Tata Steel UK Limited (Tata Steel)

Electric Arc Furnace (EAF)

Soils and Peat Management Plan (Condition 54)

RSK Project no. 664195

MAY 2025

RSK GENERAL NOTES

Project No.: 664195

Title: Port Talbot, Electric Arc Furnace
Peat Management Plan and Soil Management Plan (Condition 54)

Client: Tata Steel UK Limited (Tata Steel)

Date: May 2025

Office: Bristol

Status: Final

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1 INTRODUCTION

1.1 Introduction

1.1.1 In March 2025, Tata Steel UK Limited (Tata Steel UK) obtained planning permission (application reference P2024/0711) for development of an electric arc furnace and associated development at its Port Talbot Steelworks, Grange Road, Margam, Neath Port Talbot, SA13 2NG.

1.1.2 The planning permission grants to Tata Steel UK:

Full planning permission for the demolition of existing buildings and structures, partial infill of the BOS lagoon, and construction of a new electric arc furnace-based steel production facility (1 No. arc furnace, 2 no ladle furnaces). The development includes chemical / material storage and transfer infrastructure, pipework and cabling (above and below ground), buildings, fume and dust treatment plant, water treatment facility and material handling systems, electrical control rooms and power infrastructure, offices and ancillary facilities, together with new and amended roads and rail lines, landscaping and green infrastructure, lighting, hardstanding, CCTV, drainage and associated engineering operations.

Outline planning permission (with all matters reserved except for access and landscaping) for the construction of a scrap metal handling facility and associated scrap yards, scrap processing facility, new substation, underground and overground electrical infrastructure, and new and amended roads and rail lines, landscape and green infrastructure, lighting, hardstanding, CCTV, drainage and associated engineering operations.

1.2 Purpose of this document

1.2.1 The planning permission as referenced above includes a number of conditions, including Condition 54 which requires that:

54. Prior to the commencement of a phase of development as approved by Condition 39,(with the exception of site clearance and demolition works) a Soils and Peat Management Plan (SPMP) shall be submitted to and approved in writing by the Local Planning Authority (LPA). The development shall be carried out in full accordance with the approved SPMP for that reason.

Reason: To ensure the appropriate management of soils and impacts on peat during construction and prevent pollution in accordance with Policies EN7 and EN8 of the Neath Port Talbot Local Development Plan (2011-2016)

1.2.2 This document is intended to provide the information necessary to allow discharge of Condition 54.

1.2.3 Specifically, it introduces and coordinates the information contained in the respective appendices:

- Appendix A is the Soils and Materials Management Plan (SMMP) produced by Tata Steel UK's contractor team.

- Appendix B is the Peat Management Plan (PMP) produced by Tata Steel UK's specialist consultant, WRc.

1.2.4 These documents have been produced independently to reflect the differing areas of expertise in the project team, but are jointly expected to meet the requirements of Condition 54.

2 APPENDED DOCUMENTS

2.1 Soil and Material Management Plan

2.1.1 The SMMP at Appendix A has been prepared by Tata Steel UK's contracting team to document the protocols for soils and material handling across the whole development area. The reason that soils and materials are combined into one document is that the construction of the proposed development will entail excavation of both anthropogenic materials and natural soils. Hence, a combined approach to materials and soils handling is logical.

2.1.2 The SMMP is guided by principles of waste management hierarchy and contaminated land legislation, seeking to ensure that excavated soils are re-used on site where it is safe and permitted to do so, and removed for off-site disposal where this is not the case.

2.1.3 Information is also provided on the protocols for temporary storage and transportation of excavated soils.

2.1.4 Full details of the proposed measures are provided in Appendix A.

2.2 Peat Management Plan

2.2.1 The PMP at Appendix B has been prepared by Tata Steel UK's specialist consultant, WRc.

2.2.2 Site investigation and geological mapping indicates that naturally occurring peat soils underlie parts of the development area. The need for a PMP is driven by the value placed on peat through Planning Policy Wales 12, particularly focusing on its function as a long-term carbon store.

2.2.3 Site investigation data indicates that the peat occurring beneath the site occurs at depths ranging between 4.7m and 18.75m below ground. The majority of bulk excavations are expected to be less than 3m in depth, with only the excavations for the materials hoppers exceeding this, extending up to 9m. Site investigation data in the vicinity of the hoppers suggests that continuous peat horizons are expected to occur only below 10.5m.

2.2.4 It is therefore not expected that large quantities of previously undisturbed peat will be encountered during the construction works.

2.2.5 The PMP is therefore a precautionary document establishing the protocols for peat handling, storage and management in the unexpected event of encountering peat in larger quantities that would be suggested by the available geological data.

2.2.6 The fundamental measure in the PMP is that excavated peat will be re-buried at depth within the site, therefore preserving its function as a long-term carbon store. Associated protocols for its handling and temporary storage are also provided.

2.2.7 Further information is supplied in Appendix B.

APPENDIX A: SOILS AND MATERIALS MANAGEMENT PLAN

1. Introduction

This document is design to meet the requirements of Condition 53 and 54 of planning permission 2024/0711, which relates to the construction of a new electric arc furnace at the Port Talbot Steelworks.

These conditions are included below for ease of reference:

Condition 53:

"Prior to the commencement of a phase of development as approved by Condition 39, a Material Management Plan (MMP) shall be submitted to and approved in writing by the Local Planning Authority (LPA). The MMP (for that phase) shall outline the procedures and methodologies for the management, reuse, storage, transportation, and disposal of materials (including soils, slag and other excavated material) arising from the development or imported onto site or exported from the site. The development shall be carried in full accordance with the approved MMP, and all materials shall be managed as detailed within the plan for that construction phase."

Condition 54:

"Prior to the commencement of a phase of development as approved by Condition 39, (with the exception of site clearance and demolition works) a Soils and Peat Management Plan (SPMP) shall be submitted to and approved in writing by the Local Planning Authority (LPA). The development shall be carried out in full accordance with the approved SPMP for that reason."

The document is designed to be a high level and site wide strategy that establishes the principles of how material is managed in delivering the EAF development. It applies to all phases of development. Its structure and content have been discussed informally with officers at Neath Port Talbot Council (NPT) prior to the submission of the application.

The document should be read in conjunction with the Phase 2 Site Investigation Report (March 2025) and Remediation Strategy (April 2025) prepared by RSK Geo-Sciences in relation to conditions 45 and 46 imposed on the EAF planning permission at the site.

1.1. Summary of Proposed Development

The hybrid planning permission provides for the following development:

'Hybrid planning application: full planning permission for the demolition of existing buildings and structures, partial infill of the BOS lagoon, and construction of a new electric arc furnace-based steel production facility (1 no. arc furnace, 2 no. ladle furnaces). The development includes an upgraded slag processing facility, chemical/material storage and transfer infrastructure and pipework and cabling (above and below ground), buildings, fume and dust treatment plant, water treatment facility and material handling systems. Electrical control rooms and power infrastructure. Offices and ancillary facilities together with new and amended transport infrastructure, landscaping and green infrastructure, and associated engineering operations.

Outline planning permission (with all matters reserved except for access and landscaping) for demolition and the construction of a scrap metal handling facility and associated scrap yards, scrap processing facility, underground and overground electrical infrastructure, and new and amended transport infrastructure, landscape and green infrastructure, drainage and associated engineering operations.

1.2. Document Purpose

This document lays out the principles in which soils, excavated materials and suitable stockpiled materials are to be handled associated with the EAF Meltshop project at Port Talbot Steelworks. There is a requirement for a significant cut and fill exercise across the construction site to facilitate various aspects of the development. This will likely generate a significant amount of soil, much of which will be anthropogenic in nature. The site was originally reclaimed from the mud flats and dunes that formed the port area prior to it's development from the early 1920's to the present day. Much of the made ground is slag from the various furnaces present over the years, with rubble and construction debris from the various iterations of the works. The majority of this material is entirely suitable to form the basis for the new construction, both chemically and geo-technically.

Tata Steel UK commissioned a Ground Investigation Report and a Geotechnical Design Report to assess the ground conditions and confirm the suitability of re-use. A significant amount of boreholes and trial pits were undertaken during the intrusive section of the investigation. Whilst it is not possible to completely cover all areas of the site, sufficient data has been analysed to characterise the site. Contaminants have been found that would be expected from a century of steel making at the Port Talbot site, including heavy metals, hydrocarbons, and asbestos containing materials. However these contaminants are not widespread through the construction boundary. Most of the impact is associated with the former Grange Coke Ovens and that area is due to be left predominantly undisturbed for the EAF project.

The conclusion of the Geo-environmental report is that some areas of contamination exceed the human health criteria for future occupiers. The recommended remediation is a clean capping layer or concrete slab is installed above these failing soils then it severs the pathway that would cause an unacceptable risk. This remediation strategy should be taken into account when reading this document: soils that exceed the thresholds will be maintained under a clean capping layer to ensure compliance. As noted above, a remediation strategy is being submitted to discharge Condition 45 of the planning permission.

2. General Soil Strategy

In alignment with the waste hierarchy, TSUK will attempt to maximise the re-use of soil on-site. There are areas of the site where levels will need to be significantly reduced. The majority of the rest of the site will be raised to plateau for development and limit the flood risk in the future. In order to maximise the re-use of soil on site, there needs to be a comprehensive soil testing regime in order to ensure that it is suitable for the end-use. Soil will be segregated upon excavation and tested, the exact frequency will be set out in the remediation strategy. The testing suite and proposed thresholds are in Appendix A and are based on the commercial/industrial end-use criteria, and the source of the threshold is included for reference.

The soil will be temporarily stockpiled so the laboratory testing can be completed. It should be noted that the potential for fugitive dust will be addressed as per the Construction Environmental Management Plan and the Air Quality Management Plan. The position of all soil samples will be recorded in order to accurately allow the immediate re-use of the soil once the testing has confirmed compliance. Soil that fails the re-use criteria will be temporarily quarantined in order to assess whether additional testing can allow the soil to be used. For example, a failing stockpile could be further subdivided into 5 sections and re-tested in order

to see if there was an isolated non-conformance or whether the whole stockpile is contaminated above acceptable re-use criteria.

If after re-testing soil is still above the soil re-use criteria then it will be sent for disposal. The testing will be used to complete a basic waste characterisation as per the Guidance on the Classification and Assessment of Waste (WM3). The route of disposal will depend on this classification and whether it passes Waste Acceptance Criteria (WAC) or requires an alternative disposal route, such as incineration.

3. Re-use of Soil and Other Materials on Site

As previously stated, Tata Steel UK has a long history of maximising re-use of its by-products and process materials on-site to provide a stable platform for its operations, stockyards and ancillary areas. TSUK intend to continue this re-use of material, as long as they are deemed to be suitable. The general soil strategy is listed in the previous chapter. Importantly, this approach relies on TSUK demonstrating that material we excavate isn't a waste.

The definition of waste is any material that a holder intends to discard or is required to discard. There has been much discussion on the use of soil in construction or remediation projects and the charity, Contaminated Land: Applications in Real Environments (CL:AIRE) produced a guidance document known as the Definition of Waste: Code of Practice (DoW:CoP). That set out a framework of how soils can be re-used and not classified as a waste. As it states "it is the responsibility of the holder of a material to form their own view on whether that material is waste or not." and then procedures to set out multiple scenarios for re-use on the site of origin or use on other sites or even as part of a hub and cluster arrangement whether there is an intermediate site. In order to formalise the re-use of potentially waste soils, a Material Management Plan (MMP) is produced that details volumes, origins, destination and purpose of soils

For the EAF Meltshop project, TSUK has assessed the risk of soil re-use on site. The risk has been found to be low, which has informed the intention not to discard any soil. For that reason, any soil that is excavated and directly re-used on-site without any treatment is not a waste and therefore will not require an MMP to formalise this.

TSUK and its contractors will continue to test soils and other materials for their suitability for use in various aspects of the project, however, in a situation where soil is excavated and requires remedial treatment in order to be compliant with re-use criteria, then a formal MMP will be created and lodged with CL:AIRE to ensure compliance.

4. Aggregate from Steel Waste: Quality Protocol

One of the major routes to utilising both deposited and stockpile materials is the Aggregate from Steel Waste: Quality Protocol. Basic Oxygen Steelmaking slag (BOS slag) was a major waste produced by the steelmaking process. Its long been valued as a useful, hard wearing aggregate that can be used in multiple construction scenarios, in both bound and unbound applications.

The issue with newly arising slag is that when it reacts with water and atmospheric carbon dioxide it has the potential to expand, which could lead to heave or subsidence issues. The Quality Protocol was created in collaboration with the Environment Agency to counteract this issue and to recognise the value of this material in construction. This allows the use of BOS

slag in a number of construction applications as a non-waste, as long as steps have been undertaken to ensure that the material is suitable for use. The exact testing varies depending on the use but is predominantly related to the geotechnical properties particularly its expansivity.

It should be noted that an entire suite of testing is not required by the quality protocol before the slag can be utilised for construction. A significant programme of testing was done as part of the preparation of the quality protocol document. It showed that, as long as the document is adhered to, BOS slag has no significant environmental impact over the use of other virgin aggregate alternatives. The full text of the quality protocol can be found here: Aggregate from waste steel slag: quality protocol - GOV.UK.

5. Temporary storage

Soil shall be stockpiled close to the origin of the material in designated areas that will be tracked by the principal contractor. The stockpiles will be designated a unique identifier that allows the tracking of the movement of material, but also the testing of the soil. This will be an manual system (with digital storage of all information) and the unique identifier will be assigned to the soils samples when they go to the laboratory. The tracking will include the date of excavation, location, tonnage or volume, confirmation of whether samples have been taken (or re-testing if required), results of analysis and confirmation of whether it is suitable for re-use. The tracking system will also record where the soil is to be re-used on site. This will also be used as evidence for Condition 63 on the use of slag on site, and will be made available to the council upon request.

There is no requirement to store stockpiled material on an impermeable surface unless it shows significant visual or olfactory evidence of contamination. In the case of suspected gross contamination, soil must be placed on an impermeable liner or sealed concrete area with no links to surface water drains.

In all cases, whether contamination is suspected or not, soil must be stored in a way where rainwater cannot run-off into surface water drains or ditches on site. This is in order to prevent silt build up in the drainage network and potential contaminants that could cause a breach of the site environmental permit.

6. Transportation

Soil will be transported to storage areas and areas of re-use on site via the on-site private road network. There will be a variety of both road worthy and non-worthy vehicles moving the soil. This will include Moxy-style tippers and other heavy plant along-side more traditional rigid and articulated tippers. The Port Talbot site has a significant amount of heavy plant for already for its standard operations and its road network is designed to support this.

The Construction Environmental Management Plan (CEMP) covers on-site vehicle movements and potential mitigations for elements such as dust, noise, tracking of soils on to the highway and storage of fuels. All movement of soil will adhere to the standards set out in the CEMP.

If any soil needs to be taken off-site for any reason then it will be transported on road worthy vehicles with the correct carriers license. If this includes off-site disposal of the soil then the load will be accompanied with a Waste Transfer Note (non-hazardous) or a Waste Consignment Note (hazardous waste). The following section details soil as a waste and under what circumstances it could be considered as such.

7. Asbestos

Due to the presence of boilers, furnaces, steam pipelines and other high temperature equipment on-site, there is the potential to find asbestos containing materials (ACM) in the near surface soils. This is predominantly white asbestos (chrysotile) that is usually cement bound but there is also the potential to encounter brown asbestos (amosite) primary from pipe lagging.

TSUK is required to produce a remediation strategy for the works as part of the EAF development. This document will provide greater detail on asbestos and proposals to control it and the risk it poses.

The risk associated with ACM is the potential inhalation of fibres by future users of the site or the construction workers. If the pathway to inhalation can be severed then the risk is mitigated. The standard remediation techniques when encountering asbestos are either removal or encapsulation. The installation of a clean capping layer above the asbestos containing soils is the preferred methodology on this site to protect future users from the risk of inhalation. For this reason, if soil is assessed to be between 0.001 and 0.1% by weight asbestos then it can be re-used on-site as long as clean cover (e.g. material that has passed the specification in Appendix A) is placed above it. This is the same mitigation set out in the Phase II contaminated land report for the presence of asbestos fibres in the made-ground.

Where soil has been assessed to be above the 0.1% hazardous waste threshold or visible ACM containing material is present, it must be disposed of to landfill, unless other mitigation measures are implemented such as solidification. It should be noted that any additional methods of dealing with asbestos have not been discussed with either the Local Planning Authority or the Environmental Regulator and would need to be licensed under the Environmental Permitting Regulations.

TSUK has an active hazardous landfill to the south of the main works that is able to accept asbestos containing material if there is no other route to re-use or remediation.

8. Conclusion

TSUK and its contractors are committed to re-using soil and aggregates generated from the construction activities on-site. A tracking and sampling system will be enforced to understand where soils have originated and where they will be re-used on site and ensure their suitability for incorporation into the earthworks design.

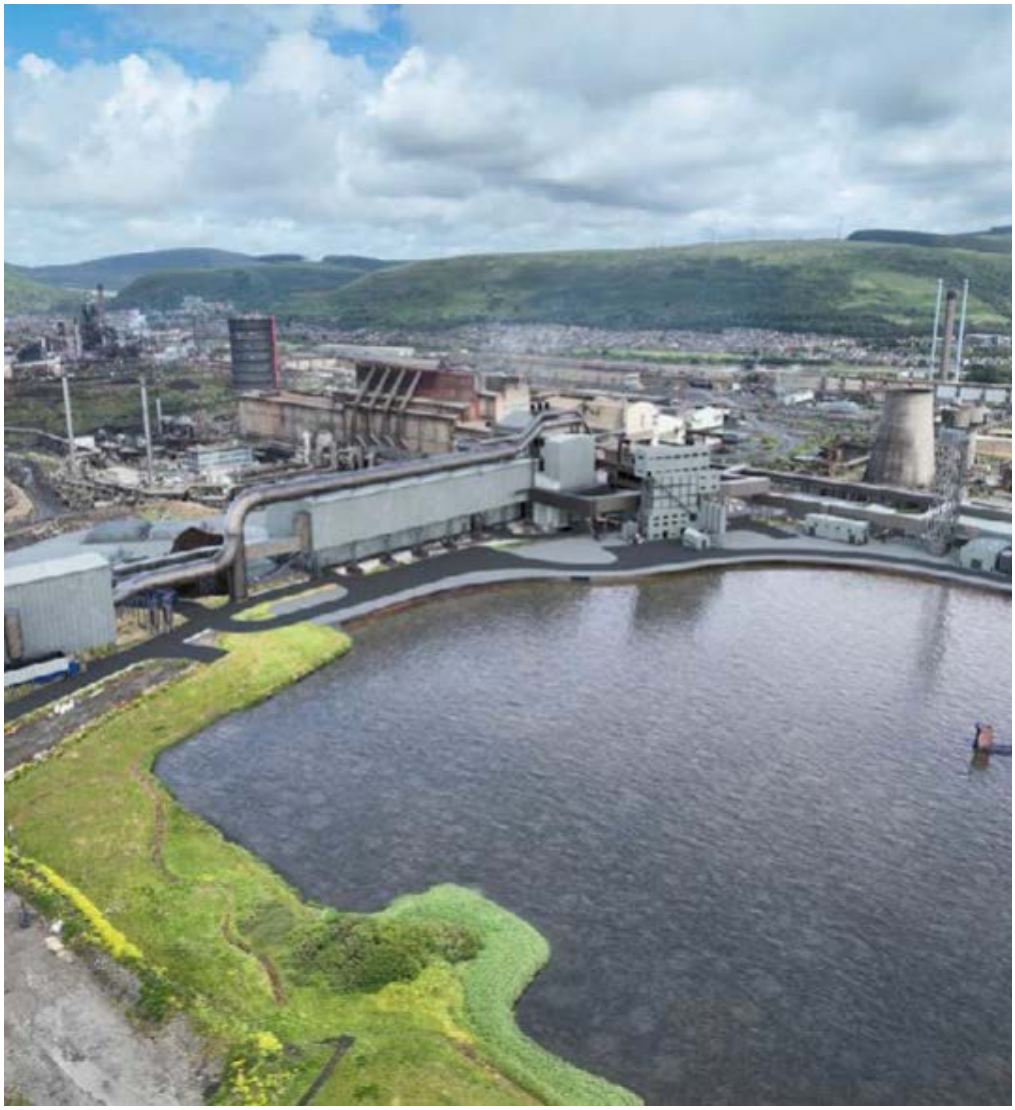
TSUK is fully aware of its obligations under waste law and have multiple mechanisms to utilise materials on site that meet those requirements including materials never becoming a waste, the DoWCOP and quality protocol.

If any materials cannot be legitimately re-used on site, they will be classified using WM3 and disposed of, either via the two on-site landfills or to an external provider. All permits and licenses will be checked and records held for any transfer or disposal.

Appendix A – Proposed Cover Thresholds

Proposed Clean Cover Thresholds		
Compound	Threshold (mg/kg unless otherwise stated)	Source
Arsenic	640	Suitable for Use Levels (S4ULs)
Beryllium	12	Suitable for Use Levels (S4ULs)
Boron	240,000	Suitable for Use Levels (S4ULs)
Cadmium	410	Suitable for Use Levels (S4ULs)
Chromium (III)	8,600	Suitable for Use Levels (S4ULs)
Chromium (VI)	33	Suitable for Use Levels (S4ULs)
Copper	68,000	Suitable for Use Levels (S4ULs)
Lead	2,300	Category 4 Screening Levels (C4SL)
Mercury	58	Suitable for Use Levels (S4ULs)
Nickel	980	Suitable for Use Levels (S4ULs)
Selenium	1,000	Suitable for Use Levels (S4ULs)
Vanadium	9,000	Suitable for Use Levels (S4ULs)
Zinc	73,000	Suitable for Use Levels (S4ULs)
Cyanide (Free)	24	SoBRA Acute Generic Assessment Criteria
Aliphatic EC_5-EC_6	3,200	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Aliphatic EC_6-EC_8	7,800	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Aliphatic EC_8-EC_{10}	2,000	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Aliphatic EC_{10}-EC_{12}	9,700	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Aliphatic EC_{12}-EC_{16}	59,000	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Aliphatic EC_{16}-EC_{35}	1,000,000	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Aromatic EC_5 -EC_7	26,000	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Aromatic EC_7 -EC_8	56,000	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Aromatic EC_8 -EC_{10}	3,500	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Aromatic EC_{10} -EC_{12}	16,000	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Aromatic EC_{12} -EC_{16}	36,000	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Aromatic EC_{16} -EC_{21}	28,000	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Aromatic EC_{21} -EC_{35}	28,000	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Acenaphthene	84,000	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Acenaphthylene	83,000	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Anthracene	520,000	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Benzo[a]anthracene	170	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Benzo[a]pyrene	35	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Benzo[b]fluoranthene	44	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Benzo[ghi]perylene	3,900	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Benzo[k]fluoranthene	1,200	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Chrysene	350	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Dibenzo[ah]anthracene	3.5	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Fluoranthene	23,000	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Fluorene	63,000	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Indeno{123-cd]pyrene	500	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Naphthalene	190	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Phenanthrene	22,000	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Pyrene	54,000	Suitable for Use Levels (S4ULs) 1% Soil Organic Matter
Asbestos	<0.001%	Laboratory Detection Limit

APPENDIX B: PEAT MANAGEMENT PLAN



Tata Steel

Port Talbot EAF

Peat Management Plan

2880540

May 2025

WRc GENERAL NOTES

Project No.: 2880540-01

Title: Port Talbot EAF – Peat Management Plan

Client: RSK Environment

Date: May 2025

Office: WRc Stirling

Status: Draft

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Date:	20/05/2025		

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Figure 1: Peat Management Plan reburial location overview

Figure 2: Peat Management Plan reburial location detail

1 INTRODUCTION

This report provides a Construction Peat Soil Management Plan for the Port Talbot Electric Arc Furnace (EAF) project and associated infrastructure.

This report forms part of the suite of documents required to discharge planning conditions required by Neath Port Talbot County Borough Council. Of particular relevance to this document are Conditions 54, which stipulate the requirement for submission of a Soils and Peat Management Plan (SPMP) prior to commencement of a phase of development (with the exception of site clearance and demolition works).

The report covers the peat element of these conditions, estimating the total volumes of peat soil that need to be excavated, and sets out the plans in place for storage and reburial of the excavated peat soils. Guidance on management and handling of excavated peat soils is also provided.

A Soil Management Plan will be submitted under separate cover.

1.1 Site Location

The Site is located in the coastal industrial town of Port Talbot on the south coast of Wales, approximately 14 km east of Swansea. The development lies within the Port Talbot Steelworks, where traditional steel making ceased in 2024. The construction of the EAF is part of a planned transition to greener steel making process at the Port Talbot Site.

The proposed Site covers an area of approximately 157 ha and is located within a fully industrial setting. Land use in the wider area includes residential and commercial property, open field hills, moorland and reservoirs. Morfa beach and the Bristol channel run parallel to the west of the Proposed Development. The main area of development will be in the north/north west of the Site where construction of the EAF is planned.

1.2 Development Proposals

The construction phase of the Proposed Development would involve a number of different elements. The elements with particular relevance to peat soils are summarised below:

- Canopy Hood
- Consteel Conveyor
- Fume Treatment Plant
- Shredded Scrap Yard
- Hot Briquetted Iron Dolo & Lime Bunker
- Ferro Alloys Bunker
- Fire Water Pump House
- Primary Pump House
- Main Power Centre
- Power Compensation Building
- National Grid Compound
- Melt Shop Power Distribution Building
- Incoming Scrap Yard Electrical Building
- Melt Shop WTP Electrical Building

- Melt Shop FEP Electrical Building
- Compressor House
- Scrap Storage & Processing Yard
- Overflow Scrapyard
- Non Ferrous Processing Area
- Scanning Facilities
- Railway Weigh Bridge
- Car Parking Area
- Changing & Office Block Building
- Emergency Tank
- Lagoon Water Pump House
- Green Walkway Extension
- HBI & Pig Iron Storage Area
- Active Carbon Injection Silos.

These elements are all shown on ES Figures 2.1a and b Site Plan.

2 PEAT SOIL CONDITION

2.1 Policy Background

Under Planning Policy Wales Edition 12 (2024[1]) (known as PPW), peat is accorded a high value as a result of its functions as a carbon sink and long-term carbon store.

The Step-Wise Approach sets out four key stages which have to be followed for developments:

- Step 1 – Avoid
- Step 2 – Minimise
- Step 3 – Mitigate/Restore
- Step 4 – Compensate on site/Compensate off site.

Of these, Step 1 has the highest priority and requires implementing first. Developments should also provide biodiversity enhancement and a Long-Term Management Plan (Step 5)[1]. This applies particularly to peat soils with active surface vegetation as a result of their combined carbon sink and carbon store status.

The situation relating to peat soils that are buried some metres below ground and no longer have a vegetation layer is less common. Peat soil in this situation can no longer act as a carbon sink, but remains a carbon store, and therefore has a lower sensitivity than surface peat soil. If it is not possible to avoid buried peat soil, the key management strategy would therefore be to minimise any excavation of buried peat soil and to ensure that any peat soil that requires excavation is reburied in a suitable location within the site in order to maximise the stored carbon within the peat soil deposit in the long term.

2.2 Peat Soil at the Site

The peat soil at the Port Talbot EAF site is all buried at a depth of 4.7 m below ground level (bgl) or deeper, with the deepest records at 18.75 m bgl[2]. This situation means that none of the peat deposits present are ‘active’ and are not sequestering carbon as they have no active vegetation layer present. Buried peat such as this remains a carbon store while kept waterlogged and not in contact with oxygen in the atmosphere.

Three principal building techniques are required as part of the EAF project that have potential to interact with peat soils:

- Excavation, where the foundations of the structures require bulk removal of ground materials;
- Driven piling, where pre-cast concrete piles are forced into the ground but no excavation is required; and
- Augered piling, where a hole is created using an auger and concrete is simultaneously pumped into the void to form the pile in-situ.

[1] Planning Policy Wales Edition 12, 2024. Welsh Government. Available at: https://www.gov.wales/planning-policy-wales

[2] EAF Project Phase 2 Geo-Environmental Investigation, RSK Geosciences, February 2025.

Driven piling does not require any excavation of substrate material.

Augered piling requires boring of the pile locations, resulting in limited excavation of the substrate.

Bulk excavation requires removal of all the ground material within the excavation area.

Both piling options involve substantially lower ground disturbance than conventional excavated foundations.

During pile driving, peat soil will be pushed away from its existing locations but would remain underground and waterlogged, therefore its capacity as a carbon store remains unchanged.

For auger piling, some peat soil is likely to be brought to the surface during the boring process, this would typically occur in a mix of other soils, superficial deposits including sand and clay, rock fragments and water. The total volume of peat soil disturbed would be similar for both forms of piling and is expected to be small within the context of peat soils present at the site.

Some parts of the infrastructure will require excavation, notably for substructures, tunnels, laying of pipelines and electrical cables. The excavation depth for foundations is noted to be generally shallow, up to 3 m in depth, with the exception of the hoppers required for material handling facilities which require excavation to depths of 9 m bgl.

Excavations up to 3 m bgl are very unlikely to encounter peat soils at any location as the ground investigation data did not identify any peat soils at shallower depth than 4.7 m bgl in the relevant parts of the site.

3 PEAT SOIL EXCAVATION

3.1 Calculated Peat Soil Excavation Volumes

The construction and foundation methods for the required infrastructure have been cross-checked with the ground investigation borehole logs to determine where there is potential for required groundworks to interact with buried peat soil horizons.

3.1.1 Bulk excavations

For all areas requiring excavation, the peat soil horizons are in all cases located further below ground than the required excavation depth. This applies to excavations up to 3 m deep and excavations up to 9 m deep across the development site. As a result, no bulk excavation of peat is expected to be required.

One borehole, BH301, in the area where excavations up to 9 m bgl are required for the HBI and Alloys Bunkers, recorded *'pockets of pseudofibrous peat'* at depths between 9 and 15 m although no continuous layer of peat was identified. It is possible that some of these pockets may be affected by excavation works for the bunkers in this area.

The other boreholes in this area recorded peat horizons at depths of 10.5-11.5 m bgl indicating that it is highly unlikely that significant peat soils will be encountered during bulk excavation works.

3.1.2 Piling

The only situations where peat soils are expected to be directly affected by the construction works are in locations where piled foundations are required.

As the installation of precast concrete piles does not require any ground excavation, these areas have not been considered further. The peat soils affected by installation of precast concrete piles would remain buried underground and would retain their carbon store in full.

Two types of augered piling are required. Continuous Flight Auger (CFA) piles and secant piles both require augered holes and will generate excavated material at surface, and as a result some peat soil material will be excavated in these areas.

The table below sets out the estimated volumes of peat soil that need to be excavated in order to allow construction of the Proposed Development to proceed. The calculations are provided per 'structural element' and as an overall total for all the required site works.

Table 3.1: Peat soil excavation volumes for piling. Numbers refer to the construction elements identified on Figure 1.

Structural element	Total (m^3)
1. Canopy Hood – CFA piles	9.16
2. Consteel conveyor – CFA piles	671.54
5. HBI bunker – CFA piles	56.24
5. HBI bunker – secant piles	232.79

Structural element	Total (m^3)
6. Alloys bunker – CFA piles	52.93
6. Alloys bunker – secant piles	198.08
31. Charging bay – CFA piles	54.58
Total	**1,275.32**

The excavation volume calculations have made use of the following assumptions in relation to piling:

- CFA pile diameter 0.90 m.
- Secant pile diameter 1.00 m.
- CFA pile spacing on a 3.00 m grid throughout the relevant infrastructure area.
- Secant piles form a continuous wall around the perimeter of the relevant structure.

3.2 Plans for Storage and Reburial

The augering process produces a mix of materials including peat, soils, superficial deposits including sand and clay, rock fragments and water as a result of the excavation method and it is very unlikely to be possible to separate this into different soil types. This material will be treated in accordance with the adopted Soils and Material Management Plan and either re-used on-site or transported for disposal off-site as applicable (see Appendix A).

Should any previously unidentified peat deposits be discovered during the bulk excavation works, the excavated peat would be stored separately from other excavated materials and would be reburied as soon as practicable within the construction timeline.

A reburial location has been identified on the west side of the reservoir within the Steelworks boundary and is shown on **Figures 1 and 2**. Tata Steel has confirmed that excavated peat soils would be stored immediately adjacent to the reburial location if it is not possible to rebury the material immediately.

The excavation for reburial will be of sufficient depth to ensure that any excavated peat soils are located below the water table. The reburial site has a footprint of up to 650 m^2 and a proposed maximum depth of 4 m bgl. This would permit reburial of approximately 1,625 m^3 of peat soil assuming a reburial thickness of 2.5 m with a capping layer of 1.5 m to prevent drying of the peat soil.

The proposed sizing of the reburial pit is based on a precautionary estimate of peat soil arisings from bulk excavations for the two bunkers. It is likely that no peat soil will require storage and reburial at this location, but these contingency plans are in place to allow for a margin of error in the ground investigation results and the possibility that peat soil horizons are present at shallower depths in this area.

4 GUIDANCE FOR PEAT SOIL HANDLING AND STORAGE

4.1 Peat Soil Excavation

During construction of the required infrastructure, it is possible that bulk excavation works will encounter some areas of buried peat soil.

The Contractor will adopt the following good practice guidelines with relation to peat soil excavation, handling, storage and reburial:

- Excavated materials would be classified depending on their composition as far as possible, and each type would be stored separately. It is recognised that the augering process will lead to some mixing of soil types.
- Excavated peat soils would be transported to the planned storage location as soon as practicable after excavation.

Although some peat soil will be excavated as part of the piling operations, this would be mixed with other soil and rock materials. As a result, it would not be possible to separate out the peat soil for separate reburial. This material will be treated in accordance with the adopted Soils and Material Management Plan and either re-used on-site or transported for disposal off-site as applicable (see Appendix A).

4.2 Temporary Storage

In the event that excavated peat soils require to be stored, the following outline good practice would be applied to the peat soil storage area:

- If possible, peat soils should be placed in the reburial location immediately rather than stored separately.
- Above-ground storage should be for as short a time as possible to minimise drying of the excavated peat soil.
- Stockpiles should be kept covered with a geotextile or equivalent material to minimise drying from sun or wind.
- During periods of dry weather, light spraying of the temporary peat soil stores would be applied in order to minimise drying.
- Silt fencing or equivalent silt management measures would be established on the downslope side of the stockpiles to minimise silt transfer into the reservoir.

5 SUMMARY

This Construction Peat Management Plan provides an assessment of the expected volumes of peat soils that will require excavation during the construction of the Port Talbot EAF and associated infrastructure. The assessment has included consideration of all of the proposed excavation and piling works that have potential to encounter buried peat soils during the construction process.

The assessment indicates that it is unlikely that bulk excavation works will encounter peat, although it is possible that some small volumes of peat may require excavation for the HBI and alloy bunkers.

Approximately 1,258 m^3 peat soil is expected to be excavated as a result of augered piling operations. As a result of the augering process, this peat soil will be mixed with other soil and rock materials and it will not be possible to separate out the peat soils from these other materials. This material will be treated in accordance with the adopted Soils and Material Management Plan and either re-used on-site or transported for disposal off-site as applicable (see Appendix A). Any peat soil excavated from the bunker areas will be reburied at the identified location near the reservoir within the steelworks complex. The potential for material storage is in excess of the potential maximum excavation volumes, which provides a level of contingency in the event that more peat soil is encountered and to allow for bulking of the peat soil as it is likely to be mixed with other soil materials during the excavation operations.

The immediate reburial or careful storage and reburial of excavated peat soils will help to minimise carbon loss during the excavation process and to prevent long-term carbon loss once the peat soil is reburied and capped.

Legend:

- Red Line Boundary
- Peat Disposal Site
- Temporary Stockpiles

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

Rev	Date	Description	Drn	Chk	App
01	20/05/2025	Temporary Stockpiles	CJ	RE	CI
00	07/05/2025	First Draft	NH	CI	CI

664195 - Electric Arc Furnace

RSK

TITLE: Figure 1:
Peat Management Plan

ID:P664195_Figure 1 - Peat Management Plan

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Metres

Scale: 1:12,500 @ A3

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Legend:

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Coordinate System: British National Grid
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Rev	Date	Description	Drn	Chk	App
00	20/05/2025	First Draft	CJ	RE	CI

664195 - Electric Arc Furnace

RSK

TITLE: Figure 2:
Peat Management Plan

ID:P664195_Figure 2 - Peat Management Plan

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Metres

Scale: 1:1,000 @ A3

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