Tata Steel UK Limited

Design & Access Statement

Port Talbot Steelworks

September 2024

Issued for PAC

Turley

Contact

Sarah Morgan
Associate Director
sarah.morgan@turley.co.uk

Turley
18 Windsor Place
Cardiff
CF10 3BY

Date of issue

September 2024

Disclaimer

Copyright

Contents

Executive Summary

Tata Steel UK Limited ('Tata Steel') is the largest steel producer in the UK. It is a significant employer in some of the UK's most social-economically deprived communities. The business and the steelworks at Port Talbot is of strategic environmental, social and economic importance in South Wales, Wales and the UK more widely.

Port Talbot Steelworks is an ageing asset. Many of the 'heavy end' assets are at end-of-life and have started closing as a result. The steelworks is a heavy carbon user and Greenhouse Gas (GHG) emitter.

Tata Steel is proposing the construction and operation of a new Electric Arc Furnace (EAF) based steel production facility and associated infrastructure within the existing Port Talbot Steelworks boundary, in Port Talbot. The delivery of the proposed EAF facility will place Port Talbot at the forefront of the Government's efforts to decarbonise the steel production sector, which is a recognised challenge.

In summary, the application seeks to provide:

- An optimal site layout which balances design and planning considerations with the overall function and operation of the proposed scheme
- On-site landscaping / SuDS / biodiversity features where possible and safe to do so surrounding the operational site
- A drainage strategy which takes account of SuDS and responds to the operational requirements of the administration, industrial processing and truck loading areas
- Safe access and egress for staff and visitors, industrial / operational use, truck and rail loading and emergency operators.

The proposed design responds positively to the surrounding context and adheres to placemaking principles by:

- Safeguarding the amenity and significance of all sensitive environmental, heritage and residential receptors through a sensitive design approach
- Responding to environmental protection criteria relating to land, health, waste, air quality and noise
- Taking into account the significance of known built and natural heritage assets and their setting
- Avoiding any unacceptable impact on nearest sensitive environmental and residential receptors, and land uses
- Landscaping quality and avoidance of any undue visual impacts from public vantage points in the vicinity of the site
- Being acceptable from a flood consequence perspective, taking into account the requirement for sustainable drainage and climate change resilience
- Delivering net biodiversity benefit.

01

Introduction

This Design and Access Statement (DAS) has been prepared on behalf of Tata Steel UK Limited ('Tata Steel').

The DAS supports a hybrid planning application for the construction of an Electric Arc Furnace (EAF) and associated infrastructure on land at Port Talbot Steelworks, Port Talbot. The description of development is as follows:

"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, drainage 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."

Document Purpose

In preparing this DAS, Tata Steel aims to reflect the objectives of good design as set out in Planning Policy Wales (PPW) and Technical Advice Note 12: Design (TAN 12). As stated by TAN 12, the DAS is intended to be a communication tool which outlines how design has been considered from the outset of the development process.

The DAS also reflects guidance set out in Design and Access Statements in Wales: Why, What and How (Design Commission for Wales, 2017). Specifically, the DAS demonstrates a logical design process, and has been written with consideration for advice on how to structure a DAS.

The DAS demonstrates that the proposed development would be responsive to its surrounding context and could be delivered in accordance with relevant design policies. The DAS should be read in conjunction with the full set of supporting documentation submitted as part of the planning application.

Document Structure

Introduction

Gives an overview of the Application Site location, wider context and key considerations.

Context Assessment

Describes the wider setting, planning and local considerations to inform design development.

Site Assessment

Describes the environmental setting and site-specific considerations, summarising a suite of technical analysis.

The Proposals

A description of the proposed detail and outline submission elements, summarising a suite of technical information.

Summary and Conclusion

A review of the key aspects of the proposal.

Reading This Document - Plan Orientation

Two plan orientations will be used throughout this document. Plans showing the wider context will be orientated with north at the top of the diagram (as shown to the right) whereas plans showing the Application Site in detail will be orientated facing west-southwest (as shown on the next page). The detail diagrams are arranged as such to more easily compose the site and surrounding steel works on a page.

Below lists the plans and their orientation for reference:

Plans Orientated facing North:

Figure 1: Site Aerial Plan (orientated north)

Plans Orientated facing West-Southwest:

Figure 2: Site Aerial Plan (orientated west-southwest)

Site Location

Wider Location

Port Talbot is located in the County Borough of Neath Port Talbot, Wales. The Port Talbot Steelworks is located wholly within the county. It comprises major buildings accommodating key components of the steel making process, together with associated ancillary structures and infrastructure.

Port Talbot is well connected to the wider South Wales region, principally via the M4 motorway and the South Wales Mainline rail line.

The Application Site lies approximately 1.75km to the south east of Port Talbot town centre and approximately 650m south of Margam Wharf. It sits within the confines of the long-established steelworks and is characterised by a heavily industrialised built environment which dominates the southern end of Port Talbot.

The steelworks lie to the south of the River Afan, which cuts through Port Talbot town centre, and extends south towards the Eglwys Nunydd Reservoir. The industrialised area runs parallel to the M4 and is highly prominent on approach to Port Talbot from the south and east.

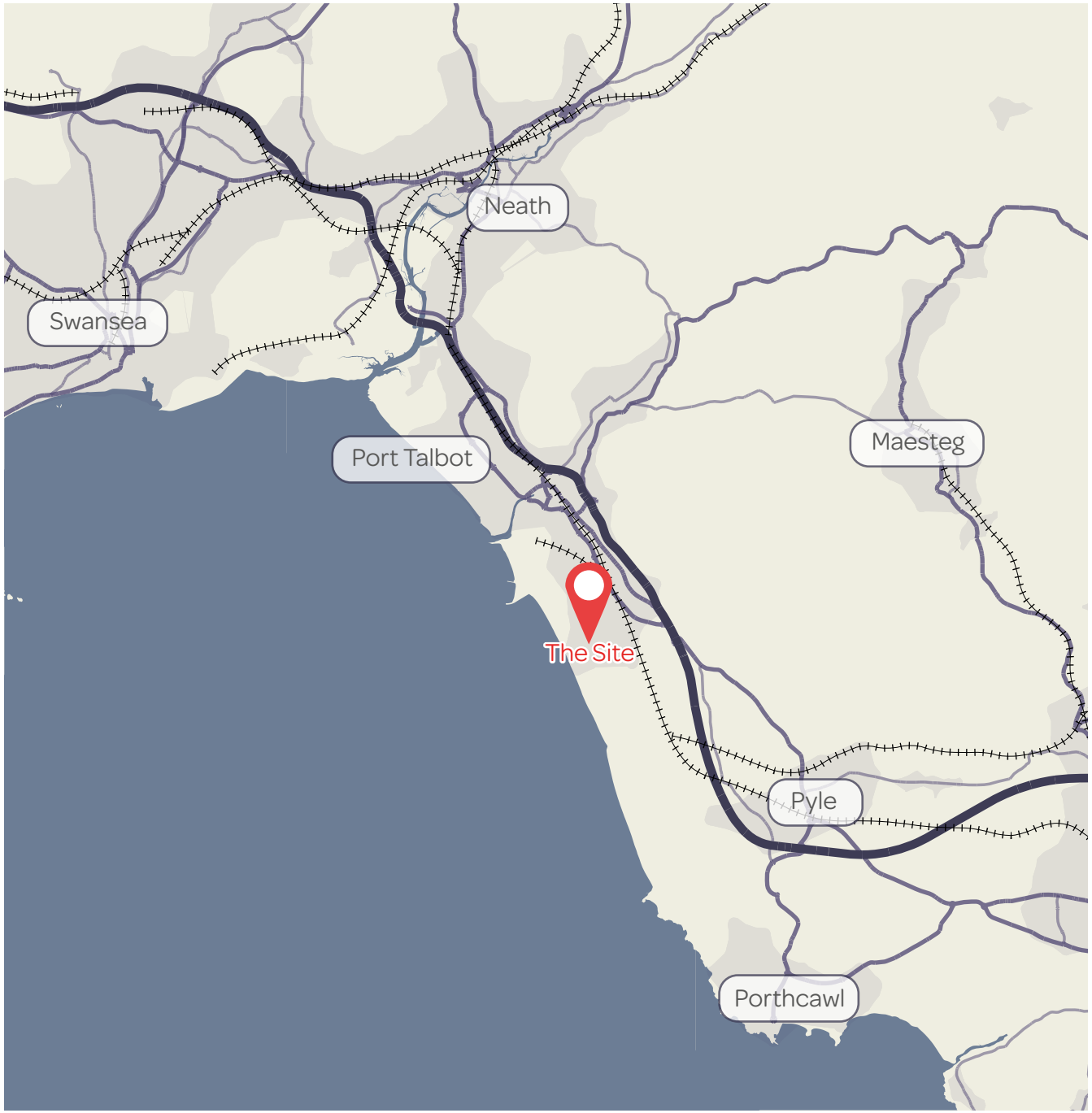


Figure 3: Regional Location Plan

Figure 4: Site Location Plan

Site Description

Site Location

The Application Site ('the Site') extends to c.159.6 hectares (ha) and is identified in Fig. 4 on the previous page.

The Site boundary is irregular in shape and includes the following parts of the extant steelworks:

- A continuous casting plant, slab yards, and part of a basic oxygen steelmaking plant in the northern part of the Site
- An operational lagoon, a steel service centre, and Margam colliery memorial in the central area of the Site
- A haul road which forms the westernmost boundary
- Coal yards in the south western area of the Site.

A more detailed analysis of the Site is set out in Chapter 3 of this DAS.

Figure 5: Distant view of the Basic Oxygen Steel (BOS) making plant

Figure 6: Close-up view of the BOS making plant

Figure 7: Lagoon area

Figure 8: One of a number of pipelines which cross the Site

Figure 9: Existing scrapyard

Figure 10: View between the hot and cold rolling mills

Figure 11: Long distance view from the southern boundary

Figure 12: View of Blast Furnaces to the north of the Site

Vision

Generations of Opportunity

The Port Talbot Margam works were constructed and operational in the early 1920s, with the Abbey works following in the 1950s. Much of the Margam works' assets remained operational and were used in conjunction with the Abbey works for a considerable period of time.

Port Talbot Steelworks has provided jobs and economic opportunities over the last 100 years for residents of Port Talbot. At its peak in the 1960s the site was the largest single employer in Wales employing around 18,000 people.

The Port Talbot Steelworks is also one of the largest steel production plants in Europe.

What changes are planned?

Tata needs to modernise its operations in order to decarbonise the steelworks and better address the impacts that it has on the environment. There is a critical requirement and agreement with the UK Government to decarbonise the steelworks. Failure to do so will render the long-term operation of the steelworks unsustainable. Decarbonising the steelworks is critical to the national greenhouse gas reduction targets set by UK and Welsh Governments.

In order to decarbonise the steelworks, Tata Steel is proposing to develop new options for more sustainable steel production to the existing Port Talbot Steelworks. This will be in the form of a newly proposed Electric Arc Furnace (EAF) to help promote more carbon friendly industrial development.

This will help to align with local ambitions for long term growth and regeneration with key stakeholders such as the South Wales Industrial Cluster (SWIC) and Net Zero Industry Wales (NZIW), promoting more sustainable industrial development in the region.

What is an Electric Arc Furnace (EAF)?

An EAF is an alternative means of steel production that is not reliant on traditional fossil fuels. Instead it melts scrap steel and metal through the electric heating of electrodes. This process generates less carbon and has a lesser impact on the environment. Additionally this facility will be able to utilise the abundant supply of scrap steel currently exported from the UK whilst removing the reliance on imported iron ore.

This document focuses on the proposal for the installation of an Electric Arc Furnace (EAF) at the Port Talbot Steelworks and associated engineering works across the site.

Development of the EAF will help to secure the future of steel production at Port Talbot by decarbonising the steelworks, reducing its environmental impacts and making the steel production process more efficient. The EAF will also allow Port Talbot Steelworks to make use of excess scrap steel produced natively within the UK which is currently exported overseas improving the resilience of the supply chain.

Once the EAF is fully operational steel production levels will be maintained at current levels. It is anticipated that there will be a total of 5,720 FTE Tata Steel UK jobs post the EAF transition, sustaining steel production at the Port Talbot Steelworks and protecting employment in the long term.

Redevelopment of areas of the wider steelworks no longer required for steel production provides an opportunity to attract investment and create a range of new jobs in a more diverse base of industries.

Figure 13: Electric Arc Furnace (Getty Images)

EAF Steel making and the Circular Economy

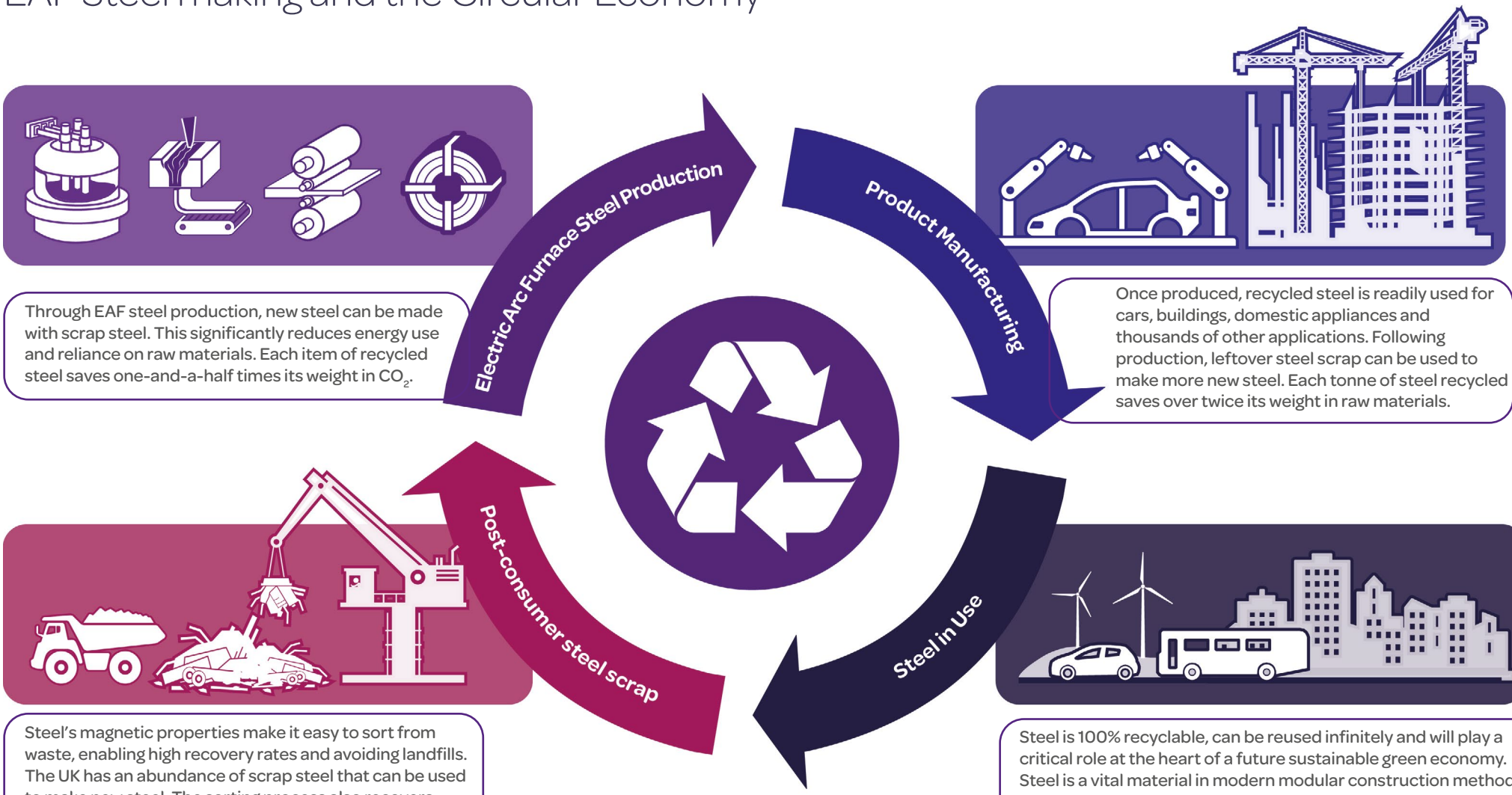


Figure 14: Circular Steel Economy

Proposal Summary

Tata Steel is proposing the construction and operation of a new EAF based steel production facility and associated infrastructure within the existing Port Talbot Steelworks boundary, in Port Talbot ('the Proposed Development'). The Proposed Development forms part of a £1.25bn investment that is the largest in South Wales industry for many decades. It will secure steelmaking in Port Talbot for the foreseeable future.

This will create a high-tech, green future for Britain's largest steel business and bolster UK steel security. It would cut the CO_2 emitted at the Site by about 90%, equivalent to 1.5% of the UK's total direct emissions. 75% of raw materials will be sourced from the UK, up from 10% today helping to maintain the country's self-sufficiency in steel making, ensuring our steel production is more resilient to adverse global events.

Figure 15: Indicative View of the Proposed Development. Images are under development and will be finalised before planning application submission.

Breakdown of the Proposed £1.25bn Investment

Electric Arc Furnace & Ladle Metallurgy Furnace

- Asset Investment £930m
- 3mt Capacity
- Sized to maximise re-use of existing steel plant infrastructure
- National Grid connection available Autumn 2027.

Casters

- Asset Investment £40m
- Life extension Capital Expenditure and essential replacement
- Example: Mould Tables, Backbones and Structures.

Port Talbot Hot Strip Mill & HCF

- Asset Investment £110m
- New Coilbox unit and ancillaries
- New Crop Shear Unit and ancillaries.

Port Talbot Link

- Asset Investment £170m
- Pickle line tank replacement and install Recoiler.

Figure 16: EAF (Getty Images)

Figure 17: Ladle Metallurgy Furnace (Getty Images)

Figure 18: Hot Rolling (Getty Images)

Figure 19: Cold Rolling Mill (Getty Images)

Decarbonising Port Talbot

The majority of carbon emissions produced by the existing Port Talbot Steelworks originate from the two blast furnaces which produce pig iron from iron ore and coking coal. The pig iron is subsequently used to produce steel at the Basic Oxygen Steel making (BOS) plant.

This iron making process inherently produces large amounts of Carbon Dioxide (CO_2) due to the use of coal in the process.

Three options were considered when deciding on how to de-carbonise steel making at Port Talbot:

- Retrofit the iron making processes by utilising Carbon Capture, Use and Storage with the existing Blast Furnaces
- Replace carbon in iron making processes
- Focussing on steel recycling.

The following page spread covers these options in greater detail.

Option 1: Retrofit existing iron-making processes through the use of Carbon Capture, Use and Storage (CCUS)

The focus of this idea is to utilise Carbon Capture, Use and Storage technologies to capture the Carbon Dioxide emissions produced by the blast furnaces. These emissions would then be safely stored or used in other industrial processes.

Key Points:

- CCUS is established in other sectors but not yet applied at scale in the steel industry.
- Only one steel-maker in the world captures and stores CO_2 at an industrial scale with a capacity of only 1/8th of Port Talbot's emissions.
- Continued long-term reliance on coal unlikely to be acceptable to policy-makers or society.

Pros

- Established and efficient iron-making technology.
- Existing assets remain viable.

Cons

- Port Talbot's heavy-end assets are reaching the end of their operational lifespans.
- CCUS not applied at scale in the steel industry.
- Perpetuates reliance on coal, reaching net-zero goals is infeasible through this route.

Option 2: Replace carbon in iron-making - Hydrogen (H2) Direct Reduced Iron (DRI) & Electric Arc Furnaces (EAF)

This process replaces the use of coal in iron-making with hydrogen. The Direct Reduced Iron is then melted to produce steel in an Electric Arc Furnace.

Key Points:

- Current DRI technology uses Natural Gas (NG), a fossil fuel.
- Hydrogen based DRI is still being developed
- Hydrogen made with renewable electricity in the DRI production process offers a route to CO_2 free iron-making.

Pros

- Avoids using coal.
- Natural Gas - DRI and EAF technologies well established.
- Suitable for a wide range of steel grades.

Cons

- Green hydrogen unlikely to be available at scale in the UK until 2035, making this process reliant on NG at least until then.
- Port Talbot heavy-end assets reaching the end of their operational lifespans.
- Hydrogen DRI facility uses more than five times more energy than an EAF.
- Interim NG-DRI emits 1.5 ton CO_2 per ton of DRI.

Option 3: Focus on steel recycling using Electric Arc Furnaces (EAF)

This process focusses on recycling scrap steel using an EAF. Virgin iron sources can additionally be added to the scrap.

Key Points:

- The UK has a large surplus of scrap with 8 million tons exported every year.
- Ultra-low emissions are achievable if electricity powering the furnaces comes from renewables.
- Electricity price is a key enabler.
- Use of additional iron source with scrap increases range of products that can be made.

Pros

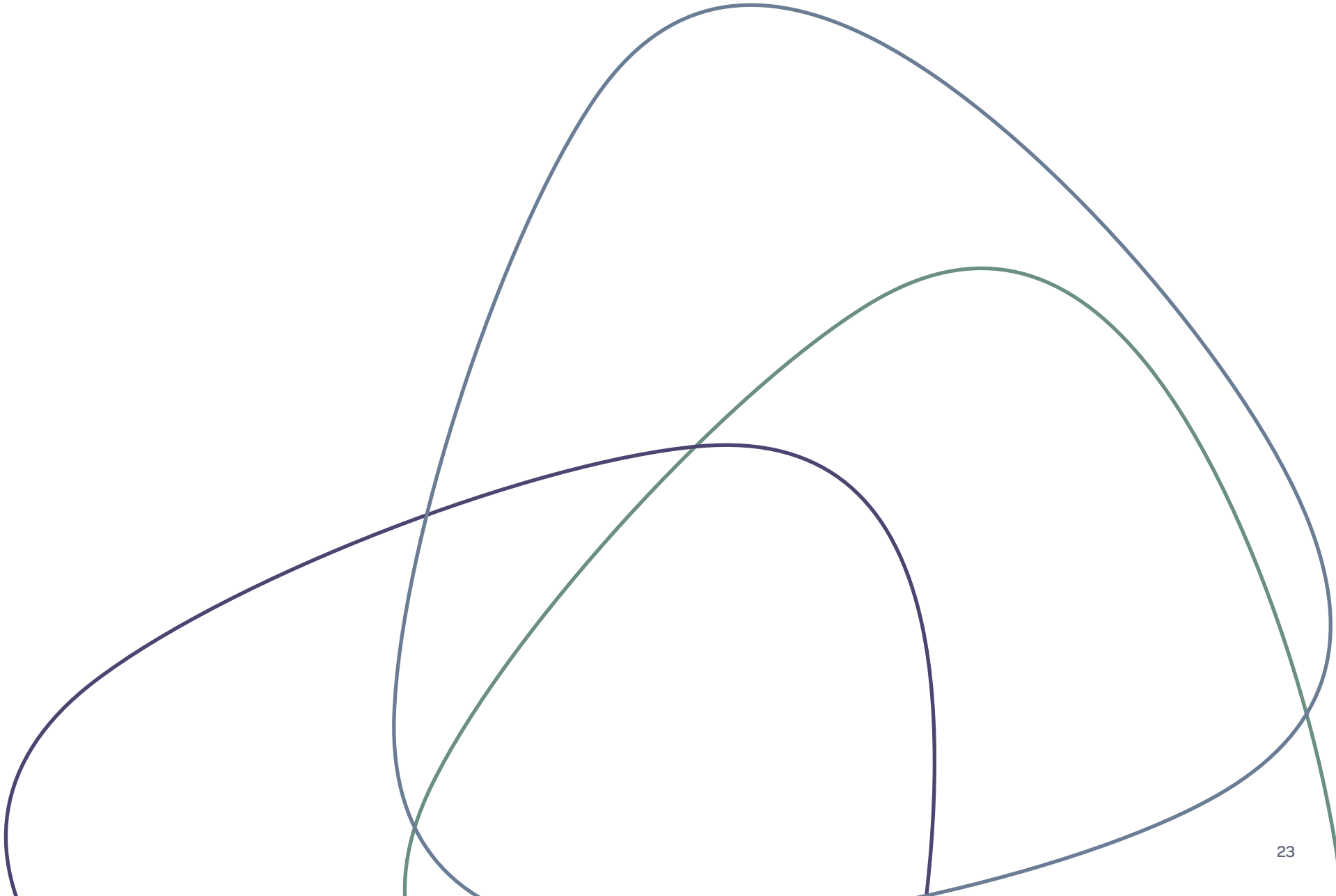
- Established and proven technology - ready now.
- Emissions 80% lower than from blast furnace route.
- Abundant supply of scrap raw material available in the UK (UK is the largest exporter of scrap in the EU).
- Significant first step to reduce CO_2 to reach net-zero goals. Compatible with future steps including use of green DRI.
- Improves Port Talbot's capability to make high-strength steel.

Cons

- Not all steel grades are proven using this route, with work on-going to mitigate any potential impacts.

02

Context Assessment



Design Policy Context

The accompanying planning statement provides a detailed analysis of policy objectives. The following provides a summary of those policies directly applicable to the design of the proposal.

The current Development Plan for the site consists of the Neath Port Talbot County Borough Council Local Development Plan 2011 - 2026 (NPTLDP), adopted in January 2016.

Other material considerations include:

- Planning Policy Wales (Edition 9, November 2016)
- Technical Advice Notes (TAN)
- Supplementary Planning Guidance (SPG).

Neath Port Talbot County Borough Council Local Development Plan

Key policies of relevance to the design of the proposals include:

Environmental Health

Paragraph 2.2.1 confirms the objective to value the environment. Objective 16 aims to address air quality issues and minimise noise generating and polluting activities.

Strategic Policy 2 (Health) is to reduce people's exposure to the determinants of poor health and provide an environment that encourages healthy, active and safer lifestyles.

Strategic Policy 16 (Environmental Protection) states that air, water and ground quality and the environment generally will be protected and where feasible improved through the following measures:

- Ensuring that proposals have no significant adverse effects on water, ground or air quality and do not significantly increase pollution levels
- Giving preference to the development of brownfield sites over greenfield sites where appropriate and deliverable
- Ensuring that developments do not increase the number of people exposed to significant levels of pollution.

Policy EN 8 (Pollution and Land Stability) states that proposals which would be likely to have an unacceptable adverse effect on health, biodiversity and/or local amenity or would expose people to unacceptable risk such as air, noise and light pollution, contamination, land instability and water pollution will not be permitted.

Policy EN 9 (Developments in Central Port Talbot Area) requires developments which could breach air quality objectives during their construction phase to comply with a Construction Management Plan, submitted to the Council as part of the planning process.

Design

Policy TR2 (Design and Access of New Development) confirms that proposals will only be permitted where they can meet all of the relevant criteria stated. These include not compromising safe and efficient use of the highway network, and providing safe access arrangements to allow safe manoeuvring of service vehicles.

Policy BE 1 (Design) states that all proposals will be expected to demonstrate high quality design and take account of the natural, historic and built environmental context. The policy sets a range of criteria to be satisfied (where relevant) for development to be permitted. This includes:

- Complementing and enhancing the appearance of the site and area in relation to the proposal's scale, height and massing, elevational treatment.
- Respect for site context within the local landscape.
- Utilising appropriate materials and landscaping/screening, where appropriate.
- Using resources as efficiently as possible.

Paragraph 5.5.3 states that the character of most of the area derives from its industrial heritage, including the large scale steel industries.

Planning Policy Wales (PPW)

PPW (Edition 9) was adopted in November 2016 and sets out the land use planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes.

Sustainable Development

The planning system provides for "a presumption in favour of sustainable development to ensure that social, economic and environmental issues are balanced and integrated, at the same time, by the decision-taker...in taking decisions on individual planning applications". Section 4.11 seeks to ensure sustainable development through good design.

Environmental Health

Section 13.10 – 13.12 focuses on improving the quality of water and air. Material considerations in determining applications for potentially polluting development are likely to include (inter alia):

Location, taking into account such considerations as the reasons for selecting the chosen site itself.

The risk and impact of potential pollution from the development, insofar as this might have an effect on the use of other land and the surrounding environment.

Impact on the road and other transport networks, and in particular on traffic generation.

Paragraph 5.5.1 notes that in achieving sustainable development, balancing conservation objectives with wider economic needs is important. All reasonable steps should be taken to safeguard or enhance the environmental quality of the land and pre-application discussions between developers and Natural Resources Wales are recommended.

Design

Section 4.11 promotes sustainability through good design, and notes that design must consider the social, environmental and economic aspects of the development, including construction, operation, management and the relationship to the surrounding context.

Technical Advice Notes

Technical Advice Notes (TANs) are supplementary documents to Planning Policy Wales. A number of TANs are relevant to the planning application but TAN12 specifically considers design.

TAN12: Design

TAN12 was adopted in March 2016 and provides advice on promoting good, sustainable design through the planning system.

Guidance promotes early consultation and consideration of design with the local planning authority and sets out the approach for delivering good design. Guidance is provided on a range of design elements, including, but not limited to access, character, sustainability, movement and context.

Supplementary Planning Guidance

Design

This guidance was adopted in July 2017 and is a material consideration in the decision making process.

With regards to the Tata steelworks, the SPG recognises that large scale industry forms a key characteristic of the area's heritage and character. The steelworks forms part of the landscape and views across the area.

Section 4 of the SPG focuses on the implementation of Policy BE1 of the NPTLDP. This sets out a number of key principles which should be considered by developers in the design of the proposal, including:

- Defining and identifying where and how development proposals have regard to distinctiveness and enhancing the character of the surrounding area.
- Demonstrating how local context and character has been addressed, including the wider landscape, townscape and heritage where appropriate.
- Explaining and justifying the use of materials and landscaping within the development.
- Demonstrating that the proposals do not adversely affect highway safety or residential/community amenity.
- Demonstrating that the planning, layout and orientation makes efficient use of land, taking account of site constraints.

Planning Policy Wales

Productive and Enterprising Places

Prosperous - Increased economic activity:

- All sectors
- All scales
- Making land available
- Lifelong learning and training opportunities
- Investment in renewable and low carbon energy sources
- Resource efficient choices for now and over the lifetime of development.

Resilient - Supported by agriculture and tourism:

- Including natural, built and historic environment
- Preservation for future generations.

Healthier - Increased economic activity:

- Greater use of no and low carbon uses
- Greater distribution of economic wealth to alleviate poverty (as a determinant of health).

Equal - Promotion of sufficient employment and enterprising opportunities:

- Enable people to realise their potential

- Build of existing economic strengths
- Assist in delivering prosperity to all.

Cohesive Communities:

- Access to fulfilling work
- Easily reached workplaces through sustainable transport
- Communities that can communicate effectively and safely with their neighbours.

Vibrant - Vibrancy support by provision of jobs and economic activity:

- Supporting a thriving welsh language to make a distinctive contribution to the viability of communities.

Globally Responsible:

- Reducing carbon footprint
- Integrated public transportation
- Resource choices through which multiple benefits can be realised.

Technical Advice Note 12

Design

Safety:

- Ensuring attractive and safe public spaces
- Security through natural surveillance.

Environment:

- Achieving efficient use and protection of natural resources
- Enhancing biodiversity
- Designing for change.

Character:

- Sustaining or enhancing local character
- Promoting legible development
- Promoting a successful relationship between public and private space
- Promoting quality, choice and variety
- Promoting innovative design.

Movement:

- Promoting sustainable means of travel.

Access:

- Ensure easy access for all.

Placemaking Charter Wales: People & Community, Location, Identity, Movement, Mix of Uses, Public Realm

Neath Port Talbot

Local Development Plan

SP11 Employment Growth

- Supporting growth though safeguarding existing uses and encouraging new and expanding employment areas.

SP18 Low Carbon Energy

- Encouraging low carbon technology development
- Encouraging energy conservation and efficiency
- No unacceptable impacts on local residents.

Design Standards

- Design SPG 2017.

Parking Standards

- Parking Standards SPG 2017.

BE1 Design

- Complements character and appearance of the site
- Respects context
- Utilises appropriate materials
- Retain local features
- Full role in achieving integrated transport
- Barrier free environments with access to all

- Creates safe places
- Full role in achieving integrated transport
- Uses resources as efficiently as possible, including land, layout, using brownfield over greenfield and maximising solar gain
- Utilise drainage to limit surface water run-off, flood risk and prevent pollution.

Welsh Language

- Welsh Language SPG 2017.

SP1 Climate Change

- Development cohesive places
- Reduce commercial transport emission through encouraging alternatives
- Reduce dependence on the private car
- Take into account likely increased flood risk
- Reduce fragmentation of natural habitats.

Pollution Standards

- Pollution SPG 2016.

Historic Context

Port Talbot is an industrial town in the county of Glamorgan, with a population of around 50,000 people. The plan on the opposite page maps the pattern of development within the local area from the 1880s to the present day.

Settlement in this location is known to date back to the bronze age, but the main stimulus to modern industrial development began when the English Copper Company established works at Taibach in 1770. There was further development near Aberafan in 1820 when the Margam Tinplate Works opened, and at the same time there were the beginnings of iron production.

Rapid industrial growth resulted in construction of a new dock complex in the 1830s. The main line of the South Wales Railway reached Port Talbot in 1850.

In the late 19th Century iron and steel overtook copper as the main local product and export, along with coal. By the mid-20th Century Port Talbot had become a steel producing town of international importance.

The population of the town expanded rapidly during the immediate post-war period, and connectivity was enhanced by the construction of the M4 in the 1960s. The development of the Aberafan Centre in the 1970s enhanced the town centre retail offer.

Port Talbot Steelworks

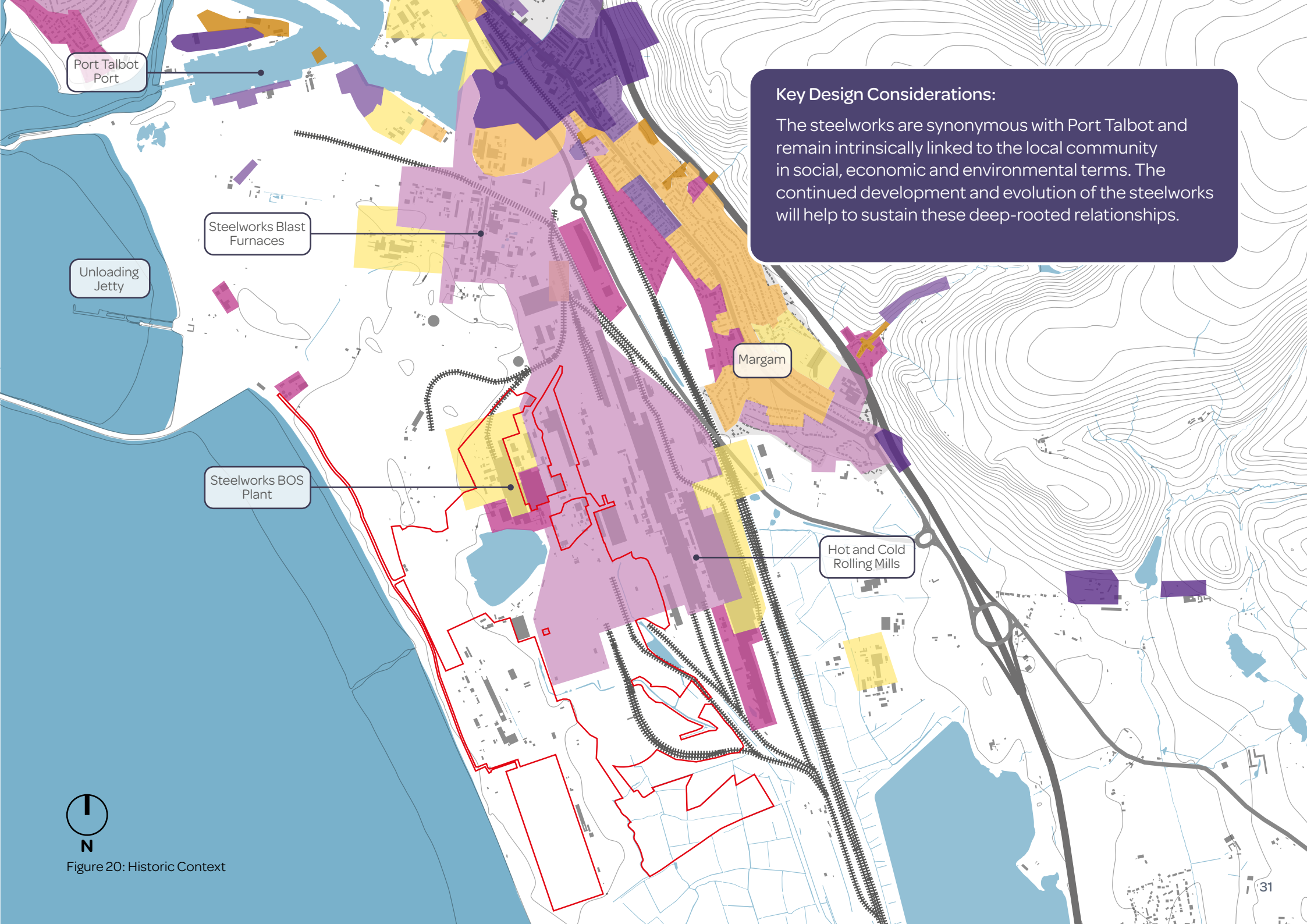
Steel making at the Port Talbot site dates back over 100 years. Key developments have included the Margam Iron and Steel Works in the 1920s, and the Abbey Works in the early 1950s. These sites formed part of the Steel Company of Wales.

At the time of peak employment in the 1960s the Abbey Works had become both Europe's largest steelworks and the largest single employer in Wales, with a labour force of 18,000 people.

Today, Port Talbot Steelworks is one of Tata Steel's two European steel-making and processing plants. The plant produces hot rolled and cold rolled coil and employs around 4,000 people.

KEY

- 1880s
- 1900s
- 1920s
- 1950s
- 1960s
- 1980s
- Present Day



Key Design Considerations:

The steelworks are synonymous with Port Talbot and remain intrinsically linked to the local community in social, economic and environmental terms. The continued development and evolution of the steelworks will help to sustain these deep-rooted relationships.

Figure 20: Historic Context

Views

Landscape Setting (wider context)

A Landscape and Visual Impact Assessment (LVIA), prepared by RSK, has been produced alongside this DAS.

The LVIA describes Port Talbot as sitting within National Landscape Character Area (LCA) 38, Swansea Bay and describes the key distinctive natural, cultural and perceptual characteristics of this area as a mix of "*narrow coastal plain, extensive soft coastline, steeply rising hills, urban areas and heavy industry*".

The Site straddles two neighbouring LCAs: LCA 50: Port Talbot Docks and Margam Works and LCA 1: Margam Marsh as defined by the Neath and Port Talbot Landscape Assessment. LCA 50 comprises of large-scale heavy industry which forms the vast majority of the Site. The remaining area of the Site is located within LCA 1, which consists primarily of unmanaged marsh grassland and primarily forms the route for the underground electric cable.

Key visual and sensory characteristics of the area include:

- Large scale heavy industry and Port Talbot docks, a deep water port.
- Skyline dominated by the steelworks.
- Flat landscape.
- Smaller industrial units around the docks and next to the town centre.
- The strong character of the area is dominated by overpowering and noisy heavy industry.

The wider area has a highly distinctive landscape character. The large scale industrial areas in and around the steelworks are part of that landscape and in particular create a unique skyline punctuated by vertical elements.

Figure 21: View across existing Port Talbot Steelworks

Landscape Designations

The Gower National Landscape, designated for its scenic quality at a national level, is located approximately 13 km to the west of the Site. Any potential visibility would be greatly limited by intervening distance and development would be difficult to discern separately from the existing steelworks.

There are 3 non-statutory landscape designations – Special Landscape Areas (SLAs) - within the study area: SLA 4 Margam; SLA 6 Kenfig Burrows; and SLA 8 Porthcawl Coast. Margam Mountain Landscape of Special Historic Interest sits within SLA 4; however it is outside the ZTV for the development Site.

Topography

The steelworks sits within a low lying coastal plain to the north of Margam Moors and to the immediate edge of the Swansea Bay shore line. Margam Moors is characterised as low-lying enclosed wetland pasture set on reclaimed salt marsh. To the east of the town, the land form banks up to three mountain peaks which create a ridge effect and forms the edge of the town on the western side. The ridge effect means that Port Talbot, the steelworks and the Site are largely screened from the wider landscape.

Open Space

The industrial and utilitarian character of the steelworks means that open space is limited to peripheral and 'ad hoc' areas between operation areas and stock-piling areas. These are largely unmanaged areas of semi-improved grass and scrub. There are no areas of public open space within the steelworks or in proximity to the Site.

To the east of the steelworks, beyond Harbour Way and the railway corridor, are several open spaces within and adjacent suburban area.

Landscape Character

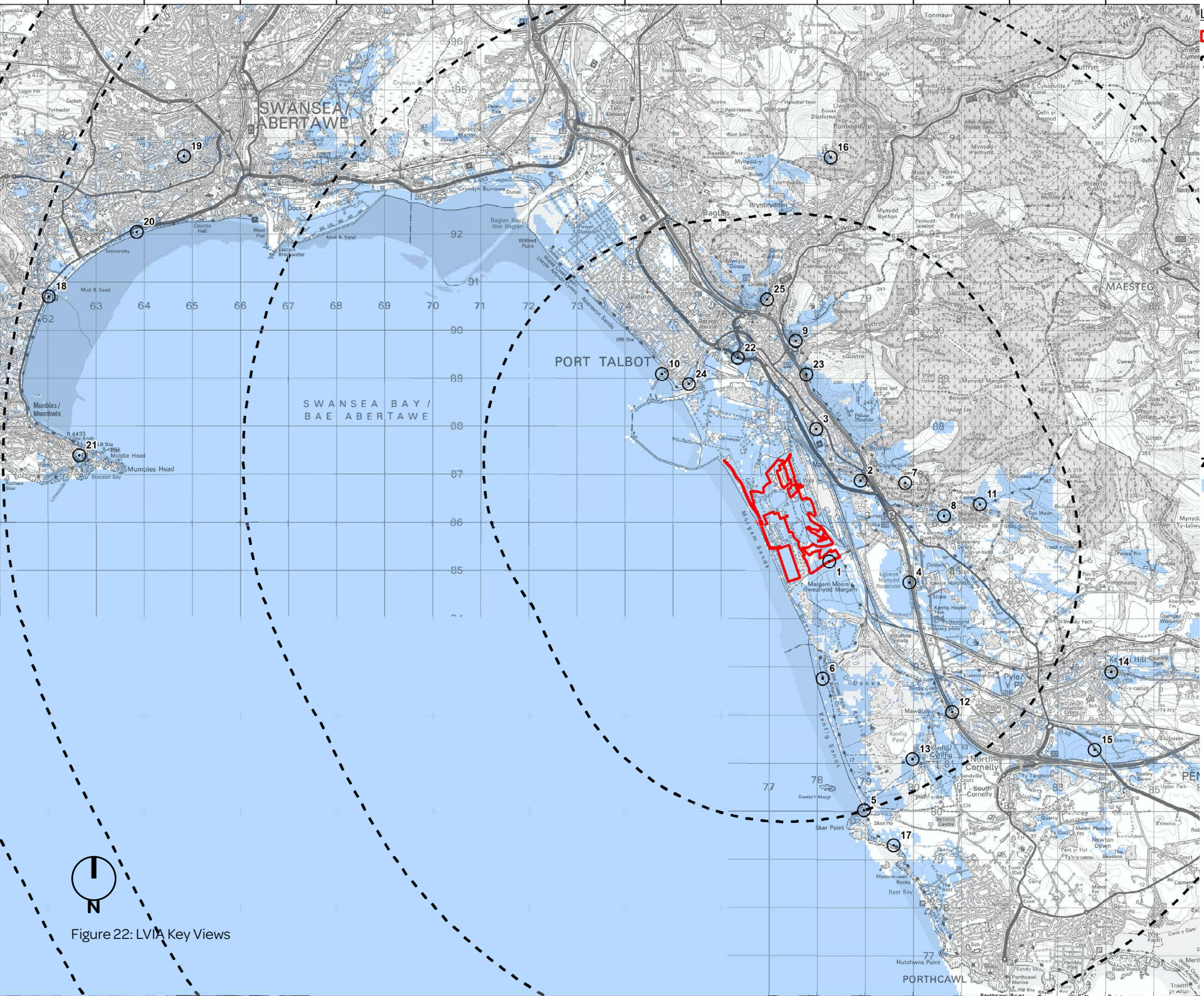
Locally, changes in landscape character relate to the enclosure of the landscape, extent of built form, the influence of human activity and vegetation. Within the steelworks, the scale of buildings, road infrastructure and limited landscape features gives a feeling of exposure, vastness and a landscape which is not human in scale.

The local horizon line is broken by large scale structures associated with the industrial uses, including stacks, tall buildings and cooling towers. These appear irregular in view.

Visual Amenity

The LVIA identifies an approximate zone of theoretical visibility of the Proposed Development (see plan extract opposite). This represents the extent of area visible from within the Site and from which development on the Site is likely to be noticeable.

The LVIA identifies 25 representative viewpoints to reflect the range, character and quality of existing views towards the Site and the key visual receptors. For the purposes of this DAS, six of the viewpoints closest to the Site have been summarised across the following pages.



Legend:

- Site boundary
- Distance radii from site boundary (5, 10, 15, 17km)
- Viewpoints

1 Longlands Lane, PRoW 5/92.PT/3
2 Tata Steel Recreation Ground/ Abbotts Close
3 Morfa Avenue, Margam
4 Eglwys Nunydd Reservoir (M4)
5 Kenfig Burrows
6 Porthcawl Coast
7 Wales Coast Path, Braided Route
8 Margam Country Park
9 Broomhill at Pen-y-cae
10 Aberavon Sands, Port Talbot
11 Ogwr Ridgeway/Glamorgan Ridgeway
12 M4 overbridge
13 Kenfig National Nature Reserve
14 High Street, Kenfig Hill
15 A48, lay-by
16 Cairn at Foel Fynyaddau
17 Porthcawl Coast
18 Swansea Parade, Blackpill
19 Nicander Parade, Swansea
20 Swansea Parade, Swansea Cenotaph
21 Mumbles Hill Information Point
22 Harbour Way
23 Mynydd Brombil
24 Mariner's Point
25 Cwmavon Road

Zone of Theoretical Visibility

- Proposed facilities may be visible

Figure 22: LVIA Key Views

Viewpoint 1: Longlands Lane/public right of way (LCA 1)

Views of the Site consist of Margam Moors in the foreground which extend toward the steelworks in the middle and longer distance. Establishing scrub vegetation screens views into the existing brownfield land of the site further to the north. The scarp slope and upland plateau form the backdrop to the northeast, with Mynydd Brombil Wind Farm a notable feature in the skyline.

Viewpoint 2: Tata Steel Recreation Ground / Abbotts Close (LCA 49)

View across the car park and sports ground towards the existing steelworks in the middle distance; views are somewhat cluttered by security fencing, overhead electrical lines, floodlighting and chimney stacks which regularly punctuate the skyline within the Tata Steel Site. Views of the Site are screened by the steelworks.

Viewpoint 3: Morfa Avenue, Margam(LCA 49)

View across the hardstanding and playing fields towards the existing steel works with associated sheds and chimney stacks in the middle distance. Views of the Site are screened by the steelworks, which itself is somewhat screened by intervening built form of Margam and tree and shrub vegetation.

Viewpoint 4: Eglwys Nunydd Reservoir (M4) (LCA 1)

Taken from privately owned (Tata Steel) land to approximate views from the motorway at this location. Views towards the Site consist of Eglwys Nunydd Reservoir in the foreground which extend toward the steelworks in the middle and longer distance. Tree and scrub vegetation softens views of the lower levels of the works. The scarp slope is just visible to the north, but the view is dominated by water and sky with the steelworks at its intersection.

Viewpoint 6: Porthcawl Coast just north of Sker Point (LCA14)

Views towards the Site across the Kenfig Sands and Burrows which extend toward the steelworks in the distance. The scarp slope and upland plateau form the backdrop to industry to the north and east, whilst the open sweep of Swansea Bay draws the eye to the west.

Viewpoint 23: Wales Coast Path near Mynydd Brombil (LCA 6)

Elevated views from the lower scarp slope towards the coastal plain to the south. The area of existing industrial development beyond the built form of Port Talbot defines the coastal edge at this location with Swansea Bay beyond. The existing steelworks are dominant in these views.

Figure 23: Viewpoint 1 - Longfords Lane/Public Right of Way (LCA 1)

Figure 24: Viewpoint 3 - Morfa Avenue, Margam (LCA 49)

Figure 25: Viewpoint 6 - Porthcawl Coast just north of Sker Point (LCA14)

Figure 26: Viewpoint 2 - Tata Steel Recreation Ground/Abbots Close (LCA49)

Figure 27: Viewpoint 4 - Eglwys Nunydd Reservoir (M4) (LCA1)

Figure 28: Viewpoint 23 - Wales Coast Path near Mynydd Brombil (LCA 6)

Access and Connectivity

Vehicular Access

At Port Talbot the M4 has key junctions with the A48, A4107 and A474. The A48 is a key spine route through the town. The A4107 and A474 provide important inland connections including to Maesteg and Neath.

The A48 connects to the A4241 Harbour Way, which was opened in 2013. This runs adjacent to the wider steelworks site.

Due to the secure nature of the steelworks and the adjoining port areas to the north many roads to the west of Harbour Way are private roads with restricted access. This includes security lodges / gates. The Proposed Development will be accessed via this private road network.

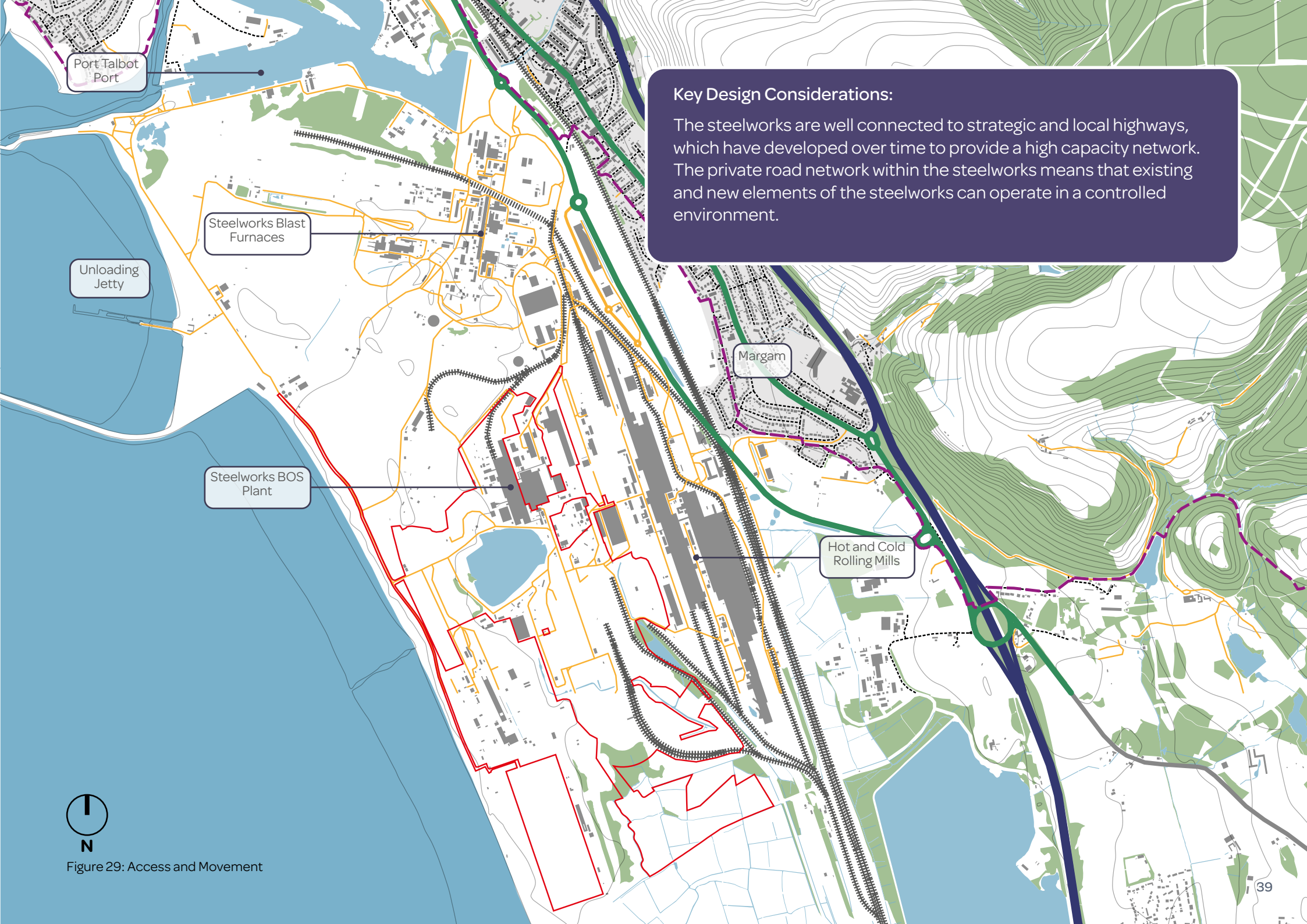
Public Transport

The Site is well placed to encourage travel by public transport. The closest bus stops are located on either side of the A48 Margam Road, less than 0.5 miles from the Main Gate Access. In addition, Port Talbot Bus Station, which provides additional bus services to other destinations such as Maesteg and Goytre, is located within an acceptable 1.2 mile walk distance.

Port Talbot Parkway Railway Station is also located within walking and cycling distance. The station offers regular direct services throughout the week to destinations including Neath Llanelli, Swansea, Manchester Piccadilly, Bridgend, Cardiff, Carmarthen and London, amongst others.

KEY

- M4 Motorway
- A Roads
- Restricted Access / Private Road
- Rail Line
- Rail Station
- Bus Stops
- Local Roads
- National Cycle Network
- Buildings
- Urban Area



Key Design Considerations:

The steelworks are well connected to strategic and local highways, which have developed over time to provide a high capacity network. The private road network within the steelworks means that existing and new elements of the steelworks can operate in a controlled environment.

Figure 29: Access and Movement

Walking and Cycling

In addition, the Site is in close proximity to National Cycle Route 4, which is located to the north-west of the Main Gate Access and connects Swansea in the north with the outskirts of Cardiff in the south-east, whilst also providing a traffic-free link to National Cycle Route 887 in Port Talbot. National Cycle Route 887 runs in a south-west to north-east direction and provides a link between Port Talbot town centre and Glyncorrwg.

Summary

Overall, the Site benefits from good levels of accessibility by sustainable modes and has a large residential catchment as well as a good range of local amenities within close proximity. Access to the Site on foot and by cycle is of a good standard and there are multiple transport connections within close proximity providing access to a range of local destinations. These findings demonstrate that existing and prospective staff will not be wholly reliant on the private car for travel to work.

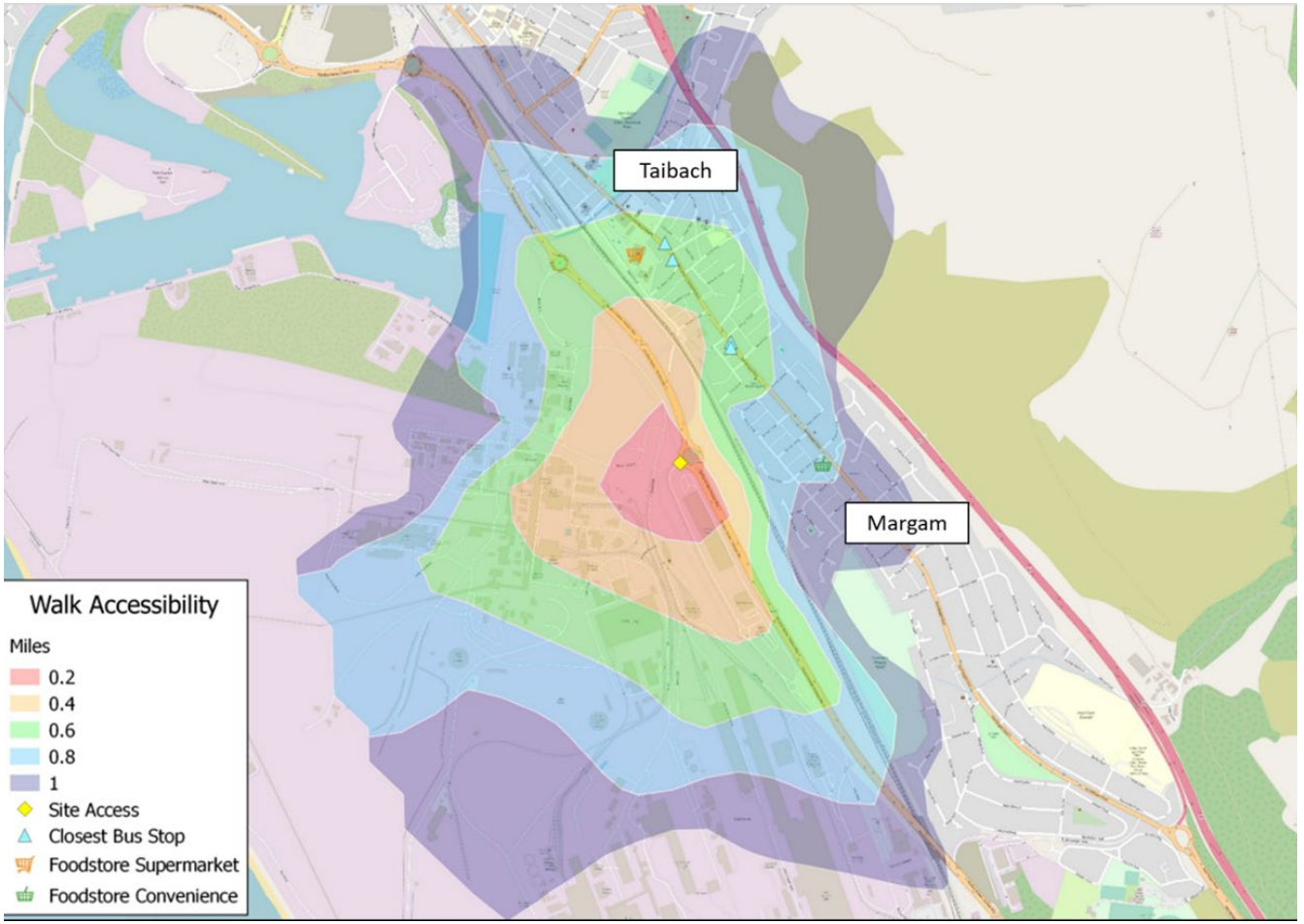


Figure 30: Walk Accessibility Plan (Transport Assessment)

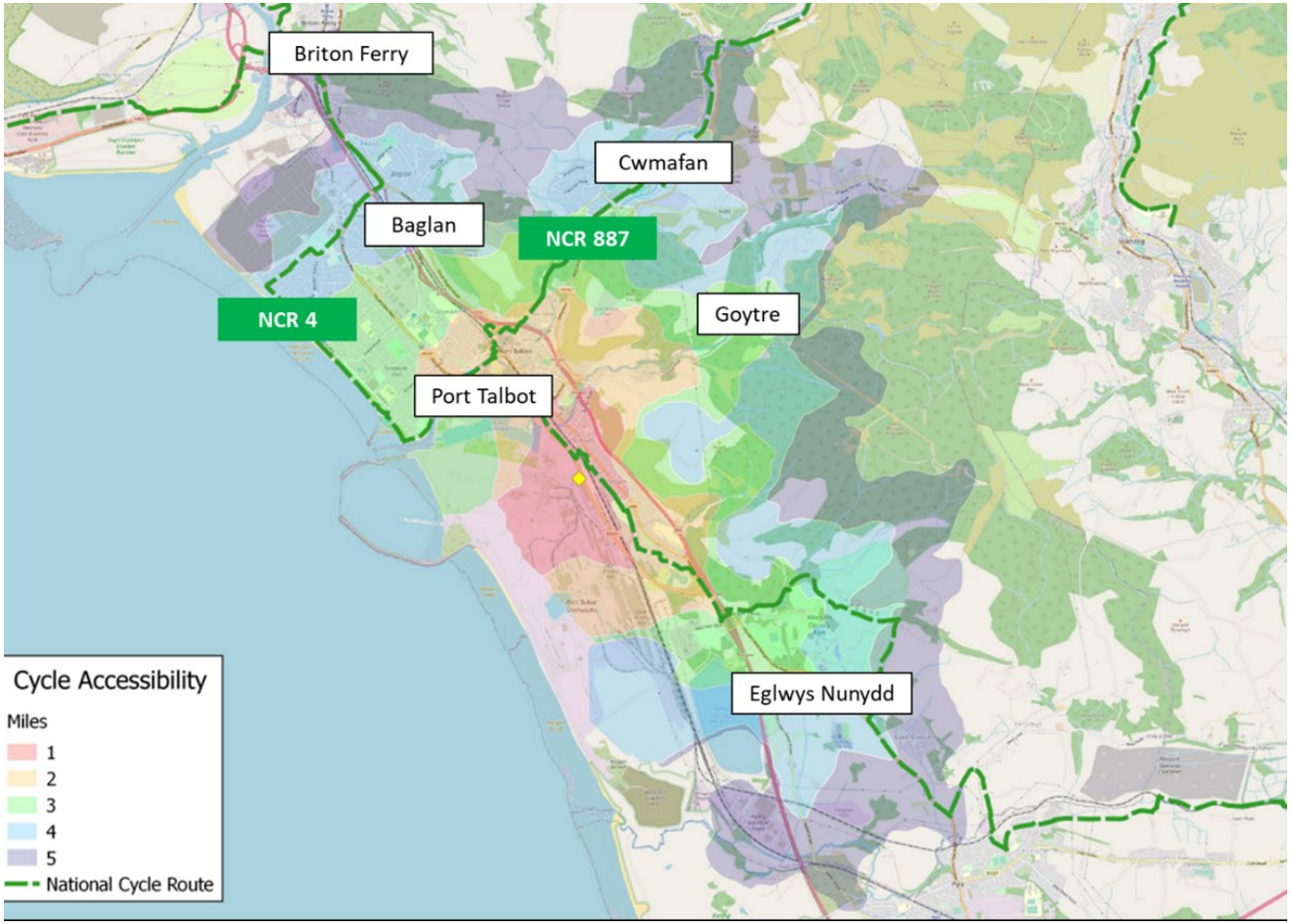


Figure 31: Cycle Accessibility Plan (Transport Assessment)

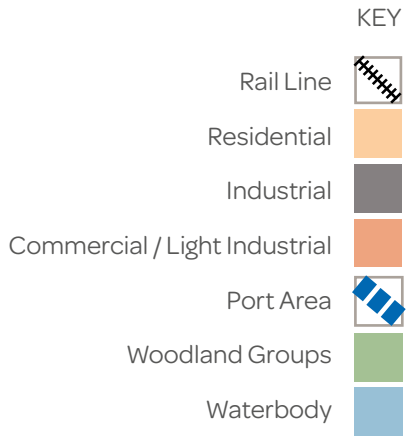
Land Use

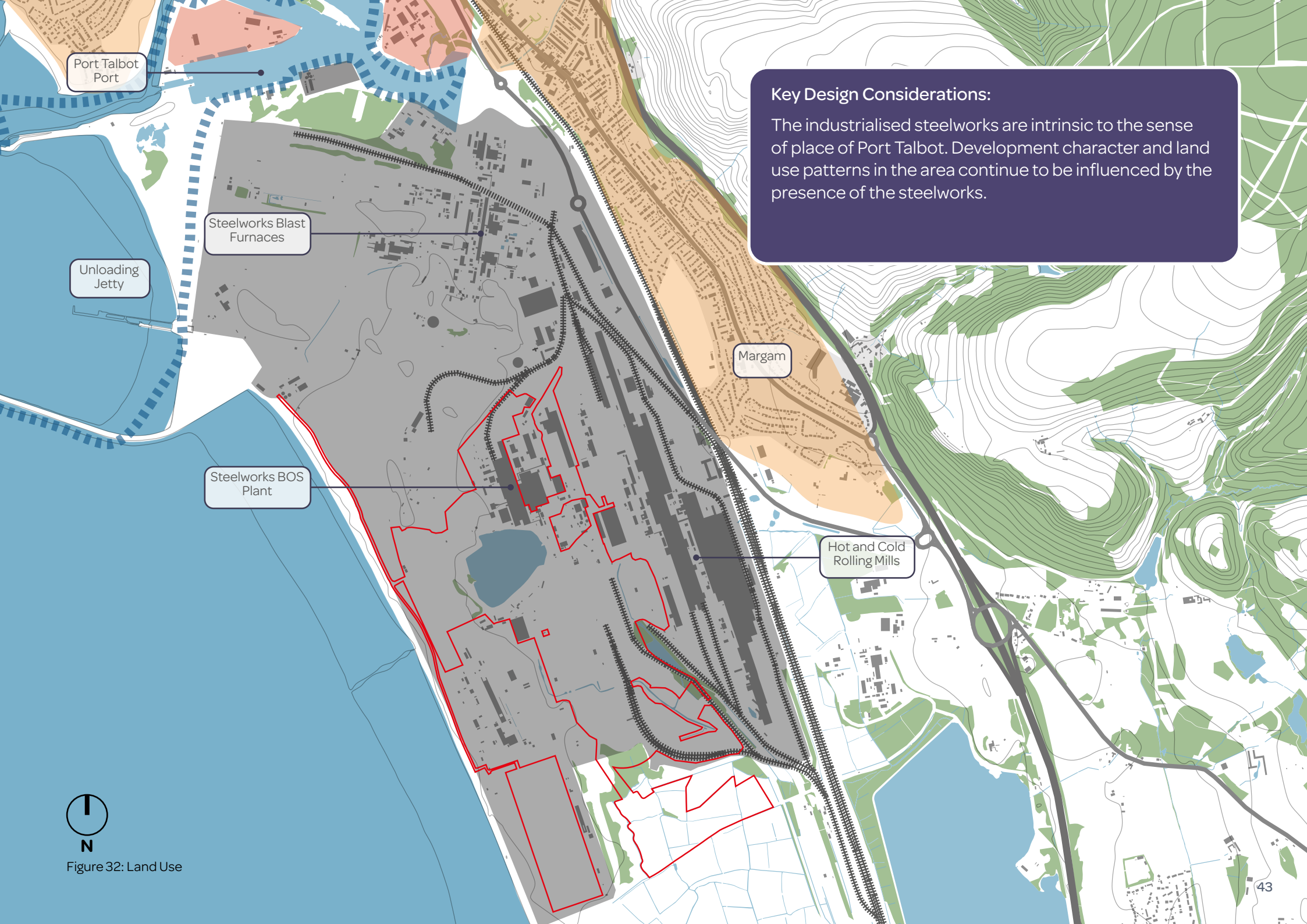
The spatial and socio-economic characteristics of Port Talbot are heavily influenced by its industrial past and present. This has shaped the town on a local, regional and national scale, and contributes to its unique sense of place.

The current land use profile of Port Talbot comprises a broad range of residential, industrial, commercial, town centre and port uses, set alongside open countryside and woodlands.

The Site is located within the heart of the large scale, heavy industrial area that extends south of the town centre. This industrial area, and the Site itself, is separated from the town centre and surrounding residential areas by the South Wales Mainline rail line running approximately north-south.

Beyond the rail line the urban area of Port Talbot stretches along the coastline, with the settlement pattern generally occupying lower lying ground before the land rises steeply to the north and east. There is a ribbon of coalescent settlements along the eastern side of the steelworks including Margam, Taibach and Pen-y-Cae. Large residential areas such as Aberavon, Sandfields and Baglan are located north of the steelworks complex.





Key Design Considerations:

The industrialised steelworks are intrinsic to the sense of place of Port Talbot. Development character and land use patterns in the area continue to be influenced by the presence of the steelworks.

Figure 32: Land Use

Local Character

The Steelworks

The Site sits within the confines of the existing steelworks. This is characterised by a heavily industrialised built environment which dominates the southern end of Port Talbot.

The steelworks lie to the south of the River Afan, which cuts through Port Talbot town centre, and extends south towards the Eglwys Nunydd Reservoir. The industrialised area runs parallel to the M4 and is highly prominent on approach to Port Talbot from the south / east.

The steelworks covers a substantial area, extending to about 1,133ha in total.

Figure 33: Parking adjacent to the BOS Plant

Figure 34: HARSCO Plant

Figure 35: Coke Ovens (now decommissioned)

Figure 36: Steelworks BOS Plant (Getty Images)

Building Scale

The steelworks is a utilitarian environment with a range of structures with differing scales. Buildings are typically large, steel frame construction. Steel frame chimney structures, plant and equipment are also highly visible. Heights reach up to 60m for buildings and as high as 150m for emission stacks.

The size of buildings and structures vary according to their function within the industrial process. Larger buildings include the blast furnaces, power stations, rolling mills and the BOS Plant. These buildings are served by a series of large yards, storage sites and transport systems such as conveyor belts and railway lines.

There are also several tall structures in the form of stacks, storage tanks and cooling towers.

The built environment of the steelworks includes buildings of very large footprint. The steelworks also includes an extensive network of overground pipework and infrastructure.

Figure 37: Rolling Mill Exterior

Figure 38: Blast Furnaces

Figure 39: Railway sidings near to rolling mills

Materials

Across the steelworks external facing materials are generally functional, chosen principally for durability and safety in order to withstand industrial processes, challenging environmental conditions and to facilitate maintenance. Buildings are typically steel frame with grey steel cladding.

Towards the east of the steelworks, more recent non-industrial developments in the form of the Stores Building, Training Centre and Visitors Centre introduce more variation to the external materials palette. This recognises the proximity of public vantage points, but is only possible due to these buildings being non-industrial.

Figure 40: Photographic samples representing materials in the main industrial areas of the steelworks

Figure 41: Photographic samples representing materials in the non-industrial areas of the steelworks

Heritage and Archaeology

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

Identified Heritage Assets

There are 130 designated assets located within the 5km study area. These comprise 19 scheduled monuments, 7 grade I listed buildings, 14 grade II* listed buildings, 87 grade II listed buildings, a conservation area and 2 registered parks and gardens.

There are a further 350 non-designated assets located within the 1km study area. Of these, 2 are historic landscapes of multiple periods, 1 dates to the Roman period, 1 dates to the Medieval period, 16 date to the Post-Medieval period, 13 date to the modern period, and 2 are of unknown date.

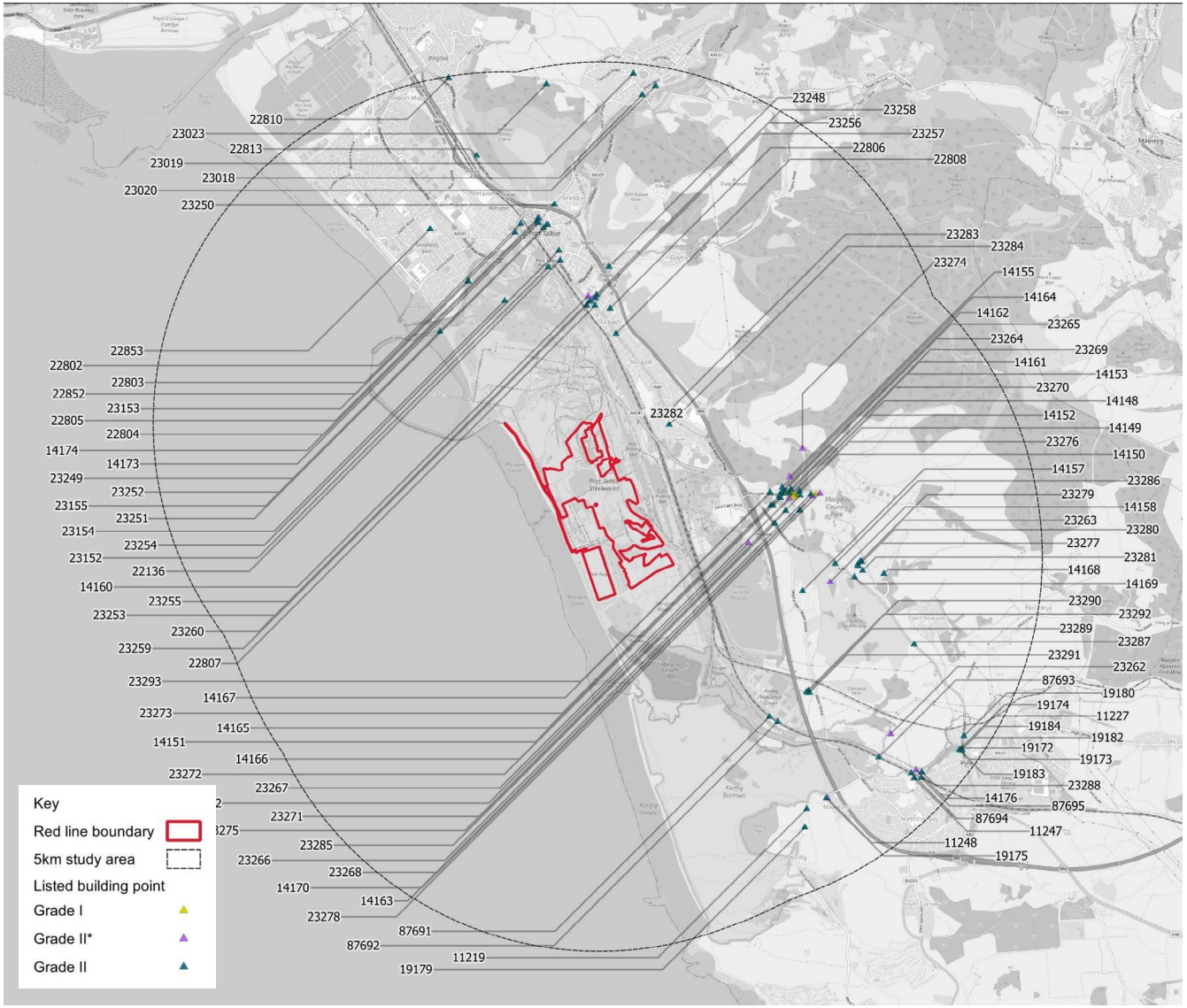


Figure 42: Listed Buildings within 5km of the Site

Historic Landscape Character (HLC)

Historic Landscape Characterisation data for the study area defines the south eastern part of the site as: HLCA002 Margam Moors. This is reclaimed and enclosed salt marsh wetland pasture. There are Medieval and Post-Medieval fields and former Medieval monastic grange land with varied field patterns with typical ridge and furrow, earth bank and drainage features . The rest of the site is not covered by HLC.

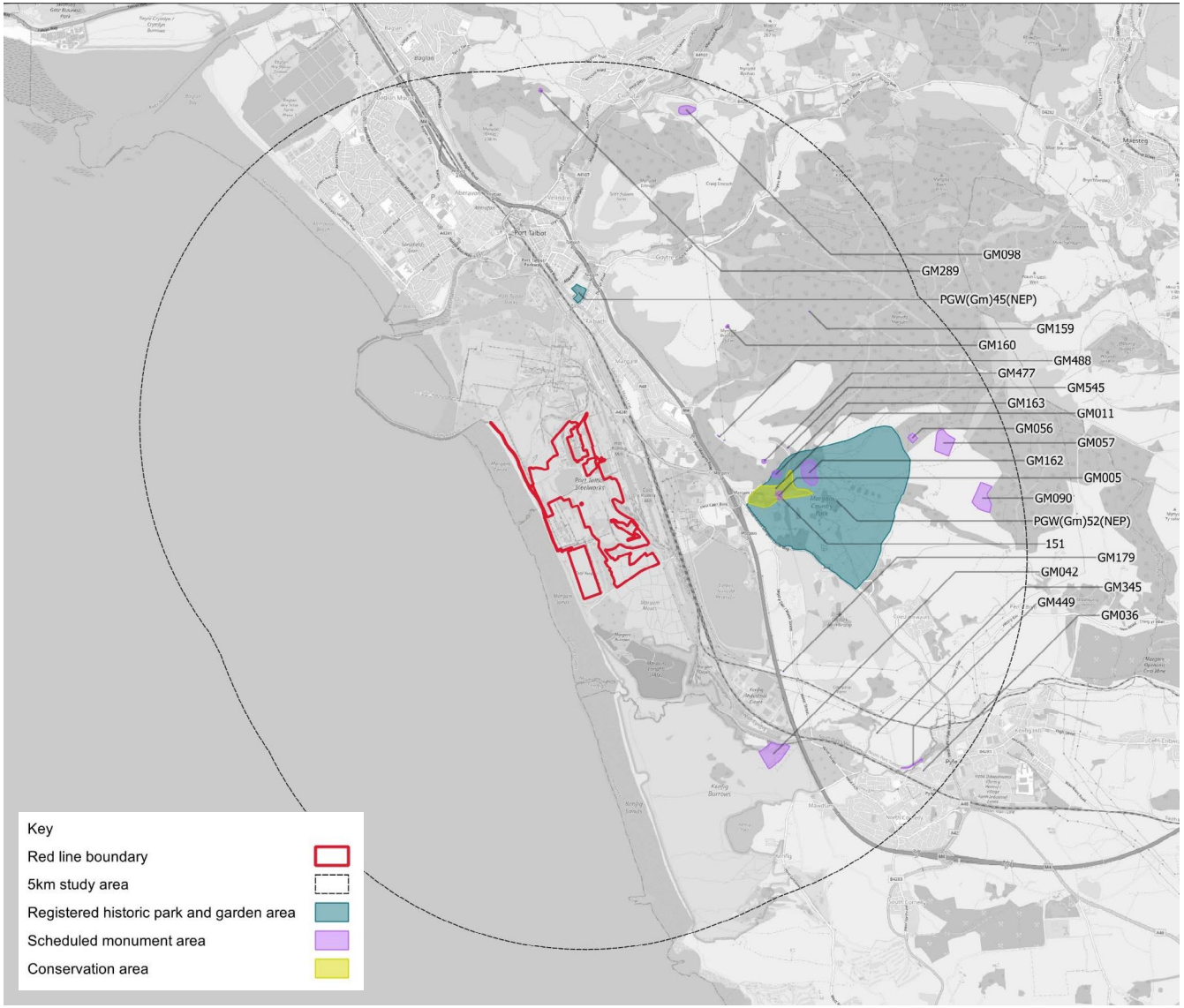


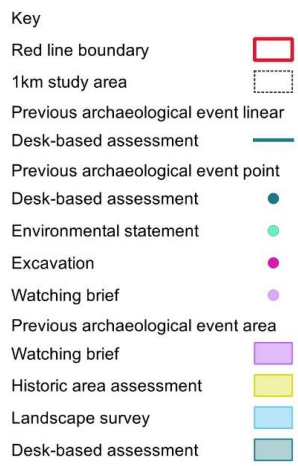
Figure 43: Designated Historic Assets within 5km of the Site

Previous Investigations

The locations of the investigations detailed below are shown on Figure 44.

Eight previous archaeological investigations are recorded within the study area:

- A partial excavation was undertaken of Theodrics Grange (20041) by T. Gray in 1903 (E000456). A building found three years prior was cleaned back and a piscina was found amongst the ruins indicating the location of a chapel
- An archaeological watching brief was carried out for the Marlas-Raos sewage pipeline by GGAT in 1992 (E003718). Observations that were possible suggested that the potential for the preservation of archaeological remains, particularly from the prehistoric period, is high
- A desk-based assessment for Ysgol Newydd, Margam was carried out by Rubicon Heritage Services in 2016 (E007984). The assessment identified 69 known cultural heritage assets in the study areas, and none in the development area itself. It was determined that there would be no direct or indirect impact on any known cultural heritage assets and nor an impact on the setting of any assets
- A desk-based assessment was carried out on high-status settlement in Glamorgan-Gwent by GGAT in 2010 (E007242). A total of 277 medieval/post-medieval sites were initially assessed, following which 58 continued to a more detailed assessment. Of those, between 33 and 37 were considered to be/ potentially be of National Significance, 19 of which are already Scheduled Ancient Monuments. Nine sites were considered to be at least of Regional Significance
- A desk-based assessment was carried out as part of a rapid archaeological appraisal on land at Mynydd Margan, Mynydd Ty-talwyn and Mynydd Baedan near Margam by GGAT in 2013 (E006900). Six new archaeological sites were identified during the study. The report concludes that the planned work would not pose any constraints on the archaeology
- A landscape survey was carried out as part of GGAT150: rapid coastline assessment by GGAT in 2018 (E006100), who undertook a scoping exercise in 2016-—2017 to define a coastal zone area in relation to currently mapped risks associated with climate change and determined what work should be done to bring the quality and scope of data on the coast of Glamorgan and Gwent up to present standards
- A landscape survey was carried out as part of the Arfordir Coastal Heritage project by GGAT in 2014 (E007638), which aimed to identify new sites and monitor archaeological sites and to engage interested local people. It especially aimed to record and monitor sites under threat of coastal erosion or other forms of damage and to involve interested individuals and community groups in taking an active role in caring for their coastal heritage on an independent and sustainable basis
- An historic area assessment was carried out at Newland Farm by the University of Leicester in 2013 (E007771) The Assessment of the Significance of Impact of Development on Historic Landscapes, 2nd edition (ASIDOHL2) aimed to assess the direct, physical impacts of a wind turbine development as well as indirect physical and visual impacts upon the landscape surrounding Newland Farm. Overall the impact from the proposed turbine was determined to be Slight, with a slightly higher impact on the landscape of Kenfig Burrows, especially those areas closest to the turbine.



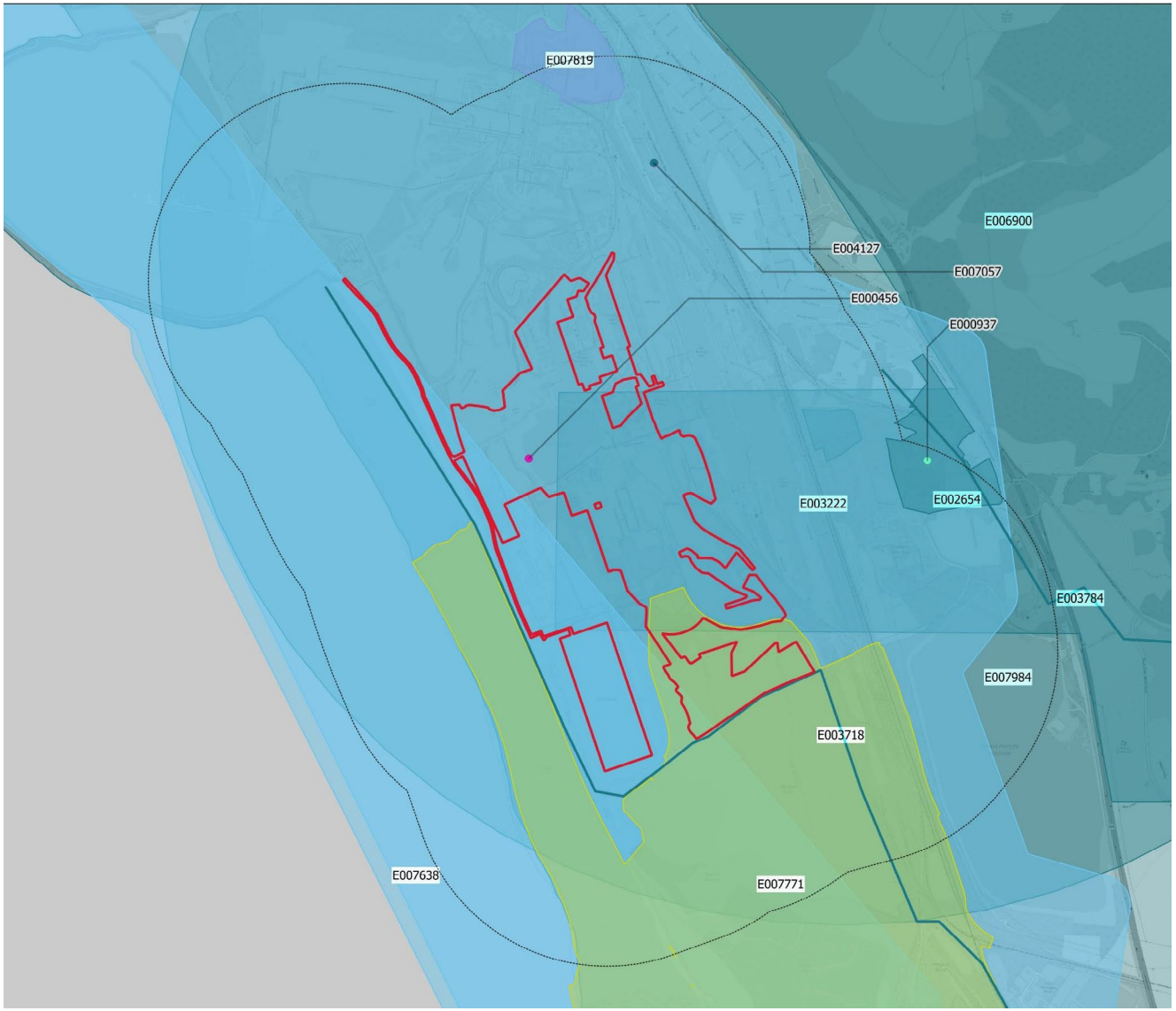
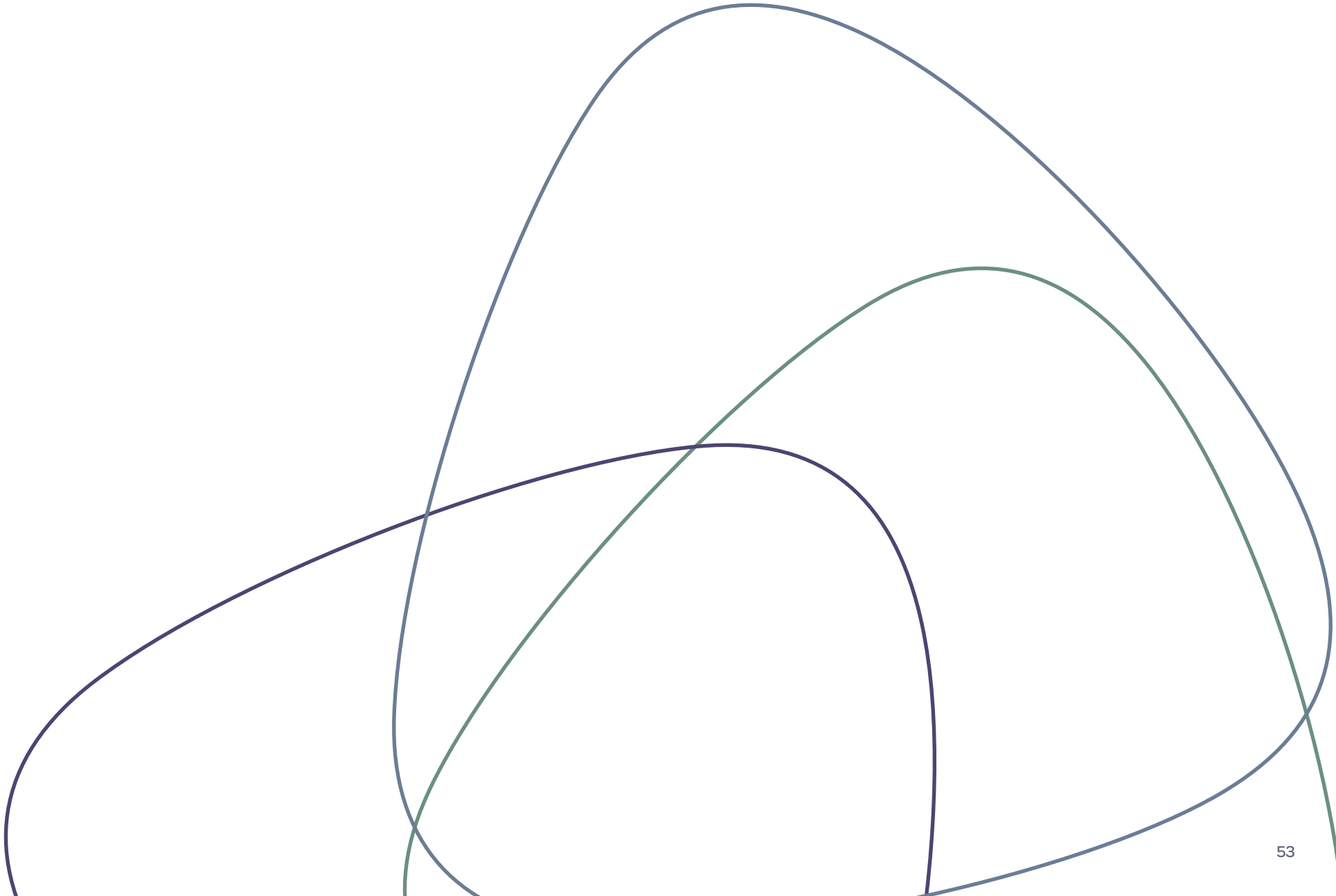


Figure 44: Previous archaeological investigations within 1km

03

Site Assessment



Site Boundaries

North

The northern boundary runs from the coast road to the access road east of the BOS Plant. Towards the north-west this boundary is characterised by various open air storage sites for aggregate and rubble. Further east this boundary bisects the BOS Plant building with the parts of building included within the red-line intended to house the EAF. The eastern most part of this boundary edge features various storage areas for cast steel slabs.

South-East

The south east corner abuts an existing railway line and contains a hard-standing area. The boundary wraps around an existing aggregate storage area and coal tip, a couple of additional railway spurs enter the site from the south.

This section of boundary features a series of field parcels which link the Site to existing overhead power lines to the east. These field parcels extend south to Heolcae'r-Bont, a gravel road and Public Right of Way and include a number of watercourses and hedgerows.

West

The majority of the western boundary is formed by the coast road which runs along the western side of the steelworks. To the west of this boundary is Margam Sands beach and beyond that Swansea Bay and the Bristol Channel.

East

The eastern boundary is characterised primarily by two large open air storage sites for cast steel slabs. Between these storage sites is a large steel shed. There is also a large building adjacent to the northern storage area which abuts the Site boundary. At its most southerly point this boundary wraps around a series of railway sidings and a waterbody called Lower Mother Ditch.

South-West

The south-west boundary contains the existing scrapyards which process scrap steel. A number of small storage yards and industrial buildings are contained within this area. This section of the boundary also includes the coke ovens which are in the process of being decommissioned.

This boundary terminates at the coast road to the west.

Internal

Two areas are surrounded by the Site but are otherwise outside of the boundary. The larger of these areas features a complex of structures including a cooling tower water treatment plant and water towers.

The southern-most internal area contains a storage yard and hard-standing.

Key Design Considerations:

The Site boundary is complex and contains numerous different contexts and facilities. Areas within the boundary include the BOS Plant, various storage sites for inputs and outputs of the steel mill, transportation infrastructure, the coke ovens as well as undeveloped fields. The context outside of the boundary is largely industrial with exceptions being the nature reserve to the south and the coast to the west.

N

Figure 45: Site Boundaries Plan

Existing Site Layout

Site Overview

The Application Site extends to c.159.6 ha and is identified in Fig. 46.

The Site boundary is irregular in shape and includes the following parts of the extant steelworks:

- A continuous casting plant, slab yards, and part of a basic oxygen steelmaking plant in the northern part of the site
- An operational lagoon, a steel service centre, and Margam colliery memorial in the central area of the site
- A haul road which forms the westernmost boundary
- Coal yards in the south western area of the site.

The Site slopes in a general south-easterly direction. The lowest levels within the planning boundary are located in the south-east, where the reen network exists, at approximately 4.15mAOD. The eastern side of the Site is generally lower than the west, with Site levels typically remaining below 10mAOD. The west of the Site is shown to have typically higher ground levels, likely due to existing material and scrap storage areas. Levels in the south-west of the Site are approximately 14.95mAOD, with the highest levels shown to be in the north-west of the Site at around 23.06mAOD.

KEY

ApplicationSite Boundary

Wider Tata Steel Ownership

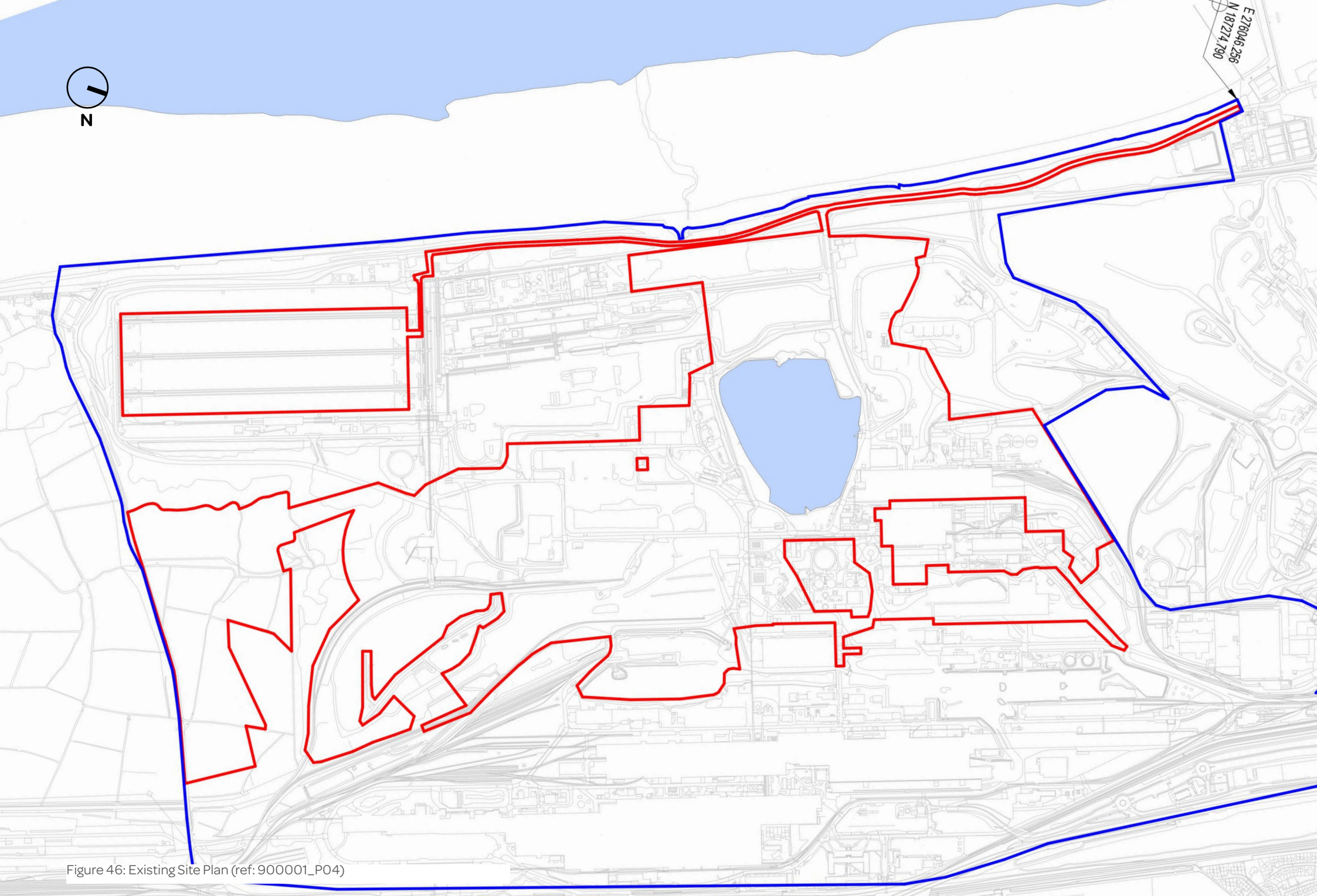


Figure 46: Existing Site Plan (ref: 900001_P04)

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 Gate Access roundabout and A4241 Harbour Way / West Gate Access roundabout.

For vehicles egressing the Site, the Main Gate Access road provides a two lane approach onto the A4241 Harbour Way / Main Gate Access roundabout. On entry to the site, the Main Gate Access provides a single lane off the A4241 Harbour Way / Main Gate Access 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 Gate Access roundabout, with the majority of the access road comprising 3 lanes which provides significant queuing capacity before off the adopted highway.

The West Gate Access road provides a single lane approach onto the A4241 Harbour Way / West Gate Access roundabout. For vehicles accessing the Site via the West Gate Access, 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 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 banned 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 accesses. A minibus 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 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

The Site has been assessed 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.

Figure 51: Existing lagoon

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 reen 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.

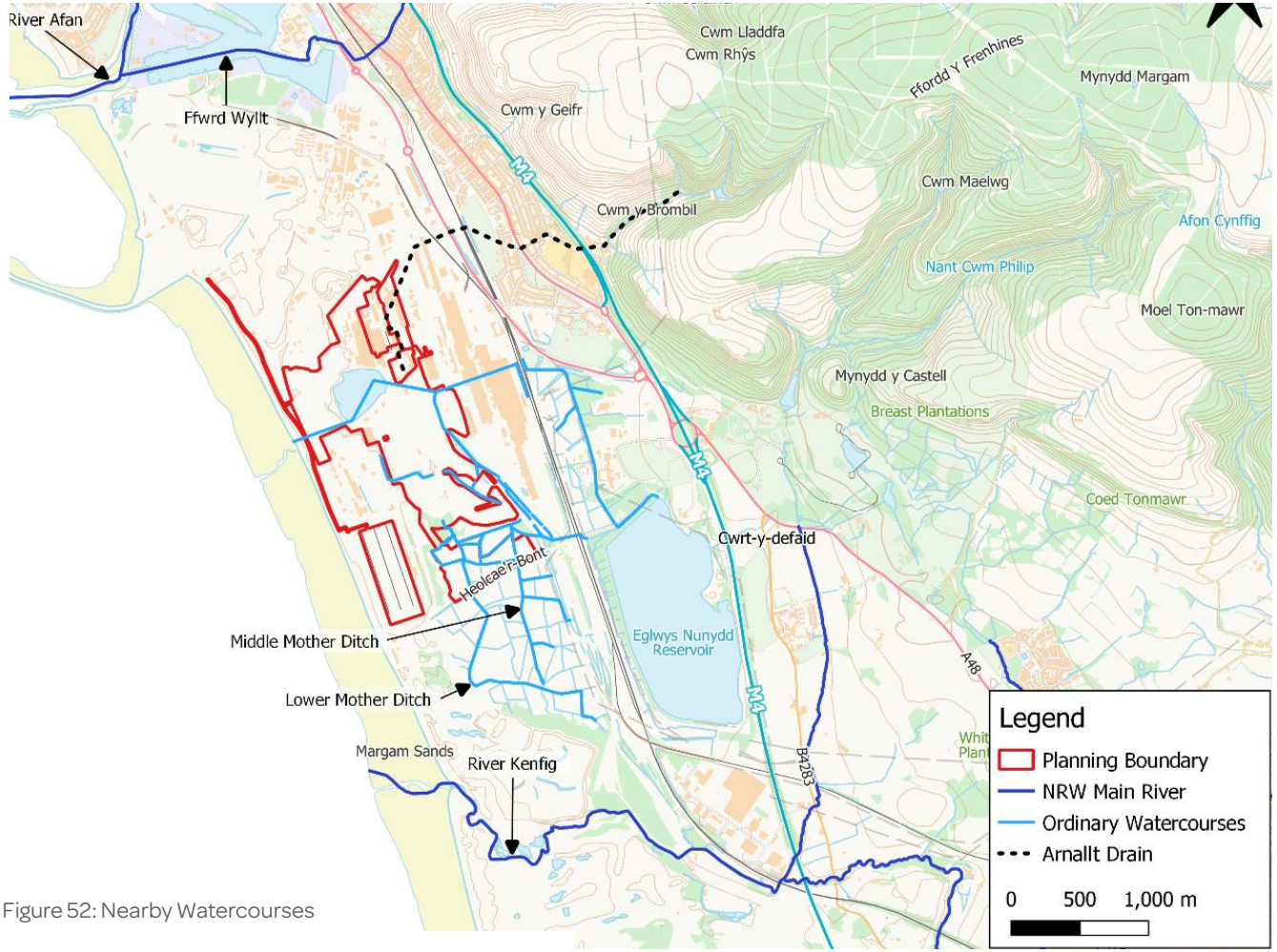


Figure 52: Nearby Watercourses

Flood Risk from Rivers

The Site is shown to be mostly at very low risk of flooding from rivers, as shown in Figure 55. 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 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 56. 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 53.

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 water-bodies 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 54. A high-level assessment of the risk of flooding from reservoirs has therefore been undertaken and is included in Appendix A.

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.

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 waste water and the drainage strategy respond to this. Downstream surface and ground water, other water resources and affect on flood risk from development will need to be assessed.

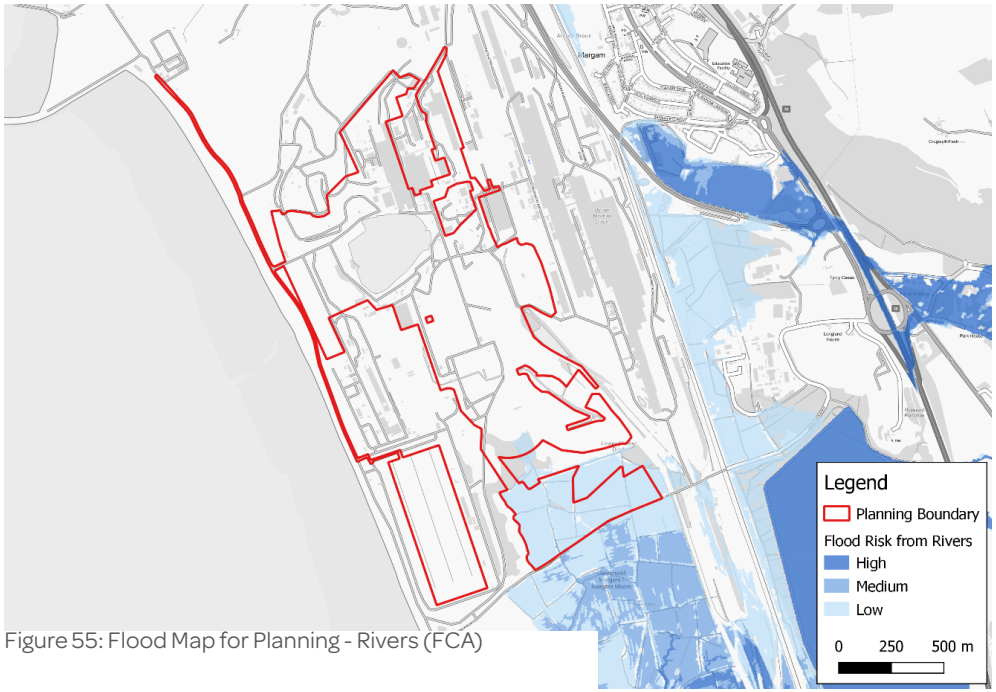


Figure 55: Flood Map for Planning - Rivers (FCA)

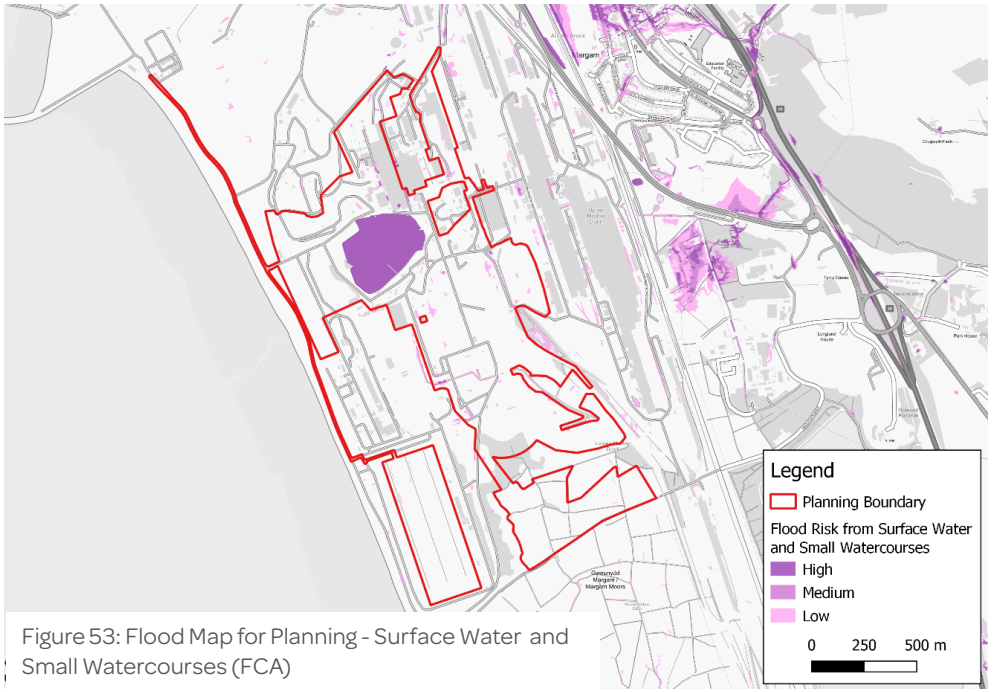


Figure 53: Flood Map for Planning - Surface Water and Small Watercourses (FCA)

Figure 56: Flood Map for Planning - Sea (FCA)

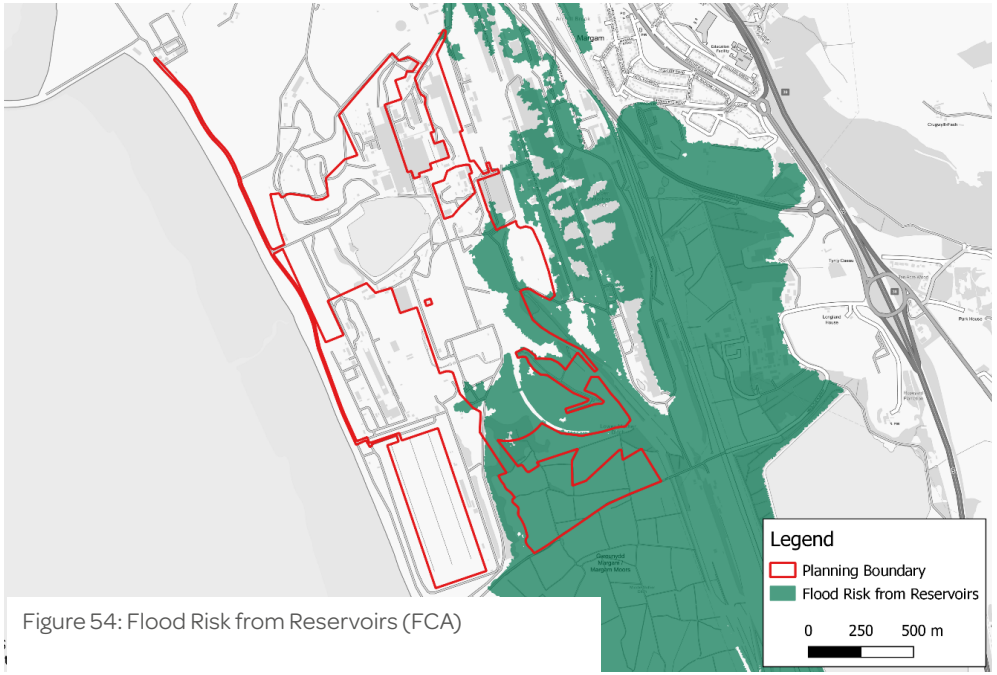


Figure 54: Flood Risk from Reservoirs (FCA)

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.

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.

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.

Design Considerations

Given the large extent of the Site there are plenty of 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.

Figure 57: Phase 1 Habitats Map

Heritage & Archaeology

The Site

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 (WGl/MGl) 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 planned for retention and relocation (if required).

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
- Theodrics Grange (20041) is a ruined Medieval building which formed part of a monastic grange, possibly of a domestic function.

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 archaeological investigation.

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 this DBA are fully preserved in situ.

Figure 59: Henbiniwn Grange, located outside the Site boundary to the east

Figure 58: Morfa Colliery memorial

Constraints & Opportunities Summary

A number of spatial constraints and technical considerations have been identified which will need to the 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 operation phase will had 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 polluted and treated as waste water 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.

Noise

Construction and operational noise and vibration will need to be considered in the proposals.

Air Quality

This proposal equates to the decarbonisation of steel production and contributing to the Welsh and UK's ambitions for Net Zero. In addition, local air quality effects are important in both construction and operational phases to not adversely impact the amenity and health of nearby residents, workers and visitors.

Landscape & Ecology

Development may affect a number of different view points 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. It is also recommended that, wherever feasible, the proposed development is designed such that the known archaeological remains identified within the site by this DBA are fully preserved in situ.

Figure 60: Site Constraints Plan

04

The Proposals

The Tata Steel Design Commitment

Tata Steel is committed to positively impacting the communities in which it operates and respecting the environment. Tata Steel has its own internal standards for building design. As well as award-winning sustainability, Tata Steel has adopted modern and attractive design concepts and finishes. Tata Steel is committed to high-quality, sustainable design, and is committed to continuing that legacy through the proposed development.

Overview of Proposals

Design Evolution

The design of the EAF has been primarily driven by functional and operational requirements. This has informed the size, location and appearance of much of the design proposal, with little room for design flexibility.

Pre-application discussions and pre-application discussions with NPT and NRW led to the evolution of the development. The extent and nature of the approach to green infrastructure as an integral element in the design process is agreed with both NPT and NRW. This has maximised the opportunities to include soft and hard landscaped design features as part of the development. Ecology, drainage and landscape inputs from NPT and NRW have added significant value to the scheme. Similarly, technical evidence on noise and air quality has informed the scope for mitigation measures to be designed into the Proposed Development from the outset of the planning process.

The positive influence of the pre-application discussions on the scope of the application submission and design of the Proposed Development accords with planning policy and best practice.

Design Approach

The proposed site layout and appearance reflect the industrial nature of the Proposed Development. The proposals have been informed by technical, design, planning, operational and safety requirements, including:

- Proximity and connectivity required to accommodate interacting stages of the EAF technology and process
- Accessibility, including to the private road network and public highway
- Engineering and operational efficiencies
- Safe movement and operation around the site
- Reducing heights to respond to amenity, visual impact and environmental health considerations
- Amending technical designs to improve operation and respond to corresponding planning considerations, such as noise generation
- A material palette that utilises muted and matt colours on equipment.

The reflection of these considerations in the final layout ensures a functional and efficient use of the site. Tata Steel and the consultant team have worked closely with NPT to develop a comprehensive scheme that balances design with the overall function of the facility.

Description of Development

This application seeks planning permission for the following:

"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, drainage 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."

The Proposed Development will require the demolition of existing buildings and structures, and the construction of a new EAF steel production facility. The proposal also includes a scrap metal handling facility and associated scrap yards, slag processing facility, chemical and material storage structures, buildings, handling systems, electrical control rooms and power infrastructure, laboratories, offices and ancillary facilities, together with new and amended transport infrastructure, landscaping and associated development.

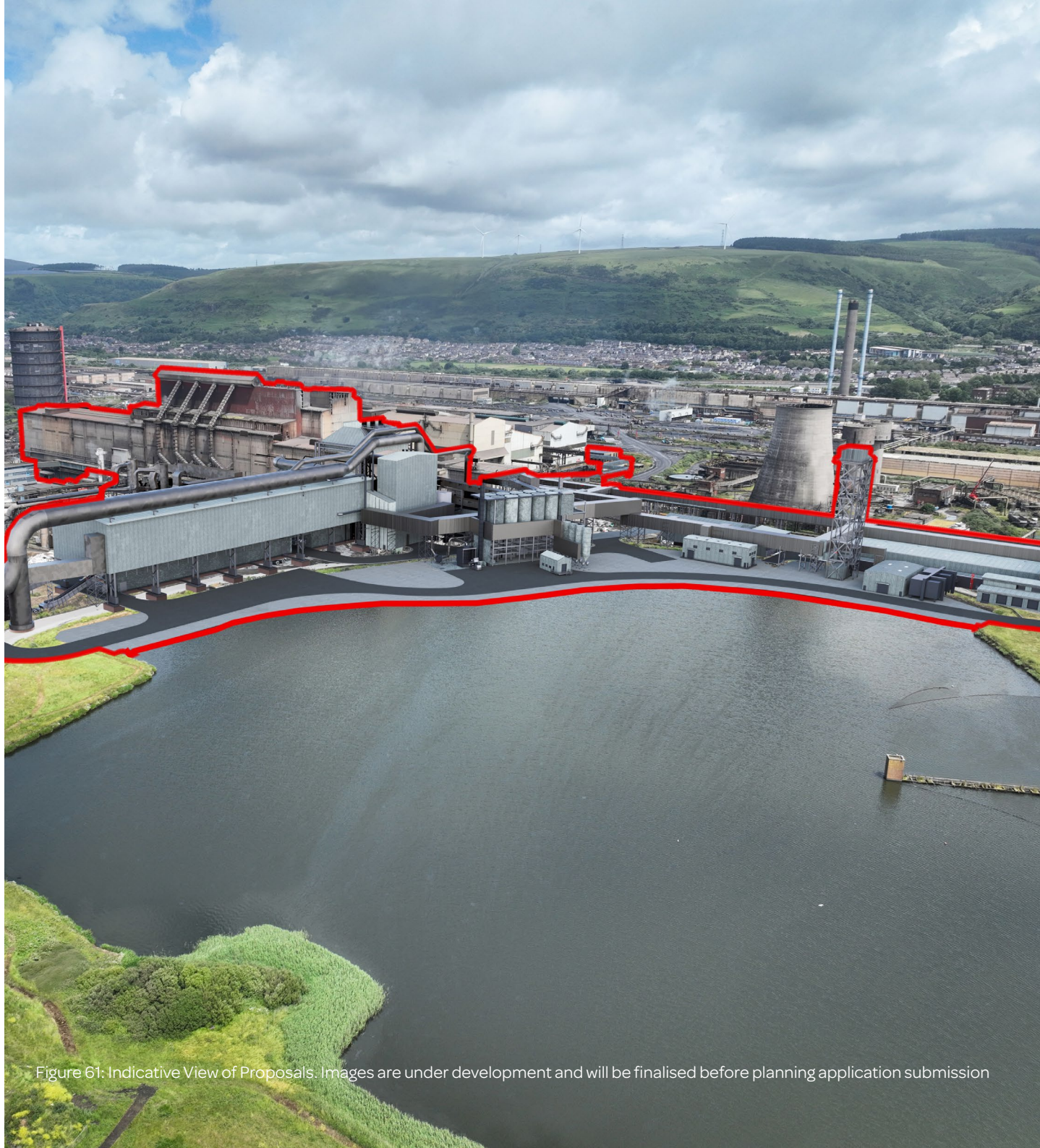


Figure 61: Indicative View of Proposals. Images are under development and will be finalised before planning application submission

Description of Process

The process diagram opposite (Figure 62) captures the essential elements of the proposed EAF steel making facility and how it will operate at Port Talbot. Each of the elements include new built development required to integrate the facility into the existing infrastructure at the steelworks.

Raw Materials

The main raw materials for the proposed EAF process will primarily be transported on to site via the existing rail network. The HBI and pig iron storage area is located to the south of the proposed development and will comprise a new concrete pad for temporary storage of these materials directly offloaded from freight trains. HBI will be transported to the HBI bunker and pig iron to the shredded scrap yard.

Production of Steel

The development will be served by a new / extended internal road network. This will comprise a combination of works to existing roads (including widening) and the creation of new roads that will facilitate the movement of super heavy vehicles from the scrap handling areas to the EAF. The scrap metal will be moved to the shredded scrap yard for temporary storage before it is 'charged' on to the Consteel Conveyor. This process will be operated from a control room. Once heated, the scrap is charged into the EAF. The EAF is to be located within the existing BOS building, which will be extended and repurposed to accommodate electric steel making.

Waste Production

There will be two major waste streams from the steel making process: EAF dust (also known as red dust) and EAF slag.

EAF dust is a mix of three extracted dusts generated as part of the process. Primary dust is generated directly from the EAF and is captured by a hood and will be transferred into the ducting above the plant and into the Fume Extraction Plant (FEP). Fugitive dusts, often called secondary dust, within the BOS building will be extracted via a canopy located in the roof of the BOS plant.

Electrical Distribution

The proposed EAF facility will be supported by a series of electrical upgrades undertaken by National Grid (NG) at Port Talbot. This includes an upgrade to the Margam Substation and the construction of a new electrical infrastructure at the steelworks site. To connect these, NG will install electrical cables between Margam and Port Talbot. These upgrades are essential for the operation of the EAF, though the Margam Substation upgrade is also required for other local projects. Tata Steel's planning application includes the Port Talbot electrical infrastructure works, all of which will occur on land owned by Tata Steel. While NG is responsible for obtaining permissions for the Margam Substation and external cabling, these elements will be assessed cumulatively as part of the environmental impact assessment (EIA) for the EAF facility.

Figure 62: Process Diagram

Demolition Works

To accomodate the new EAF facility, demolition / deconstruction of the existing structures will be required. The buildings and structures to be demolished are shown on plan EAF-LAW-X-X-DR-A-040001_P02 (Figure 63). Images of the buildings and structures to be demolished are shown across the following pages.

KEY

- Site Boundary
- Wider Tata Ownership
- Existing Buildings
- Existing Roads
- Existing Buildings & Structures to be Demolished

- Scrap Storage Shed (1A)
- Existing Pump House (1B)
- Harsco Baler Plant (1C)
- Weigh Bridge (1D)
- Harsco Frag Plant (1E)
- Electrical Room (1F)
- Mechanical/Electrical Workshop (1G)
- RH Penthouse (1H)
- RH Cooling Tower (1I)
- RH Pump House (1J)
- Slag Splashing Compound (1K)
- Storage Shed (1L)
- Coal Conveyor Superstructure (1N)
- Inlet Structure (1O)
- BF Gas Pipe Rack (Partially Removed) (1P)
- Existing Compressor House With MCC Room (1Q)
- Concrete Abutments (1R)

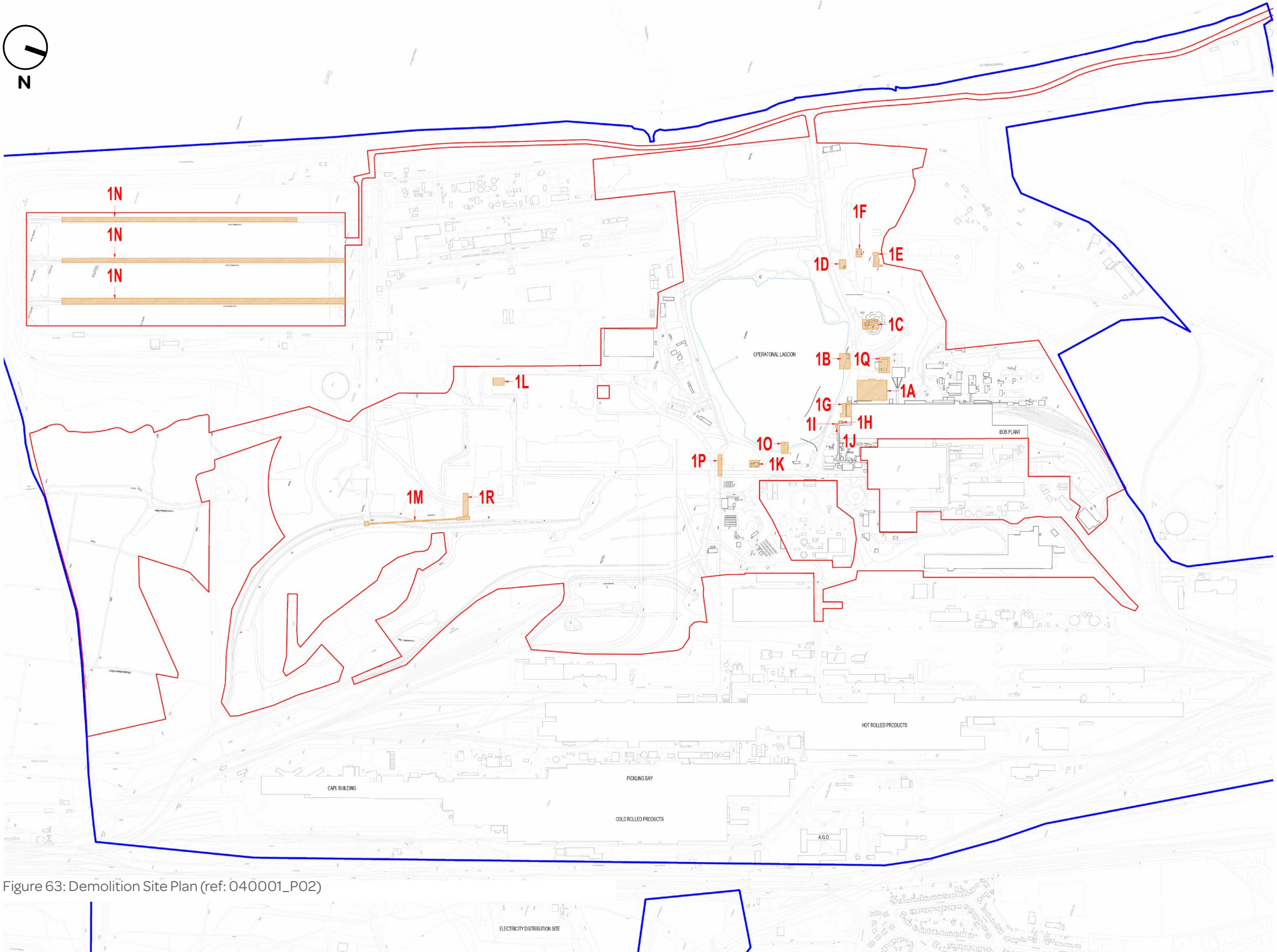


Figure 63: Demolition Site Plan (ref: 040001_P02)

1A Scrap Storage Shed

1D Weigh Bridge

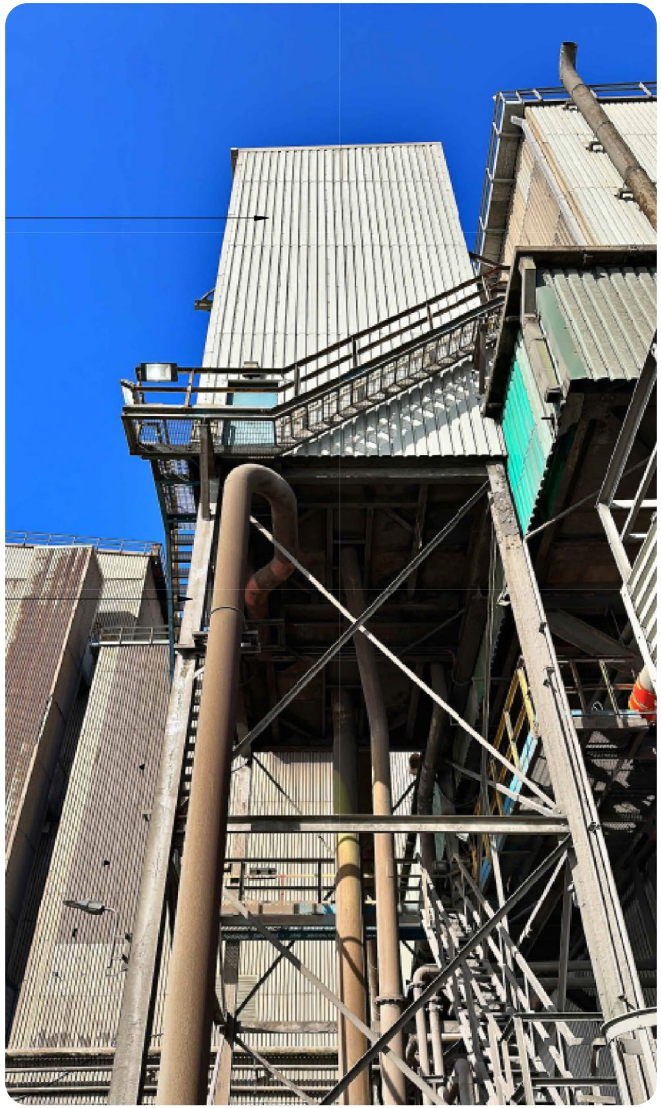
1B Existing Pump House

1E Harsco Frag Plant

1C Harsco Baler Plant

1F Electrical Room

1H RH Penthouse



1I RH Cooling Tower

1J RH Pump House

1L Storage Shed

1N Coal Conveyor Superstructure

1K Slag Splashing Compound

1P BF Gas Pipe Rack (Partially Removed)

1Q Existing Compressor House With MCC Room

1O Inlet Structure

1Q Concrete Abutments

Site Layout - Full Application

Development Summary

The site layout is reflective of the industrial nature of the Proposed Development. It has been informed by technical, design, planning, operational and safety requirements, including but not limited to:

- Proximity and connectivity required to accommodate interacting stages of the Tata Steel EAF technology and process.
- Accessibility, including to the private road network and public highway.
- Engineering and operational efficiencies.
- Safe movement and operation around the Site.
- Reducing heights to respond to amenity, visual impact and environmental health considerations.
- Amending technical designs to improve operation and respond to corresponding planning considerations, such as noise generation.
- A material palette that utilises muted and matte colours on equipment.

The reflection of these considerations in the final layout ensures a functional and efficient use of the site. Tata Steel and the consultant team have worked closely with NPT to develop a comprehensive scheme that balances design with the overall function of the facility.

Construction Staff

A new office building will be constructed on the eastern side of the BOS plant to house construction staff and, eventually, operators of the EAF facility. There will be a new car parking facility that will allow workers to arrive at the site, change into their work wear, before using an extended covered walkway to enter directly into the main construction area.

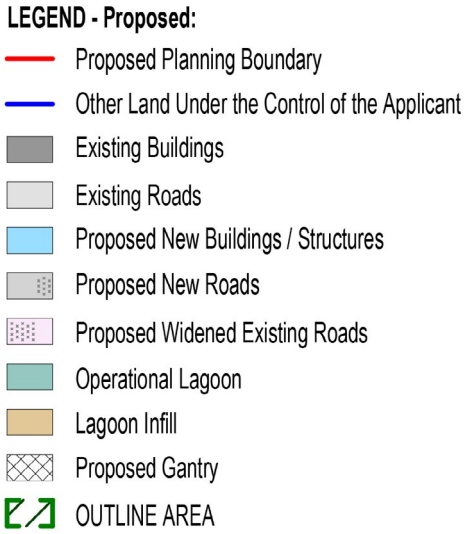
Full Planning Element

The development forming part of the full planning application is detailed in Table 1.

- Alterations to existing basic oxygen steel making and secondary refining building
- Water cooling systems and water treatment plant (including emergency backup power up systems and diesel generator rooms)
- Fume and dust extraction systems with stacks
- Lime handling facility
- Slag processing facility
- Storage areas/buildings with material handling system
- Ancillary plant equipment and pipework
- Electrical control rooms with cable carrier systems
- Preparation and storage areas
- Compressor rooms
- Offices and ancillary facilities
- Partial infill of the BOS lagoon
- New access roads with gates and parking areas
- New and amended rail track and associated infrastructure
- Landscaping and green infrastructure
- Firefighting pump house
- Oxygen and argon vessels
- Upgraded laboratories

Table 1: Detailed Development Specification

Built Development	Dimensions (m)			SL No. Reference on Reference Layout
	Length	Width	Height	
Canopy Hood	31.5	34.9	57.88	1
Consteel Conveyor	148.6	41.6	33.88	2
Fume Treatment Plant (FTP)	**37**	40.2	70	3
Shredded Scrap Yard	N/A	N/A	N/A	4
Hot Briquetted Iron Dolo & Lime Bunker	45.6	11.5	42.54	5
Ferro Alloys Bunker	34.6	14.3	33.99	6
Fire water pumphouse	25	27	9	7
Primary Pumphouse	28.9	80	10.32	8
Secondary Pumphouse	29.2	77.6	22.19	9
Main Power Centre	46.95	24.65	10.64	21
Power Compensation Building	77.1	59.5	12.99	22
Melt Shop Power Distribution Building	27.3	55.1	12.45	10
Meltshop WTP Electrical Building	23.25	36.65	9.29	11
Meltshop FEP Electrical Building	46.7	16.45	10.09	12
Compressor House	15.85	20.6	14.69	13
Car parking area			N/A	14
Changing and office block building	24.8	83.4	7.34	15
Emergency Tank	13.5	11.65	54.33	16
Lagoon Water Pump House	10.5	31	9.78	17
Green Walkway Extension	172.65	87.55	11.84	18
HBI & Pig Iron Storage Area			N/A	30
Active Carbon Injection Silos	8.5	3.8	13.37	19
Power Silos	25.05	18.55	19.68	20
Charger Bay South Extension	34.95	14.65	43.34	31
HBI Electrical Building	8.1	16.8	7.81	32



Canopy Hood 01

Consteel Conveyor 02

Fume Treatment Plant (FTP) 03

Shredded Scrap Yard 04

Hot Briquetted Iron (HBI) Dolo & Lime Bunker 05

Ferro Alloys Bunker 06

Fire Water Pump House 07

Primary Pump House 08

Secondary Pump House 09

Melt Shop Power Distribution Building 10

Melt Shop WTP Electrical Building 11

Melt Shop FTP Electrical Building 12

Compressor House 13

Car Parking Area 14

Changing and Office Block 15

Emergency Tank 16

Lagoon Water Pump House 17

Green Walkway Extension 18

Active Carbon Injection Silos 19

Powder Silos 20

Main Power Centre 21

Power Compensation Building 22

HBI & Pig Iron Storage Area 30

Charging Bay South Extension 31

HBI Electrical Building 32

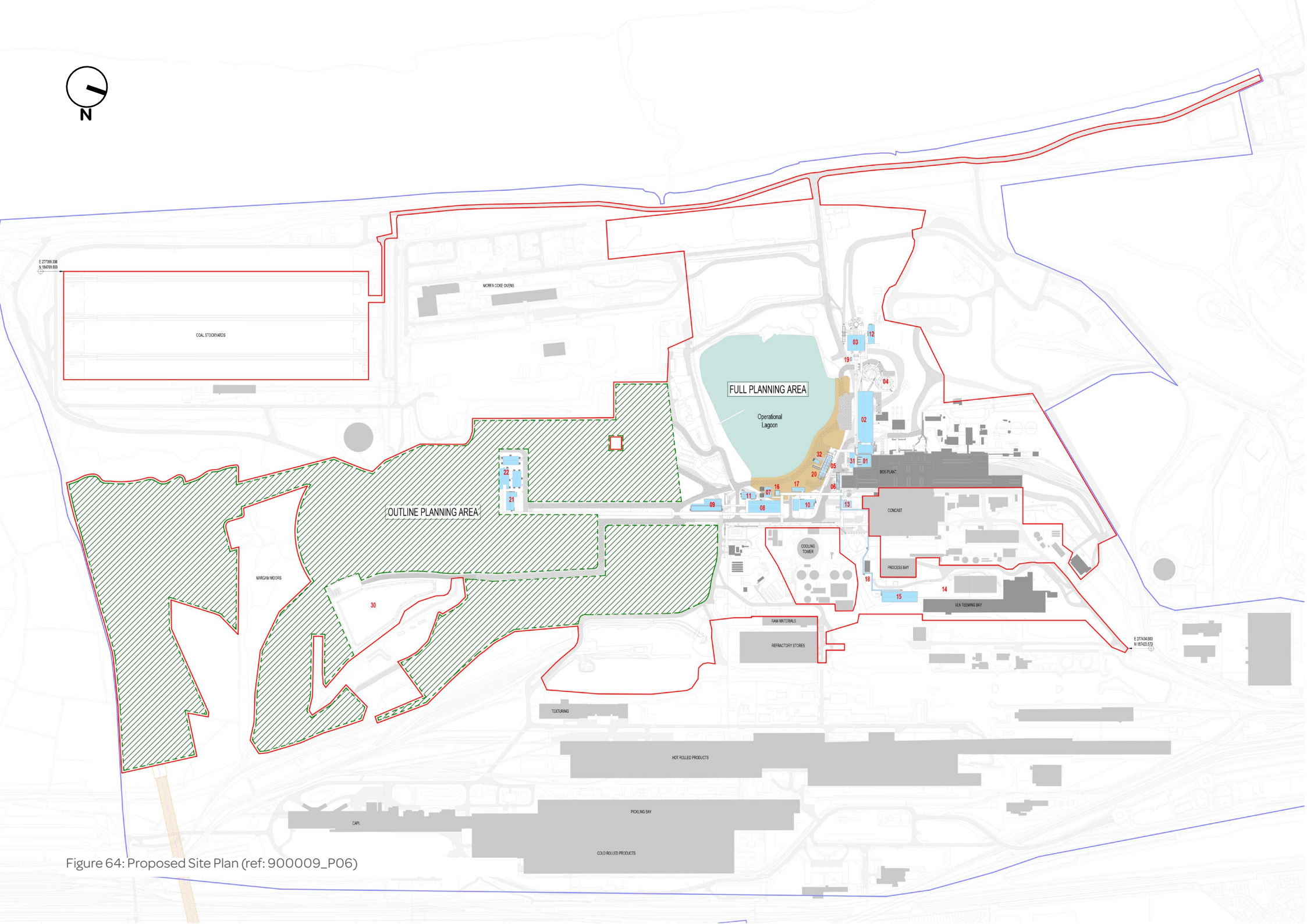


Figure 64: Proposed Site Plan (ref: 900009_P06)

Temporary Construction Areas

The Proposed Development will require land to serve as temporary construction 'laydown' areas.

The extent, nature and use of the proposed temporary construction areas will be determined once the final detailed engineering design has been completed, and the appointed contractor has developed a detailed CEMP and associated construction compound plans. This will include the detail of any methods for deconstruction required within the red line.

The full extent of proposed temporary construction areas has been included for planning and EIA purposes to inform a robust assessment of any associated impacts and effects. The areas provide accessible construction laydown, compound, storage and staff facilities for the duration of the construction period.

It is anticipated that the temporary construction areas will be used in the following ways:

- An area to house the main principal contractor compound and associated amenities / welfare facilities.
- Car parking.
- Material delivery, drop off and storage.

Refer to Landscape Architect drawings for Landscaping information

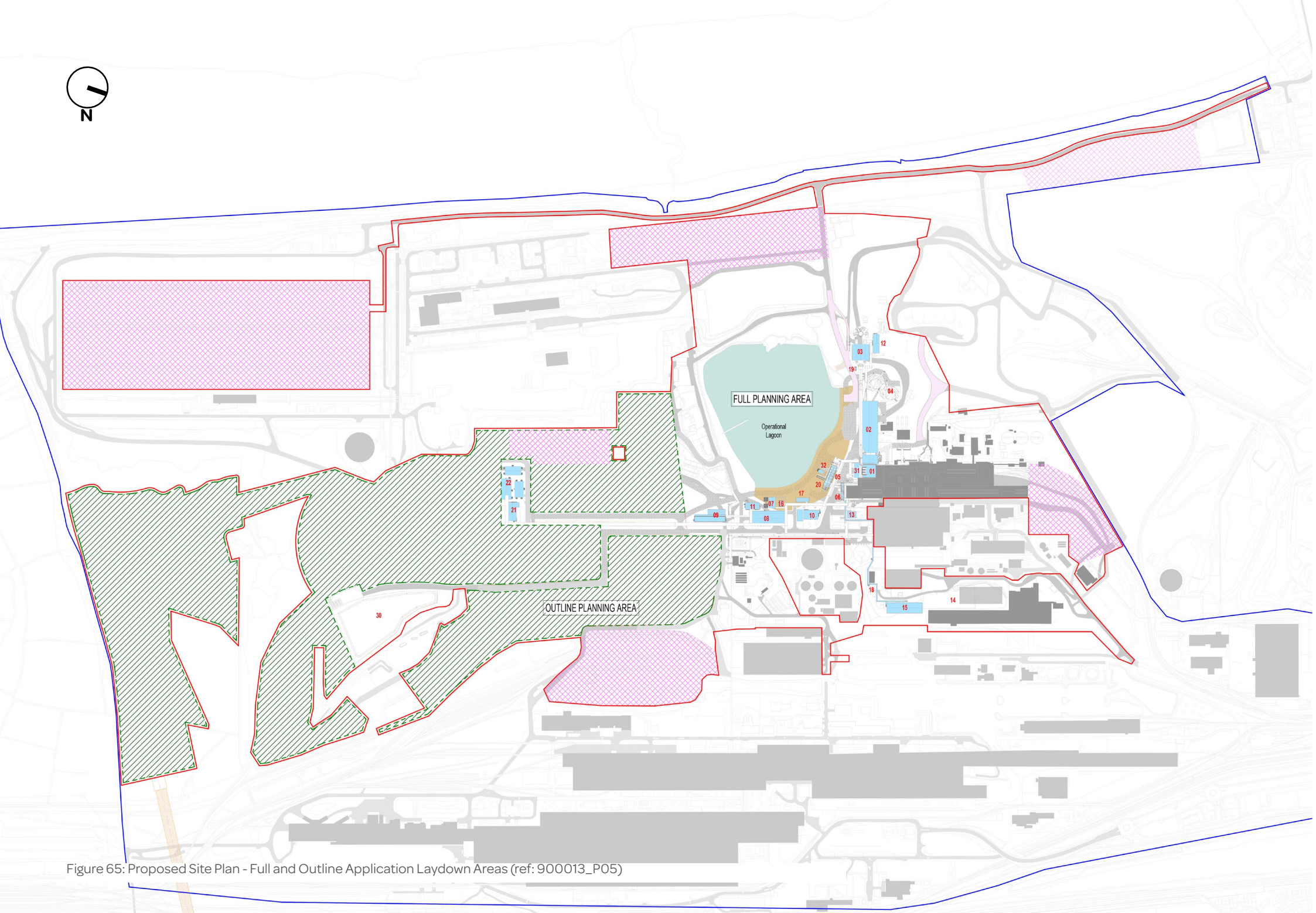


Figure 65: Proposed Site Plan - Full and Outline Application Laydown Areas (ref: 900013_P05)

Site Layout - Outline Application

Outline Planning Element

The maximum and minimum parameters of the outline planning elements of the scheme are defined in the Parameter Plan (ref. 900200). Heights will vary across the outline element of the scheme, up to a maximum of 20m.

Scrap metal will be brought onto site by one or two (possibly in combination) options as set out in the Planning Statement. Depending on which option is progressed, a phased approach may be required to developing the scrap area: Phase 1 and Phase 2. These Phases are likely to include the following works:

Phase 1

- Rail receipt facilities for weighing, inspecting and unloading trains.
- Scrap bays for segregation and storage of scrap.
- Road network to provide access around scrap yard facility.
- Relocation of existing Harsco Shredder to new scrap yard for processing internal scrap arisings.
- Installation of a shear to process internal arisings.
- Office and amenity provision for scrap yard workers.
- Dedicated scrap overflow yard.
- Scrap lorry unloading area.
- Associated mobile equipment for scrap handling.

Phase 2

- Shredder and associated plant for production of high-quality shredded scrap
- Non-ferrous processing plant for processing waste generated by the shredder.

Indicative layout plans are included in the submission to demonstrate the potential layout of Phase 1 and Phase 2. The Outline Development Parameters are based on Phase 2, which features the most development.

Table 2: Outline Development Parameters

Built Development	Dimensions (m)			SL No. Reference on Reference Layout
	Length	Width	Height	
National Grid Compound	200	100	15	23
Incoming Scrap Yard Electrical Building	35	25	15	24
Office	**40**	20	8	
Car Park	**25**	25	0	
Disabled Car Park	**3.6**	1.5	0	
Workshop	**70**	25	8	
Incoming Scrap Yard Electrical Building	**30.2**	20	11.7	
Scrap Storage	**Varies**	Varies	7	
Shear	**58.7**	53	19.5	25
Pre-Shredded Feed Stock Pile	**25**	20	6	
Pre-Shredder	**12**	11.3	9	
Shredder Feed Stock Pile	**62**	32	9	
Shredder (Block 01 – Infeed Conveyor)	**30**	10	10	
Shredder (Block 02 – Hammer Mill)	**40**	40	20	
Shredder (Block 03 – Air Separation)	**25**	125	20	
Shredder (Block 04 – Pickling & Stacker)	**60**	125	20	
Acoustic Mitigation Barrier	**800**	5	15	
Lorry Tipping Area	**150**	50	7	
HARSCO Shredder	**50**	50	7	
Shear	**58.7**	53	7	26
Overflow Scrap Bay 01	**50**	100	7	
Overflow Scrap Bay 02	**80**	68	7	
Existing Repurposed Building	**115**	65	15	
Non Ferrous Processing Area	**67**	125	13	27
Scanning Facilities	**15**	15	15	28
Railway Weigh Bridge	**15**	15	15	29

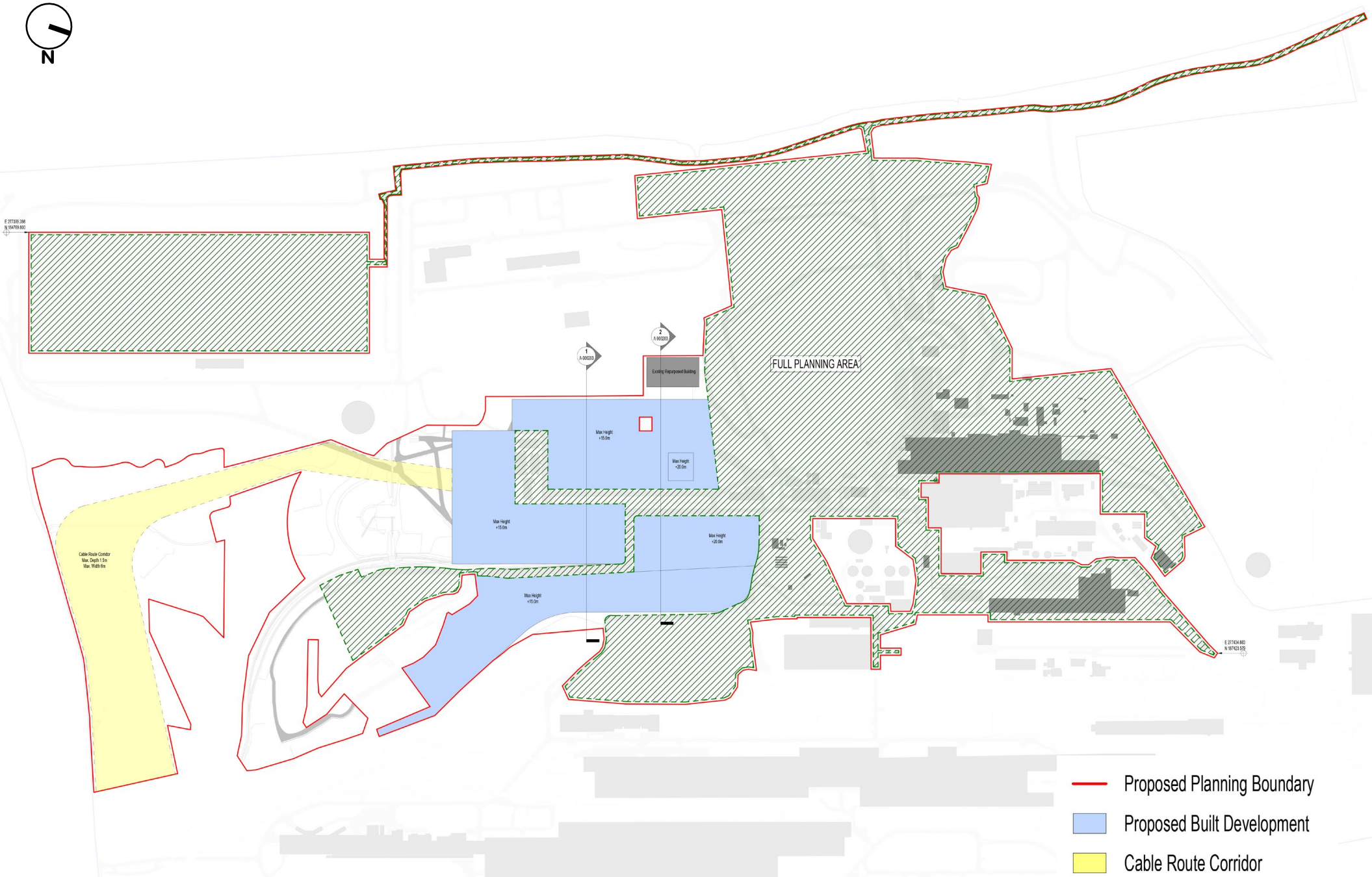


Figure 66: Parameter Plan - Build Zones and Max Heights (ref: 900200_P03)

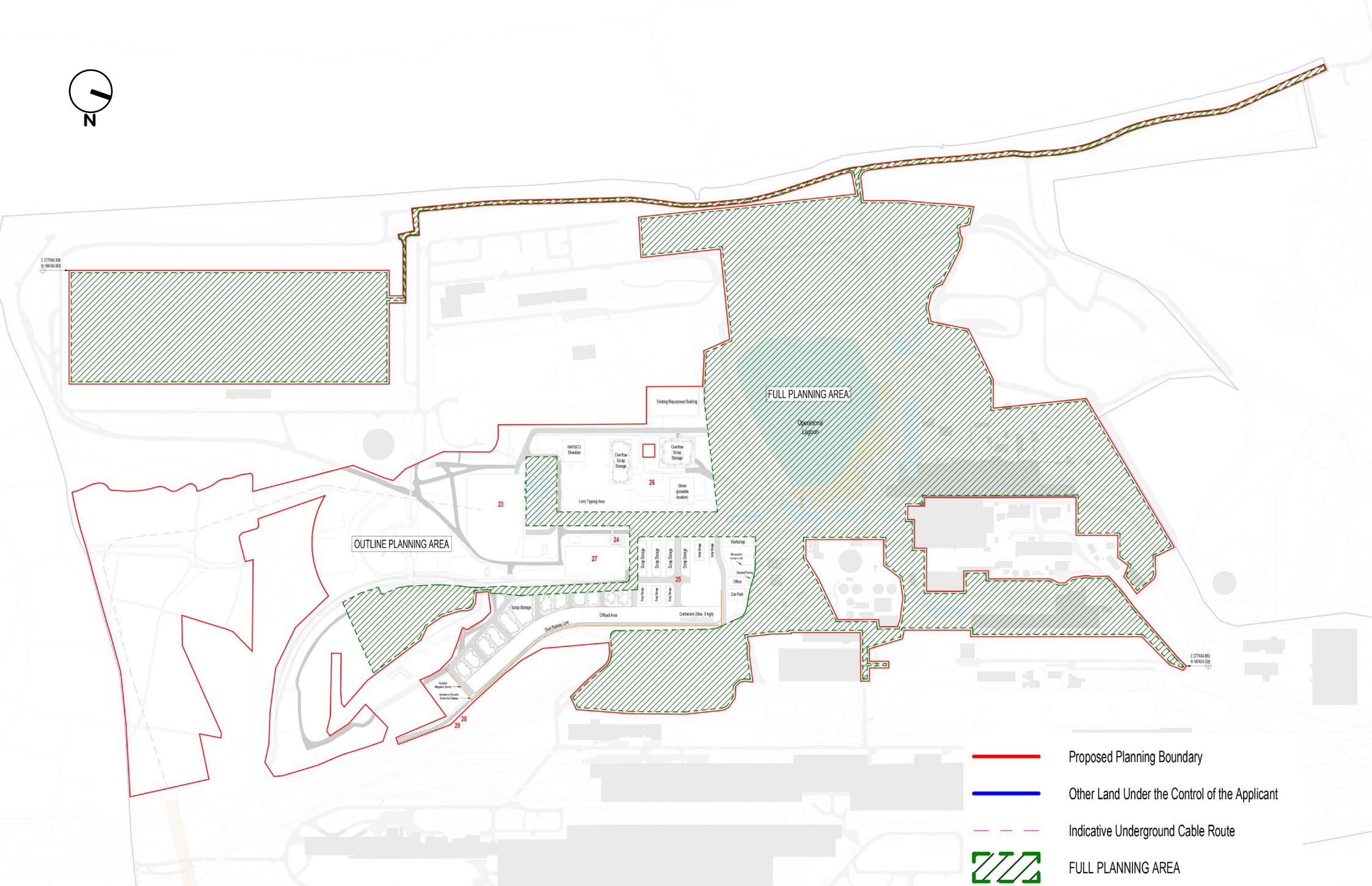


Figure 67: Proposed Site Plan - Indicative Outline Plan - Phase 1 (ref: 900010A_P05)

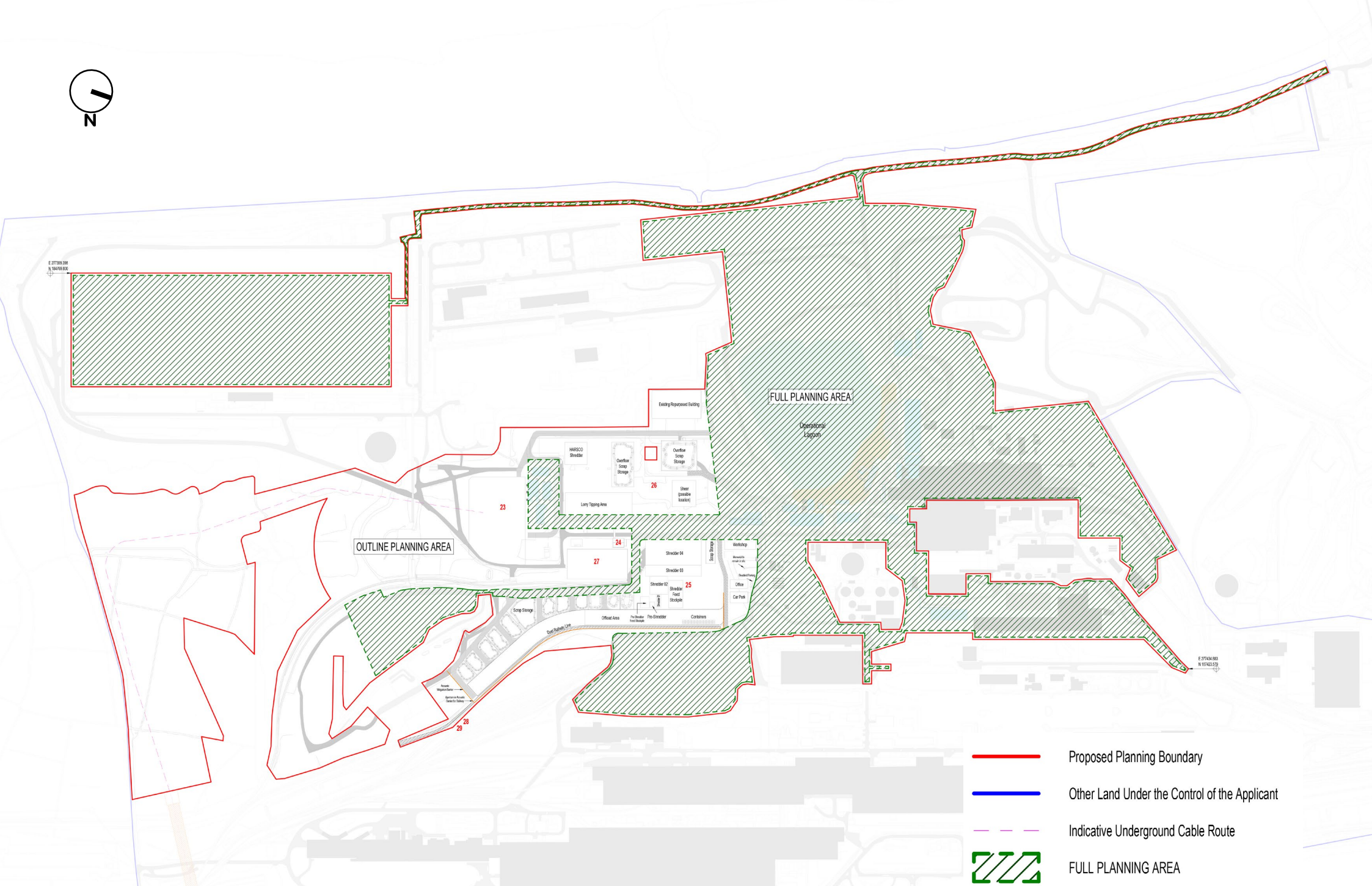


Figure 68: Proposed Site Plan - Indicative Outline Plan - Phase 2 (ref: 900010_P05)

Access

Proposed Site Access

The Site will be accessed predominantly via the existing Main Gate site access off the A4241 Harbour Way. The West Gate site access off the A4241 Harbour Way may also be used occasionally for larger plant / specialist deliveries etc.

Both access points provide significant queueing capacity between the gate house and the local highway network. The barrier security system at the gate house monitors arrivals / departures and allows quick touch-card access to the Site for registered staff / frequent visitors.

All construction workers will be registered as a frequent visitor and provided with a pass allowing for quick touch-card access through the barrier.

The existing internal road network which is currently used by frequent two-way HGVs will continue to be utilised. Within the Site, access will be facilitated by works to the existing road network and the creation of new roads. All proposed new roads, widened roads, service yards and turning areas have been designed based on swept path analysis and to meet Tata Steel's requirements and relevant standards.

Pedestrian / cycle access to the development site will continue to be provided via the existing Main Gate Access off the A4241 Harbour Way.

Parking

New parking provision will be provided as follows:

- East of the BOS Plant – the proposed car park will provide a total of 180 spaces, including 9 disabled bays and 10% EV bays, and has been designed with 6m aisle widths throughout the car park.
- Construction Compound – accommodating 395 spaces, although a further car park will be created to the south if demand dictates, providing up to 1,160 spaces.

Collectively, up to 1,340 parking spaces will be provided as part of the proposed development, which is in excess of the number of construction workers. Therefore, the level of parking is more than sufficient to accommodate the demand of construction workers, particularly when considering the typically high proportion of construction workers that car share.

Summary

Overall, the Proposed Development accords with relevant local and national policy, including active travel considerations as applicable to an industrial site of this nature.

The Proposed Development, when fully operational, will result in a significant reduction in traffic movements (including HGV9s) when compared to that generated by the established site operations. This reduction in traffic will be associated with the reduction in staff required to operate the facility as well as the removal of coal deliveries; and scrap metal proposed to be delivered to/from the site by rail, as opposed to road in the current operations. There will be a significant overall betterment provided from a highway perspective during the operational phase of the development.

Figure 69: Existing Site Access

Scale, Massing & Appearance

Building Heights

The proposed building heights are set out in the following table and reflect the scale and massing of the existing steelworks.

Tata Number	Planning Number	Description	Full vs Outline	Width (mm)	Length (mm)	Height (mm)
1	1	Canopy Hood	Full	34,900	31,500	57,882
2						
3	2	Consteel Conveyor	Full	41,600	148,600	33,879
4	3	Fume Treatment Plant	Full	40,200	37,000	69,996
5	4	Shredded Scrap Yard	Full	N/A	N/A	N/A
6						
7	5	Hot Briquetted Iron Dolo & Lime Bunker	Full	11,500	45,600	42,541
8	6	Ferro Alloys Bunker	Full	14,300	34,600	33,991
9	7	Fire Water Pump House	Full	27,000	25,000	9,000
10	8	Primary Pump House	Full	80,000	28,900	10,324
11	9	Secondary Pump House	Full	77,600	29,200	22,182
12						
13	21	Main Power Centre	Full	24,650	46,950	10,642
14	22	Power Compensation Building	Full	59,500	77,100	12,993
15	23	National Grid Compound	Outline			N/A
16	10	Melt Shop Power Distribution Building	Full	55,100	27,300	12,449
17	24	Incoming Scrap Yard Electrical Buidling	Outline			N/A
18	11	Melt Shop WTP Electrical Building	Full	36,650	23,250	9,288
19	12	Melt Shop FEP Electrical Building	Full	16,450	46,700	10,086
20						
21						
22						
23						
24	13	Compressor House	Full	20,600	15,850	14,687
25	25	Scrap Storage & Processing Yard	Outline			N/A
26	26	Overflow Scrapyard	Outline			N/A
27	27	Non Ferrous Processing Area	Outline			N/A
28						
29	28	Scanning Facilities	Outline			N/A
30	29	Railway Weigh Bridge	Outline			N/A
31	14	Car Parking Area	Full			N/A
32	15	Changing & Office Block Building	Full	83,400	24,800	7,337
33	16	Emergency Tank	Full	11,650	13,500	54,330
34	17	Lagoon Water Pump House	Full	31,000	10,500	9,783
35						
36	18	Green Walkway Extension	Full	87,550	172,650	11,835
37	30	HBI & Pig Iron Storage Area	Full			N/A
38	19	Active Carbon Injection Silos	Full	3,800	8,500	13,370
39	20	Powder Silos	Full	18,550	25,050	19,675
41	31	Charger Bay South Extension	Full	14,650	34,950	43,338
	32	HBI Electrical Building	Full	16,800	8,100	7,807

Figure 70: Indicative View of Proposals. Images are under development and will be finalised before planning application submission

Figure 71: Indicative View of Proposals. Images are under development and will be finalised before planning application submission

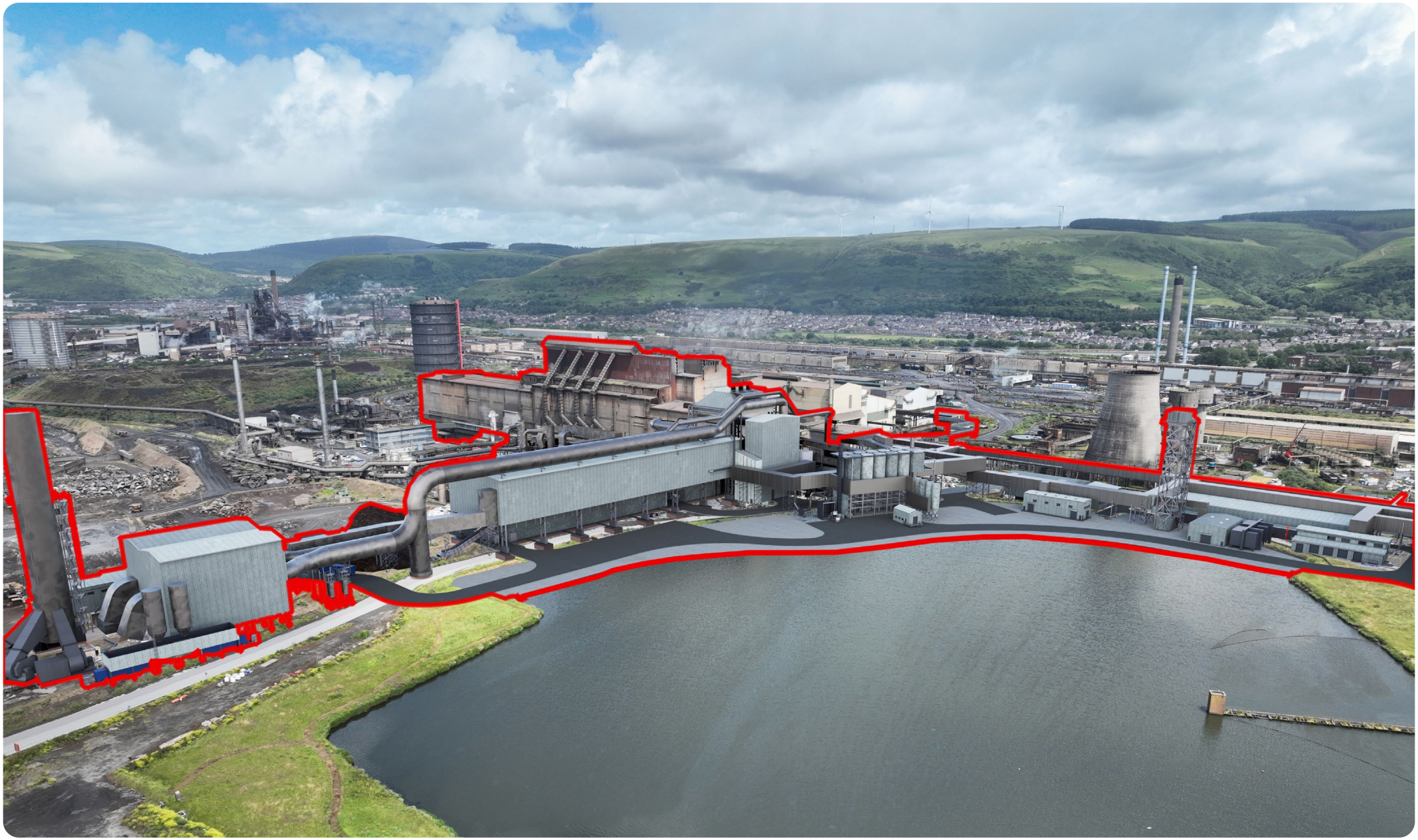


Figure 72: Indicative View of Proposals. Images are under development and will be finalised before planning application submission

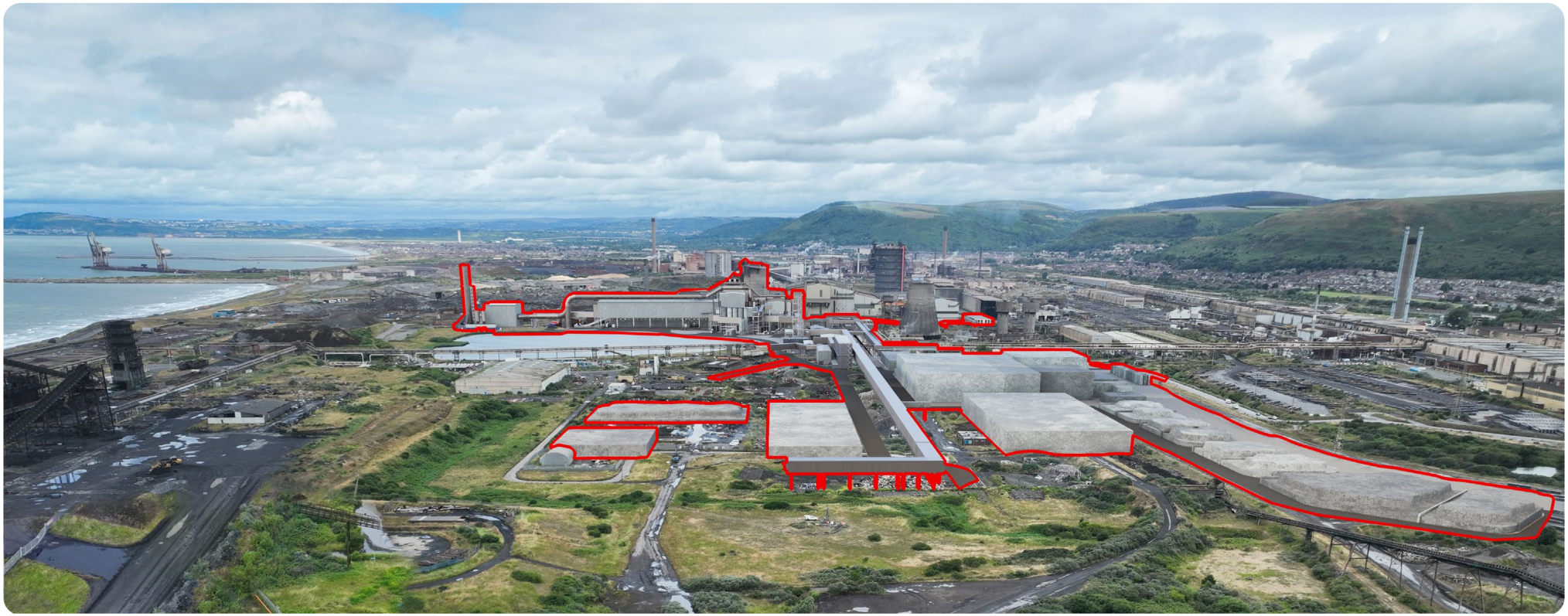


Figure 73: Indicative View of Proposals. Images are under development and will be finalised before planning application submission

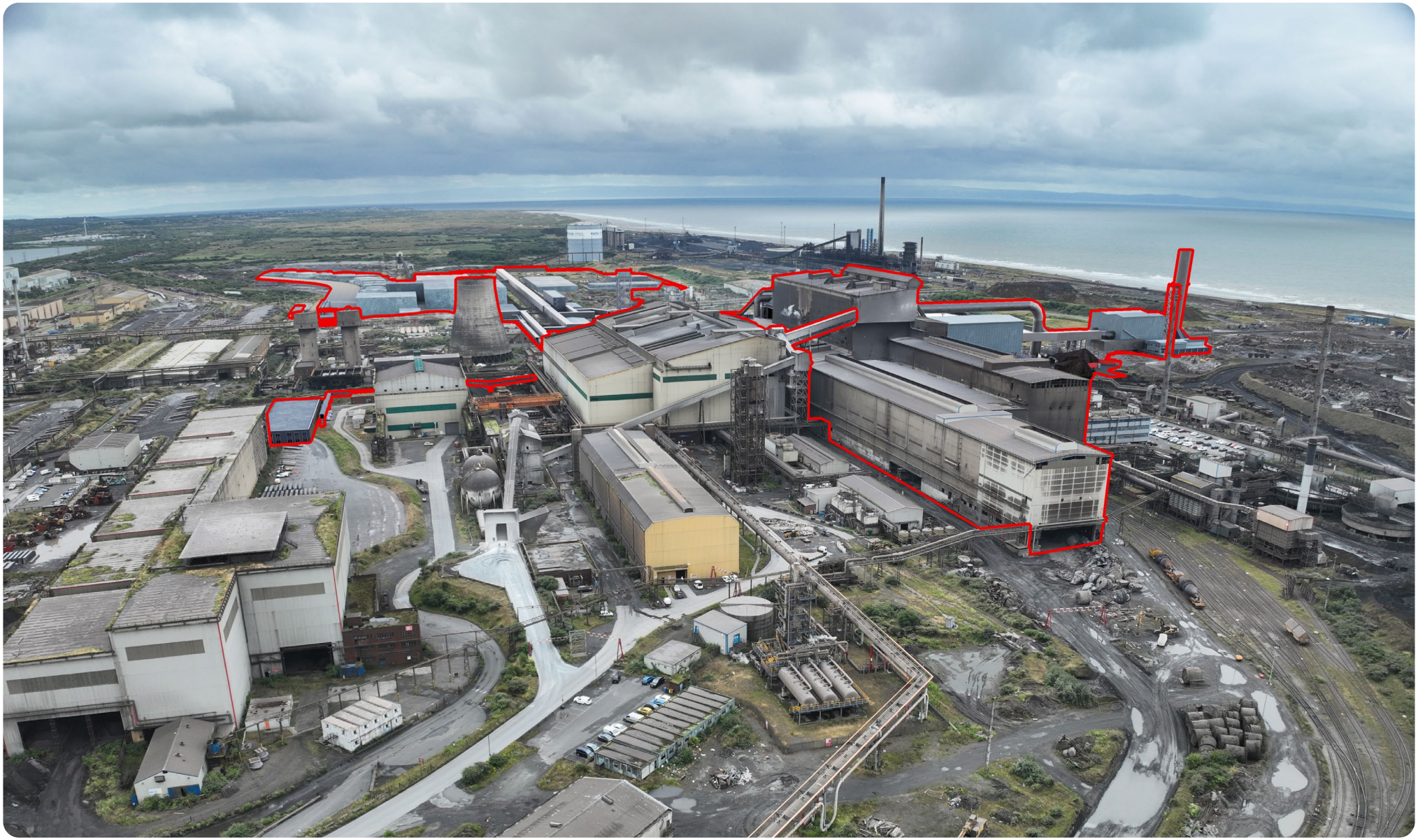
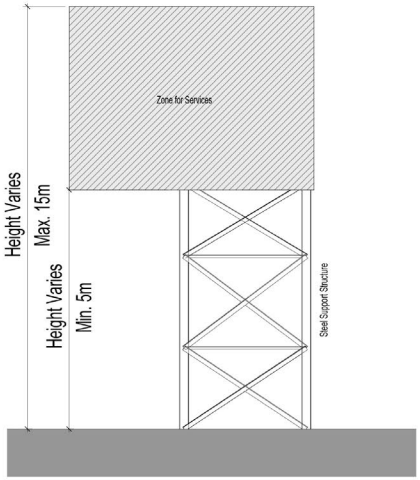
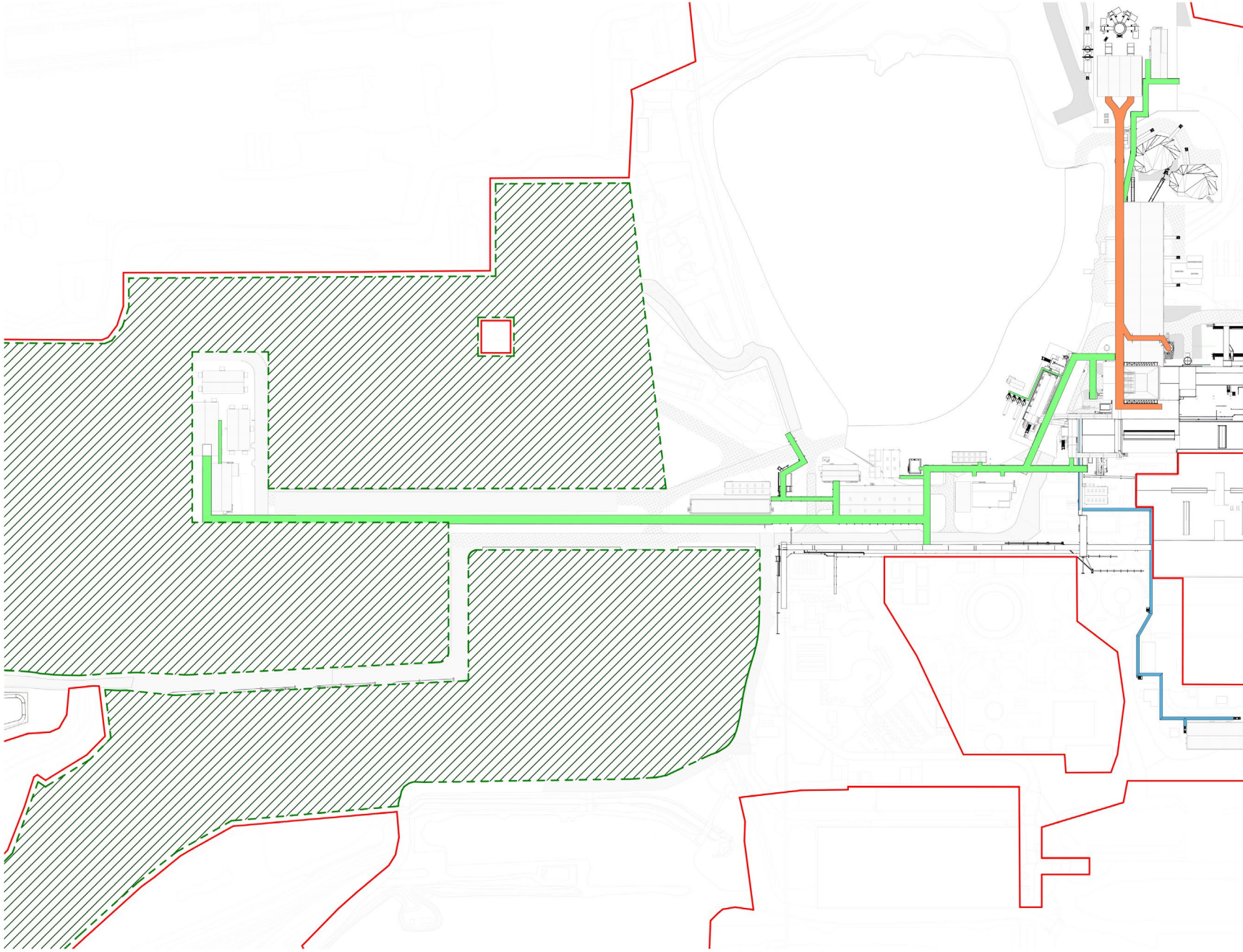


Figure 74: Indicative View of Proposals. Images are under development and will be finalised before planning application submission

Figure 75: Indicative View of Proposals. Images are under development and will be finalised before planning application submission



Elevated Service Route_Section
1 : 100



Elevated Service Route_Plan
1 : 2000

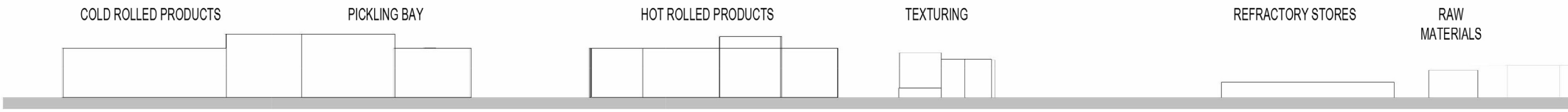
Elevated Service Route

Fume Duct *(refer to Unit 02 & 03)*

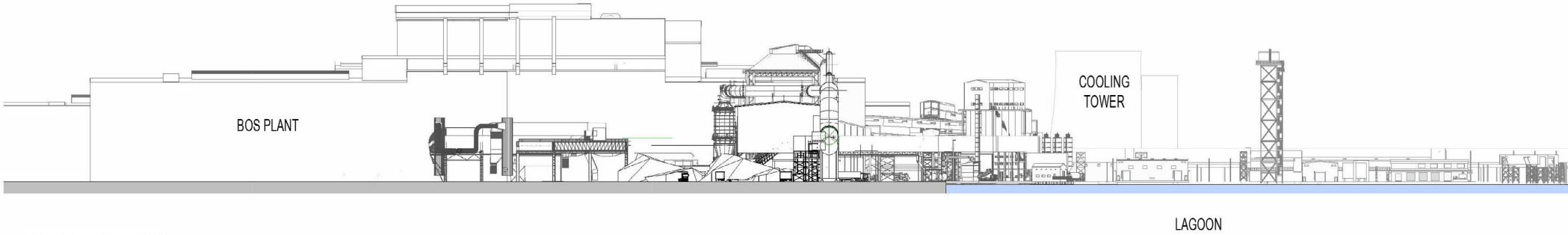
Unit 18 - Green Walkway Extension

Figure 76: Elevated Service Route (ref: 063200_P01)

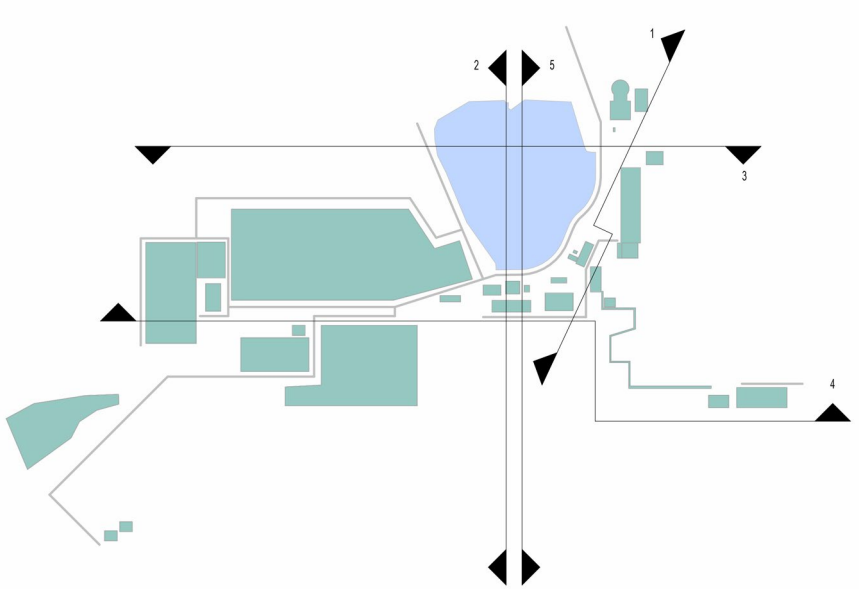
Site Section 01

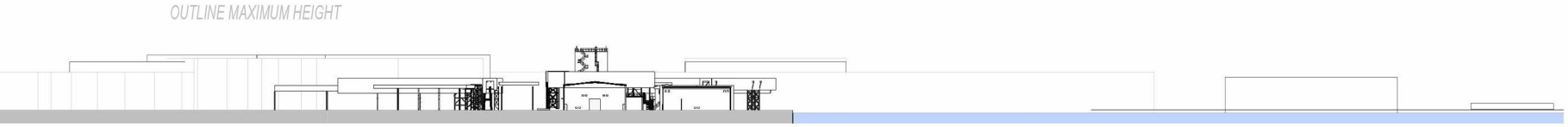


Site Section 02



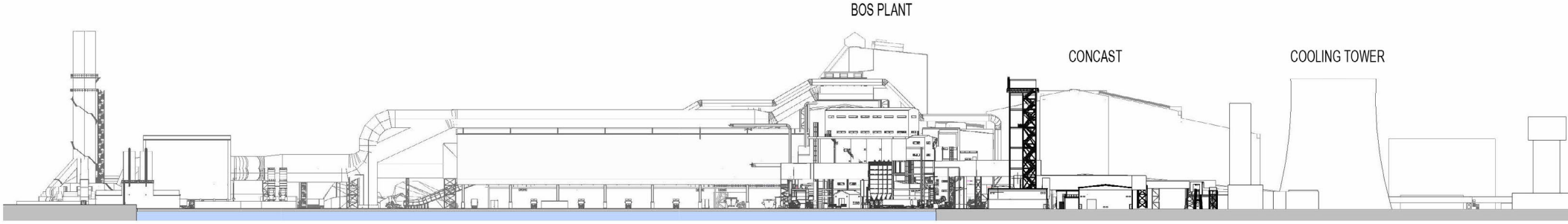
Site Section 03


1
2
5
3
4

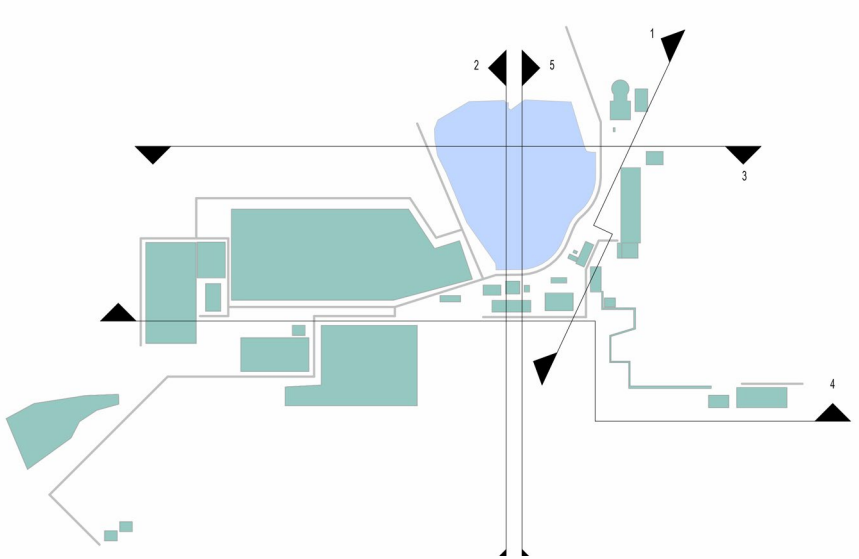

OUTLINE MAXIMUM HEIGHT
LAGOON

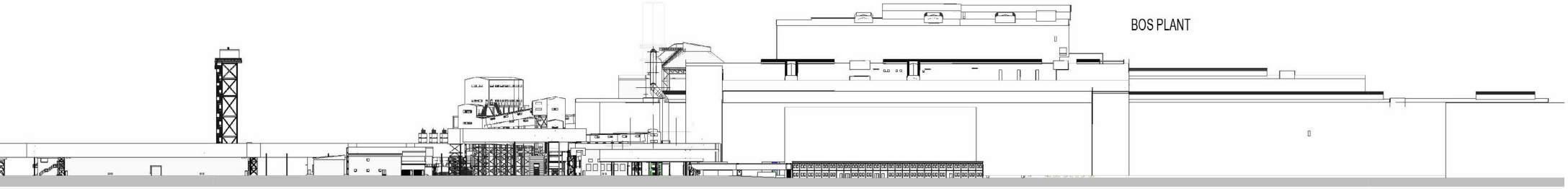

OUTLINE MAXIMUM HEIGHT

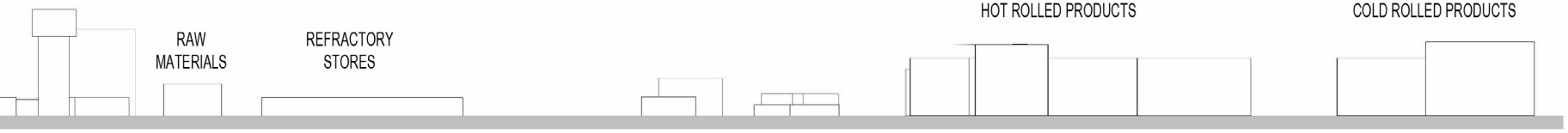
Site Section 04



Site Section 05


1
2
5
3
4


BOS PLANT


RAW
MATERIALS
REFRACTORY
STORES
HOT ROLLED PRODUCTS
COLD ROLLED PRODUCTS

Materials

The proposed building materials are set out in the following table and reflects the appearance of the existing steelworks.

The materials palettes for the industrial process area are operationally led and reflective of the surrounding existing steelworks. These include metal, galvanised steel and silo materials.

The material for all the units is set to be Tata Steel's Trisomet cladding to walls and roofs, all to be Colorcoat HPS200 Ultra Goosewing Grey (RAL 7038), with the exception of Unit 15 (Office & Changing block).

Tata Number	Planning Number	Description	Full vs Outline	*Materiality* Walls	Roofs	Fenestration	External Railings & Stairs
1	1	Canopy Hood	Full	Metal Cladding - Goosewing Grey	Metal Cladding - Goosewing Grey	PPC - Goosewing Grey	Galvanised
2							
3	2	Consteel Conveyor	Full	Metal Cladding - Goosewing Grey	Metal Cladding - Goosewing Grey	PPC - Goosewing Grey	Galvanised
4	3	Fume Treatment Plant	Full	Metal Cladding - Goosewing Grey	Metal Cladding - Goosewing Grey	PPC - Goosewing Grey	Galvanised
5	4	Shredded Scrap Yard	Full	N/A	N/A	N/A	N/A
6							
7	5	Hot Briquetted Iron Dolo & Lime Bunker	Full	Metal Cladding - Goosewing Grey	Metal Cladding - Goosewing Grey	PPC - Goosewing Grey	Galvanised
8	6	Ferro Alloys Bunker	Full	Metal Cladding - Goosewing Grey	Metal Cladding - Goosewing Grey	PPC - Goosewing Grey	Galvanised
9	7	Fire Water Pump House	Full	Metal Cladding - Goosewing Grey	Metal Cladding - Goosewing Grey	PPC - Goosewing Grey	N/A
10	8	Primary Pump House	Full	Metal Cladding - Goosewing Grey	Metal Cladding - Goosewing Grey	PPC - Goosewing Grey	Galvanised
11	9	Secondary Pump House	Full	Metal Cladding - Goosewing Grey & Concrete	Metal Cladding - Goosewing Grey	PPC - Goosewing Grey	Galvanised
12							
13	21	Main Power Centre	Full	Metal Cladding - Goosewing Grey	Metal Cladding - Goosewing Grey	PPC - Goosewing Grey	Galvanised
14	22	Power Compensation Building	Full	Metal Cladding - Goosewing Grey	Metal Cladding - Goosewing Grey	PPC - Goosewing Grey	N/A
15	23	National Grid Compound	Outline	N/A	N/A	N/A	N/A
16	10	Melt Shop Power Distribution Building	Full	Metal Cladding - Goosewing Grey	Metal Cladding - Goosewing Grey	PPC - Goosewing Grey	Galvanised
17	24	Incoming Scrap Yard Electrical Buidling	Outline	Metal Cladding - Goosewing Grey	Metal Cladding - Goosewing Grey	PPC - Goosewing Grey	Galvanised
18	11	Melt Shop WTP Electrical Building	Full	Metal Cladding - Goosewing Grey	Metal Cladding - Goosewing Grey	PPC - Goosewing Grey	Galvanised
19	12	Melt Shop FEP Electrical Building	Full	Metal Cladding - Goosewing Grey	Metal Cladding - Goosewing Grey	PPC - Goosewing Grey	Galvanised
20							
21							
22							
23							
24	13	Compressor House	Full	Metal Cladding - Goosewing Grey	Metal Cladding - Goosewing Grey	PPC - Goosewing Grey	N/A
25	25	Scrap Storage & Processing Yard	Outline	N/A	N/A	N/A	N/A
26	26	Overflow Scrapyard	Outline	N/A	N/A	N/A	N/A
27	27	Non Ferrous Processing Area	Outline	N/A	N/A	N/A	N/A
28							
29	28	Scanning Facilities	Outline	N/A	N/A	N/A	N/A
30	29	Railway Weigh Bridge	Outline	N/A	N/A	N/A	N/A
31	14	Car Parking Area	Full	N/A	N/A	N/A	N/A
32	15	Changing & Office Block Building	Full	Metal Cladding - Anthracite & Gold - TBC	Metal Cladding - Goosewing Grey	PPC - Goosewing Grey	Galvanised
33	16	Emergency Tank	Full	Metal Cladding - Goosewing Grey	Metal Cladding - Goosewing Grey	PPC - Goosewing Grey	Galvanised
34	17	Lagoon Water Pump House	Full	Metal Cladding - Goosewing Grey	Metal Cladding - Goosewing Grey	PPC - Goosewing Grey	N/A
35							
36	18	Green Walkway Extension	Full	N/A	N/A	N/A	Galvanised
37	30	HBI & Pig Iron Storage Area	Full	N/A	N/A	N/A	N/A
38	19	Active Carbon Injection Silos	Full	Silo Material to Specialist Information	Silo Material to Specialist Information	Silo Material to Specialist In	Silo Material to Specialist Information
39	20	Powder Silos	Full	Silo Material to Specialist Information	Silo Material to Specialist Information	Silo Material to Specialist In	Silo Material to Specialist Information
41	31	Charger Bay South Extension	Full	Metal Cladding - Goosewing Grey	Metal Cladding - Goosewing Grey	PPC - Goosewing Grey	Galvanised
	32	HBI Electrical Building	Full	Metal Cladding - Goosewing Grey	Metal Cladding - Goosewing Grey	PPC - Goosewing Grey	Galvanised

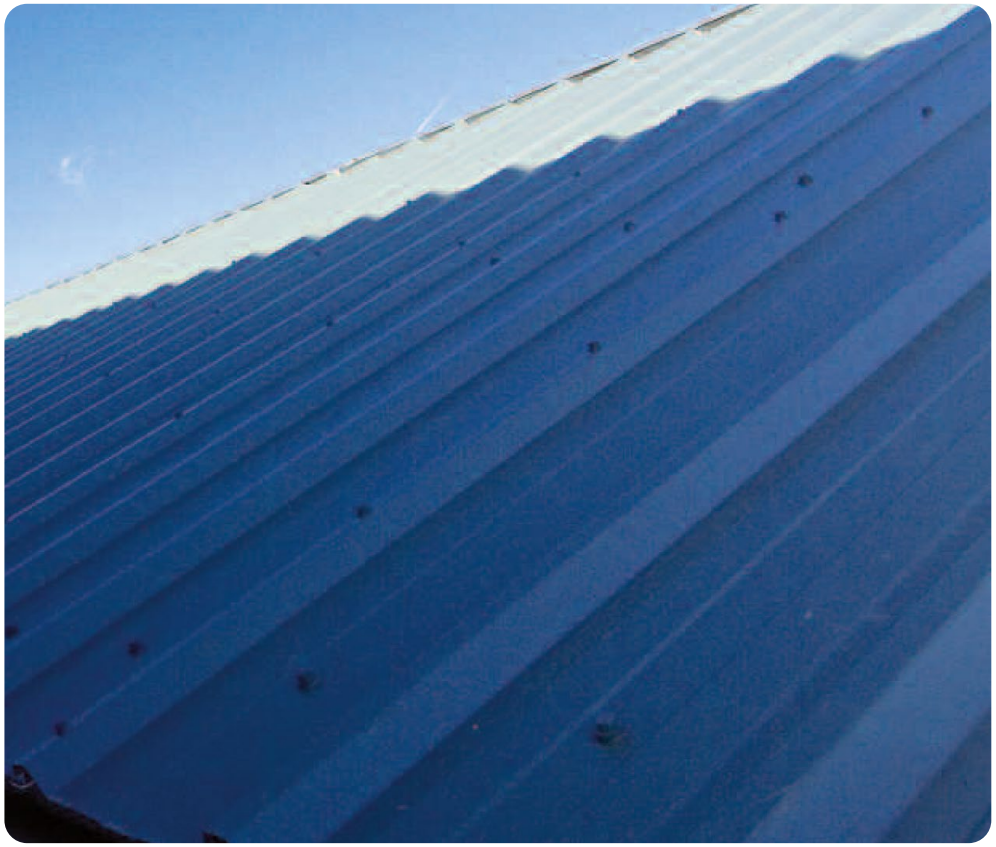


Figure 77: Example of Trisomet roof cladding

Figure 78: Example of Trisomet wall cladding

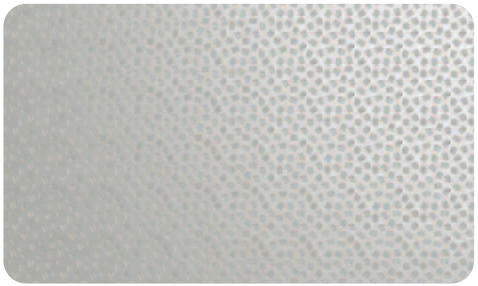


Figure 79: Trisomet - 'Goosewing Grey'

Materials - Office Building

As a facility which will host meetings and conferences, the design of the Office & Changing Block (Unit 15) contrasts with the industrial appearance of the steelworks. Due to this building intending to be a reclad modular construction, it was decided that a simple variation in colour would be more suitable than geometric variety. The Wernick Swansea University building was identified as a project of similar construction method that displayed desirable aesthetic, and therefore was used as a precedent for developing the office building.

The office building will be clad in the same Trisomet material as the other proposed buildings, in a combination of Anthracite (RAL 7016) and Straw (RAL 080 70 30).

Figure 80: Indicative CGI of the Office & Changing Block

West Elevation

East Elevation

South Elevation

North Elevation

Figure 81: Proposed Office & Changing Block Elevations

Figure 82: Trisomet - 'Straw'

Figure 83: Trisomet - 'Anthracite'

Landscape Strategy

Landscape & Habitats

The application is supported by a comprehensive Green Infrastructure Statement prepared by Turley and a Landscape Strategy prepared by RSK. These have been significantly informed by ecology and drainage considerations.

The southern fields are the key focus of landscape and habitat mitigation proposals. These include the following measures:

- Grazing marshes
- Ditches
- Ridges and furrows
- Seasonal wetland scrapes
- Reed beds
- Scrub and grassland
- Spoil mounds and gabions
- Native coastal tree planting
- Wildlife tower;
- Native coastal scrub planting
- Reed bed habitat
- Restored / improved / naturally colonised grassland habitat
- Restored ditch with re-profiled banks.

The Landscape Strategy responds to the industrial nature of the Site and is ecology-led, aiming to contribute to the enhancement of biodiversity, where practically possible.

The proposed measures have been agreed through pre-application discussions with Biodiversity Officers at NPT. The southern fields are the key focus of landscape and habitat mitigation proposals. These include:

Ditches

- Remove overgrown scrub along the internal banks and along the top edges, together with silt removal to improve water flow.
- Clearance works to create an open ditch network for wildlife, improve waterflow, site wide drainage and management.
- 7m wide grass field margins will be retained either side of the ditches for maintenance access, field margin habitat and wildlife corridors.

Ridge and Furrow

- Undertake an initial grass cut and vegetation clearance to reveal the original field patterns.
- Grass and weeds will be cleared to a level that can be grazed for maintenance.
- Habitat monitoring will take place over the initial years to establish the seasonal effectiveness of the existing system.
- Some minor excavation works may be required to improve the current system for further effectiveness subject to monitoring reports.

Seasonal Wetland Scrapes

- Creation of two new wetland scrapes.
- Excess soil and subsoil to be used on site where possible or, as spoil mounds across the wider site to preserve the seed bank, and encourage self-colonisation.

Figure 84: Landscape Strategy Mitigation Proposals (ref: 0780-SHRSK-XX-XX-DR-L-1001 to 1014)

Reed Beds

- Create new reed bed habitat covering an area of around 32,200sqm.
- Each scrape will be graded to create a shallow end and deep end to further support a range of wetland habitats.
- Any excess soil will be removed and used to create soil mounds or for gabion fill to replace habitat loss.
- Reed planting will be generated from onsite seed collection and restricted to sowing around the drier edges to allow successful establishment.
- Natural colonisation will prevail over time and will be monitored.

Scrub and Grassland

- New pockets of coastal scrub habitat are proposed to replace existing removed through the clearance works.
- Any existing grassland removed, or ground disturbed through site clearance works will be made good but will not be reseeded. Instead, the preferred method of grassland re-establishment is to allow natural colonisation, expanding the species diversity of the Margam Moors SSSI.
- Large wide areas of grassland corridor will be left to establish as additional habitat across this area.

In addition, landscape mitigation measures are proposed adjacent to the existing lagoon. These include:

- Excess soil and spoil from the wider site works will be retained on Site and utilised for habitat creation.
- This will be as soil / spoil mounds formed around the site, retaining the seed bank and left to colonise naturally, forming the open grass mosaic habitat as found across the wider steelworks site.
- Additional soil and spoil will be used to fill gabion baskets located around the lagoon edge.
- The mixed fill will create unique habitat for plants, insects, expanding provision and biodiversity across the northern area of the Site.
- Additional pockets of species rich coastal scrub are proposed around the lagoon to compensate for loss in the southern grazing marshes and to further expand biodiversity across the wider site.

The Landscape Strategy seeks to support drainage and enhance biodiversity. It accords with the principles set out in LDP Policy BE1 (Design), Policy 9 (Resilient Ecological Networks and Green Infrastructure) of FW and the placemaking principles set out in PPW (Edition 11).

Figure 85: Lagoon Landscape Strategy

On-Site Mitigation and Enhancement

The proposed package of on-site mitigation includes:

- Grassland Management – Where grass vegetation well established, implement an annual cutting regime of random areas to diversify grassland (i.e. c.5 – 10%), with the arisings removed. This cutting would need to be done in a 'messy' way (no straight lines).
- Scrub Management – Ensure scrub does not encroach significantly and if required control scrub – similar manner to the existing sea buckthorn management. This will help to maintain structural diversity.
- Woodland Management – Existing areas of woodland to be cleared of dense scrub understorey to promote tree heath and create more open areas such as clearings / rides.
- Creation of bunds, artificial slag piles and gabion baskets to encourage the natural regeneration of open mosaic habitat (to SINC status).
- Potential for areas of lichen heath and heathland to be created within some of the proposed landscaping / SUDS areas.
- Any new railway lines will have extended ballast either side to provide greater opportunity for development of open mosaic habitat
- Artificial Hibernacula – Provide artificial hibernacula using ballast / brash from other areas of the site within the woodland and scrub areas.

In addition, the following enhancement measures are proposed to the southern extent of the site:

- Low level of cattle grazing to diversify and open up existing vegetation
- The associated ditches will be enhanced to ensure they qualify at SINC status
- Wildlife tower – which will provide potential habitat for barn owl, roosting bats, invertebrates and nesting birds
- Topography manipulation
- Reedbed creation
- Wetland habitat creation.

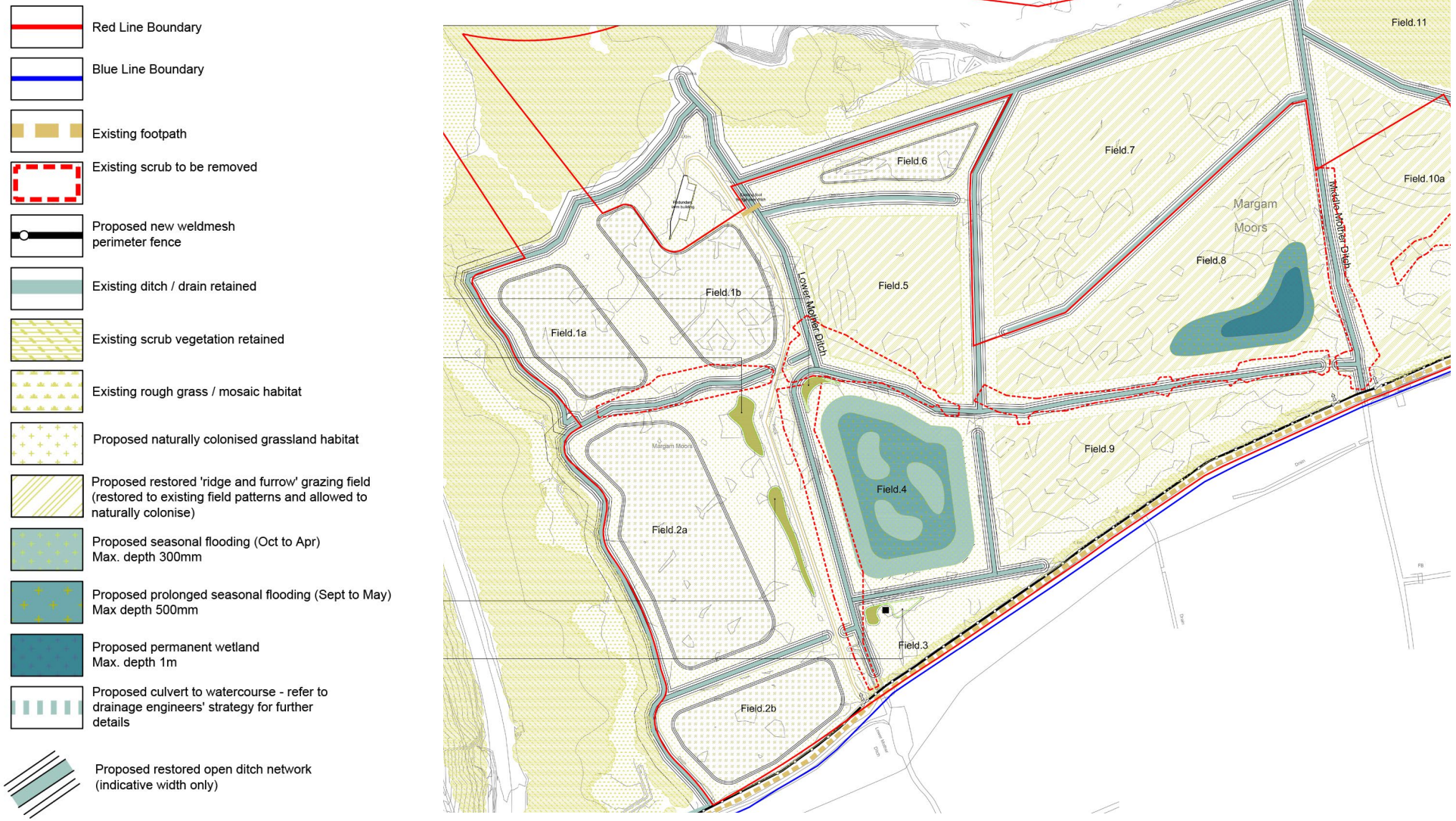
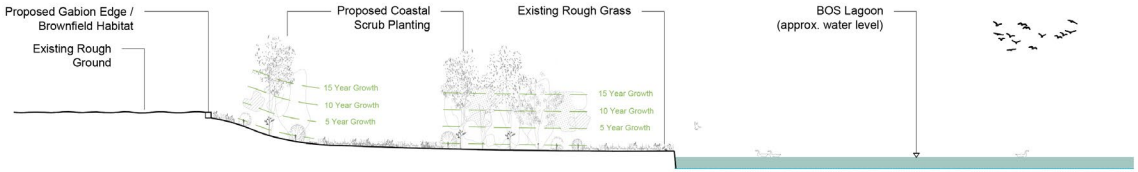


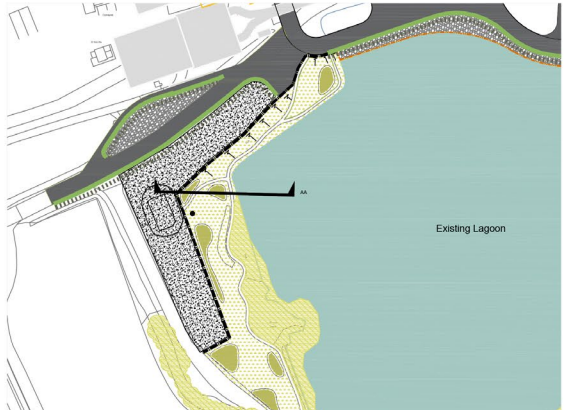
Figure 86: Southern Grazing Marshes Landscape Strategy

Section A - Typical Section through Gabion Edge to Lagoon

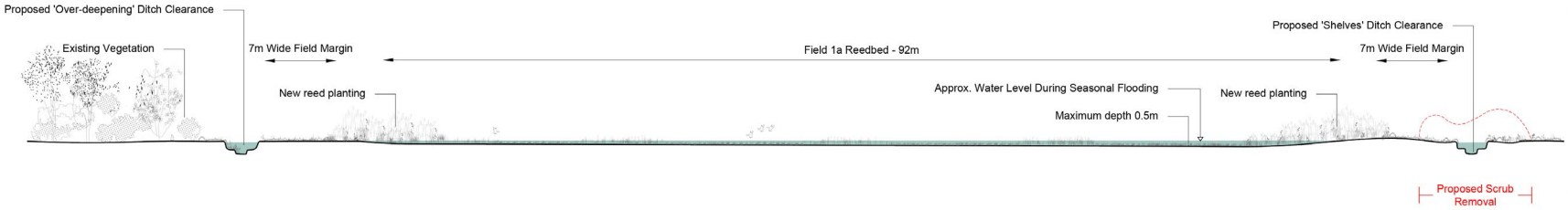


A

AA

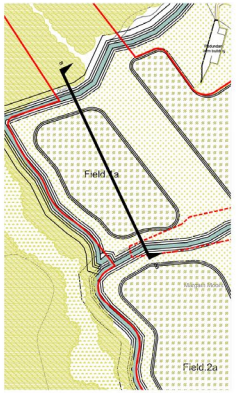


Section B - Typical Section through Reed Bed

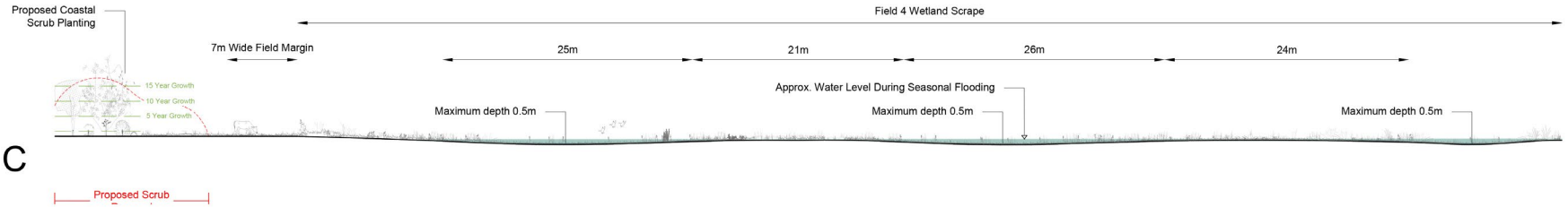


B

BB

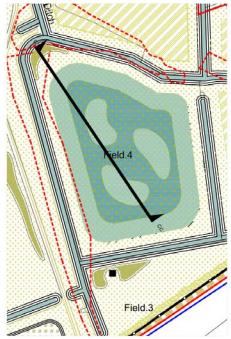


Section C - Typical Section through Field 4 Wetland Scrape

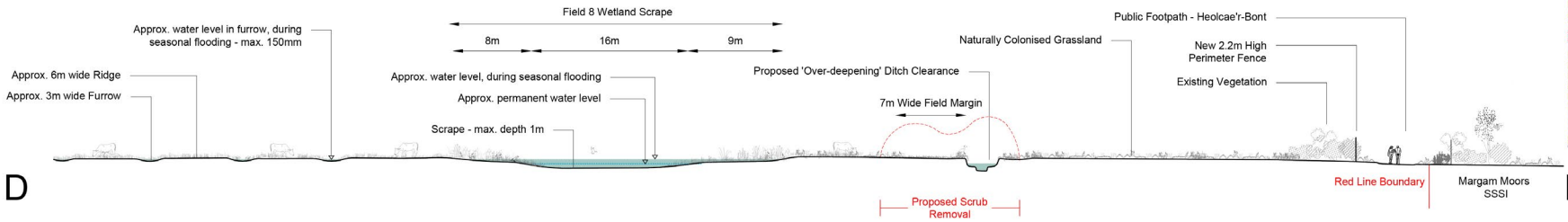


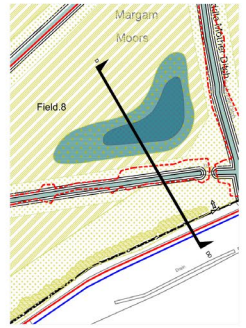
C

CC

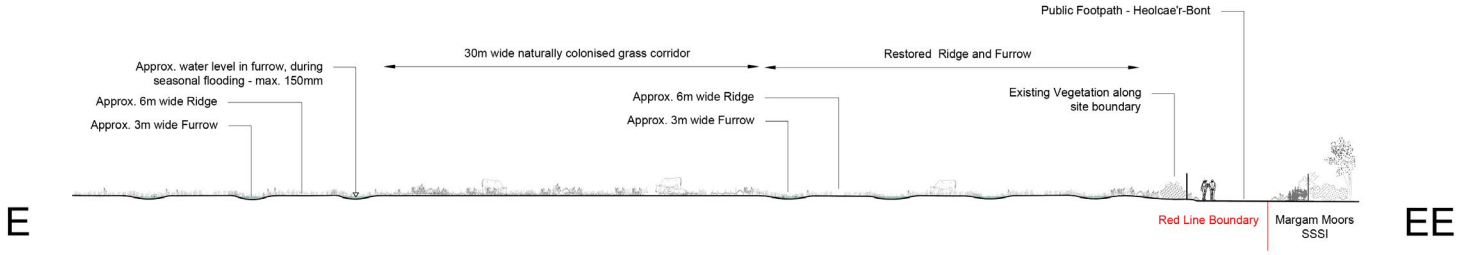


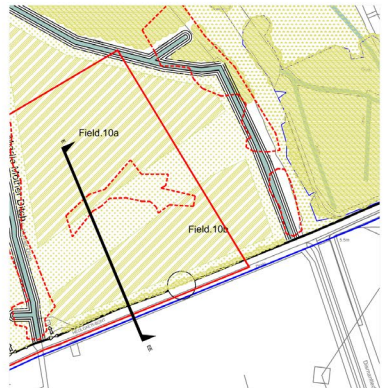
Section D - Typical Section through Field 8 Wetland Scrape



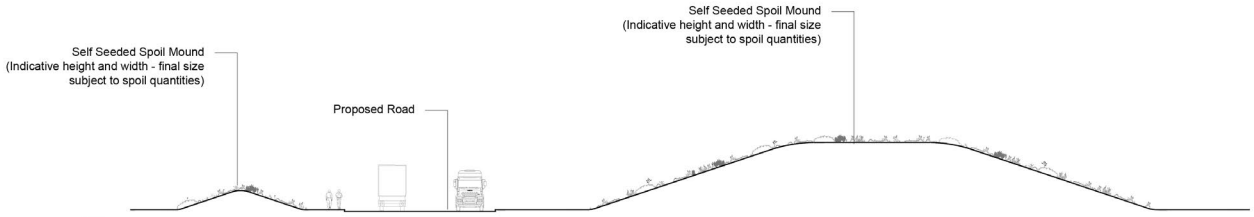


Section E - Typical Section through Ridge and Furrow Grazing Field





Section F - Typical Section through Spoil Mounds



Drainage Strategy

A surface water drainage strategy has been developed for the Site and will be incorporated into the site design and construction. This will aim to control surface water runoff without increasing flood risk or impacting on water quality downstream using SuDS where possible.

Areas shown to be at surface water and small watercourse flood risk are associated with existing water-bodies across the Site, and small localised areas of ponding. These areas of ponding shall be managed by SuDS features across the Site.

The principles of the SuDS surface water drainage strategy are outlined as follows:

- Areas of development and new facilities located on existing impermeable surfacing will be drained via the existing systems towards the onsite wastewater treatment works.
- For new areas of development, two main surface water systems will be operated across the Site: the 'contaminated stream' and the 'clean water stream'. Both streams shall ultimately be pumped to the Site outfall into Swansea Bay.

The SuDS surface water drainage system will manage the risk of surface water flooding through the collection and conveyance of surface water up to the 1 in 100 year rainfall event with an allowance for climate change. Surface water will be discharged at the Site outfall at an unattenuated rate.

Areas of the Site shown to currently be at flood risk from surface water and small watercourses are generally associated with small localised areas of ponding. Where these extents of ponding are located in areas proposed for new development, the SuDS system will ensure conveyance of surface water flows away from on-site flood risk receptors into the Site drainage system therefore mitigating the risks from this impact.

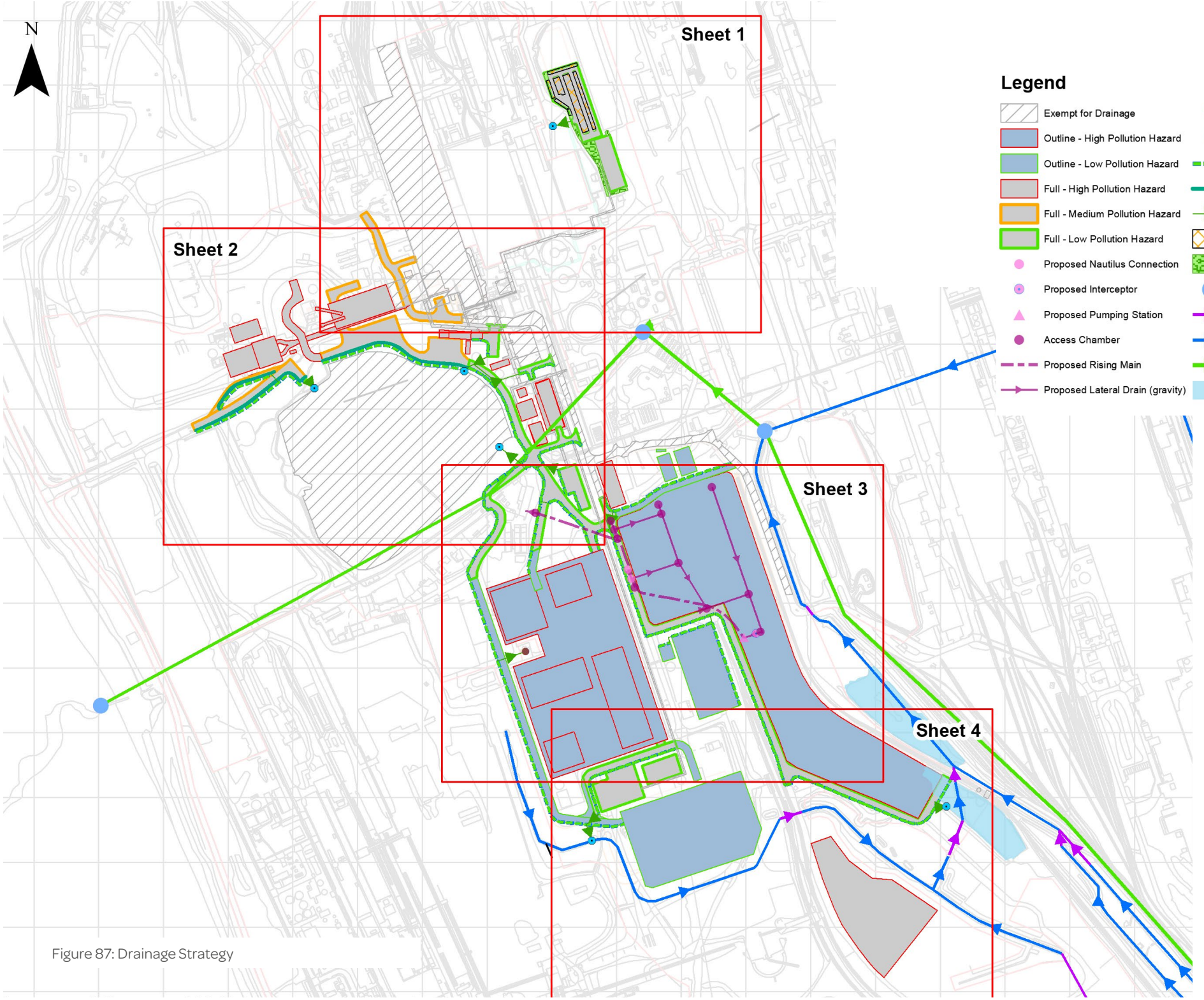


Figure 87: Drainage Strategy

Mitigation & Effects Summary

Summary

The new EAF has been designed to minimise and mitigate any environmental impacts and create benefits where possible.

The 'Green Infrastructure and Landscaping' and 'Drainage Strategy' sections on pages 114-123 of this DAS set out details of the proposed approach to landscape, habitats and water management. The following additional considerations are summarised here:

- Air Quality
- Noise
- Ground Conditions
- Heritage
- Views.

The full assessment and mitigation approach can be found within the Environmental Statement supporting this planning application.

Air Quality

A total of eight scenarios were modelled to assess air quality impacts from road traffic and industrial emissions between construction and operational phases (compared to both established and interim baselines) over multiple years.

The output of the assessment confirms:

- Fugitive dust from construction activities poses a medium risk to the Margam Moors SSSI, but with the proposed mitigation measures (outlined below), residual effects will likely be negligible, with minor adverse effects during adverse weather.
- Emissions from construction vehicle movements and industrial sources are not significant compared to the established or interim baseline and are beneficial for human and ecological receptors.
- The fully operational proposed development, including vehicle movements and industrial sources, will have no significant impact compared to the established or interim baseline, being beneficial for most pollutants at human receptors and generally beneficial at ecological receptors.
- The results of the sensitivity tests showed concentrations were within acceptable ranges when utilising different sets of meteorological data and model input parameters.

Overall, the assessment concludes that there will be generally beneficial effects on air quality in the Interim Scenario and EAF Scenario, when compared to the Established Baseline Scenario, as shown in the mass of NOx emissions (tonnes/annum, tpa) emitted from the Site as an example:

The following mitigation measures are proposed:

- Once operational , further measures for fugitive dust mitigation are not anticipated due to regulation by an Environmental Permit from NRW, BAT and an annually revised AQMP will control dust emmissions from the proposed development and other processes. Demolition and construction effects will also be mitigated through a CLP and CEMP where practicable

- Additional mitigation for construction vehicle movements and industrial sources is not required due to their small impact on air quality
- The dispersion model assessment shows largely beneficial impacts at receptor locations during the operational phase, so additional mitigation is not required.

Noise

An assessment of construction noise and vibration has been undertaken based on the anticipated activities that will take place during the demolition and construction phases of the proposed cevelopment. The construction assessment indicates that adverse effects generated by noise and vibration at the nearest sensitive receptors are not significant.

Following the implementation of recommended mitigation measures, the residual effects at residential receptors are anticipated to be not significant during the construction phase.

Sound propagation modelling has been undertaken to establish whether the operation of the proposed development is likely to give rise to adverse impacts at noise sensitive receptors. The results of the modelling have informed the embedded mitigation measures included within the proposed development design.

Based on the results of the assessment, the initial assessment identified the potential for significant adverse impacts, following consideration of the context of the site, the adverse impacts are considered as not significant.

As part of the detailed design phase of the Proposed Development, the operational phase noise assessment will be refined with specific requirements for embedded mitigation measures, such as noise barriers or enclosures, confirmed.

No further mitigation measures have been identified beyond the embedded mitigation detailed within the assessment. Therefore, the residual effects at residential receptors are anticipated to be not significant during the operational phase.

Ground Conditions

An assessment has been made of what impacts the proposed development could have on the land, soil or groundwater.

In terms of land and soil, these features are not considered to be sensitive at the site, and no significant impacts are expected to occur.

Taking into account both the anticipated reduced quality of groundwater and the application of the Proposed Development's proposed embedded mitigation methods the significance of the effect of development with respect to this receptor has been classified as minor.

An intrusive site investigation is being undertaken for the Site. This was primarily programmed to inform the detailed design prior to construction (including the anticipated preparation of Remediation Strategy documents with respect to ground contamination which would be submitted to NPT to satisfy planning conditions).

During the construction phase for the development of the EAF, the embedded mitigation measures associated with standard construction management are considered sufficient to avoid impacts. Plans produced associated with the construction phase will be designed around site specific data and risk assessments, meeting both standard guidance and legislation requirements. No significant construction phase residual effects are identified, with no additional mitigation measures required with the exception of measures to handle peat, if encountered.

During the operation phase of the EAF, the potential impacts to the identified receptors are assessed as being negligible or minor effect, as a result of mitigation of adherence to regulatory practices and permit requirements, reducing potential impacts. As such, no significant operational phase residual effects are identified, with no additional mitigation measures required.

Heritage

The Proposed Development has the potential to physically and permanently adversely affect historic assets during construction. Buried archaeological deposits and palaeoenvironmental remains, if present, may be damaged or destroyed by construction groundworks and other activities. Permanent minor adverse (non-significant) effects are predicted on two non-designated historic assets during construction of the Proposed Development: Morfa Colliery (421174) and Theodrics Grange (20041), as well as upon archaeological potential for hitherto unknown remains that may be discovered during evaluation or construction. Mitigation through preservation by record is proposed, which would reduce the residual effect to neutral (not significant).

In the operational phase of the Proposed Development, moderate adverse residual effects (not-significant) are predicted on seven designated historic assets: Chain Home Low Radar Station (GM488), Landscape around Half Moon Camp (GM477), Margam Abbey (GM005), Mynydd y Castell Camp (GM162), and Margam Park Conservation Area (151) and Registered Garden (PGW(Gm)52(NEP)), and Hen Eglwys (GM163). A minor adverse residual effect (not significant) is predicted on the designated historic assets Henbiniwn (00740w). Negligible adverse (non-significant) residual effects are predicted on the non-designated historic asset Morfa Colliery (421174) and Theodrics Grange (20041).

Views

The proposed development would introduce a new element into the Site that is entirely in keeping with the existing LCA 50: Port Talbot Docks and Margam Works landscape.

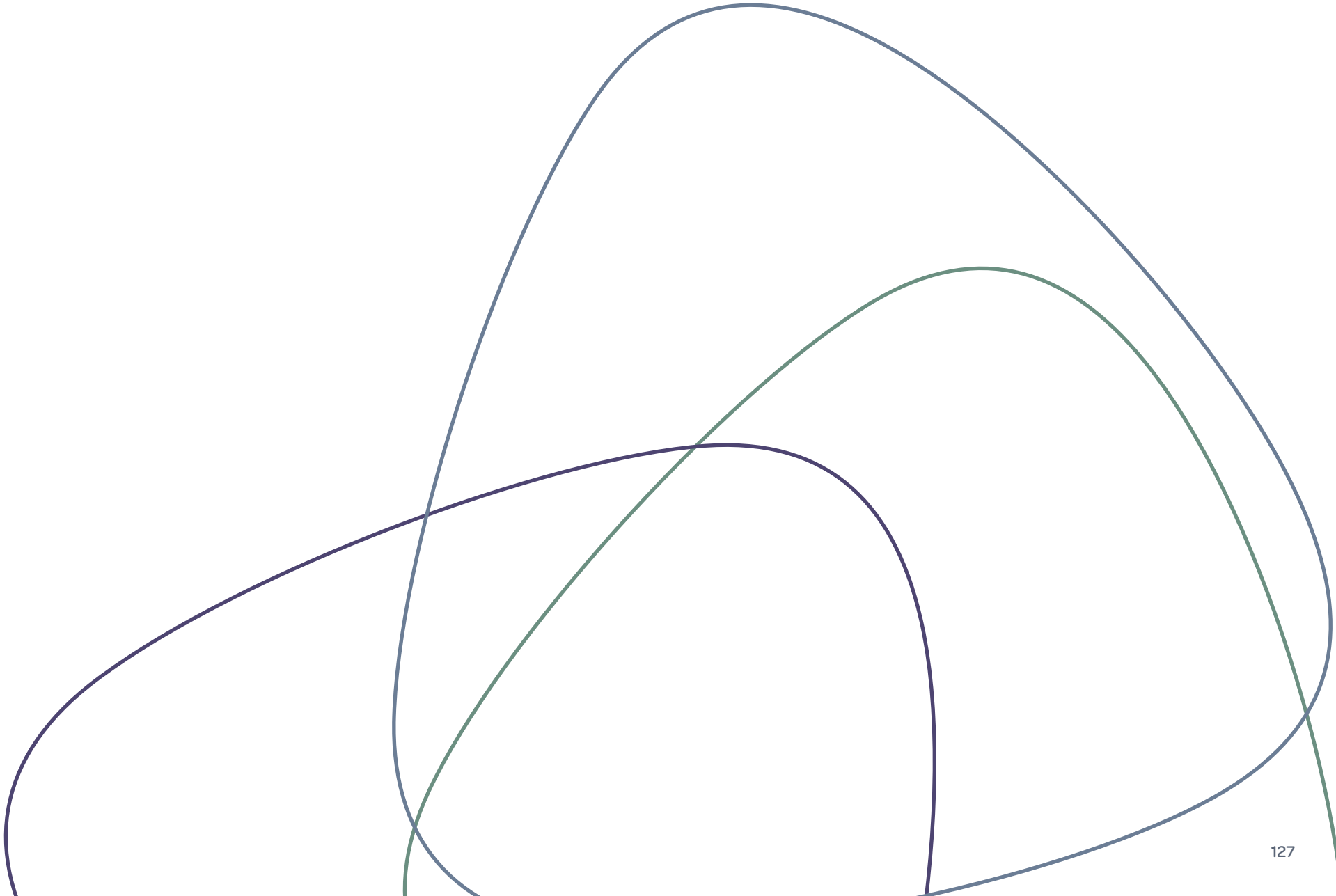
The EAF is proposed to be located to the south and east of the large lagoon area, adjacent to and partly within the existing steel making buildings ('BOS plant') which would be refurbished. The Proposed Development would be of a similar, albeit generally subservient scale to the existing plant buildings, with just a single flume to its northernmost edge being taller, at a maximum height of 83.7 m AOD.

Summary of effects:

- The Site is located within the steelworks. The extent of operational effects upon landscape character would be limited by the topographic containment of the coastal plain by the rising land and forestry on Mynydd Margam to the east, existing industry and urban form to the north and the landfill and Kenfig Dunes to the south.
- The effects of the Proposed Development on landscapes to the west would be mitigated by the wide expanse of Swansea Bay, which creates significant separation distances to receptors.
- There would be no significant construction effects on landscape character.
- There would be no significant visual effects for visual receptors during operation, partially due to the extent of screening locally and also because of the extent of existing industrial development on the Site and in the coastal plain area.
- There would be at most minor (not significant) effects of neutral nature for residents at Broomhill, Port Talbot and minor (not significant) adverse effects for users of the M4.

05

Conclusion



Summary & Conclusion

This DAS supports a hybrid planning application for a new EAF facility at Port Talbot Steelworks.

The nature of the development is driven by the engineering, safety and operational processes required by Tata Steel. These considerations largely dictate the function and form of the proposed development.

The DAS helps to communicate how the design of the Proposed Development has been informed by a logical design process, would be responsive to its surrounding context and could be delivered in accordance with relevant design policies.

In summary, the application seeks to provide:

- Safe access and egress for staff and visitors, industrial / operational use, truck loading and emergency operators
- Access from the existing main site entrance via Harbour Way
- On-site landscaping / SuDS / biodiversity features where possible and safe to do so surrounding the operational site
- Internal two-way access roads for safe movement of all relevant vehicles around the industrial process area
- An optimal site layout which balances design and planning considerations with the overall function and operation of the proposed scheme
- A drainage strategy which takes account of SuDS and responds to the operational requirements of the administration, industrial processing and truck loading areas
- External lighting to facilitate safe working, operation and movement throughout the Site, taking account of biodiversity and amenity considerations.

The proposed design responds positively to the surrounding context and adheres to placemaking principles by:

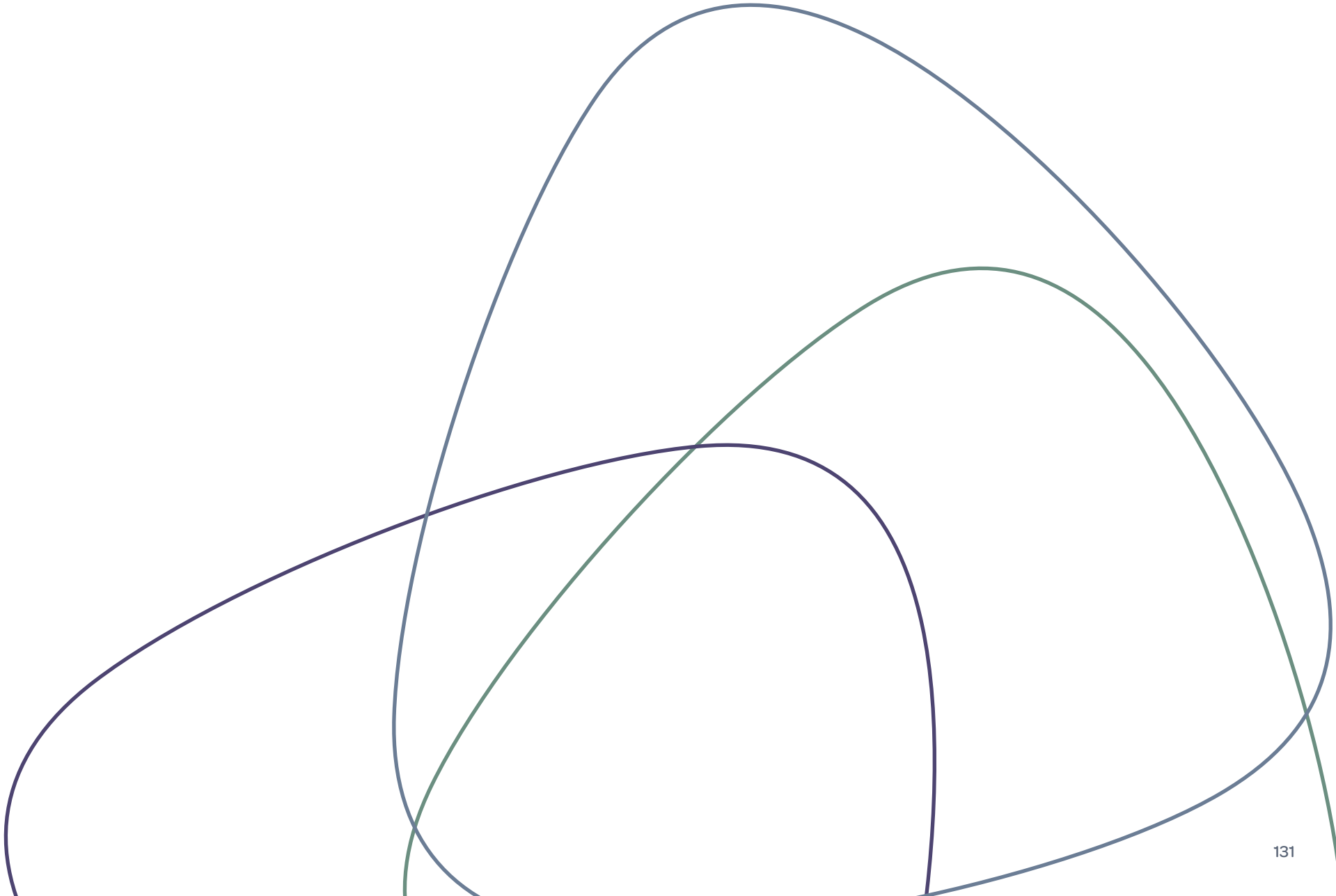
- Responding to environmental protection criteria relating to land, health, waste, air quality and noise
- Taking into account the significance of known built and natural heritage assets and their setting
- Avoiding any unacceptable impact on nearest sensitive environmental and residential receptors, and land uses
- Landscaping quality and avoidance of any undue visual impacts from public vantage points in the vicinity of the site
- Being acceptable from a flood consequence perspective, taking into account the requirement for sustainable drainage and climate change resilience
- Delivering net biodiversity benefit.

The proposals represent a significant step in sustainable development on previously developed land, serving as a catalyst for the long-term transformation of Port Talbot. The project will:

- Position Port Talbot as a leader in sustainable steel production, supporting the UK's goals for steel industry development and net zero emissions targets
- Sustainably regenerate an underutilised site with industrial and economic development
- Promote sustainable growth, benefiting the local economy, skills and community

- Deliver net biodiversity benefit through on-site mitigation, whilst meeting all relevant environmental protection requirements
- Safeguard the amenity and significance of all sensitive environmental, heritage and residential receptors and land uses through a sensitive design approach
- Ensure flood resilience by incorporating sustainable drainage systems and climate change adaptations
- Promote the use of alternative modes of transport and active travel, whilst also being acceptable from a highway and transport perspective.

Glossary of Terms



Blast Furnace

A type of furnace which is used to smelt iron ore into pig iron using coal. The blast refers to hot blasts of air which is blown through the furnace to refine the iron ore into iron.

BOS - Basic Oxygen Steel making

The current method of producing steel at Port Talbot. The BOS plant takes molten iron produced at the blast furnaces and changes it into steel by blowing supersonic oxygen over the molten iron. This process will be replaced with the EAF.

Coke

Fuel used in the Blast Furnace to smelt iron ore, derived from coal.

Continuous Casting Process

A process in which molten steel is poured from the LMFs into a mold. Through the mold the steel is cast into a slab solidifying during the process. The output from this process can be further processed in rolling mills.

EAF - Electric Arc Furnace

A type of furnace that heats material by means of a high-temperature electric arc. The energy for this process comes entirely from electricity, allowing for steel-production that is not dependent on fossil fuels. The EAF will be the primary steel making furnace with output subsequently passed to Ladle Metallurgy Furnaces.

Heavy-End

Refers to the iron-making side of Port Talbot steelworks. This area includes the Blast Furnaces and associated infrastructure such as areas for storing and processing iron ore and coal.

LMF - Ladle Metallurgy Furnace

A type of furnace that is used to further refine molten steel produced by the EAF. This is referred to as secondary steel making and is used to create speciality steels such as stainless steel.

Metallurgy

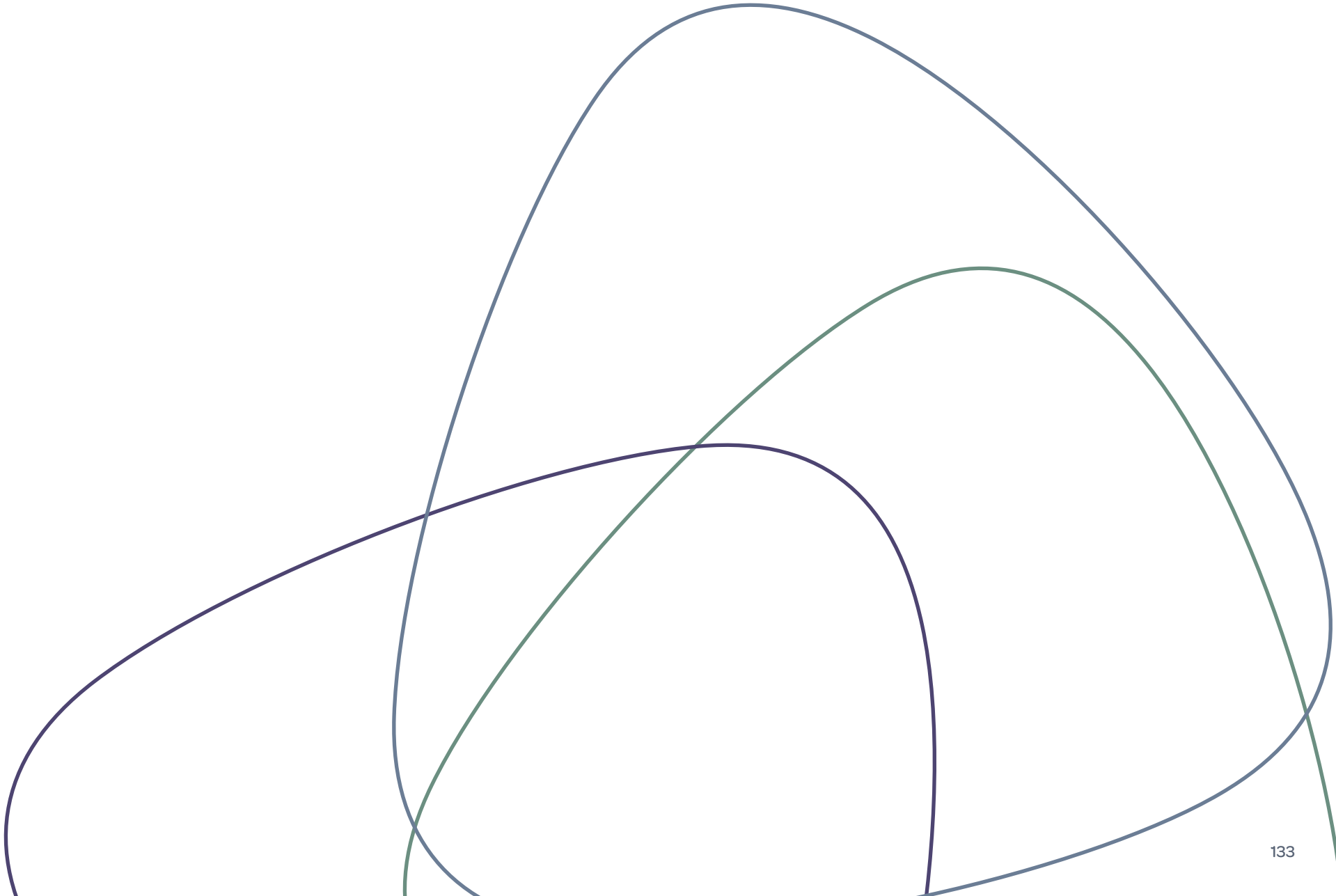
A branch of materials science and engineering concerned with the properties of metals as well as their production and purification.

Pig Iron

Type of iron produced in a Blast Furnace, used to make steel in the BOS plant.

Rolling Mill

A facility which takes solid steel slabs produced in the continuous casting process and passes them through pairs of rollers to reduce the thickness of the material as well as give the slab a more uniform thickness.




Turley