

**Project Dragon – Sustainable Aviation Fuel
(SAF) Production Facility**
Environmental Statement Volume 3:
Environmental Management Plan

August 2023

1. This document provides a summary of all the mitigation measures identified during the EIA process in order to manage the environmental effects during the construction and operational stages of the Proposed Scheme, and to establish a suitable mechanism to secure and deliver mitigation. This document should be read in conjunction with **Volume 1: Primary Report and Supporting Graphics; Volume 2: Technical Appendices; and Volume 4: Non-Technical Summary.**
2. As set out in **Volume 1, Chapter 2: Approach to EIA**, the EIA has considered primary, secondary and tertiary mitigation in line with the Institute of Environmental Management & Assessment's (IEMA) Environmental Impact Assessment Guide to Delivering Quality Development^a. These are defined as follows:
 - **Primary** – modifications to the location or design of the Proposed Scheme made during the pre-application stage that are an inherent part of the project;
 - **Secondary** – actions that will require further activity in order to achieve the anticipated outcome; and
 - **Tertiary** – actions that would occur with or without input from the EIA feeding into the design process. These include actions that will be undertaken to meet other existing legislation requirements, or actions that are considered to be standard practices used to manage commonly occurring environmental effects.
3. All primary, secondary and tertiary mitigation referenced throughout the Environmental Statement (ES) has been collated and is summarised in the EMP (**Table 1**).
4. Each of the **Volume 1, Technical Chapters 6 – 13** have considered primary and tertiary mitigation prior to undertaking the assessment of likely significant effects. Following the conclusion of effects based on the Proposed Scheme, any further mitigation measures or monitoring arrangements (i.e. secondary mitigation or enhancement) have been detailed.
5. It should be noted that, given the definition of primary mitigation and the fact that the measures are inherent to the Proposed Scheme, all primary mitigation is to be secured through the plans submitted for approval (see below); **Volume 1, Chapter 4: Development Specification** and any associated strategies / principles referenced in **Volume 1, Chapter 4: Development Specification** that are submitted in support of the ES or the Application. As such, through the approval of the submitted plans the following key aspects of the Proposed Scheme that have underpinned the assessments within **Technical Chapters 6 – 13** will be secured:
 - Plant, building and equipment layout and footprint;
 - Spatial extent of temporary and permanent works;

^a IEMA (2016). EIA Guide to Delivering Quality Development.

- Maximum heights (approved through the Design and Access Statement plus elevation plans); and
 - Hard and soft landscaping (ecological and SuDS functionality).
6. As explained in **Volume 1, Chapter 2: Approach to EIA**, the ES has assessed a wider boundary than the planning application boundary. Therefore, **Figures 4.1 – 4.14** were prepared for the ES to show the full extent of the EIA Study Area Boundary. How these figures correlate to the plans submitted for approval is listed below:

| ES Figure | Equivalent Plan Submitted for Approval |
|--|--|
| Figure 4.1: Site Location Plan | 2143.01-IA-ZZ-ST-DR-A-0100_Site Location Plan |
| Figure 4.2: Existing Site Key Plan | 2143.01-IA-ZZ-ST-DR-A-0200_Existing Site Key Plan |
| Figure 4.3: Existing Site Plan (Area 1) | 2143.01-IA-ZZ-ST-DR-A-0201_Existing Site Plan (Area 1) |
| Figure 4.4: Existing Site Plan (Area 2) | 2143.01-IA-ZZ-ST-DR-A-0202_Existing Site Plan (Area 2) |
| Figure 4.5: Existing Site Plan (Area 3) | 2143.01-IA-ZZ-ST-DR-A-0203_Existing Site Plan (Area 3) |
| Figure 4.6: Existing Site Plan (Area 4) | 2143.01-IA-ZZ-ST-DR-A-0204_Existing Site Plan (Area 4) |
| Figure 4.7: Proposed Site Plan – PDZ & Temporary Construction Area | 2143.01-IA-ZZ-ST-DR-A-0217_Proposed Site Plan - PDZ & Temp. Construction Areas |
| Figure 4.8: Proposed PDZ Layout | 2143.01-IA-ZZ-ST-DR-A-0215_Proposed PDZ Layout & Equipment List |
| Figure 4.9: Proposed Site Key Plan | 2143.01-IA-ZZ-ST-DR-A-0210_Proposed Site Key Plan |
| Figure 4.10: Proposed Site Plan (Area 1) | 2143.01-IA-ZZ-ST-DR-A-0211_Proposed Site Plan (Area 1) |
| Figure 4.11: Proposed Site Plan (Area 2) | 2143.01-IA-ZZ-ST-DR-A-0212_Proposed Site Plan (Area 2) |
| Figure 4.12: Proposed Site Plan (Area 3) | 2143.01-IA-ZZ-ST-DR-A-0213_Proposed Site Plan (Area 3) |
| Figure 4.13: Proposed Site Plan (Area 4) | 2143.01-IA-ZZ-ST-DR-A-0214_Proposed Site Plan (Area 4) |
| Figure 4.14: Proposed PDZ Layout - External Surface Finishes | 2143.01-IA-ZZ-ST-DR-A-0216_Proposed PDZ Layout - External Surface Finishes |
| - | 2143.01-IA-ZZ-ZZ-DR-A-0500 – 2143.01-IA-ZZ-ZZ-DR-A-0514 (Elevation Plans) |

7. Where **Figures 4.1 – 4.14** are referred to as the mechanism to secure in **Table 1**, the equivalent plan as listed above is the relevant plan to be approved.
8. Within **Table 1**, specific mitigation measures identified and implemented to further remove, reduce or offset an environmental effect, in addition and further to those aspects listed above, have been captured.
9. The mitigation relied upon to ‘scope out’ environmental topics as part of the EIA Scoping Report (**Volume 2, Appendix 2.1**) is also included within the EMP (**Table 1**). A marking system has been used for clarity to show where mitigation has remained the same, evolved, or is new/additional from that presented in the EIA Scoping Report, as follows:
 - Where mitigation remains as reported in the EIA Scoping Report, this is marked with an =;
 - Where mitigation has changed/evolved since that reported in the EIA Scoping Report, this is marked with an +; and
 - Where mitigation is new/additional and wasn’t presented in the EIA Scoping Report, this is marked with a *.
10. With respect to secondary mitigation, it is assumed these measures will be secured either through appropriately worded condition and / or Section 106 agreement as determined by Neath Port Talbot County Borough Council (NPTCBC), as the determining authority.
11. To note, this EMP has been prepared for the purpose of PAC, in the absence of **Chapter 7: Terrestrial Ecology**. Accordingly, further mitigation measures may be necessary and included in the EMP for planning submission.

Table 1: Environmental Management Plan – Primary Mitigation

| Ref. | Primary Mitigation | Mechanism to Secure | Responsibility (where applicable) | Timescales (where applicable) |
|--|---|---|--------------------------------------|----------------------------------|
| <p>All forms of primary mitigation are based on the description of the Proposed Scheme set out in Volume 1, Chapter 4: Development Specification and the plans as set out in Volume 1, Figures 4.1 – 4.14, which the Proposed Scheme will be delivered in accordance with.</p> | | | | |
| Ground Flare | | | | |
| P1 + | <p>The Proposed Scheme has been designed with a single enclosed ground flare (extend up to 20 metres in height from the proposed ground level (set at approximately 8m AOD) which will be in the western extent of the Site (defined on Figure 4.7 and 4.10). The ground flare is made up of multiple ‘burners’ at ground level, surrounded by a circular enclosure.</p> <p>This flare design has been adopted in order to reduce visual envelope associated with the Proposed Scheme (compared to a more generic stack).</p> | <p>Approval of Figures 4.1 – 4.14 submitted with the Application, which will be subject to planning condition</p> | - | - |
| Access, Movement and Parking | | | | |
| P2 + | <p>Framework Operational Transportation Management Plan (or similar) has been prepared and submitted within the Application. This has set out all forms of transportation to be used during the operation of the Proposed Scheme (and associated materials to be transported), including details of safety measures/procedures to be deployed to ensure safe transportation and compliance with any relevant legislation, regulation or guidance (i.e. UN Model Regulations, The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009, The International Convention for the Safety of Life at Sea, 1974 (SOLAS), The International Carriage of Dangerous Goods by Inland Navigation (ADN) and International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol of 1978 relating thereto (MARPOL)).</p> | <p>Approval of Framework Operational Transportation Management Plan (or similar), which will be subject to planning condition</p> | Applicant | Prior to operation |

| Ref. | Primary Mitigation | Mechanism to Secure | Responsibility (where applicable) | Timescales (where applicable) |
|------|--|---------------------|-----------------------------------|-------------------------------|
| | All forms of primary mitigation are based on the description of the Proposed Scheme set out in Volume 1, Chapter 4: Development Specification and the plans as set out in Volume 1, Figures 4.1 – 4.14 , which the Proposed Scheme will be delivered in accordance with. | | | |

Flood Risk and Drainage Strategy

| | | | | |
|---------|--|--|---|------------------|
| P3 + | <p>The PDZ will implement a singular development platform of 8m AOD in order to ensure the Proposed Scheme remains to be flood free in the 0.1% AEP + climate change event (for fluvial and tidal flooding)^b, as detailed in full within the Flood Consequence Assessment (FCA) has been prepared and submitted as part of the Application.</p> <p>Effects to flood risk receptors in the Unnamed Port Road Supporting Infrastructure Area of the Site – adequately mitigated by site operational procedures and flood warnings.</p> | Approval of Flood Consequences Assessment, which will be subject to planning condition | - | Pre-construction |
| P4 + | <p>The Proposed Scheme will adopt a drainage strategy to include two main surface water drainage systems, comprising:</p> <ul style="list-style-type: none"> The ‘clean water drain’ shall be managed through the use of a SuDS system where possible. This shall consist of rain gardens, gravel-based swales and permeable paving; and The ‘contaminated’ drain system will be installed for the management of contaminated water arising from the process of the Proposed Scheme and bunded areas of the PDZ. This drainage system will discharge to the on-site Effluent Waste Water Treatment Package (Equipment Ref: Z-6950) in the western extent of the PDZ. | SAB Approval of Drainage Strategy, which will be subject to planning condition | Applicant / Project Design Engineer / Drainage Consultant | Pre-construction |

^b Minimum height of 7.5m AOD is required to achieve this and it should be noted that much of the PDZ is above 7.5mAOD already, however, some areas are below this level.

| Ref. | Primary Mitigation | Mechanism to Secure | Responsibility (where applicable) | Timescales (where applicable) |
|-----------------------------------|---|-------------------------------------|---|-------------------------------|
| | <p>All forms of primary mitigation are based on the description of the Proposed Scheme set out in Volume 1, Chapter 4: Development Specification and the plans as set out in Volume 1, Figures 4.1 – 4.14, which the Proposed Scheme will be delivered in accordance with.</p> <p>The SuDS have been designed to meet the Welsh Government Statutory Standards for Sustainable Drainage Systems and The SuDS Manual (C753) as appropriate for the industrial nature of the Site.</p> <p>All SuDS assets shall be lined to reduce the risk of downward infiltration of water into underlying soils, which would increase the risk of mobilisation of existing contaminants.</p> <p>The Proposed Scheme will include permeable paving (staff car parking areas), trapezoidal ditches (gravel based swales) along the Unnamed Port Road / primary internal road (where applicable) and macro-permeable paving (frontage of warehouses).</p> <p>A Drainage Strategy has been prepared, in line with the above principles, and has been submitted to NPTCBC SAB for approval as part of the Application.</p> | | | |
| Operational Water Strategy | | | | |
| P5 * | Waste process water will be directed to the on-site effluent waste water treatment package ^c . At which point the water will be treated and process for discharge to Port Talbot Dock via a new outfall. Discharge will be subject to an Environmental Permit from NRW | Environmental permit from NRW | Project Design Engineer / Permitting Consultant | Pre-construction |
| P6 * | All water demand for the process will be met via water abstracted from the Dock. | Abstraction licence approved by NRW | Applicant / Permitting Consultant | Pre-operation |

^c Equipment Ref: Z-6950 on **Figure 4.8**.

| Ref. | Primary Mitigation | Mechanism to Secure | Responsibility (where applicable) | Timescales (where applicable) |
|--|--|--|------------------------------------|-------------------------------|
| | All forms of primary mitigation are based on the description of the Proposed Scheme set out in Volume 1, Chapter 4: Development Specification and the plans as set out in Volume 1, Figures 4.1 – 4.14 , which the Proposed Scheme will be delivered in accordance with. | | | |
| P7 * | Potable water efficiency for occupied buildings equivalent to a minimum of 2 credits under BREEAM issue <i>Wat 01 Water Consumption</i> is targeted, which requires a 25% reduction on baseline water consumption. | Subject to planning condition | Applicant, Project Design Engineer | Pre-construction |
| P8 * | Intake screen mesh grade of 1mm will be included in the design of water intakes used for abstraction activities during the operational stage, in line with NRW guidance on prevention of entrainment during water abstraction activities. | Subject to planning condition | Applicant, Project Design Engineer | Operation |
| Landscape and Biodiversity Strategy | | | | |
| P9 * | The Proposed Scheme will implement landscaping (within the PDZ) in line with Figure 4.14 , which contains details of all finished external surfaces. Proposed landscaping will have biodiversity function, providing habitats equivalent to habitats of biodiversity value in the wider Port Talbot Docks and associated industrial sites, supporting key foodplants for invertebrates and provide sources of pollen and nectar. | Approval of Figure 4.14 submitted with the Application, which will be subject to planning condition | - | Construction |
| P10 * | Biodiverse green/brown roof have been incorporated into the design of the Administrative Building and Gatehouse 1 (as defined on Figure 4.14). | Approval of Figure 4.14 submitted with the Application, which will be subject to planning condition | - | Construction |
| P11 + | Japanese knotweed will be subject to management, via herbicide spraying, as part of site preparation works, and continue with ongoing herbicide spraying as part of a long-term management strategy for Japanese Knotweed. | - | Applicant / ABP | Pre-application / |

| Ref. | Primary Mitigation All forms of primary mitigation are based on the description of the Proposed Scheme set out in Volume 1, Chapter 4: Development Specification and the plans as set out in Volume 1, Figures 4.1 – 4.14 , which the Proposed Scheme will be delivered in accordance with. | Mechanism to Secure | Responsibility (where applicable) | Timescales (where applicable) |
|--------------------------|---|--|--|----------------------------------|
| | | | | Construction / Operation |
| Lighting Strategy | | | | |
| P12 + | <p>The Proposed Scheme will ensure that all external (operational) lighting will be designed and installed in line with best practice measures – relevant British Standards (i.e. BS 5489-1:2020, BS EN 13201-2 – Road lighting and BS EN 12464-2 – Lighting of Work Places) and guidance (e.g. ILP’s Guidance Notes for the Reduction of Obtrusive Light, Lighting Guide 1: The industrial environment and LG6: The exterior environment; ILP’s PLG04; and ILP Guidance Note GN01), and or mitigation measures set out within the guidance so as to mitigate effects from obtrusive light.</p> <p>A Preliminary Lighting Strategy has been prepared and submitted to NPTCBC for approval as part of the Application.</p> | <p>Approval of Preliminary Lighting Strategy submitted with the Application, which will be subject to planning condition, and submission of a detailed lighting design</p> | <p>Lighting engineer / Project Design Engineer / Architect</p> | Operation |
| Waste Strategy | | | | |
| P13 + | <p>A Framework Waste Management Plan has been prepared and submitted with the Application. This sets out all waste arisings from the Proposed Scheme (including any potentially waste that would be classified as hazardous waste) and the way in which each waste arising will be managed on-site, transported and disposed of, including compliance with relevant legislation, regulation or guidance for each waste arising (i.e. detailed responsible persons, necessary carriage certificates/duty of care notification or documentation needing to be implemented).</p> <p>A final waste management plan will be subject to condition.</p> | <p>Approval of Preliminary Waste Strategy submitted with the Application and final waste management plan, which will be subject to planning condition</p> | <p>Waste Consultant / End User</p> | Operation |

| Ref. | Primary Mitigation | Mechanism to Secure | Responsibility (where applicable) | Timescales (where applicable) |
|-----------------------------|--|--|--------------------------------------|----------------------------------|
| | All forms of primary mitigation are based on the description of the Proposed Scheme set out in Volume 1, Chapter 4: Development Specification and the plans as set out in Volume 1, Figures 4.1 – 4.14 , which the Proposed Scheme will be delivered in accordance with. | | | |
| P14 + | In line with statutory legislation [i.e. The Waste (England and Wales) Regulations 2011 ^d , Environmental Protection Act 1990 ^e and the Environmental Protection (Duty of Care) Regulations 1991 ^f], as well as the British Standard (BS) 5906:2005 Waste Management in Building – Code of Practice, the Applicant is responsible for the arrangement of refuse and recycling to be collected from their premises, with the specific type of collections dependent on the nature of the activities and expected waste arisings. It is expected that waste arisings associated with the ancillary operational facilities will include general waste and general recyclable waste (i.e. plastic bottles, paper etc). | | | |
| Overheating | | | | |
| P15 * | Dynamic modelling for thermal comfort will be undertaken for occupied buildings in accordance with BREEAM credit <i>Hea 04 Thermal Comfort</i> . The assessment will take account of building design and occupation and establish what if any mitigation measures are necessary to ensure suitable internal thermal conditions through the year. Such measures may include glazing design and/or specification, internal / external shading, ventilation and passive / active cooling and will ensure significant effects are avoided. | Planning condition for detailed Overheating Assessment | Applicant | Prior to operation |
| Air Quality Strategy | | | | |

^d <https://www.legislation.gov.uk/uksi/2011/988/contents/made>

^e <https://www.legislation.gov.uk/ukpga/1990/43/contents>

^f <https://www.legislation.gov.uk/uksi/1991/2839/made>

| Ref. | Primary Mitigation | Mechanism to Secure | Responsibility (where applicable) | Timescales (where applicable) |
|----------|--|---------------------|--------------------------------------|----------------------------------|
| | All forms of primary mitigation are based on the description of the Proposed Scheme set out in Volume 1, Chapter 4: Development Specification and the plans as set out in Volume 1, Figures 4.1 – 4.14 , which the Proposed Scheme will be delivered in accordance with. | | | |
| P16 * | A continuous monitoring system will be applied to the Steam Vent from relevant heat exchangers and where VOCs are detected these are directed straight to the flare to prevent fugitive emissions. | Planning condition | Applicant | Operation |
| P17 * | The Site will incorporate best available techniques (BAT) including periodic monitoring of odour, review of a site specific odour management plan and the use of minimal residence times, chemical treatment, aerobic treatment, enclosure measures and end-of-pipe treatment to reduce odours from wastewater collection and treatment (details of such measures are set out within the Odour Briefing Note). | Planning condition | Applicant / End User | Operation |

Table 2: Environmental Management Plan – Tertiary Mitigation

| Ref. | Tertiary mitigation | Mechanism to Secure | Responsibility | Timescales |
|--|---|---|-------------------|-------------------------|
| <p>Tertiary mitigation presented below has been collated from the EIA Scoping Report (Volume 2, Appendix 2.1), Chapter 4: Development Specification and Technical Chapters 6 – 13.</p> | | | | |
| <p>Construction Environmental Management Plan (CEMP)</p> | | | | |
| <p>T1 +</p> | <p>A CEMP will be prepared by the appointed contractor in line with key legislation and guidance, as well as industry standards, codes of practice and best practice measures.</p> <p>The detailed CEMP will be informed by and consider the following measures, as identified within this EMP (across T2 – T11).</p> <p>Key legislation, guidance, industry standards and codes of practices will be adopted where applicable:</p> <ul style="list-style-type: none"> • 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; | <p>Construction Environmental Management Plan, which will be subject to planning condition.</p> | <p>Contractor</p> | <p>Pre-Construction</p> |

| Ref. | Tertiary mitigation | Mechanism to Secure | Responsibility | Timescales |
|------|--|---------------------|----------------|------------|
| | <p>Tertiary mitigation presented below has been collated from the EIA Scoping Report (Volume 2, Appendix 2.1), Chapter 4: Development Specification and Technical Chapters 6 – 13.</p> | | | |

- 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; and
- IAQM Guidance on the Assessment of Dust from Demolition and Construction.

The CEMP will include the following:

- 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;

| Ref. | Tertiary mitigation | Mechanism to Secure | Responsibility | Timescales |
|------|---|---------------------|----------------|------------|
| | <p>Tertiary mitigation presented below has been collated from the EIA Scoping Report (Volume 2, Appendix 2.1), Chapter 4: Development Specification and Technical Chapters 6 – 13.</p> <ul style="list-style-type: none"> 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; and Measures to manage the risk to surrounding properties and the local watercourse from surface water run-off that is generated during construction. | | | |

General Measures

| | | | | |
|---------|---|---|------------|--------------|
| T2 = | <p>The CEMP will set out general construction management practices to be implemented, to include:</p> <ul style="list-style-type: none"> 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; Set out 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; | <p>Construction Environmental Management Plan, which will be subject to planning condition.</p> | Contractor | Construction |
|---------|---|---|------------|--------------|

| Ref. | Tertiary mitigation | Mechanism to Secure | Responsibility | Timescales |
|---------|---|--|----------------|--------------|
| | <p>Tertiary mitigation presented below has been collated from the EIA Scoping Report (Volume 2, Appendix 2.1), Chapter 4: Development Specification and Technical Chapters 6 – 13.</p> <ul style="list-style-type: none"> • Good construction site housekeeping; • Setting out key construction hours and protocols/working method practices for extended works where necessary; • Provision of tool-box talks; • Requirements for marine construction equipment and plant sourced from outside the area, including a jack-up barge if used, to be checked for INNS and cleaned prior entering the water at Port Talbot Dock (e.g. following the 'Check, Clean and Dry' method); • Preparation of specific method statements; • Define 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; and • 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. | | | |
| | <u>Traffic</u> | | | |
| T3 + | The CEMP will include a Construction Traffic Management Plan (CTMP) which will set out details for the following: | Construction Environmental Management Plan | Contractor | Construction |

| Ref. | Tertiary mitigation | Mechanism to Secure | Responsibility Timescales |
|------|--|---|---------------------------|
| | <p>Tertiary mitigation presented below has been collated from the EIA Scoping Report (Volume 2, Appendix 2.1), Chapter 4: Development Specification and Technical Chapters 6 – 13.</p> <ul style="list-style-type: none"> • 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 / manoeuvre 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; • All HGVs will be requested to route via the M4 Junction 38, and not through Port Talbot, to reduce any potential impact in the vicinity of the town centre; | <p>which will be subject to planning condition.</p> | |

| Ref. | Tertiary mitigation | Mechanism to Secure | Responsibility | Timescales |
|----------------------------|--|---|----------------|--------------|
| | <p>Tertiary mitigation presented below has been collated from the EIA Scoping Report (Volume 2, Appendix 2.1), Chapter 4: Development Specification and Technical Chapters 6 – 13.</p> <ul style="list-style-type: none"> • 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; and • Adaptation of working time to avoid peak hours, if necessary. | | | |
| <u>Air Quality</u> | | | | |
| T4 = | <p>The CEMP will include dust and particulate matter management measures, including:</p> <ul style="list-style-type: none"> • Preparation of a Dust Management Plan (DMP) in line with IAQM Guidance on the Assessment of Dust from Demolition and Construction and identification of measures to deployment on-site, which will include tertiary measures such as fencing/hoarding around the perimeter of the Site, screening of stockpiles, damping down of exposed soils; • Implementation of wheel washing facilities; • Details of procedures for the management of dust arising from stockpiles or exposed soils (i.e. screening or dampening down); and • Interaction with the stakeholder communication plan (set out above). | Construction Environmental Management Plan which will be subject to planning condition. | Contractor | Construction |
| <u>Noise and Vibration</u> | | | | |
| T5 * | <p>The CEMP will incorporate mitigation measures for construction noise that follow best practicable means (BPM) outlined in BS 5228-1:2009+A1:2014, including the following:</p> | Construction Environmental Management Plan, | Contractor | Construction |

| Ref. | Tertiary mitigation | Mechanism to Secure | Responsibility | Timescales |
|-----------------|---|--|----------------|--------------|
| | <p>Tertiary mitigation presented below has been collated from the EIA Scoping Report (Volume 2, Appendix 2.1), Chapter 4: Development Specification and Technical Chapters 6 – 13.</p> <ul style="list-style-type: none"> • 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); and / or manoeuvring 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; and • Switch plant off when not required. | which will be subject to planning condition. | | |
| <u>Lighting</u> | | | | |
| T6 = | <p>The CEMP will set out light pollution management measures in line with the following:</p> <ul style="list-style-type: none"> • 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; | Construction Environmental Management Plan, which will be subject to planning condition. | Contractor | Construction |

| Ref. | Tertiary mitigation | Mechanism to Secure | Responsibility | Timescales |
|------|---|---------------------|----------------|------------|
| | Tertiary mitigation presented below has been collated from the EIA Scoping Report (Volume 2, Appendix 2.1), Chapter 4: Development Specification and Technical Chapters 6 – 13. | | | |

- Placement of temporary lighting required to ensure safe working conditions and to maintain security, to have due regard of sensitive receptors (i.e. occupied residential properties);
- Lighting to be directed so as avoid unnecessary light spill outside of construction areas and to ensure that the light distribution is toward the task area;
- Lighting to be switched off when not required for safe working conditions and Site security;
- 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; and
- Light dimming and automatic switch off would be used (where appropriate).

Waste

| | | | | |
|---------|--|---|------------|--------------|
| T7 + | <p>The CEMP will include a Site Waste Management Plan (SWMP) which will set out, as a minimum:</p> <ul style="list-style-type: none"> • 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); • 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; | Construction Environmental Management Plan which will be subject to planning condition. | Contractor | Construction |
|---------|--|---|------------|--------------|

| Ref. | Tertiary mitigation | Mechanism to Secure | Responsibility | Timescales |
|---|---|--|-------------------|---------------------|
| <p>Tertiary mitigation presented below has been collated from the EIA Scoping Report (Volume 2, Appendix 2.1), Chapter 4: Development Specification and Technical Chapters 6 – 13.</p> <ul style="list-style-type: none"> • Methods for the efficient management of materials, including the ability to source sustainable construction materials (where possible); • Identify targets for the reduction of construction waste (where possible) and monitoring procedure for targets throughout the construction stage; and • Outline further best practice measures to be adopted in order to achieve identified targets, taking account of the waste hierarchy of reduce, reuse, recycle, recovery and disposal. | | | | |
| <p><u>Ground, Earthworks and Water</u></p> | | | | |
| T8 + | <p>Existing contamination and any occurrence of accidental contamination events will be managed through the CEMP by:</p> <ul style="list-style-type: none"> • 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); | <p>Construction Environmental Management Plan which will be subject to planning condition.</p> | <p>Contractor</p> | <p>Construction</p> |

| Ref. | Tertiary mitigation | Mechanism to Secure | Responsibility | Timescales |
|------|--|---------------------|----------------|------------|
| | <p>Tertiary mitigation presented below has been collated from the EIA Scoping Report (Volume 2, Appendix 2.1), Chapter 4: Development Specification and Technical Chapters 6 – 13.</p> | | | |

- 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.); and
- 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.

| Ref. | Tertiary mitigation | Mechanism to Secure | Responsibility | Timescales |
|------|---|---------------------|----------------|------------|
| | Tertiary mitigation presented below has been collated from the EIA Scoping Report (Volume 2, Appendix 2.1), Chapter 4: Development Specification and Technical Chapters 6 – 13. | | | |

Climate change

| | | | | |
|----------|--|--|------------|--------------|
| T9 = | The CEMP will set out provision of shaded refuges and drinking water supplies to avoid health and safety risks associated with high summer temperatures. | Construction Environmental Management Plan, which will be subject to planning condition. | Contractor | Construction |
| T10 * | The CEMP will set out plant design and sourcing and materials selection etc, to reduce GHG emissions. | | | |

Unexploded Ordnance (UXO)

| | | | | |
|----------|--|---|------------|--------------|
| T11 = | The CEMP will include an UXO Working Method Statement encompassing: <ul style="list-style-type: none"> • UXO Safety Awareness Briefings; • Non-Intrusive Magnetometer Probe Survey; • Intrusive Magnetometer Probe Survey, comprising CPT testing at 2m centres to depth of 12m within the purposed pile layout; and • EOD Engineer - On Site Supervision. | Construction Environmental Management Plan which will be subject to planning condition. | Contractor | Construction |
|----------|--|---|------------|--------------|

Archaeology

| | | | | |
|----------|--|---|------------------------|------------------|
| T12 = | A Written Scheme of Investigation will be submitted to NPTCBC for approval prior to construction works commencing on-site. This will include details of the need, extent and type of archaeological investigations and any necessary mitigation required upon encountering archaeological assets. The Archaeological and Heritage Assessment prepared concludes that mitigation at this stage would comprise the completion of a watching brief during the open cur excavations across the PDZ, or a phase of evaluation trenching. | Written Scheme of Investigation, which will be subject to planning condition. | Archaeological advisor | Pre-construction |
|----------|--|---|------------------------|------------------|

| Ref. | Tertiary mitigation | Mechanism to Secure | Responsibility | Timescales |
|------|---|---------------------|----------------|------------|
| | Tertiary mitigation presented below has been collated from the EIA Scoping Report (Volume 2, Appendix 2.1), Chapter 4: Development Specification and Technical Chapters 6 – 13. | | | |

Additional ground investigation(s), Remediation Strategy and Validation Reporting

| | | | | |
|-------|--|--|-----------------------------|------------------|
| T13 + | <ul style="list-style-type: none"> 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 BS 8485:2015+A1:2019, to determine/validate the presence/absence of the exact extent and nature of existing contamination across the Site; Where necessary a Remediation Strategy^g 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; and 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. | Remediation Strategy and Validation Reporting which will be subject to planning condition. | Ground engineer / Applicant | Pre-construction |
|-------|--|--|-----------------------------|------------------|

Securement of Permits, Licenses and Consents (where applicable)

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

| Ref. | Tertiary mitigation | Mechanism to Secure | Responsibility | Timescales |
|----------|---|---|--|---|
| | Tertiary mitigation presented below has been collated from the EIA Scoping Report (Volume 2, Appendix 2.1), Chapter 4: Development Specification and Technical Chapters 6 – 13. | | | |
| T14 = | All regulatory permits, licenses and consents will be obtained from NRW and the applicable regulatory regimes. | Permit to be secured from NRW /NPTCBC / the Health and Safety Executive | Permitting consultant / Applicant / End user | Pre-application / post-application / Construction / Operation |

Operational Safety Protocols

| | | | | |
|----------|---|--|--|-------------------|
| T15 + | <p>The principle of inherently safer design has been applied by the project engineers throughout the Front End Engineering Design (FEED) stage and informed by the Applicants HSE Design Philosophy prepared for the Proposed Scheme, which accord with all relevant HSE Guidance and associated Measures Documents^{h,i}.</p> <p>Approval from the Health and Safety Executive (HSE) in line with the COMAH Application is required. Through this approval process, the Applicant will demonstrate all aspects of their quantified risk assessment and controls, which will be subject to review and validation by the HSE.</p> <p>The FEED stage for the Proposed Scheme has considered the hierarchy of controls in determining feasible and effective control solutions to reduce</p> | Approval of required COMAH documents by HSE, NRW and NPTCBC, as applicable | Project Design Engineer / Applicant / End user | Pre-determination |
|----------|---|--|--|-------------------|

^h <https://www.hse.gov.uk/comah/sragtech/techmeasindex.htm>

ⁱ The full list of measures currently identified through the Applicants HSE Design Philosophy (Volume 2, Appendix 6.1) and committed through in the ES are set out in Volume 1, Chapter 6: Major Accidents and Disasters.

| Ref. | Tertiary mitigation | Mechanism to Secure | Responsibility | Timescales |
|------|---|---------------------|----------------|------------|
| | Tertiary mitigation presented below has been collated from the EIA Scoping Report (Volume 2, Appendix 2.1), Chapter 4: Development Specification and Technical Chapters 6 – 13. | | | |

exposure to occupational hazards for on-site users (and thus limiting implications beyond the Site).

The plant layout and human and machine or equipment interface points have been designed to maximise safety.

Building/Structure Design and Construction

| | | | | |
|----------|--|--|--|--|
| T16 = | <p>All buildings/structures (including plant and equipment) will be constructed in accordance with (where required and applicable):</p> <ul style="list-style-type: none"> • HSE Design Codes – Plant; • BS 8485: Ground gas membranes; • CIRIA C735 Good practice on the testing and verification of protection systems for buildings against hazardous ground gases; • CIRIA Report C572: Treated ground engineering properties and performance; • British Research Establishment document FB75: Building on Fill – Geotechnical Aspects; • BS 6031:2009: Code of Practice for Earthworks; • Building Regulations and associated Approved Documents; • Technical Measures Document ‘Design Code – Plant’; • Protection against lightning strikes on process plant located outside buildings is also required; • All proposed buildings/structures (including process plant and equipment) will undergo necessary checks and measures as part of the design process (i.e., review of design and associated risk assessment by Design Safety | Approval of required COMAH documents by HSE, NRW and NPTCBC, as applicable, and compliance with Building Regulations | Project Design Engineer / Architect / Contractor | Pre-determination and Pre-Construction |
|----------|--|--|--|--|

| Ref. | Tertiary mitigation | Mechanism to Secure | Responsibility | Timescales |
|--|--|--|-----------------|--|
| | <p>Tertiary mitigation presented below has been collated from the EIA Scoping Report (Volume 2, Appendix 2.1), Chapter 4: Development Specification and Technical Chapters 6 – 13.</p> <p>Engineer), third party independent check of design or within conjunction with relevant authority (i.e. HSE); and</p> <ul style="list-style-type: none"> All foundations across the Site will be designed and installed in line with relevant standards and guidance, including (but not limited to) CIRIA Report C572: Treated ground engineering properties and performance; British Research Establishment document FB75: Building on Fill –Geotechnical Aspects and BS 6031:2009: Code of Practice for Earthworks. | | | |
| Japanese Knotweed Management Strategy | | | | |
| T17 + | Implementation of long term management strategy, as identified in P11. | - | Applicant / ABP | Pre-application / Construction / Operation |
| Marine Piling Method Statement | | | | |
| T18 * | A Marine Construction Method Statement will be prepared and submitted as part of the Marine License for the proposed construction and operational wharfs. This will set out the controls to ensure the steel lock gates at the entrance of Port Talbot Docks are closed during any piling activities within the marine environment associated with the construction of the Proposed Scheme. | Marine Licence, subject to approval by NRW | Contractor | Construction |

Table 3: Environmental Management Plan – Secondary Mitigation

| Ref | Secondary Mitigation | Mechanism to Secure | Responsibility | Timescales |
|---|---|----------------------------|---|-------------------|
| Full detail is outlined in Technical Chapters 6 – 13 . These are broadly in topic order. | | | | |
| Terrestrial Ecology | | | | |
| Not currently identified for PAC. | | | | |
| Noise Construction Compliance Review | | | | |
| S1* | 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 Chapter 12: Noise and Vibration . | Planning condition | Contractor | Construction |
| Plant and Equipment Noise Evaluation and Validation | | | | |
| S2* | The assessment of effects has been informed by the sound power levels for the proposed equipment and plant within the Proposed Scheme, as set out within Table 12.6 , which in turn have been informed by the Project Design Engineers and suppliers. As such, upon completion of the final design and at the point procurement of plant / equipment is undertaken, it will be necessary to ensure the final plant and equipment aligns with the assessed sound power levels or can utilise appropriate plant / equipment specific mitigation to achieve these levels. Therefore, a further level of evaluation and validation of equipment and plant against Table 12.6, Chapter 12: Noise and Vibration is necessary. | Planning condition | Project Design Engineers / Noise Consultant | Pre-operation |
| Marine Pilling Method Statement | | | | |
| S* | A Marine Construction Method Statement will be prepared and submitted as part of the Marine License for the proposed construction and operational wharfs, this should include as a minimum: | Marine Licence, subject to | Contractor | Pre-Determination |

| Ref | Secondary Mitigation | Mechanism to Secure | Responsibility | Timescales |
|-----|--|---------------------|----------------|------------|
| | Full detail is outlined in Technical Chapters 6 – 13 . These are broadly in topic order. | | | |
| | <ul style="list-style-type: none"> <li data-bbox="439 331 1346 443">• A soft-start procedure to be implemented for all piling events, to present the opportunity for receptors to flee the 15m distance to recoverable injury, and potentially the distance to TTS threshold; and | approval by NRW | | |
| | <ul style="list-style-type: none"> <li data-bbox="439 451 1346 494">• Details of proposed bubble curtain(s). | | | |

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