue of the versatile soils. Policy B1.1.8 seeks to avoid rezoning land which contains versatile soils if the land is appropriate for other activities and there are other areas adjoining townships which are appropriate for residential or business development which do not contain versatile soils. Essentially, the policy seeks to avoid rezoning land that is useful for other activities, such as primary production, having regard not only to the soil classification but also to other factors such as those identified in case law, and there are alternative sites adjoining townships, which do not contain versatile soils.

At a broader level, the District Plan promotes growth in and adjoining existing townships, so versatile soils in the Rural Zone are available for other uses. The issue of urban growth is addressed further in the baseline assessment report for RE019 District Wide Urban Growth.

5.2. Rural Volume

The Rural Volume is also concerned with the irreversible use of versatile soils and seek to encourage urban expansion in or adjoining existing townships.

The objectives in Chapter B1.1 Land and Soil do not address versatile soils specifically. Rather adverse effects on the District's land and soil resources should be avoided and the sustainable management of soil resources is to be promoted. Rural density is used to manage the ratio of land to buildings and other infrastructure necessary to support residential uses in the Rural Zone such that these activities allow for the retention of versatile soils for more appropriate uses.

Policy B1.1.8 specifically addresses versatile soils, and repeats the approach in the Township Volume to encourage residential development in and around existing townships. In the context of the Rural Volume, residential development means subdividing and erecting houses at a higher density than one house per four hectares.

6.0 Comparison with Other District Plans

The district plans of the adjoining councils of Christchurch City, Waimakariri District, Ashburton District and Hurunui District have been examined in terms of their approach to managing versatile soils.

6.1. Waimakariri District Plan

Waimakariri's District Plan was declared operative on 3 November 2005 and is not as current as other plans reviewed in this report.

The Waimakariri District Plan identifies that the potential for land degradation from inappropriate land use is an issue in the region, and that the relevant objective is to maintain and enhance the life-supporting capacity of the land resource (Objective 4.1.1). Policy 4.1.1.6 refers specifically to versatile soils and seeks to promote land uses which safeguard the life supporting capacity of soils that have been classified as versatile and promote their availability for future uses. The Plan does not define versatile soils but states that they are deemed to be those identified as Class 1 and Class 2 land under the LUC system.

This policy is given effect to by District Plan rules which require an assessment of the effects on the life supporting capacity of soils at the time of a plan change, subdivision or resource consent.

The Plan also seeks to enable the sustainable management of natural and physical resources and recognises that there can be changes in the resource management expectations that a community may hold for an

area. As such, any proposal for growth and/or development should provide an assessment of how, and to the extent which, the proposal will protect the life supporting capacity of soils and how this would be managed in a sustainable and integrated way. The Plan also recognises that there will be some situations where irreversible use of the soil resource may occur to enable the needs of other users or potential users to be met in accordance with the purpose of the RMA.

In the Subdivision rules chapter, the provisions to safeguard the life supporting capacity of soils is a matter over which control is exercised, for controlled activities, and is a matter of discretion for restricted discretionary and discretionary activities.

6.2. Ashburton District Plan

The Ashburton District Plan was made operative on 25 August 2014 and recognises that highly productive soils are present in the District and that the productive potential of this land should be protected. Activities that can affect the long term productive use of soils include subdivision, development and the use of small rural lots for principally residential activities. These issues are addressed in the Rural, Residential and Subdivision chapters of the District Plan.

In the Rural Chapter, Objective 3.1 seeks to enable primary production through the protection and use of highly versatile and/or productive soils and the management of potential adverse effects. Policy 3.1A seeks to ensure the continued use of highly productive and/or versatile soils by ensuring that land is not developed for residential or non-rural activities. This policy is supported by Policy 3.1B which seeks to provide for residential growth in Residential zones and other identified areas and Policy 3.1E which discourages earthworks and extractive processes which deplete the topsoil or the subsoil. The protection of versatile soils is not directly given effect to with specific rules, but through rules and controls on residential density and building coverage and rules which enable a range of land uses in rural areas.

The Residential Chapter also addresses the issue of productive soils and acknowledges that the growth and development of urban environments has the potential to prevent these soils from being able to meet the needs of future generations for primary production. For this, and for other resource management issues, the Plan seeks to consolidate growth in and around towns and settlements. Objective 4.2 balances the need to provide for growth, through different forms of residential development in a range of areas around the District whilst also protecting the productive potential of the rural area. Policies are focused around providing for a compact urban form, avoiding sprawl and maintaining clear distinctions between urban and rural areas. In having regard for future residential needs, the approach is to avoid highly productive and versatile land, unless this is outweighed by the protection of other resources. There are no specific rules which address versatile soils in the Residential Chapter.

In the Subdivision Chapter, the Plan acknowledges that the economy of the District is heavily dependent upon agricultural activities, which rely upon access to productive soils as well as unrestricted use of the land. Policy 9.1D seeks to set minimum allotment sizes in Rural Zones to protect productive activities, while Policy 9.1H seeks to promote a consolidated urban form for the same purpose. These policies are implemented through rules related to minimum allotment sizes in Rural and Residential zones.

Versatile soils are not defined in the District Plan.

6.3. Hurunui District Plan

The Hurunui District Plan was made operative in June 2018 and includes the CRPS definition for versatile soils. However versatile soils are not referred to elsewhere in the remainder of the Plan.

In Chapter 3 – Rural, the Plan recognises that all land does not need to be in productive use or that its potential be fulfilled, rather it is important to safeguard the land's life supporting capacity. In this regard it is essential that the district's land and soil resources are protected from activities which may adversely

affect its life supporting capacity. This means avoiding land use practices that could limit the opportunity to use the potential of the soils for other purposes. The Plan also acknowledges that most of the district's high quality soils adjoin existing settlements and the expansion of these settlements can have an irreversible impact on those soil resources.

Objective 3.2 seeks to manage rural areas so that primary production activities can be carried out efficiently and effectively. Policy 3.2 seek to protect highly productive soils by discouraging activities that will have adverse effects on their continued productive use and life-supporting characteristics that are difficult to reverse. However rules in the Rural chapter do not specifically address the protection of highly productive soils.

The loss of productive capacity of land in the rural environment is recognised as an issue in the subdivision chapter, however the objectives, policies and rules remain largely silent on specific methods of protection or approaches to managing highly productive soils. Instead the loss of productive capacity is managed through rules addressing residential density, and assessment matters that require the balance area of land to be considered in terms of continued benefit for farming purposes.

6.4. Christchurch District Plan

The Christchurch District Plan was made operative on 19 December 2017. The Plan does not define versatile soils and the majority of references to soil in the Plan appears only to relate to the filling, excavation or disturbance of soil.

The Plan seeks to provide a range of opportunities in the rural environment primarily for rural productive activities, which are defined as including farming, forestry and quarrying activities. In the Rural Chapter, Objective 17.2.1.1 seeks to ensure that subdivision, use and development of rural land supports, maintains and, where appropriate, enhances the potential for rural productive activities to contribute to the economy of the District, whilst maintaining a contrast to the urban environment. This objective is supported by a variety of policies, none of which specifically address soils. Density of residential development in the Rural Zone is managed for the purpose of maintaining the working function of the rural environment.

Versatile soils are acknowledged in the chapter on Subdivision, Development and Earthworks. In regards to subdivision, additional matters for control in rural zones direct consideration of the extent to which clustering development is beneficial to the continuation of rural activities including the ability to use versatile soils. This chapter also sets out maximum volumes for earthworks, being both filling and excavation. Where the volume thresholds are exceeded, discretion is provided to consider if versatile soils would be lost to production from the earthworks activity.

6.5. Cross Boundary Approach

There is little direct consistency in approaches across the provisions in the Hurunui, Waimakariri, Christchurch City, and Ashburton plans. Only one (Hurunui) includes a definition of versatile soils, although all make mention of versatile soils. There is some consistency across the plans in that the objectives and policies specifically address the loss and/or retention of productive capacity of soils, although none of the plans contain specific rules regarding versatile soils. Protection of versatile soils is given effect to in the subdivision chapters with controls on density and minimum lot size.

7.0 Selwyn's Growth Direction v Versatile Soils

Land within the District with versatile soils have been identified in Section 3 of this report. The various statutory and strategic documents which establish a framework for Council's obligations in relation to soils have been reviewed and discussed in Section 4.

The future growth direction of the various townships within the district are indicated by the strategic framework established by Council through Selwyn 2031 and the Area Plans for the Malvern and Ellesmere wards, alongside the structure plans for Lincoln, Rolleston and Prebbleton. These documents largely conclude that there is sufficient existing undeveloped residential land within the existing township boundaries to provide for the estimated future population growth.

The Ellesmere and Malvern Area Plans acknowledged that towns in these areas have capacity to meet growth projections through existing zoned land (i.e. developable land or 'plan-enabled' land). This existing capacity includes zoned but undeveloped land and developed land with further development potential (e.g. infill). Since then, Council has also developed and endorsed the Selwyn Capacity for Growth Model (SCGM), which again indicates that there is sufficient capacity, although this is tight in some townships with some reliance on more efficient use of existing zoned land.

For those townships in the Selwyn Central and Springs wards, the need to rezone more land is being considered through the National Policy Statement for Urban Development Capacity (NPS-UDC) workstream, however there is little mandate for rezoning given the strong direction of the CRPS in controlling and directing greenfield expansion.

As previously mentioned, the matter of issue of urban growth has been addressed in the separate baseline assessment report for RE019 District Wide Urban Growth, which should be read in conjunction with this report.

It is noted that some existing undeveloped residential land within the district's townships is located on Class 1 or 2 soils. This means that, when this land is developed for urban purposes, the soil will be removed from productive land uses. However the current provisions within the District Plan have allowed for this, through zoning this land Living and incorporating it within the boundary of a township.

It is presently considered that the Selwyn district is not currently facing an issue of the loss of versatile soils or the loss of productive capacity of rural soils in relation to urban development. However, there may come a time where, should there be a need to rezone land, the loss of versatile soils may occur on the fringes of a number of townships in order to provide for urban growth. Nonetheless, it is recognised that the protection of these soils is not absolute and must be balanced against a wide range of factors, as established through case law.

8.0 Conclusion

The protection of versatile soils is not a resource management issue in and of itself. Rather, the key concerns relate to ensuring the continued viability and versatility of land for productive use and the sustainable management of resources when providing for urban expansion.

The loss of versatile soils is not currently an issue within the district, nor is it likely to be an issue within the next 10 years, given the results of the SCGM. Further, the protection of versatile soils is only one part of the mix when considering potential urban growth paths and there are some equally or more important factors which the Council must consider under the statutory frame work of the RMA.

It is considered that the current provisions within the Operative District Plan in relation to versatile soils recognise the need to balance the protection of versatile soils against other activities, such as urban development and, as such, these provisions should be rolled over as is.

This approach is consistent with the CRPS and the plans of adjoining councils and recognises that the RMA does not place any primacy of soils or land over other natural and physical resources which allow people and their communities to provide for the needs of current and future generations.