Planning Statement

Project Dragon, Land at Crown Wharf, Port Talbot Docks

August 2023

Turley

Contents

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Acronyms

ALARP	As Low as Reasonably Practicable
AEP	Annual Exceedance Probability
ATJ	Alcohol to Jet
ABP	Associated British Ports
COMAH	Control of Major Accident Hazards
CoPC	Contaminants of Potential Concern
DARE	Decarbonisation and Renewable Energy Strategy
DAS	Design and Access Statement
EIA	Environmental Impact Assessment
ES	Environmental Statement
FEED	Front-end Engineering Design
FTE	Full-time Equivalent
FW	Future Wales: The National Plan 2040
HRA	Habitat Regulations Assessment
HSE	Health and Safety Executive
LCA	Life Carbon Assessment
LDP	Local Development Plan
LPA	Local Planning Authority
LVIA	Landscape Visual Impact Assessment
NBB	Net Benefit for Biodiversity
NRW	Natural Resources Wales
NPTC	Neath Port Talbot Council
NZIW	Net Zero Industry Wales
PAC	Pre-application Consultation
PDZ	Production Development Zone
PET	Polyethylene Terephthalate
PNNL	US Department of Energy's Pacific Northwest National Laboratory
PPW	Planning Policy Wales
RLDP	Replacement Local Development Plan
SAF	Sustainable Aviation Fuel
SPG	Supplementary Planning Guidance

SWIC	South Wales Industrial Cluster
TAN	Technical Advice Note
TCA	Temporary Construction Area
UXO	Unexploded Ordinance
WFD	Water Framework Directive

Executive Summary

1. LanzaTech is an innovative Carbon Capture and Transformation company. It is a global leader in gas fermentation technology, headquartered in Illinois, USA, and listed on the NASDAQ stock exchange (LNZA). The proposed development is being delivered by its UK business, LanzaTech UK Ltd.

2. LanzaTech is applying for full planning permission for a new sustainable jet fuel production facility on land at Crown Wharf in Port Talbot Docks. The development is described as:

   "Demolition of existing structures and erection of a Sustainable Aviation Fuel (SAF) production facility, including enclosed ground flare, storage tanks, installation of pipework and electrical, processing and utility equipment, administration, warehouse and laboratory buildings, new access, car parking and transport infrastructure including a truck loading area and associated works, hard and soft landscaping, areas for temporary construction laydown, and associated development."

3. The application site comprises a 17.98ha area of vacant previously developed land, set in the established Port Talbot Docks. The site lies in the foreground of the large structures at the operational Tata steelworks, which dominate the heavy industrial landscape in the locality. The site benefits from excellent access to the strategic transport infrastructure in this area of Port Talbot, including the Dock, deep sea Harbour, primary distributor (Harbour Way), trunk road (M4 motorway) and local active travel (shared cycleway and footway) route.

4. The delivery of the proposed SAF production facility will place Port Talbot at the forefront of Government requirements to decarbonise the aviation sector, which is acknowledged as being particularly challenging. LanzaTech is a core industrial partner in the South Wales Industrial Cluster and Net Zero Industry Wales, who are driving decarbonisation and industrial innovation in the region. The proposal responds directly to clear national objectives and legal commitments at UK and Welsh Government levels to decarbonise the aviation sector. The feasibility, engineering and planning stages of the project is supported by Government funding.

5. Port Talbot represents a prime and sustainable location to produce SAF. The local skills and industry, geography and connectivity, and its role in the wider decarbonisation ambitions of the region are key benefits. Its Celtic Freeport status reflects these considerations. The application proposal represents a vital initial transformative regeneration opportunity in the delivery of the Celtic Freeport ambitions.

6. LanzaTech has undertaken a comprehensive site selection process in Port Talbot. The application site is the prime location for the proposal based on relevant functional, operational, environmental, and planning considerations. Extensive pre-application consultation and collaboration with Neath Port Talbot Council (NPTC) (and other key stakeholders) has positively influenced the scale and detailed design of the proposed development. Feedback from a variety of stakeholders and the local public has been positive, supporting the opportunity for Port Talbot to be at the forefront of the drive to achieving Wales' net zero targets.

7. The nature of the development reflects the outcomes of the extensive pre-application consultation. The planning application is for the terrestrial development aspects of the project. A separate Marine Licence will be sought for the wharf facilities required for LanzaTech to construct and operate the development. Separate environmental and greenhouse gas permits, water abstraction license, hazardous substances consent, control of major accidents hazards (COMAH) approval and the permission of the SuDS Approving Body (SAB) will also be required by LanzaTech.

8. The planning application is supported by an Environmental Impact Assessment (EIA). The scope of the EIA has been agreed with NPTC and key stakeholders, including National Resources Wales (NRW). Alongside the EIA, the application includes a suite of technical documents assessing the proposal against prevailing development plan policy and all relevant material considerations.

9. The EIA concludes that the development will not result in any significant or unacceptable adverse environmental or social impacts. The application demonstrates that the proposal is planning policy compliant in all respects, taking material considerations into account.

10. The proposal constitutes positive sustainable economic development on under-utilised brownfield land. It will act as a catalyst for the long-term and continued transformation of Port Talbot Docks, including through the Celtic Freeport ambitions. It will:

    - Put Port Talbot on the map as a leader for SAF production, contributing to the achievement of UK Government aviation industry and net zero targets.
    - Sustainably regenerate an underutilised site with industrial and employment development as a transformative catalyst for the Celtic Freeport ambitions.
    - Invest in and utilise the existing harbour and dock infrastructure for transportation development.
    - Achieve local and national policy ambitions to promote sustainable growth and development that supports the local economy, skills, and community.
    - Deliver net biodiversity benefit through on-site and off-site mitigation, whilst meeting all relevant environmental protection requirements.
    - Protect the amenity and significance of all sensitive environmental, heritage and residential receptors and land uses through a sensitive design approach.
    - Be acceptable from a flood consequence perspective, taking into account the requirement for sustainable drainage and climate change resilience.
    - Promote the use of alternative modes of transport and Active Travel, whilst also being acceptable from a highway and transport perspective.

11. The proposal is entirely in accordance with the development plan. The balance of material considerations weighs heavily in favour of the development. Planning permission should be granted on this basis.

1. Introduction

1.1 This Planning Statement has been prepared on behalf of LanzaTech UK Limited ("LanzaTech") in support of a full planning application for the erection of a Sustainable Aviation Fuel (SAF) production facility, converting ethanol to jet fuel, and associated infrastructure at Land at Crown Wharf, Port Talbot Docks.

1.2 The description of development is as follows:

"Demolition of existing structures and erection of a Sustainable Aviation Fuel (SAF) production facility, including enclosed ground flare, storage tanks, installation of pipework and electrical, processing and utility equipment, administration, warehouse and laboratory buildings, new access, car parking and transport infrastructure including a truck loading area and associated works, hard and soft landscaping, areas for temporary construction laydown, and associated development."

1.3 This Statement sets out the relevant context for the application proposal. It includes a description of the site and its surroundings, the proposed development, the relevant planning history and local and national planning policy framework. The evidence-based assessment illustrates the case that the proposal represents positive sustainable and economic development. This Statement should be read in conjunction with the suite of documents submitted in support of the application. A summary of the supporting technical evidence is provided in Appendices 1 and 2 of the Covering Letter to the submission.

LanzaTech

1.4 LanzaTech is an innovative Carbon Capture and Transformation company and a global leader in gas fermentation technology, headquartered in Illinois, USA, and listed on the NASDAQ stock exchange (LNZA). The proposed development is being delivered by its UK business, LanzaTech UK Ltd, and UK-based consultants.

1.5 LanzaTech UK Limited is assisting the aviation industry with the delivery of sustainable technology required to meet Government targets to decarbonise the sector. LanzaTech is a key partner of SWIC and Net Zero Industry Wales (NZIW) and is fully committed to unlocking the redevelopment of Port Talbot docks to deliver an innovative and ground-breaking SAF facility.

1.6 LanzaTech's focus is on the delivery of a new sustainable jet fuel production facility in Port Talbot. This converts ethanol to SAF through the LanzaJet™ Alcohol-to-Jet (ATJ) Process. The neat SAF produced in the process contains essentially zero aromatic compounds, producing a much cleaner burn and causing far fewer soot particles and contrails that heat the atmosphere. The SAF produced also delivers over 70% Greenhouse Gas (GHG) savings as compared to the fossil jet fuel equivalent.

1.7 The LanzaJet™ ATJ process has been developed by LanzaTech and the US Department of Energy's Pacific Northwest National Laboratory (PNNL). It can use any source of sustainable ethanol, such as ethanol from recycled industrial emissions, that are otherwise unavoidable.

1.8 The proposed SAF development is the first of its kind in the UK. Project Dragon is LanzaTech's flagship project in the UK. LanzaTech will develop this first UK deployment of the LanzaJet™ ATJ technology and has future ambitions (with spin-out company LanzaJet) to develop multiple follow-on projects in the UK (and globally) as the SAF market develops.

Structure

1.9 The remainder of this statement is structured as follows:

- Section 2 describes the vision and background;
- Section 3 describes the site context;
- Section 4 provides an overview of the pre-application engagement process;
- Section 5 outlines the proposed development;
- Section 6 provides the planning policy context;
- Section 7 provides an assessment of the proposal against key planning considerations;
- Section 8 sets out LanzaTech's proposed draft heads of terms; and
- Section 9 provides the summary and conclusion.

2. Vision and Background Context

2.1 This section summarises the vision for Project Dragon and sets the background to the project. Delivery of the proposed development is underpinned by support at a national, regional and local level. It represents a significant investment opportunity within the context of the proposed ABP's Future Ports Programme, the Celtic Freeport, local and UK-wide decarbonisation initiatives, and Welsh and UK Government targets regarding sustainable aviation and net zero.

National Context

2.2 The Welsh Government declared a climate emergency in April 2019. To try to limit the effects of climate change, the UK and Welsh governments have set legally binding targets to achieve net-zero emissions by 2050 (through the Climate Change Act 2008 (as amended)) and the Net Zero Target set through the Climate Change Act 2008 (2050 Target Amendment) Order 2019.

2.3 Aviation is one of the most difficult sectors to decarbonise. Green House Gas (GHG) emissions from UK-based international aviation fuels were 26.0 MtCO2e in 2022[1] and are predicted to continue to rise as aviation recovers after the COVID pandemic. To tackle this, the UK Government has proposed a SAF Mandate that will require the use of sustainable aviation fuel from 2025, and 10% of the jet fuel used in UK aviation to be SAF by 2030.

2.4 The proposed facility will help facilitate lower emission flying. It will do this by converting sustainably sourced ethanol into SAF which reduces the climate impact of flying by more than 70%. The proposed development will supply 1% of the UK's jet fuel needs, or 1/10th of the proposed 2030 SAF Mandate target. It responds to the UK Government's Ten Point Plan for a Green Industrial Revolution, Transport Decarbonisation Plan, and Jet Zero Strategy.

2.5 The need for SAF take-up is also a key part of the Carbon Budget Delivery Plan for the aviation sector which supplements the UK Government's Net Zero Strategy for the UK (as well as forming a crucial plank for the strategy document itself). The proposed facility will play a substantial part in achieving the Government's aims for aviation decarbonisation (as described in Chapter 10 (Climate Change) of the Environmental Statement (ES)).

Funding

2.6 LanzaTech has secured £25 million of funding from the Department for Transport's Advanced Fuels Fund to develop and deliver the proposed SAF production facility (as well it's future aspiration to deliver a gas fermentation plant to turn industrial waste gases into ethanol. This does not form part of this planning application). LanzaTech was also awarded with approximately £3 million of Green Fuels, Green Skies (GFGS)

[1] 2022_UK_greenhouse_gas_emissions_provisional_figures_statistical_summary.pdf (publishing.service.gov.uk)

funding following a UK Government competition for the development of SAF production plants in the UK.

2.7 The funding demonstrates the UK Government's commitment and confidence in the technology to support the decarbonisation of the aviation sector.

Why Port Talbot?

2.8 Port Talbot can play a vital role as a catalyst in helping Wales reach its net zero targets. Port Talbot already has many of the key attributes needed to decarbonise, including its industrial setting, deep water port and easy access to the M4 (which provides connectivity with key locations such as Milford Haven and Heathrow).

2.9 The LanzaTech facility will put Port Talbot at the forefront of this innovative industry that is developing globally. This will ensure that the region leads the way on sustainable aviation fuel production and generating long-term, skilled jobs.

2.10 LanzaTech is committed to delivering sustainable development in Port Talbot. The scheme will contribute positively towards Neath Port Talbot Council's (NPTC) goals to mitigate and adapt to the effects of climate change and the Welsh Government's climate emergency declaration.

2.11 These proposals are set within the recent announcement of Port Talbot and Milford Haven's successful Celtic Freeport bid[2], driving on-going investment in the region and which emphasised the Welsh Government's support for Port based green economy development.

South Wales Industrial Cluster and Net Zero Industry Wales

2.12 The proposal sits within a wider strategy for decarbonisation in South Wales, led by the South Wales Industrial Cluster (SWIC) and Net Zero Industry Wales (NZIW), who are driving decarbonisation and innovation in the region.

2.13 SWIC is made up of 30 partners, with a focus on technology, policy creation and research to deliver net zero for the region. SWIC will also promote the delivery of a number of projects to drive decarbonisation and economic growth. SWIC is aiming to create the world's first net-zero emissions industrial zone. LanzaTech is a key SWIC partner.

2.14 NZIW has been created to support the decarbonisation of Welsh industry and create new jobs in the green industries of the future. NZIW will work with an existing group of 40 business and academic partners operating within a wide range of energy-intensive industries to help them achieve net zero.

2.15 SWIC and NZIW is aligned with the UK Government's Ten Point Plan for a Green Industrial Revolution[3], which demonstrates the UK's significant and continuing commitment to tackling greenhouse gas emissions. The Ten Point Plan, alongside the

[2] Wales freeports for Milford Haven-Port Talbot, Anglesey - BBC News
[3] The ten point plan for a green industrial revolution - GOV.UK (www.gov.uk)

Net Zero Strategy, sets out the UK's vision to be a global leader in green technologies, of which SAF is one.

ABP Future Ports Programme

2.16 ABP's Future Ports Programme sets out its vision for Port Talbot. ABP states that it will *"work with partners to ensure that Port Talbot is a key driver in the next industrial revolution, translating the risks of decarbonisation into opportunities."* The vision outlines the application site as an optimum location for 'sustainable fuel production' within the wider industrial context and ambitions. Decarbonisation is highlighted as a key economic opportunity for the area.

2.17 The application proposal will act as a catalyst for the delivery of ABP's Future Ports Programme, including the creation of a wider zero-carbon manufacturing cluster. It is an exciting opportunity to see development delivered on prominent, underutilised brownfield land. LanzaTech is working closely with ABP on all matters surrounding investment and delivery of the proposed development.

Summary

2.18 The background to the proposed development identifies that:

- There are clear national objectives and Government requirements to decarbonise the aviation sector and support the production of SAF in the immediate future.
- Government funding clearly evidences the support for the project at a national level.
- LanzaTech is committed to delivering SAF production in the region and is a core industrial partner to SWIC and NZIW who are driving decarbonisation and innovation in the region.
- Port Talbot represents a prime, sustainable location to produce SAF, based on local skills and industry, geography and connectivity, and wider decarbonisation, Freeport and regeneration ambitions.
- The application proposal is a transformative opportunity for the region, placing Port Talbot at the forefront of SAF production in Wales and the UK.

3. Site Context

Site Selection

3.1 A thorough site selection process was undertaken in August 2021. A number of sites across Neath Port Talbot were assessed for their suitability for the proposed development. A structured methodology was applied to the analysis, assessing the key opportunities, constraints and relevant planning policies and allocations, and is described further in Chapter X: Alternatives of the Environmental Statement. The following matters formed part of the assessment criteria:

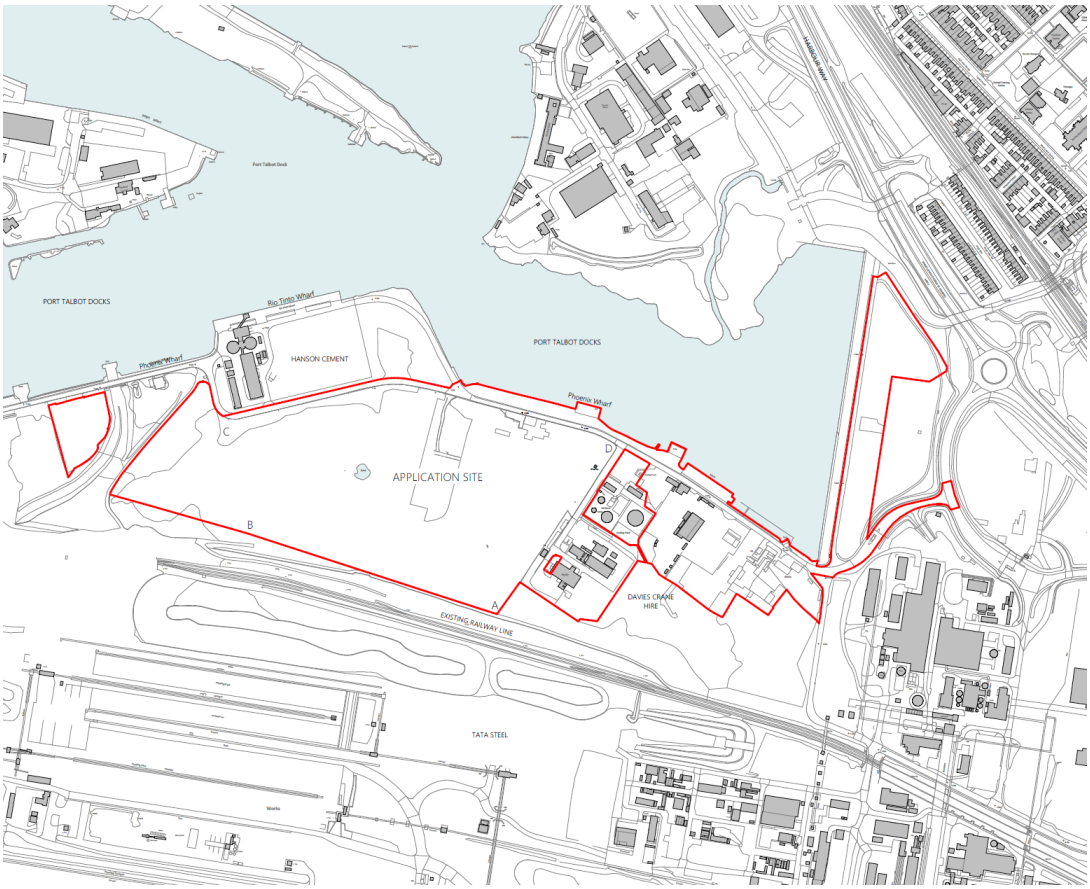
- Accessibility to key utilities, resources, hydrogen and transport modes including options for road, rail and sea;
- Environmental constraints including flood risk, biodiversity, contamination, noise and air quality;
- Minimum site size and configuration;
- Land ownership arrangements;
- Landscape and visual impact;
- Safeguarding of land and COMAH status;
- Residential amenity;
- Future development intentions and surrounding context;
- Planning policy position, designations and allocations; and
- Associated consents and requirements.

3.2 The site at Crown Wharf was identified as the preferred option for functional, operational, and planning reasons. Key to this is the site's strategic location within the industrial core of Port Talbot and surrounding dock facilities, adjacent to active industrial uses and the Port Talbot Steelworks and good marine and terrestrial transport links. It represents underutilised previously developed land with excellent access to industrial skills, products and resources to support the development. The site is included in ABP's Future Ports Programme, which aims to create a new low-carbon manufacturing cluster and will act as a catalyst for surrounding development.

Site Context

3.3 The site is located at Crown Wharf in Port Talbot Docks, immediately to the north of Port Talbot Steelworks. The site forms part of the wider harbour and dock facilities of Port Talbot operated by ABP.

Figure 3.1: Site Location Plan

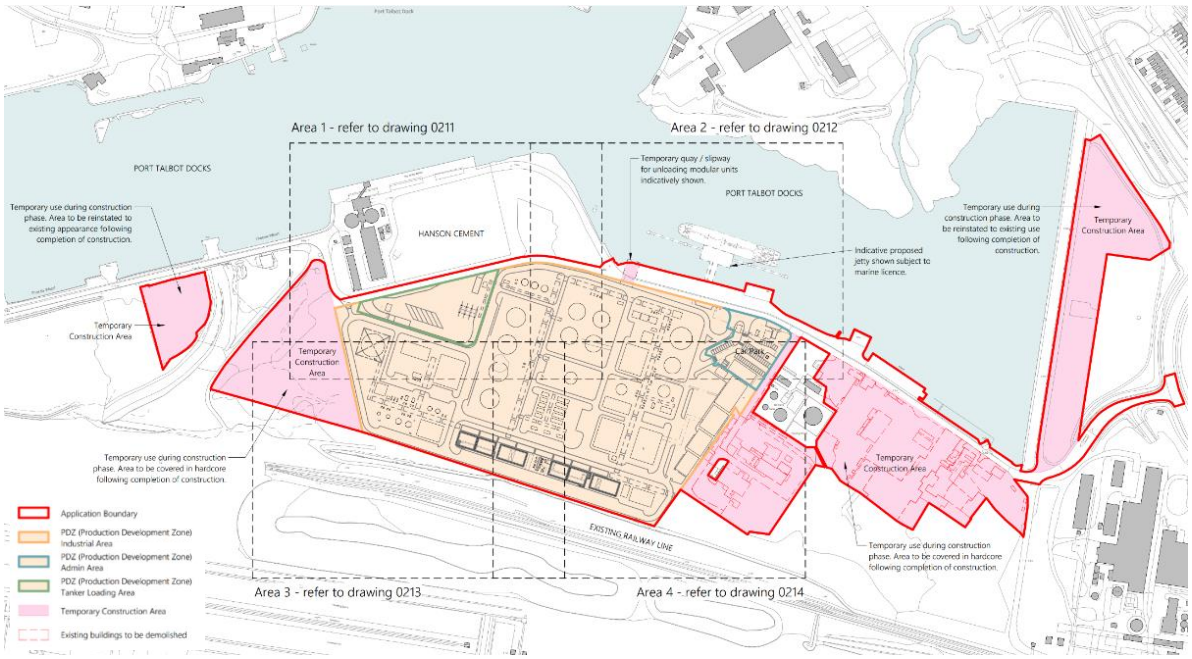


3.4 The application site comprises the following (as shown in Figure 3.2):

- The proposed facility will be located at the primary parcel of land at Crown Wharf. This site extends to approximately 9.12ha and will be referred to as the 'Production Development Zone' (PDZ);
- Temporary Construction Areas located within the wider Port Talbot Docks, which extend to approximately 8.05ha in total (referred to as 'Temporary Construction Areas' (TCA)); and
- An extent of the Unnamed Port Road, running adjacent to the northern boundary of the PDZ (referred to as 'Unnamed Port Road Supporting Infrastructure').

3.5 An extent of the marine environment of Port Talbot Docks, located to the north of the PDZ (referred to as the Marine Unloading/Loading Facility), forms part of the wider EIA boundary. No marine element is included within the red line for which planning permission is sought.

Figure 3.2: Proposed Site Plan showing PDZ and TCAs



3.6 The proposed facility will be located within the PDZ. The PDZ comprises previously developed land with an industrial history. The PDZ's previous uses include a coal works, followed by a metal refinery and associated warehouses during the early and mid-20th Century.

3.7 The PDZ has re-greened over a significant period. The vegetation across the PDZ mainly comprises various young trees and shrubs. A significant area of hardstanding (associated with historic uses and demolished buildings) lies in the centre of the site and connects to the main access point to the north.

3.8 There are no designated assets (such as scheduled monuments or listed buildings) present at the site.

3.9 The site benefits from existing road access via a private road, accessed from Harbour Way and the M4. It also benefits from access to the harbour to the north.

3.10 The PDZ lies within Flood Zone B (known to have been flooded in the past), as defined by the Natural Resources Wales (NRW) Development Advice Maps. The NRW Flood Map for Planning shows the north east of the site within Flood Zone 3 (greater than 0.5% chance of flooding in a given year).

3.11 The north eastern TCA lies within Flood Zone C2 (areas of the floodplain without significant flood defence infrastructure). The other TCAs and the unnamed Port Road supporting infrastructure are located in Flood Zone B.

Surrounding Context

3.12 The site is set within an established industrial area. The nature of surrounding buildings and structures form a key part of the character and skyline of Port Talbot and form the backdrop to the site.

3.13 The PDZ is bound to the north by Hanson Cement Works and Port Talbot Docks. The cement works is a predominant feature of Port Talbot Docks from all directions. A range of employment uses are located beyond the docks further to the north, with residential development approximately 1km to the north west of the PDZ.

3.14 The site's eastern boundary (TCA east) is adjoined by a private road and industrial development. Further to the east lies the operational Port Talbot Steelworks and Harbour Way.

3.15 An unused section of railway line adjoins the site to the south. A vegetated bund separates the site from Port Talbot Steelworks to the south.

3.16 The site is bound to the west by brownfield land and existing ABP operations. The main access road to the harbour and Steelworks runs along the north and south west of the site.

3.17 The site is accessible by road and sea from strategic transport routes. The application site is located in close proximity to the active travel network being promoted by NPTC. This offers access to the site on foot and by bike through the main ABP site gate.

3.18 The site benefits from existing vehicular access via a private road, from Harbour Way and the M4. It also benefits from an existing, direct access to the dock area, which lies approximately 25 meters to the north of the PDZ.

Planning History

3.19 The site has a long-standing history of previous industrial use. It has limited recent planning history. A Section 36 (Electricity Act 1989) application to construct and operate a power plant was granted in August 2007 (ref. P2007/0060). We understand that this permission has not been implemented.

3.20 The history of uses at the site sets a positive precedent for major industrial development at the application site. This is supported by the heavy industrial history of the area.

Summary

3.21 This section confirms that:

- A comprehensive site selection process was undertaken. The application site is the prime location for the development proposed, taking account of functional, operational and planning considerations.

- There is an established history of on-site industrial uses, as well as historic planning approval for energy/plant development.
- That the site represents a significantly underutilised brownfield location, surrounded by industrial uses and well situated to support modern industry.
- The site is supported and accessible by a range of modes of transport, including the road network and by sea via the adjacent dock.

4. Pre-application Engagement

4.1 This planning application has been informed by extensive and detailed discussions with officers across various disciplines at NPTC, as well as other stakeholders. Further information is detailed in the accompanying Pre-application Consultation Report.

Pre-application Collaboration

4.2 Discussions with officers at NPTC have evolved over the past two years from the very early stages of the proposal. The nature of the pre-application process illustrates the collaborative approach taken by LanzaTech.

4.3 Initial discussions with NPTC's Development Management team started in 2021. Regular pre-application meetings have taken place throughout 2023. These have involved planning, environmental, highways and other specialist officers.

4.4 LanzaTech has also facilitated joint meetings with NRW and NPTC, where relevant. These covered key crossover topics, such as noise, air quality and marine/permitting elements.

4.5 The feedback received throughout pre-application discussions has informed the design evolution and technical detail set out in this planning application.

Landowner Collaboration

4.6 ABP is the landowner of the PDZ and the majority of the land within the application site boundary. LanzaTech has actively engaged with ABP throughout the project development process, which has included bi-weekly meetings to discuss the various elements of the proposed development and any associated agreements. This demonstrates the commitment of both LanzaTech and ABP to the successful delivery of the proposed development.

Pre-application Consultation

4.7 LanzaTech launched its initial communications website[4] in respect of the project in April 2023 and has hosted a number of public consultation events in the local community. The proposal was well received, with recognition of the site's context, potential, the need to decarbonise and the opportunities associated with the production of SAF. Comments raised regarding environmental topics, biodiversity and health and safety have been addressed as part of this planning submission.

4.8 LanzaTech also completed the mandatory Pre-application Consultation (PAC) process with owners/occupiers, community consultees and specialist consultees during August 2023. The process was carried out in accordance with The Town and Country Planning (Development Management Procedures) (Wales) Order 2012.

[4] LanzaTech - Project Dragon (lanzadragon.wales)

4.9 A Pre-application Consultation (PAC) report is submitted in support of this planning application and contains full details of the statutory pre-application consultation undertaken.

EIA Scoping

4.10 An Environmental Impact Assessment (EIA) Scoping Report for the proposed development was submitted to NPTC in May 2023 (ref. P2023/0436). LanzaTech is confident that its approach to the Environmental Statement is robust and addresses all relevant topics in detail.

Habitat Regulations Assessment (HRA)

4.11 The Ecological Impact Assessment (RPS, July 2023) (ECIA) prepared confirms the likely ecological and biodiversity effects of the proposed development are such that a Habitat Regulation Assessment for the development is not required.

Water Framework Directive (WFD)

4.12 Although not specifically mentioned within Regulation 26 of the EIA Regulations, the need for a coordinated assessment is often applied when there is a need for a Water Framework Direction (WFD) assessment[5].

4.13 The proposed development does interface with the marine environment, specifically Port Talbot Docks, whereby the need for a WFD assessment needs consideration. The dock itself is considered as a transitional waterbody, albeit both the River Afan and Ffrwd Wylt River feed into Port Talbot Docks (and therefore are upstream of the docks). Swansea Bay (a defined Coastal WFD waterbody) is located to the west of Port Talbot Docks, beyond the dock gates (and River Afan). As such there is perceived connectivity between the Port Talbot Docks and WFD waterbodies (including a groundwater body).

4.14 It is therefore necessary for a WFD assessment to be provided for the proposed development. The WFD assessment is currently at 'scoping' stage, whereby an evaluation of potential effects on the waterbodies is being prepared. Upon completion of the 'scoping' stage it will be necessary for the assessments within the ES to reflect the outputs of the WFD assessment. This will be completed for the submission of the application.

Summary

4.15 The extensive pre-application discussions have been positive, supporting the principle of development at the application site. The need for decarbonisation in the region, within the aviation industry, and development which contributes to net zero targets, is recognised, and welcomed by all stakeholders.

[5] The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (legislation.gov.uk)

4.16 LanzaTech has considered the feedback provided at each stage of the process and provided clarification/amendments to the scheme, where required and appropriate. This demonstrates the collaborative approach underpinning the proposed development.

4.17 LanzaTech has actively engaged with a variety of stakeholders and residents through a range of methods and consultation events since launching communications in April 2023. LanzaTech has also completed mandatory Pre-application Consultation in line with the relevant guidance and legislation.

5. Proposed Development

5.1 The following Section provides a summary of the application proposal, its facilities and on-site process. It should be read in conjunction with the Design and Access Statement (prepared by Inspire Architects), accompanying drawings and Chapter 4 of the Environmental Statement (prepared by Turley).

Description of Development

5.2 This application seeks full planning permission for the following:

"Demolition of existing structures and erection of a Sustainable Aviation Fuel (SAF) production facility, including enclosed ground flare, storage tanks, installation of pipework and electrical, processing and utility equipment, administration, warehouse and laboratory buildings, new access, car parking and transport infrastructure including a truck loading area and associated works, hard and soft landscaping, areas for temporary construction laydown, and associated development."

5.3 A full breakdown of all buildings, structures, equipment, and associated facilities (Equipment List) for which planning permission is sought is outlined in **Appendix 1**. The subsequent paragraphs provide an overview of the development and the associated massing, scale, and appearance of the facility.

5.4 The nature of the development is driven by the chemical engineering, safety and operational process required by LanzaTech. To a large extent, these considerations dictate the form of the proposed development.

The Alcohol-to-Jet Process

5.5 The application proposal will deliver a SAF production facility in Port Talbot, transforming sustainably sourced ethanol into SAF and sustainable diesel, using the LanzaJet™ ATJ technology.

5.6 LanzaTech will use ethanol that complies with the requirements of the proposed UK SAF Mandate[6], which is currently being finalised. This requires that ethanol is made from sustainably produced wastes or residues (biomass or Recycled Carbon Fuels) or low carbon electricity (renewable or nuclear). The SAF supplied must also meet strict sustainability requirements. The proposed development has been developed to meet these requirements.

5.7 The proposed development will be fed by ethanol from industrial waste gases at other sites at which LanzaTech has established its gas fermentation technology around the world. These could include sites in Belgium, China, India, the US or other locations. Alternatively, LanzaTech may purchase sustainably sourced ethanol on the open market, such as ethanol made from waste starch. The greenhouse gas emissions associated with the production and transport of the ethanol have been taken into

[6] Mandating the use of sustainable aviation fuels in the UK - GOV.UK (www.gov.uk)

account in the Life Carbon Assessment (LCA) assessment of the carbon intensity of the SAF produced by LanzaTech in Port Talbot.

5.8 The process to produce SAF is summarised in Figure 5.1 and Table 5.1 below. The AtJ plant first dehydrates the ethanol to make ethylene. Two further steps then combine the ethylene molecules into long chains (oligamerisation) before a final step saturates the long chain hydrogen carbon molecules created in a step called hydrogenation. The outputs of this process, achieved through fractionation, are the SAF and sustainable diesel.

Figure 5.1: Graphic of LanzaTech Gas Fermentation Process and LanzaTech ATJ™ Process

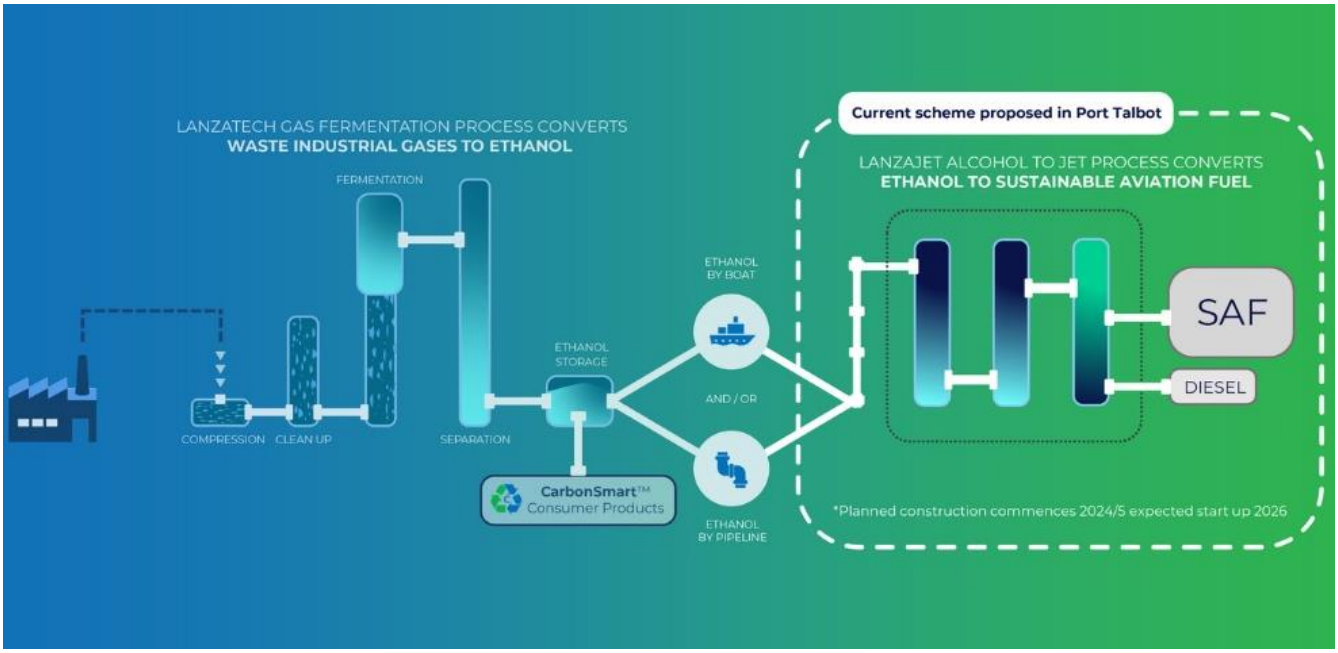


Table 5.1: High-level Summary of ATJ Process

Stage of Process	Summary
Step 1 – Sustainably sourced ethanol	Sustainably sourced ethanol is routed to the site by ship and transferred via pipe to ethanol storage tanks within the site.
Step 2 – Splitting to produce water and ethylene	The ethanol is transferred via pipe from the tanks to the process modules along the site's southern boundary, where it goes through a process of dehydration and splitting to create ethylene and water.
Step 3 – Oligomerisation	Ethylene molecules are combined into long chains. This process takes place within the process modules at the south of the site.

Step 4 – Hydrogenation	This process saturates the oligomerised molecules with hydrogen. This process takes place within the process modules at the south of the site.
Step 5 – Fractionation	The resulting product goes through a process of fractionation. This separates grades of fuel using temperature (different boiling points). This step also takes place within the process modules.
Step 6 – Output of SAF and sustainable diesel	The outputs are transferred via pipe and stored on-site in the respective SAF storage tanks and sustainable diesel storage tanks as identified on the layout plan. Thereafter, SAF will be piped to a wharf loading facility and distributed via ship. Sustainable diesel will be piped to the truck loading area and loaded onto tankers for distribution via road.

5.9 The ability to undertake the above process forms the basis of the proposed development and layout described in subsequent sections below.

5.10 The facility will produce approximately 90% sustainable aviation fuel and 10% sustainable diesel that would be sold as a sustainable road fuel. The proportion of SAF versus sustainable diesel is flexible and can change up to a 'maximum' sustainable diesel scenario of 25% sustainable aviation fuel and 75% sustainable diesel. The exceptional scenarios against which this flexibility could be utilised is set out in the supporting Transport Assessment (prepared by SCP).

5.11 The proposal has the potential to deliver ~1% of the UK's total jet fuel requirement. This would equate to approximately 10% of the SAF required under the UK SAF Mandate in 2030.

Proposed Development

5.12 As set out in Section 3, the proposed development consists of three primary areas:

- **PDZ**: The Production Development Zone comprises all permanent buildings, structures, plant and equipment associated with the proposed development.
- **Private Access Road:** The unnamed port road will provide the access points to the site.
- **Temporary Construction Areas**: Surrounding land to be utilised as temporary

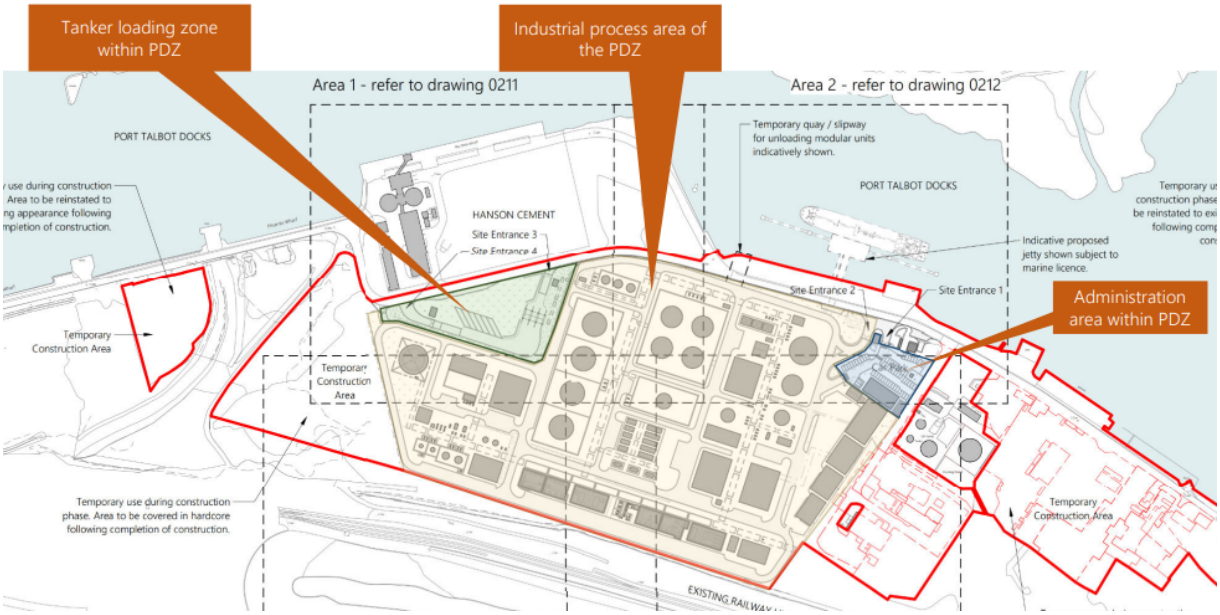
Production Development Zone

5.13 The PDZ layout can be split into three zones:

- Administration Area;
- Industrial Process Area; and

- Truck Loading Area.

Figure 5.2: PDZ Zones



Administration Area

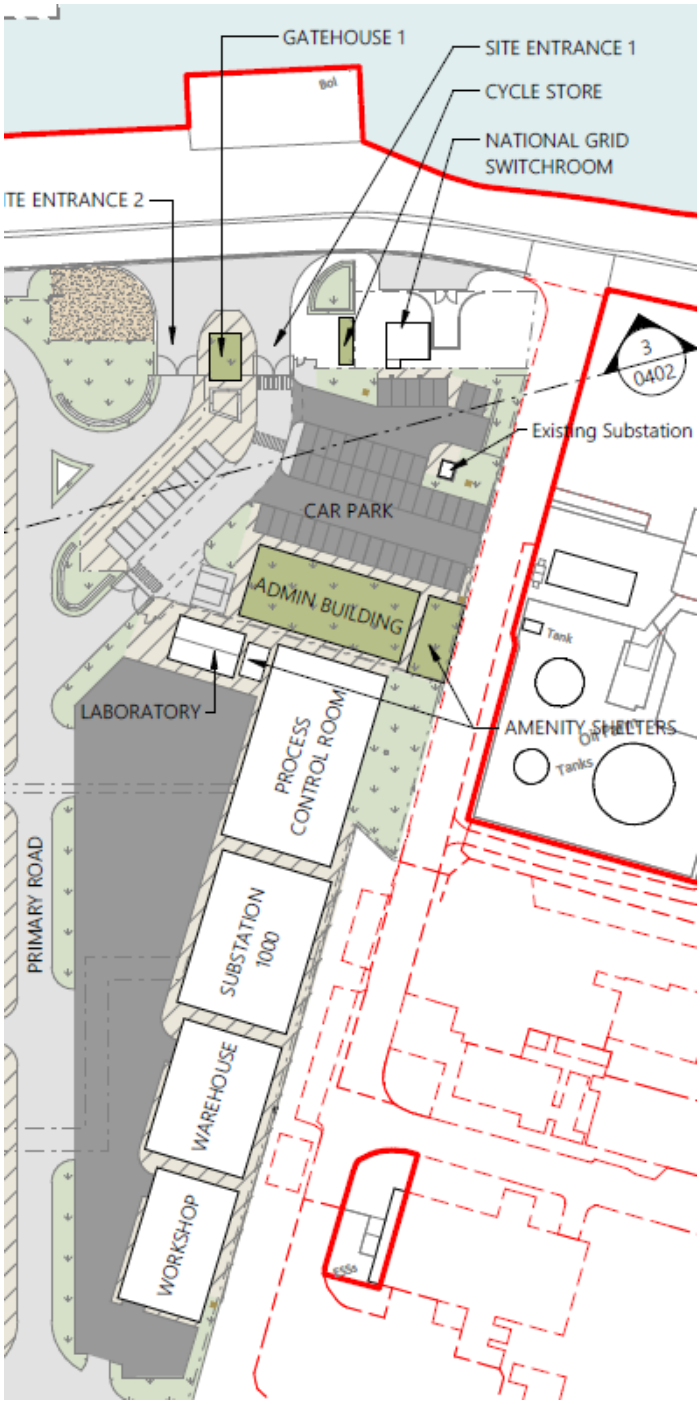
5.14 The administration area is situated at the main entrance to the site. It comprises development along the eastern boundary of the PDZ and includes:

- Gatehouse 1 – 35 sqm (GIA). The gatehouse will control entry into the administration building and car park and into the industrial process area.
- Administration building – 342 sqm (GIA). This is the primary building for use by employees and visitors. This is segregated from the wider industrial process area and further buildings to the south for operational and safety reasons.
- Amenity shelters – covered outside space for employees.
- Cycle stand – comprising eight bicycle parking spaces and two motorcycle spaces. This will accommodate sustainable transport choices and potential future improvements to surrounding port infrastructure.
- Car parking – 57 parking spaces, including two disabled parking spaces. 25% of the spaces proposed will accommodate active electric vehicle (EV) charging points. This level of parking will accommodate staff parking during each shift change over and parking for any visitors or maintenance staff who may be present onsite.
- Retention of an existing electrical substation.
- Electrical switchroom(s).
- Areas for SuDS/biodiversity and landscaping.

5.15 Further buildings accessed through the industrial entrance and separated from the main admin building and car parking area by a 2.4m high palisade fence, comprising:

- The process control room – 700 sqm (GIA). This is a dedicated control centre for the industrial process.
- Laboratory – 84 sqm (GIA). This will monitor the quality of feedstock materials, partially processed materials and finished products.
- Workshop – 337 sqm (GIA). This will be used for the repair and maintenance of items in the industrial process.
- Warehouse – 399 sqm (GIA). This will be used for the storage of spare parts and consumables for the industrial process.
- Electrical substation – 15m in height and connecting to wider industrial process area and substation.

Figure 5.3: Extract from Inspire Architects Plans, showing the Administration Area.



5.16 The proposed buildings will be located within close proximity to the site access and car/cycle parking facilities. This will allow easy access for staff and will reduce any potential conflict between staff and operational vehicles/movements across the site.

Massing, Scale and Appearance

5.17 The design of the administration area has been developed to maximise opportunities for landscaping, SuDS and biodiversity, whilst taking account of the functional, safety and operational requirements of the site. This includes brown roofs on the

administration building, adjacent amenity shelter, gatehouse 1 and cycle shelter. Sustainability matters including EV and solar have been considered in the design development and incorporated within the car park and administration building. This is demonstrated on the accompanying layout and landscape plans, prepared by Inspire Architects.

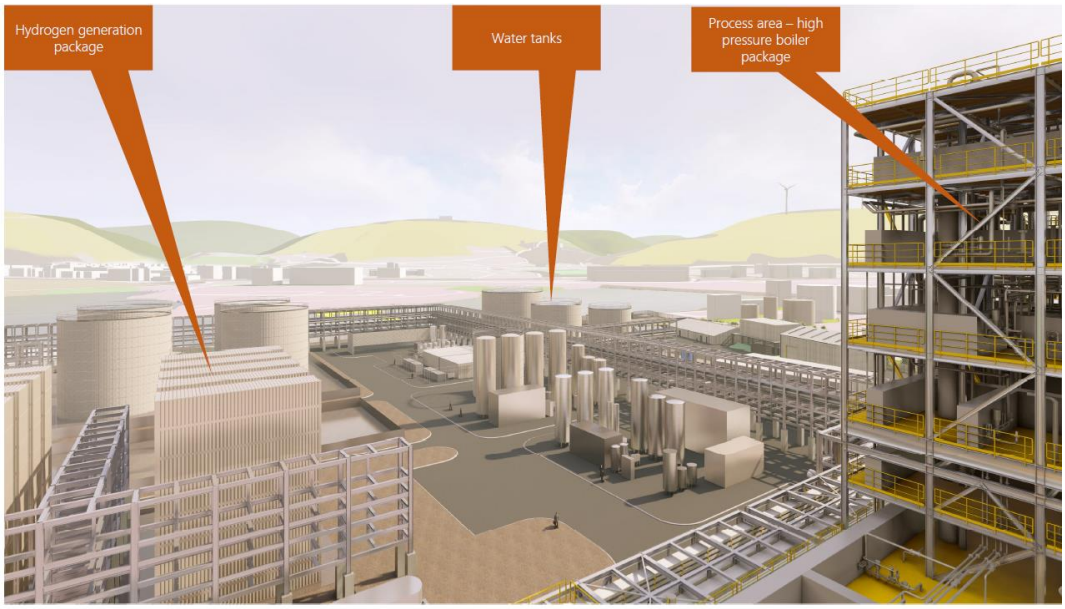
5.18 The proposed building heights across the administration area range from 10 to 15 metres. Several buildings will be single storey. The massing and scale of the structures reflects their operational requirements, including considerations regarding ventilation, internal functions, layout and safety matters. Full details of the design development, function and scale of each building is set out in Table 4, Section 6 of the Design and Access Statement.

5.19 The appearance of the administration area reflects its use and function as the primary entrance, frontage and public facing space within the site. The proposed layout and material palette reflect the optimum balance of design, planning and operational considerations. Full details of the materials used in the administration area are set out in Section 6.5 of the Design and Access Statement.

Industrial Process Area

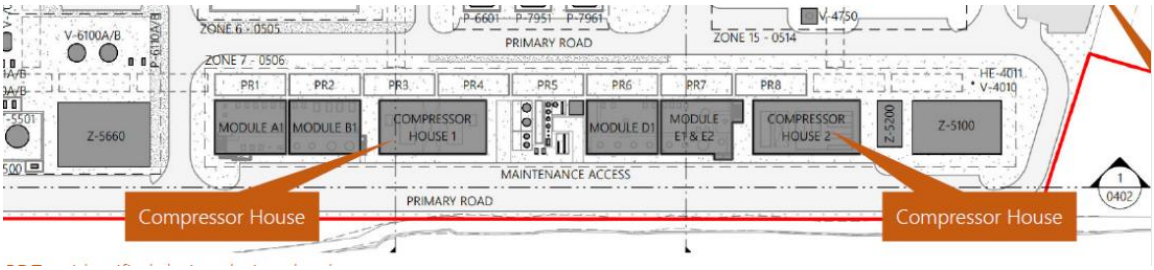
5.20 The industrial process area comprises the primary equipment associated with the AtJ process. The processing, storage and utility zones are located centrally within the PDZ and will include all the processing/production plant, associated structures and pipework, and the storage of inputs and outputs. This includes tanks for the storage of ethanol, sustainable aviation fuel and sustainable diesel.

Figure 5.4 and 5.5: 3D model extracts of industrial process area and equipment



5.21 Two buildings (compressor houses 1 and 2) are situated adjacent to the process modules in the southern extent of the site.

Figure 5.6: Extract from Inspire Architects showing Compressor Houses



5.22 A full breakdown of buildings, equipment and associated structures is set out in Appendix 1.

Massing, scale and appearance

5.23 The tallest structure comprises Module E1 & E2, set within the process modules along the southern boundary of the PDZ (see Figure 5.2 and 5.6 above) and will extend to approximately 46.3 metres in height. The remainder of the proposed development within the industrial process area will extend to a maximum height of 45 metres. The storage tanks throughout the industrial process area range in function and height from 5-20 metres. The smallest structures include pumps and engineering packages at 3m in height. The proposed heights have been reduced through the design process and since early pre-application discussions, with careful consideration to function and operational requirements as well as design and visual impact.

5.24 The scale of development is reflective of the site's operational and functional nature. All structures have been situated to aid the flow of process, function and safety considerations. It is representative of the scale of industrial development within the immediate vicinity and set within this context. Where possible, larger process units and associated equipment have been situated toward the southern boundary of the PDZ, to minimise visual proximity to the dock and wider harbourside area.

5.25 The material palette for the industrial process area will be operationally led and reflective of surrounding materials to include metal, galvanised steel and aluminium.

5.26 Where possible and safe to do so, opportunities for biodiversity/SuDS have been incorporated within the boundaries of the industrial process areas.

Enclosed Ground Flare

5.27 Through extensive pre-application discussion with NPTC, the design of the proposed flare has reduced from an 'elevated flare' (a tall concrete or steel pillar, which could have extended to circa 80 metres high) to an enclosed ground flare. This amendment has significant visual impact and noise benefits.

5.28 The ground flare will be enclosed within a shorter and wider structure. This will be situated in the western extent of the PDZ and within the industrial process area. The enclosed ground flare will extend up to 20m in height from the proposed ground level (i.e. in line with other equipment located within the industrial process area).

5.29 The flare is a crucial safety feature for the facility. During normal operations, the flare will only burn a minimal number of 'pilot' gases to support the safe operation of the facility.

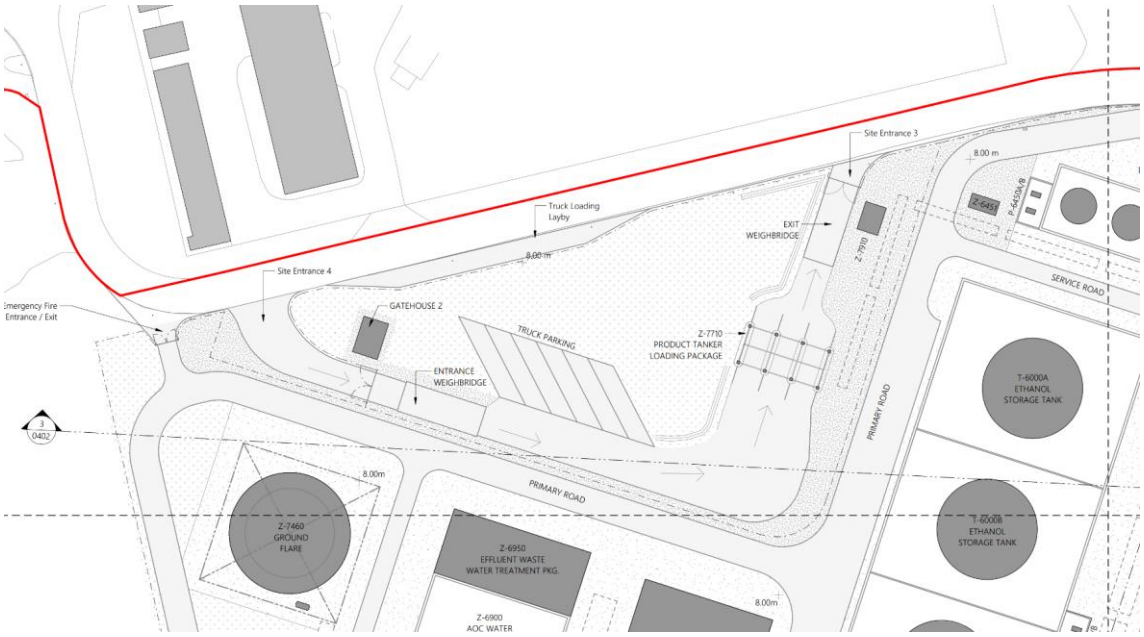
5.30 During an interruption to the process (such as a power cut), the flare will need to be used to recover the facility and safely shut it down. The flare will also need to be used to start up the plant. LanzaTech will strive to minimise both the amount and duration of any flaring event. Intensive use of the flare is expected to be limited and not common practice. Robust assessments have been undertaken against the use scenarios of the flare and form part of the supporting application documentation. This is discussed further in the Planning Assessment section.

Truck Loading Area

5.31 The truck loading area is situated along the north western boundary of the PDZ. It includes the facilities required for the loading of tankers for the distribution of sustainable diesel. This includes:

- A truck layby waiting area, before entering the main truck loading area;
- Gatehouse 2 – which extends to 35sqm GIA;
- Entrance and exit access points and associated weighbridges;
- Five truck parking bays;
- Truck loading and pump facilities; and
- Area of landscaping/biodiversity provision.

Figure 5.7: Extract from Inspire Architects Plan showing proposed truck loading area



5.32 The truck loading area is situated to provide ease of access from the main site access and separation from the main administration and industrial process areas. The scale of development and material palette are reflective of the wider development site, taking into consideration function and operation. The gatehouse will reflect the design and materials used in the administration area.

Access

5.33 The site will be accessed from the private road at the north of the application site. Three new vehicular access points are proposed. Two access points are located at the north east of the site and lie adjacent to the unnamed road which runs along the northern site boundary. The main site entrance will be used for the admin area (to be used by staff and visitors). The industrial entrance will be used to access the process area. Both access points will be controlled by a gatehouse for security.

5.34 Vehicles collecting and exporting products from the site will enter and exit the site from a new access point at the truck loading area. This is located at the north west of the site. Internal site roads are proposed across the Industrial Process Area to allow the transportation of materials and the daily operation of the site. This will also ensure that all modules and equipment can be accessed for maintenance purposes. All roads will be two-way with external lighting. Laybys and maintenance access are provided at specific locations throughout the Industrial Process Area to support the on-going operation and maintenance of the site (see the supporting plans prepared by Inspire Architects for further information).

5.35 There is an additional emergency access point in the north western corner of the site for emergency vehicles. This will only be used in emergency situations.

5.36 Ethanol and SAF will be transferred to and from the PDZ respectively via pipe rack from the wharf/unloading and loading facility, to be located within the adjacent dock area

owned by ABP. This will be subject to a separate marine licence. This will enable the transportation of ethanol and SAF via pipe to the dock and on to a ship.

PDZ-wide development proposals

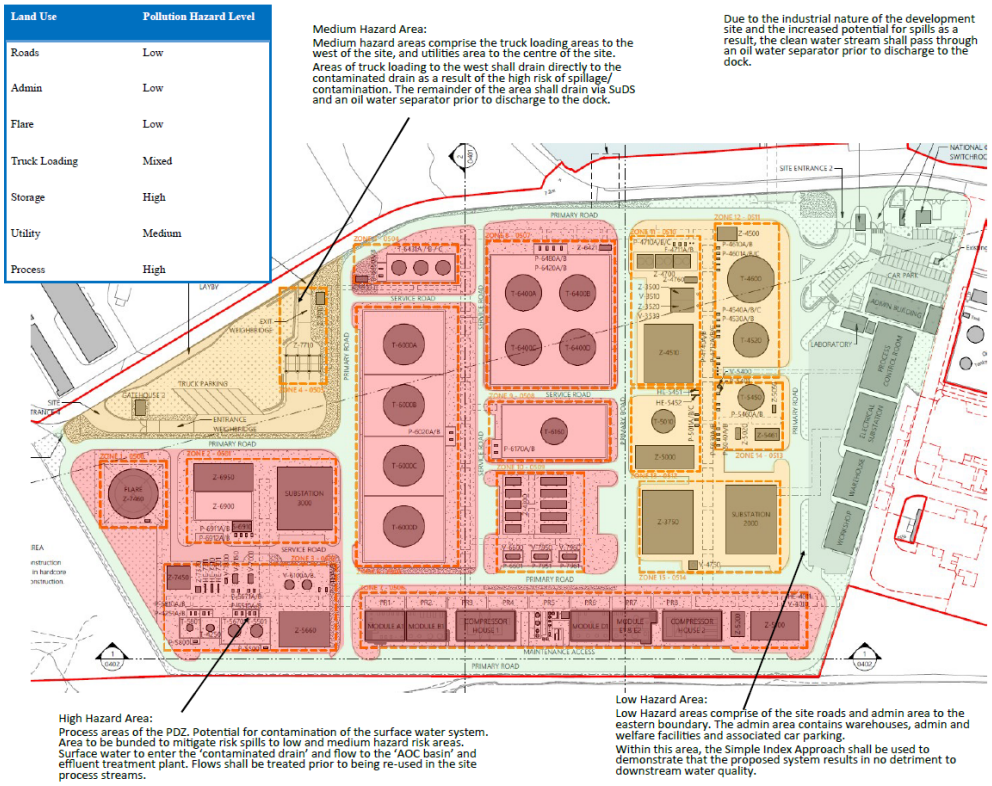
Drainage

5.37 The management of surface water across the site will reflect the site's industrial nature. It takes account of contamination risk being high, medium or low across different areas of the PDZ and has been developed in discussion with NPTC as the SuDS Approving Body. Surface water across the PDZ will be managed through two streams:

- The clean water drain – this will be used for low and medium hazard areas including roads, the administration area, enclosed ground flare, truck loading and utility space (see Appendix F of the supporting Outline Drainage Strategy, prepared by JBA). The clean water drain will flow through a SuDS system, discharging to Port Talbot dock.

- The contaminated drain – this will be used for high hazard areas comprising the storage and process areas of the site. The contaminated drain will flow to the onsite effluent treatment plant. The treated water will be re-used in the industrial process.

Figure 5.8: Water Quality Management Plan showing the various hazard areas.



5.38 The SuDS system will comprise rain gardens, trapezoidal ditches (gravel-based swales) and permeable paving. Biodiversity and amenity benefits are limited due to the industrial nature of the site and the consideration of health and safety and the Control of Major Accident Hazards (COMAH) Regulations. Biodiversity and amenity benefits are

maximised wherever possible across the site, particularly within the administration areas of the PDZ.

5.39 Foul flows from the PDZ will be accommodated within the public combined system, which drains to Afan New Works Wastewater Treatment Works (WwTW).

5.40 A formal SAB pre-application and subsequent full application will be submitted in parallel to the Pre-application Consultation and planning application process.

Site levels

5.41 The site will require levelling to accommodate the proposed development. Existing topography across the PDZ ranges from 6.86m to 9.64m AOD.

5.42 In response to current and future flood levels and a proportionate balance of cut and fill to allow for a good working substrate and minimising earthwork movements off-site, a flat working surface of circa 8m AOD is proposed across the site.

Fencing and enclosures

5.43 Site safety is an important and integral element of the proposed development. The proposed perimeter and internal fencing will comprise:

- Perimeter fencing: 2.4m steel palisade fence with security topping
- Internal fencing between administration building and industrial processes: 2.4m steel spiked palisade fencing (without security topping)
- Specific areas within the industrial processing area (such as substations): 2.4m chain-link fencing

5.44 LanzaTech has identified the above as the optimum solution to ensure the safe and secure operation of the site, based on experience gained from its sites in other locations. Palisade fencing benefits from a long and durable lifespan to support the proposed development. It is consistent with surrounding industrial sites in the immediate vicinity. All fencing will have steel posts set in concrete.

5.45 Details of means of enclosure/fencing for construction purposes will be detailed through a full Construction Environmental Management Plan (CEMP) to be developed in accordance with an associated planning condition and based on the Framework CEMP submitted with this application.

External lighting

5.46 A detailed lighting proposal has been developed for the site to accommodate staff welfare facilities, movement of goods and storage uses developed within the site. The introduction of lighting, such as road lighting and floodlighting, is to provide visual amenity, safety and operational performance, which may have the potential to result in obtrusive light at receptor locations.

5.47 The submitted lighting assessment sets an area of assessment which includes the PDZ and the adjacent surrounding areas, focussing on those receptors in near proximity and/or with a direct line of sight to the proposed development (up to approximately 2

km). Analysis includes key sensitive receptors that are most likely to experience a noticeable change given a new lighting installation or view of the night-time scene.

Layout and Overall Design

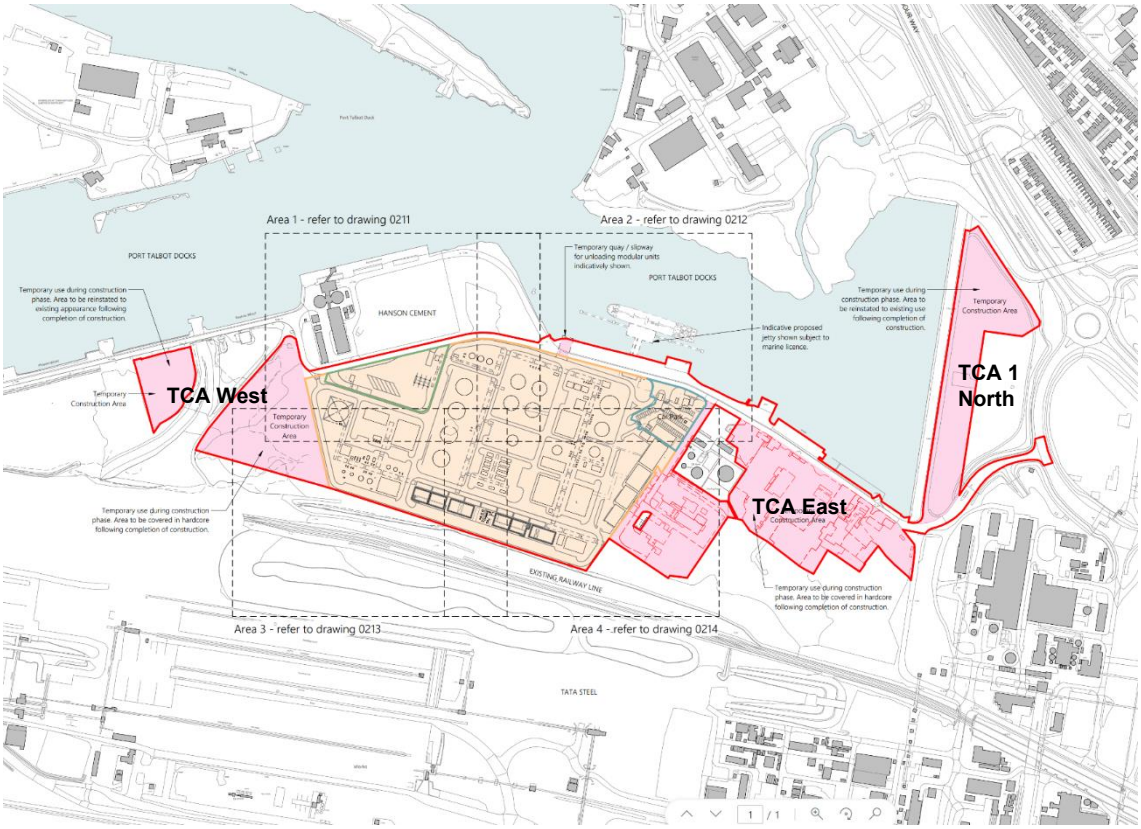
5.48 The site layout is reflective of the industrial nature of the proposed development. It has been informed by technical, design, planning, operational and safety requirements, including but not limited to:

- Proximity and connectivity required to accommodate interacting stages of the LanzaJet™ ATJ technology and process.
- Accessibility, including to the private road network and public highway, and dock facilities.
- Preliminary modelling regarding fire hazards and risks, ahead of a full Quantitative Risk Assessment (QRA). This has informed distances between occupied buildings and process equipment, as well as the location and extent of landscaping/SuDS/biodiversity provision.
- Engineering and operational efficiencies.
- Safe movement and operation around the site.
- Locating larger structures, plant and equipment in the southern extent of the site, at a greater distance from surrounding uses and receptors on the opposite side of the dock.
- Reducing heights to respond to amenity, visual impact and environmental health considerations.
- Amending technical designs to improve operation and respond to corresponding planning considerations, such as noise generation. This includes design amendments such as enclosing plant/equipment.
- A material palette that utilises muted and matte colours on larger equipment, as shown in the supporting Design and Access Statement.
- The above considerations and final layout ensure a functional and efficient use of the site. LanzaTech and the consultant team have worked closely with NPTC to develop a comprehensive scheme that balances design with the overall function of the facility.

Temporary Construction Areas

5.49 LanzaTech requires sufficient land in proximity to the PDZ for use as temporary construction laydown areas. Given the nature of the scheme and associated Environmental Impact Assessment, the potential TCAs form part of this application submission and are included within the EIA Study Area Boundary. These are set out below and comprise TCA1 (north), TCA East and TCA West.

Figure 5.9: Extract from Inspire Architects with annotated TCAs



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

5.51 At this stage, the full extent of potential TCA space has been included for planning and EIA purposes to inform a robust assessment of any associated impacts and effects.

5.52 It is anticipated that the TCAs will be used in the following ways:

- An area to house the main principal contractor compound and associated amenities/welfare facilities;
- Car parking;
- Material delivery, drop off and storage;
- Potential pre-fabrication; and
- Satellite compounds, if required.

5.53 Construction working hours will generally be 07:00 to 19:00, Monday to Friday and 07:00 to 13:00 on Saturdays. It is likely that some construction activities will be

required to operate for 24 hours at certain times. Where on-site works are to be conducted outside core hours, they will comply with the requirements set out in the future CEMP (once developed), outcomes of associated technical reports and any relevant conditions agreed with NPTC through the planning application determination process.

5.54 The construction period is anticipated to run for circa 2.5 years, commencing in 2024 with completion in 2026.

5.55 Where appropriate, temporary drainage requirements for the TCAs will be provided and will be addressed through the separate SAB process. The TCAs which comprise existing hardstanding will retain and use the existing drainage systems serving these areas. TCA1 (north) will utilise the slope of the area to drain to proposed ditches with drainage pumps to manage any runoff or build-up of materials associated with temporary construction.

5.56 Full details of associated construction lighting and temporary enclosures will be detailed in a CEMP, which will be developed from the Framework CEMP (which forms part of this application submission) at the appropriate time and subject to further discussion/agreement with NPTC, pursuant to condition.

Operating Hours

5.57 The site will operate 24 hours a day, 7 days a week. This will take place 365 days per year.

5.58 Once operational, the proposed development is expected to generate approximately 85 FTE jobs. Staff will work in shifts, as detailed below, and supported by six remote support staff:

- Day Support Staff: Nine staff working 08:00-17:00
- Day Shift: 12 staff working 00:00-08:00
- Evening Shift: 41 staff working 08:00-16:00
- Night Shift: 17 staff working 16:00-00:00

Proposal Overview

5.59 Overall, the application proposal seeks to provide:

- Safe access and egress for staff and visitors, industrial/operational use, truck loading and emergency operators.
- Access from the main site entrance via the unnamed port road.
- On-site landscaping/SuDS/biodiversity features where possible and safe to do so surrounding the operational site. This includes the use of different external surface materials and brown or biosolar roofs, where practical.

- Amenity shelters.
- 57 car parking spaces and dedicated cycle stand facilities, incorporating disabled parking and 25% active EV charging.
- Administration areas including gatehouse 1, primary administration building and associated buildings within the industrial process area comprising warehousing, labs, workshops, electrical substations and process control room.
- Industrial process area comprising the enclosed ground flare, compressor houses, all pipework, storage, utility and processing equipment and structures, and all associated and ancillary development.
- Internal two-way access roads for safe movement of all relevant vehicles around the industrial process area.
- Truck loading area and associated facilities, including gatehouse 2 (which extends to 35 sqm GIA).
- On-site substations and switchrooms to accommodate off-site power and utilities.
- An optimal site layout which balances design and planning considerations with the overall function and operation of the proposed scheme.
- A drainage strategy which takes account of SuDS and responds to the operational requirements of the administration, industrial processing and truck loading areas.
- Perimeter and internal fencing, to identify the PDZ and separate different functional areas, to allow safe on-going operation and ease of movement across the site.
- External lighting to facilitate safe working, operation and movement throughout the site, taking account of biodiversity and amenity considerations.

Utilities and off-site infrastructure

5.60 LanzaTech is progressing detailed discussions with relevant utility providers regarding the delivery of necessary off-site infrastructure. This includes:

- DCWW (potable water and foul drainage) – DCWW has confirmed that sufficient capacity is available to serve the development. Relevant infrastructure will be delivered by DCWW, as required.
- National Grid - electricity capacity is confirmed and discussions in relation to securing a connection agreement to the Pyle substation are on-going. National Grid will obtain relevant consents and deliver the requisite electrical connection to the application site boundary.

5.61 Proportionate mechanisms/conditions regarding the delivery of off-site infrastructure by third parties, where appropriate, reasonable and enforceable to do so, will be discussed and agreed with NPTC throughout the planning application determination.

Associated Consents, Permits and Licensing

5.62 This full planning application focuses on delivering the terrestrial planning elements necessary to deliver this major and complex proposal.

5.63 Given the industrial and technical nature of the proposal, additional consents, permits and licenses (beyond the planning process) will be required to support the operation of the scheme. For completeness and to aid NPTC in the decision-making process, the table below summarises the anticipated (separate) requirements and where these are assessed[7].

5.64 The wharf loading/unloading facility and grid connection do not form part of the proposed development for which planning permission is sought but have in any event been assessed as appropriate to the level of detail known at this stage in the ES. The approach to these items is underpinned by legal advice from Pinsent Masons and set out in **Appendix 2**. This has been agreed with NPTC through the course of pre-application discussions.

5.65 Where relevant to do so, ongoing collaboration has taken place across technical teams to ensure consistency on associated consenting, permitting and licensing matters.

Table 5.2: Summary of consents, licenses, permits and other approvals required separate to the planning process

Permit / Consent / License / Other Approval	Description	Lead Consultant and Relevant Determining Authority
Environmental Permit	An environmental permit is required for the main production activity, in accordance with the Environmental Permitting Regulations (England and Wales) 2016 (as amended).	Consultant: ERM Authority: NRW
Greenhouse Gas Emissions Permit	The scheme will exceed relevant thresholds and will require a Greenhouse Gas Permit to operate under the UK Emissions Trading Scheme.	Consultant: ERM Authority: NRW

[7] Further technical detail on these separate consents and permits are provided in the Environmental Statement. All will be progress by separate specialist technical teams and undertaken in line with relevant standards, guidance and requirements.

Water Abstraction License	Required for the volume of water expected to be abstracted from Port Talbot docks.	Consultant: ERM Authority: NRW
Hazardous Substances Consent	Required for the handling of hazardous substances and exceedance of controlled quantities in the Planning (Hazardous Substances) (Wales) Regulations 2015.	Consultant: ERM Authority: NPTC in consultation with the Health and Safety Executive (HSE) and NRW
Control of Major Accident Hazards (COMAH)	Required due to the handling of hazardous substances exceeding the Upper Tier COMAH threshold.	Consultant: ERM Authority: HSE and NRW
Marine License	A marine license will capture all marine works associated with the wharf loading/unloading facility, in accordance with legal advice.	Authority: NRW in consultation with NPTC as statutory consultee
Sustainable Drainage Approval Body (SAB)	In accordance with Schedule 3 of the Flood and Water Management Act 2010, the proposed development requires SAB approval.	Consultant: JBA Authority: NPTC

6. Planning Policy

6.1 This section summarises the local and national planning policy context relevant to the proposed development. This should be read alongside the Planning Policy Matrix included at **Appendix 3**.

The Development Plan

6.2 The Development Plan comprises Future Wales: The National Plan 2040 (February 2021) and the adopted Neath Port Talbot Council Local Development Plan ("LDP"), adopted in January 2016.

Future Wales: The National Plan 2040

6.3 Future Wales ("FW") was published by Welsh Government in February 2021 and constitutes the national development framework, setting out the direction of development in Wales to 2040. FW addresses key national priorities, including sustaining and developing a vibrant economy, achieving decarbonisation and climate-resilience and improving the health and well-being of our communities. Future Wales is strongly influenced by Planning Policy Wales (PPW) which established key principles for the planning system.

6.4 Outcome 11 of FW states that *"decarbonisation commitments and renewable energy targets will be treated as opportunities to build a more resilient and equitable low-carbon economy".* FW aims to ensure that the planning system will help Wales *"lead the way in promoting and delivering a competitive, sustainable decarbonised society"* (page 56).

6.5 Policy 1 (Where Wales Will Grow) identifies three National Growth Areas for Wales, which are complemented by Regional Growth Areas. One of the National Growth Areas is Swansea Bay and Llanelli, which includes Port Talbot.

6.6 Policy 9 (Resilient Ecological Networks and Green Infrastructure) states that development proposals must demonstrate action towards securing the maintenance and enhancement of biodiversity to provide a net benefit, the resilience of ecosystems, and green infrastructure assets, through innovative, nature-based approaches to site-planning and the design of the built environment.

6.7 The Project aligns with FW's aim for Wales to become a world leader in renewable technologies, support investment and reduce carbon emissions.

Local Development Plan

6.8 The LDP guides the future development for NPTC, and sets out where, when, and how much new development can take place during the plan period (2011 to 2026).

6.9 Objective 1 (Climate Change) seeks to minimise the causes and consequences of climate changes through reduced greenhouse gas emissions and adapt to climate

change through consideration of its effects in the design and location of new development.

6.10 Policy TR4.2 of the LDP identifies the site as part of a wider 'Safeguarded Freight Facility' at Port Talbot Docks.

6.11 The policies listed below are relevant to the proposed development. A Planning Policy Matrix (included at Appendix 3) sets out each policy in detail and provides an analysis demonstrating how the application proposal complies with the requirements of each.

- **Policy SP1 (Climate Change)** addresses how the causes and consequences of climate change will be addressed.

- **Policy SP4 (Infrastructure)** states that development will be expected to make efficient use of existing infrastructure, and where required make adequate provision for new infrastructure.

- **Policy SP5 (Development in the Coastal Corridor Strategy Area)** states that, in the Coastal Corridor Strategy Area (in which the site is located), sustainable growth and development will be promoted to benefit the County Borough, while protecting and enhancing the area's character and environment.

- **Policy SP6 (Development in the Valleys Strategy Area)** states that, in the Valleys Strategy Area (in which the site is located), the local economy and communities will be enhanced and reinvigorated and the distinctive environment will be protected through area specific measures.

- **Policy SP11 (Employment Growth)** states that new employment developments will be encouraged by specified measures.

- **Policy EC2 (Existing Employment Areas)** seeks to protect the employment function of NPTC's employment areas.

- **Policy EC3 (Employment Area Uses)** states that uses are restricted within allocated and existing employment areas. Developments are required to demonstrate that proposals do not cause any adverse impacts on the overall function of the employment area.

- **Policy SP15 (Biodiversity and Geodiversity)** notes how important habitats, species, and sites of geological interest will be protected, conserved, enhanced, and managed.

- **Policy SP16 (Environmental Protection)** states that air, water, ground quality, and the environment generally, will be protected and improved where feasible through the measures set out in the policy.

- **Policy EN8 (Land Stability)** refers to 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.

- **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. It sets out how this will be achieved.

- **Policy SP20 (Transport Network)** states that the transport system and infrastructure will be developed in a safe, efficient, and sustainable manner through the measures set out in the policy.

- **Policy TR2 (Design and Access of New Development)** states that development proposals will only be permitted where criteria set out in the policy are satisfied.

- **Policy TR4 (Safeguarding Freight Facilities)** designates four areas to be safeguard for the transportation of freight. This includes designation TR4/4: Existing Rail Connections & Sidings, in which the development site is located.

- **Policy SP21 (Built Environment and Historic Heritage)** states that the built environment and historic heritage will, where appropriate, be conserved and enhanced.

- **Policy BE1 (Design)** states that all development proposals are expected to demonstrate high quality design which takes into account the natural, historic, and built environmental context, and contributes to the creation of attractive, sustainable places. The Policy states that proposals will only be permitted where specified criteria are met.

Supplementary Planning Guidance

6.12 The LDP is supported by Supplementary Planning Guidance ("SPG"). The relevant SPGs are listed below:

- Planning Obligations (October 2016)
- Pollution (October 2016)
- Parking Standards (October 2016)
- Open Space and Greenspace (July 2017)
- Renewable & Low Carbon Energy (July 2017)
- Design (July 2017)
- Landscape and Seascape (May 2018)
- Biodiversity and Geodiversity (May 2018)

Emerging Planning Policy

6.13 NPTC is currently in the process of reviewing its adopted LDP. The preferred strategy consultation is anticipated in November 2023. Adoption is anticipated in July 2025. The 15-year plan period will be from 2021 to 2036, replacing the current LDP.

6.14 LanzaTech has actively engaged in NPTC's Candidate Sites Process for the Replacement Local Development Plan (RLDP). This engagement has occurred in parallel with the early planning stages of the proposed development and has included meetings with NPTC's Policy team. The site was submitted for Stage 1 of the process in May 2022 (ref: RLDP/PT/0035).

6.15 The site is currently designated as a Safeguarded Freight Facility (Policy TR4/2) within the adopted LDP (dated 2016). The site has not come forward for freight development and other complementary uses are deliverable in this location and would better promote the use of the dock and harbour and sustainable, innovative industry.

6.16 LanzaTech's involvement seeks the development of an appropriate development plan policy allocation for the site and framework for its regeneration as part of the wider Port Talbot Docks area. In agreement with ABP and NPTC, LanzaTech's interests will be represented as part of the wider ABP comments on the RLDP and its contribution to plan-making in the context of the Celtic Freeport. LanzaTech remain committed to participation in the RLDP and maximising the opportunities presented by the Celtic Freeport and wider regeneration.

The Decarbonisation and Renewable Energy Strategy (DARE) (May 2020)

6.17 The Decarbonisation and Renewable Energy Strategy (DARE) sets out how NPTC will reduce its carbon footprint when carrying out operations and functions and respond to the challenges of climate change. The Strategy addresses NPTC's approach to renewable and low carbon development across the Borough.

Biodiversity Duty Plan 2020 – 2023 (December 2021)

6.18 The Biodiversity Duty Plan is NPTC's plan required under section 6 of the Environment (Wales) Act 2016. It sets out a summary of the many important ecosystems existing across the Borough and how these will be supported and monitored.

National Planning Policy

Planning Policy Wales

6.19 Planning Policy Wales Edition 11 (published in February 2021) ("PPW") sets out the land use planning policies of the Welsh Government. The primary objective of PPW is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales, as required by the Planning (Wales) Act 2015, the Wellbeing of Future Generations Act and other key legislation.

6.20 It is supplemented by a series of Technical Advice Notes (TANs), Welsh Government Circulars, and policy clarification letters, which together provide the national planning policy framework for Wales.

6.21 Paragraph 3.3 states that good design is fundamental to creating sustainable places. Design is not just about the architecture of a building but the relationship between all elements of the natural and built environment. To achieve sustainable development, design must go beyond aesthetics and include the social, economic, environmental, cultural aspects of the development.

6.22 Paragraph 3.7 sets out that development should seek to maximise energy efficiency and the efficient use of other resources (including land), maximise sustainable movement, minimise the use of non-renewable resources, encourage decarbonisation and prevent the generation of waste and pollution.

6.23 Paragraph 3.30 notes that the Welsh Government declared a climate emergency in 2019. The planning system plays a key role in tackling the climate emergency through the decarbonisation of the energy system and the sustainable management of natural resources.

Welsh National Marine Plan

6.24 The Welsh National Marine Plan (WNMP) was adopted in November 2019 and constitutes the first marine plan for Wales. It aims to shape the seas of Wales to support economic, social, cultural and environmental objectives.

6.25 The document guides the sustainable development of Wales' marine areas by setting out how proposals will be considered by decision makers. The document covers the inshore and offshore Welsh National Marine Plan regions and sets out the Welsh Government's policies for, and in connection with, the sustainable development of the Marine Plan Area.

6.26 Further detail on the WNMP and policies relevant to the proposed development are set out in the Planning Policy Matrix (**Appendix 3**).

Technical Advice Notes (TAN)

6.27 The Technical Advice Notes relevant to the determination of the application proposal include:

- TAN 11: Noise (October 1997)
- TAN 15: Development and Flood Risk (July 2004)
- TAN 18: Transport (March 2007)
- TAN 5: Nature Conservation and Planning (September 2009)
- TAN 23: Economic Development (February 2014)
- TAN 12: Design (March 2016)
- TAN 24: The Historic Environment (May 2017)

Summary

6.28 This section has summarised the planning policy context relevant to the application proposal, taking into account material considerations. The key themes identified relate to decarbonisation, sustainability, sustainable economic growth, natural environment, amenity, and design.

6.29 National legal commitments to achieving decarbonisation form an important framework against which this application should be determined. Prevailing

development plan policy is supportive of decarbonisation, including the use of low carbon and best available technology development. This agenda is an important driver for achieving sustainability and the delivery of sustainable development, including climate change resilience.

6.30 The site is allocated as a safeguarded freight facility in the LDP. The use of existing dock infrastructure in the designated coastal corridor is an important opportunity recognised in the development plan and WNMP. Development plan policy and relevant material considerations promote sustainable economic development, particularly where it delivers regeneration and investment in strategic existing growth locations served by existing infrastructure.

6.31 Development must be of high quality, taking into account the nature of the site and its surrounding context. Placemaking criteria must be met in relation to:

- Environmental protection criteria relating to land, health, waste, air quality and noise.
- Health and safety requirements must be met, including on fire risk and major accidents and emergencies.
- Taking into account the significance of known built and natural heritage assets, and their setting.
- Avoid any unacceptable impact on nearest sensitive environmental and residential receptors, and land uses.
- Landscaping quality and avoidance of any undue visual impacts from public vantage points in the vicinity of the site.
- Being acceptable from a flood consequence perspective, taking into account the requirement for sustainable drainage and climate change resilience.
- Delivering net biodiversity benefit.
- Promoting the use of alternative modes of transport and Active Travel, whilst also being acceptable from a highway and transport perspective.

6.32 Further analysis of the proposed development and its compliance with national and local planning policy objectives is provided in the following section of this report.

7. Planning Assessment

7.1 This section considers the proposed development against the planning policy context identified in Chapter 5. The assessment is broken down into core policy themes. A detailed summary of all relevant planning policy relevant to the application proposal is presented at **Appendix 3**.

7.2 Having established the context for the proposed development, the core policy themes relevant to the proposed development are as follows:

- Principle of development, including the proposed use and its deliverability;
- Sustainable economic development, including employment, decarbonisation ambitions and regeneration;
- The built environment and industrial context;
- Environmental health; and
- Natural environment.

Principle of Development

7.3 The application site is located within the operational Port Talbot docks. The site comprises historic brownfield land with an established history of industrial use.

7.4 The regeneration of a vacant and underutilised brownfield site is strongly supported by planning policy at all levels. The proposed development will make a considerable contribution to the long-term (sustainable) economic development of the area, creating approximately 85 FTE highly skilled jobs on site.

7.5 The proposal will complement the industrial role of the area, including the wider Port Talbot Docks, which includes Hanson Cement to the north, and Tata Steel UK Port Talbot Steelworks to the south. The site's history confirms that the principle of major industrial development in this location is well established.

7.6 The principle of development is supported by local and national policy. It directly complies with the strategic aims of FW and the goal to decarbonise. The proposal would support key planning principles, including (but not limited to):

- **Growing Our Economy in a Sustainable Manner**
  - The introduction of industrial development that will foster economic activity and sustainable growth. The site offers the opportunity to bring forward a new vibrant and dynamic employment opportunity in an accessible location which directly delivers on the Government's ambitions for sustainable fuel supply.

- **Creating and Sustaining Communities**

  – The proposed development will provide a range of new employment opportunities, including 85 FTE jobs in the operational phase. LanzaTech is committed to supporting local employment and supply chain opportunities.

- **Making Best Use of Resources**

  – The proposed development would result in the redevelopment of previously developed land that is currently underutilised and will act as a catalyst for wider development opportunities. It seeks to cluster industrial development to maximise proximity to surrounding resources and skills.

Associated British Ports Ambitions

7.7 ABP is the freehold landowner of the application site. ABP's 'Future Ports: Port Talbot' document sets out its long-term vision for Port Talbot Docks. The vision outlines the site as an optimum location for 'sustainable fuel production'. ABP's intention is to seek *'transformational change for the next industrial revolution'*.

7.8 The proposed development will act as a catalyst for the delivery of ABP's vision and will sit within a context of industrial uses at Port Talbot Docks. It is an exciting opportunity to see innovative development delivered on prominent, underutilised brownfield land. This aligns with the wider aims and ambitions of the Celtic Freeport to generate new investment and support new green jobs.

Safeguarded Freight Facility Designation

7.9 Policy TR4.2 of the LDP identifies the site as part of a wider 'Safeguarded Freight Facility' at Port Talbot Docks. The site has been vacant for a significant period and has not come forward for freight/port related development, as originally envisioned.

7.10 Through LanzaTech's long running discussions with ABP, the intention is to promote the application site for sustainable aviation fuel production. The proposed development seeks to utilise the existing harbour for the transportation of materials, feedstock and products (broadly consistent with the site's current LDP allocation). It would not preclude the existing or future use of the harbour or wider Dock area. On the contrary, the development supports the use of the working harbour and ABP dock facilities. It would support and facilitate transport movements by sea.

7.11 Continuing to safeguard this land in its current form will preclude the sustainable regeneration of the site and wider docks. Other complementary industrial uses are clearly deliverable and viable in this location that would continue to support the use of the dock and harbour assets.

Deliverability

7.12 LanzaTech is committed to delivering the SAF production facility in Port Talbot and investing within the region. This investment is backed by Government funding through the Department for Transport Advanced Fuels Fund.

7.13 LanzaTech is working collaboratively with the primary landowner, ABP, to facilitate development at the site. LanzaTech has a clear and achievable timeline for the construction and implementation of the facility by 2026, which all parties are working to deliver.

7.14 LanzaTech has confirmed that the proposed development can be delivered promptly once the relevant planning (and other) approvals are in place.

Sustainable Economic Development

7.15 LanzaTech is committed to delivering sustainable development. LanzaTech's mission is to create a post-pollution future where waste carbon is the building block from which everything is made. Its core business and technology contribute to this future and enable a circular carbon economy by transforming waste carbon into new sustainably produced fuels and chemicals. This provides consumers with sustainable products and services (like journeys by air) with lower environmental impact.

7.16 The proposed development will contribute positively towards NPTC's goals to mitigate and adapt to the effects of climate change and Welsh Government's climate emergency declaration. It responds to and will help deliver the UK Government's Ten Point Plan for a Green Industrial Revolution and Net Zero Strategy and the achievement of the UK's Carbon Budget. The Project offers a significant opportunity for Port Talbot and to meet government targets to decarbonise the aviation sector.

7.17 The facility represents a long-term investment by LanzaTech in facilitating new and innovative economic development in Port Talbot. It is LanzaTech's first UK facility and will lead the way as an example scheme for future investment in this technology at a Wales and UK scale. LanzaTech is a key partner of SWIC and NZIW, demonstrating its ongoing commitment to the region.

7.18 The proposals will make a positive contribution to sustainable economic development, growth, and job creation in Neath Port Talbot. It supports the vision set out in DARE. In doing so, the proposal will contribute towards the Council's mission of maximising the economic, social, health and environmental benefits of decarbonisation through a focus on sustainability. It will also further Wales' progress towards a more resilient and equitable low-carbon economy and provides a significant opportunity for Port Talbot to lead on this agenda.

7.19 NPTC wants Neath Port Talbot to be at the heart of positive change. The focus of DARE is on action and the Council wants to work with partners to accelerate the shift needed. The scheme responds positively to this policy agenda and the need for delivery.

Economic Impact and Supply Chain

7.20 The proposed development will deliver economic benefits to Port Talbot and the wider region. Turley has prepared a detailed assessment of the economic impact that the application proposal is capable of delivering, as set out in Chapter 9 of the ES. In summary, the application proposal can deliver:

- Anticipated total capital expenditure in the construction of the proposed development is measured in hundreds of millions of pounds.

- The creation of 85 new permanent (on-site) FTE jobs.

- The proposed development has the potential to support up to 130 FTE jobs in the supply chain.

- Use of local contractors where feasible, as well as use of local firms involved in activities such as water treatment, waste management, chemical management and ship loading/unloading, wherever possible. This makes use of specialist skills, of which there are a greater proportion in the area due to its industrial context.

7.21 The beneficial economic impacts of the proposed development will extend beyond construction employment to include the generation of indirect benefits for the local economy. Gross Value Added for the project is calculated to be in the order of tens of millions of pounds per year over the minimum 20-year operating life of the facility. It will generate considerable expenditure on construction materials, goods and other services which will be purchased from a wide range of suppliers. Local firms will be used where possible. This expenditure has far-reaching benefits both locally and further afield as it filters down the supply chain. This will result in positive spin-off benefits for the region.

Existing and Proposed Employment Use

7.22 TCA North is located within Existing Employment Land (Policy EC2/11 (Tata Steelworks) of the LDP). The land proposed for temporary construction use is within ABP's landownership. The use of this site for temporary construction activities will support and facilitate wider employment use in the area, in accordance with Policy EC2 and 3. This use will be temporary, and it would not impact the overall function of this area for employment in the future.

7.23 TCA East comprises small scale, operational employment uses. These uses will be displaced to another location within NPT. It forms part of the land allocated as a safeguarded freight facility around the docks. This area includes several industrial businesses situated in a mix of warehouses and buildings of varying quality. As part of ABP's Future Ports Programme for Port Talbot, land will be made available to accommodate future regeneration. ABP is in discussion with existing occupants prior to the submission of this planning application regarding their displacement. The parcel is proposed to be used on a temporary basis to facilitate the construction of the proposed development. Full details of the extent of use of the TCAs will be provided as part of a detailed CEMP and Construction Method Statements, at the appropriate time.

7.24 To accommodate the temporary construction use proposed, as well as any future regeneration proposals (which do not form part of this application proposal), demolition/deconstruction of the existing industrial structures will be required on TCA East, and some existing occupants will be permanently displaced. ABP (as landowner) is liaising with the interested parties and will take the appropriate steps to facilitate the proposal.

7.25 It is the intention for the activities of these businesses to remain within NPT and there will be no impact on employment levels within the borough as a result. In accordance with Policy EC4, demolition of the existing buildings within TCA East will facilitate development that provides significant investment in Neath Port Talbot and an increased level of direct and indirect employment opportunities. It will bring a new form of innovative industrial skills and technology to the area.

7.26 The nature of the businesses to be relocated provide complementary and important skills for the proposed development. Where possible, LanzaTech will engage in local partnership arrangements and support supply chain opportunities with existing occupants. A wider Social Value Strategy forms part of LanzaTech's commitment to investment in the area and will be developed in discussions with key stakeholders.

7.27 Overall, the proposed development does not impact on the existing policy allocation and supports the delivery of a new employment use. It will positively support the use of local businesses and skills in the supply chain and result in a positive impact on local employment through on-site and indirect jobs.

7.28 In summary, the proposed SAF facility:

- Comprises the sustainable use of historic brownfield land.
- Will support national and local planning policy, as well as vision strategies relating to climate change.
- Will contribute to the local economy, providing new employment opportunities in both the construction and operational phases.
- Will complement the wider regeneration of the docks and will be a catalyst for further developments of this nature.
- Will encourage and enhance on-going employment and industrial operations around the dock, including utilising the harbour.
- Represents a significant, sustainable, long-term investment in NPT's economy.

Built Environment

High Quality and Safe Design

7.29 As set out in Section 5, the design, layout, scale, appearance and landscaping of the proposed development responds directly to the requirements of the industrial process and health and safety considerations. The buildings, plant and equipment are placed strategically to ensure the effective and safe functioning of the facility, in line with the LanzaJet ATJ™ technology.

7.30 The layout proposed ensures that the operational safety and the management of accidents and hazards is integral to its operation. This has included consideration of accessibility for maintenance equipment, ventilation and spacing of buildings and structures, safe isolation of equipment and personnel access and egress during maintenance activities.

7.31 Considerable efforts have been made to incorporate high quality design, sustainability, SuDS, landscaping and biodiversity into this industrial site, where appropriate and safe to do so. These considerations seek to limit the visual impact of the proposals, as well as minimise any amenity impacts. Examples of how the final design has evolved in direct discussion with Officers at NPTC include:

- Minimising heights through careful engineering of the equipment;
- Enclosing structures where appropriate and in accordance with engineering practices to reduce noise;
- Ensuring large items are provided in muted, matte colours;
- Amenity shelters for staff are provided in two separate locations across the site;
- Maximising SuDS, landscaping and biodiversity space where it is safe to do so and in keeping with the industrial context of the site;
- Use of brown roofs and solar panels to promote biodiversity and sustainability, where practical in the administration area;
- Developing a high-quality entrance into the site around the administration building;
- Configuring the development arrangement to reduce visual impact where possible, situating large equipment away from the prominent water frontage. This includes the process area and enclosed ground flare; and
- Shift from an elevated flare to an enclosed ground flare (see below).

Enclosed Ground Flare

7.32 A significant evolution to the scheme's design is the proposed flare. The flare is a crucial part of the proposed development. It is essential for ensuring the safe functioning of the plant.

7.33 An elevated flare is an industry standard for this type of facility. A circa 80m elevated flare formed part of the original design. This was set back to the south west corner of the PDZ to minimise visual impact.

7.34 LanzaTech assessed various options to minimise the noise and visual impact of the flare. An enclosed ground flare is now proposed. This leads to a significant reduction in height and significantly lower noise levels and lower luminosity, as gases are burnt at ground level within a circular enclosure.

Scale

7.35 The scale and heights of the proposed development are considered acceptable in this location. This is due to the industrial context of the surrounding area. The visualisations (prepared by Ocean CGI) demonstrate that the scale and appearance of the proposed development sits appropriately within the surrounding context.

7.36 Heights have been minimised through the careful engineering of equipment. Heights vary from 8m to 46.3m across the site.

7.37 The tallest element (46.3m) is a module at the south of the site. The PDZ layout has been configured to reduce visual impact where possible by moving large equipment away from the prominent water frontage.

Figure 7.1: Visualisation of the PD

7.38 These heights are significantly lower than some structures in the surrounding area (e.g. there are two existing chimney stacks in close proximity to the site at an approximate height of 120m-135m).

Appearance

7.39 The materials to be used are consistent with the surrounding industrial context, as illustrated in Section 4 of the Design and Access Statement (Inspire Architects, 2023). Silver coloured or galvanised metals will be used for industrial equipment, as well as white coatings for tanks, pipework, ducting and supporting structure.

7.40 Some items will be finished in warning colours such as yellow or red, typically being access walkways, stairs, balustrades and safety equipment.

7.41 Materials for buildings in the administration area include insulated panels (on functional buildings such as the warehouse and workshop) and grey bricks used on administration buildings. Feature colours are based on Lanzatech corporate colours.

Figure 7.3: Visualisation of administration area from the main access point

Summary

7.42 To summarise, the proposed design responds positively to the surrounding context and adheres to placemaking principles by:

- Best utilising the site and ensuring the safe, functional separation of the utility, process and administration areas.
- Complementing the scale, mass and proportions of existing structures in the surrounding area.
- Replicating the materials used in the surrounding context.
- The use of formal and informal landscaping on the site, to aid with drainage and biodiversity considerations, where possible.

7.43 The proposed design accords with the principles set out in LDP Policy BE1 (Design), TAN 12 (Design) and the placemaking principles set out in PPW (Edition 11), as demonstrated in the Planning Policy Matrix in Appendix 3.

Landscaping

7.44 The Landscape Strategy responds to the industrial nature of the site. It is landscape and SuDS-led, aiming to contribute to the effective drainage of surface water and enhancement of biodiversity, where practically possible.

7.45 The strategy has been developed in correspondence with the engineers and COMAH specialists to respond to fire and safety considerations across the site. The proposed measures have been agreed through pre-application discussions with Biodiversity and SAB Officers at NPTC. The application proposes the following:

- Hard Landscaping:
  - Rain gardens to process the filtration of rainwater;
  - Amenity shelters with brown roof offer habitats for pollinators;
  - Bee Hotel to encourage bee population and promote pollination and the growth of plants;
  - Biodiverse Gabion Modular to attract birds, bees and invertebrates;
  - Permeable paving to facilitate the drainage system; and
  - Gravel catchpits.
- Soft Landscaping:
  - Proposed flower-rich grassland to offer habitat and encourage wildlife with low key management;
  - Potential for roadside grassland at base of the railway embankment;

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

Sustainability and Climate Change

7.47 The design of the proposed development responds positively to the sustainability principles set out in national and local planning policy. The proposed development will:

- **Utilise low carbon renewable energy** – Solar PV panels will be installed on the rooftops of the administration building, subject to health and safety requirements. Air Source Heat Pumps will also be incorporated through an all-electric energy strategy to provide space heating and cooling to the office areas of the proposed units. Provision is made for 25% electric vehicle (EV) charging parking spaces.
- **Reduce energy use** – High levels of insulation and air tightness will be used in buildings to reduce energy loss. High efficiency lighting with appropriate energy saving controls will also be used. All occupied buildings in the administration area will make us of low carbon materials, ventilation and natural lighting, where feasible.
- **Utilise waste materials** – Sustainably sourced waste ethanol will be used in the LanzaJet^{TM} ATJ process. Water will be re-used in the process as boiler feed water for steam generation and cooling water make-up.

7.48 The proposed development will feature a range of measures to reduce carbon emissions, mitigate the effects of climate change, and to ensure the long-term

resilience of the development to the effects of climate change. The proposed development will:

- **Use best practice flood risk management** - Sustainable Drainage Systems (SuDS) will be used to manage surface water runoff, including filter and channel drains, rain gardens and permeable paving to mitigate the effects of climate change.

- **Seek to enhance biodiversity –** Brown roofs will be incorporated within the administration area to support biodiversity and an off-site biodiversity enhancement plan will be implemented.

7.49 The site process will play a crucial role producing an expected 100 million litres of SAF annually, contributing to the UK Government's sustainable aviation fuel 2030 target. Promoting the use of SAF is critical in the aviation sector's efforts to mitigate climate change and reduce its environmental impact to achieve net zero emissions in aviation.

7.50 In summary, the proposals are in accordance with and support the principles set out in LDP Policies SP1 (Climate Change), SP18 (Renewable and Low Carbon Energy) and RE2 (Renewable and Low Carbon Energy in New Development). Further detail is provided in the Sustainability and Energy Statement.

Lighting

7.51 Exterior lighting is required at the site to allow for safe access and use of the area by employees and visitors. The submitted drawings include the proposed external lighting to illuminate roads, paths, car parks and truck loading areas and task lighting for external areas associated with the modules and compressor houses.

7.52 Light modelling of the new lighting arrangement has been undertaken using DIALux software to calculate exterior lighting scenes and evaluate the design against standard good practice guidance for the minimisation of obtrusive light. The model included within the Lighting Assessment includes all exterior and roof lighting units.

7.53 The indicative lighting design strategy largely contains light within the confines of the Land at Crown Wharf, Port Talbot. Pole lighting provides illumination to the designated areas predominantly without over-lighting, and equipment will create a distribution that drops below 1 lux within 45 m from pole locations. It should be noted that the lower aiming angle in the assessment area, and their distance from wooded areas, aids in minimising light reaching adjacent trees.

7.54 In summary, the assessment found that no effects relating to light spill upon residential receptors are anticipated. Indirect sky glow and low-level glare effects are anticipated, but these can be sufficiently mitigated using standard, easily applied mitigation measures. These include luminaire shielding and the careful consideration of luminaire positioning and orientation (aiming the fixtures downwards with a concerted intention to only illuminate areas that require light), as well as avoiding over lighting areas where possible. No effects upon ecological receptors are anticipated, therefore no specific mitigation is required in this regard.

7.55 The above demonstrates that the proposed development accords with Policy EN8 of the LDP, as well as the Pollution SPG (October 2016).

Environmental Health

Noise

7.56 A comprehensive and robust worst-case approach to construction and operational noise scenarios has been assessed by Hunter Acoustics (Appendix 12.2 and 12.3 to the ES). The methodology underpinning this has been discussed and agreed with NPTC and NRW Officers.

Construction Noise and Vibration

7.57 The outcomes of the scenarios demonstrate that noise levels meet all relevant limits during standard weekday and Saturday working hours. This remains the case in the majority of locations for evening and weekend working limits. Only against a worst-case 1-hour noise scenario are there exceedances of 5db at two receptors and it is anticipated that any evening and weekend working would be at a reduced rate (i.e., not reflective of this worst-case position).

7.58 Accordingly, there are no significant effects associated with construction noise. Best practice measures will be followed throughout the construction period, in accordance with the ES and subsequent controls set out in the detailed CEMP.

7.59 A suitably worded planning condition will be agreed with NPTC and NRW to allow for and manage out of hours working if required.

Operational Noise

7.60 The scenario for operational noise has been assessed with consideration to 24-hour operation and intermittent noise sources, including the testing of diesel generators and flaring.

7.61 A range of measures have been introduced during the design development to mitigate the impact of higher noise sources, including the move to an enclosed ground flare, enclosing compressor plant within compressor houses and enclosing high noise pumps.

7.62 There are no significant effects resulting from operational noise of the proposed development. Predicted noise levels fall well below existing background levels within relevant designated quiet areas. No unacceptable impact is indicated, in accordance with Policy EN10 of the LDP.

7.63 Where there are exceedances in noise levels during an emergency flaring scenario at the closest receptors, this represents an exceptional circumstance that is anticipated to occur on average once in every 10 years. Flaring noise levels would also drop in-line with start-up flaring after around 30 minutes. It is not uncommon for higher limits to be permissible during an infrequent, emergency scenario.

7.64 The ship off-loading process associated with the transfer of ethanol may take up to 18 hours. Where pump off-loading will run into the night, this has the potential to cause an adverse impact at two receptors SSR3 (Isaac's Place/Borough St) and SSR7 (Talbot Road). This would only occur once every 7-14 days. Ship pumps are outside of

LanzaTech's control and represent an expected level of shipping activity for a well-established port. This aligns with local objectives and policy allocations to encourage port activity and freight movement in this area.

7.65 Overall construction and operational noise levels are generally in accordance with limits and reflective of the surrounding industrial and port operations. On-site mitigation including enclosures and design changes have occurred to support this. Sources of exceedances relate to infrequent or emergency scenarios. The proposed development accords with policies EN8 and EN10 in the LDP, as well as and TAN 11 (Noise).

Air Quality

7.66 Air quality modelling by Kairus and an assessment of impact forms part of the Environmental Statement (Chapter 11 and appendices 11.1-11.8). The methodology and scope of assessment has been agreed with NPTC and NRW during pre-application discussions.

7.67 The outputs of the modelling confirm that emissions resulting from the proposed development are predicted:

- To have no significant effects due to construction traffic.
- To have no significant effect on the levels of fine particles (PM10) within the air quality management area.
- To have no significant effect on the local ecology.
- Not to lead to any breaches of any pollution standards at local properties.

7.68 Standard best practice mitigation will be followed during the construction and demolition process to manage dust. These practices and measures will be captured in a comprehensive CEMP to follow through an appropriately worded planning condition.

7.69 An Odour Briefing Note has been prepared by LanzaTech which confirms that the design of the plant seeks to mitigate any fugitive emissions. No odours are expected from the gas or liquids used on site. In line with engineering and permitting practices, best available techniques (BAT) to monitor and manage this will be followed throughout the operation of the development.

7.70 The above demonstrates that the proposed development complies with policies SP16 and EN8 of the LDP, as well as the Pollution SPG (October 2016).

Ground Investigation

7.71 The potential for significant pollutant linkages (human health and controlled waters) to be present is of low to moderate risk, as found by the preliminary site investigation. Potential on-site sources of contamination include made ground/unspecified deposited material of unknown chemical composition and potentially contaminative current and historical land uses. Potential off-site sources relate to possible contaminating current and historical processes that have been identified in proximity to the site.

7.72 Some Contaminants of Potential Concern (CoPCs) have been identified within the accessible areas of the site. The proposed hardstanding and proposed structures will mitigate the pollutant pathways. Where soft landscaping is proposed (which is limited given the industrial nature of the use), a suitable cover system may be required within these areas if made ground remains after site levelling.

7.73 The level of risk for contaminant migration is considered low for the CoPC identified within sampled groundwater. This is due to the anticipated low mobility of the contaminants and the presence of hardstanding across the site which will limit the potential for infiltration.

7.74 Due to the presence of general made ground gas and asbestos, good brownfield site working practices will be adopted by construction workers to mitigate against potential risks. Further geo-technical and geo-environmental assessments are currently being conducted, in line with recommendations. The methodology for these assessments has been developed in discussion with Environmental Health Officers at NPT and NRW and the location of boreholes and trial pits agreed in advance.

7.75 A suite of suitably worded planning conditions will be agreed in advance with NPTC Officers. This is standard practice for sites of this nature. Where possible, the outputs of the geo-technical and geo-environmental work underway will seek to limit the number and extent of conditions required, once available. The approach accords with all relevant LDP policies and practices.

7.76 The above demonstrates that the proposed development complies with policies SP16 and EN8 of the LDP, as well as the Pollution SPG (October 2016).

Flood Risk

7.77 A comprehensive Flood Consequences Assessment has been prepared by JBA Consulting.

7.78 The Development Advice Map and Technical Advice Note (TAN) 15 shows that the proposed PDZ is located in Zone B (flooded in the past). The unnamed Port Road supporting infrastructure, TCA West and TCA East are in Zone B (floodplain without significant flood defence infrastructure). TCA1 North is located within Zone C2. The proposed development is identified as 'less vulnerable' development under TAN15.

7.79 TAN15 assigns one of three flood risk vulnerabilities to development. The PDZ, unnamed Port Road supporting infrastructure and TCA are classified under TAN15 as 'less vulnerable' development.

7.80 The Flood Consequences Assessment confirms:

- The dominant flood risk to the site is tidal and fluvial.
- During the pre-development scenario, the land within the PDZ is predicted to be flood free during the tidal 0.5% AEP plus climate change and fluvial 1% AEP plus climate change and 0.1% AEP events.

- Ground levels should be raised to at least 7.5mAOD, a level above the 0.1% AEP design event.

- The PDZ is predicted to remain flood free during the 0.1% plus climate change tidal flood event as a result of ground raising works.

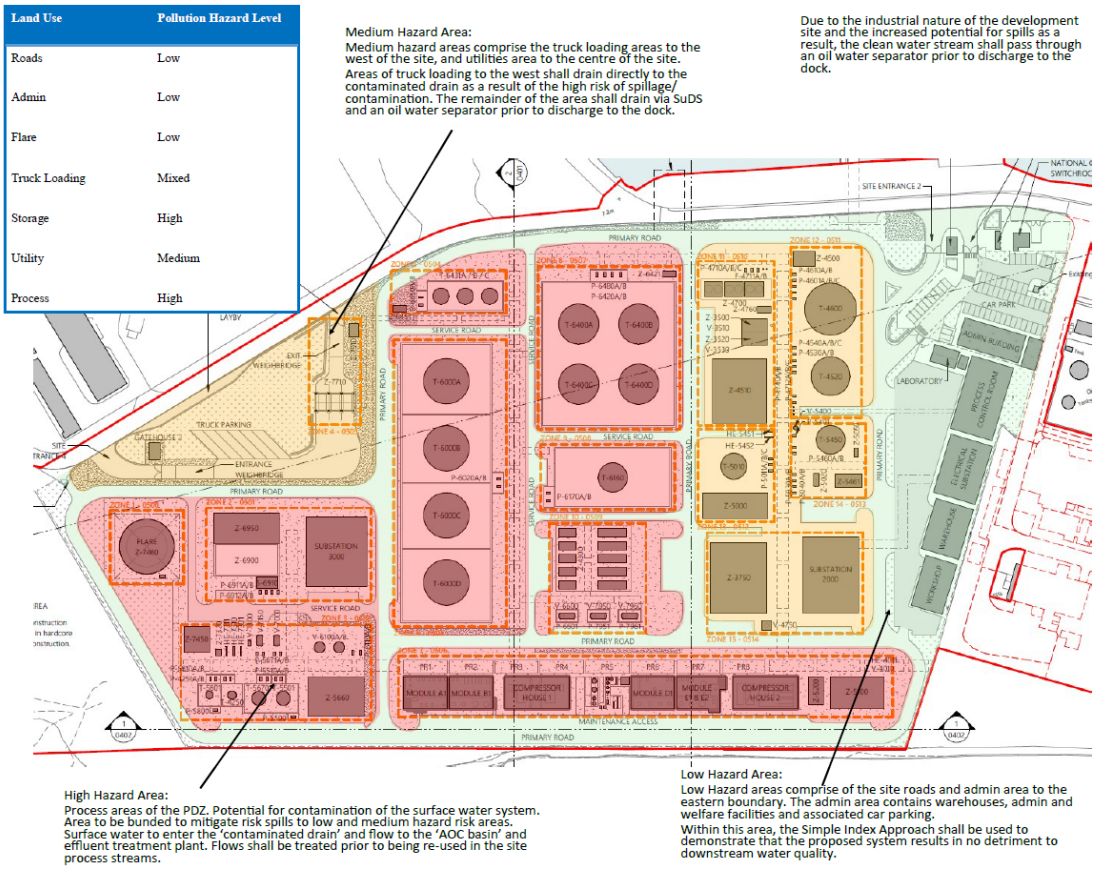
7.81 As a result of the above, ground levels across the PDZ will be raised to a minimum ground level of 7.5m AOD. Most areas of the site already exceed this level. The proposed cut and fill balance is set at 8m AOD. No changes in level to the Unnamed Port Road Supporting Infrastructure or the TCAs are proposed. There will be no third-party impacts resulting from ground raising.

7.82 The proposed development satisfies the Justification Test requirements within the Flood Consequences Assessment, including managing flood risk in line with the acceptability criteria. The proposed development meets the principles and requirements set out in TAN15 and the aims of Planning Policy Wales, as well as LDP Policy SP1 (Climate Change).

Drainage

7.83 As set out in Section 5, the management of surface water reflects the site's industrial nature. This will be managed through two streams; the clean water drain utilising SuDS and discharging to Port Talbot dock (for areas identified as low and medium hazards) and the contaminated drain flowing to the onsite effluent treatment plant (for areas identified as high hazard). This is demonstrated below.

Figure 7.2: Water Quality Management Plan



7.84 The SuDS system will comprise rain gardens, trapezoidal ditches (gravel-based swales) and permeable paving. Biodiversity and amenity benefits are limited as a consequence of the industrial nature of the site and the consideration of health and safety and the Control of Major Accident Hazards (COMAH) Regulations. However, biodiversity and amenity benefits are maximised wherever possible across the site, particularly to the admin areas of the PDZ.

7.85 Foul flows from the PDZ will be accommodated within the public combined system, which drains to Afan New Works Wastewater Treatment Works (WwTW).

7.86 Long term management and maintenance will be undertaken by LanzaTech. The system will not be offered for adoption by the SAB. The drainage will be self-contained and will not impact on any future development proposals at the Port.

7.87 The above approach has been carefully considered against the SAB requirements and six standards. This has been discussed with SAB and Biodiversity Officers at NPTC during pre-application discussions.

7.88 The formal SAB pre-application and full submission will take place in parallel to the planning process. Further information on the COMAH requirements will be provided as part of the supporting evidence.

7.89 The above demonstrates that the proposed development meets the principles and requirements set out in TAN15 and the aims of Planning Policy Wales, as well as LDP Policy SP1 (Climate Change).

Traffic and Transport

Site Accessibility

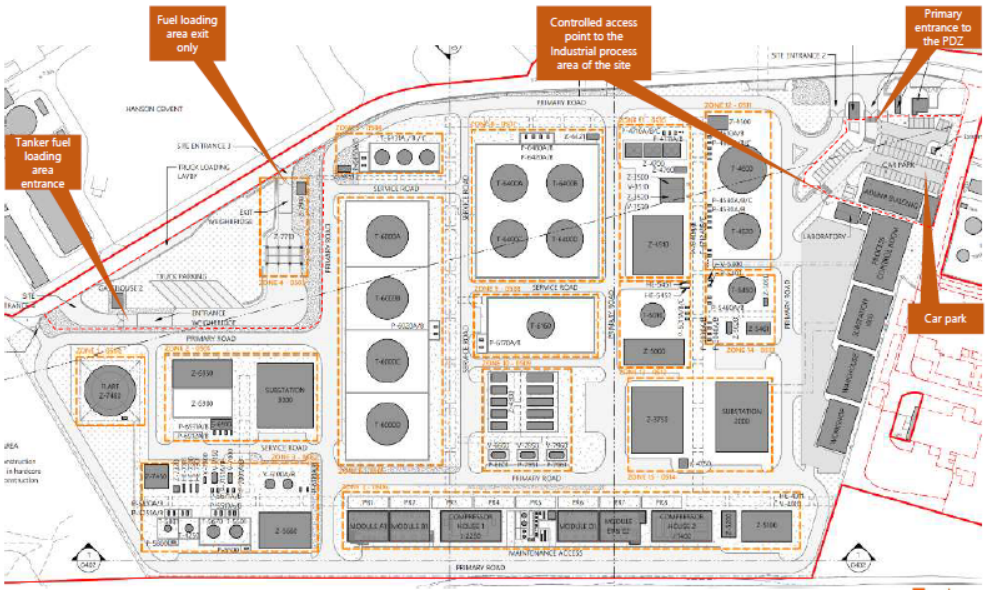
7.90 The site is accessible by sustainable modes of transport, offering future employees a range of transport options. Access to the ABP site entrance on foot and by bike is of a good standard. The area is well connected by regular bus and train services. The nearest train station (Port Talbot Parkway) and bus stops are located less than 1 km from the PDZ.

7.91 Three new vehicular access points will be created off the unnamed port road to the north of the site, which connects to the local highway network at the A4241 Harbour Way / North Road access junction. This access route regularly accommodates large HGV's / commercial vehicles associated with the existing operations / uses surrounding the application site.

7.92 The 'East Access' will provide segregated access to the staff car park/administration building and a separate industrial access to the main site / primary internal road network.

7.93 The 'West Access' comprises a gated entry only access to the truck loading facility. The third access comprises a gated emergency vehicular access to be used by emergency vehicles only.

Figure 7.3: Proposed Access to PDZ



7.94 The unnamed port road is sufficient to facilitate two-way HGV access during the construction and operation phases. The design is set out at Appendix 7 of the supporting Transport Assessment, prepared by SCP.

7.95 In the short term, pedestrian and cycle access will not be permitted within the ABP area for safety reasons. However, LanzaTech proposes to provide a free EV shuttle service with a cycle rack to/from the ABP access gate. A system will be implemented to allow staff to walk/cycle to the site, call to be picked up from in the vicinity of the ABP security gate and be transported to the site. Cycle parking and EV parking spaces will be provided, as mentioned in Section 4.

Traffic

7.96 The impact of the construction traffic arising from the scheme has been tested in detail at the key junctions on the local highway network, as agreed with NPTC. The assessments show that that the majority of the junctions along the A4241 Harbour Way and on route between the site and the M4, including Junction 38 itself, are predicted to operate within capacity with the proposed construction traffic in place.

7.97 Capacity issues have been identified during the afternoon peak hour and during both the AM and PM peak hours at certain locations. However, the impact of the construction traffic at these junctions is not considered to be material. Mitigation measures are not considered necessary, particularly given the temporary nature of the impact during the construction period. The additional level of traffic estimated to be generated during the operational phase is not material.

7.98 As agreed with NPTC, HGVs will be routed along Junction 38 of the M4 to avoid HGV movements through Port Talbot.

Parking

7.99 As identified in Section 5, sufficient car parking has been provided to accommodate operation, shift changeover, accessibility requirements, and visitors to the site.

Motorcycle parking and safe cycle storage will be provided within the car parking area adjacent to the administrative building, in line with planning policy requirements.

7.100 Active EV charging is provided to 25% of spaces to promote sustainable transport movements.

Shipping

7.101 The proposed development will utilise the marine loading/unloading facility to import ethanol feedstock and export SAF produced on-site, using ship tankers. The shipping would be undertaken by appropriate third parties, either procured by LanzaTech or by the ethanol feedstock supplier. Commercial transport by alternatives to road (e.g. rail or sea) are encouraged by Policy SP1 (Climate Change) of the LDP.

7.102 The proposed development accords with relevant local and national policy, including Active Travel considerations as applicable to an industrial site of this nature.

Natural Environment

Ecology and Biodiversity

Baseline Habitat

7.103 The ECIA prepared in support of the application details a survey-based assessment of the baseline habitat and protected species status of the site. The habitat baseline at the PDZ and both TCA East and West areas of the site are characterised by:

- Regenerating willow scrub that is less than 20 years old is the most extensive habitat type in the PDZ.
- Areas of mixed species scrub and bramble associated with the margins of the grey willow with gorse dominates areas on the eastern side of the PDZ, where the substrate is dryer.
- There are two small areas of coastal grassland and nearby dune slack vegetation are evident in the central areas of the PDZ.
- Strips of naturally regenerated grassland of varying structure and species are evident in the eastern and western areas of the PDZ, with central and southern glade areas with patchy long grass and sprawling dewberry.
- Three seasonally flooded areas support open strands of common reed bounded by regenerating scrub willows.
- An area of recolonising bare ground and hardstanding lies in the centre of the PDZ, which is repeated on other hardstanding areas associated with former industrial works on site.
- The PDZ include a range of species of lower plans, almost entirely limited to the areas of sparsely vegetated ground and open grassland on sandy substrates.

7.104 The TCA1 North is a flat expanse of unsealed made ground consisting of, *inter alia,* materials including crushed concrete and waste steel slag. The area comprises a habitat

mosaic of sparse ephemeral vegetation, including indicator species of grassland and post-industrial habitats. The area includes colonies of oxtongue broomrape, a nationally rare and legally protected plant. There are areas of diverse lower plants in the TCA.

7.105 The site has extensive stands of long-established Japanese Knotweed (JKW), which covers approximately 40% of the PDZ. The largest expanses are located in the south western area of the PDZ. The habitat has negligible importance for biodiversity value and reduces the value of all the habitats in which it establishes. The species is a significant negative factor adversely affecting the biodiversity value of the PDZ. Left untreated, the JKW will result in the loss of all but the willow scrub.

Protected Species

7.106 The ECIA confirms that bat roosts are not a relevant consideration on site. Bat transect and/or remote recording identified four bat species on site. Common pipistrelle night-time passes were the most frequently encountered species in the PDZ. Overall, the site is associated with very low levels of bat activity and is of local value as a resource for the local population of the species. Very low levels of soprano pipistrelle, nathusius pipistrelle and noctule bats were as also recorded on site.

7.107 Baseline surveys have identified that the site is of negligible or low importance for: otters (local importance in the open dock only), badgers (negligible), common lizard (local but County importance in the context of the wider port), grass snake (local/district), slow worm (local), great crested newts (negligible) and invertebrates (local).

7.108 Most of the breeding bird nesting habitat within the site is associated with the denser structured vegetation, principally bramble, gorse and woody hawthorn scrub have scattered distribution across the PDZ. The dense bracken also provides potential cover for species associated with scrub that nest on the ground. The breeding bird and winter bird assemblage within the application site is classified as having local importance.

Ecological Mitigation and Enhancement

7.109 The ECIA details the mitigation and enhancement outcomes required from the development to deliver a policy compliant net biodiversity benefit. The delivery of ecological mitigation and enhancement is captured in the standalone Net Biodiversity Benefit Briefing Note (Turley, July 2023) submitted in support of the application.

7.110 Separate to Project Dragon, ABP is promoting proposals for the Future Ports Programme and an associated programme of ecological mitigation, including acquiring land in the vicinity of Port Talbot to ensure that mitigation is delivered for the Future Ports Programme and Project Dragon. ABP and LanzaTech have reached agreement that, if required and agreed to be as a suitable site as part of the liaison process with NPTC that the land it has acquired will be able to be utilised for Project Dragon.

7.111 The Project Dragon off-site mitigation proposals are being developed in light of those programmes and in liaison with ABP and NPTBC to ensure that:

- The impacts of Project Dragon are mitigated and a net biodiversity benefit (NBB) outcome is secured;

- The mitigation is reactive to and appropriate for the land that is able to be utilised for the purposes of delivering the off-site mitigation; and

- Mindful that the land is not control of LanzaTech, seeking to apply where it is possible to do so.

7.112 Biodiversity compensation and enhancement will be a combination of port based and significant off-site measures to ensure biodiversity gain is achieved to meet the requirements of the Environment (Wales) Act 2016 and PPW.

On-site Mitigation and Enhancement

7.113 The package of on-site mitigation will include:

- Flower-rich grassland.

- Pioneer vegetation.

- Modular biodiversity walls.

- Bio-solar roof on the administrative building.

- Green and brown roofs on Site Entrance Gatehouse 1, Cycle Shelter and Amenity Shelters.

- Removal of matting and gravel surface at the temporary construction laydown area at Margam Wharf.

- Insect hotels in relevant soft and hard landscaping areas of the site.

7.114 An environmentally sensitive lighting scheme will be designed for the construction and the operational phases of the development to minimise artificial light spill outside the boundary of the application site. Construction lighting and the permanent lighting scheme will be developed with reference to the recommendations published by the Institution of Lighting Professions and Bat Conservation Trust (BCT and ILP, 2018), as demonstrated in the Framework Construction Environmental Management Plan (Technip Energies, 2023).

7.115 The operational scheme will ensure that each part of the site is ‘suitably and adequately lit’ for essential operational reasons. LED lamps would be used, with 'warm white' selected as a preference on the site boundaries (i.e. with colour temperatures of between 2700K to 3000K for LED lights) where compatible with minimum operational requirements. Lighting units will be selected to minimise upward and lateral light spill. Further information is provided in the Lighting Assessment (AECOM, 2023).

7.116 These measures will help protect the context of existing habitats on the boundary of the operational site. In the future a network of green / brown corridors is to be created as part of the port-wide biodiversity compensation strategy. It is possible that features will be retained/created in the vicinity of the development and environmentally sensitive lighting will maintain the potential for features around the site to be incorporated into this network.

Phasing

7.117 The measures will be fully installed on site by the end of the first planting season following commissioning of the plant. The current programme confirms that this date will be by the within 36 months of the confirmed commissioning of the SAF facility.

Maintenance and Monitoring

7.118 Annual monitoring will be undertaken for a minimum of five years from the start of operation at the SAF facility to assess the extent to which plant populations are establishing in the green space. LanzaTech will be responsible for on-site long-term management and ongoing monitoring. A full scheme of maintenance and monitoring will be agreed with the Council during the determination of the application. The implementation of this scheme can be secured by planning condition.

Off-Site Ecological Mitigation and Enhancement

Proposed Approach

7.119 ABP has purchased an off-site area of land for ecological purposes in the vicinity of Port Talbot. There is intended to be a commercial agreement between ABP and LanzaTech confirming that necessary off-site NBB works required for Project Dragon will be delivered at this off-site location that will likely be finalised during the determination of the planning application. This intended agreement confirms LanzaTech's ability to commit to delivery of the mitigation and enhancement for the project. There is more than reasonable certainty that the required mitigation and enhancement for Project Dragon will be undertaken at the ABP identified site or in another location in NPTC.

7.120 The off-site receptor land is intended for the delivery of off-site mitigation and enhancement to off-set ecology and biodiversity impacts associated with development proposals at Project Dragon and the FPT. It is important to note that:

- The Council is supportive of the delivery of NBB at the off-site receptor, working closely with ABP.

- The Council and ABP will take an overarching approach to the detailed design, management, and maintenance of NBB initiatives at the off-site receptor site.

7.121 The proposed off-site mitigation and enhancement outcomes at the chosen off site location will address the ecological and biodiversity effects of Project Dragon. Wherever possible, compensation for adverse effects on Section 7 habitats will be like for like, but where a habitat type cannot be directly compensated, alternative habitat compensation will come forward to ensure that an overall balance is positive and that NBB is delivered.

7.122 It is anticipated that woodland/scrub compensation will be brought forward for the losses of low-value self-sown willow scrub, mixed species scrub, and gorse. It is also anticipated that grassland compensation will be provided off-site to fully offset unavoidable effects on coastal grassland, and naturally regenerated grassland. Off-site compensation will also address the loss of biodiversity value associated with habitat change in TCA1.

7.123 It is expected that the delivery of the ecological mitigation will be subject to a suitably worded planning condition to any granting of planning permission for the proposed development or planning obligation so that NPTC can ensure the mitigation occurs.

Phasing

7.124 LanzaTech will work with ABP and the Council to ensure an appropriate mix of the above mitigation outcomes are incorporated into the off-site biodiversity site. This will evolve subject to the outcomes of the ABP master planning process, in collaboration with the Council and key stakeholders.

7.125 LanzaTech will ensure the appropriate suite of mitigation and enhancement outcomes from the menu set out above will be implemented at the off-site receptor land purchased by ABP, or, if this is ultimately not possible, that an appropriate alternative site is agreed with NPT, to the timescales required by the results of the ECIA.

Maintenance and Monitoring

7.126 The full maintenance and monitoring of the off-site mitigation and enhancement is intended to be secured, between ABP and LanzaTech, in collaboration with the Council. This will be an appropriate regime that responds to the detailed design of the planned biodiversity investment by ABP and LanzaTech. The regime can only be determined when the full mitigation and enhancement plan at the site is known and approved pursuant to a planning condition (or obligation). If an alternative site is used, Lanzatech would own the maintenance and monitoring regime that is put forward.

Summary

7.127 In line with Policy 9 of FW, the proposed development will deliver a net benefit for biodiversity through the combination of:

- On-site mitigation and enhancement measures including the provision of small multi-functional landscaped spaces on the boundary of Project Dragon.
- Habitat restoration and enhancement outcomes at the chosen off-site biodiversity compensation site.

7.128 The proposed package of mitigation and enhancement will be delivered in collaboration with ABP and the Council. The intended commercial agreement between LanzaTech and ABP confirms deliverability. A package of proposed planning conditions (or obligations) will give the Council control on delivery on all of the above.

7.129 They will also give flexibility to allow for maximum collaboration between ABP, LanzaTech and the Council. This flexibility will ensure a comprehensive approach that will maximise the quality of net biodiversity benefit delivered as part of Project Dragon, taking into account wider interests in the regeneration of the port as a whole.

Landscape and Visual Impact

7.130 The site is vacant and clear of development. Views of the site are currently limited. Views of the PDZ are more noticeable from some areas, including the public areas around Crown Wharf. Within the more built-up areas of Port Talbot, views towards the PDZ are more limited due to the screening effect created by the dense areas of residential terraced housing.

7.131 Key visual receptors with views towards the PDZ include road users and pedestrians on Harbour Way; users of the Wales Coast Path; and road users and residents on residential streets within Port Talbot and Margram. All viewpoints were agreed with NPTC in advance. These were agreed prior to design improvements to the scheme, including reducing the height of the flare from elevated to enclosed ground flare.

7.132 The proposed development would re-introduce development and result in vegetation clearance across the PDZ. The proposed structures would be of a similar scale and size to existing industrial structures within the wider steel works. Whilst the proposed development would result in some noticeable changes to views, these changes would reflect existing components in views and would not obscure or detract from the special qualities of views to the Margam Mountains and wider open views across Swansea Bay.

7.133 During the construction phase, there would be some more noticeable changes to views due to wider parts of the site being used and the location of the TCAs which in part extend development closer to the residential context of the application site. During the operational phase, development would be concentrated within a small area and would be set behind the Port Talbot Docks with open water and wider areas of scrub maintaining a more open context to the foreground of views.

7.134 The impacts on landscape and visual receptors are considered appropriate to its context and would maintain views that contribute positively to the visual amenity experienced by visual receptors.

7.135 The above demonstrates that the proposed development accords with LDP policies SP21 (Built Environment and Historic Heritage) and BE1 (Design), as well as the Landscape and Seascape SPG (May 2018).

Heritage and Archaeology

7.136 The proposed development would have no direct impact on designated historic assets (such as listed buildings and scheduled monuments). There are no designated historic assets located within the site boundary or its wider surroundings.

7.137 The proposed development fits within a pattern of land use and industrial construction which is still typical of the area. The change within the general surroundings is not considered to impact on the significance of any heritage assets or cause any harm. For 'non-designated' historic assets, the Heritage and Archaeology Assessment does not identify any effects to the Margam Mountain Registered Landscape of Special Historic Interest. The views are already defined by the existing industrial development at Port Talbot.

7.138 The proposed development would have no more than a 'minor adverse' impact on buried archaeological remains at the Construction Stage and no further impacts in this respect are anticipated as being likely to occur subsequently during the development's Operational Stage.

7.139 Mitigation for this limited impact on sub-surface archaeology will comprise the completion of a watching brief during the open cut excavation for construction, or a programme of archaeological trial trenching, to identify and record any archaeological

features, deposits or remains of interest that would be either destroyed or damaged by the implementation of the works. This would be agreed in advance with the local authority's archaeological advisors at GGAT and then detailed in a Written Scheme of Investigation (or WSI) submitted to and approved by GGAT as a condition of planning permission being granted for the development.

7.140 No archaeological monitoring, observation or recording is proposed in respect of the piled foundations and in addition no archaeological investigation is considered to be necessary.

7.141 The above demonstrates that the proposed development accords with LDP policies SP21 (Built Environment and Historic Heritage) and BE1 (Design), as well as TAN 24 (The Historic Environment).

Other Matters

Licensing and Marine Activity

7.142 All associated and required licenses, permits and consents (including but not limited to an Environmental Permit, control of Major Accidents and Hazards (COMAH), marine licence and Hazardous Substances Consent) are being sought through the appropriate determining authority in line with relevant standards, guidance, and requirements.

Health and Safety

7.143 LanzaTech requires consent from the Health and Safety Executive (HSE) in line with the Control of Major Accident Hazards (COMAH) Regulations. This will ensure that the proposed development all operation will take all necessary measures to prevent major accidents involving dangerous substances and limit the consequences to people and the environment of any major accidents which occur. LanzaTech will demonstrate all aspects of their quantified risk assessment and controls through this process, which will be subject to review and validation by the HSE.

7.144 The principle of inherently safer design has been applied by the project engineers throughout the FEED stage. This has been informed by both the project specific HSE Design Philosophy, as well as the HSE Measures Documents, which establish guidance and principles for all facilities/projects that fall within the COMAH Regulations.

Construction and Demolition

7.145 A Framework Construction Environmental Management Plan (CEMP) has been prepared and submitted with this planning application. This sets the framework for a full CEMP which will be prepared by the contractor taking into account the outcomes of the planning application and EIA. This will continue to evolve and will be subject to an appropriately worded planning condition.

7.146 The outcomes of the final CEMP will:

- Provide a mechanism for ensuring that measures to mitigate potentially adverse environmental impacts identified in the ES are implemented.
- Ensure that good construction practices are adopted throughout the construction of the works.

- Provide a framework for mitigating impacts that may be unforeseen or that are not identified until construction is underway.
- Provide assurance to third parties that their requirements with respect to environmental performance will be met.
- Provide a mechanism for ensuring compliance with environmental legislation.
- Provide a framework for compliance auditing and inspection.
- Provide trained and experienced environmental personnel to satisfy relevant requirements and responsibilities.

7.147 As aforementioned, the structures on TCA East will be demolished to create additional laydown space for the proposed development. This comprises approximately 4,529sqm of floorspace. The buildings are low level, industrial buildings which are constructed of masonry, concrete and steel.

7.148 Where possible, any masonry or concrete materials will be crushed and re-used as hardcore surfacing to the laydown area. On completion, the area will be left as hardstanding.

7.149 Demolition associated with the proposed development has been considered in relevant technical documents and the accompanying ES. Full details of the proposed demolition method will be provided in a Demolition Method Statement, to be conditioned.

7.150 All relevant construction and demolition will be carried out in accordance with best practice, relevant legislation and planning policy.

Waste

Construction Waste

7.151 A Waste Management Plan has been prepared by Stopford. This is supported by the Framework CEMP and the Environmental Management Plan in the ES.

7.152 The main waste types generated during the construction period include soil material, concrete material and steel. The appointed construction contractor Health, Safety and Environment department will control and supervise construction waste during construction.

7.153 All waste materials will be segregated, classified into the appropriate non-hazardous and hazardous categories/codes, collected separately at the point of origin, labelled, and stored appropriately to ensure safe containment and transportation (by a registered waste carrier) for their final re-use, recycling or disposal.

7.154 LanzaTech will follow the waste hierarchy (Figure 7.4). Where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

Figure 7.4: Waste Hierarchy

7.155 The appointed contractor will segregate waste streams on-site, prior to them being taken to a licensed waste facility for recycling or disposal.

Operational Waste

7.156 Specific waste compounds and storage areas will be designated and labelled in the Site Layout Plan, prepared by Inspire Architects.

7.157 Recycling and recovery at the proposed facility will include the following:

- Off-spec intermediates and fuels re-used in the oligomerisation and hydrogenation processes.
- Commercial mixed waste recovered and recycled as far as possible by appointed waste carrier supplier (e.g., paper/cardboard, glass, metal and plastic).

7.158 Waste storage will not give rise to secondary environmental impacts such as odour or pollution of groundwater due to rainwater infiltration or site run-off. The site design and operation prevent cross-contamination of wastes or the mixing of incompatible materials. A series of measures to ensure this are set out in the Waste Management Plan and summarised below:

- Disposal of waste will follow the conditions of the NRW environmental permit. This includes record keeping, monitoring and control obligations.
- Hazardous waste disposal will follow the Hazardous Waste Regulations[8], including additional labelling, record keeping, monitoring and control obligations from the "cradle to the grave".
- Only licenced waste carriers will supply waste collection, transfer and disposal of waste from the Installation.

[8] The Hazardous Waste (England and Wales) Regulations 2005 (legislation.gov.uk)

- Appointed site staff will be provided with training on the management of all wastes for disposal.

7.159 To summarise, the proposed development will not give rise to any negative environmental impacts as a result of any waste generated. This is demonstrated by the above, as well as Chapter 4 of the ES. The proposed development complies with Policy W3 of the LDP.

Overall Summary

7.160 This section has assessed the proposed development in relation to key planning policy themes, considering material considerations. The proposed development accords with the planning policy and guidance set out in the Planning Policy Matrix (Appendix 3) and summarised in Section 3 of this Planning Statement.

7.161 The proposed development supports prevailing development plan policy by supporting decarbonisation and sustainable economic development. The proposed development will act as a catalyst for achieving the delivery of sustainable development within Port Talbot. This supports the principle of development.

- The proposed development is of high-quality and has evolved through the design process to address potential impacts such as visual, noise and amenity impacts. The proposed development complies with the relevant planning policy for the following reasons:

- It will deliver sustainable economic development on underutilised, brownfield land.

- It will deliver net biodiversity benefit through on-site and off-site mitigation.

- It meets environmental protection planning policy criteria relating to land, health, waste, air quality and noise.

- Health and safety requirements have been considered from the outset of the design process, including on fire risk and major accidents and emergencies.

- It avoids any unacceptable impact on nearest sensitive environmental and residential receptors and land uses through sensitive design.

- It is acceptable from a flood consequence perspective, taking into account the requirement for sustainable drainage and climate change resilience.

- It promotes the use of alternative modes of transport and Active Travel, whilst also being acceptable from a highway and transport perspective.

- It has considered built and natural heritage assets, and their setting.

8. Planning Obligations – Draft Heads of Terms

Planning Obligations and Developer Contributions

8.1 Due to the scale and nature of the development proposed it is considered that mitigation in the form of planning obligations is likely to be required. Such mitigation will be secured by means of Section 106 of the Town and Country Planning Act 1990 (as amended).

8.2 Negotiations with the Council are ongoing and will be concluded during the determination of the application proposal. Discussions will be informed by NPTC's Planning Obligations SPG (adopted in October 2016). The SPG sets out the approach and procedures which will apply, and the types of development that may require planning obligations, subject to relevant thresholds and triggers.

8.3 The categories include:

- Transport and Access;
- Education;
- Welsh Language; and
- Employment, training and skills.
- Biodiversity and the Natural Environment

8.4 In accordance with the Welsh Office Circular 13/97, the five key tests must be satisfied in the use of planning obligations[9]. NPTC has not introduced a Community Infrastructure Levy (CIL) charging schedule, as all essential infrastructure has been assessed through other mechanisms, with reliance on planning obligations to provide this.

Draft Heads of Terms

8.5 The necessary contributions and obligations associated with this development proposal are to be discussed and negotiated with NPTC throughout the planning application determination process. All obligation requests will need to rely on sufficient evidence and justification to show they are necessary and reasonable in all respects.

8.6 The draft 'Heads of Terms' anticipated by LanzaTech are set out below. It is intended this will be refined during the determination of the planning application, as set out above and that they will inform the completion of the necessary legal agreement(s).

[9] Set out at Paragraph 2.1.2 of the Planning Obligations SPG (2016).

Transport and Access

8.7 Implementation of the proposed commitments on-site, including a LanzaTech 'shuttle' service (details to be agreed) to facilitate access for pedestrians and cyclists between the main ABP access gate and LanzaTech site entrance.

8.8 Implementation of active Electric Vehicle (EV) charging as set out in the Transport Assessment and Sustainability Strategy and facilitating infrastructure for future EV.

8.9 Travel Plan measures, as set out in and building upon the Transport Implementation Strategy within the Transport Assessment (SCP, July 2023).

8.10 Reasonable and evidenced Active Travel improvements in the local area, if applicable.

Biodiversity and the Natural Environment

8.11 A management scheme for the on-site landscaping/SuDs/biodiversity provision on the site will be provided. This will set out responsibilities for on-going long-term management with relevant parties.

8.12 The Council is aware that LanzaTech is working closely with its officers and ABP as landowner on the implementation of a comprehensive strategy for the management and eradication of Japanese Knotweed (JKW) across the entire port. Herbicide treatment has begun and will continue in September 2024. ABP is leading on this eradication programme. Full details of the treatment and its outcomes are taking into account in the landscape, biodiversity, and drainage strategies for the site. This comprehensive approach is a significant benefit of the development in removing an invasive species from the site.

8.13 As agreed during pre-application discussions, LanzaTech is working collaboratively with NPTC and ABP on off-site ecological mitigation and management matters. The detailed mechanism for this via a planning condition (or obligation) will be agreed between parties through the course of the planning application determination.

Welsh Language

8.14 A proportionate and justified contribution to supporting the Welsh Language in NPTC.

Employment, Training and Skills

8.15 Whilst not directly identified in NPT's Planning Obligations SPG, LanzaTech welcomes the opportunity to integrate the proposed development within the local community and economy and support the area through local partnerships.

8.16 This may include partnerships with local and complementary industrial skills and businesses, apprenticeships, and training, as well as a wider social value strategy and contributions. The detail of this will be developed and agreed through the course of the planning application determination process.

8.17 LanzaTech will continue to work collaboratively with NPT on these matters to address a suite of appropriate planning conditions and/or S106 planning obligations.

9. Conclusion

9.1 This Planning Statement is prepared on behalf of LanzaTech in support of an application for a SAF production facility in Port Talbot.

9.2 The proposed development will:

- Put Neath Port Talbot on the map as a leading authority in SAF in the UK.
- Ensure that the region leads the way on SAF production and reaching the UK government target to achieve net-zero emissions by 2050 (through the Climate Change Act 2008 (as amended)).
- Make an important contribution towards UK Government requirements to use sustainable aviation fuel from 2025, and which requires 10% of the jet fuel used in the UK aviation industry to be SAF by 2030.
- Achieve local and national policy ambitions to promote sustainable growth and development which supports the local economy, skills, and community.
- Sustainably regenerate an underutilised site with industrial and employment uses commensurate to the surrounding context.
- Create 85 FTE jobs on-site in the operational phase, and further employment generation in the supply chain as LanzaTech draws on local and specialist contractors.
- Utilise the existing harbour for the transportation of materials and products, promoting use of this existing facility in line with Celtic Freeport and wider ABP Future Ports Programme ambitions.

9.3 The Project accords with local and national planning policy and guidance and in doing so enables the decision maker to grant planning permission.

9.4 The proposed development presents a well-considered development, which responds positively to the relevant planning policy context at the local and national levels, including the Local Development Plans, Future Wales and Planning Policy Wales. In light of the overwhelming policy support at all levels, it is considered that planning permission should be granted accordingly.

Appendix 1: Equipment List

Equipment, Plant or Building	Equipment Reference	Maximum Height (m)	Maximum Overall Height (m AOD)[10]
Filters	F-4711A/B/C	6	14
Water Filters	F-4712A/B/C	6	14
Exchanger	HE-4011	8	16
Heat Exchanger	HE-5451	8	16
Heat Exchanger	HE-5452	8	16
Heat Exchanger	HE-7301	6	14
Heat Exchanger	HE-7310	6	14
Heat Exchanger	HE-7311	6	14
Pumps	P-4251A/B P-4530A/B P-4540A/B/C P-4601A/B/C P-4610A/B P-4710A/B/C P-4740A/B P-5011A/B P-5030A/B P-5040A/B P-5401 P-5460A/B P-5500 P-5510A/B P-5671A/B P-5800 P-5810A/B P-6020A/B P-6110A/B P-6170A/B P-6420A/B P-6480A/B P-6450A/B	3	11

[10] Derived from the maximum height(s) and the assumed 8m AOD development plateau created across the PDZ, as per *'Earthworks and Levels'*.

Equipment, Plant or Building	Equipment Reference	Maximum Height (m)	Maximum Overall Height (m AOD)[10]
	P-6601 P-6911A/B P-6912A/B P-7001A/B P-7151A/B P-7951 P-7961		
Sump	S-6910	4	12
Storage Tank	T-4250	4	12
Water Tank	T-4520	17	25
Water Tank	T-4600	20	28
Water Tank	T-5010	14.5	22.58
Storage Tank	T-5450	17.4	25.4
Storage Tank	T-5501	5	13
Tank	T-5670	9.4	17.4
Storage Tank	T-5801	5	13
Storage Tank	T-6000A/B/C/D	20	28
Tank	T-6160	13	21
Tank	T-6400A/B/C/D	20	28
Tank	T-6431A/B/C	9	17
Receiver	V-3510	6	14
Receiver	V-3530	6	14
Drum	V-4010	5	13
Drum	V-4750	7	15
Drum	V-5400	7	15
Hydrocarbon Vessel	V-6100A/B	15	23
Drum	V-6600	8	16
Drum	V-7000	5	13
Drum	V-7150	5	13
Drum	V-7300	6	14
Drum	V-7950 / V-7960	8	16
Air Compressor Package	Z-3500 / Z-3520	4	12
Liquid Nitrogen Package	Z-3750	12	20

Equipment, Plant or Building	Equipment Reference	Maximum Height (m)	Maximum Overall Height (m AOD)[10]
Hydrogen Generation Package	Z-4300	20	28
Metering Package	Z-4500	5	13
Treatment Package	Z-4510	4	12
Cooling Tower Package	Z-4700	6.9	14.9
Package	Z-4760	3	11
Package	Z-5000	8	16
Package	Z-5020	8	16
Dosing System	Z-5050	6	14
Boiler Package	Z-5100 (Stack)	4.4 (40)	12.4 (48)
Boiler Package	Z-5200	4.4	12.4
Package	Z-5461	8	16
Package	Z-5660	10	18
Package	Z-6421	7	15
Package	Z-6451	7	15
Collection Basin	Z-6900	5	13
Package	Z-6950	4	12
Package	Z-7320	6	14
Package	Z-7450	4	12
Ground Flare Package	Z-7460[11]	20	28
Tanker Loading Package	Z-7710	5	13
Package	Z-7910	6	14
Module A1	n/a	27.5	35.5
Module B1	n/a	22.5	30.5
Module C1	n/a	20.5	28.5
Module D1	n/a	16.7	24.7
Module E1 & E2	n/a	46.3	54.3
Compressor House 1	n/a	10	18

[11] For **Chapter 11: Air Quality** the Ground Flare Package (Z-7460) has been modelled as a 'stack' point source emission at 20m, in line with the overall height of the enclosure that surrounds the ground mounted gas burners (see *'Flare'* for more details)

Equipment, Plant or Building	Equipment Reference	Maximum Height (m)	Maximum Overall Height (m AOD)[10]
Compressor House 2	n/a	10	18
Gatehouse 1	n/a	3.5	11.5
Gatehouse 2	n/a	3.5	11.5
National Grid Switchroom	n/a	10	18
Administration Building	n/a	15	23
Process Control Room	n/a	6	14
Electrical Substation (Substation 1000)	n/a	10	18
Warehouse	n/a	10	18
Workshop	n/a	10	18
Laboratory	n/a	10	18
Substation 2000	n/a	10	18
Substation 3000	n/a	10	18

Appendix 2: Legal advice on ES approach to Marine Loading Facility and Grid Connection

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Infrastructure

Lanzatech UK Limited

Planning

Project Dragon

Advice on Assessment Approach to Marine Loading Facility and Electrical Connection

1. **INTRODUCTION**

1.1 LanzaTech UK Limited ('LanzaTech') is currently in the process of producing an Environmental Statement ('ES') to support a planning application ('the Planning Application') for a new facility for the production of sustainable aviation fuel in the form of Alcohol to Jet Synthetic Paraffinic Kerosene (ATJ SPK), and Renewable Diesel (ATJ-RD), using technology and processes developed and licenced by LanzaTech ('the Project'). The Planning Application will be submitted to Neath and Port Talbot Council ('NPT').

1.2 The Project will be located close to the docks within Port Talbot in an area known as 'Crown Wharf' and will involve modifications to be undertaken to the docks, namely:

1.2.1 during the construction phase, a temporary wharf and jetty to facilitate the construction of the Project (including the large-scale production plant and equipment), with associated reinforcement works to the adjacent area of quay; and

1.2.2 for the operational phase, the continued use of the temporary wharf and a new permanent jetty (and associated breasting and/or mooring dolphins) and associated loading/unloading facility and pipework to facilitate ship movements to carrying ethanol primary feedstock to the Project production facility; and to transport the resulting sustainable aviation fuel from the Project to customers.

1.3 A large part of the Crown Wharf Works are in the marine environment and therefore a marine licence will be required for them pursuant to the Marine and Coastal Access Act 2009.

1.4 Planning permission is not required for the marine aspects of the Crown Wharf Works ('the Marine Works'), as these sit below the mean low water mark and mean high water spring tide. Mean low water is the 'seaward' extent of the Town and Country Planning Act 1990 regime as it is the geographical extent of the jurisdiction of a local planning authority. Mean high water is the limit of the area covered by marine licensing, further to section 41 of the Marine and Coastal Access Act 2009. That section defines the UK marine area as:

1.4.1 the area of sea within the seaward limits of the territorial sea adjacent to the United Kingdom;

1.4.2 'sea' is defined as including an area submerged at mean high water spring tide; and

1.4.3 also includes waters in any area 'which is closed, whether permanently or intermittently by a lock or other artificial means against the regular

actions of the tide', and therefore including areas behind features such as the Port Talbot dock walls.

1.5 As the Marine Works will take place within the Port Talbot dock within an area which is 'submerged at mean high water spring tides', they fall within the definition of 'sea' under section 41, and require a Marine Licence. This will be the case at the time the application is made, and when it is determined, which are the relevant points in time for NPT and NRW to be considering the consenting approach. There is no legal principle which requires consideration of any potential change in the future extent of the marine area, at the time of determination.

1.6 The respective planning and licensing jurisdictions of NPT and NRW are also not matters of judgment or discretion – they are set by the legislation.

1.7 These works will not therefore form part of the Planning Application.

1.8 Separately, LanzaTech will require an electrical connection from the Project to the National Grid, likely to be achieved via a new 33kv cable route ('the Electrical Connection'). The Electrical Connection works would be carried out by National Grid as the statutory undertaker responsible for the electrical network in NPT. National Grid is the body with the relevant expertise to design and carry out the work, and also the owner and operator of the substation to which the cabling will need to connect. Given the controls exerted by National Grid on electrical system upgrades, it is understood that it will be more appropriate and efficient for Project delivery for this to be taken forward by National Grid.

1.9 Importantly, whilst the high level routing of the Electrical Connection is confirmed and the formal connection request accepted, the full technical details as to how it will be carried out are to be agreed. This will take some time to be agreed with National Grid, as is the case for most major developments in the UK. As such, any consent that may be necessary for the Electrical Connection will not form part of the Planning Application. However, from initial discussions with National Grid, it is understood that the works for the Electrical Connection would likely take place in and within highway land or under private streets.

1.10 There is no legal requirement for either the Marine Works or the Electrical Connection to be included in the Planning Application. Subject to the following, this approach results in no detriment to NPT's ability to lawfully consider and determine the Planning Application. As they are a part of the overall Project, it is important that the Marine Works and Electrical Connection are considered appropriately within LanzaTech's ES. This will ensure that the Project as a whole is assessed, even if it is (necessarily and lawfully) made up of a number of different applications.

1.11 This note sets out our advice on the approach that should be taken and which will ensure that the ES is robust and allows NPT to proceed to determine the

Planning Application expeditiously. Similar principles would apply to any HRA report that would accompany the Planning Application, if that is required.

1.12 This advice is provided for the benefit of LanzaTech and may not be relied on by any other person.

2. GENERAL PRINCIPLES

2.1 There is a significant amount of case law relating to what should be considered to form 'the project' for EIA purposes, most recently summarised in the judgment in the judicial review of the Sizewell C Nuclear Power Station development consent order decision[1].

2.2 Such cases have been brought forward on the basis that, in consenting regimes, the focus is not on what, or how many, consents are being brought forward, but on ensuring that the impacts of a project overall are assessed. This assessment must be commensurate with the level of information that is available at the time of that assessment.

2.3 The key 'mischief' that case law has sought to avoid is development projects being *artificially* 'salami sliced' into smaller parts (and accompanying assessment documentation) to avoid assessment of impacts of a wider development as a whole.

2.4 In this context, the Sizewell judgment re-emphasised the principles from preceding cases that it is acceptable for a decision maker to make a decision on the first part of a larger development even where it is accompanied by an ES that only assesses the later parts of the development on the basis of a high level of information[2].

2.5 This is partly on the basis that a later decision maker will be able to consider the detail of a later stage of development in the later application; and in doing so, account for the cumulative impacts of the wider Project as a whole on the aspect of the environment that they are concerned about.

2.6 The High Court also recognised that to hold otherwise would entail lengthy and unnecessary delays to the determination of consent applications, awaiting 'full' environmental information. The judge in that case went on to say that: "*The need for the supply of utilities such as water is common to many, if not all, forms of development. A utility company's need to make additional provision so as to be able to supply existing and new customers in the future does not mean that that provision (or its method of delivery) is to be treated as forming part of each new development which will depend upon that supply. The consequence would be that where a new supply has yet to be identified by the relevant utility*

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[1] [2023] EWHC 1526 (Admin) and available here

[2] Indeed in the Sizewell case, there was no information available and so the applicant was right not to assess at all.

company, decisions on those development projects would have to be delayed until the company is able to define and decide upon a proposal. That approach would lead to sclerosis in the planning system which it is the objective of the legislation and case law to avoid (R (Forest of Dean (Friends of the Earth)) v Forest of Dean District Council [2015] PTSR 1460 at [18])".

2.7 The important point therefore, is that information should be included in an ES which covers the entirety of the project in question, where it is possible to do so, but that it is acceptable for the level of detail that is included to be at a different level of consideration for those aspects that are not within the scope of the consent application in hand, compared to those aspects that are within that scope.

2.8 In respect of the Electrical Connection, it should also be noted that, under section 55(2)(c) of the Town and Country Planning Act 1990, the carrying out by statutory undertakers of any works for the purpose of inspecting, repairing or renewing cables or other apparatus, including the breaking open of any street or other land for that purpose is not considered to be development at all, never mind EIA development. It is also noted that, ordinarily, electrical works would be carried out pursuant to National Grid's permitted development rights, although it is acknowledged that such rights are not available where they form part of an EIA Development, pursuant to article 3(10) of the GPDO. This context is important in considering the level of assessment to be undertaken for the Electrical Connection, given that none in fact may need to be undertaken.

3. GENERAL PRINCIPLES AND THE PROJECT

3.1 In the context of the Project, we understand that LanzaTech acknowledge that both the Electrical Connection and the Marine Works form part of the 'project' for EIA purposes, given the functional interdependence between each of the Marine Works and the Electrical Connection and the rest of the Project, and in light of the fact that the Electrical Connection and the Marine Works would not be brought forward as stand-alone projects absent the rest of the Project[3].

3.2 It is therefore understood by LanzaTech that the Electrical Connection and the Marine Works do need to be considered in the ES which support the Planning Application.

3.3 We also understand that it is unlikely a marine licence application will be submitted for the Marine Works until after the Planning Application has been made (and potentially before it is determined). The development of that application is being undertaken to ensure that:

[3] Two of the key tests in case law in respect of considering whether development forms part of a wider 'project'.

3.3.1 the marine licence process dovetails with LanzaTech's project programme; and

3.3.2 the design of the Marine Works is both conducive to the uses proposed for them and is undertaken in an agreed fashion to allow the parameters of that design to be considered in both the Planning Application ES and the application for the marine licence.

3.4 Discussions with National Grid are on-going in relation to the full technical details of the Electrical Connection. As such it is not possible to include consent for them in the Planning Application. Furthermore, it is entirely possible that the works would not in fact require planning permission at all if carried out under the street, but this is not currently able to be confirmed. As such, LanzaTech will need to continue working with National Grid to confirm the approach to be taken, and noting that this will be done to meet the Project's overall timelines.

3.5 With this in mind, and accounting for the General Principles set out above, we recommend that the following approach is taken to consideration of the Marine Works in the Planning Application documentation:

3.5.1 the Planning Application ES should incorporate an assessment of the Project as a whole, including the terrestrial elements of the Crown Wharf Works and the Marine Works;

3.5.2 the ES should include (as was proposed in the Scoping Report), a marine ecology chapter to assess the impacts of the Marine Works. This should be undertaken on a reasonable worst-case parameter approach, on the basis of the level of design that has been able to be developed for the marine licence application to date, but acknowledging that this design may develop further in support of a marine licence application; and

3.5.3 any HRA (if required) should also include consideration of impacts to designated sites from marine related effects from the Marine Works.

3.6 Whilst the detailed installation and consenting approach for the Electrical Connection are still to be finalised, the wider context is that the environmental effects of cabling works in the street are usually very limited in duration and zone of influence, and would typically be limited to impacts on traffic flows and pedestrian movements during roadworks. In the context of the ES Scoping Opinion having scoped these out of the ES for the main terrestrial works, we recommend that the ES takes a high level approach to acknowledge that such works would need to take place and could cause such impacts, but that these impacts would be able to be mitigated through standard mitigation approaches, thus not causing significant effects (and thus consistent with the original Scoping approach).

3.7 Taking this approach to the Marine Works and the Electrical Connection will enable NPT to consider the impacts of the Project as a whole, commensurate with the level of detail that is available in respect of both terrestrial and marine impacts, whilst also enabling it to focus its attention on controls relating to those matters which are its function and responsibility to consent.

3.8 Furthermore it is noted that, given the locations of the nearest substations to the main project site, the receptors that may be affected will differ for the Electrical Connection. There is therefore limited scope for there to be 'cumulative'[4] impacts arising from the carrying out of the Electrical Connection and the main terrestrial works, and we would assume no scope for cumulative impacts on the same receptors between the Electrical Connection and the Marine Works. It therefore makes sense for each application (where necessary) to focus on the specific works being consented in question, whilst still acknowledging their role as part of the wider Project.

3.9 The above approach will also ensure that the Project cannot be considered to have been 'salami-sliced' in EIA terms, notwithstanding that it is (necessarily) consented via two (or potentially three) different applications.

3.10 Further design development of the Marine Works will then be able to follow in the marine licence application. The marine licence application should draw upon the conclusions of the Planning Application ES in providing its own environmental information, including (unless this is not possible) confirming that the design is within the parameters assessed in that Planning Application ES.

3.11 To the extent that the Marine Works design falls outside of the parameters set out in the Planning Application, the environmental impacts of that change can be considered by NRW in determining the marine licence application, whilst also considering the cumulative impacts of the Project as a whole to the marine environment.

3.12 In this way, the development of the Marine Works will be able to be considered as part of the Project by NPT and then again by NRW as the design has further developed. This will ensure that there are no 'gaps' in assessment in legal, procedural, or substantive terms.

3.13 The Electrical Connection works will be able to be brought forward either through there being no need for planning permission (under section 55 TCPA 1990) but controlled through street works licensing; or through a subsequent planning application that would provide more detail on the works to be undertaken.

3.14 It should also be noted that the EIA Regulations provide further reassurance on project development, through the concept of 'subsequent consent' applications

[4] By 'cumulative' here we do not mean a cumulative assessment in a normal ES sense, but the cumulative impacts of different parts of the same project on any single receptor.

and whereby environmental information is capable of being updated and considered further in relation to future detailed applications pursuant to the planning permission.

3.15 Finally, to provide further reassurance to NPT that these aspects will be covered by the later approval, LanzaTech could also consider offering a planning condition which provides that implementation of the planning permission cannot take place until it has submitted an environmental impact 'verification report' to NPT. This would set out that the design of the Marine Works in the marine licence application and the proposed carrying out of the Electrical Connection is consistent with the parameters considered in the Planning Application ES, or if that is not the case would identify how the parameters in the marine licence application and the carrying out of the Electrical Connection are different and provide NPT with updated environmental information.

3.16 This approach will give LanzaTech the flexibility to ensure that (a) happens and does not adversely affect programme, whilst providing reassurance to NPT that any changes in parameters will be considered by the decision maker for the later consent by offering (b).

Pinsent Masons LLP, 11 August 2023

Appendix 3: Planning Policy Matrix

Planning Policy Matrix

This planning policy matrix provides an overview of relevant adopted planning policy and material planning considerations in relation to the proposed development. The matrix identifies relevant planning policies, summarises policy requirements, and identifies the relevant weight to be afforded to each.

Key	
Full Weight	
Moderate Weight	
Welsh Government Document	
Neath Port Talbot Council (NPTC) Document	
Policy Compliant	
Not Compliant	

Weight	Authority & Policy Document	Planning Policy Reference	Summary of Policy Requirements	Turley Commentary	Scheme Compliance
The Development Plan					
Full Weight	Welsh Government Future Wales: The National Plan 2040	Overview	Future Wales (FW) is the national development framework, setting the direction for development in Wales up to 2040. FW is a development plan document 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. Future Wales is strongly	The proposed development will make a significant contribution towards achieving Wales' decarbonisation objectives. There are clear national objectives and Government requirements to decarbonise the aviation sector and support the	

Weight	Authority & Policy Document	Planning Policy Reference	Summary of Policy Requirements	Turley Commentary	Scheme Compliance
	(published February 2021)		influenced by Planning Policy Wales (PPW) which establishes key principles for the planning system.	production of SAF in the immediate future	
		Policy 1: Where Wales Will Grow	Three National Growth Areas for Wales are identified, which will be complemented by Regional Growth Areas. One of the National Growth Areas is Swansea Bay and Llanelli, which includes Port Talbot.	The development site is located within Port Talbot Regional Growth Area.	
		Policy 9: Resilient Ecological Networks and Green Infrastructure	Development proposals must demonstrate action towards securing the maintenance and enhancement of biodiversity to provide a net benefit, the resilience of ecosystems, and green infrastructure assets, through innovative, nature-based approaches to site-planning and the design of the built environment.	Ecological surveys have been undertaken to determine the existing baseline conditions at the site, and to identify constraints and opportunities for maintaining and enhancing biodiversity and green infrastructure. The proposed approach to ecology at the application site (and the mechanism for delivery) is detailed in full within the supporting ES and will be further refined in collaboration with NPTC (as required) during the assessment and determination of the application.	

Weight	Authority & Policy Document	Planning Policy Reference	Summary of Policy Requirements	Turley Commentary	Scheme Compliance
	Neath Port Talbot Council (NPTC) Local Development Plan 2011-2016 (adopted January 2016)	Overview	The NPTC Local Development Plan (LDP) sets out where, when, and how much new development can take place within the County Borough between 2011 and 2026. The LDP is guided by four overarching objectives relating to climate change (objective 1), health (objective 2), sustainable communities (objective 3), and recreational and community facilities (objective 4). Objective 1 seeks to minimise the causes and consequences of climate changes through reduced greenhouse gas emissions and adapt to climate change through consideration of its effects in the design and location of new development.	The proposed development seeks to support the overarching objectives of the LDP. In particular objective 1, which seeks to minimise the causes and consequences of climate change.	
		Policy SP1: Climate Change	The causes of climate change will be addressed by implementing measures including minimising greenhouse gas emissions from transport by encouraging freight/commercial transport by alternatives to road (e.g. rail or sea) and reducing dependence on the private car by promoting alternative means of transport. The consequences of climate change will be addressed by following a sequential approach to development at risk from flooding, and by minimising the fragmentation of habitats and creating opportunities for habitat and species change and migration where possible.	The application proposal is an important de-carbonisation project. The proposed development will feature a range of measures to reduce carbon emissions, mitigate the effects of climate change, and to ensure the long-term resilience of the development to the effects of climate change. The proposed development will utilise the marine loading/unloading facility to import ethanol feedstock and	

Weight	Authority & Policy Document	Planning Policy Reference	Summary of Policy Requirements	Turley Commentary	Scheme Compliance
				export SAF produced on-site, using tanker ships. The seaborne movement of goods will be carried out by appropriate third parties, either procured by LanzaTech or by the ethanol feedstock supplier. Commercial transport by alternatives to road (e.g. rail or sea) are encouraged by Policy SP1.	
		Policy SP2: Health	Measures will be taken in relation to the high levels of poor long term health and sickness, including reducing people's exposure to elements that can have an adverse impact on their health such as social, economic or physical environment.	An assessment of the impact of the application proposal on human health forms part of the supporting ES. Impacts in terms of noise, air quality and waste on human health are considered within relevant technical assessments.	
		Policy SP3: Sustainable Communities	The delivery of sustainable, healthy, and cohesive communities, and the conservation of the countryside will be promoted. Settlement limits will be defined within which development which accords with the settlement hierarchy will be permitted in principle, and inappropriate development outside of the settlements limits will be resisted.	Whilst the development site is located outside of Port Talbot's defined settlement limits, it comprises historic brownfield land at a strategic dockland asset in the authority area. The site is allocated for freight	

Weight	Authority & Policy Document	Planning Policy Reference	Summary of Policy Requirements	Turley Commentary	Scheme Compliance
		Policy SC1: Settlement Limits	Outside of settlement limits, development will only be permitted under specified circumstances. Where development is permitted outside settlement limits, any new buildings must be located adjacent to existing buildings or settlements wherever possible, and be of an appropriate scale and form.	development. The principle of development in this location is established and the site is considered to be a suitable location for sustainable development.	
		Policy SP4: Infrastructure	Development will be expected to make efficient use of existing infrastructure, and where required make adequate provision for new infrastructure. Where necessary, Planning Obligations will be sought to ensure that the effects of developments are fully addressed in order to make the development acceptable.	Discussions will be held with NPTC during the consideration of the application to determine any requirement for planning obligations. Potential obligations are detailed in Section 7 of this Statement.	
		Policy I1: Infrastructure Requirements	Further works or funding may be required in addition to SP4, to mitigate the impact of new development. This includes consideration and appropriate provision for open space, biodiversity, environmental and conservation interests, improvements to walking and cycling routes, community and public transport, education and training, and historic and built environment and public realm improvements.	The requirement for additional works or financial contributions to mitigate the impact of the proposed development will be reviewed with NPTC during the consideration of the application.	
		Policy OS1: Open Space Provision	For employment or commercial development proposals of over 1,000sqm, provision will be sought for associated amenity space.	The constraints and opportunities to provide amenity space on the site have been	

Weight	Authority & Policy Document	Planning Policy Reference	Summary of Policy Requirements	Turley Commentary	Scheme Compliance
				considered and amenity shelters are proposed to serve the site.	
		Policy SP5: Development in the Coastal Corridor Strategy Area	In the Coastal Corridor Strategy Area (in which Port Talbot and the application site are located), sustainable growth and development will be promoted to benefit the County Borough, while protecting and enhancing the area's character and environment.	The proposals comprise new employment development and will create economic benefits within the Coastal Corridor, Strategy Area and Valleys Strategy Area. The proposal will contribute towards the Council's mission of maximising the economic, social, health and environmental benefits of decarbonisation through a focus on sustainability. It will also further Wales' progress towards a more resilient and equitable low-carbon economy and provides a significant opportunity for Port Talbot to lead on this agenda.	
		Policy SP6: Development in the Valleys Strategy Area	In the Valleys Strategy Area (in which Port Talbot and the application site are located), the local economy and communities will be enhanced and reinvigorated and the distinctive environment will be protected through area specific measures.		
		Policy SP11: Employment Growth	New employment developments will be encouraged.		
		Policy SP15: Biodiversity and Geodiversity	Important habitats, species, and sites of geological interest will be protected, conserved, enhanced, and managed through measures including the identification of internationally, nationally, regionally and locally important	Ecology surveys have been undertaken to assess and determine the baseline biodiversity of the application	

Weight	Authority & Policy Document	Planning Policy Reference	Summary of Policy Requirements	Turley Commentary	Scheme Compliance
			sites, and the protection of important natural heritage features.	site and identify constraints and opportunities for maintaining and enhancing biodiversity and green infrastructure. Any adverse effects from the loss of scrub habitats and grasslands will be fully compensated by enhancements and safeguarding of ancient woodland. Targeted improvements in the condition of high value habitats and their long-term safeguarding provides biodiversity enhancement, in addition to the measures specifically required to provide compensation for impacts of the proposed development. LanzaTech has demonstrated commitment to the off-site delivery of enhancement through discussions with ABP. This approach is set out in the submitted Ecology Note and ECIA.	
		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, sites supporting Local Biodiversity Action Plan (LBAP), or S42 habitats or species will only be permitted where they conserve or enhance the natural heritage importance of the site, or where the development could not reasonably be located elsewhere and the benefits outweigh the natural heritage importance of the site. Mitigation and/or compensation measures will need to be agreed where adverse effects are unavoidable.		
		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 to retain and protect features wherever possible, or where the biodiversity value and role of the relevant feature has been taken into account. Where the removal is unavoidable, mitigation measures must be agreed.		

Turley

Weight	Authority & Policy Document	Planning Policy Reference	Summary of Policy Requirements	Turley Commentary	Scheme Compliance
				The Landscape Strategy responds to the industrial nature of the site. It aims to contribute to the effective drainage and filtration of surface water and enhance biodiversity, where possible.	
		Policy SP16: Environmental Protection	Air, water, ground quality, and the environment generally, will be protected and where feasible improved through measures including ensuring that proposals have no significant adverse effects on water, ground, or air quality, and do not significantly increase pollution levels, giving preference to brownfield sites over greenfield sites, and ensuring that developments do not increase the number of people exposes to significant levels of pollution.	Assessments of the development's potential environmental impact, including air quality, noise, and ground contamination have been undertaken and are detailed in the submitted Environmental Statement.	
		Policy EN8: Land Stability	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 air, noise, light, or water pollution, contamination, or land instability will not be permitted. Proposals which create new problems or exacerbate existing problems will not be acceptable unless mitigation measures are included.		
		Policy SP18: Renewable and	A proportionate contribution to meeting national renewable energy targets and energy efficiency targets will be made		

Weight	Authority & Policy Document	Planning Policy Reference	Summary of Policy Requirements	Turley Commentary	Scheme Compliance
		Low Carbon Energy	while balancing the impact of development on the environment and communities. This will be achieved by measures including encouraging low carbon technology development, encouraging energy conservation and efficiency measures in all new major development proposals, and by ensuring that development will not have an unacceptable impact on the environment and amenity of local residents.	A Sustainability and Energy Statement is submitted in support of the planning application. Balancing sustainability and ecology measures in an environment where maintenance and fire protection are high priorities has been a key consideration throughout. The safest way to do this is to incorporate solar panels to enable some on-site energy generation, and brown roofs to create new bio-diverse habitat. In addition, air source heat pumps and EV charging are proposed, plus a strategy to reduce energy use in admin buildings is detailed in full in the Sustainability and Energy Statement.	
		Policy RE2: Renewable and Low Carbon Energy in New Development	Schemes that connect to existing sources of renewable energy and incorporate on-site zero/low carbon technology (including microgeneration technologies) will be encouraged. Development with a total floorspace of 1,000sqm or more will be required to submit an Energy Assessment to determine the feasibility of incorporating renewable energy schemes.		
		Policy SP19: Waste Management	Provision will be made for the delivery of an integrated network of waste management facilities through measures including ensuring that provision is made for the sustainable management of waste in all new developments.	The proposed approach to waste is detailed in the supporting Waste Management Plan. The Plan covers both operational and	

Turley

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		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. Industrial or commercial development that would generate in excess of 1,000 tonnes of waste per annum, and development that would generate hazardous waste will be required to produce Site Waste Management Plans.	construction waste and how this will be processed.	
		Policy SP20: Transport Network	The transport system and infrastructure will be developed in a safe, efficient, and sustainable manner through measures including restricting development which would have an unacceptable impact on highway safety, requiring appropriate parking provision, facilitating movement of freight by means other than road, and requiring development proposals to be designed to provide safe and efficient access and promote sustainable transport.	The potential impact of the proposed development on the existing transport network has been assessed in the submitted Transport Assessment. The site is accessible by sustainable modes of transport, offering future employees a range of transport options. Access to the ABP site entrance on foot and by bike is of a good standard and there are multiple transport connections within close proximity, which provide access to a range of local destinations. Prospective staff	
		Policy TR2: Design and Access of New Development	Development proposals will only be permitted where criteria are satisfied. The criteria include avoiding an adverse impact on highway safety or unacceptable levels of traffic generation, providing appropriate levels of parking and cycling facilities, accessibility to a range of travel means including public transport and safe cycle and pedestrian routes, and providing Transport Assessment and Travel Plans to developments that are likely to generate significant traffic generation.		

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				will not be wholly reliant on the private car for travel to work.	
		Policy TR4: Safeguarding Freight Facilities	Four areas are designated to be safeguard for the transportation of freight. The application site is located within a wider area designated for rail freight facilities (Policy TR4/4: Existing Rail Connections & Sidings) Proposals that would inhibit the transportation of freight will be resisted, unless it can be demonstrated that the use of the route for movement of freight is not realistic or necessary.	This is a long-standing allocation and development for this use has not come forward. The site's suitability for SAF is acknowledged in ABP's aspirations for the wider port. Continuing to safeguard this land in its current form will preclude the sustainable regeneration of the site and wider docks and harbour. The proposed development seeks to utilise the existing harbour for the transportation of materials, feedstock and products (broadly consistent with the site's current LDP allocation). It would not preclude the existing or future use of the harbour or wider Dock area. On the contrary, the development supports the use of the working	

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				harbour and ABP dock facilities. It would support and facilitate transport movements by sea.	
		Policy SP21: Built Environment and Historic Heritage	The built environment and historic heritage will, where appropriate, be conserved and enhanced. This includes encouraging high quality design standards in all development proposals, protecting arterial gateways from intrusive and inappropriate development, safeguarding features of historic and cultural importance, and identifying and where appropriate enhancing, designated sites.	The potential impact of the proposed development on the built and historic environment has been assessed in the Environmental Statement. The proposed development would have no direct impact on designated historic assets (such as listed buildings and scheduled monuments). There are no designated historic assets located within the site boundary or its wider surroundings.	
		Policy BE1: Design	All development proposals will be expected to demonstrate high quality design which takes into account the natural, historic, and built environmental context, and contributes to the creation of attractive, sustainable places. Proposals will only be permitted where specified criteria are met. This includes complementing and enhancing the character and appearance of the site, respecting the context of the site and local landscape, utilising materials appropriate to surroundings, avoiding an adverse impact on highway	The design evolution of the application proposal is set out in detail in the submitted Design and Access Statement (DAS). Accompanying plans and images provide details of the proposed design. The site layout responds to the requirements of the industrial process and health and	

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			amenity, retaining and enhancing important local features, playing a role in achieving and enhancing an integrated transport and communications network, utilising land and energy resources efficiently, limiting surface water run-off and flood risk.	safety considerations. The various buildings and modules are placed strategically to ensure the effective and safe functioning of the facility, taking account of the site context.	
Material Considerations					
Full weight	Welsh Government Planning Policy Wales (PPW) Edition (published February 2021	Overview	Planning Policy Wales (PPW) establishes key principles for the planning system. It is supplemented by a series of Technical Advice Notes (TANs), Welsh Government Circulars, and policy clarification letters, which together provide the national planning policy framework for Wales.	The proposals comply with national and local planning policy and advice.	
		Sustainable Development	Paragraph 1.2 sets out that the primary objective of PPW is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental, and cultural well-being of Wales. Figure 4 sets out Key Planning Principles which comprise: - growing the economy in a sustainable manner - making the best use of resources - facilitating accessible and healthy environments - creating and sustaining communities - maximising environmental protection and limiting environmental impact	The application proposal supports the key principles set out in PPW, and proposes economic development which will promote the best use of resources and land. The application proposal's sustainability credentials are considered in detailed within the supporting Sustainability and Energy Statement. The proposed development will deliver economic benefits to Port	

Turley

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			Paragraph 3.3 states that good design is fundamental to creating sustainable places. Design is not just about the architecture of a building but the relationship between all elements of the natural and built environment. To achieve sustainable development, design must go beyond aesthetics and include the social, economic, environmental, cultural aspects of the development. Paragraph 3.7 sets out that development should seek to maximise energy efficiency and the efficient use of other resources (including land), maximise sustainable movement, minimise the use of non-renewable resources, encourage decarbonisation and prevent the generation of waste and pollution. Paragraph 3.30 states that in 2019 the Welsh Government declared a climate emergency. The planning system plays a key role in tackling the climate emergency through the decarbonisation of the energy system and the sustainable management of natural resources.	Talbot and the wider region, including: Anticipated total capital expenditure in the construction of the proposed development of several hundred million pounds. The creation of 85 new permanent (on-site) FTE jobs, plus potential to support up to 130 FTE jobs in the supply chain. Use of local contractors where feasible, as well as local firms involved in activities such as water treatment, waste management, chemical management and ship loading/unloading, wherever possible.	
Moderate Weight	Welsh Government Technical Advice Notes (TAN)	TAN 5: Nature Conservation and Planning (published September 2009)	Planning should contribute to protecting and enhancing biodiversity and geological conservation. It demonstrates how local planning authorities, developers, and key stakeholders in conservation can work together to deliver more sustainable development that does not result in losses from the natural heritage but instead takes every opportunity to enhance it.	Ecology surveys have been undertaken to determine the existing biodiversity of the site, and identify constraints and opportunities for maintaining and enhancing biodiversity and	

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				green infrastructure on and off site. The proposed approach to ecology on the site is detailed in the submitted ES and supporting reports.	
		TAN 11: Noise (published October 1997)	The planning system can be used to minimise the adverse impact of noise without placing unreasonable restrictions on development, or adding unduly to the costs and administrative burdens of business. Local authorities should adopt a corporate approach and ensure close co-operation between planning and environmental health departments when considering noise and noise generating developments. Measures to control the sources of, or limit exposure to, noise should be proportionate and reasonable, and may include engineering, layout, or administrative mitigation.	A range of measures have been introduced during the design development to mitigate the impact of higher noise sources, including the move to an enclosed ground flare, enclosing compressor plant within compressor houses and enclosing high noise pumps. There are no significant effects resulting from operational noise of the proposed development. Predicted noise levels fall well below existing background levels within relevant designated quiet areas. No unacceptable impact is indicated, in accordance with TAN 11 and Policy EN10 of the LDP.	

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		TAN 12: Design (published March 2016)	TAN 12 provides advice on promoting sustainable design through the planning system. The guidance promotes early consideration of design and a multi-disciplined collaborative approach. This includes pre-application discussions with the Local Planning Authority, end users, and stakeholders.	Discussions regarding the design of the application proposal have been held with NPTC during the pre-application stage. LanzaTech UK is both the applicant and end user, therefore the scheme has primarily been designed according to LanzaTech's specific requirements, taking into account the site context and health and safety requirements.	
		TAN 15: Development and Flood Risk (published July 2004)	TAN 15 provides a framework within which the flood risks arising from rivers, the sea, surface water, and coastal erosion can be assessed.	The application site is located primarily within Flood Zone B. A detailed Flood Consequences Assessment is submitted is supporting of the planning application. The Flood Consequences Assessment demonstrates that the proposed development satisfies the Justification Test, including managing flood risk in line with the acceptability criteria. The proposed development meets the principles and requirements set out in TAN15	

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				and the aims of PPW, as well as LDP Policy SP1 (Climate Change).	
		TAN 18: Transport (published March 2007)	An efficient and sustainable transport system is a requirement for a modern, prosperous, and inclusive society. Integration of planning and development of transport infrastructure has a key role to play in addressing the environmental aspects of sustainable development, in particular climate change.	The potential impact of the proposed development on the existing transport network has been assessed within the submitted Transport Assessment. With regard to provision for access via a variety of transport modes, car parking, motorcycle parking and safe cycle storage is provided. Active EV charging is provided to 25% of car parking spaces to promote sustainable transport movements.	
		TAN 23: Economic Development (published February 2014)	Economic development can include any form of development that generates wealth, jobs, and income. The TAN deals principally with B Use Classes, but states that it is important that the planning system recognises the economic aspects of all development, and that planning decisions are made in a sustainable way which balance	The socio-economic benefits and impacts of the development are considered in the Environmental Statement. This also details measures to be taken to balance	

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			social, environmental, and economic considerations. Where economic development would cause environmental or social harm which cannot be fully mitigated, careful consideration of the economic benefits will be necessary.	the social, environmental, and economic considerations.	
		TAN 24: The Historic Environment (published May 2017)	TAN 24 provides guidance on how the planning system considers the historic environment during development plan preparation and decision making. Specific guidance is provided in relation to World Heritage Sites, Scheduled Monuments, archaeological remains, Listed buildings, Conservation Areas, Historic Parks and Gardens, historic landscapes, and historic assets of special local interest.	There are no designated heritage assets on the application site, and it is not located within a Conservation Area. An Archaeological Assessment has been submitted with this application which reviews the potential for any archaeological findings during construction and recommends appropriate mitigation where required.	
	Neath Port Talbot Council (NPTC) Supplementary Planning Guidance (SPG)	Planning Obligations (published October 2016)	It is important that sufficient new development is secured to meet the needs of communities, and that where possible the impacts of new development are addressed by the planning system. It is expected that developers pay for, or contribute to, improvements to infrastructure that would not otherwise be needed. The principal categories for which the Council will seek contributions include transportation and access, open space, biodiversity and the natural environment.	Discussions will be held with NPTC during the consideration of the application to determine any requirement for planning obligations. Potential obligations are detailed in Section 7 of this Statement.	

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		Open Space and Greenspace (published July 2017)	The SPG supports LDP policies SP10 (Open Space), OS1 (Open Space Provision), and OS2 (Protection of Existing Open Space). Employment and commercial proposals which result in a net increase in floorspace of 1,000sqm or more will be required to provide amenity space to allow employees access to an outdoor amenity area close to the workplace.	The constraints and opportunities to provide amenity space on the site have been considered and the drawings detail the amenity shelters that are proposed within the development.	
		Landscape and Seascape (published May 2018)	The SPG supports LDP policies SP14 (The Countryside and the Undeveloped Coast), EN1 (Undeveloped Coast, EN2 (Special Landscape Areas), and EN3 (Green Wedges). Landscape and Visual Impact Assessments (LVIA) will often be required as part of the Environmental Impact Assessment (EIA) process for development and should be undertaken in all cases where there is likely to be a significant landscape or seascape impact from a proposal. Impacts on skylines, views, and panoramas will be important considerations. These impacts should be identified in relation to significant receptors (such as local residents or communities) as well as the wider landscape/seascape generally. Visualisation of the appearance of a proposal can assist in the assessment of its landscape impact, by submitting plans, elevations, sections, sketches, annotated photographs, wirelines, augmented reality, photomontages, or 3D simulations.	The potential impacts of the development on landscape and the wider area have been assessed and a full Landscape and Visual Impact Assessment has been submitted with the planning application. The application is also supported by plans, elevations, sections, and images.	

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		Biodiversity and Geodiversity (published May 2018)	The SPG supports LDP policies SP15 (Biodiversity and Geodiversity), EN6 (Important Biodiversity and Geodiversity Sites), and EN7 (Important Natural Features). The SPG sets out a basic framework for dealing with biodiversity and geodiversity in the planning process in Neath Port Talbot. This includes anticipating potential biodiversity impacts of a development proposal early in the planning process, protecting designated sites and species, taking account of indirect or cumulative impacts, protecting wildlife corridors, and identifying opportunities for a development to contribute towards a net gain for biodiversity and protection of geodiversity. To achieve this, pre-application discussions with NPTC are encouraged. Sufficient information about the existing biodiversity is also required. For certain developments consideration should also be made for whether there is a need for licenses from Welsh Government of Natural Resources Wales, and/or an Environmental Impact Assessment (EIA), and/or a Habitat Regulations Assessment (HRA).	Ecology surveys have been undertaken to determine the existing biodiversity of the site and identify constraints and opportunities for maintaining and enhancing biodiversity and green infrastructure on and off site. The proposed approach to ecology on the site is detailed in the submitted ES and supporting reports, including the Ecology Note and ECIA. Relevant ecological/species specific licences will be sought if necessary.	
		Pollution (published October 2016)	The SPG supports LDP policies SP16 (Environmental Protection), EN8 (Pollution and Land Stability), EN9 (Developments in the Central Port Talbot Area), and EN10 (Quiet Areas). The overall approach to be taken to pollution matters is set out in PPW Chapter 13, with further detailed advice in relation to noise matters in TAN 11. It is	Assessments of the potential impact of the development on aspects of the environment including air quality, noise, and ground contamination have been carried out in the EIA.	

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			emphasised that the role of the planning system is to determine whether a development is an acceptable use of land, rather than to seek to control the processes or substances used in any particular development. The SPG notes that matters of water, air pollution, and land contamination are controlled by other agencies, therefore planning authorities will need to ensure that planning conditions do not duplicate or contradict measures more appropriately controlled under these regimes. Further details are set out in the SPG of factors to be taken into account when reviewing potential causes and impacts of air, noise, light, and water pollution, and land contamination. Relevant reports are required to be submitted with planning applications to ensure compliance with the LPA and SPG.		
		Renewable & Low Carbon Energy (published July 2017)	The SPG supports LDP policies SP18 (Renewable and Low Carbon Energy), RE1 (Criteria for the Assessment of Renewable and Low Carbon Energy Developments), and RE2 (Renewable and Low Carbon Energy in New Development). The SPG outlines how the plan policies will be applied. An Energy Assessment is required for any development which results in a new floorspace of 1,000sqm or more.	A Sustainability and Energy Statement has been submitted in support of the planning application which details the measures proposed to comply with this requirement as set out in Policies SP18 and RE1.	
		Parking Standards	The NPTC parking standards encapsulate the CSS Wales Parking Standards (published 2014), the Joint Transport Plan for South West Wales 2015-2020, and the LDP.	Parking requirements have been considered, and the submitted Transport Assessment demonstrates that the Project is	

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		(published October 2016)	The SPG designates zones across NPTC derived from the six zones set out in the Wales Parking Standards. The application site lies partially within Zone 4 (Suburban of Near Urban) and Zone 5 (Countryside).	fully compliant. 25 electric vehicle charging points are also proposed.	
		Design (published July 2017)	The SPG supports LDP policies SP21 (Built Environment and Historic Heritage) and BE1 (Design). The SPG provides guidance for designing all types of development, including commercial development. The SPG sets out that although the function of commercial development often dictates form, and operational constraints or requirements define massing and scale, the external appearance, location of entrances, key views, and frontages can be delivered and designed in a way that maintains quality. The SPG also provides details on the implementation of the design criteria in policy BE1 (Design). These include character and appearance, wider context, materials and landscaping, highway safety and amenity, retention of important features, community safety, integrated transport and linkages, resource efficiency, drainage systems, and inclusive design.	The design of the application proposal has evolved with input from a multi-disciplinary team. The design has primarily been influenced by the operational and functional requirements of the development, taking account of the site context. The proposed design has been discussed with NPTC during pre-application discussions. A detailed Design and Access Statement (DAS) (and accompanying plans and images) is submitted in support of the planning application to provide a detailed overview of the proposed design approach.	
	Welsh National Marine Plan (published	Overview	The Welsh National Marine Plan (WNMP) sets out the long term vision for the sustainable development of the Welsh marine area. The WNMP should be used by applicants to shape proposals and licence applications, public authorities	The development site is in proximity to the 'inshore region' and is likely to require the import and/or export of materials by	

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	November 2019)		to guide decision making, and other users to understand Welsh Government's policy for the sustainable development of the Plan area. The WNMP covers both the Welsh inshore region and offshore region, as set out in Figure 1 of the WNMP. Any decision with the potential to affect the Plan area, including those related to terrestrial activities, should be taken in accordance with the WNMP unless relevant considerations indicate otherwise or with regard to the WNMP. The level of detail required to demonstrate compliance should be proportionate to a project's scale, potential impacts and risk.	boat through the WNMP regions. This has been considered and assessed in the Environmental Statement.	
		GEN_01: Planning Policy	There is a presumption in favour of the sustainable development of the plan area in order to contribute to Wales' well-being goals.	The development site is not within the WNMP area but is in proximity. A proportionate approach by NPTC should be taken when considering the impact of the development.	
		GEN_02: Planning Policy	Relevant public authorities should take a proportionate, risk-based approach to application of relevant marine planning policies in decision making.		
		ECON_01: Sustainable Economic Growth	Proposals for economically sustainable activities are encouraged, particularly where they contribute to criteria such as a more resilient economy.	The application proposal comprises economically sustainable development that	

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		SOC_02: Well-being of coastal communities	Proposals that contribute to the well-being of coastal communities are encouraged.	will benefit Port Talbot, and the wider region.	
		ECON_02: Coexistence	Proposals should demonstrate how they have considered opportunities for coexistence with other compatible sectors in order to optimise the value and use of the marine area and marine natural resources. The background text recognises that projects may not be able to identify realistic coexistence opportunities.	The scheme has considered the potential impact on nearby developments that will rely on the marine area.	
		SOC_03: Marine Pollution Incidents	Proposals should demonstrate how they minimise their risk of causing or contributing to marine pollution incidents.	The risk of accidents and emergencies has been assessed in the Environmental Statement.	
		SOC_07: Seascapes	Proposals should demonstrate how potential impacts on seascapes have been taken into consideration and should avoid, minimise, and/or mitigate impacts.	The potential impact of the development on landscape has been assessed and submitted with the LVIA which accompanies the planning application.	
		SOC_08: Resilience to Coastal Change and Flooding	Proposals should demonstrate how they are resilient to coastal change and flooding over their lifetime.	The proposed approach to flood risk has been discussed with NPTC and a FCA is submitted in support of this application.	

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		SOC_09: Effects on Coastal Change and Flooding	Proposals should demonstrate how they avoid significant adverse impacts upon coastal processes and minimise the risk of coastal change and flooding.		
		SOC_10: Minimising Climate Change	Proposals should demonstrate how they avoid, minimise, and/or mitigate the emission of greenhouse gases.	The proposed development seeks to minimise the causes and consequences of climate change.	
		SOC_11: Resilience to Climate Change	Proposals should demonstrate that they have considered the impacts of climate change and have incorporated appropriate adaptation measures.		
		ENV_01: Resilient Marine Ecosystems	Proposals should demonstrate how potential impacts on marine ecosystems have been taken into consideration and avoid, minimise and/or mitigate adverse impacts.	The potential impact of the development has been assessed in the Environmental Statement which has a chapter focused on marine biology and impacts from noise during construction and operation. Mitigation where appropriate is recommended.	
		ENV_05: Underwater Noise	Proposals should demonstrate that they have considered noise impacts on the marine environment and avoid, minimise and/or mitigate adverse impacts. The background text sets out shipping can be a source of concern.		
		ENV_06: Air and Water Quality	Proposals should demonstrate that they have considered their potential air and water quality impacts and avoid, minimise and/or mitigate adverse impacts.		

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		GOV_01: Cumulative Effects	Proposals should demonstrate that they have assessed potential cumulative effects and avoid, minimise and/or mitigate adverse impacts.		
		P&S_01: Ports & Shipping	Proposals for ports, harbours, and shipping activities will be supported where they contribute to the objectives of the plan.	The application proposal seeks to support the plan objectives. The development supports the use of the working harbour and ABP dock facilities. It will serve to support and facilitate transport movements by sea. The development will utilise the existing harbour for the transportation of materials and products, promoting use of this existing facility in line with Celtic Freeport and wider ABP Future Vision ambitions.	

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