

Translink Sea Defence 16E

Geoenvironmental Desk Study Assessment

Draft Report

October 2025

**Prepared for:
Amey Consulting**

www.jbaconsulting.com

Document Status

Issue date	16 October 2025
Issued to	[REDACTED]
BIM reference	QSO-JBA-XX-XX-RP-EN-0002-S3-P01 -Geoenvironmental Desk Study_16E
Revision	P01
Prepared by	[REDACTED] Senior Geoenvironmental Analyst
Reviewed by	[REDACTED] Principal Hydrogeologist
Authorised by	[REDACTED] Project Manager/Director

Carbon Footprint

The format of this report is optimised for reading digitally in pdf format. Paper consumption produces substantial carbon emissions and other environmental impacts through the extraction, production and transportation of paper. Printing also generates emissions and impacts from the manufacture of printers and inks and from the energy used to power a printer. Please consider the environment before printing.

Contract

JBA Project Manager [REDACTED]
Address 2/F Lincoln House, Lincoln Lane, Arran Quay, Smithfield,
Dublin D07 Y75P
JBA Project Code 2025s1344

This report describes work commissioned by Amey Consulting, on behalf of Translink, by an instruction dated 29/08/2025. The Client's representative for the contract was [REDACTED] of Amey Consulting. [REDACTED] of JBA Consulting carried out this work.

Purpose and Disclaimer

Jeremy Benn Associates Limited ("JBA") has prepared this Report for the sole use of Amey Consulting and its appointed agents in accordance with the Agreement under which our services were performed.

JBA has no liability for any use that is made of this Report except to Amey Consulting for the purposes for which it was originally commissioned and prepared.

No other warranty, expressed or implied, is made as to the professional advice included in this Report or any other services provided by JBA. This Report cannot be relied upon by any other party without the prior and express written agreement of JBA.

Copyright

© Jeremy Benn Associates Limited 2025

Contents

1	Introduction	5
1.1	Background	5
1.2	Aim and scope of the study	5
1.3	Data sources	6
2	Site Introduction and environmental setting	7
2.1	Introduction	7
2.2	Site area, location and proposed works	7
2.3	Current land use and Topography	8
2.4	Surface water hydrology	8
2.5	Geology	11
2.6	BGS boreholes and previous ground investigation	13
2.7	Mines and Quarries	15
2.8	Hydrogeology	15
2.9	No groundwater abstraction licenses or notifications are recorded as being present on site or within 1km of the site boundary (DAERA OpenData Abstraction Licensing, 2023). Ecological and other designations	16
3	Environmental Data and Contamination Sources	17
3.1	Introduction	17
3.2	Regulatory and environmental data	17
3.3	Historical land use	21
4	Preliminary Environmental Risk Assessment	24
4.1	Introduction	24
4.2	Potential Contamination Sources	24
4.3	Pathways to receptors	28
4.4	Potential environmental receptors	29
4.5	Conceptual site model	30
4.6	Uncertainties & opportunities	31
5	Qualitative Risk Assessment	32
6	Conclusions	37

6.1	Site History & Potential Sources of Contamination	37
6.2	Environmental Risk Assessment Summary	37
6.3	Recommendations	38
A	Appendices	A-1
A.1	Information provided by Third Party (Local Authority and Regulators)	A-1
B	Methodology for Preliminary Environmental Assessment	B-1
B.1	Qualitative Risk Assessment Methodology	B-1
B.2	Hazards	B-1
B.3	Receptors	B-1
B.4	Pathways	B-2
B.5	Exposure Assessment	B-2

List of Figures

Figure 2-1: Site location	8
Figure 2-3: Surface water hydrology	10

List of Tables

Table 2-1: Flood Risk	11
Table 2-2: Stratigraphy of lithologies underlying the site	11
Table 2-4: Aquifer designations	15
Table 3-1: Summary of regulatory and environmental data	17
Table 3-2: Historical land use	21
Table 4-2: Pathways to receptors	28
Table 4-3: Environmental receptors	29
Table 5-1: Qualitative risk assessment summary	33
Table B-7-1: Classification of associated hazard [potential severity] (modified from CIRIA C552)	B-2
Table B-7-2: Classification of probability	B-3
Table B-7-3: Contamination risk matrix	B-4
Table B-7-4: Description of the risk classifications and likely action required	B-4

1 Introduction

1.1 Background

JBA Consulting (JBA) have been commissioned by the Amey Consulting to undertake a desk based contaminated land assessment which presents all available relevant information in relation to the Sea Defence Scheme (Section 16E). The findings of the desk study will be used to inform ground investigation works, outline design and detailed design.

The works objective for Section 16E of the Sea Defence Scheme is to protect an area of eroded existing grassed coastal railway embankment adjacent to the City of Derry Airport, Londonderry, Northern Ireland.

1.2 Aim and scope of the study

The purpose of this desk study report is to determine the likely presence and extent of any potential environmental (contamination related) risks associated with the proposed scheme. This is achieved through:

- review of the current environmental setting, establishing any potential environmental pathways and receptors;
- assessment of potential contamination sources through analysis of environmental regulatory data and historical land uses; and,
- a qualitative Preliminary Risk Assessment (PRA) based upon current UK guidance: Land Contamination Risk Management (Environment Agency (EA) 2020) for any potential sources that have been identified, following the production of a conceptual site model, using the source-pathway-receptor methodology. This corresponds to a Stage 1 Risk Assessment under the practice guide for Redeveloping Land Affected by Contamination (Department of Agriculture, Environment and Rural Affairs (DAERA), April 2019), along with the above LCRM guidance framework which is recommended for use for contaminated land assessments by the Northern Ireland Environment Agency (NIEA).

Any conclusions and recommendations will then be given based on the results of this assessment. It should be noted that ecological and geotechnical assessments (ground stability, structural) are excluded from this report and no site walkover visit has been undertaken. For the avoidance of doubt, this assessment excludes assessment of above ground infrastructure at the site for the potential presence of Asbestos Containing Materials (ACMs), or assessment of the presence of potential invasive plant species.

1.3 Data sources

The data used in the desk study were obtained from the following sources:

- Topography and general mapping:
 - Ordnance Survey of Northern Ireland (OSNI) Open Data; and,
 - Aerial photography (Google Earth and Bing Maps).
- Geology and Soils:
 - GSNI 1:10,000 geology mapping;
 - GSNI 1:250,000 geology mapping;
 - GSNI digital geology mapping;
 - GSNI online borehole database (BGS website);
 - GSNI online Lexicon (BGS website);
 - UK Soil Observatory; and,
 - Northern Mine Research Society (NMRS) – Mines Map.
- Hydrogeology:
 - Aquifer classification (NIEA Catchment Data Map Viewer);
 - Groundwater vulnerability (NIEA Catchment Data Map Viewer);
 - Surface Water and Groundwater Abstraction Licences (DAERA);
 - Drinking Water Protection Zones (NIEA Catchment Data Map Viewer); and,
 - Flood Risk Viewer (experience.arcgis.com).
- Environmental records and historical mapping
 - OSNI map Viewer; and,
 - PRONI Historical Maps (<https://apps.spatialni.gov.uk/PRONIAApplication/>);
 - Waste Management Licencing Public Register (DAERA); and,
 - Pollution prevention and Control Public register (DAERA).
- DoE Industry Profiles (1995 archived, CL:AIRE)

Derry City and Strabane District Council and the Northern Ireland Environment Agency (NIEA) were contacted to request environmental information pertaining to the site and surrounding area. Further details are provided in Section 3.2.

2 Site Introduction and environmental setting

2.1 Introduction

The section presents a summary of the environmental setting of the sites and surrounding area, including aspects such as site history, hydrology, geology, and environmentally sensitive areas. This information is analysed to enable the identification of vulnerable receptors (such as productive aquifers, sites of ecological importance, etc.) and potential pathways (such as migration through the surface and sub-surface water flow).

2.2 Site area, location and proposed works

The Site is referred to as 16E in this report and comprises a section of sea defences located along the railway track along the southern shores of Lough Foyle (estuary of the River Foyle). The Site also consists of the proposed compound (0.1ha) and section of railway track (2.80km) which is surrounded by agricultural fields, with the City of Derry Airport, commercial properties, scrub and shoreline habitat within the wider area.

The proposed work area (75m / 0.1ha) is centred around OS Grid Reference 254724 422279. The Site is located in County Londonderry, Northern Ireland, approximately 1.7km northwest of Greysteel village centre.

The proposed sea defence would consist of:

- Approximately 30m (alongshore length) of 1-3t double interlocking primary rock armour placement over the existing revetment slope and bedded in at the toe of the revetment, to protect an area of eroded existing grassed coastal railway embankment adjacent to the end of the City of Derry Airport runway.
- Approximately 9m total cross-shore footprint.
- Topsoil and other excavation as required to achieve formation level.
- Crest of the new defence to be approximately 2-2.5m from the seaward rail.
- Wrapping into the existing defences at all tie-ins.

The site location is provided in Figure 2-1.

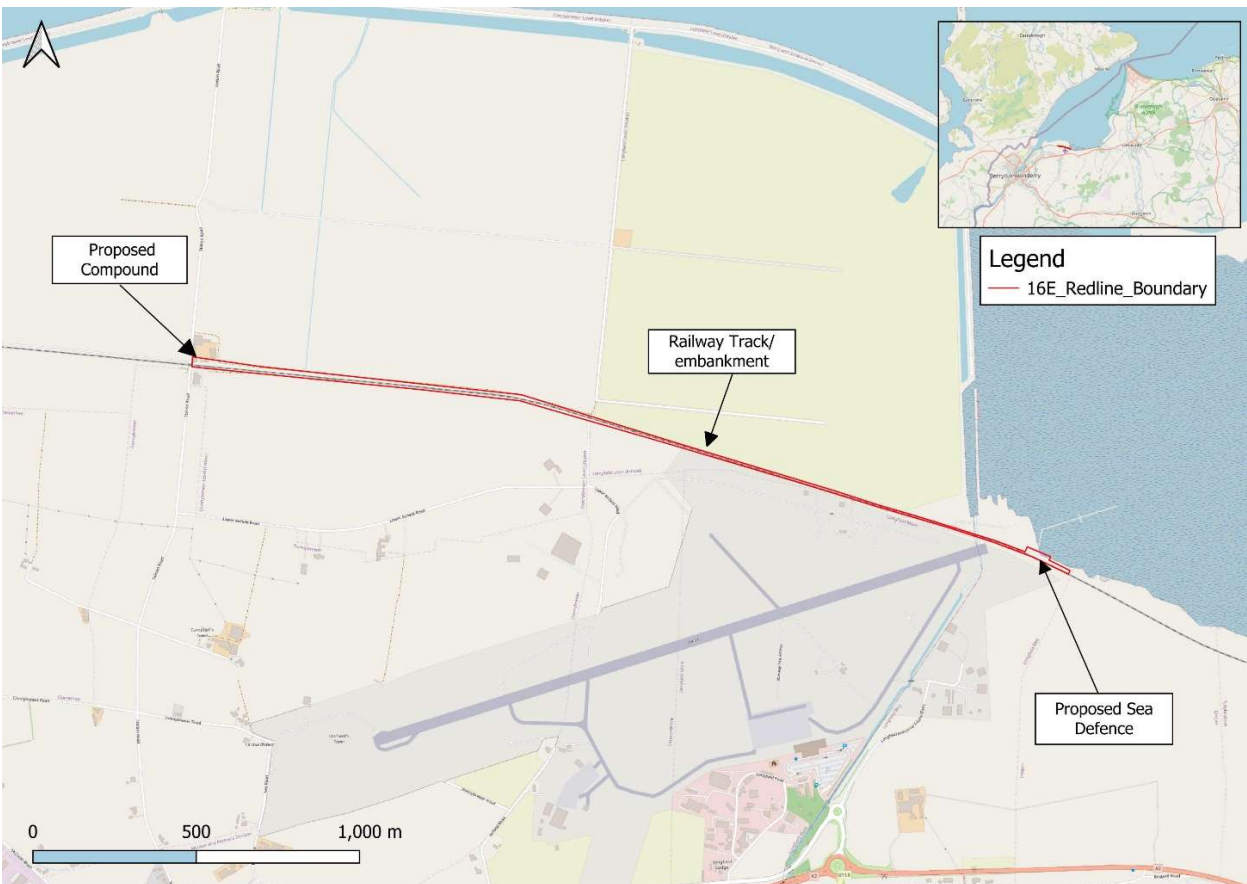


Figure 2-1: Site location

2.3 Current land use and Topography

The Site (16E) comprises a section of sea defences located along the railway track. The proposed compound at the west of the site is currently land associated with a farm estate. The railway line and earth embankment make up the remainder of the site. The land surrounding the site is predominantly agricultural fields, used for livestock and arable farming. The City of Derry Airport (including the end of a runway) is situated adjacent to the southern site boundary. A private farm track runs along the northwestern boundary of the site, from

Generally, the site is situated on low lying ground where the topography only gradually varies between 0mAOD and 3mAOD with the highest elevations associated with the railway line embankment, including the proposed sea defence area.

2.4 Surface water hydrology

The site has numerous hydrological receptors within 1km of the site.

The proposed sea defence 'Asset 16E' is located on the southern front of the Lough Foyle (estuary of the River Foyle).

- Muff River runs southwest to northeast and turns northwards prior to being culverted under the northeastern end of the airport runway and the railway (site) before emerging approximately 50m to the north of the site. The Muff River discharges 450m north of site, into the Lough Foyle.
- An unnamed distributary of the River Muff runs from south to north, underneath the railway line (site) approximately 360m from within the western site boundary. The watercourse connects with saline lagoons which are situated along the Lough Foyle shoreline, 1.1km north of the site and impounded by the Eglinton Embankment. The lagoons connect with Foyle Harbour and Faughan, discharging through a number of outfalls.
- An unnamed distributary of the Sheskin River flows northwards and discharges approximately 900m east southeast of the site, to the Lough Foyle.
- A network of open drains / field drains / rhines / drainage channels? Part of the Longfield Level Intake network?
- There is potential for unmapped surface drains and underdrainage to be present within the site boundary and surrounding area.

The Water Framework Directive (WFD) classification of the Muff River is reported by NIEA as 'Moderate' overall WFD status. The Muff River water body is classified as having 'Moderate' ecological status (2021) given the natural characteristics and potential, 'Good' chemical classification (subgroup A and B) and 'Failing to Achieve Good' chemical classification (subgroup C). The site does not sit within a Surface Water - Drinking Water Protection Area (NIEA Catchment Data map Viewer, 2025).

The Lough Foyle marine water body is classified as having Moderate ecological status, 'Good' chemical classification (subgroup A) and 'Failing to Achieve Good' chemical classification (subgroup B and C) (WFD, 2021).

Foyle Harbour and Faughan marine water body is classified as having MEP (Maximum Ecological Potential) (WFD, 2021), 'Good' chemical classification (subgroup A) and 'Failing to Achieve Good' chemical classification (subgroup B and C) (WFD, 2021).

The hydrology is provided in Figure 2-2.



Figure 2-2: Surface water hydrology

2.4.1 Water abstractions

No surface water abstraction licenses or notifications are recorded as being present on site or within 1km of the site boundary (DAERA OpenData Abstraction Licensing, 2023).

2.4.2 Flood risk assessment

Table 2-1 summarises the flood risk on site. This information has been compiled from Northern Ireland Department for Infrastructure – Rivers: Flood Hazard and Risk Maps. Table 2-1 shows that some central sections of the site are within fluvial floodplains (associated with the River Muff) and a central section of the site is within a surface water flood extent (associated with adjacent agricultural land drainage to the south).

An existing tidal flood defence (unknown Standard of Protection (SOP)) is located to the north of the Donnybrewer and Longfield Levels, north of the site. The majority of the Site, including the area of proposed sea defence, and surrounding area are within a ‘strategic tidal floodplain’ (associated with the Lough Foyle).

Table 2-1: Flood Risk

Source of Flooding	On-site Presence	Description
Fluvial	Yes	Some central sections of the site (railway line) sit within a fluvial flood floodplain. Return Period 100 years.
Tidal	Yes	The majority of the site and surrounding areas sit within a ‘strategic tidal floodplain’. Return Period 200 years.
Surface Water and small watercourses	Yes	A central section of the site (railway) sits within a surface water flood zone.
Reservoirs	No	The site is not at risk of flooding from reservoirs.
Groundwater	N/A	There is no online data currently available to suggest the site is at risk of groundwater flooding.
Canals	No	The site is not at risk of flooding from canals.

2.5 Geology

2.5.1 Summary

Information on the superficial and solid geology of the site and the surrounding area has been reviewed from the UK Soil Observatory (UKSO) and Geological Survey of Northern Ireland geology mapping (GSNI GeoIndex). The geology underlying the site is summarised in Table 2-2 and described in more details in Sections 2.5.2 to 2.5.5.

Table 2-2: Stratigraphy of lithologies underlying the site

Age	Formation/Group	Description	Thickness
Quaternary - Superficial geology	Topsoil - Gleysols / Disturbed*	*Gleysols are soils influenced by water; groundwater affected soils.	Variable thickness
	Intertidal Deposits (undifferentiated) – clay, silt, sand and gravel (1:10,000)	**Variable lithology. Gravel through to clay, may be rich in organic matter; from the intertidal coastal zone.	Variable thickness
Carboniferous - Bedrock geology	Roe Valley Group – sandstone and conglomerate, interbedded (1:10,000)	**Indurated sandstones, mudstones and siltstones yielding 1-1.5L/s.	425m
	Consisting of the Barony Glen Formation (1:250,000)	**Interbedded sandstone, siltstone, mudstone, calcrete, palaeosols, purplish brown, purplish red, grey, fawn, brown, green.	400m
Sources: *UKSO – Soil map for Northern Ireland (WRB Classification) **BGS Online Lexicon of Named Rock Units			

2.5.2 Soils

The UKSO (Soil map for Northern Ireland) have classified the soils as Gleysols within the west of the site (railway) and across a small portion of land at the east of the site (railway). These are wetland soils that, unless drained, are saturated with groundwater for long enough periods to develop a characteristic gleyic colour pattern. They are located in depression areas and low landscape positions with shallow groundwater. Shallow groundwater and marginal ditches to most fields mean that the water resource is vulnerable to pollution from nutrients, pesticides and wastes applied to the land. Soils support wet brackish coastal flood meadows.

Soils classified as 'disturbed soils' extend from the south over the central portion of the site (railway track). No soil classification is recorded for the western extent of site (proposed sea defence).

2.5.3 Artificial ground

The GSNI GeoIndex indicates that no artificial ground is recorded within 1 km of the site.

The railway track embankment along with any previous earthworks along the proposed sea defence area is considered to comprise Made Ground.

2.5.4 Superficial deposits

The GSNI 1:10,000 geology mapping indicates that the superficial deposits across the site and area generally to the north of the site comprise undifferentiated Intertidal Deposits. The Intertidal Deposits consist of gravel through to clay and may be rich in organic matter; from the intertidal coastal zone. Tidal Flat Deposits (comprising clay and sand) are recorded within 10m south-southwest of the central section of site.

The 1:250,000 mapping indicates that the majority of the site (railway line) is underlain by Raised Marine Deposits (clay, silt and sand). Raised Beach Deposits are shown to the south of the site (beneath the airport) and slightly extend across the site to the west of the works area.

2.5.5 Bedrock geology

The GSNI Geo Index records the site to be underlain by the Roe Valley Group which comprises the Barony Glen Formation. The Barony Glen Formation is recorded under most of the site and consists of interbedded sandstone, siltstone, mudstone, calcrete, palaeosols, coloured purplish brown, purplish red, grey, fawn, brown and green. No bedrock formation is recorded for the eastern extent of the site (including section of proposed sea defence). No other bedrock units underlay the site.

2.6 BGS boreholes and previous ground investigation

The GSNI GeoIndex was consulted to identify if any intrusive borehole information is available for the site. No boreholes were located on-site, however a series of boreholes (dated 1991) are listed between 500m – 1km south associated with ‘Eglinton Airport’. No rockhead was encountered and no further details are provided.

As part of a ground investigation by Northwest Geotech in April 2021, one borehole was constructed on site to a maximum depth of 8mbgl (below ground level).

The following provides a summary of the onsite ground conditions:

- 16E - BH01 (within proposed sea defence area):
 - 0.0-0.55mbgl - Dark grey medium to coarse GRAVEL (Made Ground - Ballast).
 - 0.55-1.80mbgl - Very loose brownish grey slightly silty very sandy fine to medium angular to subangular GRAVEL. Sand is fine to coarse (Made Ground).
 - 1.80-2.30mbgl - Very loose greyish brown silty very sandy fine to medium subangular to subrounded GRAVEL. Sand is fine to coarse (Made Ground).

- 2.30-2.90mbgl - Very soft blackish brown slightly sandy slightly gravelly silty PEAT. Sand is fine to medium. Gravel is fine subangular to subrounded.
 - 2.90-7.20 - Very soft grey slightly gravelly sandy SILT. Sand is fine. Gravel is fine subangular to subrounded
 - 7.20-8.00mbgl - Soft grey laminated sandy SILT. Sand is fine.
- Groundwater was encountered at 3.60mbgl.

2.7 Mines and Quarries

The GSNI records no active quarries or historic mine workings (shafts/adits) with 1km of the site.

The Northern Mine Research Society (NMRS) records no coal mines within 1km of the site.

2.8 Hydrogeology

The site sits within the Claudy Groundwater Body (ID: UKGBNI4NW003) as defined by the European Groundwater Framework Directive. This groundwater body is defined as having ‘poor’ chemical status and ‘good’ quantitative status (NIEA Catchment Data map Viewer, 2025).

Limited information is available on groundwater quality in the carboniferous aquifer but calcium and bicarbonate would be expected to be the dominant ions. Chloride levels may be elevated near the coast (NIEA, 2012).

2.8.1 Aquifer designation

The bedrock aquifer of the Roe Valley Group is classified as ‘Old Red Sandstones’ – typically a ‘fracture’ aquifer type with ‘moderate’ productivity potential (GSNI, 2023).

The aquifer is described as having low yields with mainly shallow, local flows (NIEA, 2021).

Bedrock aquifers may be locally confined where thicker deposits of clayey till overlie it. Depth to water table is expected to be shallow (<10 m) and groundwater underlying the site has previously been encountered at 3.60mbgl (Northwest Geotech, 2021).

The aquifer designations are summarised in Table 2-4 below.

Table 2-3: Aquifer designations

Group	Formation	Classification
Superficial (drift) Deposits	N/A	N/A
Bedrock - Roe Valley Group	Barony Glen Formation - Carboniferous Dinantian (early) Sandstones, Shales and Limestones	BI (f) – Limited Productivity, Fracture Flow
Explanation of aquifer classes from NIEA: WFD AQUIFER CLASSIFICATION SCHEME FOR NORTHERN IRELAND (March 2005)		

2.8.2 Aquifer vulnerability and water quality

Vulnerability is generally high across the aquifer other than some areas to the east where thicker less permeable till deposits are considered to occur (NIEA, 2012).

2.8.3 Drinking water protection

The site sits completely within the Claudy Groundwater - Drinking Water Protection Area (NIEA Catchment Data map Viewer, 2025).

2.8.4 Groundwater abstractions

2.9 No groundwater abstraction licenses or notifications are recorded as being present on site or within 1km of the site boundary (DAERA OpenData Abstraction Licensing, 2023). Ecological and other designations

The Lough Foyle extends across the northern boundary of the eastern portion of the site and is designated an ASSI (Area of Specific Scientific Interest) and a RAMSAR site. The ASSI is for habitats which include saline lagoons and coastal saltmarsh.

The Lough Foyle is also a classified Special Protection Areas (SPA).

There are no Special Areas of Conservation (SAC) or Areas of Outstanding natural Beauty (AONB) within 1km of the site (OSNI Map Viewer).

In 2019 the new Nutrient Action Programme Regulations (NAP - Northern Ireland) 2019 were made for the period 2019-2022. The new Regulations replace the Nitrates Action Programme Regulations (Northern Ireland) 2014 as amended and the Phosphorus (Use in Agriculture) Regulations 2014. The NAP Regulations apply to all agricultural land in Northern Ireland and therefore applies to the site (DAERA, 2025).

There are no Urban Waste Water Treatment Directive Designated Sensitive Areas (Eutrophic) within 1km of the site (DAERA, 2015).

3 Environmental Data and Contamination Sources

3.1 Introduction

An assessment of potential contamination sources has been completed through a review of a number of data sources including regulatory data (such as waste management licenses, trade directories, and pollution incident records) and historical mapping. Regulatory data and historical mapping were sourced through online sources outlined in section 1.3.

3.2 Regulatory and environmental data

Table 3-1 provides a summary of the regulatory and environmental data concerning the site and local area.

Table 3-1: Summary of regulatory and environmental data

Data source	Details
Contaminated Land Register Entries and Notices	<p>A register of "contaminated land" as defined under Part III of the Waste and Contaminated Land Order is not held by the local authority. This legislation has not been enacted in Northern Ireland.</p> <p>The Planning Portal has been reviewed as part of this assessment. No Planning Applications with reference to 'contamination' or 'remediation' have been listed within 1km of the site.</p>
GSNI Recorded Mineral Occurrences / Resources	<p>No Mineral Occurrences recorded within 1km of the site (up to the year 2000).</p> <p>The following Mineral Resources are located within 1km of the site:</p> <ul style="list-style-type: none"> • Slate resource 750 m south-southeast; • Psammites and Quartzites resources 800 m south-southeast; • Peat resource 700 m south-southeast; and, • Sandstone resource underlies the site and surrounding areas.

Data source	Details
Local Authority Recorded Landfill Sites	<p>Prior to The Pollution Prevention and Control Regulations (Northern Ireland) 2003 coming into force, Local Councils regulated landfill sites through a waste management licencing system.</p> <p>Derry City & Strabane District Council was contacted for information and confirmed they do not hold a record of historic or currently operational landfill sites for the site.</p>
NIEA Recorded Authorised Landfill Sites	<p>NIEA records include tonnage of waste accepted for landfilling by authorised landfill sites in Northern Ireland by year (2013 – 2017). There are no recorded landfill sites within 1 km of the site. The closest recorded authorised landfill, located 4km southwest of the site, was operated by Du Pont (UK) Industrial Ltd. Landfill Type – non-hazardous. Recording 0 tonnes deposited for years 2013 - 2017.</p>
Other Licensed Waste Management sites	<p>Two Licensed Waste Management Facilities are recorded to be located 0-500m upgradient of site (OSNI):</p> <ul style="list-style-type: none"> • One licence (Exemption Expired) relating to Farmland to the rear of 41 Station Road, Eglinton, Derry. Held by Northern Ireland Railways Ltd. EWC Description includes: track ballast other than those mentioned in 17 05 07 (Licence No.: WMEX 13/65). Located 0m north of the site. • One active licence relating to Unit 7, Airfield Road, Eglinton, Derry. Held by Peak Environmental (UK) Ltd. EWC Description includes: plastic packaging/waste plastic/plastic shavings and turnings/ paper and cardboard/plastic and rubber (Licence No.: WML13/50). Located 150m south of the site. <p>The DAERA Waste Management Licensing (WML) public register was reviewed as advised by NIEA Waste Regulation Unit. One Licenced Waste Management Facility is located within 1km of the site:</p> <ul style="list-style-type: none"> • One licence held by Eglinton Timber Products Ltd, Longfield Industrial Estate West, Eglinton, Derry, Londonderry, BT47 3PY. Description: Non-Hazardous Treatment & Transfer Wood. Specified Operations: Sorting, separation, shredding and storage of clean waste wood. Maximum 5,000 tonnes / yr waste to be accepted and no more than 600 tonnes to be stored at any one time (Licence No.: WML 13/10). Located 900m south-southwest of the site.
COMAH Public Information Northern	<p>NIEA records no COMAH operational establishments within 1km of the site.</p>

Data source	Details
Ireland	
Planning Hazardous substance Consents / Enforcements	Hazardous Substances Consents Register – request for information from NIEA pending
Registered Radioactive Substances	Hazardous Substances Consents Register – request for information from NIEA pending
Fuel station entries	None located within 1km of the site.
Points of Interest – Commercial / Manufacturing and Production	<ul style="list-style-type: none"> DAERA Waste Management Unit records ‘Foyle Metals’ (Waste recycling, treatment and disposal sites: metal recycling sites) located at Airfield Road (165m south). No further details provided. DAERA records ‘Unspecified Works’ (chemical works, engineering works, building works, factories, fuel oil suppliers) located at Longfield Road (480m south-southwest). Dated 1976.
LAPPC	<p>Derry City & Strabane District Council confirms the following premises regulated by the Council under the Pollution Prevention and Control (Industrial Emissions) Regulations (NI) 2013 within 1km of the site:</p> <ul style="list-style-type: none"> Eglinton (Timber Products) Ltd, located at Longfield Industrial Estate West relating to Timber Processing (High Risk Category). PPC Ref: PPC/16/C/002.
Pollution prevention and Control (PPC)	None located within 1km of the site (DAERA public register).
Discharge consents	NIEA Water Information Request Viewer records ten Active trade discharge consents within 500m of the site in relation to Airport Site Drainage: Intercepted (4), Car Park Site Drainage (2), Unspecified Site Drainage (3) and Vehicle Washing (1).
Recorded pollution incidents to controlled waters	<p>Derry City & Strabane District Council does not hold information on pollution incidents.</p> <p>NIEA Water Information Request Viewer records two Pollution Incidents within 1km of the site. These were recorded between 500m – 1000m up-hydraulic gradient of the site in 2015. The incidents were classified as Low Level pollution severity and related to Domestic sources.</p>

Data source	Details
Mining Instability	GSNI records no historic mine workings (working/ shafts/ adits/ collapse) with 1km of the site.
Notes: IPC = Integrated Pollution Control; IPPC = Integrated Pollution Prevention & Control; LAPPC = Local Authority Pollution Prevention & Controls	

3.3 Historical land use

The historical land uses on and adjacent to the site have been determined from a review of historical OS mapping supplied as PRONI Historical Mapping (PRONI, 2025) and a summary is outlined in the sections below. These maps at scales of 1:50,000 Vector and OSNI Fusion data, 1:10,000 and 1:50,000 scale Raster Mapping were produced between 1829 to 1986. Available aerial imagery from between 2005 and 2025 has also been reviewed (Google Earth, 2025). A summary of historical land uses within the site is given in Table 3-2.

Table 3-2: Historical land use

Map year	Land use on site	Land use off-site (within 500m)	Potential contamination sources
OSNI 1829 – 1835	The site appears to be an area of intertidal habitat / agricultural land.	Agricultural land use ('Longfield More') approximately to the south of the site.	- None
OSNI 1838 – 1862	'Londonderry and Coleraine Railway' has been constructed (1856) and runs through the site. 'Muff Station' is situated at the western extent of the site. At the east of the site a cutting (possible river) intersects the site. At this location the railway runs over 'Longfield Bridge' (of wooden construction).	Buildings associated with 'Donnybrewer Mains' are located adjacent to the eastern extent of site. The 'Donnybrewer Level (Intake)' and the 'Longfield Level (Intake)' are situated to the north of the railway (site). A pond is located approximately 450m to the north of site.	- Agricultural land and runoff - Railway infrastructure
OSNI 1900-1932	The railway has been re-labelled as 'Midland Railway'. 'Eglinton Station' has replaced 'Muff Station' on the southern side of the railway at the east of the site. A level crossing is also labelled. The 'tidal' river/cutting that	No significant changes.	- Agricultural land and runoff - Railway infrastructure

Map year	Land use on site	Land use off-site (within 500m)	Potential contamination sources
	<p>intersects the site in the east is labelled as 'Muff River' and has a confluence with the bay approximately 450m to the north of site.</p> <p>The eastern extent of site (beyond Muff River) is labelled as marshland and 'covered by spring tides'.</p>		
<p>OSNI 1916-1957</p> <p>DAERA Open Data: Historical Landuse Dataset (WWII and Cold War)</p>	<p>The railway has been re-labelled as 'London Midland & Scottish Railway'.</p>	<p>No significant changes.</p> <p>DAERA records a WWII 'Eglinton Airfield Pillbox' adjacent to the northern site boundary (centre of site). Multiple military installations within 500m to the south of site include WWII Blister and Fromson hangars, pillboxes and machine gun fire testing ranges. Cold War era hangars were also constructed.</p>	<ul style="list-style-type: none"> - Agricultural land and runoff - Railway infrastructure - WWII and Cold War Infrastructure: ammunition and explosives including lead, trinitrotoluene (TNT) residues may remain in the soil.
<p>OSNI 1957-1986 1:10,000</p> <p>DAERA Open Data: Historical Landuse Dataset 1976</p>	<p>'Airfield Road' runs north-south and intersects the middle of site at a level crossing.</p>	<p>DAERA records 'Unspecified Works' dated 1976 at Longfield Road, 480m south-southwest of site.</p> <p>A 'disused' Airfield is located adjacent to the southeast of the site at 'Longfield More'.</p>	<ul style="list-style-type: none"> - Agricultural land and runoff - Railway infrastructure - Airfield (PFAS-containing aqueous film-forming)

Map year	Land use on site	Land use off-site (within 500m)	Potential contamination sources
		<p>Agricultural land (fields) is located across the Donnybrewer Levels to the northwest and southwest of the site, and across the Longfield Levels to the northeast of the site.</p>	<p>foams (AFFFs))</p> <ul style="list-style-type: none"> - Unspecified Works: Chemical works, engineering works, building works, factories, fuel oil suppliers - WWII and Cold War Infrastructure: ammunition and explosives including lead, trinitrotoluene (TNT) residues may remain in the soil.
<p>Aerial imagery (Google) 2005</p>	<p>Farmhouse and associated buildings to the north of the railway (onsite).</p>		<ul style="list-style-type: none"> - Agricultural land and runoff

4 Preliminary Environmental Risk Assessment

4.1 Introduction

This preliminary environmental risk assessment has been undertaken in accordance with the Environment Agency’s Land Contamination Risk Assessment (LCRM), which follows a source-pathway-receptor methodology, which is described in Appendix B. This section summarises the findings for each component of this assessment, which then culminates in the development of a conceptual site model. This model is then used to develop a risk rating for any given potential contamination source that has been identified.

4.2 Potential Contamination Sources

The potential sources of contamination have been identified from regulatory data and historical and current land uses within a 500m buffer of the site.

The primary potential sources are identified in: Potential contamination source Table 4-1.

Table 4-1 Table 4-1: Identified potential contamination sources

Source	Potential contaminants of concern	Severity (hazard)
On-site		
MADE GROUND associated with Railway Embankment	Fuel oils (diesel - leaks, spills), lubricating oils, creosote (including PAHs), solvents, de-icing chemicals (ethylene glycol), herbicides, ferrous residues, toxic metals, asbestos, ash, sulphate.	Medium
MADE GROUND associated with Roads (rail crossings)	Oil and fuel spills, tire and brake wear (toxic metals, PAHs). Road salt. De-icing chemicals. Litter (microplastics). Fill materials (sediment)	Minor
AGRICULTURE Livestock and Materials Storage associated with farmyard (west)	Fertilizers (nitrates, phosphates and toxic metals), herbicides, pesticides, plastic materials (mulching films, packaging), manure (nitrogen, phosphorous, pathogens, organic matter, antibiotics), fuels and oils from machinery.	Mild
MADE GROUND Residential: farmhouses and associated buildings	Household waste. Sewage, septic leaks: pathogens, nutrients. Household chemicals: cleaning agents, paints, solvents. Gardens: pesticides, herbicides, fertilizers, organic matter.	

Source	Potential contaminants of concern	Severity (hazard)
	Plastics and microplastics	
COMMERCE and INDUSTRY Licensed Waste management Sites: 'Exemption Expired' relating to Farmland to the rear of 41 Station Road, Eglinton, Derry (Track Ballast Waste). Located 0m north of the site.	Track ballast – “construction and demolition wastes (including excavated soil from contaminated sites)”	Medium
Off-site, up to 1km from the site		
COMMERCE and INDUSTRY Airport: City of Derry Airport	Aviation fuels (hydrocarbons, benzene, toluene), anti-freeze and de-icing agents (ethylene glycols, acetates), organic solvents (ketones, methanol, hydrocarbons, esters, chlorinated compounds), fire-fighting agents (PFAS), fuel additives and paints (toxic metals, BTEX compounds), plastics and microplastics, tire and brake wear, washing agents, lubricants, hydraulic fluids, herbicides.	Medium
AGRICULTURE <ul style="list-style-type: none"> • Pastoral land use (sheep/cattle grazing) • Arable land use 	Manure: nitrogen, phosphorous, pathogens, organic matter. Antibiotics and hormones. Sediment erosion and particulates. Phosphate, nitrate, sulphates, pesticides, fertilizers. Herbicides. toxic metals. Pathogens: bacteria, viruses, parasites. Plastic materials: mulching films, packaging. Suspended solids. Organic compounds. Oils and fuels from machinery.	Mild
MADE GROUND associated with roads and footpaths	Oil and fuel spills, tire and brake wear (toxic metals, PAHs). Road salt. De-icing chemicals. Fly-tipping and litter (microplastics) Fill Materials (sediment / erosion of paths due to footfall)	Minor
MADE GROUND <ul style="list-style-type: none"> • Residential: farmhouses and associated buildings 	Household waste. Sewage, septic leaks: pathogens, nutrients. Household chemicals: cleaning agents, paints, solvents. Gardens: pesticides, herbicides, fertilizers, organic matter. Plastics and microplastics	Medium
COMMERCE and INDUSTRY <ul style="list-style-type: none"> • James Quinn Auto Repairs located at 	Fuels, oils, solvents, BTEX, fuel additives, toxic metals, tire and brake wear. Washing agents, lubricants.	Medium

Source	Potential contaminants of concern	Severity (hazard)
<p>Lower Airfield Road, upgradient of site (150m south).</p> <ul style="list-style-type: none"> Longfield Industrial Estate located upgradient of site (270m south-southwest). 		
<p>COMMERCE and INDUSTRY Commercial / Manufacturing and Production:</p> <ul style="list-style-type: none"> Foyle Metals located at Airfield Road 165m south of the site. 'Unspecified Works' located at Longfield Road 480m south-southwest of the site. 	<p>Metal recycling/waste: toxic metals (incl. lead, mercury, cadmium, arsenic), Fuels/oils (incl. hydrocarbons, PAHs).</p> <p>Unspecified Works - chemical works/ engineering works/ building works/ factories/ fuel oil suppliers</p>	Medium
<p>COMMERCE and INDUSTRY Licensed Waste management Sites:</p> <ul style="list-style-type: none"> Unit 7, Airfield Road, Eglinton, Derry. License held by Peak Environmental (UK) Ltd. Located 150m south of the site. 	<p>Plastic packaging/waste plastic/plastic shavings and turnings/ paper and cardboard/plastic and rubber.</p>	Medium
<p>HISTORIC MILITARY INFRASTRUCTURE</p> <ul style="list-style-type: none"> WWII 'Eglinton Airfield Pillbox' adjacent to the northern site boundary. Multiple military installations within 500m to the south of site include WWII Blister and Fromson hangars, pillboxes and machine gun fire testing ranges. Cold War era hangars. 	<p>Ammunition and explosives including lead, trinitrotoluene (TNT) residues may remain in the soil.</p>	Mild

Source	Potential contaminants of concern	Severity (hazard)
<p>ACTIVE TRADE DISCHARGES</p> <ul style="list-style-type: none"> Ten consents within 500m of the site in relation to Airport Site Drainage: Intercepted (4), Car Park Site Drainage (2), Unspecified Site Drainage (3) and Vehicle Washing (1). 	<p>Surface water drainage/ run-off associated predominantly with airport: potential contaminants include aviation fuels (hydrocarbons, benzene, toluene), anti-freeze and de-icing agents (ethylene glycols, acetates), organic solvents (ketones, methanol, hydrocarbons, esters, chlorinated compounds), fire-fighting agents (PFAS), fuel additives and paints (toxic metals, BTEX compounds), plastics and microplastics, tire and brake wear, washing agents, lubricants, hydraulic fluids, herbicides.</p>	<p>Medium</p>

4.3 Pathways to receptors

Potential receptors and possible pathways for contaminants to reach these receptors are summarised below:

Table 4-2: Pathways to receptors

Pathway	Notes	Receptors
Direct Contact/Ingestion	Ingestion, inhalation, dermal contact for human health receptors	Construction workers Public end user Farmers
Uptake by plants	Through roots and water	Plants Grazing animals
Overland flow/runoff	Surface water overland	Muff River Lough Foyle (ASSI, SPA)
Surface Water via drainage	Surface water migration in rivers, streams, and drains	Muff River Lough Foyle (ASSI, SPA)
Fluvial Flooding	Leaching/dissolution followed by migration via fluvial flooding.	Muff River Lough Foyle (ASSI, SPA)
Tidal Flooding	Leaching/dissolution followed by migration via Tidal flooding.	Muff River Lough Foyle (ASSI, SPA)
Groundwater infiltration/flow	<p>Migration via leaching/dissolution and infiltration to permeable strata.</p> <p>The railway embankment comprises granular made ground.</p> <p>Desk-based evidence indicates some of the soil on / adjacent to site is classified as Gleysols - groundwater affected soils. Infiltration to the underlying bedrock aquifer through made ground / topsoil is possible.</p> <p>The bedrock aquifer may be locally confined where thicker less permeable deposits of clayey till overlie it. Depth to water table expected to be shallow (<10 m).</p>	<p>'Old Red Sandstones' Bedrock Aquifer: Roe Valley Group – typically a 'fracture' aquifer type with 'moderate' productivity potential</p> <p>The site sits within the Claudy Groundwater - Drinking Water Protection Area</p> <p>No groundwater abstraction licenses or notifications are recorded as being present on site or within 1km of the site</p>

4.4 Potential environmental receptors

A summary of environmental receptors that may be present in or within 1km from the site is given in Table 4-3. This shows receptor types and their associated sensitivity.

Table 4-3: Environmental receptors

Receptor Type	Receptor	Sensitivity	Reasoning
Human receptors	Future site users and construction workers involved in site development, farmers, public (adjacent footpath).	High	At this stage JBA understand that the proposed works may potentially involve excavation and other ancillary groundworks. Work may result in potential exposure to contaminants during groundworks, through direct contact, inhalation, or accidental ingestion of contaminants. Construction workers and farmers on-site, and members of the public off-site may be susceptible.
Ecological Receptors	Lough Foyle (ASSI, SPA, RAMSAR site).	Medium	Location across the proposed Sea Defence section of the site. Potential for contaminants to reach this receptor via surface runoff.
Groundwater	Old Red Sandstones' Bedrock Aquifer (Roe Valley Group)	High	The Claudy groundwater body is defined as having 'poor' chemical status and 'good' quantitative status. Vulnerability is generally high across the groundwater body. Depth to water table is unknown but expected to be shallow (<10 m). Groundwater flow within the bedrock is expected to be mainly shallow. There is potential for infiltration of contaminants from Made Ground into the aquifer. The site sits within the Claudy Groundwater - Drinking Water Protection Area.
Surface water	Muff River	High	WFD designation 'Moderate' (2021). Flows through the site boundary at two locations. Potential for contaminants to reach this receptor via run off.
	Lough Foyle	High	WFD designation 'Moderate' ecological status, 'Good' chemical

Receptor Type	Receptor	Sensitivity	Reasoning
	marine water body		classification (subgroup A) and 'Failing to Achieve Good' chemical classification (subgroup B and C). Borders the section of the site referred to as the proposed sea defence. Potential for contaminants to reach this receptor via run off.

4.5 Conceptual site model

A preliminary conceptual model for the site and surrounding environment has been developed based on the information available and described below.

- The bedrock deposits underlying the site are categorised as:
 - Roe Valley Group – sandstone and conglomerate, interbedded.
 - 'Old Red Sandstones' bedrock Aquifer – typically a 'fracture' aquifer type with 'moderate' productivity potential.
- Hydrology in the area comprises the Muff River and its distributary which pass through the site and discharge into the 'Lough Foyle' and 'Foyle Harbour and Faughan' (Lough Foyle), respectively.
 - The Muff River flows under the airport runway and the site via a culvert and discharges into the Lough Foyle 450m north of the site.
 - A distributary of the River Muff flows under the site via a culvert and discharges to the Foyle Harbour and Faughan, via a saline lagoon situated along the Lough Foyle shoreline, 1.1km north of the site.
 - The proposed sea defence section of the site sits in direct connection with the Lough Foyle.
- No superficial deposits are shown to be present underlying the site or surrounding area.
- Groundwater flow within the bedrock is expected to be mainly shallow. There is potential for vertical infiltration of contaminants from Made Ground into the aquifer.
- Groundwater within the bedrock aquifer is considered to follow the regional topography, flowing generally towards the northwest.

4.6 Uncertainties & opportunities

The conceptual site model has the following uncertainties:

- A detailed site walkover to identify potential visual evidence of contamination has not been undertaken.
- The presence of on-site and off-site potential sources of contamination have not been verified by an intrusive ground investigation.
- Ground conditions within the area of proposed works, including geological profile and groundwater characteristics have been inferred from available mapping and online data sources outlined in Section 1.3.
- Assessment of regulatory data is based on a review of online data sources. There is the potential for unrecorded landfills and other contamination sources to be present within 250 m of the study area.

5 Qualitative Risk Assessment

The conceptual site model is used to identify potential pollutant linkages by identifying the following:

- Potential contamination source(s) - a contaminant or pollutant that is in, on, or under the land and that has the potential to cause harm or pollution;
- Environmental pathways - a route by which a receptor is or could be affected by a contaminant; and,
- Environmental receptors - that could be adversely affected by a contaminant, e.g. construction workers, future site users, controlled waters, ecological receptors, etc.

A pollutant linkage must be present for there to be a Source-Pathway-Receptor linkage. Without a pollutant linkage, there is no risk - even if a potential source of contamination is present.

A tabulated summary of the risk assessment process can be seen in Table 5-1. This firstly describes the sources, pathways, and receptors derived from the baseline desk study and conceptual model. The assessment methodology for PRA described in Appendix B is then utilised to derive the potential severity of the given potential contamination source on any identified potential receptors. Finally, the likelihood of said contamination source reaching the receptor is given, which in conjunction with the potential severity is used to state a final risk value for each receptor. A full breakdown of potential contaminants associated with each source is shown in Table 4-1.

Table 5-1: Qualitative risk assessment summary

Source: Table 4-1	Pathway: Table 4-2	Receptor: Table 4-3	Severity	Probability	Risk
On Site Sources					
MADE GROUND associated with: <ul style="list-style-type: none"> • Railway Track (runoff catchment) • Embankments: Railway Embankment • Roads: Rail Crossings • Licensed Waste management Site: relating to Farmland to the rear of 41 Station Road, Eglinton (track ballast) 	Direct Contact/Ingestion	Human Receptors	Mild	Unlikely	Very Low risk
	Uptake by plants	Plants and Grazing animals	Mild	Low likelihood	Low risk
	Surface Water via drainage	Muff River Lough Foyle (ASSI, SPA)	Medium	Likely	Moderate
	Overland flow/runoff		Medium	Likely	Moderate
	Fluvial Flooding		Mild	Low likelihood	Low risk
	Surface Water via shallow groundwater		Medium	Unlikely	Low risk
	Tidal Flooding		Mild	Low Likelihood	Low risk
	Groundwater infiltration/flow	Bedrock Aquifer	Medium	Low Likelihood	Moderate/Low risk
AGRICULTURE <ul style="list-style-type: none"> • Livestock and Materials Storage associated with farmyard (west) • Residential: farmhouses and associated buildings 	Direct Contact/Ingestion	Human Receptors	Mild	Unlikely	Very Low risk
	Uptake by plants	Plants and Grazing animals	Mild	Low likelihood	Low risk
	Surface Water via drainage	Muff River Lough Foyle (ASSI, SPA)	Medium	Low likelihood	Moderate/low risk
	Overland flow/runoff		Medium	Low likelihood	Moderate/low risk

Source: Table 4-1	Pathway: Table 4-2	Receptor: Table 4-3	Severity	Probability	Risk
	Fluvial Flooding		Mild	Low likelihood	Low risk
	Surface Water via shallow groundwater		Medium	Unlikely	Low risk
	Tidal Flooding		Mild	Low Likelihood	Low risk
	Groundwater infiltration/flow	Bedrock Aquifer	Medium	Low Likelihood	Moderate/Low risk
Off-site Sources, up to 500m from site					
AGRICULTURE <ul style="list-style-type: none"> • Pastoral land use (sheep/cattle grazing) • Arable land use • Residential: farmhouses and associated buildings 	Surface Water via drainage	Muff River Lough Foyle (ASSI, SPA)	Medium	Low likelihood	Moderate/low risk
	Overland flow/runoff		Medium	Low likelihood	Moderate/low risk
	Fluvial Flooding		Mild	Low likelihood	Low risk
	Surface Water via shallow groundwater		Medium	Unlikely	Low risk
	Tidal Flooding		Mild	Low Likelihood	Low risk
	Groundwater infiltration/flow	Bedrock Aquifer	Medium	Low Likelihood	Moderate/Low risk
COMMERCE and INDUSTRY Airport: City of Derry Airport	Surface Water via drainage	Muff River Lough Foyle (ASSI, SPA)	Medium	Low likelihood	Moderate/low risk
	Overland flow/runoff		Medium	Low likelihood	Moderate/low risk
	Fluvial Flooding		Mild	Low	Low risk

Source: Table 4-1	Pathway: Table 4-2	Receptor: Table 4-3	Severity	Probability likelihood	Risk
	Surface Water via shallow groundwater		Medium	Unlikely	Low risk
	Tidal Flooding		Mild	Low Likelihood	Low risk
	Groundwater infiltration/flow	Bedrock Aquifer	Medium	Low Likelihood	Moderate/Low risk
COMMERCE and INDUSTRY <ul style="list-style-type: none"> • James Quinn Auto Repairs located at Lower Airfield Road, upgradient of site (150m south) • Longfield Industrial Estate located upgradient of site (270m south-southwest) • Foyle Metals (recycling/waste facility) located at Airfield Road 165m south of the site • Licensed Waste management site Unit 7, Airfield Road, Eglinton, Derry. License held by Peak Environmental (UK) Ltd. 	Surface Water via drainage	Muff River Lough Foyle (ASSI, SPA)	Medium	Low likelihood	Moderate/low risk
	Overland flow/runoff		Medium	Low likelihood	Moderate/low risk
	Fluvial Flooding		Mild	Low likelihood	Low risk
	Surface Water via shallow groundwater		Medium	Unlikely	Low risk
	Tidal Flooding		Mild	Low Likelihood	Low risk
	Groundwater infiltration/flow	Bedrock Aquifer	Medium	Low Likelihood	Moderate/Low risk

Source: Table 4-1	Pathway: Table 4-2	Receptor: Table 4-3	Severity	Probability	Risk
Located 150m south of the site.					
MADE GROUND associated with: <ul style="list-style-type: none"> • Railway Track (runoff catchment) • Railway Embankment • Roads and footpaths 	Surface Water via drainage	Muff River Lough Foyle (ASSI, SPA)	Medium	Likely	Moderate
	Overland flow/runoff		Medium	Likely	Moderate
	Fluvial Flooding		Mild	Low likelihood	Low risk
	Surface Water via shallow groundwater		Medium	Unlikely	Low risk
	Tidal Flooding		Mild	Low Likelihood	Low risk
	Groundwater infiltration/flow	Bedrock Aquifer	Medium	Low Likelihood	Moderate/Low risk
HISTORIC MILITARY INFRASTRUCTURE WWII <ul style="list-style-type: none"> • Military installations within 500m to the south of site include WWII Blister and Fromson hangars, pillboxes and machine gun fire testing ranges. Cold War era hangars. 	Surface Water via drainage	Muff River Lough Foyle (ASSI, SPA)	Medium	Low likelihood	Moderate/low risk
	Overland flow/runoff		Mild	Low likelihood	Low risk
	Fluvial Flooding		Mild	Low likelihood	Low risk
	Surface Water via shallow groundwater		Medium	Unlikely	Low risk
	Tidal Flooding		Mild	Low Likelihood	Low risk
	Groundwater infiltration/flow	Bedrock Aquifer	Medium	Low Likelihood	Moderate/Low risk

6 Conclusions

6.1 Site History & Potential Sources of Contamination

A review of historical mapping indicates that the site has remained reasonably unchanged since the late 19th century. The local area has predominately comprised agricultural land with limited historical development.

Within the site boundary, the following historic potentially contaminative activities or features were identified: agricultural land associated with livestock and materials storage (farmyard in the west of the site) and Made Ground associated with the railway line and embankment.

Within 500m of the site boundary, the following historic potentially contaminative activities or features were identified:

- Made Ground: Railway line and embankment, roads/rail crossings
- Agriculture - animal grazing and arable land use
- Farms - residential properties, farm buildings and livestock
- Artificial Deposits associated with the embankment and sea defence
- City of Derry Airport
- Longfield Industrial Estate
- Foyle Metals (recycling/waste facility)
- Auto Repairs/ Garage
- Historic military installations including WWII Blister and Fromson hangars, pillboxes and machine gun fire testing ranges. Cold War era hangars.

Potential sources of contamination at the site and surrounding areas are associated with the following activities:

The highest risk of contamination arises from runoff, drainage and groundwater infiltration/flow associated with agricultural, railway and wider commercial/industrial sources (City of Derry Airport, Longfield Industrial Estate and Historic WWII military installations). These are likely to affect sediments and water quality in the Muff River and Lough Foyle, and water quality in the Old Red Sandstones Aquifer.

6.2 Environmental Risk Assessment Summary

The following SPR (Source-Pathway-Receptor) linkages remain from the preliminary risk assessment:

Risk from on-site sources:

- The risk to the Surface Water (Muff River and Lough Foyle) is assessed as being **Moderate risk**.

- The risk of infiltration to the Bedrock aquifer is assessed as being **Moderate/Low risk**.
- The risk to flora and fauna is assessed as being **Low risk**.
- The risk to on-site construction workers, on-site/off-site farmers and public end-users is assessed as being **Very Low risk**.

Risk from off-site sources:

- The risk to the Surface Water (Muff River and Lough Foyle) is assessed as being **Moderate risk**.
- The risk of infiltration to the Bedrock aquifer is assessed as being **Moderate/Low risk**.

In the UK, a risk-based approach is used to assess the potential impact associated with ground contamination as summarised in the conceptual site model. The current and former uses of the site indicate a **Moderate risk** potential for potentially widespread soil and groundwater contamination.

6.3 Recommendations

Based upon the findings of this preliminary risk assessment, JBA have not identified pollutant linkages with the potential to cause harm to controlled waters (surface water sources or bedrock aquifer), or to human health (on-site construction workers, on-site/off-site farmers or public end-users). Therefore, there are no recommendations for any further intrusive site investigation work.

It is recommended, however, that care is taken during any proposed excavation works in Made Ground (should it be present) and that a plan should be put in place in the event that any unexpected contamination is encountered. If unexpected contamination is encountered during the excavation works (visual and olfactory), separation, storage, and further assessment should be carried out.

Should there be a requirement for any of the Made Ground to be exported from the site, it is recommended that waste acceptance criteria testing is carried out to appropriately classify the material for disposal.

It is further recommended that any future works proposed for the Site refer to and comply with the Guidance for Pollution Prevention (GPP) document series. This series provides best practice environmental guidance applicable across the UK and serves as regulatory guidance specifically for Northern Ireland (NIEA, 2021).

A Appendices

A.1 Information provided by Third Party (Local Authority and Regulators)



Ref: EIR / 6006

02nd October 2025

Mr [REDACTED]

Email: [REDACTED]

Dear Mr [REDACTED],

Environmental Information Regulations Request - Pollution Incidents

I refer to your EIR request and respond as follows:

Request

I am writing to request information regarding any pollution incidents, contaminated land, historic/current landfill sites, Industry Pollution (IPC) consents or pollution related complaints within 2km radius of the following site (situated north of City of Derry Airport).

- Our site's Red Line Boundary – please see attached plan
- Nearest/approximate post code: BT47 3ZF

Response

1. Records of pollution incidences at the site or the surrounding lands within 2km radius

The Environmental Health Service (EHS) holds no information on pollution incidences on the site and in the surrounding vicinity of 2km radius of the site. You may wish to contact the Water Management Unit of the Northern Ireland Environment Agency to ascertain if they have any further information on historic pollution at the site or in the vicinity of this site. Further information can be found at:

Derry

C/o Council Offices
98 Strand Road
Derry
BT48 7NN

Strabane

C/o Council Offices
47 Derry Road
Strabane
BT82 8DY

+44 (0) 2871 253 253
info@derrystrabane.com
www.derrystrabane.com

f Derry City & Strabane District Council
t @dcsdcouncil

<https://www.daera-ni.gov.uk/topics/pollution/water-pollution>

2. Contaminated land records for the site or surrounding lands within 2km

EHS note that the area within the red site boundary line is currently used as a railway line. Based on information from the Historical Land Use Map available on Spatial NI, there are several historical land uses recorded within a 2km radius of the red site boundary line provided. One historical land use located within the red site boundary is indicated as "military installations". To access more comprehensive information on historical land uses in the area, The historic land use data can be accessed on Spatial NI at the following link:

<https://maps.spatialni.gov.uk/> additionally historical land use maps are available through the PRONI Historical Maps Viewer and can be accessed at the following link: <https://www.nidirect.gov.uk/services/search-proni-historical-maps-viewer>.

The subject site is situated within the Campsie Business Park area and south east of Campsie Industrial Estate which contains a variety of manufacturing, engineering and industrial facilities, motor vehicle dealerships, motor repair facilities and other trade sales outlets. Due to the nature of the surrounding area in which the site is situated there may be the potential for land contamination to have occurred. However, the Environmental Health Service has no direct knowledge or record of any contamination issues within a 2km radius of the site.

The Northern Ireland Environment Agency's (NIEA) Regulation Unit (RU) also holds a database of sites where, based on their historic land-use, there is potential for contamination to be present. Further information on this data base can be found at: -

<https://www.daera-ni.gov.uk/articles/planning-and-land-contamination> and further guidance can be obtained from the Regulation Unit (RU) Land and Groundwater Team within the NIEA to determine records of contaminated land at the location or in the vicinity of the subject site.

3. Historic/Current landfill sites within 2km

We do not hold a record of any historic current landfill sites. You may wish to consider Waste Management activities listed on Public register at <https://www.daera-ni.gov.uk/services/waste-management-licensing-public-register>. Please contact the Waste Regulation Unit for any further information required. General queries: 028 9056 9353, Email: WRU.Queries@daera-ni.gov.uk

4. IPC Consents within 2km

EHS would confirm that there are two premises regulated by the Council under the Pollution Prevention and Control (Industrial Emissions) Regulations (NI) 2013 within 2km of the centre point of the red site boundary line provided. There are also three establishments regulated by the Council under the Pollution Prevention and Control (Industrial Emissions) Regulations (NI) 2013 which are situated just outside the 2km radius. You can view all installations permitted by the Council at: <https://dcsdc.maps.arcgis.com/apps/webappviewer/index.html?id=a414295d11474bc5b05a252a9f406046>

You may wish to contact the Industrial Pollution and Radiochemical Inspectorate (IPRI) within the Northern Ireland Environment Agency for any further information required regarding Part A and B permitted installations. The public register can be searched online at <https://www.daera-ni.gov.uk/articles/public-registers>.

5. Pollution Complaints

Our records indicate that the Environmental Health Service received one complaint regarding alleged black smoke emanating from Campsie Fuels, 22A Donnybrewer Rd, Campsie, Londonderry BT47 3PD. EHS attended the site and witnessed black smoke. A warning letter was issued.

If you are dissatisfied with our response, you have rights of review and appeal; these rights consist of two review processes.

Firstly, our internal review procedure is available by contacting:

██████████
Chief Executive
Derry City and Strabane District Council
98 Strand Road
Derry BT48 7NN
Tel: ██████████ or email: ██████████

Secondly, you can appeal directly by contacting the Information Commissioner at:

Information Commissioner
Wycliffe House
Water Lane
Wilmslow
CHESHIRE SK9 5AF
Tel: ██████████ (local rate) or email: ██████████

I would however advise that the Information Commissioner has indicated that a review will not be undertaken unless the Council has first had an opportunity to re-consider its decision.

Yours sincerely

██████████
Head of Health & Community Wellbeing

B Methodology for Preliminary Environmental Assessment

The methodology for this assessment is based on the Environment Agency's Land Contamination Risk Management (LCRM, which replaces previous guidance within CLR11). Stage 1: Risk Assessment requires that a Tier 1 Preliminary Risk Assessment is carried out ahead of development to assess the potential risk. The methodology used to establish the preliminary risk assessment is described below.

B.1 Qualitative Risk Assessment Methodology

Risk assessment is the process of collating known information on a hazard or set of hazards in order to estimate actual or potential risks to receptors. The receptor may be human health, a water resource, a sensitive local ecosystem or even future construction materials. Receptors can be connected with the hazard under consideration via one or several exposure pathways (e.g. the pathway of direct contact). Risks are generally managed by isolating or removing the hazard, isolating the receptor, or by intercepting the exposure pathway. Without the three essential components of a source (hazard), pathway and receptor, there can be no risk. Thus, the mere presence of a hazard at a site does not mean that there will necessarily be attendant risks. The following risk assessment thus focuses on those parts of the site where hazards or potential hazards have been identified and is not general to the whole site.

B.2 Hazards

Potential sources of contamination are identified for the site, based on a review of the current and previous site uses. Not only the nature but also the likely extent of any contamination is considered, e.g. whether such contamination is likely to be localised or widespread.

B.3 Receptors

The varying effects of a hazard on individual receptors depends largely on the sensitivity of the target. Receptors include any people, animal or plant population, or natural or economic resources within the range of the source which are connected to the source by the transport pathway. Receptors can, in addition, extend to remediation processes and future construction materials that may be adversely affected by on-site contamination. In general, however, receptors can be divided into a number of groups, dependant on the final use of the site.

B.4 Pathways

The mere presence of contamination does not infer a risk. The exposure pathway determines the dose delivered to the receptor and the effective dose determines the extent of the adverse effect on the receptor. The pathway which transports the contaminants to the receptor or target generally involves conveyance via soil, water or air.

B.5 Exposure Assessment

By considering the source, pathway and receptor, an assessment is made for each contaminant on a receptor-by-receptor basis with reference to the significance and degree of the risk. In assessing this information, a measure is made of whether the source contamination can reach a receptor, determining whether it is of a major or minor significance. The exposure risks are assessed against the present site conditions. The assessment of risk presented here has been based upon the procedure outlined in DEFRA Circular 01/2006. In addition, DEFRA, with the Collaborative Centre of Excellence in Understanding and Managing Natural and Environmental Risks, Cranfield University, has published guidance on risk assessment (Guidelines for Environmental Risk Assessment and Management). A guide to good practice for contaminated land risk assessment has also been produced by CIRIA (CIRIA C552 2001). This guidance from DEFRA and CIRIA states that the designation of risk is based upon a consideration of both:

- The severity of the potential consequence [takes into account both the potential severity of the hazard and the sensitivity of the receptor].
- The likelihood of an event (probability); [takes into account both the presence of the hazard and receptor and the integrity of the pathway].

Table B-1 provides a classification of the potential severity of contamination risks occurring at the site, while Table B-2 summarises the probability classifications.

Table B-6-1: Classification of associated hazard [potential severity] (modified from CIRIA C552)

Classification	Associated hazard [potential severity]
Severe	<p>Short-term (acute) risks to human health likely to result in significant harm.</p> <p>Short-term risk of pollution to a sensitive water resource or ecosystem.</p> <p>Catastrophic damage to crops/buildings/property/infrastructure, including off-site soils.</p> <p>Short-term risk to a particular ecosystem or organism forming part of such an ecosystem.</p>

Classification	Associated hazard [potential severity]
Medium	Chronic damage to human health. Risk of pollution of sensitive water resource or ecosystem. Significant change in a particular ecosystem. Significant damage to crops/buildings/property/infrastructure (on or off-site). Contamination of off-site soils.
Mild	Pollution of non-sensitive water resources. Significant damage to crops/buildings/property/infrastructure (on or off-site).
Minor	Harm, although not necessarily significant harm which may result in a financial loss. Easily preventable, non-permanent health effects on humans, or no effects. Easily repairable damage to crops/buildings/property/infrastructure.

Table B-6-2: Classification of probability

Classification	Definition of probability
High	There is a pollution linkage and an event that either appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution.
Likely	There is a pollution linkage, and all the elements are present and in the right place which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low	There is a pollution linkage, and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such an event would take place and is less likely in the shorter term.
Unlikely	There is a pollution linkage, but circumstances are such that it is improbable that an event would occur even in the very long-term.

Once the classification of consequence and probability has been assigned to a pollution linkage, the risk associated with it can be evaluated. Table B-3 shows how a risk category is assigned based on the consequence and probability. Definitions of each risk category and the investigation actions that are likely to be necessary in each case are given in Table B-4. These definitions and the risk matrix are based upon CIRIA C552.

Table B-6-3: Contamination risk matrix

		Consequence			
		Severe	Medium	Mild	Minor
Probability	High	Very high risk	High risk	Moderate risk	Moderate / low risk
	Likely	High risk	Moderate risk	Moderate / low risk	Low risk
	Low	Moderate risk	Moderate / low risk	Low risk	Very low risk
	Unlikely	Moderate / low risk	Low risk	Very low risk	Very low risk

Table B-6-4: Description of the risk classifications and likely action required

Classification	Definition and likely actions required
Very high	<p>There is a high probability of severe harm to a defined receptor, or there is evidence that severe harm is currently taking place.</p> <p>The risk is likely to result in a substantial liability.</p> <p>Urgent investigation (if not already undertaken) and remediation is likely to be required.</p>
High	<p>Harm to a designated receptor is likely.</p> <p>The risk, if realised, is likely to present a substantial liability.</p> <p>Urgent investigation (if not already undertaken) is likely to be required.</p>
Moderate	<p>Harm to a designated receptor is possible. However, it is either relatively unlikely that the harm would be severe or, if any harm were to occur it is more likely that the harm would be relatively mild. Investigation is likely to be required to clarify the level of potential liability and risk.</p>
Low	<p>Harm to a designated receptor is possible but is likely to be mild at worst.</p> <p>Further investigation is not required at this stage.</p>
Very low	<p>There is a low possibility of harm to a designated receptor occurring, and if it were to be realised it would be likely to be mild at worst. Further investigation is not required at this stage.</p>

Offices at

Bristol
Coleshill
Doncaster
Dublin
Edinburgh
Exeter
Glasgow
Haywards Heath
Leeds
Limerick
Newcastle upon Tyne
Newport
Peterborough
Portsmouth
Saltaire
Skipton
Tadcaster
Thirsk
Wallingford
Warrington

Registered Office
1 Broughton Park
Old Lane North
Broughton
SKIPTON
North Yorkshire
BD23 3FD
United Kingdom

+44(0)1756 799919
info@jbaconsulting.co
m
www.jbaconsulting.com
Follow us:  

Jeremy Benn
Associates Limited

Registered in England
3246693

JBA Group Ltd is
certified to:
ISO 9001:2015
ISO 14001:2015
ISO 27001:2013
ISO 45001:2018