

REPORT ON ASSESSMENT OF ALTERNATIVES UNDER SECTION 32 OF THE RESOURCE MANAGEMENT ACT

1. INTRODUCTION

The purpose of this report is to meet Council's requirements under Section 32 of the Resource Management Act 1991 (the RMA), by recording Council's assessment of alternative land use options for managing the effects of development in the Mapua and Ruby Bay areas.

This report supports Council's Plan Change No 22 to the Tasman Resource Management Plan.

2. LEGISLATIVE REQUIREMENTS

The purpose of the RMA is to promote the sustainable management of natural and physical resources, by 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 RMA requires that when changes to statutory documents are notified, a Section 32 evaluation is also to be made publicly available. This evaluation is to consider the alternatives, benefits and costs of the proposed changes in achieving the purpose of the Act. A further evaluation is to occur before the local authority makes a decision on the proposed changes.

Section 32 sets out what the evaluation must do:

- (3) An evaluation must examine-
 - a) the extent to which each objective is the most appropriate way to achieve the purpose of this 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.
- (4) For the purposes of this examination, an evaluation must 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.

The RMA does not include definitions of “efficiency” or “effectiveness”. Efficiency is taken to mean a measured ratio of benefits to costs, where a higher ratio indicates a higher efficiency. Effectiveness is a measure of how successful a policy, rule or other method is in achieving an objective.

2. PLANNING CONTEXT

2.1 Summary

The following table outlines the activity leading towards proposed Change No 22.

Table 1: Mapua Plan Change Planning Context	
Date	Planning Activity
December 2000	Publication of the Coastal Tasman Area Strategic Development Review, which set the scene for further detailed studies in Mapua and Ruby Bay, and the coastal fringe area now known as Rural 3.
December 2003	Establishment of Rural 3 zone, some of which serves as hinterland to Mapua and Ruby Bay.
April 2004	Publication of the Mapua Ruby Bay Development Study.
June 2006	Council resolves to prepare a Structure Plan for Mapua - Ruby Bay.
May 2007	Council adopts recommendations of a Climate Change Risks and Briefing Paper.
April 2008	Draft Mapua Structure Plan released for public comment.
June 2008	Council agrees to amended Structure Plan as a basis for preparing a draft plan change.
July 2008	MoE Coastal Hazards and Climate Change Guidance instructs Councils to plan for a 0.8m sea level rise by 2090.
October 2008	Construction of the Ruby Bay bypass commenced.
June 2009	LTCCP becomes operative – includes Mapua projects.
July 2009 August 2009	Audit of the remediation of former FCC site released. Site Management Plan for former FCC site released.
October 2010	Ruby Bay Bypass opens

2.2 Key Planning Issues

2.2.1: Infrastructure

The responses to the 2004 Mapua Ruby Bay Development Study frequently referred to Mapua's inadequate infrastructure services. Since this time several upgrade projects have been included in the Council's LTCCP (Long Term Council Community Plan), but infrastructure remains a significant planning issue and constraint for future development. A table of all Mapua Ruby Bay infrastructure projects programmed in the Council's Activity Management Plans, covering the next twenty years, is attached as Appendix 1. All options for new residential development assessed during the structure planning process are reliant on improved services provision. As such the cost and predicted roll out of adequate services provision has been a key consideration in the Council's options assessment work. Key infrastructure issues and planned activities are:

Stormwater –

A major widening of the Seaton Valley Stream below Stafford Drive is proposed as well as improvements to culverts and to the tide gates at the Mapua Causeway. The stream works will also incorporate recreational opportunities.

Wastewater –

A major trunk main upgrade to Bells Island treatment plant was completed in 2010.

In addition seven pumping stations in the Mapua Ruby Bay area will be upgraded in the planning period.

Water –

The Coastal Tasman pipeline will be constructed to enhance the Mapua/ Ruby Bay water supply with the Aranui Road water main replacement proposed in 2014/15.

Roading –

Streetscaping in Aranui Road is proposed to be completed by 2020.

Road widening is proposed in Pomona and Seaton Valley Roads during the planning period. Some corners on Higgs Road will be improved.

Reserves -

The Mapua waterfront park is expected to be completed in the planning period.

Land for new playing fields is also being sought. New residential areas will contribute new neighbourhood open spaces and walkway linkages as well as incorporating some areas with biodiversity values.

2.2.2: Hazards

A Coastal Hazard Area exists along the Ruby Bay – Mapua shoreline. The coastline is dynamic and subject to severe erosion where it is unprotected (historic long-term retreat is estimated at over 1m per year). A range of protection structures, built by property owners and the Council, have resulted in adhoc hazard management and inefficient shoreline protection.

An anticipated sea level rise (0.8m by 2090) will bring an increased risk of flooding by sea inundation, realised by increasing frequency of storm surge events, and a gradual rise in mean sea level.

Following consideration of a Climate Change Risks and Briefing Paper, Council adopted a number of recommendations, some relevant to the urban development process. The Council committed resources, through the Annual Plan process, to fund detailed contour information on low-lying coastal land. (This information was obtained for the Mapua - Ruby Bay area in late 2008.) Council also adopted the recommendation that it applies the best available climate information at the time of any infrastructure installation, upgrade or maintenance, and the review of policy documents, including the Tasman Resource Management Plan.

At a policy level, coastal hazard management in New Zealand tends to consider the following options:

Event Protection	hard approach (seawalls, groynes, etc.) soft approach (dune protection, beach nourishment)
Damage Prevention	avoidance (prevent residential development) modify loss potential (e.g. relocatable buildings)
Loss Distribution	individual measures (e.g. insurance) community measures
Risk Acceptance	increase community's ability to cope with effects of an event.

It is accepted practice throughout New Zealand that the use of seawalls, revetments, groynes, breakwaters and other artificial structures should only be considered after other, less environmentally damaging alternatives are deemed unfeasible. This is due to a number of reasons: the impact of artificial structures on localised beach wave and sediment patterns; their impact on the integrity and functioning of natural coastal processes; the disappearance of dunes, dry beaches and low-tide wet beaches; loss of public amenity values; and reduction in public access to and use and enjoyment of the coastal environment.

Although it is likely that a structural barrier approach to erosion and inundation protection will continue to be maintained and potentially also more required at Ruby Bay, specific structural options have not been developed within the plan change timeframe. A preliminary technical assessment of future erosion and inundation risk in a “no protection” scenario has been undertaken, using long term historical erosion trends and land level contours at 0.5m intervals derived from high resolution LiDAR data. Ongoing technical study utilising computer modelling techniques would be valuable, to confirm the assessed erosion and inundation risk in a “no protection” scenario and how these risks are moderated should existing levels of protection be maintained or increased.

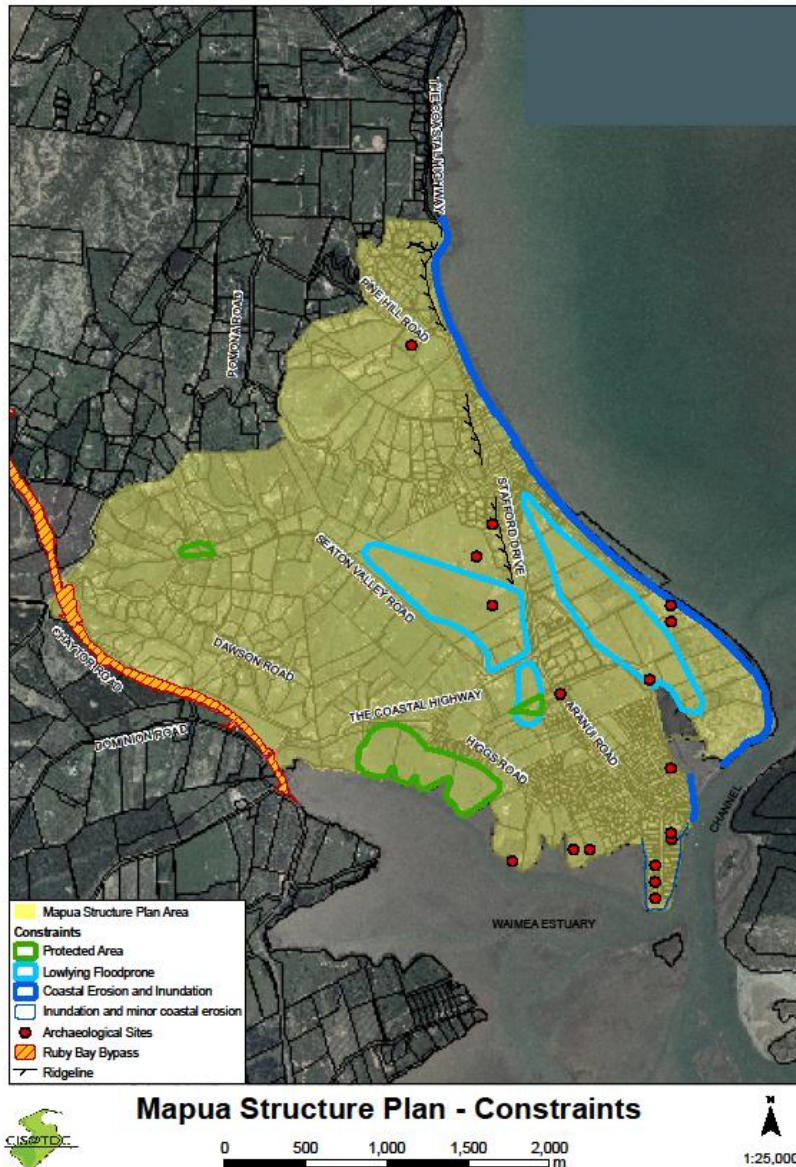
Wave runup and littoral drift – sediment transport modelling of the Ruby Bay-Mapua shoreline is desirable, to update Council’s knowledge of the complex beach system as a whole, and how adhoc protection structures are affecting coastal process behaviour.

The modelling would be valuable as a tool to confirm coastal erosion and inundation hazard risks under various climate change scenarios.

The preferred option is to extend the coastal hazard area so it takes into account both inundation and coastal erosion.

Freshwater inundation also remains a hazard in some low-lying areas of Mapua.

The constraints map 1 below indicates land that has been excluded from residential development options assessment, due to coastal or freshwater inundation risk.



Map 1

2.2.3: Productive Land and Rural Character

Public responses to both the 2004 Mapua Ruby Bay Development Study and 2008 Draft Mapua Structure Plan show consistent public concern about the loss of productive land and associated rural character. More recent public concern on the (perceived negative) affects of the Rural 3 zone - which is not in the Structure Plan area - has nevertheless heightened sensitivities and concerns about the 'spread' of the Mapua urban area onto adjacent productive rural and horticultural land.

However, there are limited geographical options for providing for residential development in the structure plan area – largely due to the hazard constraints

shown in Map 1 and the limited scope and desire for infill development in existing residential zones. The loss of some productive land is therefore inevitable if the demand for new residential development is to be met.

2.2.4: Open Space Provision

Whilst the public's concern over the loss of rural character is linked to a sense of open space, there is an additional concern that provision of open space for active and passive recreation will need to increase with the area's population.

The Council's policy is to require four hectares of open space per 1000 people. With an anticipated population growth of 572 people between 2006 and 2031 (Statistics NZ medium growth projection), an additional two hectares of open space will be required.

The Council has earmarked a site for further playing fields midway up the Seaton Valley. It has considered some alternative sites but these are not favoured because they are considered to be either too flood prone or have high summer irrigation requirements.

3. REVISED ISSUES

3.1 Population growth/take up of Rural 3 – impact on Mapua

Mapua is also a service centre for some residents of the Rural 3 hinterland. The Coastal Tasman Area (which includes all of Rural 3 plus the area west to the Moutere Highway) is projected to grow from 2215 (year 2006) to 2666 residents in 2031. While 517 new lots have been approved in the Rural 3 Zone between 2003 and February 2009 uptake of these lots for new dwellings has been relatively slow.

Residents living in the central section of Rural 3 are likely to use Mapua as their service centre which may cause impacts on its physical and social infrastructure (roads, school, library, health centre etc.). Residents in the southern sector of the Rural 3 Zone are more likely to use Richmond as their service centre. Residents in the northern sector are likely to use Motueka and possibly Tasman as their centre.

3.2 Infrastructure

A comprehensive range of servicing projects for water, wastewater, stormwater and roads has been included in the Council's LTCCP. A new project that has not yet been included in the LTCCP is the Mapua playing field proposal.

3.3 Coastal hazards

The coastal hazards assessment has been provided in a separate report by the Council's coastal resource scientist.

3.4 Business Growth options

Two sites have been considered that have frontage to Stafford Drive. The first site can be considered as an extension to the existing Warren Place zone. Currently it has two lifestyle properties on it. The shared path for cyclists and pedestrians along Stafford Drive passes across its frontage. Multiple accesses could cause some safety issues so alternative access would be desirable.

The other larger site has the same issue with the shared path crossing its frontage. There have been a number of adverse comments received during consultation about using this site for business growth because of possible cross boundary effects with residential use nearby.

4. ASSESSMENT OF OPTIONS – RESIDENTIAL GROWTH AND GROWTH MANAGEMENT OPTIONS

Option A) Status Quo No further planned development			
Benefits and opportunities	Costs and constraints	Risks and uncertainties	Summary of Council Assessment
No direct or immediate cost to Council.	Unexpected future costs could arise.	This adhoc approach to strategic development planning would allow piecemeal growth to occur. Risk of private plan changes.	✘ This option is not an acceptable way forward.

Option B) Infill/intensification Increase densities in existing residential zone			
Benefits and opportunities	Costs and constraints	Risks and uncertainties	Summary of Council Assessment
Increase densities in existing residential zone. Intensification provides for medium density housing types. Plan change will require second dwellings on lots to have a resource consent – Council will have more control over intensification.	Limited opportunities for infill exist. Limited public support for higher densities. Intensification can't occur in the short-term, until infrastructure services are upgraded.	Some sites close to the Mapua Channel may be subject to future inundation.	✓ Some intensification may be acceptable, but there is limited scope and support for significant amounts of intensification. Intensification is not an effective option for meeting all future demand for residential growth.

Option C) Residential zone extension - Hill Land Phase 1			
Benefits and opportunities	Costs and constraints	Risks and uncertainties	Summary of Council Assessment
<p>Ability to provide a significant number of new lots (over 200)</p> <p>Adjacent to Mapua township.</p> <p>Pleasant outlook – good amenity.</p> <p>Land closer to existing services connections than for Option D.</p> <p>Opportunities to create new walking and cycling linkages between the Higgs Rd area and the existing village centre in Aranui Road and Aranui Park.</p>	<p>Residential zoning required to be deferred until necessary infrastructure is provided.</p> <p>Potential reverse sensitivity issues if residential development occurs piecemeal – resulting pockets of residential amongst orchard uses not desirable.</p> <p>Loss of some productive land.</p> <p>Cost of treating former orchard land for chemical residues</p> <p>Need to upgrade Higgs Road.</p> <p>Investment required in social infrastructure (e.g. school, health facilities) to provide for new population.</p>	<p>This option is reliant on the roll-out of efficient infrastructure services.</p> <p>Individual landowner preferences and market forces may not support this land being developed first.</p>	<p>✓</p> <p>Of all the new residential zone options, it is the most cost effective to service this land with new infrastructure first (start from bottom of site and work up the hill).</p> <p>With adequate road, cycling and walking linkages and open spaces, this new residential zone will become a planned and integrated extension of Mapua village.</p>

Option D) Residential zone extension - Hill Land Phase 2			
Benefits and opportunities	Costs and constraints	Risks and uncertainties	Summary of Council Assessment
<p>Ability to provide a significant number of new lots (over 300).</p> <p>Opportunity to create an amenity planting setback along the edge of (current) SH60, which could safeguard a pleasant arrival experience for Mapua.</p> <p>Opportunity to provide a small neighbourhood commercial centre to service some of the local shopping needs of this residential area (e.g. dairy, takeaway).</p>	<p>Desirable for this land to be developed after phase 1 (Option C) is substantially built out. However, 5-6 lots have already been consented as deferred rural residential, adjacent to the sub-station. There is potential for these existing deferred rural residential lots to be re-zoned as deferred residential.</p> <p>Loss of productive land.</p> <p>Cost of treating former orchard land for chemical residues.</p> <p>Will significantly alter the rural character currently associated with Mapua's arrival experience.</p> <p>Will significantly alter the identity of Mapua and the perceived containment of its residential areas.</p> <p>Need to provide safe pedestrian access along (current) SH60 to Mapua School.</p> <p>Investment required in social infrastructure (e.g. school, health facilities) to provide for new population.</p>	<p>This option is reliant on the roll-out of efficient infrastructure services – deferred zoning necessary.</p> <p>Time it may take for Phase 1 to be built out.</p> <p>May be political need to consider a rates remission policy.</p> <p>Individual landowner preferences and market forces may not support this land being developed as a second phase.</p> <p>Risk of creating a car-reliant development, and not meeting sustainable development objectives, if adequate walking and cycling linkages into Mapua aren't provided at the time of development.</p>	<p>✓</p> <p>Lots adjacent to sub-station already consented, with specific TRMP rules in place.</p> <p>This option will provide for significant percentage of demand for new residential growth.</p> <p>Over time, and with adequate physical and social infrastructure in place, it will be a planned and pleasant new sub-entity to the Mapua village.</p>

Option E) Headland Option Residential zone extension			
Benefits and opportunities	Costs and constraints	Risks and uncertainties	Summary of Council Assessment
<p>Potential to provide 50 - 60 new lots.</p> <p>Land has high amenity value – extensive views over estuary.</p> <p>Opportunity to create public reserve on estuary edge and in gullies – e.g. an esplanade reserve of width at least 20 metres.</p> <p>Land does not require treating for chemical residues.</p>	<p>Residential zoning required to be deferred until necessary infrastructure is provided.</p>	<p>This option is reliant on the roll-out of efficient infrastructure services.</p> <p>Must ensure reserve on estuary edge is adequate to create a no-build buffer to estuary habitats and archaeological sites</p>	<p>✓ This option is not reliant on phasing of Options C or D.</p>

Option F) Village Low Land Residential zone extension			
Benefits and opportunities	Costs and constraints	Risks and uncertainties	Summary of Council Assessment
<p>Potential to create 102 new lots (already consented).</p> <p>Adjacent to village centre. Meets Council's walkability and access objectives</p> <p>Provides opportunity to extend Mapua Domain</p>	<p>Most of consented development is deferred until necessary infrastructure is provided.</p>	<p>The land is low lying. A long-term potential inundation hazard exists.</p> <p>Servicing quite difficult because of lowlying nature and lack of fall.</p>	<p>✓</p> <p>This option provides the last opportunity for significant new residential development in the heart of the village.</p>

Option G) Ruby Bay Coastal Strip Change existing Rural 1 to Residential Closed			
Benefits and opportunities	Costs and constraints	Risks and uncertainties	Summary of Council Assessment
<p>A Closed Residential Zone will enable existing dwellings to be redeveloped under TRMP residential rules. Footprint coverage and infilling of sites will be governed by new rules. NB: No coverage rules for dwellings in present Rural 1 zone.</p> <p>No new development or subdivision will be allowed.</p> <p>Coastal protection structures will be defined and classified as buildings, which will give the Council more control over their design and installation.</p> <p>New coastal management policies will create the opportunity to remediate the landscape character of the beach affected by installation of adhoc coastal protection structures.</p> <p>New coastal management policies could create improved public access to beach.</p>	<p>Area prone to coastal erosion and seawater inundation.</p> <p>Identified community desire for a buffer area distinguishing the Ruby Bay residential area from Mapua residential boundary.</p>	<p>National government guidance assumes 0.8m sea level rise by 2090 and increased incidences of storm surges.</p> <p>Council requires ongoing coastal engineering study to confirm frequency and severity of hazard risk exposure to direct future coastal management/property protection policies.</p> <p>Coastal Hazard Area boundaries will overlay this zone. Boundaries of the CHA are currently being reviewed.</p>	<p>✓</p> <p>It is appropriate to introduce this Residential Closed Zone, as this area is not suitable for further residential development due to coastal erosion and seawater inundation risk.</p>

Option H) Brownfield Site Option Residential Special Development Area on mixed-use development site (remediated FCC site, Tahī St west side)			
Benefits and opportunities	Costs and constraints	Risks and uncertainties	Summary of Council Assessment
<p>Vital opportunity to provide medium density housing types.</p> <p>Residential component to mixed-use developments is desirable and meets Council's urban design objectives.</p> <p>Meets Council's walkability/access objectives.</p>	<p>Land covenants will be required to implement imposed MfE audit conclusions and restrictions on future land use.</p>	<p>Community concern over suitability of remediated land for residential gardens.</p>	<p>✓</p> <p>Council supports the need for a residential component to this important mixed-use development.</p> <p>The site has been independently audited as suitable for residential development.</p> <p>Development subject to minimum ground level to avoid future inundation risk</p>

Option I) Senior Property - Hillside Serviced Rural Residential Zone			
Benefits and opportunities	Costs and constraints	Risks and uncertainties	Summary of Council Assessment
<p>Opportunity to provide desirable lifestyle lots of high amenity.</p> <p>Opportunity to create walking linkages between Pomona Road and Stafford Drive</p>	<p>Rural Residential zoning required to be deferred until necessary infrastructure is provided.</p>	<p>TRMP will need to adequately control the impact of hill side buildings and roads on the landscape.</p>	<p>✓</p> <p>This option will provide for the demand for high amenity lifestyle lots in the Mapua area.</p>

Options for Coastal Flood Plain – inserted December 2010					
Option No	Zone	Explanation	Costs	Benefits	Efficient , Effective
J1	Rural Residential <i>1 hectare minimum area</i>	This option would replicate the type of subdivision that already exists in a part of the area fronting Aranui Road. The latter has been allowed through a resource consent. This option would allow the creation of 50 additional complying lots. More lots than this number could result from grants of discretionary subdivision.	Infrastructure costly to provide on flat lowlying sites Elevated wastewater systems needed Filling of sites could affect the Council’s stormwater project already underway	Would meet the needs of some landowners who seek to reduce the size of their current holdings	Contrary to current draft policy to have future rural residential development on the hills away from coastal hazards
J2	Rural 1 <i>12 ha minimum area < 12 ha lot sizes discretionary</i>	This option is the status quo. An indeterminate number of additional lots could be yielded as discretionary subdivision.	Rock protection works present an ongoing maintenance cost to some of the lots that have been created	Some improvements to existing access along the coast have been obtained	Discretionary subdivision provision has allowed a wide range of lots below the minimum area - policy now unclear
J3	Rural 1 Special <i>12 ha minimum area < 12 ha lot sizes non complying</i>	This option is a modification of the status quo - with a tighter subdivision rule. A small number of additional lots could result from grants of non complying subdivision subject to chosen policy.	Opportunity cost to some landowners who may not be able to subdivide	Retains most of the current spacious sites	Could possibly be effective but would rely on strong policy direction
J4	Rural Coastal <i>3.5 ha minimum area; <3.5 ha non complying</i>	This option would allow the creation of 6-7 more complying lots if confined to the coastal side of Stafford Drive and 15 if applied over the whole zone. Further lots could result from grants of non complying subdivision.	Existing access to some of the larger lots is at capacity	Would meet the needs of some landowners who seek to reduce the size of their current holdings	Partially supports policy of directing future development to the hills
J5	Rural 1 Closed <i>Further subdivision prohibited apart from boundary adjustments</i>	This option is the most limited in allowing future subdivision. No additional lots would be created.	Opportunity costs to a few landowners who may not be able to subdivide	Retains the current spacious sites and requires minimal infrastructure such as roads and other pipe services	Fully supports the policy of directing future development to the hills away from coastal hazards

Option K) Coastal Zone with filling			
Benefits and opportunities	Costs and constraints	Risks and uncertainties	Summary of Council Assessment
A Coastal Zone on the seaward side of Stafford Drive with filled sites for new development to reduce the risk of seawater and freshwater inundation of filled properties.	<p>Will be costly to fill this large area.</p> <p>Stormwater planning has already been modelled on this area remaining unfilled.</p>	<p>Could exacerbate flooding area in lower Seaton Valley.</p> <p>Likely to cause or increase flooding risk on adjoining land.</p> <p>Filled area may remain subject to coastal erosion and seawater inundation risk.</p> <p>The filling may impact on natural character and heritage sites</p>	<p>✓</p> <p>The outcomes of hazard planning and flood modelling work dictate it is necessary to restrict new development in this area, particularly subdivision and filling.</p>

5. ASSESSMENT OF OPTIONS – COMMERCIAL AND LIGHT INDUSTRIAL GROWTH OPTIONS

Option L) Mapua Wharf Extension of commercial zone west of Tahī St			
Benefits and opportunities	Costs and constraints	Risks and uncertainties	Summary of Council Assessment
<p>Will complement and support the existing wharf commercial area.</p> <p>Will strengthen the viability and identity of the wharf area as a commercial and visitor attraction node.</p>	<p>Some land covenants will be required due to brownfield site history.</p>	<p>Suitable audit results of remediated site.</p> <p>Timescale for development of the remediated site.</p> <p>Minimum ground level required to avoid sea water inundation risk.</p>	<p>✓</p> <p>The wharf is an important commercial and tourist node. New commercial activity is an important element of the Tahī St mixed-use development.</p>

Option M) Toru Street New commercial zone			
Benefits and opportunities	Costs and constraints	Risks and uncertainties	Summary of Council Assessment
<p>Opportunity to expand and strengthen existing commercial zone in the village centre.</p> <p>Opportunity to accommodate home-business, start-up or small-to-medium business enterprise and community activities in Mapua.</p>	<p>Need to manage cross boundary issues with adjacent residential zone.</p>	<p>Implementation of new zoning dependant on land owner actions. Phasing of this zone in relation to other new commercial zones is uncertain.</p>	<p>✓</p> <p>This will expand and strengthen the existing village centre commercial zone.</p>

Option N) Aranui Road/Higgs Rd Extension of commercial zone
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Benefits and opportunities	Costs and constraints	Risks and uncertainties	Summary of Council Assessment
Opportunity to expand and strengthen existing commercial zone in the village centre.	Traffic access and management for corner sites.	Implementation of new zoning dependant on land owner actions. Phasing of this zone in relation to other new commercial zones is uncertain.	✓ This will expand and strengthen the existing village centre commercial zone.

Option O) New 'Neighbourhood centre' in Seaton Valley Road New Deferred Commercial Zone			
Benefits and opportunities	Costs and constraints	Risks and uncertainties	Summary of Council Assessment
<p>A new neighbourhood commercial centre would serve the Seaton Valley catchment area.</p> <p>Would support Council's walkability/access objectives.</p> <p>Would support urban design policies and support wider sustainability objectives.</p> <p>The commercial centre would serve as a buffer between the sub-station and adjacent residential dwellings.</p>	<p>Traffic safety and access – site would need to be located between existing sub-station and the proposed new road access into Freilich land.</p>	<p>Phasing is uncertain.</p>	<p>✓</p> <p>Provision of a small neighbourhood commercial centre is an essential element of long-term community development of the new residential area west of the Coastal Highway.</p>

Option P) Stafford Drive North New Light Industrial Zone			
Benefits and opportunities	Costs and constraints	Risks and uncertainties	Summary of Council Assessment
<p>A large site with good potential road access.</p> <p>Would provide for new local business and employment opportunities.</p>	<p>Public opposition due to cross-boundary issues with adjacent residential and rural-residential zones (noise, visual effects, traffic generation). Conflicts with shared path across frontage</p> <p>Land also a potential area for new open space/playing fields, which would provide a desirable green buffer between the Ruby Bay and Mapua 'sections' of Stafford Drive.</p> <p>There are limited alternative locations for new light industrial zoning.</p>	<p>Low-lying land is at some risk of freshwater inundation and future seawater inundation.</p>	<p>This site is not a preferred option because filling of it will impact on adjoining land.</p> <p>Industrial activities inappropriate close to residential</p>

Option Q) Stafford Drive South New Light Industrial Zone			
Benefits and opportunities	Costs and constraints	Risks and uncertainties	Summary of Council Assessment
<p>Located adjacent to existing light industrial zone at Warren Place.</p> <p>Would provide for new local business and employment opportunities close to Mapua.</p> <p>Opportunity to relocate existing landscape strip to Seaton Valley Stream boundary</p>	<p>There are limited alternative locations for new light industrial zoning.</p> <p>The streamside location means some land will be required for a reserve.</p>	<p>Low-lying land so minimum ground levels will be required.</p>	<p>Some flood risk from Seaton Valley Stream dependant on stream upgrade works.</p> <p>Proximity to existing industrial zone is a positive feature</p> <p>Separated from urban dwellings</p>

6. ASSESSMENT OF OPTIONS –OPEN SPACE OPTIONS

Option R) Senior Land New open space provision – lower Seaton Valley			
Benefits and opportunities	Costs and constraints	Risks and uncertainties	Summary of Council Assessment
Land owner negotiations could be progressed quickly.	Cost of flood prevention/repair/on-going maintenance likely to be unacceptable.	Very low-lying land (1.5-2m). In a high-risk flood area.	Flood risk and frequency of inundation is too high and renders site unsuitable. Extensive works would be required.

Option S) Senior Land New open space provision – mid Seaton Valley			
Benefits and opportunities	Costs and constraints	Risks and uncertainties	Summary of Council Assessment
Land owner negotiations could be progressed quickly. Soils heavier than Option T so need less irrigation Opportunity to integrate in the Seaton Valley Stream margin	Some earthworks may be necessary to prepare site And raise land to suitable level to reduce flood risk.	Flooding of playing fields is expected to be an infrequent event .	Slight to moderate flood risk is acceptable.

Option T) Stafford Drive North New open space provision			
Benefits and opportunities	Costs and constraints	Risks and uncertainties	Summary of Council Assessment
Good location between Mapua and Ruby Bay. Would act as a green buffer to prevent continuous ribbon development along Stafford Drive.	The soils in the area are relatively light so much irrigation is likely to be required. Moderate earthworks required and stump removal.	Likely outcome of land owner negotiations unknown. Some flood risk.	Location is suitable for open space provision but light soils and large trees make ground preparation costly.

6. ASSESSMENT OF OPTIONS – HAZARD PLANNING OPTIONS

Option U) Coastal Hazard Area New boundary to restrict all building, filling and subdivision			
Benefits and opportunities	Costs and constraints	Risks and uncertainties	Summary of Council Assessment
Contains the number of assets at risk. Minimises the exposure hazard risk to life and property	Some development opportunities forgone	Existing sea level rise figures may be further adjusted. Longevity and integrity for existing structures is uncertain.	Precautionary approach supports NZCPS policies.

Option V) Coastal Hazard Area Existing boundary remains - status quo			
Benefits and opportunities	Costs and constraints	Risks and uncertainties	Summary of Council Assessment
Some development continues	Will require increased height of existing protective structures to minimise inundation.	The extent of the Coastal Hazard Area may need to be adjusted again at a later date. Doesn't acknowledge inundation risk. Risk at Channel entrance not acknowledged	Existing CHA only acknowledges erosion risk to 2040. Ignores future risks of inundation.

Option W) Chemical Hazard Area Remove CHA and add new earthworks rules to TRMP			
Benefits and opportunities	Costs and constraints	Risks and uncertainties	Summary of Council Assessment
Transparent and easily discoverable	Cost and time of preparing and implementing regulations	Delays in implementation may occur. Contestability may dilute desired outcome	Uncertainty of outcome

Option X) Chemical Hazard Area			
Remove CHA and gazette parts of site as reserve with management plan			
Benefits and opportunities	Costs and constraints	Risks and uncertainties	Summary of Council Assessment
Process may be simpler and faster than imposing new rules and policy under RMA	Some costs in changing the status of the land to a reserve and preparing a management plan.	Doesn't address all the land that needs to be managed through a special Site Management Plan	A partial solution to the issue that may take some time to implement

Option Y) Chemical Hazard Area			
Remove CHA and amend all related Council property records, to link to site management plan and prepare Engineering Standards for remediated soils			
Benefits and opportunities	Costs and constraints	Risks and uncertainties	Summary of Council Assessment
Has immediate effect if on all property records. Easily discoverable	Little cost in implementing. Roads and foreshore records separate to other Council records	Slight risk the property record will not be checked Engineering Standards are not proposed to be altered immediately	This option can provide good linkage between site management plan and property records. Roads will need to be separately addressed Engineering standards can address all remediated soils