



TAURANGA CITY COUNCIL

CITY PLAN SECTION 32 REPORT

Chapter 4 – Earthwork Provisions



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1. INTRODUCTION

The Council is required under section 32 of the Resource Management Act 1991 (the RMA) to carry out an evaluation of alternatives, costs and benefits, and efficiency and effectiveness of the various components of the proposed City Plan.

Section 32 of the Act requires that the evaluation must examine:

- (a) the extent to which each objective is the most appropriate way to achieve the purpose of the Act; and
- (b) whether, having regard to their efficiency and effectiveness, the policies, rules or other methods are the most appropriate for achieving the objectives.

An evaluation must also take into account:

- (a) the benefits and costs of policies, rules, or other methods; and
- (b) the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules or other methods.

This report fulfils the obligations of the Council under s32 of the RMA. The following is a section 32 analysis in regard to Earthworks Provisions. It should be read together with the text of the proposed City Plan itself.

2. PURPOSE OF THE EARTHWORKS PROVISIONS (GENERAL CHAPTER)

Earthworks are an essential part of the on-going utilisation and management of the land resource in the City.

Whilst the operative District Plan provides some control over earthworks in coastal zones and harbour margins there is either no control, or ambiguity as to the Council's ability to control earthworks outside of these areas.

The purpose of the draft earthworks provisions are to provide clearer direction on the management of earthwork activities within the City.

If not managed well earthworks have the potential to cause significant adverse effects on the environment such as:

- Increased loadings of sediment onto and into Council infrastructure and assets.
- Effects on amenity such as visual changes and construction effects including traffic movements, noise and dust.
- Effects on natural hazards, such as induced or accelerated erosion or slope instability, altered drainage patterns and flood risk.
- Loss or damage to natural landforms and features.
- Discharge or disposal of material from contaminated sites.

As the City continues to grow and development pressure increases earthworks are being regarded as an area of concern, particularly where they are in close proximity to residential development.

3. RECORD OF DEVELOPMENT OF PROVISIONS

3.1 Background Research

The following background research has been used to inform the draft earthworks provisions.

The Operative District Plan and the Regional Council

Under the operative District Plan earthwork restrictions are identified in the following areas:

- Within the Coastal Hazard Erosion Policy Area (CHEPA) – Here rules limit the excavation and deposition of earth and sand to ensure the integrity of the coastal dune system is maintained.
- Within the Flood Hazard Policy Area – Here the rules enable consideration of potential inundation effects of developing land lower than 2.7m – 2.9m Moturiki Datum (MD)
- Within Coastal Environments and Natural Waterways – Here rules limit the excavation and deposition of earth to ensure the amenity and character values associated with the coastal areas and tributary systems are maintained.

In relation to subdivision applications the operative Plan also identifies that applicants shall, as and when appropriate, provide information of proposed areas of excavation and filling including finished contours. In addition the Plan identifies that satisfactory completion of earthworks will (where appropriate) be governed by the subdivision consent conditions.

So, whilst there is ability to exercise control in coastal and flood hazard areas and ecologically sensitive areas there is little or no ability for the Council to consider earthworks where they occur outside these areas. The current management approach to earthworks has created the following issues:

- Ambiguity over the extent of control able to be exercised when large scale earthworks are associated with Greenfield subdivision.
- The ability to consider potential adverse amenity effects associated with cut and fill of sites.
- The ability to manage earthworks on contaminated land.
- The general lack of certainty or ambiguity for developers and landowners associated with the lack of earthwork standards.

In terms of the Bay of Plenty Regional Council (EBOP) the Regional Water and Land Plan identifies the regional triggers for earthworks consent. This recently promulgated plan distinguishes between small scale earthworks and large scale earthworks and provides a definition for both. Whilst large scale earthworks require consent small scale earthworks (volumes under 5000m³), where those earthworks comply with the permitted activity conditions, do not. Up to 20000m³ is a controlled activity which must be granted consent by EBOP.

Although there are instances where EBOP control volumes smaller than this (i.e. within Erosion Hazard Zones or Riparian Management Zones) it is important to note that these earthworks are being considered against regional objectives and policies which will not necessarily address those localised District level effects. These volumes are also significant when considered against the fact that a standard tipper truck carries between 8 – 10m³

The Building Act and Building Code

Whilst the Building Act 2004 sets out statutory requirements the Building Code sets out a series of performance based criteria that buildings must adhere to and are assessed against. Although the Building Act 2004 and the Building Code do not directly control earthworks, they are able to be considered under 'siteworks'. 'Siteworks' are defined as:

“work on a building site, including earthworks (emphasis added), preparatory to, or associated with, the construction, alteration, demolition, or removal of a building.”

The parameters for considering earthworks through the building consent process are identified in the structural provisions (B1) of the Building Code. The relevant sections are listed below:

OBJECTIVE

B1.1 The objective of this provision is to:

- (a) Safeguard people from injury caused by structural failure,*
- (b) Safeguard people from loss of amenity caused by structural behaviour, and*
- (c) Protect other property from physical damage caused by structural failure.*

FUNCTIONAL REQUIREMENT

B1.2 Buildings, building elements and sitework shall withstand the combination of loads that they are likely to experience during construction or alteration and throughout their lives.

PERFORMANCE

B1.3.1 Buildings, building elements and sitework shall have a low probability of rupturing, becoming unstable, losing equilibrium, or collapsing during construction or alteration and throughout their lives.

B1.3.2 Buildings, building elements and sitework shall have a low probability of causing loss of amenity through undue deformation, vibratory response, degradation, or other physical characteristics throughout their lives, or during construction or alteration when the building is in use.

B1.3.3 Account shall be taken of all physical conditions likely to affect the stability of buildings, building elements and sitework, including:

- (a) Self-weight,*
- (b) Imposed gravity loads arising from use,*
- (c)...*
- (d) Earth pressure,*
- (e) Water and other liquids,*
- (f) Earthquake,*
- (g)...*
- (r) Removal of support.*

....

B1.3.6 Sitework, where necessary, shall be carried out to:

- (a) Provide stability for construction on the site, and*
- (b) Avoid the likelihood of damage to other property.*

B1.3.7 Any sitework and associated supports shall take account of the effects of:

- (a) Changes in ground water level,*
- (b) Water, weather and vegetation, and*
- (c) Ground loss and slumping.*

Therefore any earthworks (cut or fill) carried out in conjunction with the construction or alteration of a building need to satisfy these requirements of the Building Code and the Building Act.

Whilst the Building Code provides a framework for considering the issue of stability and cuts and fill there are two key issues associated with relying solely on the Building Act to manage earthworks. Firstly, earthworks are governed by a series of performance standards which introduce a degree of interpretation and discretion. Secondly, the Building Act is site specific and does not enable consideration of the wider potentially adverse environmental effects associated with earthworks.

Tauranga District Council Slope Stability Criteria (Rock Engineering November 2002)

This report was prepared for the Council to provide guidance and performance criteria for building consent applications where slope stability is considered to be an issue. This was in response to changes to the Building Code, particularly sB/VM4, which removed specific performance criteria from the document opening it up to a greater degree of interpretation. The report reviews previous New Zealand and overseas experience in respect to factors of safety of slopes and was a key document used to identify slopes within Tauranga where the factor of safety is a concern. The factor of safety is best defined as the ratio of the total force available to resist sliding to the total force tending to induce the sliding. The adverse effects of slope failure in the Tauranga context were most prominent during the May 2005 storm event.

Tauranga Storm Event May 2005; Landslip Issues (Hegan & Wesley June 2005)

This report presents the survey results of the slips that occurred during the storm event. The report identifies the main cause of the slip and contributing factors and recommends how further slips can be avoided in the future. The report identifies that ground re-shaping, location of fill and associated retaining are activities that can concentrate run-off and exert additional force, leading to slope failure. One of the key recommendations of the report is for the Council to exercise tighter control on earthworks noting that *“builders and house owners frequently carry out excavations or place fill on properties in a manner that clearly increases the risk of slope failures.”*

The Design of Permanent Slopes for Residential Development (Crawford and Millar, undated)

This paper examines the issue of assessing slope stability where development occurs on residential land and the requirements of the Building Code in this process. One of the key conclusions of this report is that the requirements of the Building Code do not adequately address issues of slope stability and geotechnical investigations.

Tauranga Landslides 18 May 2005: Site Visit and Review Notes (Rock Engineering, July 2005)

This brief report was prepared in response to the May storm event and considered the issues leading to the widespread slope failure which include slope factor of safety.

Review of Other Territorial Authority Approaches to Earthwork Management

As part of the background research a review of other territorial authority's methods of managing earthworks was undertaken. This review identified that earthworks are principally managed through district plans through restrictions on volumes, depth of cuts and fill, land

area exposed and the degree of slope. The following identifies the methods employed by a selection of other territorial authorities reviewed:

- Auckland City Council – Controls over volume, area and location
- Manukau City Council – Control over volume and location
- Taupo District Council – Control over height of cut / fill and extent
- New Plymouth District Council – Control over height of cut / fill, volume and location
- Napier City Council – Control over volume, area and location
- Queenstown District Council – Control over height of cut/fill, volume and location.

The review highlighted that Tauranga City Council appears to be one of the few territorial authorities that does not have specific comprehensive provisions for earthworks in its district plan.

Quality Planning Website (www.qualityplanning.org.nz)

Earthworks is specifically recognised on the Quality Planning website as an activity which can generate a range of adverse effects. This website identifies some of the key issues and effects associated with earthworking activities and discusses different methods to manage these effects and the role and function of territorial authorities in this respect.

3.2 Consultation Outcomes

General

In August of 2008 general consultation of issues associated with the General Rules Chapter and options to address these issues was undertaken. There was no specific feedback received at this stage on earthworks.

In April of 2009 a community feedback exercise was undertaken on draft content for the City Plan. As a result of this process the following comments were received:

- Earthworks controls are too restrictive. This will generate an unnecessary number of resource consents. Other management methods should be considered.
- Silt management not a District Plan issue – dealt with through the regional plan.
- Matters of discretion too closely aligned with the Regional Council.
- Minor upgrading of transmission lines should be exempt from earthworks controls.

Tangata Whenua

In June and July 2008 specific hui were held with tangata whenua to identify issues for consideration in the drafting of the City Plan. The following relevant issues were identified;

- The scale and volume of earthworks associated with subdivision.
- Earthworks near 'sensitive' sites should be discussed with the relevant hapu.

The Tangata Whenua Collective

Through the development and discussion of the proposed heritage provisions and the identification of 'significant Maori areas' two key issues were able to be identified:

- The adverse effects earthworks can have on culturally significant areas.

- The lack of consultation or involvement from hapu where earthworks are occurring in these areas.

Key Stakeholders

In April 2009 a meeting was held with Council's asset managers, regional council staff and consultants from Aurecon, Coffey and MTEC to discuss the draft earthwork provisions. The outcomes of this meeting are summarised as follows:

- The need to ensure that earthwork provisions strike the right balance between regional and territorial authority responsibilities.
- Thresholds for each zone need to be appropriate to enable accepted and anticipated development to occur.
- Management techniques for earthworks in proximity to boundaries need more consideration.

In May 2009 a meeting was held with representatives of Master Builders and Certified Builders, Harrison Grierson Consultants Ltd, Architectural Designers and Grasshopper Farms Ltd to discuss the proposed earthwork provisions for the City Plan. Key issues discussed were:

- The current 'gap' in earthwork controls between the regional and territorial councils and the potential adverse effects associated with this.
- There should be a mix of regulations and education. The degree of appropriate permitted activity thresholds is critical. Thresholds should not be set at a level that results in continual resource consent requirements.

Council Staff

In drafting the earthworks provisions internal meetings were held with Council's City Development engineers and Building staff to discuss the earthwork issues associated with the operative Plan and the gaps or 'grey' areas between the Building Act and the RMA. Some of the key issues identified related to earthworks on slopes, the lack of erosion and sediment control measures and the timing of retaining wall versus dwelling construction.

3.3 Council Meetings

The issue of earthworks has been discussed with the Strategy and Policy Committee. The following identifies the meeting dates, the issues discussed and the outcomes of those meetings:

Strategy and Policy Committee 10 June 2008

Issue Discussed

- Whether there should be more control around the effects of earthworks.

Meeting Outcome

- Introduce standards that would enable the potential adverse effects of earthworks to be considered.

Strategy and Policy Committee 18 December 2008

Issue discussed

- What degree of earthworks control should be introduced into the District Plan?

Meeting outcome

- Introduce more comprehensive controls for volume and m² in relation to location

Strategy and Policy Committee 10 March 2009

Issue discussed:

- Presentation and discussion of draft earthworks provisions prior to informal notification.

Meeting outcome:

- Elected Members endorse draft earthworks provisions.

Strategy and Policy Committee 7 July 2009

Issue discussed:

- Report back on community feedback received on draft earthwork provisions. Discussion over key issues.

Meeting Outcome:

- Develop earthwork controls in conjunction with the development / building community to ensure Council's concerns are managed and enough flexibility is provided.

3.4 Relevant Legislation, Strategies and Policy

3.4.1 Legislation

Resource Management Act 1991 (the RMA)

The sections of the RMA considered relevant to earthworks are identified as follows:

Section 5 – Purpose of the Act

- (1) The purpose of this Act is to promote the sustainable management of natural and physical resources.*
- (2) In this Act, sustainable management means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing 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.*

The introduction of specific earthworks provisions is considered to be consistent with the purpose of the Act.

Section 6 – Matters of National Importance

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 recognise and provide for the following matters of national importance:

- (a) The preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:*
- (b) The protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development:*
- (c) The protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna:*
- (e) The relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga.*
- (f) [the protection of historic heritage from inappropriate subdivision, use, and development.]*
- (g) [the protection of recognised customary activities.]*

Earthworks have the potential to adversely affect those matters of national importance identified under section 6. The proposed earthwork provisions, through specific rules and links to other chapters in the plan manage those potential adverse affects where appropriate.

Section 7 – Other Matters

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:

- (c) the maintenance and enhancement of amenity values*
- (f) maintenance and enhancement of the quality of the environment*

Earthworks have the potential to adversely affect those 'other matters' identified above. The introduction of more specific earthwork provisions provides a baseline to ensure the quality of the environment is maintained and enables these matters to be considered where resource consent is required.

Section 31 – Functions of Territorial

- (1) Every territorial authority shall have the following functions for the purpose of giving effect to this Act in its district:*
 - (a) The establishment, implementation, and review of objectives, policies, and methods to achieve integrated management of the effects of the use, development, or protection of land and associated natural and physical resources of the district*
 - (b) the control of any actual or potential effects of the use, development, or protection of land, including for the purpose of—*
 - (i) the avoidance or mitigation of natural hazards; and*
 - (ii) the prevention or mitigation of any adverse effects of the storage, use, disposal, or transportation of hazardous substances; and*
 - (iia) the prevention or mitigation of any adverse effects of the development, subdivision, or use of contaminated land:*

(iii) the maintenance of indigenous biological diversity:

The proposed earthwork provisions are an essential component of regulatory framework that enables potential adverse effects of development to be considered and as such they will fulfil the Council's obligations under this section of the RMA.

3.4.2 Policy

Territorial authorities are required to give effect to policy statements (i.e. the New Zealand Coastal Policy Statement and the regional policy statement) under section 75(3) of the RMA. The provisions of the policy statements relevant to earthworks are identified below.

Environment Bay of Plenty Regional Policy Statement

The Regional Policy Statement was approved by resolution on the 4 of November 1999. Change No. 1 was incorporated and made operative on the on the 26 June 2008.

Chapter 6 – Land

6.3.1(a) Objective

The adoption of sustainable land use and management practices.

6.3.1(b) Policies

6.3.1(b)(i) To sustain the potential of land resources to meet the reasonably foreseeable needs of current and future generations.

6.3.1(b)(ii) To safeguard the life-supporting capacity of the soil and associated ecosystems, particularly indigenous ecosystems, and to protect soil from degradation.

6.3.1(b)(iii) To avoid, remedy or mitigate adverse effects on the environment associated with the inappropriate subdivision, use, and development of land.

6.3.1(b)(xiv) To protect water quality from the adverse effects of land use.

Chapter 11 – Natural Hazards

11.3.1(a) Objective

The vulnerability to natural hazards of the region's people and communities, and its natural and physical resources, is avoided or mitigated.

11.3.1(b) Policies

11.3.1(b)(v) To recognise and protect the integrity of natural ecosystems that are natural defences against flooding, inundation or erosion, particularly where new subdivision, use and development is proposed.

11.3.1(b)(xi) To avoid or mitigate the vulnerability of existing urban subdivision, use and development, and significant infrastructure that are at risk from natural hazards

Chapter 13 – Physical Resources / Built Environment

13.3.1(a) Objective

A built environment that enables efficient use, development and protection of natural and physical resources while avoiding, remedying and mitigating adverse effects on the environment.

13.3.1(b) Policies

- 13.3.1(b)(i) *To promote the integrated management and efficient use of physical resources and the built environment within the region and across the region's boundaries.*
- 13.3.1(b)(ii) *To promote an efficient and safe land transport network.*
- 13.3.1(b)(vi) *To avoid or reduce the adverse effects on the environment, relating to the use and development of the built environment and the construction, operation, and decommissioning of physical resources and infrastructure.*
- 13.3.1(b)(viii) *To discourage uses of land, for example for urban development or settlement growth, which would:*
- (h) *Result in the loss of recognised historic heritage.*

Chapter 15 - Natural Features and Landscapes and Historic Heritage

15.3.1(a) Objective

The protection of historic heritage and outstanding natural features and landscapes from inappropriate subdivision, use and development.

15.3.1(b) Policies

15.3.1(b)(iv) *To afford priority to the protection of historic heritage and natural features and landscapes assessed as warranting protection under section 6 of the Act.*

Chapter 16 – Natural Character and Indigenous Ecosystems

16.3.1(a) Objective

The preservation of the natural character of the region, including the protection of significant indigenous habitats and ecosystems, having particular regard to intrinsic values of ecosystems.

16.3.1(b) Policies

16.3.1(b)(ii) *To ensure that intrinsic values of ecosystems are given particular regard to in resource management decisions and operations.*

16.3.1(b)(iv) *To manage resources in a manner that will ensure recognition of and provision for significant indigenous habitats and ecosystems.*

New Zealand Coastal Policy Statement

Policy 1.1.4

It is a national priority for the preservation of natural character of the coastal environment to protect the integrity, functioning, and resilience of the coastal environment in terms of:

- (a) the dynamic processes and features arising from the natural movement of sediments, water and air;*
- (b) natural movement of biota;*
- (c) natural substrate composition;*
- (d) natural water and air quality;*
- (e) natural bio diversity, productivity and biotic patterns; and*
- (f) intrinsic values of ecosystems.*

Policy 1.1.5

It is a national priority to restore and rehabilitate the natural character of the coastal environment where appropriate.

Proposed New Zealand Coastal Policy Statement

Objective 3

The natural character of the coastal environment is preserved, through the protection or restoration of natural landscapes, features, processes and indigenous biological diversity.

Policy 30: Integrity and functioning

To preserve the natural character of the coastal environment, it is a national priority to protect its integrity and functioning by maintaining:

- (a) the resilience and productivity of indigenous ecosystems;*
- (b) natural landscape and landform;*
- (c) the dynamic processes and features that arise from the natural movement of sediments, water and air;*
- (d) natural biotic patterns and movements;*
- (e) water and air quality; and natural substrate composition.*

3.4.3 Regional Plans

Under section 75(4) of the RMA:

A district plan must not be inconsistent with—

- (a) a water conservation order; or*
- (b) a regional plan for any matter specified in section 30(1).*

The following regional plan provisions are considered to be relevant to the draft plan content.

Bay of Plenty Regional Water and Land Plan

Objective 9 Land use and land management practices are appropriate to the environmental characteristics and limitations of the site, and avoid, remedy or mitigate adverse effects on the life-supporting capacity of soil resources, the receiving environment and heritage values.

Objective 17 Riparian margins are appropriately managed to protect and enhance their soil conservation, water quality and heritage values.

Objective 19 Protect vulnerable areas from erosion.

Objective 21 Maintain and improve the protective function of coastal sand dunes.

Objective 22 Recognition of the beneficial effects of the use and development of water, land and geothermal resources on the social, cultural and economic wellbeing of people and communities

Objective 38 The significant adverse effects of existing contaminated land are remedied or mitigated.

Policy 21 To manage land and water resources in the Bay of Plenty within an integrated catchment management framework to:

- (k) Promote and encourage the adoption of sustainable land management practices that are appropriate to the environmental characteristics and limitations of the site to:*
 - (i) Protect the soil and avoid, remedy or mitigate the adverse effects of erosion.*
 - (ii) Maintain the health of the region's soil resources for future generations.*
 - (iii) Achieve the appropriate management of riparian areas, including the retirement and planting of riparian areas of streams, rivers, lakes, wetlands and estuaries.*
 - (iv) Avoid, remedy or mitigate adverse effects on water quality in the receiving environment.*

- (v) *Take into account the assimilative capacity of the soil.*
- (vi) *Recognise and provide for heritage values of the site.*
- (vii) *Maintain or improve the protective function of coastal sand dunes.*
- (viii) *Control sediment entering estuaries and harbours from use and development activities.*
- (l) *Manage land and water resources according to realistic management goals that are appropriate to the existing environmental quality and heritage values (including ecosystem values) of the location.*

Policy 51 To require the appropriate management of stormwater quality, including:

- (a) The use of source controls to avoid the contamination of stormwater.*
- (b) The use of best practicable options.*
- (c) Treatment of stormwater to prevent the contamination of receiving environments.*

Policy 60 To use processes under the Act or any other legislation to ensure that any potential adverse effects caused by remediation or disturbance of contaminated land are avoided, remedied or mitigated.

Method 124 Encourage land disturbance activities to be managed according to the Environment Bay of Plenty Erosion and Sediment Control Guidelines²¹ (Earthworks, Quarries, or Forestry whichever is appropriate) to control erosion and discharges of sediment to water, and to contain suspended solids in stormwater on-site where appropriate.

3.4.4 Strategy

Under section 74(2)(b) of the RMA the Council is required to have regard to any management plans or strategies prepared under other Acts. The following strategies are considered to be relevant.

Smartgrowth

Smartgrowth is the guiding growth management document for the sub-region. There are several principles relating to earthworks:

Natural systems that provide protection against hazards are recognised and protected
 Outstanding or significant heritage features are protected as a matter of priority.
 The protection of other cultural heritage that is unique or representative is encouraged

SmartGrowth identifies that the Council will:

Identify areas subject to natural hazards that are consequently constrained in terms of their suitability for urban development.
Use the Regional Policy Statement (RPS), Regional and District Plans,.....to protect outstanding or significant sites

Tauranga Tomorrow

Tauranga Tomorrow identifies that one of the eight community outcomes is that Tauranga will be 'Built to fit our hills, harbour and coast', in that Tauranga will be:

- *A city of neighbourhoods nestled in the landscape and*
- *Our landscape reflects our sense of place, mauri and identity.*

4. ISSUES

4.1 Summary of the Issue

The main issue facing the Council is what is the most effective means of managing the potential adverse effects of earthworks in the context of statutory requirements, the regulatory 'gap' between Tauranga City Council and the regional council created by the Regional Land Plan and the likely future pressures associated with a fast growing city? Through the research and consultation undertaken to date it is considered that there are two key areas for consideration – the location of earthworks activities and the volume of earthworks, in relation to their location, that are likely to generate potential adverse effects.

This issue is summarised below.

4.2 Issue 1: The volume and location of earthworks associated with subdivision, use and development within Tauranga have the potential to generate adverse effects on amenity values; cultural and heritage values; the transport network; slope stability; ecologically sensitive areas and areas subject to natural hazard and infrastructure.

Issue Statement

Tauranga City has a varied topography consisting of relatively flat coastal plains; headlands gullies, plateaus and foothills. Underlying this topography is a variety of soil types that present their own unique geological characteristics. This topography is recognised as containing a variety of hazards and culturally significant sites; and a number of natural and physical resources which contribute to the amenity values of the city and to the social, economic and cultural well being of people and the community.

The Council recognise that these facets of the city are at risk from the adverse effects of earthwork activities and as such it is important to be able to consider these effects on natural and physical resources and people and the community where they are potentially adverse.

4.2.1 Objectives

This table identifies the appropriateness of the listed objectives in achieving the purpose of the RMA.

Objective Number	Objective	Appropriateness
4.3.3.1	<i>Objective – Earthworks Earthworks are provided for and managed to ensure they do not adversely affect the environment, Plan Areas or cultural and heritage values.</i>	<i>This objective is:</i> <ul style="list-style-type: none">• <i>Relevant because it addresses the issue and provides for the sustainable management and consideration of potential adverse effects associated with the development of the City's land resource in a way which will enable people and the community to provide for</i>

		<p><i>their social, economic and cultural well being.</i></p> <ul style="list-style-type: none"> • <i>Useful as it relates to providing a framework to manage earthworks within the City.</i> • <i>Achievable through the implementation of the proposed policies and methods.</i> • <i>Reasonable as it relates to the statutory requirements of the RMA and enabling the Council to manage earthworks.</i>
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4.2.2 Policies, Methods and EREs

Objective 4.3.3.1 is to be addressed through Policies 4.3.3.1.1, 4.3.3.1.2, 4.3.3.1.3, 4.3.3.1.4, 4.3.3.1.5, 4.3.3.1.6 and 4.3.3.1.7 which specifically relate to the management of particular areas or activities. The proposed rules in turn provide the methods by which the Council will manage the potential adverse effects of earthworks.

Policies	<i>Policy 4.3.1.1.1 – Stability</i>
	<i>Policy 4.3.1.1.2 – Sediment Runoff</i>
	<i>Policy 4.3.1.1.3 – Flood Prone Areas</i>
	<i>Policy 4.3.1.1.4 – Contaminated soils</i>
	<i>Policy 4.3.1.1.5 – Vehicle Movements</i>
	<i>Policy 4.3.1.1.6 – Earthworks within the CHEPA</i>
	<i>Policy 4.3.1.1.7 – Earthworks within and adjoining Special Ecological Areas and Outstanding Natural Features and Landscapes and Important Natural Landscapes</i>
	<i>Policy 4.3.1.1.8 – Significant Maori Areas and Archaeological Sites</i>
Methods	<p><i>Rule 4.3.2 – Permitted Activity Rules</i></p> <p><i>These provisions identify:</i></p> <ul style="list-style-type: none"> • <i>particular activities that are exempt from the earthworks rules;</i> <p><i>The purpose of this is to recognise the ability to consider earthworks separately through the subdivision process and to provide for operational flexibility where activities are unlikely to generate adverse effects.</i></p>

City General Rules - Ear

TCC Ref: 2779287

- *earthworks rules that must be complied with across all zones;*

The purpose of these rules is to provide for the day to day management of earthworks across the city (with specific reference to the application of erosion and sediment control methods) and identify particular areas

	<p>cross reference to other parts of the plan, the Council's GIS system and other external documents.</p> <ul style="list-style-type: none"> • specific requirements related to a particular zone, heritage site or plan area. <p>The purpose of these rules is to identify any additional specific requirements for earthworks dependant on which particular zone or plan areas they are occurring in. The intention of these rules is to establish a bench mark that enables the majority of permitted activities to occur unimpeded and identifies acceptable thresholds within plan areas that are unlikely to generate adverse effects. For example the threshold for the residential zone recognises the three circumstances where earthworks generally occur within the City – filling of flat sites, basement dig outs (common in the Mount) and cut and fill of sloping sites.</p> <p>Rule 4.3.3 – Restricted Discretionary Activity Rules</p> <p>The purpose of these rules is to enable the Council to consider the potential adverse effects of earthworks on a case by case basis where they do not meet a general, zone or areas specific permitted standard. This process will enable conditions of consent to be applied to mitigate potential adverse effects where necessary.</p> <p>Rule 4.3.4 – Discretionary Activities</p> <p>The purpose of these rules is to provide consistency of activity status across plan chapters and to signal instances where earthworks are likely to generate variable adverse effects or effects that may not be appropriate in all instances.</p> <p>Rule 4.3.5 – Non-complying Activity Rules</p> <p>The purpose of these rules is to provide consistency of activity status across plan chapters and to identify those instances where earthworks are likely to generate significant adverse effects and are unlikely to be appropriate.</p> <p>Matters of Control – Subdivision</p> <p>In the interests of sustainable management and completeness the matters of control for subdivision enable the potential adverse effects earthworks not associated with a land use activity per se to be considered. Earthworks associated with subdivision are generally of a larger scale involving whole sale re-contouring of topography. Recognising this through the matters of control enable the Council to consider the potential effects of this both on the landform of the site and in context of the wider environment.</p>
Costs	<ul style="list-style-type: none"> • Increased compliance costs to landowners and developers through the introduction of more comprehensive earthwork provisions.
Benefits	<ul style="list-style-type: none"> • Provides clear thresholds for earthwork activities and enables potential adverse effects to be considered. • Still provides flexibility for landowners and developers to undertake a reasonable amount of earthworks. • Consistent with new approaches to land management introduced through the plan review.

	<ul style="list-style-type: none"> • <i>Integration between the RMA and the Building Act providing certainty and direction around grey areas associated with the Building Act or other earthwork related effects not able to be considered under this act.</i> • <i>Reduced hazard risks.</i> • <i>Fills the 'gap' created by the Regional Water and Land Plan and enables the effects earthworks to be considered at a local and not just a regional level.</i>
Risk	<i>The proposed thresholds for earthworks are based on a professional judgement through consultation with the community and key stakeholders. From the research undertaken and past experience it is clear that more explicit earthworks provisions should be introduced but the potential risk lies in whether the thresholds are too restrictive or too generous, thereby either creating an unnecessary level of regulation or enabling an unsustainable level of adverse effect on the environment.</i>
Efficiency	<i>The proposed policies and methods are efficient because they seek to manage earthworks in a way that recognises the provisions of the Building Act and continues to enable people and the community to undertake permitted activities.</i>
Effectiveness	<i>The proposed policies and methods are effective because they clearly identify thresholds for earthwork activities across the city i.e. what is permitted and what will require resource consent, and will enable the objective to be achieved.</i>
Appropriateness	<i>The proposed policies and methods are appropriate because they give effect to the objective, are efficient, will introduce more benefits than costs and enable the Council to give effect its statutory requirements under the RMA.</i>

The alternative approach to the proposed earthwork provisions is considered below:

Alternative 1	Status Quo – Retain operative plan provisions
Costs	<ul style="list-style-type: none"> • <i>The operative rules would not be consistent or compatible with new approaches to land management introduced through the plan review.</i> • <i>Long term community costs and risks through a looser regulatory regime.</i> • <i>Time and money costs incurred by Council investigating complaints or liability issues associated with earthworks.</i> • <i>Increased hazard risks.</i> • <i>Does not address the regulatory 'gap' between Tauranga City Council and the regional council.</i>
Benefits	<i>Developers and landowners have more flexibility and less compliance costs.</i>
Risk	<i>Many of issues and potential effects associated with earthworks are not able to be managed or considered by the Council where they are potentially adverse. It is considered that retaining the operative</i>

	<i>provisions presents an increase risk of adverse effects occurring within the environment.</i>
Efficiency	<i>Retaining the operative provisions is not considered to be an efficient method of environmental management when considered against the increased thresholds of the Regional Land and Water Plan and the potential risks and the costs.</i>
Effectiveness	<i>Retaining the operative provisions is not considered to provide an effective framework for comprehensively managing the adverse effects of earthworks,</i>
Appropriateness	<i>This alternative is not considered to be appropriate as it would not be efficient, only provides a partially effective management regime and does not enable the Council to fulfil its functions under the purposes and principles of the RMA.</i>

Alternative 2	<i>Restrictive approach – High Level of Control</i> <i>A less flexible management regime e.g. highly restrictive limits on volumes and heights of cut and fill in proximity to boundary etc. This approach is more consistent with other territorial authorities.</i>
Costs	<ul style="list-style-type: none"> • <i>Duplication of processes otherwise enable to be considered under the Building Act.</i> • <i>Very little flexibility for land owners and developers and very high compliance costs.</i> • <i>Would generate a high number of resource consent applications</i>
Benefits	<i>Enables detailed consideration of all but very minor earthwork activities.</i>
Risk	<i>This alternative would be a risk adverse approach introducing a heavy layer of regulation enabling detailed management of earthworks. Through the research undertaken to date it is not considered that this approach is justified and is therefore unlikely to withstand community and political challenge.</i>
Efficiency	<i>This risk adverse approach is not considered to be an efficient means of providing for the sustainable management of the environment.</i>
Effectiveness	<i>Providing a risk adverse regulatory framework for managing earthworks is not considered effective given it is unnecessary when considered against other options and legislation.</i>
Appropriateness	<i>Overall this alternative is not considered to represent an appropriate means of managing earthworks in the interests of providing for the social and economic well being of the community.</i>

For the proposed policies and methods, the following ERE is anticipated:

- Sustainable management of the Council's land resource.

4.2.3 Monitoring Proposed Plan Provisions

ERE	Indicator	Evaluation of Plan Effectiveness
Sustainable management of the Council's land resource	<ul style="list-style-type: none"> • Sediment levels • Number of consents compared to the monitoring and enforcement database 	<ul style="list-style-type: none"> • Maintenance and clean up costs of Council roads stormwater system are reduced. • Sediment levels within the harbour attributed to the City are reduced. • Conditions of consents are ensuring land is sustainably managed and there is a reduction in the number of complaints or enforcement actions related to earthworks.

5. RECOMMENDED OBJECTIVES, POLICIES AND METHODS

Earthworks are an essential part of the on-going utilisation and management of the land resource in the City. The issue associated with earthworks has been identified in section 4 of this report and identifies the issues associated with earthworks within the City.

The City has a varied topography which is subject to various constraints and it is important the potential adverse effects of earthworks on the City's environment are able to be considered to promote the sustainable management of the City's natural and physical resources. The objective is appropriate in this respect and the supporting policies and methods efficiently and effectively provide the thresholds and framework that will enable the majority of permitted land use activities to continue whilst ensuring any potential adverse effects on the social, economic and cultural well being of people or the community can be considered.

6. NOTIFICATION AND RECOMMENDED DECISIONS

[This section to be completed following hearings.]