

Access

SCP has been appointed to provide transport planning and engineering advice in support of the EAF Project.

Existing Site Access

The existing Tata Steel site is accessed from two locations off the A4241 Harbour Way, the A4241 Harbour Way / main access gate roundabout and A4241 Harbour Way / west access gate roundabout.

For vehicles egressing the Site, the main access gate road provides a two-lane approach onto the A4241 Harbour Way / main access gate roundabout. On entry to the Site, the main access gate provides a single lane off the A4241 Harbour Way / main access gate roundabout initially. This widens to two lanes after around 50m and then 3 lanes after circa 80m on the approach to the internal site roundabout and gate house. Each vehicle passes a security check prior to entering the Site. The site security gate is located circa 650m from the A4241 Harbour Way / main access gate roundabout, with the majority of the access road comprising 3 lanes which provides significant queuing capacity before off the adopted highway.

The west access gate road provides a single lane approach onto the A4241 Harbour Way / west access gate roundabout. For vehicles accessing the Site via the west access gate, a single lane is provided off the A4241 Harbour Way for circa 165m which widens to two lanes for another circa 100m on the approach to the gate house, providing significant queueing capacity.

Existing Pedestrian / Cycle Access

There is an eastern pedestrian access point into the central area of the steelworks, across Harbour Way. The route provides direct pedestrian access from the local highway network to the main office and canteen facilities for staff employed at the steelworks.

There is a shared footway / cycleway that runs along western side of the aforementioned site access roads, connecting to a shared footway / cycleway on the A4241 Harbour Way.

The applicant has confirmed the following in relation to pedestrian / cycle access:

- Pedestrians are permitted to enter the steelworks site, but internal site distances are significant and currently result in access by foot not being a viable mode of travel for most staff.
- Cycling within the steelworks site is prohibited following a safety risk assessment. However, cyclists are permitted to enter via the main and west gates and park bicycles in the vicinity of the access points. A minibuss is provided from the main and west gates to pick up cyclists, providing access to all areas of the plant. Cyclists are then provided with a pickup time for transport back to the main or west gate to collect their bicycle.



Figure 47: Harbour Way - A4241



Figure 48: Site access road at Harbour Way roundabout



Figure 49: Pedestrian crossing on Harbour Way



Figure 50: Shared foot/cycle way on Harbour Way

Flood Risk & Drainage

A Flood Consequence Assessment (FCA) has been prepared by JBA Consultants for its vulnerability to flood risks from rivers, sea, surface water and reservoirs.

The Site is located adjacent to Swansea Bay on its western boundary. There are no NRW Main Rivers within the boundary of the Land at Port Talbot Steelworks. The Eglwys Nunydd Reservoir, which is a SSSI, is located southeast of the Site boundary. The Site is also adjacent to Margam Moors, which is designated as a SSSI and SINC. The SINC comprises wet woodland, reedbeds, ditches and marshy grassland.

The Site itself has a complex network of surface water drainage with several ordinary watercourses crossing the Site. Along with a number of watercourses, the Site has an extensive piped drainage network to manage surface water runoff, foul drainage, and process water.

Located at the northern extent of the Site, within the development boundary, the Tata Steel reservoir (BOS lagoon) is used for process water supply and forms an artificial water body constructed to support the operation of the steelworks.



According to NRW's Development Advice Maps (DAM), the east of the Site is located within Flood Zone B (areas known to have been flooded in the past). The western area of the Site is within Flood Zone A (at little or no risk of fluvial or coastal/tidal flooding). There is a small area in the south of the Proposed Development area which is located within DAM Zone C2 (areas of the floodplain without significant flood defence infrastructure).

The majority of the Site is located in Flood Zone 1 (less than a 0.1% AEP chance of flooding in any given year, with an allowance for climate change for the life of the development).

An area in the south is located within Flood Zones 2 and 3, which is associated with the Margam Moors reën network. Flood Zone 2 suggests that there is between a 0.1% - 1% AEP chance of flooding from fluvial sources in any given year, including climate change. Flood Zone 3 represents areas that have greater than 1 in 100 chance of flooding in any given year, including climate change. No built development is proposed within the extents of Flood Zone 2 and 3.

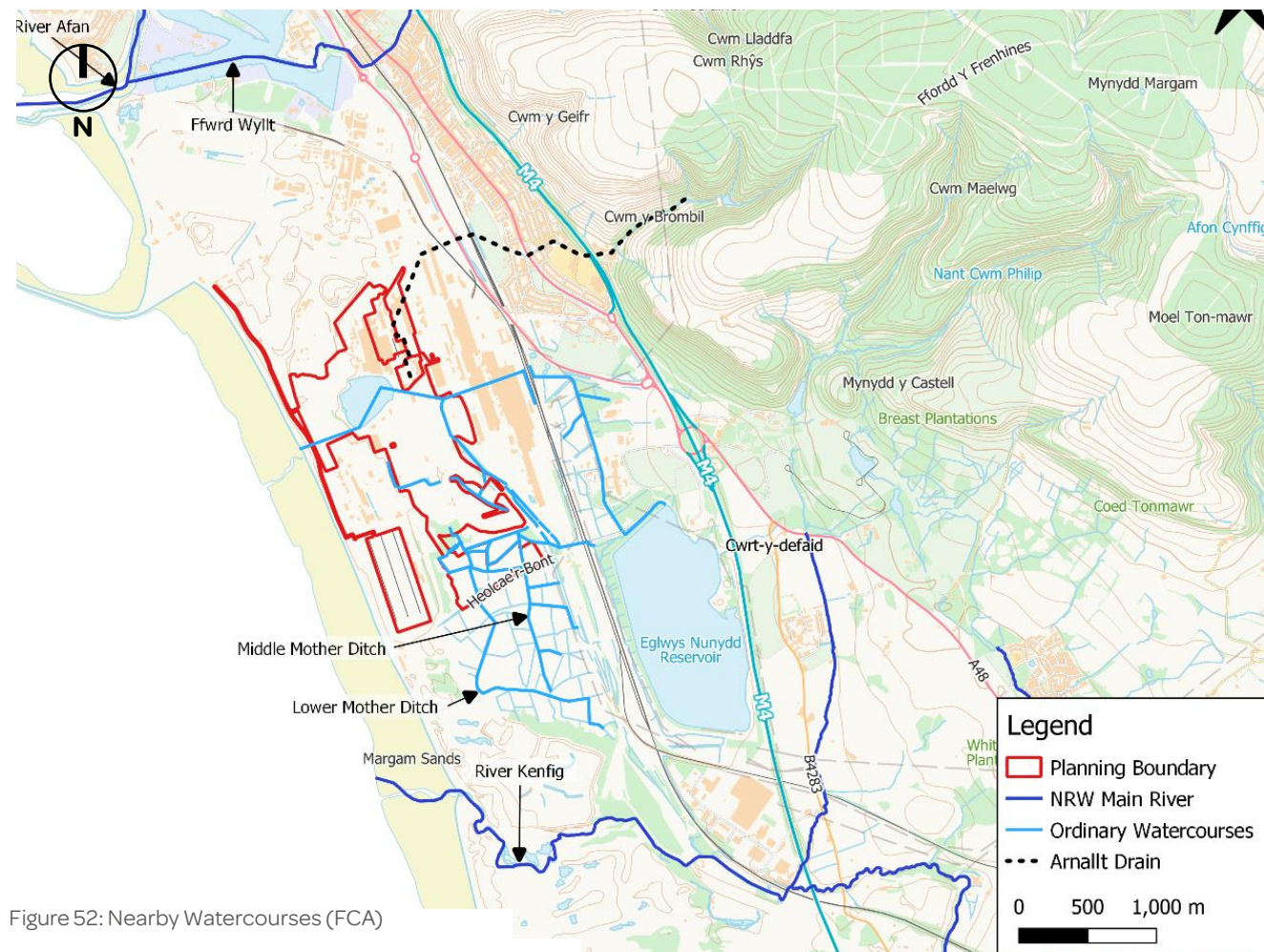
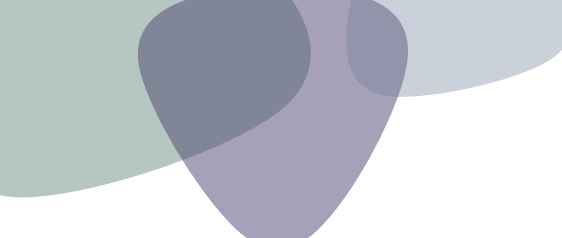


Figure 52: Nearby Watercourses (FCA)



Flood Risk from Rivers

The Site is shown to be mostly at very low risk of flooding from rivers, as shown in Figure 53. This means that there is a less than 0.1% AEP (1 in 1000) chance of fluvial flooding in any given year.

An area in the south of the Site is shown to be at low risk of fluvial flooding. The Flood Risk Assessment Wales (FRAW) dataset does not include an allowance for climate change. Consequently, the Flood Map for Planning provides the most up to date representation of fluvial risk to the Site.

Flood Risk from the Sea

The Site is at very low risk of flooding from the sea, as shown in Figure 55. This means that there is a less than 0.1% AEP (1 in 1000) chance of flooding in any given year.

Flood Risk from Surface Water and Small Watercourses

The NRW FRAW flood risk from surface water and small watercourses mapping shows that the Site is generally at very low risk, as shown in Figure 54.

The mapping indicates that there are some areas across the Site with a low-high risk of surface water flooding. Low risk indicates between a 0.1% -1% AEP (1 in 1000 and 1 in 100) chance of flooding in any given year.

Areas shown to be at surface water and small watercourse flood risk are associated with existing waterbodies across the Site, and small localised areas of ponding.

Flood Risk from Reservoirs

The Site is considered to be at potential risk of flooding from a failure of the Eglwys Nunydd reservoir, as shown in Figure 56. A high-level assessment of the risk of flooding from reservoirs has therefore been undertaken.

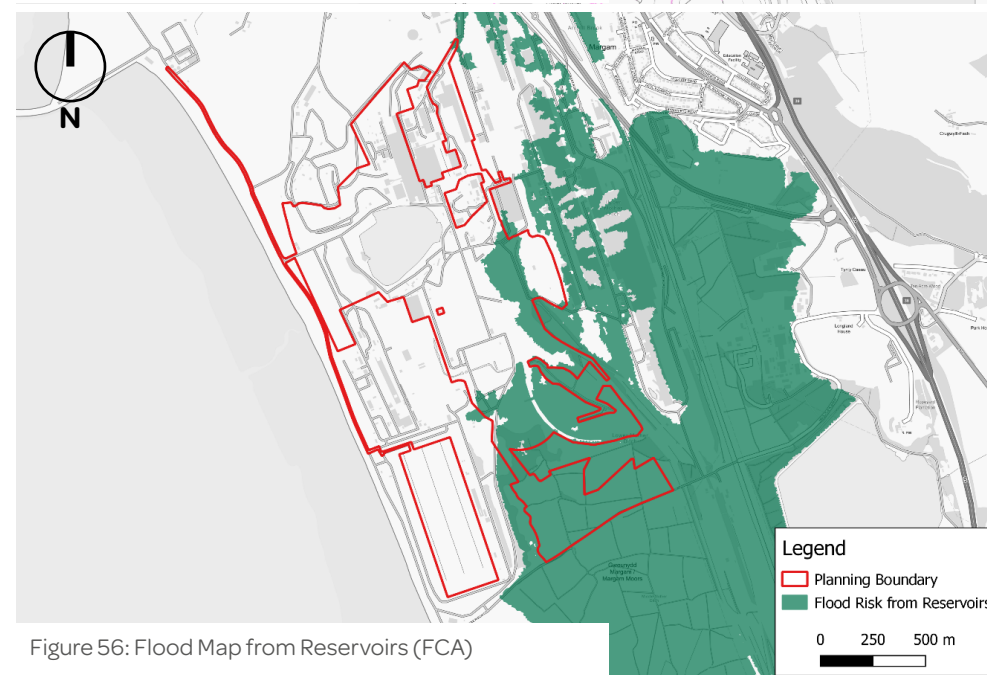
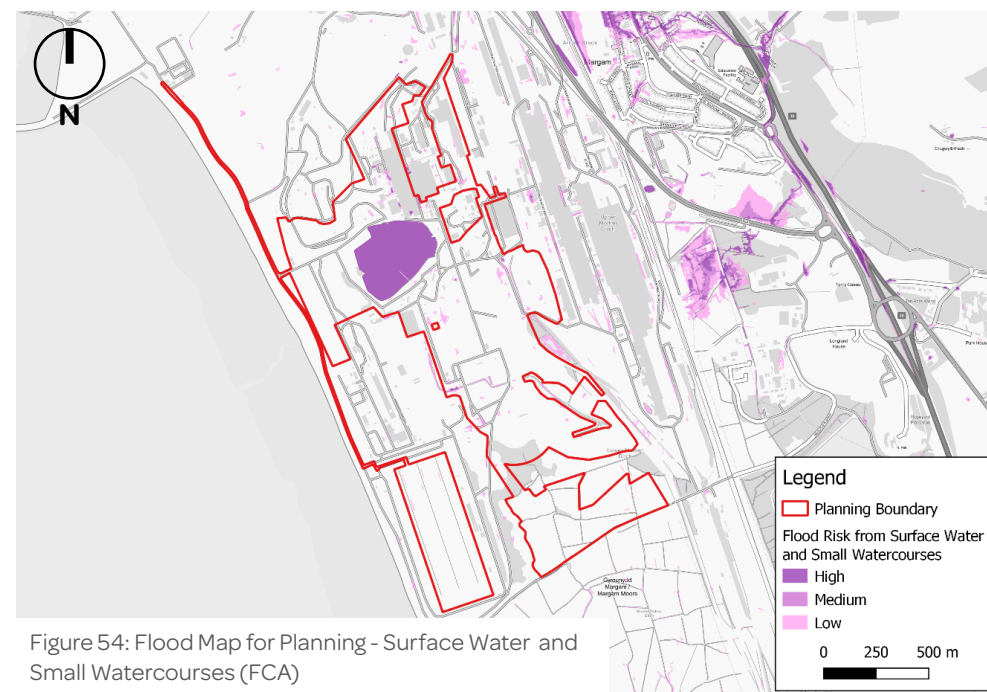
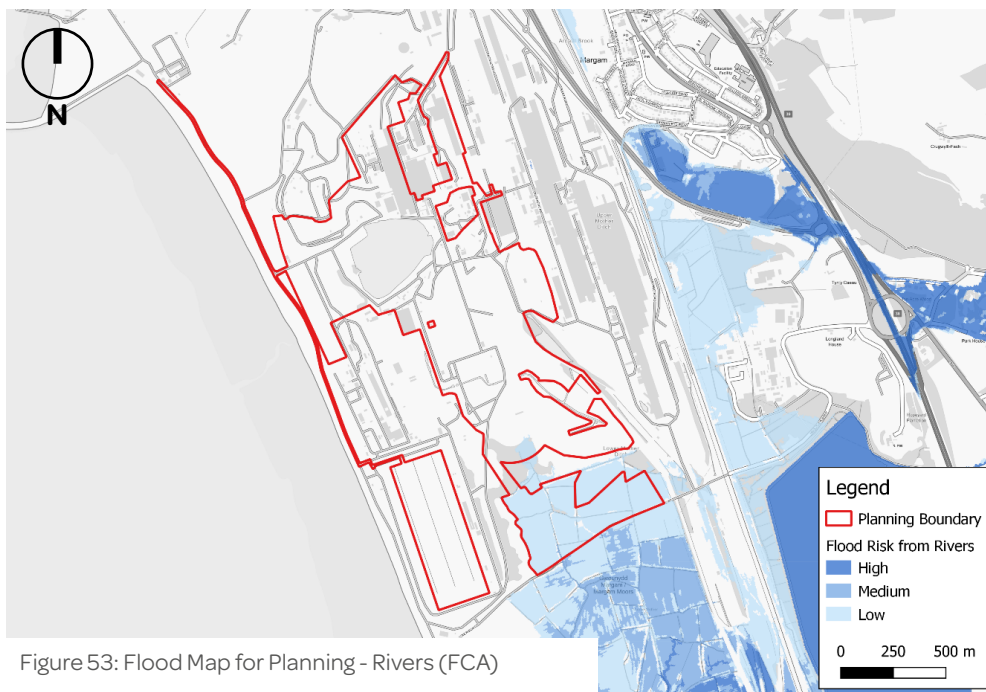
This assessment concluded that the flood level from the reservoir is estimated to be approximately 6.1mAOD. The proposed ground levels for the Proposed Development are likely to be raised and levelled to facilitate the new development to a minimum level of 6.2mAOD across the proposed built development within the reservoir flood risk extent. Ground levels in the Margam Moors, immediately to the south of the development has a typical ground level of 4.0mAOD. Development should include a raising of levels, 0.1m higher than the estimated reservoir failure flood level of 6.1mAOD.

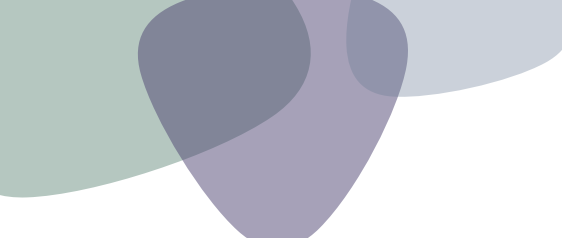
The Margam Moors are therefore likely to receive and store the vast majority of flood water from any failure of Eglwys Nunydd reservoir. The Moors therefore provide a significant low risk area for the reservoir to drain to relatively safely, with the minimum consequence for the proposed development area.

Key Design Considerations

The Site is at little or no risk of tidal, groundwater, sewer, or reservoir flooding. Development levels must be raised to alleviate the risk of impact from reservoir failure.

Water management will need to consider if run off is clean or wastewater and the drainage strategy respond to this. Downstream surface and ground water, other water resources and effect on flood risk from development will need to be assessed.





Ground Conditions

Land, Soil and Groundwater

A Phase 1 Desk Study has been undertaken by RSK Geosciences.

Historically the Site was occupied by predominately undeveloped land with a historic coal mine present on the west, and more recently by the steelworks, which are still present. A review of historical maps has provided an indication of the types of contamination that could be present on-site.

Data shows an active landfill site located to the south of the Site, which has a permit to accept industrial waste.

Geological maps show that the Site is located on natural deposits made up of a mixture of sand, gravel and clay layers, with occasional peat. Beneath these units is solid rock from the South Wales Coal Measures, which contain mudstone and coal layers at greater depth. A layer of man-made material is present across the surface, associated with the industrial site use.

There are no sites that are classified as being of geological importance on or close to the Site.

Reference to the Peatlands of Wales map confirms there are no areas of peatlands within the red line boundary for the planning application and no peatland identified on the Peatlands of Wales map will be affected by the Proposed Development.

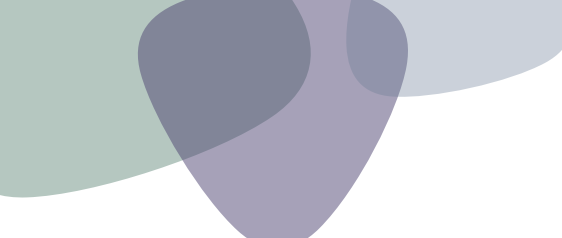
Areas of the site are underlain by buried peat. Early results of the phase 2 site investigations confirm the depth of the buried peat deposits across the site. These depths have been plotted relative to the Proposed Development layout, including all new buildings. The intended excavation depths to construct the new buildings known at this stage have been modelled against the buried peat deposits. This assessment is included in the site investigations chapter (Chapter 10) of the ES. It demonstrates that the peat occurs below the maximum depth of excavation. It will remain undisturbed by the Proposed Development.

There are no protected mineral resources (sand, gravel or clay deposits which could be extracted for use in construction projects) on-site or nearby.

Although there is some soil present across the Site, significant areas of the Site are covered by buildings or concrete at the surface. No soil that would be of value for farming is present.

The groundwater beneath the Site is categorised as a secondary aquifer, meaning that some water from below the ground could be used to provide water resources. However, there are no recorded abstraction points for drinking water within 1 km of the Site boundary.





Noise

RSK Acoustics has undertaken noise and vibration impact assessments. Baseline noise surveys have been undertaken to establish the existing acoustic environment experienced at sensitive receptors in the vicinity of the Site.

Operation and activity at the steelworks has caused high levels of noise when in heavy use, relative to other types of industry and urban areas. The study area is also affected by noise from other sources, such as the proximity to the M4 and the railway.

The following will need to be considered in the development of the proposals:

- Construction noise
- Construction vibration
- Construction traffic noise
- Operational noise
- Operational traffic noise
- Operational rail noise.

Air Quality

An Air Quality Assessment (AQA) has been undertaken to consider the existing air quality conditions and potential impacts on air quality that would result from the construction and operation of the Proposed Development.

The assessment makes use of a study area with a 10km radius around the Site boundary, and considers sensitive receptors such as road networks, residential areas and ecologically sensitive sites.

The baseline study considered the concentration of existing pollutants which were measured at several monitoring locations representative of human receptors – such as nearby residential properties and major traffic routes – as well as ecological sites such as the Margam Moor SSSI. The baseline assessment indicated that baseline air quality was most influenced by industrial activities at the steelworks, as well as traffic emissions from nearby roads.

Emissions of key pollutants from the Tata Steel site have predominantly decreased between 2015 and 2023. With regard to key air pollutants, such as oxides of nitrogen (NO_x) and particulate matter (PM₁₀ and PM_{2.5}), air quality objectives have generally been met in recent years. There is one monitoring location in Port Talbot maintained by Defra where the air quality objective was not met during 2023 (for PM₁₀ concentrations, measured on a 24-hour basis).

The EAF represents a significant opportunity to reduce emissions of key pollutants at source, which will influence pollutant concentrations to be reduced. For the key pollutants, including dioxins, carbon monoxide, NO_x, PM₁₀, PM_{2.5} and sulphur dioxide, emissions are expected to fall by between 60% and 93%.

The AQA also considered an ‘interim baseline’, which represents the period following closure of heavy end infrastructure and before the Proposed Development becomes operational. The interim baseline anticipates a reduction in emissions following the closure of the heavy end infrastructure.

Lighting

A Light Pollution Study was undertaken by Waldrams. An initial review of the area was undertaken in order to identify areas sensitive to light pollution. Three areas were identified due to sensitive wildlife, particularly bats:

- Areas 1: Eglwys Nunydd Reservoir.
- Area 2: Internal reservoir.
- Area 3: Green area with fields, trees and bushes, and featuring an access road (Healcaeir-Bont) and a path (Lower Mother).

This review showed that all residential areas in the area are too far from the site to be significantly adversely affected by light spillage.

The area within which the Proposed Development is located has already been identified as well-lit within the Neath Port Talbot Landscape Assessment

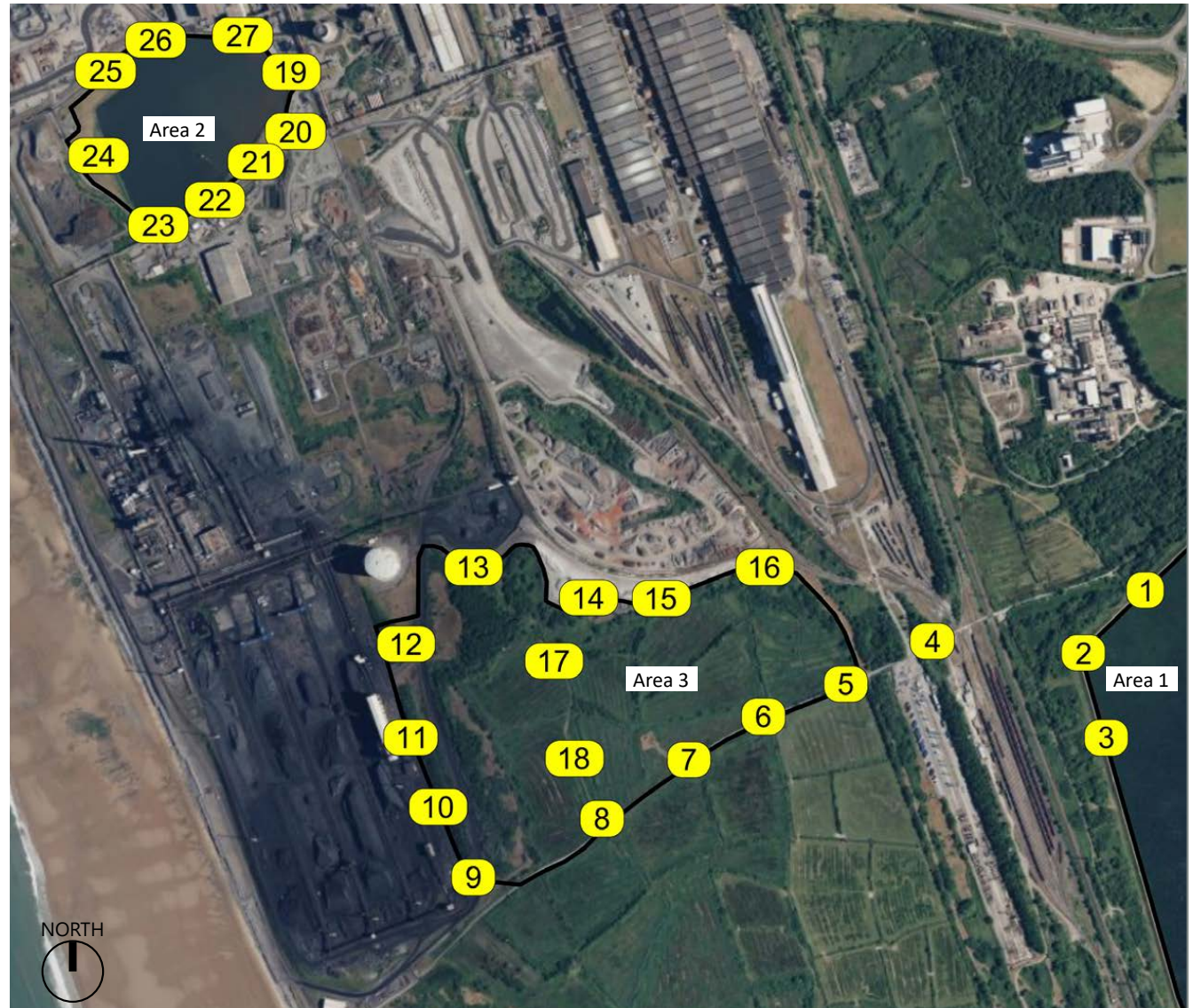
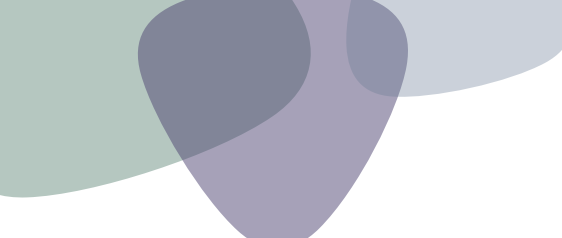


Figure 57: Sensitive Areas and Reading Locations (Lighting Pollution Study)



Landscape & Ecology

A Preliminary Ecological Appraisal (PEA) has been prepared by RSK in support of the application.

The report confirms that the Site comprises the following habitats:

- Bare ground / developed land with scrub and ephemeral short perennial vegetation
- Semi-improved neutral grassland
- Broadleaved plantation woodland
- Standing water
- Reedbeds.

The Site is predominately bare ground / developed land. Open mosaic habitat is the most dominant habitat type comprising a mixture of scrub, grassland and ephemeral vegetation, semi-improved neutral grassland, broadleaved plantation woodland, standing water and reedbeds. There are a number of channels holding water throughout the Site and a lagoon associated with the steelworks, located at the northern extent of the Site.

Due to the industrial history of the Site this mosaic of habitats would be classed as Open Mosaic Habitat on Previously Developed Land and the southern fields together with their drain network would be classed as coastal floodplain grazing marsh, both of these are habitats of principal importance for the purpose of maintaining and enhancing biodiversity in Wales. Some of the habitats are considered to be species-rich.

The watercourses within the Site are all designated as Site of Importance for Nature Conservation (SINC). The Kenfig/ Cynffig European Designated Site is located in close proximity as are Margam Moors and Eglwys Nunydd Reservoir Sites of Special Scientific Interest (SSSI) and two further SINCs. Japanese knotweed is present within the Site and is listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). Should this species be impacted as part of the works then an invasive species management plan should be implemented.

The Site is immediately bordered to the north, east and west by land owned by Tata Steel, with coastal floodplain grassland, reedbed, an access road and Margam Moors Site of Special Scientific Interest (SSSI) adjacent to the south of the Site. The surrounding landscape is a mixture of woodland, hedgerows, waterbodies (reservoir), coastal floodplain grassland and residential properties within Margam.

Key Design Considerations

Given the large extent of the Site there are some opportunities for biodiversity enhancement, in particular the set aside and management of coastal floodplain habitat and open mosaic habitat to establish and develop to its full potential.

Legend:

Site boundary

2021/2022 survey area

Phase 1 Habitats

Broadleaved woodland -
plantation

Dense scrub

Poor semi-improved grassland

Semi-improved neutral
grassland

Swamp

Standing water

Ephemeral / short perennial

Bare ground

Buildings

Hardstanding

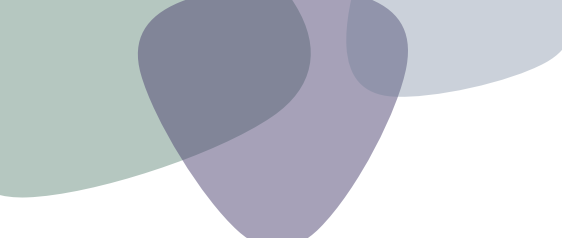
Line of broadleaved trees

Standing water



Figure 58: Phase 1 Habitats Map (PEA)





Heritage & Archaeology

Headland Archaeology have produced a desk-based assessment detailing identifying on-site and wider archaeological features.

Two Site visits have been made to assess the impact on heritage and archaeological assets, the first on 4 November 2021 and a second on 3 February 2022. These visits covered the current development location, including the steelworks and nearby Scheduled Monuments.

The current steelworks is a dominant feature within the local landscape and dominates the skyline. The complex has buildings and infrastructure of varying heights and massing. There is evidence of previous phases of the steelworks visible above ground comprising disused building remains, earthworks and road surfaces.

The steelworks is visible from multiple points within Margam Park Conservation Area and Margam Mountain Historic Landscape (HLW (WGI/MGI) 2). Vegetation and trees would likely shield the assets slightly more in the summer when foliage would be denser.

Large areas of the Site have been almost entirely previously disturbed through a combination of Post-Medieval mining and modern development of the steelworks and associated railway tracks.

There are no designated assets located within the Site boundary.

There is a memorial to the 1890 disaster at Morfa Colliery within the Site boundary. It is understood that this is not affected by the Proposed Development and will be retained in situ.

There are two non-designated historic assets located within the Site:

- Morfa Colliery (421174) is a 19th century colliery in the north western area of the Site
- Theodorics Grange (20041) is a ruined Medieval building which formed part of a monastic grange, possibly of a domestic function.

Key Design Considerations

The Proposed Development proposal is for industrial land use, located alongside existing current and historical industrial land-use. The Proposed Development maintains the Site's character, with the small area of farmland in the south of the Site proposed to be maintained, and industrial use will continue across the rest of the Site.

It is not anticipated that proposals to develop the Site should represent a conflict with legislation or national or local planning policies. The likely development impacts are considered to be of a level of significance that they could be adequately mitigated through a staged programme of impact assessment and proportionate archaeological watching brief.

The memorial to Morfa Colliery (421174) will be retained. It is also recommended that, wherever feasible, the proposed development is designed such that the known archaeological remains identified within the Site by the assessment are fully preserved in situ.



Figure 60: Henbiniwn Grange, located outside the Site boundary to the east



Figure 59: Morfa Colliery memorial

Constraints & Opportunities Summary

A number of spatial constraints and technical considerations have been identified which will need to be addressed in the design of the proposals for the Site. These can be summarised as follows:

Access

An asset to the Site and its needs as a steelworks. Using a mix of road and rail through the construction and operational phases will alleviate issues on local arterial roads.

Flood Risk & Drainage

The area is generally at low flood risk from various sources. Some development will need to be on a raised level to enable the complex to absorb a reservoir failure event without significant impact on-site - off-site Margam Moors would absorb most run off in such an event.

Water management needs special consideration between run off that may be of higher risk of pollution and treated as wastewater to protect water quality and clean run off can be channelled to the lagoon for internal processes.

Ground Conditions

Overall, land and soil features at the Site are not considered to be sensitive. No significant impacts are expected to occur.

Air Quality

A specialist air quality assessment has been undertaken by Temple. A total of eight scenarios have been modelled to assess air quality impacts from road traffic and industrial emissions between construction and operational phases (compared to both established and interim baselines).

Mitigation requirements will be required for dust generation in both the processing of scrap for the EAF; and for the EAF facility itself.

Noise

The construction assessment indicates that adverse effects generated by noise and vibration at the nearest sensitive receptors are not significant. Sound propagation modelling of the Proposed Development identified the potential for significant adverse impacts. However, and following consideration of the context of the site, the adverse impacts are considered as not significant.

Landscape & Ecology

Development may affect a number of different viewpoints with the most immediate being Longlands Lane adjacent to Margam Moors SSSI.

Development must retain habitats where possible and use opportunities to restore and enhance habitats for Net Biodiversity Gain. The main opportunities for this are around the works Lagoon and adjacent to the Margam Moors SSSI.

There is an opportunity to further protect, restore and enhance the natural landscape.

Heritage & Archaeology

The memorial to Morfa Colliery (421174) will be retained. The Proposed Development will be designed so that the known archaeological remains identified within the Site are fully preserved in situ.





Figure 61: Site Constraints Plan