



Preliminary Site Investigation

Point Erin Park

Prepared for
Watercare Services Limited

Prepared by
Tonkin & Taylor Ltd

Date
December 2022

Job Number
1011009.1000 v1



**Together we create and
sustain a better world**

www.tonkintaylor.co.nz

Document control – Point Erin Park

Title: Preliminary Site Investigation					
Date	Version	Description	Prepared by:	Reviewed by:	Authorised by:
November 2022	1	Draft issue to client	S. Maclean	L. Phuah	L. Phuah
December 2022	2	Final	S. Maclean	L. Phuah	L. Phuah

Distribution:

Watercare Services Limited

1 electronic copy

Tonkin & Taylor Ltd (FILE)

1 electronic copy

Table of contents

1	Introduction	1
	1.1 Background and objectives	1
	1.2 Scope of work	2
2	Site description	2
	2.1 Site identification	2
	2.2 Geology	3
	2.3 Hydrogeology and hydrology	3
3	Site history	4
	3.1 Aerial photograph review	4
	3.2 Contamination enquiry	5
	3.3 Property file review	6
4	Potential for contamination and implications	7
5	Conclusions	7
6	Applicability	8
Appendix A	Site layout plan	
Appendix B	Select aerial photographs	
Appendix C	Site contamination enquiry	
Appendix D	Select property files	

1 Introduction

Tonkin & Taylor Ltd (T+T) has been commissioned by Watercare Services Limited (Watercare) to undertake a Preliminary Site Investigation (PSI) for the land where infrastructure works is being proposed on the southern end of 94 Shelley Beach Road, Ponsonby (herein referred to as 'the site'). The extent of the site and property are shown by the red and blue solid line respectively on Figure 1.1 below.

This desktop study is undertaken in accordance with the proposal for ground contamination support for Point Erin Park dated 27 September 2022, as an extension of the existing contract with Watercare dated 21 July 2020. This preliminary draft report has been prepared in general accordance with the requirements for a PSI referred to in the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NESCS) and as outlined in the Ministry for Environment's (MfE's) Contaminated Land Management Guidelines No.1¹.

The persons undertaking, managing, reviewing, and certifying this investigation are suitably qualified and experienced practitioners as defined in the NESCS Soil User's Guide².



Figure 1.1: Site location (shown in red) and property boundary (shown in blue) with available online contours shown (Source: Auckland Council Geomaps)

1.1 Background and objectives

We understand that Watercare is preparing to undertake excavation works on site for the construction of a pipeline as part of the Central Interceptor (CI) project.

T+T has been commissioned to review the available information on the site to establish if any HAIL activities have occurred at the site which may overlap with the proposed CI project works, and if any

¹ Ministry for the Environment, updated 2021, Contaminated land management guidelines No. 1: *Reporting on Contaminated Sites in New Zealand*.

² Ministry for the Environment. 2012. *Users' Guide: National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health*. Wellington: Ministry for the Environment

additional controls and consents under the NESCS and AUP(OP)³ are required. The general site layout for the proposed works is shown below in Figure 1.2.

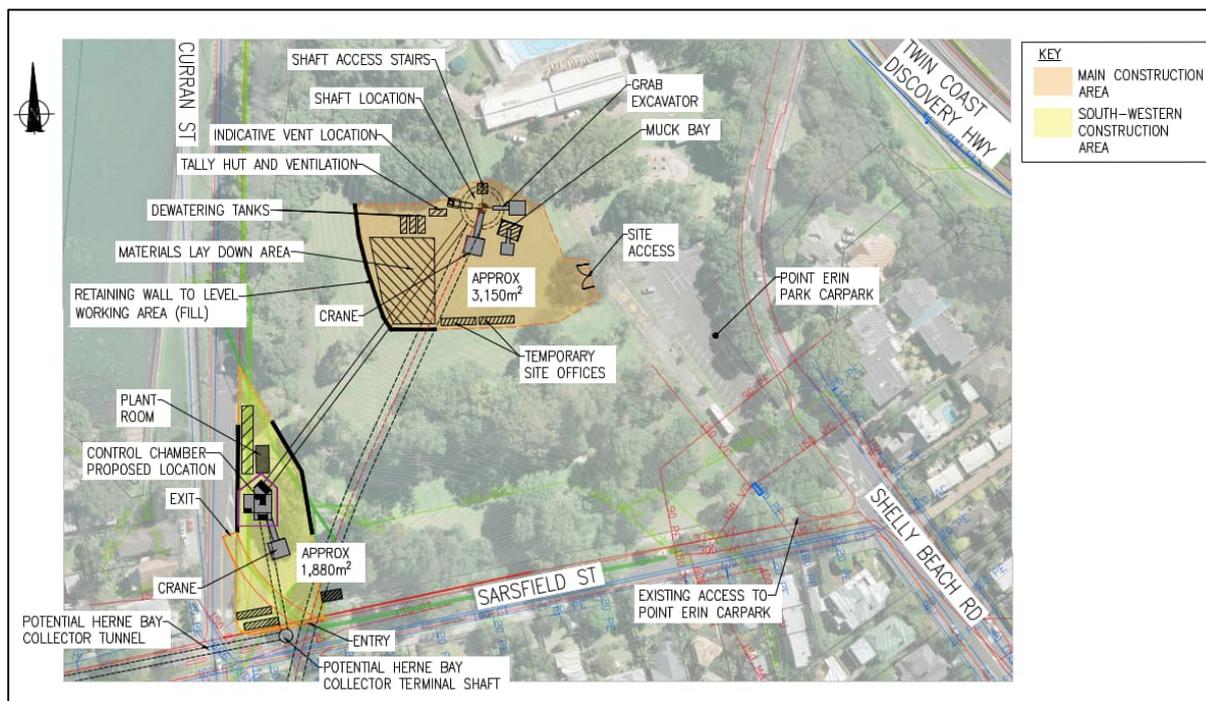


Figure 1.2: General layout of works within Point Erin Park

1.2 Scope of work

The scope of work for this desktop study comprised:

- Review of available aerial photographs from on online databases such as Auckland Council Geomaps and Retrolens.
- Request and review Council held information from sources such as the property files and Auckland Council (Council) contamination enquiry.
- Preparation of this report summarising the above items and potential ground contamination implications including consenting requirements.

2 Site description

2.1 Site identification

The site (shown in Figure 1.1:) is located on the southern end of Point Erin Park and is accessed from driveway and carpark off Shelly Beach Road. The proposed area measures approximately 20,100 m² in area. The topographical survey information available on Auckland Council Geomaps indicates that the site generally slopes toward the southwestern corner of the site. The contours also show a sharp slope towards the northern end of the property and suggests that the northern end of the property is on a cliff and Point Erin Park is on a headland.

The site is bounded by Shelly Beach Road to the east, Sarsfield Street to the south, Curran Street to the west, and the northern area of Point Erin Park in the north as shown in Figure 1.1:. The Northern Motorway runs to the north-east of the site. Site identification information is presented in Table 2.1.

³ Auckland Council, Updated December 2021. *Auckland Unitary Plan – Operative in Part*

Table 2.1: Site and property identification

Insert heading	Heading
Property Street address	94 Shelly Beach Road, Ponsonby, Auckland, 1011
Legal description	PT Allot 9 & 10 Sec 8 Suburbs Auckland (Point Erin Park)
Property owner	Her Majesty the Queen
Site area	20,100 m ²
Zoning	Open Space

2.2 Geology

Published geology⁴ shown below in Figure 2.1 indicates that the site area (including the northern part of the property which forms the headland) is underlain by rock of the East Coast Bays Formation (ECBF).

At lower elevations towards the north of the headland area, unweathered and weathered ECBF are overlain by fill and mixed marine and alluvial deposits of the Tauranga Group.



Figure 2.1: Published geology (Source: Kermodé)

2.3 Hydrogeology and hydrology

The Council online database (Geomaps) indicates that an overland flow path runs from the southwest corner of the site and flows in a northern and western direction towards the Waitematā Harbour.

⁴ Kermodé, L.O. 1992: Geology of the Auckland Urban Area. Scale 1:50,000, Institute of Geological & Nuclear Sciences geological map 2. 1 sheet + 63p. Institute of Geological and Nuclear Sciences Ltd. Lower Hutt, New Zealand.

A groundwater and settlement report⁵ produced by Aurecon for the St Marys Bay – Masefield Beach Water Quality Improvement Project indicates that for the low elevation areas at the base of the headland, groundwater is generally present at relatively shallow depths, <1 m – 3 m below ground level. Drilling undertaken by Aurecon⁶ indicates that groundwater was not observed to depths of at least 5 m in BH30 (shown in Figure 6-1) located just south of the site along Sarsfield Street.

Groundwater flow is inferred to follow topography to the north, east and west towards the Waitematā Harbour.

3 Site history

Historical information relating to the site was collected and reviewed to identify any further details about the history of the site. Information was collected from a variety of sources including Auckland Council GeoMaps, Retrolens, and Auckland Council property files and contamination enquiry. The information presented documents onsite activities, and comments on readily observable surrounding land use where relevant. The information that has been reviewed is summarised in this section.

3.1 Aerial photograph review

The review of aerial photography indicates that the site has remained consistent in its use as a park since the earliest aerial photograph in 1940. A small building with a surrounding landscaped area was observed near the north-eastern corner of the site in 1940, but was no longer present by the 1959 aerial. Photographs held by the New Zealand National Library⁷ suggest that this building was likely a tea kiosk that was on site since at least the early 1900s (refer to Photograph 3.1). The modern carpark constructed along the eastern border of the site was first observed in the 1959 aerial within the footprint of the former observed tea kiosk. The Point Erin swimming baths were developed between 1955 and 1959 to the north of the site, which are also accessed through the carpark.

The area surrounding the site has remained predominantly in residential use since 1940. The aerial photograph from 1940 shows houses present in the surrounding land, and the roads surrounding the park are established and consistent with the present-day layout. The northern area of the park (not within the site) appears to have been reclaimed from the Waitematā Harbour between 1950 and 1955. The reclamation made way for the Northern Motorway located to the northeast of the site, which was constructed circa 1955. The layout of the motorway and surrounding land has remained consistent since construction.

Selected aerial photographs are presented in Appendix B.

⁵ Aurecon, 26 April 2018. *St Marys Bay – Masefield Beach Water Quality Improvement Project, Preliminary Groundwater and Settlement Monitoring and Contingency Plan*. Prepared for Auckland Council. Aurecon Reference: 255303

⁶ PDP, April 2018. *St Marys Bay & Masefield Beach Water Quality Improvement Project – Groundwater Technical Report*. Prepared for Auckland Council. PDP Ref: A03179700

⁷ New Zealand National Library. https://natlib.govt.nz/records/23093355?search%5Bi%5D%5Bplace_authority_id%5D=-328064&search%5Bpath%5D=items (Accessed 15 November 2022)



Photograph 3.1: Historic photograph of the Tea Kiosk and associated landscaped area (Source: New Zealand National Library).

3.2 Auckland Council Contamination enquiry

A site contamination enquiry was received on 10 October 2022 from Council and indicates that there is no contamination information within Council records for the site. A copy of the Council contamination enquiry is presented in Appendix C.

The Council contamination enquiry identified Masfield Reserve (approximately 40 m west of the site) as an Auckland Council owned closed landfill (shown in Figure 3.1). Auckland Council's Closed Landfill Team (per communications with Oscar Simons⁸) has confirmed that they do not hold detailed information of the closed landfill. Under their Asset Owner Approval criteria (AOA)⁹, the Masfield closed landfill is identified as a "moderate" risk landfill.

A review of Auckland Council Geomaps did not indicate any underground services that may act as pathways for contaminant migration between Masfield Reserve and the site. Groundwater/leachate (if any) from the closed landfill would expect to flow down gradient / north towards the coast rather than east towards the site. There is therefore unlikely to be a migration pathway for leachate and/or landfill gas from the closed landfill to site and low risk in relation to the proposed site development.

⁸ Tea Kiosk at Point Erin Park, Auckland. Price, William Archer, 1866-1948 :Collection of post card negatives. Ref: 1/2-000359-G. Alexander Turnbull Library, Wellington, New Zealand. [/records/23093355](https://records/23093355)

⁹ https://www.aucklandnz.com/sites/build_auckland/files/media-library/documents/closed-landfill-summary-list.pdf

Watercare¹⁰ confirmed that there was no requirement from Council to monitor landfill gas during the Sarsfield Street and Curran Street works for the St Mary's Bay & Masefield Beach Water Quality Improvement Project located between the Masefield closed landfill and the site.



Figure 3.1: Masefield Reserve Closed Landfill, within 200 m of the site (radius shown in red) (Source: Auckland Council)

3.3 Property file review

The property files held by Auckland Council for the site were received on 19 October 2022 and were reviewed to identify any potential for contamination that may have occurred as a result of historic activity on the site. Select relevant property files have been included at Appendix D to this report. The documents in the property file for the site are largely related to the development of the Point Erin swimming baths, located to the north of the site, and the St Mary's Bay & Masefield Beach Water Quality Improvement Project that occurred on and surrounding the site.

A reviewed building application from 1963 indicated the construction of a transformer. The construction material is detailed as concrete. Watercare confirmed that the transformer is located east of the south-western construction area (not within the site boundary) adjacent to Sarsfield Street.

A reviewed consent report indicates that a consent for new water pipelines running through the subject site (connecting the Point Erin Pool to the realigned waterline) was sought by Watercare in 2010. The proposed water line traverses the property and site in the north-western to south-eastern direction as shown below in Figure 3.2. No documents relating to ground contamination were noted for this resource consent as part of the property file review.

An Assessment of Environmental Effects by Beca and an associated Detailed Site Investigation undertaken by Aurecon¹¹, were undertaken in 2018 in relation to the Water Quality Improvement Project. The investigations were predominantly carried out in the northern area of Point Erin Park,

¹⁰ RE: St Mary's Bay application documents – contaminated land (26 October 2022). From Dietmar Londer (Auckland Council) to Xenia Meier (Watercare)

¹¹ Aurecon, 2018, St Marys Bay – Masefield Beach Water Quality Improvement Project, Detailed Site Investigation. Ref: 255303.

away from the site. There were no documents in the property files to suggest that any potentially contaminating activities have occurred on the site for the proposed works.

Further details on these reviewed documents and a summary of other reviewed property files is presented in Appendix D.

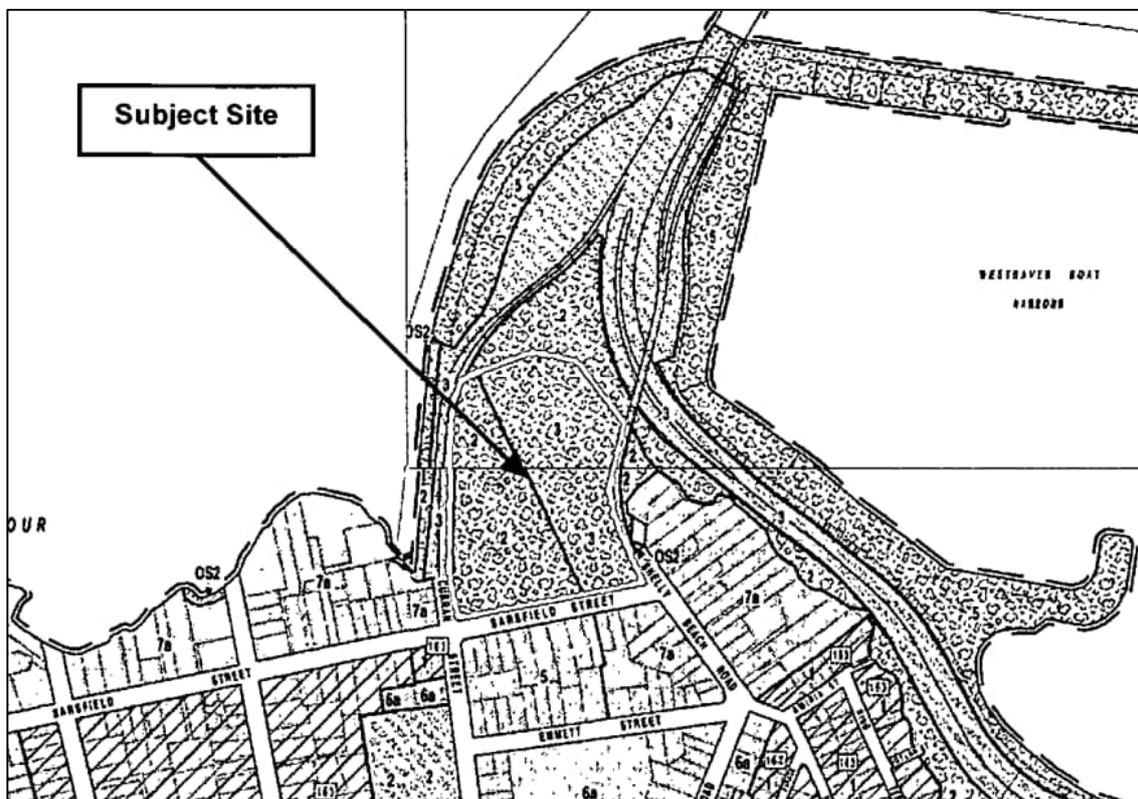


Figure 3.2: Proposed waterline development (Source: Auckland Council)

4 Potential for contamination and implications

The review of the site history has not identified any HAIL activities that have been undertaken at the site. The removed tea kiosk as identified in the aerial review and transformer as identified in the property file is away from the proposed shaft and associated developments.

A moderate risk closed landfill is located approximately 40 m to the west of the site. Given that there are no obvious preferential pathways for leachate/ landfill gas migration to the site, we consider the risk from the nearby closed landfill to the proposed site works to be low.

5 Conclusions

The main findings of this assessment, which has been prepared for Watercare in support of proposed works on the subject site for the CI project, are:

- The site has been used as an open space reserve since prior to 1940. The historical layout is consistent with the present-day, and it remains covered with grass and vegetation.
- A review of the available site history information indicates that it is *more likely than not* that no HAIL activities have occurred on the site.
- A moderate risk closed landfill is located approximately 40 m to the west of the site. A review of Auckland Council Geomaps indicate that there are no preferential migration pathways between the landfill and the site.

6 Applicability

This report has been prepared for the exclusive use of our client Watercare Services Limited, 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 this report will be used by Auckland Council in undertaking its regulatory functions in connection with the site at Point Erin Park.

Tonkin & Taylor Ltd
Environmental and Engineering Consultants

Report prepared by:



Sylvie Maclean
Environmental Consultant

Authorised for Tonkin & Taylor Ltd by:



Lean Phuah
Project Director

SYMA

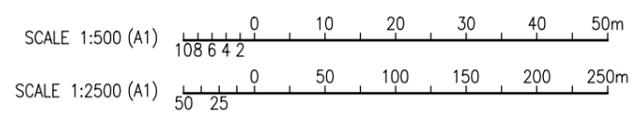
\\ttgroup.local\files\aklprojects\1011009\1011009.1000\issueddocuments\point erin - preliminary site investigation final.docx

Appendix A Site layout plan



KEY	
	MAIN CONSTRUCTION AREA
	SOUTH-WESTERN CONSTRUCTION AREA

PLAN
SCALE: 1:500



PRELIMINARY
FOR INFORMATION



Plot Date: Dec 09, 2022 - 2:39pm C:\pwwork\anthony.doherty@jacobs.com\dms51944\DSCIN-DEL-SKT-C-J-300010.dwg

ISSUE	DATE	AMENDMENT
A		ISSUED FOR INFORMATION

Watercare
COPYRIGHT - This drawing, the design concept, remain the exclusive property of Watercare Services Limited and may not be used without approval. Copyright reserved.

CENTRAL INTERCEPTOR (DSCIN)
 POINT ERIN TERMINAL SHAFT AND NETWORK CONNECTIONS
 PRELIMINARY CONSTRUCTION SITE LAYOUT

CAD FILE DSCIN-DEL-SKT-C-J-300010.DWG	
REF No.	ORIGINAL SCALE A1 AS SHOWN
SKETCH No.	ISSUE
DSCIN-DEL-SKT-C-J-300015	A

Appendix B Select aerial photographs

Appendix B Table 1: Historic aerial photographs

Year and source	Photo
1940 – Auckland Council	 A black and white aerial photograph from 1940, taken from the Auckland Council. It shows a residential neighborhood with a grid of streets. A specific plot of land is outlined in red. This plot is situated on a slight rise, bordered by a road to the south and a larger, more open area to the north. The surrounding area includes houses, trees, and a body of water in the upper right corner.
1955 – Retrolens (SN583 1917-26)	 A black and white aerial photograph from 1955, taken from Retrolens (SN583 1917-26). It shows the same residential neighborhood as the 1940 photo. The red-outlined plot is still visible, showing some changes in the surrounding landscape and buildings over the 15-year period. The layout of streets and the general appearance of the houses remain consistent with the earlier photo.

1959 – Auckland Council



1981 – Retrolens (SN5802 U-10)



2001 – Auckland Council



2017 – Auckland
Council



Appendix C Site contamination enquiry

10 October 2022

Tonkin & Taylor Limited
PO Box 5271
AUCKLAND 1141

Attention: Xiao Jin

Dear Xiao

Site Contamination Enquiry – Part Point Erin Park, Ponsonby

This letter is in response to your enquiry requesting available site contamination information within Auckland Council records for the above site. Please note this report does not constitute a site investigation report; such reports are required to be prepared by a (third-party) Suitably Qualified and Experienced Practitioner.

The following details are based on information available to the Contamination, Air & Noise Team in the Resource Consent Department. The details provided may be from former regional council information, as well as property information held by the former district/city councils. For completeness the relevant property file should also be requested to obtain all historical records and reports via 09 3010101 or online at:

<https://www.aucklandcouncil.govt.nz/buying-property/order-property-report/Pages/order-property-file.aspx>.

1. Hazardous Activities and Industries List (HAIL) Information

This list published by the Ministry for the Environment (MfE) comprises activities and industries that are considered likely to cause land contamination as a result of hazardous substance use, storage, and/or disposal.

There is no contamination information within Council records for the site.

Please note:

- *If you are demolishing any building that may have asbestos containing materials (ACM) in it, you have obligations under the Health and Safety at Work (Asbestos) Regulations 2016 for the management and removal of asbestos, including the need to engage a Competent Asbestos Surveyor to confirm the presence or absence of any ACM.*
- *Paints used on external parts of properties up until the mid-1970's routinely contained lead, a poison and a persistent environmental pollutant. You are advised to ensure that soils affected by old, peeling or flaking paint are assessed in relation to the proposed use of the property, including high risk use by young children.*

2. Consents and Incidents Information (200m radius of the selected site)

The Council database was searched for records of the following activities within approximately 200 metres of the site:

- Pollution Incidents (including air discharges, oil or diesel spills)
- Bores
- Contaminated site and air discharges, and industrial trade process consents

- Closed Landfills
- Air quality permitted activities
- Identified HAIL activities



Figure 1: Selected Consents, Incidents and HAIL activities within approximately 200m of the subject site

Legend:

- | | |
|----------------------------|--|
| All Consents + | Closed Landfill (Auckland Council owned) □ |
| All Applications ■ | Closed Landfill (Privately owned) ■ |
| All Permitted Activities * | All Incidents • |
| All Bores ★ | HAIL activities ▨ |

Relevant details of any pollution incidents and consents and HAIL activities are appended to this letter (Attachment A). Please refer to the column titled 'Property Address' on the spreadsheet to aid in identifying corresponding data on the map.

For any identified HAIL sites, please refer to the tab "HAIL activities" for more information (Column C and D include HAIL activity details where these are available).

The following site within the search area have been identified as closed landfills and may have been subject to historical filling / importation of unverified-origin material. Please note that this information is indicative only and our database of such sites is incomplete.

A. INDICATIVE ONLY	Please contact Contaminated Land (Environmental Services)
OWNERSHIP:	Auckland Council
SITE ID:	186
PROPERTY DESCRIPTION ADDRESS:	Closed landfill
SITE NAME:	Masefield Reserve

Please note:

The HAIL activity hatching in Figure 1 only reflects whether a site has been identified as a HAIL site (both verified and non-verified) by the Council and the type of HAIL associated with the site. This does not confirm whether the site has been formally investigated or the contamination status of the property (e.g. contaminated, remediated etc.). Additionally, due to limitations within Council's records, the specific HAIL activity is not included in the data for all properties. For further information on any of these known HAIL sites, a subsequent site contamination enquiry can be lodged for the specific property (up to 5 adjacent properties can be covered in one request).

While the Auckland Council has carried out the above search using its best practical endeavours, it does not warrant its completeness or accuracy and disclaims any responsibility or liability in respect of the information. If you or any other person wishes to act or to rely on this information, or make any financial commitment based upon it, it is recommended that you seek appropriate technical and/or professional advice.

If you wish to clarify anything in this letter that relates to this site, please contact contaminatedsites@aucklandcouncil.govt.nz. Any follow up requests for information on other sites must go through the online order process.

Should you wish to request any of the files referenced above and/or listed in the attached spreadsheet for viewing, please contact the Auckland Council Call Centre on 301 0101 and note you are requesting former Auckland Regional Council records (the records department requires three working days' notice to ensure the files will be available).

Please note Auckland Council cost recovers officer's time for all site enquiries. As such an invoice for \$228 for the time involved in this enquiry will follow shortly.

Yours Sincerely,

**Contamination, Air and Noise Team
Specialist Unit | Resource Consents
Auckland Council**

Appendix D Select property files

D1 Reviewed property files

Key findings of the review are summarised below:

- The earliest property record in the file was from 1962 which was a building application for the Point Erin swimming baths. Materials used are detailed as concrete and brick.
- A building application form for a transformer from 1963 was sighted. The location of the transformer is not provided, however, it is likely to be associated with operations for the swimming baths located on the north eastern end of Point Erin Park, away from site. The construction material is detailed as concrete.
- A memorandum from 1994 was sighted, which details the discovery of a leak in the pool. The cause of the leak was unknown, and it was suspected that it may have been occurring for a number of years.
- A memorandum from 1996, addressed to Avondale/Mt Albert/Western Bays Area Office from City Design, was sighted. It detailed a proposed scheme to divert contaminated pool water from the Point Erin Baths from the stormwater disposal to the sanitary sewer, to comply with the Resource Management Act. No further details about the plans are specified.
- A letter dated November 2004 was located, addressed to City Design. It advises that a resource consent to install an above ground storage tank, piping, and underground piping, was granted. It is understood that the tank is for the storage of spa pool water for backwash.
- Numerous files relating to the construction of the Point Erin Pools between 1970 and 2004 were sighted. No significant information relating to contamination was discovered, and the area where the pools are located is not included in the site for the proposed works.
- A report by Auckland City Council in 2010 was sighted. It detailed a resource consent application for the installation of new water pipelines through Point Erin Park as part of the Victoria Park Tunnel project. The report stipulates that the resource consent is to install new water pipelines through the subject site, connecting the Point Erin Pool to the realigned watermain that runs along Sarsfield Street. The water line was proposed to be 200 m long. The proposed methodology was to install the line using open trenching and directional drilling with surplus excavated material removed from site.
- An Assessment of Environmental Effects published by Beca in 2018 was sighted in relation to a Water Quality Improvement Project undertaken at St Marys Bay and Masefield Beach. Point Erin Park was the major construction site for the project, and included the installation of a new pipeline, weir structure, pump station, and odour control unit. Contaminated land investigations were undertaken (Section 8.12), which found a number of contaminated areas pertaining to a history of land reclamation, landfilling, and development across the whole project site. These areas were investigated in further detail in a Detailed Site Investigation (DSI) prepared by Aurecon in 2018. Further details are outlined in Section D1.1.

D1.1 Aurecon 2018 DSI

Intrusive investigations were undertaken at the fringes of Point Erin Park to characterise soils in the area of the proposed St Marys Bay and Point Erin stormwater tunnel. Investigation locations were predominantly in the northern and western area of the park away from the site and within the reclamation fill, shown in Figure 6-1 below.

The ground investigation results confirmed the presence of fill from near surface soils and up to 5 m below ground level (bgl) east of the site along the proposed stormwater tunnel.

The results of the investigations relevant to the site on the southern section of Point Erin Park are summarised as follows:

- Soils returned elevated levels of heavy metals and/or polycyclic aromatic hydrocarbons (PAH) that exceeded AUP Permitted Activity criteria at BH07, BH27, BH28, and BH09, where human health criteria for recreational use was also exceeded.
- The presence of asbestos was detected in BH27 and BH28. It was identified to pose a risk to construction workers and carries obligations under the Health and Safety at Work (Asbestos) Regulations.
- Waste-containing fill was generally classified as hazardous waste that required disposal to a licensed landfill or managed fill, and reworked natural fill was generally classified as clean fill or managed fill.



Figure 6-1: Previous soil investigation locations in the vicinity of Point Erin Park (Source: Aurecon DSI)¹². Site location shown in red with the property boundary shown in blue.

¹² BH30 was excluded from the investigations as it was outside the area of disturbance for the project.

www.tonkintaylor.co.nz

