Margam Substation

Planning Statement

On behalf of **NGET**

nationalgrid

Project Ref: 331201497 | Rev: B | Date: August 2025

Registered Office: Stantec House, Kelburn Court, Birchwood, Warrington. WA3 6UT
Office Address: Rotterdam House, 116 Quayside Newcastle Upon Tyne NE1 3DY
T: 0191 261 5588 E: newcastle.uk@stantec.com

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	Name	Position	Signature	Date
Prepared by:	EG	Graduate Planner	EG	29/05/25
Reviewed by:	RC	Senior Planner	RC	24/06/25
Approved by:	MR	Associate Director	MR	11/07/25
For and on behalf of Stantec UK Limited				

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A	July 2025	Issue Draft	EG	RC	MR
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1 Introduction

1.1 Background

1.1.1 This Planning Statement has been prepared by Stantec on behalf of NGET ('the Applicant') to support a planning application to Neath Port Talbot County Borough Council ('the Council'). Full planning application for the extension of the Margam 275kV substation including the erection of a gas insulated switchgear hall (GIS hall) and the demolition of the existing control and amenities buildings to enable the erection of a new amenities building. Works to include earthworks, surface water management and drainage infrastructure, lighting, CCTV, boundary treatment, car parking, ecological improvements including a wildlife tower and gabion baskets, improved internal access roads, diesel generator and hardstanding, storage and washroom buildings and water storage tank, flood defence wall including flood gates and appropriate landscaping and other associated engineering operations.

1.1.2 A detailed overview of the proposed works to the existing Margam 275kV substation compound is provided below:

- Construction of a GIS hall to house 275 kV electrical switchgear and ancillary equipment;
- The GIS hall to include up to 12 bays with the provision of up to 3 spare bays;
- Mechanically Switched Capacitor with Damping Network;
- Realignment of the existing downleads and Super Grid Transformer circuits to new bays within the GIS hall;
- New amenities building to include welfare facilities, meeting room and ancillary office space;
- One diesel generator to be used in a backup situation only and hardstanding for a replacement freestanding diesel generator;
- Security fencing;
- Surface water management and drainage infrastructure including internal drainage systems;
- Flood defence wall (1150mm high and depth 1000mm) and flood gates at existing access points into the existing substation;
- Water storage tank (6m high and 6.1m diameter);
- CCTV;
- Lighting to include 6m medium duty, tilt down tubular steel constructure (exact location to be agreed), 27no. 'label C', 18no. 'label E' and 13no. 'label EX1), dark sky approved;
- Creation of new designated car parking area (four standard bays and two accessible bays);
- Landscaping to incorporate native planting / wildflowers; and
- Ecological mitigation to include a wildlife tower and gabion baskets.

1.1.3

1.1.4 The purpose of the development is to provide critical infrastructure requirements in order to support Tata Steelworks UK's development of an Electric Arc Furnace at their Port Talbot site together with other growing electricity demands. Following planning approval (ref P2024-0711), Tata Steel is building a new, large-scale Electric Arc Furnace (EAF) at its Port Talbot steelworks, a £1.25 billion project funded with a £500 million investment from the UK Government. This EAF will replace the site's traditional blast furnaces, significantly reducing carbon emissions by approximately 90% and producing up to three million tonnes of steel annually from recycled scrap. Construction began in July 2025, and the furnace is expected to be commissioned by the end of 2027

1.1.5 This Statement sets out the planning policy context relating to the planning merits and acceptability of the principle of the Proposed Development (see Section 4) and how environmental issues relating to the development are addressed. This Statement should be read in conjunction with the drawings and information accompanying the planning application (Table 1.1) to fully understand the Development, its potential impacts and planning merits.

1.2 Application Submission Documents

1.2.1 Table 1.1 below sets out the plans and documents that are submitted with the application.

Table 1.1: Application Documents

Document	Reference
Drawings	
Margam GIS Hall – Level 00 General Arrangement	**MARPT-BHK-01-00-DG-A-201000 (Rev P06)**
Margam GIS Hall – GIA & GEA General Arrangement Plans	**MARPT-BHK-01-00-DG-A-201100 (Rev P06)**
Margam Amenities Existing and Demolition	**MARPT-BHK-01-00-DG-A-201501 (Rev P03)**
Margam Amenities Building - (Level 00 General Arrangement Proposed Plan)	**MARPT-BHK-01-00-DG-A-201510 (Rev P05)**
Margam GIS Hall - Level 01 (Crane Access) General Arrangement	**MARPT-BHK-01-01-DG-A-201001 (Rev P06)**
Margam Amenities Building – (Roof General Arrangement)	**MARPT-BHK-01-R1-DG-A-201515 (Rev P04)**
Margam GIS Hall – Roof Plan General Arrangement	**MARPT-BHK-01-R2-DG-A-201003 (Rev P06)**
Margam GIS Hall – Location Plan	**MARPT-BHK-01-ZZ-DG-A-130020 (Rev P04)**
Margam GIS Hall – Existing Site Plan	**MARPT-BHK-01-ZZ-DG-A-130021 (Rev P04)**
Margam GIS Hall – Demolition Site Plan	**MARPT-BHK-01-ZZ-DG-A-130022 (Rev P04)**

Margam GIS Hall – Proposed Site Plan	**MARPT-BHK-01-ZZ-DG-A-130023 (Rev P05)**
Margam GIS Hall – General Arrangement Sections	**MARPT-BHK-01-ZZ-DG-A-200300 (Rev P02)**
Margam GIS Hall – Water Tank	**MARPT-BHK-01-ZZ-DG-A-201012 (Rev P02)**
Margam GIS Hall_Context Elevations	**MARPT-BHK-01-ZZ-DG-A-202000 (Rev P04)**
Margam GIS Hall – General Arrangement Elevations	**MARPT-BHK-01-ZZ-DG-A-202001 (Rev P06)**
Margam GIS Hall – Proposed Materials	**MARPT-BHK-01-ZZ-DG-A-202002 (Rev P05)**
Margam GIS Hall – Context Elevations – Existing	**MARPT-BHK-01-ZZ-DG-A-202100 (Rev P04)**
General Arrangement Elevations Existing	**MARPT-BHK-01-ZZ-DG-A-202110 (Rev P01)**
Margam Amenities Building – (Proposed Elevations and Materials)	**MARPT-BHK-01-ZZ-DG-A-202510 (Rev P05)**
Margam Amenities Building – (General Arrangement Sections)	**MARPT-BHK-01-ZZ-DG-A-203501 (Rev P05)**
Margam Amenities Building - (Fire Strategy Plan Level 00)	**MARPT-BHK-01-00-DG-A-200701 (Rev P04)**
Margam GIS hall – (Fire Strategy Level 00)	**MARPT-BHK-01-00-DG-A_200601 (Rev P06)**
Margam - Site Plan - Proposed External Lighting - Layout	**MARPT-BHK-01-XX-DG-E-320010 (Rev P03)**
Margam – Fencing Foundation Details	**MARPT-BHK-01-XX-DG-S-161302 (Rev P01)**
Margam Drainage Layout	**MARPT-BHK-01-ZZ-DG-C-181009 (Rev P03)**
Margam Attenuation Details	**MARPT-BHK-01-ZZ-DG-C-181026 (Rev P01)**
Margam Swept Path Analysis Layout Sheet 01 of 02	**MARPT-BHK-01-ZZ-DG-C-161029 (Rev P03)**
Margam Swept Path Analysis Layout Sheet 02 of 02	**MARPT-BHK-01-ZZ-DG-C-161030 (Rev P03)**
Reports	

Planning Statement	**Stantec**
Design and Access Statement	**Stantec**
Flood Consequences Assessment	**SLR / BakerHicks**
Drainage Report	**BakerHicks**
Hydrogeological Impact Assessment	**SLR / BakerHicks**
Coal Mining Risk Assessment	**BakerHicks**
Ground Investigation Report	**BakerHicks**
Piling Method Appraisal Document	**Laing O'Rourke**
Lighting Technical Note	**Stantec**
Carbon Technical Note	**Stantec**
Construction Environmental Management Plan	**Laing O'Rourke**
Construction Logistic Plan (CLP)	**Laing O'Rourke**
Waste Management Plan	**Laing O'Rourke**
Surface Water Management Plan	**Laing O'Rourke**
Green Infrastructure Assessment	**Stantec**
Agricultural Land Quality Consideration Assessment	**Kernon**
Outline Soil Management Plan	**Kernon**
Arboricultural Impact Assessment	**Stantec**
Ecological Impact Assessment	**Stantec**
Landscape and Habitat Management Plan	**Stantec**
Shadow Habitat Regulations Assessment	**Stantec**
Habitat Management Plan (Margam Burrows)	**Stantec**
Botanical Survey Report	**Stantec**
Breeding Bird Survey Report	**Stantec**
Great Crested Newt Survey Report	**Stantec**
Bat Surveys Interim Report	**Stantec**
Invertebrate Interim Survey Report	**Stantec**
Reptile Survey Report	**Stantec**

Water Vole and Otter Report	**Stantec**
Wintering Birds Survey Report	**RSK**
Landscape and Visual Appraisal	**Stantec**
Strategic Landscape Design	**Stantec**
Peat Management Plan	**RSK**
Transport Statement	**Stantec**
Air Quality Assessment	**Stantec**
Sustainability Statement	**Stantec**
Historic Environment Desk Based Assessment (Heritage Statement)	**Stantec**
Operational Noise Impact Assessment	**RSK**
Construction Noise and Vibration Impact Assessment	**RSK**
RIBA Stage 3 Fire Safety Strategy	**Stantec**
EMF assessment of proposed Margam substation extension	**NG**
Siting Study	**Stantec**

1.3 Environmental Impact Assessment

1.3.1 The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 as amended (the "EIA Regulations"), make provision for applicants to seek a screening opinion from the LPA on whether EIA is required. Applicants are advised to secure a screening opinion early on, before they undertake any statutory pre-application publicity and consultation.

1.3.2 Regulation 6 of the EIA Regulations specifies that a screening request must include:

1.3.3 '6.(1) A person who is minded to carry out development may request the relevant planning authority to adopt a screening opinion.

- (2) A request for a screening opinion in relation to an application for planning permission must be accompanied by—
- *(a)a plan sufficient to identify the land;*
- **(b)a description of the development, including in particular—**
- (i) a description of the physical characteristics of the development and, where relevant, of demolition works;
- (ii) a description of the location of the development, with particular regard to the environmental sensitivity of geographical areas likely to be affected;

- *(c) a description of the aspects of the environment likely to be significantly affected by the development;*

- *(d) a description of any likely significant effects, to the extent of the information available on those effects, of the proposed development on the environment resulting from—*

1.3.4 (i) the expected residues and emissions and the production of waste, where relevant; and

1.3.5 (ii) the use of natural resources, in particular soil, land, water and biodiversity; and

- *(e)such other information or representations as the person making the request may wish to provide or make including any features of the proposed development or any measures envisaged to avoid or prevent what might otherwise have been significant adverse effects on the environment.'*

1.3.6 A screening request for a screening opinion was submitted to the Council on 2nd May 2025 (application reference P2025/0309). The screening request submitted provided details on the proposed development (see section 4)in line with the EIA regulations. The request for Screening Opinion under Regulation 6 of the Town and Country Planning (Environment Impact Assessment) (Wales) Regulations 2017 for a new 275 kV double busbar substation to replace and extend the existing Margam Substation, including a GIS hall and amenities building and 6no cables of 275 kV between Margam and Port Talbot substations to include cable trenching and Horizontal Directional Drilled (HDD) cable was submitted.

1.3.7 The Screening Opinion issued by the Council concluded that the proposed development (see section 4) was not EIA development, and therefore an Environmental Statement (ES) was not required. This decision was issued on 22 May 2025.

1.3.8 The Council concluded within their Screening Opinion (reference P2025/0309) that the proposed development is not EIA development. NGET, as statutory undertakers, are utilising their permitted development rights under the Town and Country Planning (General Permitted Development) 1995, Schedule 2 Part 17 Class G (Welsh GPDO) in order to install new cables between the proposed Margam and the proposed Port Talbot substations. It is therefore highlighted that the cables are not included within the description of development for this planning application

1.3.9 Owing to the footprint of the substation extension extending beyond NGET's operational land, planning consent is still required for the Margam substation extension and associated works. As confirmed in the Council's Screening Opinion, the proposal is unlikely to give rise to any significant environmental effects and therefore does not require an Environmental Impact Assessment.

1.4 Background Context

The Climate Change Act 2008

1.4.1 The Climate Change Act 2008 is the basis for the UK's approach to tackling and responding to climate change. Through the Climate Change Act, the UK government has set a target to significantly reduce UK greenhouse gas emissions, committing in law to reducing greenhouse gas emissions by at least 100% of 1990 levels (net zero) by 2050. The energy sector is a significant contributor of carbon emissions, therefore, to achieve net zero ambitions the government has also made a commitment to fully decarbonise the UKs energy sector by 2035.

1.4.2 Specifically, to the Welsh Government's Net Zero Strategic Plan, several key targets and goals to achieve net zero emissions are set out. The main points include:

- **Net Zero by 2050:** Wales aims to achieve net zero carbon emissions by 2050, balancing greenhouse gas emissions with the amount removed from the atmosphere.

- **Interim Targets:** There are interim targets set for 2030 and 2040, with a series of five-year carbon budgets to track progress. For example, the 2030 target is a 63% reduction in emissions, and the 2040 target is an 89% reduction.

- **Renewable Energy:** By 2035, Wales aims for 100% of its electricity demand to be met by renewable sources.

1.4.3 These goals are part of a broader effort to create a greener, stronger, and fairer Wales. Consequently, there is significant and urgent needs to upgrade energy infrastructure such as substations like Margam to achieve greater energy security and provide a reliable energy system for generations to come.

Planning Policy Wales (PPW)

1.4.4 In February 2024, the Welsh Government released Planning Policy Wales Edition 12 (PPW). This document sets out the land use planning policies of the Welsh Government and is supplemented by a series of Technical Advice Notes (TANs), Welsh Government Circulars and policy clarification letters. Together these documents provide the national planning policy framework for Wales. It aims to promote sustainable development through the planning system, emphasising a presumption in favour of sustainability and a strong commitment to enhancing population wellbeing.

1.4.5 PPW ensures that development proposals contribute positively to biodiversity and ecosystem reliance. It is a key part of the planning framework and is closely tied to the requirement for a Green Infrastructure Statement. PPW introduces the Step-Wise Approach which is a six stage process that developers must follow to demonstrate how a proposal will deliver a net benefit for biodiversity and sets out a clear and logical order for developers: 1. Avoidance; 2. Minimisation; 3. Mitigation; 4. Compensation; 5. Enhancement 6. Long term management.

1.4.6 The approach is underpinned by the DECCA Framework which outlines five key attributes of ecosystems resilience: diversity, extent, condition, connectivity and aspects.

1.4.7 Under PPW, peat is accorded as high value as a result of its functions as a carbon sink and long-term carbon store. Under the Step Wise Approach, the strong preference is to avoid any disturbance of peat particularly to peat with active surface vegetation as a result of its combined carbon sink / carbon store status.

1.4.8 The need to achieve greater energy security and provide reliable energy infrastructure is reflected in Chapter 5 of Planning Policy Wales which encourages planning authorities to help facilitate the grid infrastructure.

Future Wales: The National Plan 2040

1.4.9 Future Wales – the National Plan 2040 is the national development framework, setting the direction for development in Wales to 2040, and has development plan status. It is a development plan with a strategy for addressing key national priorities through the planning system, including sustaining and developing a vibrant economy, achieving decarbonisation and climate-resilience, developing strong ecosystems and improving the health and well-being of communities.

1.4.10 Policy 17 (Renewable and low carbon energy and associated infrastructure) of Future Wales: The National Plan 2040 states new strategic grid infrastructure for transmission and distribution of energy should be designed to minimise visual impact on nearby communities; and The Welsh Government commitment to working with stakeholders, including NGET and Distribution

Network Operators, to transition to a multivector grid network and reduce the barriers to the implementation of new grid infrastructure.

Technical Advice Notes (TANs)

1.4.11 TANs sit alongside Planning Policy Wales (PPW) and Future Wales, forming part of the national development framework by providing detailed guidance on implementing national planning policy. The PPW states that TANs together with PPW to set out the policy issues that the planning system deals with. The following TANs have also been taken into account in relation to the Proposed Development, they offer detailed planning guidance on their respective subject areas:

- **TAN 5** - Nature and Conservation Planning
- **TAN 11** - Noise
- **TAN 12** – Design
- **TAN 14** - Coastal Planning
- **TAN 15** – Development, Flooding and Coastal Erosion
- **TAN 18** – Transport
- **TAN 21** – Waste
- **TAN 23 -** Economic Development
- **TAN 24** - The Historic Environment

1.5 The Applicant

1.5.1 The Applicant NGET stand as a leading energy infrastructure company, crucial in delivering electricity throughout the United Kingdom. As a responsible and forward-thinking organisation, NGET are dedicated to ensuring the safe, reliable, and efficient transmission of energy to meet the demands of both consumers and businesses.

1.5.2 NGET are dedicated to supporting the transition to a low-carbon future. NGET are actively investing in renewable energy projects, enhancing grid resilience, and implementing advanced technologies to reduce their environmental impact. Their sustainability initiatives are aligned with national and international climate goals, ensuring that they contribute positively to the global effort to combat climate change.

1.5.3 NGET's role in this instance is to support energy security and ensuring there is sufficient resilience in the energy sector to support the de carbonisation of major employers such as Tata Steel as part of their aspirations to move from traditional steelmaking to an Electric Arc Furnace.

1.6 Structure of this Statement

1.6.1 The remainder of this Planning Statement comprises of the following chapters including appropriate sub-sections:

1.6.2 Section 2.0 (the next Section) provides a description of the application Site and its surroundings;

- Section 3.0 sets out planning history of the Site, and any other relevant planning applications and appeal decisions;

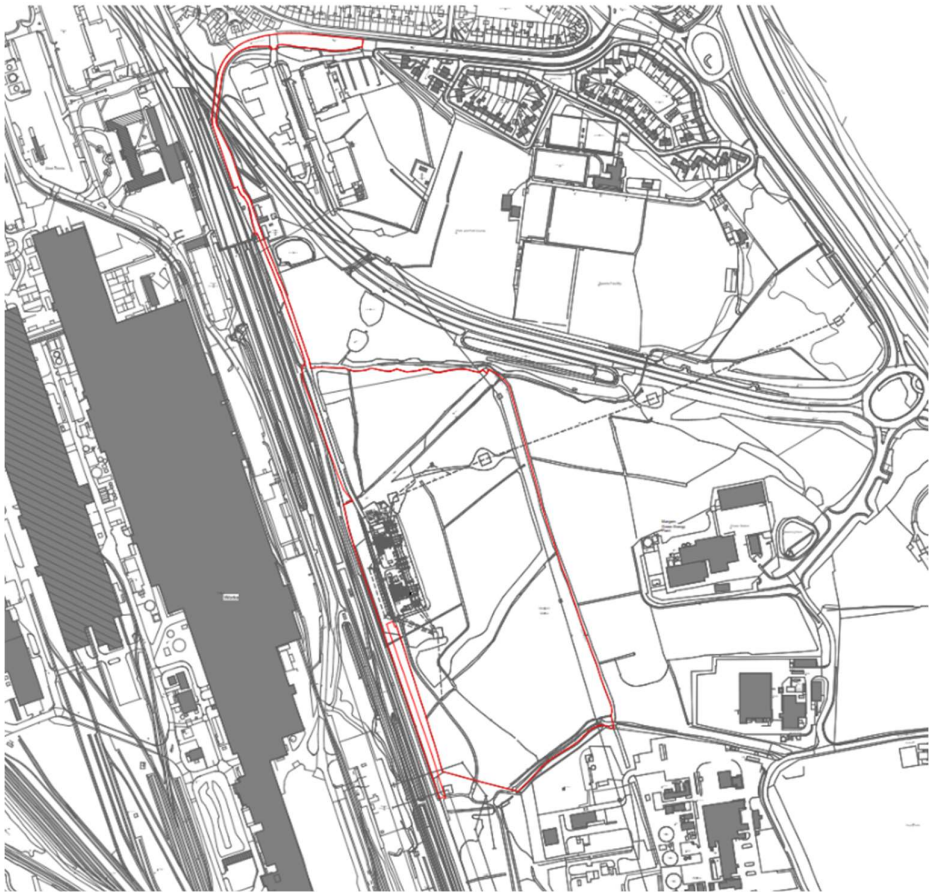
- Section 4.0 describes the Proposed Development proposed in more detail;
- Section 5.0 sets out the relevant national and local planning policies and guidance relevant to the Site and the Proposed Development;
- Section 6.0 considers the main planning issues and provides an assessment of how the application complies with planning policy; and
- Section 7.0 summarises the Planning Statement and draws conclusions.

2 Site and Surrounding Context

2.1 Site Location

2.1.1 The site is located in Port Talbot, South Wales, SA13 2NF, located approximately 14km south-east of Swansea. Specifically, the site is located immediately adjacent to the northeast of the existing Margam 275kV Air Insulated Substation, near the Tata steelworks complex. The Site falls within the administrative boundary of the Council and measures approximately 15.36Ha. The surrounding area is predominantly industrial, featuring views of large-scale buildings associated with Tata Steel and the BOC plant.

Figure 2.1: Site Location Plan



2.2 Site Description

2.2.1 Margam Substation, and the application Site, are located in an area characterised by industrial development. To the east, approximately 290 metres away, are the Western Wood Energy Plant and Margam Green Energy Plant. Further east, approximately 823 meters away, are the A48 (Margam Road) and the M4 motorway, with the Margam Moors beyond. Directly to the west lie the Tata Steelworks and the London to Swansea railway. Access to the site is currently available from the north via the A4241 Harbour Way and from the south-east via Heol Cae'r Bont which connects from the roundabout on the A48 Margam Road.

2.2.2 The application site is a wetland habitat complex, the majority of which is designated as a local Site of Importance for Nature Conservation. It is a flat, low-lying area typical of coastal regions. Industrial development encloses the site to the west and south, obstructing views in these directions. Prominent industrial structures dominate the local landscape and skyline. Additionally, the rising hills to the east enhance this sense of enclosure.

2.2.3 The site is bounded to the west by the existing Margam substation, to the north by the A4241 Harbour Way, providing access into Port Talbot from the M4 J38, to the south by the Western Bio-Energy plant and BOC Gas works, and to the east by the Margam Green Energy Plant.

2.2.4 The area has been an important centre for industrial production since the 19th Century. Due to the areas proximity to coal reserves and coastal access, industry grew as the flow of imports and exports of raw materials and finished products increased from the beneficial geographical position. The Margam Steelworks, first opened in 1923, was the first use of steelworks in the area, which later became part of the Port Talbot Steelworks, which has been one of the largest steelworks in Europe since its inception.

2.2.5 Port Talbot Steelworks have been under the ownership of Tata Steel Europe since 2007 and has an annual steel production of approximately 3.5 million tonnes per year, and 4,000 employees. The plant facilities include two blast furnaces, hot and cold rolling mills, and a power plant. The regional economic impacts of the site are significant, providing thousands of direct and indirect jobs to the economy of South Wales. Furthermore, a significant amount of the steel produced is exported, helping to correct the UK's balance of payments deficit.

2.3 Technical and Policy Considerations

2.3.1 With regard to policy designations and technical considerations:

- The Site is located within a Site of Importance for Nature Conservation (SINC) (Junction 38 Wetland Complex);
- The Site is located within Flood Zone 3 for rivers (more than 1% annual chance of flooding), Flood Zone 1 for the sea (less than 0.1% annual chance), and Flood Zones 2 and 3 for surface water and small watercourses (0.1% to more than 1% annual chance), all accounting for the effects of climate change;
- There is Peat present at the Site buried at depths between 0.2m to 6.1m. The Peat Management Report states that as no peat is exposed at the surface, and no surface vegetation is peat-forming or 'active', the peat deposits are not considered active in terms of carbon sequestration;
- The Site is free from any formal landscape designations. The closest wildlife sites are Margam Moors SSSI and Eglwys Nunydd Reservoir SSSI, approximately 1km south-east of the site;
- The Site is not subject to any heritage designations and contains no designated heritage assets. However, it is worth noting that several designated heritage assets are located within the surrounding area including a scheduled monument (1.37km east), listed buildings, a Grade I registered park and garden (1.15km), and registered historic landscape areas (1.15km east).
- The Site comprises of Grade 4 Agricultural Land, classified as poor-quality agricultural land with severe limitations, which significantly restrict the range of crops and level of yields; and
- Also, an Air Quality Management Area (AQMA) has been declared in Neath Port Talbot covering an area covering the majority of land and properties between the Steelworks and

the M4 Motorway for exceedances of the 24-hour mean PM10 NAQO, however there has been a decline in measured PM10 levels since the AQMA was declared.

2.3.2 In summary, the site is well-located for the proposed use given the location of the existing Margam substation and the proximity to the approved substation at Port Talbot as part of the wider planning application for Tata Steelworks (reference P2024-0711). Whilst the site is not without its environmental constraints it is considered that with sufficient avoidance, mitigation and compensation the Step Wise process can be met to ensure the benefits of this development can be realised.

3 Planning History

3.1 Planning Applications on the Site

3.1.1 A search of the Council's online planning records revealed the following pertinent applications of the Proposed Development in the table below:

Table 3.1: Planning History

Planning Reference	Description of Development	Decision
P2008/0832	Screening opinion for proposed Margam 275KV GIS substation	Not EIA
P2009/0266	Consultation under Section 37 of the Electricity Act 1989 for consent to divert the existing 275 kV VE overhead line in the vicinity of the Margam 275kV substation	No objection
P2009/0267	Erection of a 275KV gas insulated switchgear electricity substation and associated laydown area.	Approved
P2012/0832	Erection of a 275KV gas insulated switchgear electricity substation and associated laydown area (amendment to planning permission ref. P2009/0267 granted on 1/4/10).	Application Withdrawn

3.1.2 Prior to submission of the 2009 planning application (Ref: P2009/0267), a previous EIA Screening Opinion (Ref:P2008/1478) was sought from the Council for the proposed 275kV GIS substation on land north of the existing Margam substation. In their Screening Opinion response, the Council concluded that the development was unlikely to result in significant environmental impacts and therefore was not EIA development. The indicative proposal at that time is outlined below:

Figure. 3.1: P2009/0267 – Substation Proposal

3.1.3 Following receipt of the Council's Screening Opinion, a full planning application (P2009/0267) was submitted in 2009 for the construction of a GIS electricity substation and an associated laydown area, in accordance with the aforementioned plan. This application was approved with conditions under delegated powers, citing the following:

"The proposal forms an essential addition to the national grid system and will enable the connection of a major power generator to be connected to the national grid and facilitate the continued essential supply of power to Corus steelworks. Whilst the proposal does result in the loss of BAP habitat, it is considered that this loss is outweighed by the need for the proposal and that the proposed mitigation strategy is acceptable and therefore the proposal would provide an acceptable form of development within this area. Furthermore the physical development, whilst large in scale, due to its location and context, its effect on the overall character of the area will be small and that any adverse affects are outweighed by the need for the scheme. It is considered that the proposed development would not result in any significant impact upon any residential properties in the area in terms of loss of visual amenity or noise."

3.2 Pre-Application Enquiry

3.2.1 On June 6, 2024, a pre-application enquiry was submitted to the Council, to seek guidance regarding the proposed extension of the existing Margam substation.

3.2.2 The Council's response was received on September 17, 2024. In their feedback, they outlined several key areas that the applicant must address to support the application effectively.

3.2.3 The principle of development and need section of the pre-application enquiry response summarised that whilst the application site is located outside of settlement limits (in accordance with Development Plan Policy SC1), the Proposed Development is required to provide much needed upgrades to energy infrastructure, enable increased capacity needs, for growth and energy security, which fall into criteria 9 of Policy SC1, which allows development outside of settlements where "associated with the provision of public utilities, infrastructure and waste management facilities which cannot reasonably be located elsewhere".

3.2.4 The Council were aware that there is a need to provide upgrades to existing energy infrastructure within the borough in order to serve and facilitate future development and ensure energy security through the transition to a low carbon economy.

3.2.5 Subject to the above listed considerations being met, the pre-application enquiry confirmed the development as acceptable in principle subject to biodiversity, flooding, design and visual impact, highway and pedestrian safety, contaminated land and high-risk coal and noise and air quality.

3.2.6 In preparing this planning application due consideration has been given to the pre-application enquiry advice received, and the Applicant has taken due care to best manage all technical considerations of the Site, and to mitigate any impact or potential impacts as a result of the development, wherever possible.

3.2.7 Further engagement has also taken place with Natural Resource Wales, Council for British Archaeology Wales, and the Trust for Welsh Archaeology (HENEB).

3.2.8 **The Principle of Development**: the need and principle of development is considered to be acceptable subject to the following matters.

3.2.9 **Biodiversity:** A range of surveys have been undertaken in consultation with the Council to ensure that any potential impacts on biodiversity are properly assessed and mitigated, in line with both local and national policies, specifically policies EN6 and EN7 of the Local Plan and in compliance with the step-wise approach. For details of the surveys undertaken, please refer to Section 7.5. As required in the pre-application response this has had regard to the fact that the site is a SINC consisting of a cohesive wetland including wet woodland, reedbeds, ditches and marshy grassland together with the nearby SSSI.

3.2.10 **Flooding:** The Site lies within Flood Zone C2 and within Flood Zone 2 and 3. A Flood Consequences Assessment and Drainage Report has been undertaken to support the

application, demonstrating that the Site can accommodate the Proposed Development and complies with the requirements set out in TAN 15. On-going engagement has been undertaken with the SuDS Approving Body.

3.2.11 **Design and Visual Impact:** The pre-application response recognises that the immediate locality of the site and the presence of the existing substation and overhead powerlines, in principle, is unlikely to result in unacceptable visual impact. The relevant design drawings and elevations for the Proposed Development have been submitted, accompanied by a Landscape and Visual Impact Assessment. This demonstrates compliance with Local Plan Policy BE1, and appropriate mitigation measures have been incorporated where necessary.

3.2.12 **Highways and Pedestrian Safety:** The application site is located off Cefn Gwrgam Road which is unclassified. A comprehensive Transport Assessment has been prepared to demonstrate that both construction and operational traffic can be safely and effectively managed.

3.2.13 **Contaminated Land and Coal Mining Risk:** A Coal Mining Risk Assessment has been completed in line with pre-application advice to address potential issues related to contaminated land and high-risk coal areas. Furthermore, a Ground Investigation report has also been prepared by Baker Hicks and is submitted as part of this application.

3.2.14 **Noise and Air Quality:** Given the site's proximity to an Air Quality Management Area, both a Noise Impact Assessment and an Air Quality Assessment have been undertaken to evaluate and mitigate potential environmental impacts.

4 Proposed Development

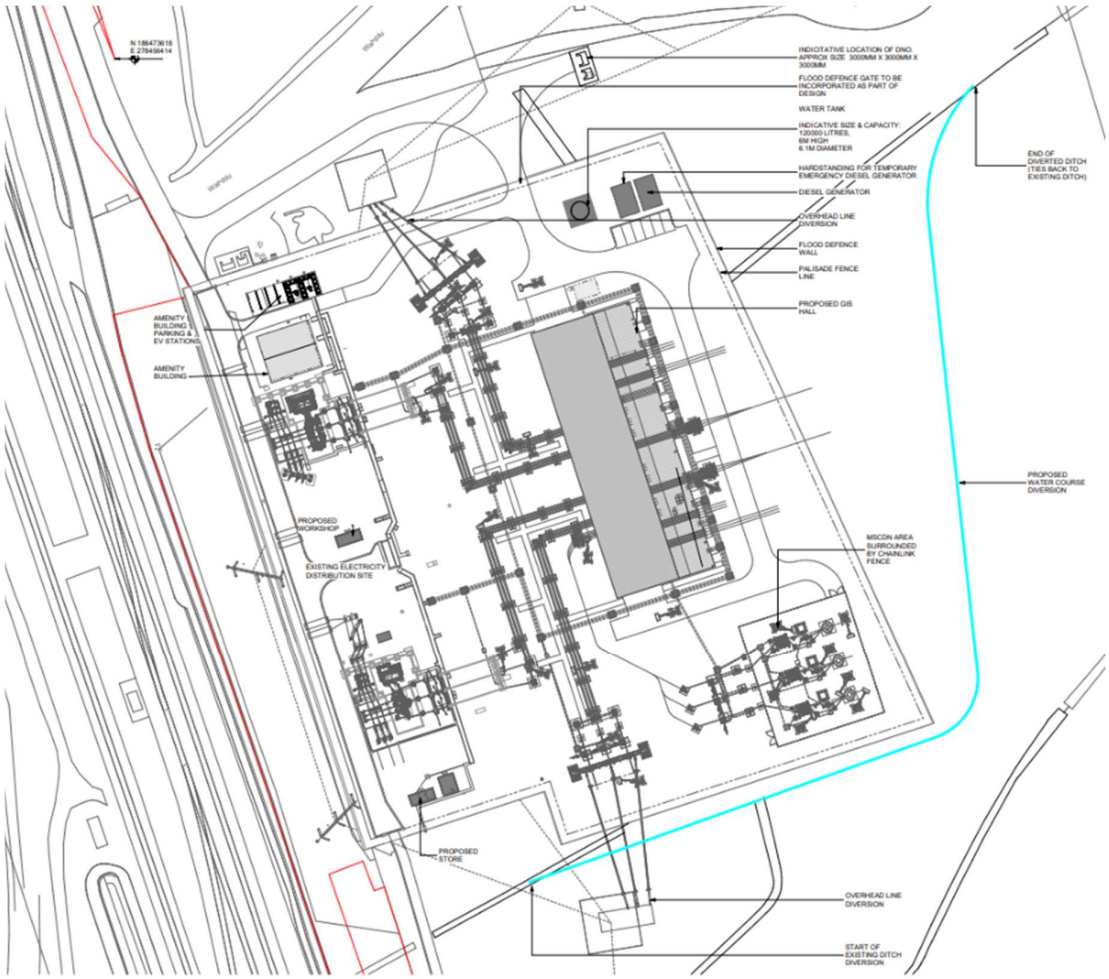
4.1 Overview

4.1.1 The Proposed Development includes the extension of the Margam 275kV substation including the erection of a GIS hall and the demolition of the existing control and amenities buildings to enable the erection of a new amenities building. Works to include earthworks, surface water management and drainage infrastructure, lighting, CCTV, boundary treatment, car parking, ecological improvements including a wildlife tower and gabion baskets (to be conditioned), improved internal access roads, diesel generator and hardstanding, storage buildings and water storage tank, flood defence wall including flood gates and appropriate landscaping and other associated engineering operations.

4.1.2 NGET substations do not directly feed any residential properties and this includes Margam. Margam 275kV substation currently feeds Grange substation which provides a feed to Tata Steel. The new Margam substation extension provides a supply to the new Port Talbot substation which then feeds the EAF at Tata steel in addition to Grange.

4.1.3 The proposed substation extension (GIS Hall) will be located directly to the east of the existing substation, while the amenity building and associated parking spaces are located in the north-western corner of the site. In the north-eastern corner, a water tank and diesel generator are to be installed, and the south-western corner will accommodate storage units. Access to the site will be via the existing entry point on the northern boundary, which will undergo improvement works as part of the overall site development as pictured in Figure 4.1 below.

Figure 4.1: Site Layout Plan



4.1.4 This site has been selected due to its strategic advantages, including the ability to deliver critical upgrades to the energy infrastructure, accommodate future growth for long-term reliability, meet increasing customer demand, enhance energy security, and support broader economic development.

4.1.5 Table 4.1 below sets out the proposed dimensions and materials and colours for the individual buildings and structures that form part of the proposed development.

Table 4.1: Proposed Development Elevations and Materials

Building/Structure	Elevations and Floorspace	Materials and Colours
Margam GIS Hall	Height 17.24m North and South Elevations Width – 70.332m	• **Wall Cladding system** – Composite insulated cladding panels (colour to be conditioned) • **External double door** – General purpose hinged steel door (powder coated grey) • **Gutter System** – Steel gutter (black)

	East and West Elevations Width – 26.682m Floorspace area - 1,876.6 m2	• **Roof cladding system** – Insulated built-up roof with trapezoidal external profile (dark grey) • **External single door** – General purpose hinged steel door (powder coated grey) • **Rainwater pipe** – Aluminium rainwater pipe (powder coated black) • **Kerb upstand** – Concrete kerb upstand • **Roller shutter door** – Roller shutter door (powder coated grey) • **Wall cladding system** – Blank panel for future services (olive green) • **GIB Penetration** – Composite panel (colour to match wall cladding system)
Amenities Building	Height 7.724m South and North Elevations Width 12.34m East and West Elevations Width 13.7m Floorspace – 150m2	• **External Wall Cladding** – Fire Resilient External Wall Cladding Panel (Grey) • **Guter System** – Gutter Highline – Gul/Whi (Black) • **Single Ply Membrane Roof** – Rock span Roof System (Anthracite Grey) • **External Single Door** – Uniguard general purpose hinged steel door (Power Coated Grey) • **Rainwater Pipe** – Aluminium Rainwater Pipe (Powder Coated Mill Black) • **Kerb Upstand** – Concrete Kerb Upstand • **Window** – Aluminium framed Solid Panel Window (Grey) • **Cill, Verge, Head and Cill Flashings** – Aluminium Flashings • **SkylineCA160 Door Canopy** – Door Canopy
Washroom Unit	Height 2.86m East and South Elevations Width 6.045m North and West Elevations Width 2.432m Floorspace – 13m2	• **External modular unit workshop and storage** – Modified ISO standard steel shipping container - grey • **External single door** – General purpose hinged door – powder coated – grey.

Storage and Workshop Units	Height 2.865m West and East Elevation width 6.060m North and South Elevation width 2.4m Floorspace – 13m2	• **External modular unit workshop and storage** – Modified ISO standard steel shipping container (Grey). • **External double door** – General purpose hinged steel door (Powder coated grey) • **External Stair and balustrade** – External stainless-steel handrail on both sides fixed to staircase and landing.
Water Tank	Height 6.204m Width 6.1m	• Reinforced Concrete Slab • Storage Tank • Flanged Gate Value • Suction Connection for Fire Appliance.
Flood Defence Wall	Height 1.15m Thickness 1m	The form of the construction of the flood wall is expected to be one of the following options: • Embedded reinforced concrete wall (2.3) • Sheet piled wall (2.4) • Mass concrete wall (2.5) • Earth bund (2.6)

4.1.6 A detailed suite of drawings accompanies this planning submission, as outlined in Table 1.1 of this Planning Statement. A full description of the elements of the Proposed Development is also provided within the accompanying Design and Access Statement (DAS).

5 Site Selection Process

5.1 Overview

5.1.1 The recent planning approval for Tata Steel UK Electrical Arc Furnace (EAF) (planning application P2024-0711) requires necessary associated upgrades to the wider electrical infrastructure. Without the upgrades required, including the extension to Margam substation, NGET are unable to guarantee there is sufficient capacity within the network to support economic growth and energy security within the region.

5.1.2 The drivers for this project, and the requirement to upgrade NGETS's energy infrastructure include:

- Enabling room for future increased capacity needs, ensuring the UK has a reliable energy system for generations to come;
- Satisfying customer demands;
- Improving energy security; and
- Investing in energy capacity and for growth.

5.1.3 A detailed Siting Study was undertaken to produce a comprehensive assessment of alternative sites with the potential to deliver a substation as an alternative to extending the Margam substation.

5.1.4 The Margam Substation site was selected as the most practical and cost-effective location for the Proposed Development saving public cost for the consumer. Cost effective in this sense does not mean a direct saving for NGET but includes a saving in public cost which is passed to consumers and businesses. The Horlock Rules are explained in Section 6 but comprise a series of criteria applicable to new substations, substation extensions and modifications which cover the following considerations. These have been applied and set out in full within the accompanying Siting Study

5.1.5 This Study assessed multiple sites based on technical feasibility, environmental constraints, and potential community impact, concluding that the chosen site offered the best balance of these factors. The environmental constraints included landscape and visual, ecology, cultural heritage, transport, planning and socio-economic impacts which were mainly informed by a desk-based assessment and a site visit for each option. This is explained in full within the Siting Study report accompanying this planning application.

5.1.6 The methodology adopted was in line with the wider approach taken by NGET as set out in "Our Approach to Options Appraisal" guidance which requires an evaluation of options.

5.1.7 Its strategic location just 1.2 kilometres from the proposed Port Talbot Substation minimises the need for new transmission lines and simplifies integration with existing infrastructure. Additionally, the Margam Substation requires upgrades to support other regional projects, further reinforcing the suitability of this extension. Without the ability to extend the substation would result in the need for a brand new substation with a bigger footprint and much longer cable runs.

6 Planning Policy Context

6.1 NGET's Statutory Responsibilities

6.1.1 NGET is the only company licensed to transmit electricity in England and Wales. NGET's Transmission Licence was granted under the Electricity Act 1989, Section 6 (1) (b).

6.1.2 When developing proposals for new network infrastructure NGET has a duty under the Electricity Act 1989 to do so in an efficient, coordinated and economical way. NGET is also required, under Section 38 of the Electricity Act 1989, to comply with the provisions of Schedule 9 requires licence holders, in the formulation of proposals to transmit electricity to. This has been considered within the accompanying Siting Study:

- Schedule 9(1)(a) "have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest"; and

- Schedule 9(1)(b) "do what reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects."

6.1.3 NGET also has a statutory duty under Section 9 (2) of the Electricity Act 1989:

- "(….) to develop and maintain an efficient, coordinated and economical system of electricity transmission; and

- (…) to facilitate competition in the supply and generation of electricity."

6.2 The Horlock Rules

6.2.1 NGET published guidance[1] sets out their approach towards substation developments and provides guidance on their siting and design in both mitigate environmental effects and meet overarching policy requirements and objectives.

6.2.2 The Horlock Rules comprise a series of criteria applicable to new substations, substation extensions and modifications which cover the following considerations. These have been applied and set out in full within the accompanying Siting Study.

6.3 Policy Overview

6.3.1 This section of the Planning Statement summarises the current and emerging planning policy context for the proposed development.

6.3.2 The Local Plan for the site includes the Neath Port Talbot County Borough Council Local Plan (2011-2026) and the Neath Port Talbot Flood Management Plan.

6.3.3 Additional material policy considerations come from national planning policies outlined in Planning Policy Wales and its supporting technical advice notes, as well as from Future Wales: The National Plan 2040 and the Welsh National Marine Plan.

[1] Microsoft Word - horlock_rules.doc

6.4 Neath Port Talbot County Borough Council Local Plan (2011 – 2026)

6.4.1 The following strategic policies have been considered pertinent to the proposed development:

- **Policy SP1 Climate Change:** The causes and consequences of climate change will be addressed by implementing the following measures.
    - In relation to the causes of climate change, Provision will be made for the County Borough's appropriate contribution to renewable and low carbon energy generation.
    - In relation to the consequences of climate change, likely increased flood risk will be taken into account and addressed by ensuring that there is greater resilience by avoiding development on land that is at risk from flooding in the first instance in accordance with the sequential approach set out in national guidance or in locations that could increase the risk of flooding elsewhere. In addition, the fragmentation of habitats will be minimised and opportunities made for habitat and species change and migration where possible.
- **Policy SP3 Sustainable Communities**: The delivery of sustainable, healthy and cohesive communities and the conservation of the countryside will be promoted by:
    - Defining sustainable communities and locations for development by the identification of a settlement hierarchy that reflects the role and function of settlements;
    - Defining settlement limits within which development which accords with the settlement hierarchy will be permitted in principle;
    - Resisting inappropriate development outside settlement limits
- **Policy SP4 Infrastructure:** New development is expected to make efficient use of existing infrastructure and where required make adequate provision for new infrastructure, ensuring that there are no detrimental effects on the area. Where necessary, Planning Obligations will be sought to ensure that the effects of developments are fully addressed in order to make the development acceptable.
- **Policy SP5 Development in the Coastal Corridor Strategy Area:** In the Coastal Corridor Strategy Area, sustainable growth and development will be promoted to benefit the County Borough as a whole, while protecting and enhancing the area's character and environment.
- **Policy SP14 The Countryside and Undeveloped Coast:** The countryside and undeveloped coast, including landscapes, seascapes and agricultural land, will be protected and where feasible enhanced through the following measures:
    - The protection of the open countryside through the control of inappropriate development outside settlement limits;
    - The protection of the undeveloped coast through the control of inappropriate development;
    - The designation and protection of Special Landscape; and
    - The designation and protection of Green Wedges.
- **Policy SP15 Biodiversity and Geodiversity**: Important habitats, species and sites of geological interest will be protected, conserved, enhanced and managed through the following:

- The identification of the following Internationally and Nationally designated sites within the County Borough to enable their protection;
- Special Areas of Conservation (SACs) and Ramsar Sites;
- Sites of Special Scientific Interest (SSSIs);
- National Nature Reserves (NNRs);
- The identification and protection of sites of regional and local importance; and
- The protection of important natural heritage features.

- **Policy SP16 Environmental Protection**: 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 SP18 Renewable and Low Carbon Energy:** A proportionate contribution to meeting national renewable energy targets and energy efficiency targets will be made while balancing the impact of development on the environment and communities. This will be achieved by:
  - Encouraging where appropriate, all forms of renewable energy and low carbon technology development;
  - Encouraging energy conservation and efficiency measures in all new major development proposals;
  - Ensuring that development will not have an unacceptable impact on the environment and amenity of local residents.

6.4.2 The following topic-based policies are of relevance to the proposed development:

- **Policy SC1 Settlement Limits:** Development within settlement limits that is proportionate in scale and form to the role and function of the settlement as set out in the Settlement Hierarchy will be acceptable in principle. Outside settlement limits, development will only be permitted if it associated with the provision of public utilities, infrastructure and waste management facilities that cannot reasonably be located elsewhere.

- **Policy I1 Infrastructure Requirements:** In addition to infrastructure improvements necessary to make a development acceptable in health, safety and amenity terms, additional works or funding may be required to ensure that, where appropriate, the impact of new development is mitigated.

- **Policy EC4 Protection of Existing Employment Uses:** Proposals which would result in the loss of existing land or buildings in employment use as defined in Policy EC3 and/or within the existing employment areas identified in Policy EC2, will only be permitted where the following criteria are satisfied:

- It is demonstrated that employment uses are no longer viable or appropriate in this location; or
- Continued use for employment purposes would have unacceptable impacts on the environment, local amenity or adjacent uses; or
- The existing space can be redeveloped for employment uses that achieve an increased level of employment combined with other appropriate uses

- **Policy EN6 Important Biodiversity and Geodiversity Sites:** Development proposals that would affect Regionally Important Geodiversity Sites (RIGS), Local Nature Reserves (LNRs), Sites of Interest for Nature Conservation (SINCs), sites meeting SINC criteria or sites supporting Local Biodiversity Action Plan (LBAP) site. or S42 habitats or species will only be permitted where:
  - They conserve and where possible enhance the natural heritage importance of the site; or
  - The development could not reasonably be located elsewhere, and the benefits of the development outweigh the natural heritage importance of the site
  - Mitigation and/or compensation measures will need to be agreed where adverse effects are unavoidable. The ecological mitigation and compensation are detailed later within this planning statement and also in full within the ecological reports submitted alongside this planning application.
- **Policy EN7 Important Natural Features**: Development proposals that would adversely affect ecologically or visually important natural features such as trees, woodlands, hedgerows / field boundaries, watercourses or ponds will only be permitted where:
  - Full account has been taken of the relevant features in the design of the development, with measures put in place to ensure that they are retained and protected wherever possible; or
  - The biodiversity value and role of the relevant feature has been taken into account and where removal is unavoidable, mitigation measures are agreed.
- **Policy EN8 Pollution and Land Suitability:** 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 due to the following will not be permitted:
  - Air pollution;
  - Noise pollution;
  - Light pollution;
  - Contamination;
  - Land instability;
  - Water (including groundwater) pollution.
- Policy EN8 also states that proposals which would create new problems or exacerbate existing problems detailed above will not be acceptable unless mitigation measures are included to reduce the risk of harm to public health, biodiversity and/or local amenity to an acceptable level.

- **Policy RE1: Criteria for the Assessment of Renewable and Low Carbon Energy Development:** All renewable energy or low carbon energy development proposals will be required to demonstrate that:
    - Measures have been taken to minimise impacts on visual amenity and the natural environment;
    - There will be no unacceptable impacts on residential amenity;
    - The development will not compromise highway safety;
    - The development would not interfere with radar, air traffic control systems, telecommunications links, television reception, radio communication and emergency services communications; and
    - There are satisfactory proposals in place for site restoration as appropriate.
- **Policy RE2: Renewable and Low Carbon Energy in New Development:** Schemes that connect to existing sources of renewable energy, district heating networks and incorporate on-site zero / low carbon technology (including microgeneration technologies) will be encouraged. The following proposals will be required to submit an Energy Assessment to determine the feasibility of incorporating such a scheme and where viable, would be required to implement the scheme:
    - Residential development for 100 or more dwellings;
    - Development with a total floorspace of 1,000 sqm or more.
- **Policy W3 Waste Management in New Development:** Proposals for new built development will need to demonstrate that provision is made for the design, layout, storage and management of the waste generated by the development both during the construction phase and occupation. The following proposals will be required to produce Site Waste Management Plans:
    - Residential development for 50 or more dwellings;
    - Industrial or commercial development that would generate in excess of 1,000 tonnes of waste per annum;
    - Development that would generate hazardous waste.
- **Policy TR2 Design and Access of New Development:** Development proposals will only be permitted where all of the following criteria, where relevant, are satisfied:
    - The development does not compromise the safe, effective and efficient use of the highway network and does not have an adverse impact on highway safety or create unacceptable levels of traffic generation;
    - Appropriate levels of parking and cycling facilities are provided and the access arrangements for the site allow for the safe manoeuvring of any service vehicles associated with the planned use;
    - The development is accessible by a range of travel means, including public transport and safe cycle and pedestrian routes;
    - Transport Assessments and Travel Plans are provided for developments that are likely to create significant traffic generation.

6.5 Neath Port Talbot Flood Risk Management Plan

6.5.1 As mentioned in Section 2.3.1, the site sits within Flood zones 2 and 3 and is at some risk of flooding over the course of its lifetime, along with much of the Council. Although there are no large rivers within the Margam ward, the area is home to numerous streams and brooks, as well as the large, raised reservoir of Eglwys Nunydd, which is fed by many of the small watercourses.

6.5.2 Conclusions from the council's flood extent map and hydraulic modelling, indicates some risk of fluvial flooding from the numerous small watercourses, however the build-up of natural sand dunes at Port Talbot Beach and Morfa Beach add natural protection the Port Talbot Steelworks.

6.5.3 From the published Flood Risk Management Plan, there are moderate risks of flooding in a 1 in 30 year, 1 in 100 year, and 1 in 1000-year event, to the south of the ward by Kenfig Industrial Estate, but not on or around the Port Talbot Steelworks. Of the 1289 properties in the ward, an estimated 102 were at low risk of flooding, 9 at medium risk and 6 at high risk. Of the non-residential properties which provided economic activity, of the 2350, an estimated 176 were at low risk of flooding, 39 at medium risk and 12 at high risk.

6.5.4 Furthermore, the requirement for a flood defence wall to protect the electrical equipment in a flood event has resulted in some flood water displacement across the site. This is set out within the accompanying Flood Consequences Assessments. Efforts have been made to notify all affected landowners in accordance with advice from NRW and the Council.

6.6 Planning Policy Wales (PPW)

6.6.1 In February 2024, the Welsh Government released Planning Policy Wales Edition 12 (PPW). This document serves as the primary national planning policy framework for Wales and is a key consideration in planning decisions. It aims to promote sustainable development through the planning system, emphasising a presumption in favour of sustainability and a strong commitment to enhancing population wellbeing.

6.6.2 Chapter 5 of the PPW discusses Wales energy goals. Paragraph 5.7.1 states that:

"The Welsh Government's highest priority is to reduce demand wherever possible and affordable. Low carbon electricity must become the main source of energy in Wales."

6.6.3 Chapter 5 also encourages planning authorities to help facilitate improvements in grid infrastructure. Paragraph 5.7.10 states that:

"Planning authorities should plan positively for grid infrastructure. Development plans should facilitate the grid infrastructure required to support the renewable and low carbon energy potential for the area, particularly areas identified for such development. Planning authorities should support appropriate grid developments, whether or not the developments to be connected are located within their authority."

6.6.4 Paragraph 5.9.19 relates to development management for renewable and low carbon energy and states that:

"In determining applications for the range of renewable and low carbon energy technologies, planning authorities should take into account:

- ***The contribution a proposal will make to meeting identified Welsh, UK and European targets;***
- ***The contribution to cutting greenhouse gas emissions; and***

- ***The wider environmental, social and economic benefits and opportunities from renewable and low carbon energy development".***

6.6.5 Furthermore Paragraph 5.9.20 adds that:

"Planning authorities should also identify and require suitable ways to avoid, mitigate or compensate adverse impacts of renewable and low carbon energy development. The construction, operation and decommissioning, remediation and aftercare of proposals should take into account:

- ***The need to minimise impacts on local communities, such as from noise and air pollution, to safeguard quality of life for existing and future generations;***
- ***The impact on the natural and historic environment;***
- ***Cumulative impact;***
- ***The capacity of, and effects on the transportation network;***
- ***Grid connection issues where renewable (electricity) energy developments are proposed; and***
- ***The impacts of climate change on the location, design, build and operation of renewable and low carbon energy development. In doing so, consider whether measures to adapt to climate change impacts give rise to additional impacts".***

6.7 PPW – Technical Considerations

6.7.1 Section 6 titled Distinctive and Natural Places of PPW covers planning topics related to the historic environment, landscape, biodiversity, geodiversity and habitats, coastal characteristics, air quality, soundscape, water services, flooding and other environmental (surface and sub-surface) risks.

Ecology and Biodiversity

6.7.2 The six steps in the step-wise approach: avoid, minimise, mitigate/restore, compensate on-site, compensate off-site, and refuse planning permission. The paragraph states that once following the step-wise approach and providing evidence in the Green Infrastructure Statement, a scheme of enhancements must ensure a net benefit for biodiversity which is being secured via a Section 106 agreement

6.7.3 The Green Infrastructure Statement provides further detailed guidance on the 6 steps of the step-wise approach. In summary, planning authorities must prioritise avoiding damage to biodiversity and ecosystem functioning, considering alternative sites and designs to minimise harm. Proposals in designated sites or those with irreplaceable habitats and species are unacceptable. If avoiding damage isn't possible, authorities must minimise impacts by retaining and managing habitats, ensuring connectivity, and using innovative solutions. If damage occurs, mitigation or restoration measures should repair habitats and support ecosystem resilience. As a last resort, off-site compensation must fully compensate for any loss, involving habitat restoration or creation, guided by ecological assessments and the Green Infrastructure Assessment. Each step must include a long-term management plan for avoidance, minimisation, mitigation, and compensation measures. If adverse effects outweigh other considerations, the development should be refused.

6.7.4 Paragraph 6.43 states that the planning system has a key role in helping to reverse biodiversity decline and strengthening ecosystem resilience across different scales. It must ensure that appropriate measures are in place to prevent ecological degradation and to actively promote

environmental improvements. While acknowledging that development is necessary and may affect biodiversity, the system should aim to deliver an overall net benefit for biodiversity and ecosystem resilience, which in turn supports greater well-being.

6.7.5 Paragraph 6.43 adds that is important that biodiversity and ecosystem resilience considerations are taken into account at an early stage in both development plan preparation and when proposing or considering development proposals.

6.7.6 Paragraph 6.4.34 discusses the importance of peatland and states that:

"Where peat is identified within proposed developments considerable weight should be given to its protection because of its special importance in underpinning and supporting national natural resources such as soil carbon, biodiversity and flood management, and unless other significant material considerations indicate otherwise it will be necessary to refuse permission."

Flood Risk

6.7.7 Furthermore, PPW also states in paragraph 6.2.22 that:

"Planning authorities should adopt a precautionary approach of positive avoidance of development in areas of flooding from the sea or from rivers. Surface water flooding will affect choice of location and the layout and design of schemes, and these factors should be considered at an early stage in formulating development proposals."

Air Quality

6.7.8 Paragraph 6.76 discusses the issue of air quality stating that when proposing new developments, planning authorities and developers must consider the impact on air quality and noise, especially in designated management or priority areas and near sensitive receptors. They should avoid creating environments with poor air quality or unsuitable soundscapes and are encouraged to include measures that reduce exposure to air and noise pollution while promoting healthy and appropriate acoustic environments.

Technical Advice Notes (TANs)

6.7.9 TANs sit alongside Planning Policy Wales (PPW) and Future Wales, forming part of the national development framework by providing detailed guidance on implementing national planning policy. The following technical advice notes have been identified as of relevance to the proposed development:

- **TAN 5: Nature and Conservation Planning –**This TAN offers guidance on how the land use planning system can help protect and enhance biodiversity and geological conservation.

- **TAN 12: Design –** This TAN provides advise on how 'Promoting sustainability through good design' and 'Planning for sustainable building' may be facilitated through the planning system.

- **TAN 14: Coastal Planning –**This TAN highlights several coastal zone issues that the planning system should address. For development proposals, these include:

    - The nature of the ground conditions and physical processes, and the potential need for remedial and defence works;

    - Effects on physical and biological processes along the coast;

- The potential effects on mineral, water and conservation resources; and
- Any potential visual impact from both land and sea.

- **TAN 15: Development, Flooding and Coastal Erosion -** This TAN offers technical guidance that supplements the policy outlined in Planning Policy Wales regarding development and flooding. It provides advice on development and flood risk in relation to sustainability principles and establishes a framework for assessing risks from river and coastal flooding, as well as additional run-off from development in any location.

- **TAN 18: Transport –** This TAN provides guidance on the following topics related to transport:
  - Integration of land use and transport planning;
  - Location of development;
  - Regional transport plans;
  - Parking; and
  - Design of development.

- **TAN 24: The Historic Environment -** The purpose of this Technical Advice Note (TAN) is to guide how the planning system considers the historic environment during development plan preparation and decision-making on planning and Listed Building (LBC) applications.

Future Wales: The National Plan 2040

6.7.10 Future Wales – the National Plan 2040 is our national development framework, setting the direction for development in Wales to 2040. It is a development plan with a strategy for addressing key national priorities through the planning system, including sustaining and developing a vibrant economy, achieving decarbonisation and climate-resilience, developing strong ecosystems and improving the health and well-being of our communities.

6.7.11 The following policies are pertinent to the proposed development:

- **Policy 2 – Shaping Urban Growth and Regeneration – Strategic Placemaking**: The growth and regeneration of towns and cities should positively contribute towards building sustainable places that support active and healthy lives, with urban neighborhoods that are compact and walkable, organised around mixed-use centres and public transport, and integrated with green infrastructure.

- **Policy 3 - Supporting Urban Growth and Regeneration – Public Sector Leadership:** The Welsh Government will play an active, enabling role to support the delivery of urban growth and regeneration. The Welsh Government will assemble land, invest in infrastructure and prepare sites for development. We will work with local authorities and other public sector bodies to unlock the potential of their land and support them to take an increased development role.

- **Policy 8 – Flooding:** Flood risk management that enables and supports sustainable strategic growth and regeneration in National and Regional Growth Areas will be supported. The Welsh Government will work with Flood Risk Management Authorities and developers to plan and invest in new and improved infrastructure, promoting nature based solutions as a priority. Opportunities for multiple social, economic and environmental benefits must be maximised when investing in flood risk management infrastructure. It must be ensured that

projects do not have adverse impacts on international and national statutory designated sites for nature conservation and the features for which they have been designated.

- **Policy 9 - Resilient Ecological Networks and Green Infrastructure:** To ensure the enhancement of biodiversity, the resilience of ecosystems and the provision of green infrastructure, the Welsh Government will work with key partners to:

  - identify areas which should be safeguarded and created as ecological networks for their importance for adaptation to climate change, for habitat protection, restoration or creation, to protect species, or which provide key ecosystems services, to ensure they are not unduly compromised by future development; and

  - identify opportunities where existing and potential green infrastructure could be maximised as part of placemaking, requiring the use of nature based solutions as a key mechanism for securing sustainable growth, ecological connectivity, social equality and wellbeing.

- **Policy 17 - Renewable and Low Carbon Energy and Associated Infrastructure:** The Welsh Government strongly supports the principle of developing renewable and low carbon energy from all technologies and at all scales to meet our future energy needs. In determining planning applications for renewable and low carbon energy development, decisionmakers must give significant weight to the need to meet Wales' international commitments and our target to generate 70% of consumed electricity by renewable means by 2030 in order to combat the climate emergency. Proposals should describe the net benefits the scheme will bring in terms of social, economic, environmental and cultural improvements to local communities. New strategic grid infrastructure for the transmission and distribution of energy should be designed to minimise visual impact on nearby communities. The Welsh Government will work with stakeholders, including NGET and Distribution Network Operators, to transition to a multivector grid network and reduce the barriers to the implementation of new grid infrastructure.

- **Policy 18 - Renewable and Low Carbon Energy Developments of National Significance:** Proposals for renewable and low carbon energy projects deemed Developments of National Significance will be permitted if they comply with Policy 17 and meet criteria ensuring minimal adverse impacts on landscapes (especially near National Parks and AONBs), visual amenity, internationally and nationally designated nature sites, protected species and habitats, and built heritage. Projects must enhance biodiversity, avoid environmental disturbances (e.g., noise, light, air quality), not interfere with defence or aviation operations, and ensure sustainable transport and resource use. They must also include clear decommissioning plans and consider cumulative impacts from existing and approved developments.

Emerging Planning Policy: Neath Port Talbot Replacement Local Plan

6.7.12 The Council is in the process of developing a new Local Plan for the Borough. The Council held an 8-week consultation on the Replacements Local Plan Preferred Strategy between 12th December and 6th February 2025. All comments received during this consultation stage are being considered by the Council and works will progress on the Deposit Plan.

6.7.13 As the emerging Local Plan is still at an early stage and has not yet reached draft form, it is considered to carry only limited weight in the assessment of the Proposed Development. However, this position should be kept under review until the application is determined. Consequently, it is not currently possible to assess the proposal against the emerging policies. The progress of the Local Plan will continue to be monitored, and appropriate action will be taken should there be any significant developments prior to the granting of permission.

7 Planning Assessment

7.1 Overview

7.1.1 This section provides analysis of the Proposed Development against the identified relevant national and local planning policies and other material planning considerations.

7.1.2 Key matters for the determination of the application that are assessed in this section are as follows:

- The Principle of Development;
- Design;
- Flood Risk & Drainage;
- Ecology and Trees;
- Ground Conditions;
- Environmental Health;
- Transport and Access;
- Landscape and Visual Impacts; and
- Heritage Impact and Archaeology.

7.2 The Principle of Development

7.2.1 The primary objective of Planning Policy Wales (PPW) is to ensure that that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales. PPW must reconcile the needs of development and conservation, securing economy, efficiency and amenity in the use of the land, ensuring the sustainable management of natural resources and protecting, promoting, conservating and enhancing the built and historic environment.

7.2.2 PPW also sets out objectives regarding electricity grid network and energy storage which hold particular relevance to the Proposed development. PPW states that an effective electricity grid network is essential to achieve the Welsh Government's renewable and low carbon goals. Planning for energy developments and grid infrastructure should be integrated. Additional grid infrastructure may be necessary to support Pre-Assessed Areas in Future Wales and new energy projects.

7.2.3 **Paragraph 5.7.10 states that:** ***"Planning authorities should plan positively for grid infrastructure. Development plans should facilitate the grid infrastructure required to support the renewable and low carbon energy potential for the area, particularly areas identified for such development. Planning authorities should support appropriate grid developments, whether or not the developments to be connected are located within their authority."***

7.2.4 There is further support for low carbon energy infrastructure in national policy from Future Wales: The National Plan 2040. Future Wales Policy 17 (Renewable and Low Carbon Energy and Associated Infrastructure) states that in determining applications for low carbon infrastructure, significant weight should be applied to proposals contributing to meeting future

energy goals and needs. Future Wales also adds that the Welsh Government wishes to see new grid infrastructure for the wider transmission and distribution of electricity which should be designed to minimise their visual impact on nearby communities.

7.2.5 The Council's Local Plan reflects the goals and stance towards improving energy efficiency and infrastructure. Policy SP18 (Renewable and Low Carbon Energy) states that a proportionate contribution to meeting national renewable energy targets and energy efficiency targets will be made while balancing the impact of development on the environment and communities. This will be achieved by:

- Encouraging, where appropriate, all forms of renewable energy and low carbon technology development;
- Encouraging energy conservation and efficiency measures in all new major development proposals;
- Ensuring that development will not have an unacceptable impact on the environment and amenity of local residents.

7.2.6 The Proposed Development, comprising an extension to the existing Margam Substation and associated ancillary works (fully described in the Description of Development), represents a vital upgrade to national electricity infrastructure. It aligns with both local and national objectives and policies. Designed to meet growing energy demand, the extension will address current needs while accommodating future increases, ensuring a consistent and reliable energy supply that supports the continued growth and stability of industrial operations.

7.2.7 An electricity substation provides a critical role in the transmission and distribution of electrical power. The substation's operational role is essential for efficient long-distance transmission through stepping-up power levels and stepping down for safe distribution to homes, business, and industries. It can therefore be considered an essential element of the electricity network. Substations help regulation and maintain voltage levels within acceptable limits across the grid. They can also be used to isolate parts of the grid for maintenance or in the event of a fault, protecting the system from damage.

7.2.8 While the proposed extension to the Margam Substation does not directly involve low-carbon or renewable energy sources (as referenced in Policies SP18 and RE1 of the Council's Local Plan), its purpose and outcomes strongly align with the aims of Policies SP4 of the local plan, Policies 3 and 17 of Future Wales, and Paragraph 5.7.10 of PPW. The development constitutes critical upgrades to electricity infrastructure, enhancing both efficiency and capacity. Its location adjacent to the existing substation has been selected for optimal efficiency and minimal environmental impact, with mitigation measures incorporated where necessary. Overall, it will support a resilient and efficient electricity grid and support major employer Tata Steelworks for move from traditional steelmaking to Electric Arc Furnace, which will be vital for meeting renewable and low-carbon energy goals.

7.2.9 The proposed extension and ancillary development are essential to meeting the increasing energy demands of the surrounding area, ensuring a stable and reliable electricity supply. As regional development continues in Neath Port Talbot, the substation will be key to improving network resilience, reducing the risk of outages, and supporting future residential and commercial growth. This is particularly important given its strategic proximity to Port Talbot steelworks and the area's industrial character.

7.2.10 Based on the identified need for the Proposed Development and its alignment with both national and local planning policy, the proposed extension to the Margam Substation is considered to be acceptable in principle. The Proposed Development supports both the objectives of Planning Policy Wales and Future Wales by contributing to a resilient and efficient electricity grid, which is essential for achieving renewable and low carbon energy goals. The Proposed Development

also aligns with the Council's Local Plan by promoting energy infrastructure that balances environmental and community impacts.

7.2.11 Given the Proposed Development's strategic importance in supporting regional energy demands and industrial growth, the proposal is consistent with the overarching aim of delivering sustainable development and is therefore deemed appropriate in planning terms and should be considered acceptable in principle; in accordance with overarching aims of Planning Policy for Wales (PPW and Future Wales) and requirements of relevant policies SP4 (Infrastructure) and I1 (Infrastructure Requirements) of the adopted Local Plan.

7.3 Design

7.3.1 Policy BE1 Design of the Local Plan states that all development will be expected to demonstrate high quality design which fully takes into account the natural, historic and built environmental context and contributes to the creation of attractive, sustainable places.

7.3.2 PPW also encourages good design and states planning authorities should through a process of negotiation seek to improve poor or average developments which are not well designed, do not take account of their context and consider their place, or do not meet the objectives of good design. Paragraph 5.12.2 discusses design choices and site selection stating that:

"Planning authorities should consider both design choices and site selection and treatment as part of assessing development proposals and encourage a shift towards embedding circularity in the flow of materials. Measures which prevent waste arising include reducing the quantity of wastes produced, the reuse of products, extension of the lifespan of products and considering how materials within a site can be incorporated into new development".

7.3.3 Details of the proposed scale, appearance and layout of the proposed development have been provided in supporting drawings of the application. The elevations and materials used are also outlined in the supporting Design and Access Statement. In preparation and design of the proposals, due consideration has been given to the characteristics of the surrounding area, and the available area for development. The scale of the proposed development is limited to that needed for operational purposes. The proposed development's design evolved from a comprehensive siting study conducted in January 2025, which assessed alternative locations and scales against technical and engineering factors. The study concluded that the application site is the most suitable overall.

7.3.4 It is proposed that the existing control and amenities building will be demolished and replaced with a new amenities building which will include welfare facilities, together with a meeting room and one large office and a second general office. There will be no intensification to the number of staff working from the amenities building and it will remain as the existing arrangements. This means that it is likely that staff will be present onsite on average twice per month while general inspections and maintenance take place. This is normally undertaken by maintenance workers together with additional supervisors depending on the complexity of the tasks. Given the electrical nature of site and health and safety implications, it is often necessary for several staff to be on site during routine operations, maintenance and monitoring. These include not only workers but regional operational managers and other asset health staff from NGET who regularly carry out various audits and so require desk space. This will be a temporary basis only and there will be no permanent members of staff on site.

7.3.5 The substation has been designed for operational purposes and is the minimum operational footprint in order to minimise environmental impact as far as possible.

7.4 Flood Risk & Drainage

7.4.1 Both local and national planning policies support development proposals that incorporate appropriate flood risk mitigation measures. Policy BE1: Design in the Council's Local Plan requires all development proposals to demonstrate high-quality design, permitting only those where drainage systems are designed to manage surface water runoff, reduce flood risk, and prevent pollution. Similarly, Planning Policy Wales (Policy 8) promotes flood risk management as a means to enable sustainable strategic growth and regeneration. Further guidance is provided in Technical Advice Note (TAN) 15, which states that a Flood Consequences Assessment (FCA) is required for any development located wholly or partially within Flood Zones 2 or 3.

7.4.2 The Baker Hicks Flood Consequence Assessment (FCA) (Baker Hicks, 2025b) provides a review of the potential sources of flood risk at the Site to determine an appropriate design level for flood mitigation measures in the form of a flood defence wall. The FCA concludes that the displacement of floodwater by the proposed flood defence wall during the 1% (1 in 100) and 0.1% (1 in 1,000) annual exceedance probability floods when considering the impacts of climate change will have only a limited effect on the flood extent in the vicinity of the Proposed Development, with peak flood levels increased by 0.019m and 0.023m respectively. However, the detailed hydraulic modelling that informed the FCA indicates that the annual probability of the land in the vicinity of the Proposed Development flooding is between 10% (1 in 10) and 3.3% (1 in 30) and therefore the minor impact in terms of flood extents and levels arising from the displacement of floodwaters would manifest itself only very infrequently and for a limited duration. Whilst the flood defence wall will result in the displacement of flood water across the wider Margam Moor site, this is minimal and all relevant landowners have been notified as per the advice received from NRW and the Council.

7.4.3 Therefore, it can be concluded that the Proposed Development will have no significant impact within the retained areas of the SINC by virtue of increased flood extents or levels.

7.4.4 Should the unlikely event occur where Margam Substation were to flood to an extent to which it went offline, the operational impact would likely be limited in scale and manageable. There is no indication that such an event would result in a widespread blackout or pose a significant risk to Tata Steel's operations. Furthermore, the connection offer for the new EAF, accepted by Tata, is based on this single substation connection. Tata accept this unlikely risk and will mitigate appropriately. The electric arc furnace is not as sensitive to cessation as the blast furnace operation was, the furnace can easily be restarted with little effect on production in the event of a loss of power. The worst-case scenario is that the refractories would need to be removed, and this is completed on a two-week cycle under normal operations.

7.4.5 BP 213 (Substation Flood Risk Assessment and Flood Risk Monitoring) is the appropriate NGET procedural reference which sets out the technical and procedural requirements for flood resilience. The guidance under TAN15 defines "highly vulnerable" development as that which, if flooded, would pose a risk to life, the environment, or critical services. In contrast, "less vulnerable" development is where the consequences of flooding are more manageable and do not pose such risks.

7.4.6 There is no evidence of a direct risk to life or the environment from a flood at Margam. Tata Steel appears to have sufficient backup arrangements in place. The substation's role in the grid does not suggest it would trigger a regional blackout if temporarily offline.

7.4.7 NGET substations do not directly feed any residential properties and this includes Margam. Margam 275kV substation currently feeds Grange substation which provides a feed to Tata Steel. The new Margam substation extension provides a supply to the new Port Talbot substation which then feeds the EAF at Tata steel in addition to Grange.

7.4.8 Therefore, from an operational standpoint, the Margam Substation can reasonably be considered *less vulnerable* under TAN15.

7.4.9 Based on current understanding and assuming confirmed redundancy, Margam Substation qualifies as “less vulnerable” under TAN15 from an operational perspective.

7.4.10 A drainage strategy using attenuated discharge to the local network has been developed, with SuDS Approval Body to be sought alongside the planning application.

7.4.11 Surface water features at the site include interconnected drainage ditches, such as the Mother Ditch system, and the Eglwys Nunydd Reservoir, located 1km southeast. The Development Advice Map indicates the substation site is in Zone C2, lacking flood defences.

7.4.12 Fluvial modelling shows the substation site is at risk of flooding in 1 in 1,000-year and 1 in 100-year events (with Climate Change). A Flood Consequence Analysis recommends a fluvial defence wall with a crest level at 5 m AOD to protect the substation.

7.4.13 Further hydrological modelling will include site-specific data and be confirmed in the final FCA. The site is low-lying, with shallow groundwater and unproductive superficial deposits. Bedrock deposits are classified as a Secondary A aquifer, supporting local water supplies.

7.4.14 A flood defence wall is proposed to protect the substation, designed to resist extreme flood events. Surface water runoff will be discharged at a controlled rate into the existing tributary network, not exceeding the greenfield runoff rate of 2.9 litres per second for up to the 1 in 100-year storm event with a 40% climate change allowance. A detention basin will manage flow rates, with outflow pumped to the Upper Mother Ditch. Surface water drainage provision is subject to planning and SuDS Approval Body approval.

7.5 Ecology and Trees

7.5.1 Local Plan Policy SP15 states that important habitats, species and sites of geological interest will be protected, conserved, enhanced and managed. Protection and enhancement of ecology is also supported in national policy with paragraph 6.43 of PPW stating that the planning system has a key role in helping to reverse biodiversity decline and strengthen ecosystem resilience. The system should aim to deliver an overall net-benefit for biodiversity and ecosystem resilience. This is also echoed in TAN 5 (Nature and Conservation Planning) which states biodiversity conservation and enhancement is an integral part for planning and sustainable development, paragraph 2.4 adds that development policies and, where appropriate, supplementary planning guidance, should promote opportunities for the incorporation of wildlife and geological features within the design of development and green infrastructure.

7.5.2 The Junction 38 Wetland Complex Site of Importance for Nature Conservation (SINC) will face direct impacts due to permanent and temporary habitat loss. The Proposed Development may also affect the Eglwys Reservoir Site of Special Scientific Importance (SSSI) and Margam Moors SSSI during construction through disturbance (noise and/ or lighting) and air pollution impacts. A detailed assessment of the impacts and required mitigation and compensation measures are outlined within the Ecological Impact Assessment (EcIA). Impacts on the Junction 38 Wetland Complex SINC will be mitigated and compensated for through on-site and off-site habitat enhancement (as outlined within the Key Landscape and Ecological Deliverables and Off-Site Compensation and Enhancement Sections below), re-burying of excavated peat, and measures detailed within the Construction Environmental Management Plan (CEMP). Impacts on the SSSIs will be reduced to non-significant effects through measures detailed within the CEMP.

7.5.3 The Site's habitats include a mosaic of swamp (mostly reedbed), marshy grassland, dense scrub, and standing water, transitioning between these states. Other habitats include neutral semi-improved grassland and ephemeral/short perennial areas. The Site is classified as Section 7 Priority Habitat: reedbeds.

7.5.4 The Site support various protected or notable species. Surveys have been undertaken to assess impacts and inform licensing requirements, with all mitigation measures outlined within the EcIA to ensure no significant effects from the proposed development on protected and notable species.

7.5.5 The appropriate surveys have been undertaken on the site to understand the biodiversity conditions onsite and opportunities for appropriate mitigation or enhancement as part of the proposals, in accordance with local plan policies SP15, SP16, EN6 and EN7.A summary of the species surveys and relative importance are provided below:

- Otter – the assessment concluded that otter may commute through the site with their potential presence assessed as being of less than local importance;
- Water vole – surveys concluded the likely present of water vole with a low population density, assessed as of local importance;
- Breeding birds - surveys recorded 25 species with the assemblage being assessed as of local importance;
- Wintering birds – surveys recorded 40 species with the assemblage being assessed as of local importance;
- Reptiles – the assessment concluded that the site likely supports low population of common lizard, slow worm and grass snake, meeting the criteria for a key reptile site of county importance;
- Great crested newt – are considered absent from the site;
- Bats – No bat roosts were recorded on site, bat activity was low, comprising mainly common and soprano pipistrelle bat species. Other species included lesser horseshoe, brown long-eared, noctule, Myotis spp., and serotine with assemblage being assessed as of local importance; and
- Invertebrates – surveys are still on-going as a precautionary approach the assemblage has been assessed to be of regional importance.

Step Wise Approach

7.5.6 In accordance with the stepwise approach outlined in Planning Policy Wales (Edition 12, 2024), a comprehensive Siting Study was undertaken to identify a preferred location for the proposed 275kV GIS substation (Stantec, 2025). The study assessed ten potential sites, with five shortlisted for detailed appraisal. Each site was evaluated against environmental, technical, and socio-economic criteria, including proximity to designated ecological sites, landscape sensitivity, access, and integration with existing infrastructure.

7.5.7 Option 2, located directly adjacent to the existing Margam Substation, was identified as the preferred site and is the Site considered as the Proposed Development. While the Option 2 location lies within the Junction 38 Wetland Complex SINC, the Siting Study concluded that no alternative site assessed could avoid impacts on designated ecological sites. All other options considered in the siting study would result in either direct or indirect impacts on the SINC or other designated sites (e.g. SSSIs or ancient woodland) due to the required cable routing or substation footprint.

7.5.8 Option 2 was selected as the least environmentally damaging and most technically viable solution, offering:

- Direct adjacency to existing infrastructure, enabling extension rather than new construction;

- The shortest cable route to the proposed Port Talbot Substation, reducing land disturbance and ecological impact;
- Location within an established industrial area, minimising visual and community impacts; and
- Use of existing access routes, avoiding the need for new road construction.

7.5.9 The study demonstrates that avoidance of impact on the SINC is not possible. This is due to the critical need for the Proposed Development, which is driven by the specific requirements of Tata and cannot be altered without compromising its viability. In this context, Option 2 represents the most sustainable and deliverable solution when assessed against the full range of planning and environmental constraints.

7.5.10 The study demonstrates that avoidance of impact on the SINC is not possible. This is due to the critical need for the Proposed Development, which is driven by the specific requirements of Tata and cannot be altered without compromising its viability. In this context, Option 2 represents the most sustainable and deliverable solution when assessed against the full range of planning and environmental constraints.

7.5.11 Following the Siting Study, various options for the design of the substation in the Option 2 location were considered. The primary aim of the design considerations was to minimise the footprint of the Proposed Development, such that permanent impacts on the SINC would be minimised. The scheme design has also included consideration of elements of the design to minimise impacts beyond the footprint of the substation itself on the retained area of the site (e.g. through consideration of lighting design).

Key Landscape and Ecological Deliverables

7.5.12 The Landscape and Habitat Management Plan for the Site describes the key landscape and ecological deliverables. Habitat measures will include the:

- Natural regeneration of reedbed and associated habitats within the permitted development footprint;
- Realignment of diches within the Site and reconnection to the wider ditch network;
- Reinstatement and/or enhancement of ditches within the Site to restore ditch profile and function and connection to the Upper Mother Ditch;
- Provision of trees and scrub in appropriate locations;
- Management and monitoring of reedbed habitat;
- Management and monitoring of the extent of willow and other scrub to maintain balance between scrub, wetland habitats and open ditch habitats; and
- Monitoring of the extent of marshy grassland/drier grassland in response to ditch reinstatement and realignment. Consideration will be given to the incorporation of specific management and monitoring prescriptions for grassland if it becomes a feature of the site.

7.5.13 Species measures will include:

- Provision of reptile hibernacula;

- Provision of a “Wildlife Tower” to provide opportunities for roosting bats;
- Provision of gabion baskets for invertebrates;
- Maintenance of a mosaic of wet scrub, reedbed and ditch habitats to support diversity of breeding bird, mammal (water vole and others) and invertebrate species;
- Inclusion of a Lighting design to maintain dark corridors for use by foraging and commuting bats.; and
- Monitoring and control of invasive nonnative species, where required.

Off-Site Compensation and Enhancement

7.5.14 To deliver a measurable net benefit for biodiversity, a complementary off-site enhancement scheme is proposed on Tata Steel land at Margam Burrows. This will be secured via a Section 106 agreement and includes:

- Scrub removal around existing dune slack ponds to improve conditions for great crested newts (GCN);
- Creation of new dune slacks in low-diversity areas;
- Reuse of excavated sand to create open dune habitat and opening up closed-sward on south-facing dunes to benefit invertebrates and early successional species;
- Installation of multifunctional gabion basket features using clean slag provided by Tata Steel.;
- Rotational scrub management, particularly targeting species such as grey willow and sea buckthorn to maintain balance between dune grassland and scrub;
- Dune slack rejuvenation on a 4–5 year cycle; and
- Monitoring and adaptive management to maintain habitat quality and species diversity.

Net Benefit for Biodiversity

7.5.15 The combined on-site and off-site measures are designed to deliver a measurable Net Benefit for Biodiversity in accordance with Planning Policy Wales and the DECCA Framework. The proposals:

- Compensate for the permanent loss of part of the J38 Wetland SINC;
- Enhance the ecological function of retained habitats;
- Enhance and create new priority habitats and improve habitat connectivity;
- Support protected and notable species; and
- Provide for long-term management and monitoring to secure biodiversity gains.

7.6 Ground Conditions

7.6.1 Local Plan Policy EN8 (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 due to contamination and water (including groundwater) pollution will not be permitted. Proposals which would create new problems or exacerbate existing problems detailed above will not be acceptable unless mitigation measures are included to reduce the risk of harm to public health, biodiversity and/or local amenity to an acceptable level.

Coal Mining Risk Assessment

7.6.2 A Coal Mining Risk Assessment was conducted by BakerHicks. The report concluded that the risk of historical coal mining activities on the proposed development is considered to be low.

7.6.3 Although there remains a moderate risk of potential unrecorded shallow mine workings across the site. Further ground investigation at the substation is required to determine the presence of any shallow coal workings or to investigate the depth of bedrock cover to coal beneath the site.

Earthworks Controls and Mitigation

7.6.4 Excavation, particularly for building foundations, will involve significant ground disturbance. To minimise environmental impact, the following best practices will be implemented.

7.6.5 Erosion control is prioritised over sediment control to reduce water pollution. Disturbed areas will be minimised by preserving natural vegetation and avoiding unnecessary topsoil disturbance. Work will be phased to reduce runoff, and drainage systems, sediment traps, and runoff controls will be installed before site clearance. Bare ground exposure will be limited, and clean runoff will be diverted around the site. Erosion and sediment control measures will be maintained and monitored throughout the project.

7.6.6 Stockpiled materials, such as excavation residue, can pollute water and air. To mitigate this, stockpiles will be placed away from watercourses, on stable ground, and runoff will be controlled. Contaminated materials will be stored on impermeable surfaces within bunded areas and covered to prevent runoff. Contaminated runoff will be disposed of according to legal requirements. During dry weather, dust control measures will include covering or dampening materials and limiting stockpile height.

7.6.7 Further controls and mitigation measures for silt-laden runoff are detailed in the Water Management Plan.

Continuous Flight Auger (CFA) / Auger Displacement Piles (ADP)

7.6.8 Laing O'Rourke will conduct piling for structural foundation support. Although the exact method is not yet determined, displacement piling methods will be considered to minimise disruption to peat layers. Drilled displacement piles, which displace soil laterally, are a likely option. Water control measures will include an abstraction and discharge system, with remaining water managed in in accordance with the Water Management Plan.

Discovery of Contaminated Land

7.6.9 The Site identified for the Margam Substation is currently undeveloped. It is noted that the Tata Steel plant is situated to the west, separated by the Network Railway, which runs to the north-south. Should any contamination be identified on this site, it is likely to be associated with historical railway development. However, any potential contamination can be appropriately addressed through the application of standard planning conditions typically used to manage land contamination.

Peat

7.6.10 Under Planning Policy Wales Edition 12 (2024), peat is highly valued for its role as a carbon sink and long-term carbon store.

7.6.11 The Step-Wise Approach outlines four key stages for development:

- Step 1 – Avoid (highest priority)
- Step 2 – Minimise
- Step 3 – Mitigate/Restore
- Step 4 – Compensate on/off site

7.6.12 A fifth step, biodiversity enhancement and a Long-Term Management Plan is also required, especially for peat soils with active vegetation due to their combined carbon sink and store status.

7.6.13 Buried peat without vegetation, found metres below ground, is less common. It no longer acts as a carbon sink but remains a carbon store and is therefore less sensitive than surface peat. Where avoidance is not possible, the key strategy is to minimise excavation and re-bury any removed peat on site to preserve long-term carbon storage.

7.6.14 At the Margam site, peat is buried at varying depths up to 6.1m below ground level (bgl). None of the peat is 'active' or sequestering carbon, as there is no vegetation layer. However, buried peat remains a carbon store if waterlogged and not exposed to oxygen.

7.6.15 Three principal construction techniques for the substation extension may interact with peat soils:

- Excavation: Involves bulk removal of ground materials for foundations.
- Driven piling: Pre-cast concrete piles are forced into the ground without excavation.
- Augered piling: A hole is bored and filled with concrete in-situ, involving limited excavation.

7.6.16 Driven piling displaces peat but keeps it underground and waterlogged, preserving its carbon storage. Augered piling may bring some peat to the surface, requiring storage and later disposal. Both piling methods disturb less ground than excavation, and the total volume of disturbed peat is expected to be minor. Excavation for foundations is shallow, up to 1 m deep.

7.6.17 The Construction Peat Management Plan, submitted as part of the planning application, provides an assessment of the expected volumes of peat soils that will require excavation during the construction of the Margam Substation extension. The assessment has included consideration of all the proposed excavation work that have potential to encounter peat soils during the construction process. In accordance with Planning Policy Wales, the Step-Wise Approach has been applied to guide decision-making for this development. A siting study was carried out in line with Step 1 – Avoidance – which concluded that the selected location is the most appropriate. Subsequent steps have therefore been followed to minimise the potential impacts of the development.

7.6.18 The assessment indicates that 2,010 m^3 peat soil will be excavated as a result of the development, of which 1,956 m^3 would be suitable for reburial. This peat soil will be reburied at the identified locations near the proposed Margam substation. The proposed material storage area is in excess of the expected excavation volumes, providing a level of contingency in the

event that more peat soil is encountered and to allow for bulking of the peat soil as it is likely to be mixed with other soil materials during construction operations.

7.6.19 Approximately 54 m^3 peat soil is expected to be excavated as a result of augered piling operations. As a result of the augering process, this peat soil will be mixed with other soil and rock materials and it will not be possible to separate out the peat soils from these other materials. The mixed arisings will be removed from site for disposal at a suitably licensed facility.

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

7.6.21 Whilst the removal of any peat will be avoided as far as possible, any peat removed will be stored and reburied accordingly. Whilst peat removal has not been entirely avoided, in accordance with the Step Wise process, suitable mitigation has been identified.

7.7 Environmental Health

7.7.1 Local Plan Policy BE1 (Design) states that all development proposals are expected to demonstrate high quality design and does not have a significant adverse impact on the amenity of occupiers of adjacent land or the community.

7.7.2 Local Plan Policy SP16 (Environmental Protection) states that air, water and ground quality and the environment generally will be protected and where feasible will be improved through ensuring proposals have no significant adverse effects on water ground or air quality and do not significantly increase pollution levels. The following reports have been produced to ensure the Proposed Development does not have any adverse effects on the surrounding environment:

Operational Noise Impact Assessment

7.7.3 An Operational Noise Impact Assessment (ONIA) has been produced by RSK Acoustics Ltd to determine the potential noise impacts associated with the operation of the substation extension compared to the existing acoustic environment. The report concluded that the noise levels from the extension will be very low, and as such will have no impact on the existing soundscape.

7.7.4 At this stage no additional noise control measures are considered to be required. Any changes to the design, sound emission data or inclusion of additional noise emitting plant items may require additional acoustic design work.

Construction Noise Impact Assessment

7.7.5 A Construction Noise and Vibration Impact Assessment has been undertaken by RSK Acoustics (RSKA) on the behalf of contractors Laing O'Rourke. The assessment has been informed by baseline noise surveys carried out by RSKA in March 2025 and May 2024 comprising unattended measurements at locations representative of the nearest noise sensitive receptors and nearest ecological receptors respectively.

7.7.6 The Assessment establishes noise criteria have not been breached, noise from construction works may still have some impact on the identified receptors. While the predicted values represent a worse case scenario, it is considered good practice to implement Best Practicable Means. This is set out in full within the Construction Noise Assessment.

Air Quality Assessment

7.7.7 An Air Quality Assessment was undertaken by Stantec to assess the impact of construction and decommissioning of the Proposed Development on air quality within the study area. The report

concluded that for that the impacts from construction and decommissioning on traffic and ecological receptors are considered to be 'not significant'. In addition, the impacts of emissions associated with Non-Road Mobile Machinery during the construction and decommissioning phases of the Proposed Development are considered to be 'not significant'.

7.7.8 It is acknowledged that construction and decommissioning may generate dust. Following IAQM guidance, mitigation measures should be implemented to reduce PM10 and dust soiling risks. With these measures, impacts are considered 'not significant'. The report concludes that the Proposed Development is therefore considered to be in accordance with the requirements of the Planning Policy Wales, and relevant local and national guidance regarding air quality.

Lighting Impact

7.7.9 During construction, temporary lighting will be required for safety. Laing O'Rourke will provide lighting at welfare and working locations, using best practices to minimise glare and other impacts.

7.7.10 Lighting mitigation measures include using task-specific luminaires, reducing light spill with low cut-off systems, employing louvres and shields, and using visual screening. Lighting levels will be reduced outside working hours, with automated controls to manage lighting based on activity and ambient light. Directional lighting will minimise intrusion into sensitive habitats, and an appropriate number of lighting units will be used to avoid excessive light spill.

7.7.11 These measures aim to reduce the environmental and visual impact of temporary lighting during construction, ensuring compliance with safety and environmental standards.

Construction Environmental Management Plan

7.7.12 To ensure the appropriate management of the development during both the construction and operational phase, a CEMP has been prepared for the proposed development and submitted to accompany this application ensuring compliance with Local Policy SP16 (Environmental Protection. The CEMP covers the environmental energy impacts relating directly to the construction activity within the site boundary, but also within the local area that may be affected by the development/activity. The CEMP that supports the application includes the following:

- A table showing the objectives, mitigation / optimisation measures, and responsibilities for the implementation of those measures;
- Arrangements for environmental monitoring;
- Provision for reporting, public liaison, and prior notification of particular construction related activities; and
- The mechanism for the public to register complaints and the procedures for responding to such complaints.

7.7.13 Full details of the proposed measures of the CEMP are included in the accompanying report submitted as part of this application.

7.7.14 Overall, through the noise, air quality and lighting impacts assessment that have been undertaken it has demonstrated that the Proposed Development can be appropriately accommodated without any significant impacts on nearby receptors. Therefore, the Proposed Development is aligned with local policy SP16 (Environmental Protection) and is acceptable in environmental impact terms.

7.8 Transport and Access

7.8.1 The TAN 18 paragraph D.4 outlines when a development requires a Transport Assessment. The Proposed Development doesn't meet these criteria, as it won't significantly impact movements. Therefore, a Transport Assessment isn't required, but a Transport Statement is included with the planning application.

7.8.2 Local Plan Policy SP 20 (Transport Network) states that it the Council will restrict development which would have an unacceptable impact on highway safety. Local Policy TR 2 (Design and Access of New Development) expands further on this point stating that development proposals will only be permitted where the development does not compromise the safe, effective and efficient use of the highway network and does not have an adverse impact on highway safety or create unacceptable levels of traffic generation.

7.8.3 Vehicles will access the Site via M4 Junction 38, A48 Margam Road, and Cefn Gwrgan. Southbound departures will travel via Cefn Gwrgan, A48 Margam Road, and M4 Junction 38. Northbound departures will travel via Cefn Gwrgan, A48 Margam Road, and Groes Interchange to join the M4 northbound.

7.8.4 All vehicles accessing the Site will be processed at a control point on Cefn Gwrgan Rd before proceeding down the single-track lane to the Site. Traffic marshals will control both ends of the lane. Deliveries will be controlled by the Site management team to prevent congestion; only booked and authorised vehicles will be granted access. All deliveries must report to the proposed deliveries and logistics area for compliance checks and to await space on the Site for processing. During construction, roadside parking will be suspended to ensure clear vehicle paths. Internal access roads within the Site will be constructed to accommodate the largest required vehicles, with widths between 3.5m and 4.5m, widening at bends and entrance points.

7.8.5 The Transport Assessment concluded that the Proposed Development is well connected to the A48, M4, and wider trunk road network. The limited vehicle trips during construction, operation, and decommissioning will not significantly impact the highway network. The M4 will see a 0.20% increase and the A48 a 1.91% increase in traffic, both considered negligible. The Construction Logistics Plan (CLP) ensures environmental, and traffic impacts are managed effectively. Therefore, due consideration has been given to relevant policies and managing technical highways matters of the Site.

7.9 Landscape and Visual Impacts

7.9.1 The Landscape Visual Appraisal conducted by Stantec stated that the Site is visually enclosed by landform, built form, and vegetation, with limited clear views towards it. There would be no direct landscape effects on designations like the Margam Special Landscape Area (SLA), Margam Country Park, or Kenfig Burrows SLA. Indirect effects would be minimal across all phases.

7.9.2 Direct landscape effects were identified on Margam Marsh (LCA 1), the local landscape character, Site topography, landform, watercourses, and existing vegetation. These effects are expected due to vegetation clearance, construction, and the introduction of the Proposed Development. Upon completion, moderate effects would remain on the local landscape character and vegetation, but reduce for topography, landform, watercourses, and Margam Marsh. By year 15, these effects are predicted to lessen due to natural regeneration.

7.9.3 The greatest adverse visual effect (moderate) would be from View Locations (VL) 4 and 5 during construction, due to elevated views and high sensitivity of visitors. Post-construction, the effect would reduce as the development blends with other industrial areas. No views of the development were identified at VL3.

7.9.4 A sequential appraisal for road receptors on the A4241 Harbour Way and recreational receptors along the Wales Coast Path found moderate effects during construction for recreational users, reducing to neutral by year 15. For road users, minor effects would remain due to limited visibility and similar industrial character. The Site can accommodate the Proposed Development with LHMR incorporation and adherence to CEMP, helping it blend with surroundings and avoid undue harm to key habitats or views from designated landscapes.

7.9.5 Overall, the indirect and direct impacts of the development are not expected to be significant adverse or unacceptable on identified human and landscape receptors and therefore complies with local polices SP14 (The Countryside and the Undeveloped Coast) and BE1 (Design), Furthermore the report outlined the following onsite and off-site mitigation strategies that will be implemented.

On-Site Mitigation

7.9.6 Embedded mitigation measures aim to reduce potential effects of the Proposed Development. The LVA focuses on effects within the Site footprint only. Relevant embedded mitigation measures include:

- Retention of existing vegetation where practicable;
- Limiting the height of the Proposed Development of the GIS Hall to minimise visual effects;
- Considering sensitive Site conditions, including its SINC designation;
- Additional scrub and woodland planting to mitigate habitat loss.

7.9.7 The Landscape Strategy Plan outlines proposed mitigation measures:

- Areas of natural regeneration where vegetation has been lost to construction swathes and soil has been compacted by way of sowing of nurse grass to allow natural growth and succession;
- New marginal planting to the SuDS area following removal of the welfare compound;
- New marginal planting along the diverted watercourses;
- Creation of gabion basket CO^2 gardens through the re-use of slag from Tata on top of the proposed flood wall and around the SuDS area;
- Inclusion of a ‘wildlife tower’ within the Site which would aim to provide a haven for birds, bats and invertebrates, approximately 5mH x 2mW x 2mD; and
- Temporal enhancements along the existing watercourses through removal of encroaching vegetation.

Off-Site Mitigation

7.9.8 An off-site area southwest of the Site, partially within Margam Moors SSSI, is proposed for additional mitigation. The land is currently in the ownership of Tata Steelworks UK, however NG are within advanced discussions to acquite the freehold of the site and the mitigation will be secured via a Section 106 Agreement. Details are in the PEA and Landscape and Habitat Management Report but the proposed measures include:

- Creation of dune slacks / sand dunes in lower value areas currently dominated by red fescue / burnet rose;

- Enhancement of existing dune slack pond through removal of scrub shading out perimeter;
- Creation of an open dune habitat by re-using sand from dune slack creation;
- Open up south facing dunes to create open dune habitat to create habitat diversity and benefit invertebrates; and
- Creation of a gabion basket CO^2 Garden through the re-use of slag from Tata to include multifunctional features including bee bricks, potentially used as a boundary feature to provide shelter for invertebrates, reptiles and Great Crested Newt.

7.10 Heritage Impacts and Archaeology

7.10.1 Local Plan Policy SP21 (Built Environment and Historic Heritage) requires the built environment and historic assets to, where appropriate and possible, be conserved and enhanced.

7.10.2 A Historic and Environment Desk-Based Assessment has been conducted by Stantec to outline baseline conditions and assess potential effects upon the historic environment from the proposed substation extension. The report concluded that there is no designated heritage assets located within or directly adjacent to the Site. However, several designated heritage assets are located within the surrounding area including a scheduled monument (1.37km east), listed buildings, a Grade I registered park and garden (1.15km), and registered historic landscape areas (1.15km east).

7.10.3 Furthermore, peat deposits underlying the site have a potential to contain buried archaeological and paleoenvironmental remains dating to the early prehistoric period.

7.10.4 Full details and conclusions of the Historic and Environment Desk Based Assessment report, are included in the supporting document provided as part of this planning application and impacts have bee avoided and mitigation measures include an Archaeological Clerk of Works.

Archaeology

7.10.5 Laing O'Rourke received an archaeological desk study report (P21-268, ver 1.3) from Headland Archaeology in February 2022. This is the only assessment available for identifying archaeological features in the development area. The report highlights two historic assets, Morfa Colliery and Margam Warren that could be affected by the proposed works. It assesses the potential for archaeological remains as follows:

- Low potential for Early Medieval and earlier remains
- Medium potential for Post-Medieval and Modern remains linked to Morfa Colliery and the steel works
- High potential for Medieval remains within the development land parcels

7.10.6 The report concludes that direct impacts on known historic assets are unlikely to significantly constrain development consent. However, Laing O'Rourke will implement mitigation measures, such as detailed excavations if significant remains are found and watching briefs for areas requiring open cuts or trench works. Further clarity and appropriate actions will be taken as the development progresses to minimise any potential disturbance to archaeological features in line with paragraph 5.3.80 of the Local Plan which requires proposals to demonstrate that the development would not result in any unacceptable impacts on areas of archaeological importance.

7.10.7 A Historic Environment Desk-Based Assessment conducted by Stantec concluded that the Scheme will not result in direct impacts on any designated historic assets or changes to their setting that would affect heritage interests or significance.

7.10.8 Modern industrial works have caused localised disturbance within the existing substation footprint; however, most of the Site comprises undeveloped agricultural land with demonstrable potential for archaeological remains. Extant landscape features of post-medieval and/or possible medieval date have been identified, including former drainage ditches, the Upper Mother Ditch, Wal Dduand and the line of Heol y Deiliaid along the southern boundary. This former road is believed to follow a medieval paved causeway linking Hen Biniwn Grange (SN:87) to Margam Abbey (SN:6). The route appears preserved by two parallel ditches, suggesting possible surviving below-ground remains.

7.10.9 None of the known archaeological remains are considered nationally significant (i.e., equivalent to a scheduled monument), though there is potential for further unknown remains to be present.

8 Conclusion

8.1.1 This application is submitted to the Council for an extension of the Margam 275kV substation including the erection of a GIS hall and the demolition of the existing control and amenities buildings to enable the erection of a new amenities building. Works to include earthworks, surface water management and drainage infrastructure, lighting, CCTV, boundary treatment, car parking, ecological improvements including a wildlife tower and gabion baskets, improved internal access roads, diesel generator and hardstanding, storage and washroom buildings and water storage tank, flood defence wall including flood gates and appropriate landscaping and other associated engineering operations.

8.1.2 The development supports local and national goals for a resilient electricity grid that enables renewable and low-carbon energy, meeting current and future energy demands while ensuring reliable supply for industrial operations.

8.1.3 The proposed substation extension and associated development will play a critical role in the electricity network by regulating voltage, enabling safe power distribution, and isolating faults or maintenance areas to protect the grid. The extension is essential to meet growing regional energy needs, enhance network resilience, and support future residential and commercial growth, particularly given its proximity to Port Talbot steelworks and the area's industrial character. The Proposed Development is therefore logically placed immediately adjacent to existing infrastructure and has been carefully selected through a site selection process to minimise impacts on the environment and surrounding area to the Site.

8.1.4 It is considered the proposal strongly aligns with both national and local planning policies, including Planning Policy Wales (PPW), Future Wales, and relevant policies of the Council's Local Plan. The Proposed Development is to comprise of sustainable development; its purpose involves the strengthening and enabling much-needed upgrades to energy infrastructure, whilst balancing environmental and community considerations.

8.1.5 The Proposed Development has been shown to comply with relevant local and national planning policies and represents a sustainable form of development. Any potential impacts are limited in scale, with appropriate mitigation measures identified where necessary.

8.1.6 Additionally, the development would bring additional significant benefits, including job creation and significant biodiversity enhancements to be provided, through habitat creation and ecological improvements made. These additional benefits are factors which further support the case for granting planning permission.

8.1.7 The Applicant therefore respectfully requests that planning permission for the Proposed Development is granted.