

# Land contamination assessment report

## Warkworth Structure Plan

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Prepared by:

Marija Jukic (Senior Specialist), Resource Consents

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# 1 Executive Summary

A limited desktop assessment of land contamination within the Warkworth Structure Plan Future Urban Zone (FUZ) undertaken in March 2018 identified a number of potentially contaminating activities included on the Ministry for the Environment (MfE) Hazardous Activities Industries List (HAIL) as either being undertaken or more likely than not to have been undertaken in this area. Those activities were commonly associated with pastoral farmland and rural–residential use (for example, livestock dips or spray race operations, importation of unverified fill, burying and burning of farm waste), horticultural activities (market gardening, orchards, green houses and viticulture), and commercial operations (such as a motor mechanic workshop and a spare car parts business).

The desktop assessment concluded that further investigations within the FUZ are required and some remedial works and resource consents may subsequently be necessary; however, it is considered that issues arising from contamination are generally unlikely to present significant constraints to land development in the FUZ.

This report provides an assessment of the Warkworth Structure Plan in relation to the applicable objectives and principles of key planning documents that provide guidance, either directly or indirectly in relation to the management of contaminated land. These include:

- Warkworth Structure Plan Principles
- Structure Plan Guidelines (Appendix 1 of the Unitary Plan)
- National Policy Statement for Freshwater Management (2017)
- Auckland Unitary Plan (Operative in Part) Regional Policy Statement
- Auckland Plan 2050

It is recognised that the Warkworth Structure Plan facilitates the assessment and management of contaminated land through the strategic zoning of sections of land (including the provision of buffer zones between potential contaminant sources and identified sensitive receptors). The strategic zonings will be implemented into the District Plan through future plan changes and the subsequent resource consent applications will trigger the planning requirements under Section 104(1) of the *Resource Management Act 1991*.

The implementation of the Warkworth Structure Plan through future plan changes and the resource consent process will facilitate the assessment and management of contaminated sites within the FUZ (including remediation if required), prior to redevelopment. The above approach will progressively reduce the existing potential contaminant sources within the FUZ that pose a risk of adverse effects on the receiving environment and/or human health.

In addition, the Warkworth Structure Plan provides for buffer zones (esplanade reserves/strips, wide riparian areas, arterial roads) between potentially contaminated sites and sensitive receptors, which reduce the likelihood of potential contaminant discharges reaching these receptors.

Through these measures it is anticipated that adverse effects on the environment or human health associated with either historical or future contaminated land will be adequately mitigated, and the

quality of the environment improved. The Warkworth Structure Plan provides the opportunity to use the growth and development within the Future Urban Zone to protect and enhance Auckland's environment (Auckland Plan 2050, Directive 3).

Based on the assessment, the proposed Warkworth Structure Plan is considered to meet the applicable principles and objectives of the key documents noted above and is therefore supported from the perspective of contaminated land management.



## 2 Introduction

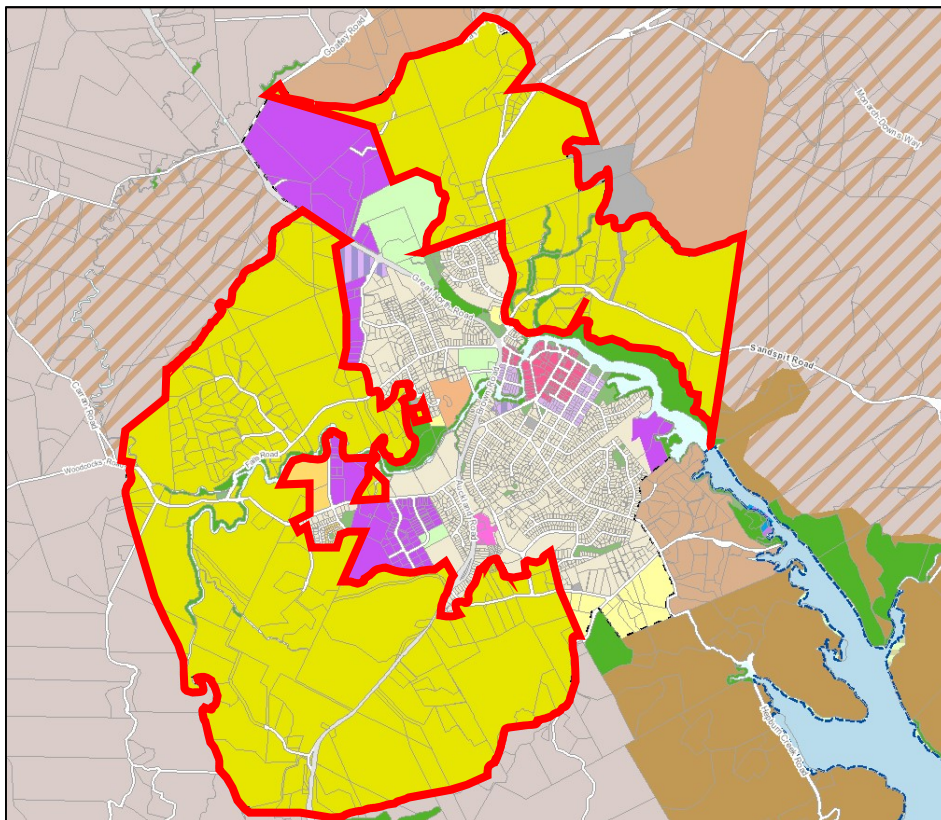
### 2.1 Purpose and scope of the report

This is one of a number of reports that have been prepared for the Warkworth Structure Plan as part of the supporting information behind the structure plan document. This report outlines the existing environment in the study area with regards to contaminated land and assesses the Warkworth Structure Plan in relation to contaminated land.

### 2.2 Study Area

The study area for the Warkworth Structure Plan is the Future Urban zone around Warkworth. It comprises around 1,000ha of land. The study area is shown outlined in red on Figure 1 below.

**Figure 1:** Warkworth structure plan study area (outlined in red)



## 3 Existing environment

### 3.1 Description of study area

A limited desktop assessment of the historical and current land uses within for the study area in relation to potentially contaminating activities, as prescribed on the Ministry for the Environment's Hazardous Activities and Industries List (HAIL), was undertaken in March 2018. The information gathered as part of this report included:

- a) A review of historical aerial photographs obtained from Auckland Council's GeoMaps GIS database and the Local Government Geospatial Alliance's historical imagery resource Retrolens, to identify any indicator of potentially contaminating land uses.
- b) A review of the Council's resource consents database to assess what consents have been granted and permitted activities undertaken within the study area that may be associated with contaminating activities.
- c) A high-level site visit of the study area (utilising public land only).

The assessment indicated that the majority of the study area has historically been and continues to be utilised for pastoral farmland and rural-residential purposes. Although these land uses are generally considered to be low risk with regards to contamination, localised occurrences may exist, resulting from the following potential sources:

- a) Livestock dips or spray race operations in pastoral farmland areas

Dipping sheep to control external parasites was a legal requirement in New Zealand from 1849 to 1993. Due to the associated use of chemicals containing arsenic and organophosphorus pesticides, and the resulting potential impact to human health and the environment, livestock dips or spray race operations are classed as a contaminating activity (HAIL Category A8).

- b) On-site wastewater disposal systems

On-site wastewater disposal systems which usually comprise septic tanks, associated pipework and disposal fields, are considered as potential HAIL activities (HAIL Categories G5 - waste disposal to land, and G6 - waste recycling or waste or wastewater treatment), due to the presence of biological contaminants, nutrients and potential heavy metals that may impact human health and the environment.

- c) Asbestos

Asbestos was a common building material in New Zealand between the 1920s and the mid-1980s, although it may have been used up until 2000. It was utilised for a range of purposes, including wall or roof cladding, insulation, soffit fittings, backing to vinyl flooring and in decorative plaster and textured ceilings.

Given the age of a number of the buildings within the study area, including residences, farm sheds and commercial buildings, it is considered that asbestos may be present at some of the properties where former site buildings have been demolished.

d) Lead-based paints

Lead-based paints were commonly used on NZ building until the early 1980s. Although lead levels in the paints were reduced over the decades (white lead was phased out in the mid-1960s, lead chromate was disused in the late 1970s, wood primers containing red lead paint were phased out in the 1980s and roof coatings containing calcium plumbate ceased being used in the 1990s), it is considered that a number of buildings within the study area are sufficiently old that surrounding soils in the immediate vicinity of these buildings may be impacted by the historical use of these paints.

e) Burial and burning of farm waste

Common waste disposal practices carried out on New Zealand farms, despite their illegality, have been the burial or burning of contaminated waste. Depending on the material burnt or buried, these activities may have resulted in impacts to both the environment and human health and can be classified as a HAIL activity under Category G5 - waste disposal to land.

f) Importation of unverified fill

The importation of unverified fill material for farm maintenance works, such as, the upkeep of tracks, backfilling areas susceptible to waterlogging and erosion, and infilling gullies, is recognised as a potential HAIL activity (Category I Any land that has been subject to the intentional or accidental release of hazardous substances in sufficient quantity that it could be a risk to human health or the environment). Contaminants commonly associated with unverified fill material include heavy metals, polycyclic aromatic hydrocarbons and asbestos, although other contaminants may also be present in the material, depending on the source of the fill.

g) Fuel storage

The storage of fuel on-site for farm vehicles and other plant (HAIL Category A17 Storage tanks or drums for fuel, chemicals or liquid waste) is commonly undertaken on rural properties.

Eight properties within the study area are known or are suspected to have been utilised for horticultural purposes, including market gardening, orchards, green houses and viticulture. Persistent bulk storage and use of pesticides (HAIL Category A10) are commonly associated with such horticultural activities. As spraying is the primary method by which pesticides are normally applied to crops, it is anticipated that contaminants are likely to be of low concentration and dispersed relatively uniformly across a property, although hotspots of higher contaminant concentrations may occur in areas such as storage sheds and at locations where the chemicals were mixed/prepared.

It was noted that properties surrounding these eight horticultural sites would require assessment for potential spray drift impacts.

Other potentially contaminating HAIL activities identified within the study area include:

- a) A golf range at a single property. The primary HAIL activities associated with golf ranges are the persistent bulk storage and use of chemicals such as pesticides (HAIL Category A10). As with horticultural land use, it is anticipated that contamination across the golf course would be of a dispersive nature, although hotspots of higher contaminant concentrations might occur in areas such as storage sheds and at locations where the chemicals were mixed/prepared.
- b) A motor mechanic workshop was identified at one property. Contaminants of concern associated with motor vehicle maintenance include hydrocarbons, solvents and heavy metals. Depending on the age and condition of the workshop infrastructure, including floors and drainage pits, waste disposal practices, and depth of groundwater beneath the site, the level of contamination could range from negligible to significant.
- c) A spare car parts business at a single property. As with the motor mechanics workshop, the level of contamination will depend on the age and condition of the workshop infrastructure, including floors and drainage pits waste disposal practices, and depth of groundwater beneath the site.
- d) Search of the Council's consent database revealed that a property had held a consent to discharge wastewater including wash down from stock holding pens, from an abattoir operation. The consent expired in 2004. Given the length of time since the assumed cessation of operations, no biological or nutrient issues are anticipated to be of concern. However, any chemicals used by the abattoir for cleaning and disinfecting purposes may potentially have impacted the site soils.

Two properties appear to be utilised as laydown/ storage areas, one for a freight company and the second for a drilling company. Whether the properties can be assessed as potential or actual HAIL sites will depend in part on the type of freight or drilling equipment/chemicals being stored, and whether vehicle/drill equipment maintenance works are carried out on these properties.

It is noted that portions of the study site abut areas currently zoned Business-Light Industry Zone under the Auckland Unitary Plan (Operative in Part) (AUP (OP)). Depending on the contamination status and activities undertaken within these areas, there may be some restrictions on future land use on immediately adjacent land.

The desktop assessment has concluded:

- HAIL activities have been identified as having or potentially having occurred within the study area; and therefore, further contamination assessment will be required to confirm the contamination status of properties across the study area.
- Although further assessments within the study area are required and some remedial works and resource consents may be required, overall it is considered that issues arising from contamination land are generally unlikely to present significant constraints to land development in the study area.



## 4 Warkworth Structure Plan

### 4.2 Overview of Warkworth Structure Plan

The Warkworth Structure Plan sets out the pattern of land uses and the supporting infrastructure networks for the Future Urban zoned land around Warkworth. In preparing the Warkworth Structure Plan, the following were considered:

- the context of the existing town in Warkworth
- the opportunities and constraints of the structure plan area as identified in 16 technical papers<sup>1</sup>
- the feedback received from various stakeholders and public engagement events<sup>2</sup>.

The structure plan is show in **Figure 2**.

Some of the key high-level features of the Warkworth Structure Plan include:

- Ecological and stormwater areas are set aside from any built urban development.
- The new residential areas across the Future Urban zone enable around 7,500 dwellings<sup>3</sup> and offer a range of living types from spacious sections around the fringe to more intensive dwellings such as town houses and apartments around the new small centres and along public transport routes.
- Warkworth's local and rural character is protected through various measures including provisions to protect the bush-clad town centre backdrop by the Mahurangi River and retaining the Morrison's Heritage Orchard as a rural feature of the town.
- New employment areas are identified, comprising land for new industry (e.g. warehousing, manufacturing, wholesalers, repair services) and land for small centres (e.g. convenience retail, local offices, restaurants/cafés). The existing Warkworth town centre by the Mahurangi River will remain as the focal point of the town.

The land uses are supported by infrastructure including:

- Prioritising active transport in Warkworth through a separated walking and cycling network providing connectivity to new and existing centres, employment areas, schools and public transport stations.
- A roading network including a potential southern interchange on Ara Tūhono – Pūhoi to Warkworth (south facing ramps only).
- A public transport network built upon the recently introduced 'New Network for Warkworth' and in the long term has a bus station/interchange in Warkworth's southern Local Centre and a Park and Ride near the potential Ara Tūhono – Pūhoi to Warkworth southern interchange.

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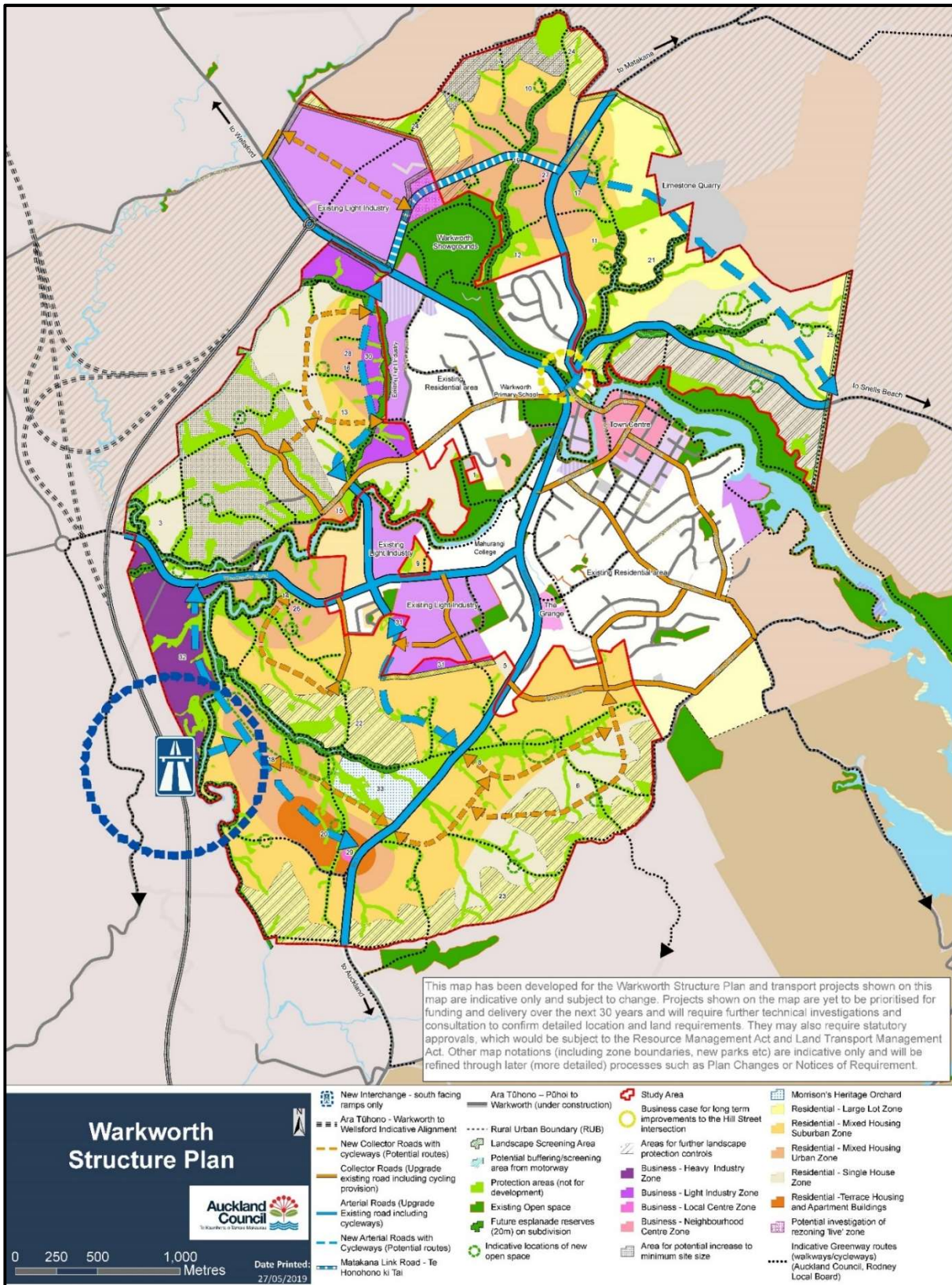
<sup>1</sup> 16 topic papers that were prepared in February 2018 as part of initial consultation on the structure plan

<sup>2</sup> This includes feedback from mana whenua, business, resident and community groups, engagement survey findings and community workshops held to generate land use ideas for the Warkworth area.

- Other infrastructure providers for utilities such as wastewater, water, power supply, telephone, broadband, community facilities, schools, and healthcare have plans underway to service the planned growth of Warkworth.

Further details on the Warkworth Structure Plan can be found in the structure plan document on the project website.

Figure 2: Warkworth Structure Plan



### 4.3 Assessment of the Warkworth Structure Plan

Section 1.3 of the Structure Plan Guidelines (Appendix 1 of the Unitary Plan) and presented in Appendix 1 of this report, states that relevant external documents should be considered when preparing structure plans. The following documents have been identified as being either directly or indirectly relevant to the issue of contaminated land, and therefore assessment of the Warkworth Structure Plan has been undertaken against the applicable aspects of these documents:

- Warkworth Structure Plan Principles
- Structure Plan Guidelines (Appendix 1 of the Unitary Plan)
- National Policy Statement for Freshwater Management (2017)
- Auckland Unitary Plan (Operative in Part) Regional Policy Statement
- Auckland Plan 2050

#### 4.3.1 Assessment and management of contaminated land under the Warkworth Structure Plan

The Warkworth Structure Plan facilitates the assessment and management of contaminated land through the strategic zoning of sections of land (including the provision of buffer zones between potential contaminant sources and identified sensitive receptors). The strategic zonings will be implemented into the District Plan through future plan changes and the subsequent resource consent applications will trigger the planning requirements under Sections 74 and 104(1) of the *Resource Management Act 1991*.

With regards to the planning requirements, any proposed future development associated with change in land use, subdivision or soil disturbance within the Warkworth Structure Plan's Future Urban Zone (FUZ) will require assessment under the *Resource Management Act 1991*. In accordance with section 104(1) of the Act, when considering an application for resource consent, a Council must, subject to Part 2 of the Act, have regard to:

- a) Any actual and potential effects on the environment of allowing the activity;
- b) Any relevant provisions of a national environmental standard, other regulations, national policy statement, a New Zealand Coastal Policy Statement, a Regional Policy Statement or Proposed Regional Policy Statement, Plan or Proposed Plan; and
- c) Any other matter a council considers relevant and reasonably necessary to determine the application.

Of the sources listed under (b) above the two key documents regarding assessment of an application in relation to contaminated land are:

- The National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011 (NES Soil) regulation. The NES Soil provides a nationally consistent set of controls and soil contaminant standards to ensure a piece of land affected by contaminants in soil in such a way as to pose a risk to human health, is appropriately identified, assessed and where required, remediated and/or managed. All territorial authorities are required to give effect to and enforce the requirements of the NES Soil in accordance with their functions under the RMA relating to contaminated land.



- Section E30 of the AUP (OP) which details specific provisions to manage the environmental risks associated with contaminated land. This section addresses the effects of the discharge of contaminants from contaminated land or land containing elevated levels of contaminants into air, or into water, or onto or into land pursuant to section 15 of the *Resource Management Act 1991*. Thresholds beyond which a risk assessment process is required to determine whether the discharge will result in other than *de minimus* adverse effects, or whether it can be remediated or managed are included in the section.

If initial assessment of a development within the FUZ identifies that a HAIL activity is more likely than not to have occurred within the site boundaries, a full evaluation under the NES Soil regulations, and under section E30 of the AUP (OP) will be required at the resource consent stage. Should the assessment confirm the presence of contamination, suitable management (including remediation, if appropriate) and monitoring strategies carried out under the appropriate NES and/or contaminant discharge consents will be required to mitigate the adverse effects on the environment and human health during the works, ensure the site's suitability for the proposed future land use.

The implementation of the Warkworth Structure Plan through a Plan Change and subsequent resource consent processes will facilitate the assessment and management of contaminated sites within the FUZ (including remediation if required), prior to redevelopment. It is anticipated that the above approach will progressively reduce the existing potential contaminant sources within the FUZ that pose a risk of adverse effects on the environment and/or human health, and ultimately contribute to the restoration and enhancement of the environment.

The incorporation of strategic zoning into the Warkworth Structure Plan provides buffer zones between potentially contaminated sites and identified sensitive receptors. These include:

- The proposed use of arterial roads and wide riparian areas to separate industrial zones, where HAIL activities are more likely to be undertaken, from more sensitive land uses, such as residential zones or the Mahurangi River. This separation will reduce the likelihood and levels of potential contaminant discharges reaching sensitive receptors, and as such, will reduce the overall impact on these receptors. Additionally, the use of buffer zones may contribute to the resolution or minimisation of reverse sensitivity issues in these areas.
- Proposed future esplanade reserves/strips and protection areas which provide buffer zones between the Mahurangi River (and its tributaries), and potentially contaminated sites. As with the use of arterial roads and wide riparian areas around the industrial zones noted above, the esplanade reserve/strip will reduce the likelihood of potential contaminant discharges, such as surface water runoff from contaminated sites, reaching the river or its tributaries.

#### **4.3.2 Assessment of the plan against the Warkworth Structure Plan principles**

Planning principles have been developed for the Warkworth Structure Plan which are to be used alongside statutory objectives and policies already in the AUP (OP) to help plan the FUZ in Warkworth.

The principles and associated objectives, developed utilizing a range of sources, are listed in full in the Warkworth Structure Plan document. Although none of the principles or associated objectives refer specifically to contaminated land, several objectives target improvements to water quality through the minimisation of discharges to air and water, as follows:



- **The Mahurangi River is the jewel in Warkworth's crown**
  - *Protect the Mahurangi River from the effects of urbanisation as a matter of paramount importance in the development of the Future Urban zone*
  - *Use the development of the Future Urban zone to improve the health and quality of the Mahurangi River wherever possible*
  - *Treat all the tributaries in the Future Urban zone as being vital to the health of the Mahurangi River*
  
- **Sustainability and natural heritage**
  - *Plan to enable development of the Future Urban zone to be sustainable, including having a compact urban form, providing local employment options, enabling extensive active and public transport routes, and minimising discharges to air and water bodies*
  - *Design the Future Urban zone to be able to adapt to the effects of climate change*
  - *Protect and enhance existing bush/natural areas and create ecological corridors linking the Future Urban zone to other ecological areas*

The assessment and remediation of contaminated land within the FUZ will progressively eliminate the existing potential contaminant sources, and therefore reduce discharges to both air and the nearby water bodies that negatively impact sensitive receptors, such as the Mahurangi River and its tributaries. Where potential contaminated land remains, the use of esplanade reserves and strips along the river, and arterial roads and wide riparian areas around the industrial zones will reduce the likelihood that contaminant discharges reach the river or its tributaries, or any other sensitive receptors in the FUZ.

#### **4.3.3 Assessment of the plan against the matters identified in the Structure Plan Guidelines (Appendix 1 of the Unitary Plan)**

Section 1.4.2 (Natural Resources) of the Structure Plan Guidelines presents matters related to the identification, investigation and management of natural resources, and includes objectives that relate both directly and indirectly with contaminated land:

- 1) *The protection, maintenance and enhancement of natural resources, particularly those that have been scheduled in the Unitary Plan in relation to Mana Whenua, natural resources, and the coastal environment;*
- 2) *Demonstrate how proposed subdivision, use, and development will protect, maintain and enhance the values of the resources identified in 1.4.2(1) above;*
- 3) *Measures to manage natural hazards and contamination.*

A review of the Auckland Council's GeoMaps GIS database indicates that there are a number of natural resources, scheduled in the Unitary Plan, that occur within or in close proximity to the FUZ. Eight terrestrial Significant Ecological Areas (SEA) (SEA-T-2294, SEA-T-2367, SEA-T-2368a, SEA-T-5440, SEA-T-6442, SEA-T-6676, SEA-T-6684 and SEA-T-6985), primarily associated with the Mahurangi River and its tributaries, are identified within the FUZ, whilst a number of additional SEAs (both marine and terrestrial) are located in the immediate vicinity of the FUZ, again associated with the Mahurangi River and downstream Mahurangi Harbour.

In addition, portions of the site are located within the following Management Areas:

- Natural Stream Management Area - immediately south of Woodcock Road, and east of Wyllie Road
- High-Use Stream Management Area – Majority of the FUZ, with the exception of the north-eastern portion
- High Use Aquifer Management Area - although it is noted that there are no Quality-Sensitive Management Areas within or immediately adjacent to the FUZ.

As noted in Section 4.3.1, any proposed future development associated with change in land use, subdivision or soil disturbance within the FUZ will require assessment under the *Resource Management Act 1991*.

The implementation of the Warkworth Structure Plan through the resource consent process will facilitate the assessment and management of contaminated sites within the FUZ (including remediation if required), prior to redevelopment. The above approach will progressively reduce the existing potential contaminant sources within the FUZ that pose a risk of adverse effects on the receiving environment noted above.

In addition, the Warkworth Structure Plan provides for buffer zones (esplanade reserves/strips, wide riparian areas, arterial roads) between potentially contaminated sites and some of the natural resources identified above, which reduce the likelihood of potential contaminant discharges reaching these sensitive receptors. It is anticipated that the reduction of the contaminant discharges will contribute to the restoration and enhancement of natural resources in the vicinity of the FUZ.

Section 1.5 of the Structure Plan Guidelines discusses the specialist documents required to support the structure plan and plan changes process. Subsection 1.5 (2)(b) states that the scale and detail of the investigation and reporting required needs to be at a level appropriate to the scale of the area subject to the structure planning process and the complexity of the issues identified by the process.

A limited desktop assessment of land contamination within the FUZ has been completed, the details of which are presented in Section 3.1 of this report. The assessment concludes that although further investigations within the study area are required and some remedial works and resource consents may be required, overall it is considered that issues arising from contamination land are generally unlikely to present significant constraints to land development in the FUZ.

Based on the findings of the desktop assessment, it is considered that the investigation and reporting completed is appropriate for the scale of the area and the complexity of the contaminated land issues identified.

#### **4.3.4 Assessment of the plan against the National Policy Statement for Freshwater Management**

National policy statements are instruments issued under section 52(2) of the *Resource Management Act 1991* and state objectives and policies for matters of national significance. Although there is no specific national policy statement that deals directly with contaminated land, a number of the objectives in the National Policy Statement for Freshwater

Management (2017) (NPSFM) relate to the management of discharges of contaminants into the environment.

The NPSFM provides direction on how local authorities should carry out their responsibilities under the *Resource Management Act 1991* for managing freshwater, and guides them, in consultation with their communities, to set objectives for the state of freshwater bodies in their regions and to set limits on resource use to meet these objectives. Objectives A1 and A2 of Section A (Water quality) of the NPSFM relates most directly to the management of contaminant discharges:

- **Objective A1** relates directly to the discharge of contaminants, and states:  
*To safeguard:*
  - a) *The life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems, of fresh water; and*
  - b) *The health of people and communities, as affected by contact with fresh water;**in sustainably managing the use and development of land, and of discharges of contaminants.*
  
- **Objective A2**  
*The overall quality of fresh water within a freshwater management unit is maintained or improved while:*
  - a) *protecting the significant values of outstanding freshwater bodies;*
  - b) *protecting the significant values of wetlands; and*
  - c) *improving the quality of fresh water in water bodies that have been degraded by human activities to the point of being over-allocated.*

As previously noted, the implementation of the Warkworth Structure Plan through the resource consent process will facilitate the assessment and management of contaminated sites within the FUZ (including remediation if required), prior to redevelopment. The above approach will progressively reduce the existing potential contaminant sources within the FUZ that pose a risk of adverse effects on the Mahurangi River and its tributaries.

In addition, the Warkworth Structure Plan provides for buffer zones (esplanade reserves/strips, wide riparian areas, arterial roads) between potentially contaminated sites and some of the natural resources identified above, which reduce the likelihood of potential contaminant discharges reaching these sensitive receptors. It is anticipated that the reduction of contaminant discharges will contribute to the restoration and enhancement of freshwater bodies within the surrounds of the FUZ.

#### **4.3.5 Assessment of the plan against any relevant provisions in the Regional Policy Statement**

Chapter B of the AUP (OP) includes the Regional Policy Statement, which guides activity at a regional level and has informed lower order provisions relating to specific areas. Section B10.4 (Land-Contaminated) speaks directly to the issues of contaminated land and provides clear objectives and policies with respect to their assessment and management.

#### **B10.4.1 Objective**

- (1) *Human health and the quality of air, land and water resources are protected by the identification, management and remediation of land that is contaminated.*

#### **B10.4.2 Policies**

- (1) *Identify land that is or may be contaminated based on:*
  - (a) *Sites known to have supported contaminating land use activities in the past;*
  - (b) *Sites with a significant potential risk to human health; or*
  - (c) *Sites having significant adverse effects on the environment.*
- (2) *Land which may be contaminated due to having supported contaminating land use activities in the past but has not been investigated will be identified as being potentially contaminated.*
- (3) *Manage or remediate land that is contaminated where:*
  - (a) *The level of contamination renders the land unsuitable for its existing or proposed use; or*
  - (b) *The discharge of contaminants from the land is generating or is likely to generate significant adverse effects on the environment; or*
  - (c) *Development or subdivision of land is proposed.*

As noted in Section 4.3.1 above, any proposed future development within the FUZ will require assessment under the *Resource Management Act 1991*. If initial assessment of a development within the FUZ identifies that a HAIL activity is more likely than not to have occurred within the site boundaries, a full evaluation under the NES Soil regulations, and/or under section E30 of the AUP (OP), will be required at the resource consent stage. The process of assessment, including standards and matters of control, is clearly detailed in both documents.

The implementation of the Warkworth Structure Plan through a Plan Change and subsequent resource consent processes will facilitate the assessment and management of contaminated sites within the FUZ (including remediation if required in accordance with the objective and policies listed above), prior to its redevelopment, to ensure its suitability for its existing or proposed use.

#### **4.3.6 Assessment of the plan against any relevant provisions in the Auckland Plan 2050**

The environmental and cultural heritage outcome of the Auckland Plan 2050 (2018) states:

*“Auckland preserve, protect and care for the natural environment as our shared cultural heritage for its intrinsic value and for the benefit of present and future generations.”*

Key Directions and Focus Areas supporting this outcome include:

- *Direction 3: Use growth and development to protect and enhance Auckland’s environment.*
- *Focus Area 2: Focus on restoring environment as Auckland grows.*
- *Focus Area 4: Protect Auckland’s significant natural environments and cultural heritage from further loss.*

The implementation of the Warkworth Structure Plan through the resource consent process will facilitate the assessment and management of contaminated sites within the FUZ (including remediation if required), meeting the objectives of Direction 3 and Focus Areas 2 and 4, listed above.

In addition, the provision for buffer zones (esplanade reserves/strips, wide riparian areas, arterial roads) between potentially contaminated sites and some of the natural resources identified above, will contribute to the protection and restoration of natural resources within and in the vicinity of the FUZ, in line with the objective of Focus Area 4.

## 5 Conclusions

The proposed Warkworth Structure Plan is considered to meet the applicable principles and objectives of the documents listed in section 4.3. Therefore, it is supported from the perspective of contaminated land management. The Plan facilitates the assessment and management of contaminated land, through the assessment and management of contaminated land through the strategic zoning of sections of land (including the provision of buffer zones between potential contaminant sources and identified sensitive receptors). The strategic zonings will be implemented into the District Plan through future plan changes and the subsequent resource consent applications will trigger the planning requirements under Section 104(1) of the *Resource Management Act 1991*.

Through these measures it is anticipated that adverse effects on the environment or human health associated with either historical or future contaminated land will be adequately mitigated, and the quality of the environment improved. It is considered that the Warkworth Structure Plan provides the opportunity to “*use the growth and development within the Future Urban Zone to protect and enhance Auckland’s environment*” (Auckland Plan 2050, Directive 3).



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or visit **[www.aucklandcouncil.govt.nz/have-your-say](http://www.aucklandcouncil.govt.nz/have-your-say)**