

## Chapter 4: Natural Resources

### 4.1 Introduction

The Waikato basin and lowlands contain high quality soils, which are important to the district's identity and economy. There are also large coal deposits and potentially gas resources, iron sand, limestone, sand resources and hard rock aggregates (refer to section 1.5A). The strategic location of the district means that these natural resources are important for a variety of uses, both within the district and in areas to the north and south.

Sustainable management of these resources is approached by addressing issues of continued access, and the effects of subdivision and development.

### 4.2 Issue – Soil Removal and Damage

Removal of soil and damage to soil structure reduces the soil's life supporting capacity and productive potential and restricts its versatility, especially for high quality soil.

OBJECTIVE	POLICIES
<p>4.2.1 Physical, chemical and biological properties necessary for maintaining the life supporting capacity and productive use of the soil, especially high quality soil, are retained.</p>	<p>4.2.2 The productive potential of soil, especially high quality soil, should not be compromised by activities that do not use or rehabilitate the productive capability of the soil or that adversely affect the physical, chemical and biological properties of the soil.</p> <p>4.2.3 Soil, especially high quality soil, should be available in its natural state and original location for future generations.</p> <p>4.2.4 Activities that do not utilise or rehabilitate the life supporting capacity and the productive capability of high quality soils should not locate on land containing high quality soils.</p> <p>4.2.5 Where high quality soil removal or disturbance cannot be avoided, the soil should be used to rehabilitate the land or enhance soils elsewhere to retain soil versatility and productive capacity.</p> <p>4.2.6 The physical, chemical and biological properties of soil should be reinstated at the conclusion of activities that have adversely affected those properties.</p>

### 4.3 Reasons and Explanations

#### 4.3.1 Soils

High quality soils are a finite resource, and are particularly valuable because of their versatility. They make up 35 percent of the soils of the district. There are limited areas of high quality soils found in relatively flat and well-drained areas with favourable climatic conditions. The plan sustains the potential of soils, particularly high quality soils, to provide for farming now, including for food production, and the needs of future generations by managing the introduction of non-rural activities in rural areas. There has been a long tradition of Maori recognising the versatile and productive soil resource along the Waikato River while using it for pa and gardens. Maori have cultural knowledge of, and value, the best soil for food production. This tradition is continuing as the soils continue to be valued today as highly productive areas.

Life-supporting capacity, as referred to in section 5 of the Resource Management Act, refers to the ability of soil to act as a medium for plant growth, including its ability to maintain water and nutrient supply. Safeguarding that life-supporting capacity requires the maintenance of soil health by preventing or mitigating any degradation of the soil's physical, chemical and biological properties. The versatility of the land to act as a high-production medium can be sustained through good management practices.

Protection of food sources is a national obligation under Agenda 21 (an international agreement adopted at the United Nations Conference on Environment and Development, 1992). The management of land to ensure the continued availability of soil, particularly the most versatile soil, is therefore necessary to meet this obligation.

#### **4.3.2 Activities**

Locating residential, business or industrial uses on high quality soils can destroy the soils or prevent their most efficient and best uses, especially for food production. A more sustainable use of the soils of the district would be to locate these activities on land with poorer soils. Activities that do not utilise the productive capacity of high quality soil should be limited to circumstances where other positive effects for the community are significant, or where the loss, including the cumulative loss, of the productive capacity of high quality soils is minor.

#### **4.3.3 Removal of Soil**

Poor land management, such as excessive cultivation or removal of soil, poses threats to the sustainability of the versatile Waikato soil resource and the long-term availability of the soil. The removal or destruction of versatile soil is an inefficient use of this finite resource. Soil that has been removed from a site is best used for site rehabilitation or redistributed to enhance soils elsewhere.

#### **4.3.4 Reinstatement of Soil Properties**

Some activities affect the properties of soil to the extent that they can no longer be used for other purposes e.g. through removal or degradation. High standards of rehabilitation and reinstatement of soil properties are required to ensure that the versatility of soils is retained and that water edge environments are maintained or enhanced following disturbance.

## 4.4 Issue – Land Fragmentation

Fragmentation as a result of subdivision, use or development can limit the versatility of rural land by restricting the range of opportunities for land use, constraining access to minerals and other resources, and increasing conflicts between land users.

OBJECTIVES	POLICIES
<p>4.4.1 Versatility and productive capability of rural land, especially that containing high quality soil and open space, is retained.</p>	<p>4.4.2 Allotments created by subdivision, particularly in areas containing high quality soils, should be appropriately located and shaped and of sufficient size to enable rural production based on the soil resource.</p> <p>4.4.2A Rural land should be retained in large holdings, and the creation of large holdings encouraged, to retain opportunities for land based primary production and rural industries.</p> <p>4.4.3 Subdivision of rural land composed principally of small land holdings outside defined growth areas should be constrained to ensure rural land uses continue to predominate in these areas.</p> <p>4.4.4 Repeated subdivision of rural land that results in additional lots must be avoided.</p> <p>4.4.5 Boundary adjustments and boundary relocations should be provided for where they enable more efficient rural use of land holdings.</p>

## 4.5 Reasons and Explanations

### 4.5.1 Subdivision

Subdivision can both facilitate and constrain development, depending on its location and density. Subdivision in the rural area can have adverse effects on the ability to use rural land efficiently for productive purposes. For instance, small rural house lots remove land from production and can constrain rural industries through being sensitive to the effects of those industries. Land based primary production and rural industries make a vital contribution to sustainable management, especially towards the social and economic wellbeing of the community. Adverse effects on these activities need to be managed to ensure continuing future economic wellbeing. Subdivision needs to be managed, and open spaces need to be retained, in ways that provide for the efficient utilisation of natural and physical resources (including built facilities such as transport networks, mineral resources and ongoing rural production) and that enable the community to provide for its wellbeing, both now and in the long term. When subdivision does occur in the rural area, new allotments need to be located, sized and shaped in order to minimise any adverse effects on rural land uses and where possible to enable productive rural activities to occur.

Rural land is a finite resource that is vulnerable to small scale changes that, cumulatively, can have a profound effect on the ability of land to be used efficiently for rural production and other rural activities. A key focus is to ensure that the resource does not become so fragmented that its attraction for productive rural activities is diminished, including where land is already made up of small holdings. For small land holdings, a level of rural production or rural use may still occur, particularly where multiple titles are managed together. Avoiding the repeated subdivision of land is a vital part of avoiding cumulative adverse effects. It will mean that the balance lot created at time of

subdivision will remain intact into the future and hence remain available for productive rural activities, and will limit the incremental increase of non-rural activities in rural areas. Therefore, using the date of a certificate of title to determine the activity status of a subdivision application is fundamental to implementing the policy framework. The subdivision of certificates of title created after 6 December 1997, with a few specified exceptions, is not anticipated and is strongly discouraged.

Boundary adjustments and boundary relocations can provide benefits such as increased versatility for a range of land use activities and more efficient use of rural land holdings. These activities may in some cases have additional benefits in terms of reducing conflicts between land uses and promoting rural character and amenity.

Also refer to chapters 1A, 3, 4, 5, 6, 8, 11, 12, and 13.

#### 4.5A Issue – Mineral Extraction

Inadequate mineral supplies will inhibit the community's ability to provide for its social and economic wellbeing.

OBJECTIVE	POLICIES
<p>4.5A.1 Minerals are available for extraction.</p>	<p>4.5A.2 Nationally and regionally significant mineral resources should be recognised for their actual or potential contribution to social and economic wellbeing.</p> <p>4.5A.2A Subdivision and development should be located and designed so that opportunities to access aggregate resources are retained where</p> <ul style="list-style-type: none"> <li>(a) There is a substantial volume of high grade aggregate resource, particularly where the resource is in close proximity to significant markets, and</li> <li>(b) The transport network provides a convenient and direct route from the resource area to major markets, and</li> <li>(c) Large land holdings predominate, and</li> <li>(d) Current development does not unduly constrain access to or transportation of aggregate, and</li> <li>(e) Aggregate extraction would not compromise matters identified as being of national importance under section 6 of the Act.</li> </ul> <p>4.5A.3 Access to and extraction of mineral resources from specific areas identified as Coal Mine Policy Areas and Aggregate Extraction Policy Areas on the planning maps should not be compromised by new use or development in areas on or close to those areas.</p> <p>4.5A.4 Activities that are sensitive to the effects of mining or associated mineral haulage should be located and designed to avoid, remedy or mitigate adverse effects on the utilisation of actively exploited mineral resources or for which resource consent to extract has been obtained, so that resource utilisation is not constrained.</p> <p>4.5A.5 The use and development of energy surface facilities at specific sites individually identified on the Planning Maps should be recognised and provided for in Schedule 25F.</p>

## 4.5B Reasons and Explanations

### 4.5B.1 Availability of Mineral Resources

The district contains regionally and nationally significant mineral resources including hard rock aggregate, sand and gravel and coal. Waikato district's strategic location means that its aggregate resources are vital not only to this district but also to Hamilton, and are of increasing importance to Auckland. The location-specific and finite characteristics of minerals need to be recognized, and access to, and utilisation of, these resources need to be managed to enable the community to provide for its social and economic wellbeing.

There is a long history of large-scale mining operations within the district. A number of existing operations are expected to continue or expand, and new operations are anticipated. The economic value of these resources is affected by several physical characteristics such as resource quantity and quality, distance to a major road, and operational constraints imposed to address adverse effects on sensitive adjoining land uses. Extractive industries can result in the creation of lakes and wetlands, with their potential for amenity and ecological benefits.

Subdivision, use or development, especially of a sensitive nature such as residential and rural-residential, in close proximity to mineral resources has the potential to constrain extraction of those resources. Development in the vicinity of an actively exploited mineral resource or a haulage route should be designed to avoid, remedy or mitigate its sensitivity to the effects of mining and haulage. The wide extent of mineral resources within the district means that there is considerable uncertainty regarding when, or if, extraction may occur at a specific new site. Therefore it is not reasonable to give special protection within the district plan to resources throughout the district for which mineral extraction is not currently authorised or to constrain other activities in the meantime. Those who wish to utilise new resources in the future should consider options outside of the district plan to facilitate future extraction. Options may include proactively establishing buffers around specific sites through land purchase or agreements with landowners.

Notwithstanding, long-term opportunities to access aggregate resources need to be secured, to ensure the community can meet its needs and as a means of minimising the adverse effects associated with aggregate extraction. Consideration should be given to the adverse effects of subdivision and development upon the ability to commence aggregate extraction in the future where a combination of factors indicate extraction may be viable and appropriate. Factors include the quantity and quality of resources, the ease with which resources can be transported to markets, and the suitability of the area for aggregate extraction, taking into account the sensitivity of the area to extraction and the ability to internalise the effects of any new extraction activity. The size of any internal buffers will differ between hard rock and sand, and this should be reflected in the size of land holdings to which this policy applies.

An Aggregate Resource Policy Area annotation on the policy maps is designed to retain access opportunities to aggregate resources by ensuring consideration is given to the density and location of new lots being created through subdivision and the consequential development of new dwellings or other sensitive activities. Within this policy area, subdivision should be managed so that it does not constrain access to the aggregate resource in terms of both its extraction and its haulage. The annotation does not imply approval in principle for aggregate extraction to occur in future. The activity status of aggregate extraction is not affected by the annotation.

#### 4.5B.2 Specific Sites Identified

Where aggregate extraction is currently occurring, or land use consents to commence aggregate extraction have been granted, an Aggregate Extraction Policy Area may be included on a policy map. This annotation results in the development of sensitive activities on neighbouring properties being regulated.

Specific sites have been identified on the planning maps as Coal Mining Policy Areas and Aggregate Extraction Policy Areas as new use or development in areas on or close to these sites needs to be managed to ensure that extraction of mineral resources from these areas is not compromised

### 4.6 Issue – Subdivision and Land Disturbance Near Water

Subdivision and land disturbance near the coast and the margins of wetlands, lakes and rivers, can degrade water quality and ecosystems.

OBJECTIVE	POLICY
<p>4.6.1 Coastlines, wetlands, lakes and rivers are protected from the adverse effects of subdivision and land disturbance.</p>	<p>4.6.2 Margins of water bodies (including river banks) and the coast, significant indigenous vegetation and habitats, and other sensitive areas should be: protected from the adverse effects of soil removal and disturbance, earthworks, vegetation clearance, and disposal of waste to land, or if disturbed, reinstated to an equivalent or better condition than prior to disturbance.</p> <p>4.6.2A Subdivision and land disturbance along the margins of water bodies and the coast should be managed to avoid, remedy or mitigate adverse effects, including sediment and nutrient runoff and the removal of soil.</p> <p>4.6.2B The coastal environment should be protected from the effects of activities distant from the coast, including soil disturbance, earthworks, vegetation removal and waste disposal to land.</p>

### 4.7 Reasons and Explanations

The Waikato Regional Council has primary responsibility for managing water quality. The district plan has a role in managing land uses that can indirectly affect water quality. Activities such as soil disturbance, sediment and nutrient runoff, cultivation, vegetation clearance or discharge of contaminants around wetlands, lakes, rivers and coastal margins can adversely affect water quality, increase sediment generation, and cause river bank instability. Subdivision, use or development near the margins of water bodies or the coast is likely to involve such activities. Where the effects on the margins of water bodies cannot be avoided, mitigation and remediation shall be implemented to minimise the actual and potential effects of the activity. The coastal policy gives effect to the Hauraki Gulf Marine Park Act 2000.

## 4.8 Issue – Urban Expansion

Sporadic development on the urban fringe of Hamilton and the urban fringes of other urban areas may impede conversion of land to fully integrated urban development.

OBJECTIVE	POLICY
4.8.1 Future urban development potential of Hamilton and other urban areas is not impeded.	4.8.2 Subdivision and building in the urban fringe should not compromise future urban development potential. 4.8.3 Non-rural activities in the urban fringe should be avoided. 4.8.4 Subdivision, use and development should be managed to ensure a predominance of open space within an urban fringe so that opportunities for urban-density expansion are retained.

## 4.9 Reasons and Explanations

Hamilton city is projected to continue to grow rapidly. This may necessitate the conversion of rural land in the vicinity of Hamilton into high-density urban use, particularly in the Urban Expansion Policy Area where land will eventually form part of Hamilton. Sustainable management of this land requires that attention be paid to non-rural development that might occur during the period prior to conversion to full urban use. The Ruakura Agricultural Research Centre is located within the Urban Expansion Policy Area and its continued operation should be facilitated.

Residential, industrial, or business development could impede later conversion to urban uses by obstructing the required urban road and utility networks, reducing the available economies of scale for urban development, fragmenting titles, adversely affecting urban amenity, inefficient use of the land resource and infrastructure, and taking land out of production sooner than would be the case if the land were developed more systematically. Land in the Urban Expansion Policy Area in particular should therefore be carefully managed so that activities do not prevent or significantly increase the costs of future conversion of the land to urban use. Similar issues arise around towns such as Te Kauwhata, Raglan, Huntly and Ngaruawahia, as well as around some villages, and these areas should also be carefully managed.

## 4.10 Methods of Implementation

### 4.10.1 Regulatory Methods

- (a) Rules controlling land use and subdivision especially on land containing high quality soil.
- (b) Rules controlling land use and subdivision in areas on or close to specific and individually identified mineral resource sites.
- (c) Rules controlling land use and subdivision on coast and water body margins.
- (d) Esplanade reserves and other development setbacks created adjacent to water bodies and the coast.
- (e) Rules prohibiting and controlling non-rural activities in the Urban Expansion Policy Area by reference to effects on future conversion to urban use, while still providing for research and ancillary activities at the Ruakura Agricultural Research Centre.

### 4.10.2 Deleted

#### 4.10.3 Council Works and Services

- (a) Avoid location of community assets on high quality soil.
- (b) Minimise soil disturbance associated with road activities.
- (c) Adopt soft engineering techniques.
- (d) Engineering practices associated with roads and drainage.
- (e) Management of esplanade reserves.

#### 4.10.4 Information, Education and Advocacy

- (a) Support promotion of high quality soil to landowners.
- (b) Liaison with Landcare, Ministry of Agriculture and Forestry, Waikato Regional Council, farmers and other rural land users.
- (c) Support promotion of best practice guides for soil use.
- (d) Liaison with mineral industry sources.
- (e) Liaison with adjoining landowners.
- (f) Support promotion on enhancing water margins and water quality.
- (fa) Support the efforts of community groups working with land users to minimise environmental impacts.

### 4.11 Reasons for Methods

#### 4.11.1 Regulatory

Regulatory methods are necessary to protect natural resources such as soil, minerals and water. Subdivision of rural land is often undertaken for economic reasons and the effect on natural resources may not always be taken into consideration. Because the location of subdivision is regulated, availability and access to natural resources can be considered. Rules are especially necessary in the Urban Expansion Area ensure that non rural activities do not impede or increase the costs of future conversion of the land to full urban uses, to counteract market incentives for such development.

#### 4.11.2 Deleted

#### 4.11.3 Council Works and Services

The Council will locate community assets and development, and adopt environmentally responsive engineering techniques to ensure that disturbance to high quality soil is minimised. Good management of coastal and water body margins is necessary to allow continuity of ecosystems and protection of habitats.

#### 4.11.4 Information, Education and Advocacy

Lack of public information and awareness of soil management contributes to the ongoing loss of productivity from versatile soils. Information and liaison with industry related specialists are ways in which landowners can be made aware of alternatives.

### 4.12 Anticipated Environmental Results

ISSUES	ANTICIPATED ENVIRONMENTAL RESULTS
4.12.1 Soil removal and damage	(a) Retention of the life supporting capacity and the potential and versatility of soil, especially high quality soil, for productive purposes for current and future generations.

ISSUES	ANTICIPATED ENVIRONMENTAL RESULTS
4.12.2 Land fragmentation	(a) Sustainable management of the natural resources of the district. (b) Effective and efficient use of natural resources. (c) Maintenance of access to areas for future mineral extraction. (d) Limited loss of productive rural land. (e) Retention of a predominance of rural land uses (f) Retention of rural land in large holdings sufficient in size to enable productive rural activities to occur. (g) Retention of a range of opportunities for rural land uses. (h) Minimal conflicts between adjoining land uses. (i) Rural resources safeguarded for productive rural activities. (j) Avoidance of repeated subdivision of rural land.
4.12.3 Land disturbance near water	(a) Establishment of setback buffers between developments and the margins of the coast or water bodies. (b) Avoidance of contamination of water bodies from development.
4.12.4 Urban expansion	(a) Limited subdivision and non-rural activities in the urban fringe. (b) Retain potential for urban density development.