

Beachlands South Fast-Track Application

Desktop Ground Contamination Investigation

Prepared for: Beachlands South Limited Partnership

Prepared by: Tonkin & Taylor Ltd

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Statement of Qualifications and Experience

My name is Cara Angela Di Vitto. I am a Senior Contaminated Land Consultant at Tonkin & Taylor Ltd (T+T). I have worked at T+T since 2017. I have 15 years' experience in the assessment and management of contaminated land and groundwater.

Recent relevant projects and services that I have been involved with include:

- Land Remediation Lead for multiple neighbourhoods and precincts the Lead Alliance (Kāinga Ora's Auckland Housing Programme), covering residential redevelopment of large areas within Auckland City.
- Author and project manager for a detailed site investigation of a residential property following demolition activities for Waimakariri District Council.
- Contamination lead for ground contamination investigations and author of a Tier 2 risk assessment to inform a consent application for a proposed school development in Gisborne.

I confirm that, in my capacity as author of this report, I have read and abided by the Environment Court of New Zealand's Code of Conduct for Expert Witnesses contained in the Practice Note 2023.

Executive summary

Beachlands South Limited Partnership (BSLP) has engaged Tonkin & Taylor Ltd (T+T) to undertake an initial desktop assessment comprising a review of available historical aerial photographs for the two properties located at 758 & 770 Whitford-Maraetai Road (the "Site"). This report has been prepared to assess the substantive application submitted by Beachlands South Limited Partnership ('BSLP') under the Fast-track Approvals Act ('FTAA'). This report may be updated into a Preliminary Site Investigation (PSI) to support the development, in future.

The table below summarises the key findings and initial implications for the site development, assuming soil disturbance work will be undertaken. The information presented should be read in conjunction with the relevant detail included in the main body of the report.

This assessment should be revisited if this report is updated into a PSI in future and / or if the proposed development under the FTAA changes.

Consideration	Outcome
Desktop historical aerial review	- Based on the historical aerials reviewed via Auckland Council Geomaps and Retrolens, the Site appears to have been pastoral, following which it was developed for rural residential sometime between the 1950s and 1975. - Little changes were noted since its rural residential development, with minor potential for soil disturbance and possible additions of ancillary structures (possibly sheds) within the Site. - It is noted that the Site appears to have a number of gullies present, and surface water is expected to flow in a northerly direction via the gullies, and into the ponds / wetlands immediately north and northwest of the Site (located within the golf course). - Surrounding land use largely reflects the Site development, where the land was largely pastoral until the properties to the south and east were developed for rural residential. - The land to the north and west remained vacant until the 1990s when it was developed into a golf course. [refer Sections 3 and 4]
Potential for contamination	- While rural residential land use is not listed on the MfE Hazardous Activities and Industries List (HAIL), the development of the Site for residential land use occurred during a time when asbestos containing materials (ACM) and lead-based paint were commonly used as building materials. - Potential for ACM and lead-based paint to have been used within on site structures cannot be ruled out, and they may have, over time, resulted in shallow ground impacts. These impacts, if any, are likely to be within curtilage areas around former and existing structures. - Neither the Council contamination enquiry nor the property file have been reviewed for this assessment, and we recommend these be obtained and reviewed for a future PSI. - Further assessment to complete a PSI would be needed to confirm the potential nature and extent of contamination, if any, at the Site. [refer Section 5]
Development implications	We <u>assume</u> a consent under the NESCS and AUP would need to be sought, based on an application being made for the wider development. We recommend the Site be included in the application for the wider development.

Consideration	Outcome
	• If ground disturbance work is proposed within the Site, we recommend soil testing be undertaken in accordance with the pre-works investigation procedure set out in the CSMP. • The application activity can be confirmed following the completion of a PSI and if soil testing indicates otherwise. [refer Section 6]

We recommend soil testing be undertaken at the Site, within curtilage areas at a minimum and soils tested for heavy metals and asbestos.

This assessment should be revisited if this report is updated into a PSI and / or DSI in future and / or if the proposed development under the FTAA changes.

1 Introduction

Tonkin & Taylor Ltd (T+T) has been engaged by the Beachlands South Limited Partnership (hereafter referred to as 'BSLP') to prepare this initial ground contamination desktop assessment for the two properties located at 758 and 770 Whitford-Maraetai Road, Whitford, Auckland (herein referred to as the "Site", Figure 1.1). Site development will comprise additional golf holes and an access way to the light industrial / work live units on the land fronting Whitford-Maraetai Road. This initial ground contamination assessment outlines a review of historical aerial imagery for the Site and a high-level implications assessment, including potential consenting requirements to support a potential future development.

Assessment of land contamination consenting considerations for the wider Project area is presented in the separate T+T letter report¹.

1.1 Background

This report has been prepared to assess the substantive application submitted by BSLP under the Fast-track Approvals Act ('FTAA'). The Project name is 'Beachlands South' and is included in Schedule 2 of the FTAA as a Listed Project with significant regional or national benefits. The Project is located across approximately 159.58 hectares of live zoned land and approximately 108.6 hectares Future Urban zoned land at 110 Jack Lachlan Drive, and 620, 712, 758 and 770 Whitford-Maraetai Road, Beachlands. The subdivision layout with the Site located at 758 and 770 Whitford-Maraetai Road is presented in Figure 1.1.

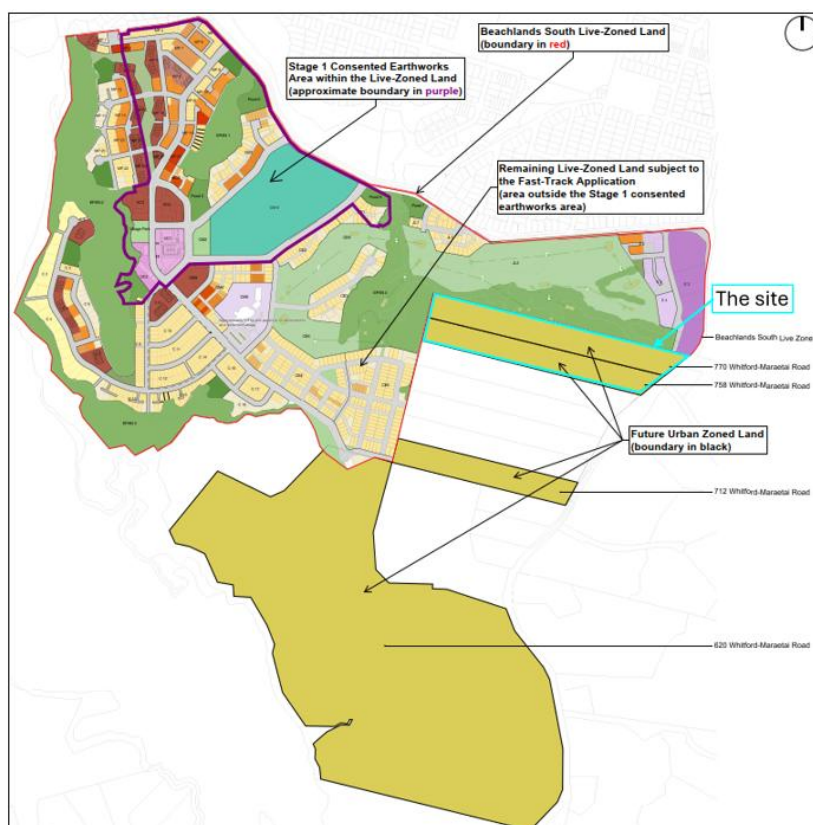


Figure 1.1: Proposed subdivision and site location plan.

¹ Tonkin & Taylor Ltd (18 June 2026), *Beachlands South: Fast Track Application – Contamination Consent Considerations*. Job No: 1014358.3200-LTR-CN-001.

A Detailed Site Investigation (DSI) report has been prepared for the wider subdivision area comprising the Formosa Golf Resort at 110 Jack Lachlan Drive and the neighbouring properties at 620 and 712 Whitford-Maraetai Road². The results from this investigation generally concluded that some soil impacts are present across the area investigated and a consent under the NESCS and AUP is likely to be required. A Contamination Site Management Plan³ was prepared to mitigate potential soil exposure risks to human health and the environment from future soil disturbance activities.

2 Objective and scope

The following scope of work was undertaken to complete the initial desk-based ground contamination assessment for 758 and 770 Whitford-Maraetai Road, Whitford:

- Review of relevant FTAA information provided by the BSLP.
- Review of available historical aerial photographs from online sources (Auckland Council Geomaps and Retrolens) as well as a review of information held in our T+T library for the Site (if any).
- Preparation of this initial desk-based ground contamination assessment report with a summary of our information review findings, assessment of the desk-based findings against the NESCS and Auckland Unitary Plan (AUP) contaminated land rules in the context of proposed future subdivision and residential land use.

This report has been prepared in general accordance with national guidance and standards for conducting ground contamination-related investigations in New Zealand. This includes general compliance with the format described in the Ministry for the Environment (MfE) Contaminated Land Management Guidelines (CLMG) No. 1⁴ "Reporting on contaminated Sites in New Zealand", revised 2021⁴. While this desk-based assessment is currently limited in scope, we understand this assessment will be further developed into a Preliminary Site Investigation (PSI) as defined by the MfE CLMG No.1 in future.

The persons undertaking, managing, reviewing, and certifying this investigation are suitably qualified and experienced practitioners (SQEP), as required by the NESCS and defined in the NESCS Users' Guide⁵.

3 Site description

3.1 Location and legal description

The Site is located at 758 and 770 Whitford-Maraetai Road, approximately 22 kilometres east of Auckland central business district (CBD), in a predominantly rural residential area. Based on topography, a number of ridgelines exist within the Site. The contours show the Site slopes from a high point (approximately 63 m above mean sea level (amsl)) in the south-east corner (on 758 Whitford-Maraetai Road) to the lowest elevation (approximately 22 m amsl) in the north-western corner (on 770 Whitford-Maraetai Road).

² T+T, 2022. Detailed Site Investigation - 110 Jack Lachlan Drive and 620 Whitford-Maraetai Road. Prepared for Beachlands South Limited by Tonkin and Taylor Ltd, dated November 2022, version 5, reference: 1014358 v5.

³ T+T 2026. Contaminated Site Management Plan – Beachlands South – Fast Track Consent. prepared for Beachlands South Limited Partnership (BSLP) by Tonkin and Taylor Ltd (T+T), dated June 2026, DRAFT version 1, reference 1014358.3200 v1.

⁴ MfE, 2021, Contaminated Land Management Guidelines No. 1. Reporting on Contaminated Sites in New Zealand (Revised 2021).

⁵ MfE, 2012, Users Guide National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health.

The Site currently consists of two neighbouring rural residential-style properties (refer Figure 1.1) with associated dwellings and ancillary structures on each. Each property is between six (6) to seven (7) hectares (ha) in size and covers a total land area of some 13 ha. The Site identification details are presented in Table 3.1.

Table 3.1: Site identification

Address	Legal Description	Area (ha)
758 Whitford-Maraetai Road	Lot 9 Deposited Plan (DP) 54105	6.1
770 Whitford-Maraetai Road	Lot 10 DP 54105	6.9
Total site area		13 Hectares

Source: Auckland Council Geomaps, accessed on 12 June 2026.⁶

The Site is bordered to the south and east by similar rural residential-style properties and a golf course to the north and west. Further north, past the golf course, is a residential development and what appears (from the aerial photograph review) to be a retirement village further to the east.

3.2 Geology

The published geological map for the Auckland region⁷ (refer Figure 3.1) indicates that the Site is primarily underlain by deposits of the East Coast Bays Formation (ECBF). This formation typically comprises interbedded sandstone, siltstone, and mudstone, with variable volcanic content and occasional volcanoclastic grits.

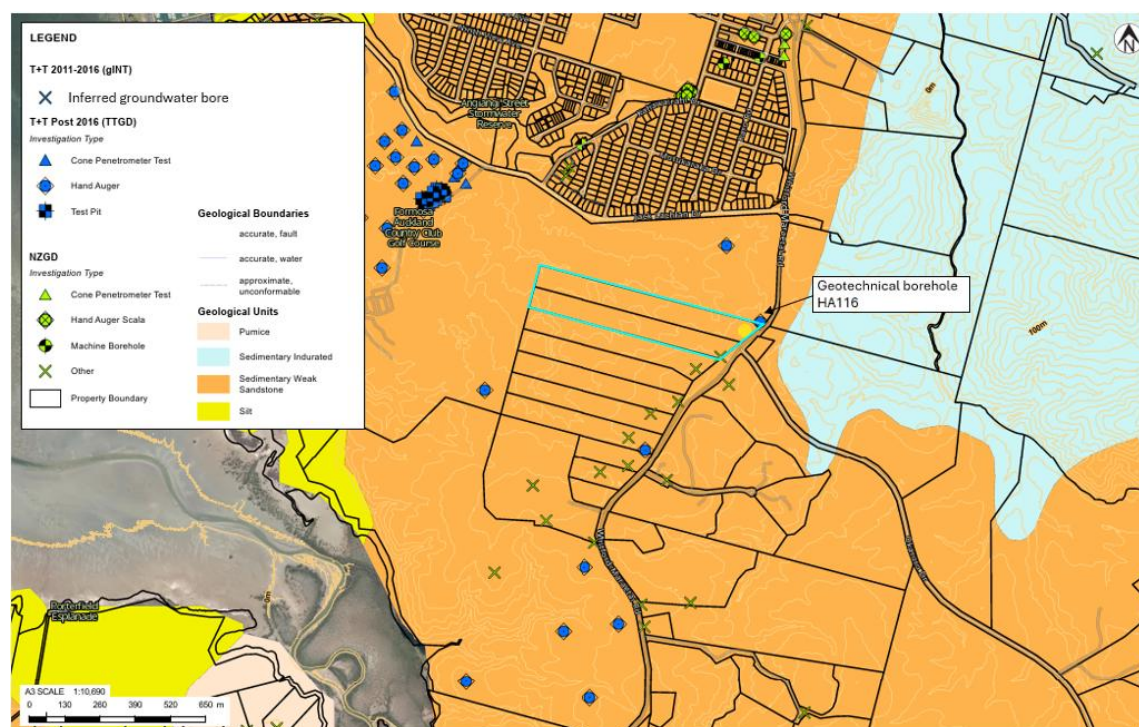


Figure 3.1: Geological map of the Site and surrounding area.

⁶ Auckland Council Geomaps, Web Map Viewer. (accessed 12 June 2026).

⁷ Kermode, L.O. (1992). *Map. Geology of the Auckland Urban Area. Scale 1:50,000. Institute of Geological & Nuclear Sciences Geological Map 2. 1 sheet + 63p. Institute of Geological & Nuclear Sciences Limited, Lower Hutt, New Zealand.*

3.3 Hydrology and Hydrogeology

Consistent with the information presented in the Detailed Site Assessment (DSI) for the wider subdivision, no published groundwater data was available for the Site. However, based on the geotechnical borehole log for HA116⁸ advanced near the Site boundary to the north-east, groundwater was logged at this location at a depth of 2.9 m below ground level (m bgl). The borehole is located near the north-east boundary of the Site (within the wider subdivision area, specifically, on 110 Jack Lachlan Drive).

In addition, and based on topography and proximity to expected wetlands immediately north of the site, groundwater is expected to be encountered between 1.5 and 5.0 m below ground level (bgl) depending on the ground level elevation. Groundwater is expected to follow topography in a northerly direction, towards the ponds and wetlands located in the golf course, north of the Site. Overall, regional groundwater flow is likely to be in a westerly direction towards Tāmaki Strait.

Auckland Council's online GeoMaps indicates that surface water flows to the north and northwest via overland flow paths that are connected to the ponds and wetlands within the golf course, located immediately north of the Site.

4 Historical site use

Historical aerial photograph information relating to the Site has been collected from a variety of sources including Auckland Council online Geomaps and Retrolens databases. This discussion of Site history focuses on the aerial photograph review where comments are provided on readily observable surrounding land use. The information reviewed is summarised in the following sections.

4.1 Aerial photograph review

Historic aerial photographs were obtained from Auckland Council online Geomaps and Retrolens and reviewed. Relevant features of the Site and surrounds are summarised from each aerial photograph in Table 4.1.

⁸ T+T, 2026. Beachlands South Fast-Track Application – Geotechnical Report. Prepared for Beachlands South Limited Partnership by Tonkin and Taylor Ltd (T+T), dated June 2026, version 2, reference: 1014358.3200 v2.

Table 4.1: Summary of aerial photograph review

Aerial photograph (date and source)	Key points identified	Photograph
1940s (Auckland Council Geomaps)	The Site and surrounding land is largely pastoral. Some overland flow paths are observed within the Site and appear to be within natural gullies on Site. A watercourse is present immediately to the north and what appears to be an unsealed road is present along the eastern boundary of the Site.	
1950s (Auckland Council Geomaps)	The Site appears to be relatively unchanged. Some rural residential properties appear on land to the north, south and east of the Site.	
1975 (Retrolens)	The Site is currently used for rural residential purposes and residential-style dwellings are present in the eastern portion of the Site, with access to the road. The surrounding land use appears to be relatively unchanged since the 1950s aerial. Some additional rural residential-style properties have been added to the north and south and some properties to the north appear to contain fenced paddocks.	

Aerial photograph (date and source)	Key points identified	Photograph
1980s (Auckland Council Geomaps)	Some areas of ground disturbance are visible within the Site. Additional rural residential-style properties to the south have been established. One property to the south appears to have market gardens / orchards established. Subdivision of land further north appears to be underway.	
1990s (Auckland Council Geomaps)	The Site appears to be unchanged. Market gardens / orchard activities on a property to the south appear to have ceased. The land immediately north of the Site is undergoing earthwork.	
2000 (Auckland Council Geomaps)	The Site appears to be relatively unchanged. The property immediately to the north has been developed into a golf course. Land to the west is under development.	

Aerial photograph (date and source)	Key points identified	Photograph
2010-2011 (Auckland Council Geomaps)	The Site appears to be relatively unchanged. The surrounding area also appears to be relatively unchanged.	
2015-2016 (Auckland Council Geomaps)	The Site appears to be relatively unchanged. Land to the north of the golf course is under residential development.	
2019-2020 (Auckland Council Geomaps)	Additional hardstand areas (inferred driveways) have been added to the property at No. 758. Some surface water appears to be ponded on this property. The surrounding land use appears to be relatively unchanged.	

Aerial photograph (date and source)	Key points identified	Photograph
2024-2025 (Auckland Council Geomaps)	Some ancillary buildings (likely sheds) have been added to both No. 758 and No. 770. The immediately surrounding land appears to be unchanged. The residential development further north (noted in the 2015-2016 aerial) has intensified. Land to the west that was under development, noted in the 2000 aerial, appears to have been developed into retirement-style living.	

5 Potential for contamination

Based on review of historical aerial photographs, it is concluded that the Site may have been subjected to HAIL activities based on the age of the dwellings and the potential for the use of asbestos and/or lead based paint on or in the structures.

An assessment of the potential magnitude of asbestos and lead effects are presented in Table 5.1.

Table 5.1: Potentially contaminating activities

Land use/activity	Potential contaminants	Magnitude, possible extent and likelihood of contamination
Dwellings of an age where asbestos and lead-based paints were commonly used in New Zealand	Potential for asbestos and lead impacts in near-surface soils within curtilage areas of the existing and former dwellings on the Site. (Potentially HAIL – I: land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment).	Typically soils in the upper 200-300 mm within curtilage areas may be impacted from weathering of external asbestos containing materials (ACM) and / or lead-based paint.

6 Implications

6.1 Development Implications

Based on the Historical aerial review, the Site has been used for pastoral purposes prior to rural residential development between the 1950s and 1975. Potential exists for surface soils in curtilage areas to be impacted by asbestos and / or lead in near surface soils. We consider that the NESCS and the Auckland Unitary Plan Rules could apply to the Site, depending on the outcome of soil testing and the proposed development of the Site.

Site development will comprise additional golf holes and an access way to the light industrial / work live units on the land fronting Whitford-Maraetai Road. At the preparation of this report, it is unclear whether this will require earthworks to be carried out within the Site boundary.

Soil testing within curtilage areas will indicate whether controls to manage effects on human health and / or the environment will be required, the potential implications of which are outlined further in the subsequent sections.

We recommend soil testing within curtilage areas be undertaken as a minimum and soils tested for heavy metals (including lead) and asbestos.

This report be updated into a Preliminary and Detailed Site Investigation (PSI/DSI) to support potential future consenting requirements.

6.2 Regulatory and consenting requirements

The rules and associated assessment criteria relating to the control of contaminated sites in the Auckland Region are specified in the following documents:

- The National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health (NESCS)⁵; and
- Auckland Unitary Plan (AUP);
- Health and Safety at Work (Asbestos) Regulations 2016 (hereafter Asbestos Regulations).

The NESCS considers issues relating to land use and the protection of human health while the AUP has regard to issues relating to the protection of the general environment, including ecological receptors.

6.2.1 NESCS

The NESCS applies to a piece of land which an activity or industry on the HAIL has been, is being, or is 'more likely than not' to have been undertaken on it.

Based on the limited historical information review and the use of the Site for rural residential purposes, the potential exists for HAIL - I to have occurred due to potential for ACM and / or lead-based paints to have been used as an external building material.

Consent requirement under the NESCS cannot be determined based on the level of information reviewed and a PSI is recommended to be completed to determine whether the Site is a potential or verified HAIL.

We have assumed a Site wide consent under the NESCS will be sought for the wider development (refer Figure 1.1), and we therefore recommend the Site be included in the overall consent application.

If ground disturbance works are proposed within the Site, a pre-works investigation procedure is set out in the CSMP³.

6.2.2 Auckland Unitary Plan (AUP)

The contaminated land rules are set out in Chapter E Environmental Risk Section E30 of the AUP and are now 'treated as operative' under [section 86F of the Resource Management Act 1991](#).

Rule E30.6.1.4 states that if soil concentrations or the 95% upper confidence limit (UCL) of soil concentrations are below the specified permitted activity criteria detailed in Table E30.6.1.4.1, then a resource consent is not required for the Site. If soil contaminant concentrations exceed these

relevant guidelines or separate phase is present, then a controlled activity consent for the ongoing discharge of contaminants is required.

Consent requirement under the AUP cannot be determined based on the level of information reviewed and further information would be needed to assess the earthworks volumes and whether these exceed the 200 m³ trigger limit unless a discretionary activity consent is sought.

We have assumed a Site wide consent under the AUP will be sought for the wider development (refer Figure 1.1), and we therefore recommend the Site be included in the overall consent application.

If ground disturbance works are proposed within the Site, a pre-works investigation procedure is set out in the CSMP³.

6.2.3 Health and Safety at Work (Asbestos) Regulations 2016

The management of asbestos in soils is regulated under the Health and Safety at Work (Asbestos) Regulations 2016 (Asbestos Regulations). In order to help achieve compliance with the Asbestos Regulations, WorkSafe New Zealand has prepared an Approved Code of Practice (ACoP): Management and Removal of Asbestos (September 2016). The ACoP refers readers to the “*New Zealand Guidelines for Assessing and Managing Asbestos in Soil*” (herein referred to as the Asbestos-in-Soil Guidelines) dated October 2024, by BRANZ Ltd.

The Asbestos-in-Soil guidelines define the level of oversight and controls (including personal protective equipment, decontamination, etc.) that is required to be implemented dependent on the concentration of asbestos fibres/fines or fragments that are present in the soils.

Asbestos as a building material may be present in soil if weathering or degradation of the external surfacing containing ACM has occurred, resulting in impacts to soil. Therefore, testing for asbestos in soil within curtilage areas is recommended, in accordance with the pre-works investigation procedure set out in the CSMP³, to determine the level of asbestos contamination controls, if needed, during soil disturbance work.

7 Applicability

This report has been prepared for the exclusive use of our client BSLP, with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose, or by any person other than our client, without our prior written agreement.

We understand and agree that our client will submit this report as part of an application under the Fast Track Approvals Act 2024, and that an Expert Panel will use this report for the purpose of assessing that application. We understand and agree that this report will be used by the Expert Panel in undertaking its regulatory functions.

Tonkin & Taylor Ltd
Environmental and Engineering Consultants

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Together we create + sustain a better world