



Project Dragon - Sustainable Aviation Fuel (SAF) Production Facility

Framework Construction Environmental Plan

November 2023

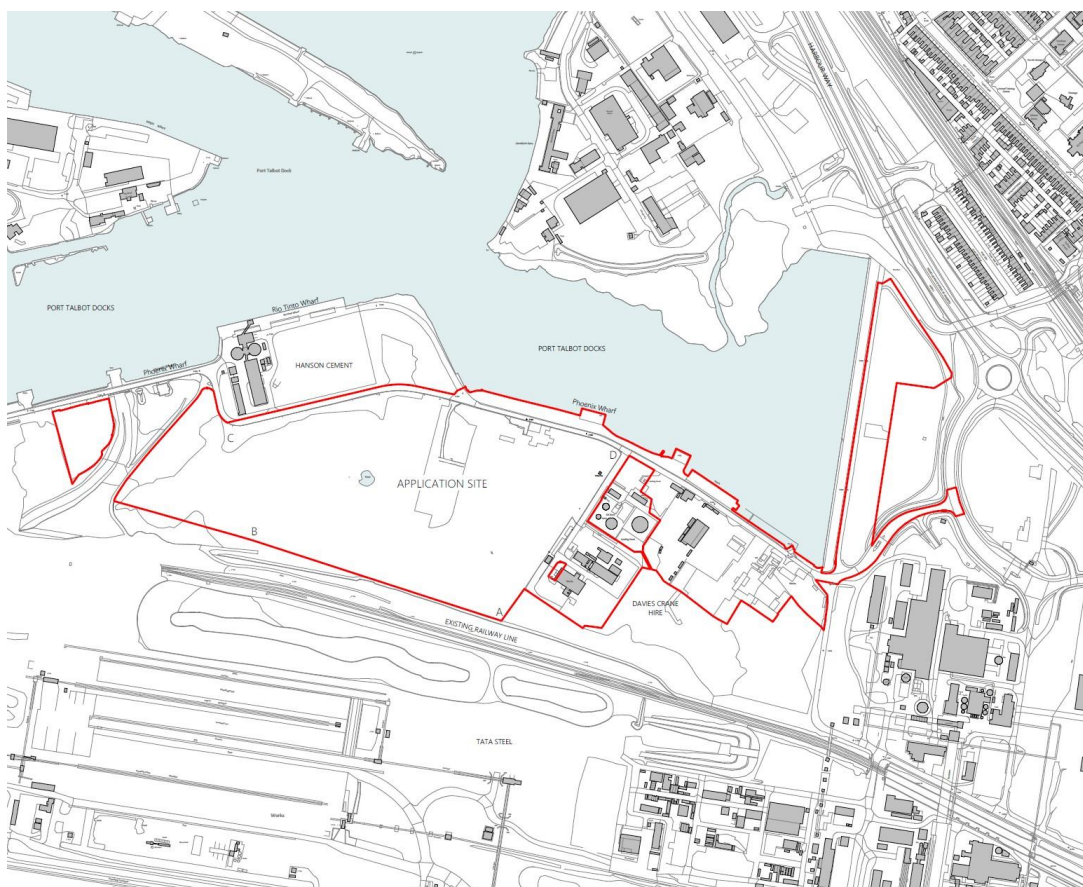
LanzaTech

1 Introduction

LanzaTech is an innovative Carbon Capture and Transformation company and a global leader in gas fermentation technology. Headquartered in Illinois, USA, the business is listed on the NASDAQ stock exchange (LNZA). LanzaTech is seeking planning permission to build a new Sustainable Aviation Fuel (SAF) production facility on land at Crown Wharf in Port Talbot Docks, Port Talbot, Wales (referred to as ‘the site’).

The site location plan is captured in Figure 1 below. The site is a previously developed industrial piece of land situated in the heart of the established Port Talbot Docks and Harbour. It is within the administrative boundary of Neath Port Talbot County Borough Council (NPT).

Figure 1: Site Location Plan



The aviation industry is acknowledged as being particularly challenging to decarbonise. The delivery of the proposed SAF production facility will place Port Talbot at the forefront of UK Government requirements to decarbonise the sector.

LanzaTech is a core industrial partner in the South Wales Industrial Cluster (SWIC) 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 are supported by Government funding.

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

1.1 Framework Construction Environmental Plan Objectives

This Framework Construction Environmental Management Plan (FCEMP) outlines the controls to be put in place for the demolition and construction works associated with the proposal for all contractors. It sets initial parameters for intended methods to avoid, reduce and mitigate demolition and construction effects on the environment. It provides a series of measures and standards of work that must be applied by the Principal Contractor(s) and its sub-contractor(s) through the demolition and construction phases of the development.

The FCEMP provides controls and working methods to ensure:

- Effective planning, management and control during demolition and construction to mitigate potential impacts on people, businesses, nature and historic environment.
- The mechanisms to engage with the local community and its representatives throughout the demolition and construction period.

These methods consider the Environmental Impact Assessment (October 2023) (EIA) prepared by Turley in support of the full planning application for the project.

The objectives of the Framework CEMP are summarised as follows:

- Minimise and eliminate where possible the environmental effects of the demolition and construction of the proposed SAF development.
- Document the environmental controls to be adopted during demolition and construction.
- Enable agreement with the relevant approval authorities on mitigation measures to be adopted during demolition and construction.
- Provide a framework for contractors to manage demolition and construction impacts.

This FCEMP has been prepared by LanzaTech and will be adopted by the appointed Principal Contractor(s) to implement and formulate a Detailed CEMP (DCEMP). LanzaTech welcomes a condition imposed on the planning permission for the SAF development requiring the preparation and submission of a DCEMP prior to the commencement of development, to be consistent with the FCEMP. The planning condition will ensure that the DCEMP will be submitted for approval by NPT, when appropriate. NPT will maintain control over the management and implementation of the demolition and construction phase of development.

The DCEMP will be a living document that will be updated at key milestones in the project construction programme. The updates will be made in consultation with key stakeholders and NPT, as required. The DCEMP will be the responsibility of the Principal Contractor(s). It will ensure that the Principal Contractor(s) will (as a minimum) comply with applicable environmental legislation at the time of demolition and construction. Further guidance from industry best practice documents will be applied, where relevant.

1.2 Framework CEMP Structure

This FCEMP is structured as follows:

Section 2 – The Site and Surrounding Context, Proposed Development and Key Construction Considerations and Challenges.

Section 3 – Roles, Responsibilities and Communications.

Section 4 – Construction Programme and Methodology.

Section 5 – Framework CEMP Strategies.

Section 6 – Implementation. Monitoring and Updating

2 The Site and Surrounding Context

2.1 The Development Site

The Project Dragon site represents under-utilised previously developed industrial land with excellent access to industrial skills, products, and resources to support the development. The site is included in ABP's Future Ports Program. The program aims to create a new low-carbon manufacturing cluster and will act as a catalyst for surrounding development in delivering the Celtic Freeport, which also covers the Project Dragon site.

Extensive pre-application consultation and collaboration with NPT (and other key stakeholders) has positively influenced the scale and detailed design of the proposed development at the site. Feedback from a variety of stakeholders and the local public has been positive. The positive response reflects the opportunity the development provides for Port Talbot to be at the forefront of the drive to achieving Wales Net Zero targets.

The planning application is for the terrestrial development aspects of the project. A separate marine license will be sought for the required jetty/wharf facilities, which ABP and LanzaTech will construct and operate at the site. A separate environmental and greenhouse gas permit, 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. The associated consents and approvals will be in place prior to commencement of development and this FCEMP does not seek to duplicate the controls that would be put in place in these consents.

This FCEMP is for the terrestrial elements of the Project Dragon project as a whole, encompassing the demolition and construction phase of this part of the proposed development. A separate FCEMP (and subsequent DCEMP) (or equivalent as required by NRW) will be produced by LanzaTech and the Principal Contractor(s) for the marine element of the development, when appropriate.

2.2 Site Details

The site comprises the following (as shown in Figure 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 7.44ha in total (referred to as 'Temporary Construction Areas' (TCA)).
- An extent of the Phoenix Way running adjacent to the northern boundary of the PDZ (referred to as 'Unnamed Port Road Supporting Infrastructure').

Area 1 - refer to drawing 0211

Area 2 - refer to drawing 0212

Area 3 - refer to drawing 0213

Area 4 - refer to drawing 0214

PORT TALBOT DOCKS

HAWSON CONCRETE

INDUSTRIAL AREA

ADMIN AREA

TANKER LOADING AREA

TEMPORARY CONSTRUCTION AREA

LEGEND

- Application Boundary
- PDZ (Production Development Zone) Industrial Area
- PDZ (Production Development Zone) Admin Area
- PDZ (Production Development Zone) Tanker Loading Area
- Temporary Construction Area
- Existing buildings to be demolished

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

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 northeast of the PDZ within Flood Zone 3 (greater than 0.5% chance of flooding in a given year).

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supporting infrastructure are located within Flood Zone B.

2.3 Temporary Construction Areas

LanzaTech has identified sufficient land in proximity to the PDZ for use as temporary construction laydown areas: TCA1 (North), TCA East and TCA West.

The extent, nature and use of the proposed TCAs within the land identified in the planning application will be determined once the final detailed engineering design has been completed. The FCEMP will be developed into a DCEMP by LanzaTech and the appointed Principal Contractor(s). The DCEMP will present a final, comprehensive CEMP and associated construction compound plans.

2.4 The Proposed Development

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.”

A full breakdown of all buildings, structures, equipment, and associated facilities (Equipment List) for which planning permission is outlined in the Planning Statement supporting the planning application. The nature of the development is driven by the chemical engineering, safety and operational process required by LanzaTech.

3 Roles, Responsibilities and Communications

3.1 The Client

Overall responsibility for the DCEMP and ensuring legislative compliance lies with LanzaTech UK Limited. LanzaTech will ensure that all contractors engaged in the project have an obligation to comply with good environmental practice. The methods to ensuring compliance will be set out in the DCEMP.

3.2 The Principal Contractor(s)

The Principal Contractor(s) will be charged with responsibility for management, co-ordination, and implementation of the DCEMP.

It will be the responsibility of the Principal Contractor(s) to ensure that all staff, sub-contractors, and site workers are aware of the DCEMP. All site visitors will need to understand the aims of the DCEMP. All visitors must recognise their personal responsibility in its implementation, protection of the environment and legislative compliance.

The Principal Contractor(s) will have responsibility for ensuring that the DCEMP and associated documentation are kept up to date. Documentation, recording and monitoring of the DCEMP will be essential. This will be recorded and verified at the end of the project.

It is the Principal Contractor(s)'s responsibility to ensure that demolition and construction works are undertaken in compliance with all relevant and current legislation applicable at the time of the works. It should employ any relevant Construction Skills Certification Scheme (CSCS) standards during demolition and construction on the Site.

The Principal Contractor(s) will also co-ordinate environmental activities during demolition and construction, including:

- Ensuring appropriate environmental training and advice is provided to contractors.
- Monitoring demolition and construction activities and compliance.
- Acting as point of contact between contractors and other stakeholders.

3.3 Sub-contractors

All sub-contractor contracts on Project Dragon will include an obligation to comply with the requirements of the FCEMP and subsequent DCEMP. All personnel on site will be inducted in accordance with the requirements of the FCEMP and DCEMP and be made aware of all requirements prior to commencing any work on site.

3.4 LanzaTech Project Manager

The Project Manager will act as a central point of contact between LanzaTech UK Limited and the

Principal Contractor(s), the local community and other third parties. It is anticipated that a project manager will be confirmed once the Principal Contractor(s) has been appointed.

3.5 LanzaTech Community Liaison Officer

A Community Liaison Officer will be assigned to act as a single point of contact for the public. The officer will provide general information on the demolition and construction of the development. It will be the officer's responsibility to respond to any queries or complaints that may come forward. The Community Liaison Officer will work closely with the Project Manager to ensure accurate and up-to-date information is available on all planned work, issues, or incidents.

The Community Liaison Officer will be responsible for establishing a series of client approved communication protocols. These protocols will ensure that relevant stakeholders are kept informed of demolition and construction progress and any issues arising. They will establish lines of communication should any stakeholders wish to raise issues regarding the demolition and construction works.

The communication protocols will also establish appropriate relations between contractors, the client, and any adjacent construction works. This is particularly important for any adjacent developments as part of the implementation of the Celtic Freeport proposals and/or ABP's Future Port Talbot program. The communication protocols will be important with occupants of closest properties to the demolition and construction sites.

Appropriate liaison and handover must take place where there are changes to demolition and construction personnel between infrastructure delivery and demolition and construction stages.

3.6 Training

Environmental training will be an essential element in the implementation of the DCEMP. It is necessary to ensure compliance with environmental legislation. The Principal Contractor(s) will prepare a short briefing note on the DCEMP, which will be provided to visitors to the site. A copy of the DCEMP will be available in the main site office reception.

No demolition and construction personnel, including office staff will be permitted to work on the site until they have attended the site induction course. The course will include a briefing on the DCEMP. It will summarise the agreed means of minimising environmental effects, all waste management procedures and emergency responses. The induction will include targeted toolbox talks on vital topics.

3.7 Project Communications, Local Community and Third-Party Liaison

The residential population local to the site will be made aware of the activities on site. The Community Liaison Officer will act as a central point of contact between LanzaTech, the Principal Contractor(s), the local community and other third parties. The officer will ensure that residents are advised of:

- The nature of the proposed works.

- The proposed hours of work and their expected duration.
- Updates during the demolition and construction phases of the project.
- Any local resident meetings to discuss the project, if required.
- Investigating and responding to any complaints, comments and/or emergencies.

The information will be made available through relevant communication channels such as letter drops, notices on site hoardings, website communications, electronic and community (hard copy) newsletters, adverts in the local press etc. All communication will include contact details for the Project Manager and a 24-hour contact telephone number. A logbook system will provide a place for the public, visitors and neighbours to make comments on the site and the proposed development.

3.8 LanzaTech Bio-security Officer

LanzaTech and/or the Principal Contractor(s) will appoint a Bio-Security Officer throughout the demolition and construction phase of the development. The officer will be responsible for the implementation and management of a comprehensive bio-security plan for the whole site.

3.9 Climate Change

The DCEMP will set out provision of shaded refuges and drinking water supplies to avoid health and safety risks associated with high summer temperatures. The DCEMP will set out plant design and sourcing and materials selection to reduce greenhouse gas emissions.

3.10 Regulatory Permits, Licenses and Consents

All regulatory permits, licenses and consents will be obtained from NRW and the applicable regulatory regimes.

3.11 Considerate Constructors Scheme

LanzaTech will promote membership of the Considerate Constructors Scheme (CCS). Registration of this membership will be the responsibility of the Principal Contractor(s). This will foster communication and good relations using the above structure(s). All appointed contractors will follow a voluntary code of professional conduct, demonstrating minimum standards for demolition and construction practices, including:

- **Considerate** - consideration for residents, workers, pedestrians, visitors, neighbouring occupiers, businesses, and highway users at times and in a manner that will reduce disturbance.
- **Quiet** - noise from works, machinery, workers, radios, music, vehicles, and all other sources is to be kept to a minimum. There are to be no works that are audible at the nearest residential boundary outside permitted hours of work unless

prior agreement has been reached with the Council.

- **Clean** - footways, carriageways, public areas adjacent to the site, as well as all visible aspects of site activities such as hoardings, scaffolding, and warning lights, are to be kept clean and in good order. Dust and smoke are to be kept to a minimum. Mud and spillage are to be cleaned off pavements, roads, and public areas immediately.
- **Responsible** - the contractor is to check that all employees, agents, sub-contractors, suppliers, drivers and others working on or near the project or activity maintain all aspects of the Code of Good Practice.
- **Tidy** - pride in the condition and appearance of the project or activity, adjacent highways and public areas is to be shown in every way, including the tidiness of temporary structures, materials, machinery and the constant removal of litter and rubbish.
- **Safe** - projects, activities and vehicle movements are to be carried out with utmost care for the safety of passers-by, adjacent neighbours and for workers. All plant and machinery items are to be maintained in a safe working order and the safety of structures is to be checked frequently.
- **Accountable** – a contact board is to be clearly displayed by the project or activity giving names and telephone numbers of staff who can be contacted promptly and take immediate action in response to issues raised by residents, businesses and others.

The DCEMP will utilise these overarching principles to ensure clear roles and responsibilities in accountably implementing the delivery of the project. Proactive communication with the local community and key stakeholders will continue throughout the project.

4 Construction Programme and Methodology

Overall responsibility for the DCEMP and ensuring legislative compliance lies with LanzaTech UK Limited and the appointed Principal Contractor(s). Any legal and guidance references cited in the FCEMP and subsequent DCEMP will be reviewed regularly by LanzaTech UK Limited during the demolition and construction phase of the project.

4.1 Key Construction Considerations and Challenges

It is noted that the key construction and challenges on the site include:

- **Brownfield industrial land** – ground conditions, geo-environmental and geotechnical considerations are important during the demolition and construction phase.
- **Drainage and flood risk** – the site is near the dock and sea, and fluvial water. It has a high-water table. Drainage matters will be a key demolition and construction consideration.
- **Ecology and biodiversity** – bio-security measures in response to the presence of Japanese Knotweed, impacts on habitats and protected species and associated mitigation are fundamental elements of this FCEMP.
- **Nearby land uses** – alignment with existing (and planned future) users of the dock and surrounding land uses will be an important consideration during the demolition and construction phase of the development.
- **Construction access and transportation** – impacts of vehicular and pedestrian access by road and sea will be an important consideration during the demolition and construction phase of the development.
- **Heritage and Archaeology** – a watching brief and/or trial trenching is proposed to mitigate a potential minor adverse impact on buried archaeological remains during the demolition and construction phase of the project.
- **Landscape and Visual Impact** – the demolition and clearance of all vegetation on site will have a significant adverse impact during the demolition and construction phase of the development.
- **Site set up and construction layout** – the development site includes three separate construction laydown areas: TCA1, TCA West and TCA East. The configuration of the construction compound, amenity and welfare areas will need to be carefully considered and managed during the demolition and construction phases of the development.
- **Waste** – the demolition and construction phases of the development will result in

a range of waste arisings. LanzaTech will ensure the management of waste in accordance with the Waste Hierarchy and all current legislation.

- **Health and Safety** – LanzaTech will be responsible for the management of strict health and safety procedures and practices on site, in accordance with current legislation and guidance.
- **Residential amenity** – the planning application and accompanying ES include a detailed assessment of all likely effects on nearest residential receptors. The FCEMP considers the working practices and procedures required to mitigate any potential adverse effects on these receptors during the demolition and construction phase of the development.
- **Noise** – linked closely to the above, all noise effects and associated mitigation are identified in the planning application and are accounted for in this FCEMP.
- **Air quality** – air quality including fugitive dust is an important consideration in the heavy industrial context of Port Talbot. LanzaTech is cognisant of this context and the likely effects of the proposed development. It will work closely with the contractor(s) implementing the demolition and construction elements of the development to ensure required mitigation, where possible.

The subsequent sections of this FCEMP will address each of these key considerations and the resulting means of managing likely effects in turn. Each matter and subsequent section will be fully developed in the DCEMP, when appropriate.

4.2 Construction Management

The DCEMP will set out general construction management practices to be implemented, to include:

- Implementation of appropriate site-specific safety procedures, including hoarding, and temporary secure access gates at the PDZ and/or Temporary Construction Areas
- The provision of construction staff at key interfaces, if appropriate.
- Necessary site security measures (such as security lighting, CCTV and on-site personnel) in order to reduce potential crime. The site security arrangements during construction will be in line with the requirements set out in the Construction (Design and Management) Regulations 2015.
- Good construction site housekeeping.
- Key construction hours and protocols/working method practices for extended works where necessary.
- Provision of toolbox talks.
- Preparation of specific method statements.
- A stakeholder communications plan to be adopted during construction works and procedures for logging and responding to all environmental-related issues and complaints (e.g., in respect to dust, air quality, vibration, noise and

- lighting) where relevant or arise.
- Sequencing of drainage features.
- Use of best practice guidance such as the Pollution Prevention Guidelines (Environment Agency) and Control of Water Pollution from Construction Sites (CIRIA), and incorporate on-going monitoring by the environmental clerk of works.

The approach to risk and compliance will follow up to date best practice methodology and will be provided within the detailed DCEMP.

Prior to commencement of works, LanzaTech will serve appropriate notices and inform occupiers of properties that may be affected by the works of any noise, dust, vibration and smoke that may occur as a result of the demolition and construction works.

Contact details of the appropriate persons will be provided alongside notices to ensure any complaints or emergencies are dealt with promptly and professionally.

Demolition and construction activities undertaken on-site will be subject to more detailed environmental risk assessment by the Principal Contractor(s), as appropriate, and will:

- Identify potential environmental impacts that can be anticipated.
- Assess the risks from these impacts.
- Identify the control measures to be taken and re-calculate the risk based on those set out in this DCEMP.

The Principal Contractor(s) will report to LanzaTech where an unacceptable level of residual risk is identified so that action can be taken through design changes, re-scheduling of work or alternative methods of working to reduce the risk to an acceptable level.

The results of risk assessments, and their residual risks, will only be considered acceptable if:

- The severity of outcome is reduced to the lowest practical level.
- The number of risk exposures is reduced.
- All reasonably practical mitigating measures have been taken and the residual risk rating is reduced.

The findings of the risk assessment and, in particular, the necessary controls would be explained to all contractors before the commencement of the relevant works using an agreed instruction format (e.g., toolbox talks).to a minimum.

Any risk assessment conducted should conclude that the environmental risks are not outside the scope already established within the ES.

4.3 Environmental Standards

Site Environmental Standards will be agreed with the Principal Contractor(s) and would detail the minimum measures that should be achieved for general operations falling outside the risk assessment in line with the measures set out in this DCEMP.

These will cover matters such as storage of materials, management of waste, noise and vibration, and water pollution control. The standards should be used as a briefing tool on Site. These standards will also form the basis of 'toolbox talks' which will inform all contractors working on Site of the potential environmental risks arising from demolition and construction activities.

4.4 Consents and Licenses

The Principal Contractor(s) will be responsible for any consents, permissions, or licences necessary for the demolition and construction works that are not already in place by the Applicants. For example, land drainage consent and waste licenses.

A register of consents etc. must be kept, to include all applied for and secured, details of expiry dates, conditions and commitments that must be adhered to and all related correspondence. The Principal Contractor(s) should make sure that this is kept up to date.

4.5 Key Legislation, Guidance, Industry Standards and Codes of Practice

This FCEMP and the subsequent DCEMP will take into account key legislation, guidance and industry standards and codes of practice where applicable including, *inter alia*, the following:

- Health and Safety at Work Act 1974.
- The Construction (Design and Management) Regulations 2015.
- Control of Pollution Act 1974.
- Control of Asbestos Regulations 2012.
- Confined Space Regulations 1997.
- Environmental Protection Act 1990.
- Environmental Protection (Duty of Care) Regulations 1991.
- Hazardous Waste (England and Wales) Regulations 2005.
- CIRIA 733 Asbestos in Soil and Made Ground.
- CIRIA C741 Environmental Good Practice on Site Guide.
- CIRIA C624 Development and Flood Risk.
- CIRIA C670 Site Health Handbook.
- CIRIA C532 Control of Water Pollution from Construction Sites.
- Guidance for Pollution Prevention (GPPs).
- CL: AIRE Development Industry Code of Practice.
- Fire Prevention on Construction Sites: Joint Code of Practice.
- BS 6031:2009 Code of Practice for Earthworks.
- BS 42020: 2013 Biodiversity. Code of practice for planning and development.
- BS 5228 1:2009 + A1:2014 Code of practice for noise and vibration control on construction and open sites Part 1 - Noise and Part 2 – Vibration.
- BS 12464-2:2014 – Lighting of Work Places – Part 2: Outdoor Work Places.

- CIE Technical Report Document 129.
- Institution of Lighting Professionals (ILP) Guidance Notes for Reduction of Obtrusive Light.
- Bat Conservation Trust and ILP Bats and Artificial Lighting in the UK Guidance Note 08/18 – Bats and the Built Environment Series.
- IAQM Guidance on the Assessment of Dust from Demolition and Construction.

It is the Principal Contractor(s)'s responsibility to check that demolition and construction works are undertaken in compliance with all relevant and current legislation applicable at the time of the works.

It is expected that through site induction and toolbox meetings, staff will gain an awareness of the information contained within these documents.

Provision, communication and update of the list of environmental legislation during demolition and construction will be the responsibility of the Principal Contractor(s).

4.6 Emergency Planning and Incident Control

The Principal Contractor(s) will develop and implement an incident control procedure for the project. The aim of this incident control procedure is to prevent the release of pollutants (for example oil and fuels) into the environment and to protect health and safety of those on-site. Emergency procedures are also to be prepared by the Principal Contractor(s).

4.7 Environmental Pollution Incident Recognition

The Principal Contractor(s) will undertake health, safety and environmental induction training courses to highlight the key potential environmental pollution issues to all relevant project personnel. Briefing topics will include:

- Uncontrolled discharge/spillage of polluting substances such as chemicals, oil, concrete etc. into controlled waters or sewers.
- Uncontrolled discharge of contaminated surface water run-off such as oil, chemical, suspended solids contamination into controlled waters.
- Release of smoke (e.g. from fire) into the atmosphere.
- General ecological, archaeological and environmental awareness.
- Spillage of solid waste into sensitive areas and risks of windblown litter and debris.
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4.8 Emergency Planning, Control and Reporting

The Principal Contractor(s) will set up and manage systems, procedures and equipment for emergency planning which will include the following:

- Provision of adequate spillage containment materials to stop and contain pollution at source, for example the use of available earth where stockpiles are strategically placed in environmentally vulnerable areas.

- Provision of a site drainage plan identifying and colour coding surface water drainage separate to foul sewer drainage. This will assist in the siting of storage containment areas and associated protection measures.
- Emergency bunding /control packs to be available at key locations in the event of a pollution incident.
- Reporting incident immediately to Site management team and raising the alarm with the emergency pollution control response team (including the emergency services, where appropriate).
- Liaison with the appropriate representatives from Natural Resources Wales (NRW) and essential local emergency services.
- Safe disposal of pollution waste, as required.

All environmental incidents shall be recorded by the Principal Contractor(s) and reported to LanzaTech as soon as practicable and if appropriate reported to the EA or other relevant stakeholders. The Principal Contractor(s) will complete an environmental incident report as part of the procedure.

4.9 Site Logistics Control and Site Planning

Schedules and plans to be prepared by the Principal Contractor(s) will show an overview of the logistics plan for demolition and construction and will be included in the Detailed DCEMP. This will include a detailed Construction Logistics Plan (CLP).

The DCEMP will include the following through the CLP:

- Programme and phasing details of proposed construction works.
- A plan of site preparation and construction works, highlighting the various stages and their context within the project, including a full schedule of materials, manpower resources, and plant and equipment schedules.
- Detailed layout arrangements, plans for storage, accommodation, vehicular movements, delivery and access.
- Prohibition or restricted operations.
- Details of plant used.
- Identification of roles and responsibilities of key staff in relation to environmental management.
- Details of operations that are likely to result in disturbance, with an indication of the expected duration of each phase with key dates.
- Measures to manage the risk to surrounding properties and the local watercourse from surface water run-off that is generated during construction.

4.10 Construction Layout

The development will be constructed in an active port. Alignment with existing users of the port dock and surrounding land uses will be an important consideration during the demolition and construction phase of the development. This consideration will include any future development

plans for the regeneration of Port Talbot Dock emerging as part of the Celtic Freeport aspirations, and ABP's Future Port Talbot Vision programme.

Project Dragon includes separate TCA's, which 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.
- Satellite compounds, if required.
- Site layout (e.g., principal access/egress points, routing plans, site security).
- Site offices and welfare facilities.
- Site access routes (demolition and construction traffic management).
- Delivery areas.
- Storage and lay-down.

The PDZ will also be an important location during the demolition and construction process.

4.11 Construction Period and Working Hours

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

Core 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 DCEMP (once developed), outcomes of associated technical reports and any relevant conditions agreed with NPTC through the planning application determination process.

NPTC will be notified in advance of any intention to operate outside of the core working hours during the demolition and construction phase.

4.12 Welfare Facilities

In accordance with the *Construction (Design and Management) Regulations 2015*, and HSE guidance, welfare facilities will be provided on site. These will include canteens, toilets and washrooms with hot water; drying/changing rooms; and a first aid post, as appropriate. Full details of the welfare facilities on site will be provided in the CLP and DCEMP prepared by the Principal Contractor, when appropriate.

4.13 Site Security

The Principal Contractor(s) will provide boundary fencing/delineation, including hoarding and suitable signage and any associated security in general accordance with the *Construction (Design and Management) Regulations 2015*.

4.14 General Types of Plant and Equipment

All key static plant and equipment (e.g. hoists, power distribution units, diesel storage tanks etc.) will be clearly identified on CLP.

The Principal Contractor(s) will be required to complete a '*Register of Plant & Equipment and Statutory Certification*' within their Health & Safety Plan prior to works commencing on site.

The register allows an inventory of on-site plant and equipment to be kept. It will ensure plant and equipment is maintained in accordance with statutory test/examination/inspection requirements, and that specific operator training requirements are addressed.

This list will also assist by providing a useful cross-reference for noise level predictions and assessments of plant and machinery in respect to ensuring that excessive noise levels are identified, and suitable control measures implemented to reduce those noise levels.

4.15 Monitoring and Complaints

The requirements for a programme for monitoring and reviewing complaints will be reviewed by the Principal Contractor(s).

4.16 Auditing and Reviews

Checks will be undertaken on the effectiveness of the DCEMP. Should deficiencies be identified, the DCEMP will be updated to enable the document to continue to fulfil its objectives. This will include a review of current legislation, standards, plant, processes, etc. Revised copies of the DCEMP will be provided in the Site office.

In addition, consideration will be given to regular environmental audits of the demolition and construction works to enable compliance with the DCEMP. The scope of the audits could include:

- Waste management & duty of care.
- Noise & vibration.
- Dust.
- Demolition and construction traffic.
- Fuel storage.
- Pollution.
- Community liaison.
- Biodiversity and ecology.

All audits undertaken should be documented in an Audit Report. Where non-conformances with the DCEMP are identified, these will be recorded on a Non-Conformance Report, this should include:

- Details of who and what is being audited.
- Details of the non-conformance.
- Corrective action required.
- Review of corrective action dated and signed.

The report allows subsequent audits to monitor the performance of the corrective action and then sign off the corrective action request once it has been successfully implemented. All completed non-conformance reports will be held on site in a designated file.

5 Framework CEMP Strategies

5.1 Waste and Materials Management

The proposal will generate waste material from demolition and construction which will require appropriate handling, storage, treatment, transportation, and disposal. Stopford has produced a Waste Management Plan (October 2023) (WMP) for LanzaTech UK Limited. The WMP shall be considered to form part of LanzaTech's Environmental Management Systems and FCEMP. An updated version will be produced alongside the DCEMP, when appropriate.

Waste Types

The primary waste types and estimated volumes from the construction phase of the development are:

- Soil material – 1,406 cubic metres.
- Concrete material – 868 cubic metres.
- Steel – 43 cubic metres.
- Cables – 1 cubic metres.
- Mixed wastes – 36 cubic metres.
- Packing wastes – 344 cubic metres.
- Domestic (mixed) wastes – 191 cubic metres.
- Contaminated water (hazardous) – 11,304 cubic metres.
- Chemicals (hazardous) – 385 cubic metres.

The most significant generation of waste from the site will be from remediation and site levelling activities.

Potential impacts associated with waste arising from the demolition and construction period of the Proposed Development have been assessed:

- Transport (i.e., vehicle movements associated with collection / transfer of waste).
- Dust (and odour) (arising from excavation activities, storage of stockpiles and waste).
- Noise (arising from demolition and construction activities, handling of waste).

Specific mitigation measures associated with these are included within the individual topic chapters within this Framework DCEMP.

Mitigation Measures

The hierarchy of waste management will be adopted, in accordance with national policy requirements. The waste management methods in order of preference for this project are as follows:

- **Waste Prevention** – through good design and procurement mechanisms.

- **Preparation for Reuse** – to provide design features to the Proposed Development to use materials in their current state and form, this can occur either on or off site.
- **Material Recovery** – by using waste materials found on site and recycling / recovering them into an alternative form that can be used for construction purposes.
- **Other Recovery** – Energy recovery from biodegradable or combustible materials; and
- **Disposal** – The least preferred option where the waste stream would be subject to a final disposal route, such as landfill.

The DCEMP will include a Site Waste Management Plan (SWMP) which will set out, as a minimum:

- Adherence to waste provisions of the Environmental Protection Act 1990 and the Environmental Protection (Duty of Care) Regulations 1991, setting out the principles and legal requirements relating to waste (including hazardous waste).
- A site-specific Screening Verification Criteria for the classification of soils for re-use or disposal will be derived by LanzaTech following guidance such as Definition of Waste: Code of Practice by CLAIRE.
- All waste to be removed from the site will be by licensed waste carriers and taken to licensed waste facilities. The selection will be informed by an audit of licensed waste facilities conducted by LanzaTech.
- Outline details of material and waste storage / handling on-site and procedures for the removal of waste off-site in line with appropriate licensed handling procedures, especially with respect to hazardous waste.
- Identify targets for the reduction of construction waste (where possible) and monitoring procedure for targets throughout the construction stage.
- Outline further best practice measures to be adopted to achieve identified targets, taking account of the waste hierarchy of reduce, reuse, recycle, recovery and disposal.
- Spoil arisings during demolition and construction will be temporarily stockpiled within the site boundary before either beneficial re-use on site for use in development platform construction or being taken off-site by HGV for treatment and/or disposal at a local permitted facility or for reuse in other development sites in the area.
- Soil will be stockpiled in areas of low risk of flooding within the site boundary. The size of stockpiles will be kept to a minimum by the re-use of site arisings, where possible.
- Any suspected contaminated material will be placed on an impermeable membrane to prevent the leaching of any contaminants into the subsurface or watercourse.
- Suitable measures will be put in place to prevent sediment being washed into watercourses, and the stockpiles will be kept low and visually monitored for wash away during/after periods of prolonged rainfall.
- The Principal Contractor(s) Health, Safety and Environment development will control and supervise construction waste, including records.

- Soil will be sampled as per guidance and any contaminated spoil identified will be managed in accordance with the following:
 - Defra 2009 Construction Code of Practice for the Sustainable Use of Soil on Development Sites; and
 - Definition of Waste: Development Industry Code of Practice. The Principal Contractor(s) Health, Safety and Environment development will control and supervise construction waste, including records.

The Principal Contractor(s) will be responsible for the implementation and management of the SWMP. It will be responsible for waste streams on-site, prior to them being taken to a licensed waste facility for recycling or disposal.

LanzaTech is committed to onsite reprocessing of suitable material where possible to minimise non-suitable material being removed from site. This commitment to reuse on site where possible will reduce the costs of transportation and procurement of virgin materials. When combined with considerate design practice, this will help to minimise demolition and construction waste in line with the waste hierarchy.

The procurement and delivery of materials will be managed by a Principal Contractor(s), as necessary, to support material usage optimisation and minimisation of waste quantities.

Following completion of a demolition audit, the detailed DCEMPs will outline the estimated tonnage and composition of waste expected during this phase. Any demolition material should be managed on the basis of 'reuse, recycle, recover'.

Should the remediation work result in any contamination at the site, the material will need to be managed responsibly and this will be addressed in the Proposed Development Remediation Strategy.

Hazardous Waste

It is anticipated that hazardous waste material will be encountered during construction the construction works. A specific Hazardous Waste Management Plan (HMWP) will be developed by the Principal Contractor(s) to ensure this is minimised wherever possible and to ensure it is dealt with in accordance with relevant policy and guidance.

An Asbestos Risk Register and Control of Substances Hazardous to Health (COSHH) report will also be prepared if asbestos is considered a risk.

Materials Management Plan

Earthworks will be required for the development to allow for the provision of foundations, sub-base for roads and amenities. A Materials Management Plan (MMP) will be used to manage the balance of cut and fill on-site in accordance with the CLAIRE definition of waste. Excess arisings from the earthwork phase may include soil (top and sub soils), clays, limited volumes of sands and gravels, and foundation debris. CIRIA guides offer best practice guidance for the storage and reuse of materials arising from earthworks.

Monitoring and Reviewing

Waste arisings will be monitored and reviewed by LanzaTech through the SWMP. The volume/tonnage of waste generated (or sent off site) as well as the percentage or volume/tonnage reused, recycled or disposed will be recorded throughout the construction phase.

LanzaTech and the Principal Contractor(s) are responsible for ensuring that each SWMP produced is reviewed and updated accordingly at regular intervals, and as necessary throughout the construction phase. The Principal Contractor(s) will provide a monthly report to LanzaTech (as applicable) on the progress of the Waste Management Strategy.

5.2 Construction Traffic and Highways Considerations

Traffic (road and sea) will be generated during the demolition and construction of the Proposed Development. This will include vehicles bringing plant and materials to the site, removing waste, and demolition and construction personnel movements.

The Project Dragon planning application includes a detailed Transport Assessment (SCP, October 2023) (TA). It specifies likely effects and means of mitigating any minor adverse effects on the movement of traffic in the dock and on the nearby public highway system. Both will need to be carefully managed during the demolition and construction phase of development.

Likely Effects

Table 1– Construction Workers Temporal Distribution (Arrivals / Departures)

Staff Arrival and Departure Times	Arrive		Depart	
	06:00-07:00	75%	17:00-18:00	75%
	07:00-08:00	20%	18:00-19:00	20%
	08:00-09:00	5%	19:00-20:00	5%

Table 2 – Total Construction Trip Generation Estimates

Total (PCU)	AM Arrivals	AM Departures	PM Arrivals	PM Departures
	205	52	24	177

The construction phase will represent the worst-case traffic impact of the scheme on the local highway network. The impacts are of a temporary nature, during the construction period only.

Mitigation Measures

The CLP and separate Travel Plan (TP) will be prepared by the Principal Contractor(s) and included in the DCEMP. Building on the above trip generation analysis and this FCEMP, these will assess the likely significant effects of the demolition and construction phase of the

development on the transport network based on detailed numbers. They will define the appropriate hours of operation and routes to be used by HDVs and other large demolition and construction vehicles.

Subject to this analysis, relevant mitigation measures for the demolition and construction stage to be included in the CLP and TP include:

- Site hoarding will be erected around the perimeter of the site to contain all works. The hoarding will provide three separate and suitable pedestrian and vehicle entrances. Construction traffic will be instructed to use the appropriate construction access to minimise the impact on the highway network. All sea traffic will use a construction wharf on Port Talbot Dock.
- Spoil and material arising from each phase will be stored on-site and reused on-site where possible. Any spoil and material that cannot be reused on-site will be removed from site using tipper lorries.
- Off-site pre-construction / pre-fabrication will be utilised where possible.
- Operational production plant will be delivered via barge.
- There will be no reliance on the public highway for storage of materials or plant. Materials and plant will be off-loaded either manually or via crane/Hi-Ab directly within the site hoarding. Specific locations will be detailed in the CLP.
- Pedestrian activity will be managed to ensure that there is no conflict between construction activity and pedestrian movements.
- Drivers will be instructed of the vehicle route and made aware of the potential risks to pedestrians and cyclists associated with construction movements. Routing information will be supplied to all contractors/suppliers. HGVs will be required to route via the M4 Junction 38, and therefore avoid Port Talbot and junctions with identified capacity issues, as detailed later, through the implementation of a Construction Traffic Management and Routing Plan. The permitted routes to the M4 will be communicated to all construction contractors, displayed on-site and route plans passed to all drivers at site inductions. Drivers will be informed that they will face disciplinary action if caught contravening.
- Records of correspondence with suppliers relating to the agreed routes will be maintained, so that in the event of non-compliance in this matter, suppliers could be held accountable.
- Construction vehicle routing will be kept under review should there be any deliveries with significant vertical demands to ensure there are no height restrictions.

- Construction vehicles are fitted with alarm systems and protection devices for cyclists.
- Suitably trained banksmen would be employed who would manage any potential conflicts with construction vehicles and pedestrians when vehicles entering/exiting the site.
- Construction works will be incentivised to travel via minibus instead of personal vehicles. Car sharing will also be encouraged.
- Adaptation of working time to avoid peak hours, if necessary.
- Appropriate signage of the routes to ensure vehicles use the approved routes to and from the site.
- Installation of temporary signage, where appropriate, in the vicinity of the accesses for highway users.
- Management of construction parking and implementation of protocols for construction staff.
- Ensuring all construction related vehicles are well maintained.
- Temporary traffic management for short periods when delivery of abnormal / oversized loads may cause obstruction to the public highway.
- Use of wheel washing facilities.
- Design of the temporary accesses to ensure that vehicles have appropriate visibility.
- HGV speed limits to be applied on Unnamed Port Road and any additional access routes created on-site.
- Routes and road surfaces will be regularly maintained.
- Layout of construction working areas to allow adequate space for vehicles to unload / maneuver on-site.
- Construction traffic will be controlled by means of a vehicle arrival and departure management plan to achieve an even spread of vehicle movements during the working day.
- Off-site pre-construction/pre-fabrication will be utilised where possible.

- Process equipment modules will be delivered via barge.
- Travel via minibus instead of personal vehicles will be incentivised and car sharing will be encouraged.
- Adaptation of working time to avoid peak hours, if necessary.

Air Quality

The principal source of potential air quality impacts associated with demolition and construction of the Proposed Development relates to dust and elevated levels of Particulate Matter (PM).

The demolition and construction works will be carried out in such a way that emissions of air-borne pollutants, including dust, are reduced and managed by best practicable means. This will reduce nuisance, or health effects to nearby residents and the local community, and that air quality objectives are not exceeded.

The principle potential impact, during demolition and construction, in relation to air quality is in relation to the production and management of dust. The following activities have the potential to cause emissions of dust during demolition and construction of the Proposed Development:

- The demolition of existing buildings and structures.
- Ground remediation and earthworks including excavating, digging foundations, levelling areas of the Site and landscaping.
- Materials handling such as storage of material in stockpiles and spillage.
- Site preparation including delivery of construction material, erection of fences and barriers.
- Movement of demolition and construction traffic including haulage, vehicles and plant movements.
- Construction and fabrication of buildings, access roads and associated infrastructure; and
- Disposal of waste materials off-site.

Mitigation

LanzaTech and the Principal Contractor will be responsible for the following mitigation measures and the management of them through the DCEMP:

- **Communication**
 - Display the name and contact details of persons accountable on the Site boundary.
 - Display the head or regional office information on the Site boundary.

- **Management**

- Record all dust and air quality complaints, identify causes and take measures to reduce emissions.
- Record exceptional incidents and action taken to resolve the situation.
- Carry out regular site inspections to monitor compliance with the dust management plan and record results.
- Increase site inspection frequency during prolonged dry or windy conditions and when activities with high dust potential are being undertaken.
- Agree dust monitoring regime during 'high risk' activities with the local authority.
- Plan site layout so that machinery and dust causing activities are located away from receptors, as far as possible.
- Erect solid screens or barriers around dusty activities or the site boundary at least as high as any stockpile on site.
- Fully enclose Site or specific operations where there is a high potential for dust production and the Site is active for an extensive period.
- Avoid site run off of water or mud.
- Keep site fencing, barriers and scaffolding clean using wet methods.
- Remove potentially dusty materials from Site as soon as possible.
- Cover, seed or fence stockpiles to prevent wind whipping.
- Ensure all vehicles switch off engines when stationary.
- Avoid the use of diesel or petrol powered generators where possible.
- Manage the delivery of goods and materials through the CLP.
- Only use cutting, grinding and sawing equipment with dust suppression equipment.
- Ensure an adequate supply of water on-site for dust suppressant.
- Use enclosed chutes and conveyors and covered skips.
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use water sprays on such equipment where appropriate.
- Ensure equipment is readily available on-site to clean up spillages of dry materials.
- No on-site bonfires and burning of waste materials on-site.

- **Demolition**

- Incorporate soft strip inside buildings before demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust).
- Ensure water suppression is used during demolition operation.
- Bag and remove any biological debris or damp down such material before demolition.

- **Earthworks**

- Re-vegetate earthworks and exposed areas /soil stockpiles to stabilise surfaces as soon as practicable.

- Only remove the cover in small areas during work and not all at once.
- **Construction**
 - Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless required for a particular process.
 - Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored silos with suitable emissions control systems.
- **Trackout**
 - Use water assisted dust sweepers on the Site access and local roads.
 - Avoid dry sweeping of large areas.
 - Ensure vehicles entering and leaving the site are covered to prevent escape of materials.
 - Record inspection of on-site haul routes and any subsequent action, repairing as soon as reasonably practicable.
 - Install hard surfaced haul routes which are regularly damped down.
 - Install a wheel wash with a hard-surfaced road to the Site exit where site layout permits.

Based on the above, the DCEMP will include dust and particulate matter management measures, including the inclusion of a Dust Management Plan (DMP) in line with IAQM Guidance on the Assessment of Dust from Demolition and Construction.

Noise

Demolition and construction noise could potentially increase the ambient noise levels at existing noise-sensitive receptors. Full details of the types of demolition and construction methods and plant are still to be determined but will be detailed in the DCEMP, with activities structured into the following stages:

- Site preparation, ground remediation and earth works.
- Demolition, foundations and substructure works.
- Piling will be required for the construction of the proposed commercial and industrial uses.
- Building erection and superstructure works.
- Road works.
- Landscaping works, internal building demolition and construction and fit-out.

Mitigation

The DCEMP will incorporate mitigation measures for construction noise that follow best practicable means (BPM) outlined in BS 5228-1:2009+A1:2014, including the following:

- All access roads should be kept clean and maintained in a good state of repair to avoid unwanted rattle and “body slap” from vehicles.
- Minimise drop heights of materials.
- Any reversing beepers fitted to vehicles should be minimised as far as is

reasonably practicable and subject to maintaining site safety.

- Alternatively, mute / switch off reversing beepers and using a banksman; low beeper volume settings (if possible set to site ambient noise levels).
- Maneuvering vehicles in a circular manner to avoid the use of reversing alarms;
- Site layout should locate the noisiest stationary plant as far as is practicable from residential receivers.
- The operatives of the site should be made aware of noise control requirements.
- Any proposed evening (after 1900 – 2300hrs) and weekend construction works (outside of 0700 – 1300hrs Sat) would need to be confirmed against limits set out in the ES.

Further mitigation to be include in the DCEMP include:

- Ensuring the use of quiet working methods, the most suitable plant and reasonable hours of working for noisy operations, where reasonably practicable.
- Locating noisy plant and equipment as far away from dwellings as reasonably possible, and where practical, carry out loading and unloading in these areas.
- Screening plant to reduce noise which cannot be reduced by increasing the distance between the source and the receiver (i.e. by installing noisy plant and equipment behind large site buildings).
- Shutting down any machines that work intermittently or throttling them back to a minimum.
- Orientating plant that is known to emit noise strongly in one direction so that the noise is directed away from houses, where possible.
- Closing acoustic covers to engines when they are in use or idling.
- Lowering materials slowly, whenever practicable, and not dropping them.
- Use of temporary acoustic barriers, where appropriate, and other noise containment measures, such as screens, sheeting and acoustic hoardings at the construction site boundary to minimise noise breakout and reduce noise levels at the potentially affected receptors.

5.3 Contamination and Ground Conditions

LanzaTech has undertaken a comprehensive suite of Phase 1 and intrusive Phase 2 Site Geoenvironmental and Geotechnical surveys and assessments at the site. This process includes a detailed Unexploded Ordinance Risk Assessment. The reports are submitted as part of the planning application. Collectively, the assessments inform a detailed understanding of the site conditions, contamination levels and ground water characteristics.

Likely Effects

The PDZ site features a large concrete slab surrounded by dense overgrown vegetation (including JKW), some of which has been cleared. It is underlain by superficial Tidal Flat Deposits characterized by soft silty clay with layers of sand, gravel and peat. The underlying bedrock geology is made up of grey coal bearing mudstones/siltstones with seatearths and minor sandstones. Part of the site includes landscape ground where extensive earth moving

has occurred.

The documentation identifies the following potential effects during the demolition and construction period:

- Human health – exposure to contaminants of potential concern (CoPC's), polycyclic aromatic hydrocarbons (PAH) compounds and asbestos within the shallow made ground via ingestion, inhalation and dermal contact.
- Human health – potential ingress and accumulation of bulk ground gas into ground structures.
- Hydrocarbon contamination – in the made ground.
- Controlled waters (secondary aquifers and docks) – potential vertical and horizontal migration of leachable contaminants within groundwater along preferential pathways.
- Standing groundwater that is tidal influenced at between 0.35-1.91mbgl and 0.99m and 4.85mbgl across the site area.

The temporary construction area at Margam Wharf (TCA1) is distinct from the PDZ (and TCA East and West). It is a disused plot of largely scrub land, with remnants of infrastructure associated with Margam Wharf (concrete slabs and access road) present across the site.

It is proposed to only clear TAC1 and cover the surface with a membrane before gravelling the area for use during the construction period. The documentation identifies the following potential effects during the construction:

- Human health – construction workers – exposure to contaminants associated with potential made ground/infilled ground and potentially contaminative historic industrial processes on and in proximity to site through ingestion, inhalation and dermal contact pathways.
- Controlled waters – leaching of potential contaminants from potential made ground/shallow soils and vertical and lateral migration through saturated zone to controlled waters.

Mitigation

Existing contamination and any occurrence of accidental contamination events will be managed through the DCEMP by:

- Define appropriate PPE; monitoring equipment, safe-entry procedures and use of Respiratory Protective Equipment (RPE) where required; provision of on-site washing facilities; and good house-keeping practices for all construction workers and contractors.
- Environmental awareness training for all on-site construction workers and contractors.
- Asbestos Management Plan, including procedures for identification, removal, handling, and disposal in line with appropriate guidance and regulations (i.e., The Hazardous Waste (England and Wales) Regulations 2005, Control of Asbestos Regulations 2012 and CIRIA C733).
- Requirements and detailed of settling basins (if appropriate or required).

- Details of preventative measures to avoid accidental spillages (such as bunded storage and general safe storage of materials, fuels and oils) and details of emergency spill kits and procedures.
- Details of proposed use of impermeable materials (temporary or permanent) to prevent ingress into the ground.
- Details of proposed earthworks and working method statements for the management of earthworks, including consideration of measures to reduce the risk of silt combining with run-off.
- All earthworks will be undertaken in accordance with relevant industry guidance including CIRIA Report C572: Treated ground engineering properties and performance, British Research Establishment document FB75: Building on Fill - Geotechnical Aspects and British Standard 6031:2009: Code of Practice for Earthworks, and Health and Safety Executive (HSE) standards for such facilities.
- Washing down/equipment cleaning associated with concrete or cementing processes and provision of facilities to remove sediment prior to disposal.
- Temporary drainage management strategy, including details for the management of sediment and contaminants (i.e., through the implementation of sediment traps, etc.).
- A material management plan (MMP) will be prepared and included as part of the CEMP. This will set out the necessary procedures for the handling, crushing, storing and re-use of any hard-core obtained from the removal of the existing hardstanding within the Site.

The measures required to mitigate potential impacts will be identified through additional ground investigation leading to design of appropriate foundations, structures, retaining structures and remedial works as appropriate. Furthermore, if required, measures such as ground improvement, use of geogrids or other risk-based solutions will be identified through this process to mitigate the risk of land instability and/or contamination.

LanzaTech will work with the Principal Contactor(s) to ensure the following mitigation measures are developed in the DCEMP and in accordance with current health and safety legislation, when appropriate:

- UXO – the site is at Moderate Risk from German UXB's. The DCEMP will include provision for:
 - A UXO Safety Awareness Briefing will be carried out prior to all intrusive works commencing.
 - A non-intrusive magnetometer survey will be undertaken across the site.
 - A watching brief of all open excavations will be maintained throughout the construction phase of the development.
 - An intrusive magnetometer probe survey (CPT testing at 2m centers to depth of 12m within the proposed pile layout) will be carried out once a piling layout is finalized and before works commence.
 - EOD Engineer – on site supervision.

- Biosecurity:
 - The DCEMP will need to set out a comprehensive bio-security management plan for the demolition and construction phase of the development. Further details on this matter are set out in the Ecology section of this FCEMP (see below).
- Risk Assessments:
 - Risk Assessments and Method Statements (RAMS) should be developed prior to commencing groundworks or demolition and construction. Demolition and construction workers should be made aware of the findings of the existing (and proposed) ground investigations. Risk Assessments and Method Statements (RAMS) should be prepared accordingly, and where appropriate shared with relevant stakeholders, and work will be undertaken in accordance with the RAMS. The provision of appropriate personal protective equipment (PPE) to be worn by site workers (as specified in the RAMS). The adoption of safe working practices and use of PPE in accordance with appropriate RAMS will provide adequate protection to demolition and construction workers.
 - Demolition and construction activities will be carried out in full compliance with appropriate health and safety legislation, at current amendments, and with reference to appropriate guidance documents and approved codes of practice published by the Health and Safety Executive (HSE).
- Ground gas:
 - Additional gas monitoring to fully characterise the ground gas regime and confirm any remedial measures required.
 - Avoidance of the construction of any structures, or confined spaces in TCA1 to mitigate any ground gas risk.
 - Suitable gas protection measures will be implemented at the detailed design stage.
 - Protocols for working in confined spaces to ensure sufficient mitigation for ground gas exposure, in accordance with HSE Approved Code of Practice 'Safe work in confined spaces'.
- Contamination:
 - Undertake a Stage 2: Remediation Options Appraisal and Stage 3: Remediation and Verification works, including development of a Remediation Strategy, Verification of the identified remediation works. This will include targeted ground investigations and soil sampling to confirm the depth and extent of hydrocarbon contamination.
 - Off-site disposal of arisings would be undertaken in accordance with the Waste Duty of Care Code of Practice (March 2016), and the excavation and re-use of materials would be undertaken in accordance with a Materials Management Plan (MMP). The requirement for a MMP will be secured through a condition attached to any planning permission.
 - Procedures for mitigating the potential risk of accidental discharges of potentially contaminative materials during the demolition phase include the appropriate use of temporary bunding and settlement ponds to allow for

isolation and on-site treatment of any sediment laden or contaminated water prior to discharge to the receiving system. Designated wheel washing areas, screening stockpiles of materials and dampening exposed soils will also be implemented as appropriate.

- The Principal Contractor(s) will need to ensure any demolition or construction works on Site refer to appropriate Guidance for Pollution Prevention (GPP) (and the older Pollution Prevention Guidelines) such as GPP 5: Works and maintenance in or near water and PPG 6 Working at construction and demolition sites.
 - Measures to minimise exposure to asbestos containing materials.
 - Additional ground investigation(s) works will be undertaken on-site, to be undertaken in accordance with BS930:2015+A1:2020 Code of Practice for Site Investigations; British Standard 10175:2011+A2:2017 Investigation of Potentially Contaminated Sites - Code of Practice; and BS8485:2015+A1:2019, to determine/validate the presence/absence of the exact extent and nature of existing contamination across the site.
 - Where necessary a Remediation Strategy¹ will be prepared, outlining site specific remedial activities (if deemed necessary following ground investigation works), and submission to NPTCBC for approval.
 - As necessary completion of a corresponding Validation Report, to ensure that the remedial concentrations set out in the remediation scheme have been achieved.
 - If further unexpected contamination is encountered during construction works following remediation, appropriate measures, which may include additional assessment as defined in the Remediation Strategy, will be implemented and will be incorporated within the CEMP to deal with such circumstances.
- Groundworks:
 - The use of pile foundations, informed by a detailed piling risk assessment (to avoid the creation of any new contamination pathways from soils with high hydrocarbon concentrations) prior to the commencement of the construction phase of the development.
 - Instruction of a specialist ground improvement contractor and a scheme for the treatment of site won materials to provide a suitable piling platform.
 - Provision of a Foundation Works Risk Assessment (FWRA) which would be undertaken by the Principal Contractor(s) once the proposed foundation solutions are known, and in accordance with EA guidance 'Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination' (EA, 2001).
 - Ground and surface water:
 - Additional ground water monitoring to fully characterise the ground gas regime and confirm any remedial measures required.

¹ Informed by the existing and supplementary ground investigation works to understand exact extent and nature of existing contamination in relation to the developable areas.

- A pre-commencement demolition works controlled waters risk assessment should be undertaken and agreed with regulatory authorities including the Environment Agency to assess risks to controlled waters based on the specific nature of the demolition activities, and provide appropriate mitigation measures, if required.
- Construction activities carefully planned and informed by continuous groundwater level monitoring to determine the maximum groundwater levels across the site.
- A detailed construction drainage scheme and for any underground structures will need to take account of the potential high-water levels.
- Any non-pilled settlement critical elements in areas of the site raised during the development of the construction platform are constructed as late in the programme as possible to reduce potential long-term maintenance issues.
- The construction drainage design avoids any concentrations of flow to ground to the wind blow sands present across the southern parts of the site.
- Measures to minimise and control runoff/leaching to controlled waters, specific measures to protect soils, and prevention measures including bunded storage.
- Designated wheel washing areas; settling basins; screening stockpiles of materials, dampening exposed soils as appropriate will need to be identified by the Principal Contractor(s) and implemented within the detailed DCEMP.

5.4 Flood Risk and Drainage

LanzaTech has worked closely with specialist drainage consultants to prepare an Outline Drainage Strategy for the proposed development, including the construction phase. This strategy will inform a detailed strategy and the Sustainable Urban Drainage Approval Board (SAB) application alongside the planning application.

Potential Effects

The Flood Consequences Assessment (October 2023) prepared by JBA in support of the application states that the PDZ will implement a singular development platform of 8.1m AOD. Demolition and construction activities can impact the hydrology, drainage, water quality and flood risk on the site by:

- Potential change to the rate and volume of site-runoff associated with general demolition and construction activities.
- Potential surface water contamination or pollution from the production of silt laden surface water runoff, spillages of fuel and general demolition and construction activities.
- Potential impact on the water quality of the receiving watercourse, docks and/or groundwater.
- Potential mobilisation of existing onsite contaminants.

Mitigation

The mitigation measures required to alleviate the potential impacts of flood risk and surface water runoff during demolition and construction of the development include:

- The 8.1m AOD development platform for the site will mitigate any flood risk during the lifetime of the development, accounting for climate change.
- Phoenix Way will remain at the current AOD level, which is below 8.1m AOD minimum level. The DCEMP will contain site operational procedures and flood warning measures to mitigate any flood risks during the demolition and construction phase of the development.
- The DCEMP will replicate the detailed drainage strategy for the 'clean water drain' shall be managed through the use of SuDS system where possible, including rain gardens, gravel-based swales and permeable paving.
- The DCEMP will include a detailed scheme for the management of surface water runoff during the demolition and construction phase of the development. It will manage surface water runoff to carefully mitigate and minimise the risk of silt laden runoff (or other contaminants) entering the drainage system and, ultimately, the dock.
- The DCEMP will be submitted as part of the full sustainable urban drainage system approval board (SAB) application to NPT.
- The DCEMP will take into account the following guidance documents:
 - PPG1 General Guide to the Prevention of Pollution.
 - PPG2 Above Ground Oil Storage Tanks.
 - PPG5 Works and Maintenance in or near Water.
 - PPG6 Working and Construction and Demolition Sites.
 - PPG13 Jet Washing.
 - Ciria C768 Guidance on the construction of SuDS.
 - Ciria C698 Site handbook for the construction of SuDS.
 - Ciria C742 Environmental Good Practice on Site.
- There are known fluctuating high levels of groundwater across the PDZ. Management of high groundwater levels shall also need to be considered within the CEMP.

The DCEMP will ensure that a suitable construction stage drainage scheme to control surface water runoff will be implemented.

The site has potential for groundwater flooding of property situated below ground level (i.e. basements) and some potential for groundwater flooding to occur at the surface. Measures

that will reduce groundwater flooding to construction zones and ensure effects to surface water bodies (volumes and rates of discharge) are appropriately managed onsite include:

- Run-off areas will be identified and water drainage in those areas would be actively managed.
- A toolbox briefing about the importance of the water supply, water bodies and use of pollution control packs will be disseminated to all site staff.

Detailed measures to mitigate risk to groundwater and local watercourses including the dock will be set out in the DCEMP and are likely to include:

- Piling and de-watering of construction areas on the site, as appropriate.
- The appropriate use of temporary bunding and settlement ponds to allow for isolation and on-site treatment of any sediment laden or contaminated water prior to discharge to the receiving system.
- Oils and fuels will be stored within designated areas in impervious storage bunds to contain any leakages or spillages.
- Any construction water runoff from the site will require the filtering out of suspended solids before reintroduction to the water system.
- Pollution control packs will be positioned within vulnerable areas to allow immediate reaction to any pollution incident.
- Stockpiles will be designed and positioned to minimise the amount of pollutants entering the watercourse.
- Route surface water runoff from worked areas to a silt trap before discharge into the dock, ensuring that silt loading does not increase.
- Designated wheel washing areas, screening stockpiles of materials; dampening exposed soils as appropriate.

5.5 Landscape and Visual Considerations

The planning application includes a detailed Landscape and Visual Impact Assessment (LVIA). It is evident that the demolition and construction of the site will lead to substantial temporary changes in the landscape and townscape. This will impact on people's visual amenity which will be phased over a period of time.

Adverse effects occur during demolition and construction as a result of the presence of cranes, excavators and lorries, scaffolding, hoardings, demolition and construction activity, and storage compounds and mounds. These will temporarily change the landscape and townscape elements of the site and potentially cause visual disruption.

The measures required to mitigate the adverse effects to landscape, townscape and visual receptors associated with demolition and construction of the proposal include:

- Land / vegetation clearance will be limited to the minimum necessary for the works.

- Demolition and construction areas will be laid out to minimise adverse impacts arising from temporary structures, demolition and construction activities and lighting.
- Demolition and construction roads will use the same route as permanent access roads, where reasonably practicable.
- Use of demolition and construction site lighting outside normal working hours will be restricted to the minimum necessary for workforce and public safety, and for security.
- Directional luminaries will be used to limit unwanted light spill.
- Maintenance of tidy and contained site compounds.
- Hoardings erected around the area of demolition and construction works, for reasons of creating a visual barrier to demolition and construction activities and also as a safety measure, to prevent access to the general public (exact designs will be decided by the Principal Contractor(s) once instated).
- Temporal measures including the removal of all temporary structures and stockpiles when no longer required.

The general principles to mitigate the adverse effects of lighting associated with demolition and construction of the proposal will be defined in DCEMP, taking into account of the Lighting Assessment and Strategy for the project but will include the following measures:

- Demolition and construction lighting should be directed so it does not create light intrusion outside of the immediate working area.
- Sufficient lighting units used to avoid the need for tall, wide beam lighting units to illuminate large areas.
- Vehicle lights to be properly directed, and lenses must be intact to prevent unnecessary glare and breakout of obtrusive light (this is also an MOT requirement).
- Lighting to be reduced when not required for safety purposes. Security lighting should be kept at the minimum level needed for visual and security protection.
- Where practicable, construction lighting in the site would be designed to comply with Environmental Zone E3 in accordance with ILP Guidance Note GN01.
- Illuminance levels arising from temporary lighting to be designed in accordance with BS EN 12464-2: 2014 and CIE 129.
- Use of light shields/baffles to control upward light to within the maximum 2.5% set out in the ILP Guidance Note GN01, where possible.
- Lighting to be kept at 0° tilt to avoid Sky Glow, where practicable.
- Light dimming and automatic switch off would be used (where appropriate).
- If appropriate, to reduce the need for fixed visible lighting outside working hours, the use of infrared flood lighting and CCTV systems to be considered for security.
- All lighting related to the works will be designed and fitted to minimise light intrusion onto any sensitive habitat such the wet woodland and reed bed habitats to the immediate east of TCA East and dark corridor to the south of the site.
- The use of visual screening, such as hoardings between more sensitive visual receptors and demolition and construction light sources in proximity to the site

- Dark corridors to be maintained during the evening, overnight or early morning (i.e. outside approximately one hour before dusk and one hour after dawn) along the southern boundary of the site. This will avoid the fragmentation of habitat used by species such as bats.

5.6 Ecology and Biodiversity

The planning application is supported by a detailed Ecological Impact Assessment prepared by RPS (October 2023) (ECIA). The ECIA is informed by a comprehensive suite of detailed on-site surveys of the PDZ and TCA areas. It sets out a detailed analysis of the sensitive habitats and protected species present on site as a baseline for the likely effects of the development. The ECIA also identifies the required ecological and biodiversity mitigation (on and off-site) for the development, including during the demolition and construction phase. The information is critical in managing likely environmental effects during the demolition and construction phases of the development.

Likely Effects

The development site is being cleared in its entirety. The TCA areas will be cleared, treated with a vegetation membrane, and covered in gravel to create robust construction laydown areas. The effects of this clearance relate primarily to landscape and visual impact and are covered in detail in the proceeding section.

- Habitat loss, disturbance or fragmentation affecting habitats and floral and faunal species.
- Noise, vibration and/or visual disturbance affecting faunal species.
- Dust affecting floral and faunal habitats and species.
- Surface water run-off during construction carrying hydrocarbons, silt and/or chemicals, affecting habitats and floral and faunal species.
- Emissions from vehicles and machinery during construction.

There are dense stands of Japanese Knotweed population in the PDZ and TCA West, as well as smaller stands in other areas surrounding the Site. The advanced herbicide treatment and proposed removal of the Japanese knotweed crowns by ABP ahead of construction activities (see Chapter 4: Development Specification) will reduce the vigour of the plant within the most extensive stands present across much of the PDZ. All areas of bare soil within the PDZ construction area could contain viable Japanese knotweed rhizome. Therefore, construction activities such as vegetation clearance and earthworks pose a high risk of spread of Japanese knotweed either across the Site, or to wider habitats adjacent to the Site or further afield (i.e. through effective transportation off-site via construction vehicles). The spread of Japanese knotweed could then result in the degradation of habitats within and outside the Site boundary.

The habitats within the PDZ and TCA West form part of a bat flight corridor located to the south of the open water dock which includes the margins of the disused railway line and sidings. The large 1ha reedbed bounded by scrub adjoining TCA East and to the east of the PDZ is a further area with high value as foraging habitat located adjacent to the construction site. The use of temporary construction lighting in spring, summer, and autumn (outside of the core working hours) would

reduce the potential value of the scrub and reedbed habitats adjoining the working areas to continue to function as bat foraging habitat and flight lines over the circa two/two and a half year construction period.

Mitigation

LanzaTech will work closely with the Principal Contractor(s) to ensure relevant ecology mitigation and management during the demolition and construction phase of the project.

The DCEMP will include a detailed strategy to mitigate any unacceptable impact on Otters during the demolition and construction phase of the project. The measures to be included in the DCEMP are:

- Daytime working hours to commence no sooner than one hour after sunrise and finish no later than one hour before dusk.
- Details relating to storage of construction materials and locating away from watercourse in a way that prevents otters gaining access or using them to rest in (e.g. pipe ends will be capped or covered).
- Construction materials will be stored using a stand-off distance of 10m from any watercourse in a way that prevents otters gaining access or using them to rest in (e.g., pipe ends will be capped or covered).
- Any trenches that are left open overnight will have planks of wood placed at regular intervals to allow otters a way out.
- All tools, food, litter and construction materials and packaging that may constitute a hazard to otters will be removed daily from the site.
- Any areas that may be suitable for use by otters will be checked immediately prior to works commencing by a suitably qualified, experienced and licensed ecologist.

The DCEMP will set out a detailed Bio-security Plan for the site in response to the presence of JKW on site. The Bio-security Plan will include mandatory requirements for all contractors and site personnel to fully adhere to at all times. These measures will be determined by a suitably qualified specialist.

The list below is not intended to be exhaustive at this stage. The measures will include:

- JKW will be subject to management (via herbicide spraying) as part of site preparation works, and continue with ongoing herbicide spraying as part of the long-term management strategy for the invasive species.
- Robust cleaning procedures to be implemented for all contractors, with monitoring and enforcement by dedicated personnel.
- Every contractor will be responsible for completely removing soil from all vehicles and clothing and footwear in dedicated wash down areas equipped with portable water source.
- Dirty water collection areas will be maintained to prevent surface water run-off from the site.
- The separate designated hard surfaced vehicle and footwear cleaning areas will be

established close to all exits from the PDZ, and any other areas of the site known to have Japanese knotweed and be required to be operational from the outset of construction stage.

- Any person entering the PDZ construction site will be legally responsible for fully adhering to the mandatory biosecurity procedures with LanzaTech holding ultimate responsibility for compliance across all contractor teams.
- For all other invasive plant species, the contractor will excavate all plants, corms, and roots of these species under an ecological watching brief in advance of large-scale vegetation clearance and ground remodelling. All excavated plant material of these invasive species would be incinerated in a nominated control area within the working site.

A Welsh Government derogation bat licence will be obtained to enable the demolition of Building 1 in TCA East, which is known to support a common pipistrelle summer day roost. The licence will need to account for the following:

- No work with the potential to damage or destroy the roost will be undertaken until the licence is obtained, and all such work would be carried out strictly in accordance with the licence method statement.
- Full details of the timing of measures for species protection, mitigation and demolition will be presented in the method statement submitted with the licence application.
- A minimum of two long lasting bat boxes of suitable design will be installed on larger trees in the adjoining woodland in locations that will not be affected by light spill or noise during construction. Installation of the boxes will be prior to the removal or disturbance of the roost and both boxes would be installed more than 3m above ground level on west or east facing sides of trees.
- Species protection measures will be detailed in the licence application. Bats would be excluded under the supervision of the named ecologist (or their accredited agent) on the WG bat licence during the active season. Alternatively, where exclusion is impractical, the roost feature would be subject to soft demolition directly supervised by the named ecologist on the WG bat licence.
- All site staff involved in demolition of Building 1 (and the other three buildings with low bat roost potential) would be made aware of the presence of bats and the potential risk of encountering bats while demolishing buildings. If bats are encountered at any stage, all works would stop until the bat licence holder has been contacted and has advised on what action is necessary.
- The bat boxes will be subject to roost monitoring to assess use by species of bats with checks in September/October by a bat survey licence holder for signs of use and to determine the species using the boxes (DNA analysis of droppings).

Additional measures for the protection of nesting birds during construction stage (including demolition works) to be established as part of the final and comprehensive CEMP. Measures will include the following:

- Habitats of value to nesting birds will be removed outside the breeding season to avoid constraints on the construction programme.

- During bird nesting season (between the start of March to August inclusive) prior to works that involve the removal of vegetation (trees, scrub, bramble, bracken, grassland) or the initiation of activities on extensive open ground inspections/ surveys for nesting birds will be completed comprising inspections for nests in vegetation and observations of any territorial activity. These precautions relate to each part of the Site including the TCAs; and will include inspections of trees, shrubs, dense ground vegetation and sparsely vegetated ground.
- Any active nest sites in a working area will be protected by with a minimum stand-off of 5m. Or where the presence of an active Cetti's warbler nest is identified this will require a minimum buffer zone of 25m to avoid disturbance of adult birds while on or at the nest.

The specification of demolition and construction lighting will be the responsibility of LanzaTech and the Principal Contractor(s), and each sub-contractor contractor. The aim of the lighting will be to ensure all work areas are safe and functional, and not compromised.

The general principles to mitigate the adverse effects of lighting during this phase set out in the above chapter are relevant to ecology. In particular, the DCEMP will detail how:

- Demolition and construction lighting will be directed so it does not create light intrusion outside of the immediate working area.
- All lighting related to the works will be designed and fitted to minimise light intrusion onto any sensitive habitat such the wet woodland and reed bed habitats to the immediate east of TCA East and dark corridor to the south of the site.
- The use of visual screening, such as hoardings, between more sensitive visual receptors and demolition and construction light sources in proximity to the site.

When combined, the lighting and hoarding measures in the DCEMP will ensure the maintenance of a dark corridor along the southern boundary of the site. This will avoid the fragmentation of habitat used by species such as bats. Maintenance and management of this corridor will be the responsibility of LanzaTech and the Principal Contractor(s).

The DCEMP will include a detailed commitment by LanzaTech and the Principal Contractor(s) that TCA West will not be utilised for demolition and construction works until all reptiles have been safely translocated from the area.

5.6 Archaeology and Cultural Heritage

LanzaTech has commissioned an Archaeological and Heritage Assessment in support of the proposed development. The assessment concludes that the scheme will have no direct impact on designated or non-designated heritage assets.

Potential Effects

An Archaeological and Heritage Assessment has been prepared by EDP in support of this planning application. The report concludes 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.

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.

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.

Mitigation

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.

No archaeological monitoring, observation or recording is proposed in respect of the piled foundations. No archaeological investigation is necessary.

The preferred means of mitigation will be agreed in advance with the NPT 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.

LanzaTech and the Principal Contractor(s) will adopt the preferred means of mitigation identified during the determination of the application and ensure all necessary resulting measures are included in the DCEMP.

LanzaTech has prepared this FCEMP as the strategic environmental management plan for the project. The FCEMP aims to:

- Minimise, (eliminating where practicable), the environmental effects of the demolition and construction of the proposal.
- Document the environmental controls to be adopted during demolition and construction.
- Enable agreement with the NPT and key stakeholders on framework mitigation measures to be adopted during demolition and construction.
- Provide a framework for contractors and all site personnel to manage demolition and construction impacts to be captured in the DCEMP.

Mitigation measures have been outlined to limit potential impacts of demolition and construction traffic, air quality and dust, noise and vibration, contamination and ground conditions, water resources and flood risk, landscape and visual considerations, ecology and natural habitats, archaeology and cultural heritage.

The FCEMP has also outlined a series of general best practice principles which should be adhered to, including a register of environmental impacts, the production of risk assessments, the adherence to Site Environmental Standards, the monitoring and measurement of demolition and construction activities and the roles and responsibilities of key Site staff.

LanzaTech and the Principal Contractor(s) will ensure the FCEMP will be taken forward and developed into a subsequent DCEMP for the demolition and construction phase of the development, to be consistent with this FCEMP.

The DCEMP will be a live document and will be reviewed periodically throughout the life of the project. Regular reviews will help ensure that the DCEMP is up-to-date and suitably adapted to changes as the project progresses.

The FCEMP forms the basis of a planning condition to be imposed on any planning permission for the development that will require the submission and approval of the DCEMP prior to the commencement of development on site.