MASON EVANS

Geo-Environmental Consultants

BEACH DRIVE,

IRVINE

REPORT ON
SITE INVESTIGATIONS

DATE

June 2019

CLIENT

North Ayrshire Council

PREPARED BY

Heather Scott
Geo-Environmental Scientist

www.masonevans.co.uk

North Ayrshire Council

BEACH DRIVE,

IRVINE

REPORT ON SITE INVESTIGATIONS

Date of Issue:	June 2019
Report Status:	First Edition
Project Reference:	P18-621
Prepared By:	Heather Scott – Geo Environmental Scientist
Approved by:	Patrick Barry – Director

Mason Evans Partnership Limited
The Piazza
95 Morrison Street
GLASGOW
G5 8BE

CONTENTS

LIST OF DRAWINGS

LIST OF APPENDICES

EXECUTIVE SUMMARY

Client	North Ayrshire Council
Site	Beach Drive, Irvine
Proposed Development	Residential development with gardens
Project Objectives	▪ To investigate the possible presence of ground contamination associated with the historical uses of the site and any potential associated risks. ▪ To investigate the ground conditions and provide recommendations on foundation and infrastructure design. ▪ To provide recommendations (if any) for additional works/remediation required.
Recorded Ground Conditions	The soils were noted to comprise of MADE GROUND (up to 3.95 m thick; generally, between GL and 1.20 m), underlain by natural raised marine deposits (fine to coarse SAND) to depths > 6.0m. Groundwater was recorded at 3.40 m depth. Therefore, we consider that a pervasive groundwater table exists at approximately 1.50 m AOD.
Assessment of Risks to Human Health, the Water Environment and Vegetation	The shallow soils are considered to pose a risk to human health with exceedances of toxic metal and PAH contaminants. Phytotoxic copper and zinc contaminants were also recorded within the shallow soils. The shallow soils do not pose a significant risk to the water environment.
Assessment of the Built Environment	Recommended concrete (ACEC) Classification is AC-2 with a Design Sulphate Class for the site of DS-2. Following our water supply pipe risk assessment, we conclude that either barrier (PE-AL-PE), wrapped steel and wrapped ductile iron water supply pipes be utilised. Water supply pipes could be laid in standard width trenches, and backfilled with clean, inert material.
Assessment of Ground Gas and Radon	From the site characteristic hazardous gas flow rate, as calculated and based on a worst-case scenario, the ground gas regime was classified as 'Characteristic Situation 2'. As such ground gas preclusion measures are deemed necessary. Radon gas preclusion measures are not required.
Offsite Waste Classification	Should the shallow soils be removed to landfill, HazWasteOnlineTM software classified 21 out of 30 No. shallow soil samples as Non-Hazardous waste, 8 No. samples were classified as Hazardous Waste and 1 No. (refer to Appendix 15). This is due to elevated TPH and metal results recorded within the made ground/natural soils which are noted to be carcinogenic, flammable, toxic for reproduction and ecotoxic.

EXECUTIVE SUMMARY (Contd.)

Remedial Measures	Given that the site has been classified as Characteristic Situation 2 ground gas preclusion measures are deemed necessary, as set out in Table 16, 17 and 18 within the text. Given the presence of toxic and phytotoxic contaminants within the shallow soils, we recommend that an environmental capping layer be placed in any areas of gardens or soft landscaping. This growing medium should be a minimum of 600mm thick, comprising at least 450 mm of clean, inert subsoil and 150 mm clean, inert topsoil.
Soakaways	The results from soakaway testing indicate the soils to have a low to moderate infiltration rate.
CBRs	CBRs within the natural granular soils recorded minimum results of 10%.
Foundation Considerations (Based on existing site levels)	Based on existing site levels below the eastern and western site areas, a foundation bearing horizon of <1.20 m depth can be expected and will provide an allowable bearing capacity of 75 kN/m^2. Below the central site area, a similar bearing horizon was recorded at depths of 2.0 m to 4.0 m. Foundation solutions will therefore vary from shallow spread to trench fill or even vibro-improvement or piling. The exact foundation option will be dependant on final development levels. Finally, it should be noted that the pits recorded unstable side walls within the granular soils when excavated. This will require consideration when finalising foundation designs.
Invasive Plant Species	The legislated species of Japanese Rose and Cotoneaster have been identified within the site.
Mining	Our researches indicated no risk from shallow mining workings, or recorded mine entries.
Buried Structure	A buried structure was present in the central southern site area (conjectured to be a possible fuel tank) however following requests to the Council, no further information on this tank was made available.

1.0 INTRODUCTION

1.1 Commission

1.1.1 Mason Evans Partnership (MEP) were commissioned by Harley Haddow Ltd (The Engineer) on behalf of North Ayrshire Council (The Client), to undertake ground investigation works at a site, named as Beach Drive, Irvine (Drawing No P18/621/SI/R/F/01 and 02).

1.1.2 Mason Evans supervised ground investigations at the captioned site to determine the underlying ground conditions in relation to a proposed residential development at the captioned site (Drawing No P18/621/SI/R/F/03).

1.2 Investigation Proposals

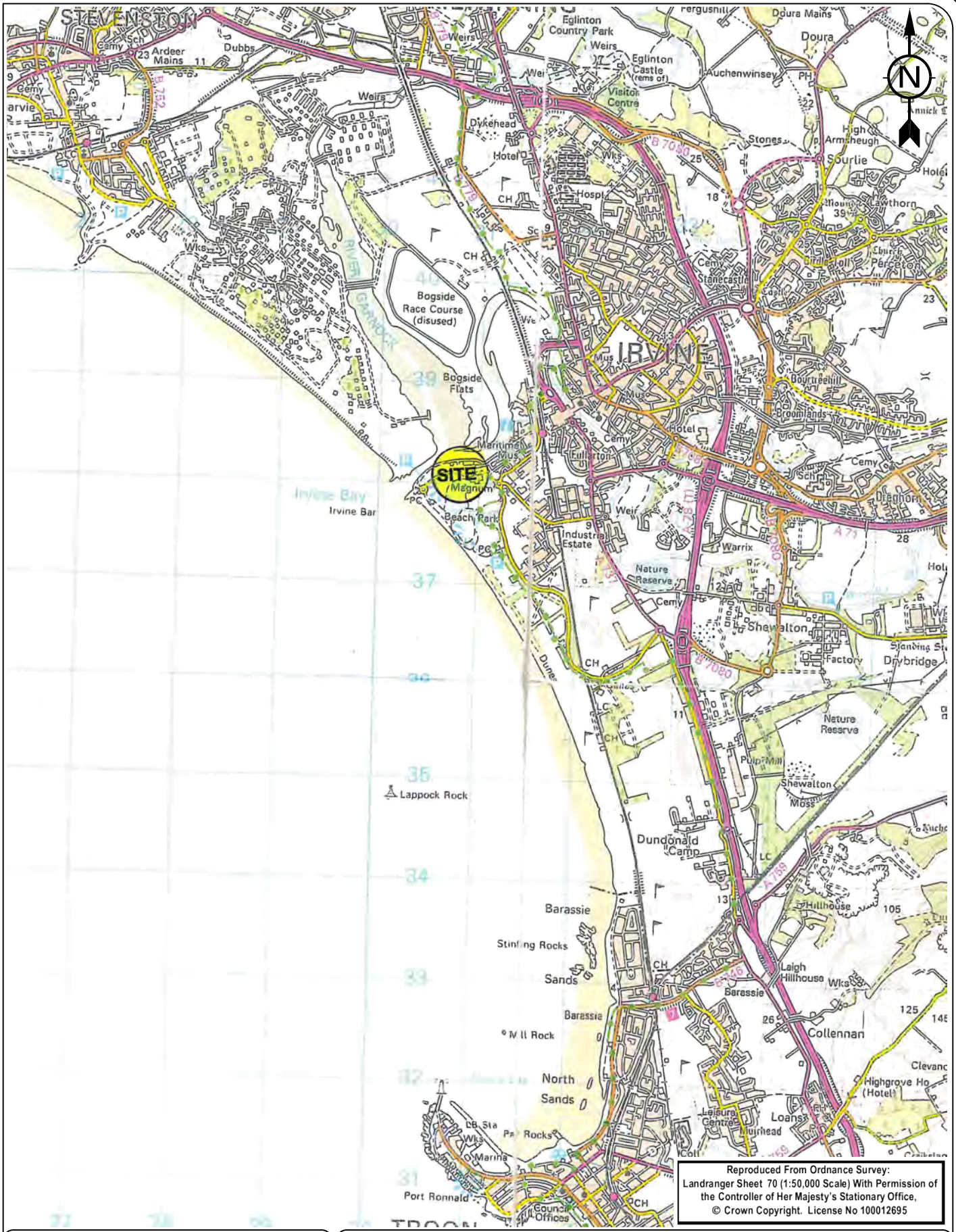
1.2.1 The investigation proposals were outlined in by the Engineer, dated July 2018. The intention of the investigation was to provide information on the following:

- Soil profile beneath the site.
- Chemical contamination conditions.
- Ground gas emissions.
- Geotechnical characteristics of the materials.
- Foundation bearing characteristics.
- Mining constraints.

1.3 Limitations

1.3.1 Our interpretations of the ground conditions are based on the information retrieved from soil bores and trial pits within the site during the recent investigations. While we have carried out interpretation of the ground conditions between the exploratory locations, it should be recognised that soil and groundwater conditions can vary from point to point. As such, ground conditions at variance with those indicated by the exploratory pits/bores may exist in areas not investigated.

1.3.2 It should be recognised that this report is prepared in accordance with current recommended practice and existing legislation. It is written in the context of a proposed residential development with associated areas of hardstanding. Should there be any alternative end-use, it would be prudent to consult us further to ensure the continued pertinence of the recommendations advised.



MASON EVANS
Geo-Environmental Consultants
t: 0141 420 2025 e: mail@masonevans.co.uk
The Piazza, 95 Morrison Street, Glasgow, G5 8BE

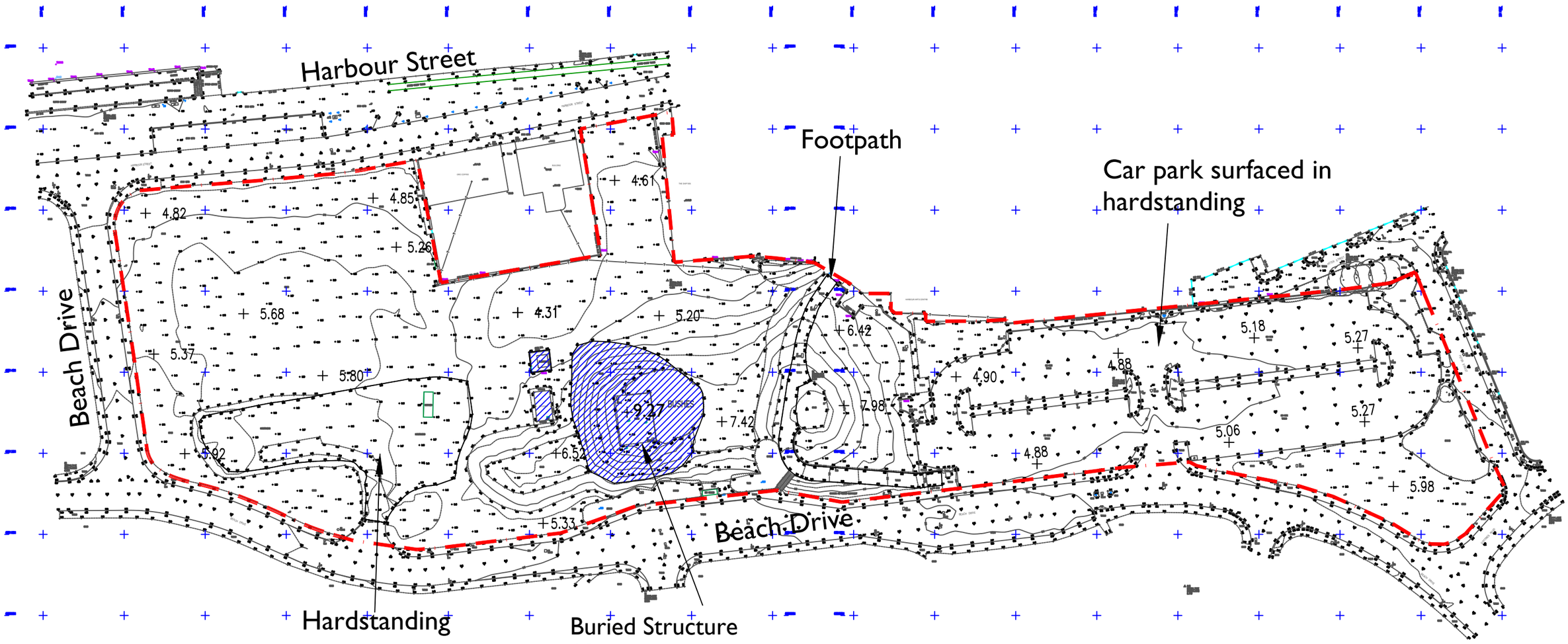
client details:
NORTH AYRSHIRE COUNCIL

project title:
BEACH DRIVE
IRVINE

drawing title:
SITE LOCATION PLAN

project no:	drawing no:	revision:	date:	drawn by:	approved by:	scale:
P18/621	P18/621/SI/R/F/01		03.06.19	AC	PB	1:50,000

A4 border: 277 x 190



NOTES

Site boundary

Areas of no access

+ 5.42 Spot levels

Note:
Topographic survey received from Harley Haddow Ltd (February, 2019)

REV	DATE	DETAILS

NORTH AYRSHIRE COUNCIL

PROJECT TITLE

BEACH DRIVE
IRVINE

DRAWING TITLE

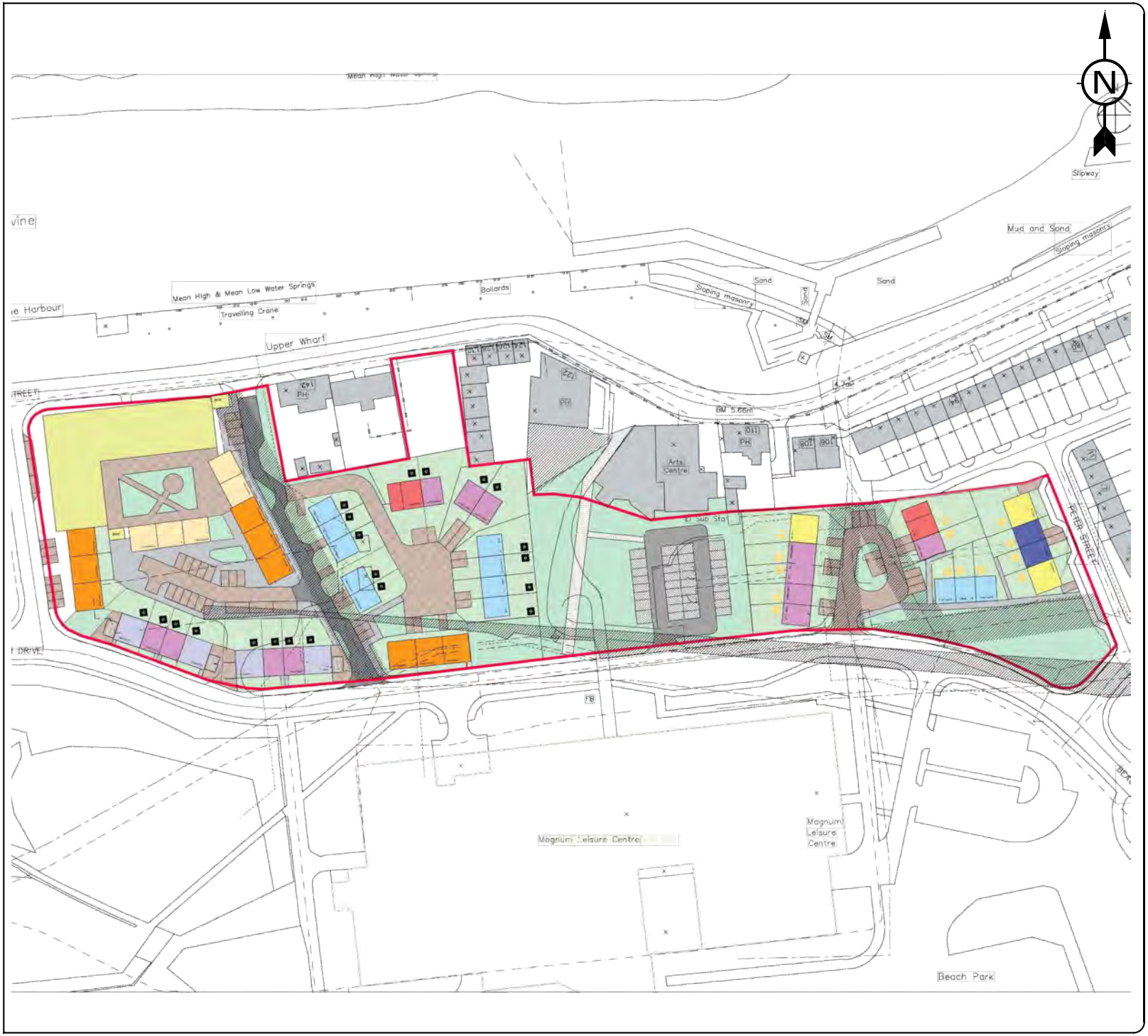
SITE LOCATION PLAN

DRAWN BY	CHK'D BY	APP'D BY	DATE	SCALES
AC	HS	PB	03.06.19	1:1000 @ A3

PROJECT No.	DRAWING No.	REVISION
P18/621	P18/621/SI/R/F/02	

MASON EVANS
Geo-Environmental Consultants
t: 0141 420 2025 e: mail@masonevans.co.uk
The Piazza, 95 Morrison Street, Glasgow, G5 8BE

A3 border: 400 X 273



NOTES

Site boundary

Note:
Proposed development layout received from Harley Haddow Ltd (February, 2019)

REV	DATE	DETAILS

NORTH AYRSHIRE COUNCIL

PROJECT TITLE

BEACH DRIVE
IRVINE

DRAWING TITLE

PROPOSED DEVELOPMENT LAYOUT

DRAWN BY	CHK'D BY	APP'D BY	DATE	SCALES
AC	HS	PB	03.06.19	Not to Scale

PROJECT No.	DRAWING No.	REVISION
P18/621	P18/621/SI/R/F/03	

MASON EVANS
Geo-Environmental Consultants
t: 0141 420 2025 e: mail@masonevans.co.uk
The Piazza, 95 Morrison Street, Glasgow, G5 8BE

A4 border: 297 X 210

2.0 SUMMARY OF DESK STUDY INFORMATION

2.1 General

2.1.1 The content of this report is as summarised in the sections below and supported by a Site Walkover Survey undertaken by Mason Evans in February 2019 (Included in Appendix 01).

2.2 The Site

2.2.1 A summary of the existing site conditions is included in the table below:

TABLE 01 - Site Details and Review of Public Records

Site Name	Beach Drive, Irvine
National Grid Ref	230920, 638150
Site Area	Total site area: Approx. 1.89 Ha
Topography	At the time of the walkover, the site was noted to be generally flat lying in the western and eastern site area with man-made landscaped (mounded) areas in the central southern site area. The surface covering was generally noted to be 'Grass' with areas of hard-standing (i.e. car-park, footpath).
Current Usage	The site was currently in use as a car park (eastern site area) and soft landscaping areas across the remainder of the site.
Proposed Use	A new residential development with gardens and associated roads (Drawing No. P18/621/SI/R/F/03).
Surface Water Bodies	The closest surface water feature is the Garnock/Irvine Estuary, located 31 m north of the site. The Garnock/Irvine Estuary would be considered a potential sensitive water in terms of this site. This waterbody is considered to be tidally influenced. SEPAs Water Environment Hub classified the overall quality as 'good' with a water quality of 'High' in 2014 (Appendix 03).
Groundwater	The 'Kilmarnock' groundwater is recorded to underlie the site. SEPAs Water Environment Hub classified the overall quality of the water body as 'poor' and the water quality as 'poor' in 2014 (Appendix 03).
Public Register Information	4 No discharge consents were registered within 250 m of the site, consisting of sewage effluent discharges. A further 3 No discharge consents are recorded within 500 m of the site. There are no groundwater abstraction points within 1000 m of the site. There are 3 No active and inactive Contemporary Trade Directory Entries within 250 m of the site, and a further 9 No entries are noted within 500 m. No fuel stations are present within 500 m of the site. There is 1 No. registered Landfill site within 250 m of the site (220 m NW of the site) named 'Stevenson Works Tip'.
Fuel Tanks	A buried structure was present in the central southern site area (conjectured to be a possible fuel tank) however following requests to the Council, no further information on this tank was made available.
Radon	The site is located within a low probability radon area where less than 1% of properties are considered to be above the action level.
Invasive Plants	An invasive weeds survey was carried out in April 2019. The legislated species of 'Japanese Rose' and 'Cotoneaster' were identified within the southern central site area and the eastern site area (refer to Appendix 05).
Flooding	The site was shown to be within an area which has a moderate likelihood of river water flooding. The site is not noted to be within an area of coastal or surface water flooding (refer to Appendix 03).

2.3 Site History

2.3.1 Information on the site's historical use was obtained through an inspection of available Ordnance Surveys maps dating from 1863 to the present day. A summary of the information is presented in the following table:

TABLE 02 - Summary of History (Ordnance Survey Map Records)

Ordnance Survey Map Edition	The Site	The Surrounding Area
1856 (1:2,500 scale) **1860** (1:10,000 scale)	• The site was noted to consist of unoccupied land	• A lime works was present to the east of the site • Irvine Harbor was present to the north of the site • Buildings were noted to be present to the north of the site • A ship building yard was noted to be present to the north east of the site (~500m) • The area of 'Fullarton' was present to the north east of the site (~1000m) with housing, churches and schools
1857 - 1895 (1:2,500 scale) **1897** (1:10,000 scale)	• The site was noted to consist of unoccupied land	• A chemical works was noted to be present to the south east of the site (including 'Eglinton' and 'Irvine' works • Expansion had taken place in 'Fullarton'
1895 (1:2,500 scale)	• A railway was noted to run through the site (central and southern site area) • Buildings were noted to be present In the northern site area	• No significant changes
1896 (1:2,500 scale)	• No significant changes	• No significant changes
1910 (1:2,500 scale) **1910 - 1911** (1:10,000 scale)	• No significant changes	• A rifle range was noted to be present approx. 700 m to the southeast
1956 (1:2,500 scale)	• Some buildings were noted to have been demolished in the northwestern site area • Spoil was present in the southwestern site area	• No significant changes
1956 - 1980 (1:2,500 scale) **1958** (1:10,000 scale)	• No significant changes	• Works were noted to be disused to the south of the site (one remained to SE of the site) • Sand pits were present to the south/southeast of the site (~500 m) • Fullarton had undergone expansion
1957 - 1964 (1:2,500 scale)	• No significant changes	• No significant changes
1968 (1:10,000 scale)	• No significant changes	• A bottle works was noted to be present to the southeast of the site (~250m) • Irvine industrial estate was present to the southeast • Disused shafts to the south (500m) and southeast (600m) of the site • There was an increase in housing to the east of the site (Fullarton)

TABLE 02 Continued- Summary of History (Ordnance Survey Map Records)

1978 - 1987 (1:2,500 scale) **1984** (1:10,000 scale)	• A footpath was noted to be present in the central site area • A car park was noted to be present in the eastern site area	• Works to the south of the site were no longer present • Works were present to the south and east of the site • A leisure center was noted to be present to the immediate south of the site • 'Beach Park' with a boating pond was present to the south of the site • A timber yard and works was present to the northeast of the site (>500m) • Disused shafts are no longer noted to be present
1992 (1:2,500 scale) **1991** (1:10,000 scale)	• A presumed car park area was noted to be present in the southwestern site area • Two small buildings were noted in the central site area	• No significant changes
1993 (1:2,500 scale)	• No significant changes	• No significant changes
2001 (1:10,000 scale)	• No significant changes	• No significant changes
2019 (1:10,000 scale)	• No significant changes	• The leisure center was no longer noted to be present

2.3.2 As such and based on the information presented within the Phase I Desk Top Study, **we conclude that the site is 'Brownfield' in nature.**

2.3.3 Copies of historical Ordnance Survey maps are included in Appendix 02.

2.4 Published Geological Information

Superficial Deposits

2.4.1 The available published maps recorded the shallow soils to comprise 'Raised Marine Deposits consisting of sand and gravel (Drawing No. P18/621/SI/R/F/04).

2.4.2 Due to the past site usage, it is anticipated that MADE GROUND soils will exist within the site which may be significant in some areas.

2.4.3 Historical borehole records from within the site and the immediate surrounding area would indicate that this made ground extends up to depths of 4.26 m bgl. This was underlain by deposits of SAND and GRAVEL (Raised Marine Deposits) (Appendix 07). A borehole which extends to a depth of 48.27 m bgl encountered boulder clay at depths of 15.18 m bgl.

Solid and Mining Geology

2.4.4 The underlying rock strata were indicated to consist of sedimentary rocks of the Middle Coal Measures, comprising SILTSTONE, SANDSTONE and MUDSTONE with numerous productive coal seams and seatrock (Drawing No. P18/621/SI/R/F/05). The British Geological Survey Map indicates faulting in the surrounding area.

2.4.5 The Geological Survey Map indicates that the Kilmarnock Major Coal outcrops to the northwest of the site and dips to the northwest (i.e. away from the site).

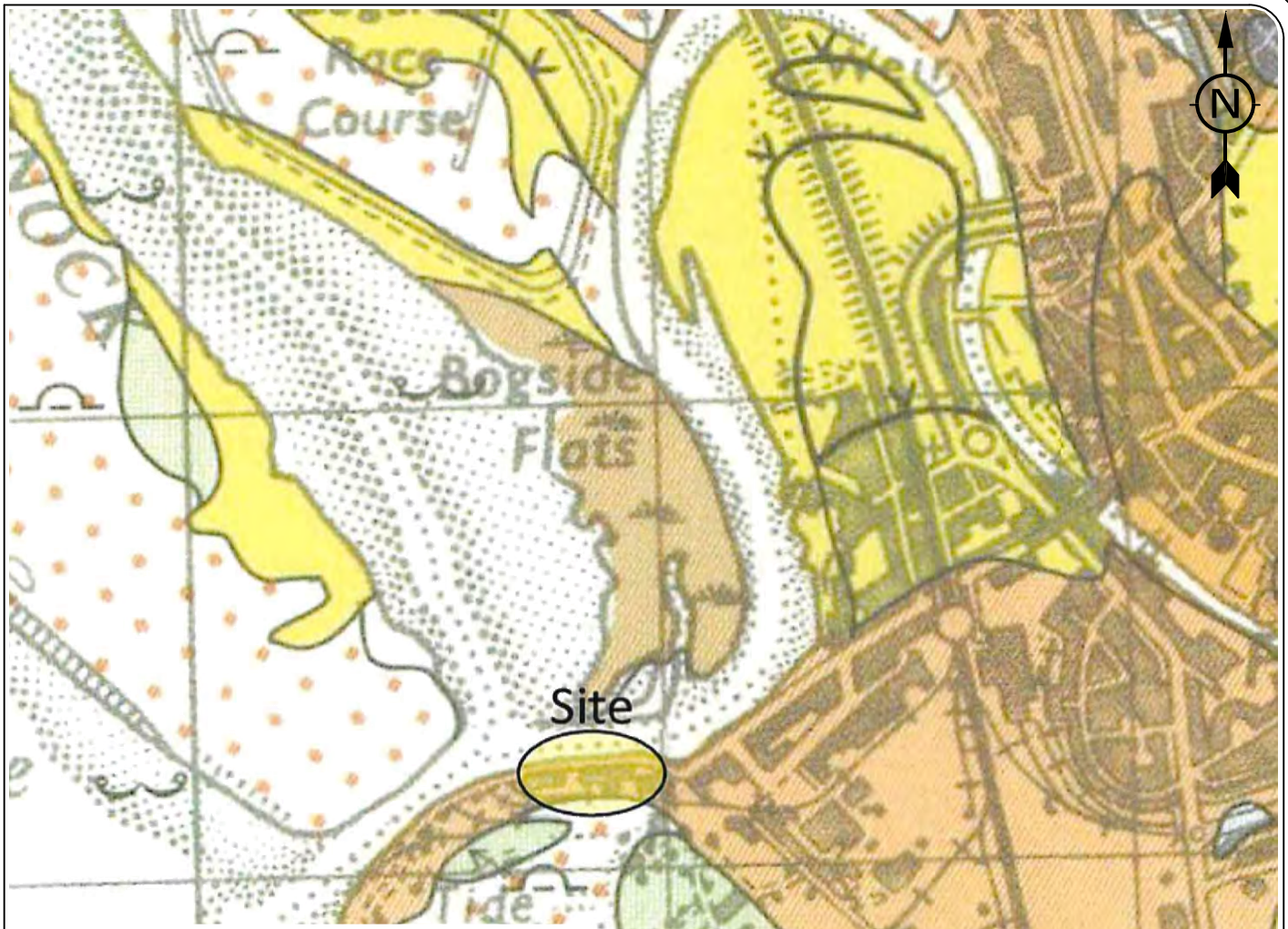
2.4.6 A historical BGS borehole which extends to a depth of 48.27 m bgl encountered rock (described as SANDSTONE) at depths of 31.80 m bgl (Appendix 07).

2.4.7 A review of The Coal Authority Interactive Viewer indicates that the site is located within a 'Coal Mining Reporting Area', however it is not in a 'Development High Risk Area'. A report obtained from The Coal Authority (refer to Appendix 06) states that the 'property is not within a surface area that could be affected by past underground mining'.

2.4.8 Additionally, the Coal Authority Report states that 'there are no known coal mine entries within, or within 20 meters of, the boundary of the property'.

2.4.9 We would therefore consider the site to be minerally stable and not at risk from shallow mining activities.

2.4.10 No historical quarries were noted on the OS maps within the site or surrounding area.



Man-made deposits: waste and natural earth materials
- deposited on original ground surface
- filling former opencast excavation

Landslip

Blown sand: fine-grained, cross-bedded sand containing shell fragments and forming dune and low mounds

Peat: an accumulation of variable thickness of wet, dark brown, partially decomposed vegetation.

Alluvium: silt, sand and gravel deposited in present and former river valleys, often terraced.

Back feature of river terrace: downward slope in direction of arrowhead.

Present beach deposits: mud, silt, sand, shingle and boulders generally within the intertidal zone

Raised Marine Deposits:

Post-Glacial: sand and gravel, often with shell fragments deposited up to 15 m above O. D.

Late-Glacial: mostly sand and gravel with some silt and clay deposited up to 42 m above O.D. in the north decreasing to around 22 m above O.D. in the south

Late-Glacial: marine or estuarine silts and clays of the 'Clyde Beds', where distinguished

Feature marking former coastline: associated with raised beach deposits

Glacial Meltwater Deposits:

Moundy deposits of sand and gravel

Flat or terraced spreads of sand and gravel

Flat or terraced spreads of silt and clay

MASON EVANS
Geo-Environmental Consultants
t: 0141 420 2025 e: mail@masonevans.co.uk
The Piazza, 95 Morrison Street, Glasgow, G5 8BE

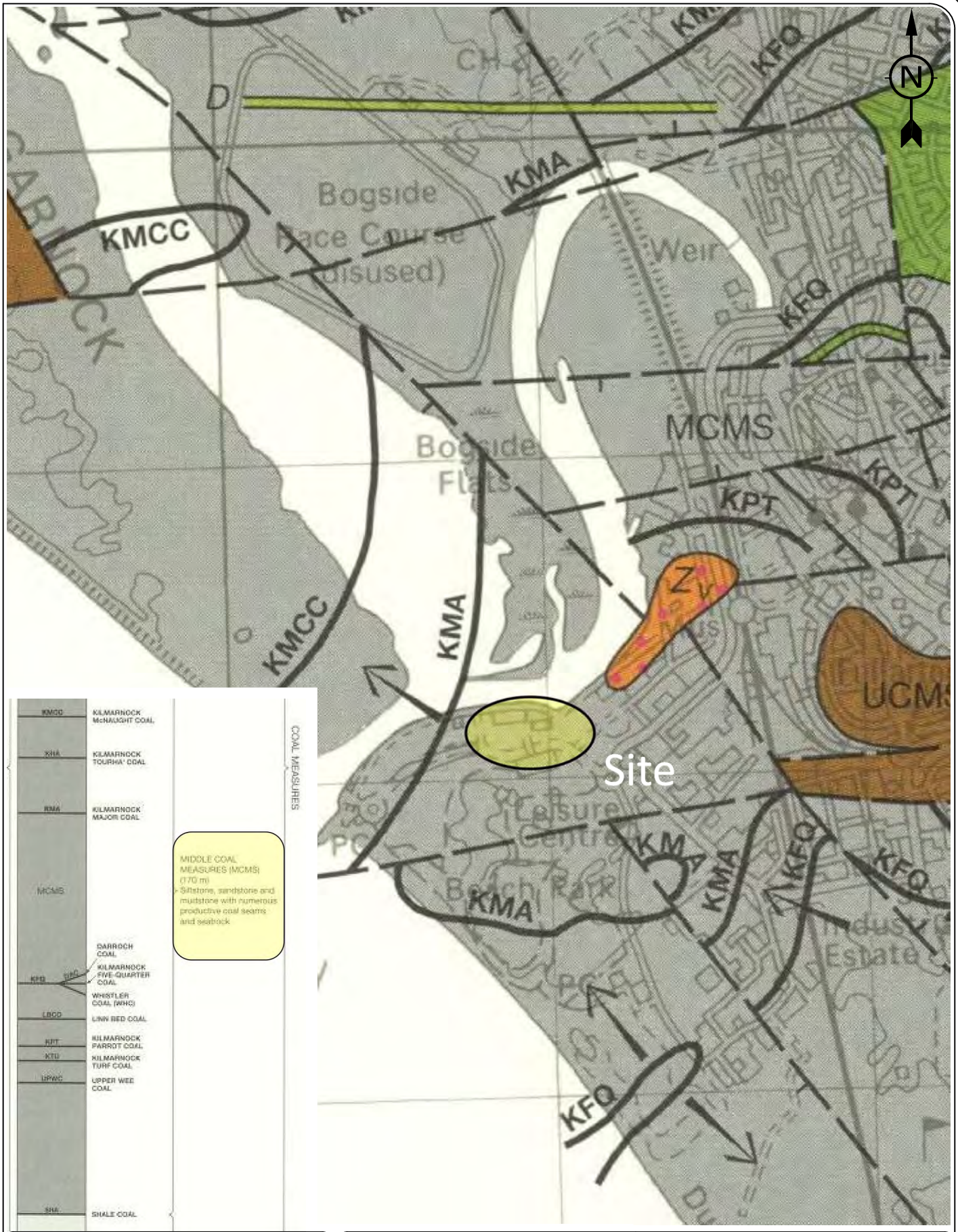
client details: NORTH AYRSHIRE COUNCIL

project title: BEACH DRIVE IRVINE

drawing title: EXTRACT FROM PUBLISHED GEOLOGICAL SURVEY MAP (DRIFT)

project no:	drawing no:	revision:	date:	drawn by:	approved by:	scale:
P18/621	P18/621/SI/R/F/04		03.06.19	AC	PB	Not to Scale

A4 border: 277 x 190



MASON EVANS
Geo-Environmental Consultants
t: 0141 420 2025 e: mail@masonevans.co.uk
The Piazza, 95 Morrison Street, Glasgow, G5 8BE

client details: NORTH AYRSHIRE COUNCIL

project title: BEACH DRIVE IRVINE

drawing title: EXTRACT FROM PUBLISHED GEOLOGICAL SURVEY MAP (SOLID)

project no:	drawing no:	revision:	date:	drawn by:	approved by:	scale:
P18/621	P18/621/SI/R/F/05		03.06.19	AC	PB	Not to Scale

A4 border: 277 x 190

Hydrogeology

2.4.11 Interpretation of the site hydrogeology required consideration of the general geological conditions. In this instance, the available information indicated the site to be potentially comprised of three geological units: made ground, raised marine deposits and sedimentary bedrock. The typical permeability ranges of each of these strata are recorded in Table 03.

TABLE 03 –Typical Material Permeability

Material	Typical Permeability Range (m/sec)
Made Ground	Variable
Raised Marine Deposits	10^{-1} to 10^{-5}
Sedimentary Bedrock	10^{-6} to 10^{-10}

2.4.12 At present, surface run-off below the site would be moderate over the site given that the eastern site area was surfaced predominantly in hardstanding. Infiltration of surface water would therefore be expected to be moderate.

2.4.13 Given the high permeability of the underlying alluvial soils, it was considered possible that a groundwater body could potentially be present within these deposits. Given the close proximity to the Garnock/Irvine Estuary surface water body, it was considered that this groundwater body would be tidally influenced and would be saline (i.e. groundwater levels may vary).

2.4.14 The potential for a deeper groundwater table within the sedimentary bedrock is moderate given the permeability range of the sedimentary strata. The presence of any potential deep groundwater table would be dependent on secondary porosity, such as fracturing; this would also control any potential movement between shallow and deep lying groundwater bodies.

2.4.15 The Scottish Environmental Protection Agency (SEPA) provides guidance in document WAT-PS-10-01 'Assigning Groundwater Assessment Criteria for Pollutant Inputs' (August 2014) for assessing contamination risks to groundwater and the water environment. As noted above it is considered that a groundwater body could exist within the underlying natural alluvial deposits. As a result, shallow groundwater could be regarded as a potential sensitive receptor.

2.5 Preliminary Conceptual Site Model

2.5.1 In order to fully evaluate the potential presence of contamination at the site, the study area must be considered in an environmental context taking account of its geology, topography, past and present land-use and any previous site investigation data. It is therefore advantageous to develop a 'Conceptual Site Model' as defined in the R & D Publication CLR11 issued by the Department for the Environment and Rural Affairs (DEFRA). The model then forms an integral part of the contamination assessment of the proposed development site.

2.5.2 Statutory guidance sets the definition of contaminated land within the context of the "suitable for use" approach. It is based on the principles of risk assessment, including the concept of a **pollutant linkage** between a **source** contaminant and a **receptor**, by means of a **pathway.** This concept is considered further below. We would highlight that the approach, while perhaps rendering the site suitable for its current use, may provide inappropriate to a change in site designation or specific land use, arising from existing site conditions.

2.5.3 The presence of all three elements identifies a plausible pollutant linkage. An assessment of the potential sources, pathways and receptors constitutes a conceptual mode for the site.

2.6 Source Characterisation

2.6.1 The potential on-site sources of contamination identified by this desk study are:

- Deposition of contaminated materials during historic site development works (railway line and buildings) (construction/use/demolition);
- Usage as a car park (eastern site area).

2.6.2 The potential off-site sources of contamination identified by this desk study are:

- Deposition of contaminated materials from the construction/demolition of neighbouring developments.
- Deposition of contaminated materials from the usage of neighbouring industrial developments.

2.6.3 The typical processes involved, and associated Contaminants of Concern (COC) are discussed and summarised in Table 03 overleaf.

TABLE 03: Contaminants of Concern

THE SITE	Industrial Activity/ Site Use	Potential Pathways	Associated Potential Contaminants
CURRENT	• On-going usage as a car park	• Spillages and leakages of contaminants.	Metals: As, Cd, Cr, Ni, Zn, Cu, Hg, Pb Organics: Fuel oils, PAH, Phenol Miscellaneous: Asbestos Ground Gasses: CO_2, CH_4
PREVIOUS	• Deposition of contaminated fill materials onto the natural ground below the site. • Railway line	• Deposition of waste materials during construction and usage • Deposition of waste during land reclamation. • Spillage of contaminants.	Metals: As, Cd, Cr, Ni, Zn, Cu, Hg, Pb Organics: Fuel oils, PAH, Phenol Miscellaneous: Asbestos Ground Gasses: CO_2, CH_4
IMMEDIATE SURROUNDING AREA	**ustrial Activity/ Site Use**	• **Potential Pathways**	**Associated Potential Contaminants**
CURRENT	• Surrounding residential/commercial developments • Demolition of surrounding industrial developments.	• Spillages and leakages of contaminants. • Contaminants transported from surrounding surface run-off.	Metals: As, Cd, Cr, Ni, Zn, Cu, Hg, Pb Organics: Fuel oils, PAH, Phenol Miscellaneous: Asbestos Ground Gasses: CO_2, CH_4
PREVIOUS	• Surrounding residential/commercial developments • Adjacent 'Chemical Works' • Demolition of surrounding development.	• Deposition of contaminated materials/wastes during construction /demolition. • Spillage of and leakages of contaminants. • Contaminants transported from surrounding surface run-off.	Metals: As, Cd, Cr, Ni, Zn, Cu, Hg, Pb Organics: Fuel oils, PAH, Phenol Miscellaneous: Asbestos Ground Gasses: CO_2, CH_4

2.7 Receptor Characterisation

2.7.1 Potential receptors at the site are defined on the basis of the site proposal, which will include the development of new residential properties, with associated hard standing and soft landscaping. The following receptors are considered relevant to this site:

- Humans – site end users and construction works (outdoor),
- Humans – site end users (indoor),
- Buildings and services (including water supply pipes and buried concrete),
- Vegetation (plants in soft landscaped areas),
- Water Environment

2.8 Pathway Characterisation (Pollutant Linkages)

2.8.1 The pathways by which sensitive receptors may be exposed to potential sources of contamination, as determined by the proposed end use for the site are as follows:

1. Humans – site end users and construction workers (outdoor)
   - Dermal (skin) contact with contaminated soil, fugitive dust and the absorption of any contaminants through the skin into the body.
   - Inhalation of soil dust or vapour.
   - Ingestion of soil by hand to mouth activity.

2. Humans – site end users (indoor)
   - Inhalation of any ground gas migrating into the buildings.
   - Inhalation of soil derived dust.
   - Ingestion of soil derived dust.

3. Buildings
   - Potential soil gas generated in the ground vertically migrating and pooling within the structure.
   - Contact with aggressive or acidic soils will affect the concrete design of the foundations.

4. Services including the domestic water supply
   - Direct contact with contaminated soil or groundwater.
   - Leaching of contaminants through the soil.
   - Service trenches acting as preferential migration pathways for contamination.
   - Permeation of plastic water supply pipes.

5. Vegetation (plants in landscaped areas)
   - Direct contact with contaminated soils and groundwater.
   - Uptake of contaminants from the soil or groundwater into the plant.
   -

6. Water Environment
   - Leaching of contaminants from the soil to water environment.
   - Contaminant migration offsite in the water environment.
   - Direct entry of contaminants (e.g. spillage) into the water environment.

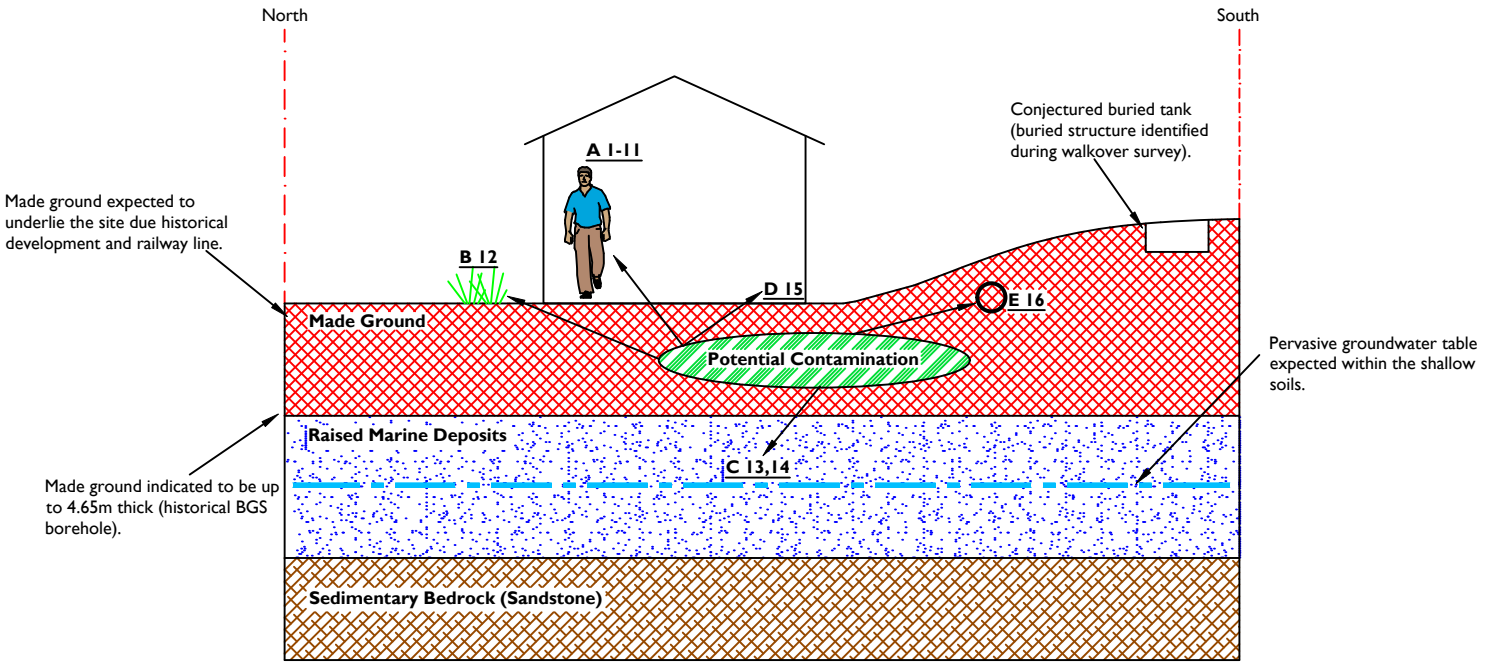
2.8.2 The potential source-receptor-pathway linkages identified for this site are illustrated within our Preliminary Conceptual Site Model (Drawing No P18/430/SI/R/F/06) and on Tables 4A and 4B. Site investigations were required to confirm or otherwise the existence of such linkages in addition to providing further confirmation of the geological and geotechnical conditions.

TABLE 4A: Preliminary Qualitative Risk Assessment – On Site

Source	COCs	Pathway	Receptors (s)	Assessment	Further Investigation Required
1. Areas of potentially contaminated made ground	Metals, semi-metals and non-metals: As, Cd, Cr, Ni, Zn, Cu, Hg, Pb Organics: Hydrocarbons, PAH, Fuel oil, Phenol Anions: Asbestos, Sulphate Ground gasses: CO_2, CH_4	Dermal contact, ingestion, inhalation	Human – site workers Humans – end users (outdoor)	Spillage/leakage of contaminants impacting near surface soils. Contaminated materials may have been deposited within the site.	Yes
		Leaching through soil or direct migration	The water environment - groundwater	Contaminants may be leached and potentially mobilised from the soil by percolation and/or shallow groundwater movement.	Yes
		Direct contact, leaching through soil, groundwater migration	Buildings and services	Potential for aggressive chemical environments for concrete due to sulphate and acidic conditions. Presence of contaminants in soil that may permeate water supply pipes.	Yes
		Gas/vapour inhalation, vertical/lateral migration	Buildings and services Humans – end users (indoor)	Contamination may include gas/vapour producing materials or compounds that could vertically migrate into overlying buildings producing a potentially asphyxiating or explosive environment.	Yes
		Direct contact, uptake	Plants	Direct contact or uptake of contamination from the soil or groundwater could adversely affect any plants grown.	Yes
		Migration in the groundwater	Groundwater	Contaminants could impact the groundwater and migrate offsite.	Yes
		Point source discharge	Surface water	Garnock/Irvine Estuary	No
		Diffuse source	Surface Water	Garnock/Irvine Estuary	No

TABLE 4B: Preliminary Qualitative Risk Assessment – Off-Site

Source	COCs	Pathway	Receptors (s)	Assessment	Further Investigation Required
1. Areas of potentially contaminated made ground	Metals, semi-metals and non-metals: As, Cd, Cr, Ni, Zn, Cu, Hg, Pb Organics: Hydrocarbons, PAH, Fuel oils, Phenols Anions: Asbestos, Sulphate Ground gasses: CO_2, CH_4	Dermal contact, ingestion, inhalation	Human – site workers Humans – end users (outdoor)	Spillage/leakage of contaminants impacting near surface soils. Contaminated materials may have been deposited within the site.	Yes
		Leaching through soil or direct migration	The water environment - groundwater	Contaminants may be leached and potentially mobilised from the soil by percolation and/or shallow groundwater movement.	Yes
		Direct contact, leaching through soil, groundwater migration	Buildings and services	Potential for aggressive chemical environments for concrete due to sulphate and acidic conditions. Presence of contaminants in soil that may permeate water supply pipes.	Yes
		Gas/vapour inhalation, vertical/lateral migration	Buildings and services Humans – end users (indoor)	Contamination may include gas/vapour producing materials or compounds that could vertically migrate into overlying buildings producing a potentially asphyxiating or explosive environment.	Yes
		Direct contact, uptake	Plants	Direct contact or uptake of contamination from the soil or groundwater could adversely affect any plants grown.	Yes
		Migration in the groundwater	Groundwater	Contaminants could impact the groundwater and migrate offsite.	Yes
		Point source discharge	Surface water	Garnock/Irvine Estuary	No
		Diffuse source	Surface Water	Garnock/Irvine Estuary	NO



Potential Source

· Contaminated made ground.

Potential Exposure Pathways

1. Outdoor ingestion of dust.
2. Indoor ingestion of dust.
3. Consumption of homegrown vegetables.
4. Ingestion of soil attached to vegetables.
5. Skin contact with outdoor soil.
6. Skin contact with indoor dust.
7. Outdoor inhalation of dust.
8. Indoor inhalation of dust.
9. Outdoor inhalation of soil vapour.
10. Indoor inhalation of soil vapour.
11. Inhalation of ground gases.
12. Contaminant uptake by vegetation.
13. Leaching of contaminants to the groundwater.
14. Contaminant migration in the groundwater.
15. Detrimental effects on buried concrete.
16. Permeation of plastic water supply pipes.

Potential Receptors

A. Site users / construction personnel.
B. Vegetation / fauna.
C. Groundwater.
D. Buried concrete (Service and foundations)
E. Plastic water supply pipes.

NOTES

REV	DATE	DETAILS

NORTH AYRSHIRE COUNCIL

PROJECT TITLE

BEACH DRIVE
IRVINE

DRAWING TITLE

PRELIMINARY CONCEPTUAL SITE MODEL

DRAWN BY	CHK'D BY	APP'D BY	DATE	SCALES
AC	HS	PB	04.06.19	Not to Scale

PROJECT No.	DRAWING No.	REVISION
P18/621	P18/621/SI/R/F/06	

MASON EVANS
Geo-Environmental Consultants
t: 0141 420 2025 e: mail@masonevans.co.uk
The Piazza, 95 Morrison Street, Glasgow, G5 8BE

A4 border: 297 X 210

3.0 SITE INVESTIGATIONS

3.1 General

3.1.1 The scope and location of works was determined by the Engineer. The sampling was non-targeted in relation to geo-environmental matters as dictated by the Preliminary Conceptual Site Model. Site works undertaken were implemented generally in accordance with BS 10175:2011 +A2:2017 and BS 5930:2015.

3.1.2 The following investigation works were undertaken:

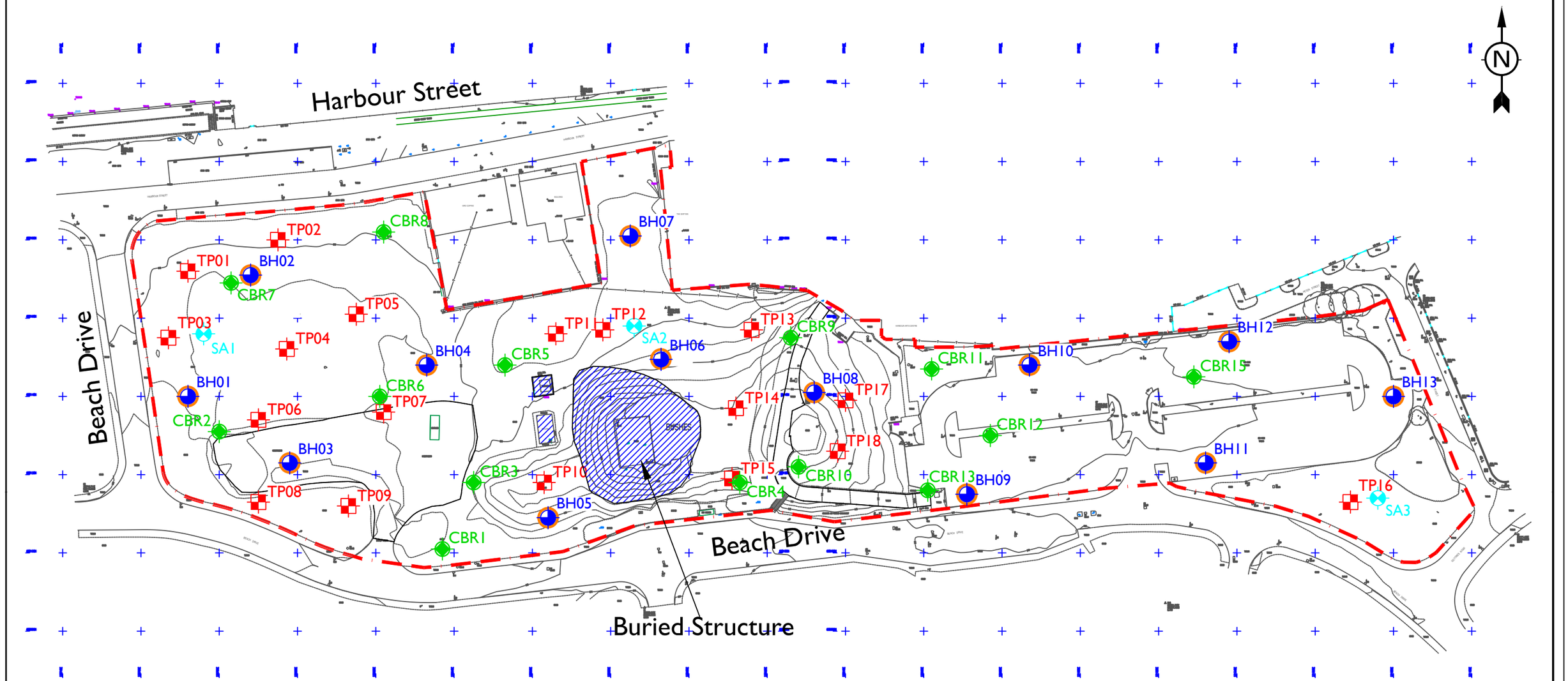
TABLE 05 – Site Investigations

Trial Pits	18 No. trial pits, excavated mechanically, extended to depths of up to 2.90m bgl and logged by an experienced field specialist. Logs are included in Appendix 08.
Soil Boreholes and Well Installations	13 No. soil boreholes were sunk across the site to depths of up to 6.00 m bgl. Gas and groundwater monitoring wells were installed in all 13 No. boreholes. Logs are included in Appendix 09.
California Bearing Ratio Test (CBR test)	15 No. CBR tests were carried out across the site. Logs are included in Appendix 10.
Soakaway Tests	3 No. soakaway tests were carried out across the site. Logs are included in Appendix 11.
Chemical Testing	27 No. soil samples, and 9 No. leachate samples, were tested for a comprehensive range of potential contaminants. Soil chemical analysis results are included in Appendix 12.
Ground Water/Gas Monitoring	4 No. monitoring visits undertaken. Results are included in Appendix 13.
Geotechnical Testing	In-situ SPT tests were undertaken in all boreholes sunk on site. Geotechnical analyses were undertaken on selected soil samples. Results are included in Appendix 15.

3.1.3 The exploratory boreholes were intended to provide geotechnical and hydrogeological data of site areas associated with the proposed development, and to facilitate soil and water sampling for chemical contamination and geotechnical testing, where required.

3.1.4 Representative samples of made ground and underlying natural soils were obtained and tested for an appropriate suite of testing associated with the historical site usage.

3.1.5 Exploratory hole locations are indicated on Drawing No P18/621/SI/R/F/07 and coordinates and levels (mAOD) of each position are included in Appendix 16.



TP01 to TP18	Trial pit supervised by Mason Evans Partnership (February, 2019)
BH01 to BH13	Soils borehole sunk by SKF Ltd (February, 2019)
CBR1 to CBR15	CBR testing undertaken by SKF Ltd (February, 2019)
SA01 and SA03	Soakaway testing undertaken by SKF Ltd (February, 2019)

NOTES

- Site boundary
- Ground gas / water monitoring well installed
- Areas of no access

Note:
Topographic survey received from Harley Haddow Ltd (February, 2019)

REV	DATE	DETAILS

NORTH AYRSHIRE COUNCIL

PROJECT TITLE

BEACH DRIVE
IRVINE

DRAWING TITLE

EXPLORATORY HOLE
LOCATION PLAN

DRAWN BY	CHK'D BY	APP'D BY	DATE	SCALES
AC	HS	PB	03.06.19	1:1000 @ A3

PROJECT No.	DRAWING No.	REVISION
P18/621	P18/621/SI/R/F/07	

MASON EVANS
Geo-Environmental Consultants
t: 0141 420 2025 e: mail@masonevans.co.uk
The Piazza, 95 Morrison Street, Glasgow, G5 8BE

A3 border: 400 X 273

3.2 Investigation Rationale

3.2.1 Our intrusive investigation has sought to be generally compliant with BS 10175:2001 and BS 5930:2015. We have implemented the following site practices:

- The drilling works have been undertaken by a suitably accredited sub-contractor;
- The geological succession at each exploratory hole location has been logged by an experienced field specialist and samples taken for laboratory analysis together with a visual assessment, made of geological character and potential contaminant impact if present.
- In selecting the appropriate samples for testing, we have taken cognisance of a number of factors, including the proposed site use. Sampling rationale has been determined in accordance with R&D Technical Report P5-066/TR Secondary Model Procedure for the Development of Appropriate Soil Sampling Strategies for Land Contamination, as indicated in the table below.

TABLE 06 – Sampling Strategy

Rationale for Sampling at Different Depths	
Depth Range	**Rationale**
Ground Level – 1.0 m	To assess: • Human/ animal intake arising from ingestion and dermal contact. • Potential for wind entrainment leading to inhalation (of contaminated soils and dusts) or deposition onto neighbouring land. • Surface water run-off (e.g. due to flash flooding). • Uptake by shallow rooting plants (e.g. crops, ornamental and wild species). • Surface leaching to groundwater.
>1.0 m in made or natural ground	To assess: • Intake via ingestion/ inhalation/ dermal contact arising from 'abnormal' (or unpredicted) excavation (e.g. children digging dens) or for other purposes such as swimming pools, ponds, house extensions. • Uptake by deep rooting shrubs or trees. • Intake by or arising from the activities of burrowing animals. • Intake arising from construction/ maintenance of buildings and services, for example: a. Foundations (usually within 2.0 m of final formation level). b. Water supply pipes, telecommunications, gas and power (0.5 m to 1.0 m of final formation levels). c. Sewers (from 0.5 m to >1.0 m of final formation level). • To locate perched water of groundwater. • To confirm depth of made ground. • To locate possible lateral pathways for gas or vapour migration in made ground. • To establish the extent of any leaching of soluble constituents from superficial soils. • To detect 'deep' contamination (e.g. gas generating materials, leachable materials, dense solvents located above an impermeable stratum). • To obtain information on 'background' soil properties. • To locate 'natural' lateral migration pathways.

- The scope of the testing implemented considered the interpreted origin of the materials in association with their description. This is consistent with best practice under current contaminated land guidance. The chemical condition of these materials was assessed for a wide spectrum of potential contaminants, comprising a broad range of common organic and inorganic substances primarily of a toxic or phytotoxic nature.
- During sample collection, relevant information such as notes of field observations has been logged before transferring the samples to laboratory-prepared sample containers of appropriate type. Care was also taken to minimise the aeration of samples during transfer to the containers.

3.2.2 At the generic assessment stage it should be assumed that all pathways, contained within the generic model applied, will be active. In reality, unless a contaminant is volatile (e.g. organic), exposure by direct contact is likely to be mitigated by the depth of the contaminant or available surface cover. Generally, direct contact with contaminants at greater than 600 mm depth, or under hardstanding is highly unlikely to occur, unless the ground is to be disturbed through removal of surfacing or earthworks.

4.0 INVESTIGATION RESULTS

4.1 Ground Conditions

4.1.1 The ground conditions recorded during the investigation were generally consistent with the anticipated sequence of strata indicated by the desk study information. The soils were noted to generally comprise of hardstanding/Topsoil underlain by MADE GROUND, underlain by natural, raised marine (granular) soils.

4.1.2 Rockhead was not encountered within any of the exploratory hole locations, however it is known to exists at depths of between 15.4 m and 22.4 m depth.

4.2 Soils Encountered

4.2.1 A summary of ground conditions encountered is presented in Table 07 below.

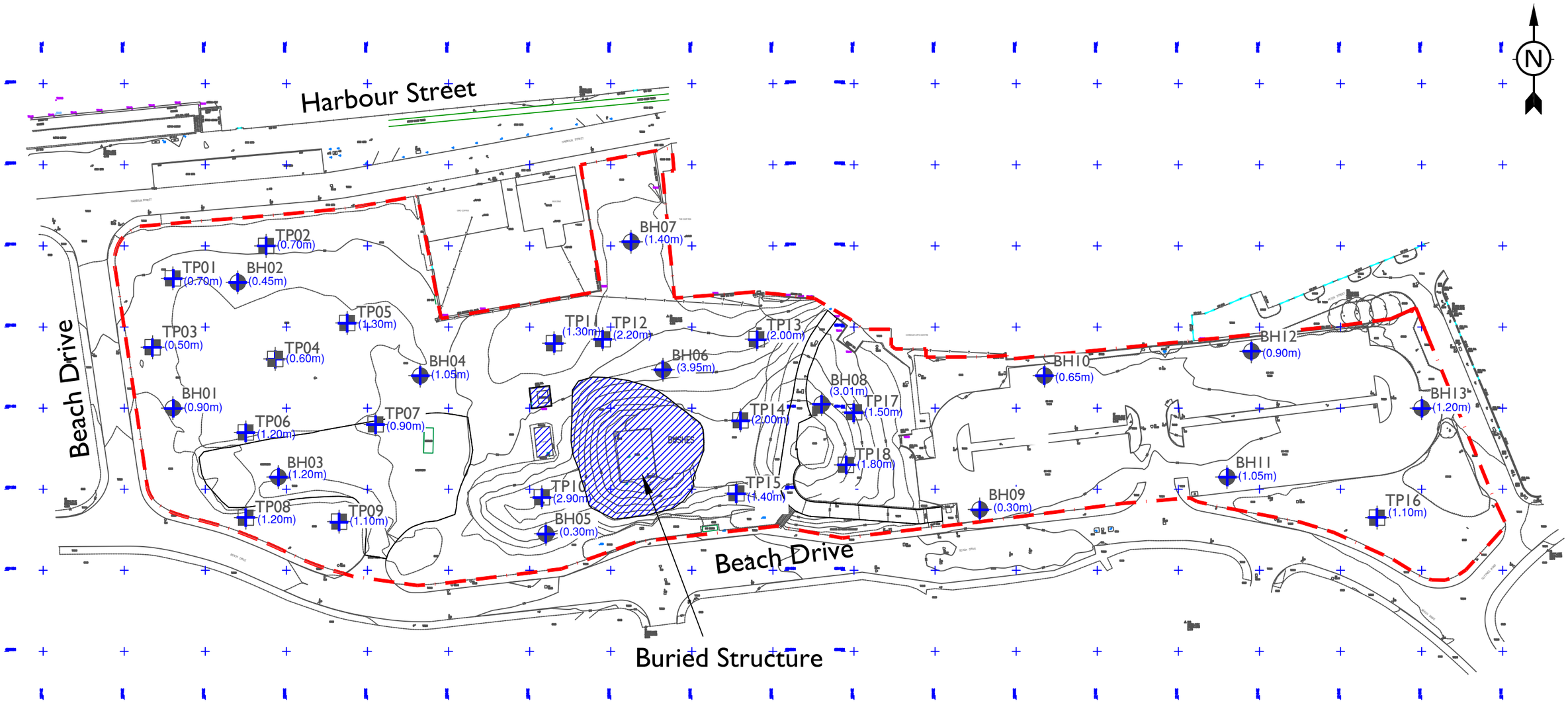
Made Ground

4.2.2 The site was noted to have a surface covering of hard standing of tarmac in the eastern site area (car park) (between 0.07 and 0.10 m thick). Across the remainder of the site, a surface covering of topsoil (made ground), described as brown sandy gravel surfaced in grass, was present and was noted to be between 0.10 m and 0.30 m thick.

4.2.3 This hardstanding/topsoil was further underlain by brown gravelly sand, occasionally described as clayey, with extraneous material of ash, cinders, brick, metal, concrete and plastic. These were encountered below the hardstanding/topsoil and proven up to 3.95 m thick, however they were generally encountered between 0.30 – 1.20 m.

4.2.4 It is considered that the made ground deposits underlying the site are due to historical development within the site. The recorded thickness and distribution of made ground deposits is indicated on Drawing No P18/621/SI/R/F/08.

4.2.5 It should be noted that in the central site area, the site is topographically higher and the soils consisted of TOPSOIL underlain by brown fine to coarse sand. However, it is conjectured that these mounded areas have been formed by earthworks and site re-grading and therefore is considered as made ground.



TP01 to TP18 — Trial pit supervised by Mason Evans Partnership (February, 2019)

BH01 to BH13 — Soils borehole sunk by SKF Ltd (February, 2019)

NOTES

- Site boundary
- (1.20m) Recorded made ground thickness
- Areas of no access

Note:
Topographic survey received from Harley Haddow Ltd (February, 2019)

REV	DATE	DETAILS

NORTH AYRSHIRE COUNCIL

PROJECT TITLE

BEACH DRIVE
IRVINE

DRAWING TITLE

RECORDED MADE
GROUND THICKNESSES

DRAWN BY	CHK'D BY	APP'D BY	DATE	SCALES
AC	HS	PB	03.06.19	1:1000 @ A3

PROJECT No.	DRAWING No.	REVISION
P18/621	P18/621/SI/R/F/08	

MASON EVANS
Geo-Environmental Consultants
t: 0141 420 2025 e: mail@masonevans.co.uk
The Piazza, 95 Morrison Street, Glasgow, G5 8BE

A3 border: 400 X 273

Raised Marine Deposits

4.2.7 Within each of the exploratory hole locations, made ground was noted to be underlain by raised marine deposits. These soils were recorded as light brown/brown fine to coarse SAND (occasionally described as slightly gravelly/silty). The soils were encountered from the base of the made ground and were proven to a depth of 6.0 mbgl.

4.2.8 It should be noted that the upper granular soils become unstable when encountered within the pit excavations.

4.2.9 The recorded depth to medium dense (or better) SAND is indicated on Drawing No. P18/621/SI/R/F/09.

Obstructions

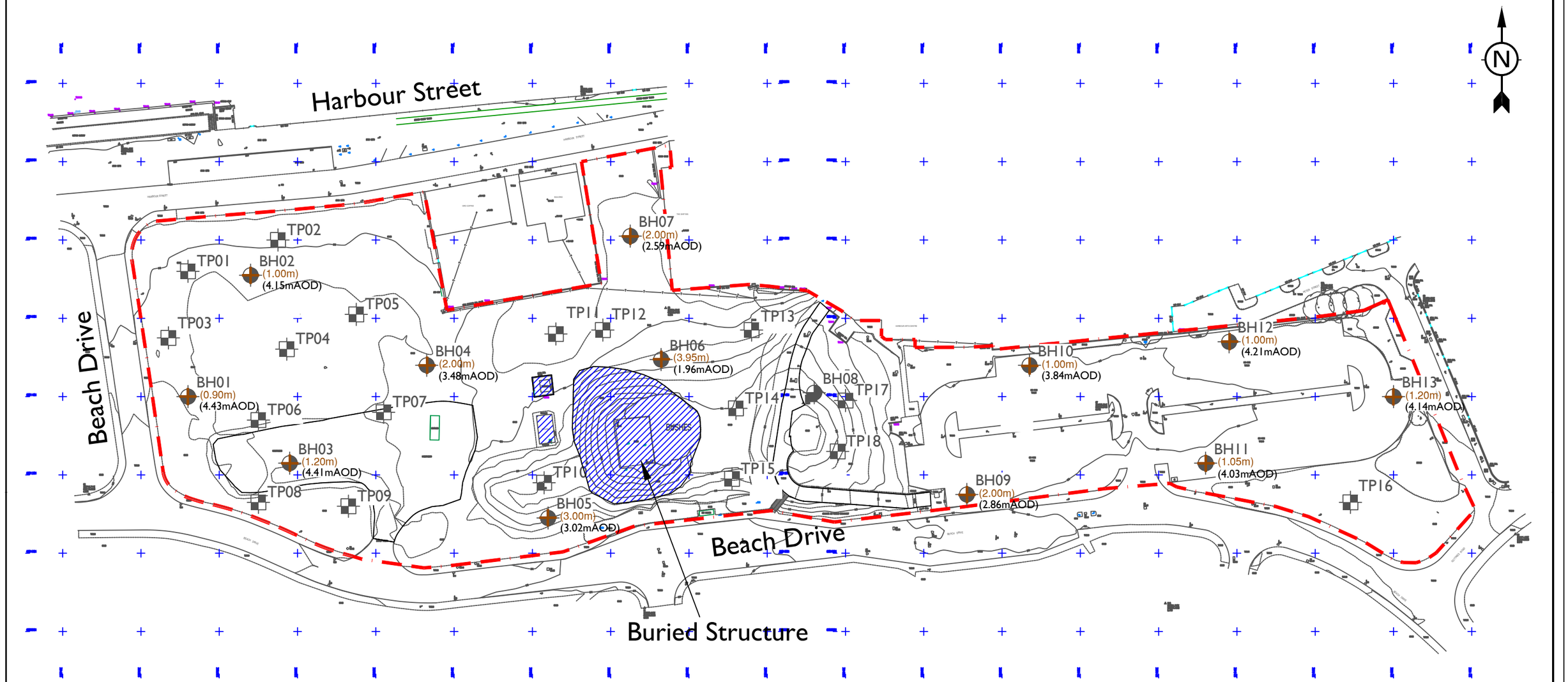
4.2.10 An obstruction was encountered within BH08 at 3.01 m depth described as a hard concrete obstruction. BH12 and BH13 also encountered obstructions at 3.60 m described as 'presumed boulder'.

Buried Structures

4.2.11 In the central southern site area, a buried structure is present with a concrete cover. The council held no information on this structure and therefore for health and safety reasons, we did not investigate this structure.

4.3 Visual/Olfactory Evidence of Chemical Contamination

4.3.1 Generally no obvious visual or olfactory evidence of chemical contamination was observed in the exploratory trial pit or boreholes during site investigation works.



TP01 to TP18 — Trial pit supervised by Mason Evans Partnership (February, 2019)

BH01 to BH13 — Soils borehole sunk by SKF Ltd (February, 2019)

NOTES

- Site boundary
- (1.20m) Recorded depth to medium dense (or better) soils
- (1.20mAOD) Recorded level to medium dense (or better) soils
- Areas of no access

Note:
Topographic survey received from Harley Haddow Ltd (February, 2019)

REV	DATE	DETAILS

NORTH AYRSHIRE COUNCIL

PROJECT TITLE

BEACH DRIVE
IRVINE

DRAWING TITLE

DEPTH TO MEDIUM DENSE (OR BETTER) SOILS

DRAWN BY	CHK'D BY	APP'D BY	DATE	SCALES
AC	HS	PB	03.06.19	1:1000 @ A3

PROJECT No.	DRAWING No.	REVISION
P18/621	P18/621/SI/R/F/09	

MASON EVANS
Geo-Environmental Consultants
t: 0141 420 2025 e: mail@masonevans.co.uk
The Piazza, 95 Morrison Street, Glasgow, G5 8BE

A3 border: 400 X 273

4.4 Groundwater

4.4.1 During site works, groundwater strikes were recorded within 7 No. exploratory borehole locations, at depths between 3.70 m bgl and 5.00 m bgl.

4.4.2 To provide a more accurate assessment of groundwater behaviour, monitoring wells were installed within each of the shallow soil boreholes (13 No). To date, the wells have been monitored on four occasions (results included in Appendix 14). The results of the groundwater depth monitoring are summarised in Table 08 below.

TABLE 07 - Summary of Groundwater Monitoring Results

Location	Depth (m bgl)	Well Depth (m bgl)	Recharge
BH01	DRY	4.00	NO
BH02	DRY	4.00	NO
BH03	DRY	4.00	NO
BH04	DRY	4.00	NO
BH05	DRY	4.00	NO
BH06	DRY	4.00	NO
BH07	3.62	4.00	NO
BH08	DRY	4.00	NO
BH09	3.60	4.00	V. SLOW
BH10	3.63	4.00	NO
BH11	3.65	4.00	NO
BH12	DRY	3.60	NO
BH13	DRY	3.00	NO

4.4.3 A groundwater was recorded at depths of approximately 3.6 (BH07 - BH11) this equates to 1.5 m AOD. Consequently, we consider that a shallow water table exists at this level below the site.

4.4.4 We therefore conjecture that this water table is the 'Kilmarnock Groundwater Body' (refer to section 2.2.1 which has been classified by SEPA as 'poor'.

5.0 CONTAMINATION RISK ASSESSMENT

5.1 Human Health and Groundwater Risk Assessment Screening Criteria

5.1.1 Consideration of analytical results against applicable, conservative risk based screening criteria has been used to provide an assessment of risk. A tiered risk based approach comprises:

- Preliminary Risk Assessment (e.g. establishing potential pollutant linkages);
- Generic Quantitative Risk Assessment (GQRA) (e.g. the comparison of contaminant concentrations against Soil Guideline Values (SGV) or other Generic Assessment Criteria (GAC)); and
- Detailed Quantitative Risk Assessment (DQRA) (e.g. the comparison of contaminant concentrations against site specific assessment criteria).

5.1.2 A GQRA has been carried out as part of this assessment. Soil chemical analysis data has been assessed in terms of risks to human health and vegetation while leachate data has been assessed in terms of risks to the water environment. The GACs utilised are the recently published Suitable 4 Use Levels (S4ULs) derived by LQM/CIEH, based on the exposure parameters, outlined in the DEFRA publication SP1010 (Category 4 Screening Levels (C4SLs) (March 2014). The S4ULs are derived in accordance with current UK legislation, and national policy using the most recent version of the CLEA software (v1.06). Normally the CLEA software utilises the default exposure pathways and land use assumptions outlined in SR3 (Environment Agency 2009b).

5.1.3 The derived S4ULs are based on the concept of minimal tolerable risk as described in SR2 (Environment Agency 2009a) which underpins all previous EA SGVs and other GACs. Please note that S4ULs do not incorporate any toxicological parameter changes to the CLEA base model, however recent toxicological data has been incorporated into the contaminant databases. Furthermore, S4UL GACs are considered to be equivalent to the previously published Environment agency SGVs, and previous iterations of LQM/CIEH GACs and as such are suitable for use in generic quantitative risk assessments under both planning and Part IIa regimes.

5.1.4 In this case we have utilised S4UL values appropriate to a 'residential end-use with gardens'. These guidelines have been used in recognition of the proposed residential development.

5.2 Statistical Analysis of Data

5.2.1 Where appropriate, chemical data for soils can be considered statistically in general accordance with the guidelines given in the Chartered Institute of Environmental Health Publication *Guidance on comparing Soil Contamination Data with a Critical Concentration* (May 2008).

5.2.2 For this project, statistical analysis has not been required.

Sample Depths

5.2.3 At the generic assessment stage, it should be assumed that all pathways contained within the generic model applied will be active. In reality, unless a contaminant is volatile (e.g. organic), exposure by direct contact will likely be mitigated by the depth of the contaminant or available surface cover. Generally, direct contact with contaminants at greater than 600 mm depth or under hardstanding is highly unlikely to occur unless the ground is to be disturbed through removal of surfacing or earthworks.

5.3 Ground Gas Assessment

5.3.1 The potential presence of carbon dioxide and methane at the target site have been appraised in compliance with CIRIA document, *Assessing Risks Posed by Hazardous Gases to Buildings (Report C665)* and BS 8485, *Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings (June 2015)*. These documents detail site investigations methodologies and risk assessment procedures for assessing the results from such investigations.

5.4 Building Materials Assessment

5.4.1 BRE Special Digest 1 'Concrete in Aggressive Ground' (3rd Edition, 2005) has been used to determine an appropriate concrete class for the development.

6.0 HUMAN HEALTH RISK ASSESSMENT

6.1 Contaminants In Soils

6.1.1 27 No. samples of the shallow soils were retrieved from the trial pits and analysed for a range of metal, hydrocarbon and asbestos contaminants. The laboratory test certificates are included in Appendix 13. An overview of the results is shown in Table 08 below.

TABLE 10 - Exceedance of Guideline Levels (Residential End-Use with Gardens)*

Contaminant	Effect	Measured Concentrations in Excess of SGV/GSV/SSTL (mg/kg)		Measured Exceedance Concentrations (mg/kg)		SGV/GSV/ SSV (mg/kg)	Source
		Made Ground	Natural	Made Ground	Natural		
Arsenic	Toxic	5 out of 20	3 out of 7	TP16 (99) TP04 (44) TP17 (47) BH11 (58) BH13 (1500)	TP05 (46) TP16 (200) BH09 (320)	37	LQM/CIEH S4ULs (2015)
Boron	Toxic	0 out of 20	0 out of 7	-	-	290	LQM/CIEH S4ULs (2015)
Cadmium	Toxic	0 out of 20	0 out of 7	-	-	11	LQM/CIEH S4ULs (2015)
Chromium III	Toxic	0 out of 20	0 out of 7	-	-	910	LQM/CIEH S4ULs (2015)
Chromium VI	Toxic	0 out of 20	0 out of 7	-	-	6	LQM/CIEH S4ULs (2015)
Copper	Toxic	1 out of 20	0 out of 7	BH13 (2600)	-	2400	LQM/CIEH S4ULs (2015)
Copper	Phytotoxic	1 out of 20	2 out of 7	TP16 (260)	TP16 (280) BH09 (370)	200	BS:3882 (2015)
Lead	Toxic	11 out of 20	2 out of 7	TP02 (1200) TP05 (730) TP05 (970) TP07 (250) TP10 (290) TP11 (270) TP12 (560) TP16 (440) TP04 (370) BH11 (270) BH13 (13000)	TP16 (1000) BH09 (2100)	210	C4SL (DEFRA SP1010) (2014)
Mercury (Inorganic)	Toxic	0 out of 20	0 out of 7	-	-	40	LQM/CIEH S4ULs (2015)
Nickel	Toxic	0 out of 20	0 out of 7	-	-	130	LQM/CIEH S4ULs (2015)
Nickel	Phytotoxic	0 out of 20	0 out of 7	-	-	110	BS:3882 (2015)
Selenium	Toxic	0 out of 20	0 out of 7	-	-	250	LQM/CIEH S4ULs (2015)
Zinc	Toxic	0 out of 20	0 out of 7	-	-	3700	LQM/CIEH S4ULs (2015)
Zinc	Phytotoxic	10 out of 20	1 out of 7	TP02 (780) TP05 (740) TP05 (920) TP07 (380) TP10 (430) TP11 (310) TP12 (550) TP16 (660) TP04 (390) BH13 (1100)	BH09 (340)	300	BS:3882 (2015)
Total Sulphate	Phytotoxic	0 out of 20	0 out of 7	-	-	10,000	ICRCL/SAC
Phenol	Toxic	0 out of 20	0 out of 7	-	-	550	LQM/CIEH S4ULs (2015)
Petroleum Hydrocarbons							
Aliphatic C5-C6	Toxic	0 out of 20	0 out of 7	-	-	78	LQM/CIEH S4ULs (2015)
Aliphatic C6-C8	Toxic	0 out of 20	0 out of 7	-	-	230	LQM/CIEH S4ULs (2015)
Aliphatic C8-C10	Toxic	0 out of 20	0 out of 7	-	-	65	LQM/CIEH S4ULs (2015)
Aliphatic C10-C12	Toxic	0 out of 20	0 out of 7	-	-	330	LQM/CIEH S4ULs (2015)
Aliphatic C12-C16	Toxic	0 out of 20	0 out of 7	-	-	2400	LQM/CIEH S4ULs (2015)
Aliphatic C16-C21	Toxic	0 out of 20	0 out of 7	-	-	92,000	LQM/CIEH S4ULs (2015)
Aliphatic C16-C35	Toxic	0 out of 20	0 out of 7	-	-	92,000	LQM/CIEH S4ULs (2015)
Aliphatic C21-C35	Toxic	0 out of 20	0 out of 7	-	-	92,000	LQM/CIEH S4ULs (2015)
Aromatic C5-C7	Toxic	0 out of 20	0 out of 7	-	-	140	LQM/CIEH S4ULs (2015)
Aromatic C7-C8	Toxic	0 out of 20	0 out of 7	-	-	290	LQM/CIEH S4ULs (2015)
Aromatic C8-C10	Toxic	0 out of 20	0 out of 7	-	-	83	LQM/CIEH S4ULs (2015)

TABLE 10 - Exceedance of Guideline Levels (Residential End-Use with Gardens)* Cont…

Aromatic C10-C12	Toxic	0 out of 20	0 out of 7	-	-	180	LQM/CIEH S4ULs (2015)
Aromatic C12-C16	Toxic	0 out of 20	0 out of 7	-	-	330	LQM/CIEH S4ULs (2015)
Aromatic C16-C21	Toxic	0 out of 20	0 out of 7	-	-	540	LQM/CIEH S4ULs (2015)
Aromatic C21-C35	Toxic	0 out of 20	0 out of 7	-	-	1500	LQM/CIEH S4ULs (2015)
PAHs							
Naphthalene	Toxic	0 out of 20	0 out of 7	-	-	5.6	LQM/CIEH S4ULs (2015)
Acenaphthylene	Toxic	0 out of 20	0 out of 7	-	-	420	LQM/CIEH S4ULs (2015)
Acenaphthene	Toxic	0 out of 20	0 out of 7	-	-	510	LQM/CIEH S4ULs (2015)
Fluorene	Toxic	0 out of 20	0 out of 7	-	-	400	LQM/CIEH S4ULs (2015)
Phenanthrene	Toxic	0 out of 20	0 out of 7	-	-	220	LQM/CIEH S4ULs (2015)
Anthracene	Toxic	0 out of 20	0 out of 7	-	-	5400	LQM/CIEH S4ULs (2015)
Fluoranthene	Toxic	0 out of 20	0 out of 7	-	-	560	LQM/CIEH S4ULs (2015)
Pyrene	Toxic	0 out of 20	0 out of 7	-	-	1200	LQM/CIEH S4ULs (2015)
Benz(a)anthracene	Toxic	0 out of 20	0 out of 7	-	-	11	LQM/CIEH S4ULs (2015)
Chrysene	Toxic	0 out of 20	0 out of 7	-	-	22	LQM/CIEH S4ULs (2015)
Benzo(b)fluoranthene	Toxic	1 out of 20	0 out of 7	TP10 (5.3)	-	3.3	LQM/CIEH S4ULs (2015)
Benzo(k)fluoranthene	Toxic	0 out of 20	0 out of 7	-	-	93	LQM/CIEH S4ULs (2015)
Benzo(a)pyrene	Toxic	1 out of 20	0 out of 7	TP10 (5.0)	-	2.7	LQM/CIEH S4ULs (2015)
Indeno(1,2,3-c,d)pyrene	Toxic	0 out of 20	0 out of 7	-	-	36	LQM/CIEH S4ULs (2015)
Dibenz(a,h)anthracene	Toxic	2 out of 20	0 out of 7	TP02 (0.68) TP10 (0.92)	-	0.28	LQM/CIEH S4ULs (2015)
Benzo(g,h,i)perylene	Toxic	0 out of 20	0 out of 7	-	-	340	LQM/CIEH S4ULs (2015)
Other							
Asbestos	Toxic	0 out of 20	0 out of 7	-	-	Detection	HSE

* Based on SOM of 2.5 %. Average SOM recorded as 3.8 %
** Phytotoxic values based on pH of >7

6.1.2 We have compared the results with soil guideline values for a residential end land use with gardens, assuming 2.5% soil organic matter. These guidelines have been used in recognition of the proposed residential development.

6.1.3 Toxic metal and polyaromatic hydrocarbons were recorded in the made ground soils.

6.2 Conclusions

6.2.2 As such, it is concluded that the shallow soils underlying the site pose a risk to human health and remedial measures will therefore be required.

7.0 WATER ENVIRONMENT RISK ASSESSMENT

7.1 Water Environment Vulnerability

7.1.1 Based on the desk study researches, interpretation of the ground conditions following investigative works and the results from groundwater monitoring, we consider the main water environment receptor with regards to the site to be the shallow ground water body below the site.

7.1.2 Groundwater was recorded at 3.40 m depth. Therefore, we consider that a pervasive groundwater table exists at approximately 1.50 m AOD.

7.2 Assessment of Water Environment

7.2.1 Following SEPA Position Statement WAT-PS-10-01, *'Assigning Groundwater Assessment Criteria for Pollutant Inputs'* (August 2014), the following assessment should be carried out for potential pollutant linkages to the water environment:

1) Assess which receptors (including surface / coastal waters, wetlands, potable water extractions, and future drinking water potential) may be affected by contamination sources.
2) For potential pollutant linkages, assess contaminant concentrations against relevant screening values at the recommended assessment point, taking into consideration mixing and upstream/upgradient concentrations, where appropriate.
3) Evaluate whether remedial measures would be either disproportionately costly, a risk to other receptors, or cause deterioration of the natural environment.

7.2.2 All water analyses have been compared to appropriate guideline values. Where surface water is considered a primary risk, Environmental Quality Standards are used (EQSs) as obtained from SEPA document WAT-SG-53 (February 2018). Where groundwater is considered the main receptor, Minimum Reporting Values (MRVs) and Resource Protection Values (RPVs) as outlined in SEPA document WAT-PS-10-01 (August 2014) have been used. In the absence of any SEPA published MRV/RPV/EQS we have reverted to the WHO Guidelines for Drinking Water Quality, as amended, (currently 4th Edition, 1st Addendum, 2017) as recommended in SEPA position Statement WAT-PS-10-01.

7.2.3 Based on the recorded ground conditions and the findings from subsequent groundwater monitoring we conclude that a pervasive groundwater body exists within the natural granular soils below the site, at depths ranging of approximately 3.6 m bgl (1.50 m AOD).

7.2.4 In the absence of groundwater samples, 9 No leachate tests were collected and sent for laboratory analysis. The results have been compared to the appropriate guideline values (SEPA's Resource Protection Values (RPV's) and Minimum Reporting Values (MRV's) and in the absence of any SEPA published MRVs and RPVs we have reverted to WHO's Guidelines for Drinking Water Quality (4th Edition, 2011).

7.2.5 The leachate test results are included in Appendix 13 and are summarised in Table 12 overleaf.

TABLE 12 – Soil Leachate Analysis Compared with Appropriate Water Quality Standards

Potential Contaminant	RPV/MRV (µg/l)	WHO (µg/l)	No of Samples Tested (Total)	No of Samples Above Guidelines	Range of Concentrations which Exceeded Relevant Guidelines
Arsenic	10		9	3	TP16 (30) BH11 (22) BH13 (23)
Mercury	0.01		9	1	BH13 (0.35)
Chromium	50		9	0	
Cadmium	0.1		9	0	
Lead	25		9	1	BH13 (51)
Selenium	10		9	0	
Copper		2000	9	0	
Nickel	20		9	0	

7.2.6 The leachate testing has identified exceedances of arsenic, lead and mercury above utilised guideline values.

7.2.7 As leachate analysis was utilised, it is not unexpected that elevations were present. However, these exceedances were localised and marginal and as such we do not consider there to be a risk to the already 'poor' quality groundwater body.

7.2.8 It should also be noted that no groundwater abstraction wells are present within 1000m of the site.

8.0 GROUND GAS EMISSIONS

8.1 General

8.1.1 A ground gas risk assessment has been undertaken to assess the risk associated with carbon dioxide, methane gas and radon, to new buildings and their users. The identified potential sources of ground gas were the thick made ground soils, with timbers, and the tidal alluvial soils underlying the site.

8.1.2 The assessment of risk due to ground gases has been further discussed in publications for CIRIA and BRE, which have indicated a number of 'characteristic situations' depending on the concentrations and flow rates of gas. This classification system has been further developed by Wilson and Card (1999), and Boyle and Witherington (2006) and a revised industry guidance has been provided within CIRIA Report C665 (2007).

8.2 Ground Gas – Results

8.2.1 At the time of reporting, ground gas monitoring of the installations was on-going, having been undertaken at the site on four occasions. The monitoring was undertaken using a portable gas meter and the data is presented below.

8.2.2 Measurements were taken with barometric pressure ranging from 1005 mb to 1028 mb. Oxygen concentrations were recorded to range from 13.8% to 20.4%. Carbon dioxide concentrations were recorded to range from 0.0% and 5.8% vol. Steady state flow rates were not recorded to exceed 0.0 litres/hour over the monitoring period. Methane was not recorded above 0.0 % during any of the monitoring visits. The location of the monitoring wells and a summary of the results are included in Drawing No P18/621/SI/R/F/10. The results of the gas monitoring are included in Appendix 14.

8.3 Ground Gas – Assessment

8.3.1 Gas Screening Values have been calculated in line with CIRIA 665 and BS 8485 (2015) guidance.

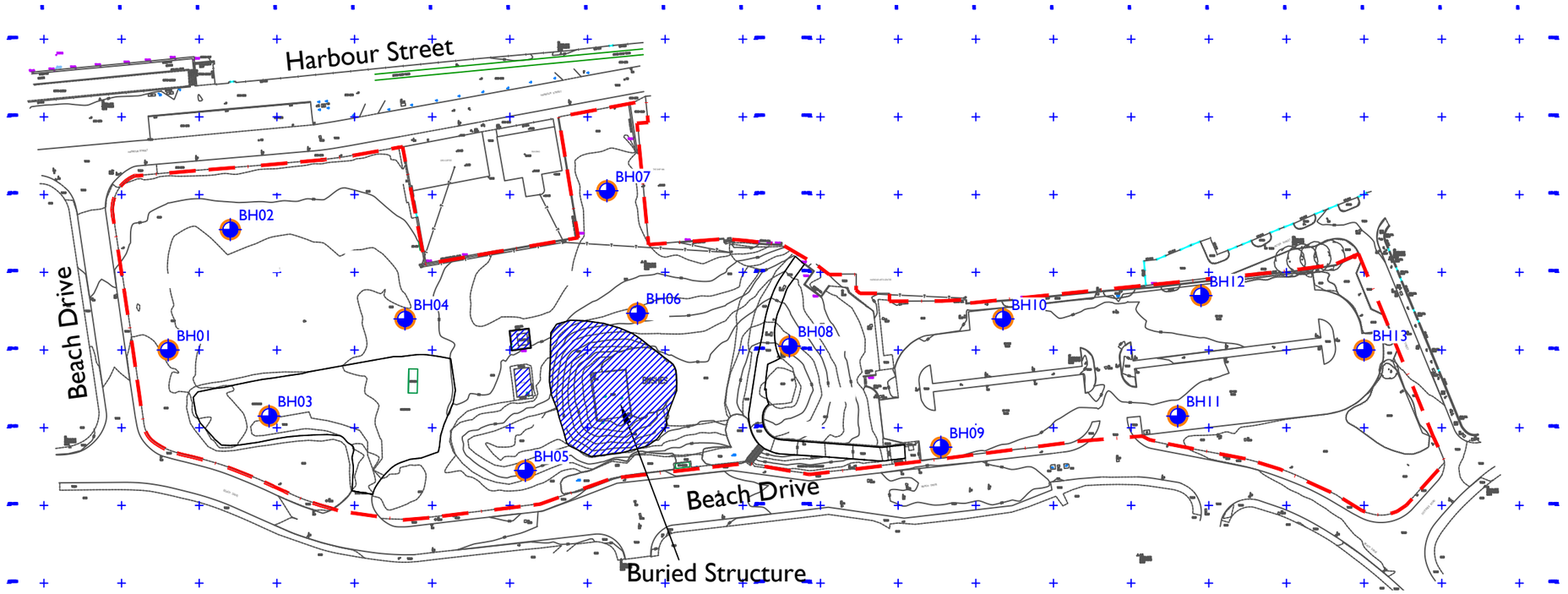
8.3.2 This is done by calculating a Q_{hg} for each monitoring point, for each monitoring event. Hazardous gas flow rate Q_{hg} (in lh^{-1}) is calculated using the following:

$$\mathbf{Q_{hg} = C_{hg}/100 \times q}$$

Where:

C_{hg} is the measured hazardous gas concentration (in percentage volume-by-volume)

q is the flow rate (in litres per hour) of combined gasses from the standpipe found by direct measurement.



Borehole BH01 BH01

Date.	CH_4 % Vol.	CO_2 % Vol.	O_2 % Vol.	Ave Flow (l/h)	Atmos. Pressure (mb)	G/Water Depth (m)
11.03.19	0.0	0.1	20.1	0.0	1021	DRY
20.03.19	0.0	0.3	19.9	0.0	1027	DRY
11.04.19	0.0	0.6	19.6	0.3	1028	DRY
10.05.19	0.0	0.4	20.1	0.2	1010	DRY

Borehole BH02 BH02

Date.	CH_4 % Vol.	CO_2 % Vol.	O_2 % Vol.	Ave Flow (l/h)	Atmos. Pressure (mb)	G/Water Depth (m)
11.03.19	0.0	0.0	20.2	0.0	1021	DRY
20.03.19	0.0	0.1	20.1	0.0	1027	DRY
11.04.19	0.0	0.2	20.0	0.3	1028	DRY
10.05.19	0.0	0.1	20.4	0.2	1010	DRY

Borehole BH03 BH01

Date.	CH_4 % Vol.	CO_2 % Vol.	O_2 % Vol.	Ave Flow (l/h)	Atmos. Pressure (mb)	G/Water Depth (m)
11.03.19	0.0	1.1	18.9	0.0	1021	DRY
20.03.19	0.0	0.5	19.8	0.0	1027	DRY
11.04.19	0.0	0.9	18.1	0.3	1028	DRY
10.05.19	0.0	1.6	18.7	0.2	1010	DRY

Borehole BH04 BH04

Date.	CH_4 % Vol.	CO_2 % Vol.	O_2 % Vol.	Ave Flow (l/h)	Atmos. Pressure (mb)	G/Water Depth (m)
11.03.19	0.0	1.5	18.5	0.0	1021	DRY
20.03.19	0.0	1.1	18.8	0.0	1027	DRY
11.04.19	0.0	2.0	18.2	0.3	1028	DRY
10.05.19	0.0	1.5	19.2	0.2	1010	DRY

Borehole BH05 BH05

Date.	CH_4 % Vol.	CO_2 % Vol.	O_2 % Vol.	Ave Flow (l/h)	Atmos. Pressure (mb)	G/Water Depth (m)
11.03.19	0.0	0.8	19.6	0.0	1021	DRY
20.03.19	0.0	0.9	19.5	0.0	1027	DRY
11.04.19	0.0	1.2	19.1	0.3	1028	DRY
10.05.19	0.0	1.2	19.3	0.2	1010	DRY

Borehole BH06 BH06

Date.	CH_4 % Vol.	CO_2 % Vol.	O_2 % Vol.	Ave Flow (l/h)	Atmos. Pressure (mb)	G/Water Depth (m)
11.03.19	0.0	0.5	20.0	0.0	1021	DRY
20.03.19	0.0	5.8	13.8	0.0	1027	DRY
11.04.19	0.0	0.7	19.4	0.3	1028	DRY
10.05.19	0.0	0.6	19.4	0.2	1010	DRY

Borehole BH07 BH07

Date.	CH_4 % Vol.	CO_2 % Vol.	O_2 % Vol.	Ave Flow (l/h)	Atmos. Pressure (mb)	G/Water Depth (m)
11.03.19	0.0	0.0	20.2	0.0	1021	DAMP
20.03.19	0.0	0.1	20.2	0.0	1027	DAMP
11.04.19	0.0	0.6	19.8	0.3	1028	3.55
10.05.19	0.0	0.6	20.0	0.2	1010	3.62

Borehole BH08 BH08

Date.	CH_4 % Vol.	CO_2 % Vol.	O_2 % Vol.	Ave Flow (l/h)	Atmos. Pressure (mb)	G/Water Depth (m)
11.03.19	0.0	0.3	20.0	0.0	1021	DRY
20.03.19	0.0	0.4	19.7	0.0	1027	DRY
11.04.19	0.0	0.7	19.5	0.3	1028	DRY
10.05.19	0.0	0.6	19.9	0.2	1010	DRY

Borehole BH09 BH09

Date.	CH_4 % Vol.	CO_2 % Vol.	O_2 % Vol.	Ave Flow (l/h)	Atmos. Pressure (mb)	G/Water Depth (m)
11.03.19	0.0	0.5	19.9	0.0	1021	DAMP
20.03.19	0.0	1.0	19.4	0.0	1027	3.40
11.04.19	0.0	0.5	19.9	0.3	1028	3.55
10.05.19	0.0	1.1	19.2	0.2	1010	3.66

Borehole BH10 BH10

Date.	CH_4 % Vol.	CO_2 % Vol.	O_2 % Vol.	Ave Flow (l/h)	Atmos. Pressure (mb)	G/Water Depth (m)
11.03.19	0.0	0.4	20.4	0.0	1021	DAMP
20.03.19	0.0	0.4	20.0	0.0	1027	DAMP
11.04.19	0.0	0.9	19.4	0.3	1028	3.54
10.05.19	0.0	1.4	18.4	0.2	1010	3.63

Borehole BH11 BH11

Date.	CH_4 % Vol.	CO_2 % Vol.	O_2 % Vol.	Ave Flow (l/h)	Atmos. Pressure (mb)	G/Water Depth (m)
11.03.19	0.0	0.5	20.0	0.0	1021	DRY
20.03.19	0.0	0.3	20.0	0.0	1027	DAMP
11.04.19	0.0	1.4	18.7	0.3	1028	3.57
10.05.19	0.0	1.5	18.5	0.2	1010	3.65

Borehole BH12 BH12

Date.	CH_4 % Vol.	CO_2 % Vol.	O_2 % Vol.	Ave Flow (l/h)	Atmos. Pressure (mb)	G/Water Depth (m)
11.03.19	0.0	1.1	17.6	0.0	1021	DRY
20.03.19	0.0	1.4	17.7	0.0	1027	DRY
11.04.19	0.0	2.4	16.5	0.3	1028	DRY
10.05.19	0.0	1.4	18.5	0.2	1010	DRY

Borehole BH13 BH13

Date.	CH_4 % Vol.	CO_2 % Vol.	O_2 % Vol.	Ave Flow (l/h)	Atmos. Pressure (mb)	G/Water Depth (m)
11.03.19	0.0	0.1	20.3	0.0	1021	DRY
20.03.19	0.0	0.1	20.1	0.0	1027	DRY
11.04.19	0.0	0.8	19.3	0.3	1028	DRY
10.05.19	0.0	1.4	18.3	0.2	1010	DRY

NOTES

- Site boundary
- BH01 to BH13 — Soils borehole sunk by SKF Ltd (February, 2019)
- Ground gas / water monitoring well installed
- Areas of no access

Note:
Topographic survey received from Harley Haddow Ltd (February, 2019)

REV	DATE	DETAILS

NORTH AYRSHIRE COUNCIL

PROJECT TITLE

BEACH DRIVE
IRVINE

DRAWING TITLE

GAS EMISSIONS SURVEY

DRAWN BY	CHK'D BY	APP'D BY	DATE	SCALES
AC	HS	PB	03.06.19	1:1000 @ A3

PROJECT No.	DRAWING No.	REVISION
P18/621	P18/621/SI/R/F/10	

MASON EVANS
Geo-Environmental Consultants
t: 0141 420 2025 e: mail@masonevans.co.uk
The Piazza, 95 Morrison Street, Glasgow, G5 8BE

A3 border: 400 X 273

8.3.3 Hazardous gas flow rates were calculated for each monitoring point during each event. A 'worst case' scenario was realised on 20th March 2019, in BH06 where CO_2 was 5.8% and a gas flow rate of 0.0 l/hr was recorded, therefore for the purposes of the report a gas flow rate of 0.1l/hr will be utilised. The resultant hazardous gas flow rate is therefore as follows:

Q_{hg} = 5.8/100 x 0.1
Q_{hg} = 0.0058

8.3.4 The value derived above is the highest possible hazardous gas flow rate calculated over the duration of the gas monitoring. This value corresponds with 'Characteristic Situation 1'. However, as CO_2 was present at levels exceeding 5%, and given the historical land use and thick made ground onsite, we would recommend that the site is upgraded to 'Characteristic Situation 2'.

8.3.5 As such, and based on the above, we consider that the site corresponds to *'Characteristic Situation 2'* where gas preclusion measures are required, as outlined in Table 13.

TABLE 13 – Assessment of Gas Characterisation

Characteristic Situation	Hazard Potential	Gas Screening Value (GSV) (l/hr)	Additional Limiting Factors
1	Very Low	<0.07	Methane not to exceed 1% by volume and carbon dioxide not to exceed 5% by volume.
2	Low	0.07 to <0.7	Borehole air flow not to exceed 70 l/hr, otherwise increase to CS3.
3	Moderate	0.7 to <3.5	None
4	Moderate to High	3.5 to <15	None
5	High	15 to <70	None
6	Very High	>70	None

8.3.6 The construction and use of the building, together with the control of future structural changes to the building and its maintenance (the building's management) should be assessed, since potential risks posed by ground gases are strongly influenced by these factors. The assessment should lead to the categorization of the building as a whole, or each different part of the building, into one of four building types: Type A, Type B, Type C or Type D, as outlined in Table 14.

8.3.7 New buildings should be categorized in accordance with Table 14, as outlined in BS 8485 (2015).

TABLE 14 – Building Types and Descriptions (BS 8485 – 2015)

Building Type	Description
A	**Private ownership with no building management controls on alterations to the internal structure, the use of rooms, the ventilation of rooms or the structural fabric of the building. Some small rooms present. Probably conventional building construction (rather than civil engineering). Examples include private housing and some retail premises.**
B	Private or commercial property with central building management control of any alterations to the building or its uses but limited or no central building management control of the maintenance of the building, including the gas protection measures. Multiple occupancy. Small to medium size rooms with passive ventilation of rooms and other internal spaces throughout ground floor and basement areas. May be conventional building or civil engineering construction. Examples include managed apartments, multiple occupancy offices, some retail premises and parts of some public buildings (such as schools, hospitals, leisure centres) and parts of hotels.
C	Commercial building with central building management control of any alterations to the building or its uses and central building management control of the maintenance of the building, including the gas protection measures. Single occupancy of ground floor and basement areas. Small to large size rooms with active ventilation or good passive ventilation of all rooms and other internal spaces throughout ground floor and basement areas. Probably civil engineering construction. Examples include offices, some retail premises, and parts of some public buildings (such as schools, hospitals, leisure centres and parts of hotels).
D	Industrial style building having large volume internal space(s) that are well ventilated. Corporate ownership with building management controls on alterations to the ground floor and basement areas of the building and on maintenance of ground gas protective measures. Probably civil engineering construction. Examples are retail park sales buildings, factory shop floor areas, warehouses. (Small rooms within these style buildings should be separately categorized as Type B or Type C).

8.3.8 From the identified Characteristic Situation and **taking account of the proposed residential development**, the minimum gas protection score should be calculated, in accordance with Table 15 below.

TABLE 15: Gas Protection Score by Characteristic Situation and Type of Building

Characteristic Situation (CIRIA 149)	MINIMUM GAS PROTECTION SCORE (POINTS)			
	High Risk Type A Building	High Risk Type B Building	Medium Risk Type C Building	Low Risk Type D Building
1	0	0	0	0
2	**3.5**	3.5	2.5	1.5
3	4.5	4	3	2.5
4	6.5	5.5	4.5	3.5
5	-	6.5	5.5	4.5
6	-	-	7.5	6.5

8.3.9 From the site characteristic hazardous gas flow rate as calculated the ground gas regime was classified as 'Characteristic Situation 2'. Taking into account the building type (Type A) this corresponded to a **required solution score of 3.5**, and as such ground gas preclusion measures are deemed necessary.

8.3.10 Following the determination of the minimum gas protection score, a combination of two or more of: 1) structural barrier of the floor slab, and/or; 2) ventilation measures, and/or; 3) a gas resistant membrane should be implemented in order to achieve an adequate score. The protection measures along with relevant scores are outlined in Tables 16, 17 and 18 below.

TABLE 16 – Gas Protection Scores for the Structural Barrier

Floor and Substructure Design	Score
Precast suspended segmented subfloor (i.e. beam and block).	0
Cast in situ ground-bearing floor slab (with only nominal mesh reinforcement).	0.5
Cast in situ monolithic reinforced ground-bearing raft/reinforced cast in situ suspended floor slab with minimal penetrations.	1 or 1.5
Basement floor and walls conforming to BS 8102:2009 Grade 2 Waterproofing.	2
Basement floor and walls conforming to BS 8102:2009 Grade 3 Waterproofing.	2.5

TABLE 17 – Gas Protection Scores for Ventilation Protection Measures

Protection Element / System	Score	Comments
(a) Pressure relief pathway (usually formed of low fines gravel or with a thin geocomposite blanket or strips terminating in a gravel trench external to the building)	0.5	> Whenever possible a pressure relief pathway (as a minimum) should be installed in all gas protection measures systems. >If the layer has a low permeability and/or is not terminated in a venting trench (or similar), then the score is zero.
(b) Passive sub floor dispersal layer: Very good performance: Good performance: Media used to provide the dispersal layer are: Clear void. Polystyrene void former blanket. Geocomposite void former blanket. No-fines gravel layer with gas drains. No-fines gravel layer.	 2.5 1.5	 > The ventilation effectiveness of different media depends on a number of different factors including the transmissivity of the medium, the width of the building, the side ventilation spacing and type and the thickness of the layer.
(c) Active dispersal layer, usually comprising fans with active abstraction (suction) from a subfloor dilution layer, with roof level vents. The dilution layer may comprise a clear void or be formed of geocomposite or polystyrene void formers	1.5 to 2.5	> This system relies on continued serviceability of the pumps, therefore alarm and response systems should be in place. > There should be robust management systems in place to ensure the continued maintenance of the system, including pumps and vents. Active ventilation should always be designed to meet at least "good performance".
(d) Active positive pressurization by the creation of a blanket of external fresh air beneath the building floor slab by pumps supplying air to points across the central footprint of the building into a permeable layer, usually formed of a thin geocomposite blanket.	1.5 to 2.5	> This system relies on continued operation of the pumps, therefore alarm and response systems should be in place. > The score assigned should be based on the efficient "coverage" of the building footprint and the redundancy of the system. Active ventilation should always be designed to meet at least "good performance".
(e) Ventilated car park (floor slab of occupied part of the building under consideration is underlain by a basement or undercroft car park).	4	> Assumes that the car park is vented to deal with car exhaust fumes, designed to Buildings Regulations 2000, Approved Document F[9].

TABLE 18 – Gas Protection Scores for the Gas Resistant Membrane

Protection Element / System	Score	Comments
Gas resistant membrane meeting all of the following criteria: Sufficiently impervious to the gases with a methane gas transmission rate <40.0 ml/day/m2/atm (average) for sheet and joints (tested in accordance with BS ISO 15105-1 manometric method); Sufficiently durable to remain serviceable for the anticipated life of the building and duration of gas emissions; Sufficiently strong to withstand in-service stresses (e.g. settlement if placed below a floor slab); Sufficiently strong to withstand the installation process and following trades until covered (e.g. penetration from steel fibres in fibre reinforced concrete, penetration of reinforcement ties, tearing due to working above it, dropping tools, etc); Capable, after installation, of providing a complete barrier to the entry of the relevant gas; Verified in accordance with CIRIA C735.	2	The performance of membranes is heavily dependent on the quality and design of the installation, resistance to damage after installation and integrity of joints. If a membrane is installed that does not meet all the criteria in column 1 then the score is zero.

8.4 Radon

8.4.1 The Envirocheck report indicated that the site is located within a 'lower probability radon area' and therefore radon gas protective measures are not considered necessary in the construction of new developments.

8.5 Conclusions and Recommendations

8.5.1 From our ground gas risk assessment, the ground gas regime has been classified as Characteristic Situation 2. This has been upgraded from 'Characteristic Situation 1' due to the presence of CO_2 which exceeded 5% and the presence of thick made round along with historical land use.

8.5.2 Taking into account the proposed development type (residential) this corresponds to a required solution score of 3.5, and as such ground gas preclusion measures are deemed necessary, as set out in Table 16, 17 and 18 above.

8.5.3 Additionally radon gas protective measures are not deemed necessary for this site.

9.0 RISKS TO CONSTRUCTED DEVELOPMENT

9.1 Sulphate Attack on Construction Materials

9.1.1 Laboratory testing was undertaken on selected soil samples, at depths from between 0.30 m bgl and 2.00 m bgl, in order to determine the sulphate content and acidity, and hence the concrete class required for buried concrete. The results of chemical tests carried out are summarised in the table below. Full laboratory analysis results are included in Appendix 13.

TABLE 19– Sulphate and pH Summary

Determinant	Range	SDI DS Class	SDI ACEC Class
pH	7.3 – 9.6	DS-2	AC-2
Total Sulphate as SO_4 (%)	<0.010 - 7.8 (Generally, between <0.010 and 0.45)		

9.1.2 In accordance with BRE Special Digest '1:2005 Concrete in Aggressive Ground', recommendations for concrete is 'Aggressive Chemical Environment' for Concrete (ACEC) Classification AC-2 with a design sulphate class for the site of DS-2.

9.1.3 Total Sulphate of 7.8% was detected in one sample from BH06. We would consider this result to be an anomaly and not representative of the site as a whole and may be due to saline groundwater present below the site.

9.2 Phytotoxicity

9.2.1 The proposed development consists of residential housing with gardens. We have interpreted the chemical results to provide comment on the potential for phytotoxic contaminants within the shallow soils.

9.2.2 Guidance on the effects of metal contamination on plant growth is provided within the British Standard 'BS3882:2015 - Specification for Topsoil' and similar guidance issued by the Scottish Agricultural College (SAC) and. A summary of test results versus the recommended phytotoxic screening criteria is provided below:

TABLE 20: Summary of Soil Results vs Phytotoxic Screening Criteria

Contaminant	Screening Value (mg/kg)	Measured Exceedance Concentrations (mg/kg)	Conc > BS 3882 Screening Value
Zinc	300	TP02 (780) TP05 (740) TP05 (920) TP07 (380) TP10 (430) TP11 (310) TP12 (550) TP16 (660) TP04 (390) BH13 (1100) BH09 (340)	YES
Copper	200	TP16 (260) TP16 (280) BH09 (370)	YES
Nickel	110	-	NO

Note – screening value based on average pH >7.0 (Ref BS 3882:2015).

9.2.3 Exceedances of BS 3882:2015 screening values for zinc and copper have been noted within the made ground and natural materials underlying the site. As such, the shallow made ground and natural deposits are considered to pose a potential phytotoxic risk to any future vegetation.

9.3 Water Supply Pipes

9.3.1 UK Water Industry Research (UKWIR) document, '*Guidance for the Selection of Water Supply Pipes to be Laid in Brownfield Sites*', ref 10/WM/03/21, states that on brownfield sites, MDPE/HDPE water supply pipes could be at risk from organic contaminants including mineral oils, VOC's and SVOC's, if the pipes are laid within 15 m of recorded contamination. Additionally, UKWIR states that where metallic pipes are being considered for use, conductivity, pH and redox state of the soil should be assessed to determine if the pipes are at risk of being corroded.

9.3.2 Laboratory UKWIR testing was undertaken, on 3 No soil samples from across the site, for the mandatory parameters outlined in the UKWIR guidance to identify the pipe material most suitable for use within the site. The test results (included in Appendix 12) are summarised in the following tables.

TABLE 21 – UKWIR Test Results

Laboratory Name: Concept Life Sciences		Date: February 2019	Cert No. 19-06308-3, 19-06896-2 & 19-07478-2		
Group No.	Parameter Group	Depth (m bgl): 1.20 to 1.40	Maximum Concentrations Detected		
		Units	Detection Limit	Concentration	Sample Code/ Hole
1	Extended VOC suite (with TIC)	mg/kg	0.01	<0.01	All
1a	• BTEX + MTBE	mg/kg	0.01	<0.01	All
2	Extended SVOC suite (with TIC)	mg/kg	0.1	<0.1 – 0.2	All
2e	• Phenols	mg/kg	0.1	<0.050	All
2f	• Cresols and chlorinated phenols	mg/kg	0.1	<0.1	All
3	Mineral Oils C11-C20	mg/kg	10	<10 - 16	All
4	Mineral Oils C20-C40	mg/kg	10	<10 - 50	All
5	Corrosive (Conductivity, Redox and pH)				
	Conductivity	µS/cm	1	110 - 180	All
	Redox Potential	mV	-500	160 – 260	All
	pH	-	-	8.0 – 8.6	All
Specific suite if identified relevant					
2a	• Ethers	-	-	N/D	All
2b	• Nitrobenzene	-	-	N/D	All
2c	• Ketones	-	-	N/D	All
2d	• Aldehydes	-	-	N/D	All
6	Amines	-	-	N/D	All

Table 22 - UKWIR Screening Guideline Values

Parameter Group		Pipe Material All Threshold Concentrations are in mg/kg					
		PE	PVC	Barrier Pipe (PE-Al-PE)	Wrapped Steel	Wrapped Ductile Iron	Copper
1	Extended VOC suite by purge and trap or head space and GC-MS with TIC	0.5	0.125	Pass	Pass	Pass	Pass
1a	+ BTEX + MTBE	0.1	0.03	Pass	Pass		
2	SVOCs TIC by purge and trap or head space and GC-MS with TIC (aliphatic and aromatic C5 – C10)	2	1.4	Pass	Pass	Pass	Pass
2e	+ Phenols	2	0.4	Pass	Pass	Pass	Pass
2f	+ Cresols and chlorinated phenols	2	0.04	Pass	Pass	Pass	Pass
3	Mineral oil C11-C20	10	Pass	Pass	Pass	Pass	Pass
4	Mineral oil C20-C40	500	Pass	Pass	Pass	Pass	Pass
5	Corrosive (Conductivity, Redox and pH)	Pass	Pass	Pass	Corrosive if pH < 7 and conductivity > 400µS/cm	Corrosive if pH < 5, Eh not neutral and conductivity > 400µS/cm	Corrosive if pH <5 or >8 and Eh positive
Specific suite identified as relevant following Site Investigation							
2a	Ethers	0.5	1	Pass	Pass	Pass	Pass
2b	Nitrobenzene	0.5	0.4	Pass	Pass	Pass	Pass
2c	Ketones	0.5	0.02	Pass	Pass	Pass	Pass
2d	Aldehydes	0.5	0.02	Pass	Pass	Pass	Pass
6	Amines	**Fail**	Pass	Pass	Pass	Pass	Pass

TABLE 23 – Pipe Material Selection

Parameter Group		Pipe Material All Threshold Concentrations are in mg/kg					
		PE	**PVC**	**Barrier Pipe (PE-Al-PE)**	**Wrapped Steel**	**Wrapped Ductile Iron**	**Copper**
1	Extended VOC suite by purge and trap or head space and GC-MS with TIC	✓	✓	Pass	Pass	Pass	Pass
1a	+ BTEX + MTBE	✓	✓	Pass	Pass	Pass	Pass
2	SVOCs TIC by purge and trap or head space and GC-MS with TIC (aliphatic and aromatic C5 – C10)	✓	✓	Pass	Pass	Pass	Pass
2e	+ Phenols	✓	✓	Pass	Pass	Pass	Pass
2f	+ Cresols and chlorinated phenols	✓	✓	Pass	Pass	Pass	Pass
3	Mineral oil C11-C20	**X**	Pass	Pass	Pass	Pass	Pass
4	Mineral oil C20-C40	✓	Pass	Pass	Pass	Pass	Pass
5	Corrosive (Conductivity, Redox and pH)	Pass	Pass	Pass	✓	✓	**X**
2a	Ethers	N/D	N/D	N/D	N/D	N/D	N/D
2b	Nitrobenzene	N/D	N/D	N/D	N/D	N/D	N/D
2c	Ketones	N/D	N/D	N/D	N/D	N/D	N/D
2d	Aldehydes	N/D	N/D	N/D	N/D	N/D	N/D
6	Amines	N/D	N/D	N/D	N/D	N/D	N/D
	Pipes that pass chemical thresholds	**Fail**	✓	✓	✓	✓	**Fail**

9.3.3 The results have concluded that PVC, Barrier (PE-AL-PE) Pipe, Wrapped Steel and Wrapped Ductile Iron water supply pipes could be utilised within the site.

9.3.4 All water supply pipes should be laid in standard width trenches (~0.70 m wide) and backfilled with clean inert material.

10.0 REVISED CONCEPTUAL SITE MODEL

10.1 Contamination Sources/Receptors

Human Health: The shallow made ground deposits underlying the site are considered to pose a risk to human health.

Water Environment: The shallow soils underlying the site are not considered to pose an adverse risk to the water environment.

Ground Gas: Our ground gas risk assessment has indicated that ground gas preclusion measures are deemed necessary, appropriate to '*Characteristic Situation 2*'. Radon gas preclusion measures are not deemed necessary.

Built Environment: Representative samples analysed for pH and sulphate indicate ACEC Classification AC-2 with a design sulphate class for the site of DS-2.

Our water supply pipe risk assessment has indicated that PVC, Barrier (PE-AL-PE) Pipe, Wrapped Steel and Wrapped Ductile Iron water supply pipes could be utilised within the site.

Plant Life: Exceedances of BS3882:2015 screening values for phytotoxic copper and zinc contaminants have been noted.

10.2 Pollutant Linkage Assessment

10.2.1 Based on the environmental investigation results and interpretations, our revised conceptual site model is indicated on Drawing No P18/621/SI/R/F/11.

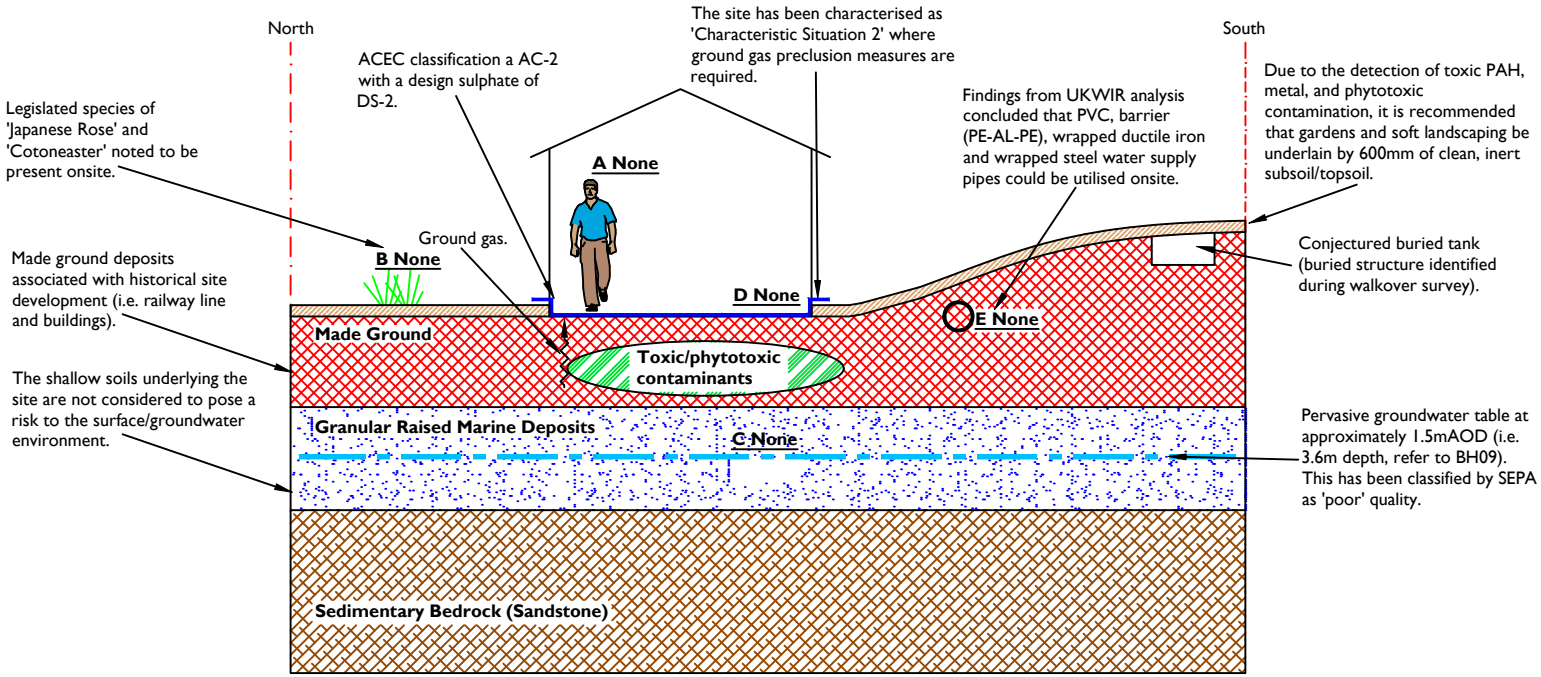
10.3 Mitigation Measures

Human Health and Plant Life

10.3.1 Following the detection of elevated toxic metal/PAH and phytotoxic copper and zinc contaminants, within the shallow soils, we recommend that an environmental capping layer be placed in areas of gardens or soft landscaping. We would recommend a minimum of 600mm thick, comprising at least 450 mm of clean, inert subsoil and 150 mm clean, inert topsoil.

10.3.2 Following our detailed ground gas risk assessment, we conclude that ground gas preclusion measures are required. These measures should be appropriate to 'Characteristic Situation 2', providing a ground gas solution score of at least 3.5. The available protection measures along with relevant scores are outlined in Tables 16, 17 and 18.

10.3.3 Consultation with North Ayrshire Council will be required to finalise the remedial designs.



Source

- Contaminated made ground.
- Ground gas.

Exposure Pathways

1. Outdoor ingestion of dust.
2. Indoor ingestion of dust.
3. Consumption of homegrown vegetables.
4. Ingestion of soil attached to vegetables.
5. Skin contact with outdoor soil.
6. Skin contact with indoor dust.
7. Outdoor inhalation of dust.
8. Indoor inhalation of dust.
9. Outdoor inhalation of soil vapour.
10. Indoor inhalation of soil vapour.
11. Inhalation of ground gases.
12. Contaminant uptake by vegetation.
13. Leaching of contaminants to the groundwater.
14. Contaminant migration in the groundwater.
15. Detrimental effects on buried concrete.
16. Permeation of plastic water supply pipes.

Receptors

A. Site users / construction personnel.
B. Vegetation / fauna.
C. Groundwater.
D. Buried concrete (Service and foundations)
E. Plastic water supply pipes.

NOTES

REV	DATE	DETAILS

NORTH AYRSHIRE COUNCIL

PROJECT TITLE

BEACH DRIVE
IRVINE

DRAWING TITLE

REVISED CONCEPTUAL SITE MODEL

DRAWN BY	CHK'D BY	APP'D BY	DATE	SCALES
AC	HS	PB	04.06.19	Not to Scale

PROJECT No.	DRAWING No.	REVISION
P18/621	P18/621/SI/R/F/11	

MASON EVANS
Geo-Environmental Consultants
t: 0141 420 2025 e: mail@masonevans.co.uk
The Piazza, 95 Morrison Street, Glasgow, G5 8BE

A4 border: 297 X 210

Buried Infrastructure

10.3.4 Following an assessment of the chemical environment, in terms of concrete classification it has been concluded that due to a potentially aggressive concrete environment, a concrete classification of AC-2, with a design Sulphate of DS-2, will be required for all buried infrastructure.

10.3.5 Given the recorded ground conditions (i.e. thick made ground), and the results from UKWIR analyses, it is concluded that PVC, Barrier (PE-AL-PE) Pipe, Wrapped Steel and Wrapped Ductile Iron water supply pipes could be utilised within the site. All future water supply pipes should be laid in standard width trenches (~0.70 m wide) and backfilled with clean inert material.

Construction/Maintenance Workers

10.3.6 All future site staff should remain vigilant to the possible risk of encountering isolated areas of contaminated material. Should potentially contaminated material be encountered, further testing mat be required to assess the risk to health and safety of the site workers and the environment.

10.3.7 Good site working practices should be followed, including:

- Use of appropriately qualified personnel for the task with the appropriate PPE;
- Provision of on-site washing facilities;
- Maintenance of a high standard of basic hygiene; and
- Implementation of a non-smoking and eating policy within the working area, with designated clean areas set aside for these activities.

10.4 Waste Management Legislation

10.4.1 Should materials be removed and disposed off-site, the developer has a statutory responsibility under the Duty of Care Regulations of the Environmental Protection Act 1990 to ensure that contaminated soil and water is disposed of off-site to a suitably licensed waste management facility in a safe and approved manner.

10.4.2 Should the shallow soils be removed to landfill, HazWasteOnlineTM software classified 21 out of 30 No. shallow soil samples as Non-Hazardous waste, 8 No. samples were classified as Hazardous Waste and 1 No. (refer to Appendix 15). This is due to elevated TPH and metal results recorded within the made ground/natural soils which are noted to be carcinogenic, flammable, toxic for reproduction and ecotoxic.

10.4.3 These results should be passed onto waste contractors for review and consultation. The results are included in Appendix 13 and 15.

10.4.4 In the event that material, uncharacteristic to that which has been previously identified within the site is encountered, we would recommend that a suitably qualified engineer/scientist obtain samples of the suspect material for chemical analysis, thus determining how the material should be managed.

10.5 Contingent Liabilities

10.5.1 Assessments of the site include the determination of contingent liabilities in respect of current and future ownerships subsequent to remedial measures. These consider the impact of the environmental conditions on the study area and surrounding areas on site users, properties and also the liability of the site owners.

10.5.2 With regard to site users, considerations in relation to liability are inherent in the development of a suitable remedial strategy. In the site-specific circumstances presented by the identified conditions, the risk levels suggest minimal liability on ownership due to the environmental conditions, subsequent to development.

10.5.3 The potential for liability arising from site conditions impacting on the surrounding environment largely considers the potential for migration of pollutants beyond the site boundary normally associated with groundwater. Based on the soil analyses, and risk assessment we consider the potential for liability arising from the site conditions to be low.

10.5.4 In the event that more definitive advice is required, we would recommend that the Client seeks specific advice on the liabilities incumbent on ownership from their legal advisors.

11.0 GEOTECHNICAL ASSESSMENT

11.1 General

11.1.1 Geotechnical laboratory testing was undertaken on samples of the natural granular soils. In addition, visual assessment of soils during the sinking of boreholes was supplemented by in-situ standard penetration tests (SPT's). It should be recognised that SPT testing of cohesive soils will only provide an indicative assessment of soils strength, although testing of granular soils will provide more reliable test data.

11.1.2 Geotechnical test results are included in Appendix 15.

11.2 Granular Raised Marine Deposits

11.2.1 Granular raised marine deposits were recorded to underlie the made ground. This granular soil was generally described as being Light brown/brown fine to coarse SAND (occasionally described as slightly gravelly/silty). The recorded distribution and depth of these soils is indicated on Drawing No. P18/621/SI/R/F/09.

11.2.2 Particle size distribution tests were undertaken on the granular soils. The results are summarised in Table 25 below.

TABLE 25 – Summary of Particle Size Distribution Testing

Sample (m bgl)	Fines Content (%) (Clay and Silt)	Sand Content (%)	Gravel Content (%)	Cobble Content (%)
BH01 @ 1.00 – 1.90	4	96	0	0
BH02 @ 2.00 – 3.00	3	93	4	0
BH04 @ 3.00 – 4.00	2	91	7	0
BH05 @ 1.00 – 2.00	3	95	2	0
BH07 @ 2.00 – 3.00	12	82	6	0
BH10 @ 3.00 – 4.00	8	79	13	0
BH11 @2.00 – 3.00	3	81	16	0
BH12 @ 1.00 – 2.00	8	57	35	0

* Where a sedimentation was not undertaken, this figure is representative of total fines i.e. particles of diameter less than 63 microns.

11.2.3 The results are in line with engineers' descriptions with a high percentage of SAND recorded.

11.2.4 SPT tests undertaken within the granular raised marine deposits at depths of between 1.00 and 5.95 m, recorded un-corrected N values of between 1 and >50, generally indicative of 'very loose' to 'dense' soils, supporting the observations made on-site.

Depth	BH01	BH02	BH03	BH04	BH05	BH06	BH07	BH08	BH09	BH10	BH11	BH12	BH13
1.00–1.45	15	7	13	7	4	14	4	34	6	8	22	20	12
2.00-2.45	12	9	16	14	1	14	6	26	11	16	15	2	13
3.00–3.45	14	13	12	11	8	6	11	>50*	9	43	20	14	36
3.60–3.60	-	-	-	-	-	-	-	-	-	-	-	>50*	>50*
4.00-4.45	14	9	39	16	18	12	23	-	11	8	44	-	-
4.50-4.95	48	16	50	28	36	29	22	-	14	18	39	-	-
5.00-5.45	-	-	-	-	28	30	20	-	18	22	35	-	-
5.50-5.95	-	-	-	-	33	29	42	-	18	28	36	-	-

**Obstruction encountered*

N VALUES	CLASSIFICATION
0-4	Very Soft / Very Loose
4-10	Soft / Loose
10-30	Firm / Medium Dense
30-50	Stiff / Dense
>50	Very Stiff / Very Dense

11.3 **CBR Probes**

11.3 **California Bearing Ratio (CBR) Probes**

11.3.1 15 No CBR probes were sunk along the approximate route of the proposed road network (Drawing No P18/621/SI/R/F/03) from ground level to depths of 1.00 m bgl. The location of CBR test probes is indicated on Drawing No P18/621/SI/R/F/06.

11.3.2 A copy of the CBR results is included in Appendix 10 and summarised in Table 26 below.

TABLE 26: Summary of California Bearing Ratio (CBR) Testing

CBR No.	Approx. Depth (m bgl)	Average CBR Value (%)	Comments
CBR01	0.00 – 0.25	12	TOPSOIL
	0.25 – 0.40	25 - 40	Made ground – variable
	0.60	27	Loose granular soils
CBR02	0.00 – 0.25	32	TOPSOIL
	0.25 – 0.80	20 - 50	Made ground – variable
	0.80 – 1.00	35	Medium Dense granular soils
CBR03	0.00 – 0.20	10	TOPSOIL
	0.20 – 1.00	8	Made ground – variable

TABLE 26: Summary of California Bearing Ratio (CBR) Testing Cont…

CBR04	0.00 – 0.20	12	TOPSOIL
	0.20 – 1.00	22 - 30	Granular soils
CBR05	0.00 – 0.20	12	TOPSOIL
	0.20 – 1.00	15 - 25	Made ground – variable
CBR06	0.00 – 0.20	22	TOPSOIL
	0.20 – 1.00	25	Made ground – variable
CBR07	0.00 – 0.10	25	TOPSOIL (Spikes due to Cobble)
	0.26 – 0.40	15	Made ground – variable
	0.40 – 1.00	9	Granular soils
CBR08	0.00 – 0.20	35	TOPSOIL
	0.20 – 1.00	32 - 65	Made ground – variable
CBR09	0.00 – 0.30	20	TOPSOIL
	0.30 – 0.60	11 - 20	Made ground - variable
CBR10	0.00 – 0.10	10	TOPSOIL
	0.10 – 1.00	5	Granular Soils
CBR11	0.00 – 0.20	10	TOPSOIL
	0.20 – 0.80	27 - 50	Made ground - variable
	0.80 – 1.00	35	Granular soils
CBR12	0.00 – 0.30	150	Could not progress due to Density/Cobble
CBR13	0.00 – 0.35	110 - 150	Made ground - variable
	0.35 – 1.00	60 - 80	granular soils
CBR14	0.00 – 1.00	10 - 17	Made ground - variable
CBR15	0.00 – 0.30	125	Could not progress due to Density/Cobble

11.3.3 The results from In-situ CBR testing generally indicate variable CBRs within the MADE GROUND soils and therefore if the MADE GROUND was to be utilised as a bearing horizon for the road then a full 600mm thick capping layer would be required.

11.3.4 The natural granular soils were noted to vary between 5% and 80 % which is in keeping with the visual observations and geotechnical testing which recorded the natural granular deposits to vary between loose and medium dense/dense.

11.3.5 Should the natural granular soils be utilised at the bearing horizon for the road then we would recommend that a 225 mm capping layer be allowed for.

11.4 Soakaway Testing

11.4.1 3 No. Soakaway tests (S01 and S03) were undertaken in the areas of the proposed drainage (refer to Drawing Nos. P18/621/SI/R/F/06)

11.4.2 The underlying ground conditions were recorded to comprise topsoil from existing ground level to a depth of 0.20 m, underlain by MADE GROUND described as a gravelly sand or slightly clayey sandy gravel with extraneous material, encountered between 0.70 m and 1.40 m, further underlain by SAND in two of the three pits (SA01 and SA03).

11.4.3 Groundwater was not encountered within the any of the pits.

11.4.4 The results of the soakaway tests are tabulated in Table 23 below.

Table 27 – Summary of Soakaway Testing

Soakaway Test	Depth of Soakaway Pit (m bgl)	Water Level (m bgl)		Infiltration Rate (m/s)
		Start	Finish	
SA01	1.00	0.20	0.85	0.00002356
SA02	1.40	0.40	0.88	0.00001567
SA03	1.50	1.18	1.44	0.00005642

11.4.5 The results from soakaway testing indicate the soils to have a low to moderate infiltration rate.

11.4.6 A copy of the soakaway test logs and results are included in Appendix 11.

12.0 FOUNDATION RECOMENDATIONS

12.1 Proposed Development

12.1.1 The development proposals for the site include for a residential development with gardens and associated roads, as shown in Drawing No P18/621/SI/R/F/03.

12.2 Foundations

12.2.1 The recorded ground conditions were generally consistent with the anticipated sequence of strata indicated by the desk study information. The soils were noted to generally comprise of MADE GROUND (up to 3.95 m thick; generally, between GL and 1.20 m), underlain by natural raised marine deposits (brown fine to coarse SAND) to depths > 6.0m.

12.2.2 Rockhead was not encountered within any of the exploratory hole locations, however it is known to exists at depths of between 15.4 m and 22.4 m depth.

12.2.3 The site is underlain by a relatively shallow groundwater table at approximately 3.6 m depth i.e. 1.50 m AOD.

12.2.4 An obstruction was encountered within BH08 at 3.01 m depth described as a hard concrete obstruction. BH12 and BH13 also encountered obstructions at 3.60 m described as 'presumed boulder'.

12.2.5 Given the variability of made ground deposits, we would not consider that the thick made ground deposits underlying the site could be utilised as suitable foundation bearing horizon.

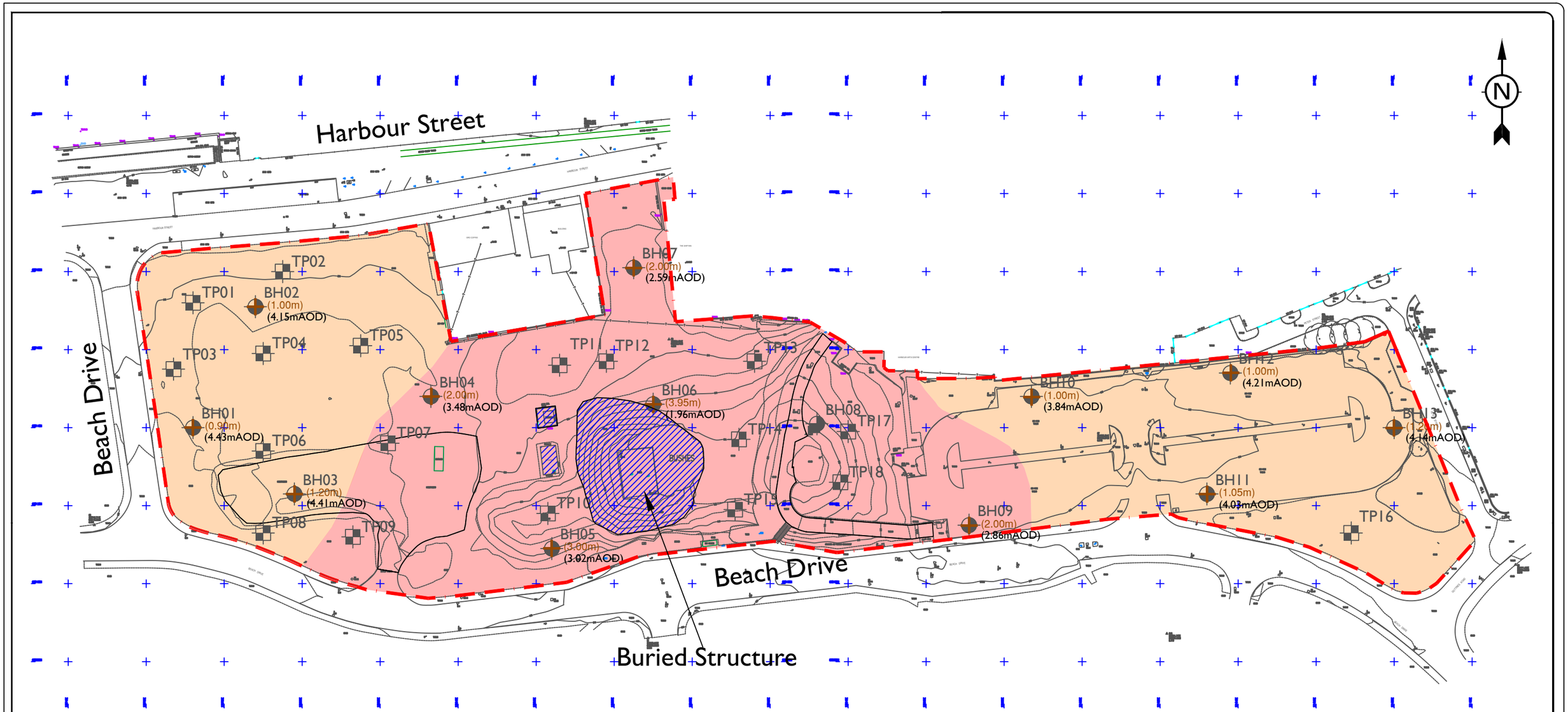
12.2.6 Based on the recorded geology, and confirmed by geotechnical test results, the underlying natural raised marine deposits could be utilised as a foundation bearing horizon.

12.2.7 Depth to a suitable bearing horizon varies across the site. In the eastern and western site areas, the foundation bearing horizon can be expected at <1.0 m below existing site levels with an allowable bearing capacity of 75 kN/m^2 (Drawing No. P18/621/R/F/12).

12.2.8 The central site area is topographically high due to thick made ground and therefore the natural granular soils are at depth. In this area, foundation options include either trench excavations or abnormal options such as vibro-improvement or piling. Please refer to Drawing No. P18/621/R/F/12.

12.2.9 Foundation designs will ultimately depend on final development levels.

12.2.10 Finally, it should be noted that the pits recorded unstable pit side walls within the upper natural granular soils when exposed. This will require consideration when finalising foundation designs.



TP01 to TP18 — Trial pit supervised by Mason Evans Partnership (February, 2019)

BH01 to BH13 — Soils borehole sunk by SKF Ltd (February, 2019)

Depth to foundation bearing horizon (>1.20m below existing site levels) with an allowable bearing capacity of 75kN/m2

Depth to foundation bearing horizon (<1.20m below existing site levels) with an allowable bearing capacity of 75kN/m2

NOTES

- Site boundary
- (1.20m) Recorded depth to medium dense (or better) soils
- (1.20mAOD) Recorded level to medium dense (or better) soils
- Areas of no access

Note:
Topographic survey received from Harley Haddow Ltd (February, 2019)

REV	DATE	DETAILS

NORTH AYRSHIRE COUNCIL

PROJECT TITLE

BEACH DRIVE
IRVINE

DRAWING TITLE

FOUNDATION ZONING PLAN

DRAWN BY	CHK'D BY	APP'D BY	DATE	SCALES
AC	HS	PB	03.06.19	1:1000 @ A3

PROJECT No.	DRAWING No.	REVISION
P18/621	P18/621/SI/R/F/12	

MASON EVANS
Geo-Environmental Consultants
t: 0141 420 2025 e: mail@masonevans.co.uk
The Piazza, 95 Morrison Street, Glasgow, G5 8BE

A3 border: 400 X 273

13.0 CONCLUSIONS AND RECOMMENDATIONS

13.1 General

13.1.1 Intrusive investigations have been undertaken to identify ground related risks that have the potential to impact on the proposed development at the site.

13.1.2 The recorded ground conditions were generally consistent with the anticipated sequence of strata indicated by the desk study information. The soils were noted to generally comprise of made ground (up to 3.95 m thick; generally, between GL and 1.20 m), underlain by natural raised marine deposits (brown fine to coarse SAND) to depths > 6.0m.

13.1.3 Bedrock was not encountered within any of the exploratory hole positions.

13.1.4 Groundwater was recorded at 3.40 m depth. Therefore, we consider that a pervasive groundwater table exists at approximately 1.50 m AOD.

13.2 Chemical Contamination and Gas Emissions

13.2.1 The shallow soils underlying the site are considered to pose a risk to human health with exceedances of metal and PAH contaminants.

13.2.2 Based on chemical analysis of the soils underlying the site, it is considered that they do not pose a risk to the wider water environment.

13.2.3 Phytotoxic copper and zinc contaminants were recorded within the shallow made ground and shallow natural soils. A such we recommend that an environmental capping layer be placed in any gardens and soft landscaping. This capping layer should be a minimum of 600mm thick, comprising at least 450 mm of clean, inert subsoil and 150 mm clean, inert topsoil.

13.2.4 From the site characteristic hazardous gas flow rate, as calculated and based on a worst-case scenario, the ground gas regime was classified as 'Characteristic Situation 2'. As such ground gas preclusion measures are deemed necessary. Radon gas preclusion measures are not deemed necessary.

13.2.5 Should the shallow soils be removed to landfill, HazWasteOnlineTM software classified 21 out of 30 No. shallow soil samples as Non-Hazardous waste, 8 No. samples were classified as Hazardous Waste and 1 No. (refer to Appendix 15). This is due to elevated TPH and metal results recorded within the made ground/natural soils which are noted to be carcinogenic, flammable, toxic for reproduction and ecotoxic. These results should be passed onto waste contractors for review and consultation.

13.3 Invasive Plant Species

13.3.1 The legislated species of Japanese Rose and Cotoneaster have been identified within the site.

13.4 **The Built Environment**

13.4.1 A potential for aggressive chemical conditions is not anticipated within the made ground soils, leading to a recommendation of a concrete ACEC Classification AC-2 with a design sulphate class for the site of DS-2.

13.4.2 Following our water supply pipe risk assessment, we concluded that either barrier (PE-AL-PE), wrapped steel and wrapped ductile iron water supply pipes be allowed for. Water supply pipes should be laid in standard width trenches, and backfilled with clean, inert material.

13.5 **Geotechnical Conclusions and Foundation Recommendations**

13.5.1 Based on existing site levels below the eastern and western site areas, a foundation bearing horizon of <1.20 m depth can be expected and will provide an allowable bearing capacity of 75 kN/m^2.

13.5.2 Below the central site area, a similar bearing horizon was recorded at depths of 2.0 m to 4.0 m.

13.5.3 Foundation solutions will therefore vary from shallow foundations to trench fill or even vibro-improvement or piling. The exact foundation option will be dependent on final development levels. Finally, it should be noted that the pits recorded unstable pit side walls within the granular soils when excavated. This will require consideration when finalising foundation designs.

13.6 **Mining**

13.6.1 Shallow mine workings, recorded mine entries or quarrying activities have not been identified within or in close proximity to the site area. Therefore we conclude that there is a low risk to future developments from shallow mine workings or mine entries.

13.7 **Consultations with Public Authorities**

13.7.1 It should be noted that various local authority departments (North Ayrshire Council) may become involved in the review of the site conditions, including the issues of contaminated land. While measures proposed are consistent with conventional practice we would advise that before design works are advanced to any considerable stage appropriate approvals are received from the relevant Council departments. We would be pleased to liaise with the Council's representatives in this regard.

We trust that this will meet with your current requirements. However, should you require any further information, please do not hesitate to contact us.

Heather Scott
Geo-Environmental Scientist

Patrick Barry
Director

Appendix 01

Site Walkover Survey

WALKOVER SURVEY RECORD

Project Name: Beach Drive, Irvine
Project Number: P18-621
Date of Survey: February 2019
Surveyed By: HS
Weather: Sunny and Dry

VICINITY OF THE SITE		DESCRIPTION
Are there any street/house/locality/pub names indicating current or former land use?	N/A	No
What are the neighbouring land uses?	NORTH	Harbour street with River Irvine beyond
	EAST	A road (Beach Drive)
	SOUTH	Beach Drive (road) with Beach Park Beyond
	WEST	Peter Street with residential properties beyond
Potential off-site receptors		River Irvine

ACCESSES

Describe the site accesses - type, width and headroom.		Open access
Describe any access difficulties for SI plant		N/A

SITE DESCRIPTION - GENERAL

What is the current land use?		Unoccupied greenspace in central and western site area and a car park in the eastern site area
What is the topography?		Flat lying to the east and west with topographically high area in the central site area (man-made landscaped area)
What is the surface cover?		Mainly grass with hardstanding in the car park to the east and a small area of hardstanding in the western site area
Are there any waterlogged areas?		None observed
How are the boundaries formed?		Boundaries are open

Does the topography suggest filling or platforming?	YES	Central site area looks to have been upfilled or re-graded
Are there any subsidence features?	NO	

EXISTING BUILDINGS

What proportion of the site do the buildings cover?		~5% – Two small buildings in central site area expected to be associated with services
Do the building(s) show any evidence of distress?	NO	
Indicate nature and location of materials in storage.		N/A
What processes are evident in the facility?		N/A

TANKS AND WASTE STORAGE

Are there any fuel or chemical storage tanks (surface and underground)? For each tank record whether it is above/under ground, nature of contents, whether full or empty, bunded/unbunded/leaking bund, presence of staining. Mark locations on plan.	NO	Possible tank in central site area – concrete slab cover with pipes. Tank most likely buried.
Is there any evidence of waste storage or disposal?	NO	
Are there any chemical drums or other containers?	NO	
Are there any discharges to surface water?	NO	

HYDROLOGY

Describe any groundwater sources - including flow rate.		
Record positions all springs, ponds and other water on site.		

PUBLIC UTILITIES

Are there any overhead cables - indicate type and location?	YES	Central site area – close to buildings
Are there any manholes - describe?	YES	Drainage
Are there other indications of utilities?	NO	
Are there any electricity transformers	NO	Yes – central site area

HAZARDS

Describe any obvious public health hazards.		

SPILLAGES AND CONTAMINATION

Are there any indications of oil or other spillages?	NO	
Is their evidence of contaminated soils?	NO	
Is there evidence of distress to vegetation?	NO	
Describe constituents of any flytipping.		N/A
Is there surface evidence of asbestos contaminated soil?	NO	
Are there any noxious smells?	NO	

GEOLOGY

Soil and rock – record and describe any exposed soils or rocks that are present.		

MINING AND QUARRYING

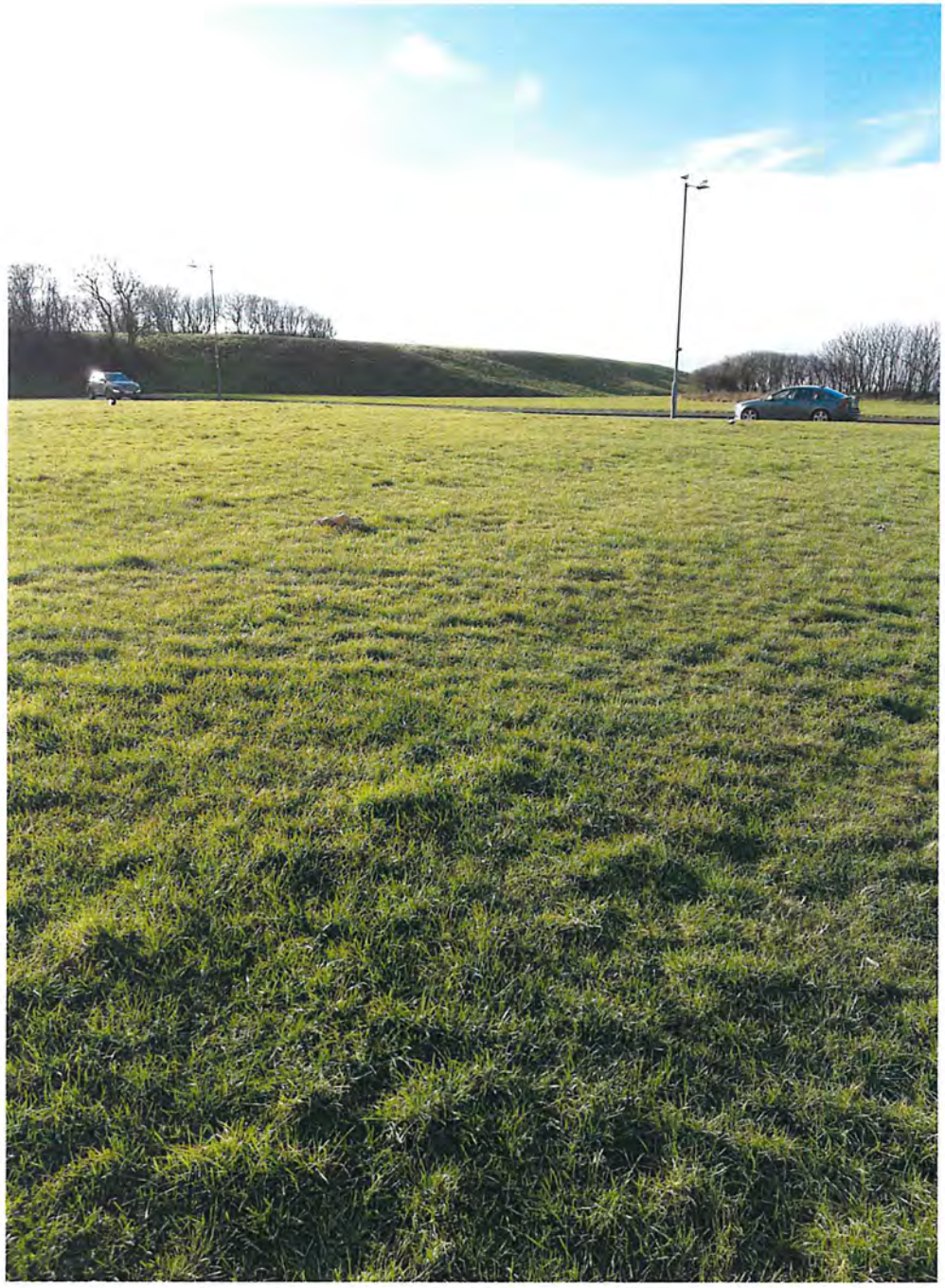
Are there any signs of mineral extraction in the area, such as old mine buildings, derelict or hummocky land, surface depressions, evidence of infilling or spoil heaps.	NO	
Is their evidence of any quarrying?	NO	

SLOPE STABILITY

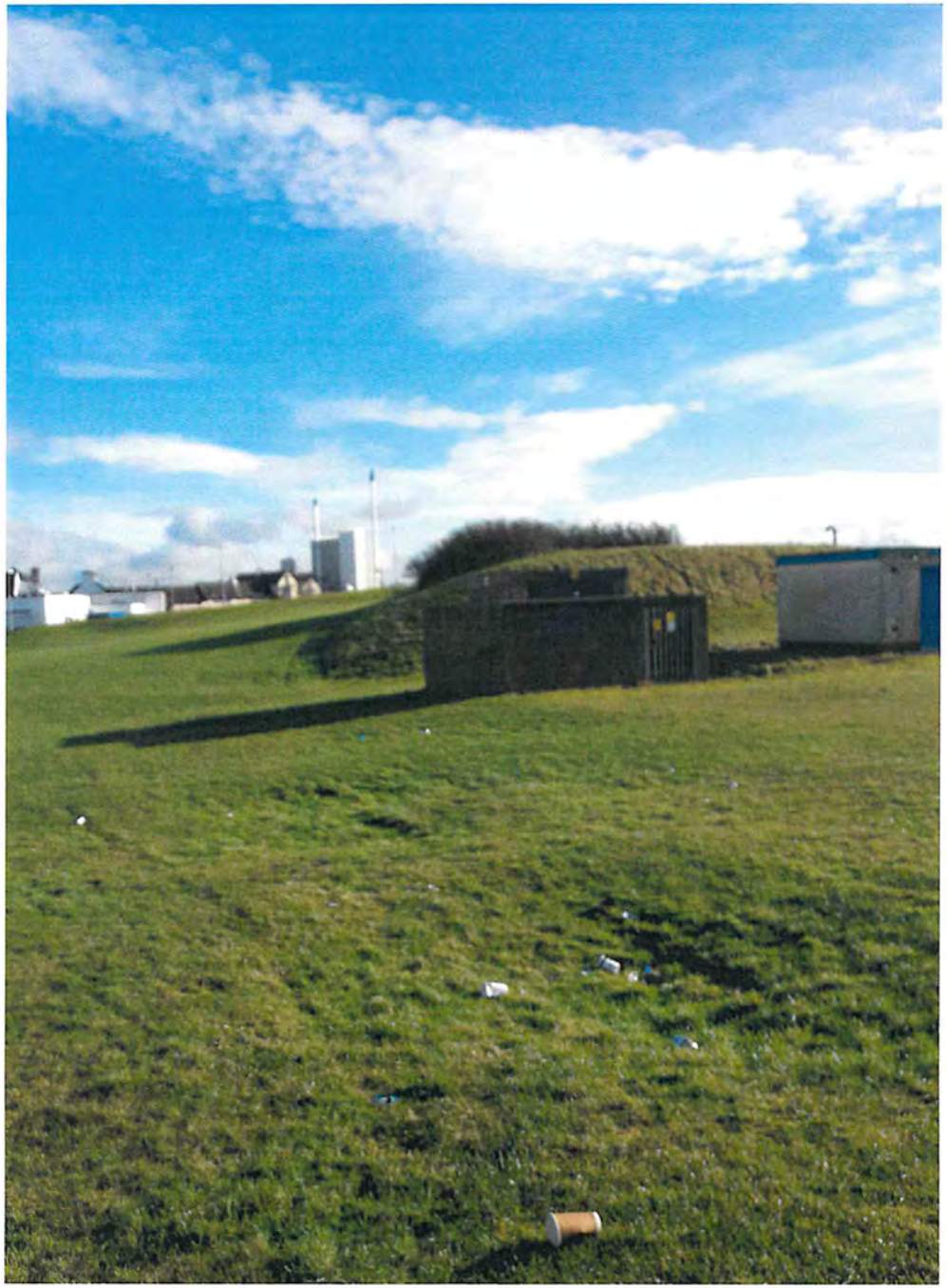
Are there any risks of slope instability?	NO	
Is there evidence of previous land slipping?	NO	

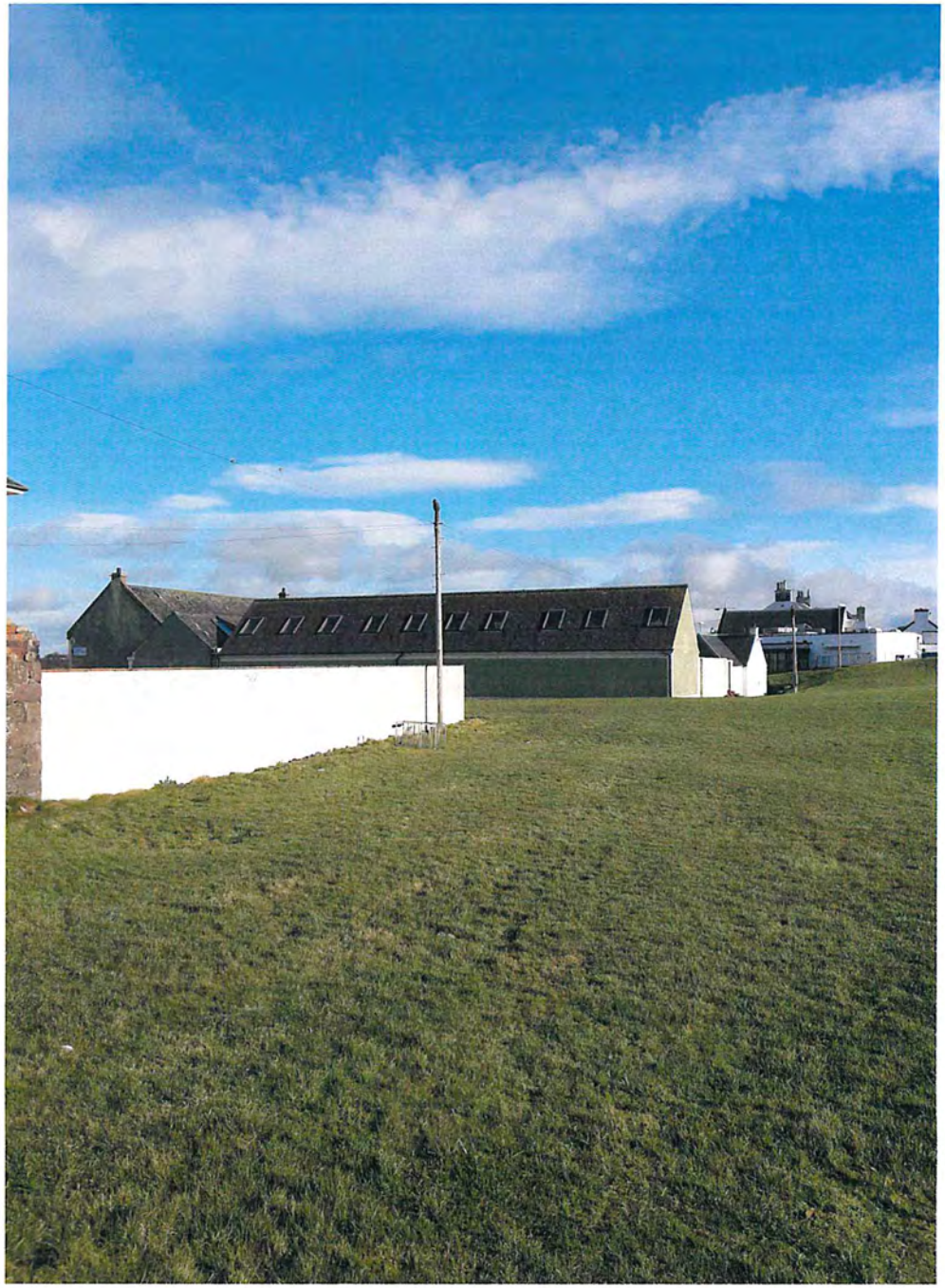
INVASIVE PLANTS

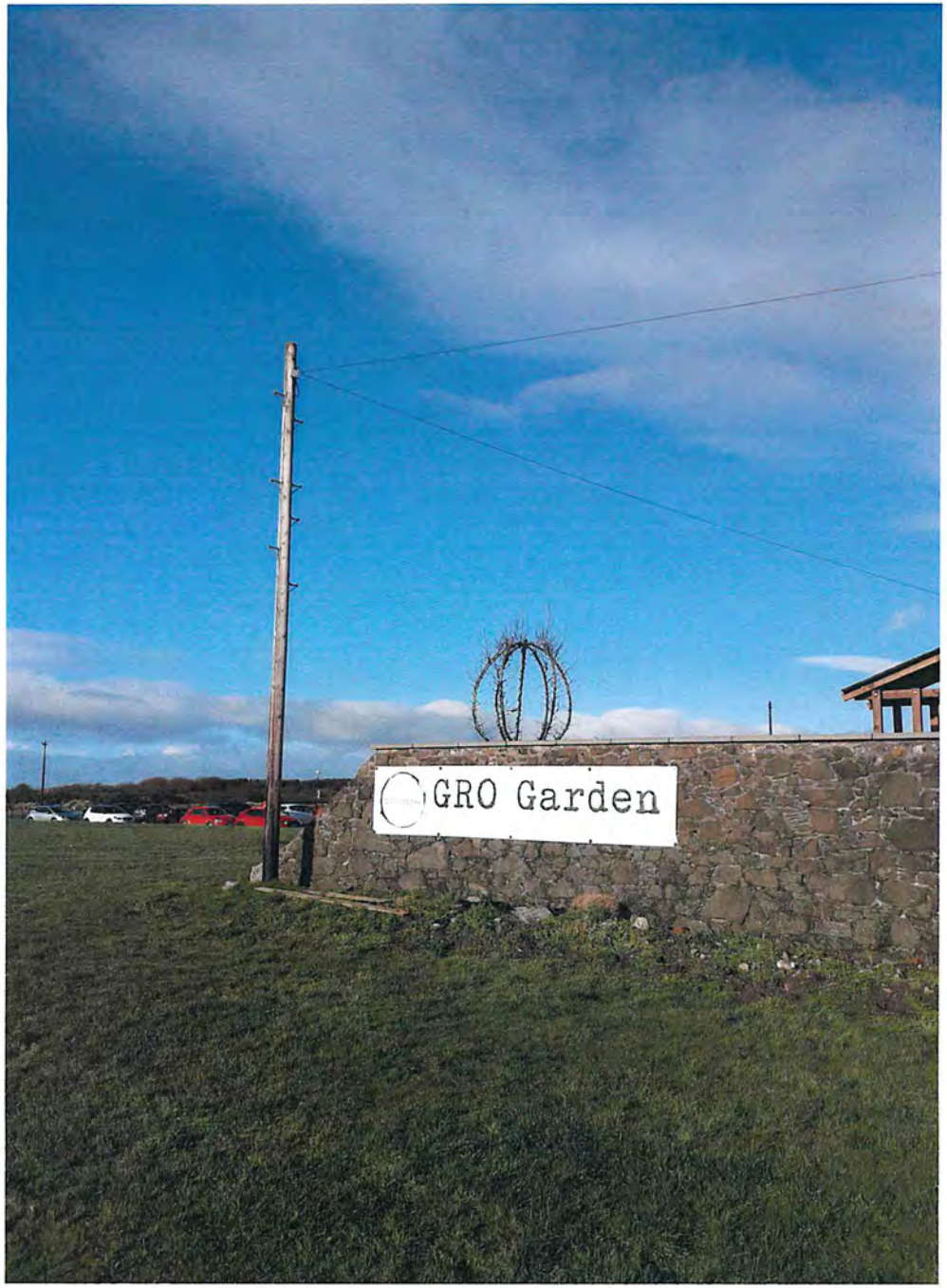
Are there any obvious invasive plants?		None observed




GRO Garden

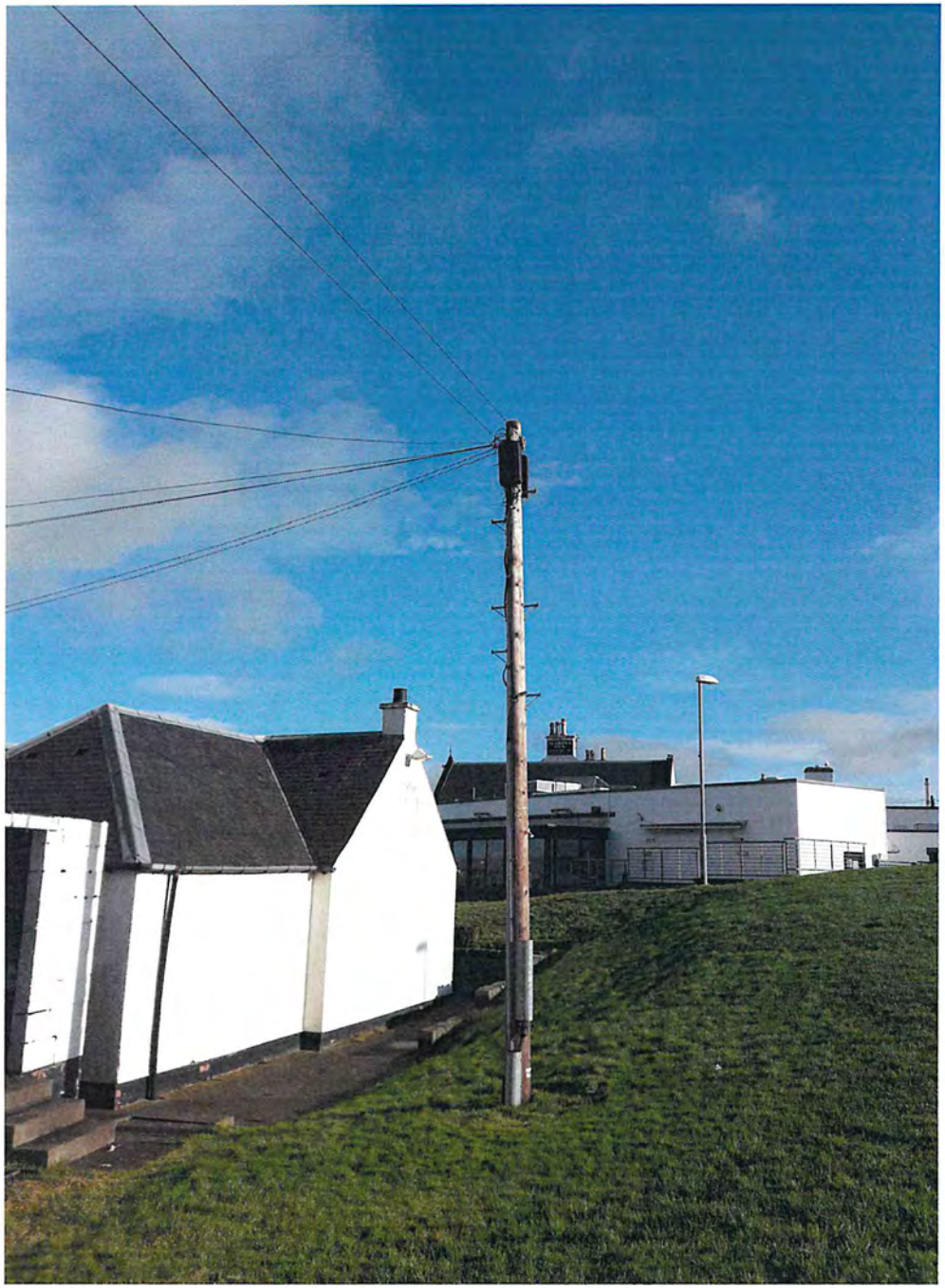





GRO Garden


DANGER OF DEATH
KEEP OUT


P
8




MH.60/60
SAVAGE
63A97/1976 GRP


MH.60/60
SAVAGE
63A97/1976 GRP

Appendix 02

Historical Ordnance Survey Maps and Datasheets

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
194289274_1_1

Customer Reference:
P18-621

National Grid Reference:
230920, 638150

Slice:
A

Site Area (Ha):
1.89

Search Buffer (m):
1000

Site Details:

80, Harbour Street
IRVINE
KA12 8PZ

Client Details:

Ms P Morton
Mason Evans Partnership
The Piazza
95 Morrison Street
(office side door on Dalentober St)
Glasgow
G5 8BE

Contents

Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination.
For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.
In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

Report Version v53.0

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 4		4	3	7
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 7			1	5
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 8		Yes		
Pollution Incidents to Controlled Waters					
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances	pg 8				1
River Quality					
Substantiated Pollution Incident Register					
Water Abstractions					
Water Industry Act Referrals					
Groundwater Vulnerability	pg 8	Yes	n/a	n/a	n/a
Drift Deposits			n/a	n/a	n/a
Source Protection Zones					
River Flood Data (Scotland)				n/a	n/a
OS Water Network Lines	pg 8		3	3	19
Waste					
BGS Recorded Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 12	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites	pg 12	1		1	2
Registered Landfill Sites	pg 13		1		1
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)	pg 14				1
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents	pg 14				2
Planning Hazardous Substance Enforcements					
Geological					
BGS 1:625,000 Solid Geology	pg 15	Yes	n/a	n/a	n/a
BGS Recorded Mineral Sites	pg 15			3	4
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas	pg 16	Yes	n/a	n/a	n/a
Mining Instability	pg 16	Yes	n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 16		Yes	n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 16	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 16	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 17	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards				n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 18		3	9	83
Fuel Station Entries	pg 26				2
Gas Pipelines					

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland					
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
National Scenic Areas					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones					
Ramsar Sites					
Sites of Special Scientific Interest	pg 27		1		
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NW (N)	0	1	230900 638200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NE)	0	1	230918 638149
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SE (E)	21	1	231050 638100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (E)	28	1	231050 638200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	34	1	231000 638200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NE (NE)	78	1	231000 638250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (W)	108	1	230650 638150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NW (N)	147	1	230918 638350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NE (E)	150	1	231200 638250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (S)	153	1	230918 637950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (S)	159	1	230950 637950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SE (SE)	191	1	231150 637950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	219	1	230550 638250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	253	1	231250 638350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	259	1	230500 638200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (N)	270	1	231000 638450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A14NW (NE)	290	1	231300 638350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (S)	291	1	230850 637800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (SW)	309	1	230550 637900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	309	1	230450 638200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	313	1	231000 637800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	319	1	231050 637800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (NE)	324	1	231300 638400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (SW)	345	1	230550 637850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (S)	345	1	230918 637750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (S)	345	1	230850 637750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (SW)	346	1	230500 637900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (NW)	351	1	230450 638350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A14SW (SE)	354	1	231300 637850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	358	1	230400 638150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (SW)	358	1	230600 637800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A14NW (NE)	360	1	231350 638400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (SW)	360	1	230450 637950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A14NW (NE)	361	1	231300 638450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A18SE (N)	363	1	231000 638550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (SE)	369	1	231250 637800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (NW)	372	1	230500 638450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (SW)	379	1	230500 637850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (SW)	384	1	230650 637750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NE (SW)	385	1	230550 637800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (SW)	386	1	230450 637900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SE (NE)	387	1	231150 638550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (NE)	395	1	231350 638450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (S)	395	1	230918 637700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A19SW (NE)	401	1	231300 638500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (SW)	403	1	230600 637750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	413	1	231000 637700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (NW)	419	1	230400 638400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A17SE (NW)	443	1	230450 638500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (S)	445	1	230918 637650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (S)	447	1	230800 637650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NW (SW)	449	1	230600 637700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (S)	453	1	230750 637650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (S)	457	1	230950 637650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	462	1	231000 637650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (SW)	464	1	230700 637650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A9NW (SE)	464	1	231350 637750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	468	1	231050 637650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A14NW (NE)	469	1	231450 638450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (SW)	478	1	230650 637650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A19SW (NE)	486	1	231300 638600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (S)	495	1	230900 637600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (S)	496	1	230800 637600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A18SW (N)	497	1	230900 638700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (N)	499	1	230850 638700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Discharge Consents** Operator: Strathclyde Regional Council Property Type: Not Given Location: Combined Storm Overflow, Crosskeys Harbour Street, IRVINE Authority: Scottish Environment Protection Agency, West Region Catchment Area: Not Given Reference: 0 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Sewage Effluent Discharge-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Irvine **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A13NW (W)	1	2	230810 638190
2	**Discharge Consents** Operator: Strathclyde Regional Council Property Type: Not Given Location: Combined Storm Overflow, Car Park (Side Of Magnum), Number 14, IRVINE Authority: Scottish Environment Protection Agency, West Region Catchment Area: Not Given Reference: 0 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Sewage Effluent Discharge-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Irvine **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A13SE (SE)	60	2	231040 638060
3	**Discharge Consents** Operator: Strathclyde Regional Council Property Type: Not Given Location: Combined Storm Overflow, Gottries Road, IRVINE Authority: Scottish Environment Protection Agency, West Region Catchment Area: Not Given Reference: 0 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Sewage Effluent Discharge-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Irvine **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A13SE (E)	78	2	231150 638090
4	**Discharge Consents** Operator: Strathclyde Regional Council Property Type: Not Given Location: Combined Storm Overflow, Water Sports Club, Harabour Street, IRVINE Authority: Scottish Environment Protection Agency, West Region Catchment Area: Not Given Reference: 0 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Sewage Effluent Discharge-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Irvine **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A13NE (NE)	105	2	231140 638250

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	**Discharge Consents** Operator: Nobel's Explosives Co Ltd Property Type: Not Given Location: New Discharge, Ardeer Works, STEVENSTON, Ayrshire Authority: Scottish Environment Protection Agency, West Region Catchment Area: Not Given Reference: CP5765 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 11th August 1977 Revocation Date: Not Supplied Discharge Type: Trade Effluent Discharge Environment: Freshwater Stream/River Receiving Water: River Irvine **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A12SE (W)	275	2	230520 638000
5	**Discharge Consents** Operator: Nobel' S Explosives Company Limited Property Type: Not Given Location: New Discharge To The River Irvine From, Ardeer Works, STEVENSTON, Ayrshire Authority: Scottish Environment Protection Agency, West Region Catchment Area: Not Given Reference: 5765 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 11th August 1977 Revocation Date: Not Supplied Discharge Type: Trade Effluent Discharge Environment: Freshwater Stream/River Receiving Water: River Irvine **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A12SE (W)	277	2	230520 637995
6	**Discharge Consents** Operator: Strathclyde Regional Council Property Type: Not Given Location: Combined Storm Overflow, Montgomery Street, IRVINE Authority: Scottish Environment Protection Agency, West Region Catchment Area: Not Given Reference: 0 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Sewage Effluent Discharge-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Irvine **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A14NW (NE)	410	2	231390 638430
7	**Discharge Consents** Operator: Strathclyde Regional Council Property Type: Not Given Location: Warrix East Phase I , Industrial Estate, Long Drive, IRVINE Authority: Scottish Environment Protection Agency, West Region Catchment Area: Not Given Reference: CD8203 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 6th February 1989 Revocation Date: Not Supplied Discharge Type: Surface Water Discharge Environment: Unknown Receiving Water: Not Supplied **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	612	2	231380 638700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	**Discharge Consents** Operator: Imperial Chemical Industries Ltd Property Type: Not Given Location: Outfall Number 6, Ardeer Site, STEVENSTON, Ayrshire Authority: Scottish Environment Protection Agency, West Region Catchment Area: Not Given Reference: 51321 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 22nd September 1992 Revocation Date: Not Supplied Discharge Type: Public Sewage: Septic Tank Discharge Environment: Controlled Waters Receiving Water: River Garnock **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A17SE (NW)	692	2	230300 638700
9	**Discharge Consents** Operator: Strathclyde Regional Council Property Type: Not Given Location: Combined Storm Overflow, Ayrshire Metals, Victoria Roundabout, IRVINE Authority: Scottish Environment Protection Agency, West Region Catchment Area: Not Given Reference: 0 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Sewage Effluent Discharge-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Irvine **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	706	2	231460 638760
10	**Discharge Consents** Operator: Strathclyde Regional Council Property Type: Not Given Location: Beach Park Pumping Station And, Emergency Outfall Marine Drive, IRVINE Authority: Scottish Environment Protection Agency, West Region Catchment Area: Not Given Reference: 8356 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 25th May 1989 Revocation Date: Not Supplied Discharge Type: Sewerage Emergency Discharge Discharge Environment: Controlled Waters Receiving Water: Firth Of Clyde **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A8SE (SE)	717	2	231250 637430
11	**Discharge Consents** Operator: Imperial Chemical Industries Ltd Property Type: Not Given Location: Outfall Number 7, Ardeer Site, STEVENSTON, Ayrshire Authority: Scottish Environment Protection Agency, West Region Catchment Area: Not Given Reference: 51311 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 22nd September 1992 Revocation Date: Not Supplied Discharge Type: Public Sewage: Septic Tank Discharge Environment: Freshwater Stream/River Receiving Water: River Garnock **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A17SW (NW)	762	2	230200 638700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
12	**Discharge Consents** Operator: Strathclyde Regional Council Property Type: Not Given Location: Emergency Outfall And Screen Chamber For, Proposed Irvine Harbour Pumping Station Authority: Scottish Environment Protection Agency, West Region Catchment Area: Not Given Reference: 8599 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 21st November 1989 Revocation Date: Not Supplied Discharge Type: Sewerage Emergency Discharge Discharge Environment: Controlled Waters Receiving Water: Firth Of Clyde **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A7NW (SW)	905	2	230020 637610
13	**Discharge Consents** Operator: Strathclyde Regional Council Property Type: Not Given Location: Combined Storm Overflow, St Paul's Church, IRVINE Authority: Scottish Environment Protection Agency, West Region Catchment Area: Not Given Reference: 0 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Sewage Effluent Discharge-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Irvine **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A19SE (NE)	980	2	231840 638780
14	**Local Authority Pollution Prevention and Controls** Name: Rockware Glass Ltd Location: Rockware Glass, Portland Road, Irvine Authority: Scottish Environment Protection Agency, West Region Permit Reference: Apc/W/0000181 Dated: 29th March 1999 Process Type: Local Authority Air Pollution Control Description: PG3/3 Glass (excluding lead glass) manufacturing processes **Status: Authorised** Positional Accuracy: Manually positioned to the road within the address or location	A14SW (SE)	384	2	231380 637887
15	**Local Authority Pollution Prevention and Controls** Name: Blue Circle Cement Location: Portland Place, IRVINE, Ayrshire, KA12 Authority: Scottish Environment Protection Agency, West Region Permit Reference: Not Given Dated: 2nd October 1992 Process Type: Local Authority Air Pollution Control Description: PG3/1Blending, packing, loading and use of bulk cement **Status: Application Withdrawn** Positional Accuracy: Manually positioned to the road within the address or location	A14SW (E)	524	2	231577 637952
16	**Local Authority Pollution Prevention and Controls** Name: Wilson Pipe Fittings (Jadeloan Ltd) Location: Portland Road, IRVINE, Ayrshire, KA12 8JE Authority: Scottish Environment Protection Agency, West Region Permit Reference: APC/W/00158 Dated: 16th July 1993 Process Type: Local Authority Air Pollution Control Description: Part B - General Metal Process (No Specific Reference) **Status: Authorised** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	651	2	231602 637738
17	**Local Authority Pollution Prevention and Controls** Name: Nacco Materials Handling (Scotland) Ltd Location: Portland Road, The Industrial Estate, IRVINE, Ayrshire, KA12 8JG Authority: Scottish Environment Protection Agency, West Region Permit Reference: Apc/W/0000192 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG6/10 Coating manufacturing **Status: Authorised** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	773	2	231601 637556

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
18	**Local Authority Pollution Prevention and Controls** Name: Tesco Stores Limited Location: Petrol Filling Station, Riverway, Ayr Road, Irvine Authority: Scottish Environment Protection Agency, West Region Permit Reference: Apc/W/0020413 Dated: 12th May 1999 Process Type: Air Pollution Controls (Part B Processes) Description: Not Supplied **Status:** **Not Supplied** Positional Accuracy: Manually positioned to the address or location	A15SW (E)	897	2	231982 638056
19	**Local Authority Pollution Prevention and Controls** Name: David Flanagan Ltd Location: 11 Ailsa Road, Irvine Industrial Estate, IRVINE, Ayrshire, KA12 8LR Authority: Scottish Environment Protection Agency, West Region Permit Reference: APC/W/00160 Dated: 20th August 1993 Process Type: Local Authority Air Pollution Control Description: PG2/4 Iron, steel and non-ferrous metal foundry processes **Status:** **Authorised** Positional Accuracy: Automatically positioned to the address	A9SW (SE)	991	2	231554 637258
	Nearest Surface Water Feature	A13NE (N)	43	-	230928 638227
20	**Registered Radioactive Substances** Name: Tesco Stores Ltd Location: 51 River Gate, IRVINE, Ayrshire, KA12 8EQ Authority: Scottish Environment Protection Agency, Head Office Permit Reference: IPB/3/2/SG/023 Dated: 25th April 1989 Process Type: Registration under S7 RSA for the keeping and use of Radioactive materials (was RSA60 S1) Description: Registration under S7 RSA for 1 or more closed sources **Status:** **Not Given** Positional Accuracy: Unknown	A19SE (NE)	942	3	231871 638672
	Groundwater Vulnerability Geological Classification: Inland water or sea Soil Classification: Not classified Map Sheet: Sheet 54 Map Of Scotland Scale: 1:625,000	A13NW (NE)	0	3	230918 638149
	Groundwater Vulnerability Geological Classification: Minor or Moderately Permeable Aquifer - Fractured or potentially fractured rocks which do not have a high primary permeability or other formations of variable permeability Soil Classification: Not classified Map Sheet: Map of Scotland Scale: 1:625,000	A13SE (SE)	0	3	230931 638124
	Drift Deposits None				
	River Flood Data (Scotland) None				
21	**OS Water Network Lines** Watercourse Form: Tidal river Watercourse Length: 1224.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Irvine Catchment Name: River Irvine Primacy: 1	A13NW (N)	51	5	230912 638255
22	**OS Water Network Lines** Watercourse Form: Tidal river Watercourse Length: 816.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Irvine Catchment Name: River Irvine Primacy: 1	A13NW (NW)	148	5	230641 638272

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
23	**OS Water Network Lines** Watercourse Form: Tidal river Watercourse Length: 2230.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Garnock Catchment Name: North Ayrshire Coastal Primacy: 1	A13NW (NW)	148	5	230641 638272
24	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 112.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: North Ayrshire Coastal Primacy: 1	A12NE (W)	289	5	230492 638297
25	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 65.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: North Ayrshire Coastal Primacy: 1	A12NE (W)	308	5	230462 638264
26	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 79.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: North Ayrshire Coastal Primacy: 1	A12NE (W)	315	5	230456 638271
27	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 80.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: North Ayrshire Coastal Primacy: 1	A18NE (N)	625	5	230954 638825
28	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 41.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: North Ayrshire Coastal Primacy: 1	A18NW (N)	673	5	230824 638872
29	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 55.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: North Ayrshire Coastal Primacy: 1	A18NW (N)	681	5	230896 638884
30	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: North Ayrshire Coastal Primacy: 1	A18NW (N)	685	5	230853 638887
31	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: North Ayrshire Coastal Primacy: 1	A18NE (N)	686	5	231015 638878

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
32	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 82.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: North Ayrshire Coastal Primacy: 1	A18NE (N)	689	5	231017 638881
33	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 49.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: North Ayrshire Coastal Primacy: 1	A18NW (N)	690	5	230859 638892
34	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 10.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: North Ayrshire Coastal Primacy: 1	A18NW (N)	720	5	230896 638923
35	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 119.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: North Ayrshire Coastal Primacy: 1	A18NW (N)	730	5	230897 638933
36	**OS Water Network Lines** Watercourse Form: Foreshore Watercourse Length: 17.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 1	A18NE (N)	755	5	231080 638934
37	**OS Water Network Lines** Watercourse Form: Tidal river Watercourse Length: 29.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 1	A18NE (N)	769	5	231093 638945
38	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 36.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: North Ayrshire Coastal Primacy: 1	A18NW (N)	769	5	230906 638972
39	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: North Ayrshire Coastal Primacy: 1	A18NE (N)	793	5	230935 638995
40	**OS Water Network Lines** Watercourse Form: Tidal river Watercourse Length: 115.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Irvine Catchment Name: River Irvine Primacy: 1	A18NE (N)	794	5	231116 638965

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
41	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 44.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: North Ayrshire Coastal Primacy: 1	A18NE (N)	799	5	230941 639000
42	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: North Ayrshire Coastal Primacy: 1	A18NE (N)	830	5	230975 639028
43	**OS Water Network Lines** Watercourse Form: Foreshore Watercourse Length: 16.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: North Ayrshire Coastal Primacy: 1	A18NE (N)	836	5	230990 639033
44	**OS Water Network Lines** Watercourse Form: Tidal river Watercourse Length: 30.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 1	A18NE (N)	843	5	231006 639038
45	**OS Water Network Lines** Watercourse Form: Tidal river Watercourse Length: 442.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Irvine Catchment Name: River Irvine Primacy: 1	A18NE (N)	856	5	231036 639047

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority Landfill Coverage Name: North Ayrshire Council - Has supplied landfill data		0	6	230918 638149
46	**Local Authority Recorded Landfill Sites** Location: Irvine Beach Park, Irvine Reference: C Authority: North Ayrshire Council **Last Reported Status:** **Unknown** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Good	A13NW (NE)	0	6	230918 638149
47	**Local Authority Recorded Landfill Sites** Location: Disused Slipway, Church Street, Irvine Reference: 2 Authority: North Ayrshire Council **Last Reported Status:** **Unknown** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Good	A14NW (NE)	355	6	231276 638461
48	**Local Authority Recorded Landfill Sites** Location: Stevenston Works Tip, Stevenston Reference: 3 Authority: North Ayrshire Council **Last Reported Status:** **Unknown** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Good	A17SE (NW)	650	6	230299 638641
49	**Local Authority Recorded Landfill Sites** Location: River Bank Infill Reference: 22 Authority: North Ayrshire Council **Last Reported Status:** **Unknown** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Good	A18NE (N)	791	6	231214 638949

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
50	**Registered Landfill Sites** Licence Holder: I.C.I. Organics Ltd Licence Reference: 3 Site Location: Stevenston Works Tip, Stevenston, Ayrshire Licence Easting: Not Supplied Licence Northing: Not Supplied Operator Location: Organics Div. Stevenston Works, STEVENSTON, Ayrshire, KA20 3LN Authority: Scottish Environment Protection Agency, West Region Site Category: Landfill Max Input Rate: Undefined Waste Source Restrictions: Waste produced/controlled by licence holder Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st May 1979 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Positioned by the supplier Boundary Accuracy: Moderate Authorised Waste: Demolition Wastes; Excavation Waste; House. + Com. Untreated Waste; Ind. Non-Haz. Waste; Ind. Notifiable Waste Prohibited Waste: Cadmium & Cadmium Compounds; Cyanide; Mercury & Mercury Compounds; Oil; Organic Solvents Considered Harmful; Organohalogens; Phenol; Toxic Metals In Insol.Form; Waste Forming Polluting Leachate; Waste Harmful To Aquatic Environment; Wastes With Ph < 6.0; Wastes With Ph > 9.0	A12NE (NW)	220	2	230569 638294
51	**Registered Landfill Sites** Licence Holder: Ayrshire Metal Products Licence Reference: 2 Site Location: Disused Dockyard, 17 Church Street, Irvine, Ayrshire, Ka12 8ph Licence Easting: Not Supplied Licence Northing: Not Supplied Operator Location: As Site Address Authority: Scottish Environment Protection Agency, West Region Site Category: Landfill Max Input Rate: Undefined Waste Source Restrictions: No known restriction on source of waste Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st October 1978 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Positioned by the supplier Boundary Accuracy: Moderate Authorised Waste: Building Rubble; Topsoil	A19SW (NE)	527	2	231334 638629

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
52	**Control of Major Accident Hazards Sites (COMAH)** Name: Barony Universal Products Plc Location: Unit 65, 3rd Avenue, Irvine, North Ayrshire, KA12 8HM Reference: 1037080 Type: Lower Tier **Status: Active** Positional Accuracy: Manually positioned to the address or location	A14SE (E)	804	7	231847 637876
53	**Planning Hazardous Substance Consents** Name: Barony Universal Products Plc Location: Unit 65 Third Avenue, Irvine, Ka12 8hm Authority: North Ayrshire Council, Planning Department Application Ref: 05/01057/Hsc Hazardous Substance: Liquefied extremely flammable gas (including LPG) and natural gas (whether liquefied or not) Maximum Quantity: 180 Application date: 2nd November 2005 **Decision: Deemed Consent GrantedGranted** Positional Accuracy: Located by supplier to within 10m	A9NE (SE)	841	8	231829 637742
53	**Planning Hazardous Substance Consents** Name: Barony Universal Products Plc Location: Unit 65 Third Avenue, Heatherhouse Industrial Estate, Irvine, Ayrshire, Ka18 2bl Authority: North Ayrshire Council, Planning Department Application Ref: 05/01057/HSC Hazardous Substance: Liquefied extremely flammable gas (including LPG) and natural gas (whether liquefied or not) Maximum Quantity: 180 Application date: Not Supplied **Decision: New application granted conditionallyGranted** Positional Accuracy: Located by supplier to within 10m	A9NE (SE)	841	8	231829 637742

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Scottish Coal Measures Group	A13NW (NE)	0	1	230918 638149
54	**BGS Recorded Mineral Sites** Site Name: Irvine Beach Sand Pit Location: Irvine, Ayrshire Source: British Geological Survey, National Geoscience Information Service Reference: 25659 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Blown Sand Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A8NE (S)	392	1	230995 637720
55	**BGS Recorded Mineral Sites** Site Name: Irvine Sand Pit Location: Irvine, Ayrshire Source: British Geological Survey, National Geoscience Information Service Reference: 234039 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glacial Deposits Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A8NE (S)	449	1	231027 637667
56	**BGS Recorded Mineral Sites** Site Name: Irvine Sand Pit Location: Irvine, Ayrshire Source: British Geological Survey, National Geoscience Information Service Reference: 234038 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glacial Deposits Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A8NE (SE)	471	1	231126 637655
57	**BGS Recorded Mineral Sites** Site Name: Irvine Beach Sand Pit Location: Irvine, Ayrshire Source: British Geological Survey, National Geoscience Information Service Reference: 25722 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Blown Sand Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A8NE (S)	617	1	231175 637515
58	**BGS Recorded Mineral Sites** Site Name: Irvine Gravel Pit Location: Irvine, Ayrshire Source: British Geological Survey, National Geoscience Information Service Reference: 25660 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Alluvium Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	620	1	231330 638735

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
59	**BGS Recorded Mineral Sites** Site Name: Fullarton Sand Pit Location: Irvine, Ayrshire Source: British Geological Survey, National Geoscience Information Service Reference: 25662 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Raised Marine Deposits Of Flandrian Age Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A15NW (E)	962	1	232050 638190
60	**BGS Recorded Mineral Sites** Site Name: Fullarton Sand Pit Location: Irvine, Ayrshire Source: British Geological Survey, National Geoscience Information Service Reference: 25661 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Raised Marine Deposits Of Flandrian Age Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A15NW (E)	976	1	232055 638280
	Coal Mining Affected Areas Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	A13NE (E)	0	9	231000 638149
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13NW (NE)	0	-	230918 638149
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NE)	0	1	230918 638149
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	33	1	230934 638070
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NE)	0	1	230918 638149
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NW (NE)	0	1	230918 638149
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	2	1	230793 638089
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	33	1	230934 638070
	Potential for Compressible Ground Stability Hazards Hazard Potential: High Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	112	1	230915 638316
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NE)	0	1	230918 638149
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NE)	0	1	230918 638149
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	60	1	231060 638231

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	72	1	230982 638234
	Potential for Landslide Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	209	1	231198 638337
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	234	1	231228 638344
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NE)	0	1	230918 638149
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NE)	0	1	230918 638149
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	41	1	230914 638245
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	57	1	230978 638245
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	112	1	230915 638316
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A12NE (NW)	238	1	230554 638304
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NE)	0	1	230918 638149
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13NW (NE)	0	1	230918 638149
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13NW (NE)	0	1	230918 638149

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
61	**Contemporary Trade Directory Entries** Name: Gwen Davey Location: 126, Harbour Street, Irvine, Ayrshire, KA12 8PZ Classification: French Polishing **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (N)	16	-	230909 638202
62	**Contemporary Trade Directory Entries** Name: T C Anderson Location: Montgomery St Yard,Harbour St, Irvine, Ayrshire, KA12 8PZ Classification: Car Dealers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13NE (NE)	93	-	231126 638246
62	**Contemporary Trade Directory Entries** Name: Irvine Harbour Co Location: Harbour St, Irvine, Ayrshire, KA12 8PY Classification: Ports, Docks & Harbours **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13NE (NE)	112	-	231143 638256
63	**Contemporary Trade Directory Entries** Name: Travel Iron Location: 42, Bimson Place, Irvine, Ayrshire, KA12 8QF Classification: Ironing & Home Laundry Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (E)	263	-	231349 638181
64	**Contemporary Trade Directory Entries** Name: Wheatley Pallet Services Location: 26, Gottries Road, Irvine, Ayrshire, KA12 8QE Classification: Pallets, Crates & Packing Cases **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (E)	274	-	231337 638258
64	**Contemporary Trade Directory Entries** Name: Jewson Location: Gottries Road, Irvine, Ayrshire, KA12 8QE Classification: Builders' Merchants **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NW (E)	314	-	231376 638270
65	**Contemporary Trade Directory Entries** Name: Glen D Knitwear Ltd Location: 11 Montgomery Pl, Irvine, Ayrshire, KA12 8PN Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	487	-	231493 638418
65	**Contemporary Trade Directory Entries** Name: Macnewco 76 Location: 11 Montgomery Pl, Irvine, Ayrshire, KA12 8PN Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	487	-	231493 638418
65	**Contemporary Trade Directory Entries** Name: J A Tinting Specialist Location: 1a Montgomery Pl, Irvine, Ayrshire, KA12 8PN Classification: Window Tinting **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A14NW (NE)	504	-	231504 638433
65	**Contemporary Trade Directory Entries** Name: Dst Logistics Ltd Location: Unit 1,Montgomery Pl, Irvine, Ayrshire, KA12 8PN Classification: Sawmills & Wood Shavings **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A14NW (NE)	512	-	231497 638458
66	**Contemporary Trade Directory Entries** Name: Ayrshire Recovery Services Location: Portland Pl, Heatherhouse Ind Est, Irvine, Ayrshire, KA12 8LW Classification: Car Breakdown & Recovery Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A14SW (SE)	490	-	231492 637860
66	**Contemporary Trade Directory Entries** Name: Rhinsmach Distribution Services Ltd Location: Unit 2 Portland Place, Heatherhouse Ind Est, Irvine, Ayrshire, KA12 8LW Classification: Distribution Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A14SW (E)	502	-	231529 637900

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
66	**Contemporary Trade Directory Entries** Name: Scotlee Transport Services Ltd Location: Portland Place, Heatherhouse Industrial Estate, Irvine, Ayrshire, KA12 8LW Classification: Road Haulage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	507	-	231509 637855
67	**Contemporary Trade Directory Entries** Name: Blades Motors Location: 114, Montgomery Street, IRVINE, Ayrshire, KA12 8PW Classification: Vehicle Inspection Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	496	-	231469 638469
67	**Contemporary Trade Directory Entries** Name: Elite Transport Location: 114, Montgomery Street, Irvine, KA12 8PW Classification: Mot Testing Centres **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	496	-	231469 638469
68	**Contemporary Trade Directory Entries** Name: Reeds Roadside Recovery Location: 1 Portland Place, Heatherhouse Industrial Estate, Irvine, Ayrshire, KA12 8LW Classification: Car Breakdown & Recovery Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	499	-	231468 637813
69	**Contemporary Trade Directory Entries** Name: Ayrshire Car Breakers Location: Portland Place, Heatherhouse Industrial Estate, Irvine, Ayrshire, KA12 8LW Classification: Car Breakdown & Recovery Services **Status: Active** Positional Accuracy: Manually positioned to the road within the address or location	A14SW (E)	513	-	231556 637930
70	**Contemporary Trade Directory Entries** Name: Irvine Car Spares Location: Portland Place, Heatherhouse Industrial Estate, Irvine, Ayrshire, KA12 8LW Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	550	-	231608 637959
71	**Contemporary Trade Directory Entries** Name: Newtown Auto Services Location: 3, Portland Avenue, Irvine, Ayrshire, KA12 8NL Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	642	-	231693 637925
71	**Contemporary Trade Directory Entries** Name: Bennets (Scotland) Ltd Location: 3, Portland Avenue, Irvine, Ayrshire, KA12 8NL Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A14SE (E)	642	-	231693 637925
71	**Contemporary Trade Directory Entries** Name: Build Center Location: 3, Portland Avenue, Irvine, Ayrshire, KA12 8NL Classification: Builders' Merchants **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	642	-	231693 637925
71	**Contemporary Trade Directory Entries** Name: Burns Pet Nutrition Location: 3, Portland Avenue, Irvine, Ayrshire, KA12 8NL Classification: Pet Foods & Animal Feeds **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	642	-	231693 637925
71	**Contemporary Trade Directory Entries** Name: Arena Office Ltd Location: 3, Portland Avenue, Irvine, Ayrshire, KA12 8NL Classification: Office Furniture & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	648	-	231689 637897
71	**Contemporary Trade Directory Entries** Name: Ayrshire Accident Repair Centre Location: 3, Portland Avenue, Irvine, Ayrshire, KA12 8NL Classification: Car Body Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SE (E)	677	-	231721 637899

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
72	**Contemporary Trade Directory Entries** Name: Filtec Waste Solutions Ltd Location: Unit 5, Portland Road, Irvine, Ayrshire, KA12 8JE Classification: Water Softeners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	650	-	231602 637738
72	**Contemporary Trade Directory Entries** Name: First In Line Tyre & Exhaust Centre Location: Portland Road, Irvine, Ayrshire, KA12 8JE Classification: Exhaust & Shock Absorber Centres **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	650	-	231602 637738
72	**Contemporary Trade Directory Entries** Name: Ecowaste Scotland Location: 5, Portland Road, Irvine, Ayrshire, KA12 8JE Classification: Waste Disposal Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	650	-	231602 637738
72	**Contemporary Trade Directory Entries** Name: Complete Waste Control Location: Unit 5, Portland Road, Irvine, Ayrshire, KA12 8JE Classification: Waste Disposal Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	650	-	231602 637738
72	**Contemporary Trade Directory Entries** Name: Ardagh Group Location: Portland Road, Irvine, Ayrshire, KA12 8JE Classification: Container Manufacturers **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A9NE (SE)	651	-	231602 637738
72	**Contemporary Trade Directory Entries** Name: W H Malcolm Ltd Location: Portland Road, Irvine, Ayrshire, KA12 8JE Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A9NE (SE)	651	-	231602 637738
72	**Contemporary Trade Directory Entries** Name: A1 Skips Location: Unit 7,5 Portland Rd, Irvine, Ayrshire, KA12 8JE Classification: Waste Disposal Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A9NE (SE)	651	-	231602 637738
72	**Contemporary Trade Directory Entries** Name: Mccullochs European Location: Unit 4,The Aspire Business Centre,Portland Road, Irvine, Ayrshire, KA12 8JE Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A9NW (SE)	656	-	231576 637697
73	**Contemporary Trade Directory Entries** Name: British Rail Location: New Street, Irvine, Ayrshire, KA12 8NU Classification: Railways **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	676	-	231640 638539
74	**Contemporary Trade Directory Entries** Name: Currys Pc World Location: 7, Riverway Retail Park, Riverway, Irvine, KA12 8AG Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NE (E)	711	-	231780 638310
75	**Contemporary Trade Directory Entries** Name: Wallace Motors Location: 11 Portland Av, Irvine, Ayrshire, KA12 8NL Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A14SE (E)	723	-	231745 637838
76	**Contemporary Trade Directory Entries** Name: Currys Location: 7, Riverway Retail Park, Riverway, Irvine, Ayrshire, KA12 8AG Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	731	-	231737 638479

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
77	**Contemporary Trade Directory Entries** Name: Kyle Car Centre Location: Warwick Auto, 11, Portland Avenue, Irvine, KA12 8NL Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	750	-	231675 637670
77	**Contemporary Trade Directory Entries** Name: Metaluna Design & Fabrication Location: Warwick Auto, 11, Portland Avenue, Irvine, KA12 8NL Classification: Wrought Ironwork **Status: Active** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	750	-	231675 637670
77	**Contemporary Trade Directory Entries** Name: Brammer Ltd Location: Portland Avenue, Irvine, Ayrshire, KA12 8NL Classification: Engineering Materials **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	752	-	231684 637678
77	**Contemporary Trade Directory Entries** Name: Ayrshire Building & Timber Supplies Location: Portland Avenue Industrial Estate, Irvine, Ayrshire, KA12 8NL Classification: Builders' Merchants **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A9NE (SE)	752	-	231684 637678
77	**Contemporary Trade Directory Entries** Name: Ayrshire Timber Location: Portland Avenue, Irvine, Ayrshire, KA12 8NL Classification: Builders' Merchants **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A9NE (SE)	752	-	231684 637678
77	**Contemporary Trade Directory Entries** Name: Annefield Supplies Location: Portland Avenue, Irvine, Ayrshire, KA12 8NL Classification: Cleaning Materials & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	755	-	231701 637696
77	**Contemporary Trade Directory Entries** Name: Great Scot Services Location: Annfield Supplies, 15, Portland Avenue, Irvine, KA12 8NL Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	755	-	231701 637696
78	**Contemporary Trade Directory Entries** Name: P R G Powerhouse Location: 4, Riverway Retail Park, Riverway, Irvine, Ayrshire, KA12 8AG Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	751	-	231796 638394
78	**Contemporary Trade Directory Entries** Name: Comet Location: 4, Riverway Retail Park, Riverway, Irvine, Ayrshire, KA12 8AG Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	751	-	231796 638394
79	**Contemporary Trade Directory Entries** Name: Kmb Auto Care Location: 11 Portland Av, Irvine, Ayrshire, KA12 8NL Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A9NE (SE)	784	-	231764 637742
79	**Contemporary Trade Directory Entries** Name: M & M Location: Unit 3,Portland Av, Irvine, Ayrshire, KA12 8NL Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A9NE (SE)	785	-	231764 637740
80	**Contemporary Trade Directory Entries** Name: The Photo Centre Location: 15, Fullarton Square, Irvine, Ayrshire, KA12 8EJ Classification: Photographic Processors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	814	-	231752 638620

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
81	**Contemporary Trade Directory Entries** Name: Daniels Location: 4, Portland Avenue, The Industrial Estate, Irvine, Ayrshire, KA12 8JD Classification: Metal Products - Fabricated **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	816	-	231747 637656
81	**Contemporary Trade Directory Entries** Name: W Speirs & Sons Ltd Location: 4, Portland Avenue, The Industrial Estate, Irvine, Ayrshire, KA12 8JD Classification: Ventilators & Ventilation Systems **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	816	-	231747 637656
82	**Contemporary Trade Directory Entries** Name: Galloway Location: 1, Kyle Road, Irvine Industrial Estate, Irvine, Ayrshire, KA12 8JF Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	828	-	231691 637568
83	**Contemporary Trade Directory Entries** Name: G M C Corsehill Ltd Location: 2, Ailsa Road, Irvine Industrial Estate, Irvine, KA12 8NG Classification: Cleaning Materials & Equipment **Status: Active** Positional Accuracy: Automatically positioned to the address	A9SW (SE)	844	-	231550 637427
83	**Contemporary Trade Directory Entries** Name: G M C Hygiene Location: 2, Ailsa Road, Irvine Industrial Estate, Irvine, KA12 8NG Classification: Hygiene & Cleansing Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9SW (SE)	844	-	231550 637427
84	**Contemporary Trade Directory Entries** Name: Orgapack (Uk) Location: Unit 83, Third Avenue, Heatherhouse Industrial Estate, Irvine, Ayrshire, KA12 8HN Classification: Packaging Materials Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	883	-	231835 637668
85	**Contemporary Trade Directory Entries** Name: Prima Blinds & Design Ltd Location: Unit 4, Kyle Road, Irvine Industrial Estate, Irvine, Ayrshire, KA12 8LE Classification: Blinds, Awnings & Canopies **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A9NE (SE)	884	-	231687 637484
85	**Contemporary Trade Directory Entries** Name: John D Dunlop Ltd Location: 3, Kyle Road, Irvine Industrial Estate, Irvine, Ayrshire, KA12 8JF Classification: Engineers - General **Status: Active** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	898	-	231716 637494
85	**Contemporary Trade Directory Entries** Name: Scottish Transmission Services Location: 3, Kyle Road, Irvine Industrial Estate, Irvine, Ayrshire, KA12 8JF Classification: Gearboxes **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	898	-	231716 637494
85	**Contemporary Trade Directory Entries** Name: Galloway Coachworks Location: Unit 1, 5, Kyle Road, Irvine Industrial Estate, Irvine, Ayrshire, KA12 8JF Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9SE (SE)	925	-	231722 637461
85	**Contemporary Trade Directory Entries** Name: Window Tinting Ayrshire Ltd Location: Unit 6, Irvine, Ayrshire, KA12 8JF Classification: Window Tinting **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A9SE (SE)	925	-	231722 637461

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
85	**Contemporary Trade Directory Entries** Name: T C Autos Location: Unit 2, 5, Kyle Road, Irvine Industrial Estate, Irvine, Ayrshire, KA12 8JF Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9SE (SE)	925	-	231722 637461
85	**Contemporary Trade Directory Entries** Name: Blade - Tek Motors Location: Unit 3, 5, Kyle Road, Irvine Industrial Estate, Irvine, KA12 8JF Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A9SE (SE)	925	-	231722 637461
85	**Contemporary Trade Directory Entries** Name: Amazing Products Location: Unit 8, 5, Kyle Road, Irvine Industrial Estate, Irvine, Ayrshire, KA12 8JF Classification: Tile Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A9SE (SE)	925	-	231722 637461
85	**Contemporary Trade Directory Entries** Name: K V N Vehicle Solutions Location: Unit 5-6,7 Kyle Road, Irvine Industrial Estate, Irvine, Ayrshire, KA12 8JF Classification: Garage Services **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A9SE (SE)	925	-	231722 637461
85	**Contemporary Trade Directory Entries** Name: S A F Refrigeration & Air Conditioning Location: Unit 8, 5, Kyle Road, Irvine Industrial Estate, Irvine, Ayrshire, KA12 8JF Classification: Refrigerators & Freezers - Servicing & Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A9SE (SE)	925	-	231722 637461
86	**Contemporary Trade Directory Entries** Name: Prontoport Location: Unit 2, 2a, Kyle Road, Irvine Industrial Estate, IRVINE, Ayrshire, KA12 8JF Classification: Engineers - General **Status: Active** Positional Accuracy: Automatically positioned to the address	A9SE (SE)	886	-	231660 637457
87	**Contemporary Trade Directory Entries** Name: Tesco Filling Station Location: Riverview Retail Park,16 Riverway, Irvine, Ayrshire, KA12 8AY Classification: Petrol Filling Stations **Status: Active** Positional Accuracy: Automatically positioned to the address	A15SW (E)	899	-	231983 638053
87	**Contemporary Trade Directory Entries** Name: Tesco Stores Ltd Location: 17, Riverway Retail Park, Riverway, Irvine, Ayrshire, KA12 8AY Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A15SW (E)	901	-	231986 638055
88	**Contemporary Trade Directory Entries** Name: Ace Tints & Wraps Location: Unit 3, Cunninghame Road, Irvine Industrial Estate, Irvine, KA12 8JJ Classification: Window Tinting **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	905	-	231797 637574
88	**Contemporary Trade Directory Entries** Name: Ayrshire Gasworks Ltd Location: Unit 3, Cunninghame Road, Irvine Industrial Estate, Irvine, KA12 8JJ Classification: Gas Companies **Status: Active** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	905	-	231797 637574
88	**Contemporary Trade Directory Entries** Name: J M K Location: Unit 3, Cunninghame Road, Irvine Industrial Estate, Irvine, Ayrshire, KA12 8JJ Classification: Computer Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	905	-	231797 637574
89	**Contemporary Trade Directory Entries** Name: Sigma-Aldrich Co Ltd Location: Second Avenue, Heatherhouse Industrial Estate, Irvine, Ayrshire, KA12 8NB Classification: Chemicals & Allied Products **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A15SW (E)	907	-	231957 637879

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
89	**Contemporary Trade Directory Entries** Name: Albann Ltd Location: Second Avenue, Heatherhouse Industrial Estate, Irvine, KA12 8HL Classification: Window Frame Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A15SW (E)	909	-	231955 637868
90	**Contemporary Trade Directory Entries** Name: Janitorial Supplies Location: Unit 2, Cunninghame Road, Irvine Industrial Estate, Irvine, Ayrshire, KA12 8JJ Classification: Cleaning Materials & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	908	-	231781 637549
90	**Contemporary Trade Directory Entries** Name: Mta Location: Unit 6-7, Cunninghame Road, Irvine Industrial Estate, Irvine, KA12 8JJ Classification: Air Conditioning & Refrigeration Contractors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	930	-	231807 637546
90	**Contemporary Trade Directory Entries** Name: Faxco Maintenance Ltd Location: Unit 9, Cunninghame Road, Irvine Industrial Estate, Irvine, Ayrshire, KA12 8JJ Classification: Office Equipment Servicing & Maintenance **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	937	-	231787 637511
90	**Contemporary Trade Directory Entries** Name: Faxco Maintenance Location: Unit 9, Cunninghame Road, Irvine Industrial Estate, Irvine, Ayrshire, KA12 8JJ Classification: Fax Machines **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	937	-	231787 637511
90	**Contemporary Trade Directory Entries** Name: Xytium Tech Group Location: Unit 9, Cunninghame Road, Irvine Industrial Estate, Irvine, Ayrshire, KA12 8JJ Classification: Chemical Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	937	-	231787 637511
90	**Contemporary Trade Directory Entries** Name: Maintenance Services (Irvine) Location: Unit 8, Cunninghame Road, Irvine Industrial Estate, Irvine, Ayrshire, KA12 8JJ Classification: Engineers - General **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	949	-	231808 637517
91	**Contemporary Trade Directory Entries** Name: Plastic Mouldings Ltd Location: 4, Ailsa Road, Irvine, Ayrshire, KA12 8LP Classification: Mould Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9SW (SE)	919	-	231593 637365
92	**Contemporary Trade Directory Entries** Name: S A F C Location: Sigma-Aldrich Co Ltd, Second Avenue, Irvine, KA12 8NB Classification: Chemicals & Allied Products **Status: Active** Positional Accuracy: Automatically positioned to the address	A10NW (E)	921	-	231944 637799
93	**Contemporary Trade Directory Entries** Name: Kyle Chandler'S Location: 1, Ailsa Road, Irvine Industrial Estate, Irvine, KA12 8LL Classification: Marine Equipment & Supplies **Status: Active** Positional Accuracy: Automatically positioned to the address	A9SE (SE)	932	-	231666 637403
93	**Contemporary Trade Directory Entries** Name: Paterson Print Ltd Location: 1, Ailsa Road, Irvine Industrial Estate, Irvine, Ayrshire, KA12 8LL Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9SE (SE)	932	-	231666 637403
93	**Contemporary Trade Directory Entries** Name: Express Blinds Location: 4 Kyle Road, Irvine Industrial Estate, Irvine, Ayrshire, KA12 8JF Classification: Blinds, Awnings & Canopies **Status: Active** Positional Accuracy: Manually positioned to the address or location	A9SE (SE)	938	-	231684 637410

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
94	**Contemporary Trade Directory Entries** Name: Instore Photos Location: 7, Rivergate, Irvine, Ayrshire, KA12 8EH Classification: Photographic Processors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	942	-	231871 638673
94	**Contemporary Trade Directory Entries** Name: Adams Kids Location: 28, Rivergate, Irvine, Ayrshire, KA12 8EH Classification: Children & Babywear - Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	942	-	231871 638673
94	**Contemporary Trade Directory Entries** Name: Ponden Mill Location: 11, Rivergate, Irvine, Ayrshire, KA12 8EH Classification: Bed & Mattress Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A19SE (NE)	942	-	231871 638673
95	**Contemporary Trade Directory Entries** Name: G M C Corsehill Ltd Location: Ailsa Rd, Irvine Ind Est, Irvine, Ayrshire, KA12 8NG Classification: Cleaning Materials & Equipment **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A9SE (SE)	954	-	231610 637334
95	**Contemporary Trade Directory Entries** Name: Fasprint Printers Location: 3, Ailsa Road, Irvine Industrial Estate, Irvine, Ayrshire, KA12 8LL Classification: Printers **Status: Active** Positional Accuracy: Automatically positioned to the address	A9SE (SE)	968	-	231655 637349
95	**Contemporary Trade Directory Entries** Name: Irvine Spring Co Ltd Location: 6, Kyle Road, Irvine Industrial Estate, Irvine, Ayrshire, KA12 8JS Classification: Spring Manufacturers & Distributors **Status: Active** Positional Accuracy: Automatically positioned to the address	A9SE (SE)	977	-	231689 637363
95	**Contemporary Trade Directory Entries** Name: Lighthouse Glass Co Location: 5, Ailsa Road, Irvine Industrial Estate, IRVINE, Ayrshire, KA12 8LL Classification: Stained Glass Designers & Producers **Status: Active** Positional Accuracy: Automatically positioned to the address	A9SE (SE)	985	-	231642 637319
96	**Contemporary Trade Directory Entries** Name: Cairns Mcleod Location: 29a, Fullarton Street, Irvine, Ayrshire, KA12 8DH Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A20SW (E)	956	-	231973 638507
97	**Contemporary Trade Directory Entries** Name: Barony Universal Products Location: Third Av, Heatherhouse Ind Est, Irvine, Ayrshire, KA12 8HN Classification: Aerosols **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A10NW (SE)	973	-	231947 637684
98	**Contemporary Trade Directory Entries** Name: S L D Pumps & Power Location: 9, Ailsa Road, Irvine, KA12 8LL Classification: Pumps - Sales, Servicing & Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A9SW (SE)	989	-	231588 637279
98	**Contemporary Trade Directory Entries** Name: Machined Components Ltd Location: 11, Ailsa Road, Irvine Industrial Estate, Irvine, Ayrshire, KA12 8LR Classification: Precision Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9SW (SE)	991	-	231555 637258
99	**Contemporary Trade Directory Entries** Name: Scottish Power Location: Rivergate, Irvine, Ayrshire, KA12 8EH Classification: Electricity Companies **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A19SE (NE)	992	-	231896 638725

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
100	**Fuel Station Entries** Name: Bickets Location: 7-9, Ayr Road , , Irvine, North Ayrshire, KA12 8DJ Brand: OBSOLETE Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Approximate location provided by supplier	A14SE (E)	825	-	231876 637894
101	**Fuel Station Entries** Name: Tesco Irvine Riverway Extra Location: Ayr Road , , Irvine, North Ayrshire, KA12 8AY Brand: Tesco Extra Premises Type: Hypermarket **Status: Open** Positional Accuracy: Manually positioned to the address or location	A15SW (E)	899	-	231984 638056

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
102	**Sites of Special Scientific Interest** Name: Bogside Flats Multiple Areas: N Total Area (m2): 2548294.05 Source: Scottish Natural Heritage Reference: 239 Designation Details: Biological Designation Date: 30th January 1987 Date Type: Designated	A13NW (N)	51	10	230910 638255

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
North Ayrshire Council	February 2013	Annual Rolling Update
East Ayrshire Council	January 2015	Annual Rolling Update
South Ayrshire Council	January 2015	Annual Rolling Update
Discharge Consents		
Scottish Environment Protection Agency - West Region	May 1998	Not Applicable
Enforcement and Prohibition Notices		
Scottish Environment Protection Agency - West Region	January 2012	Not Applicable
Integrated Pollution Controls		
Scottish Environment Protection Agency - Head Office	February 1998	Variable
Scottish Environment Protection Agency - West Region	March 2002	Variable
Local Authority Pollution Prevention and Controls		
Scottish Environment Protection Agency - West Region	March 2002	Not Applicable
Local Authority Pollution Prevention and Control Enforcements		
Scottish Environment Protection Agency - West Region	January 1998	Variable
Nearest Surface Water Feature		
Ordnance Survey	September 2017	
Prosecutions Relating to Authorised Processes		
Scottish Environment Protection Agency - West Region	March 2007	Not Applicable
Prosecutions Relating to Controlled Waters		
Scottish Environment Protection Agency - West Region	March 2007	Annual Rolling Update
Registered Radioactive Substances		
Scottish Environment Protection Agency - West Region	April 1996	Not Applicable
Scottish Environment Protection Agency - Head Office	January 1998	Not Applicable
River Quality		
Scottish Environment Protection Agency - Head Office	December 1990	Not Applicable
Scottish Environment Protection Agency - West Region	December 1990	Not Applicable
Water Abstractions		
Scottish Government - Agriculture, Environment and Fisheries Department	December 1997	Not Applicable
Water Industry Act Referrals		
Scottish Environment Protection Agency - West Region	April 1996	As Designated
Groundwater Vulnerability		
Scottish Environment Protection Agency - Head Office	December 1995	Not Applicable
Scottish Environment Protection Agency - West Region	December 1995	Not Applicable
Drift Deposits		
Scottish Environment Protection Agency - Head Office	December 1995	Not Applicable
Scottish Environment Protection Agency - West Region	December 1995	Not Applicable
River Flood Data (Scotland)		
Centre for Ecology and Hydrology	September 1999	Not Applicable
OS Water Network Lines		
Ordnance Survey	October 2018	Quarterly
BGS Groundwater Flooding Susceptibility		
British Geological Survey - National Geoscience Information Service	May 2013	Annually

Waste	Version	Update Cycle
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Integrated Pollution Control Registered Waste Sites		
Scottish Environment Protection Agency - Head Office	January 1998	Not Applicable
Scottish Environment Protection Agency - West Region	January 1998	Not Applicable
Local Authority Landfill Coverage		
East Ayrshire Council	May 2000	Not Applicable
North Ayrshire Council	May 2000	Not Applicable
South Ayrshire Council	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
East Ayrshire Council	May 2000	Not Applicable
North Ayrshire Council	May 2000	Not Applicable
South Ayrshire Council	May 2000	Not Applicable
Registered Landfill Sites		
Scottish Environment Protection Agency - Head Office	December 2005	Not Applicable
Scottish Environment Protection Agency - West Region	December 2005	Not Applicable
Registered Waste Transfer Sites		
Scottish Environment Protection Agency - Head Office	December 2005	Not Applicable
Scottish Environment Protection Agency - West Region	December 2005	Not Applicable
Registered Waste Treatment or Disposal Sites		
Scottish Environment Protection Agency - Head Office	December 2005	Not Applicable
Scottish Environment Protection Agency - West Region	December 2005	Not Applicable
Hazardous Substances	**Version**	**Update Cycle**
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	April 2018	Bi-Annually
Explosive Sites		
Health and Safety Executive	March 2017	Variable
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements		
East Ayrshire Council - Planning Department	February 2016	Variable
North Ayrshire Council - Planning Department	February 2016	Variable
South Ayrshire Council - Planning Department	October 2015	Variable
Planning Hazardous Substance Consents		
East Ayrshire Council - Planning Department	February 2016	Variable
North Ayrshire Council - Planning Department	February 2016	Variable
South Ayrshire Council - Planning Department	October 2015	Variable

Data Currency

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	November 2018	Bi-Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	Annually
Industrial Land Use	**Version**	**Update Cycle**
Contemporary Trade Directory Entries Thomson Directories	January 2019	Quarterly
Fuel Station Entries Catalist Ltd - Experian	November 2018	Quarterly
Gas Pipelines National Grid	July 2014	

Sensitive Land Use	Version	Update Cycle
Ancient Woodland Scottish Natural Heritage	July 2014	Bi-Annually
Areas of Adopted Green Belt South Ayrshire Council	August 2018	As notified
Areas of Unadopted Green Belt South Ayrshire Council	August 2018	As notified
Environmentally Sensitive Areas Scottish Government	January 2017	
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves East Ayrshire Council North Ayrshire Council South Ayrshire Council	 February 2018 February 2018 February 2018	 Bi-Annually Bi-Annually Bi-Annually
Marine Nature Reserves Scottish Natural Heritage	August 2018	Bi-Annually
National Nature Reserves Scottish Natural Heritage	November 2018	Bi-Annually
National Parks Scottish Government	December 2013	Bi-Annually
National Scenic Areas Scottish Government	December 2013	Bi-Annually
Nitrate Vulnerable Zones Scottish Government	February 2019	Annually
Ramsar Sites Scottish Natural Heritage	January 2015	Bi-Annually
Sites of Special Scientific Interest Scottish Natural Heritage	November 2017	Bi-Annually
Special Areas of Conservation Scottish Natural Heritage	August 2018	Bi-Annually
Special Protection Areas Scottish Natural Heritage	November 2017	Bi-Annually

Data Suppliers

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	

Useful Contacts

Contact	Name and Address	Contact Details
1	**British Geological Survey - Enquiry Service** British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	**Scottish Environment Protection Agency - West Region** 5 Redwood Crescent, Peel Park, East Kilbride, South Lanarkshire, G74 5PP	Telephone: 01355 574200 Fax: 01355 574688
3	**Scottish Environment Protection Agency - Head Office** Erskine Court, The Castle Business Park, Stirling, Stirlingshire, FK9 4TR	Telephone: 01786 457700 Fax: 01786 446885
4	**Centre for Ecology and Hydrology** Maclean Building, Crowmarsh Gifford, WALLINGFORD, Oxfordshire, OX10 8BB	Telephone: 01491 838800 Fax: 01491 692424
5	**Ordnance Survey** Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
6	**North Ayrshire Council** Cunninghame House, Friars Croft, Irvine, Ayrshire, KA12 8EE	Telephone: 01294 324100 Fax: 01294 324344 Website: www.north-ayrshire.gov.uk
7	**Health and Safety Executive** 5S.2 Redgrave Court, Merton Road, Bootle, L20 7HS	Website: www.hse.gov.uk
8	**North Ayrshire Council - Planning Department** Cunninghame House, Friars Croft, Irvine, Ayrshire	Telephone: 01294 324100 Fax: 01294 324144 Website: www.north-ayrshire.gov.uk
9	**The Coal Authority - Property Searches** 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk Website: www2.groundstability.com
10	**Scottish Natural Heritage** 12 Hope Terrace, Edinburgh, Midlothian, EH9 2AS	Telephone: 0131 447 4784 Fax: 0131 446 2279
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.

Historical Mapping Legends

Ordnance Survey County Series 1:10,560

Gravel Pit
Sand Pit
Other Pits
Quarry
Shingle
Orchard
Osiers
Reeds
Marsh
Mixed Wood
Deciduous
Brushwood
Fir
Furze
Rough Pasture
Arrow denotes flow of water
Trigonometrical Station
Site of Antiquities
Bench Mark
Pump, Guide Post, Signal Post
Well, Spring, Boundary Post
·285 Surface Level
Sketched Contour
Instrumental Contour
Main Roads
Fenced
Un-Fenced
Minor Roads
Fenced
Un-Fenced
Sunken Road
Raised Road
Road over Railway
Railway over River
Railway over Road
Level Crossing
Road over River or Canal
Road over Stream
Road over Stream
County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)
R.D. Bdy. Rural District Boundary
Civil Parish Boundary

Ordnance Survey Plan 1:10,000

Chalk Pit, Clay Pit or Quarry
Gravel Pit
Sand Pit
Disused Pit or Quarry
Refuse or Slag Heap
Lake, Loch or Pond
Dunes
Boulders
Coniferous Trees
Non-Coniferous Trees
Orchard
Scrub
Coppice
Bracken
Heath
Rough Grassland
Marsh
Reeds
Saltings
Building
Direction of Flow of Water
Shingle
Sand
Glasshouse
Pylon
Pylon
Electricity Transmission Line
Sloping Masonry
Cutting
Embankment
Standard Gauge Multiple Track
Road Under
Road Over
Level Crossing
Foot Bridge
Standard Gauge Single Track
Siding, Tramway or Mineral Line
Narrow Gauge
Geographical County
Administrative County, County Borough or County of City
Municipal Borough, Urban or Rural District, Burgh or District Council
Borough, Burgh or County Constituency
Shown only when not coincident with other boundaries
Civil Parish
Shown alternately when coincidence of boundaries occurs

BP, BS	Boundary Post or Stone	Pol Sta	Police Station
Ch	Church	PO	Post Office
CH	Club House	PC	Public Convenience
F E Sta	Fire Engine Station	PH	Public House
FB	Foot Bridge	SB	Signal Box
Fn	Fountain	Spr	Spring
GP	Guide Post	TCB	Telephone Call Box
MP	Mile Post	TCP	Telephone Call Post
MS	Mile Stone	W	Well

1:10,000 Raster Mapping

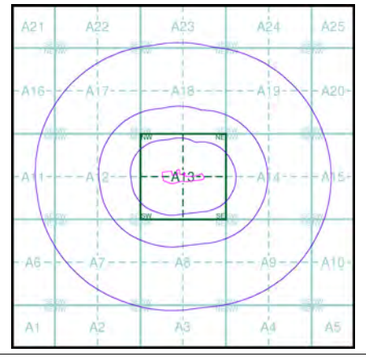
Gravel Pit
Refuse tip or slag heap
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Shingle
Mud
Sand
Sand
Sand Pit
Slopes
Top of cliff
General detail
Underground detail
Overhead detail
Narrow gauge railway
Multi-track railway
Single track railway
County boundary (England only)
Civil, parish or community boundary
District, Unitary, Metropolitan, London Borough boundary
Constituency boundary
Area of wooded vegetation
Non-coniferous trees
Non-coniferous trees (scattered)
Coniferous trees
Coniferous trees (scattered)
Positioned tree
Orchard
Coppice or Osiers
Rough Grassland
Heath
Scrub
Marsh, Salt Marsh or Reeds
Water feature
Flow arrows
MHW(S) Mean high water (springs)
MLW(S) Mean low water (springs)
Telephone line (where shown)
Electricity transmission line (with poles)
BM 123.45 m Bench mark (where shown)
Triangulation station
Point feature (e.g. Guide Post or Mile Stone)
Pylon, flare stack or lighting tower
Site of (antiquity)
Glasshouse
General Building
Important Building

MASON EVANS
Geo-Environmental Consultants

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Ayrshire	1:10,560	1860	2
Ayrshire	1:10,560	1897	3
Ayrshire	1:10,560	1910 - 1911	4
Ayrshire	1:10,560	1938	5
Ordnance Survey Plan	1:10,000	1958	6
Ordnance Survey Plan	1:10,000	1968	7
Ordnance Survey Plan	1:10,000	1978	8
Ordnance Survey Plan	1:10,000	1984	9
Ordnance Survey Plan	1:10,000	1991	10
10K Raster Mapping	1:10,000	2001	11
Street View	Variable		12

Historical Map - Slice A



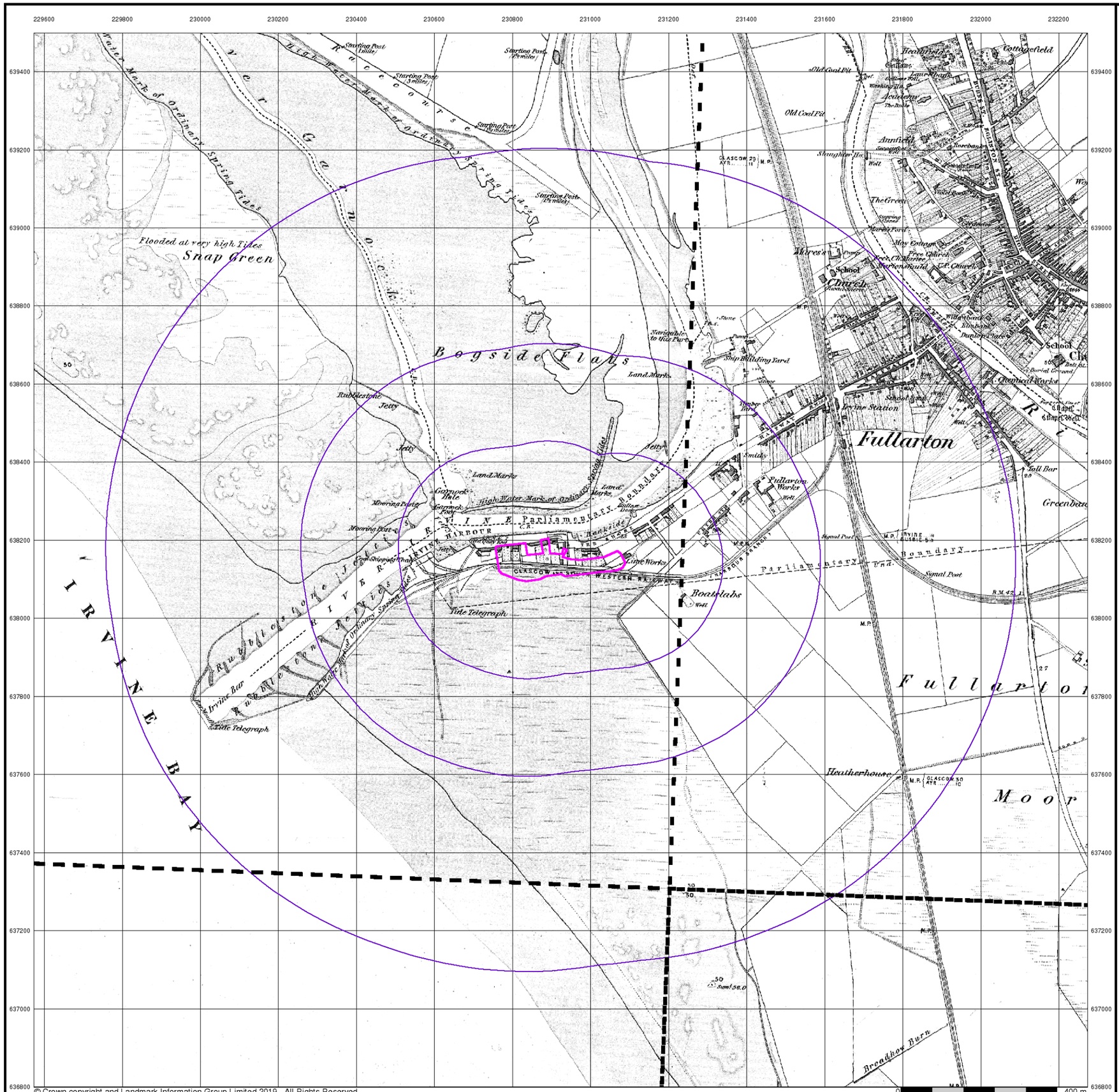
Order Details

Order Number: 194289274_1_1
Customer Ref: P18-621
National Grid Reference: 230920, 638150
Slice: A
Site Area (Ha): 1.89
Search Buffer (m): 1000

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



MASON EVANS
Geo-Environmental Consultants

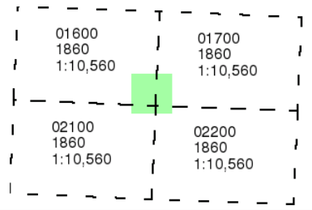
Ayrshire

Published 1860

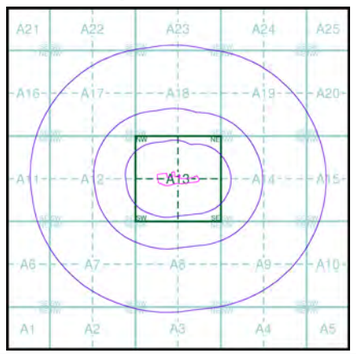
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



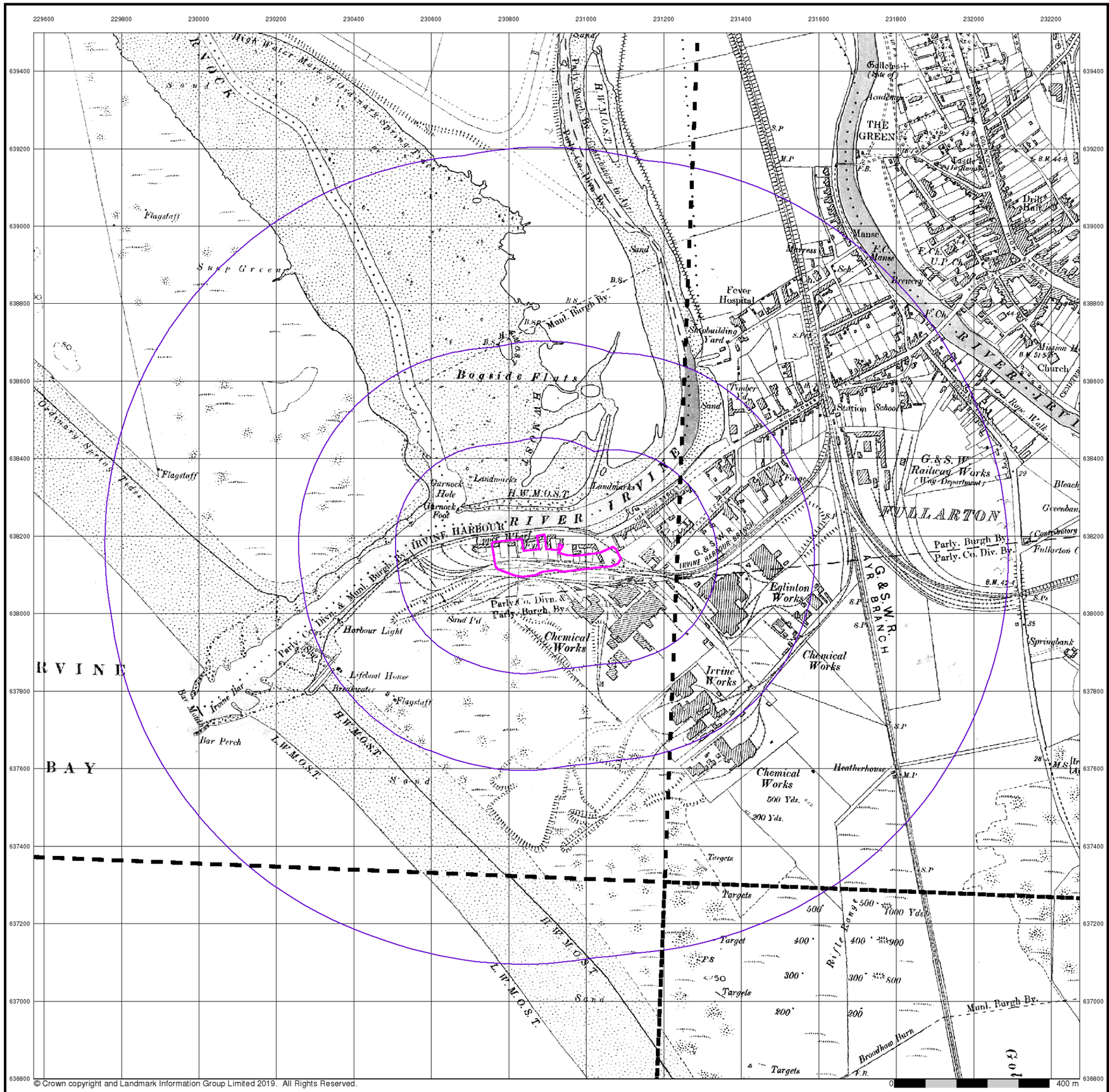
Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	1000

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



MASON EVANS
Geo-Environmental Consultants

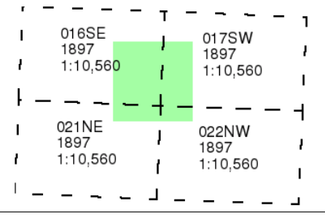
Ayrshire

Published 1897

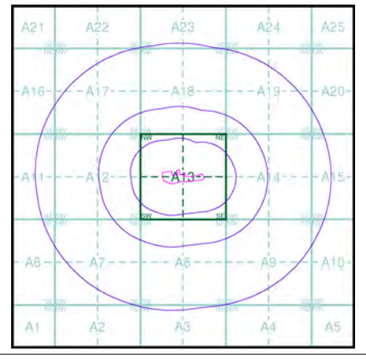
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	1000

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

MASON EVANS
Geo-Environmental Consultants

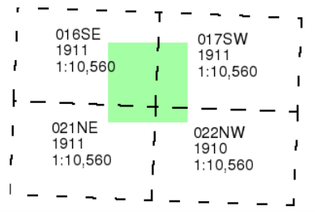
Ayrshire

Published 1910 - 1911

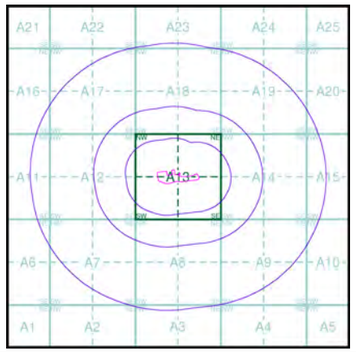
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



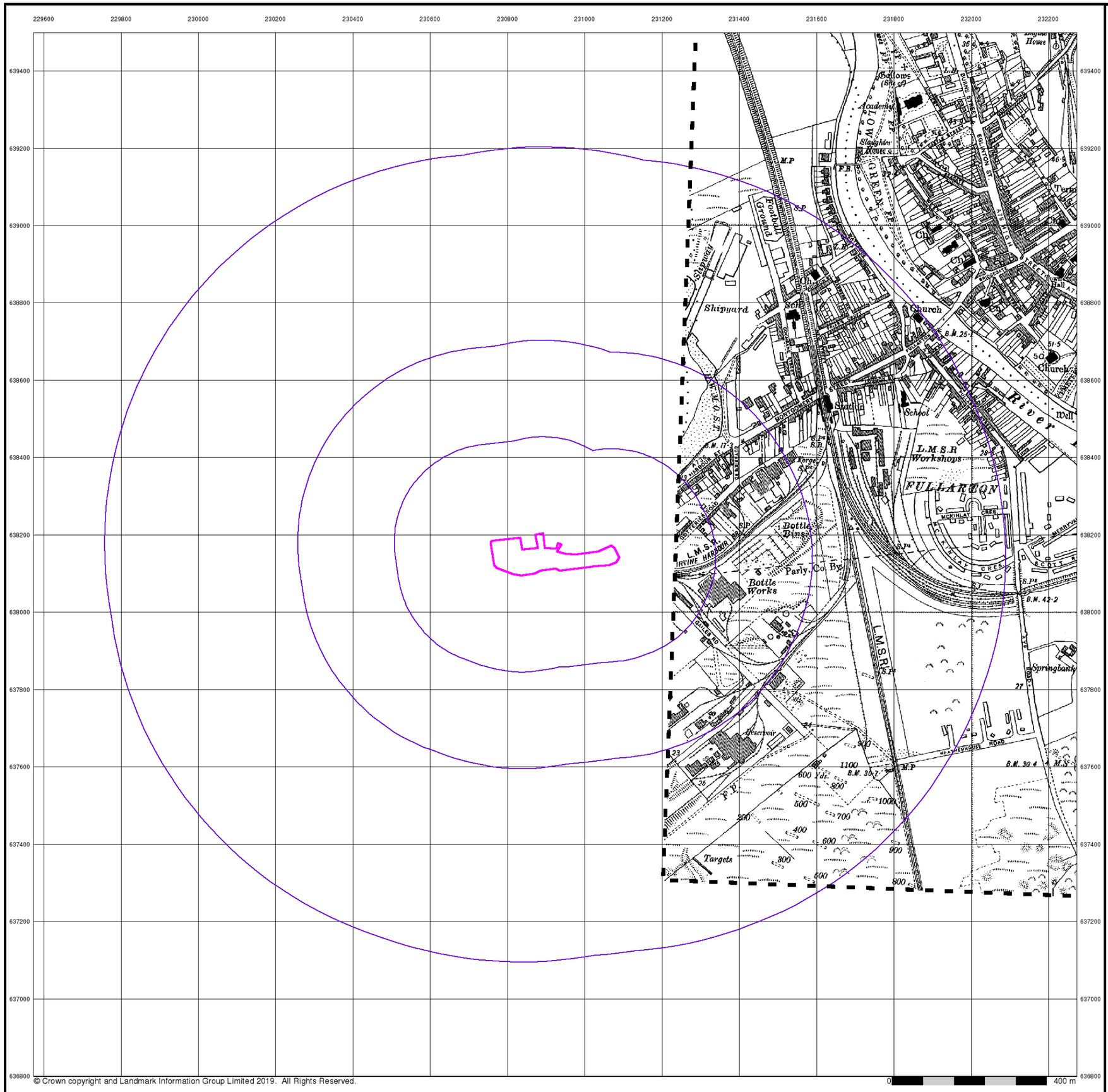
Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	1000

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



MASON EVANS
Geo-Environmental Consultants

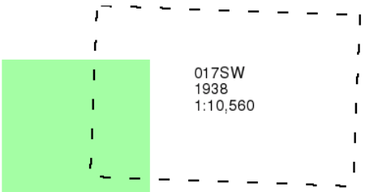
Ayrshire

Published 1938

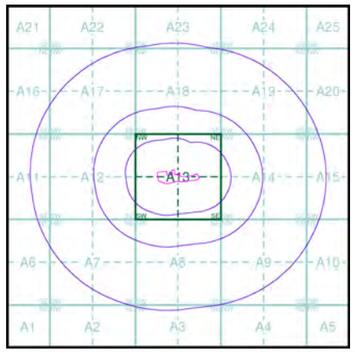
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



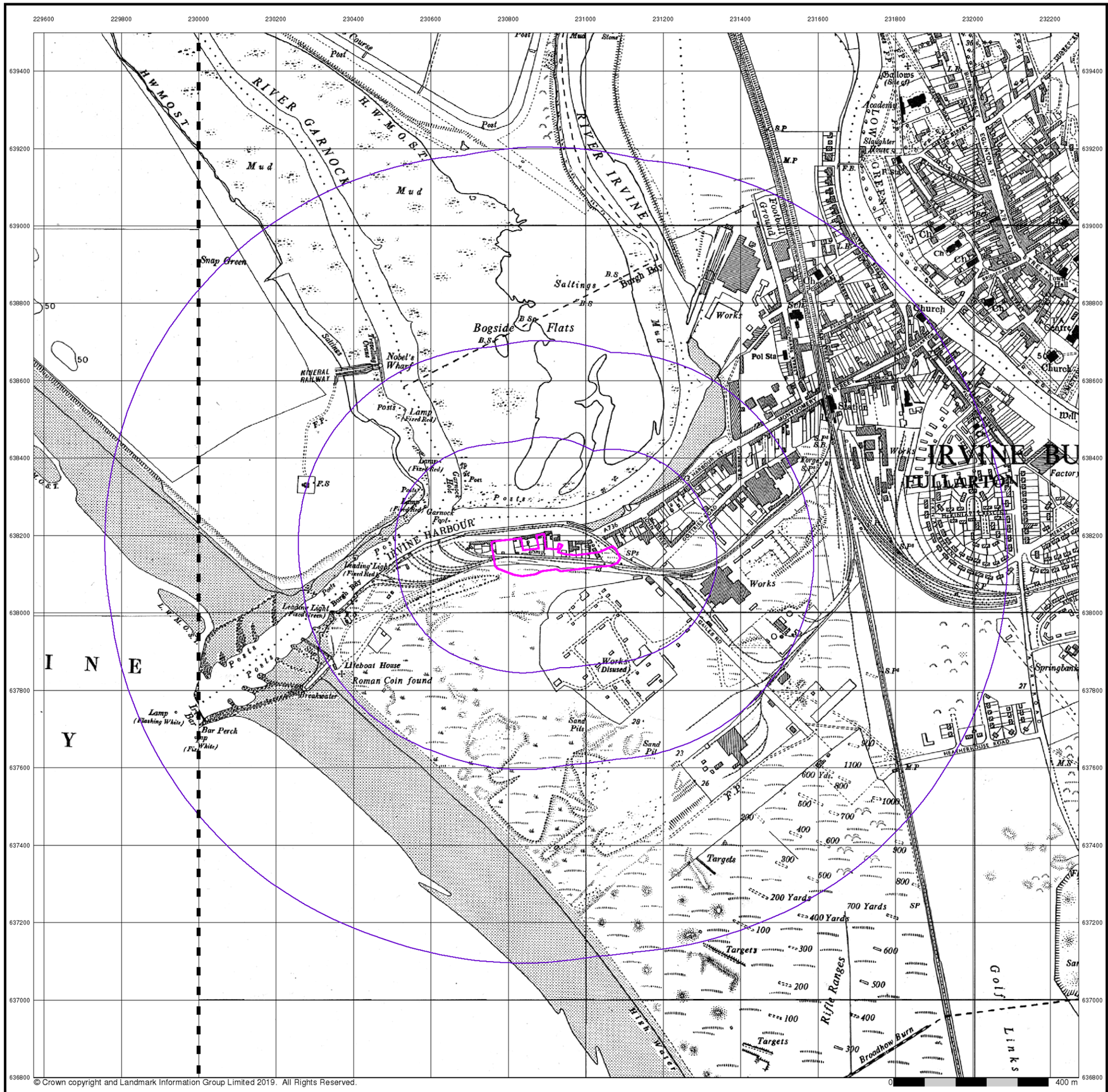
Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	1000

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



MASON EVANS
Geo-Environmental Consultants

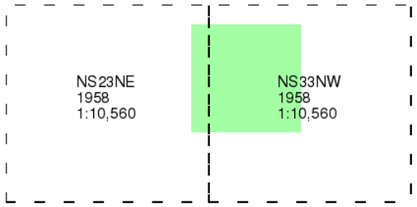
Ordnance Survey Plan

Published 1958

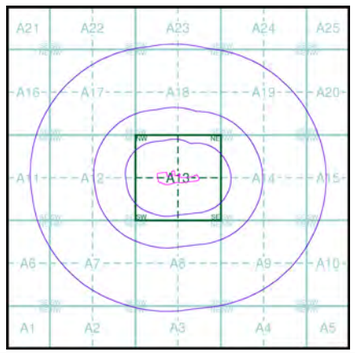
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	1000

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

MASON EVANS
Geo-Environmental Consultants

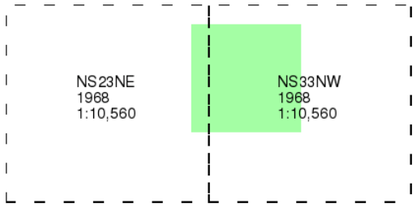
Ordnance Survey Plan

Published 1968

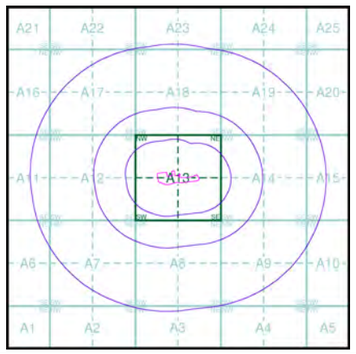
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



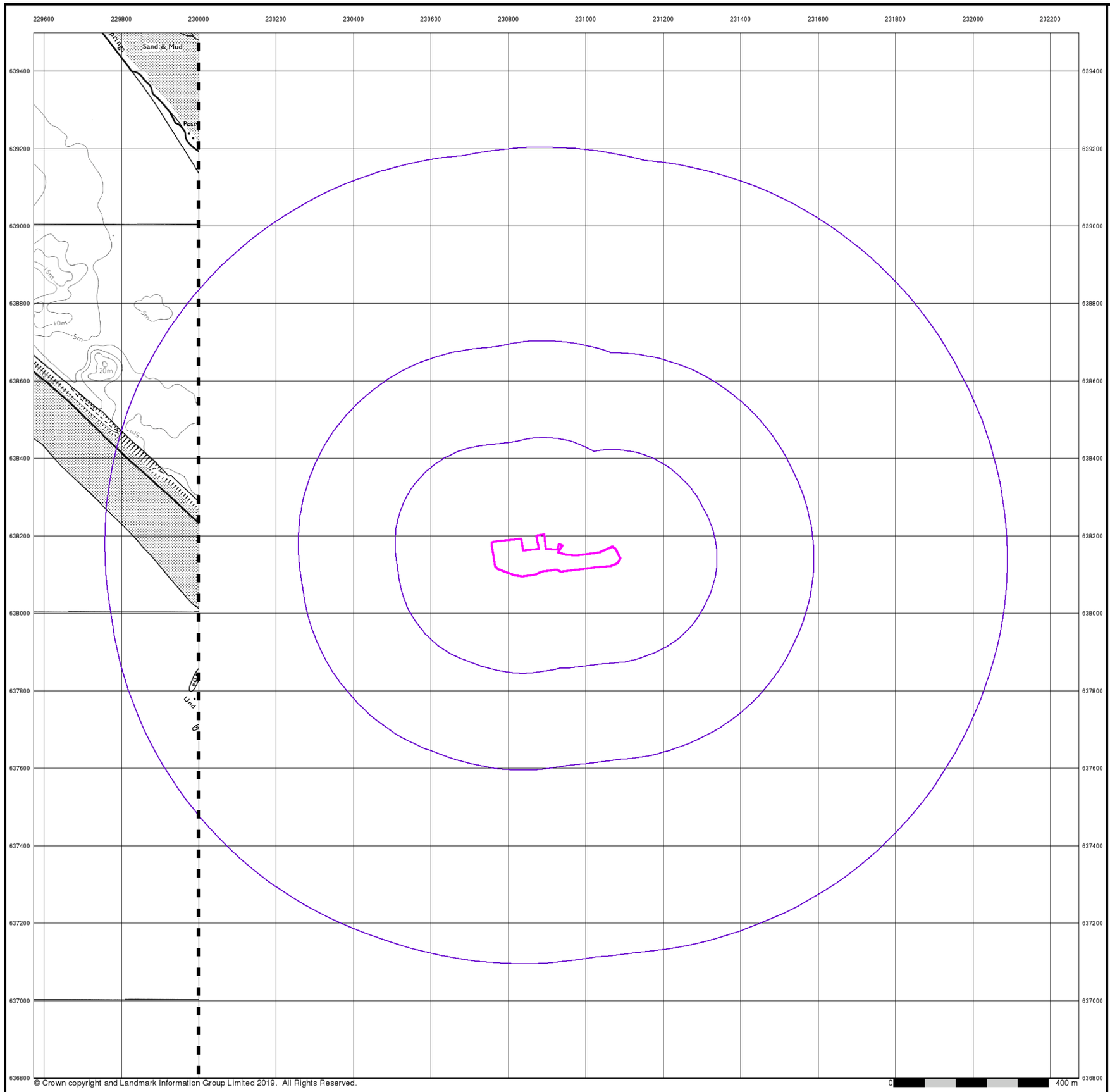
Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	1000

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



MASON EVANS
Geo-Environmental Consultants

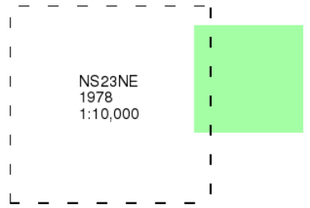
Ordnance Survey Plan

Published 1978

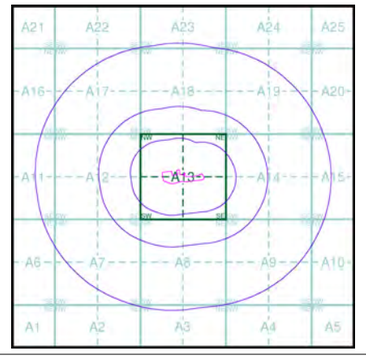
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



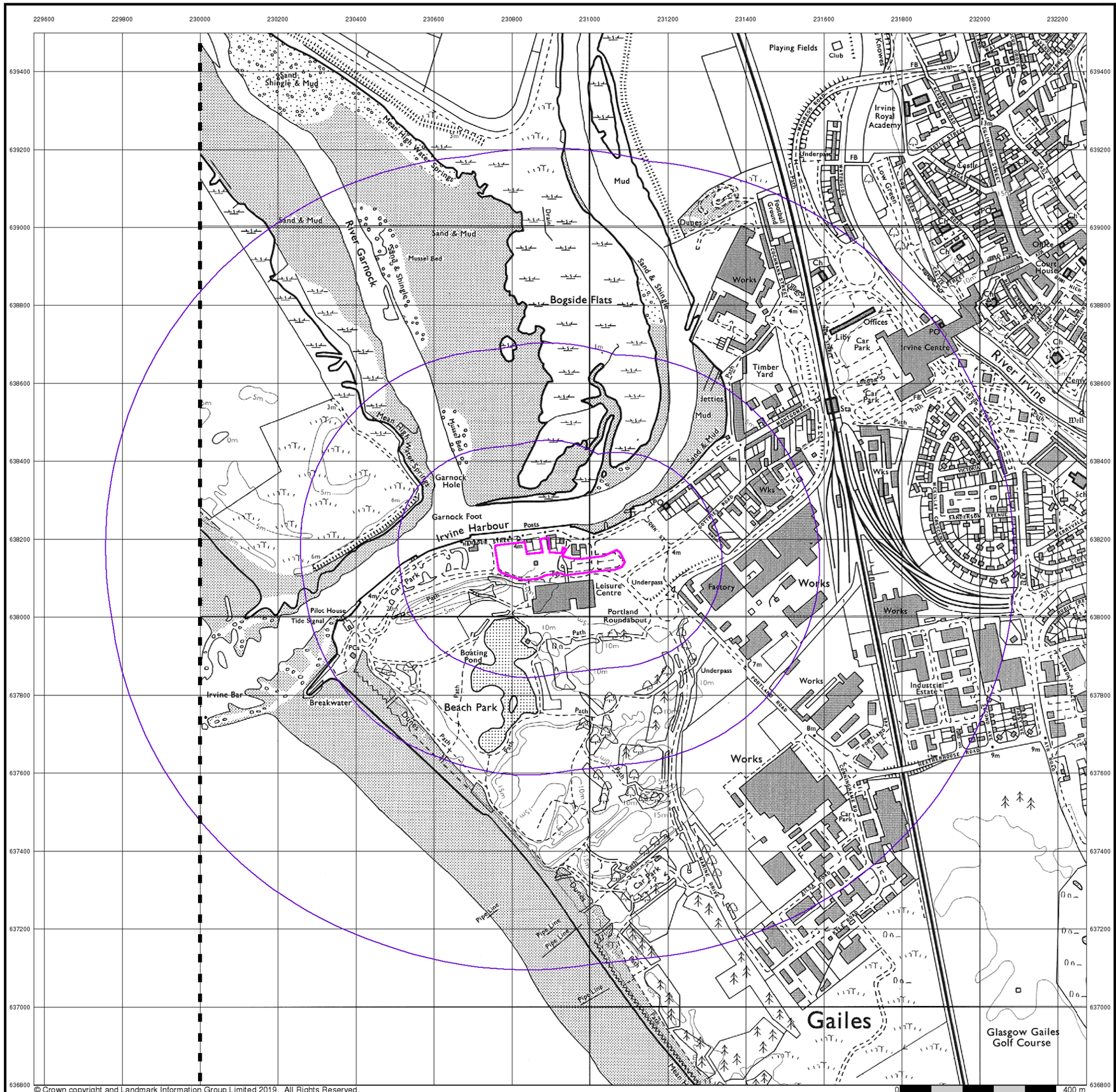
Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	1000

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



MASON EVANS
Geo-Environmental Consultants

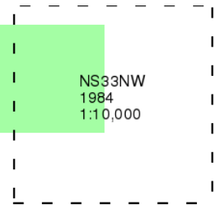
Ordnance Survey Plan

Published 1984

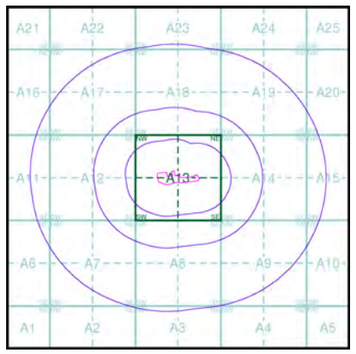
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



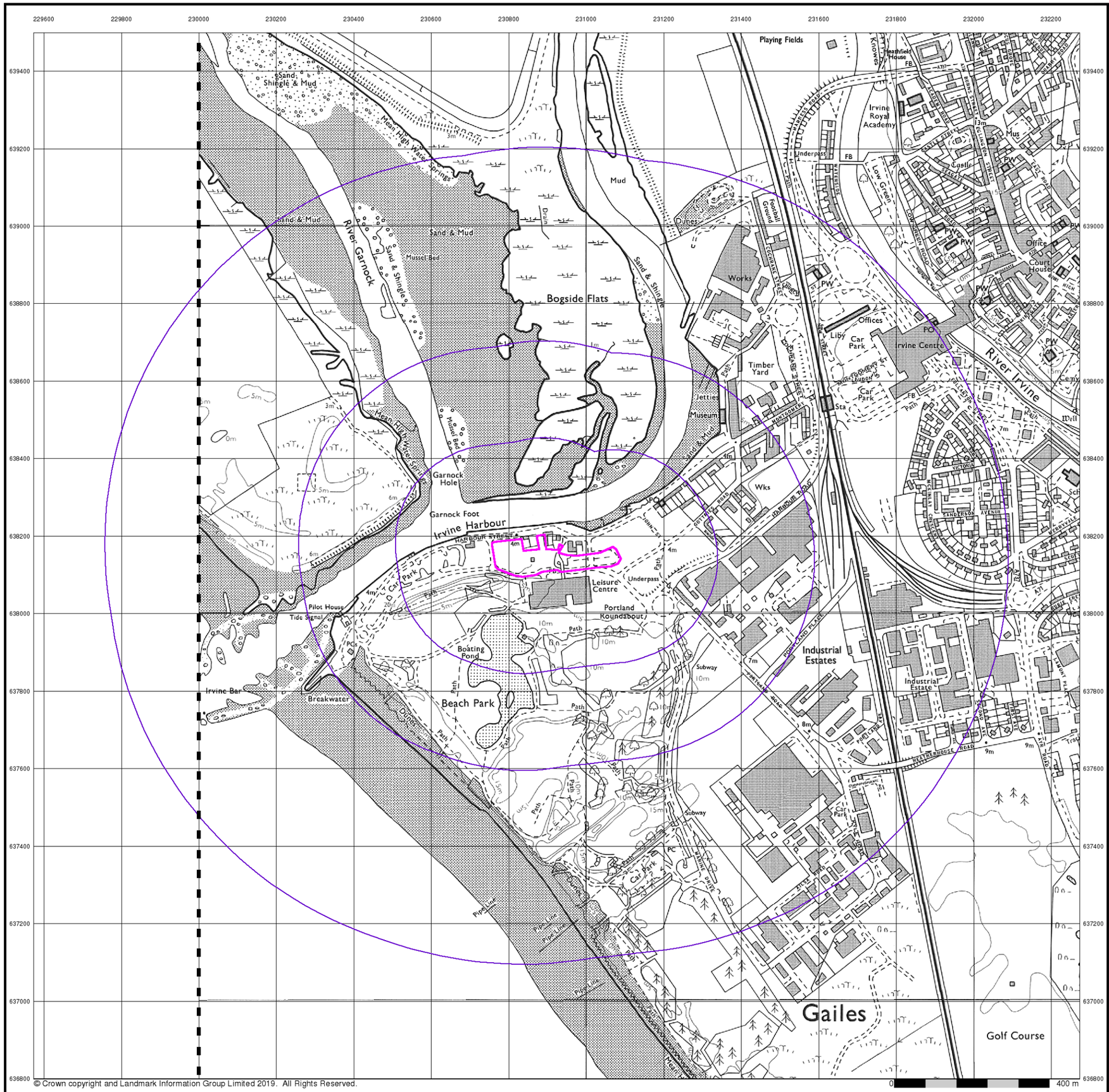
Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	1000

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



MASON EVANS
Geo-Environmental Consultants

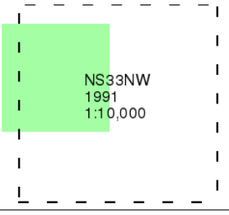
Ordnance Survey Plan

Published 1991

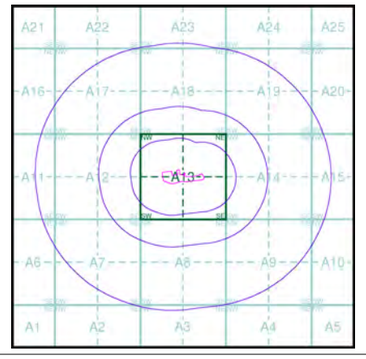
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	1000

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

MASON EVANS
Geo-Environmental Consultants

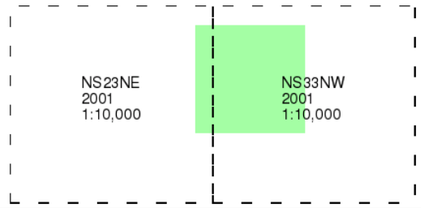
10k Raster Mapping

Published 2001

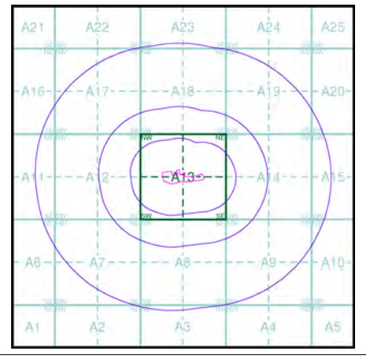
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	1000

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

MASON EVANS
Geo-Environmental Consultants

Street View

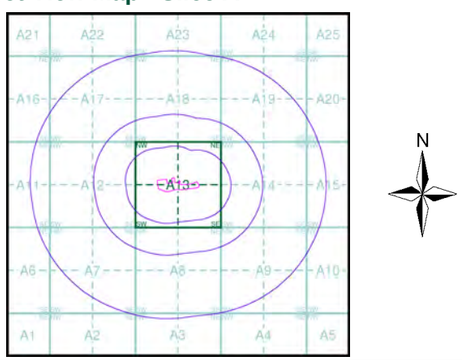
Published 2019

Source map scale - 1:10,000

Street View is a street-level map for the whole of Great Britain produced by the Ordnance Survey. These maps are provided at a nominal scale of 1:10,000

Map Name(s) and Date(s)

Street View Map - Slice A



Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	1000

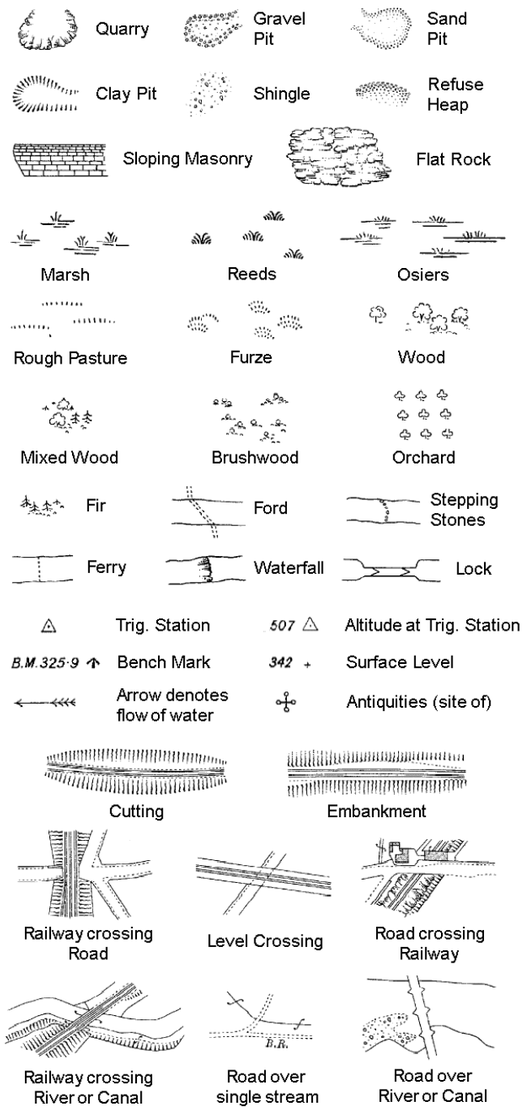
Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

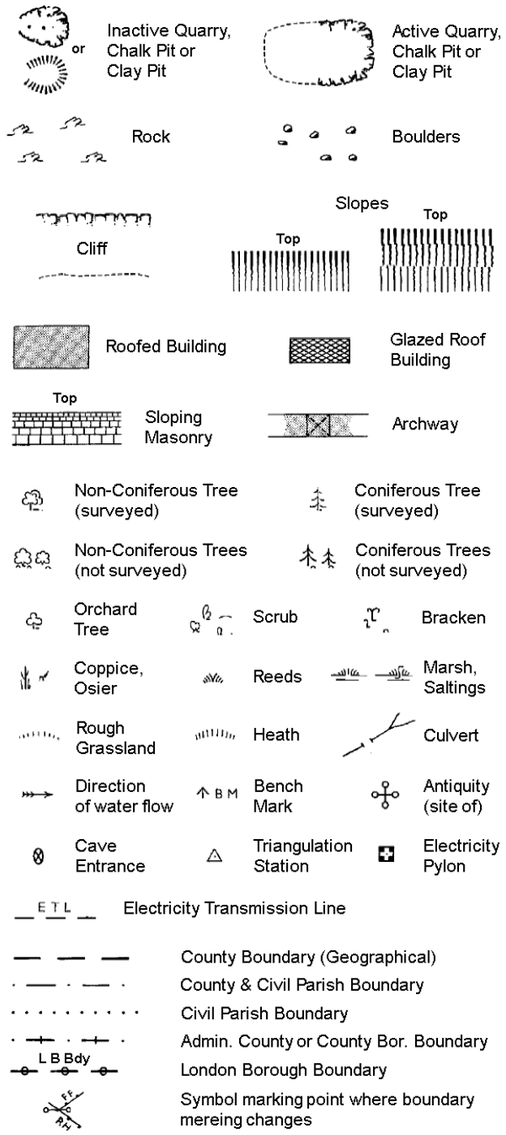
Historical Mapping Legends

Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



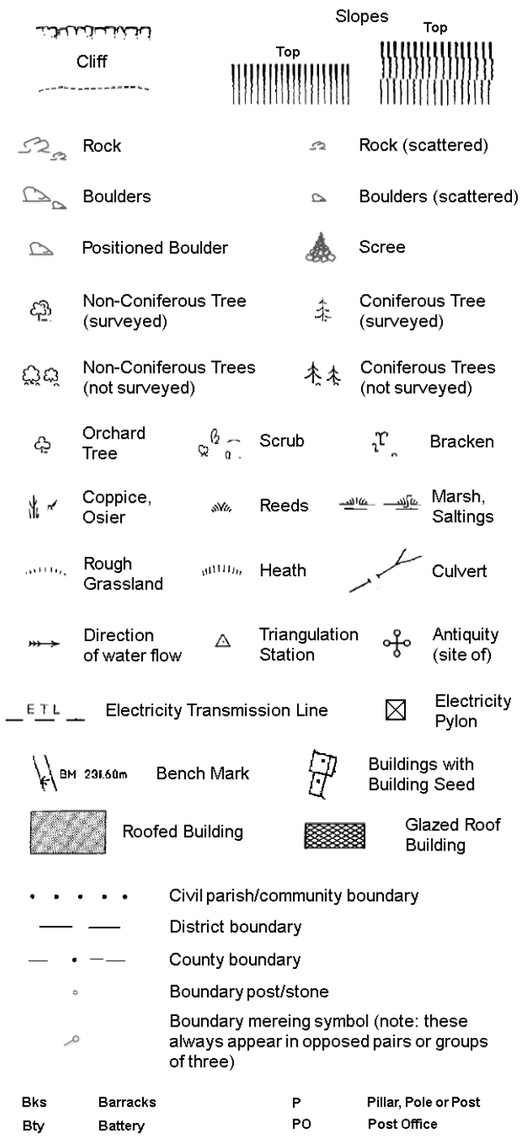
B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

Large-Scale National Grid Data 1:2,500 and 1:1,250



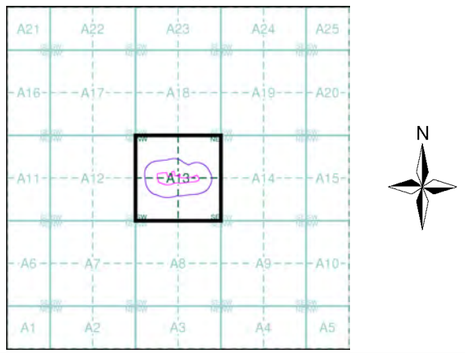
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

MASON EVANS
Geo-Environmental Consultants

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Ayrshire	1:2,500	1856	2
Ayrshire	1:2,500	1857 - 1895	3
Ayrshire	1:2,500	1895	4
Ayrshire	1:2,500	1896	5
Ayrshire	1:2,500	1910	6
Ayrshire	1:2,500	1938	7
Ordnance Survey Plan	1:1,250	1956	8
Additional SIMs	1:1,250	1956 - 1980	9
Ordnance Survey Plan	1:2,500	1957 - 1964	10
Ordnance Survey Plan	1:1,250	1963 - 1983	11
Additional SIMs	1:2,500	1964	12
Additional SIMs	1:1,250	1978 - 1987	13
Ordnance Survey Plan	1:1,250	1985	14
Additional SIMs	1:1,250	1992	15
Large-Scale National Grid Data	1:1,250	1993	16
Large-Scale National Grid Data	1:1,250	1994	17
Large-Scale National Grid Data	1:1,250	1996	18
Large-Scale National Grid Data	1:1,250	1996	19

Historical Map - Segment A13

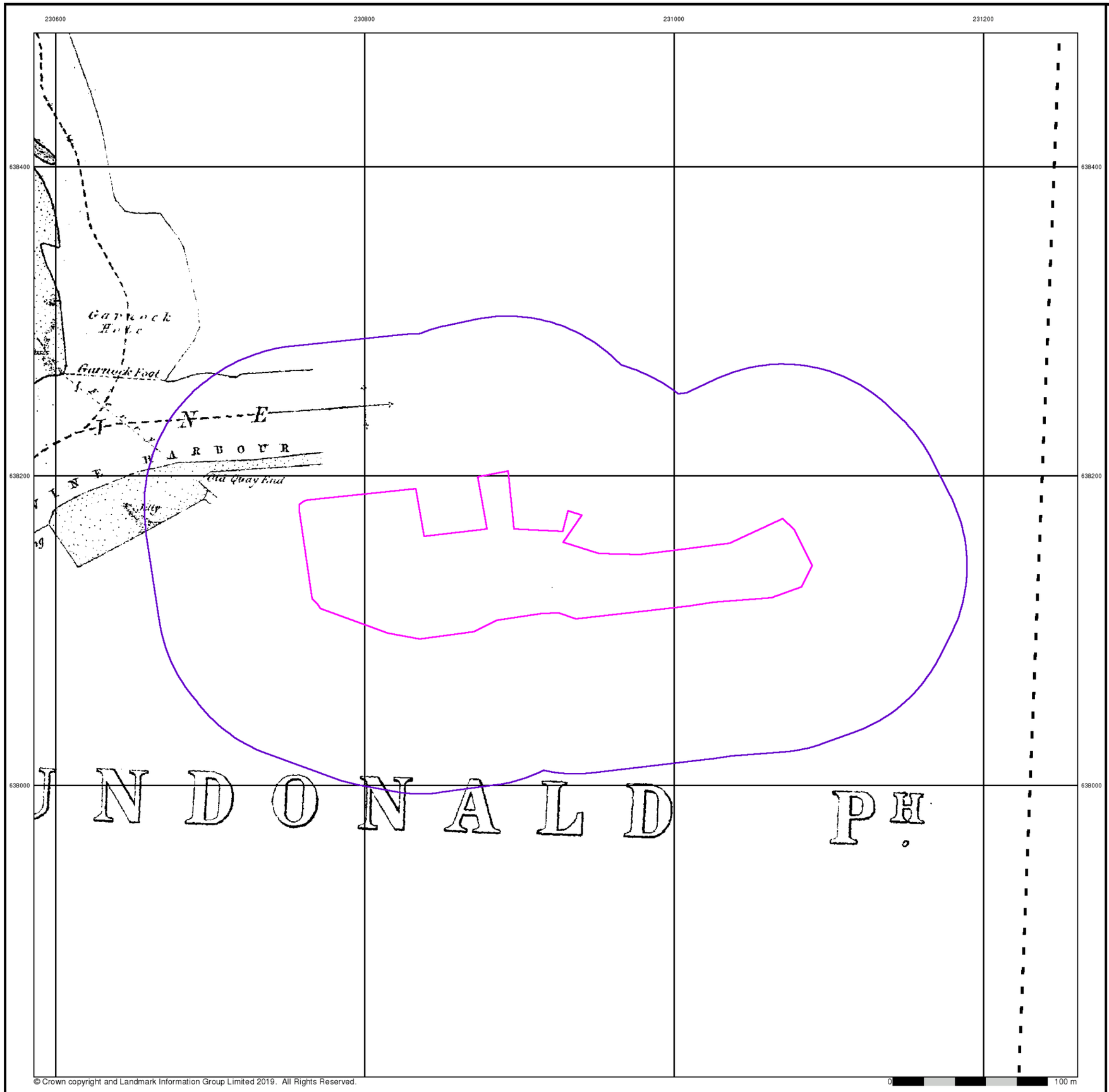


Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	100

Site Details

80, Harbour Street, IRVINE, KA12 8PZ



MASON EVANS
Geo-Environmental Consultants

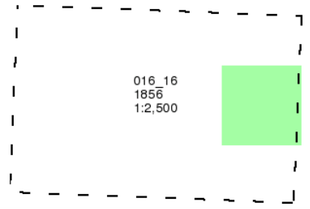
Ayrshire

Published 1856

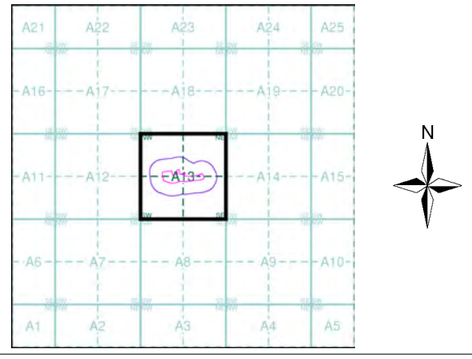
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	100

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

MASON EVANS
Geo-Environmental Consultants

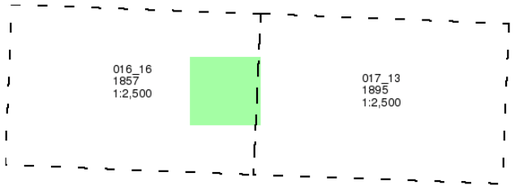
Ayrshire

Published 1857 - 1895

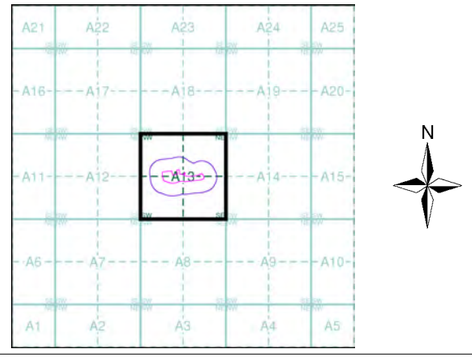
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



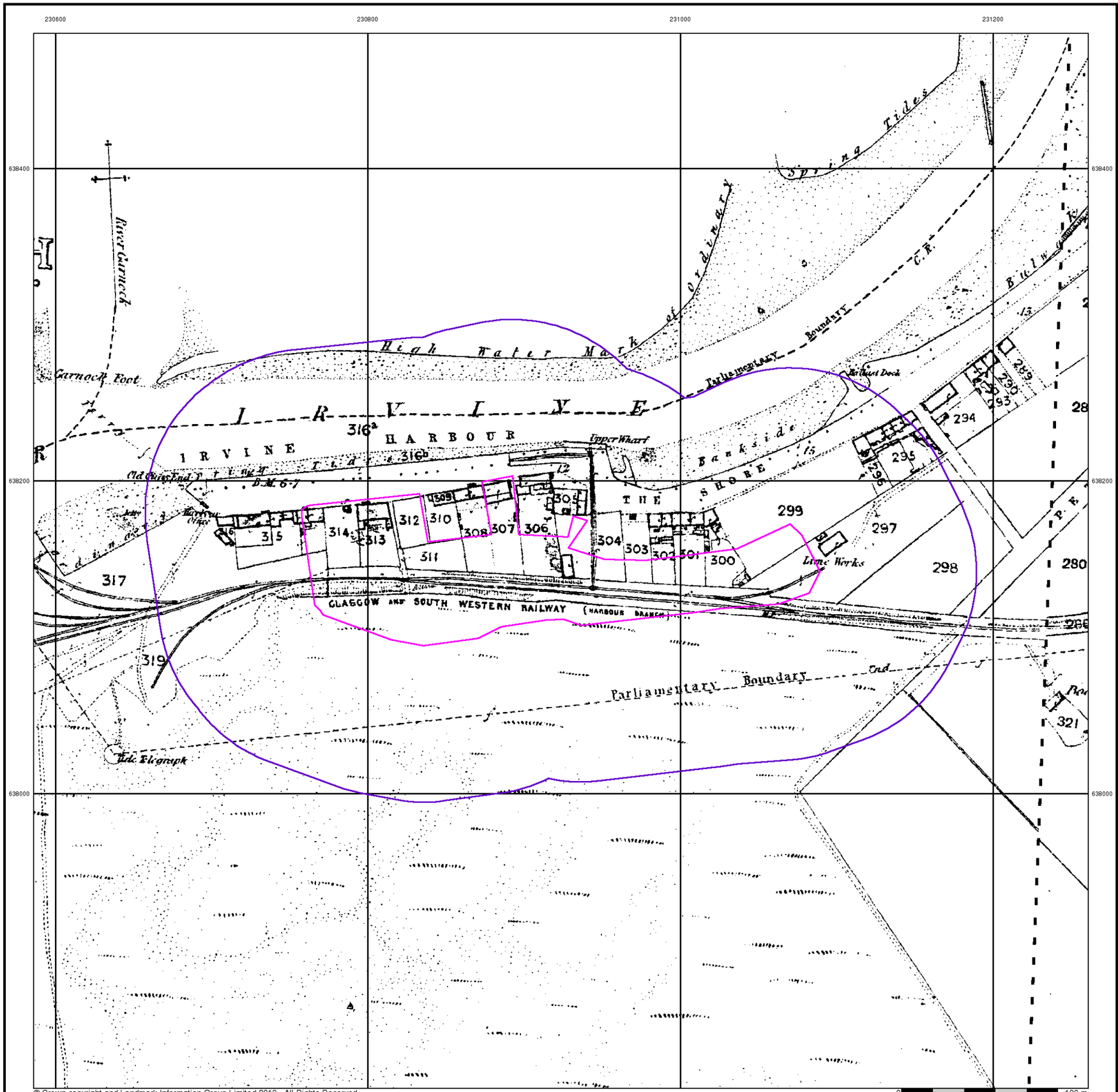
Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	100

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



0 100 m

MASON EVANS
Geo-Environmental Consultants

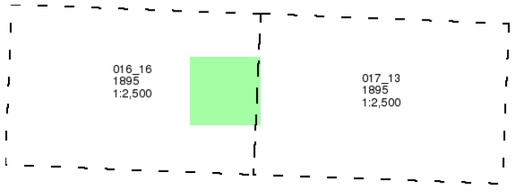
Ayrshire

Published 1895

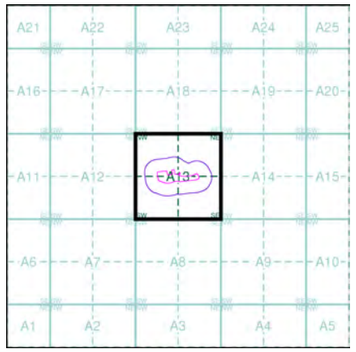
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



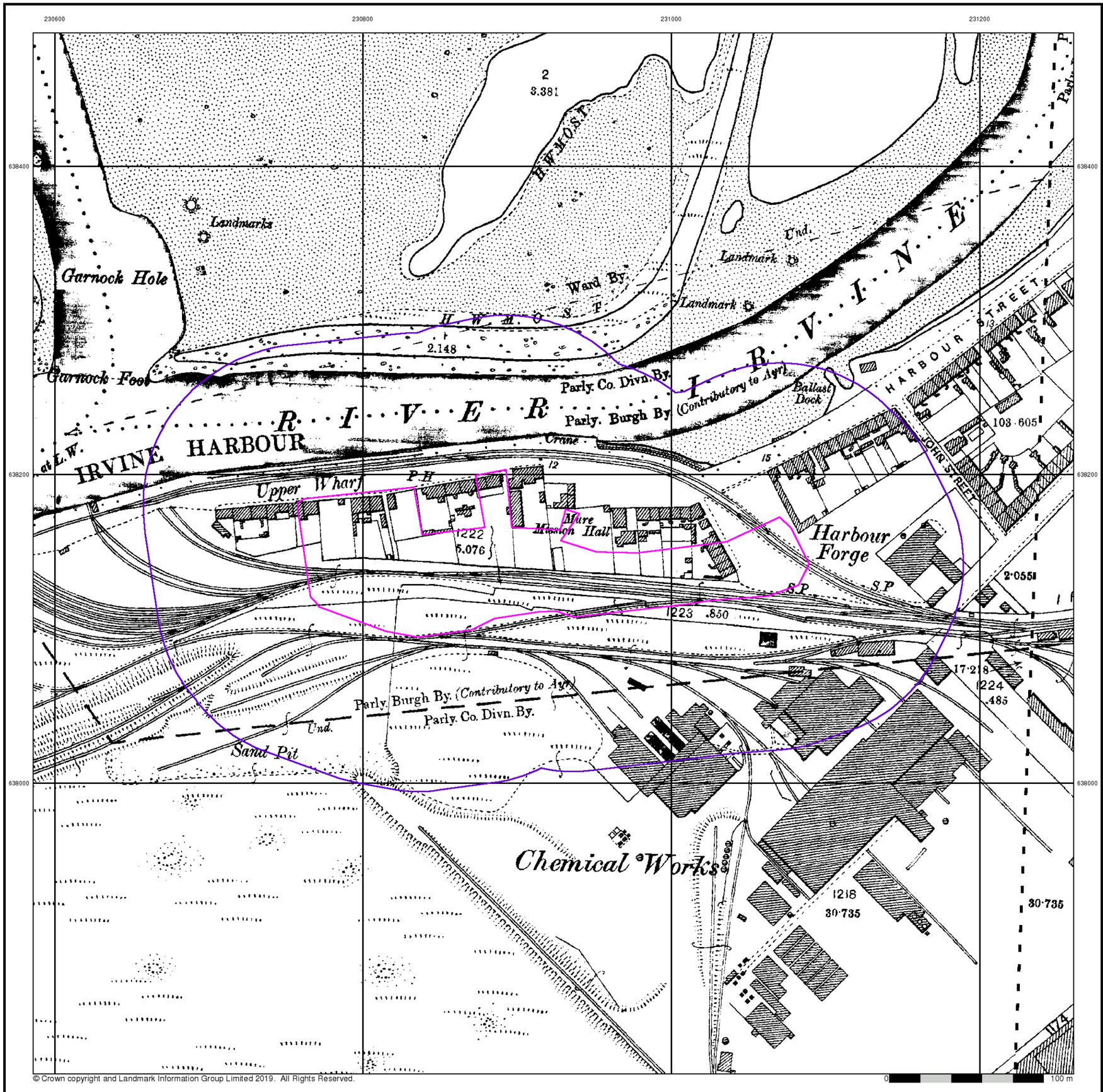
Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	100

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



MASON EVANS
Geo-Environmental Consultants

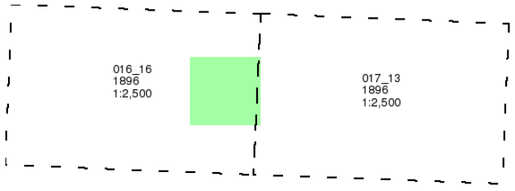
Ayrshire

Published 1896

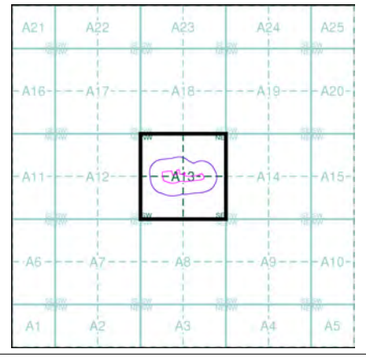
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



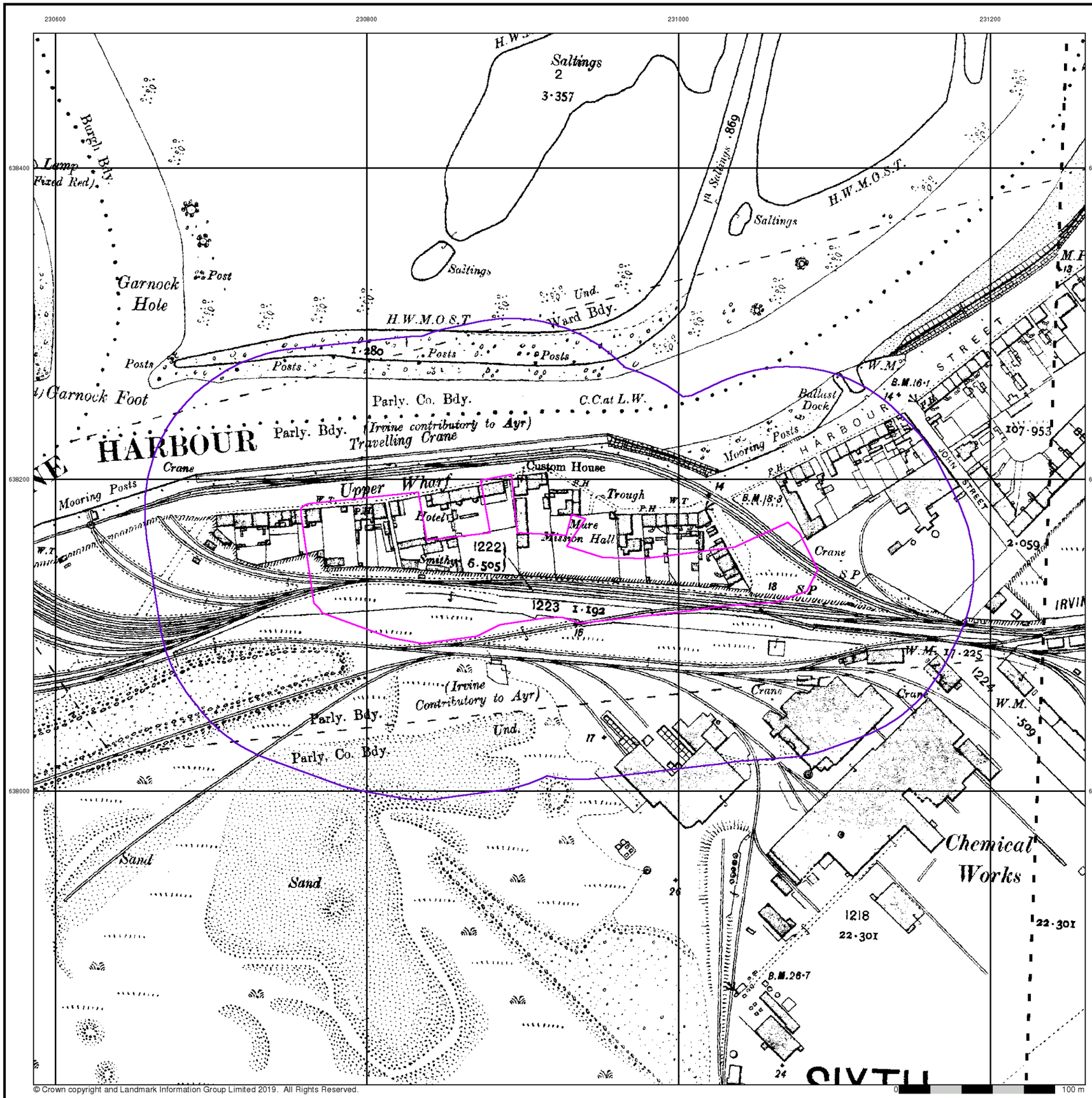
Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	100

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



MASON EVANS
Geo-Environmental Consultants

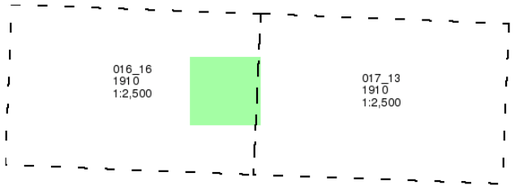
Ayrshire

Published 1910

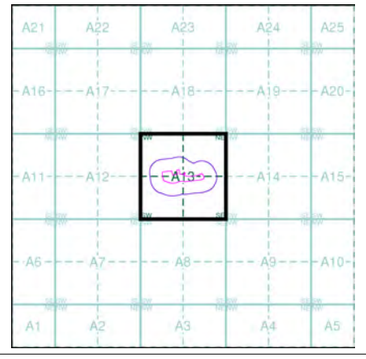
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



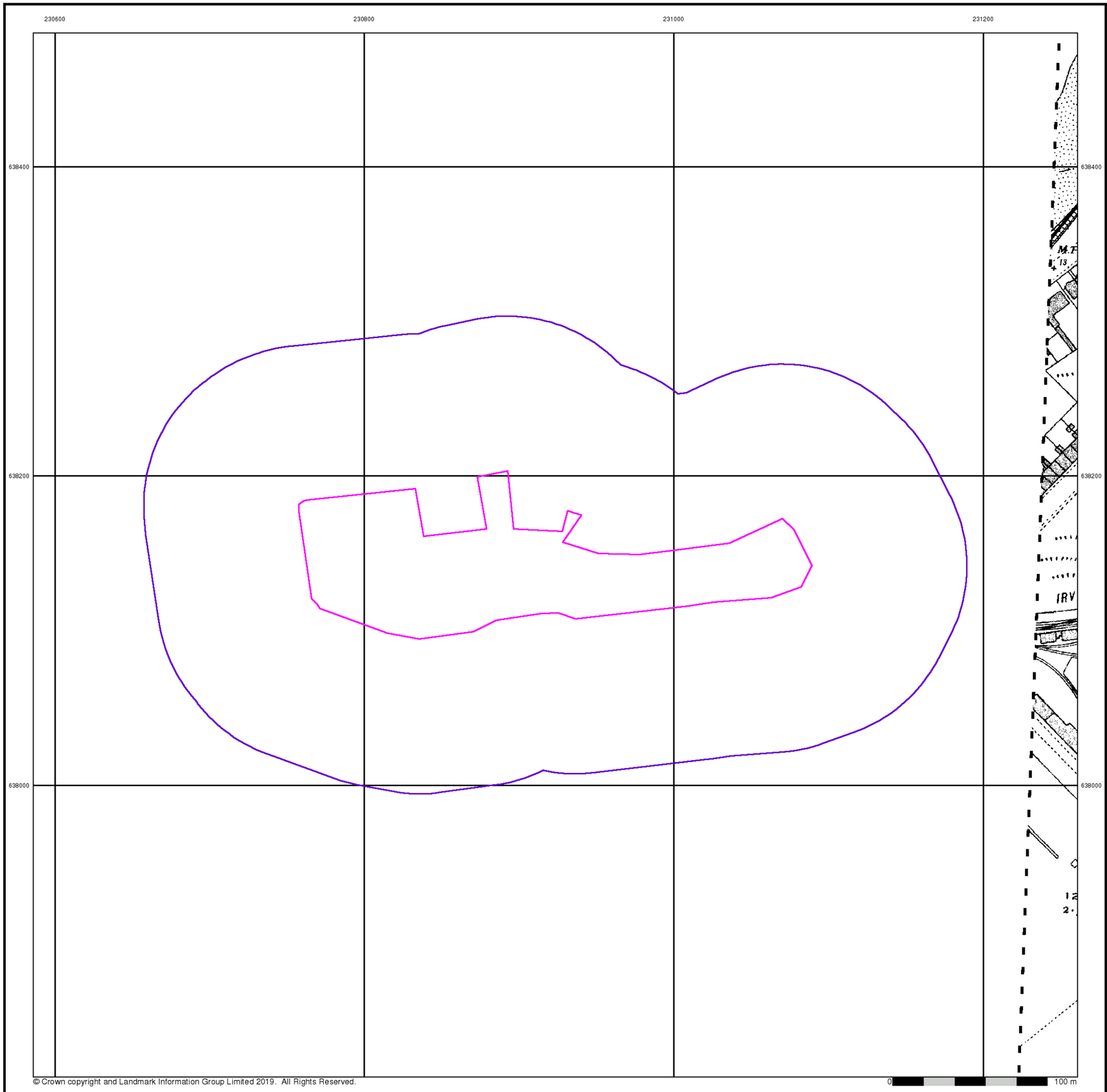
Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	100

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



MASON EVANS
Geo-Environmental Consultants

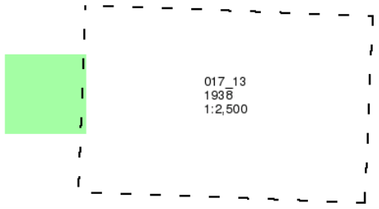
Ayrshire

Published 1938

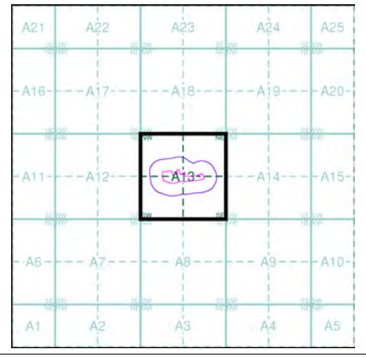
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



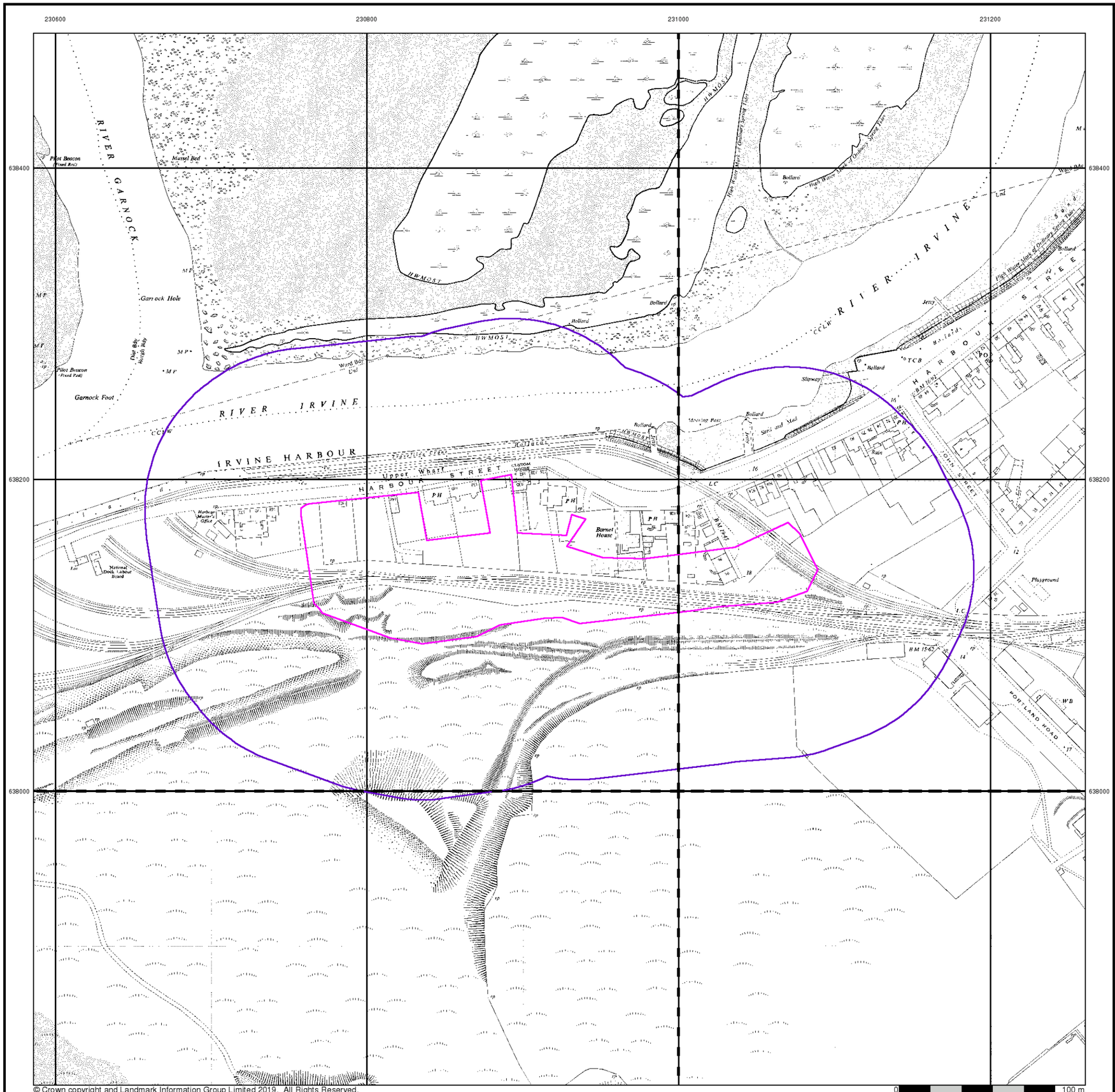
Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	100

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



MASON EVANS
Geo-Environmental Consultants

Ordnance Survey Plan

Published 1956

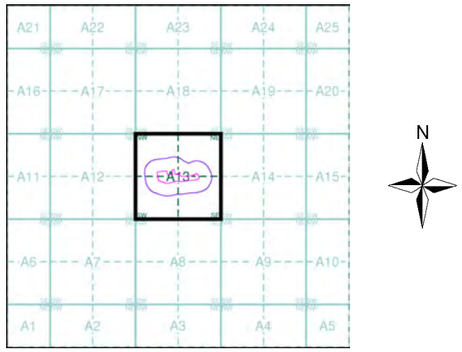
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

NS3038SE 1956 1:1,250	NS3138SW 1956 1:1,250
NS3037NE 1956 1:1,250	NS3137NW 1956 1:1,250

Historical Map - Segment A13



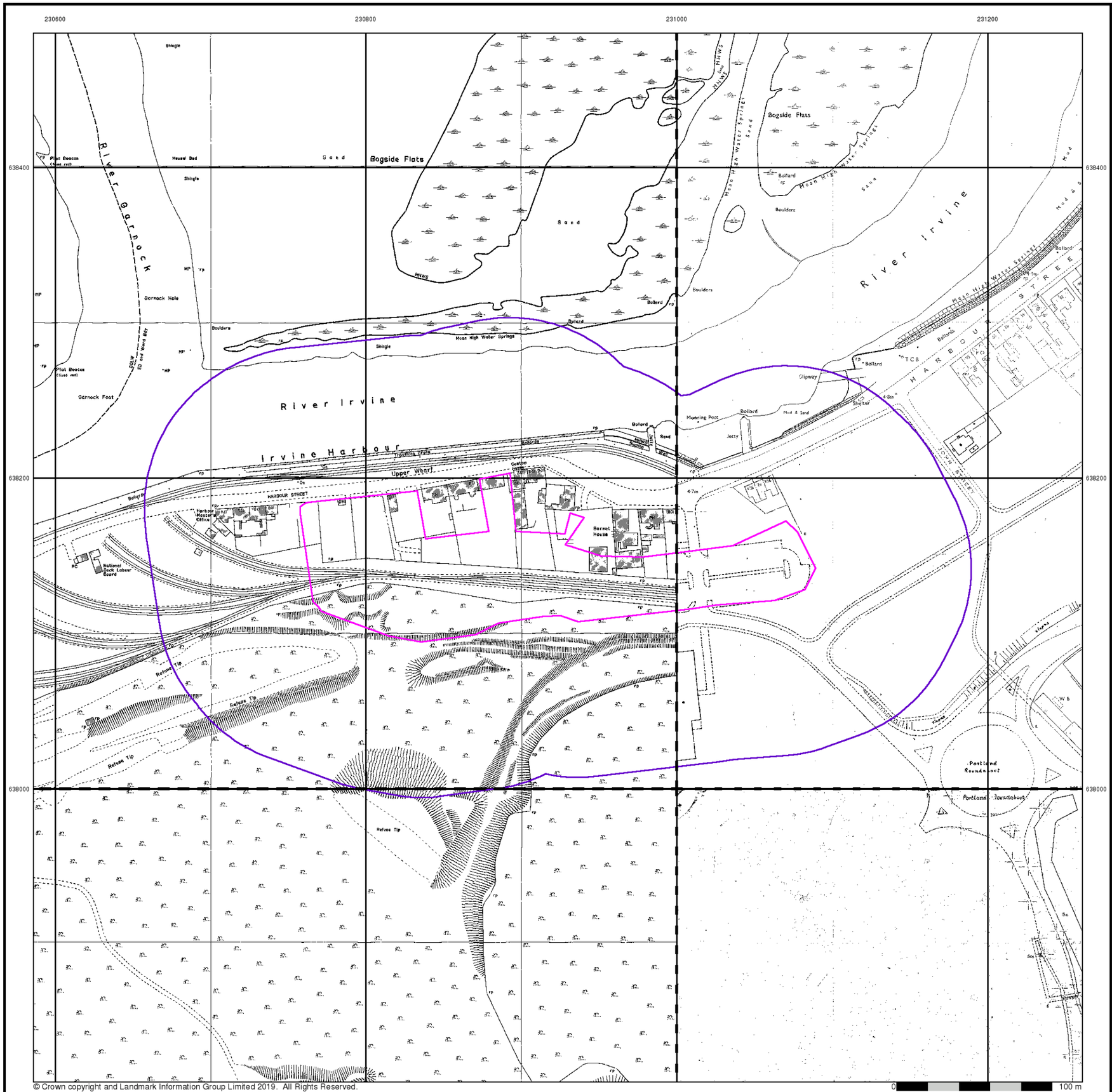
Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	100

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



MASON EVANS
Geo-Environmental Consultants

Additional SIMs

Published 1956 - 1980

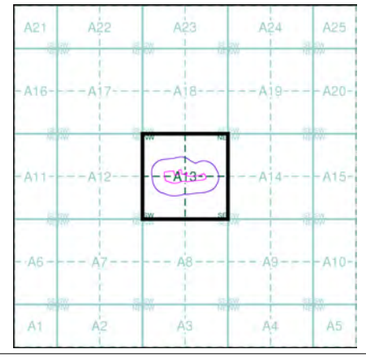
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

NS3038SE 1958 1:1,250	NS3138SW 1980 1:1,250
NS3037NE 1956 1:1,250	NS3137NW 1978 1:1,250

Historical Map - Segment A13



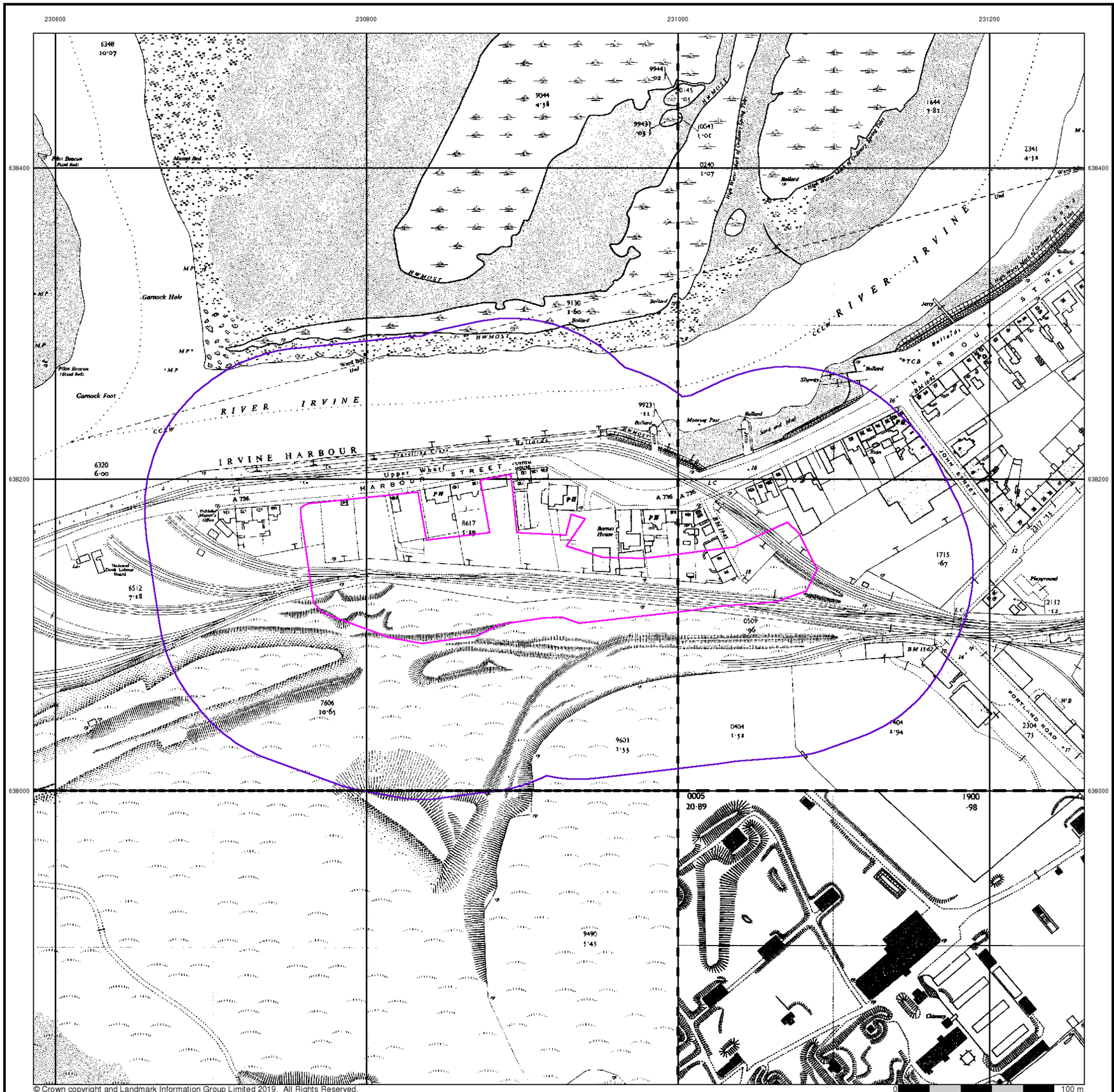
Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	100

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



MASON EVANS
Geo-Environmental Consultants

Ordnance Survey Plan

Published 1957 - 1964

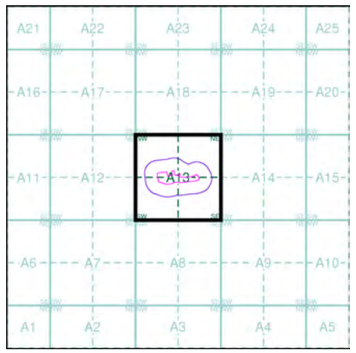
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

NS3038 1957 1:2,500	NS3138 1957 1:2,500
NS3037 1957 1:2,500	NS3137 1964 1:2,500

Historical Map - Segment A13



Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	100

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

MASON EVANS
Geo-Environmental Consultants

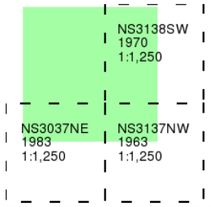
Ordnance Survey Plan

Published 1963 - 1983

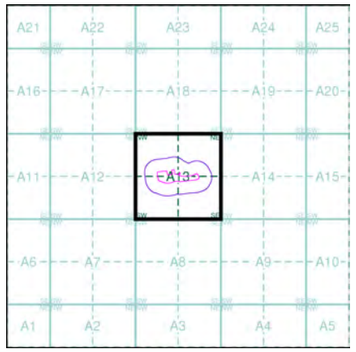
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



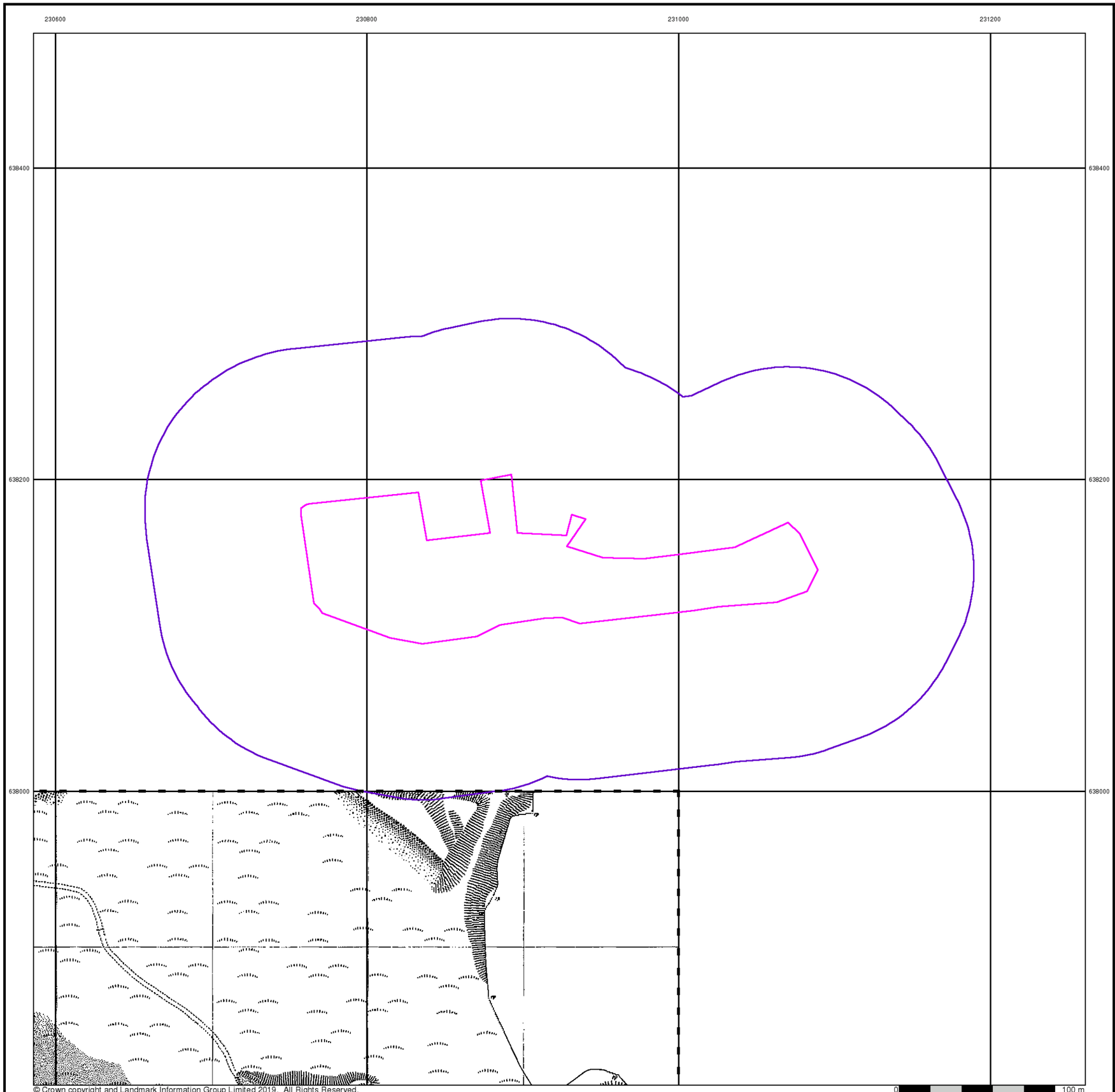
Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	100

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



MASON EVANS
Geo-Environmental Consultants

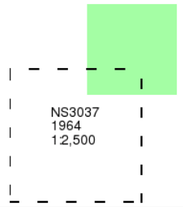
Additional SIMs

Published 1964

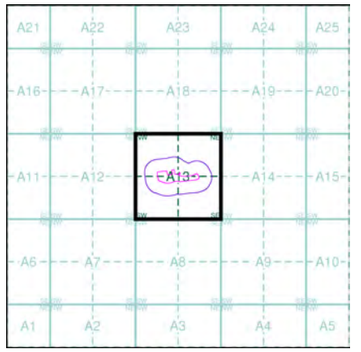
Source map scale - 1:2,500

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13

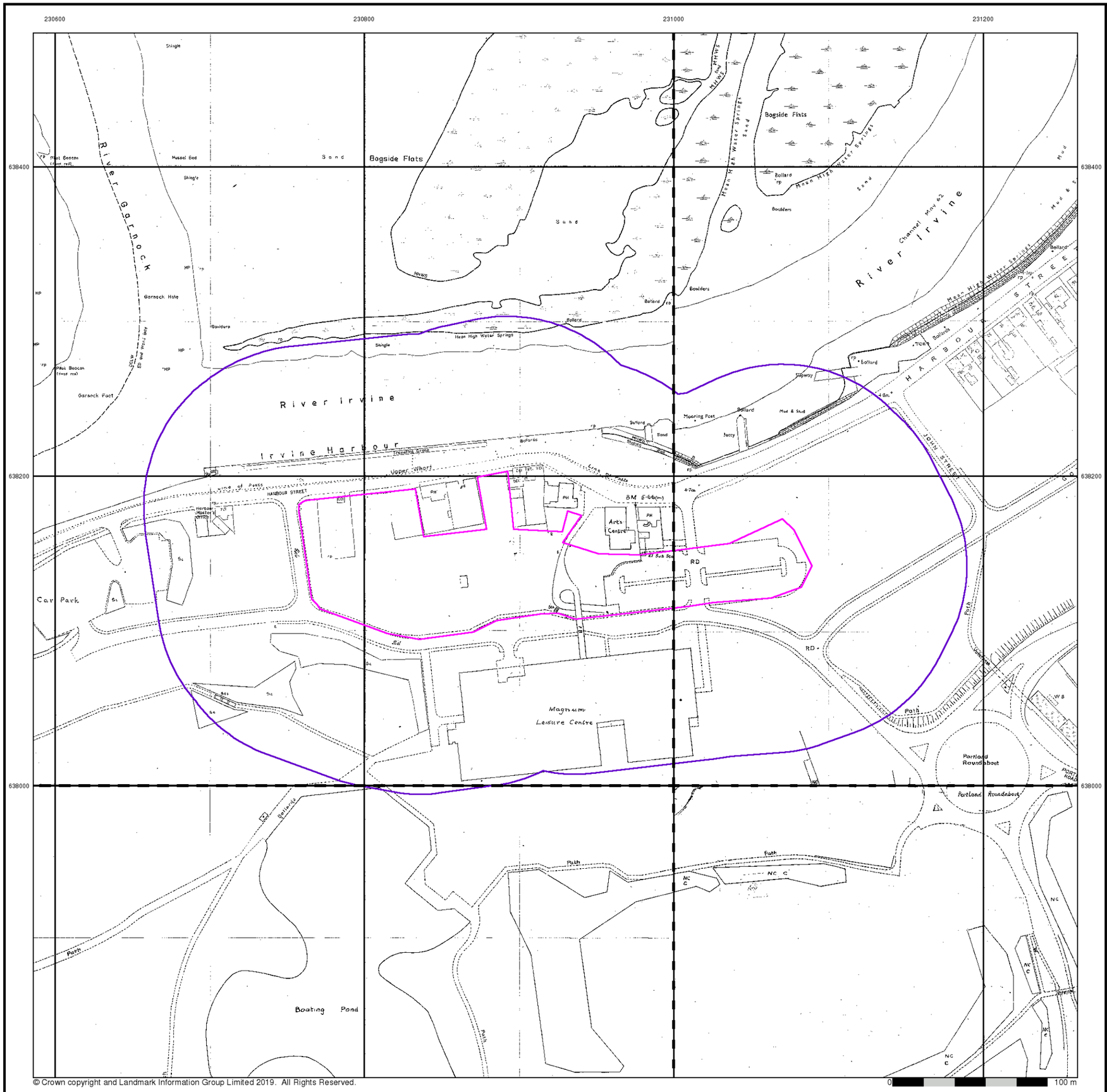


Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	100

Site Details

80, Harbour Street, IRVINE, KA12 8PZ



MASON EVANS
Geo-Environmental Consultants

Additional SIMs

Published 1978 - 1987

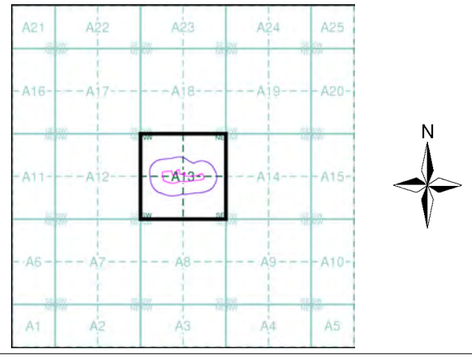
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

NS3038SE 1978 1:1,250	NS3138SW 1987 1:1,250
NS3037NE 1980 1:1,250	NS3137NW 1980 1:1,250

Historical Map - Segment A13



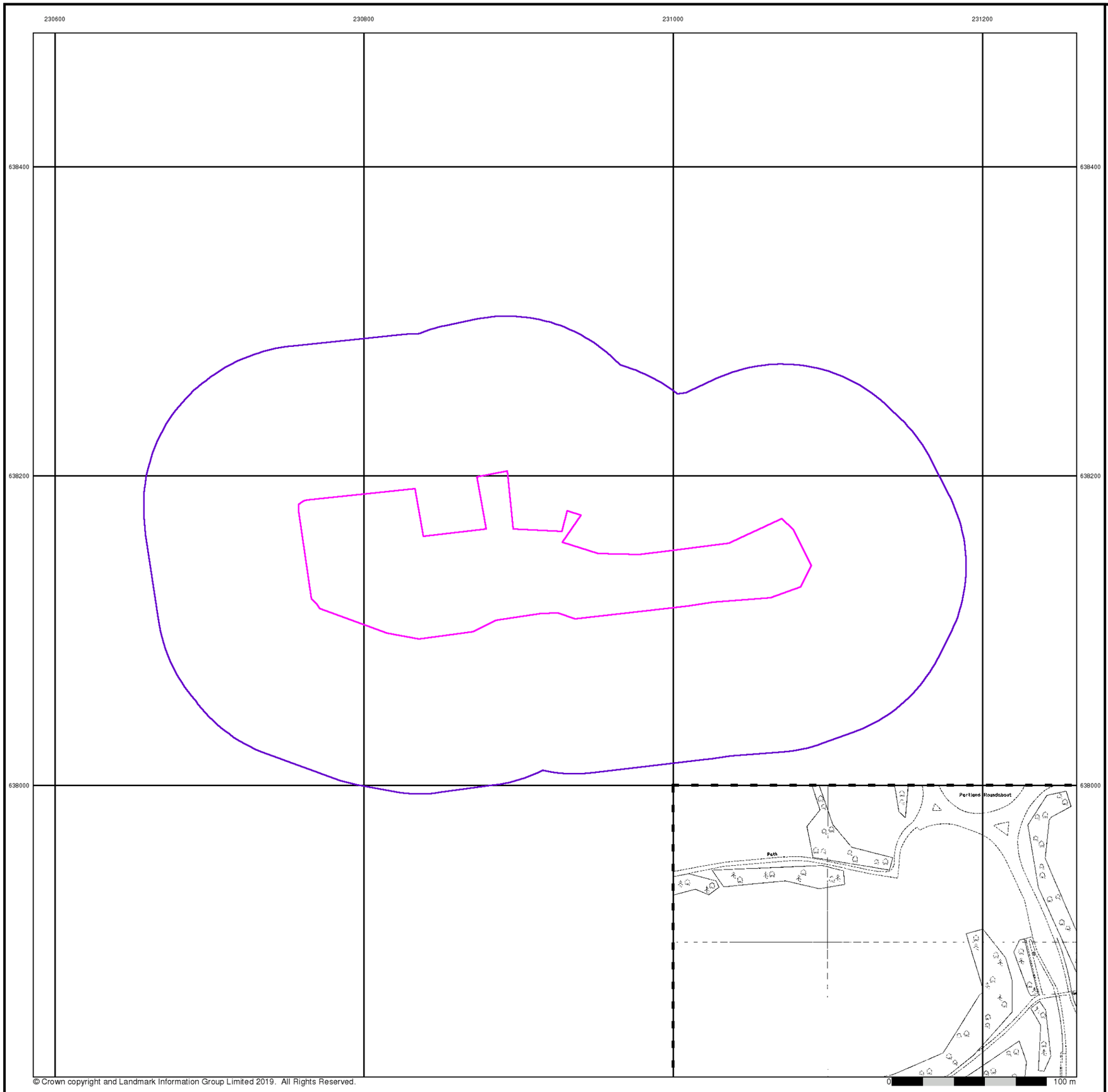
Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	100

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



MASON EVANS
Geo-Environmental Consultants

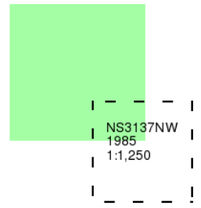
Ordnance Survey Plan

Published 1985

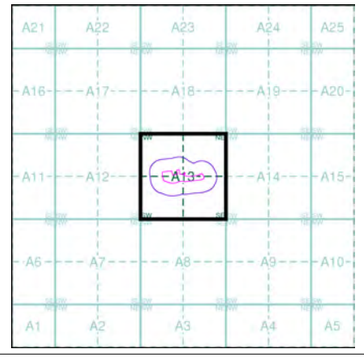
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	100

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

MASON EVANS
Geo-Environmental Consultants

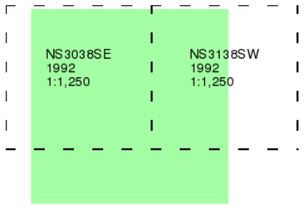
Additional SIMs

Published 1992

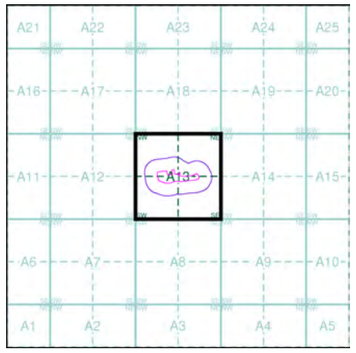
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



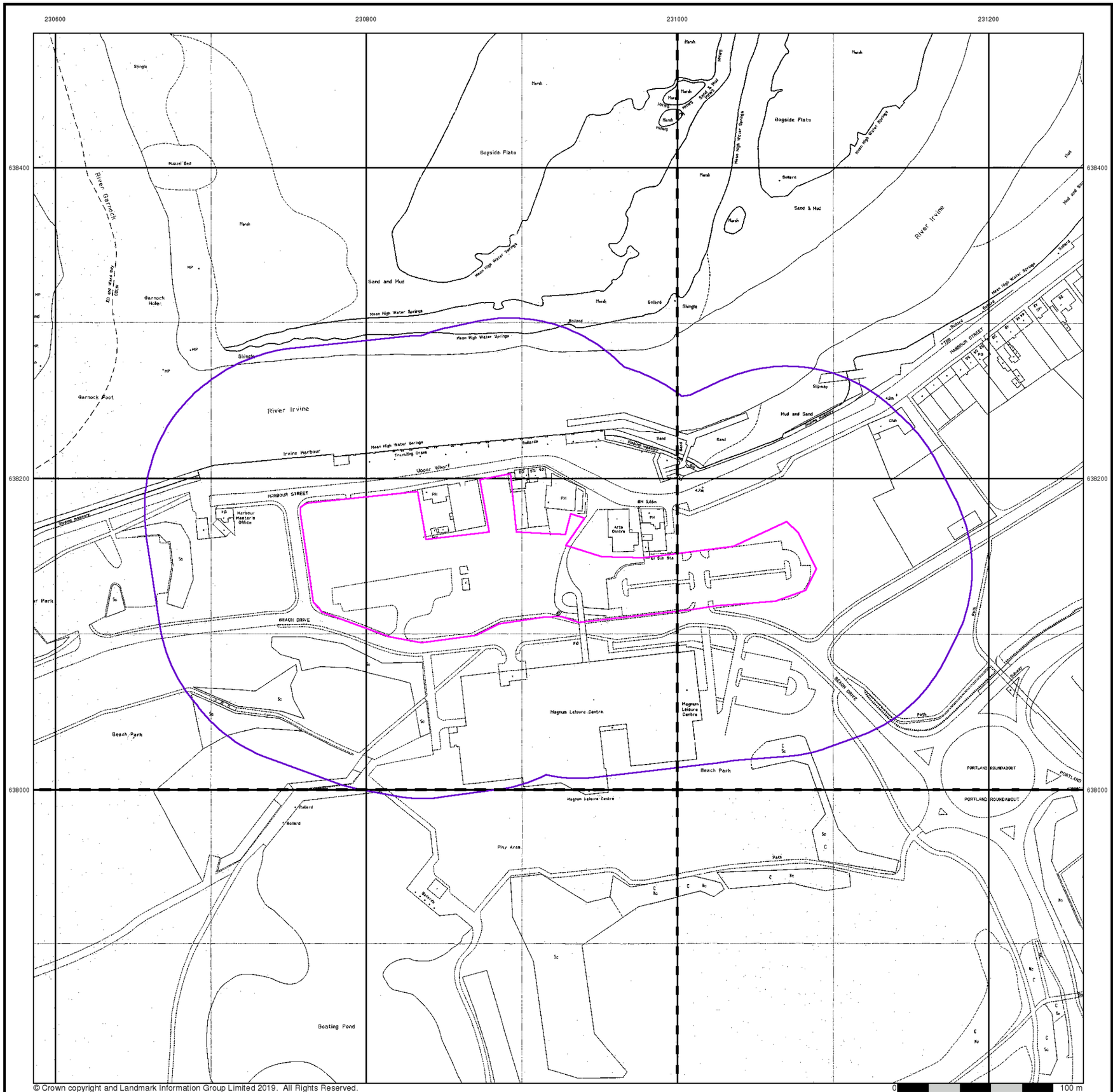
Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	100

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



MASON EVANS
Geo-Environmental Consultants

Large-Scale National Grid Data

Published 1993

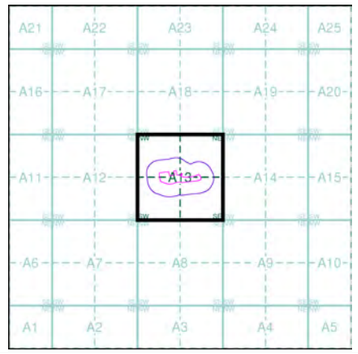
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

NS3038SE 1993 1:1,250	NS3138SW 1993 1:1,250
NS3037NE 1993 1:1,250	NS3137NW 1993 1:1,250

Historical Map - Segment A13



Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	100

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

MASON EVANS
Geo-Environmental Consultants

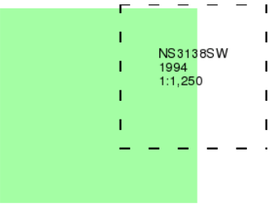
Large-Scale National Grid Data

Published 1994

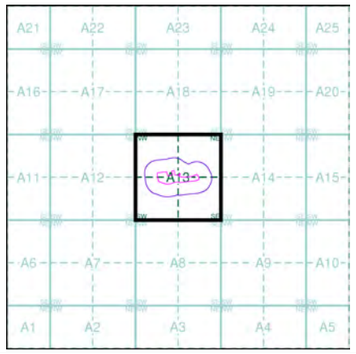
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	100

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

MASON EVANS
Geo-Environmental Consultants

Large-Scale National Grid Data

Published 1996

Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

Historical Map - Segment A13

Order Details

Order Number: 194289274_1_1
Customer Ref: P18-621
National Grid Reference: 230920, 638150
Slice: A
Site Area (Ha): 1.89
Search Buffer (m): 100

Site Details

80, Harbour Street, IRVINE, KA12 8PZ

Landmark
INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

MASON EVANS
Geo-Environmental Consultants

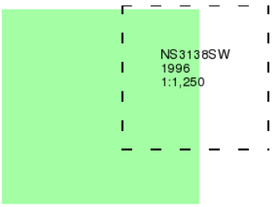
Large-Scale National Grid Data

Published 1996

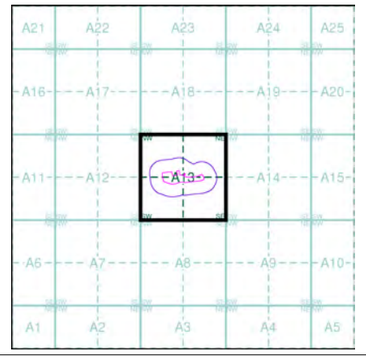
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number:	194289274_1_1
Customer Ref:	P18-621
National Grid Reference:	230920, 638150
Slice:	A
Site Area (Ha):	1.89
Search Buffer (m):	100

Site Details

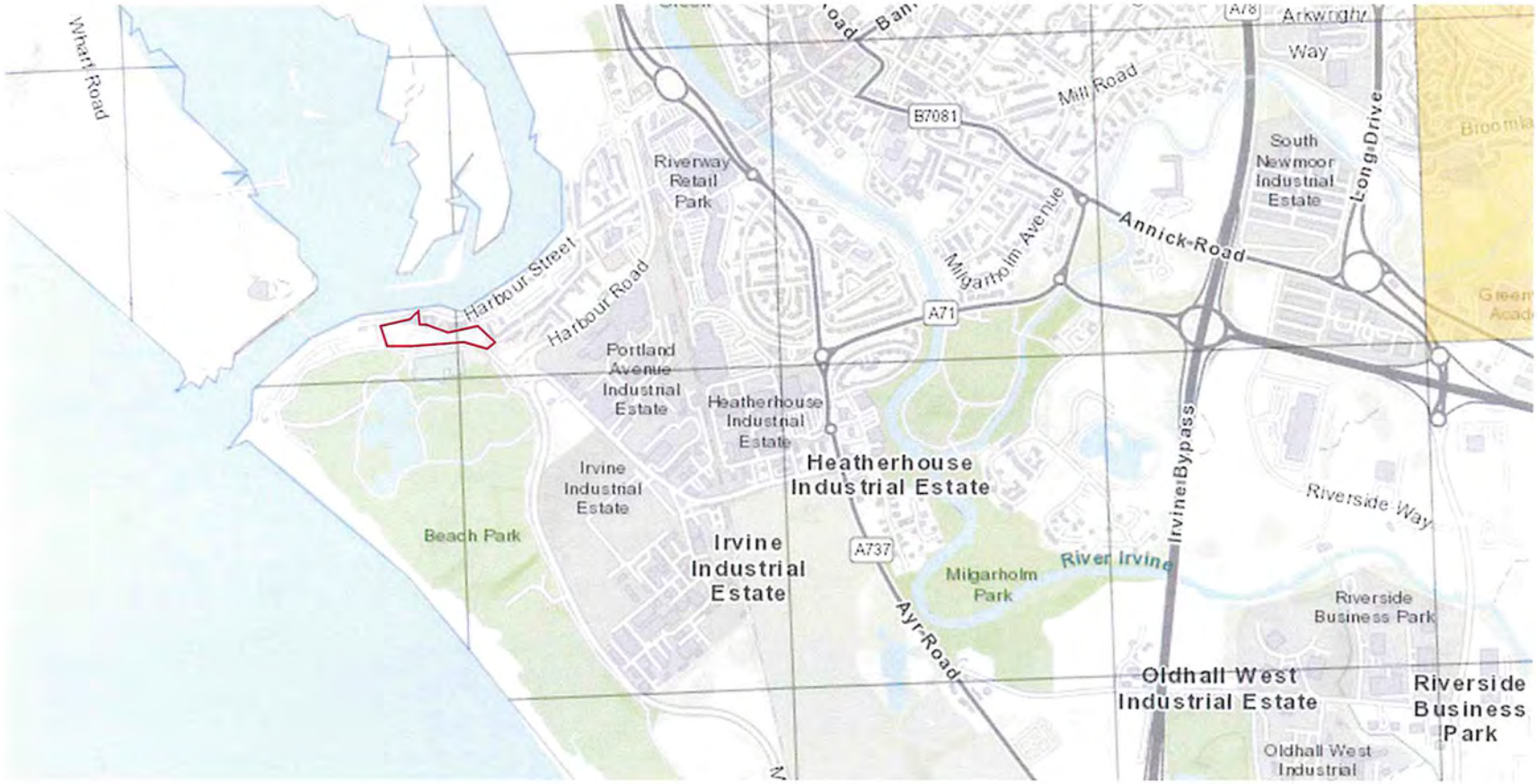
80, Harbour Street, IRVINE, KA12 8PZ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

Appendix 03

Public Information including SEPA information
and Council Correspondence (North Ayrshire Council)

RADON MAP

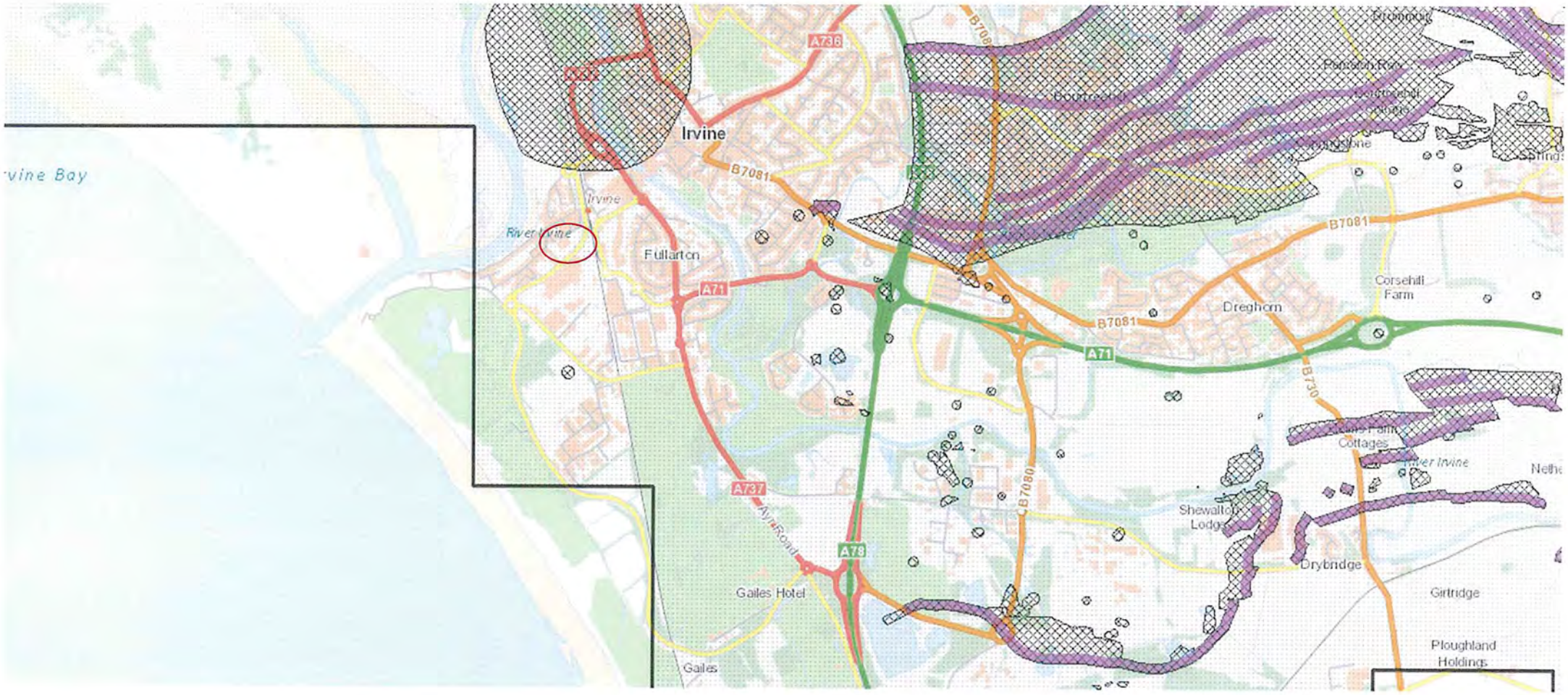

Wharf Road
Harbour Street
Harbour Road
Riverway Retail Park
B7081
Mill Road
Arkwright Way
South Newmoor Industrial Estate
Long Drive
Annick Road
Milgarholm Avenue
A71
Portland Avenue Industrial Estate
Heatherhouse Industrial Estate
Heatherhouse Industrial Estate
Irvine Industrial Estate
Irvine Industrial Estate
Beach Park
A737
Milgarholm Park
River Irvine
Irvine Bypass
Riverside Way
Riverside Business Park
Ayr Road
Oldhall West Industrial Estate
Riverside Business Park
Oldhall West Industrial

Kilmarnock is a groundwater (ID: 150662), in the Scotland river basin district. It is 372.3 square kilometres in area.

Water classification data for selected water body

ID	Name	Parameter	2012	2013	2014	2015	2016	2017
150662	Kilmarnock	2: Overall status	Poor	Poor	Poor	Poor	Poor	Poor
		2-1: Quantitative status	Good	Good	Good	Good	Good	Good
		2-1-1: Quant - Saline Intrusion	Good	Good	Good	Good	Good	Good
		2-1-2: Quant - SW Interaction	Good	Good	Good	Good	Good	Good
		2-1-4: Water balance	Good	Good	Good	Good	Good	Good
		2-2: Chemical status	Poor	Poor	Poor	Poor	Poor	Poor
		2-2-1: Chemical - Saline Intrusion	Good	Good	Good	Good	Good	-
		2-2-1-1: CSI - Electrical Conductivity	-	-	Good	Good	Good	-
		2-2-2: Chem - SW Interaction	Good	Good	Good	Good	Good	Good
		2-2-2-1: Diffuse impacts	Good	Good	-	-	-	-
		2-2-2-2: Point source impacts	Good	Good	-	-	-	-
		2-2-2-3: SWI - Specific pollutants	-	-	Good	Good	Good	Good
		2-2-2-3-1: SWI - Chromium	-	-	Good	Good	Good	Good
		2-2-2-3-2: SWI - Iron	-	-	Good	Good	Good	-
		2-2-2-3-3: SWI - Zinc	-	-	Good	Good	Good	Good


Irvine Bay
Subway
Hotel
Industrial Estate
Map Contents
Areas that may flood - All Likelihood
River
High
Medium
Low
Surface Water
High
Medium
Low
Coastal
High
Medium
Low


Irvine
A736
B7081
Irvine
River Irvine
Fullarton
A71
B7081
Dreghorn
Corsehill Farm
B7081
A71
B730
Cottages
River Irvine
A737
Ayr Road
A78
B7080
Shewalton Lodge
Drybridge
Girtridge
Gailes Hotel
Gailes
Ploughland Holdings

Information Requested and Response

I am compiling desktop information for a site known as Beach Drive, Irvine.

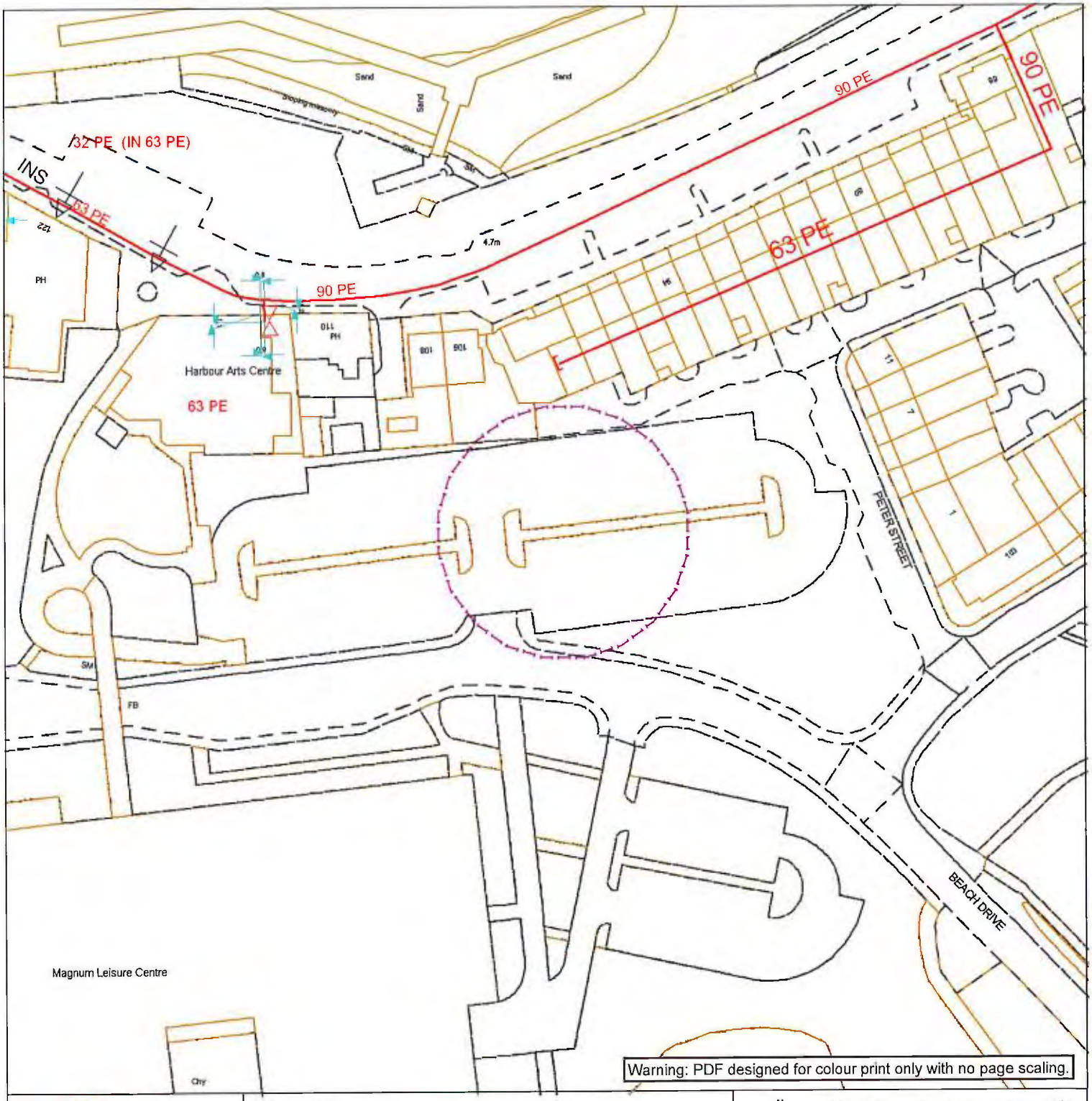
Would North Ayrshire Council have any information pertinent to our investigation such as environmental, mining or historical SI for example? Environmental Health holds two intrusive ground investigation reports by Mason Evans for the area of interest: March 2002 Project No. 2001/153 and January 2006 Project No. 2005/178.

Any information you hold on above ground or underground storage tanks would also be very helpful. Environmental Health holds no information on above ground or underground storage tanks for the area of interest at this time. This information is classified as exempt information under Exception 10(4) (a) of the Environmental Information (Scotland) Regulations 2004 on the basis that this information is not held.ye

I carried out a site walkover last week and noticed a buried structure on the site which my colleague suggested was possibly a hydrocarbon interceptor? Would North Ayrshire Council have any information on this? Environmental Health holds no information on the buried structure noted during your walkover of the area of interest at this time. This information is classified as exempt information under Exception 10(4) (a) of the Environmental Information (Scotland) Regulations 2004 on the basis that this information is not held.

Appendix 04

Buried Service Plans



Warning: PDF designed for colour print only with no page scaling.

SGN
Your gas. Our network.

Low Pressure Mains
Medium Pressure Mains
Intermediate Pressure Mains
High Pressure Mains

Digsite:
Line: Area:
LAs
GTs SSSIs

Some Examples Of Plant Items
Valve Syphon Depth of Cover Diameter Change Material Change

N W E S

This information is given as a guide only and its accuracy cannot be guaranteed.

Linesearch before dig

Contact Us

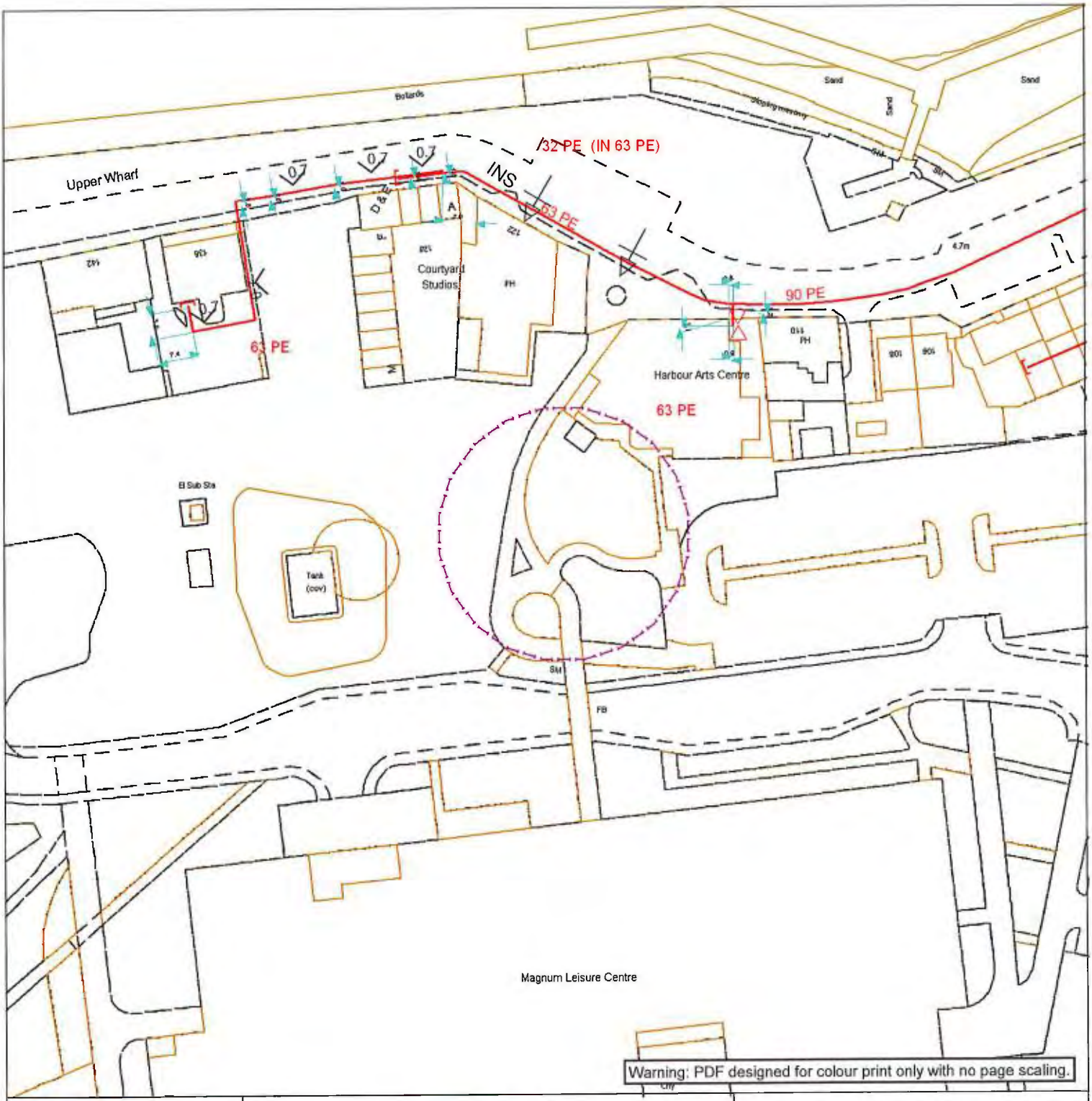
SGN Safety Admin Team:
0800 912 1722
Email:
plantlocation@sgn.co.uk

Date Requested: 09/10/2018
Job Reference: 13912271
Site Location: 231029 638137
Requested by:
Miss Cara Morrison
Your Scheme/Reference:
harbourside 3

Exact Scales:
1:1000 Area or Circle dig site
1:1000 Line dig site

This plan shows the location of those pipes owned by Scotia Gas Networks (SGN) by virtue of being a licensed Gas Transporter (GT). Gas pipes owned by other GTs or third parties may also be present in this area but are not shown on this plan. Information with regard to such pipes should be obtained from the relevant owners. No warranties are given with regard to the accuracy of the information shown on this plan. Service pipes, valves, siphons, sub-connections etc. are not shown but their presence should be anticipated. You should be aware that a small percentage of our pipes/assets may be undergoing review and will temporarily be highlighted in yellow. If your proposed works are close to one of these pipes, you should contact the SGN Safety Admin Team on 0800 912 1722 for advice. No liability of any kind whatsoever is accepted by SGN or its agents, servants or sub-contractors for any error or omission contained herein. Safe digging practices, in accordance with HS (G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that plant location information is provided to all persons (whether direct labour or sub-contractors) working for you on or near gas apparatus. Information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

Report damage immediately – KEEP EVERYONE AWAY FROM THE AREA
0800 111 999



SGN
Your gas. Our network.

Low Pressure Mains
Medium Pressure Mains
Intermediate Pressure Mains
High Pressure Mains

Digsite:
Line:
Area:
LAs
GTs
SSSIs

Some Examples Of Plant Items

Valve | Syphon | Depth of Cover | Diameter Change | Material Change

N W E S

This information is given as a guide only and its accuracy cannot be guaranteed.

Linesearch before dig

Contact Us

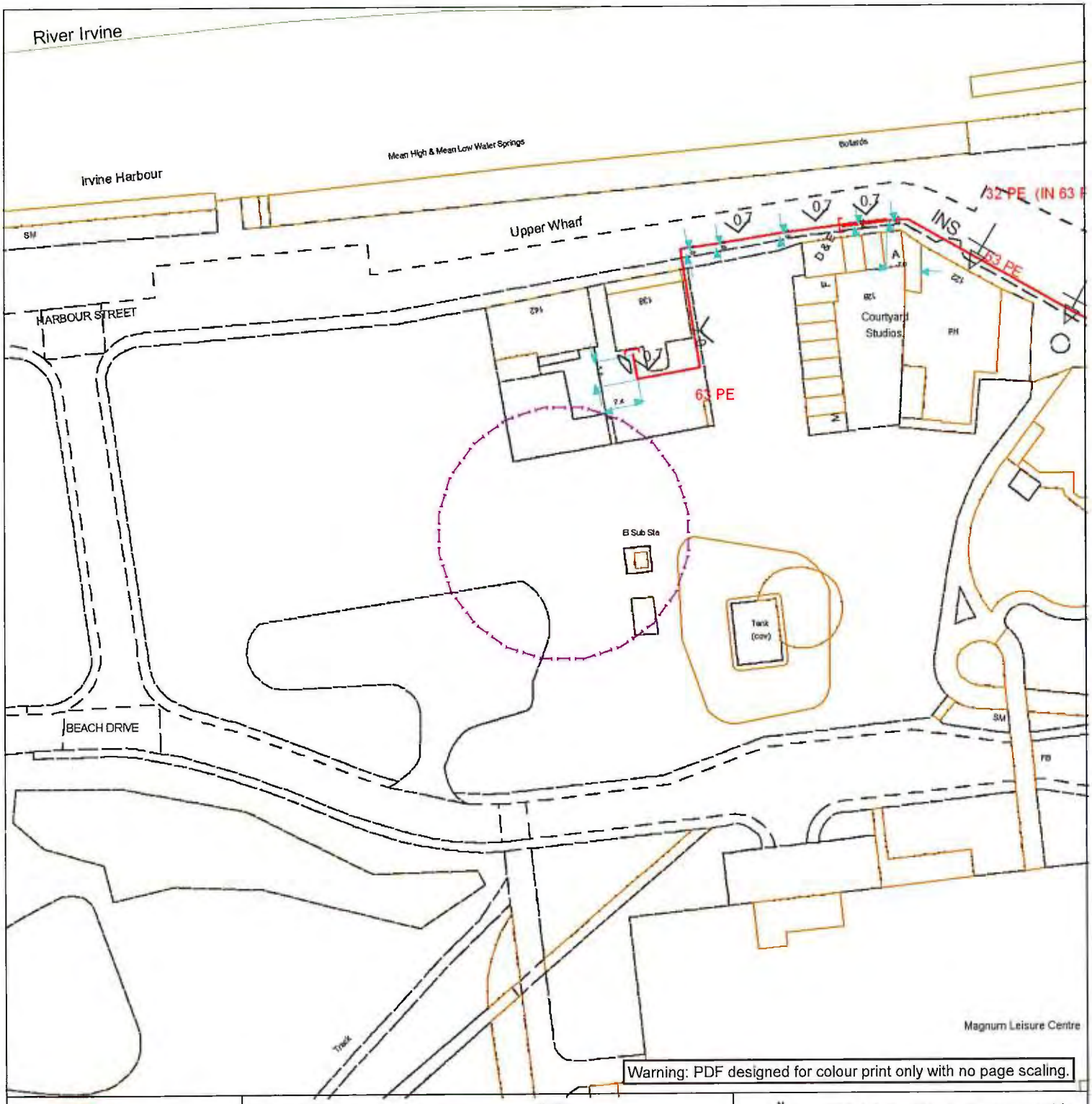
SGN Safety Admin Team:
0800 912 1722
Email:
plantlocation@sgn.co.uk

Date Requested: 09/10/2018
Job Reference: 13912252
Site Location: 230936 638138
Requested by:
Miss Cara Morrison
Your Scheme/Reference:
harbourside 2

Exact Scales:
1:1000 Area or Circle dig site
1:1000 Line dig site

This plan shows the location of those pipes owned by Scotia Gas Networks (SGN) by virtue of being a licensed Gas Transporter (GT). Gas pipes owned by other GTs or third parties may also be present in this area but are not shown on this plan. Information with regard to such pipes should be obtained from the relevant owners. No warranties are given with regard to the accuracy of the information shown on this plan. Service pipes, valves, siphons, sub-connections etc. are not shown but their presence should be anticipated. You should be aware that a small percentage of our pipes/assets may be undergoing review and will temporarily be highlighted in yellow. If your proposed works are close to one of these pipes, you should contact the SGN Safety Admin Team on 0800 912 1722 for advice. No liability of any kind whatsoever is accepted by SGN or its agents, servants or sub-contractors for any error or omission contained herein. Safe digging practices, in accordance with HS (G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that plant location information is provided to all persons (whether direct labour or sub-contractors) working for you on or near gas apparatus. Information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

Report damage immediately – KEEP EVERYONE AWAY FROM THE AREA
0800 111 999



Warning: PDF designed for colour print only with no page scaling.

SGN
Your gas. Our network.

Low Pressure Mains
Medium Pressure Mains
Intermediate Pressure Mains
High Pressure Mains

Digsite:
Line: Area:
LAs
GTs SSSIs

Some Examples Of Plant Items
Valve Syphon Depth of Cover Diameter Change Material Change

N W E S

This information is given as a guide only and its accuracy cannot be guaranteed.

Linesearch before dig

Contact Us

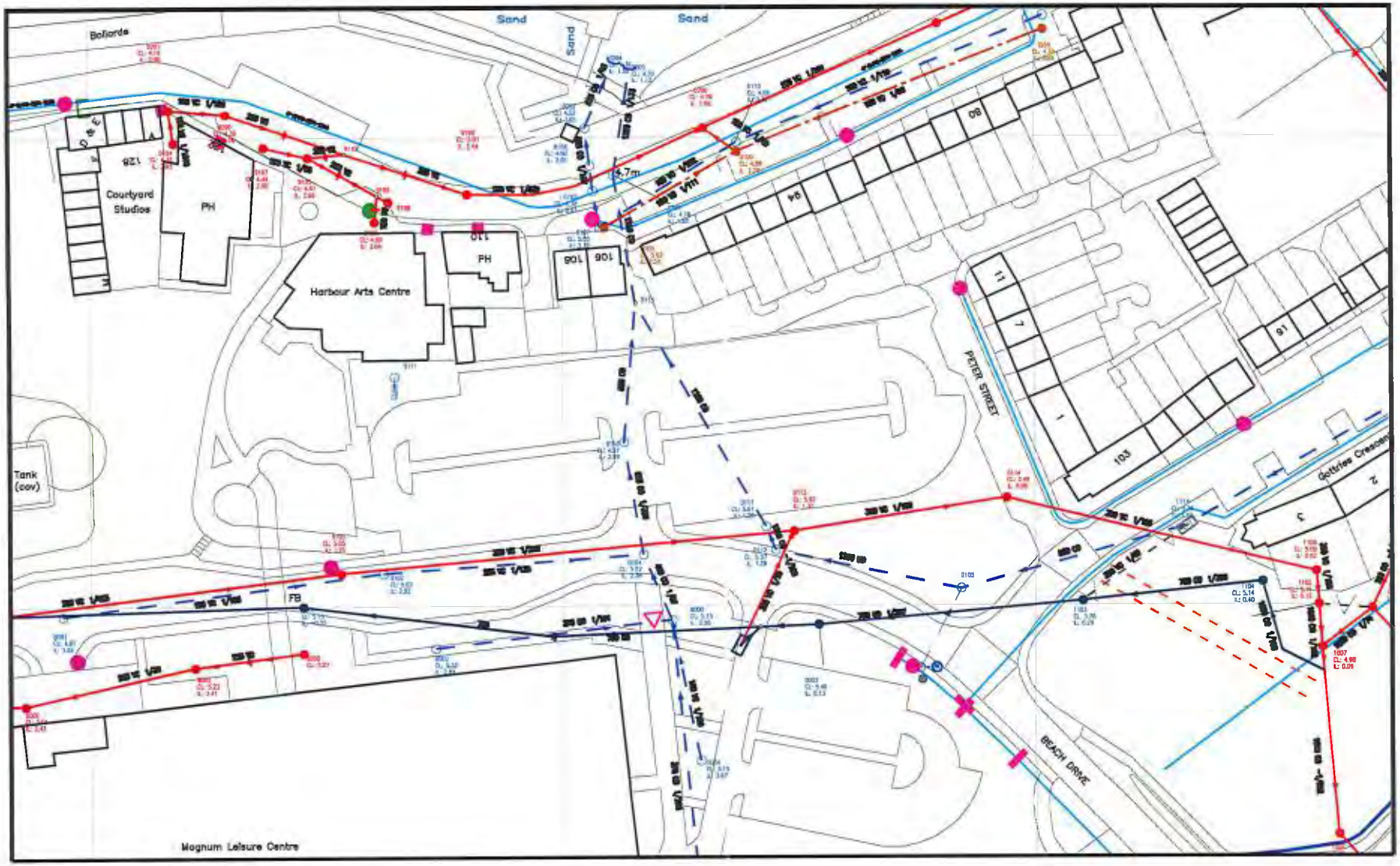
SGN Safety Admin Team:
0800 912 1722
Email:
plantlocation@sgn.co.uk

Date Requested: 09/10/2018
Job Reference: 13912229
Site Location: 230848 638148
Requested by:
Miss Cara Morrison
Your Scheme/Reference:
habourside

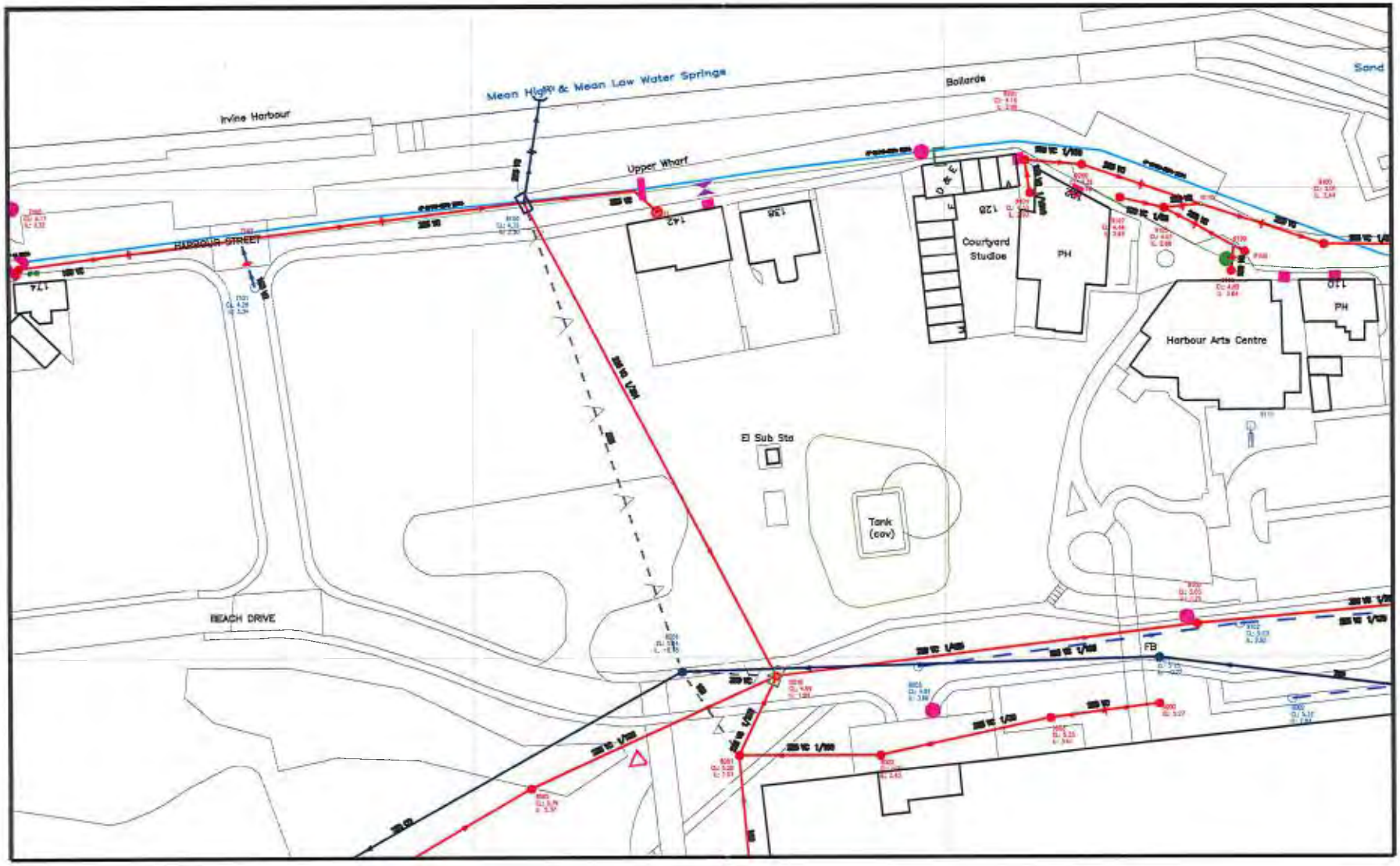
Exact Scales:
1:1000 Area or Circle dig site
1:1000 Line dig site

This plan shows the location of those pipes owned by Scotia Gas Networks (SGN) by virtue of being a licensed Gas Transporter (GT). Gas pipes owned by other GTs or third parties may also be present in this area but are not shown on this plan. Information with regard to such pipes should be obtained from the relevant owners. No warranties are given with regard to the accuracy of the information shown on this plan. Service pipes, valves, siphons, sub-connections etc. are not shown but their presence should be anticipated. You should be aware that a small percentage of our pipes/assets may be undergoing review and will temporarily be highlighted in yellow. If your proposed works are close to one of these pipes, you should contact the SGN Safety Admin Team on 0800 912 1722 for advice. No liability of any kind whatsoever is accepted by SGN or its agents, servants or sub-contractors for any error or omission contained herein. Safe digging practices, in accordance with HS (G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that plant location information is provided to all persons (whether direct labour or sub-contractors) working for you on or near gas apparatus. Information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

Report damage immediately – KEEP EVERYONE AWAY FROM THE AREA
0800 111 999



N	The representation of physical assets and the boundaries of areas in which Scottish Water and others have an interest does not necessarily imply their true positions. For further details contact the appropriate District Office.	231029,638137	(c) Crown copyright and database rights 2017 Ordnance Survey 100023460. You are permitted to use this data solely to enable you to respond to, or interact with, the organisation that provided you with the data. You are not permitted to copy, sub-license, distribute or sell any of this	Scottish Water Always serving Scotland Castle House, 6 Castle Drive, Dunfermline, KY11 8GG Tel No: 0845 601 8855
	Date Plotted: 09/10/2018	Scale: 1:1250	Plotted by third parties in any form	



N	The representation of physical assets and the boundaries of areas in which Scottish Water and others have an interest does not necessarily imply their true positions. For further details contact the appropriate District Office.	230848,638148	(c) Crown copyright and database rights 2017 Ordnance Survey 100023460. You are permitted to use this data solely to enable you to respond to, or interact with, the organisation that provided you with the data. You are not permitted to copy, sub-license, distribute or sell any of this	Scottish Water Always serving Scotland Castle House, 6 Castle Drive, Dunfermline, KY11 8GG Tel No: 0845 601 8855
	Date Plotted: 09/10/2018	Scale: 1:1250	Plotted by third party data in any form	

This map image may not be used for planning application use

SP ENERGY NETWORKS

On behalf of SP Distribution plc & SP Transmission plc

Information about apparatus given on this drawing is indicative only as the original depths and lines of cables and pipes may have been changed by persons unknown. Normally electricity cables are laid in trenches between 450mm and 1m deep, but cellars or structures such as bridges may prevent cables and pipes being laid at these standard depths. Also, the depth may be above or below the standard due to regrading of the surface or other work after the cables are laid. Where known, non-standard depths are indicated. Any interference with, or damage to, ScottishPower apparatus may result in serious accident. Health and Safety Executive booklet HSG47 provides information on the avoidance of danger from underground services. Authorities and contractors will be held liable both for the full cost of repairs to ScottishPower apparatus and all claims made against ScottishPower by Third parties as a result of interference or damage. In the event of an emergency or should you require further assistance contact 0800-092-9290 (ScottishPower area) or 0800-001-5400 (SP Manweb area).

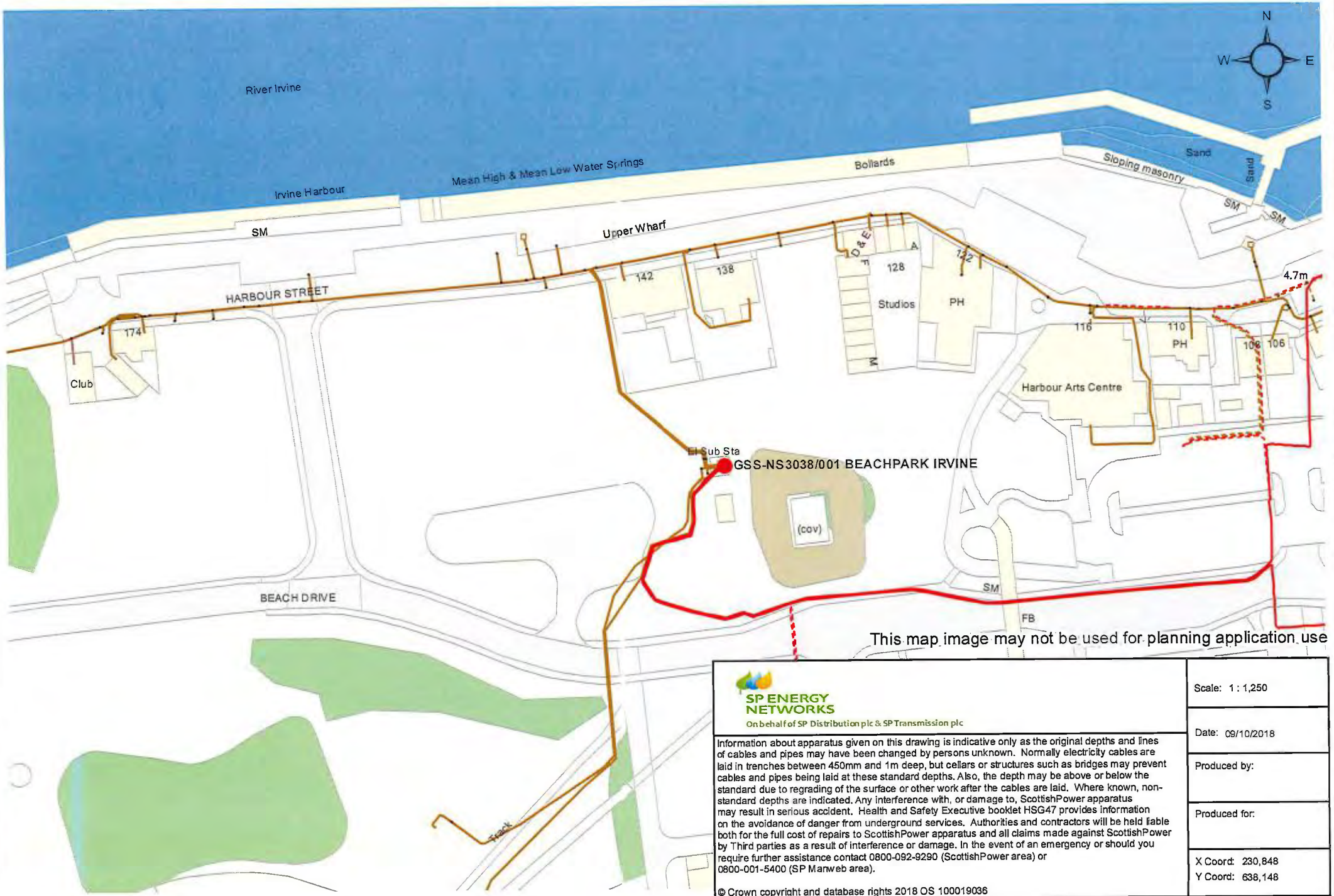
Scale: 1 : 1,250

Date: 09/10/2018

Produced by:

Produced for:

X Coord: 231,029
Y Coord: 638,137


River Irvine
Irvine Harbour
Mean High & Mean Low Water Springs
Bollards
Sloping masonry
Sand
Sand
SM
SM
SM
Upper Wharf
HARBOUR STREET
174
142
138
128
Studios
PH
122
116
110
PH
108
106
4.7m
Club
Harbour Arts Centre
Sub Sta
GSS-NS3038/001 BEACHPARK IRVINE
(cov)
BEACH DRIVE
SM
FB
N
W
E
S
This map image may not be used for planning application use
SP ENERGY NETWORKS
On behalf of SP Distribution plc & SP Transmission plc
Information about apparatus given on this drawing is indicative only as the original depths and lines of cables and pipes may have been changed by persons unknown. Normally electricity cables are laid in trenches between 450mm and 1m deep, but cellars or structures such as bridges may prevent cables and pipes being laid at these standard depths. Also, the depth may be above or below the standard due to regrading of the surface or other work after the cables are laid. Where known, non-standard depths are indicated. Any interference with, or damage to, ScottishPower apparatus may result in serious accident. Health and Safety Executive booklet HSG47 provides information on the avoidance of danger from underground services. Authorities and contractors will be held liable both for the full cost of repairs to ScottishPower apparatus and all claims made against ScottishPower by Third parties as a result of interference or damage. In the event of an emergency or should you require further assistance contact 0800-092-9290 (ScottishPower area) or 0800-001-5400 (SP Manweb area).
© Crown copyright and database rights 2018 OS 100019036
Scale: 1 : 1,250
Date: 09/10/2018
Produced by:
Produced for:
X Coord: 230,848
Y Coord: 638,148

Maps by email Plant Information Reply

IMPORTANT WARNING

Information regarding the location of BT apparatus is given for your assistance and is intended for general guidance only. No guarantee is given of its accuracy. It should not be relied upon in the event of excavations or other works being made near to BT apparatus which may exist at various depths and may deviate from the marked route

openreach

CLICK BEFORE YOU DIG

FOR PROFESSIONAL FREE ON SITE ASSISTANCE PRIOR TO COMMENCEMENT OF EXCAVATION WORKS INCLUDING LOCATE AND MARKING SERVICE

email cbyd@openreach.co.uk

ADVANCE NOTICE REQUIRED
(Office hours: Monday - Friday 08.00 to 17.00)
www.openreach.co.uk/cbyd

KEY TO BT SYMBOLS

	Planned	Live
PCP		
Pole		
Box		
Manhole		
Cabinet		

Change Of State	+	Hatchings	
Split Coupling		Built	
Duct Tee		Planned	
Building		Inferred	
Kiosk	K	Duct	

Other proposed plant is shown using dashed lines. BT Symbols not listed above may be disregarded. Existing BT Plant may not be recorded. Information valid at time of preparation. Maps are only valid for 90 days after the date of publication.

	Pending Add	In Place	Pending Remove	Not In Use
Power Cable				
Power Duct				N/A

BT Ref : DCB042922
Map Reference : (centre) NS3093638138
Easting/Northing : (centre) 230936,638138
Issued : 08/10/2018 16:29:33

WARNING: IF PLANNED WORKS FALL INSIDE HATCHED AREA IT IS ESSENTIAL BEFORE PROCEEDING THAT YOU CONTACT

Appendix 05

Invasive Plant Survey

Mason Evans Partnership
The Piazza
95 Morrison Street
Glasgow
G5 8BE

18th April 2019

FAO: Heather Scott

Invasive Weeds Survey

Dear Madam,

S2818 – Beach Drive, Irvine

Thank you for your recent enquiry in relation to invasive/legislated weeds. The development area above has been inspected and we are pleased to provide the following report in regard to our findings and recommendations.

Site Description

The survey area is located to the west of Irvin, Ayrshire. The site comprises an undeveloped piece of land, with an area of maintained grassland, a small area of hardstanding and raised hill area which appears to be bunkers to the east and a larger area of tarmac carpark, with shrubs, trees and an area of grassland to the west.

Survey Details

The survey was carried out on 17th April 2019 which is early in the new growing season. At this time of year Japanese Knotweed is identified by any plant material/ vegetation visible at the time of our inspection along with any plant residue such as leaf litter and dead stalks which remains from the previous growing season.

Japanese Knotweed undergoing herbicide management can be more difficult to find and identify, however, identification is still possible if plant crowns or sporadic/bonsai growth are present. We would ask that if the property owner/manager/developer is aware of any treatment programmes; including any infestations historically treated/eradicated and under guarantee, then this information should be disclosed to KleerKut.

This survey was non-intrusive and based on a visual inspection.

Survey Findings – Commonly Known Species Controlled By Legislation

The commonly known plants which we record during our inspections are the following:

- **Japanese Knotweed** *(Fallopia japonica)* **No Evidence**
- **Giant Hogweed** (*Heracleum mantegazzianum*) **No Evidence**
- **Himalayan Balsam** *(Impatiens glandulifera)* **No Evidence**

These plants are on Schedule 9 of the Wildlife & Countryside (Scotland) Act 1981. In Scotland Schedule 9 has been superseded by amendments brought in by the Wildlife and Natural Environment (Scotland) Act 2011 (WANE) where the legal presumption is now against causing the growth in the wild of any non-native species outwith their native range (exceptions and definitions apply to non-wild areas).

There was no **Japanese Knotweed** *(Fallopia japonica),* **Giant Hogweed** (*Heracleum mantegazzianum*) or **Himalayan Balsam** *(Impatiens glandulifera)* identified during this site inspection.

Survey Findings – Other Legislated Species

In addition to the commonly known plants noted above, there are other plants controlled under Schedule 9 of the Wildlife Countryside (Scotland) Act 1981 as amended by the Wildlife and Natural Environment (Scotland) Act 2011. Our reporting of these invasive plants is based on our opinion of the impact they will have on the proposed development and the risk that they will be spread as a result of the site works as the legislation controlling them make it an offence to grow or cause the growth of them.

Cotoneaster – Cotoneaster identified within the development area; refer to location plan and photographs.

CT1 – Cotoneaster was visible covering an area of approximately 40m². This shrub is dense and well established and under 0.5m tall.

CT2- Growing along and up wall, Cotoneaster was found measuring approximately 4m^2 and 2m tall.

CT3 – Covering an area of approximately 4m^2 Cotoneaster was identified growing along and up wall, found to be 1.5m tall, on grass verge.

CT4 – Visible Cotoneaster was identified covering an area of approximately 15m². This growth is dense and well established, among other shrubs.

Japanese Rose (Rosa Rugosa)- Japanese Rose identified within the development area; refer to location plan and photographs

JR1- Covering an area of approximately 200m², dense and well established Japanese Rose was identified within in survey area, found next to paved area and on grass.

JR2- Japanese Rose was identified among other shrubs and covers an area of approximately 10m². This growth is maintained and has recently been cut back.

Survey Findings – Problematic Non Legislated Species

In addition to the legislated plants recorded above, we also consider other non-legislated plants which could compromise/impact any development. While it is not an offence to have these plants on site there are reasons why the developer may want to consider management or treatment of them. One such plant is Horsetail.

There was no visible Horsetail recorded during our inspection of the survey area.

Why Manage Cotoneaster?

Damage To Infrastructure **-** In urban areas, this plant has the potential to cause damage to buildings and structures by rooting in crumbling mortar and cracks.

Legislation - Like Japanese Knotweed, this species is also controlled in Scotland under Schedule 9 of the Wildlife Countryside (Scotland) Act 1981 as amended by the Wildlife and Natural Environment (Scotland) Act 2011. This means that it is a criminal offence to encourage or cause the growth of this plant – this can include moving soils that contain the seeds of this plant. Soils containing the seeds or rhizomes (roots) of this species require to be managed under the current Waste Management Regulations.

Ecology - Cotoneaster is a persistent shrub which depending on species, can range in height from 1 - 3 metres in height. The dense growth of Cotoneaster quickly shades out our indigenous plants resulting in an adverse impact on our native ecology.

Ease of Spread – Cotoneaster spreads easily by seed dispersal and also regeneration of root fragments i.e. this species is also vegetative.

Why Manage Japanese Rose?

Legislation – Japanese Rose is also controlled in Scotland under Schedule 9 of the Wildlife Countryside (Scotland) Act 1981 as amended by the Wildlife and Natural Environment (Scotland) Act 2011. This means that it is a criminal offence to encourage or cause the growth of this plant – this can include moving soils that contain the seeds, corms or rhizome fragments depending on species. Soils containing plant material which is capable of regrowth requires to be managed under the current Waste Management Regulations.

Ecology - The dense growth of this non native species shades out our indigenous plants resulting in an adverse impact on our native ecology by reducing biodiversity and dominating amenity planting.

KleerKut Recommendations -

Commonly Known Species Controlled by Legislation –

There was no evidence of Japanese Knotweed, Himalayan Balsam or Giant Hogweed identified within this development.

Other Legislated Weeds –

While there was no Japanese Knotweed identified within the survey area, Cotoneaster and Japanese Rose shrubs were recorded which are controlled under the same legislation. We would recommend that the vegetation clearance is undertaken in a controlled manner at these locations to ensure that no further spread of these invasive shrubs result.

Should the client wish to use their own contractor to remove the vegetation, KleerKut could supervise the works, providing a site specific method of works which will ensure that no further spread of this invasive shrub results and that the vegetation clearance works are generally undertaken in accordance with current legislation.

Problematic Non-Legislated Weeds – There was no Horsetail identified within the survey area.

As noted, Horsetail was dying back for winter and leaves little residue, as it is early in the growing season there may be infestations present that were not visible at the time of our inspection.

In general, for the controlled invasive species we would recommend that an Invasive Weeds Management Plan/Management Strategy is put in place as soon as possible in order to manage risk and reduce the possibility of spread. The right solution for each development will vary from site to site and it is important to only consider solutions proposed by experienced Invasive Weeds Specialists. All works undertaken should ensure compliance with SEPA recommendations, current legislation and achieve Best Practice.

KleerKut Accreditation

KleerKut are a non-franchised Scottish business who have specialised in the management of invasive weeds since 2006. We have built up an enviable reputation as specialists in Japanese Knotweed by providing clear, concise and proven remediation strategies which ensure that Best Practical Environmental Options (BPEO) are achieved as recommended in the Japanese Knotweed Code of Practice.

Our knowledge and experience have enabled us to become approved consultants and contractors with many of the leading consultants, developers and construction companies throughout the UK. This was further enhanced after we were invited to join the Property Care Association (PCA). By being members of the PCA our works are Government endorsed through their Trustmark scheme.

KleerKut are accredited members of Constructionline and SMAS Safe Systems in Procurement demonstrating our commitment to working safely in partnership with our clients and sub contractors.

Thank you for your enquiry and should you have any further queries in relation to this site or any other site, please do not hesitate to contact me at this office.

Yours faithfully

Julie McLean
For KleerKut Ltd

Survey Photographs

Photo 1

JR1 - Japanese Rose

Photo 2

JR2 – Japanese Rose

Photo 3

CT2 – Cotoneaster

Photo 4

CT4 – Cotoneaster

Notes

- Japanese Knotweed
- Japanese Rose
- Cotoneaster

KLEERKUT
invasive weed specialist

Kleerkut Limited
Barncluith Business Centre
Townhead Street
Hamilton, ML3 7DP

0141 319 8210
info@Kleerkut.co.uk

Client: MEP

Job: S2818 – Beach Drive, Irvine KA12 8PZ

Title: Location Plan

Date: 02/04/19 | FAO: Heather Scott | Revision:

Appendix 06

The Coal Authority Report

The Coal Authority

CON29M Non-Residential Mining Report

80, HARBOUR STREET
IRVINE
NORTH AYRSHIRE

Date of enquiry:	**15 February 2019**
Date enquiry received:	**15 February 2019**
Issue date:	**15 February 2019**
Our reference:	**51002053172001**
Your reference:	**194289274_2|**

CON29M Non-Residential Mining Report

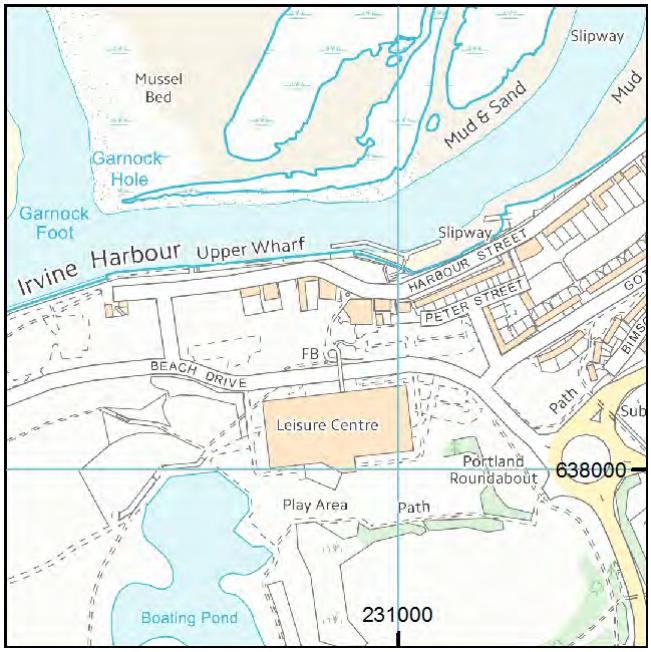
This report is based on, and limited to, the records held by the Coal Authority, at the time we answer the search.

Client name

LANDMARK INFORMATION GROUP LIMITED

Enquiry address

80, HARBOUR STREET
IRVINE
NORTH AYRSHIRE



Approximate position of property

How to contact us

0345 762 6848 (UK)
+44 (0)1623 637 000 (International)

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

www.groundstability.com

@coalauthority
/company/the-coal-authority
/thecoalauthority
/thecoalauthority

Summary

Has the search report highlighted evidence or potential of		
1	Past underground coal mining	No
2	Present underground coal mining	No
3	Future underground coal mining	Yes
4	Mine entries	No
5	Coal mining geology	No
6	Past opencast coal mining	No
7	Present opencast coal mining	No
8	Future opencast coal mining	No
9	Coal mining subsidence	No
10	Mine gas	No
11	Hazards related to coal mining	No
12	Withdrawal of support	No
13	Working facilities order	No
14	Payments to owners of former copyhold land	No

For detailed findings, please go to page 4.

Detailed findings

1. Past underground coal mining

The property is not within a surface area that could be affected by any past recorded underground coal mining.

2. Present underground coal mining

The property is not within a surface area that could be affected by present underground mining.

3. Future underground coal mining

The property is not in an area where the Coal Authority has received an application for, and is currently considering whether to grant a licence to remove or work coal by underground methods.

The property is not in an area where a licence has been granted to remove or otherwise work coal using underground methods.

The property is not in an area likely to be affected from any planned future underground coal mining.

However, reserves of coal exist in the local area which could be worked at some time in the future.

No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

4. Mine entries

There are no known coal mine entries within, or within 20 metres of, the boundary of the property.

5. Coal mining geology

The Coal Authority is not aware of any damage due to geological faults or other lines of weakness that have been affected by coal mining.

6. Past opencast coal mining

The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.

7. Present opencast coal mining

The property does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods.

8. Future opencast coal mining

There are no licence requests outstanding to remove coal by opencast methods within 800 metres of the boundary.

The property is not within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted.

9. Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31 October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

10. Mine gas

The Coal Authority has no record of a mine gas emission requiring action.

11. Hazards related to coal mining

The property has not been subject to remedial works, by or on behalf of the Coal Authority, under its Emergency Surface Hazard Call Out procedures.

12. Withdrawal of support

The property is not in an area where a notice to withdraw support has been given.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

13. Working facilities order

The property is not in an area where an order has been made, under the provisions of the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof.

14. Payments to owners of former copyhold land

The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

Additional remarks

Information provided by the Coal Authority in this report is compiled in response to the Law Society's CON29M Coal Mining enquiries. The said enquiries are protected by copyright owned by the Law Society of 113 Chancery Lane, London WC2A 1PL. This report is prepared in accordance with the Law Society's Guidance Notes 2018, the User Guide 2018 and the Coal Authority's Terms and Conditions applicable at the time the report was produced.

Disclaimer

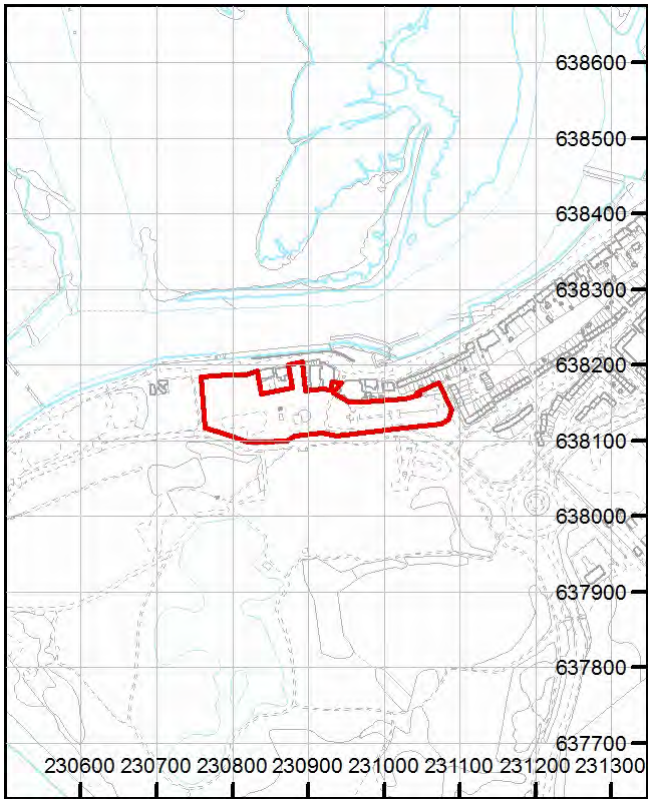
Alternative formats

If you would like this information in an alternative format, please contact our communications team on 0345 762 6848 or email communications@coal.gov.uk.

Enquiry boundary

Key

Approximate position of enquiry boundary shown



How to contact us

0345 762 6848 (UK)
+44 (0)1623 637 000 (International)

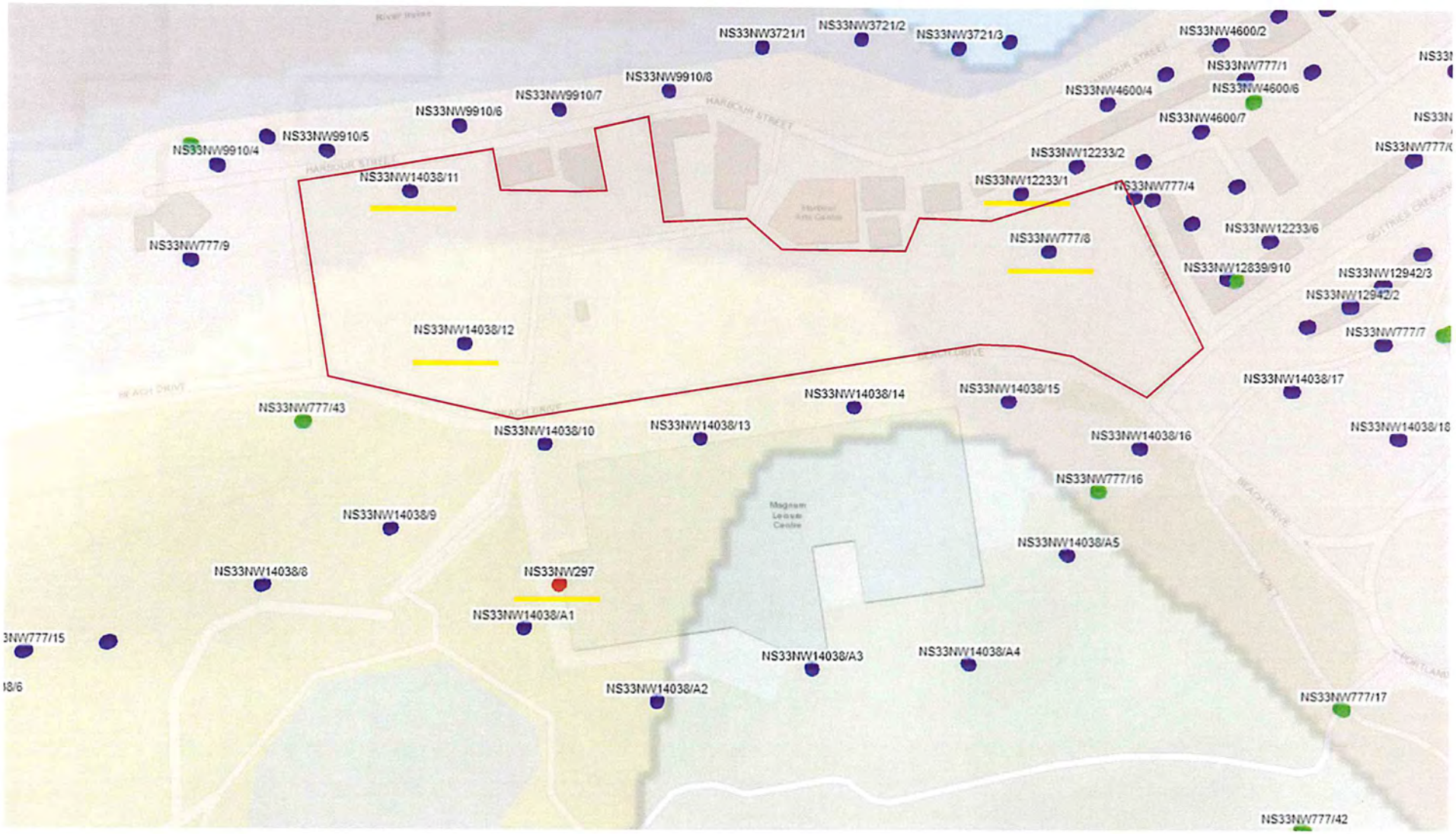
200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

www.groundstability.com

@coalauthority
/company/the-coal-authority
/thecoalauthority
/thecoalauthority

Appendix 07

Historical Borehole Records


NS33NW3721/1
NS33NW3721/2
NS33NW3721/3
NS33NW4600/2
NS33NW777/1
NS33NW4600/4
NS33NW4600/6
NS33NW4600/7
NS33NW9910/8
NS33NW9910/7
NS33NW9910/6
NS33NW9910/5
NS33NW9910/4
NS33NW14038/11
NS33NW12233/2
NS33NW12233/1
NS33NW777/4
NS33NW777/9
NS33NW777/8
NS33NW12233/6
NS33NW12839/910
NS33NW12942/3
NS33NW12942/2
NS33NW14038/12
NS33NW777/7
NS33NW14038/17
NS33NW14038/14
NS33NW14038/15
NS33NW777/43
NS33NW14038/10
NS33NW14038/13
NS33NW14038/16
NS33NW14038/18
NS33NW777/16
NS33NW14038/9
NS33NW14038/A5
NS33NW14038/8
NS33NW297
NS33NW14038/A1
NS33NW14038/A3
NS33NW14038/A4
NS33NW14038/A2
NS33NW777/17
NS33NW777/42

Norwest Holst Soil Engineering Ltd.

BOREHOLE LOG

Borehole No. **11**

Contract No. F7666
Location IRVINE
Client Strathclyde R.C.
Method of Boring Percussion
Diameter of Borehole 150mm

Sheet 1 of 1
Chainage
Ground Level 4.50 m.A.O.D.
Date 16/10/87

Description of Strata	Legend	Depth Below G.L.(m)	O.D. Level (m)	Casing Depth at Sampling	Sampling and Coring	"N"/ R.Q.D.%	Daily Progress
TOPSOIL		0.30	4.20				
Brown fine to medium silty SAND with occasional fine to medium gravel towards 1.50m		1.50	3.00		1.00 1.50		
Medium dense brown fine to medium silty SAND with fine to medium gravel. Occasional cobbles at 3.00m		1.00	0.50		2.00 3.50 C	"16"	

Type of Sample
ES S.P.T. ■ Undisturbed
IC C.P.T. × Vane
O Jar Δ Water
● Bulk ▣ Piezometer

Remarks (Observations of Ground Water etc.)
16/10/87 Borehole Dry.

Water levels are subject to seasonal or tidal variations and should not be taken as constant

Norwest Holst Soil Engineering Ltd.

BOREHOLE LOG

Borehole No. **12**

Contract No. F7666
Location IRVINE
Client Strathclyde R.C.
Method of Boring Percussion
Diameter of Borehole 150mm

Sheet 1 of 1
Chainage
Ground Level 5.40 m.A.O.D.
Date 16/10/87

Description of Strata	Legend	Depth Below G.L.(m)	O.D. Level (m)	Casing Depth at Sampling	Sampling and Coring	"N"/ R.Q.D.%	Daily Progress
MADEGROUND : Compact ash, brick, stone		0.50	4.90				
MADEGROUND : Brown sand and gravel		0.90	4.50				
Brown fine to medium silty SAND with occasional silty pockets		1.50	3.90		1.00		
Medium dense brown fine to medium grained silty SAND. 4.00 to 5.00 fine to coarse silty SAND with some fine to medium gravel getting finer towards 5m		5.00	0.40		2.00 3.00 C 4.00 4.50 C	"15" "19"	

Type of Sample
ES S.P.T. ■ Undisturbed
IC C.P.T. × Vane
O Jar Δ Water
● Bulk ▣ Piezometer

Remarks (Observations of Ground Water etc.)
Ground water :- 16/10/87 Inflow at 4.40m not rising after 15 mins casing at 4.40m
Final standing level 4.60m, with casing at 4.80m.
Trial pit dug - no services found

Water levels are subject to seasonal or tidal variations and should not be taken as constant

NS 33 NW

(see water record 22/210)

297

DAVID POLLOCK & CO. LTD. · · Saline Street, AIRDRIE

Telephone—AIRDRIE 64126-7

BORE JOURNAL

Site Irvine Water Well

Date Started 5.2.76

Date Finished 29.3.76

Borehole No. 1

Total Depth 43.27

Type of Boring

Water Struck at ft.

Strata	Thickness m.	Progressive Depth m.	Recovery m.	Remarks
Sand and rubble fill	4.26	4.26		
Dense sand	1.84	6.10		
Loose sand and gravel	0.90	7.00		
Running sand and gravel	2.45	9.45		
Running sand	1.52	10.97		
Running sand and shells	0.76	11.73		
Running sand	0.69	12.42		
Gravel, cobbles and bands of clay	0.31	12.73		
Sand, gravel, cobbles and bands of clay	0.53	13.26		
Sand, gravel, layers of clay and boulders.	1.07	14.33		
Sand, gravel with bands of clay and boulders.	0.31	14.64		
Large cobbles and gravel	0.31	14.95		
Boulder clay and gravel and cobbles	0.23	15.18		
Boulder	0.31	15.49		
Boulder clay, gravel and boulders.	1.25	16.74		
Large cobbles and gravel.	0.60	17.34		
Large cobbles and bands of clay	0.90	18.24		
Cobbles, boulders, large gravel and bands of clay	1.00	19.24		
Sandstone (hard)	9.80	29.04		
Fakey sandstone	2.14	31.18		
Fakes, ribs	4.58	35.76		
Fakes	3.66	39.42		
Fakey sandstone	0.92	40.34		
Sandstone	1.83	42.17		
Fakey sandstone	1.22	43.39		
Fakey sandstone	1.83	45.22		
Sandstone	1.22	46.44		
Fakes, ribs				

BOREHOLE LOG

BOREHOLE No. 8

FIG. 8

LOCATION S.3047 IRVINE

CLIENT Irvine Development Corporation

DRILLING METHOD Shell and Auger

GROUND LEVEL 5.1m A.O.D.

DATE 6th December, 1973

SCALE 1 : 50

DIAMETER 150mm

DESCRIPTION OF STRATA	SAMPLE	LEGEND	DEPTH	M/C	L.L.	P.L.	N	C/φ
LOOSE to MODERATELY DENSE dark and mid brown fine to medium slightly silty SAND occasionally with little Gravel	1, 2, 3, 6		GL				10	
MODERATELY DENSE light brown fine to medium SAND	4		2.00				17	
MODERATELY DENSE dark brown fine to medium slightly silty SAND little sub-rounded Gravel at top	5, 7, 8, 12		2.50				16	
MODERATELY DENSE dark brown mixed SAND, some mixed rounded to sub-rounded GRAVEL	9, 10		4.50				13	
MODERATELY DENSE black mixed SAND with mainly fine GRAVEL	11		5.50				12	
			6.00					

END OF BOREHOLE

NOTE Groundwater entered at 4.50m, rising in 15 minutes to 3.80m below ground level.

G.K.N. FOUNDATIONS LTD.,
SITE INVESTIGATION DEPARTMENT

○ DISTURBED SAMPLE
| UNDISTURBED SAMPLE
◊ BULK DISTURBED SAMPLE

Contract : HARBOUR HOUSING DEVELOPMENT
Client : I.D.C.

Coordinates :
Dates : 28/5/92

Equipment and Methods :
Light cable percussive rig.

Job Number : 5650
Borehole Number : 1
Location : IRVINE

Orientation : Vertical
Ground Level : 5.15

Daily Prog.	Water Level	In-Situ Tests	In-Situ Depths	Sample Types	Sample Depths	Legend	Strata Descriptions	Depth (m)	Red. Level
							Topsoil.	0.00 / 0.15	5.0
							FILL: Rubble.	0.45	4.7
		S 25	0.55	B	0.55 - 1.00		Medium dense brown silty fine to coarse SAND and GRAVEL.		
		S 22	1.50	B	1.50 - 1.95				
		S 16	2.50	U	2.50 - 2.95				
		S 10	3.45	B	3.45 - 3.90		Medium dense brown silty fine to coarse SAND with some fine gravel.	3.50	1.65
				B	4.00 - 4.50				
		S 8	4.50	B	4.50 - 4.95				
28/5	5 DRY						End Of Borehole	5.00	0.15

Key ;

Sample Types
U Undisturbed
D Disturbed
B Bulk Disturbed
W Water
* No Recovery

In-Situ Tests
S SPT Value
C CPT Value
* Seating Blows
‡ Inc. Seating Blows
\# No Penetration
↓ Sampler Sank

Progress / Water Levels
— Borehole Depth (day)
-- Casing Depth (m)
▽ Water Level a.m.
▽ Water Level p.m.
▽ Water Strike

General Remarks :
Chiselling 1 hour.

Scale : 10m/sheet

Sheet No. : 1 Of 1.
Depth : 0 to 10 m

HYDRACRAT LTD. SITE INVESTIGATION CONTRACTORS

Appendix 08

Trial Pit Logs

MASON EVANS Geo-Environmental Consultants t: 0141 420 2025 e: masonevans.co.uk The Piazza, 95 Morrison Street, Glasgow, G5 8BE	Site: Beach DriveIrvine		Trial Pit No: **TP01**
	Client: North Ayrshire Council		Job No: P18-621
Excavation Method: 3CX	Trial Pit Dimensions: m x m x 1.9m	Ground Level: 5.28 / Date: 18-02-19 18-02-19	Sheet: 1 of 1
Contractor			Coordinates

Depth	Sample/Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	DESCRIPTION	Legend
				5.08	(0.20) 0.20	MADE GROUND (TOPSOIL): Brown sandy gravel with occasional cobbles of concrete and fragments of fisslie mudstone. Sand was fine to coarse and gravel was fine to coarse. Surfaced in grass with rootlets.	
0.50	TJ			4.58	(0.50) 0.70	MADE GROUND: Brown/black slightly gravelly sand with fragments of fissile mudstone and porcelain. Occasional cobbles of brick. Sand was fine to coarse and gravel was fine to coarse.	
1.00	TJ			3.38	(1.20) 1.90	Light brown fine to coarse SAND.	

Remarks

1. Strength and density characteristics by visual assessment of the on-site engineer only
2. No visual or olfactory evidence of contamination
3. Pit remained dry throughout excavation
4. Walls collapsing below 0.7m
5. Pit abandoned at 1.9 mbgl due to unstable pit.

Plan

All dimensions in metres	Logged By
Scale 1:25	HS

MASON EVANS
Geo-Environmental Consultants
t: 0141 420 2025 e: masonevans.co.uk
The Piazza, 95 Morrison Street, Glasgow, G5 8BE

Site: Beach DriveIrvine			Trial Pit No: **TP02**
Client: North Ayrshire Council			Job No: P18-621
Excavation Method: 3CX	Trial Pit Dimensions: m x m x 2.6m	Ground Level: 4.89	Date: 18-02-19 18-02-19 / Sheet: 1 of 1
Contractor:			Coordinates:

Depth	Sample/Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	DESCRIPTION	Legend
				4.69	(0.20) 0.20	MADE GROUND (TOPSOIL): Brown sandy gravel with fragments of fisslie mudstone. Sand was fine to coarse and gravel was fine to coarse. Surfaced in grass with rootlets.	
0.40	TJ			4.19	(0.50) 0.70	MADE GROUND: Dark brown slightly gravelly sand with occasional cobbles of brick and fragments of old clay pipe. Sand was fine to coarse and gravel was fine to coarse.	
1.50	TJ			2.29	(1.90) 2.60	Light brown fine to coarse SAND.	

Remarks

1. Strength and density characteristics by visual assessment of the on-site engineer only
2. No visual or olfactory evidence of contamination
3. Pit remained dry throughout excavation
4. Walls collapsing below 0.7m
5. Pit abandoned at 2.6 mbgl due to unstable pit.

Plan

All dimensions in metres: Scale 1:25

Logged By: HS

MASON EVANS
Geo-Environmental Consultants
t: 0141 420 2025 e: masonevans.co.uk
The Piazza, 95 Morrison Street, Glasgow, G5 8BE

Site: Beach DriveIrvine			Trial Pit No: **TP03**
Client: North Ayrshire Council			Job No: P18-621
Excavation Method: 3CX	Trial Pit Dimensions: m x m x 2m	Ground Level: 5.16	Date: 18-02-19 18-02-19 / Sheet: 1 of 1
Contractor:			Coordinates:

Depth	Sample/Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	DESCRIPTION	Legend
				4.96	(0.20) 0.20	MADE GROUND (TOPSOIL): Brown sandy gravel with occasional cobbles of brick. Sand was fine to coarse and gravel was fine to coarse. Surfaced in grass with rootlets.	
0.40	TJ			4.66	(0.30) 0.50	MADE GROUND: Dark brown slightly gravelly sand with occasional cobbles of brick and cobbles of conrete. Sand was fine to coarse and gravel was fine to coarse.	
1.20	TJ			3.16	(1.50) 2.00	Light brown fine to coarse SAND.	

Remarks

1. Strength and density characteristics by visual assessment of the on-site engineer only
2. No visual or olfactory evidence of contamination
3. Pit remained dry throughout excavation
4. Walls collapsing below 0.5m
5. Pit abandoned at 1.5 mbgl due to unstable pit.

Plan

All dimensions in metres: Scale 1:25

Logged By: HS

MASON EVANS
Geo-Environmental Consultants
t: 0141 420 2025 e: masonevans.co.uk
The Piazza, 95 Morrison Street, Glasgow, G5 8BE

Site: Beach DriveIrvine			Trial Pit No: **TP04**
Client: North Ayrshire Council			Job No: P18-621
Excavation Method: 3CX	Trial Pit Dimensions: m x m x 1m	Ground Level: 5.44	Date: 18-02-19 18-02-19
Contractor:			Sheet: 1 of 1
			Coordinates:

Depth	Sample/Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	DESCRIPTION	Legend
				5.24	(0.20) 0.20	MADE GROUND (TOPSOIL): Brown sandy gravel with occasional cobbles of brick. Sand was fine to coarse and gravel was fine to coarse. Surfaced in grass with rootlets.	
0.40	TJ			4.84	(0.40) 0.60	MADE GROUND: Dark brown gravelly sand with occasional cobbles of brick and concrete and extraneous material of ash, remnant clay pipe and plastic. Sand was fine to coarse and gravel was fine to coarse.	
0.70	TJ			4.44	(0.40) 1.00	Light brown fine to coarse SAND.	

Remarks

1. Strength and density characteristics by visual assessment of the on-site engineer only
2. No visual or olfactory evidence of contamination
3. Pit remained dry throughout excavation
4. Walls collapsing below 0.5m
5. Pit abandoned at 1.5 mbgl due to unstable pit.

Plan

All dimensions in metres
Scale 1:25

Logged By
HS

MASON EVANS Geo-Environmental Consultants t: 0141 420 2025 e: masonevans.co.uk The Piazza, 95 Morrison Street, Glasgow, G5 8BE	Site: Beach DriveIrvine		Trial Pit No: **TP05**
	Client: North Ayrshire Council		Job No: P18-621
Excavation Method: 3CX	Trial Pit Dimensions: m x m x 2.3m	Ground Level: 5.66	Date: 18-02-19 18-02-19
Sheet: 1 of 1			
Contractor			Coordinates

Depth	Sample/Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	DESCRIPTION	Legend
				5.46	(0.20) 0.20	MADE GROUND (TOPSOIL): Brown sandy gravel with occasional cobbles of brick. Sand was fine to coarse and gravel was fine to coarse. Surfaced in grass with rootlets.	
0.50	TJ					MADE GROUND: Dark brown gravelly sand with occasional cobbles of brick and extraneous material of metal. Sand was fine to coarse and gravel was fine to coarse. Concrete block present from 1.1 - 1.3 m.	
					(1.10)		
				4.36	1.30		
1.40	TJ					Light brown fine to coarse SAND.	
					(1.00)		
				3.36	2.30		

Remarks

1. Strength and density characteristics by visual assessment of the on-site engineer only
2. No visual or olfactory evidence of contamination
3. Pit remained dry throughout excavation
4. Walls collapsing below 1.3m
5. Pit abandoned at 2.3 mbgl due to unstable pit.

Plan

All dimensions in metres	Logged By
Scale 1:25	HS

MASON EVANS Geo-Environmental Consultants t: 0141 420 2025 e: masonevans.co.uk The Piazza, 95 Morrison Street, Glasgow, G5 8BE	Site: Beach DriveIrvine		Trial Pit No: **TP06**
	Client: North Ayrshire Council		Job No: P18-621
Excavation Method: 3CX	Trial Pit Dimensions: m x m x 2.4m	Ground Level: 5.82	Date: 18-02-19 18-02-19
Contractor:			Sheet: 1 of 1
			Coordinates:

Depth	Sample/Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	DESCRIPTION	Legend
				5.62	(0.20) 0.20	MADE GROUND (TOPSOIL): Brown sandy gravel with occasional cobbles of brick. Sand was fine to coarse and gravel was fine to coarse. Surfaced in grass with rootlets.	
0.50	TJ					MADE GROUND: Dark brown gravelly sand with occasional cobbles of brick and concrete and extraneous material of brick, remnant clay pipe and occasional concrete blocks (upto 0.5m in length). Sand was fine to coarse and gravel was fine to coarse.	
					(1.00)		
1.10	TJ			4.62	1.20		
						Light brown fine to coarse SAND.	
1.50	TJ				(1.20)		
				3.42	2.40		

Remarks

1. Strength and density characteristics by visual assessment of the on-site engineer only
2. No visual or olfactory evidence of contamination
3. Pit remained dry throughout excavation
4. Walls collapsing below 1.5m
5. Pit abandoned at 2.4 mbgl due to unstable pit.

Plan

All dimensions in metres	Logged By
Scale 1:25	HS

MASON EVANS Geo-Environmental Consultants t: 0141 420 2025 e: masonevans.co.uk The Piazza, 95 Morrison Street, Glasgow, G5 8BE	Site: Beach DriveIrvine	Trial Pit No: **TP07**
	Client: North Ayrshire Council	Job No: P18-621

Excavation Method	Trial Pit Dimensions	Ground Level	Date	Sheet
3CX	m x m x 2.2m	5.37	18-02-19 18-02-19	1 of 1

Contractor:

Coordinates:

Depth	Sample/Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	DESCRIPTION	Legend
				5.07	(0.30) 0.30	MADE GROUND: Grey sandy gravel with occasional cobbles of brick. Sand was fine to coarse and gravel was fine to coarse.	
0.40	TJ			4.47	(0.60) 0.90	MADE GROUND: Dark brown gravelly sand with extraneous material of brick, wood and occasional concrete blocks. Sand was fine to coarse and gravel was fine to coarse.	
1.20	TJ			3.17	(1.30) 2.20	Light brown fine to coarse SAND.	

Remarks

1. Strength and density characteristics by visual assessment of the on-site engineer only
2. No visual or olfactory evidence of contamination
3. Pit remained dry throughout excavation
4. Pit abandoned at 2.2 mbgl due to reching extent of machine.

Plan

All dimensions in metres
Scale 1:25

Logged By
HS

MASON EVANS Geo-Environmental Consultants t: 0141 420 2025 e: masonevans.co.uk The Piazza, 95 Morrison Street, Glasgow, G5 8BE	Site Beach DriveIrvine		Trial Pit No **TP08**
	Client North Ayrshire Council		Job No P18-621
Excavation Method 3CX	Trial Pit Dimensions m x m x 2.5m	Ground Level 5.63	Date 18-02-19 18-02-19
Contractor			Sheet 1 of 1
			Coordinates

Depth	Sample/Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	DESCRIPTION	Legend
				5.43	(0.20) 0.20	TOPSOIL: Dark brown gravelly SAND . Sand was fine to coarse and gravel was fine to coarse. Surfaced in grass with rootlets.	
0.60	TJ				(1.00)	MADE GROUND: Dark brown gravelly sand with extraneous material of plastic sheet (@1.2m). Sand was fine to coarse and gravel was fine to coarse.	
1.40	TJ			4.43	1.20	Light brown fine to coarse SAND.	
					(1.30)		
				3.13	2.50		

Remarks

1. Strength and density characteristics by visual assessment of the on-site engineer only
2. No visual or olfactory evidence of contamination
3. Pit remained dry throughout excavation
4. Pit abandoned at 2.5 mbgl due to reching extent of machine.

Plan

All dimensions in metres	Logged By
Scale 1:25	HS

MASON EVANS
Geo-Environmental Consultants
t: 0141 420 2025 e: masonevans.co.uk
The Piazza, 95 Morrison Street, Glasgow, G5 8BE

Site: Beach DriveIrvine			Trial Pit No: **TP09**
Client: North Ayrshire Council			Job No: P18-621
Excavation Method: 3CX	Trial Pit Dimensions: m x m x 2m	Ground Level: 5.77	Date: 18-02-19 18-02-19
Contractor:			Sheet: 1 of 1
			Coordinates:

Depth	Sample/Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	DESCRIPTION	Legend
				5.57	(0.20) 0.20	MADE GROUND (TOPSOIL): Brown sandy gravel with occasional cobbles of brick. Sand was fine to coarse and gravel was fine to coarse. Surfaced in grass with rootlets.	
0.40	TJ					MADE GROUND: Brown sand with occasional cobbles of brick and extraneous material of metal pipe, metal scrap and plastic. Sand was fine to coarse and gravel was fine to coarse.	
				4.67	(0.90) 1.10		
1.20	TJ					Light brown fine to coarse SAND.	
				3.77	(0.90) 2.00		

Remarks

1. Strength and density characteristics by visual assessment of the on-site engineer only
2. No visual or olfactory evidence of contamination
3. Pit remained dry throughout excavation
4. Walls collapsing below 0.5m
5. Pit abandoned at 2.0 mbgl due to unstable pit.

Plan

All dimensions in metres
Scale 1:25

Logged By
HS

MASON EVANS Geo-Environmental Consultants t: 0141 420 2025 e: masonevans.co.uk The Piazza, 95 Morrison Street, Glasgow, G5 8BE	Site: Beach DriveIrvine		Trial Pit No: **TP10**
	Client: North Ayrshire Council		Job No: P18-621
Excavation Method: 3CX	Trial Pit Dimensions: m x m x 2.9m	Ground Level: 6.56	Date: 18-02-19 18-02-19
Sheet: 1 of 1			
Contractor			Coordinates

Depth	Sample/Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	DESCRIPTION	Legend
				6.36	(0.20) 0.20	MADE GROUND (TOPSOIL): Brown sandy gravel with occasional cobbles of brick. Sand was fine to coarse and gravel was fine to coarse. Surfaced in grass with rootlets.	
0.50	TJ					MADE GROUND: Dark brown/grey ashy gravelly sand with extraneous material of brick, glass, old cable and occasional concrete blocks/slab. Sand was fine to coarse and gravel was fine to coarse.	
				5.26	(1.10) 1.30		
1.40	TJ					Light brown fine to coarse SAND (conjectured MADE GROUND).	
				3.66	(1.60) 2.90		

Remarks

1. Strength and density characteristics by visual assessment of the on-site engineer only
2. No visual or olfactory evidence of contamination
3. Pit remained dry throughout excavation
4. Pit abandoned at 2.9 mbgl due to reaching machine extent .

Plan

All dimensions in metres	Logged By
Scale 1:25	HS

MASON EVANS Geo-Environmental Consultants t: 0141 420 2025 e: masonevans.co.uk The Piazza, 95 Morrison Street, Glasgow, G5 8BE	Site: Beach DriveIrvine		Trial Pit No: **TP11**
	Client: North Ayrshire Council		Job No: P18-621
Excavation Method: 3CX	Trial Pit Dimensions: m x m x 2.7m	Ground Level: 4.20	Date: 18-02-19 18-02-19
Sheet: 1 of 1			
Contractor			Coordinates

Depth	Sample/Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	DESCRIPTION	Legend
					(0.20)	MADE GROUND (TOPSOIL): Brown sandy gravel with occasional cobbles of brick. Sand was fine to coarse and gravel was fine to coarse. Surfaced in grass with rootlets.	
				4.00	0.20		
						MADE GROUND: Dark grey gravelly sand with extraneous material of brick, metal and occasional concrete blocks. Sand was fine to coarse and gravel was fine to coarse.	
0.60	TJ				(1.10)		
				2.90	1.30		
1.40	TJ					Light brown fine to coarse SAND.	
					(1.40)		
				1.50	2.70		

Remarks

1. Strength and density characteristics by visual assessment of the on-site engineer only
2. No visual or olfactory evidence of contamination
3. Pit remained dry throughout excavation
4. Pit abandoned at 2.7 mbgl due to reaching extent of machine.

Plan

All dimensions in metres	Logged By
Scale 1:25	HS

MASON EVANS Geo-Environmental Consultants t: 0141 420 2025 e: masonevans.co.uk The Piazza, 95 Morrison Street, Glasgow, G5 8BE	Site: Beach DriveIrvine		Trial Pit No: **TP12**
	Client: North Ayrshire Council		Job No: P18-621
Excavation Method: 3CX	Trial Pit Dimensions: m x m x 2.7m	Ground Level: 4.54	Date: 18-02-19 18-02-19
Contractor:			Sheet: 1 of 1
			Coordinates:

Depth	Sample/Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	DESCRIPTION	Legend
					(0.20)	MADE GROUND (TOPSOIL): Brown sandy gravel with occasional cobbles of brick. Sand was fine to coarse and gravel was fine to coarse. Surfaced in grass with rootlets.	
				4.34	0.20		
0.50	TJ					MADE GROUND: Brown gravelly sand with extraneous material of concrete, brick and a concrete slab at 0.3m. Sand was fine to coarse and gravel was fine to coarse.	
0.80	TJ						
					(2.00)		
2.00	TJ						
				2.34	2.20		
					(0.50)	Light brown fine to coarse SAND.	
				1.84	2.70		

Remarks

1. Strength and density characteristics by visual assessment of the on-site engineer only
2. No visual or olfactory evidence of contamination
3. Pit remained dry throughout excavation
4. Pit abandoned at 2.7 mbgl due to reaching extent of machine.

Plan

All dimensions in metres	Logged By
Scale 1:25	HS

MASON EVANS
Geo-Environmental Consultants
t: 0141 420 2025 e: masonevans.co.uk
The Piazza, 95 Morrison Street, Glasgow, G5 8BE

Site: Beach DriveIrvine			Trial Pit No: **TP13**
Client: North Ayrshire Council			Job No: P18-621
Excavation Method: 3CX	Trial Pit Dimensions: m x m x 2m	Ground Level: 5.19	Date: 19-02-19 19-02-19
Sheet: 1 of 1			
Contractor:			Coordinates:

Depth	Sample/Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	DESCRIPTION	Legend
					(0.20)	MADE GROUND (TOPSOIL): Brown sandy gravel with occasional cobbles of brick. Sand was fine to coarse and gravel was fine to coarse. Surfaced in grass with rootlets.	
				4.99	0.20		
0.60	TJ					MADE GROUND: Dark brown/grey sandy gravel with occasional cobbles of brick and concrete and extraneous material of metal pipe, plastic, ash and mudstone (fissile). Sand was fine to coarse and gravel was fine to coarse.	
					(1.20)		
1.10	TJ						
				3.79	1.40		
				3.69	1.50	MADE GROUND: Black slightly gravelly ashy SAND. Sand was fine to coarse.	
						Light brown fine to coarse SAND (conjectured MADE GROUND).	
					(0.50)		
				3.19	2.00		

Remarks

1. Strength and density characteristics by visual assessment of the on-site engineer only
2. No visual or olfactory evidence of contamination
3. Pit remained dry throughout excavation
4. Pit abandoned at 2.0 mbgl due to reaching extent of machine.

Plan

All dimensions in metres: Scale 1:25

Logged By: HS

MASON EVANS Geo-Environmental Consultants t: 0141 420 2025 e: masonevans.co.uk The Piazza, 95 Morrison Street, Glasgow, G5 8BE	Site: Beach DriveIrvine		Trial Pit No: **TP14**
	Client: North Ayrshire Council		Job No: P18-621
Excavation Method: 3CX	Trial Pit Dimensions: m x m x 2m	Ground Level: 6.97	Date: 19-02-19 19-02-19
Sheet: 1 of 1			
Contractor			Coordinates

Depth	Sample/Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	DESCRIPTION	Legend
				6.77	(0.20) 0.20	MADE GROUND (TOPSOIL): Brown sandy gravel with occasional cobbles of brick. Sand was fine to coarse and gravel was fine to coarse. Surfaced in grass with rootlets.	
0.50	TJ				(0.90)	MADE GROUND: Dark brown gravelly sand with occasional cobbles of brick and concrete. Sand was fine to coarse and gravel was fine to coarse.	
				5.87	1.10		
1.20	TJ				(0.90)	Light brown fine to coarse SAND (conjectured MADE GROUND)..	
				4.97	2.00		

Remarks

1. Strength and density characteristics by visual assessment of the on-site engineer only
2. No visual or olfactory evidence of contamination
3. Pit remained dry throughout excavation
4. Walls collapsing below 1.1 m
5. Pit abandoned at 2.0 mbgl due to unstable pit.

Plan

All dimensions in metres: Scale 1:25

Logged By: HS

MASON EVANS Geo-Environmental Consultants t: 0141 420 2025 e: masonevans.co.uk The Piazza, 95 Morrison Street, Glasgow, G5 8BE	Site Beach DriveIrvine		Trial Pit No **TP15**
	Client North Ayrshire Council		Job No P18-621
Excavation Method 3CX	Trial Pit Dimensions m x m x 1.4m	Ground Level 6.53	Date 19-02-19 19-02-19
Contractor			Sheet 1 of 1
			Coordinates

Depth	Sample/Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	DESCRIPTION	Legend
				6.43	0.10	TOPSOIL: Brown sandy gravel. Sand was fine to coarse and gravel was fine to coarse. Surfaced in grass with rootlets.	
0.50	TJ				(1.30)	Light brown fine to coarse SAND (conjectured MADE GROUND)..	
				5.13	1.40		

Remarks

1. Strength and density characteristics by visual assessment of the on-site engineer only
2. No visual or olfactory evidence of contamination
3. Pit remained dry throughout excavation
4. Walls collapsing below 0.3m
5. Pit abandoned at 1.4 mbgl due to unstable pit.

Plan

All dimensions in metres	Logged By
Scale 1:25	HS

MASON EVANS
Geo-Environmental Consultants
t: 0141 420 2025 e: masonevans.co.uk
The Piazza, 95 Morrison Street, Glasgow, G5 8BE

Site: Beach DriveIrvine			Trial Pit No: **TP16**
Client: North Ayrshire Council			Job No: P18-621
Excavation Method: 3CX	Trial Pit Dimensions: m x m x 2.2m	Ground Level: 5.86	Date: 19-02-19 19-02-19
Contractor:			Sheet: 1 of 1
			Coordinates:

Depth	Sample/Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	DESCRIPTION	Legend
0.60	TJ			4.76	(1.10) 1.10	MADE GROUND: Brown gravelly sand with occasional cobbles of brick and concrete. Sand was fine to coarse and gravel was fine to coarse. Surfaced in grass with rootlets.	
1.30	TJ			3.66	(1.10) 2.20	Light brown fine to coarse SAND.	

Remarks

1. Strength and density characteristics by visual assessment of the on-site engineer only
2. No visual or olfactory evidence of contamination
3. Pit remained dry throughout excavation
4. Pit abandoned at 2.2 mbgl due to reaching extent of machine.

Plan

All dimensions in metres
Scale 1:25

Logged By
HS

MASON EVANS Geo-Environmental Consultants t: 0141 420 2025 e: masonevans.co.uk The Piazza, 95 Morrison Street, Glasgow, G5 8BE	Site: Beach DriveIrvine	Trial Pit No: **TP17**
	Client: North Ayrshire Council	Job No: P18-621

Excavation Method	Trial Pit Dimensions	Ground Level	Date	Sheet
3CX	m x m x 1.5m	6.72	19-02-19 19-02-19	1 of 1

Contractor

Coordinates

Depth	Sample/Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	DESCRIPTION	Legend
				6.52	(0.20) 0.20	MADE GROUND (TOPSOIL): Brown sandy gravel with occasional cobbles of brick. Sand was fine to coarse and gravel was fine to coarse. Surfaced in grass with rootlets.	
0.30	TJ			6.32	(0.20) 0.40	MADE GROUND: Brown slightly gravelly sand with extraneous material of brick. Sand was fine to coarse and gravel was fine to coarse.	
0.80	TJ				(1.10)	Light brown fine to coarse SAND (conjectured MADE GROUND).	
				5.22	1.50		

Remarks

1. Strength and density characteristics by visual assessment of the on-site engineer only
2. No visual or olfactory evidence of contamination
3. Pit remained dry throughout excavation
4. Pit abandoned at 1.5 mbgl due to sloping topography.

Plan

All dimensions in metres	Logged By
Scale 1:25	HS

MASON EVANS Geo-Environmental Consultants t: 0141 420 2025 e: masonevans.co.uk The Piazza, 95 Morrison Street, Glasgow, G5 8BE	Site: Beach DriveIrvine		Trial Pit No: **TP18**
	Client: North Ayrshire Council		Job No: P18-621
Excavation Method: 3CX	Trial Pit Dimensions: m x m x 1.8m	Ground Level: 7.65	Date: 19-02-19 19-02-19
Sheet: 1 of 1			
Contractor			Coordinates

Depth	Sample/Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	DESCRIPTION	Legend
				7.55	0.10	MADE GROUND (TOPSOIL): Brown sandy gravel with occasional cobbles of brick. Sand was fine to coarse and gravel was fine to coarse. Surfaced in grass with rootlets.	
0.30	TJ				(0.30)		
				7.25	0.40	MADE GROUND: Brown slightly gravelly sand with extraneous material of brick. Sand was fine to coarse and gravel was fine to coarse.	
1.00	TJ				(1.40)	Light brown fine to coarse SAND (conjectured MADE GROUND).	
				5.85	1.80		

Remarks

1. Strength and density characteristics by visual assessment of the on-site engineer only
2. No visual or olfactory evidence of contamination
3. Pit remained dry throughout excavation
4. Pit abandoned at 1.8 mbgl due to sloping topography.

Plan

All dimensions in metres	Logged By
Scale 1:25	HS

Appendix 09

Records of Shallow Borehole Logs

SKF Ltd
Ground Investigation & Site Surveys

SKF Ltd, Constablewood Estate, Brisbane Glen, Largs
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

BOREHOLE NO. BH01

Contract: BEACH DR, IRVINE
Contract No: 5241
Status: FINAL

Client: MASON EVANS PARTNERSHIP
Boring Diameter: 115MM
Co-ordinates E 230772.425

Date: 18/02/2019
Equipment: PREMIER BADGER
N 638140.719

Description of Strata	Legend	Depth	Level	Sampling	SPT Blows / U Blows / Hand Vane	Pipe
Ground Surface		0.00	5.33			
MADE GROUND: Topsoil / turf [GL-0.25].		0.25	5.08	DJ 0.20		
MADE GROUND: Loose* brown sand and gravel intermixed with topsoil. Gravel fine to coarse and angular to sub rounded.		0.90	4.43	DJ 0.50 DJ 1.00		
Medium dense brown fine to coarse SAND.				SPT 1.00-1.45 U86 1.00-2.00	2,3,4,4,3,4	
				D 2.00 SPT 2.00-2.45 U78 2.00-3.00	2,2,3,3,3,3	
				D 3.00 SPT 3.00-3.45 U66 3.00-4.00	2,3,3,3,3,5	
				D 4.00 SPT 4.00-4.45	2,3,3,4,3,4	
		4.60	0.73	SPT 4.50-4.95	6,6,6,7,7,28	
Dense light grey SAND and GRAVEL. Gravel fine to coarse and angular to sub rounded. Occasional cobbles. At 5.00m pushing cobble.		5.00	0.33			

Water Strikes	Details	SYMBOLS KEY
Strike: DRY Flow:	Casing: 2.00 Final Depth: 5.00	B - BULK NR - NO RECOVERY U - UNDISTURBED * - ESTIMATED DENSITY D - SMALL DISTURBED HV - HAND VANE J - JAR V - VIAL W - WATER

Inspection Pit: 0.30 X 0.30 X 1.00
Breaking Out / Coring:
Installation: Standpipe 50mm diameter installed to 4.00m.
Notes:

Logged by: KB Checked by: SKF

ALL DIMENSIONS ARE IN METRES

SKF Ltd
Ground Investigation & Site Surveys

SKF Ltd, Constablewood Estate, Brisbane Glen, Largs
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

BOREHOLE NO. BH02

Contract: BEACH DR, IRVINE
Contract No: 5241
Status: FINAL

Client: MASON EVANS PARTNERSHIP
Boring Diameter: 115MM
Co-ordinates E 230788.356

Date: 18/02/2019
Equipment: PREMIER BADGER
N 638171.615

Description of Strata	Legend	Depth	Level	Sampling	SPT Blows U Blows Hand Vane	Pipe
Ground Surface		0.00	5.16			
MADE GROUND: Topsoil / turf [GL-0.30].		0.30	4.86	DJ 0.20		
MADE GROUND: Loose* dark grey sandy gravelly ash and cinders. Gravel fine to coarse and angular to sub rounded.		0.45	4.71	DJ 0.50		
Loose at top becoming medium dense brown fine to coarse SAND.				DJ 1.00 SPT 1.00-1.45 U86 1.00-2.00	1,1,2,2.1,2	
				D 2.00 SPT 2.00-2.45 U78 2.00-3.00	1,1,2,2,2,3	
				D 3.00 SPT 3.00-3.45 U66 3.00-4.00	2,2,3,3,3,4	
				D 4.00 SPT 4.00-4.45	1,2,2,3,2,2	
				SPT 4.50-4.95	3,4,4,4,4,4	
		5.00	0.16			

Water Strikes
Strike: 3.90 Flow: SEEPAGE

Details
Casing: 2.00 Final Depth: 5.00

Inspection Pit: 0.30 X 0.30 X 1.00
Breaking Out / Coring:
Installation: Standpipe 50mm diameter installed to 4.00m.
Notes:

Logged by: KB Checked by: SKF

SYMBOLS KEY

B - BULK
U - UNDISTURBED
D - SMALL DISTURBED
J - JAR
V - VIAL
W - WATER
NR - NO RECOVERY
* - ESTIMATED DENSITY
HV - HAND VANE

ALL DIMENSIONS ARE IN METRES

SKF Ltd
Ground Investigation & Site Surveys

SKF Ltd, Constablewood Estate, Brisbane Glen, Largs
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

BOREHOLE NO. BH03

Contract: BEACH DR, IRVINE **Contract No:** 5241 **Status:** FINAL

Client: MASON EVANS PARTNERSHIP **Boring Diameter:** 115MM **Co-ordinates** E 230798.873

Date: 18/02/2019 **Equipment:** PREMIER BADGER N 638123.211

Description of Strata	Legend	Depth	Level	Sampling	SPT Blows U Blows Hand Vane	Pipe
Ground Surface		0.00	5.61			
MADE GROUND: Loose* grey sandy fine to coarse angular gravel.		0.30	5.31	DJ 0.20		
MADE GROUND: Medium dense* brown sand and gravel with occasional fragments of brick and coal. Gravel fine to coarse and angular to sub rounded.		1.20	4.41	DJ 0.50 DJ 1.00 SPT 1.00-1.45 U86 1.00-2.00	7,4,3,3,4,3	
Medium dense becoming dense brown fine to coarse SAND. Very dense at base.		5.00	0.61	D 2.00 SPT 2.00-2.45 U78 2.00-3.00 D 3.00 SPT 3.00-3.45 U66 3.00-4.00 SPT 4.00-4.45 SPT 4.50-4.95	4,5,4,4,4,4 2,2,3,3,3,3 5,6,9,9,11,10 13,16,13,14,12,11	

Water Strikes
Strike: DRY Flow:

Details
Casing: 2.00 Final Depth: 5.00

Inspection Pit: 0.30 X 0.30 X 1.00
Breaking Out / Coring:
Installation: Standpipe 50mm diameter installed to 4.00m.
Notes:

Logged by: KB Checked by: SKF

SYMBOLS KEY

B - BULK NR - NO RECOVERY
U - UNDISTURBED * - ESTIMATED DENSITY
D - SMALL DISTURBED HV - HAND VANE
J - JAR
V - VIAL
W - WATER

ALL DIMENSIONS ARE IN METRES

SKF Ltd
Ground Investigation & Site Surveys

SKF Ltd, Constablewood Estate, Brisbane Glen, Largs
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

BOREHOLE NO. BH04

Contract: BEACH DR, IRVINE
Contract No: 5241
Status: FINAL

Client: MASON EVANS PARTNERSHIP
Boring Diameter: 115MM
Co-ordinates E 230833.467

Date: 18/02/2019
Equipment: PREMIER BADGER
N 638148.610

Description of Strata	Legend	Depth	Level	Sampling	SPT Blows U Blows Hand Vane	Pipe
Ground Surface		0.00	5.48			
MADE GROUND: Topsoil / turf [GL-0.25].		0.25	5.23	DJ 0.20		
MADE GROUND: Loose* brown sand and gravel with occasional fragments of porcelain, brick, ash and cinders. Gravel fine to coarse and angular to sub rounded.		1.05	4.43	DJ 0.50 DJ 1.00 SPT 1.00-1.45 U86 1.00-2.00	2,2,1,2,2,2	
Loose becoming medium dense brown fine to coarse SAND.		5.00	0.48	D 2.00 SPT 2.00-2.45 U78 2.00-3.00 D 3.00 SPT 3.00-3.45 U66 3.00-4.00 D 4.00 SPT 4.00-4.45 SPT 4.50-4.95	1,3,3,4,3,4 3,3,2,3.3,3 1,2,3,4,4,5 7,7,7,7,7,7	

Water Strikes
Strike: 3.50 Flow: SEEPAGE

Details
Casing: 2.00 Final Depth: 5.00

Inspection Pit: 0.30 X 0.30 X 1.00
Breaking Out / Coring:
Installation: Standpipe 50mm diameter installed to 4.00m.
Notes:

Logged by: KB Checked by: SKF

SYMBOLS KEY

B - BULK
U - UNDISTURBED
D - SMALL DISTURBED
J - JAR
V - VIAL
W - WATER
NR - NO RECOVERY
* - ESTIMATED DENSITY
HV - HAND VANE

ALL DIMENSIONS ARE IN METRES

SKF Ltd
Ground Investigation & Site Surveys

SKF Ltd, Constablewood Estate, Brisbane Glen, Largs
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

BOREHOLE NO. BH05

Contract: BEACH DR, IRVINE
Contract No: 5241
Status: FINAL

Client: MASON EVANS PARTNERSHIP
Boring Diameter: 115MM
Co-ordinates E 230864.049

Date: 19/02/2019
Equipment: PREMIER BADGER
N 638109.609

Description of Strata	Legend	Depth	Level	Sampling	SPT Blows U Blows Hand Vane	Pipe
Ground Surface		0.00	6.03			
MADE GROUND: Topsoil / turf. [GL-0.30]		0.30	5.73	DJ 0.20		
Loose* becoming very loose brown slightly gravelly fine to coarse SAND. Gravel fine to coarse and angular to sub rounded.				DJ 0.50 DJ 1.00 SPT 1.00-1.45 U86 (B) 1.00-2.00	1,1,1,1,1,1	
				D 2.00 SPT 2.00-2.45 U78 (B) 2.00-3.00	1,0,0,1,0,0	
		3.20	2.83	D 3.00 SPT 3.00-3.45 U66 (B) 3.00-4.00	1,1,1,2,2,3	
Medium dense becoming dense brown slightly silty fine to coarse SAND.				D 4.00 SPT 4.00-4.45	4,4,5,5,3,5	
				SPT 4.50-4.95	6,6,8,9,11,8	
				SPT 5.00-5.45	6,6,6,8,7,7	
				SPT 5.50-5.95	7,10,10,8,8,7	
		6.00	0.03			

Water Strikes
Strike: DRY Flow:

Details
Casing: 2.00 Final Depth: 6.00

Inspection Pit: 0.30 X 0.30 X 1.00
Breaking Out / Coring:
Installation: Standpipe 50mm diameter installed to 4.00m.
Notes:

Logged by: EM Checked by: SKF

SYMBOLS KEY

B - BULK
U - UNDISTURBED
D - SMALL DISTURBED
J - JAR
V - VIAL
W - WATER
NR - NO RECOVERY
* - ESTIMATED DENSITY
HV - HAND VANE

ALL DIMENSIONS ARE IN METRES

SKF Ltd
Ground Investigation & Site Surveys

SKF Ltd, Constablewood Estate, Brisbane Glen, Largs
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

BOREHOLE NO. BH06

Contract: BEACH DR, IRVINE **Contract No:** 5241 **Status:** FINAL

Client: MASON EVANS PARTNERSHIP **Boring Diameter:** 115MM **Co-ordinates** E 230890.509

Date: 19/02/2019 **Equipment:** PREMIER BADGER N 638146.912

Description of Strata	Legend	Depth	Level	Sampling	SPT Blows U Blows Hand Vane	Pipe
Ground Surface		0.00	5.91			
MADE GROUND: Topsoil / turf. [GL-0.20]		0.20	5.71	DJ 0.20		
MADE GROUND: Medium dense* brown clayey gravelly fine to coarse sand. Gravel fine to coarse and angular to sub rounded. Occasional fragments of brick.		0.80	5.11	DJ 0.50		
MADE GROUND: Medium dense becoming loose dark grey slightly clayey gravelly fine to coarse sand. Gravel fine to coarse and angular to sub rounded. Occasional small roots and fragments of brick and concrete. Slight hydrocarbon odour.				DJ 1.00 SPT 1.00-1.45 U86 (B) 1.00-2.00	2,2,3,5,3,3	
				D 2.00 SPT 2.00-2.45 U78 (B) 2.00-3.00	4,4,4,3,3,4	
				D 3.00 SPT 3.00-3.45 U66 (B) 3.00-4.00	1,1,2,1,1,2	
		3.95	1.96	D 4.00 SPT 4.00-4.45	3,3,3,2,3,4	
Medium dense brown fine to coarse SAND. Locally slightly silty.				SPT 4.50-4.95	5,7,7,8,7,7	
				SPT 5.00-5.45	8,7,7,7,8,8	
				SPT 5.50-5.95	7,6,7,7,7,8	
		6.00	-0.09			

Water Strikes
Strike: 5.00 Flow: MODERATE

Details
Casing: 2.00 Final Depth: 6.00

Inspection Pit: 0.30 X 0.30 X 1.00
Breaking Out / Coring:
Installation: Standpipe 50mm diameter installed to 4.00m.
Notes:

Logged by: EM Checked by: SKF

SYMBOLS KEY

B - BULK
U - UNDISTURBED
D - SMALL DISTURBED
J - JAR
V - VIAL
W - WATER
NR - NO RECOVERY
* - ESTIMATED DENSITY
HV - HAND VANE

ALL DIMENSIONS ARE IN METRES

SKF Ltd
Ground Investigation & Site Surveys

SKF Ltd, Constablewood Estate, Brisbane Glen, Largs
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

BOREHOLE NO. BH07

Contract: BEACH DR, IRVINE
Contract No: 5241
Status: FINAL

Client: MASON EVANS PARTNERSHIP
Boring Diameter: 115MM
Co-ordinates E 230.885.800

Date: 19/02/2019
Equipment: PREMIER BADGER
N 638181.357

Description of Strata	Legend	Depth	Level	Sampling	SPT Blows U Blows Hand Vane	Pipe
Ground Surface		0.00	4.59			
MADE GROUND: Topsoil / turf. [GL-0.25]		0.25	4.34	DJ 0.20		
MADE GROUND: Loose* dark brown, brown and grey slightly clayey gravelly fine to coarse sand intermixed with brick cobbles. Gravel fine to coarse and angular to sub rounded.				DJ 0.50 DJ 1.00 SPT 1.00-1.45 U86 (B) 1.00-2.00	1,1,1,1,1,1	
		1.40	3.19			
Loose becoming medium dense brown and slightly orange brown fine to coarse SAND. Dense at base.				D 2.00 SPT 2.00-2.45 U78 (B) 2.00-3.00	1,2,1,2,2,1	
				D 3.00 SPT 3.00-3.45 U66 (B) 3.00-4.00	2,2,2,3,3,3	
				D 4.00 SPT 4.00-4.45	5,5,6,8,5,4	
				SPT 4.50-4.95	6,5,5,5,6,6	
				SPT 5.00-5.45	5,5,4,4,5,7	
				SPT 5.50-5.95	7,7,9,14,10,9	
		6.00	-1.41			

Water Strikes
Strike: 3.80 Flow: MODERATE

Details
Casing: 2.00 Final Depth: 6.00

Inspection Pit: 0.30 X 0.30 X 1.00
Breaking Out / Coring:
Installation: Standpipe 50mm diameter installed to 4.00m.
Notes:

Logged by: EM Checked by: SKF

SYMBOLS KEY

B - BULK
U - UNDISTURBED
D - SMALL DISTURBED
J - JAR
V - VIAL
W - WATER
NR - NO RECOVERY
* - ESTIMATED DENSITY
HV - HAND VANE

ALL DIMENSIONS ARE IN METRES

SKF Ltd
Ground Investigation & Site Surveys

SKF Ltd, Constablewood Estate, Brisbane Glen, Largs
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

BOREHOLE NO. BH08

Contract: BEACH DR, IRVINE
Contract No: 5241
Status: FINAL

Client: MASON EVANS PARTNERSHIP
Boring Diameter: 115MM
Co-ordinates E 230932.841

Date: 19/02/2019
Equipment: PREMIER BADGER
N 638141.570

Description of Strata	Legend	Depth	Level	Sampling	SPT Blows U Blows Hand Vane	Pipe
Ground Surface		0.00	7.55			
MADE GROUND: Topsoil / turf. [GL-0.25]		0.25	7.30	DJ 0.20		
MADE GROUND: Medium dense* light brown slightly gravelly fine to coarse sand. Gravel fine to coarse and angular to sub rounded. Occasional cobbles.		1.60	5.95	DJ 0.50 DJ 1.00 SPT 1.00-1.45 U86 (B) 1.00-2.00	2,5,4,16,9,5	
MADE GROUND: Medium dense brown gravelly fine to coarse sand. Gravel fine to coarse and angular to sub rounded. Occasional cobbles. Occasional small roots and fragments of brick. At 3.01m hard concrete obstruction.		3.01	4.54	D 2.00 SPT 2.00-2.45 U78 (B) 2.00-3.00 D 3.00 SPT 3.00-3.01	35,9,11,6,4,5 40/10mm	

Water Strikes
Strike: DRY Flow:

Details
Casing: 2.00 Final Depth: 3.01

Inspection Pit: 0.30 X 0.30 X 1.00
Breaking Out / Coring:
Installation: Standpipe 50mm diameter installed to 3.00m.
Notes:

Logged by: EM Checked by: SKF

SYMBOLS KEY

B - BULK
U - UNDISTURBED
D - SMALL DISTURBED
J - JAR
V - VIAL
W - WATER
NR - NO RECOVERY
* - ESTIMATED DENSITY
HV - HAND VANE

ALL DIMENSIONS ARE IN METRES

SKF Ltd
Ground Investigation & Site Surveys

SKF Ltd, Constablewood Estate, Brisbane Glen, Largs
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

BOREHOLE NO. BH09

Contract: BEACH DR, IRVINE
Contract No: 5241
Status: FINAL

Client: MASON EVANS PARTNERSHIP
Boring Diameter: 115MM
Co-ordinates E 230971.379

Date: 19/02/2019
Equipment: PREMIER BADGER
N 638115.445

Description of Strata	Legend	Depth	Level	Sampling	SPT Blows U Blows Hand Vane	Pipe
Ground Surface		0.00	4.86			
MADE GROUND: Tarmac. [GL-0.07]						
MADE GROUND: Medium dense* light brown and grey sandy angular fine to coarse angular gravel.		0.30	4.56	DJ 0.20		
Loose* brown slightly silty slightly gravelly fine to coarse SAND. Gravel fine to coarse and angular to sub rounded.		0.60	4.26	DJ 0.50		
Loose locally medium dense brown slightly silty fine to coarse SAND.				DJ 1.00 SPT 1.00-1.45 U86 (B) 1.00-2.00	1,2,2,1,2,1	
				D 2.00 SPT 2.00-2.45 U78 (B) 2.00-3.00	2,2,3,2,3,3	
				D 3.00 SPT 3.00-3.45 U66 (B) 3.00-4.00	2,2,2,2,3,2	
		3.70	1.16			
Medium dense brown and grey silty slightly gravelly fine to coarse SAND. Gravel fine to coarse and angular to sub rounded.				D 4.00 SPT 4.00-4.45	2,2,2,3,3,3	
				SPT 4.50-4.95	2,3,4,3,3,4	
				SPT 5.00-5.45	4,4,3,4,5,6	
				SPT 5.50-5.95	5,6,5,5,4,4	
		6.00	-1.14			

Water Strikes
Strike: 3.70 Flow: MODERATE

Details
Casing: 2.00 Final Depth: 6.00

Inspection Pit: 0.30 X 0.30 X 1.00
Breaking Out / Coring:
Installation: Standpipe 50mm diameter installed to 4.00m.
Notes:

Logged by: EM Checked by: SKF

SYMBOLS KEY

B - BULK
U - UNDISTURBED
D - SMALL DISTURBED
J - JAR
V - VIAL
W - WATER
NR - NO RECOVERY
* - ESTIMATED DENSITY
HV - HAND VANE

ALL DIMENSIONS ARE IN METRES

SKF Ltd
Ground Investigation & Site Surveys

SKF Ltd, Constablewood Estate, Brisbane Glen, Largs
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

BOREHOLE NO. BH10

Contract: BEACH DR, IRVINE
Contract No: 5241
Status: FINAL

Client: MASON EVANS PARTNERSHIP
Boring Diameter: 115MM
Co-ordinates E 230987.121

Date: 19/02/2019
Equipment: PREMIER BADGER
N 638148.394

Description of Strata	Legend	Depth	Level	Sampling	SPT Blows U Blows Hand Vane	Pipe
Ground Surface		0.00	4.85			
MADE GROUND: Tarmac [GL-0.10m]						
MADE GROUND: Loose* grey sandy fine to coarse angular gravel. Many angular to sub angular cobbles.		0.35	4.50	DJ 0.20		
MADE GROUND: Loose* brown and dark brown slightly silty gravelly fine to coarse sand. Gravel fine to coarse and angular to sub rounded.		0.65	4.20	DJ 0.50		
Loose at top becoming medium dense orange brown fine to coarse SAND with traces of gravel. Gravel fine to coarse and angular to sub rounded.				DJ 1.00 SPT 1.00-1.45 U87 [B] 1.00-2.00	2,2,2,2,2,2	
				D 2.00 SPT 2.00-2.45 U78 [B] 2.00-3.00	3,3,3,4,4,5	
		3.15	1.70	D 3.00 SPT 3.00-3.45 U66 [B] 3.00-4.00	4,5,8,11,11,13	
Dense brown slightly silty fine to coarse SAND.		3.80	1.05			
Loose becoming medium dense brown slightly silty fine to coarse SAND.				D 4.00 SPT 4.00-4.45	1,2,2,2,2,2	
				SPT 4.50-4.95	4,5,5,4,5,4	
				SPT 5.00-5.45	4,5,4,5,7,6	
				SPT 5.00-5.95	7,7,7,7,7,7	
		6.00	-1.15			

Water Strikes
Strike: 3.90 Flow: SEEPAGE

Details
Casing: 2.00 Final Depth: 6.00

Inspection Pit: 0.30 X 0.30 X 1.00
Breaking Out / Coring:
Installation: Standpipe 50mm diameter installed to 4.00m.
Notes:

Logged by: LS Checked by: SKF

SYMBOLS KEY

B - BULK
U - UNDISTURBED
D - SMALL DISTURBED
J - JAR
V - VIAL
W - WATER
NR - NO RECOVERY
* - ESTIMATED DENSITY
HV - HAND VANE

ALL DIMENSIONS ARE IN METRES

SKF Ltd
Ground Investigation & Site Surveys

SKF Ltd, Constablewood Estate, Brisbane Glen, Largs
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

BOREHOLE NO. BH11

Contract: BEACH DR, IRVINE
Contract No: 5241
Status: FINAL

Client: MASON EVANS PARTNERSHIP
Boring Diameter: 115MM
Co-ordinates E 231032.882

Date: 19/02/2019
Equipment: PREMIER BADGER
N 638123.367

Description of Strata	Legend	Depth	Level	Sampling	SPT Blows U Blows Hand Vane	Pipe
Ground Surface		0.00	5.08			
MADE GROUND: Tarmac [GL-0.08].						
MADE GROUND: Loose* grey sandy fine to coarse angular gravel. Some angular cobbles.		0.55	4.53	DJ 0.20 DJ 0.50		
MADE GROUND: Loose* brown and dark brown slightly clayey sand and gravel with traces of concrete fragments. Gravel fine to coarse and angular to sub rounded.		1.05	4.03	DJ 1.00 SPT 1.00-1.45 U87 [B] 1.00-2.00	5,5,5,5,6,6	
Medium dense brown fine to coarse SAND with traces of gravel. Gravel fine to coarse and angular to sub rounded.		3.30	1.78	D 2.00 SPT 2.00-2.45 U78 [B] 2.00-3.00 D 3.00 SPT 3.00-3.45 U66 [B] 3.00-4.00	2,3,3,4,3,5 3,3,3,4,5,8	
Dense brown slightly silty fine to coarse SAND.		6.00	-0.92	D 4.00 SPT 4.00-4.45 SPT 4.50-4.95 SPT 5.00-5.45 SPT 5.00-5.95	10,12,11,11,10,12 11,10,10,10,9,10 9,9,8,9,9,9 8,9,9,10,9,8	

Water Strikes
Strike: 3.85 Flow: SEEPAGE

Details
Casing: 2.00 Final Depth: 6.00

Inspection Pit: 0.30 X 0.30 X 1.00
Breaking Out / Coring:
Installation: Standpipe 50mm diameter installed to 4.00m.
Notes:

Logged by: LS Checked by: SKF

SYMBOLS KEY

B - BULK
U - UNDISTURBED
D - SMALL DISTURBED
J - JAR
V - VIAL
W - WATER
NR - NO RECOVERY
* - ESTIMATED DENSITY
HV - HAND VANE

ALL DIMENSIONS ARE IN METRES

SKF Ltd
Ground Investigation & Site Surveys

SKF Ltd, Constablewood Estate, Brisbane Glen, Largs
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

BOREHOLE NO. BH12

Contract: BEACH DR, IRVINE
Contract No: 5241
Status: FINAL

Client: MASON EVANS PARTNERSHIP
Boring Diameter: 115MM
Co-ordinates E 231038.805

Date: 19/02/2019
Equipment: PREMIER BADGER
N 638154.159

Description of Strata	Legend	Depth	Level	Sampling	SPT Blows U Blows Hand Vane	Pipe
Ground Surface		0.00	5.22			
MADE GROUND: Tarmac [GL-0.08].						
MADE GROUND: Dense* brown and grey slightly clayey sand and gravel with occasional fragments of concrete. Gravel fine to coarse and angular to sub rounded. Many cobbles.		0.90	4.32	DJ 0.20 DJ 0.50 DJ 1.00		
Medium dense brown fine to coarse SAND with traces of gravel. Gravel fine to coarse and angular to sub rounded.		1.75	3.47	SPT 1.00-1.45 U87 [B] 1.00-2.00	3,4,4,5,5,6	
Very loose orange brown slightly silty fine to coarse SAND.		3.20	2.02	D 2.00 SPT 2.00-2.45 U78 [B] 2.00-3.00 D 3.00 SPT 3.00-3.45 U66 [B] 3.00-3.60	0,0,1,0,0,1 0,0,1,3,4,6	
Medium dense brown slightly silty gravelly fine to coarse SAND. Gravel fine to coarse and angular to sub rounded. At 3.60m hard obstruction, presumed boulder.		3.60	1.62	D 3.60 SPT 3.60-3.60	40/0mm	

Water Strikes
Strike: 2.00 Flow: Damp

Details
Casing: 2.00 Final Depth: 3.60

Inspection Pit: 0.30 X 0.30 X 1.00
Breaking Out / Coring:
Installation: Standpipe 50mm diameter installed to 3.60m.
Notes:

Logged by: LS Checked by: SKF

SYMBOLS KEY

B - BULK
U - UNDISTURBED
D - SMALL DISTURBED
J - JAR
V - VIAL
W - WATER
NR - NO RECOVERY
* - ESTIMATED DENSITY
HV - HAND VANE

ALL DIMENSIONS ARE IN METRES

SKF Ltd
Ground Investigation & Site Surveys

SKF Ltd, Constablewood Estate, Brisbane Glen, Largs
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

BOREHOLE NO. BH13

Contract: BEACH DR, IRVINE
Contract No: 5241
Status: FINAL

Client: MASON EVANS PARTNERSHIP
Boring Diameter: 115MM
Co-ordinates E 231080.668

Date: 19/02/2019
Equipment: PREMIER BADGER
N 638140.958

Description of Strata	Legend	Depth	Level	Sampling	SPT Blows U Blows Hand Vane	Pipe
Ground Surface		0.00	5.34			
MADE GROUND: Tarmac [GL-0.10].						
MADE GROUND: Medium dense* brown and grey slightly clayey sand and gravel with occasional fragments of concrete. Gravel fine to coarse and angular to sub rounded. Some cobbles.				DJ 0.20 DJ 0.50 DJ 1.00 SPT 1.00-1.45 U86 1.00-2.00	2,1,3,3,3,3	
		1.20	4.14			
Medium dense brown fine to coarse SAND with traces of gravel. Gravel fine to coarse and angular to sub rounded. At 3.60m hard obstruction, presumed boulder.				D 2.00 SPT 2.00-2.45 U78 [B] 2.00-3.00	3,3,3,3,4,3	
				D 3.00 SPT 3.00-3.45	5,5,5,6,5,20	
		3.60	1.74	SPT 3.50-3.60	24,26/25mm	

Water Strikes
Strike: DRY Flow:

Details
Casing: 2.00 Final Depth: 3.60

Inspection Pit: 0.30 X 0.30 X 1.00
Breaking Out / Coring:
Installation: Standpipe 50mm diameter installed to 3.00m.
Notes:

Logged by: LS Checked by: SKF

SYMBOLS KEY

B - BULK
U - UNDISTURBED
D - SMALL DISTURBED
J - JAR
V - VIAL
W - WATER
NR - NO RECOVERY
* - ESTIMATED DENSITY
HV - HAND VANE

ALL DIMENSIONS ARE IN METRES

Appendix 10

Records of CBR Tests

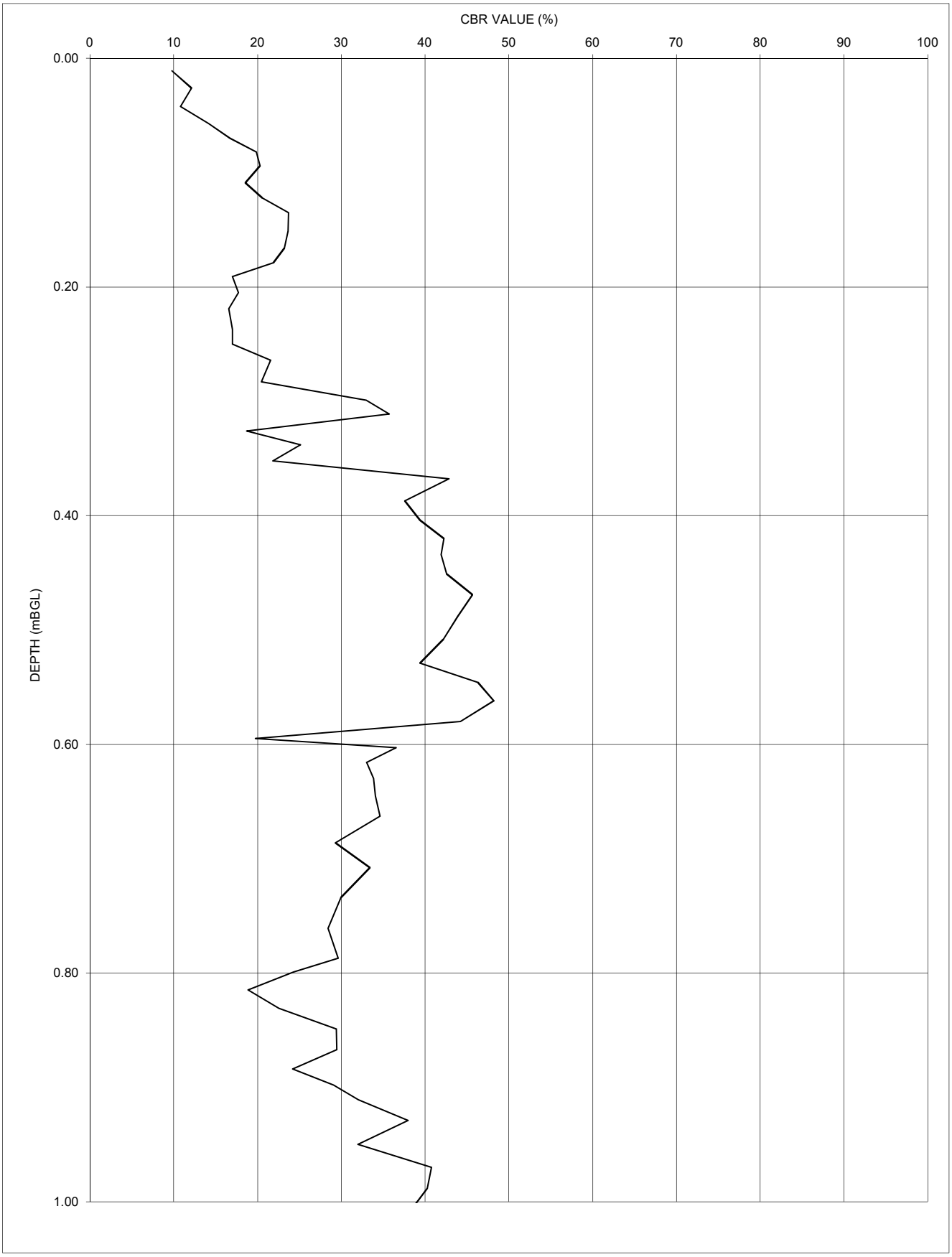
SKF Ltd
Ground Investigation & Site Surveys

SKF LTD, **Constablewood Estate, Brisbane Glen, Largs**
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

PROBE NO. CBR1

PANDA2 VARIABLE ENERGY DCP PLOT

CONTRACT: BEACH DRIVE, IRVINE
CONTRACT NO: 5241
CLIENT: MASON EVANS PARTNERSHIP
OPERATOR: KR
DATE: 19/02/2019
NOTES: -



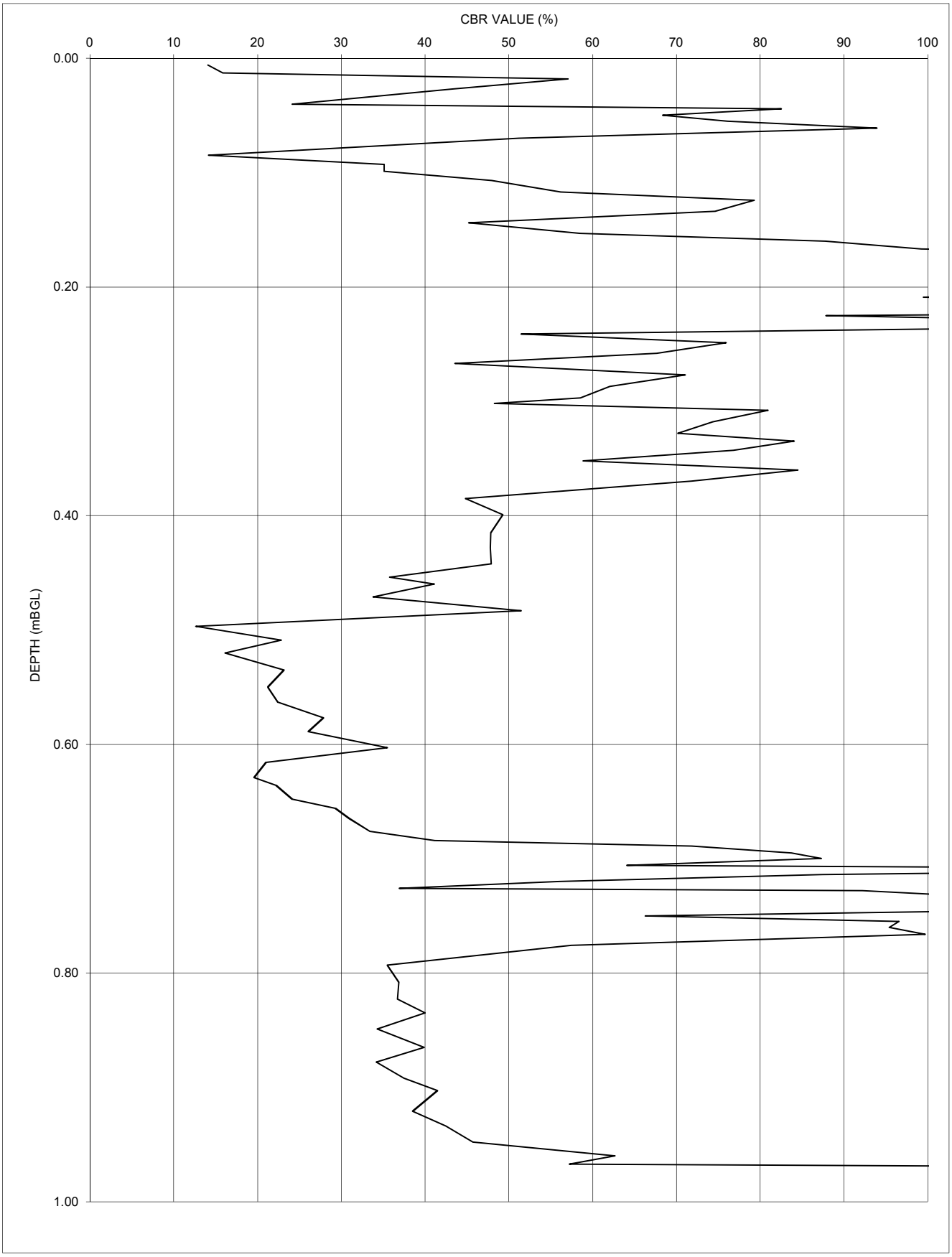
SKF Ltd
Ground Investigation & Site Surveys

SKF LTD, **Constablewood Estate, Brisbane Glen, Largs**
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

PROBE NO. CBR2

PANDA2 VARIABLE ENERGY DCP PLOT

CONTRACT: BEACH DRIVE, IRVINE
CONTRACT NO: 5241
CLIENT: MASON EVANS PARTNERSHIP
OPERATOR: KR
DATE: 19/02/2019
NOTES: -



SKF Ltd
Ground Investigation & Site Surveys

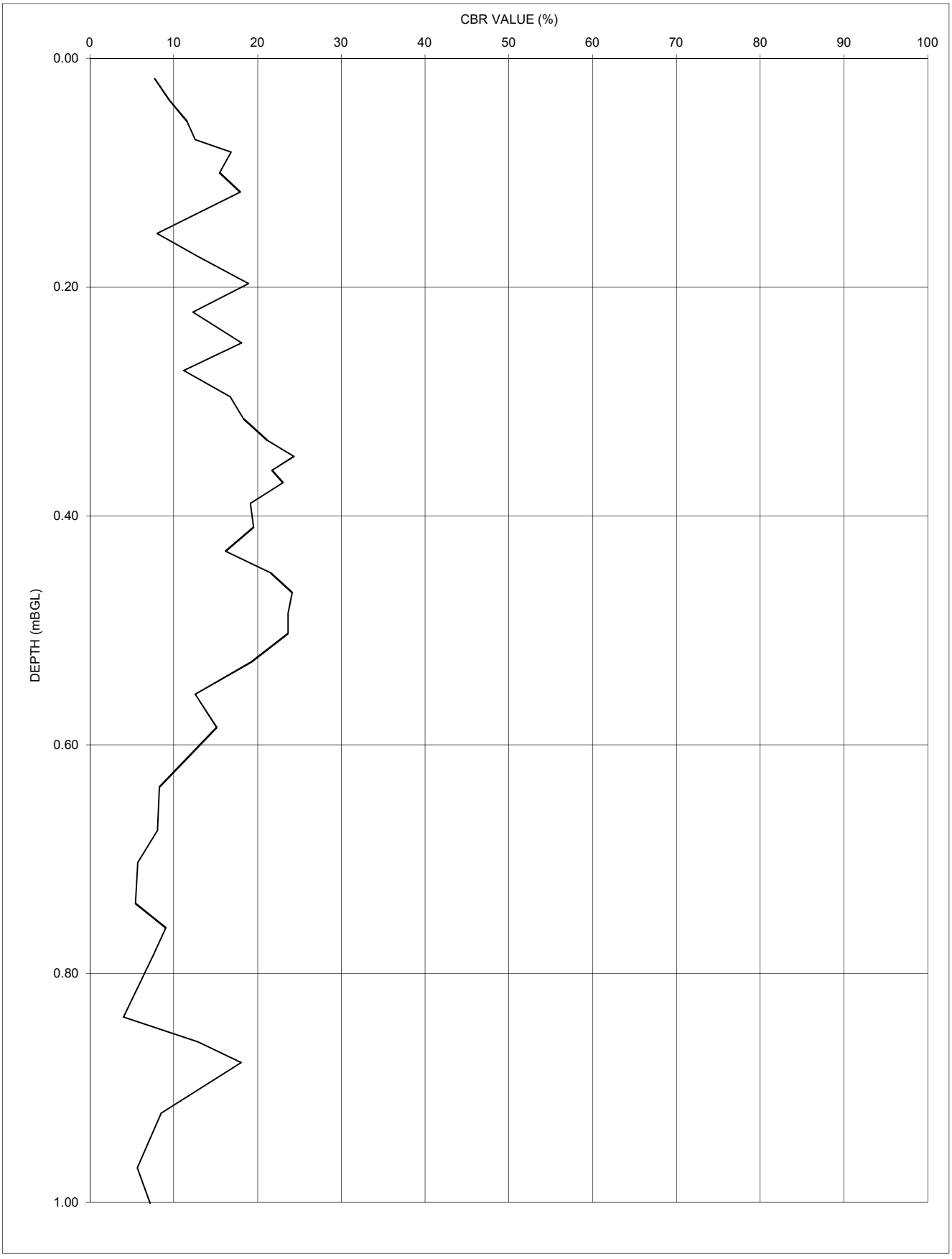
SKF LTD, **Constablewood Estate, Brisbane Glen, Largs**
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

PROBE NO. CBR3

PANDA2 VARIABLE ENERGY DCP PLOT

CONTRACT: BEACH DRIVE, IRVINE
CLIENT: MASON EVANS PARTNERSHIP
DATE: 19/02/2019

CONTRACT NO: 5241
OPERATOR: KR
NOTES: -



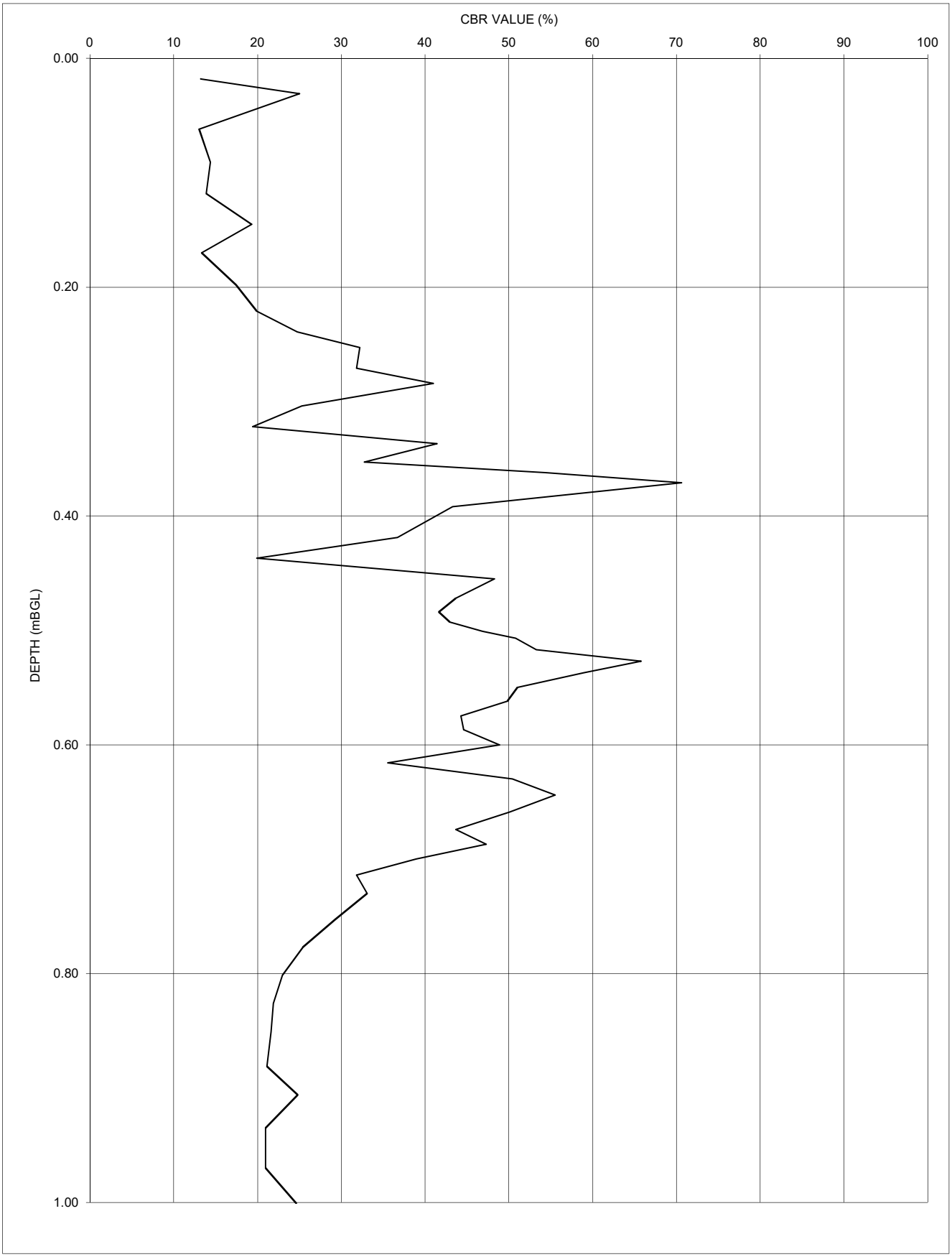
SKF Ltd
Ground Investigation & Site Surveys

SKF LTD, **Constablewood Estate, Brisbane Glen, Largs**
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

PROBE NO. CBR4

PANDA2 VARIABLE ENERGY DCP PLOT

CONTRACT: BEACH DRIVE, IRVINE
CONTRACT NO: 5241
CLIENT: MASON EVANS PARTNERSHIP
OPERATOR: KR
DATE: 19/02/2019
NOTES: -



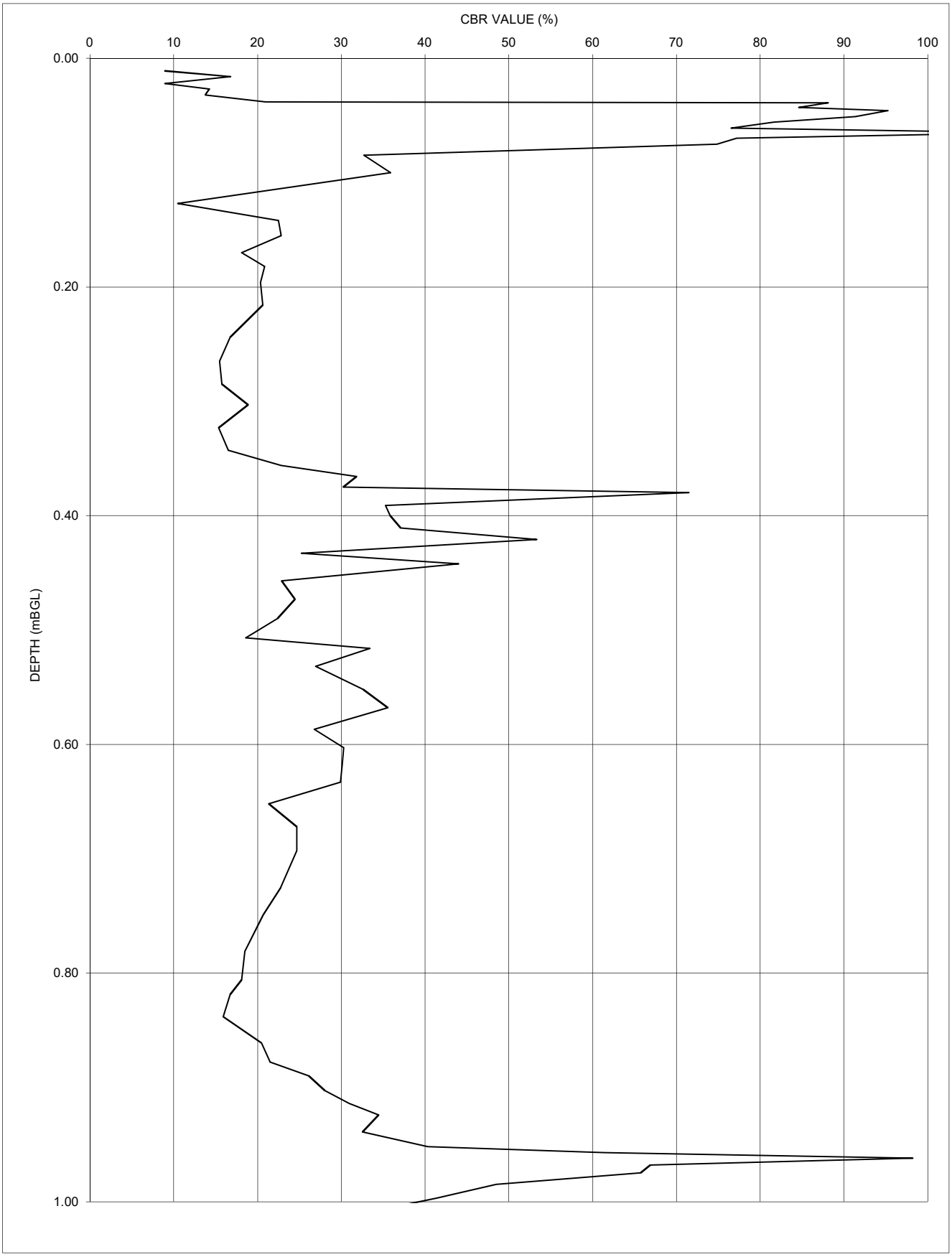
SKF Ltd
Ground Investigation & Site Surveys

SKF LTD, **Constablewood Estate, Brisbane Glen, Largs**
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

PROBE NO. CBR5

PANDA2 VARIABLE ENERGY DCP PLOT

CONTRACT: BEACH DRIVE, IRVINE
CONTRACT NO: 5241
CLIENT: MASON EVANS PARTNERSHIP
OPERATOR: KR
DATE: 19/02/2019
NOTES: -



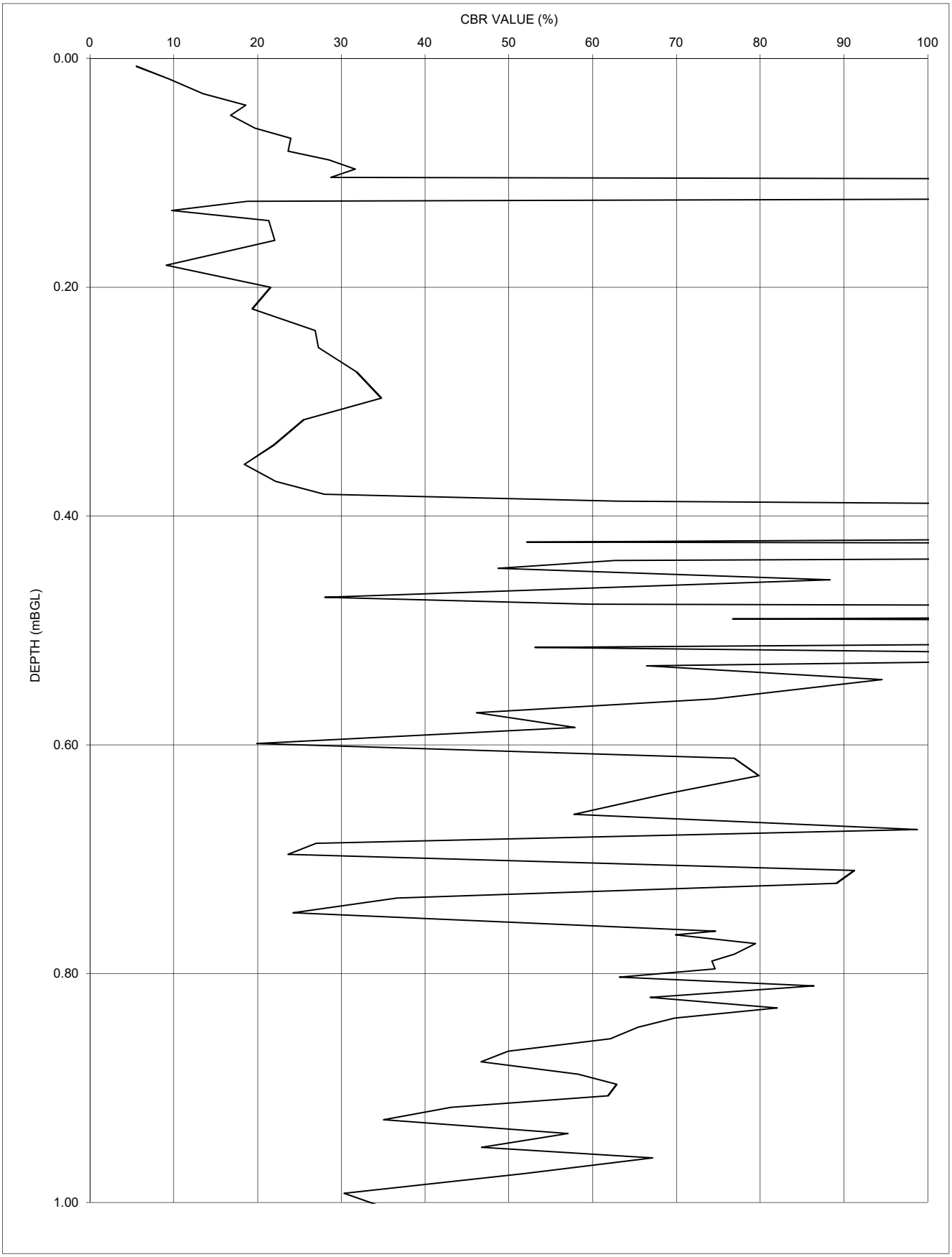
SKF Ltd
Ground Investigation & Site Surveys

SKF LTD, **Constablewood Estate, Brisbane Glen, Largs**
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

PROBE NO. CBR6

PANDA2 VARIABLE ENERGY DCP PLOT

CONTRACT: BEACH DRIVE, IRVINE
CONTRACT NO: 5241
CLIENT: MASON EVANS PARTNERSHIP
OPERATOR: KR
DATE: 19/02/2019
NOTES: -



SKF Ltd
Ground Investigation & Site Surveys

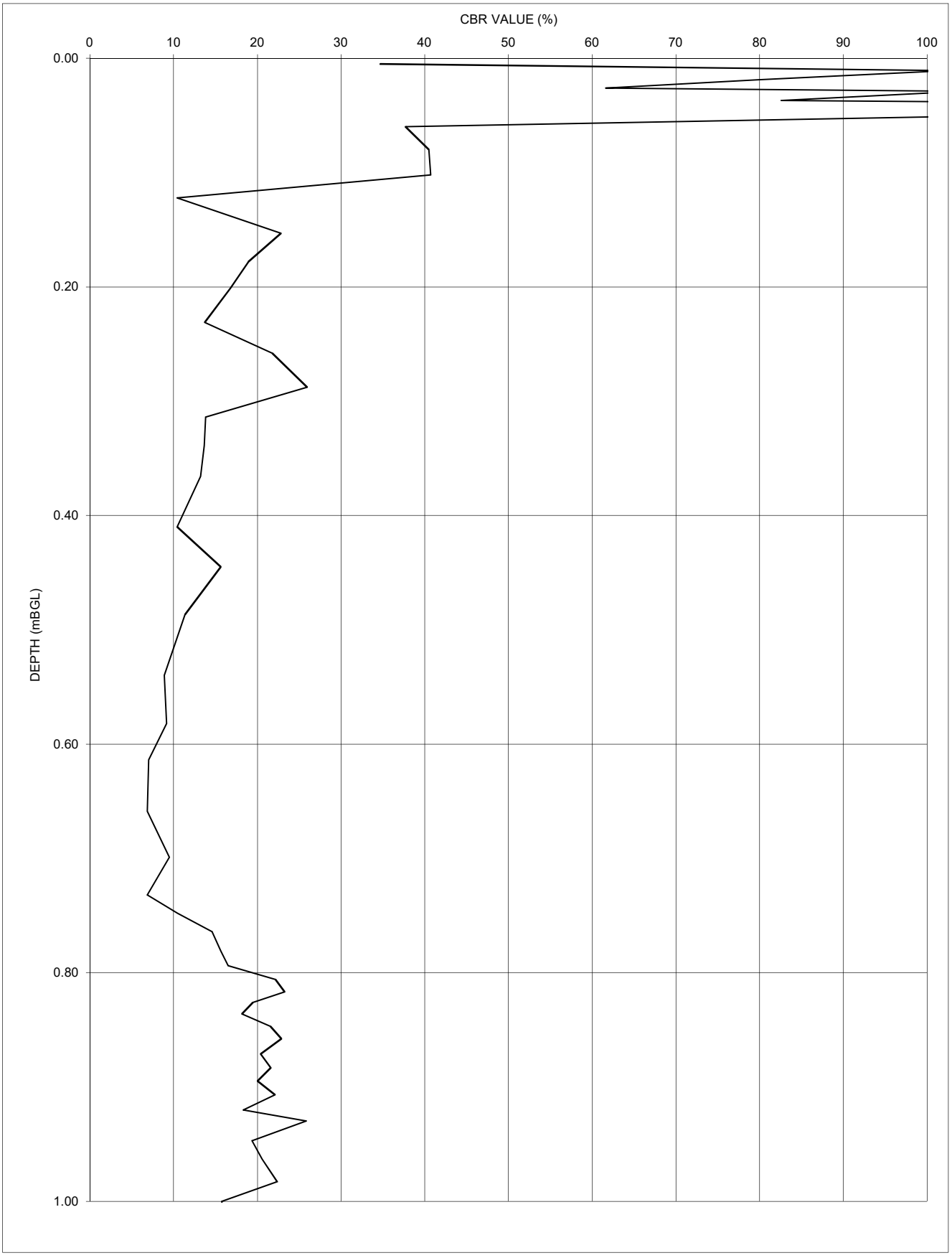
SKF LTD, **Constablewood Estate, Brisbane Glen, Largs**
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

PROBE NO. CBR7

PANDA2 VARIABLE ENERGY DCP PLOT

CONTRACT: BEACH DRIVE, IRVINE
CLIENT: MASON EVANS PARTNERSHIP
DATE: 19/02/2019

CONTRACT NO: 5241
OPERATOR: KR
NOTES: -



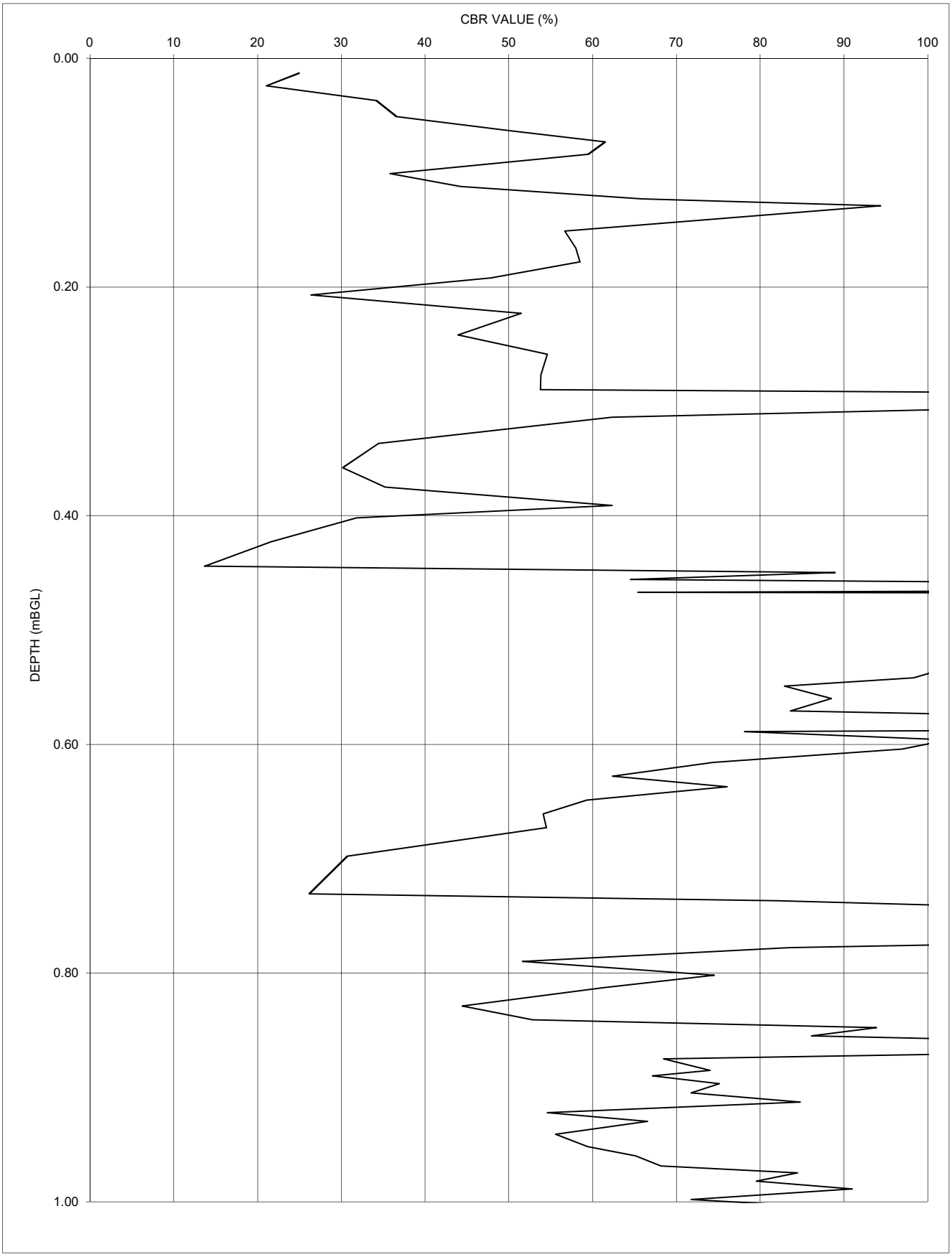
SKF Ltd
Ground Investigation & Site Surveys

SKF LTD, **Constablewood Estate, Brisbane Glen, Largs**
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

PROBE NO. CBR8

PANDA2 VARIABLE ENERGY DCP PLOT

CONTRACT: BEACH DRIVE, IRVINE
CONTRACT NO: 5241
CLIENT: MASON EVANS PARTNERSHIP
OPERATOR: KR
DATE: 19/02/2019
NOTES: -



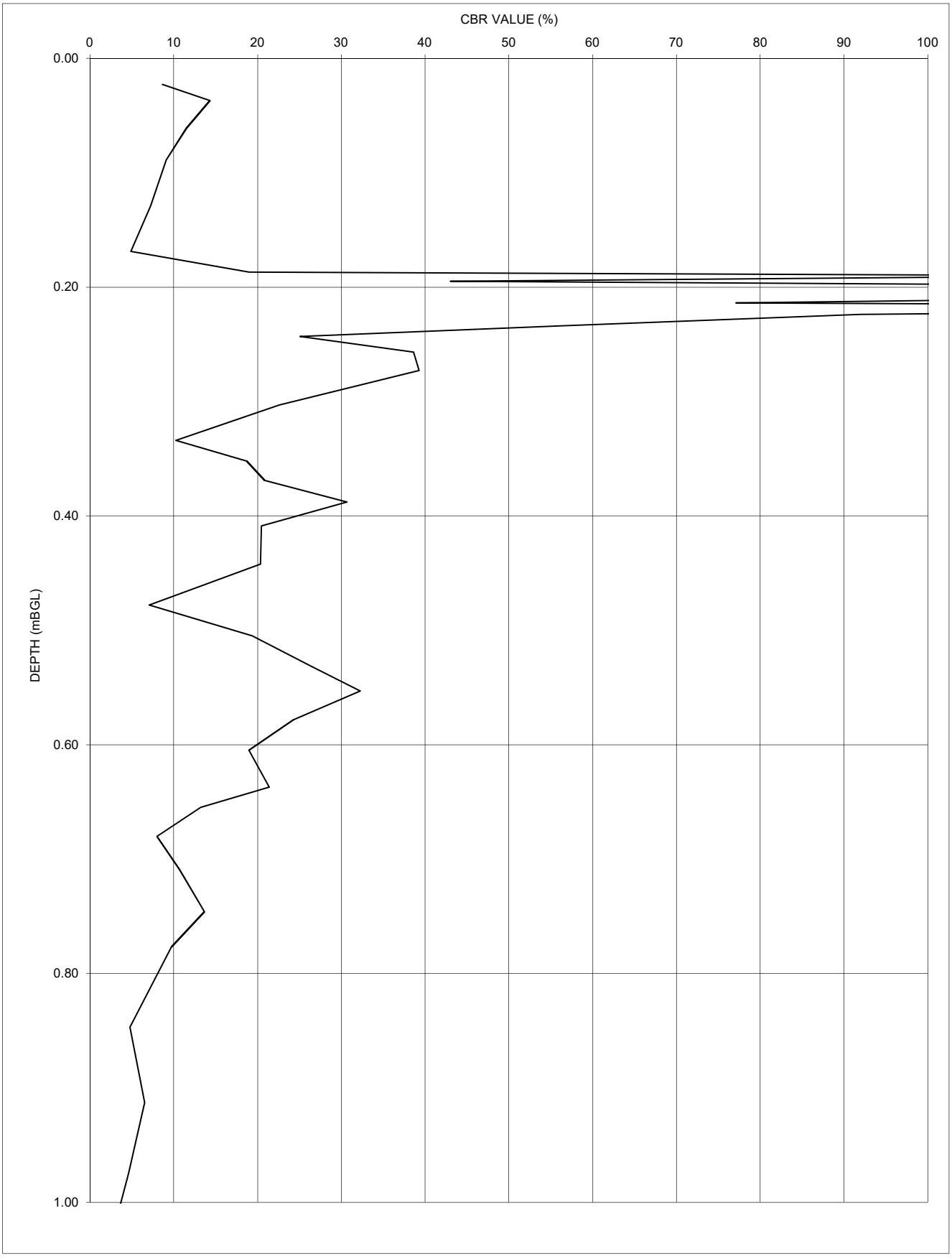
SKF Ltd
Ground Investigation & Site Surveys

SKF LTD, **Constablewood Estate, Brisbane Glen, Largs**
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

PROBE NO. CBR9

PANDA2 VARIABLE ENERGY DCP PLOT

CONTRACT: BEACH DRIVE, IRVINE
CONTRACT NO: 5241
CLIENT: MASON EVANS PARTNERSHIP
OPERATOR: KR
DATE: 19/02/2019
NOTES: -



SKF Ltd
Ground Investigation & Site Surveys

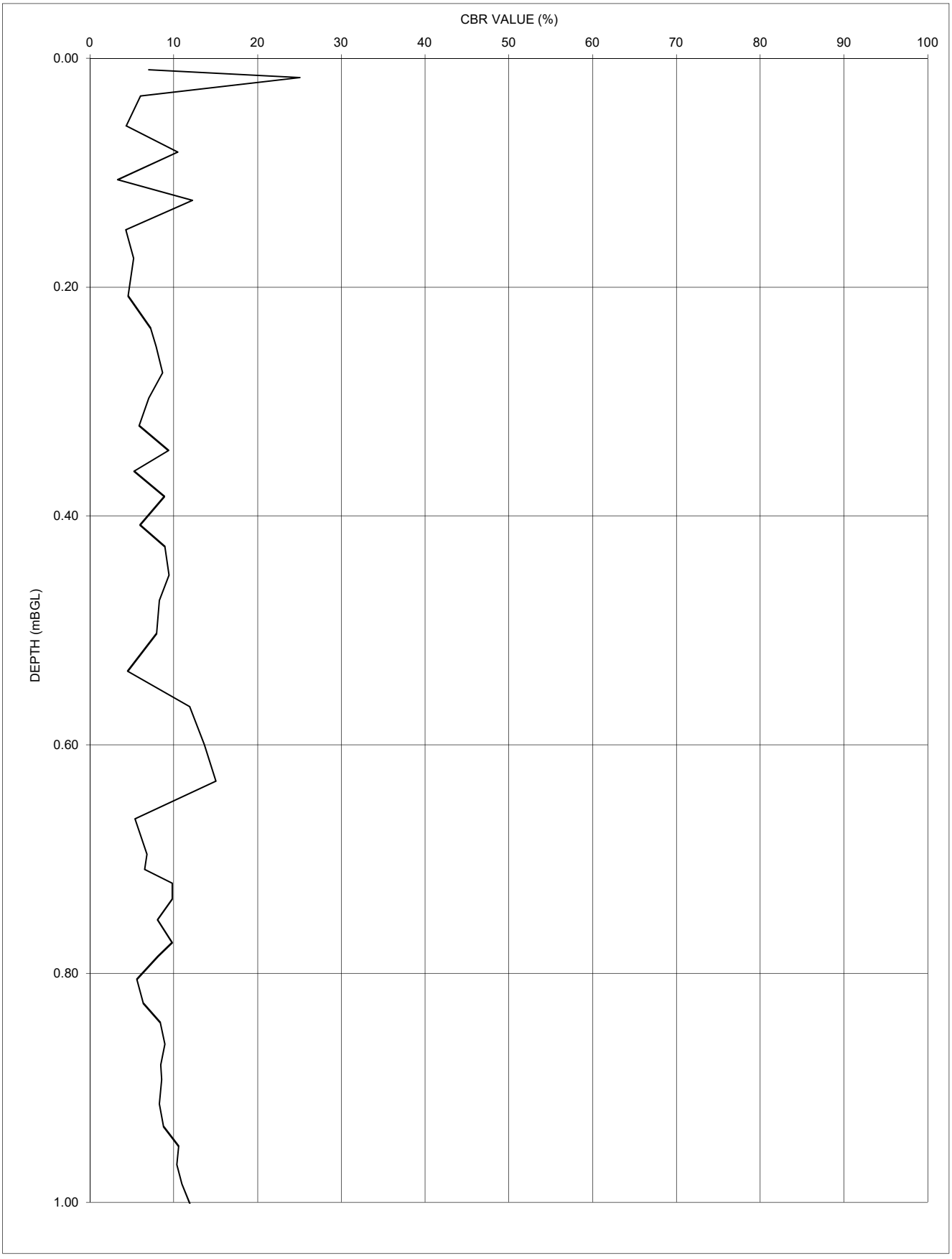
SKF LTD, **Constablewood Estate, Brisbane Glen, Largs**
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

PROBE NO. CBR10

PANDA2 VARIABLE ENERGY DCP PLOT

CONTRACT: BEACH DRIVE, IRVINE
CLIENT: MASON EVANS PARTNERSHIP
DATE: 19/02/2019

CONTRACT NO: 5241
OPERATOR: KR
NOTES: -



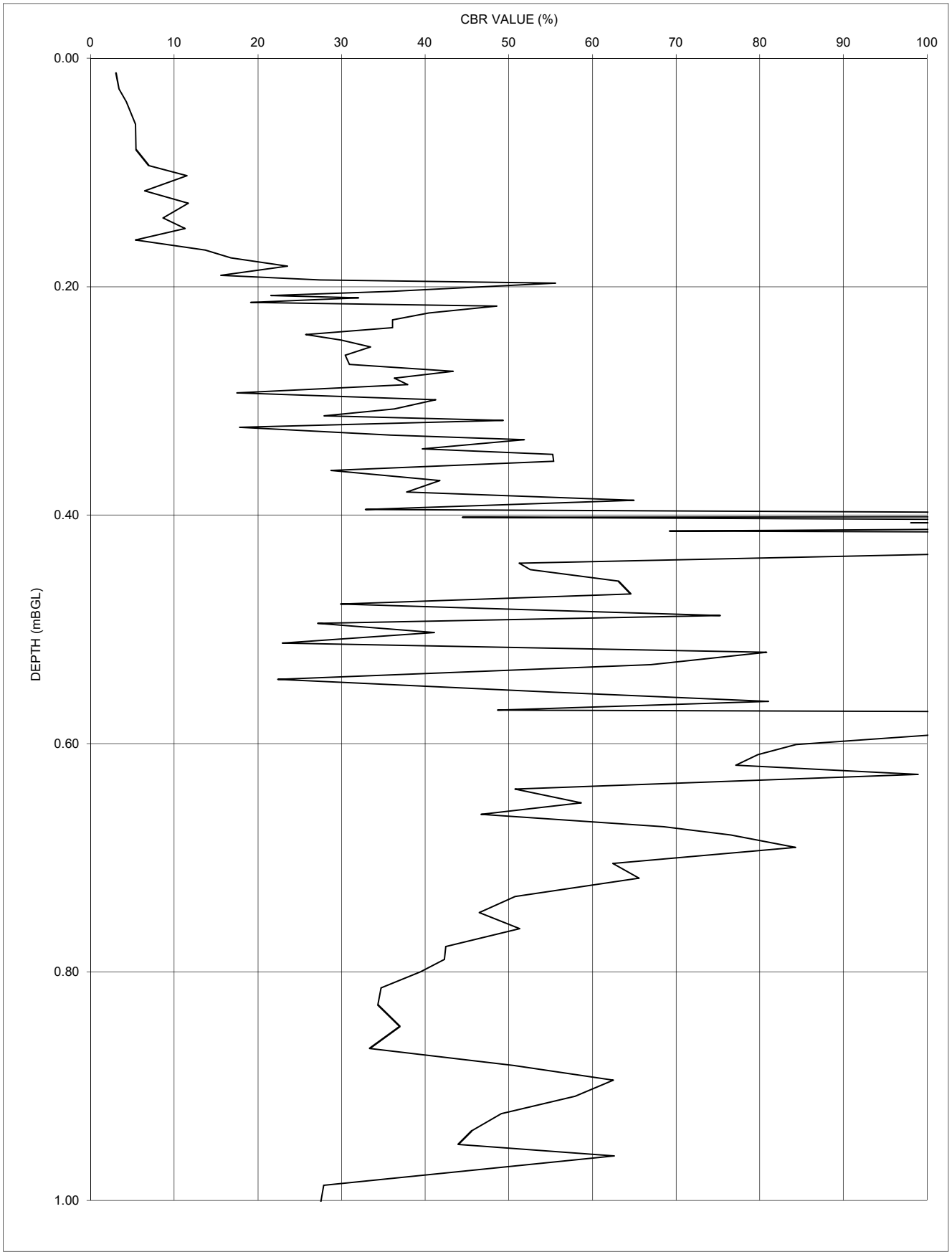
SKF Ltd
Ground Investigation & Site Surveys

SKF LTD, **Constablewood Estate, Brisbane Glen, Largs**
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

PROBE NO. CBR11

PANDA2 VARIABLE ENERGY DCP PLOT

CONTRACT: BEACH DRIVE, IRVINE
CONTRACT NO: 5241
CLIENT: MASON EVANS PARTNERSHIP
OPERATOR: KR
DATE: 19/02/2019
NOTES: -



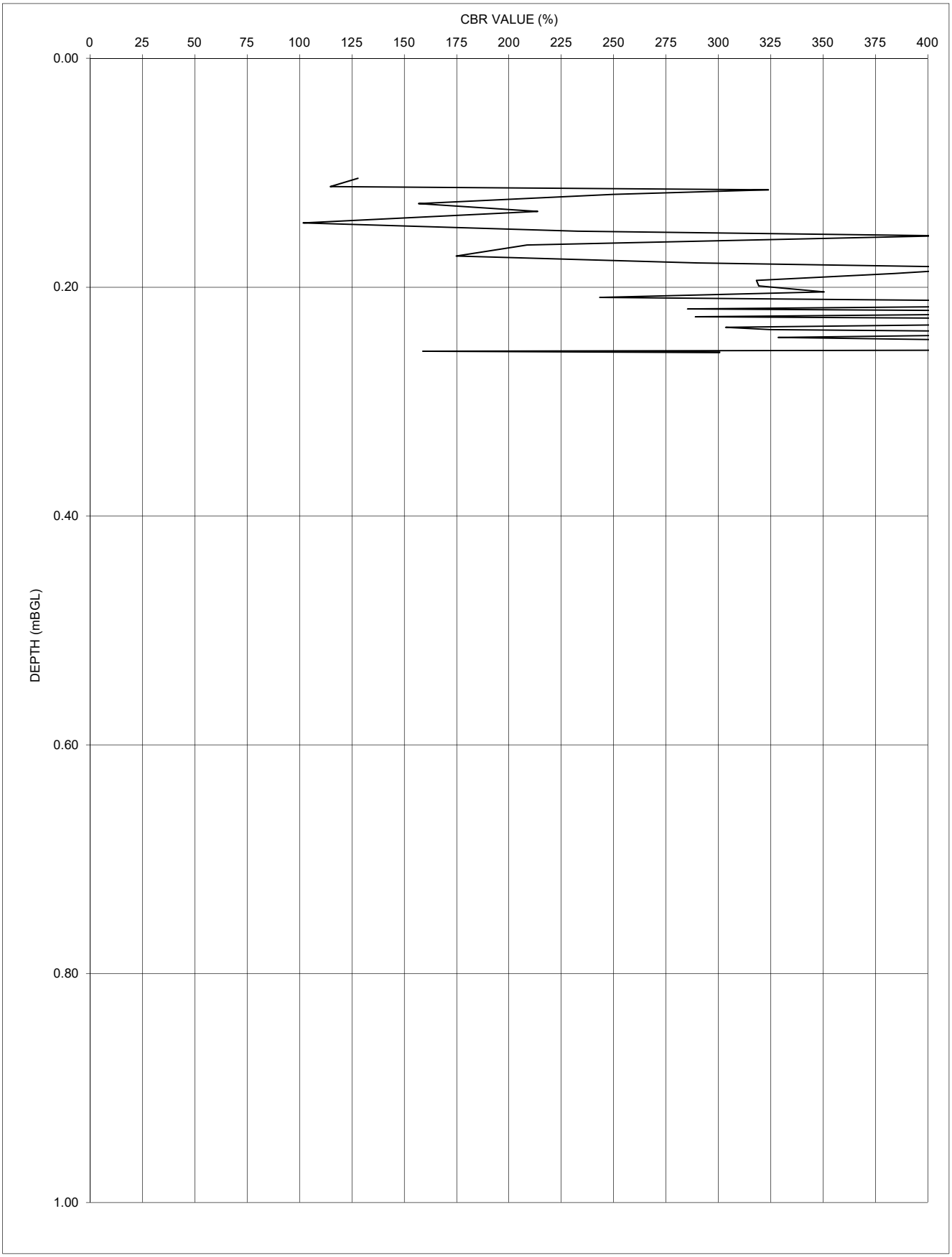
SKF Ltd
Ground Investigation & Site Surveys

SKF LTD, **Constablewood Estate, Brisbane Glen, Largs**
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

PROBE NO. CBR12

PANDA2 VARIABLE ENERGY DCP PLOT

CONTRACT: BEACH DRIVE, IRVINE
CONTRACT NO: 5241
CLIENT: MASON EVANS PARTNERSHIP
OPERATOR: KR
DATE: 19/02/2019
NOTES: -



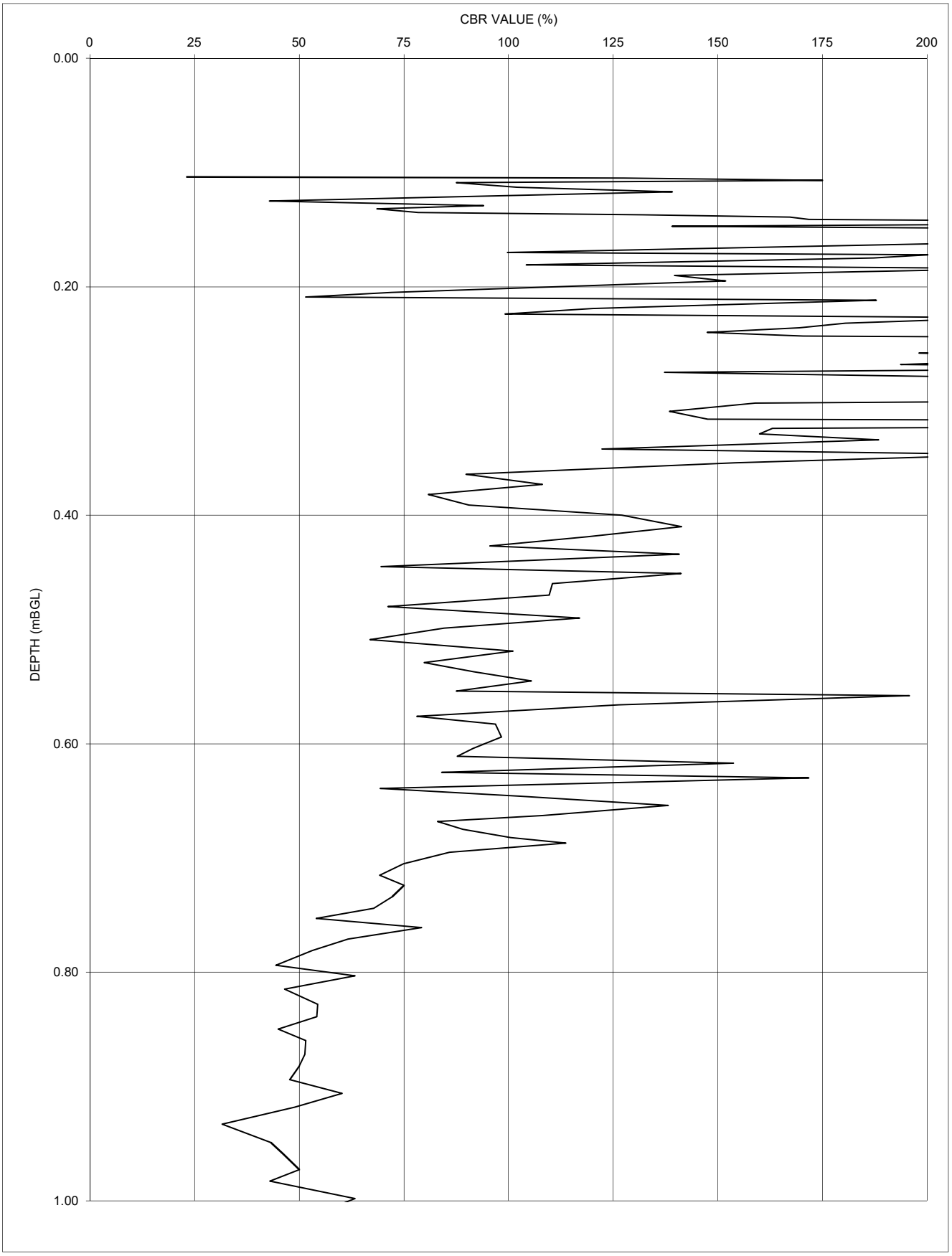
SKF Ltd
Ground Investigation & Site Surveys

SKF LTD, **Constablewood Estate, Brisbane Glen, Largs**
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

PROBE NO. CBR13

PANDA2 VARIABLE ENERGY DCP PLOT

CONTRACT: BEACH DRIVE, IRVINE
CONTRACT NO: 5241
CLIENT: MASON EVANS PARTNERSHIP
OPERATOR: KR
DATE: 19/02/2019
NOTES: -



SKF Ltd
Ground Investigation & Site Surveys

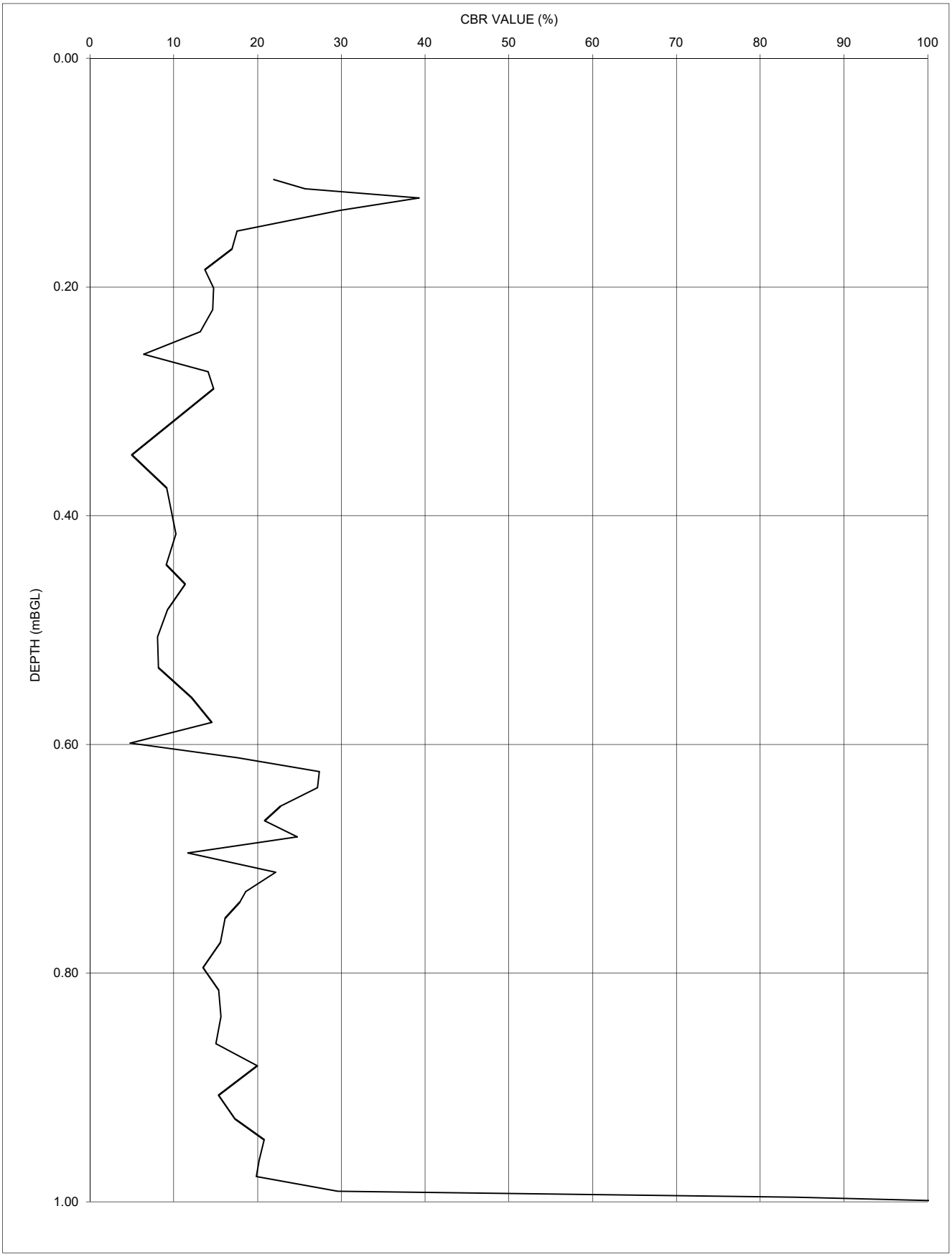
SKF LTD, **Constablewood Estate, Brisbane Glen, Largs**
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

PROBE NO. CBR14

PANDA2 VARIABLE ENERGY DCP PLOT

CONTRACT: BEACH DRIVE, IRVINE
CLIENT: MASON EVANS PARTNERSHIP
DATE: 19/02/2019

CONTRACT NO: 5241
OPERATOR: KR
NOTES: -



SKF Ltd
Ground Investigation & Site Surveys

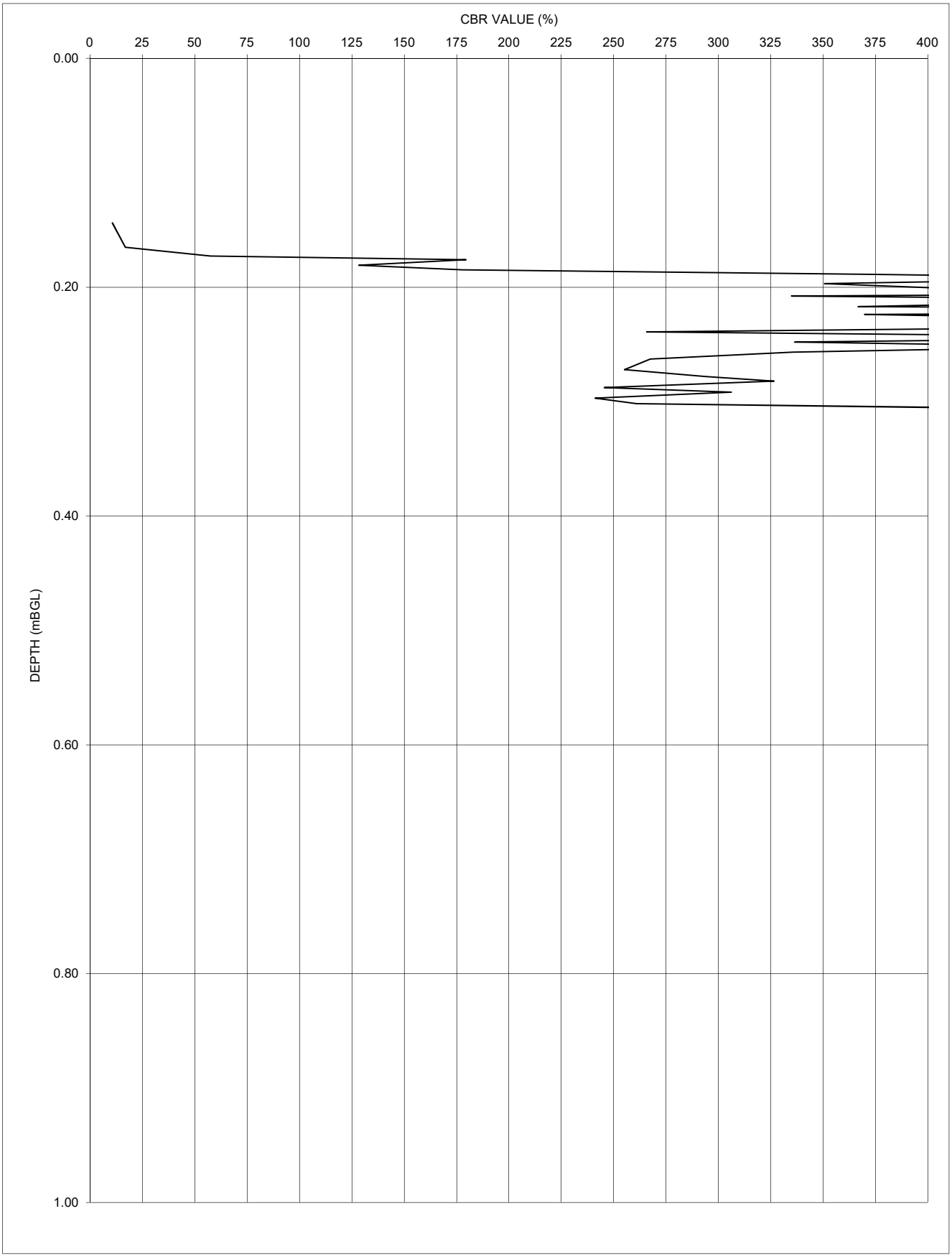
SKF LTD, **Constablewood Estate, Brisbane Glen, Largs**
Tel: 07795 493892 Email: SKFLTD@BTINTERNET.COM

PROBE NO. CBR15

PANDA2 VARIABLE ENERGY DCP PLOT

CONTRACT: BEACH DRIVE, IRVINE
CLIENT: MASON EVANS PARTNERSHIP
DATE: 19/02/2019

CONTRACT NO: 5241
OPERATOR: KR
NOTES: -



Appendix 11

Records of Soakaway Testing

RESULTS OF SOAKAGE TEST

SKF Ltd
Ground Investigation & Site Surveys

TEST PIT NO. SA01

Contract Name: BEACH DRIVE, IRVINE
Contract No.: 5241
Date: 19/02/2019
Weather: DRY WITH SUNNY SPELLS
Time to fill pit: 3 MINS
Ground Level (mAOD)
Dimensions (m)
Length: 1.30
Width: 0.50
Depth: 1.00

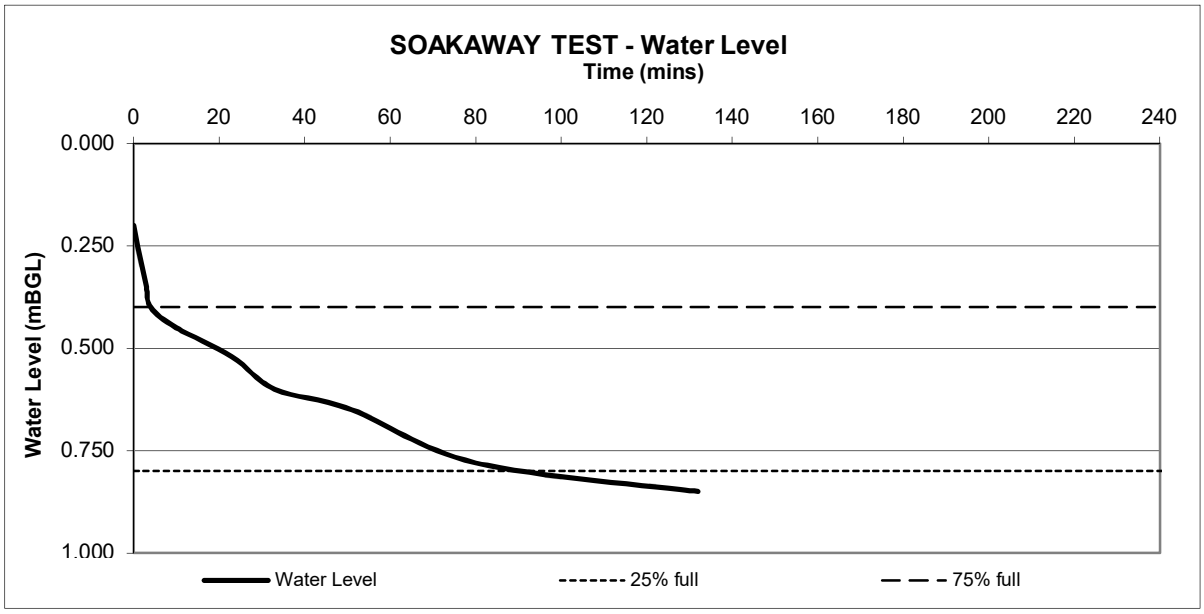
From graph (seconds)
tp75-25 = 5280

Using formula $f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$ from BRE Digest 365

f = soil infiltration rate
Vp75-25 = volume of outflow between 75% and 25% eff. depth
ap50 = mean surface area (pit sides to 50% eff. depth + base)
tp75-25 = time for outflow between 75% and 25% eff. depth

Time (mins)	Water Level (mBGL)	Water Level (mAOD)
0.00	0.20	
1.00	0.25	
2.00	0.30	
3.00	0.35	
4.00	0.40	
10.00	0.45	
23.00	0.52	
33.00	0.60	
51.00	0.65	
80.00	0.78	
132.00	0.85	

INFILTRATION RATE (m/s) f = 0.00002356



RESULTS OF SOAKAGE TEST

SKF Ltd
Ground Investigation & Site Surveys

TEST PIT NO. SA02

Contract Name: BEACH DRIVE, IRVINE
Contract No.: 5241
Date: 19/02/2019
Weather: DRY WITH SUNNY SPELLS
Time to fill pit: 3 MINS
Ground Level (mAOD)
Dimensions (m)
Length: 1.70
Width: 0.50
Depth: 1.00

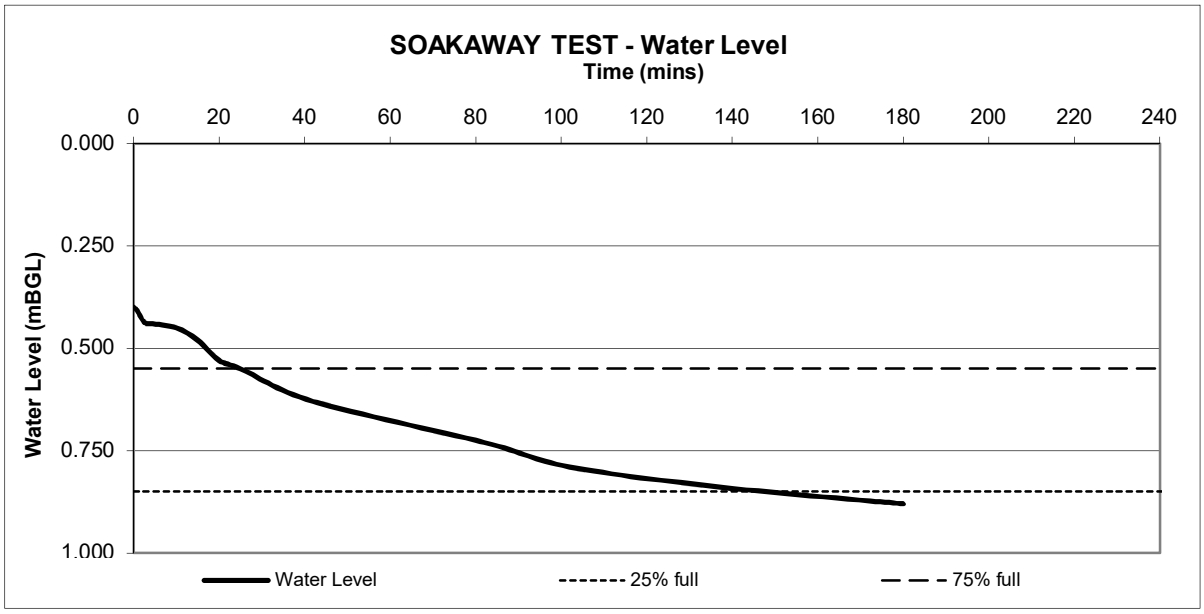
From graph (seconds)
tp75-25 = 7500

Using formula $f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$ from BRE Digest 365

f = soil infiltration rate
Vp75-25 = volume of outflow between 75% and 25% eff. depth
ap50 = mean surface area (pit sides to 50% eff. depth + base)
tp75-25 = time for outflow between 75% and 25% eff. depth

Time (mins)	Water Level (mBGL)	Water Level (mAOD)
0.00	0.40	
1.00	0.41	
2.00	0.43	
3.00	0.44	
4.00	0.44	
10.00	0.45	
15.00	0.48	
20.00	0.53	
25.00	0.55	
42.00	0.63	
82.00	0.73	
102.00	0.79	
138.00	0.84	
180.00	0.88	

INFILTRATION RATE (m/s) f = 0.00001567



RESULTS OF SOAKAGE TEST

SKF Ltd
Ground Investigation & Site Surveys

TEST PIT NO. SA03

Contract Name: BEACH DRIVE, IRVINE
Contract No.: 5241
Date: 19/02/2019
Weather: DRY WITH SUNNY SPELLS
Time to fill pit: 3 MINS
Ground Level (mAOD)
Dimensions (m)
Length: 1.80
Width: 0.50
Depth: 1.50

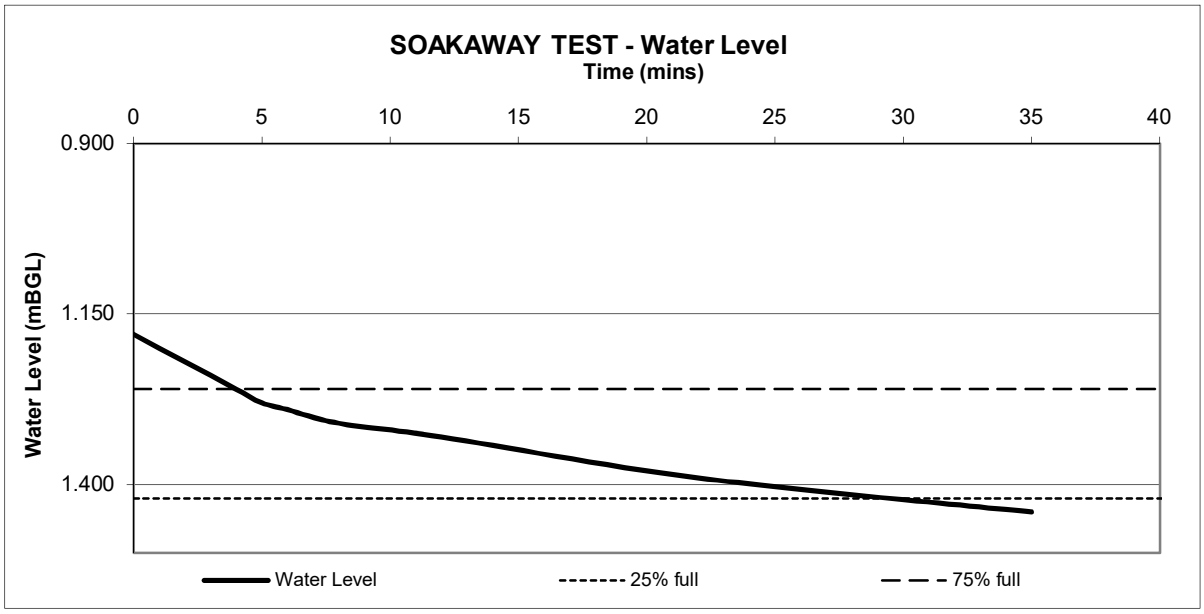
From graph (seconds)
tp75-25 = 1560

Using formula $f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$ from BRE Digest 365

f = soil infiltration rate
Vp75-25 = volume of outflow between 75% and 25% eff. depth
ap50 = mean surface area (pit sides to 50% eff. depth + base)
tp75-25 = time for outflow between 75% and 25% eff. depth

Time (mins)	Water Level (mBGL)	Water Level (mAOD)
0.00	1.18	
1.00	1.20	
2.00	1.22	
3.00	1.24	
4.00	1.26	
5.00	1.28	
6.00	1.29	
8.00	1.31	
12.00	1.33	
22.00	1.39	
35.00	1.44	

INFILTRATION RATE (m/s) f = 0.00005642



Appendix 12

Chemical Analysis Results
(Chemtest)

Chemtest
The right chemistry to deliver results
Chemtest Ltd.
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Amended Report

Report No.:	19-06308-3		
Initial Date of Issue:	19-Mar-2019	**Date of Re-Issue:**	04-Jun-2019
Client	Mason Evans		
Client Address:	The Piazza 95 Morrison Street Glasgow G5 8BE		
Contact(s):	Heather Scott		
Project	Beach drive, Irvine		
Quotation No.:		**Date Received:**	20-Feb-2019
Order No.:		**Date Instructed:**	26-Feb-2019
No. of Samples:	19		
Turnaround (Wkdays):	13	**Results Due:**	14-Mar-2019
Date Approved:	19-Mar-2019		
Approved By:			
Details:	Robert Monk, Technical Manager		

Chemtest
The right chemistry to deliver results
Chemtest Ltd.
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Amended Report

Report No.:	19-06896-2		
Initial Date of Issue:	14-Mar-2019	**Date of Re-Issue:**	04-Jun-2019
Client	Mason Evans		
Client Address:	The Piazza 95 Morrison Street Glasgow G5 8BE		
Contact(s):	Heather Scott		
Project	Beach Drive, Irvine		
Quotation No.:		**Date Received:**	25-Feb-2019
Order No.:		**Date Instructed:**	26-Feb-2019
No. of Samples:	2		
Turnaround (Wkdays):	5	**Results Due:**	04-Mar-2019
Date Approved:	14-Mar-2019		

Approved By:

Details: Martin Dyer, Laboratory Manager

Chemtest
The right chemistry to deliver results
Chemtest Ltd.
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Amended Report

Report No.:	19-07478-2		
Initial Date of Issue:	15-Mar-2019	**Date of Re-Issue:**	04-Jun-2019
Client	Mason Evans		
Client Address:	The Piazza 95 Morrison Street Glasgow G5 8BE		
Contact(s):	Heather Scott		
Project	Beach Drive, Irvine		
Quotation No.:		**Date Received:**	28-Feb-2019
Order No.:		**Date Instructed:**	28-Feb-2019
No. of Samples:	9		
Turnaround (Wkdays):	7	**Results Due:**	08-Mar-2019
Date Approved:	15-Mar-2019		

Approved By:

Details: Martin Dyer, Laboratory Manager

Chemtest
The right chemistry to deliver results

Results - Leachate

Project: Beach drive, Irvine

Client: Mason Evans				**Chemtest Job No.:**		19-06308	19-06308	19-06308	19-06308	19-06308	19-06896	19-07478	19-07478	19-07478
Quotation No.:				**Chemtest Sample ID.:**		778933	778938	778944	778949	778957	781871	784967	784970	784973
				Sample Location:		TP05	TP07	TP10	TP12	TP16	TP18	BH06	BH11	BH13
				Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):		0.5	0.4	0.5	0.8	0.6	1.00	2.00	0.50	1.00
				Date Sampled:		18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019
Determinand	**Accred.**	**SOP**	**Type**	**Units**	**LOD**									
Sulphate	U	1220	2:1	mg/l	1.0	2.7	120	5.9	66	5.9	2.5	180	13	16
Sulphide	U	1325	2:1	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Calcium	U	1415	2:1	mg/l	5.0	18	40	15	36	17	< 5.0	160	13	21
Magnesium	U	1415	2:1	mg/l	0.50	2.4	16	2.3	2.3	1.6	< 0.50	6.8	1.9	2.0
Hardness	U	1415	2:1	mg/l	15	55	170	47	99	49	< 15	420	40	61
Arsenic (Dissolved)	U	1450	2:1	µg/l	1.0	2.2	1.1	2.0	< 1.0	30	1.1	< 1.0	22	23
Cadmium (Dissolved)	U	1450	2:1	µg/l	0.080	< 0.080	< 0.080	< 0.080	< 0.080	0.084	< 0.080	< 0.080	< 0.080	0.48
Chromium (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper (Dissolved)	U	1450	2:1	µg/l	1.0	1.4	1.6	3.3	1.1	5.3	< 1.0	< 1.0	< 1.0	18
Nickel (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead (Dissolved)	U	1450	2:1	µg/l	1.0	3.2	< 1.0	3.1	1.1	6.4	< 1.0	< 1.0	5.8	51
Selenium (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.3
Zinc (Dissolved)	U	1450	2:1	µg/l	1.0	6.1	4.3	2.6	7.0	4.7	< 1.0	2.0	< 1.0	46
Mercury Low Level	U	1460	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.35
Total Phenols	U	1920	2:1	mg/l	0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Beach drive, Irvine

Client: Mason Evans			**Chemtest Job No.:**		19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308
Quotation No.:			**Chemtest Sample ID.:**		778925	778927	778930	778931	778933	778934	778938	778941	778944
			Sample Location:		TP01	TP02	TP03	TP04	TP05	TP05	TP07	TP08	TP10
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.5	0.4	1.2	0.40	0.5	1.4	0.4	1.4	0.5
			Date Sampled:		18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019
			Asbestos Lab:		COVENTRY	COVENTRY		COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-	-		-	-	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-	-			-		-	-	-
Moisture	N	2030	%	0.020	11	16	8.0	5.6	7.0	19	11	13	9.6
Soil Colour	N	2040		N/A	Brown	Brown,		Brown,	Brown,	Brown,	Brown,	Brown,	Brown,
Other Material	N	2040		N/A	Stones	Stones,		Stones,	Stones,	Stones,	Stones,	Stones,	Stones,
Soil Texture	N	2040		N/A	Sand	Sand,		Sand,	Sand,	Sand,	Sand,	Sand,	Sand,
pH	M	2010		N/A	7.3	7.8	8.6	8.3	8.0	7.9	7.8	7.8	7.9
Electrical Conductivity (2:1)	N	2020	µS/cm	1.0			180						
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40	0.83		0.44	0.67	0.90	1.6	< 0.40	0.66
Redox Potential	N	2150	mV	N/A			260						
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50		< 0.50	< 0.50	2.7	< 0.50	< 0.50	< 0.50
Sulphide (Easily Liberatable)	N	2325	mg/kg	0.50	2.3	4.6		3.1	3.6	2.0	4.1	3.1	1.9
Sulphate (Total)	M	2430	%	0.010	0.052	0.14		< 0.010	0.16	0.21	0.37	0.45	0.082
Arsenic	M	2450	mg/kg	1.0	8.1	25		3.8	37	46	27	9.0	24
Cadmium	M	2450	mg/kg	0.10	0.29	0.81		< 0.10	1.6	2.1	0.74	< 0.10	0.90
Chromium	M	2450	mg/kg	1.0	15	33		14	25	29	29	14	24
Copper	M	2450	mg/kg	0.50	17	120		3.4	120	150	150	14	120
Mercury	M	2450	mg/kg	0.10	0.21	1.2		< 0.10	0.84	0.96	0.43	< 0.10	0.31
Nickel	M	2450	mg/kg	0.50	23	45		18	51	65	76	16	41
Lead	M	2450	mg/kg	0.50	75	1200		10	730	970	250	30	290
Selenium	M	2450	mg/kg	0.20	0.24	0.52		< 0.20	0.97	1.1	0.53	< 0.20	0.36
Zinc	M	2450	mg/kg	0.50	140	780		27	740	920	380	46	430
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total Organic Carbon	M	2625	%	0.20	4.4	3.9		< 0.20	< 0.20	12	3.8	0.86	3.1
Aliphatic TPH >C5-C6	N	2680	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Aliphatic TPH >C6-C8	N	2680	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Aliphatic TPH >C8-C10	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C10-C12	N	2680	mg/kg	0.10	< 0.10	4.4	< 0.10	< 0.10	< 0.10	< 0.10	4.3	< 0.10	< 0.10
Aliphatic TPH >C12-C16	N	2680	mg/kg	0.10	< 0.10	4.3	< 0.10	< 0.10	< 0.10	< 0.10	5.7	< 0.10	3.8
Aliphatic TPH >C16-C21	N	2680	mg/kg	0.10	< 0.10	6.2	< 0.10	< 0.10	< 0.10	< 0.10	18	< 0.10	7.1
Aliphatic TPH >C21-C35	N	2680	mg/kg	0.10	< 0.10	30	< 0.10	< 0.10	< 0.10	< 0.10	78	< 0.10	19
Aliphatic TPH >C35-C44	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Aliphatic Hydrocarbons	N	2680	mg/kg	1.0	< 1.0	45	< 1.0	< 1.0	< 1.0	< 1.0	110	< 1.0	30
Aromatic TPH >C5-C7	N	2680	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Aromatic TPH >C7-C8	N	2680	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Aromatic TPH >C8-C10	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C10-C12	N	2680	mg/kg	0.10	< 0.10	0.79	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Beach drive, Irvine

Client: Mason Evans					Chemtest Job No.:	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308
Quotation No.:					Chemtest Sample ID.:	778925	778927	778930	778931	778933	778934	778938	778941	778944
					Sample Location:	TP01	TP02	TP03	TP04	TP05	TP05	TP07	TP08	TP10
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.5	0.4	1.2	0.40	0.5	1.4	0.4	1.4	0.5
					Date Sampled:	18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019
					Asbestos Lab:	COVENTRY	COVENTRY		COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
Aromatic TPH >C12-C16	N	2680	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C16-C21	N	2680	mg/kg	0.10		< 0.10	10	< 0.10	< 0.10	< 0.10	< 0.10	14	< 0.10	7.4
Aromatic TPH >C21-C35	N	2680	mg/kg	0.10		< 0.10	75	< 0.10	< 0.10	< 0.10	< 0.10	140	< 0.10	93
Aromatic TPH >C35-C44	N	2680	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Aromatic Hydrocarbons	N	2680	mg/kg	1.0		< 1.0	86	< 1.0	< 1.0	< 1.0	< 1.0	150	< 1.0	100
Total Petroleum Hydrocarbons	N	2680	mg/kg	2.0		< 2.0	130	< 2.0	< 2.0	< 2.0	< 2.0	260	< 2.0	130
Naphthalene	M	2700	mg/kg	0.10		< 0.10	0.50		< 0.10	< 0.10	< 0.10	< 0.10	0.31	0.62
Acenaphthylene	M	2700	mg/kg	0.10		< 0.10	0.36		< 0.10	< 0.10	< 0.10	< 0.10	0.15	0.36
Acenaphthene	M	2700	mg/kg	0.10		< 0.10	0.18		< 0.10	< 0.10	< 0.10	< 0.10	0.16	0.32
Fluorene	M	2700	mg/kg	0.10		< 0.10	0.25		< 0.10	< 0.10	< 0.10	< 0.10	0.40	0.55
Phenanthrene	M	2700	mg/kg	0.10		< 0.10	2.3		< 0.10	< 0.10	3.9	2.2	1.4	5.6
Anthracene	M	2700	mg/kg	0.10		< 0.10	0.70		< 0.10	< 0.10	1.1	0.60	0.77	2.0
Fluoranthene	M	2700	mg/kg	0.10		< 0.10	3.8		< 0.10	< 0.10	5.2	2.1	2.0	12
Pyrene	M	2700	mg/kg	0.10		< 0.10	4.5		< 0.10	< 0.10	6.2	2.0	1.9	12
Benzo[a]anthracene	M	2700	mg/kg	0.10		< 0.10	2.4		< 0.10	< 0.10	1.8	< 0.10	1.9	5.6
Chrysene	M	2700	mg/kg	0.10		< 0.10	3.3		< 0.10	< 0.10	2.1	< 0.10	1.5	5.4
Benzo[b]fluoranthene	M	2700	mg/kg	0.10		< 0.10	3.3		< 0.10	< 0.10	2.0	< 0.10	1.1	5.3
Benzo[k]fluoranthene	M	2700	mg/kg	0.10		< 0.10	1.6		< 0.10	< 0.10	1.4	< 0.10	0.80	3.1
Benzo[a]pyrene	M	2700	mg/kg	0.10		< 0.10	2.6		< 0.10	< 0.10	1.3	< 0.10	0.99	5.0
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10		< 0.10	1.4		< 0.10	< 0.10	0.62	< 0.10	0.30	3.6
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10		< 0.10	0.68		< 0.10	< 0.10	0.24	< 0.10	0.13	0.92
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10		< 0.10	1.8		< 0.10	< 0.10	0.47	< 0.10	0.31	3.3
Total Of 16 PAH's	M	2700	mg/kg	2.0		< 2.0	30		< 2.0	< 2.0	26	6.9	14	66
Dichlorodifluoromethane	N	2760	µg/kg	0.20				< 0.20						
Chloromethane	N	2760	µg/kg	0.20				< 0.20						
Vinyl Chloride	N	2760	µg/kg	0.20				< 0.20						
Bromomethane	N	2760	µg/kg	0.20				< 0.20						
Chloroethane	N	2760	µg/kg	0.20				< 0.20						
Trichlorofluoromethane	N	2760	µg/kg	0.20				< 0.20						
1,1-Dichloroethene	N	2760	µg/kg	0.20				< 0.20						
Trans 1,2-Dichloroethene	N	2760	µg/kg	0.20				< 0.20						
1,1-Dichloroethane	N	2760	µg/kg	0.20				< 0.20						
cis 1,2-Dichloroethene	N	2760	µg/kg	0.20				< 0.20						
Bromochloromethane	N	2760	µg/kg	0.50				< 0.50						
Trichloromethane	N	2760	µg/kg	0.20				< 0.20						
1,1,1-Trichloroethane	N	2760	µg/kg	0.20				< 0.20						
Tetrachloromethane	N	2760	µg/kg	0.20				< 0.20						
1,1-Dichloropropene	N	2760	µg/kg	0.20				< 0.20						
Benzene	N	2760	µg/kg	0.20				< 0.20						

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Beach drive, Irvine

Client: Mason Evans		**Chemtest Job No.:**			19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308
Quotation No.:		**Chemtest Sample ID.:**			778925	778927	778930	778931	778933	778934	778938	778941	778944
		Sample Location:			TP01	TP02	TP03	TP04	TP05	TP05	TP07	TP08	TP10
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.5	0.4	1.2	0.40	0.5	1.4	0.4	1.4	0.5
		Date Sampled:			18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019
		Asbestos Lab:			COVENTRY	COVENTRY		COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
1,2-Dichloroethane	N	2760	µg/kg	0.20			< 0.20						
Trichloroethene	N	2760	µg/kg	0.20			< 0.20						
1,2-Dichloropropane	N	2760	µg/kg	0.20			< 0.20						
Dibromomethane	N	2760	µg/kg	0.20			< 0.20						
Bromodichloromethane	N	2760	µg/kg	0.20			< 0.20						
cis-1,3-Dichloropropene	N	2760	µg/kg	0.20			< 0.20						
Toluene	N	2760	µg/kg	0.20			< 0.20						
Trans-1,3-Dichloropropene	N	2760	µg/kg	0.20			< 0.20						
1,1,2-Trichloroethane	N	2760	µg/kg	0.20			< 0.20						
Tetrachloroethene	N	2760	µg/kg	0.20			< 0.20						
1,3-Dichloropropane	N	2760	µg/kg	0.20			< 0.20						
Dibromochloromethane	N	2760	µg/kg	0.20			< 0.20						
1,2-Dibromoethane	N	2760	µg/kg	0.20			< 0.20						
Chlorobenzene	N	2760	µg/kg	0.20			< 0.20						
1,1,1,2-Tetrachloroethane	N	2760	µg/kg	0.20			< 0.20						
Ethylbenzene	N	2760	µg/kg	0.20			< 0.20						
m & p-Xylene	N	2760	µg/kg	0.20			< 0.20						
o-Xylene	N	2760	µg/kg	0.20			< 0.20						
Styrene	N	2760	µg/kg	0.20			< 0.20						
Tribromomethane	N	2760	µg/kg	0.20			< 0.20						
Isopropylbenzene	N	2760	µg/kg	0.20			< 0.20						
Bromobenzene	N	2760	µg/kg	0.20			< 0.20						
1,2,3-Trichloropropane	N	2760	µg/kg	0.20			< 0.20						
2-Chlorotoluene	N	2760	µg/kg	0.20			< 0.20						
1,3,5-Trimethylbenzene	N	2760	µg/kg	0.20			< 0.20						
4-Chlorotoluene	N	2760	µg/kg	0.20			< 0.20						
Tert-Butylbenzene	N	2760	µg/kg	0.20			< 0.20						
1,2,4-Trimethylbenzene	N	2760	µg/kg	0.20			< 0.20						
Sec-Butylbenzene	N	2760	µg/kg	0.20			< 0.20						
1,3-Dichlorobenzene	N	2760	µg/kg	0.20			< 0.20						
4-Isopropyltoluene	N	2760	µg/kg	0.20			< 0.20						
1,4-Dichlorobenzene	N	2760	µg/kg	0.20			< 0.20						
N-Butylbenzene	N	2760	µg/kg	0.20			< 0.20						
1,2-Dichlorobenzene	N	2760	µg/kg	0.20			< 0.20						
1,2-Dibromo-3-Chloropropane	N	2760	µg/kg	0.20			< 0.20						
1,2,4-Trichlorobenzene	N	2760	µg/kg	0.20			< 0.20						
Hexachlorobutadiene	N	2760	µg/kg	0.20			< 0.20						
1,2,3-Trichlorobenzene	N	2760	µg/kg	0.20			< 0.20						
Methyl Tert-Butyl Ether	N	2760	µg/kg	0.20			< 0.20						

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Beach drive, Irvine

Client: Mason Evans		**Chemtest Job No.:**			19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308
Quotation No.:		**Chemtest Sample ID.:**			778925	778927	778930	778931	778933	778934	778938	778941	778944
		Sample Location:			TP01	TP02	TP03	TP04	TP05	TP05	TP07	TP08	TP10
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.5	0.4	1.2	0.40	0.5	1.4	0.4	1.4	0.5
		Date Sampled:			18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019
		Asbestos Lab:			COVENTRY	COVENTRY		COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
N-Nitrosodimethylamine	N	2790	mg/kg	0.050			< 0.050						
Phenol	N	2790	mg/kg	0.050			< 0.050						
2-Chlorophenol	N	2790	mg/kg	0.050			< 0.050						
Bis-(2-Chloroethyl)Ether	N	2790	mg/kg	0.050			< 0.050						
1,3-Dichlorobenzene	N	2790	mg/kg	0.050			< 0.050						
1,4-Dichlorobenzene	N	2790	mg/kg	0.050			< 0.050						
1,2-Dichlorobenzene	N	2790	mg/kg	0.050			< 0.050						
2-Methylphenol	N	2790	mg/kg	0.050			< 0.050						
Bis(2-Chloroisopropyl)Ether	N	2790	mg/kg	0.050			< 0.050						
Hexachloroethane	N	2790	mg/kg	0.050			< 0.050						
N-Nitrosodi-n-propylamine	N	2790	mg/kg	0.050			< 0.050						
4-Methylphenol	N	2790	mg/kg	0.050			< 0.050						
Nitrobenzene	N	2790	mg/kg	0.050			< 0.050						
Isophorone	N	2790	mg/kg	0.050			< 0.050						
2-Nitrophenol	N	2790	mg/kg	0.050			< 0.050						
2,4-Dimethylphenol	N	2790	mg/kg	0.050			< 0.050						
Bis(2-Chloroethoxy)Methane	N	2790	mg/kg	0.050			< 0.050						
2,4-Dichlorophenol	N	2790	mg/kg	0.050			< 0.050						
1,2,4-Trichlorobenzene	N	2790	mg/kg	0.050			< 0.050						
Naphthalene	N	2790	mg/kg	0.050			< 0.050						
4-Chloroaniline	N	2790	mg/kg	0.050			< 0.050						
Hexachlorobutadiene	N	2790	mg/kg	0.050			< 0.050						
4-Chloro-3-Methylphenol	N	2790	mg/kg	0.050			< 0.050						
2-Methylnaphthalene	N	2790	mg/kg	0.050			< 0.050						
Hexachlorocyclopentadiene	N	2790	mg/kg	0.050			< 0.050						
2,4,6-Trichlorophenol	N	2790	mg/kg	0.050			< 0.050						
2,4,5-Trichlorophenol	N	2790	mg/kg	0.050			< 0.050						
2-Chloronaphthalene	N	2790	mg/kg	0.050			< 0.050						
2-Nitroaniline	N	2790	mg/kg	0.050			< 0.050						
Acenaphthylene	N	2790	mg/kg	0.050			< 0.050						
Dimethylphthalate	N	2790	mg/kg	0.050			< 0.050						
2,6-Dinitrotoluene	N	2790	mg/kg	0.050			< 0.050						
Acenaphthene	N	2790	mg/kg	0.050			< 0.050						
Dibenzofuran	N	2790	mg/kg	0.050			< 0.050						
4-Chlorophenylphenylether	N	2790	mg/kg	0.050			< 0.050						
2,4-Dinitrotoluene	N	2790	mg/kg	0.050			< 0.050						
Fluorene	N	2790	mg/kg	0.050			< 0.050						
Diethyl Phthalate	N	2790	mg/kg	0.050			< 0.050						
4-Nitroaniline	N	2790	mg/kg	0.050			< 0.050						

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Beach drive, Irvine

Client: Mason Evans		**Chemtest Job No.:**			19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308
Quotation No.:		**Chemtest Sample ID.:**			778925	778927	778930	778931	778933	778934	778938	778941	778944
		Sample Location:			TP01	TP02	TP03	TP04	TP05	TP05	TP07	TP08	TP10
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.5	0.4	1.2	0.40	0.5	1.4	0.4	1.4	0.5
		Date Sampled:			18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019	18-Feb-2019
		Asbestos Lab:			COVENTRY	COVENTRY		COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.050			< 0.050						
Azobenzene	N	2790	mg/kg	0.050			< 0.050						
4-Bromophenylphenyl Ether	N	2790	mg/kg	0.050			< 0.050						
Hexachlorobenzene	N	2790	mg/kg	0.050			< 0.050						
Pentachlorophenol	N	2790	mg/kg	0.050			< 0.050						
Phenanthrene	N	2790	mg/kg	0.050			< 0.050						
Anthracene	N	2790	mg/kg	0.050			< 0.050						
Carbazole	N	2790	mg/kg	0.050			< 0.050						
Di-N-Butyl Phthalate	N	2790	mg/kg	0.050			< 0.050						
Fluoranthene	N	2790	mg/kg	0.050			< 0.050						
Pyrene	N	2790	mg/kg	0.050			< 0.050						
Butylbenzyl Phthalate	N	2790	mg/kg	0.050			< 0.050						
Benzo[a]anthracene	N	2790	mg/kg	0.050			< 0.050						
Chrysene	N	2790	mg/kg	0.050			< 0.050						
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.050			< 0.050						
Di-N-Octyl Phthalate	N	2790	mg/kg	0.050			< 0.050						
Benzo[b]fluoranthene	N	2790	mg/kg	0.050			< 0.050						
Benzo[k]fluoranthene	N	2790	mg/kg	0.050			< 0.050						
Benzo[a]pyrene	N	2790	mg/kg	0.050			< 0.050						
Indeno(1,2,3-c,d)Pyrene	N	2790	mg/kg	0.050			< 0.050						
Dibenz(a,h)Anthracene	N	2790	mg/kg	0.050			< 0.050						
Benzo[g,h,i]perylene	N	2790	mg/kg	0.050			< 0.050						
Resorcinol	M	2920	mg/kg	0.050			< 0.050						
Phenol	M	2920	mg/kg	0.050			< 0.050						
Cresols	M	2920	mg/kg	0.050			< 0.050						
Xylenols	M	2920	mg/kg	0.050			< 0.050						
1-Naphthol	N	2920	mg/kg	0.050			< 0.050						
Trimethylphenols	M	2920	mg/kg	0.050			< 0.050						
Total Phenols	M	2920	mg/kg	0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
SVOC TIC	N	2790	mg/kg	N/A			None Detected						
VOC TIC	N	2760	µg/kg	N/A			None Detected						
Total SVOCs	N	2790	mg/kg	0.1			< 0.1						
Total VOCs	N	2760	mg/kg	0.01			< 0.01						

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Beach drive, Irvine

Client: Mason Evans			**Chemtest Job No.:**		19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06896
Quotation No.:			**Chemtest Sample ID.:**		778946	778947	778949	778951	778955	778956	778957	778958	781868
			Sample Location:		TP11	TP11	TP12	TP13	TP14	TP15	TP16	TP16	TP17
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.6	1.4	0.8	0.6	1.2	0.5	0.6	1.3	0.30
			Date Sampled:		18-Feb-2019	18-Feb-2019	18-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019
			Asbestos Lab:		COVENTRY		COVENTRY	COVENTRY		COVENTRY	COVENTRY	COVENTRY	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-		-	-		-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-		-	-		-	-	-	-
Moisture	N	2030	%	0.020	18	7.6	16	13	7.1	6.8	10	11	13
Soil Colour	N	2040		N/A	Brown,		Brown,	Brown,		Brown,	Brown,	Brown	Brown
Other Material	N	2040		N/A	Stones,		Stones,	Stones,		Stones,	Stones,	Stones	Stones, Roots
Soil Texture	N	2040		N/A	Sand,		Sand,	Sand,		Sand,	Sand,	Sand	Sand
pH	M	2010		N/A	7.7	8.0	7.4	8.1	8.1	7.3	8.2	8.5	8.3
Electrical Conductivity (2:1)	N	2020	µS/cm	1.0		110			170				
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	0.99		1.1	0.73		< 0.40	< 0.40	< 0.40	0.66
Redox Potential	N	2150	mV	N/A		170			160				
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50		< 0.50	< 0.50		< 0.50	1.0	< 0.50	< 0.50
Sulphide (Easily Liberatable)	N	2325	mg/kg	0.50	2.4		1.2	4.4		0.81	6.7	0.79	2.5
Sulphate (Total)	M	2430	%	0.010	0.11		0.23	0.099		< 0.010	0.11	0.024	0.091
Arsenic	M	2450	mg/kg	1.0	23		37	11		5.0	99	200	47
Cadmium	M	2450	mg/kg	0.10	0.81		0.97	0.31		< 0.10	2.7	0.40	0.39
Chromium	M	2450	mg/kg	1.0	25		35	23		13	35	12	27
Copper	M	2450	mg/kg	0.50	70		99	42		13	260	280	69
Mercury	M	2450	mg/kg	0.10	0.89		0.74	0.16		< 0.10	0.22	0.25	0.18
Nickel	M	2450	mg/kg	0.50	59		52	31		17	24	16	39
Lead	M	2450	mg/kg	0.50	270		560	100		17	440	1000	160
Selenium	M	2450	mg/kg	0.20	0.59		1.1	0.27		< 0.20	0.38	0.58	0.56
Zinc	M	2450	mg/kg	0.50	310		550	140		43	660	190	130
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50		< 0.50	< 0.50		< 0.50	< 0.50	< 0.50	< 0.50
Total Organic Carbon	M	2625	%	0.20	3.2		5.0	2.3		0.44	1.2	0.45	1.8
Aliphatic TPH >C5-C6	N	2680	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Aliphatic TPH >C6-C8	N	2680	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Aliphatic TPH >C8-C10	N	2680	mg/kg	0.10	0.76	< 0.10	< 0.10	< 0.10	0.60	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C10-C12	N	2680	mg/kg	0.10	4.5	< 0.10	5.0	< 0.10	2.8	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C12-C16	N	2680	mg/kg	0.10	11	< 0.10	9.5	4.3	5.8	< 0.10	4.0	2.7	< 0.10
Aliphatic TPH >C16-C21	N	2680	mg/kg	0.10	15	< 0.10	15	8.0	7.1	< 0.10	6.9	4.5	< 0.10
Aliphatic TPH >C21-C35	N	2680	mg/kg	0.10	61	< 0.10	83	38	50	< 0.10	30	16	< 0.10
Aliphatic TPH >C35-C44	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Aliphatic Hydrocarbons	N	2680	mg/kg	1.0	92	< 1.0	110	50	66	< 1.0	41	23	< 1.0
Aromatic TPH >C5-C7	N	2680	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Aromatic TPH >C7-C8	N	2680	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Aromatic TPH >C8-C10	N	2680	mg/kg	0.10	7.9	< 0.10	< 0.10	< 0.10	22	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C10-C12	N	2680	mg/kg	0.10	8.4	< 0.10	1.9	< 0.10	24	< 0.10	< 0.10	< 0.10	< 0.10

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Beach drive, Irvine

Client: Mason Evans					Chemtest Job No.:	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06896
Quotation No.:					Chemtest Sample ID.:	778946	778947	778949	778951	778955	778956	778957	778958	781868
					Sample Location:	TP11	TP11	TP12	TP13	TP14	TP15	TP16	TP16	TP17
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.6	1.4	0.8	0.6	1.2	0.5	0.6	1.3	0.30
					Date Sampled:	18-Feb-2019	18-Feb-2019	18-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019
					Asbestos Lab:	COVENTRY		COVENTRY	COVENTRY		COVENTRY	COVENTRY	COVENTRY	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
Aromatic TPH >C12-C16	N	2680	mg/kg	0.10		48	< 0.10	14	< 0.10	4.0	< 0.10	< 0.10	2.2	< 0.10
Aromatic TPH >C16-C21	N	2680	mg/kg	0.10		170	< 0.10	89	6.4	4.0	< 0.10	9.0	16	< 0.10
Aromatic TPH >C21-C35	N	2680	mg/kg	0.10		500	< 0.10	380	80	35	< 0.10	72	48	< 0.10
Aromatic TPH >C35-C44	N	2680	mg/kg	0.10		3.3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Aromatic Hydrocarbons	N	2680	mg/kg	1.0		740	< 1.0	480	87	89	< 1.0	81	67	< 1.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	2.0		830	< 2.0	600	140	160	< 2.0	120	89	< 2.0
Naphthalene	M	2700	mg/kg	0.10		< 0.10		1.4	< 0.10		< 0.10	< 0.10	0.68	< 0.10
Acenaphthylene	M	2700	mg/kg	0.10		< 0.10		0.79	< 0.10		< 0.10	< 0.10	0.19	< 0.10
Acenaphthene	M	2700	mg/kg	0.10		< 0.10		1.4	< 0.10		< 0.10	< 0.10	0.48	< 0.10
Fluorene	M	2700	mg/kg	0.10		< 0.10		1.5	< 0.10		< 0.10	< 0.10	0.40	< 0.10
Phenanthrene	M	2700	mg/kg	0.10		< 0.10		8.3	< 0.10		< 0.10	< 0.10	3.7	< 0.10
Anthracene	M	2700	mg/kg	0.10		< 0.10		2.0	< 0.10		< 0.10	< 0.10	0.99	< 0.10
Fluoranthene	M	2700	mg/kg	0.10		0.78		8.2	1.0		< 0.10	0.56	2.5	0.99
Pyrene	M	2700	mg/kg	0.10		1.2		8.4	0.98		< 0.10	0.62	3.3	0.94
Benzo[a]anthracene	M	2700	mg/kg	0.10		< 0.10		4.7	0.77		< 0.10	< 0.10	1.3	< 0.10
Chrysene	M	2700	mg/kg	0.10		< 0.10		5.6	0.46		< 0.10	< 0.10	1.6	< 0.10
Benzo[b]fluoranthene	M	2700	mg/kg	0.10		< 0.10		5.9	0.97		< 0.10	< 0.10	0.97	< 0.10
Benzo[k]fluoranthene	M	2700	mg/kg	0.10		< 0.10		1.9	0.14		< 0.10	< 0.10	0.25	< 0.10
Benzo[a]pyrene	M	2700	mg/kg	0.10		< 0.10		3.6	0.55		< 0.10	< 0.10	0.96	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10		< 0.10		2.8	0.50		< 0.10	< 0.10	0.59	< 0.10
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10		< 0.10		0.45	< 0.10		< 0.10	< 0.10	0.18	< 0.10
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10		< 0.10		2.6	0.35		< 0.10	< 0.10	0.64	< 0.10
Total Of 16 PAH's	M	2700	mg/kg	2.0		< 2.0		60	5.7		< 2.0	< 2.0	19	< 2.0
Dichlorodifluoromethane	N	2760	µg/kg	0.20			< 0.20			< 0.20				
Chloromethane	N	2760	µg/kg	0.20			< 0.20			< 0.20				
Vinyl Chloride	N	2760	µg/kg	0.20			< 0.20			< 0.20				
Bromomethane	N	2760	µg/kg	0.20			< 0.20			< 0.20				
Chloroethane	N	2760	µg/kg	0.20			< 0.20			< 0.20				
Trichlorofluoromethane	N	2760	µg/kg	0.20			< 0.20			< 0.20				
1,1-Dichloroethene	N	2760	µg/kg	0.20			< 0.20			< 0.20				
Trans 1,2-Dichloroethene	N	2760	µg/kg	0.20			< 0.20			< 0.20				
1,1-Dichloroethane	N	2760	µg/kg	0.20			< 0.20			< 0.20				
cis 1,2-Dichloroethene	N	2760	µg/kg	0.20			< 0.20			< 0.20				
Bromochloromethane	N	2760	µg/kg	0.50			< 0.50			< 0.50				
Trichloromethane	N	2760	µg/kg	0.20			< 0.20			< 0.20				
1,1,1-Trichloroethane	N	2760	µg/kg	0.20			< 0.20			< 0.20				
Tetrachloromethane	N	2760	µg/kg	0.20			< 0.20			< 0.20				
1,1-Dichloropropene	N	2760	µg/kg	0.20			< 0.20			< 0.20				
Benzene	N	2760	µg/kg	0.20			< 0.20			< 0.20				

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Beach drive, Irvine

Client: Mason Evans					**Chemtest Job No.:**	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06896
Quotation No.:					**Chemtest Sample ID.:**	778946	778947	778949	778951	778955	778956	778957	778958	781868
					Sample Location:	TP11	TP11	TP12	TP13	TP14	TP15	TP16	TP16	TP17
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.6	1.4	0.8	0.6	1.2	0.5	0.6	1.3	0.30
					Date Sampled:	18-Feb-2019	18-Feb-2019	18-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019
					Asbestos Lab:	COVENTRY		COVENTRY	COVENTRY		COVENTRY	COVENTRY	COVENTRY	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
1,2-Dichloroethane	N	2760	µg/kg	0.20		< 0.20			< 0.20					
Trichloroethene	N	2760	µg/kg	0.20		< 0.20			< 0.20					
1,2-Dichloropropane	N	2760	µg/kg	0.20		< 0.20			< 0.20					
Dibromomethane	N	2760	µg/kg	0.20		< 0.20			< 0.20					
Bromodichloromethane	N	2760	µg/kg	0.20		< 0.20			< 0.20					
cis-1,3-Dichloropropene	N	2760	µg/kg	0.20		< 0.20			< 0.20					
Toluene	N	2760	µg/kg	0.20		< 0.20			0.22					
Trans-1,3-Dichloropropene	N	2760	µg/kg	0.20		< 0.20			< 0.20					
1,1,2-Trichloroethane	N	2760	µg/kg	0.20		< 0.20			< 0.20					
Tetrachloroethene	N	2760	µg/kg	0.20		< 0.20			< 0.20					
1,3-Dichloropropane	N	2760	µg/kg	0.20		< 0.20			< 0.20					
Dibromochloromethane	N	2760	µg/kg	0.20		< 0.20			< 0.20					
1,2-Dibromoethane	N	2760	µg/kg	0.20		< 0.20			< 0.20					
Chlorobenzene	N	2760	µg/kg	0.20		< 0.20			< 0.20					
1,1,1,2-Tetrachloroethane	N	2760	µg/kg	0.20		< 0.20			< 0.20					
Ethylbenzene	N	2760	µg/kg	0.20		< 0.20			< 0.20					
m & p-Xylene	N	2760	µg/kg	0.20		< 0.20			< 0.20					
o-Xylene	N	2760	µg/kg	0.20		< 0.20			< 0.20					
Styrene	N	2760	µg/kg	0.20		< 0.20			< 0.20					
Tribromomethane	N	2760	µg/kg	0.20		< 0.20			< 0.20					
Isopropylbenzene	N	2760	µg/kg	0.20		< 0.20			< 0.20					
Bromobenzene	N	2760	µg/kg	0.20		< 0.20			< 0.20					
1,2,3-Trichloropropane	N	2760	µg/kg	0.20		< 0.20			< 0.20					
2-Chlorotoluene	N	2760	µg/kg	0.20		< 0.20			< 0.20					
1,3,5-Trimethylbenzene	N	2760	µg/kg	0.20		< 0.20			< 0.20					
4-Chlorotoluene	N	2760	µg/kg	0.20		< 0.20			< 0.20					
Tert-Butylbenzene	N	2760	µg/kg	0.20		< 0.20			< 0.20					
1,2,4-Trimethylbenzene	N	2760	µg/kg	0.20		< 0.20			< 0.20					
Sec-Butylbenzene	N	2760	µg/kg	0.20		< 0.20			< 0.20					
1,3-Dichlorobenzene	N	2760	µg/kg	0.20		< 0.20			< 0.20					
4-Isopropyltoluene	N	2760	µg/kg	0.20		< 0.20			< 0.20					
1,4-Dichlorobenzene	N	2760	µg/kg	0.20		< 0.20			< 0.20					
N-Butylbenzene	N	2760	µg/kg	0.20		< 0.20			< 0.20					
1,2-Dichlorobenzene	N	2760	µg/kg	0.20		< 0.20			< 0.20					
1,2-Dibromo-3-Chloropropane	N	2760	µg/kg	0.20		< 0.20			< 0.20					
1,2,4-Trichlorobenzene	N	2760	µg/kg	0.20		< 0.20			< 0.20					
Hexachlorobutadiene	N	2760	µg/kg	0.20		< 0.20			< 0.20					
1,2,3-Trichlorobenzene	N	2760	µg/kg	0.20		< 0.20			< 0.20					
Methyl Tert-Butyl Ether	N	2760	µg/kg	0.20		< 0.20			< 0.20					

Results - Soil

Project: Beach drive, Irvine

Client: Mason Evans			Chemtest Job No.:		19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06896
Quotation No.:			Chemtest Sample ID.:		778946	778947	778949	778951	778955	778956	778957	778958	781868
			Sample Location:		TP11	TP11	TP12	TP13	TP14	TP15	TP16	TP16	TP17
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.6	1.4	0.8	0.6	1.2	0.5	0.6	1.3	0.30
			Date Sampled:		18-Feb-2019	18-Feb-2019	18-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019
			Asbestos Lab:		COVENTRY		COVENTRY	COVENTRY		COVENTRY	COVENTRY	COVENTRY	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
N-Nitrosodimethylamine	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Phenol	N	2790	mg/kg	0.050		< 0.050			< 0.050				
2-Chlorophenol	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Bis-(2-Chloroethyl)Ether	N	2790	mg/kg	0.050		< 0.050			< 0.050				
1,3-Dichlorobenzene	N	2790	mg/kg	0.050		< 0.050			< 0.050				
1,4-Dichlorobenzene	N	2790	mg/kg	0.050		< 0.050			< 0.050				
1,2-Dichlorobenzene	N	2790	mg/kg	0.050		< 0.050			< 0.050				
2-Methylphenol	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Bis(2-Chloroisopropyl)Ether	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Hexachloroethane	N	2790	mg/kg	0.050		< 0.050			< 0.050				
N-Nitrosodi-n-propylamine	N	2790	mg/kg	0.050		< 0.050			< 0.050				
4-Methylphenol	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Nitrobenzene	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Isophorone	N	2790	mg/kg	0.050		< 0.050			< 0.050				
2-Nitrophenol	N	2790	mg/kg	0.050		< 0.050			< 0.050				
2,4-Dimethylphenol	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Bis(2-Chloroethoxy)Methane	N	2790	mg/kg	0.050		< 0.050			< 0.050				
2,4-Dichlorophenol	N	2790	mg/kg	0.050		< 0.050			< 0.050				
1,2,4-Trichlorobenzene	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Naphthalene	N	2790	mg/kg	0.050		< 0.050			< 0.050				
4-Chloroaniline	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Hexachlorobutadiene	N	2790	mg/kg	0.050		< 0.050			< 0.050				
4-Chloro-3-Methylphenol	N	2790	mg/kg	0.050		< 0.050			< 0.050				
2-Methylnaphthalene	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Hexachlorocyclopentadiene	N	2790	mg/kg	0.050		< 0.050			< 0.050				
2,4,6-Trichlorophenol	N	2790	mg/kg	0.050		< 0.050			< 0.050				
2,4,5-Trichlorophenol	N	2790	mg/kg	0.050		< 0.050			< 0.050				
2-Chloronaphthalene	N	2790	mg/kg	0.050		< 0.050			< 0.050				
2-Nitroaniline	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Acenaphthylene	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Dimethylphthalate	N	2790	mg/kg	0.050		< 0.050			< 0.050				
2,6-Dinitrotoluene	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Acenaphthene	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Dibenzofuran	N	2790	mg/kg	0.050		< 0.050			< 0.050				
4-Chlorophenylphenylether	N	2790	mg/kg	0.050		< 0.050			< 0.050				
2,4-Dinitrotoluene	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Fluorene	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Diethyl Phthalate	N	2790	mg/kg	0.050		< 0.050			< 0.050				
4-Nitroaniline	N	2790	mg/kg	0.050		< 0.050			< 0.050				

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Beach drive, Irvine

Client: Mason Evans			Chemtest Job No.:		19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06308	19-06896
Quotation No.:			Chemtest Sample ID.:		778946	778947	778949	778951	778955	778956	778957	778958	781868
			Sample Location:		TP11	TP11	TP12	TP13	TP14	TP15	TP16	TP16	TP17
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.6	1.4	0.8	0.6	1.2	0.5	0.6	1.3	0.30
			Date Sampled:		18-Feb-2019	18-Feb-2019	18-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019
			Asbestos Lab:		COVENTRY		COVENTRY	COVENTRY		COVENTRY	COVENTRY	COVENTRY	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Azobenzene	N	2790	mg/kg	0.050		< 0.050			< 0.050				
4-Bromophenylphenyl Ether	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Hexachlorobenzene	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Pentachlorophenol	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Phenanthrene	N	2790	mg/kg	0.050		< 0.050			0.054				
Anthracene	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Carbazole	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Di-N-Butyl Phthalate	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Fluoranthene	N	2790	mg/kg	0.050		0.065			0.075				
Pyrene	N	2790	mg/kg	0.050		0.054			0.065				
Butylbenzyl Phthalate	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Benzo[a]anthracene	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Chrysene	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Di-N-Octyl Phthalate	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Benzo[b]fluoranthene	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Benzo[k]fluoranthene	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Benzo[a]pyrene	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Indeno(1,2,3-c,d)Pyrene	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Dibenz(a,h)Anthracene	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Benzo[g,h,i]perylene	N	2790	mg/kg	0.050		< 0.050			< 0.050				
Resorcinol	M	2920	mg/kg	0.050		< 0.050			< 0.050				
Phenol	M	2920	mg/kg	0.050		< 0.050			< 0.050				
Cresols	M	2920	mg/kg	0.050		< 0.050			< 0.050				
Xylenols	M	2920	mg/kg	0.050		< 0.050			< 0.050				
1-Naphthol	N	2920	mg/kg	0.050		< 0.050			< 0.050				
Trimethylphenols	M	2920	mg/kg	0.050		< 0.050			< 0.050				
Total Phenols	M	2920	mg/kg	0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
SVOC TIC	N	2790	mg/kg	N/A		None Detected			None Detected				
VOC TIC	N	2760	µg/kg	N/A		None Detected			None Detected				
Total SVOCs	N	2790	mg/kg	0.1		0.1			0.2				
Total VOCs	N	2760	mg/kg	0.01		< 0.01			0.22				

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Beach drive, Irvine

Client: Mason Evans			**Chemtest Job No.:**		19-06896	19-07478	19-07478	19-07478	19-07478	19-07478	19-07478	19-07478	19-07478
Quotation No.:			**Chemtest Sample ID.:**		781871	784965	784966	784967	784968	784969	784970	784971	784972
			Sample Location:		TP18	BH03	BH06	BH06	BH09	BH10	BH11	BH12	BH13
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		1.00	0.50	0.50	2.00	0.50	0.50	0.50	0.50	0.50
			Date Sampled:		19-Feb-2019	18-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019
			Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-	-	-	-	-	-	-	-	-
Moisture	N	2030	%	0.020	6.4	7.1	18	15	9.2	10	7.7	9.1	3.5
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	NONE	Stones	Stones	Stones, Wood	Stones, Glass	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		N/A	8.6	8.5	8.0	7.8	8.3	8.3	9.2	8.4	9.6
Electrical Conductivity (2:1)	N	2020	µS/cm	1.0									
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40	< 0.40	2.4	0.92	< 0.40	0.58	2.8	0.96	0.43
Redox Potential	N	2150	mV	N/A									
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Sulphide (Easily Liberatable)	N	2325	mg/kg	0.50	0.71	2.4	8.6	6.4	1.8	3.3	2.4	2.1	1.5
Sulphate (Total)	M	2430	%	0.010	< 0.010	0.25	7.8	0.37	0.092	0.071	0.32	0.036	0.052
Arsenic	M	2450	mg/kg	1.0	11	21	21	18	320	11	58	7.1	4.6
Cadmium	M	2450	mg/kg	0.10	< 0.10	0.28	0.28	0.21	1.4	0.11	0.41	0.14	< 0.10
Chromium	M	2450	mg/kg	1.0	14	25	35	30	22	18	18	20	32
Copper	M	2450	mg/kg	0.50	18	39	24	37	370	23	130	18	64
Mercury	M	2450	mg/kg	0.10	< 0.10	< 0.10	0.10	0.14	0.50	< 0.10	0.11	< 0.10	< 0.10
Nickel	M	2450	mg/kg	0.50	16	69	36	53	27	52	43	29	250
Lead	M	2450	mg/kg	0.50	36	91	130	88	2100	36	270	17	8.8
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.97	0.27	0.48	< 0.20	< 0.20
Zinc	M	2450	mg/kg	0.50	40	86	180	150	340	45	120	42	94
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total Organic Carbon	M	2625	%	0.20	0.30	1.1	2.5	2.3	0.86	3.6	1.3	1.2	0.23
Aliphatic TPH >C5-C6	N	2680	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Aliphatic TPH >C6-C8	N	2680	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Aliphatic TPH >C8-C10	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C10-C12	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C12-C16	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10	3.0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C16-C21	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10	8.5	< 0.10	6.3	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C21-C35	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10	63	< 0.10	77	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C35-C44	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Aliphatic Hydrocarbons	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	74	< 1.0	84	< 1.0	< 1.0	< 1.0
Aromatic TPH >C5-C7	N	2680	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Aromatic TPH >C7-C8	N	2680	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Aromatic TPH >C8-C10	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C10-C12	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Beach drive, Irvine

Client: Mason Evans					Chemtest Job No.:	19-06896	19-07478	19-07478	19-07478	19-07478	19-07478	19-07478	19-07478	19-07478
Quotation No.:					Chemtest Sample ID.:	781871	784965	784966	784967	784968	784969	784970	784971	784972
					Sample Location:	TP18	BH03	BH06	BH06	BH09	BH10	BH11	BH12	BH13
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	1.00	0.50	0.50	2.00	0.50	0.50	0.50	0.50	0.50
					Date Sampled:	19-Feb-2019	18-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019
					Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
Aromatic TPH >C12-C16	N	2680	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C16-C21	N	2680	mg/kg	0.10		< 0.10	< 0.10	< 0.10	1.6	< 0.10	13	< 0.10	< 0.10	< 0.10
Aromatic TPH >C21-C35	N	2680	mg/kg	0.10		< 0.10	< 0.10	< 0.10	44	< 0.10	550	< 0.10	< 0.10	< 0.10
Aromatic TPH >C35-C44	N	2680	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	160	< 0.10	< 0.10	< 0.10
Total Aromatic Hydrocarbons	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	46	< 1.0	720	< 1.0	< 1.0	< 1.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	2.0		< 2.0	< 2.0	< 2.0	120	< 2.0	810	< 2.0	< 2.0	< 2.0
Naphthalene	M	2700	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	0.19	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	M	2700	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	0.22	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2700	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	0.26	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2700	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	0.30	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2700	mg/kg	0.10		< 0.10	0.53	0.14	0.59	3.2	< 0.10	0.17	< 0.10	< 0.10
Anthracene	M	2700	mg/kg	0.10		< 0.10	0.15	< 0.10	< 0.10	1.0	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	M	2700	mg/kg	0.10		< 0.10	0.67	< 0.10	0.22	3.1	< 0.10	0.15	< 0.10	< 0.10
Pyrene	M	2700	mg/kg	0.10		< 0.10	0.80	0.10	0.32	3.0	< 0.10	0.13	< 0.10	< 0.10
Benzo[a]anthracene	M	2700	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	1.3	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	M	2700	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	1.2	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2700	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	1.7	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2700	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	M	2700	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	1.1	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	0.66	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	0.75	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	M	2700	mg/kg	2.0		< 2.0	2.2	< 2.0	< 2.0	18	< 2.0	< 2.0	< 2.0	< 2.0
Dichlorodifluoromethane	N	2760	µg/kg	0.20										
Chloromethane	N	2760	µg/kg	0.20										
Vinyl Chloride	N	2760	µg/kg	0.20										
Bromomethane	N	2760	µg/kg	0.20										
Chloroethane	N	2760	µg/kg	0.20										
Trichlorofluoromethane	N	2760	µg/kg	0.20										
1,1-Dichloroethene	N	2760	µg/kg	0.20										
Trans 1,2-Dichloroethene	N	2760	µg/kg	0.20										
1,1-Dichloroethane	N	2760	µg/kg	0.20										
cis 1,2-Dichloroethene	N	2760	µg/kg	0.20										
Bromochloromethane	N	2760	µg/kg	0.50										
Trichloromethane	N	2760	µg/kg	0.20										
1,1,1-Trichloroethane	N	2760	µg/kg	0.20										
Tetrachloromethane	N	2760	µg/kg	0.20										
1,1-Dichloropropene	N	2760	µg/kg	0.20										
Benzene	N	2760	µg/kg	0.20										

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Beach drive, Irvine

Client: Mason Evans			**Chemtest Job No.:**		19-06896	19-07478	19-07478	19-07478	19-07478	19-07478	19-07478	19-07478	19-07478
Quotation No.:			**Chemtest Sample ID.:**		781871	784965	784966	784967	784968	784969	784970	784971	784972
			Sample Location:		TP18	BH03	BH06	BH06	BH09	BH10	BH11	BH12	BH13
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		1.00	0.50	0.50	2.00	0.50	0.50	0.50	0.50	0.50
			Date Sampled:		19-Feb-2019	18-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019
			Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
1,2-Dichloroethane	N	2760	µg/kg	0.20									
Trichloroethene	N	2760	µg/kg	0.20									
1,2-Dichloropropane	N	2760	µg/kg	0.20									
Dibromomethane	N	2760	µg/kg	0.20									
Bromodichloromethane	N	2760	µg/kg	0.20									
cis-1,3-Dichloropropene	N	2760	µg/kg	0.20									
Toluene	N	2760	µg/kg	0.20									
Trans-1,3-Dichloropropene	N	2760	µg/kg	0.20									
1,1,2-Trichloroethane	N	2760	µg/kg	0.20									
Tetrachloroethene	N	2760	µg/kg	0.20									
1,3-Dichloropropane	N	2760	µg/kg	0.20									
Dibromochloromethane	N	2760	µg/kg	0.20									
1,2-Dibromoethane	N	2760	µg/kg	0.20									
Chlorobenzene	N	2760	µg/kg	0.20									
1,1,1,2-Tetrachloroethane	N	2760	µg/kg	0.20									
Ethylbenzene	N	2760	µg/kg	0.20									
m & p-Xylene	N	2760	µg/kg	0.20									
o-Xylene	N	2760	µg/kg	0.20									
Styrene	N	2760	µg/kg	0.20									
Tribromomethane	N	2760	µg/kg	0.20									
Isopropylbenzene	N	2760	µg/kg	0.20									
Bromobenzene	N	2760	µg/kg	0.20									
1,2,3-Trichloropropane	N	2760	µg/kg	0.20									
2-Chlorotoluene	N	2760	µg/kg	0.20									
1,3,5-Trimethylbenzene	N	2760	µg/kg	0.20									
4-Chlorotoluene	N	2760	µg/kg	0.20									
Tert-Butylbenzene	N	2760	µg/kg	0.20									
1,2,4-Trimethylbenzene	N	2760	µg/kg	0.20									
Sec-Butylbenzene	N	2760	µg/kg	0.20									
1,3-Dichlorobenzene	N	2760	µg/kg	0.20									
4-Isopropyltoluene	N	2760	µg/kg	0.20									
1,4-Dichlorobenzene	N	2760	µg/kg	0.20									
N-Butylbenzene	N	2760	µg/kg	0.20									
1,2-Dichlorobenzene	N	2760	µg/kg	0.20									
1,2-Dibromo-3-Chloropropane	N	2760	µg/kg	0.20									
1,2,4-Trichlorobenzene	N	2760	µg/kg	0.20									
Hexachlorobutadiene	N	2760	µg/kg	0.20									
1,2,3-Trichlorobenzene	N	2760	µg/kg	0.20									
Methyl Tert-Butyl Ether	N	2760	µg/kg	0.20									

Results - Soil

Project: Beach drive, Irvine

Client: Mason Evans		**Chemtest Job No.:**			19-06896	19-07478	19-07478	19-07478	19-07478	19-07478	19-07478	19-07478	19-07478
Quotation No.:		**Chemtest Sample ID.:**			781871	784965	784966	784967	784968	784969	784970	784971	784972
		Sample Location:			TP18	BH03	BH06	BH06	BH09	BH10	BH11	BH12	BH13
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			1.00	0.50	0.50	2.00	0.50	0.50	0.50	0.50	0.50
		Date Sampled:			19-Feb-2019	18-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019
		Asbestos Lab:			DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
N-Nitrosodimethylamine	N	2790	mg/kg	0.050									
Phenol	N	2790	mg/kg	0.050									
2-Chlorophenol	N	2790	mg/kg	0.050									
Bis-(2-Chloroethyl)Ether	N	2790	mg/kg	0.050									
1,3-Dichlorobenzene	N	2790	mg/kg	0.050									
1,4-Dichlorobenzene	N	2790	mg/kg	0.050									
1,2-Dichlorobenzene	N	2790	mg/kg	0.050									
2-Methylphenol	N	2790	mg/kg	0.050									
Bis(2-Chloroisopropyl)Ether	N	2790	mg/kg	0.050									
Hexachloroethane	N	2790	mg/kg	0.050									
N-Nitrosodi-n-propylamine	N	2790	mg/kg	0.050									
4-Methylphenol	N	2790	mg/kg	0.050									
Nitrobenzene	N	2790	mg/kg	0.050									
Isophorone	N	2790	mg/kg	0.050									
2-Nitrophenol	N	2790	mg/kg	0.050									
2,4-Dimethylphenol	N	2790	mg/kg	0.050									
Bis(2-Chloroethoxy)Methane	N	2790	mg/kg	0.050									
2,4-Dichlorophenol	N	2790	mg/kg	0.050									
1,2,4-Trichlorobenzene	N	2790	mg/kg	0.050									
Naphthalene	N	2790	mg/kg	0.050									
4-Chloroaniline	N	2790	mg/kg	0.050									
Hexachlorobutadiene	N	2790	mg/kg	0.050									
4-Chloro-3-Methylphenol	N	2790	mg/kg	0.050									
2-Methylnaphthalene	N	2790	mg/kg	0.050									
Hexachlorocyclopentadiene	N	2790	mg/kg	0.050									
2,4,6-Trichlorophenol	N	2790	mg/kg	0.050									
2,4,5-Trichlorophenol	N	2790	mg/kg	0.050									
2-Chloronaphthalene	N	2790	mg/kg	0.050									
2-Nitroaniline	N	2790	mg/kg	0.050									
Acenaphthylene	N	2790	mg/kg	0.050									
Dimethylphthalate	N	2790	mg/kg	0.050									
2,6-Dinitrotoluene	N	2790	mg/kg	0.050									
Acenaphthene	N	2790	mg/kg	0.050									
Dibenzofuran	N	2790	mg/kg	0.050									
4-Chlorophenylphenylether	N	2790	mg/kg	0.050									
2,4-Dinitrotoluene	N	2790	mg/kg	0.050									
Fluorene	N	2790	mg/kg	0.050									
Diethyl Phthalate	N	2790	mg/kg	0.050									
4-Nitroaniline	N	2790	mg/kg	0.050									

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Beach drive, Irvine

Client: Mason Evans		**Chemtest Job No.:**			19-06896	19-07478	19-07478	19-07478	19-07478	19-07478	19-07478	19-07478	19-07478
Quotation No.:		**Chemtest Sample ID.:**			781871	784965	784966	784967	784968	784969	784970	784971	784972
		Sample Location:			TP18	BH03	BH06	BH06	BH09	BH10	BH11	BH12	BH13
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			1.00	0.50	0.50	2.00	0.50	0.50	0.50	0.50	0.50
		Date Sampled:			19-Feb-2019	18-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019	19-Feb-2019
		Asbestos Lab:			DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.050									
Azobenzene	N	2790	mg/kg	0.050									
4-Bromophenylphenyl Ether	N	2790	mg/kg	0.050									
Hexachlorobenzene	N	2790	mg/kg	0.050									
Pentachlorophenol	N	2790	mg/kg	0.050									
Phenanthrene	N	2790	mg/kg	0.050									
Anthracene	N	2790	mg/kg	0.050									
Carbazole	N	2790	mg/kg	0.050									
Di-N-Butyl Phthalate	N	2790	mg/kg	0.050									
Fluoranthene	N	2790	mg/kg	0.050									
Pyrene	N	2790	mg/kg	0.050									
Butylbenzyl Phthalate	N	2790	mg/kg	0.050									
Benzo[a]anthracene	N	2790	mg/kg	0.050									
Chrysene	N	2790	mg/kg	0.050									
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.050									
Di-N-Octyl Phthalate	N	2790	mg/kg	0.050									
Benzo[b]fluoranthene	N	2790	mg/kg	0.050									
Benzo[k]fluoranthene	N	2790	mg/kg	0.050									
Benzo[a]pyrene	N	2790	mg/kg	0.050									
Indeno(1,2,3-c,d)Pyrene	N	2790	mg/kg	0.050									
Dibenz(a,h)Anthracene	N	2790	mg/kg	0.050									
Benzo[g,h,i]perylene	N	2790	mg/kg	0.050									
Resorcinol	M	2920	mg/kg	0.050									
Phenol	M	2920	mg/kg	0.050									
Cresols	M	2920	mg/kg	0.050									
Xylenols	M	2920	mg/kg	0.050									
1-Naphthol	N	2920	mg/kg	0.050									
Trimethylphenols	M	2920	mg/kg	0.050									
Total Phenols	M	2920	mg/kg	0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
SVOC TIC	N	2790	mg/kg	N/A									
VOC TIC	N	2760	µg/kg	N/A									
Total SVOCs	N	2790	mg/kg	0.1									
Total VOCs	N	2760	mg/kg	0.01									

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Beach drive, Irvine

Client: Mason Evans			**Chemtest Job No.:**		19-07478	19-06308	19-06308
Quotation No.:			**Chemtest Sample ID.:**		784973	791912	791913
			Sample Location:		BH13	TP04	TP05
			Sample Type:		SOIL	SOIL	SOIL
			Top Depth (m):		1.00	0.40	1.40
			Date Sampled:		19-Feb-2019	19-Feb-2019	19-Feb-2019
			Asbestos Lab:		DURHAM	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
ACM Type	U	2192		N/A	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-	-	-
Moisture	N	2030	%	0.020	13	21	6.0
Soil Colour	N	2040		N/A	Brown,	Brown	Brown
Other Material	N	2040		N/A	Stones,	Stones	Stones
Soil Texture	N	2040		N/A	Clay,	Sand	Sand
pH	M	2010		N/A	8.5	7.8	8.7
Electrical Conductivity (2:1)	N	2020	µS/cm	1.0			
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40	1.1	< 0.40
Redox Potential	N	2150	mV	N/A			
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	1.9	< 0.50
Sulphide (Easily Liberatable)	N	2325	mg/kg	0.50	0.62	3.3	1.8
Sulphate (Total)	M	2430	%	0.010	0.15	0.23	< 0.010
Arsenic	M	2450	mg/kg	1.0	1500	44	8.4
Cadmium	M	2450	mg/kg	0.10	3.4	0.97	< 0.10
Chromium	M	2450	mg/kg	1.0	13	21	16
Copper	M	2450	mg/kg	0.50	2600	57	4.6
Mercury	M	2450	mg/kg	0.10	0.65	0.60	< 0.10
Nickel	M	2450	mg/kg	0.50	21	25	22
Lead	M	2450	mg/kg	0.50	13000	370	10
Selenium	M	2450	mg/kg	0.20	6.1	0.32	< 0.20
Zinc	M	2450	mg/kg	0.50	1100	390	34
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Total Organic Carbon	M	2625	%	0.20	1.3	9.7	< 0.20
Aliphatic TPH >C5-C6	N	2680	mg/kg	0.010	< 0.010	< 0.010	< 0.010
Aliphatic TPH >C6-C8	N	2680	mg/kg	0.010	< 0.010	< 0.010	< 0.010
Aliphatic TPH >C8-C10	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C10-C12	N	2680	mg/kg	0.10	1.9	< 0.10	< 0.10
Aliphatic TPH >C12-C16	N	2680	mg/kg	0.10	3.3	< 0.10	< 0.10
Aliphatic TPH >C16-C21	N	2680	mg/kg	0.10	5.0	1.2	< 0.10
Aliphatic TPH >C21-C35	N	2680	mg/kg	0.10	25	35	< 0.10
Aliphatic TPH >C35-C44	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Total Aliphatic Hydrocarbons	N	2680	mg/kg	1.0	35	36	< 1.0
Aromatic TPH >C5-C7	N	2680	mg/kg	0.010	< 0.010	< 0.010	< 0.010
Aromatic TPH >C7-C8	N	2680	mg/kg	0.010	< 0.010	< 0.010	< 0.010
Aromatic TPH >C8-C10	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C10-C12	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: Beach drive, Irvine

Client: Mason Evans			**Chemtest Job No.:**		19-07478	19-06308	19-06308
Quotation No.:			**Chemtest Sample ID.:**		784973	791912	791913
			Sample Location:		BH13	TP04	TP05
			Sample Type:		SOIL	SOIL	SOIL
			Top Depth (m):		1.00	0.40	1.40
			Date Sampled:		19-Feb-2019	19-Feb-2019	19-Feb-2019
			Asbestos Lab:		DURHAM	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
Aromatic TPH >C12-C16	N	2680	mg/kg	0.10	21	< 0.10	< 0.10
Aromatic TPH >C16-C21	N	2680	mg/kg	0.10	59	1.3	< 0.10
Aromatic TPH >C21-C35	N	2680	mg/kg	0.10	150	49	< 0.10
Aromatic TPH >C35-C44	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Total Aromatic Hydrocarbons	N	2680	mg/kg	1.0	230	50	< 1.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	2.0	270	86	< 2.0
Naphthalene	M	2700	mg/kg	0.10	< 0.10	0.14	< 0.10
Acenaphthylene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2700	mg/kg	0.10	< 0.10	0.38	< 0.10
Fluorene	M	2700	mg/kg	0.10	< 0.10	0.35	< 0.10
Phenanthrene	M	2700	mg/kg	0.10	6.7	4.4	< 0.10
Anthracene	M	2700	mg/kg	0.10	2.0	0.19	< 0.10
Fluoranthene	M	2700	mg/kg	0.10	5.8	6.1	< 0.10
Pyrene	M	2700	mg/kg	0.10	5.5	6.0	< 0.10
Benzo[a]anthracene	M	2700	mg/kg	0.10	3.1	3.9	< 0.10
Chrysene	M	2700	mg/kg	0.10	2.7	3.2	< 0.10
Benzo[b]fluoranthene	M	2700	mg/kg	0.10	1.9	3.4	< 0.10
Benzo[k]fluoranthene	M	2700	mg/kg	0.10	0.90	1.6	< 0.10
Benzo[a]pyrene	M	2700	mg/kg	0.10	2.0	3.1	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10	1.1	1.2	< 0.10
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10	0.19	0.24	< 0.10
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10	0.97	1.8	< 0.10
Total Of 16 PAH's	M	2700	mg/kg	2.0	33	36	< 2.0
Dichlorodifluoromethane	N	2760	µg/kg	0.20			
Chloromethane	N	2760	µg/kg	0.20			
Vinyl Chloride	N	2760	µg/kg	0.20			
Bromomethane	N	2760	µg/kg	0.20			
Chloroethane	N	2760	µg/kg	0.20			
Trichlorofluoromethane	N	2760	µg/kg	0.20			
1,1-Dichloroethene	N	2760	µg/kg	0.20			
Trans 1,2-Dichloroethene	N	2760	µg/kg	0.20			
1,1-Dichloroethane	N	2760	µg/kg	0.20			
cis 1,2-Dichloroethene	N	2760	µg/kg	0.20			
Bromochloromethane	N	2760	µg/kg	0.50			
Trichloromethane	N	2760	µg/kg	0.20			
1,1,1-Trichloroethane	N	2760	µg/kg	0.20			
Tetrachloromethane	N	2760	µg/kg	0.20			
1,1-Dichloropropene	N	2760	µg/kg	0.20			
Benzene	N	2760	µg/kg	0.20			

Results - Soil

Project: Beach drive, Irvine

Client: Mason Evans			Chemtest Job No.:		19-07478	19-06308	19-06308
Quotation No.:			Chemtest Sample ID.:		784973	791912	791913
			Sample Location:		BH13	TP04	TP05
			Sample Type:		SOIL	SOIL	SOIL
			Top Depth (m):		1.00	0.40	1.40
			Date Sampled:		19-Feb-2019	19-Feb-2019	19-Feb-2019
			Asbestos Lab:		DURHAM	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
1,2-Dichloroethane	N	2760	µg/kg	0.20			
Trichloroethene	N	2760	µg/kg	0.20			
1,2-Dichloropropane	N	2760	µg/kg	0.20			
Dibromomethane	N	2760	µg/kg	0.20			
Bromodichloromethane	N	2760	µg/kg	0.20			
cis-1,3-Dichloropropene	N	2760	µg/kg	0.20			
Toluene	N	2760	µg/kg	0.20			
Trans-1,3-Dichloropropene	N	2760	µg/kg	0.20			
1,1,2-Trichloroethane	N	2760	µg/kg	0.20			
Tetrachloroethene	N	2760	µg/kg	0.20			
1,3-Dichloropropane	N	2760	µg/kg	0.20			
Dibromochloromethane	N	2760	µg/kg	0.20			
1,2-Dibromoethane	N	2760	µg/kg	0.20			
Chlorobenzene	N	2760	µg/kg	0.20			
1,1,1,2-Tetrachloroethane	N	2760	µg/kg	0.20			
Ethylbenzene	N	2760	µg/kg	0.20			
m & p-Xylene	N	2760	µg/kg	0.20			
o-Xylene	N	2760	µg/kg	0.20			
Styrene	N	2760	µg/kg	0.20			
Tribromomethane	N	2760	µg/kg	0.20			
Isopropylbenzene	N	2760	µg/kg	0.20			
Bromobenzene	N	2760	µg/kg	0.20			
1,2,3-Trichloropropane	N	2760	µg/kg	0.20			
2-Chlorotoluene	N	2760	µg/kg	0.20			
1,3,5-Trimethylbenzene	N	2760	µg/kg	0.20			
4-Chlorotoluene	N	2760	µg/kg	0.20			
Tert-Butylbenzene	N	2760	µg/kg	0.20			
1,2,4-Trimethylbenzene	N	2760	µg/kg	0.20			
Sec-Butylbenzene	N	2760	µg/kg	0.20			
1,3-Dichlorobenzene	N	2760	µg/kg	0.20			
4-Isopropyltoluene	N	2760	µg/kg	0.20			
1,4-Dichlorobenzene	N	2760	µg/kg	0.20			
N-Butylbenzene	N	2760	µg/kg	0.20			
1,2-Dichlorobenzene	N	2760	µg/kg	0.20			
1,2-Dibromo-3-Chloropropane	N	2760	µg/kg	0.20			
1,2,4-Trichlorobenzene	N	2760	µg/kg	0.20			
Hexachlorobutadiene	N	2760	µg/kg	0.20			
1,2,3-Trichlorobenzene	N	2760	µg/kg	0.20			
Methyl Tert-Butyl Ether	N	2760	µg/kg	0.20			

Results - Soil

Project: Beach drive, Irvine

Client: Mason Evans			Chemtest Job No.:		19-07478	19-06308	19-06308
Quotation No.:			Chemtest Sample ID.:		784973	791912	791913
			Sample Location:		BH13	TP04	TP05
			Sample Type:		SOIL	SOIL	SOIL
			Top Depth (m):		1.00	0.40	1.40
			Date Sampled:		19-Feb-2019	19-Feb-2019	19-Feb-2019
			Asbestos Lab:		DURHAM	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
N-Nitrosodimethylamine	N	2790	mg/kg	0.050			
Phenol	N	2790	mg/kg	0.050			
2-Chlorophenol	N	2790	mg/kg	0.050			
Bis-(2-Chloroethyl)Ether	N	2790	mg/kg	0.050			
1,3-Dichlorobenzene	N	2790	mg/kg	0.050			
1,4-Dichlorobenzene	N	2790	mg/kg	0.050			
1,2-Dichlorobenzene	N	2790	mg/kg	0.050			
2-Methylphenol	N	2790	mg/kg	0.050			
Bis(2-Chloroisopropyl)Ether	N	2790	mg/kg	0.050			
Hexachloroethane	N	2790	mg/kg	0.050			
N-Nitrosodi-n-propylamine	N	2790	mg/kg	0.050			
4-Methylphenol	N	2790	mg/kg	0.050			
Nitrobenzene	N	2790	mg/kg	0.050			
Isophorone	N	2790	mg/kg	0.050			
2-Nitrophenol	N	2790	mg/kg	0.050			
2,4-Dimethylphenol	N	2790	mg/kg	0.050			
Bis(2-Chloroethoxy)Methane	N	2790	mg/kg	0.050			
2,4-Dichlorophenol	N	2790	mg/kg	0.050			
1,2,4-Trichlorobenzene	N	2790	mg/kg	0.050			
Naphthalene	N	2790	mg/kg	0.050			
4-Chloroaniline	N	2790	mg/kg	0.050			
Hexachlorobutadiene	N	2790	mg/kg	0.050			
4-Chloro-3-Methylphenol	N	2790	mg/kg	0.050			
2-Methylnaphthalene	N	2790	mg/kg	0.050			
Hexachlorocyclopentadiene	N	2790	mg/kg	0.050			
2,4,6-Trichlorophenol	N	2790	mg/kg	0.050			
2,4,5-Trichlorophenol	N	2790	mg/kg	0.050			
2-Chloronaphthalene	N	2790	mg/kg	0.050			
2-Nitroaniline	N	2790	mg/kg	0.050			
Acenaphthylene	N	2790	mg/kg	0.050			
Dimethylphthalate	N	2790	mg/kg	0.050			
2,6-Dinitrotoluene	N	2790	mg/kg	0.050			
Acenaphthene	N	2790	mg/kg	0.050			
Dibenzofuran	N	2790	mg/kg	0.050			
4-Chlorophenylphenylether	N	2790	mg/kg	0.050			
2,4-Dinitrotoluene	N	2790	mg/kg	0.050			
Fluorene	N	2790	mg/kg	0.050			
Diethyl Phthalate	N	2790	mg/kg	0.050			
4-Nitroaniline	N	2790	mg/kg	0.050			

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Beach drive, Irvine

Client: Mason Evans			**Chemtest Job No.:**		19-07478	19-06308	19-06308
Quotation No.:			**Chemtest Sample ID.:**		784973	791912	791913
			Sample Location:		BH13	TP04	TP05
			Sample Type:		SOIL	SOIL	SOIL
			Top Depth (m):		1.00	0.40	1.40
			Date Sampled:		19-Feb-2019	19-Feb-2019	19-Feb-2019
			Asbestos Lab:		DURHAM	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.050			
Azobenzene	N	2790	mg/kg	0.050			
4-Bromophenylphenyl Ether	N	2790	mg/kg	0.050			
Hexachlorobenzene	N	2790	mg/kg	0.050			
Pentachlorophenol	N	2790	mg/kg	0.050			
Phenanthrene	N	2790	mg/kg	0.050			
Anthracene	N	2790	mg/kg	0.050			
Carbazole	N	2790	mg/kg	0.050			
Di-N-Butyl Phthalate	N	2790	mg/kg	0.050			
Fluoranthene	N	2790	mg/kg	0.050			
Pyrene	N	2790	mg/kg	0.050			
Butylbenzyl Phthalate	N	2790	mg/kg	0.050			
Benzo[a]anthracene	N	2790	mg/kg	0.050			
Chrysene	N	2790	mg/kg	0.050			
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.050			
Di-N-Octyl Phthalate	N	2790	mg/kg	0.050			
Benzo[b]fluoranthene	N	2790	mg/kg	0.050			
Benzo[k]fluoranthene	N	2790	mg/kg	0.050			
Benzo[a]pyrene	N	2790	mg/kg	0.050			
Indeno(1,2,3-c,d)Pyrene	N	2790	mg/kg	0.050			
Dibenz(a,h)Anthracene	N	2790	mg/kg	0.050			
Benzo[g,h,i]perylene	N	2790	mg/kg	0.050			
Resorcinol	M	2920	mg/kg	0.050			
Phenol	M	2920	mg/kg	0.050			
Cresols	M	2920	mg/kg	0.050			
Xylenols	M	2920	mg/kg	0.050			
1-Naphthol	N	2920	mg/kg	0.050			
Trimethylphenols	M	2920	mg/kg	0.050			
Total Phenols	M	2920	mg/kg	0.30	< 0.30	< 0.30	< 0.30
SVOC TIC	N	2790	mg/kg	N/A			
VOC TIC	N	2760	µg/kg	N/A			
Total SVOCs	N	2790	mg/kg	0.1			
Total VOCs	N	2760	mg/kg	0.01			

Chemtest
The right chemistry to deliver results

Results - UKWIR Samples

Project: Beach drive, Irvine

Client: Mason Evans		**Chemtest Job No.:**			19-06308	19-06308	19-06308
Quotation No.:		**Chemtest Sample ID.:**			778930	778947	778955
Order No.:		Client Sample Ref.:					
		Client Sample ID.:					
		Sample Location:			TP03	TP11	TP14
		Sample Type:			SOIL	SOIL	SOIL
		Top Depth (m):			1.2	1.4	1.2
		Bottom Depth (m):					
		Date Sampled:			18-Feb-2019	18-Feb-2019	19-Feb-2019
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
pH	M	2010		N/A	8.6	8.0	8.1
Electrical Conductivity (2:1)	N	2020	µS/cm	1.0	180	110	170
Redox Potential	N	2150	mV	N/A	260	170	160
Mineral Oil (C11-C20)	N	2680	mg/kg	10.0	< 10	< 10	16
Mineral Oil (C20-C40)	N	2680	mg/kg	10.0	< 10	< 10	50
Total VOCs	N	2760	mg/kg	0.01	< 0.01	< 0.01	< 0.01
BTEX + MTBE	N	2760	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Total SVOCs	N	2790	mg/kg	0.1	< 0.1	0.1	0.2
Phenol	N	2790	mg/kg	0.050	< 0.050	< 0.050	< 0.050
Cresols & Chlorinated Phenols	N	2790	mg/kg	0.1	< 0.1	< 0.1	< 0.1
TICs (Ethers,Ketones,Aldehydes,Amines)	N	2790	mg/kg	N/A	None	None	None

Test Methods

SOP	Title	Parameters included	Method summary
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1325	Sulphide in Waters	Sulphides	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using N,N–dimethyl-pphenylenediamine.
1415	Cations in Waters by ICP-MS	Sodium; Potassium; Calcium; Magnesium	Direct determination by inductively coupled plasma - mass spectrometry (ICP-MS).
1450	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
1460	Mercury low-level in Waters by AFS	Mercury	Atomic Fluorescence Spectrometry, with collimated UV source, wavelength 253.7 nm.
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.
2010	pH Value of Soils	pH	pH Meter
2020	Electrical Conductivity	Electrical conductivity (EC) of aqueous extract or calcium sulphate solution for topsoil	Measurement of the electrical resistance of a 2:1 water/soil extract.
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2150	Redox Potential	Redox Potential	Meter
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2325	Sulphide in Soils	Sulphide	Steam distillation with sulphuric acid / analysis by 'Aquakem 600' Discrete Analyser, using N,N–dimethyl-p-phenylenediamine.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection

Test Methods

SOP	Title	Parameters included	Method summary
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2790	Semi-Volatile Organic Compounds (SVOCs) in Soils by GC-MS	Semi-volatile organic compounds(cf. USEPA Method 8270)	Acetone/Hexane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.
640	Characterisation of Waste (Leaching)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis
The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols
For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Appendix 13

Gas and Groundwater Monitoring Data

MASON EVANS
Geo-Environmental Consultants

Gas and Groundwater Monitoring Results

Project Number:	**P18-621**
Site:	**Beach Drive, Irvine**
Date:	**11.03.19**
Readings taken by:	**DR**

Background Data	
Weather Conditions	Dry
Ground Conditions (dry/wet):	Damp
Air Temperature (°C)	7
Atmospheric Pressure (mB) (start):	1021
Atmospheric Pressure (mB) (finish):	1019
O_2 (%)	20.1
CO_2 (%)	
CH_4 (%)	
N_2 (%)	

Borehole No.	**Time (hh:mm)**	**Gas**													**Groundwater**		**Sampling**		
		O_2 (%)		**CO_2 (%)**		**CH_4 (%)**		**H_2S (%)**		**CO (ppm)**		**LEL**	**Flow (l/hr)**		**Wd[3] (mbgl)**	**DoW[4] (m)**	**Pr[5]**	**R[6]**	**S[7]**
		P[1]	**SS[2]**	**P[1]**	**SS[2]**	**P[1]**	**SS[2]**	**P[1]**	**SS[2]**	**P[1]**	**SS[2]**		**P[1]**	**SS[2]**					
BH01	11:00-12:55	-	20.1	-	0.1	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	3.95	-	-	-
BH02		-	20.2	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	3.50	-	-	-
BH03		-	18.9	-	1.1	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	2.75	-	-	-
BH04		-	18.5	-	1.5	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	4.00	-	-	-
BH05		-	19.6	-	0.8	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	4.00	-	-	-
BH06		-	20.0	-	0.5	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	3.95	-	-	-
BH07		-	20.2	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Damp	3.65	-	-	-
BH08		-	20.0	-	0.3	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	2.85	-	-	-
BH09		-	19.9	-	0.5	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Damp	3.85	-	-	-
BH10		-	20.4	-	0.4	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Damp	3.65	-	-	-
BH11		-	20.0	-	0.5	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	3.70	-	-	-
BH12		-	17.6	-	1.1	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	3.50	-	-	-
BH13		-	20.3	-	0.1	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	2.85	-	-	-

Remarks		
Borehole Damage Record/ Installation Record		Key: 1 – Peak 2 – Steady state 3 – Groundwater depth 4 – Depth of well
Borehole Condition Statement	We confirm that the boreholes were left sealed correctly by Mason Evans personnel in accordance with good working practices on the above date.	5 –Purged well volumes 6 – Recharge (yes/no) 7 – Sampled (yes/no)

Gas Monitor Model:	**Serial No:**	**Recalibration Due:**
GFM 436	12984	17/12/19

MASON EVANS
Geo-Environmental Consultants

Gas and Groundwater Monitoring Results

Project Number:	**P18-621**
Site:	**Beach Drive, Irvine**
Date:	**20.03.19**
Readings taken by:	**DR**

Background Data		
	Weather Conditions	Dry
	Ground Conditions (dry/wet):	Wet
	Air Temperature (°C)	9
	Atmospheric Pressure (mB) (start):	1027
	Atmospheric Pressure (mB) (finish):	1027
	O_2 (%)	20.2
	CO_2 (%)	
	CH_4 (%)	
	N_2 (%)	

Borehole No.	**Time (hh:mm)**	**Gas**													**Groundwater**		**Sampling**		
		O_2 (%)		**CO_2 (%)**		**CH_4 (%)**		**H_2S (%)**		**CO (ppm)**		**LEL**	**Flow (l/hr)**		**Wd[3] (mbgl)**	**DoW[4] (m)**	**Pr[5]**	**R[6]**	**S[7]**
		P[1]	**SS[2]**	**P[1]**	**SS[2]**	**P[1]**	**SS[2]**	**P[1]**	**SS[2]**	**P[1]**	**SS[2]**		**P[1]**	**SS[2]**					
BH01	09:10-11:05	-	19.9	-	0.3	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	3.95	-	-	-
BH02		-	20.1	-	0.1	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	3.50	-	-	-
BH03		-	19.8	-	0.5	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	2.75	-	-	-
BH04		-	18.8	-	1.1	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	4.00	-	-	-
BH05		-	19.5	-	0.9	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	4.00	-	-	-
BH06		-	13.8	-	5.8	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	3.95	-	-	-
BH07		-	20.2	-	0.1	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Damp	3.65	-	-	-
BH08		-	19.7	-	0.4	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	2.85	-	-	-
BH09		-	19.4	-	1.0	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	3.40	3.85	>1	V slow	N
BH10		-	20.0	-	0.4	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Damp	3.65	-	-	-
BH11		-	20.0	-	0.3	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Damp	3.70	-	-	-
BH12		-	17.7	-	1.4	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	3.55	-	-	-
BH13		-	20.1	-	0.1	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	2.85	-	-	-

Remarks			
Borehole Damage Record/ Installation Record		Key: 1 – Peak 2 – Steady state 3 – Groundwater depth 4 – Depth of well	5 –Purged well volumes 6 – Recharge (yes/no) 7 – Sampled (yes/no)
Borehole Condition Statement	We confirm that the boreholes were left sealed correctly by Mason Evans personnel in accordance with good working practices on the above date.		

Gas Monitor Model:	**Serial No:**	**Recalibration Due:**
GFM 436	12984	17/12/19

MASON EVANS
Geo-Environmental Consultants

Gas and Groundwater Monitoring Results

Project Number:	**P18-621**
Site:	**Beach Drive, Irvine**
Date:	**11/04/2019**
Readings taken by:	**PM**

Background Data	
Weather Conditions	Clear/Cloudy
Ground Conditions (dry/wet):	Dry
Air Temperature (°C)	12/15
Atmospheric Pressure (mB) (start):	1028
Atmospheric Pressure (mB) (finish):	1025
O_2 (%)	20.4
CO_2 (%)	-
CH_4 (%)	-
N_2 (%)	-

Borehole No.	**Time (hh:mm)**	**Gas**													**Groundwater**		**Sampling**		
		O_2 (%)		**CO_2 (%)**		**CH_4 (%)**		**H_2S (%)**		**CO (ppm)**		**LEL**	**Flow (l/hr)**		**Wd[3] (mbgl)**	**DoW[4] (m)**	**Pr[5]**	**R[6]**	**S[7]**
		P[1]	**SS[2]**	**P[1]**	**SS[2]**	**P[1]**	**SS[2]**	**P[1]**	**SS[2]**	**P[1]**	**SS[2]**		**P[1]**	**SS[2]**					
BH01	1130-1500	-	19.6	-	0.6	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	4.00	-	-	-
BH02		-	20.0	-	0.2	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	3.55	-	-	-
BH03		-	18.1	-	0.9	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	2.80	-	-	-
BH04		-	18.2	-	2.0	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	4.05	-	-	-
BH05		-	19.1	-	1.2	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	4.05	-	-	-
BH06		-	19.4	-	0.7	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	4.00	-	-	-
BH07		-	19.8	-	0.6	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	3.55	3.70	-	-	-
BH08		-	19.5	-	0.7	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	2.90	-	-	-
BH09		-	19.9	-	0.5	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	3.55	3.80	>1	V slow	N
BH10		-	19.4	-	0.9	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	3.54	3.70	-	-	-
BH11		-	18.7	-	1.4	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	3.57	3.75	-	-	-
BH12		-	16.5	-	2.4	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	3.55	-	-	-
BH13		-	19.3	-	0.8	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	2.85	-	-	-

Remarks	All Okay.	
Borehole Damage Record/ Installation Record	Boreholes Intact.	Key: 1 – Peak 2 – Steady state 3 – Groundwater depth 4 – Depth of well 5 –Purged well volumes 6 – Recharge (yes/no) 7 – Sampled (yes/no)
Borehole Condition Statement	We confirm that the boreholes were left sealed correctly by Mason Evans personnel in accordance with good working practices on the above date.	

Gas Monitor Model:	**Serial No:**	**Recalibration Due:**
GFM 436	12644	14/01/2020

MASON EVANS
Geo-Environmental Consultants

Gas and Groundwater Monitoring Results

Project Number:	**P18-621**
Site:	**Beach Drive, Irvine**
Date:	**10/05/2019**
Readings taken by:	**PM**

Background Data		
Weather Conditions	Clear/Cloudy
Ground Conditions (dry/wet):	Dry
Air Temperature (°C)	10/12
Atmospheric Pressure (mB) (start):	1010
Atmospheric Pressure (mB) (finish):	1005
O_2 (%)	20.4
CO_2 (%)	-
CH_4 (%)	-
N_2 (%)	-

Borehole No.	**Time (hh:mm)**	**Gas**													**Groundwater**		**Sampling**		
		O_2 (%)		**CO_2 (%)**		**CH_4 (%)**		**H_2S (%)**		**CO (ppm)**		**LEL**	**Flow (l/hr)**		**Wd[3] (mbgl)**	**DoW[4] (m)**	**Pr[5]**	**R[6]**	**S[7]**
		P[1]	**SS[2]**	**P[1]**	**SS[2]**	**P[1]**	**SS[2]**	**P[1]**	**SS[2]**	**P[1]**	**SS[2]**		**P[1]**	**SS[2]**					
BH01	0930-1230	-	20.1	-	0.4	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	4.00	-	-	-
BH02		-	20.4	-	0.1	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	3.55	-	-	-
BH03		-	18.7	-	1.6	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	2.80	-	-	-
BH04		-	19.2	-	1.5	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	4.05	-	-	-
BH05		-	19.3	-	1.2	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	4.05	-	-	-
BH06		-	19.4	-	0.6	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	4.00	-	-	-
BH07		-	20.0	-	0.6	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	3.62	3.70	-	-	-
BH08		-	19.9	-	0.6	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	2.90	-	-	-
BH09		-	19.2	-	1.1	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	3.66	3.80	-	-	-
BH10		-	18.4	-	1.4	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	3.63	3.70	-	-	-
BH11		-	18.5	-	1.5	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	3.65	3.75	-	-	-
BH12		-	18.5	-	1.4	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	3.50	-	-	-
BH13		-	18.3	-	1.4	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	Dry	2.85	-	-	-

Remarks	All Okay.		
Borehole Damage Record/ Installation Record	Boreholes Intact.	Key: 1 – Peak 2 – Steady state 3 – Groundwater depth 4 – Depth of well	5 –Purged well volumes 6 – Recharge (yes/no) 7 – Sampled (yes/no)
Borehole Condition Statement	We confirm that the boreholes were left sealed correctly by Mason Evans personnel in accordance with good working practices on the above date.		

Gas Monitor Model:	**Serial No:**	**Recalibration Due:**
GFM 436	12644	14/01/2020

Appendix 14

HazWaste Online Report

HazWasteOnline™

Waste Classification Report

GVTW9-YYLGR-NR29F

Job name

P18-621 Beach Drive, Irvine

Description/Comments

Project

Site

Related Documents

#	Name	Description
None		

Waste Stream Template

Glasgow Chemtest

Classified by

Name:
Andrew McGuire
Date:
05 Jun 2019 09:52 GMT
Telephone:
0141 420 2025

Company:
Mason Evans
The Piazza
95 Morrison Street
Glasgow
G5 8BE

Report

Created by: Andrew McGuire
Created date: 05 Jun 2019 09:52 GMT

Job summary

#	Sample Name	Depth [m]	Classification Result	Hazard properties	Page
1	TP01	0.5	Non Hazardous		3
2	TP02	0.4	Hazardous	HP 7	5
3	TP03	1.2	Non Hazardous		8
4	TP04	0.40	Non Hazardous		9
5	TP05	0.5	Non Hazardous		11
6	TP05[2]	1.4	Non Hazardous		13
7	TP07	0.4	Hazardous	HP 3(i)	15
8	TP08	1.4	Non Hazardous		18
9	TP10	0.5	Non Hazardous		20
10	TP11	0.6	Hazardous	HP 3(i)	23
11	TP11[2]	1.4	Non Hazardous		26

Classification of sample: TP01

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP01
Sample Depth:
0.5 m
Moisture content:
11%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 11% No Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
2	pH			PH		7.3 pH		7.3 pH	7.3 pH		
3	boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		<0.4 mg/kg	23.173	<9.269 mg/kg	<0.000927 %		<**LOD**
4	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<**LOD**
5	arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		8.1 mg/kg	1.534	12.424 mg/kg	0.00124 %		
6	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.29 mg/kg	1.855	0.538 mg/kg	0.0000538 %		
7	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		15 mg/kg	1.462	21.923 mg/kg	0.00219 %		
8	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		17 mg/kg	3.929	66.794 mg/kg	0.00668 %		
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.21 mg/kg	1.353	0.284 mg/kg	0.0000284 %		
10	nickel { nickel sulfide }	028-006-00-9	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]		23 mg/kg	1.546	35.565 mg/kg	0.00356 %		
11	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	75 mg/kg	1.56	116.986 mg/kg	0.0075 %		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
12		selenium { selenium }				0.24	mg/kg		0.24	mg/kg	0.000024 %		
		034-001-00-2	231-957-4	7782-49-2									
13		zinc { zinc oxide }				140	mg/kg	1.245	174.26	mg/kg	0.0174 %		
		030-013-00-7	215-222-5	1314-13-2									
14		chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
15		TPH (C6 to C40) petroleum group				<2	mg/kg		<2	mg/kg	<0.0002 %		<LOD
				TPH									
16		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
17		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8									
18		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9									
19		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
20		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8									
21		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
22		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-912-4	206-44-0									
23		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-927-3	129-00-0									
24		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
29		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
31		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
32		Phenols, C9-11; Distillate Phenols			H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		648-127-00-6	293-435-2	91079-47-9									
										Total:	0.0402 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Classification of sample: TP02

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample Name:
TP02
Sample Depth:
0.4 m
Moisture content:
16%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1B; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

lead chromate: (Note 1 conc.: 0.12%)

Determinands

Moisture content: 16% No Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
2	pH			PH		7.8 pH		7.8 pH	7.8 pH		
3	boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		0.83 mg/kg	23.173	19.234 mg/kg	0.00192 %		
4	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
5	arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		25 mg/kg	1.534	38.347 mg/kg	0.00383 %		
6	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.81 mg/kg	1.855	1.502 mg/kg	0.00015 %		
7	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		33 mg/kg	1.462	48.231 mg/kg	0.00482 %		
8	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		120 mg/kg	3.929	471.486 mg/kg	0.0471 %		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
9		mercury { mercury dichloride }				1.2	mg/kg	1.353	1.624	mg/kg	0.000162 %		
		080-010-00-X	231-299-8	7487-94-7									
10		nickel { nickel sulfide }				45	mg/kg	1.546	69.584	mg/kg	0.00696 %		
		028-006-00-9	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]									
11		lead { lead chromate }			1	1200	mg/kg	1.56	1871.778	mg/kg	0.12 %		
		082-004-00-2	231-846-0	7758-97-6									
12		selenium { selenium }				0.52	mg/kg		0.52	mg/kg	0.000052 %		
		034-001-00-2	231-957-4	7782-49-2									
13		zinc { zinc oxide }				780	mg/kg	1.245	970.877	mg/kg	0.0971 %		
		030-013-00-7	215-222-5	1314-13-2									
14		chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
15		TPH (C6 to C40) petroleum group				130	mg/kg		130	mg/kg	0.013 %		
				TPH									
16		naphthalene				0.5	mg/kg		0.5	mg/kg	0.00005 %		
		601-052-00-2	202-049-5	91-20-3									
17		acenaphthylene				0.36	mg/kg		0.36	mg/kg	0.000036 %		
			205-917-1	208-96-8									
18		acenaphthene				0.18	mg/kg		0.18	mg/kg	0.000018 %		
			201-469-6	83-32-9									
19		fluorene				0.25	mg/kg		0.25	mg/kg	0.000025 %		
			201-695-5	86-73-7									
20		phenanthrene				2.3	mg/kg		2.3	mg/kg	0.00023 %		
			201-581-5	85-01-8									
21		anthracene				0.7	mg/kg		0.7	mg/kg	0.00007 %		
			204-371-1	120-12-7									
22		fluoranthene				3.8	mg/kg		3.8	mg/kg	0.00038 %		
			205-912-4	206-44-0									
23		pyrene				4.5	mg/kg		4.5	mg/kg	0.00045 %		
			204-927-3	129-00-0									
24		benzo[a]anthracene				2.4	mg/kg		2.4	mg/kg	0.00024 %		
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				3.3	mg/kg		3.3	mg/kg	0.00033 %		
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				3.3	mg/kg		3.3	mg/kg	0.00033 %		
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				1.6	mg/kg		1.6	mg/kg	0.00016 %		
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				2.6	mg/kg		2.6	mg/kg	0.00026 %		
		601-032-00-3	200-028-5	50-32-8									
29		indeno[123-cd]pyrene				1.4	mg/kg		1.4	mg/kg	0.00014 %		
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				0.68	mg/kg		0.68	mg/kg	0.000068 %		
		601-041-00-2	200-181-8	53-70-3									
31		benzo[ghi]perylene				1.8	mg/kg		1.8	mg/kg	0.00018 %		
			205-883-8	191-24-2									
32		Phenols, C9-11; Distillate Phenols			H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		648-127-00-6	293-435-2	91079-47-9									
										Total:	0.298 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No free phase hydrocarbons identified onsite

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.013%)

Classification of sample: TP03

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP03
Sample Depth:
1.2 m
Moisture content:
8%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 8% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
1		asbestos											
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001	mg/kg		0.0001	mg/kg	0.00000001 %		
2	●	pH											
				PH		8.6	pH		8.6	pH	8.6 pH		
3	●	TPH (C6 to C40) petroleum group											
				TPH		<2	mg/kg		<2	mg/kg	<0.0002 %		<**LOD**
4		Phenols, C9-11; Distillate Phenols			H, J, M								
		648-127-00-6	293-435-2	91079-47-9		<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
										Total:	0.00023 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
<LOD	Below limit of detection
CLP: Note H	Known incomplete entry, should not be used as is

Classification of sample: TP04

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP04
Sample Depth:
0.40 m
Moisture content:
5.6%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 5.6% No Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
2	pH			PH		8.3 pH		8.3 pH	8.3 pH		
3	boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		0.44 mg/kg	23.173	10.196 mg/kg	0.00102 %		
4	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<**LOD**
5	arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		3.8 mg/kg	1.534	5.829 mg/kg	0.000583 %		
6	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		<0.1 mg/kg	1.855	<0.185 mg/kg	<0.0000185 %		<**LOD**
7	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		14 mg/kg	1.462	20.462 mg/kg	0.00205 %		
8	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		3.4 mg/kg	3.929	13.359 mg/kg	0.00134 %		
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<**LOD**
10	nickel { nickel sulfide }	028-006-00-9	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]		18 mg/kg	1.546	27.834 mg/kg	0.00278 %		
11	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	10 mg/kg	1.56	15.598 mg/kg	0.001 %		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
12		selenium { selenium }				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
		034-001-00-2	231-957-4	7782-49-2									
13		zinc { zinc oxide }				27	mg/kg	1.245	33.607	mg/kg	0.00336 %		
		030-013-00-7	215-222-5	1314-13-2									
14		chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
15		TPH (C6 to C40) petroleum group				<2	mg/kg		<2	mg/kg	<0.0002 %		<LOD
				TPH									
16		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
17		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8									
18		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9									
19		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
20		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8									
21		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
22		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-912-4	206-44-0									
23		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-927-3	129-00-0									
24		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
29		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
31		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
32		Phenols, C9-11; Distillate Phenols			H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		648-127-00-6	293-435-2	91079-47-9									
										Total:	0.0128 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Classification of sample: TP05

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP05
Sample Depth:
0.5 m
Moisture content:
7%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 7% No Moisture Correction applied (MC)

#		Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1		asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
2		pH			PH		8 pH		8 pH	8pH		
3		boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		0.67 mg/kg	23.173	15.526 mg/kg	0.00155 %		
4		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<**LOD**
5		arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		37 mg/kg	1.534	56.753 mg/kg	0.00568 %		
6		cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		1.6 mg/kg	1.855	2.967 mg/kg	0.000297 %		
7		chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		25 mg/kg	1.462	36.539 mg/kg	0.00365 %		
8		copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		120 mg/kg	3.929	471.486 mg/kg	0.0471 %		
9		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.84 mg/kg	1.353	1.137 mg/kg	0.000114 %		
10		nickel { nickel sulfide }	028-006-00-9	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]		51 mg/kg	1.546	78.862 mg/kg	0.00789 %		
11		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	730 mg/kg	1.56	1138.665 mg/kg	0.073 %		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
12		selenium { selenium }				0.97	mg/kg		0.97	mg/kg	0.000097 %		
		034-001-00-2	231-957-4	7782-49-2									
13		zinc { zinc oxide }				740	mg/kg	1.245	921.088	mg/kg	0.0921 %		
		030-013-00-7	215-222-5	1314-13-2									
14		chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
15		TPH (C6 to C40) petroleum group				<2	mg/kg		<2	mg/kg	<0.0002 %		<LOD
				TPH									
16		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
17		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8									
18		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9									
19		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
20		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8									
21		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
22		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-912-4	206-44-0									
23		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-927-3	129-00-0									
24		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
29		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
31		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
32		Phenols, C9-11; Distillate Phenols			H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		648-127-00-6	293-435-2	91079-47-9									
										Total:	0.232 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Classification of sample: TP05[2]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP05[2]
Sample Depth:
1.4 m
Moisture content:
19%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 19% No Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
2	pH			PH		7.9 pH		7.9 pH	7.9 pH		
3	boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		0.9 mg/kg	23.173	20.856 mg/kg	0.00209 %		
4	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				2.7 mg/kg	1.884	5.087 mg/kg	0.000509 %		
5	arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		46 mg/kg	1.534	70.558 mg/kg	0.00706 %		
6	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		2.1 mg/kg	1.855	3.895 mg/kg	0.000389 %		
7	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		29 mg/kg	1.462	42.385 mg/kg	0.00424 %		
8	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		150 mg/kg	3.929	589.358 mg/kg	0.0589 %		
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.96 mg/kg	1.353	1.299 mg/kg	0.00013 %		
10	nickel { nickel sulfide }	028-006-00-9	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]		65 mg/kg	1.546	100.51 mg/kg	0.0101 %		
11	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	970 mg/kg	1.56	1513.021 mg/kg	0.097 %		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
12		selenium { selenium }				1.1	mg/kg		1.1	mg/kg	0.00011 %		
		034-001-00-2	231-957-4	7782-49-2									
13		zinc { zinc oxide }				920	mg/kg	1.245	1145.137	mg/kg	0.115 %		
		030-013-00-7	215-222-5	1314-13-2									
14		chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
15		TPH (C6 to C40) petroleum group				<2	mg/kg		<2	mg/kg	<0.0002 %		<LOD
				TPH									
16		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
17		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8									
18		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9									
19		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
20		phenanthrene				3.9	mg/kg		3.9	mg/kg	0.00039 %		
			201-581-5	85-01-8									
21		anthracene				1.1	mg/kg		1.1	mg/kg	0.00011 %		
			204-371-1	120-12-7									
22		fluoranthene				5.2	mg/kg		5.2	mg/kg	0.00052 %		
			205-912-4	206-44-0									
23		pyrene				6.2	mg/kg		6.2	mg/kg	0.00062 %		
			204-927-3	129-00-0									
24		benzo[a]anthracene				1.8	mg/kg		1.8	mg/kg	0.00018 %		
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				2.1	mg/kg		2.1	mg/kg	0.00021 %		
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				2	mg/kg		2	mg/kg	0.0002 %		
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				1.4	mg/kg		1.4	mg/kg	0.00014 %		
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				1.3	mg/kg		1.3	mg/kg	0.00013 %		
		601-032-00-3	200-028-5	50-32-8									
29		indeno[123-cd]pyrene				0.62	mg/kg		0.62	mg/kg	0.000062 %		
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				0.24	mg/kg		0.24	mg/kg	0.000024 %		
		601-041-00-2	200-181-8	53-70-3									
31		benzo[ghi]perylene				0.47	mg/kg		0.47	mg/kg	0.000047 %		
			205-883-8	191-24-2									
32		Phenols, C9-11; Distillate Phenols			H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		648-127-00-6	293-435-2	91079-47-9									
										Total:	0.298 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Classification of sample: TP07

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample Name:
TP07
Sample Depth:
0.4 m
Moisture content:
11%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous property to hazardous because No free phase hydrocarbons identified onsite

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.026%)

Determinands

Moisture content: 11% No Moisture Correction applied (MC)

#		Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001	mg/kg		0.0001	mg/kg	0.00000001 %		
2		pH			PH		7.8	pH		7.8	pH	7.8 pH		
3		boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		1.6	mg/kg	23.173	37.077	mg/kg	0.00371 %		
4		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5	mg/kg	1.884	<0.942	mg/kg	<0.0000942 %		<**LOD**
5		arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		27	mg/kg	1.534	41.415	mg/kg	0.00414 %		
6		cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.74	mg/kg	1.855	1.372	mg/kg	0.000137 %		
7		chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		29	mg/kg	1.462	42.385	mg/kg	0.00424 %		

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
8	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		150	mg/kg	3.929	589.358	mg/kg	0.0589 %		
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.43	mg/kg	1.353	0.582	mg/kg	0.0000582 %		
10	nickel { nickel sulfide }	028-006-00-9	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]		76	mg/kg	1.546	117.52	mg/kg	0.0118 %		
11	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	250	mg/kg	1.56	389.954	mg/kg	0.025 %		
12	selenium { selenium }	034-001-00-2	231-957-4	7782-49-2		0.53	mg/kg		0.53	mg/kg	0.000053 %		
13	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		380	mg/kg	1.245	472.991	mg/kg	0.0473 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
15	TPH (C6 to C40) petroleum group			TPH		260	mg/kg		260	mg/kg	0.026 %		
16	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
17	acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
18	acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
19	fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
20	phenanthrene		201-581-5	85-01-8		2.2	mg/kg		2.2	mg/kg	0.00022 %		
21	anthracene		204-371-1	120-12-7		0.6	mg/kg		0.6	mg/kg	0.00006 %		
22	fluoranthene		205-912-4	206-44-0		2.1	mg/kg		2.1	mg/kg	0.00021 %		
23	pyrene		204-927-3	129-00-0		2	mg/kg		2	mg/kg	0.0002 %		
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
25	chrysene	601-048-00-0	205-923-4	218-01-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
29	indeno[123-cd]pyrene		205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
31	benzo[ghi]perylene		205-883-8	191-24-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
32	Phenols, C9-11; Distillate Phenols	648-127-00-6	293-435-2	91079-47-9	H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
										Total:	0.182 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Classification of sample: TP08

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP08
Sample Depth:
1.4 m
Moisture content:
13%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 13% No Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
2	pH			PH		7.8 pH		7.8 pH	7.8 pH		
3	boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		<0.4 mg/kg	23.173	<9.269 mg/kg	<0.000927 %		<LOD
4	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
5	arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		9 mg/kg	1.534	13.805 mg/kg	0.00138 %		
6	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		<0.1 mg/kg	1.855	<0.185 mg/kg	<0.0000185 %		<LOD
7	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		14 mg/kg	1.462	20.462 mg/kg	0.00205 %		
8	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		14 mg/kg	3.929	55.007 mg/kg	0.0055 %		
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
10	nickel { nickel sulfide }	028-006-00-9	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]		16 mg/kg	1.546	24.741 mg/kg	0.00247 %		
11	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	30 mg/kg	1.56	46.794 mg/kg	0.003 %		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
12		selenium { selenium }				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
		034-001-00-2	231-957-4	7782-49-2									
13		zinc { zinc oxide }				46	mg/kg	1.245	57.257	mg/kg	0.00573 %		
		030-013-00-7	215-222-5	1314-13-2									
14		chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
15		TPH (C6 to C40) petroleum group				<2	mg/kg		<2	mg/kg	<0.0002 %		<LOD
				TPH									
16		naphthalene				0.31	mg/kg		0.31	mg/kg	0.000031 %		
		601-052-00-2	202-049-5	91-20-3									
17		acenaphthylene				0.15	mg/kg		0.15	mg/kg	0.000015 %		
			205-917-1	208-96-8									
18		acenaphthene				0.16	mg/kg		0.16	mg/kg	0.000016 %		
			201-469-6	83-32-9									
19		fluorene				0.4	mg/kg		0.4	mg/kg	0.00004 %		
			201-695-5	86-73-7									
20		phenanthrene				1.4	mg/kg		1.4	mg/kg	0.00014 %		
			201-581-5	85-01-8									
21		anthracene				0.77	mg/kg		0.77	mg/kg	0.000077 %		
			204-371-1	120-12-7									
22		fluoranthene				2	mg/kg		2	mg/kg	0.0002 %		
			205-912-4	206-44-0									
23		pyrene				1.9	mg/kg		1.9	mg/kg	0.00019 %		
			204-927-3	129-00-0									
24		benzo[a]anthracene				1.9	mg/kg		1.9	mg/kg	0.00019 %		
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				1.5	mg/kg		1.5	mg/kg	0.00015 %		
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				1.1	mg/kg		1.1	mg/kg	0.00011 %		
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				0.8	mg/kg		0.8	mg/kg	0.00008 %		
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				0.99	mg/kg		0.99	mg/kg	0.000099 %		
		601-032-00-3	200-028-5	50-32-8									
29		indeno[123-cd]pyrene				0.3	mg/kg		0.3	mg/kg	0.00003 %		
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				0.13	mg/kg		0.13	mg/kg	0.000013 %		
		601-041-00-2	200-181-8	53-70-3									
31		benzo[ghi]perylene				0.31	mg/kg		0.31	mg/kg	0.000031 %		
			205-883-8	191-24-2									
32		Phenols, C9-11; Distillate Phenols			H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		648-127-00-6	293-435-2	91079-47-9									
										Total:	0.0229 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Classification of sample: TP10

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP10
Sample Depth:
0.5 m
Moisture content:
9.6%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 9.6% No Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
2	pH			PH		7.9 pH		7.9 pH	7.9 pH		
3	boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		0.66 mg/kg	23.173	15.294 mg/kg	0.00153 %		
4	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
5	arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		24 mg/kg	1.534	36.813 mg/kg	0.00368 %		
6	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.9 mg/kg	1.855	1.669 mg/kg	0.000167 %		
7	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		24 mg/kg	1.462	35.077 mg/kg	0.00351 %		
8	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		120 mg/kg	3.929	471.486 mg/kg	0.0471 %		
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.31 mg/kg	1.353	0.42 mg/kg	0.000042 %		
10	nickel { nickel sulfide }	028-006-00-9	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]		41 mg/kg	1.546	63.399 mg/kg	0.00634 %		
11	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	290 mg/kg	1.56	452.346 mg/kg	0.029 %		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
12		selenium { selenium }				0.36	mg/kg		0.36	mg/kg	0.000036 %		
		034-001-00-2	231-957-4	7782-49-2									
13		zinc { zinc oxide }				430	mg/kg	1.245	535.227	mg/kg	0.0535 %		
		030-013-00-7	215-222-5	1314-13-2									
14		chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
15		TPH (C6 to C40) petroleum group				130	mg/kg		130	mg/kg	0.013 %		
				TPH									
16		naphthalene				0.62	mg/kg		0.62	mg/kg	0.000062 %		
		601-052-00-2	202-049-5	91-20-3									
17		acenaphthylene				0.36	mg/kg		0.36	mg/kg	0.000036 %		
			205-917-1	208-96-8									
18		acenaphthene				0.32	mg/kg		0.32	mg/kg	0.000032 %		
			201-469-6	83-32-9									
19		fluorene				0.55	mg/kg		0.55	mg/kg	0.000055 %		
			201-695-5	86-73-7									
20		phenanthrene				5.6	mg/kg		5.6	mg/kg	0.00056 %		
			201-581-5	85-01-8									
21		anthracene				2	mg/kg		2	mg/kg	0.0002 %		
			204-371-1	120-12-7									
22		fluoranthene				12	mg/kg		12	mg/kg	0.0012 %		
			205-912-4	206-44-0									
23		pyrene				12	mg/kg		12	mg/kg	0.0012 %		
			204-927-3	129-00-0									
24		benzo[a]anthracene				5.6	mg/kg		5.6	mg/kg	0.00056 %		
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				5.4	mg/kg		5.4	mg/kg	0.00054 %		
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				5.3	mg/kg		5.3	mg/kg	0.00053 %		
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				3.1	mg/kg		3.1	mg/kg	0.00031 %		
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				5	mg/kg		5	mg/kg	0.0005 %		
		601-032-00-3	200-028-5	50-32-8									
29		indeno[123-cd]pyrene				3.6	mg/kg		3.6	mg/kg	0.00036 %		
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				0.92	mg/kg		0.92	mg/kg	0.000092 %		
		601-041-00-2	200-181-8	53-70-3									
31		benzo[ghi]perylene				3.3	mg/kg		3.3	mg/kg	0.00033 %		
			205-883-8	191-24-2									
32		Phenols, C9-11; Distillate Phenols			H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		648-127-00-6	293-435-2	91079-47-9									
										Total:	0.165 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No free phase hydrocarbons identified onsite

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.013%)

Classification of sample: TP11

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample Name:
TP11
Sample Depth:
0.6 m
Moisture content:
18%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous property to hazardous because No free phase hydrocarbons identified onsite

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.083%)

Determinands

Moisture content: 18% No Moisture Correction applied (MC)

#		Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1		asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
2		pH			PH		7.7 pH		7.7 pH	7.7 pH		
3		boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		0.99 mg/kg	23.173	22.941 mg/kg	0.00229 %		
4		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<**LOD**
5		arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		23 mg/kg	1.534	35.279 mg/kg	0.00353 %		
6		cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.81 mg/kg	1.855	1.502 mg/kg	0.00015 %		
7		chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		25 mg/kg	1.462	36.539 mg/kg	0.00365 %		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
8		copper { copper sulphate pentahydrate }				70	mg/kg	3.929	275.034	mg/kg	0.0275 %		
		029-023-00-4	231-847-6	7758-99-8									
9		mercury { mercury dichloride }				0.89	mg/kg	1.353	1.205	mg/kg	0.00012 %		
		080-010-00-X	231-299-8	7487-94-7									
10		nickel { nickel sulfide }				59	mg/kg	1.546	91.232	mg/kg	0.00912 %		
		028-006-00-9	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]									
11		lead { lead chromate }			1	270	mg/kg	1.56	421.15	mg/kg	0.027 %		
		082-004-00-2	231-846-0	7758-97-6									
12		selenium { selenium }				0.59	mg/kg		0.59	mg/kg	0.000059 %		
		034-001-00-2	231-957-4	7782-49-2									
13		zinc { zinc oxide }				310	mg/kg	1.245	385.861	mg/kg	0.0386 %		
		030-013-00-7	215-222-5	1314-13-2									
14		chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
15		TPH (C6 to C40) petroleum group				830	mg/kg		830	mg/kg	0.083 %		
				TPH									
16		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
17		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8									
18		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9									
19		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
20		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8									
21		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
22		fluoranthene				0.78	mg/kg		0.78	mg/kg	0.000078 %		
			205-912-4	206-44-0									
23		pyrene				1.2	mg/kg		1.2	mg/kg	0.00012 %		
			204-927-3	129-00-0									
24		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
29		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
31		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
32		Phenols, C9-11; Distillate Phenols			H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		648-127-00-6	293-435-2	91079-47-9									
										Total:	0.196 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Classification of sample: TP11[2]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP11[2]
Sample Depth:
1.4 m
Moisture content:
7.6%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 7.6% No Moisture Correction applied (MC)

#		Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1		asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
2	●	pH			PH		8 pH		8 pH	8pH		
3	●	TPH (C6 to C40) petroleum group			TPH		<2 mg/kg		<2 mg/kg	<0.0002 %		<**LOD**
4		Phenols, C9-11; Distillate Phenols	648-127-00-6	293-435-2	91079-47-9	H, J, M	<0.3 mg/kg		<0.3 mg/kg	<0.00003 %		<**LOD**
									Total:	0.00023 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
<LOD	Below limit of detection
CLP: Note H	Known incomplete entry, should not be used as is

Classification of sample: TP12

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample Name:
TP12
Sample Depth:
0.8 m
Moisture content:
16%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous property to hazardous because No free phase hydrocarbons identified onsite

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.06%)

Determinands

Moisture content: 16% No Moisture Correction applied (MC)

#		Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1		asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
2		pH			PH		7.4 pH		7.4 pH	7.4 pH		
3		boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		1.1 mg/kg	23.173	25.49 mg/kg	0.00255 %		
4		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<**LOD**
5		arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		37 mg/kg	1.534	56.753 mg/kg	0.00568 %		
6		cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.97 mg/kg	1.855	1.799 mg/kg	0.00018 %		
7		chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		35 mg/kg	1.462	51.154 mg/kg	0.00512 %		

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
8	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		99	mg/kg	3.929	388.976	mg/kg	0.0389 %		
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.74	mg/kg	1.353	1.002	mg/kg	0.0001 %		
10	nickel { nickel sulfide }	028-006-00-9	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]		52	mg/kg	1.546	80.408	mg/kg	0.00804 %		
11	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	560	mg/kg	1.56	873.496	mg/kg	0.056 %		
12	selenium { selenium }	034-001-00-2	231-957-4	7782-49-2		1.1	mg/kg		1.1	mg/kg	0.00011 %		
13	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		550	mg/kg	1.245	684.593	mg/kg	0.0685 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
15	TPH (C6 to C40) petroleum group			TPH		600	mg/kg		600	mg/kg	0.06 %		
16	naphthalene	601-052-00-2	202-049-5	91-20-3		1.4	mg/kg		1.4	mg/kg	0.00014 %		
17	acenaphthylene		205-917-1	208-96-8		0.79	mg/kg		0.79	mg/kg	0.000079 %		
18	acenaphthene		201-469-6	83-32-9		1.4	mg/kg		1.4	mg/kg	0.00014 %		
19	fluorene		201-695-5	86-73-7		1.5	mg/kg		1.5	mg/kg	0.00015 %		
20	phenanthrene		201-581-5	85-01-8		8.3	mg/kg		8.3	mg/kg	0.00083 %		
21	anthracene		204-371-1	120-12-7		2	mg/kg		2	mg/kg	0.0002 %		
22	fluoranthene		205-912-4	206-44-0		8.2	mg/kg		8.2	mg/kg	0.00082 %		
23	pyrene		204-927-3	129-00-0		8.4	mg/kg		8.4	mg/kg	0.00084 %		
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		4.7	mg/kg		4.7	mg/kg	0.00047 %		
25	chrysene	601-048-00-0	205-923-4	218-01-9		5.6	mg/kg		5.6	mg/kg	0.00056 %		
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		5.9	mg/kg		5.9	mg/kg	0.00059 %		
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		1.9	mg/kg		1.9	mg/kg	0.00019 %		
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		3.6	mg/kg		3.6	mg/kg	0.00036 %		
29	indeno[123-cd]pyrene		205-893-2	193-39-5		2.8	mg/kg		2.8	mg/kg	0.00028 %		
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		0.45	mg/kg		0.45	mg/kg	0.000045 %		
31	benzo[ghi]perylene		205-883-8	191-24-2		2.6	mg/kg		2.6	mg/kg	0.00026 %		
32	Phenols, C9-11; Distillate Phenols	648-127-00-6	293-435-2	91079-47-9	H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
										Total:	0.251 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Classification of sample: TP13

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP13
Sample Depth:
0.6 m
Moisture content:
13%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 13% No Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
2	pH			PH		8.1 pH		8.1 pH	8.1 pH		
3	boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		0.73 mg/kg	23.173	16.916 mg/kg	0.00169 %		
4	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
5	arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		11 mg/kg	1.534	16.873 mg/kg	0.00169 %		
6	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.31 mg/kg	1.855	0.575 mg/kg	0.0000575 %		
7	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		23 mg/kg	1.462	33.616 mg/kg	0.00336 %		
8	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		42 mg/kg	3.929	165.02 mg/kg	0.0165 %		
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.16 mg/kg	1.353	0.217 mg/kg	0.0000217 %		
10	nickel { nickel sulfide }	028-006-00-9	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]		31 mg/kg	1.546	47.936 mg/kg	0.00479 %		
11	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	100 mg/kg	1.56	155.982 mg/kg	0.01 %		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
12		selenium { selenium }				0.27	mg/kg		0.27	mg/kg	0.000027 %		
		034-001-00-2	231-957-4	7782-49-2									
13		zinc { zinc oxide }				140	mg/kg	1.245	174.26	mg/kg	0.0174 %		
		030-013-00-7	215-222-5	1314-13-2									
14		chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
15		TPH (C6 to C40) petroleum group				140	mg/kg		140	mg/kg	0.014 %		
				TPH									
16		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
17		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8									
18		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9									
19		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
20		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8									
21		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
22		fluoranthene				1	mg/kg		1	mg/kg	0.0001 %		
			205-912-4	206-44-0									
23		pyrene				0.98	mg/kg		0.98	mg/kg	0.000098 %		
			204-927-3	129-00-0									
24		benzo[a]anthracene				0.77	mg/kg		0.77	mg/kg	0.000077 %		
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				0.46	mg/kg		0.46	mg/kg	0.000046 %		
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				0.97	mg/kg		0.97	mg/kg	0.000097 %		
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				0.14	mg/kg		0.14	mg/kg	0.000014 %		
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				0.55	mg/kg		0.55	mg/kg	0.000055 %		
		601-032-00-3	200-028-5	50-32-8									
29		indeno[123-cd]pyrene				0.5	mg/kg		0.5	mg/kg	0.00005 %		
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
31		benzo[ghi]perylene				0.35	mg/kg		0.35	mg/kg	0.000035 %		
			205-883-8	191-24-2									
32		Phenols, C9-11; Distillate Phenols			H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		648-127-00-6	293-435-2	91079-47-9									
										Total:	0.0704 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No free phase hydrocarbons identified onsite

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.014%)

Classification of sample: TP14

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP14
Sample Depth:
1.2 m
Moisture content:
7.1%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 7.1% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number							
1		asbestos									
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
2	●	pH				8.1 pH		8.1 pH	8.1 pH		
				PH							
3	●	TPH (C6 to C40) petroleum group				160 mg/kg		160 mg/kg	0.016 %		
				TPH							
4		Phenols, C9-11; Distillate Phenols			H, J, M	<0.3 mg/kg		<0.3 mg/kg	<0.00003 %		<**LOD**
		648-127-00-6	293-435-2	91079-47-9							
								Total:	0.016 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
<LOD	Below limit of detection
CLP: Note H	Known incomplete entry, should not be used as is

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No free phase hydrocarbons identified onsite

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.016%)

Classification of sample: TP15

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP15
Sample Depth:
0.5 m
Moisture content:
6.8%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 6.8% No Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
2	pH			PH		7.3 pH		7.3 pH	7.3 pH		
3	boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		<0.4 mg/kg	23.173	<9.269 mg/kg	<0.000927 %		<LOD
4	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
5	arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		5 mg/kg	1.534	7.669 mg/kg	0.000767 %		
6	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		<0.1 mg/kg	1.855	<0.185 mg/kg	<0.0000185 %		<LOD
7	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		13 mg/kg	1.462	19 mg/kg	0.0019 %		
8	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		13 mg/kg	3.929	51.078 mg/kg	0.00511 %		
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
10	nickel { nickel sulfide }	028-006-00-9	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]		17 mg/kg	1.546	26.287 mg/kg	0.00263 %		
11	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	17 mg/kg	1.56	26.517 mg/kg	0.0017 %		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
12		selenium { selenium }				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
		034-001-00-2	231-957-4	7782-49-2									
13		zinc { zinc oxide }				43	mg/kg	1.245	53.523	mg/kg	0.00535 %		
		030-013-00-7	215-222-5	1314-13-2									
14		chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
15		TPH (C6 to C40) petroleum group				<2	mg/kg		<2	mg/kg	<0.0002 %		<LOD
				TPH									
16		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
17		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8									
18		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9									
19		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
20		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8									
21		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
22		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-912-4	206-44-0									
23		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-927-3	129-00-0									
24		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
29		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
31		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
32		Phenols, C9-11; Distillate Phenols			H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		648-127-00-6	293-435-2	91079-47-9									
										Total:	0.019 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Classification of sample: TP16

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP16
Sample Depth:
0.6 m
Moisture content:
10%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 10% No Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
2	pH			PH		8.2 pH		8.2 pH	8.2 pH		
3	boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		<0.4 mg/kg	23.173	<9.269 mg/kg	<0.000927 %		<**LOD**
4	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				1 mg/kg	1.884	1.884 mg/kg	0.000188 %		
5	arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		99 mg/kg	1.534	151.854 mg/kg	0.0152 %		
6	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		2.7 mg/kg	1.855	5.007 mg/kg	0.000501 %		
7	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		35 mg/kg	1.462	51.154 mg/kg	0.00512 %		
8	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		260 mg/kg	3.929	1021.554 mg/kg	0.102 %		
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.22 mg/kg	1.353	0.298 mg/kg	0.0000298 %		
10	nickel { nickel sulfide }	028-006-00-9	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]		24 mg/kg	1.546	37.112 mg/kg	0.00371 %		
11	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	440 mg/kg	1.56	686.319 mg/kg	0.044 %		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
12		selenium { selenium }				0.38	mg/kg		0.38	mg/kg	0.000038 %		
		034-001-00-2	231-957-4	7782-49-2									
13		zinc { zinc oxide }				660	mg/kg	1.245	821.511	mg/kg	0.0822 %		
		030-013-00-7	215-222-5	1314-13-2									
14		chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
15		TPH (C6 to C40) petroleum group				120	mg/kg		120	mg/kg	0.012 %		
				TPH									
16		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
17		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8									
18		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9									
19		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
20		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8									
21		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
22		fluoranthene				0.56	mg/kg		0.56	mg/kg	0.000056 %		
			205-912-4	206-44-0									
23		pyrene				0.62	mg/kg		0.62	mg/kg	0.000062 %		
			204-927-3	129-00-0									
24		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
29		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
31		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
32		Phenols, C9-11; Distillate Phenols			H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		648-127-00-6	293-435-2	91079-47-9									
										Total:	0.266 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No free phase hydrocarbons identified onsite

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.012%)

Classification of sample: TP16[2]

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample Name:
TP16[2]
Sample Depth:
1.3 m
Moisture content:
11%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1B; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

lead chromate: (Note 1 conc.: 0.1%)

Determinands

Moisture content: 11% No Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
2	pH			PH		8.5 pH		8.5 pH	8.5 pH		
3	boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		<0.4 mg/kg	23.173	<9.269 mg/kg	<0.000927 %		<**LOD**
4	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<**LOD**
5	arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		200 mg/kg	1.534	306.775 mg/kg	0.0307 %		
6	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.4 mg/kg	1.855	0.742 mg/kg	0.0000742 %		
7	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		12 mg/kg	1.462	17.539 mg/kg	0.00175 %		
8	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		280 mg/kg	3.929	1100.135 mg/kg	0.11 %		

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
9	mercury { mercury dichloride }				0.25	mg/kg	1.353	0.338	mg/kg	0.0000338 %		
	080-010-00-X	231-299-8	7487-94-7									
10	nickel { nickel sulfide }				16	mg/kg	1.546	24.741	mg/kg	0.00247 %		
	028-006-00-9	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]									
11	lead { lead chromate }			1	1000	mg/kg	1.56	1559.815	mg/kg	0.1 %		
	082-004-00-2	231-846-0	7758-97-6									
12	selenium { selenium }				0.58	mg/kg		0.58	mg/kg	0.000058 %		
	034-001-00-2	231-957-4	7782-49-2									
13	zinc { zinc oxide }				190	mg/kg	1.245	236.496	mg/kg	0.0236 %		
	030-013-00-7	215-222-5	1314-13-2									
14	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<**LOD**
	024-001-00-0	215-607-8	1333-82-0									
15	TPH (C6 to C40) petroleum group				89	mg/kg		89	mg/kg	0.0089 %		
			TPH									
16	naphthalene				0.68	mg/kg		0.68	mg/kg	0.000068 %		
	601-052-00-2	202-049-5	91-20-3									
17	acenaphthylene				0.19	mg/kg		0.19	mg/kg	0.000019 %		
		205-917-1	208-96-8									
18	acenaphthene				0.48	mg/kg		0.48	mg/kg	0.000048 %		
		201-469-6	83-32-9									
19	fluorene				0.4	mg/kg		0.4	mg/kg	0.00004 %		
		201-695-5	86-73-7									
20	phenanthrene				3.7	mg/kg		3.7	mg/kg	0.00037 %		
		201-581-5	85-01-8									
21	anthracene				0.99	mg/kg		0.99	mg/kg	0.000099 %		
		204-371-1	120-12-7									
22	fluoranthene				2.5	mg/kg		2.5	mg/kg	0.00025 %		
		205-912-4	206-44-0									
23	pyrene				3.3	mg/kg		3.3	mg/kg	0.00033 %		
		204-927-3	129-00-0									
24	benzo[a]anthracene				1.3	mg/kg		1.3	mg/kg	0.00013 %		
	601-033-00-9	200-280-6	56-55-3									
25	chrysene				1.6	mg/kg		1.6	mg/kg	0.00016 %		
	601-048-00-0	205-923-4	218-01-9									
26	benzo[b]fluoranthene				0.97	mg/kg		0.97	mg/kg	0.000097 %		
	601-034-00-4	205-911-9	205-99-2									
27	benzo[k]fluoranthene				0.25	mg/kg		0.25	mg/kg	0.000025 %		
	601-036-00-5	205-916-6	207-08-9									
28	benzo[a]pyrene; benzo[def]chrysene				0.96	mg/kg		0.96	mg/kg	0.000096 %		
	601-032-00-3	200-028-5	50-32-8									
29	indeno[123-cd]pyrene				0.59	mg/kg		0.59	mg/kg	0.000059 %		
		205-893-2	193-39-5									
30	dibenz[a,h]anthracene				0.18	mg/kg		0.18	mg/kg	0.000018 %		
	601-041-00-2	200-181-8	53-70-3									
31	benzo[ghi]perylene				0.64	mg/kg		0.64	mg/kg	0.000064 %		
		205-883-8	191-24-2									
32	Phenols, C9-11; Distillate Phenols			H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
	648-127-00-6	293-435-2	91079-47-9									
									Total:	0.281 %		

Key	
	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No free phase hydrocarbons identified onsite

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0089%)

Classification of sample: TP17

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP17
Sample Depth:
0.30 m
Moisture content:
13%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 13% No Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
2	pH			PH		8.3 pH		8.3 pH	8.3 pH		
3	boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		0.66 mg/kg	23.173	15.294 mg/kg	0.00153 %		
4	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<**LOD**
5	arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		47 mg/kg	1.534	72.092 mg/kg	0.00721 %		
6	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.39 mg/kg	1.855	0.723 mg/kg	0.0000723 %		
7	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		27 mg/kg	1.462	39.462 mg/kg	0.00395 %		
8	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		69 mg/kg	3.929	271.105 mg/kg	0.0271 %		
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.18 mg/kg	1.353	0.244 mg/kg	0.0000244 %		
10	nickel { nickel sulfide }	028-006-00-9	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]		39 mg/kg	1.546	60.306 mg/kg	0.00603 %		
11	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	160 mg/kg	1.56	249.57 mg/kg	0.016 %		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
12		selenium { selenium }				0.56	mg/kg		0.56	mg/kg	0.000056 %		
		034-001-00-2	231-957-4	7782-49-2									
13		zinc { zinc oxide }				130	mg/kg	1.245	161.813	mg/kg	0.0162 %		
		030-013-00-7	215-222-5	1314-13-2									
14		chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
15		TPH (C6 to C40) petroleum group				<2	mg/kg		<2	mg/kg	<0.0002 %		<LOD
				TPH									
16		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
17		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8									
18		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9									
19		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
20		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8									
21		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
22		fluoranthene				0.99	mg/kg		0.99	mg/kg	0.000099 %		
			205-912-4	206-44-0									
23		pyrene				0.94	mg/kg		0.94	mg/kg	0.000094 %		
			204-927-3	129-00-0									
24		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
29		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
31		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
32		Phenols, C9-11; Distillate Phenols			H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		648-127-00-6	293-435-2	91079-47-9									
										Total:	0.0789 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Classification of sample: TP18

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP18
Sample Depth:
1.00 m
Moisture content:
6.4%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 6.4% No Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
2	pH			PH		8.6 pH		8.6 pH	8.6 pH		
3	boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		<0.4 mg/kg	23.173	<9.269 mg/kg	<0.000927 %		<**LOD**
4	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<**LOD**
5	arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		11 mg/kg	1.534	16.873 mg/kg	0.00169 %		
6	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		<0.1 mg/kg	1.855	<0.185 mg/kg	<0.0000185 %		<**LOD**
7	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		14 mg/kg	1.462	20.462 mg/kg	0.00205 %		
8	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		18 mg/kg	3.929	70.723 mg/kg	0.00707 %		
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<**LOD**
10	nickel { nickel sulfide }	028-006-00-9	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]		16 mg/kg	1.546	24.741 mg/kg	0.00247 %		
11	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	36 mg/kg	1.56	56.153 mg/kg	0.0036 %		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
12		selenium { selenium }				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
		034-001-00-2	231-957-4	7782-49-2									
13		zinc { zinc oxide }				40	mg/kg	1.245	49.789	mg/kg	0.00498 %		
		030-013-00-7	215-222-5	1314-13-2									
14		chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
15		TPH (C6 to C40) petroleum group				<2	mg/kg		<2	mg/kg	<0.0002 %		<LOD
				TPH									
16		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
17		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8									
18		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9									
19		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
20		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8									
21		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
22		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-912-4	206-44-0									
23		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-927-3	129-00-0									
24		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
29		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
31		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
32		Phenols, C9-11; Distillate Phenols			H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		648-127-00-6	293-435-2	91079-47-9									
										Total:	0.0234 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Classification of sample: BH03

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
BH03
Sample Depth:
0.50 m
Moisture content:
7.1%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 7.1% No Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
2	pH			PH		8.5 pH		8.5 pH	8.5 pH		
3	boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		<0.4 mg/kg	23.173	<9.269 mg/kg	<0.000927 %		<**LOD**
4	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<**LOD**
5	arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		21 mg/kg	1.534	32.211 mg/kg	0.00322 %		
6	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.28 mg/kg	1.855	0.519 mg/kg	0.0000519 %		
7	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		25 mg/kg	1.462	36.539 mg/kg	0.00365 %		
8	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		39 mg/kg	3.929	153.233 mg/kg	0.0153 %		
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<**LOD**
10	nickel { nickel sulfide }	028-006-00-9	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]		69 mg/kg	1.546	106.696 mg/kg	0.0107 %		
11	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	91 mg/kg	1.56	141.943 mg/kg	0.0091 %		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
12		selenium { selenium }				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
		034-001-00-2	231-957-4	7782-49-2									
13		zinc { zinc oxide }				86	mg/kg	1.245	107.045	mg/kg	0.0107 %		
		030-013-00-7	215-222-5	1314-13-2									
14		chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
15		TPH (C6 to C40) petroleum group				<2	mg/kg		<2	mg/kg	<0.0002 %		<LOD
				TPH									
16		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
17		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8									
18		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9									
19		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
20		phenanthrene				0.53	mg/kg		0.53	mg/kg	0.000053 %		
			201-581-5	85-01-8									
21		anthracene				0.15	mg/kg		0.15	mg/kg	0.000015 %		
			204-371-1	120-12-7									
22		fluoranthene				0.67	mg/kg		0.67	mg/kg	0.000067 %		
			205-912-4	206-44-0									
23		pyrene				0.8	mg/kg		0.8	mg/kg	0.00008 %		
			204-927-3	129-00-0									
24		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
29		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
31		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
32		Phenols, C9-11; Distillate Phenols			H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		648-127-00-6	293-435-2	91079-47-9									
										Total:	0.0544 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Classification of sample: BH06

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
BH06
Sample Depth:
0.50 m
Moisture content:
18%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 18% No Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
2	pH			PH		8 pH		8 pH	8pH		
3	boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		2.4 mg/kg	23.173	55.615 mg/kg	0.00556 %		
4	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<**LOD**
5	arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		21 mg/kg	1.534	32.211 mg/kg	0.00322 %		
6	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.28 mg/kg	1.855	0.519 mg/kg	0.0000519 %		
7	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		35 mg/kg	1.462	51.154 mg/kg	0.00512 %		
8	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		24 mg/kg	3.929	94.297 mg/kg	0.00943 %		
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.1 mg/kg	1.353	0.135 mg/kg	0.0000135 %		
10	nickel { nickel sulfide }	028-006-00-9	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]		36 mg/kg	1.546	55.667 mg/kg	0.00557 %		
11	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	130 mg/kg	1.56	202.776 mg/kg	0.013 %		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
12		selenium { selenium }				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
		034-001-00-2	231-957-4	7782-49-2									
13		zinc { zinc oxide }				180	mg/kg	1.245	224.049	mg/kg	0.0224 %		
		030-013-00-7	215-222-5	1314-13-2									
14		chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
15		TPH (C6 to C40) petroleum group				<2	mg/kg		<2	mg/kg	<0.0002 %		<LOD
				TPH									
16		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
17		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8									
18		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9									
19		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
20		phenanthrene				0.14	mg/kg		0.14	mg/kg	0.000014 %		
			201-581-5	85-01-8									
21		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
22		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-912-4	206-44-0									
23		pyrene				0.1	mg/kg		0.1	mg/kg	0.00001 %		
			204-927-3	129-00-0									
24		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
29		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
31		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
32		Phenols, C9-11; Distillate Phenols			H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		648-127-00-6	293-435-2	91079-47-9									
										Total:	0.065 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Classification of sample: BH06[2]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
BH06[2]
Sample Depth:
2.00 m
Moisture content:
15%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 15% No Moisture Correction applied (MC)

#		Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1		asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
2		pH			PH		7.8 pH		7.8 pH	7.8 pH		
3		boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		0.92 mg/kg	23.173	21.319 mg/kg	0.00213 %		
4		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<**LOD**
5		arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		18 mg/kg	1.534	27.61 mg/kg	0.00276 %		
6		cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.21 mg/kg	1.855	0.389 mg/kg	0.0000389 %		
7		chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		30 mg/kg	1.462	43.847 mg/kg	0.00438 %		
8		copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		37 mg/kg	3.929	145.375 mg/kg	0.0145 %		
9		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.14 mg/kg	1.353	0.189 mg/kg	0.0000189 %		
10		nickel { nickel sulfide }	028-006-00-9	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]		53 mg/kg	1.546	81.955 mg/kg	0.0082 %		
11		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	88 mg/kg	1.56	137.264 mg/kg	0.0088 %		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
12		selenium { selenium }				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
		034-001-00-2	231-957-4	7782-49-2									
13		zinc { zinc oxide }				150	mg/kg	1.245	186.707	mg/kg	0.0187 %		
		030-013-00-7	215-222-5	1314-13-2									
14		chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
15		TPH (C6 to C40) petroleum group				120	mg/kg		120	mg/kg	0.012 %		
				TPH									
16		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
17		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8									
18		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9									
19		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
20		phenanthrene				0.59	mg/kg		0.59	mg/kg	0.000059 %		
			201-581-5	85-01-8									
21		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
22		fluoranthene				0.22	mg/kg		0.22	mg/kg	0.000022 %		
			205-912-4	206-44-0									
23		pyrene				0.32	mg/kg		0.32	mg/kg	0.000032 %		
			204-927-3	129-00-0									
24		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
29		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
31		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
32		Phenols, C9-11; Distillate Phenols			H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		648-127-00-6	293-435-2	91079-47-9									
										Total:	0.072 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No free phase hydrocarbons identified onsite

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.012%)

Classification of sample: BH09

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample Name:
BH09
Sample Depth:
0.50 m
Moisture content:
9.2%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1B; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

lead chromate: (Note 1 conc.: 0.21%)

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Hazard Statements hit:

Aquatic Chronic 1; H410 "Very toxic to aquatic life with long lasting effects."

Because of determinands:

copper sulphate pentahydrate: (compound conc.: 0.145%)
lead chromate: (Note 1 conc.: 0.21%)

Determinands

Moisture content: 9.2% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number							
1		asbestos				0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5							
2		pH				8.3 pH		8.3 pH	8.3 pH		
				PH							
3		boron { boron tribromide }				<0.4 mg/kg	23.173	<9.269 mg/kg	<0.000927 %		<**LOD**
		005-003-00-0	233-657-9	10294-33-4							
4		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<**LOD**
		006-007-00-5									

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
5	arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		320	mg/kg	1.534	490.84	mg/kg	0.0491 %		
6	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		1.4	mg/kg	1.855	2.596	mg/kg	0.00026 %		
7	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		22	mg/kg	1.462	32.154	mg/kg	0.00322 %		
8	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		370	mg/kg	3.929	1453.75	mg/kg	0.145 %		
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.5	mg/kg	1.353	0.677	mg/kg	0.0000677 %		
10	nickel { nickel sulfide }	028-006-00-9	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]		27	mg/kg	1.546	41.75	mg/kg	0.00418 %		
11	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	2100	mg/kg	1.56	3275.612	mg/kg	0.21 %		
12	selenium { selenium }	034-001-00-2	231-957-4	7782-49-2		0.97	mg/kg		0.97	mg/kg	0.000097 %		
13	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		340	mg/kg	1.245	423.203	mg/kg	0.0423 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<**LOD**
15	TPH (C6 to C40) petroleum group			TPH		<2	mg/kg		<2	mg/kg	<0.0002 %		<**LOD**
16	naphthalene	601-052-00-2	202-049-5	91-20-3		0.19	mg/kg		0.19	mg/kg	0.000019 %		
17	acenaphthylene		205-917-1	208-96-8		0.22	mg/kg		0.22	mg/kg	0.000022 %		
18	acenaphthene		201-469-6	83-32-9		0.26	mg/kg		0.26	mg/kg	0.000026 %		
19	fluorene		201-695-5	86-73-7		0.3	mg/kg		0.3	mg/kg	0.00003 %		
20	phenanthrene		201-581-5	85-01-8		3.2	mg/kg		3.2	mg/kg	0.00032 %		
21	anthracene		204-371-1	120-12-7		1	mg/kg		1	mg/kg	0.0001 %		
22	fluoranthene		205-912-4	206-44-0		3.1	mg/kg		3.1	mg/kg	0.00031 %		
23	pyrene		204-927-3	129-00-0		3	mg/kg		3	mg/kg	0.0003 %		
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		1.3	mg/kg		1.3	mg/kg	0.00013 %		
25	chrysene	601-048-00-0	205-923-4	218-01-9		1.2	mg/kg		1.2	mg/kg	0.00012 %		
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		1.7	mg/kg		1.7	mg/kg	0.00017 %		
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		1.1	mg/kg		1.1	mg/kg	0.00011 %		
29	indeno[123-cd]pyrene		205-893-2	193-39-5		0.66	mg/kg		0.66	mg/kg	0.000066 %		
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		0.1	mg/kg		0.1	mg/kg	0.00001 %		
31	benzo[ghi]perylene		205-883-8	191-24-2		0.75	mg/kg		0.75	mg/kg	0.000075 %		
32	Phenols, C9-11; Distillate Phenols	648-127-00-6	293-435-2	91079-47-9	H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number							
								Total:	0.458 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Classification of sample: BH10

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample Name:
BH10
Sample Depth:
0.50 m
Moisture content:
10%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous property to hazardous because No free phase hydrocarbons identified onsite

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.081%)

Determinands

Moisture content: 10% No Moisture Correction applied (MC)

#		Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001	mg/kg		0.0001	mg/kg	0.00000001 %		
2		pH			PH		8.3	pH		8.3	pH	8.3 pH		
3		boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		0.58	mg/kg	23.173	13.44	mg/kg	0.00134 %		
4		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5	mg/kg	1.884	<0.942	mg/kg	<0.0000942 %		<**LOD**
5		arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		11	mg/kg	1.534	16.873	mg/kg	0.00169 %		
6		cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.11	mg/kg	1.855	0.204	mg/kg	0.0000204 %		
7		chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		18	mg/kg	1.462	26.308	mg/kg	0.00263 %		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
8		copper { copper sulphate pentahydrate }				23	mg/kg	3.929	90.368	mg/kg	0.00904 %		
		029-023-00-4	231-847-6	7758-99-8									
9		mercury { mercury dichloride }				<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
10		nickel { nickel sulfide }				52	mg/kg	1.546	80.408	mg/kg	0.00804 %		
		028-006-00-9	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]									
11		lead { lead chromate }			1	36	mg/kg	1.56	56.153	mg/kg	0.0036 %		
		082-004-00-2	231-846-0	7758-97-6									
12		selenium { selenium }				0.27	mg/kg		0.27	mg/kg	0.000027 %		
		034-001-00-2	231-957-4	7782-49-2									
13		zinc { zinc oxide }				45	mg/kg	1.245	56.012	mg/kg	0.0056 %		
		030-013-00-7	215-222-5	1314-13-2									
14		chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
15		TPH (C6 to C40) petroleum group				810	mg/kg		810	mg/kg	0.081 %		
				TPH									
16		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
17		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8									
18		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9									
19		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
20		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8									
21		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
22		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-912-4	206-44-0									
23		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-927-3	129-00-0									
24		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
29		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
31		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
32		Phenols, C9-11; Distillate Phenols			H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		648-127-00-6	293-435-2	91079-47-9									
										Total:	0.113 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Classification of sample: BH11

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
BH11
Sample Depth:
0.50 m
Moisture content:
7.7%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 7.7% No Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
2	pH			PH		9.2 pH		9.2 pH	9.2 pH		
3	boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		2.8 mg/kg	23.173	64.884 mg/kg	0.00649 %		
4	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<**LOD**
5	arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		58 mg/kg	1.534	88.965 mg/kg	0.0089 %		
6	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.41 mg/kg	1.855	0.76 mg/kg	0.000076 %		
7	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		18 mg/kg	1.462	26.308 mg/kg	0.00263 %		
8	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		130 mg/kg	3.929	510.777 mg/kg	0.0511 %		
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.11 mg/kg	1.353	0.149 mg/kg	0.0000149 %		
10	nickel { nickel sulfide }	028-006-00-9	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]		43 mg/kg	1.546	66.491 mg/kg	0.00665 %		
11	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	270 mg/kg	1.56	421.15 mg/kg	0.027 %		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
12		selenium { selenium }				0.48	mg/kg		0.48	mg/kg	0.000048 %		
		034-001-00-2	231-957-4	7782-49-2									
13		zinc { zinc oxide }				120	mg/kg	1.245	149.366	mg/kg	0.0149 %		
		030-013-00-7	215-222-5	1314-13-2									
14		chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
15		TPH (C6 to C40) petroleum group				<2	mg/kg		<2	mg/kg	<0.0002 %		<LOD
				TPH									
16		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
17		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8									
18		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9									
19		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
20		phenanthrene				0.17	mg/kg		0.17	mg/kg	0.000017 %		
			201-581-5	85-01-8									
21		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
22		fluoranthene				0.15	mg/kg		0.15	mg/kg	0.000015 %		
			205-912-4	206-44-0									
23		pyrene				0.13	mg/kg		0.13	mg/kg	0.000013 %		
			204-927-3	129-00-0									
24		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
29		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
31		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
32		Phenols, C9-11; Distillate Phenols			H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		648-127-00-6	293-435-2	91079-47-9									
										Total:	0.118 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Classification of sample: BH12

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
BH12
Sample Depth:
0.50 m
Moisture content:
9.1%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 9.1% No Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
2	pH			PH		8.4 pH		8.4 pH	8.4 pH		
3	boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		0.96 mg/kg	23.173	22.246 mg/kg	0.00222 %		
4	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
5	arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		7.1 mg/kg	1.534	10.891 mg/kg	0.00109 %		
6	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.14 mg/kg	1.855	0.26 mg/kg	0.000026 %		
7	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		20 mg/kg	1.462	29.231 mg/kg	0.00292 %		
8	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		18 mg/kg	3.929	70.723 mg/kg	0.00707 %		
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
10	nickel { nickel sulfide }	028-006-00-9	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]		29 mg/kg	1.546	44.843 mg/kg	0.00448 %		
11	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	17 mg/kg	1.56	26.517 mg/kg	0.0017 %		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
12		selenium { selenium }				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
		034-001-00-2	231-957-4	7782-49-2									
13		zinc { zinc oxide }				42	mg/kg	1.245	52.278	mg/kg	0.00523 %		
		030-013-00-7	215-222-5	1314-13-2									
14		chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
15		TPH (C6 to C40) petroleum group				<2	mg/kg		<2	mg/kg	<0.0002 %		<LOD
				TPH									
16		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
17		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8									
18		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9									
19		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
20		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8									
21		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
22		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-912-4	206-44-0									
23		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-927-3	129-00-0									
24		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
29		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
31		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
32		Phenols, C9-11; Distillate Phenols			H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		648-127-00-6	293-435-2	91079-47-9									
										Total:	0.0254 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Classification of sample: BH13

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
BH13
Sample Depth:
0.50 m
Moisture content:
3.5%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 3.5% No Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
2	pH			PH		9.6 pH		9.6 pH	9.6 pH		
3	boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		0.43 mg/kg	23.173	9.964 mg/kg	0.000996 %		
4	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
5	arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		4.6 mg/kg	1.534	7.056 mg/kg	0.000706 %		
6	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		<0.1 mg/kg	1.855	<0.185 mg/kg	<0.0000185 %		<LOD
7	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		32 mg/kg	1.462	46.77 mg/kg	0.00468 %		
8	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		64 mg/kg	3.929	251.459 mg/kg	0.0251 %		
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
10	nickel { nickel sulfide }	028-006-00-9	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]		250 mg/kg	1.546	386.578 mg/kg	0.0387 %		
11	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	8.8 mg/kg	1.56	13.726 mg/kg	0.00088 %		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
12		selenium { selenium }				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
		034-001-00-2	231-957-4	7782-49-2									
13		zinc { zinc oxide }				94	mg/kg	1.245	117.003	mg/kg	0.0117 %		
		030-013-00-7	215-222-5	1314-13-2									
14		chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
15		TPH (C6 to C40) petroleum group				<2	mg/kg		<2	mg/kg	<0.0002 %		<LOD
				TPH									
16		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
17		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8									
18		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9									
19		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
20		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8									
21		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
22		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-912-4	206-44-0									
23		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-927-3	129-00-0									
24		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
29		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
31		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
32		Phenols, C9-11; Distillate Phenols			H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		648-127-00-6	293-435-2	91079-47-9									
										Total:	0.0834 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Classification of sample: BH13[2]

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample Name:	LoW Code:	
BH13[2]	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:		
1.00 m	Entry:	17 05 03 * (Soil and stones containing hazardous substances)
Moisture content:		
13% (no correction)		

Hazard properties

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to hazardous because No free phase hydrocarbons identified onsite

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.027%)

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1A; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

arsenic pentoxide: (compound conc.: 0.23%)

Carc. 1B; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

lead chromate: (Note 1 conc.: 1.3%)

HP 10: Toxic for reproduction "waste which has adverse effects on sexual function and fertility in adult males and females, as well as developmental toxicity in the offspring"

Hazard Statements hit:

Repr. 1A; H360Df "May damage the unborn child. Suspected of damaging fertility."

Because of determinand:

lead chromate: (Note 1 conc.: 1.3%)

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Hazard Statements hit:

Aquatic Chronic 1; H410 "Very toxic to aquatic life with long lasting effects."

Because of determinands:

arsenic pentoxide: (compound conc.: 0.23%)
copper sulphate pentahydrate: (compound conc.: 1.022%)
lead chromate: (Note 1 conc.: 1.3%)
zinc oxide: (compound conc.: 0.137%)

Determinands

Moisture content: 13% No Moisture Correction applied (MC)

#		Determinand	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		CLP index number / EC Number / CAS Number							
1		asbestos 650-013-00-6 / - - - - - - - / 12001-28-4, 132207-32-0, 12172-73-5, 77536-66-4, 77536-68-6, 77536-67-5, 12001-29-5		0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
2		pH PH		8.5 pH		8.5 pH	8.5 pH		
3		boron { boron tribromide } 005-003-00-0 / 233-657-9 / 10294-33-4		<0.4 mg/kg	23.173	<9.269 mg/kg	<0.000927 %		<LOD
4		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex } 006-007-00-5		<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
5		arsenic { arsenic pentoxide } 033-004-00-6 / 215-116-9 / 1303-28-2		1500 mg/kg	1.534	2300.814 mg/kg	0.23 %		
6		cadmium { cadmium sulfate } 048-009-00-9 / 233-331-6 / 10124-36-4		3.4 mg/kg	1.855	6.306 mg/kg	0.000631 %		
7		chromium in chromium(III) compounds { chromium(III) oxide } 215-160-9 / 1308-38-9		13 mg/kg	1.462	19 mg/kg	0.0019 %		
8		copper { copper sulphate pentahydrate } 029-023-00-4 / 231-847-6 / 7758-99-8		2600 mg/kg	3.929	10215.538 mg/kg	1.022 %		
9		mercury { mercury dichloride } 080-010-00-X / 231-299-8 / 7487-94-7		0.65 mg/kg	1.353	0.88 mg/kg	0.000088 %		
10		nickel { nickel sulfide } 028-006-00-9 / 240-841-2 [1], 234-349-7 [2] - [3] / 16812-54-7 [1], 11113-75-0 [2], 1314-04-1 [3]		21 mg/kg	1.546	32.473 mg/kg	0.00325 %		
11		lead { lead chromate } 082-004-00-2 / 231-846-0 / 7758-97-6	1	13000 mg/kg	1.56	20277.597 mg/kg	1.3 %		
12		selenium { selenium } 034-001-00-2 / 231-957-4 / 7782-49-2		6.1 mg/kg		6.1 mg/kg	0.00061 %		
13		zinc { zinc oxide } 030-013-00-7 / 215-222-5 / 1314-13-2		1100 mg/kg	1.245	1369.185 mg/kg	0.137 %		
14		chromium in chromium(VI) compounds { chromium(VI) oxide } 024-001-00-0 / 215-607-8 / 1333-82-0		<0.5 mg/kg	1.923	<0.962 mg/kg	<0.0000962 %		<LOD
15		TPH (C6 to C40) petroleum group TPH		270 mg/kg		270 mg/kg	0.027 %		
16		naphthalene 601-052-00-2 / 202-049-5 / 91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
17		acenaphthylene 205-917-1 / 208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
18		acenaphthene 201-469-6 / 83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
19		fluorene 201-695-5 / 86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
20		phenanthrene 201-581-5 / 85-01-8		6.7 mg/kg		6.7 mg/kg	0.00067 %		
21		anthracene 204-371-1 / 120-12-7		2 mg/kg		2 mg/kg	0.0002 %		
22		fluoranthene 205-912-4 / 206-44-0		5.8 mg/kg		5.8 mg/kg	0.00058 %		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
23		pyrene				5.5	mg/kg		5.5	mg/kg	0.00055 %		
			204-927-3	129-00-0									
24		benzo[a]anthracene				3.1	mg/kg		3.1	mg/kg	0.00031 %		
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				2.7	mg/kg		2.7	mg/kg	0.00027 %		
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				1.9	mg/kg		1.9	mg/kg	0.00019 %		
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				0.9	mg/kg		0.9	mg/kg	0.00009 %		
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				2	mg/kg		2	mg/kg	0.0002 %		
		601-032-00-3	200-028-5	50-32-8									
29		indeno[123-cd]pyrene				1.1	mg/kg		1.1	mg/kg	0.00011 %		
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				0.19	mg/kg		0.19	mg/kg	0.000019 %		
		601-041-00-2	200-181-8	53-70-3									
31		benzo[ghi]perylene				0.97	mg/kg		0.97	mg/kg	0.000097 %		
			205-883-8	191-24-2									
32		Phenols, C9-11; Distillate Phenols			H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
		648-127-00-6	293-435-2	91079-47-9									
										Total:	2.727 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Classification of sample: TP04[2]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP04[2]
Sample Depth:
0.40 m
Moisture content:
21%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 21% No Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
2	pH			PH		7.8 pH		7.8 pH	7.8 pH		
3	boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		1.1 mg/kg	23.173	25.49 mg/kg	0.00255 %		
4	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				1.9 mg/kg	1.884	3.58 mg/kg	0.000358 %		
5	arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		44 mg/kg	1.534	67.491 mg/kg	0.00675 %		
6	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.97 mg/kg	1.855	1.799 mg/kg	0.00018 %		
7	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		21 mg/kg	1.462	30.693 mg/kg	0.00307 %		
8	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		57 mg/kg	3.929	223.956 mg/kg	0.0224 %		
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.6 mg/kg	1.353	0.812 mg/kg	0.0000812 %		
10	nickel { nickel sulfide }	028-006-00-9	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]		25 mg/kg	1.546	38.658 mg/kg	0.00387 %		
11	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	370 mg/kg	1.56	577.132 mg/kg	0.037 %		

#		Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
12		selenium { selenium }	034-001-00-2	231-957-4	7782-49-2		0.32	mg/kg		0.32	mg/kg	0.000032 %		
13		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		390	mg/kg	1.245	485.438	mg/kg	0.0485 %		
14		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
15		TPH (C6 to C40) petroleum group			TPH		86	mg/kg		86	mg/kg	0.0086 %		
16		naphthalene	601-052-00-2	202-049-5	91-20-3		0.14	mg/kg		0.14	mg/kg	0.000014 %		
17		acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
18		acenaphthene		201-469-6	83-32-9		0.38	mg/kg		0.38	mg/kg	0.000038 %		
19		fluorene		201-695-5	86-73-7		0.35	mg/kg		0.35	mg/kg	0.000035 %		
20		phenanthrene		201-581-5	85-01-8		4.4	mg/kg		4.4	mg/kg	0.00044 %		
21		anthracene		204-371-1	120-12-7		0.19	mg/kg		0.19	mg/kg	0.000019 %		
22		fluoranthene		205-912-4	206-44-0		6.1	mg/kg		6.1	mg/kg	0.00061 %		
23		pyrene		204-927-3	129-00-0		6	mg/kg		6	mg/kg	0.0006 %		
24		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		3.9	mg/kg		3.9	mg/kg	0.00039 %		
25		chrysene	601-048-00-0	205-923-4	218-01-9		3.2	mg/kg		3.2	mg/kg	0.00032 %		
26		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		3.4	mg/kg		3.4	mg/kg	0.00034 %		
27		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		1.6	mg/kg		1.6	mg/kg	0.00016 %		
28		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		3.1	mg/kg		3.1	mg/kg	0.00031 %		
29		indeno[123-cd]pyrene		205-893-2	193-39-5		1.2	mg/kg		1.2	mg/kg	0.00012 %		
30		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		0.24	mg/kg		0.24	mg/kg	0.000024 %		
31		benzo[ghi]perylene		205-883-8	191-24-2		1.8	mg/kg		1.8	mg/kg	0.00018 %		
32		Phenols, C9-11; Distillate Phenols	648-127-00-6	293-435-2	91079-47-9	H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
											Total:	0.137 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No free phase hydrocarbons identified onsite

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0086%)

Classification of sample: TP05[3]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP05[3]
Sample Depth:
1.40 m
Moisture content:
6%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 6% No Moisture Correction applied (MC)

#		Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1		asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		0.0001 mg/kg		0.0001 mg/kg	0.00000001 %		
2		pH			PH		8.7 pH		8.7 pH	8.7 pH		
3		boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		<0.4 mg/kg	23.173	<9.269 mg/kg	<0.000927 %		<**LOD**
4		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<**LOD**
5		arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		8.4 mg/kg	1.534	12.885 mg/kg	0.00129 %		
6		cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		<0.1 mg/kg	1.855	<0.185 mg/kg	<0.0000185 %		<**LOD**
7		chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		16 mg/kg	1.462	23.385 mg/kg	0.00234 %		
8		copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		4.6 mg/kg	3.929	18.074 mg/kg	0.00181 %		
9		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<**LOD**
10		nickel { nickel sulfide }	028-006-00-9	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]		22 mg/kg	1.546	34.019 mg/kg	0.0034 %		
11		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	10 mg/kg	1.56	15.598 mg/kg	0.001 %		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
12		selenium { selenium }				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
		034-001-00-2	231-957-4	7782-49-2									
13		zinc { zinc oxide }				34	mg/kg	1.245	42.32	mg/kg	0.00423 %		
		030-013-00-7	215-222-5	1314-13-2									
14		chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
15		TPH (C6 to C40) petroleum group				<2	mg/kg		<2	mg/kg	<0.0002 %		<LOD
				TPH									
16		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
17		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8									
18		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9									
19		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
20		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8									
21		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
22		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-912-4	206-44-0									
23		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-927-3	129-00-0									
24		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
29		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
31		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
32		Phenols, C9-11; Distillate Phenols			H, J, M	<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		648-127-00-6	293-435-2	91079-47-9									
										Total:	0.0156 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification
CLP: Note H	Known incomplete entry, should not be used as is

Appendix A: Classifier defined and non CLP determinands

pH (CAS Number: PH)

Description/Comments: Appendix C4
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: None.

salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex

CLP index number: 006-007-00-5
Description/Comments: Conversion factor based on a worst case compound: sodium cyanide
Data source: Commission Regulation (EC) No 790/2009 - 1st Adaptation to Technical Progress for Regulation (EC) No 1272/2008. (ATP1)
Additional Hazard Statement(s): EUH032 >= 0.2 %
Reason for additional Hazards Statement(s)/Risk Phrase(s):
14 Dec 2015 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

chromium(III) oxide (EC Number: 215-160-9, CAS Number: 1308-38-9)

Conversion factor: 1.462
Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Repr. 1B H360FD , Skin Sens. 1 H317 , Resp. Sens. 1 H334 , Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Acute Tox. 4 H302 , Acute Tox. 4 H332

TPH (C6 to C40) petroleum group (CAS Number: TPH)

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: Aquatic Chronic 2 H411 , Repr. 2 H361d , Carc. 1B H350 , Muta. 1B H340 , STOT RE 2 H373 , Asp. Tox. 1 H304 , Flam. Liq. 3 H226

acenaphthylene (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Acute Tox. 1 H310 , Acute Tox. 1 H330 , Acute Tox. 4 H302

acenaphthene (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Aquatic Chronic 2 H411 , Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319

fluorene (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400

phenanthrene (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Skin Irrit. 2 H315 , Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Skin Sens. 1 H317 , Carc. 2 H351 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Acute Tox. 4 H302

anthracene (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Skin Sens. 1 H317 , Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319

- **fluoranthene** (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 21 Aug 2015
Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Acute Tox. 4 H302

- **pyrene** (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 21 Aug 2015
Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Skin Irrit. 2 H315

- **indeno[123-cd]pyrene** (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Carc. 2 H351

- **benzo[ghi]perylene** (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 23 Jul 2015
Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400

Appendix B: Rationale for selection of metal species

boron {boron tribromide}

Worst Case Selected

cyanides {salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex}

Worst Case Selected

arsenic {arsenic pentoxide}

Worst case species

cadmium {cadmium sulfate}

Assumed worst case based on likely contaminants

chromium in chromium(III) compounds {chromium(III) oxide}

Worst case species

copper {copper sulphate pentahydrate}

Assumed worst case based on expected contaminants

mercury {mercury dichloride}

Assumed likely form of mercury compound

nickel {nickel sulfide}

Assumed likely form of contaminant

lead {lead chromate}

Worst case species

selenium {selenium}

Worst case species

zinc {zinc oxide}

Worst case species

chromium in chromium(VI) compounds {chromium(VI) oxide}

Worst case species

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.1, May 2018
HazWasteOnline Classification Engine Version: 2019.152.3882.7895 (01 Jun 2019)
HazWasteOnline Database: 2019.152.3882.7895 (01 Jun 2019)

This classification utilises the following guidance and legislation:
WM3 v1.1 - Waste Classification - 1st Edition v1.1 - May 2018
CLP Regulation - Regulation 1272/2008/EC of 16 December 2008
1st ATP - Regulation 790/2009/EC of 10 August 2009
2nd ATP - Regulation 286/2011/EC of 10 March 2011
3rd ATP - Regulation 618/2012/EU of 10 July 2012
4th ATP - Regulation 487/2013/EU of 8 May 2013
Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013
5th ATP - Regulation 944/2013/EU of 2 October 2013
6th ATP - Regulation 605/2014/EU of 5 June 2014
WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014
Revised List of Wastes 2014 - Decision 2014/955/EU of 18 December 2014
7th ATP - Regulation 2015/1221/EU of 24 July 2015
8th ATP - Regulation (EU) 2016/918 of 19 May 2016
9th ATP - Regulation (EU) 2016/1179 of 19 July 2016
10th ATP - Regulation (EU) 2017/776 of 4 May 2017
HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017
13th ATP - Regulation (EU) 2018/1480 of 4 October 2018
POPs Regulation 2004 - Regulation 850/2004/EC of 29 April 2004
1st ATP to POPs Regulation - Regulation 756/2010/EU of 24 August 2010
2nd ATP to POPs Regulation - Regulation 757/2010/EU of 24 August 2010

Appendix 15

Geo-technical Results

LABORATORY TEST CERTIFICATE

10 Queenslie Point
Queenslie Industrial Estate
120 Stepps Road
Glasgow
G33 3NQ

Tel: 0141 774 4032

email: info@mattest.org
Website: www.mattest.org

Certificate No : **19/370 - 01**

To : **Heather Scott**

Client : **Mason Evans Partnership**
The Piazza
95 Morrison Street
Glasgow
G5 8BE

Dear Sirs,

LABORATORY TESTING OF SOIL

Introduction

We refer to samples taken from Beach Drive, Irvine and delivered to our laboratory on 18th March 2019.

Material & Source

Sample Reference	:	See Report Plates
Sampled By	:	Client
Sampling Certificate	:	Not Supplied
Location	:	See Report Plates
Description	:	See Page 2
Date Sampled	:	Not Supplied
Date Tested	:	18th March 2019 Onwards
Source	:	Beach Drive, Irvine

Test Results;

As Detailed On Page 2 to Page 10 inclusive

Comments;

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation
This report should not be reproduced except in full without the written approval of the laboratory
All remaining samples for this project will be disposed of 28 days after issue of this test certificate

Remarks;

Approved for Issue

T McLelland (Director)

Date 25/03/2019

2643

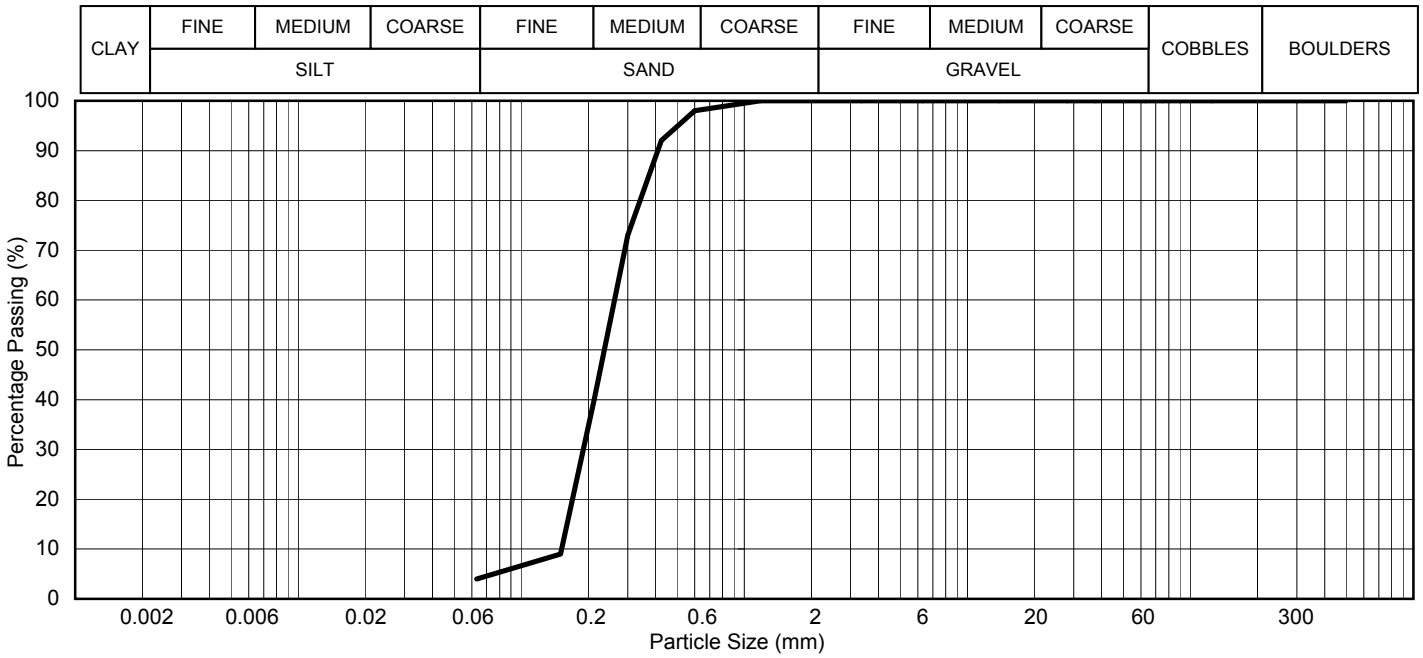
BOREHOLE	SAMPLE	DEPTH (m)	SAMPLE DESCRIPTION
BH01	U	1.00-1.90	Brown fine to coarse SAND.
BH02	U(B)	2.00-3.00	Brown slightly gravelly fine to coarse SAND. Gravel is fine to medium.
BH04	U(B)	3.00-4.00	Brown slightly gravelly fine to coarse SAND. Gravel is fine to medium.
BH05	U(B)	1.00-2.00	Brown slightly gravelly fine to coarse SAND with pockets of clay. Gravel is fine to medium.
BH07	U(B)	2.00-3.00	Brown slightly gravelly fine to coarse SAND with pockets of clay. Gravel is fine to medium.
BH10	U(B)	3.00-4.00	Brown gravelly fine to coarse SAND. Gravel is fine to coarse.
BH11	U(B)	2.00-3.00	Brown gravelly fine to coarse SAND. Gravel is fine to coarse.
BH12	U(B)	1.00-2.00	Mottled brown fine to coarse SAND and GRAVEL.

SUMMARY OF SAMPLE DESCRIPTIONS

MASON EVANS PARTNERSHIP
BEACH DRIVE, IRVINE

MATtest Limited
materials testing & consultancy

Borehole	BH01
Sample	U
Depth (m)	1.00-1.90



SIEVING				SEDIMENTATION	
Sieve Size (mm)	Percentage Passing (%)	Specification Not Applicable Lower %	Specification Not Applicable Upper %	Particle Size (mm)	Percentage Passing (%)
500.0	100	-	-	0.020	
300.0	100	-	-	0.006	
125.0	100	-	-	0.002	
90.0	100	-	-		
75.0	100	-	-		
63.0	100	-	-		
50.0	100	-	-		
37.5	100	-	-		
28.0	100	-	-		
20.0	100	-	-		
14.0	100	-	-		
10.0	100	-	-		
6.30	100	-	-		
5.00	100	-	-		
3.35	100	-	-		
2.00	100	-	-		
1.18	100	-	-		
0.600	98	-	-		
0.425	92	-	-		
0.300	73	-	-		
0.212	40	-	-		
0.150	9	-	-		
0.063	4	-	-		

GRADING CLASSIFICATION (SHW TABLE 6/2)

-

Grading classification proves the material has met the relevant grading requirements only. Further testing may be required to assess compliance with SHW.

PERCENTAGE SOIL TYPES

CLAY	SILT Ŧ	SAND	GRAVEL	COBBLES
/	4	96	0	0

UNIFORMITY COEFFICIENT (SHW TABLE 6/1 NOTE 5)

D10	D60	Specification
-	-	
UNIFORMITY COEFFICIENT	-	-

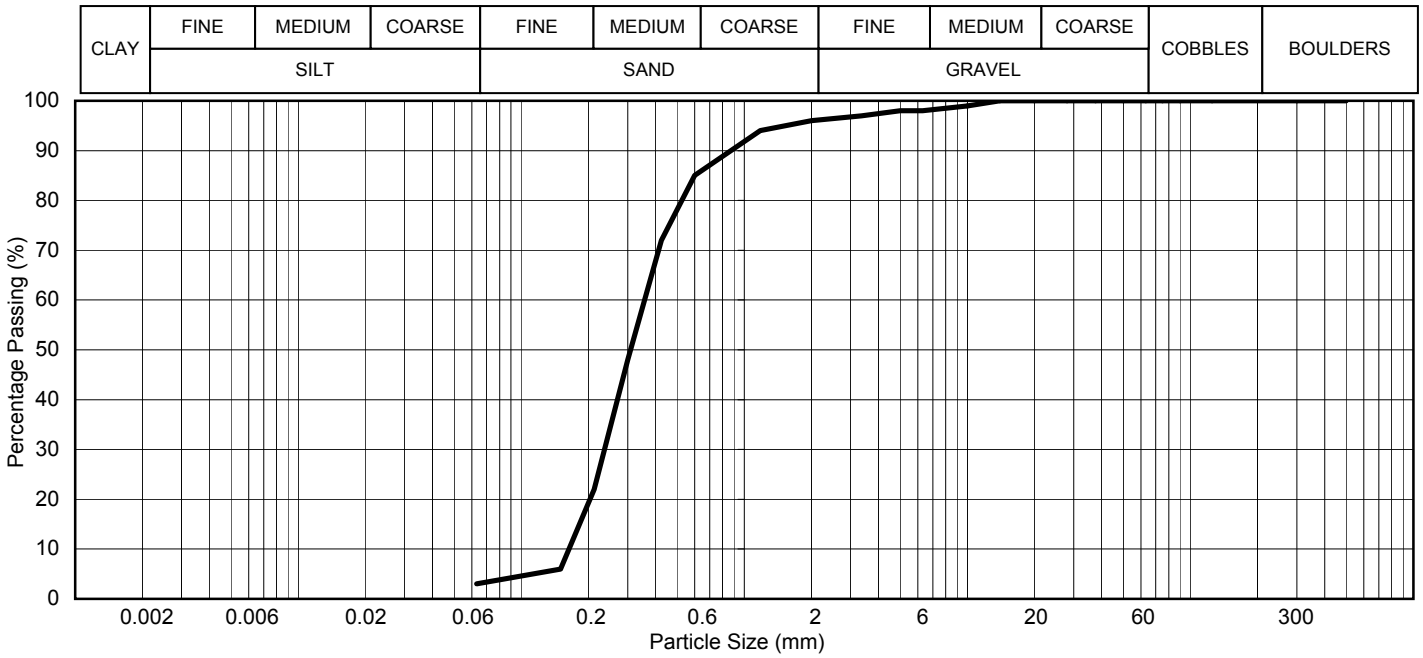
Remarks

Ŧ Where a sedimentation test was not carried out, this figure represents total fines, i.e., particles of diameter less than 63 microns

MASON EVANS PARTNERSHIP
BEACH DRIVE, IRVINE

MATtest Limited
materials testing & consultancy

Borehole	BH02
Sample	U(B)
Depth (m)	2.00-3.00



SIEVING				SEDIMENTATION	
Sieve Size (mm)	Percentage Passing (%)	Specification Not Applicable Lower %	Specification Not Applicable Upper %	Particle Size (mm)	Percentage Passing (%)
500.0	100	-	-	0.020	
300.0	100	-	-	0.006	
125.0	100	-	-	0.002	
90.0	100	-	-		
75.0	100	-	-		
63.0	100	-	-		
50.0	100	-	-		
37.5	100	-	-		
28.0	100	-	-		
20.0	100	-	-		
14.0	100	-	-		
10.0	99	-	-		
6.30	98	-	-		
5.00	98	-	-		
3.35	97	-	-		
2.00	96	-	-		
1.18	94	-	-		
0.600	85	-	-		
0.425	72	-	-		
0.300	48	-	-		
0.212	22	-	-		
0.150	6	-	-		
0.063	3	-	-		

GRADING CLASSIFICATION (SHW TABLE 6/2)

-

Grading classification proves the material has met the relevant grading requirements only. Further testing may be required to assess compliance with SHW.

PERCENTAGE SOIL TYPES

CLAY	SILT ₸	SAND	GRAVEL	COBBLES
/	3	93	4	0

UNIFORMITY COEFFICIENT (SHW TABLE 6/1 NOTE 5)

D10	D60	Specification
-	-	
UNIFORMITY COEFFICIENT	-	-

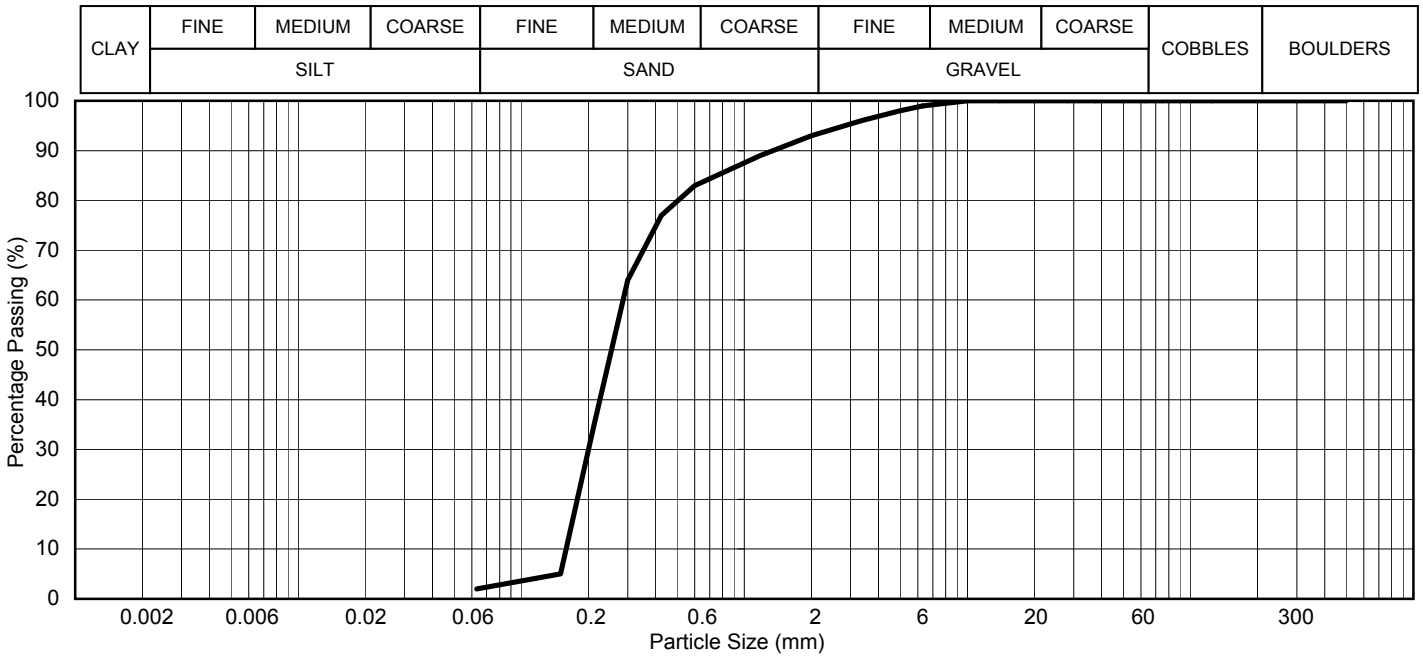
Remarks

₸ Where a sedimentation test was not carried out, this figure represents total fines, i.e., particles of diameter less than 63 microns

MASON EVANS PARTNERSHIP
BEACH DRIVE, IRVINE

MATtest Limited
materials testing & consultancy

Borehole	BH04
Sample	U(B)
Depth (m)	3.00-4.00



SIEVING				SEDIMENTATION	
Sieve Size (mm)	Percentage Passing (%)	Specification Not Applicable		Particle Size (mm)	Percentage Passing (%)
		Lower %	Upper %		
500.0	100	-	-	0.020	
300.0	100	-	-	0.006	
125.0	100	-	-	0.002	
90.0	100	-	-		
75.0	100	-	-	**GRADING CLASSIFICATION (SHW TABLE 6/2)**	
63.0	100	-	-	-	
50.0	100	-	-		
37.5	100	-	-	Grading classification proves the material has met the relevant grading requirements only. Further testing may be required to assess compliance with SHW.	
28.0	100	-	-		
20.0	100	-	-		
14.0	100	-	-		
10.0	100	-	-	**PERCENTAGE SOIL TYPES**	
6.30	99	-	-		
5.00	98	-	-		
3.35	96	-	-		
2.00	93	-	-		
1.18	89	-	-	**UNIFORMITY COEFFICIENT (SHW TABLE 6/1 NOTE 5)**	
0.600	83	-	-		
0.425	77	-	-		
0.300	64	-	-		
0.212	35	-	-		
0.150	5	-	-		
0.063	2	-	-		

CLAY	SILT ₸	SAND	GRAVEL	COBBLES
/	2	91	7	0

D10	D60	Specification
-	-	
UNIFORMITY COEFFICIENT	-	-

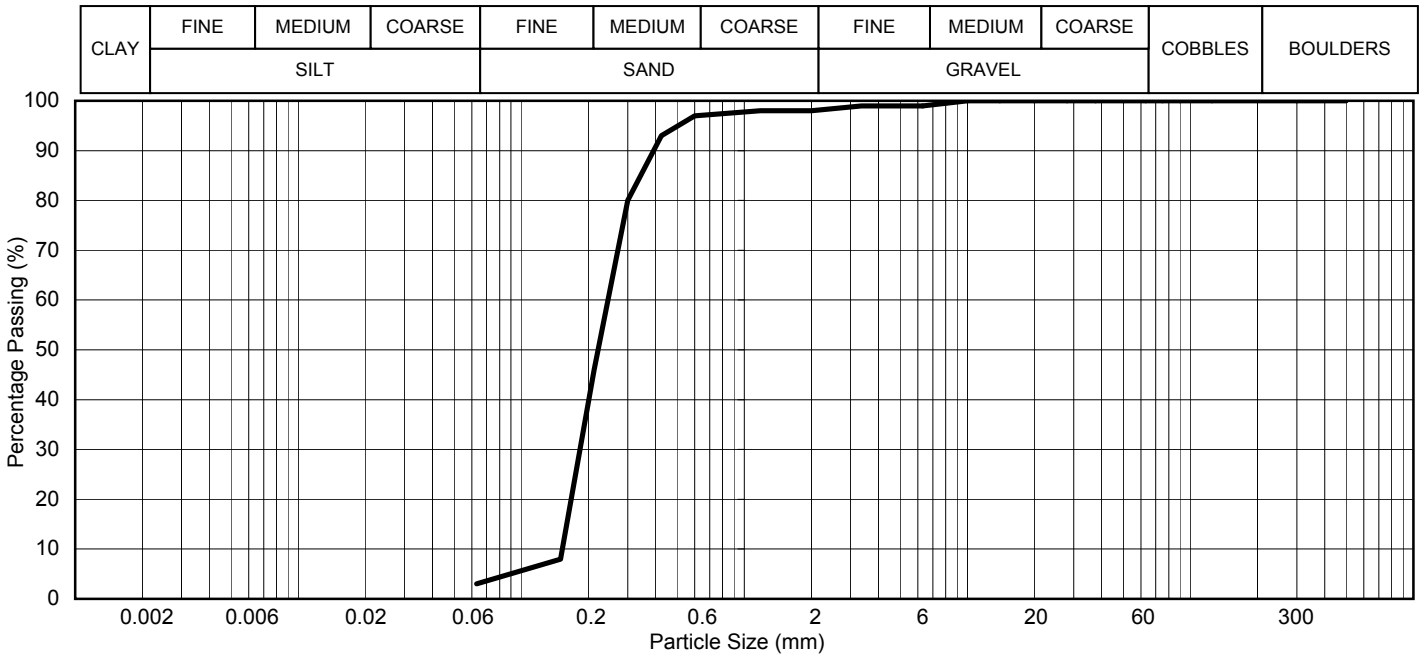
Remarks

₸ Where a sedimentation test was not carried out, this figure represents total fines, i.e., particles of diameter less than 63 microns

MASON EVANS PARTNERSHIP
BEACH DRIVE, IRVINE

MATtest Limited
materials testing & consultancy

Borehole	BH05
Sample	U(B)
Depth (m)	1.00-2.00



SIEVING				SEDIMENTATION	
Sieve Size (mm)	Percentage Passing (%)	Specification Not Applicable		Particle Size (mm)	Percentage Passing (%)
		Lower %	Upper %		
500.0	100	-	-	0.020	
300.0	100	-	-	0.006	
125.0	100	-	-	0.002	
90.0	100	-	-		
75.0	100	-	-	**GRADING CLASSIFICATION (SHW TABLE 6/2)**	
63.0	100	-	-	-	
50.0	100	-	-		
37.5	100	-	-	Grading classification proves the material has met the relevant grading requirements only. Further testing may be required to assess compliance with SHW.	
28.0	100	-	-		
20.0	100	-	-		
14.0	100	-	-		
10.0	100	-	-	**PERCENTAGE SOIL TYPES**	
6.30	99	-	-	**CLAY** / **SILT Ŧ** / **SAND** / **GRAVEL** / **COBBLES**	
5.00	99	-	-		
3.35	99	-	-	/ 3 95 2 0	
2.00	98	-	-		
1.18	98	-	-	**UNIFORMITY COEFFICIENT (SHW TABLE 6/1 NOTE 5)**	
0.600	97	-	-	**D10** / **D60** / **Specification**	
0.425	93	-	-		
0.300	80	-	-	- -	
0.212	46	-	-	**UNIFORMITY COEFFICIENT** - -	
0.150	8	-	-		
0.063	3	-	-		

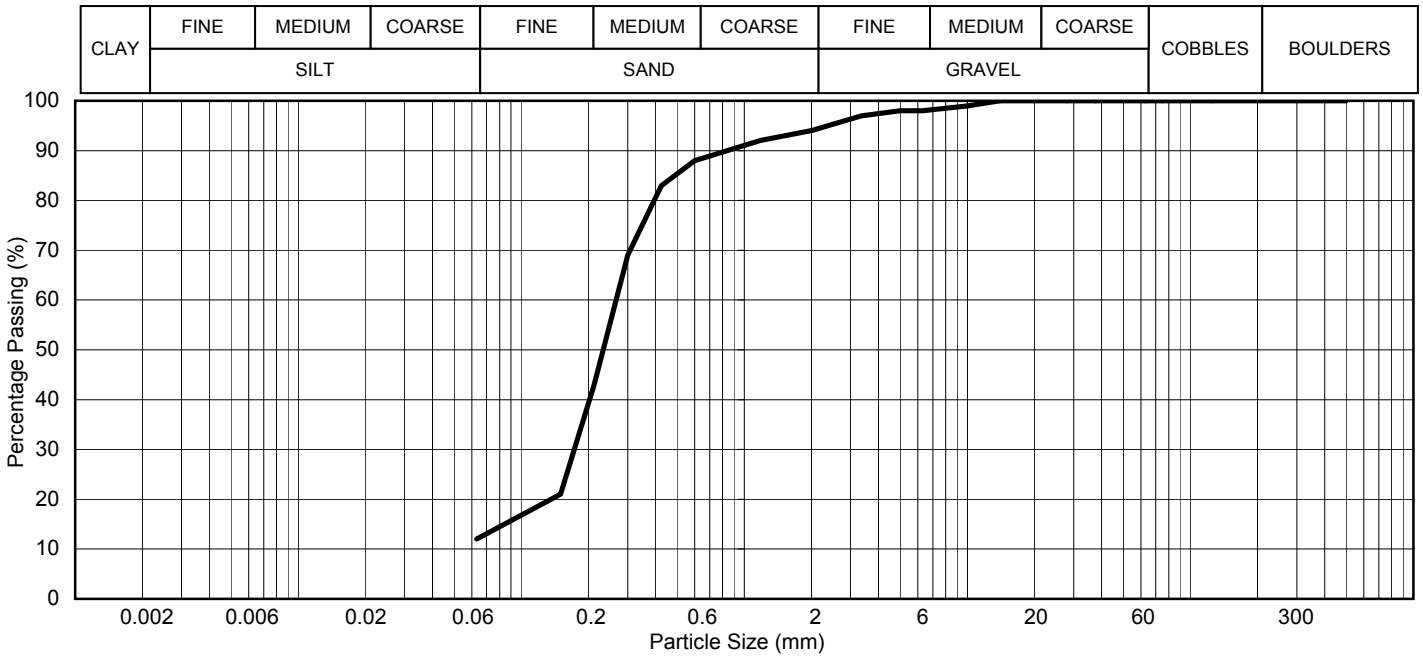
Remarks

Ŧ Where a sedimentation test was not carried out, this figure represents total fines, i.e., particles of diameter less than 63 microns

MASON EVANS PARTNERSHIP
BEACH DRIVE, IRVINE

MATtest Limited
materials testing & consultancy

Borehole	BH07
Sample	U(B)
Depth (m)	2.00-3.00



SIEVING				SEDIMENTATION	
Sieve Size (mm)	Percentage Passing (%)	Specification Not Applicable		Particle Size (mm)	Percentage Passing (%)
		Lower %	Upper %		
500.0	100	-	-	0.020	
300.0	100	-	-	0.006	
125.0	100	-	-	0.002	
90.0	100	-	-		
75.0	100	-	-	**GRADING CLASSIFICATION (SHW TABLE 6/2)**	
63.0	100	-	-	-	
50.0	100	-	-		
37.5	100	-	-	Grading classification proves the material has met the relevant grading requirements only. Further testing may be required to assess compliance with SHW.	
28.0	100	-	-		
20.0	100	-	-		
14.0	100	-	-		
10.0	99	-	-	**PERCENTAGE SOIL TYPES**	
6.30	98	-	-		
5.00	98	-	-		
3.35	97	-	-		
2.00	94	-	-		
1.18	92	-	-	**UNIFORMITY COEFFICIENT (SHW TABLE 6/1 NOTE 5)**	
0.600	88	-	-		
0.425	83	-	-		
0.300	69	-	-		
0.212	43	-	-		
0.150	21	-	-		
0.063	12	-	-		

CLAY	SILT ₸	SAND	GRAVEL	COBBLES
/	12	82	6	0

D10	D60	Specification
-	-	
UNIFORMITY COEFFICIENT	-	-

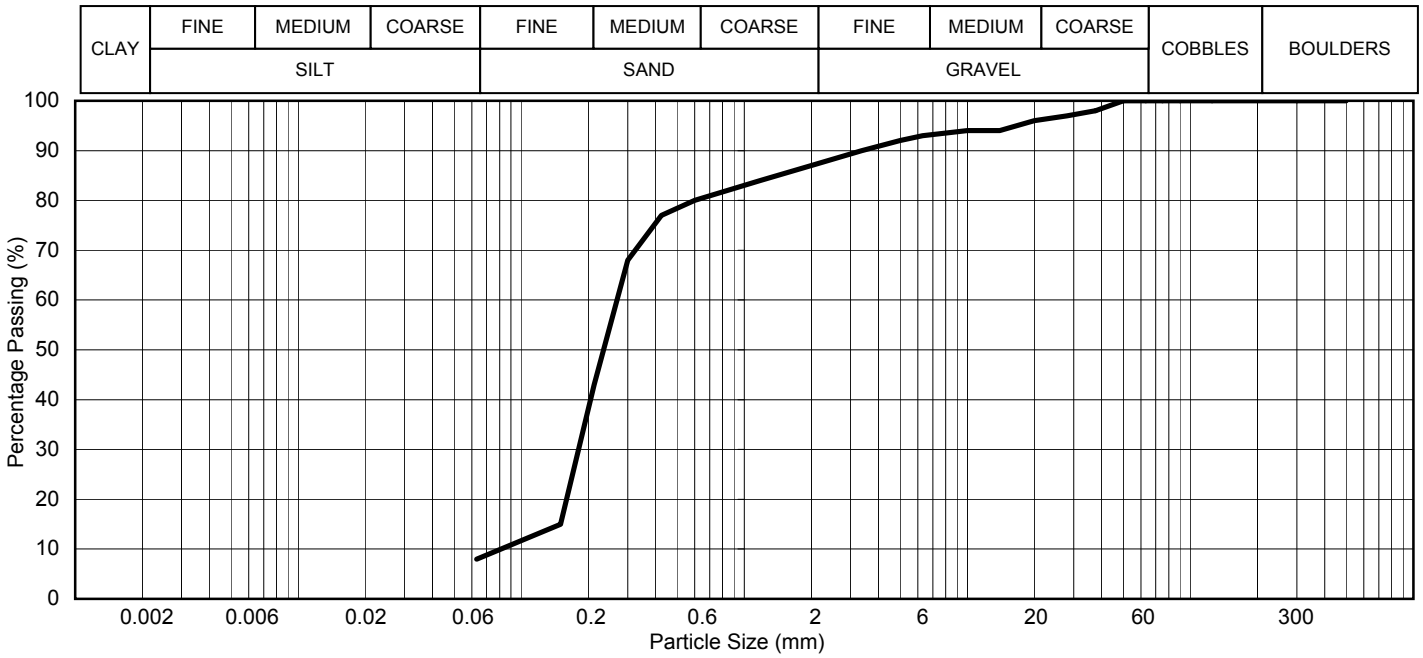
Remarks

₸ Where a sedimentation test was not carried out, this figure represents total fines, i.e., particles of diameter less than 63 microns

MASON EVANS PARTNERSHIP
BEACH DRIVE, IRVINE

MATtest Limited
materials testing & consultancy

Borehole	BH10
Sample	U(B)
Depth (m)	3.00-4.00



SIEVING				SEDIMENTATION	
Sieve Size (mm)	Percentage Passing (%)	Specification Not Applicable		Particle Size (mm)	Percentage Passing (%)
		Lower %	Upper %		
500.0	100	-	-	0.020	
300.0	100	-	-	0.006	
125.0	100	-	-	0.002	
90.0	100	-	-		
75.0	100	-	-	**GRADING CLASSIFICATION (SHW TABLE 6/2)**	
63.0	100	-	-	-	
50.0	100	-	-		
37.5	98	-	-	Grading classification proves the material has met the relevant grading requirements only. Further testing may be required to assess compliance with SHW.	
28.0	97	-	-		
20.0	96	-	-		
14.0	94	-	-		
10.0	94	-	-	**PERCENTAGE SOIL TYPES**	
6.30	93	-	-		
5.00	92	-	-		
3.35	90	-	-		
2.00	87	-	-		
1.18	84	-	-	**UNIFORMITY COEFFICIENT (SHW TABLE 6/1 NOTE 5)**	
0.600	80	-	-		
0.425	77	-	-		
0.300	68	-	-		
0.212	43	-	-		
0.150	15	-	-		
0.063	8	-	-		

CLAY	SILT ₸	SAND	GRAVEL	COBBLES
/	8	79	13	0

D10	D60	Specification
-	-	
UNIFORMITY COEFFICIENT	-	-

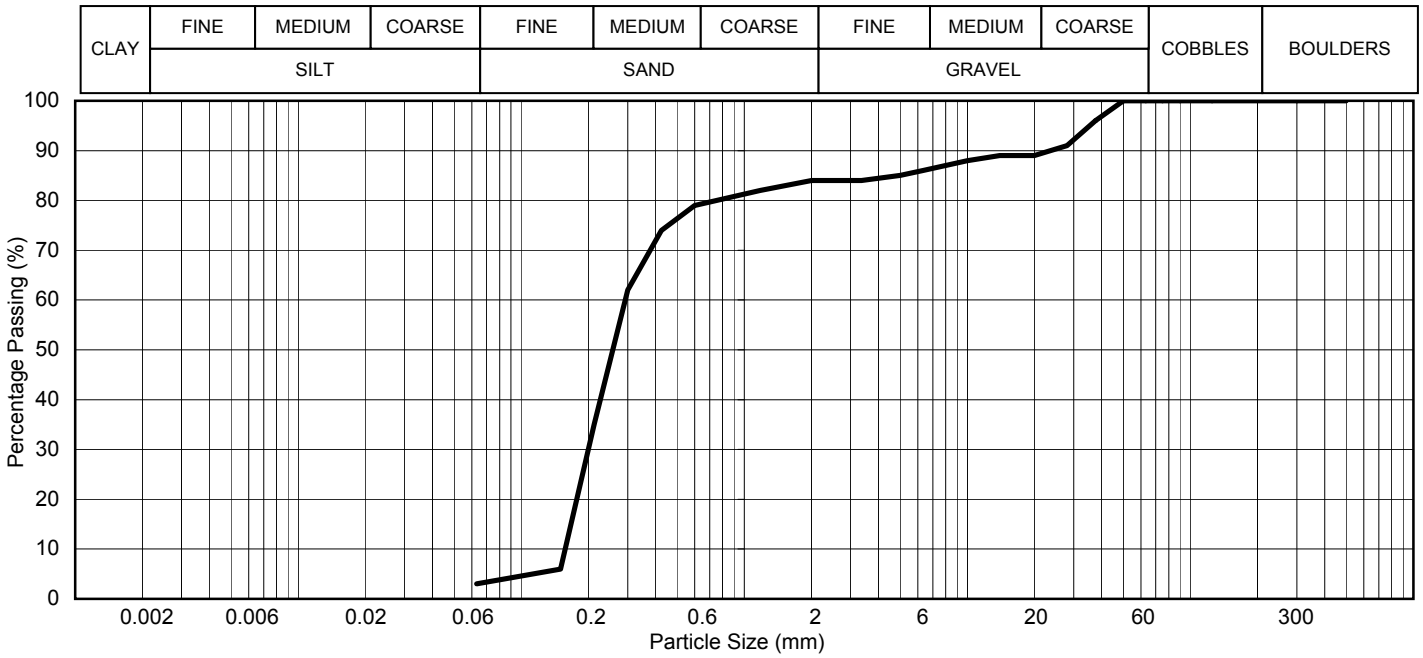
Remarks

₸ Where a sedimentation test was not carried out, this figure represents total fines, i.e., particles of diameter less than 63 microns

MASON EVANS PARTNERSHIP
BEACH DRIVE, IRVINE

MATtest Limited
materials testing & consultancy

Borehole	BH11
Sample	U(B)
Depth (m)	2.00-3.00



SIEVING				SEDIMENTATION	
Sieve Size (mm)	Percentage Passing (%)	Specification Not Applicable		Particle Size (mm)	Percentage Passing (%)
		Lower %	Upper %		
500.0	100	-	-	0.020	
300.0	100	-	-	0.006	
125.0	100	-	-	0.002	
90.0	100	-	-		
75.0	100	-	-	**GRADING CLASSIFICATION (SHW TABLE 6/2)**	
63.0	100	-	-	-	
50.0	100	-	-		
37.5	96	-	-	Grading classification proves the material has met the relevant grading requirements only. Further testing may be required to assess compliance with SHW.	
28.0	91	-	-		
20.0	89	-	-		
14.0	89	-	-		
10.0	88	-	-	**PERCENTAGE SOIL TYPES**	
6.30	86	-	-		
5.00	85	-	-		
3.35	84	-	-		
2.00	84	-	-		
1.18	82	-	-	**UNIFORMITY COEFFICIENT (SHW TABLE 6/1 NOTE 5)**	
0.600	79	-	-		
0.425	74	-	-		
0.300	62	-	-		
0.212	35	-	-		
0.150	6	-	-		
0.063	3	-	-		

CLAY	SILT ₸	SAND	GRAVEL	COBBLES
/	3	81	16	0

D10	D60	Specification
-	-	
UNIFORMITY COEFFICIENT	-	-

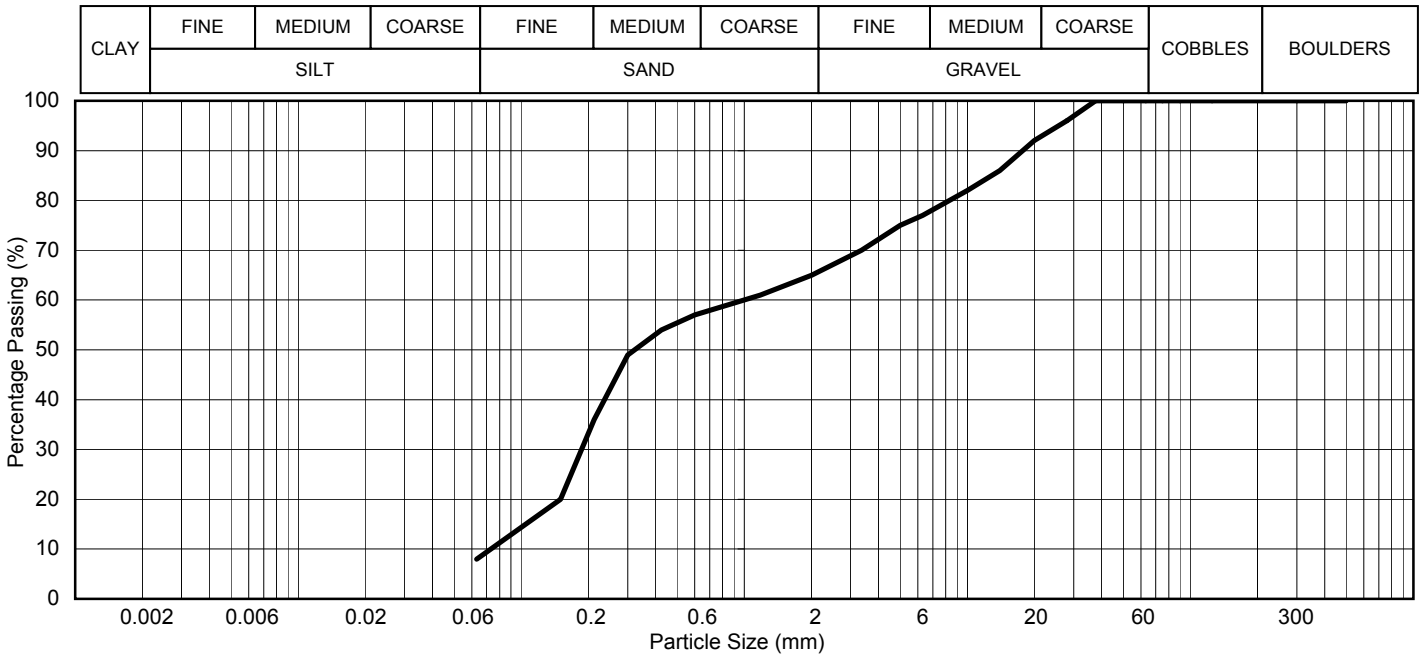
Remarks

₸ Where a sedimentation test was not carried out, this figure represents total fines, i.e., particles of diameter less than 63 microns

MASON EVANS PARTNERSHIP
BEACH DRIVE, IRVINE

MATtest Limited
materials testing & consultancy

Borehole	BH12
Sample	U(B)
Depth (m)	1.00-2.00



SIEVING				SEDIMENTATION	
Sieve Size (mm)	Percentage Passing (%)	Specification Not Applicable		Particle Size (mm)	Percentage Passing (%)
		Lower %	Upper %		
500.0	100	-	-	0.020	
300.0	100	-	-	0.006	
125.0	100	-	-	0.002	
90.0	100	-	-		
75.0	100	-	-	**GRADING CLASSIFICATION (SHW TABLE 6/2)**	
63.0	100	-	-	-	
50.0	100	-	-		
37.5	100	-	-	Grading classification proves the material has met the relevant grading requirements only. Further testing may be required to assess compliance with SHW.	
28.0	96	-	-		
20.0	92	-	-		
14.0	86	-	-		
10.0	82	-	-	**PERCENTAGE SOIL TYPES**	
6.30	77	-	-		
5.00	75	-	-		
3.35	70	-	-		
2.00	65	-	-		
1.18	61	-	-	**UNIFORMITY COEFFICIENT (SHW TABLE 6/1 NOTE 5)**	
0.600	57	-	-		
0.425	54	-	-		
0.300	49	-	-		
0.212	36	-	-		
0.150	20	-	-		
0.063	8	-	-		

CLAY	SILT ₸	SAND	GRAVEL	COBBLES
/	8	57	35	0

D10	D60	Specification
-	-	
UNIFORMITY COEFFICIENT	-	-

Remarks

₸ Where a sedimentation test was not carried out, this figure represents total fines, i.e., particles of diameter less than 63 microns

Appendix 16

Coordinates and levels of Exploratory holes, CBRs and Soakaways

Fox McMaster Surveyors Limited

13/05/2019

Mason Evans
Glasgow

Project at; **Beach Drive, Irvine**
Project reference; **5264-1**

Bore Hole Locations

Position	Easting	Northing	Level (m aOD)
BH01	230772.425	638140.719	5.333
BH02	230788.356	638171.615	5.155
BH03	230798.873	638123.211	5.611
BH04	230833.467	638148.610	5.482
BH05	230864.049	638109.609	6.028
BH06	230890.509	638146.912	5.912
BH07	230885.800	638181.357	4.595
BH08	230932.841	638141.570	7.551
BH09	230971.379	638115.445	4.862
BH10	230987.121	638148.394	4.848
BH11	231032.882	638123.367	5.083
BH12	231038.805	638154.159	5.216
BH13	231080.668	638140.958	5.342

Trial Pit Locations

Position	Easting	Northing	Level (m aOD)
TP01	230772.672	638172.818	5.283
TP02	230795.927	638180.027	4.890
TP03	230767.621	638155.499	5.158
TP04	230790.575	638159.536	5.437
TP05	230815.605	638161.077	5.656
TP06	230790.786	638134.668	5.818
TP07	230822.265	638136.522	5.370
TP08	230790.015	638113.706	5.628
TP09	230813.934	638112.084	5.765
TP10	230863.930	638118.357	6.559
TP11	230866.182	638156.052	4.199
TP12	230878.254	638157.704	4.544
TP13	230916.392	638157.790	5.187
TP14	230912.181	638137.945	6.974
TP15	230911.254	638119.440	6.528
TP16	231069.648	638113.314	5.863
TP17	230940.413	638139.034	6.719
TP18	230938.980	638126.280	7.648

CBR Locations

Position	Easting	Northing	Level (m aOD)
CBR01	230837.022	638101.640	5.435
CBR02	230780.474	638131.477	5.506
CBR03	230845.052	638118.822	5.414
CBR04	230913.551	638128.679	7.176
CBR05	230853.619	638148.246	4.476
CBR06	230821.278	638140.490	5.474
CBR07	230783.477	638169.180	5.410
CBR08	230822.795	638182.544	4.809
CBR09	230926.267	638155.035	6.785
CBR10	230928.750	638122.287	7.971
CBR11	230962.663	638147.058	5.330
CBR12	230977.665	638130.271	4.541
CBR13	230961.479	638116.597	4.866
CBR15	231029.866	638145.657	4.954

Soakaway Locations

Position	Easting	Northing	Level (m aOD)
SA1	230776.898	638156.577	5.667
SA2	230886.993	638158.449	4.909
SA3	231076.983	638114.595	5.951

Please Note:

All coordinates are relative to the National Grid Post Processed using GPS Rinex D