

wardell-armstrong.com

ENERGY AND CLIMATE CHANGE
ENVIRONMENT AND SUSTAINABILITY
INFRASTRUCTURE AND UTILITIES
LAND AND PROPERTY
MINING AND MINERAL PROCESSING
MINERAL ESTATES
WASTE RESOURCE MANAGEMENT



ASSOCIATED BRITISH PORTS

MANUFACTURING PLANT, NEWPORT DOCKS

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN (CEMP)

JANUARY 2020

DATE ISSUED: 24/01/2020
JOB NUMBER: CA11637
REPORT NUMBER: 0002
VERSION: V2.0
STATUS: FINAL

ASSOCIATED BRITISH PORTS

MANUFACTURING PLANT, NEWPORT DOCKS

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN (CEMP)

JANUARY 2020

PREPARED BY:

Sam Folarin Associate Director



Liam Price Principal Engineer



REVIEWED BY:

Sam Folarin Associate Director



APPROVED BY:

Louise Dow Technical Director





This report has been prepared by Wardell Armstrong LLP with all reasonable skill, care and diligence, within the terms of the Contract with the Client. The report is confidential to the Client and Wardell Armstrong LLP accepts no responsibility of whatever nature to third parties to whom this report may be made known.

No part of this document may be reproduced without the prior written approval of Wardell Armstrong LLP.



Wardell Armstrong is the trading name of Wardell Armstrong LLP, Registered in England No. OC307138.

Registered office: Sir Henry Doulton House, Forge Lane, Etruria, Stoke-on-Trent, ST1 5BD, United Kingdom

UK Offices: Stoke-on-Trent, Birmingham, Bolton, Cardiff, Carlisle, Edinburgh, Glasgow, Leeds, London, Manchester, Newcastle upon Tyne and Truro. International Offices: Almaty and Moscow.

ENERGY AND CLIMATE CHANGE
ENVIRONMENT AND SUSTAINABILITY
INFRASTRUCTURE AND UTILITIES
LAND AND PROPERTY
MINING AND MINERAL PROCESSING
MINERAL ESTATES
WASTE RESOURCE MANAGEMENT

CONTENTS

| | | |
|-----|---|----|
| 1 | PROJECT DETAILS & PURPOSE OF CEMP..... | 1 |
| 1.1 | Project Description..... | 1 |
| 1.2 | Purpose of the CEMP | 1 |
| 1.3 | Site Description & Wider Site Setting | 3 |
| 1.4 | Scope of Works and Build Programme | 4 |
| 1.5 | Key Construction Activities | 7 |
| 1.6 | Characteristics of the Plasterboard Production..... | 8 |
| 2 | BASIC CEMP REQUIREMENTS | 10 |
| 2.1 | Legal Requirements..... | 10 |
| 2.2 | Planning..... | 10 |
| 2.3 | Contractor Responsibilities | 10 |
| 2.4 | Emergencies | 11 |
| 2.5 | Monitoring & Auditing | 13 |
| 2.6 | Communication | 14 |
| 2.7 | Environmental Induction, Awareness, Information and Training..... | 15 |
| 2.8 | Security..... | 16 |
| 3 | PEOPLE | 17 |
| 3.1 | On Site Structure and Responsibility..... | 17 |
| 4 | GEOLOGY & GROUND CONDITIONS | 20 |
| 4.1 | Purpose of the CEMP | 20 |
| 4.2 | Specific Requirements..... | 22 |
| 4.3 | Walkover Key Findings | 23 |
| 4.4 | RSK Geo-Environmental Findings and Assessment..... | 24 |
| 4.5 | General Mitigation Measures | 26 |
| 5 | WASTE MANAGEMENT & NATURAL MATERIALS MANAGEMENT | 30 |
| 6 | WATER MANAGEMENT PLAN | 34 |
| 6.1 | Background..... | 34 |
| 6.2 | Specific Requirements..... | 37 |
| 7 | ECOLOGICAL MANAGEMENT PLAN | 43 |
| 7.1 | Basic Requirements..... | 43 |
| 7.2 | Background..... | 43 |
| 7.3 | Specific Requirements..... | 44 |
| 8 | NOISE AND VIBRATION MANAGEMENT PLAN..... | 48 |
| 8.1 | Background..... | 48 |

| | | |
|------|--|----|
| 8.2 | Specific Requirements..... | 48 |
| 8.3 | Good Practice / Best Available Techniques (BAT)..... | 49 |
| 9 | TRAFFIC AND TRANSPORT | 55 |
| 9.1 | Background..... | 55 |
| 9.2 | Specific Requirements..... | 55 |
| 10 | AIR QUALITY MANAGEMENT PLAN | 57 |
| 10.1 | Background..... | 57 |
| 10.2 | Specific Requirements..... | 58 |
| 11 | LANDSCAPE AND ARBORICULTURAL MANAGEMENT PLAN | 66 |
| 11.1 | Background..... | 66 |
| 11.2 | Specific Requirements..... | 68 |
| 12 | CULTURAL HERITAGE ASSETS MANAGEMENT PLAN | 71 |
| 12.1 | Background..... | 71 |
| 12.2 | Specific Requirements..... | 72 |

APPENDICES

APPENDIX A: Drawings & Plans

APPENDIX B: CEMP Review Table

APPENDIX C: Environmental Aspects & Impacts Register (Example)

APPENDIX D: Draft Register of Consents, Undertakings & Assurances

APPENDIX E: Draft Contacts List

1 PROJECT DETAILS & PURPOSE OF CEMP

1.1 Project Description

- 1.1.1 Wardell Armstrong LLP (WA LLP) has been instructed by Gleeds Management Services Ltd (Gleeds) on behalf of Associated British Ports (ABP) to prepare a Construction Environmental Management Plan (CEMP) which is to be submitted for approval by Newport County Council (NCC).
- 1.1.2 This CEMP has been requested to support planning requirements for the proposed redevelopment.
- 1.1.3 The redevelopment of the site located at Newport Docks comprises a proposed Plasterboard Manufacturing Facility covering an internal area of approximately 15,140m². The main building will have a maximum height to eaves of approximately 18m and a maximum ridge height of approximately 21m. The predominant eaves height will be approximately 9.2m and the predominant ridge height will be approximately 12.5m. The building will be approximately 202m long at its longest point and approximately 110m wide at its widest point.
- 1.1.4 A strip of vegetation approximately 10m wide will be maintained at the western boundary and an area of approximately 0.56ha will be maintained to incorporate the 'priority habitat open mosaic habitats on previously developed land' in the Proposed Development layout.

1.2 Purpose of the CEMP

- 1.2.1 This supporting document has been prepared so as to identify the measures that will be implemented to mitigate against significant environmental aspects of the works associated with the construction phase of the Proposed Development. It establishes the contract-specific information with which all Contractors should comply.
- 1.2.2 The successful management of construction-related environmental issues during the works shall be delivered through the development and implementation of the CEMP.
- 1.2.3 The level of detail provided by this document will allow it to be formally assessed by NCC and hopefully endorsed so as to allow for construction activities to commence without delay should the planning application be determined favourably.

- 1.2.4 The document also informs consultees and other stakeholders about the relevant CEMP requirements.
- 1.2.5 A drawing showing the Proposed Development layout is provided within Appendix A as Drawing *153091_STL_00_00_DR_A_ZZZZ_01001_P28_Proposed Site Plan*.
- 1.2.6 The CEMP will be a live working document, subject to constant updating. Each section is to be reviewed and updated as and when necessary. A CEMP Project Review Table for use during the works is located in Appendix B of this document.
- 1.2.7 Once this CEMP is submitted for NCC approval, any changes to the approach outlined within this document must be reviewed with the Local Planning Authority (LPA) and all other relevant parties. This process must be undertaken prior to carrying out any amended procedures.
- 1.2.8 This CEMP includes a number of tools which provide the appointed Contractor with advice on environmental protection. An Environmental Aspects and Impacts Register template is contained in Appendix C of this document. This will be used by the appointed Contractor to:
- a) record all sensitive environmental features that have the potential to be affected by the construction of the scheme;
 - b) assess the severity of each impact on the relevant feature; and
 - c) outline controls to be put in place to mitigate against the potential negative impact arising from the construction of the Proposed Development.
- 1.2.9 This should be updated regularly as new aspects and impacts come to light. The appointed Contractor will utilise guidance such as their in-house Environmental Specialist, CIRIA publication C741 “Environmental Good Practice on Site Guide” and a practical handbook.
- 1.2.10 The site-specific mitigation measures contained within this document have been sourced from WA LLP and the project team as a whole (as instructed by Gleeds).
- 1.2.11 Where feasible, the CEMP will be adopted by the Contractor under the conditions of their contract with the Employer, however, the document may need amendment upon the confirmation of an appointed Contractor.

1.3 Site Description & Wider Site Setting

- 1.3.1 The site is situated within Alexandra Docks, Newport, South Wales with the centre of the site located at a National Grid Reference of ST 31365, 84160.
- 1.3.2 The development site area comprises approximately 3.4 hectares of land which is open and undeveloped; see Drawing CA11637-003. This is the area of site which is proposed to be developed and is the subsequent focus of this CEMP document and hereafter referred to as the site.
- 1.3.3 Newport Docks are located directly to the south of Newport at the mouth of the River Usk. Occupying a prime location, the docks serve the UK's main industrial and commercial regions and have strategic road links to the M4 and Newport's Southern Distributor Road in addition to active rail links to the wider network within Wales. The Proposed Development site is situated to the west of Severn Sands Sand Terminal and South Dock, and south of a site occupied by Speedy Hire. The Proposed Development site borders the Ebbw River located to the west.
- 1.3.4 The Proposed Development site lies within the south-west corner of the Newport Dock estate which is operated by ABP. The commercial viability of the proposed plasterboard manufacturing facility is dependent on its location within the docks, as the transportation of gypsum (and associated cost) is reduced.
- 1.3.5 To the north of the site lies Alexandra Docks, beyond which lies industrial units and port related land. The east of the site is bound by a sand and gravels supplier and industrial works. The Ebbw River bounds the south western boundary beyond which lies fields and agricultural land. To the south of the site lies the River Usk and estuary.
- 1.3.6 The Proposed Development is located on brownfield land that was reclaimed from the Severn Estuary during the early 1900s. Since then, the site has had various uses, including a car storage facility in the 1990s until the early 2000s, and ad-hoc cargo storage. In 2008/09, planning permission was obtained for a new biomass power plant (planning application ref. NCC 08/1257), but this was never built. Therefore, the site remains derelict, vacant land.
- 1.3.7 Topographically the site is 9m above ordnance datum (AOD) at its highest within the northern corner of the site.
- 1.3.8 An aerial image of the site is illustrated overleaf within Figure 1.

Figure 1: Aerial Image Showing the Approximate Site Boundary (not to scale)



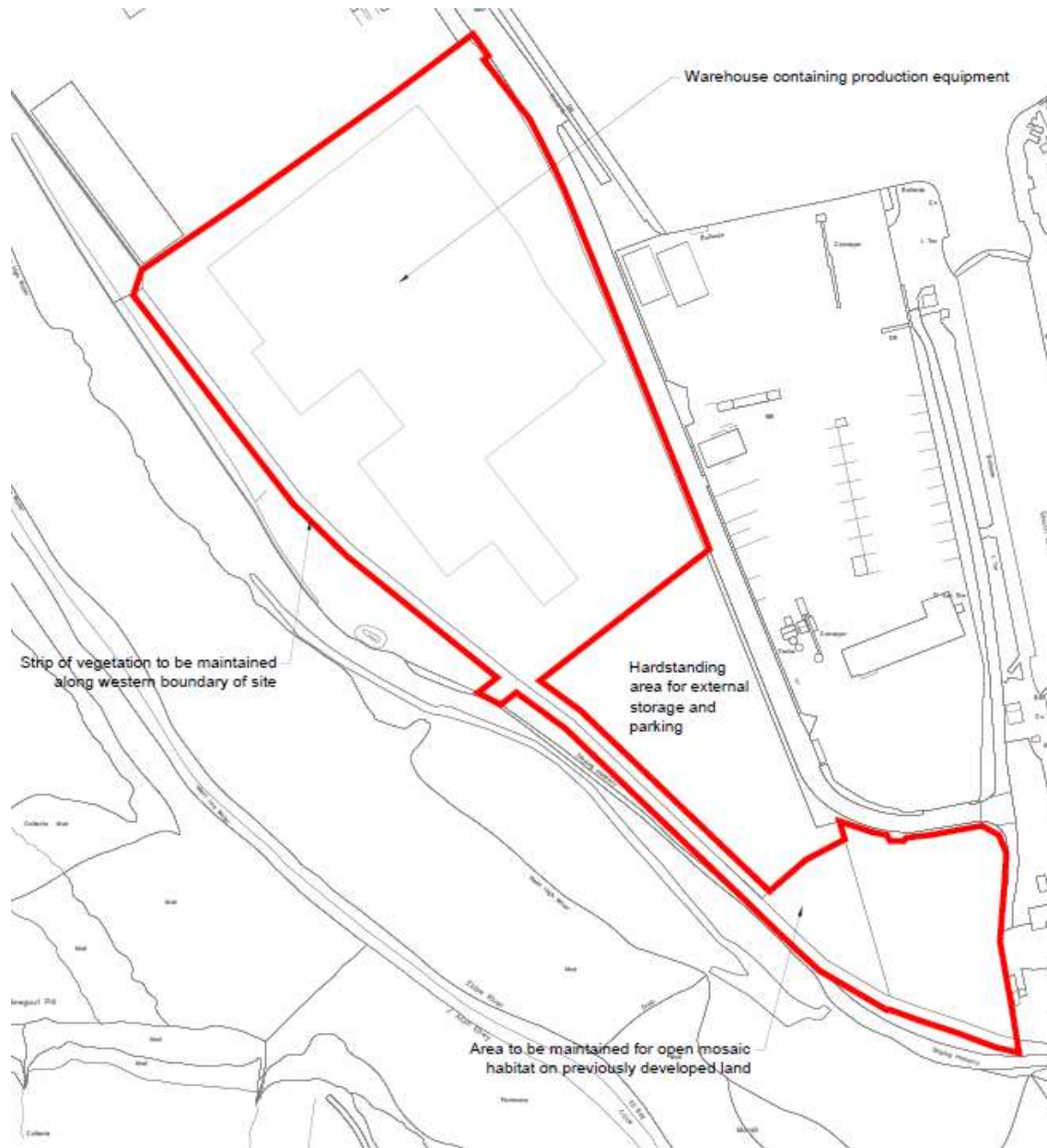
Image provided by Google Earth Imagery (Imagery Date 25/06/2018)

1.4 Scope of Works and Build Programme

- 1.4.1 The construction programme for the Proposed Development is yet to be finalised, however there is a broad indicative schedule for the construction works.
- 1.4.2 The CEMP will be adopted by the Contractor under the conditions of their contract with ABP. As of yet, the build programme has not been confirmed.
- 1.4.3 The Proposed Development will comprise a simple warehouse-type structure enclosing production lines, conveyor belts, storage loading areas and two hoppers. Covered storage areas / bays, hardstanding parking and an administrative office are also associated with the development. Planning permission for this Proposed Development will be applied for under the Town and Country Planning Act 1990.
- 1.4.4 The warehouse will consist of a simple steel portal frame construction, designed to accommodate a large interior space for equipment, storage and handling. The proposed ground engineering solution for the Proposed Development area will comprise of raising site levels to form an engineered platform (to mitigate flood risk) and a piled foundation solution for the proposed building(s). The detailed geotechnical design will be assessed following a site investigation and geotechnical risk assessment.

- 1.4.5 Enabling works are required to raise site levels to achieve a FFL of 9.63m AOD which will entail the construction of an engineered soil platform across the Proposed Development area. The foundations for the proposed warehouse structure are intended to comprise of piles, end bearing on competent strata at depth. Given the thickness of the Made Ground layer, which can vary between 0.3m and 3.0m, and the thickness of the underlying highly compressible Tidal Flat Deposits, which can vary between 9.5m and 13.7m, the proposed solution for ground improvement (soil consolidation) is to install band drains to accelerate the settlement and time for consolidation, and to reduce the risk of excessive total and differential settlement during/post construction.
- 1.4.6 Alternatively, the enabling works will entail construction of a piled transfer blanket and the proposed building will also be piled and this solution is likely to be more favourable to construction timescales and reduces the risk of settlement issues. Besides the calcination tower (explained later in this section), the production equipment itself is lightweight. Covered storage areas / bays, hardstanding parking and an administrative office are also associated with the Proposed Development.
- 1.4.7 An indicative layout of the Proposed Development is shown in Figure 2 (also see Drawing CA11637-007).

Figure 2: Indicative layout of Proposed Development



Base mapping provided by Stride Treglown

1.4.8 Site preparation is an important stage of the Proposed Development works on account of the need to undertake comprehensive review of tree protection and general site preparation. Ecological mitigation works will be required under the relevant licences.

1.4.9 Site accessibility has been considered from the outset of the design process. Vehicular access is to be detailed within a Design and Access Statement as well as the Transport and Traffic assessment (scheduled to be provided by Adams Hendry and Curtins Consulting Ltd respectively).

1.4.10 The Proposed Development works will generally comprise:

- Vegetation Clearance with an Ecological Watching Brief;
- Earthworks comprising cut and fill;
- Site establishment, logistics and welfare;
- Temporary works; and
- Environmental monitoring and control.

1.4.11 For each of the main activities above, specific materials, equipment and method used to achieve the specified requirements will be included in the Method Statements.

1.5 Key Construction Activities

1.5.1 At present, a Principal Contractor has not been appointed and therefore it is not possible at this time to fully include precise detail on the proposed construction programme and individual activities and associated methodology/sequencing of work.

1.5.2 In summary, the works comprise the construction of an approximate 15,140m² industrial building (to typical shell and core standard) requiring the following key construction activities and elements:

- Formation of contractors site set up;
- Site clearance and removal of existing vegetation and site obstructions;
- Raising of site levels utilising suitable imported engineered fill to achieve flood mitigation requirements;
- Ground engineering works to mitigate differential settlement;
- Piled foundations and associated substructure works;
- Reinforced ground floor concrete slab / piled floor slab;
- Structural steelwork superstructure;

- Insulated composite metal cladding to the envelope with low level external facing brickwork;
- Roof drainage with hidden guttering and internal downpipes;
- Polyester powered coated aluminium curtain walling and glazing;
- Roller shutters and external doors;
- Formation of onsite road access and tie-in with existing port road infrastructure;
- Reinforced concrete slab to external service yard area, with associated surface water drainage;
- Provision of car parking area;
- Soft landscaping;
- Provision of off-site incoming main services to the site comprising gas, water, electricity and telecoms/data; and
- Provision of foul drainage to septic tank.

1.5.3 The installation of the process engineering production plant and internal fit-out of the ancillary support office, laboratory and staff recreational areas will be undertaken direct by the tenant.

1.6 Characteristics of the Plasterboard Production

1.6.1 During operation, gypsum will be delivered to Newport Docks via vessel, and discharged into a quayside storage facility. From there, the raw material will be delivered to site to be stored before use in production.

1.6.2 Plasterboard products will be distributed from the manufacturing facility mainly via road transport, though export markets by sea will also be accessed where possible.

1.6.3 Approximately 70 full-time equivalent (FTE) jobs will be created by the Proposed Development and supports NCC policy EM2 in the Local Development Plan (Newport City Council, 2015).

1.6.4 The production of plasterboard involves several phases (as outlined within Figure 3). The raw material is gypsum (chemically known as calcium sulphate dihydrate); a non-toxic, naturally occurring mineral in sedimentary rock formations which contains calcium, sulphur bound to oxygen, and water (*Gypsum Association, 2019*).

- 1.6.5 A process known as calcination is undertaken to extract half a molecule of water from the gypsum. This calcination/dehydration process is achieved by heating to remove 15 % of the water of crystallisation (water that is present in crystalline compounds in definite proportions), allowing the gypsum to harden when mixed with water to form the plasterboard. Once heated, the gypsum is passed through a milling process to reduce grain sizes and is stored in silos.
- 1.6.6 The plasterboard itself is then formed between two sheets of special paper. Depending on the type of plasterboard being produced, different ratios of gypsum, water and additives are combined in a mixer.
- 1.6.7 On a conveyor belt, this paste is then spread on a paper sheet. A superior sheet is applied on top, and the board is passed through a series of bending roll machines to ensure a consistent thickness and width. Once cut, the plasterboards are dried to remove excess water. Following a quality control check, the plasterboards are conditioned in pallets, labelled and stored ready for distribution.
- 1.6.8 The production process also includes recycling of already used plasterboards which are reintroduced to the beginning of the process after crushing and separation.

Figure 3: Plasterboard Production Process Schematic

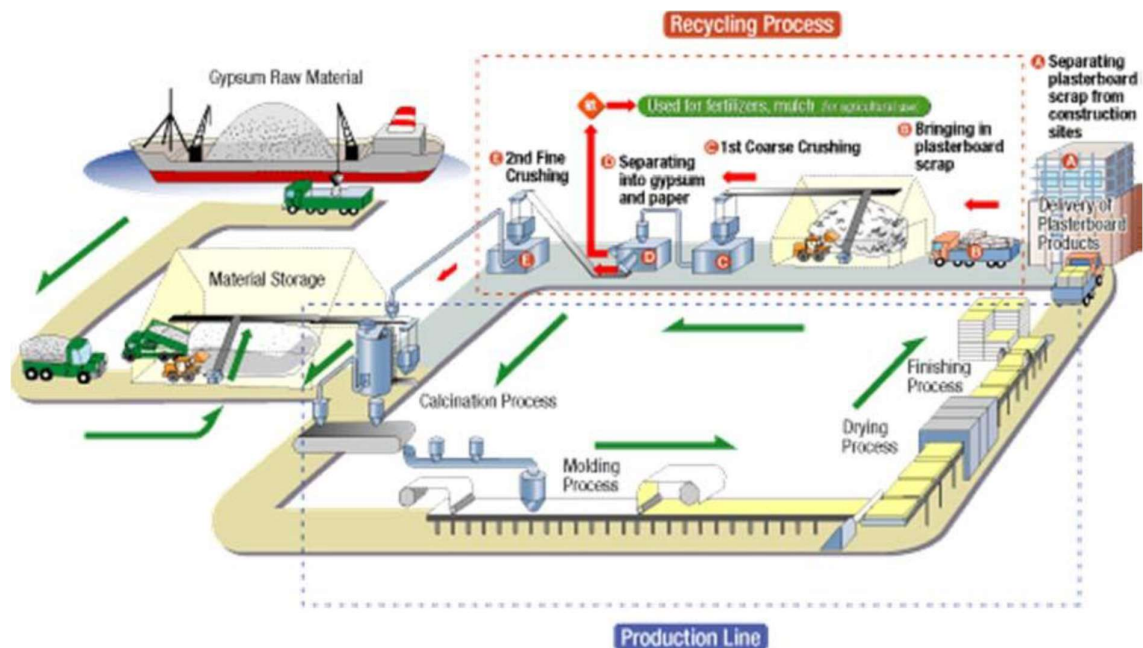


Image provided by ABPmer

2 BASIC CEMP REQUIREMENTS

2.1 Legal Requirements

2.1.1 There will be a procedure for identifying legal requirements applicable to the works as well as other requirements (i.e. contractual). Compliance shall be periodically evaluated during audits.

2.1.2 The following sources can be used to ensure that management is aware of the legal and other environmental obligations:

- Industry bodies;
- Specialists publications;
- Specialists waste disposal contractors;
- Natural Resources Wales; and
- Local Authorities.

2.2 Planning

2.2.1 There will be a procedure to identify significant environmental aspects related to the works and outline mitigation measures that are required to reduce the risk of environmental impact arising from that aspect. One of the criteria used to assess the significance of each aspect is associated legislation of contractual requirements.

2.2.2 As a result of the assessment of environmental aspects, all significant impacts shall be identified, and measurable objectives/mitigation set against them to reduce the impact of operation and service provision.

2.3 Contractor Responsibilities

2.3.1 The appointed Contractor shall be responsible for safeguarding the environment and for mitigating the effects of the works by implementing the general environmental requirements outlined in the contract documentation and the specific requirements of the CEMP.

2.3.2 This CEMP describes how construction activities shall be undertaken and managed in accordance with legislative requirements and construction industry best practice.

- 2.3.3 This CEMP is to be reviewed and further developed by the appointed contractor to reflect mitigation measures and conditions as construction progresses.
- 2.3.4 A draft register of consents, undertakings and assurances, including a draft list of specific environmental licences, consents and applicable permits is detailed in Appendix D of this document. This shall be further reviewed and updated by the Contractor at regular intervals during the works.
- 2.3.5 All documentation in relation to the environmental management of the works shall be maintained by the Contractor and be available to the Client (or the Client's Representative).
- 2.3.6 The Contractor must operate an Environmental Management System (EMS) which is certified to BS EN ISO 14001:2015.
- 2.3.7 The performance of the Contractor's enforcement of the CEMP in meeting environmental objectives and targets and in achieving effective environmental management shall be subject to on-going review.

2.4 Emergencies

- 2.4.1 Information regarding spill containment materials, methods and spill response equipment shall be clearly defined and submitted to the Client (or the Client's Representative). A procedure for a general response shall be included in the Health and Safety Plan detailed by the Contractor; stating the chain of command and standby operatives, and clearly advised to all staff. An Environmental Manager/Co-ordinator will be appointed by the Contractor.
- 2.4.2 The emergency contact details for the works shall be clearly displayed at the site where all staff can see them. An example of a template for providing emergency contact details is provided in Appendix E.
- 2.4.3 A list of any and all nearby residential properties, downstream abstractors and other sensitive receptors that could be affected by an environmental incident shall be reviewed, compiled and maintained by the Contractor.
- 2.4.4 The Designer will ensure any environmental impacts are communicated to the Client/Contractor. It is the Client's responsibility to report any environmental concerns and respond appropriately to incidents.

2.4.5 Environmental incidents shall be recorded by the Contractor including:

- Nature of spill / leak / incident;
- Time / date;
- Exact location;
- Type of material released;
- Approximate volume released;
- Actions taken to prevent contamination;
- Individuals reported to; and
- Lessons learnt.

2.4.6 Lessons learnt shall be fed back to site staff through safety and environment briefings and used by the Environmental Manager/Co-ordinator to amend procedures and update the CEMP accordingly.

2.4.7 Emergency procedures shall be tested by the Environmental Manager/Co-ordinator and the results reported to the Contractor's Project Manager. Examples of procedures would include:

- The names, 24-hour contact details of and the quickest transport route to all emergency response personnel and emergency services;
- The procedures for reporting and documenting an emergency incident;
- Personnel responsibilities during an emergency incident; and
- The location of onsite information on hazardous materials and spill containment materials.

2.4.8 Action plans for the following environmental incidents must be prepared:

- Oil and fuel spillage;
- Excessive noise;
- Excessive dust;
- Water pollution; and
- Site-specific ecological constraints.

2.5 Monitoring & Auditing

- 2.5.1 Environmental policies and contractor environmental objectives are communicated to all personnel through induction procedures, specific designated workshops, and toolbox talks. Relevant policy documents are available to view on site notice boards.
- 2.5.2 All activities that may have an impact on the environment will be controlled by the implementation of procedures and method statements. Each procedure and method statement will be reviewed by a competent person within WA LLP or project manager to ensure that they are in line with this plan as well as other applicable environmental requirements.
- 2.5.3 Compliance with the environmental management system requirements, policy, and objectives as well as compliance with the project environmental plan will be evaluated through periodic internal audits. The main monitoring tools are:
- Site visits and inspections;
 - Physical monitoring (noise, vibration, and air pollution);
 - Watching brief activities (ecology);
 - Waste records; and
 - Records of material import.
- 2.5.4 Daily inspections of the site shall occur to ensure compliance with the CEMP, and to minimise the risk of damage to the environment. All environmental incidents shall be reported to the Environmental Manager/Co-ordinator.
- 2.5.5 The Environmental Manager/Co-ordinator shall undertake monthly inspections and complete an assessment of the works' environmental performance measured against environmental standards, relevant legislation and the CEMP objectives. The Environmental Manager/Coordinator shall produce a monthly report detailing environmental performance and non-compliances and shall inform the Project Manager of all findings.
- 2.5.6 Environmental key performance indicators applicable to the works will be measured and included in the progress reports to the client as required. The parameters measured will include energy/fuel consumption; resource consumption and waste and emissions.

- 2.5.7 Document control shall be in accordance with the Client's Quality Management System (QMS) and copies of all environmental audit reports, consents and licences shall be maintained by the Project Manager and held on site for review at any time.
- 2.5.8 Internal and external environmental auditing and inspections shall be conducted. The Contractor shall be responsible for investigating and addressing any non-conformance raised by the audit within an agreed time frame and ensuring that corrective and preventative actions have been fully closed out.
- 2.5.9 Internal audits will be carried out by an environmental manager or qualified auditor that is independent from the project management team. The project team will facilitate second and third-party audits carried out on behalf of the client.
- 2.5.10 An initial project audit shall be scheduled within 3 months of commencement on site, plus a minimum of 1 additional audit per year. A copy of all audit reports and associated documents shall be kept in a site file.

2.6 Communication

- 2.6.1 The Contractor is required to manage the environmental impacts of all suppliers that provide services in relation to the works.
- 2.6.2 All correspondence between members of the project team relating to environmental issues shall be written/emailed/confirmed via Confirmation of Verbal Instruction (CVI).
- 2.6.3 The environmental responsibilities of suppliers working with / for the Contractor shall be managed, monitored and reported through the application of Method Statements.
- 2.6.4 The Contractor shall cooperate fully with arrangements for auditing suppliers' safety and environmental procedures.
- 2.6.5 The Environmental Manager/Co-ordinator shall advise the Site Manager on external communication with regulatory bodies, the public, and any other external stakeholders on environmental matters.
- 2.6.6 Key business information, performance against targets and effectiveness of the Method Statements is communicated to the Management Team at periodic meetings. Communication with operatives is normally conducted during toolbox talks or daily task briefings.

- 2.6.7 Communication with the Client regarding environmental impacts will take place during monthly progress meetings and is recorded via minutes and progress reports which can include results of monitoring, incidents, complaints, progress, and status of license applications etc. Performance against the environmental objectives and targets can be reviewed at these meetings.
- 2.6.8 A full contact list containing names, job titles and contact numbers shall be produced and maintained. On site communication will be provided by use of radios and/or mobile telephone where use is permitted.
- 2.6.9 The Site Manager will be responsible for receiving, recording and responding to external complaints. A Complaints Log shall be maintained and reviewed regularly to identify any changes to management procedures or operational controls to mitigate causes of complaints wherever possible. All complaints will be recorded in the Considerate Constructor site file.

2.7 Environmental Induction, Awareness, Information and Training

- 2.7.1 The raising of environmental awareness is seen as a crucial element in the appreciation and implementation of the CEMP.
- 2.7.2 All staff shall be suitably trained and competent for their roles and have received environmental awareness training to ensure their competence in carrying out their duties on the project.
- 2.7.3 Specialist training relating to certain environmental aspects will be developed and delivered to key members of the site team as required throughout the project.
- 2.7.4 All training records will be maintained and filed on site. the records shall include the content of the courses (induction and toolbox training), record of attendance and schedule of review.
- 2.7.5 A general environmental induction shall be developed to introduce all site personnel to the environmental issues associated with the site, important environmental controls, and general emergency procedures. A full register of induction attendance shall be maintained on site.
- 2.7.6 Task-specific toolbox talks and method statement briefings on environmental issues relating to the works will be conducted as the works progress. A full register of toolbox talks or method statement briefing attendance shall be maintained on site.

- 2.7.7 Evaluation of sub-contractors will be conducted initially through assessment of the approved supplier/sub-contractor questionnaire prior to appointment to conduct any sub-contracted works. This evaluation includes review of quality and environmental credentials. CVs of all specialist staff would be submitted for approval.
- 2.7.8 All activities that may have an impact on the environment will be controlled by the implementation of procedures and method statements.
- 2.7.9 Competency requirements for specific activities will be described in relevant Method Statements. All staff and operatives involved will be briefed on the method statement before each activity commences.

2.8 Security

- 2.8.1 The Contractor will secure the site perimeter using anti-climb Heras fencing which will be erected as soon as access is available before any work commences.
- 2.8.2 Once the site perimeter is established and any site clearance is complete, the Contractor will erect the permanent fencing to the site boundary.
- 2.8.3 On site security will be arranged and maintained by the appointed Principal Contractor in collaboration with port authorities.

3 PEOPLE

3.1 On Site Structure and Responsibility

3.1.1 The Contractor's dedicated environmental specialist team (collectively known as the Contractor's Environmental Team) and any other relevant specialist whom the Contractor deems to be necessary in discharging the contract's CEMP obligations are detailed below:

- Contracts Manager: The Contracts Manager has overall responsibility for the safe and proper execution of the contract works. They will ensure the construction programme is carried out with consideration of the environment.
- Director of Safety Health and Environment (SHE): The SHE Director will visit the site and have total responsibility for the implementation of safe systems of work. They will direct and advise staff and site personnel in respect of safety and environmental legal requirements.
- Site Manager: The Site Manager (SM) will be resident onsite and will be responsible for ensuring the works are completed in accordance with this plan and all applicable legislation, including being responsible for the allocation of sufficient resource to implement all Environmental Management. They will review this document at regular intervals and update when necessary, including undertaking a monthly review of the CEMP implementation. The SM will review environmental management reports prepared by the Project Environmental Manager, investigate incidents and non-conformances, and correct where necessary. The SM will be responsible for signing off on, and ensuring the adherence to, all permits, authorisations and consents and will be the main point of contact with the Client (or the Client's Representative) regarding Environmental Management onsite; also ensuring any environmental instructions from the Client are carried out. The SM will ensure the Contractor's staff and sub-contractors receive appropriate training on project specific environmental issues and any task-specific risks have been effectively communicated.
- Head of Quality and Environment (HQE): The HQE is responsible for the implementation of the Environmental Management System and its associated management procedures. They will liaise closely with the project management team and advise on the delivery of environmental responsibilities.
- Project Environmental Manager (PEM)/Environmental Co-ordinator: The PEM's

responsibilities include liaising with the project team to ensure compliance with environmental requirements as well as planning, implementing, and reporting the environmental monitoring of noise, vibration, and dust, as required. This will be completed via environmental audits and inspections. The PEM is also responsible for the dissemination of environmental information and maintaining awareness of the work force of the environmental implications of their actions including delivering environmental training and toolbox talks. The PEM will report non-compliances to the SM and will, as far as reasonably practicable, attend any environmental incidents onsite. Incidents and non-conformances will be corrected, and preventative action implemented. The PEM will aid in developing and reviewing the CEMP and relevant procedures including risk assessments and method statements, ensuring all environmental standards and commitments are adhered to, including carrying out the relevant/necessary environmental induction and training. Attendance at formal contract progress meetings and liaison with third-party interest groups is required.

- Project Waste Coordinator (PWC): The PWC is responsible for maintaining the Site Waste and Natural Materials Management Plan (SWNMMP), ensuring all waste carriers are registered, all waste transfers are accompanied by a waste transfer note or consignment note as required, and waste records are kept in accordance with internal procedures and legal requirements.

3.1.2 The Ecological Consultant appointed for the project shall be responsible for:

- Working with the Environmental Manager/Co-ordinator to review, update and maintaining all relevant ecological mitigation and method statements throughout the works;
- A watching brief on site and monitoring as outlined in the mitigation management plans and relevant method statements; and
- Reporting to the Environmental Manager/Co-ordinator.

3.1.3 The Arboricultural consultant appointed for the project shall be responsible for:

- Working with the Environmental Manager/Co-ordinator to review, update and maintain the mitigation measures outlined within the Arboricultural Impact Assessment Report ; and
- Working with the Environmental Management/Coordinator to review, update

and maintain the Tree Protection Plan and Arboricultural Method Statement throughout the works.

- 3.1.4 All the various reports, assessments and method statements relevant to the site must be considered when reviewing environmental management requirements. All stipulations outlined within the associated documentation should be adhered to.
- 3.1.5 The Client (or Principal Contractor) will appoint various consultants to provide support on the many different elements of the project (i.e. heritage, ecology, trees, waste, air, noise, earthworks etc.). The ongoing consultations will provide the Client and Principal Contractor on how to best manage environmental risk identified at the site.
- 3.1.6 All site-based staff have a role in following good practice and being responsible for carrying out their activities without detrimental effects on the environment. Staff should comply with systems of work and undertake tasks in accordance with their training. All site-based staff are responsible for reporting any environmental concerns and incidents to their supervisors, including suggestions for improvements.
- 3.1.7 The Client should ensure that all relevant environmental documentation is communicated to the Contractor and the Environmental team. The Client is responsible for setting the standard for environmental management onsite, as stated in the contracts, and should report any environmental concerns and respond appropriately to incidents.

4 GEOLOGY & GROUND CONDITIONS

4.1 Purpose of the CEMP

4.1.1 The works have the potential to affect geology and soils as a result of:

- the exposure of new geological strata and the potential for increased erosion;
- altering the hydrogeology of an area; or
- impacts on features which are, themselves, of particular scientific/ecological interest.

4.1.2 The assessment of the geology of the site is based on BGS Geindex online mapping, Envirocheck Report, BGS Geological Map (Newport Solid and Drift, sheet 249), previous RSK Site Investigation Reports and a site visit.

4.1.3 There is no record of artificial ground on the BGS Geindex online mapping. However, the review of historical maps displays that the site is reclaimed land and therefore made ground is expected. The RSK site investigation identified made ground across the site and generally comprised of clayey sandy gravel with occasional fragments of wood, brick and concrete. Maximum encountered thickness of made ground was 3.0m. Within the infilled river area (historic Ebbw River meander) in the central site area, reworked alluvial clay has been recorded to between 13m and 13.75m depth below ground level.

4.1.4 The BGS Geindex and BGS Geological map display that superficial deposits in the form of Tidal Flat Deposits underlie the site. These normally consist of consolidated soft silty clay with layers of sand, gravel and peat. The RSK site investigation identified alluvial clays and gravels to underlie the made ground. The clays consist of soft grey/brown clays with varying gravel content. Bands of peat and peat were found within the clay deposits.

4.1.5 The depth to the base of the alluvial clays are believed to extend to depths between 12.5m bgl and 15.0m bgl. The thickness of the alluvial clay stratum is believed to range from 9.5m in the north west of site to 13.7m in the central part of the site. The average thickness of the unit is anticipated to be 11.5m.

4.1.6 Alluvial clay is shown to be underlain by alluvial gravel and encountered within all deep cable percussive boreholes. The alluvial gravel generally comprised of medium dense becoming very dense fine to coarse subangular to subrounded gravel with occasional subangular to subrounded cobbles.

- 4.1.7 Depth to the alluvial gravel ranged from 12.5m bgl to 15m bgl, with the thickness of the unit ranging from 5.8m to 8m.
- 4.1.8 The solid geology underlying the site consist of mudstone from the Mercia Mudstone Group. The strata consist of dominantly red, les commonly green-grey, mudstone and subordinate siltstones with thick halite-bearing units in some basinal areas. The RSK site investigation encountered Mercia Mudstone at 15m below ground level.
- 4.1.9 Where land has been previously contaminated by waste and residues from historical activities (including landfilling), the relocation of contaminated or other hazardous soil materials may degrade soil quality or introduce pollutant pathways. This may result in harm to human health (construction workers, site users and site neighbours), the environment (controlled waters, ecological receptors), or buildings (e.g. services).

Receptors

- 4.1.10 The receptors / resources which could potentially be affected by the works are:
- *Construction workers*: there would be earthworks and ground disturbance which could result in exposure to contaminated soil;
 - *Future site users*: remnant pathways may exist post-construction;
 - *Site neighbours (including members of the public)* – although there are no buildings on site, there are nearby landowners/occupiers. The works could potentially have an impact on neighbouring services and facilities;
 - *Built environment*: piles or other concrete structures could be vulnerable to attack from contaminants in the ground e.g. sulphate;
 - *Controlled Waters*: shallow groundwater within the soil and deeper groundwater within the solid geology. The nearest surface water feature is the Ebbw River located 17m west of the site; and
 - *Waste resources*: the proposed works are likely to generate some construction wastes such as excavated soils, potentially contaminated soils and highway/road materials. The generation and management of waste has the potential to impact upon a number of sensitive receptors that include, but are not limited to, waste management facilities (including void landfill space), traffic, air and water. Imported soil is required on the site to create the engineered platform. Subsequently, waste generation is expected to be low. It is estimated that the

earthworks will require import of between approximately 27,320m³ and 31,228m³ of soil.

4.2 Specific Requirements

- 4.2.1 The Contractor must assess risks arising from the construction works. The Management of Health and Safety at Work Regulations 1999 require that employers (and the self-employed) must undertake a suitable and sufficient risk assessment.
- 4.2.2 Site-specific risk assessments and method statements must also include comprehensive review of the amenities and assets of occupiers / land users on site and any necessary mitigation measures to protect these features. However, it should be noted that no overhead or underground services were observed onsite during the walkover.
- 4.2.3 Off-site disposal of contaminated soils should be minimised and inert materials should be recycled for re-use onsite wherever possible.
- 4.2.4 The risk posed to site workers involved in the construction phase by contaminated soils, dusts and vapours will be reduced to acceptable levels through standard health and safety planning. This will incorporate details on personal protection equipment (PPE) and working methodology.
- 4.2.5 The levels of PPE required will vary dependent on the area of the site being worked on, any expected contamination, and the actual work being undertaken.
- 4.2.6 The Health & Safety Management Plan for the works should allow for additional measures to be implemented if visibly contaminated materials are detected, or changes in working methodology occur during the works. Where necessary, advance works should be overseen by a contamination specialist, and additional health and safety mitigation measures should be incorporated into the working plan appropriately.
- 4.2.7 The following reports have been prepared by and site investigation works carried out by RSK Group PLC for the subject site. These reports have been made available for review by WA LLP:
- Preliminary Risk Assessment, Newport Biomass Project, Newport, Wales, 110041 – R1 (00), dated December 2007;

- Initial Geotechnical and Environmental Investigation, Newport Biomass Project, Newport, Wales, 110041 – R2 (00);
- Groundwater Risk Assessment, Newport Biomass Power Plant, Newport, South Wales, 310826 – R1 (00);
- Ground Gas Risk Assessment, Newport Biomass Power Plant, Newport, South Wales, 310826 – R2 (00);
- Factual Geotechnical Report, Newport Biomass Power Plant, Newport, South Wales, 310826 – R3 (00); and
- Interpretative Geotechnical Report, Newport Biomass Power Plant, Newport, South Wales, 310826 – R4 (00).

4.2.8 It should be noted that WA LLP has prepared an up to date Geoenvironmental and Geotechnical Desk Study report (*ref. CA11637-0001-v5.0 dated January 2020*). In addition, a supplementary detailed phase of site investigation, contaminated land assessment and geotechnical assessment will be undertaken to support detailed project design. The CEMP should be updated as required based upon these further investigations and assessment.

4.3 Walkover Key Findings

4.3.1 A walkover survey of the site was carried out by RSK on 15th November 2007 and key findings are outlined below:

- The site was bound by a waste electrical and electronic equipment recycling facility to the north.
- The north western site boundary and corner was noted to be wet and contain hydrophilic plants.
- HGV trailers were observed within the northern area of the site.
- A pile of treated telegraph poles, steel and plastic debris was noted within the eastern corner.
- An active water supply was noted within the main site entrance.
- An active septic tank was also noted within the main site entrance indicated by a ventilation pipe.

- The north western corner of the site contained an area of darkened ground approximately 1m in diameter. It was thought that this could potentially be oil/diesel spill or an old site of fire.
- There we no olfactory evidence of hydrocarbons onsite.
- There were 3no. large (7m high) piles of pumice stored within the central part of the site.

4.3.2 Site reconnaissance was undertaken by a WA LLP on the 29th July 2019.

- The site is bound by metal fencing. The fence within some areas along the north eastern boundary has been damaged and Heras fencing has been put in place. The south west boundary is bound by trees and Heras fencing.
- A total of 9no. old borehole standpipes installed by RSK were observed across the site. The majority of the gas valves were broken or removed from the pipes.
- Some littering was observed within the north of the site and consisted of materials such as plastic bottles, plastic bags, a football, crisp packets and paper. Metal drums filled with concrete were observed and a pile of broken concrete fence posts were observed within the south west.
- Two foxes were observed within the north of the site during the walkover.

4.4 RSK Geo-Environmental Findings and Assessment

Environmental Testing

4.4.1 A total of 45no. chemical samples were collected during the initial geotechnical and environmental site investigation in 2008. Soil exceedances were noted for:

- Leachate concentrations for copper (TP2 0.6m-0.7m (0.024mg/l) and TP4 0.5m-0.6m (0.0068mg/l)) exceed Coastal and Estuarine EQS values;
- Leachate concentrations for lead (TP9 1.1m-1.2m (0.042mg/l)) exceed Coastal and Estuarine EQS values; and
- One groundwater exceedance of arsenic 71µg/l (BH3).

4.4.2 Samples were collected from the pumice storage pile for metals and non-metals testing. Results displayed that all samples fell below the human health Generic Assessment Criteria (GAC -commercial scenario). Leachate testing for the same suite

of determinands was undertaken on 1no. sample and results displayed levels below the laboratory method detection limit (LMDL).

Preliminary Risk Assessment

Key Potential Source Pollution Linkages

4.4.3 RSK identified a number of sources and pollutant linkages within their Preliminary Risk Assessment. The linkages are outlined below.

Historical Sources

- Minor hydrocarbon leaks or spills;
- Historical port activities and industries; and
- Contaminated dredged material used for land reclamation.

Current Sources

- Minor hydrocarbon leaks or spills;
- Storage of pumice onsite and;
- Ground gasses from made ground.

Potential Off-Site Sources

- Leachate of landfill gasses onto site from the historical landfill north of site;
- Oil or lubricant product from the adjoining waste electrical facility and;
- Surface runoff from the road to the east.

4.4.4 The site investigation established that no contaminants of concern were identified in soils onsite. However, limited contamination was identified in relation to leachate and groundwater.

4.4.5 Further intrusive works are recommended to identify contamination and hotspots onsite. Surface/groundwater and ground gas monitoring should be undertaken as part of any future site investigation. The data collated as part of the monitoring underpins site characterisation, facilitates effective remedial programme design, allows progress to be followed in real time and sometimes provides the crucial evidence to achieve site close out. The data will also assist in specifying the appropriate level of gas protection.

4.4.6 The intrusive investigation should be reviewed by the Contractor to confirm the ground conditions and to reassess the potential for contamination on site and this CEMP updated as required.

4.4.7 Based on the available information summarised in this report the site is considered to present a **Low to Moderate** risk from past use, adjacent operations, and surface water vulnerability. Further intrusive site investigation will be undertaken to quantify the risk and assess environmental liability.

4.5 General Mitigation Measures

4.5.1 The following mitigation measures are likely to need to be employed as part of the works to protect site users and neighbours during the construction phase:

4.5.2 Site access should be controlled and restricted to prevent public access.

4.5.3 Dust control may be required and is likely to include:

- covering of any contaminated soils during transportation;
- regular inspection and, if necessary, cleaning and repair of local highways and site boundaries to check for contaminated soil/dust deposits (and removal if necessary);
- where practical, use of mobile or fixed spray units to dampen surfaces of contaminated soil as indicated by weather conditions;
- keeping contaminated soil stockpiles or mounds away from the Proposed Development site boundary and, where possible, enclosing contaminated soil stockpiles or keeping them secure sheeted;
- undertaking the above measures for clean soils where excessive dust production is identified on site (i.e. from plant movement, during excavations, etc.).

4.5.4 Further measures to be employed to minimise the potential for the creation of land contamination include:

- refuelling of vehicles and other plant to only be carried out within a designated area or, where that is not possible, under the supervision of a suitably qualified and trained site foreman;
- only well maintained equipment and vehicles to be permitted on site. The

earthworks contractor/plant and equipment contractor shall provide inspection certificates of the plant/equipment's suitability and shall regularly inspect and check plant and vehicles throughout the project to ensure that they remain fit for purpose;

- any item of plant that leaks fuel or oil onto any surface shall be considered unfit for use and shall be repaired immediately or removed from site; and
- any spillages of contaminating liquids or other materials shall be reported to the site manager immediately. Stocks of oil absorbent materials shall be kept onsite to deal with small spillages.

4.5.5 All personnel onsite shall be made aware of all of the above standard good practice measures and will be instructed to implement them.

4.5.6 A detailed UXO desk study report has been undertaken by UXO specialists Zetica and the full report is included within the WA LLP Geoenvironmental and Geotechnical Desk Study report (*ref. CA11637-0001-v5.0 dated January 2020*).

4.5.7 The Zetica hazard assessment identifies a low UXO hazard level for the site and Zetica advises that no additional measures are considered essential for the site. Zetica have stated that if additional comfort is required to address the residual UXO hazard, a formal UXO awareness briefing can be provided.

4.5.8 If the proposed works on the site change or additional works are required, it is recommended to contact Zetica for a reassessment of the UXO risk and risk mitigation requirements.

4.5.9 Japanese Knotweed has been observed on site within the southern site area (according to the ABP Mer preliminary ecological assessment). A Japanese Knotweed Management Plan should be developed for the site.

4.5.10 A combination of material characterisation and removal, where appropriate, prior to stockpiling and construction control measures would be employed on site in order to ensure that the risk to off-site humans is minimised as far as is practicable.

4.5.11 Material storage areas are likely to be set up within the confines of the new site immediately adjacent to the site's access road for ease of delivery. The existing access should be extended to provide entry to these areas.

4.5.12 Mitigation measures related to run-off are described and presented in the hydrology and water quality section and outline drainage strategy (Section 6).

- 4.5.13 All hazardous materials shall be used, stored and transported in a safe manner. All personnel and contractors involved with hazardous materials handling shall be made aware of the associated environmental hazards and risks and shall be appropriately trained in routine activities and emergency actions/responses.
- 4.5.14 In the event that unidentified contamination is discovered on site, the emergency response plan will be consulted.
- 4.5.15 An up-to-date list of the hazardous materials onsite shall be prepared, specifying their location. The Environmental Manager/Co-ordinator will regularly review this.
- 4.5.16 All hazardous materials shall be kept in adequate conditions of containment, within controlled areas and securely protected from contact by non-authorized personnel, including trespassers and vandals. The quantities of hazardous material stored at any one time shall be minimised.
- 4.5.17 Control of Substances Hazardous to Health (COSHH) assessments shall be held onsite for all hazardous materials. These give advice on the type of storage required for the chemicals, i.e. bunded areas, and storage of flammable products in locked cupboards.
- 4.5.18 Above ground tanks, drum storages and pipelines that contain hazardous materials shall have properly designed secondary containment. The primary storage container itself shall be of sufficient strength and structural integrity to ensure that in normal circumstances it is unlikely to leak or burst.
- 4.5.19 Storage tanks and pipelines containing or transporting hazardous materials shall be above ground and shall have leakage / spill identification and controls in place. Leaking or empty drums or other containers shall be removed from the site immediately.
- 4.5.20 All hazardous materials shall be used in line with manufacturers' instructions.
- 4.5.21 The correct quantity of chemicals shall be used and, where possible, less hazardous alternatives considered. All hazardous materials shall be used and stored within drip trays to prevent contamination. Drip trays underneath portable plant, such as generators, shall also be used.
- 4.5.22 Any disposal of product or empty product containers shall be in accordance with waste management legislation and related COSHH sheets.
- 4.5.23 The treatment of material on site or in-situ technology and re-use of material will be maximised. The re-use of excavated soil will be supported by the preparation of a Materials Management Plan (MMP) in accordance with the Definition of Waste:

Development Industry Code of Practice (DoW CoP). The MMP will describe in an auditable way, and on a site-specific basis, how the excavated materials (e.g. contaminated or natural soils) can be re-used within the site development. The MMP will be used to record the re-use of materials on site and thus avoid any non-compliance with the waste regulations, notably the amended Duty of Care Regulations 1991 (2018).

4.5.24 An emergency response plan will detail any identified contamination on the site (to protect groundwater).

5 WASTE MANAGEMENT & NATURAL MATERIALS MANAGEMENT

- 5.1.1 A Site Waste and Natural Materials Management Plan (SWNMMP) has been produced by WA LLP to support the planning application for the Proposed Development.
- 5.1.2 The SMNMMP (*report ref. CA11637-006-v0.7, dated January 2020*) provides a preliminary forecast of the materials anticipated to be used and wastes produced during the construction and operation of the facility. The plan outlines the relevant policy and guidance and how the development will be managed to handle materials and wastes in a sustainable manner.
- 5.1.3 The construction phase waste will be managed in accordance with the principles in the waste hierarchy and cost restraints, using the following phased approach: reducing the amount of waste generated, encouraging re-use/recycling waste where possible, and finally removing remaining waste to an appropriate management facility. All the above phases will include the prevention of contamination.
- 5.1.4 The development must seek to minimise the natural environment burden of materials required for construction and operation of the facility. This will be achieved through minimisation of waste generation and repurposing of available materials, whether available on site or created during construction.
- 5.1.5 The site waste manager has been appointed to prepare and maintain a site waste management plan (and natural materials management plan) in accordance with the Site Waste Management Plan regulations. The plan will estimate the amounts of each waste type to be produced by the works and establish opportunities to dispose of the wastes in compliance with the environmental objectives.
- 5.1.6 The site waste manager will be responsible for finalisation, review and update of this SWNMMP, as well as managing and monitoring the implementation. It will be an evolving process and the plan will be adapted as the development progresses, innovative solutions are considered, and procedures become established. The responsibility for the plan and the key methods of implementation will be clearly communicated to all relevant staff and contractors and included with the procurement documentation for all companies engaged to work onsite.
- 5.1.7 A reclamation audit should be undertaken to establish the quantity of bulk materials which could arise. This can then be used in the SWNMMP to identify where recycled aggregates can be re-processed and used onsite.

- 5.1.8 The Institution of Civil Engineers (ICE) Protocol includes good practice targets for recycling a variety of materials (e.g. 95% for concrete - 2008 ICE Demolition Protocol), which can be incorporated in the SWNMMP.
- 5.1.9 The recycling and re-use will be implemented through the SWNMMP, which will dictate site-specific protocols for the management of waste, which will reflect best practice guidance. This will include:
- Designing the construction site for effective material storage and segregation; and
 - Establishing recovery targets and recording the volume of materials re-used on site.
- 5.1.10 It is recommended that such third parties as trades, suppliers, architects and designers, etc. are engaged in the development of the SWNMMP from the outset in order to ensure that all elements have been fully considered by the wider team. The principles will then be engendered in the development design and will more easily roll out to all staff and contractors employed throughout the life of the Proposed Development.
- 5.1.11 The SWNMMP will also take into consideration the waste management protocols identified within the Waste Management Plan; such as re-using any construction and demolition waste onsite wherever possible. Potential secondary uses for construction waste, include aggregate in building construction, landscaping and road construction.
- 5.1.12 Waste arisings will be further identified and quantified in the detailed design stage and through management plans developed for the construction and operation of the Proposed Development.
- 5.1.13 Responsibility will be allocated for the environmental management of the site, including the SWNMMP and will include monitoring the flow of inputs and outputs to the development at a high-level. This will include the transport of construction waste to the points of disposal/recovery and the quantities of waste materials diverted from landfill. This will be aligned with the environmental management system for the operational site (e.g. ISO 14001 or EMAS) in order to provide a structure for the process of monitoring and recording. This will allow further opportunities to be identified where waste generation can be minimised.

5.1.14 Waste avoidance measures to be considered and applied (where suitable) will include:

- Purchasing materials to the agreed design specification, to the required quantities and to the correct dimensions in order to avoid wastage and storage problems;
- Take back agreements with material suppliers to ensure that surplus materials are returned and offered for use at other development sites, as appropriate;
- Deliveries to be scheduled so that storage space requirements are minimised and managed efficiently, whilst reducing risk of potential material damage and deterioration;
- Material storage areas will be secure, weatherproof and with clearly identified segregation of incoming products and different waste streams; and
- Identification of, and discussion with local providers of, construction waste recycling capacity (and waste streams requiring specialist treatment) prior to works commencement.

Site Waste and Materials Management Plan

5.1.15 The Contractor shall be responsible for preparing and implementing the detailed SWNMMP. The SWNMMP shall:

- Define responsibility for waste management (to a named individual(s));
- Provide a preliminary estimation of waste types and quantities;
- Identify waste minimisation measures;
- Propose re-use, recycling and disposal options for all wastes, including excavated hazardous wastes if identified;
- Propose health and safety and handling measures for any asbestos containing materials (ACMs) identified during earthworks;
- Identify means by which any excavated contaminated soils associated with the earthworks and construction phase can be remediated so that the material can be re-used or recycled;
- Provide clear guidance on the sampling and analysis of soils and aggregates resulting from excavations and earthworks to categorise them (to include Waste Acceptance Criteria (WAC) testing when classed as hazardous);

- Provide clear information on site waste management (including details of waste sampling, testing and treatment);
- Identify what materials are to be segregated on site for re-use or recycling (for example, site clearance material);
- Define suitable locations for the storage and stockpiling of various waste streams and the onsite and off-site management and treatment of these;
- Identify potential off-site waste management facilities for each waste type including transport distances; and
- Facilitate the collection of data and retention of all waste related documentation.

5.1.16 If hazardous waste requires off-site removal and disposal, this activity will be undertaken by licensed contractors. Non-hazardous waste will preferably be re-used or recycled.

5.1.17 The SWNMMP must be reviewed in detail by the appointed Principal Contractor and adhered to in relation to the proposed construction activity.

5.1.18 The SWNMMP will be disseminated to all staff and contractors (as appropriate) so that the whole team is engaged in the environmental improvements and performance of the site. This will help foster ownership of site processes and achievements in improving performance.

6 WATER MANAGEMENT PLAN

6.1 Background

6.1.1 Construction activities may result in both direct and indirect impacts on the water quality, flooding, drainage and the hydrogeology of the site. A site-specific Flood Consequence Assessment (FCA) and Sustainable Drainage Strategy (SuDS Strategy) (*report ref. 072689-CUR-00-XX-RP-C-001-V02, dated September 2019*) has been prepared by Curtins Consulting Ltd to assess the potential flood consequence that may affect the Proposed Development.

6.1.2 Potential receptors are likely to include:

- Shallow groundwater within the soil;
- Deeper groundwater within the solid bedrock geology which is a Secondary B aquifer;
- Ebbw River located in relatively close proximity to the site (17m to the west); and
- Surface water features located hydraulically down-gradient of the site.

6.1.3 The use of water for dust suppression may also increase runoff quantities during construction and any excavation of potentially contaminated soil could have an impact on both surface and groundwater quality.

6.1.4 Most pollution incidents are avoidable. Careful planning of construction operations, responsible waste management and suitable anti-pollution measures reduce the risk of spillage, along with simple precautions to deal with any potential spillages. The costs of cleaning up a pollution incident can be very high, and the consequences of a prosecution for environmental offences are likely to be serious. Any work carried out in or near watercourses or over the underlying aquifers shall be regarded as high risk.

6.1.5 Water pollution will be minimised and controlled through method statements and risk assessments of construction activities which will follow construction industry best practice guidance such as those described in '*Guidance for Pollution Prevention: Works and Maintenance in or near Water*'.

6.1.6 All plant will be well maintained to limit leakage from engines or hydraulic systems. Spill kits will be carried to contain any accidental releases. Refuelling will be undertaken in designated areas where any spills can be contained. Pumps and other

similar equipment will be placed on drip trays with refuelling undertaken following strict procedures for spill control.

- 6.1.7 Chemicals and other construction materials will be stored and contained in areas where they will not be easily mobilised to reach the water. Procedures for the use of specific materials will be developed to reduce the risk of accidental release and ensure that water quality is appropriately protected.
- 6.1.8 The nearest surface water feature is the Ebbw River located 17m west of the site. The Ebbw River flows from the north along the south western boundary of the site where it joins the Usk River to the south of the site. There is a dock present to the north east of the site which joins the Usk River through a lock to the south east of the site.
- 6.1.9 Construction staff will remain within the works area and vehicles will be parked away from the Ebbw River.
- 6.1.10 There are 22no water network lines within 250m of the site. These water network lines pertain to inland rivers, tidal rivers lakes and foreshore.
- 6.1.11 The site-specific FCA and SuDS Strategy outlines the flood risk to the development as being low/medium from fluvial\tidal sources and the site is within Flood Zone C2 and B.
- 6.1.12 The classification of the development is Less Vulnerable, and given the Justification Test proving the suitable location of the proposals, along with the mitigation of setting the FFL at 9.63mAOD above the future 1 in 200 year plus climate change flood level the development is suitable given the acceptable consequences. This increases levels under the footprint of the building from 7.60-9.00mAOD to the 9.63mAOD FFL.
- 6.1.13 The development should also be signed up to the NRW flood warning service to give advanced notice of potential flooding events.
- 6.1.14 Egress from the site will be northwards via Tom Lewis Way with specific procedures integrated in to the ABP's existing docks wide Flood Evacuation Plan.

Surface Water

- 6.1.15 In terms of surface water, it is recognised that as a generally undeveloped site, the Proposed Development will result in an increase in impermeable area and a corresponding increase in surface water runoff.

- 6.1.16 The Natural Resource Wales TAN15 interactive flood mapping data is taken as a general guide to whether or not a site is at risk of flooding from various sources including rivers and seas for Flood Zoning classification.
- 6.1.17 This mapping indicates that most of the site, except for the northern corner, lies within flood zone 2, which relates to extreme floods from the river. Flood zone 2 relates to land assessed as having between a 1 in 100 and 1 in 1,000 annual probability of river flooding (1% – 0.1%), or between a 1 in 200 and 1 in 1,000 annual probability of sea flooding (0.5% – 0.1%) in any year.
- 6.1.18 Most of the site, except for the north of the site, lies within flood zone 3, which relates to extreme floods from the river. Flood zone 3 relates to land assessed as having an annual probability of flooding of 1 in 100 or greater from rivers, and 1 in 200 or greater from seas.
- 6.1.19 There are two areas within the south of the site and one area on the western boundary which display the potential for a 1 in 1000-year surface water flood event caused by local rainfall.
- 6.1.20 There are 2no. records of flood defences within 250m of the site boundary. The first is located 154m to the west of the site and the second is located 188m west of the site.
- 6.1.21 With regards to flood risk from surface water runoff and sewers, as the Proposed Development will convert grassland to impermeable land cover, the design of a suitable surface water drainage system, incorporating a Sustainable drainage system (SuDS) is a key requirement. In addition, consultation with Dwr Cymru Welsh Water, as the statutory sewerage undertaker, is recommended to agree appropriate rates of foul water discharge.
- 6.1.22 The RSK geo-environmental and geotechnical assessments of the site (*as outlined in Section 4.2.7*) provides desk study information as well as intrusive site investigation data.
- 6.1.23 The reports assess the potential environmental liabilities at the site associated with any soil contamination. The report also provides recommendations with regard to any relevant geotechnical aspects pertaining to the Proposed Development. The ground conditions have been considered not feasible for soakaway drainage due to the thickness of alluvial clay. However, no soakaway testing has been undertaken at the site to confirm feasibility.

6.1.24 Any previous (and future) geo-environmental and geotechnical investigations of the site should be considered as part of any drainage assessments.

Drainage

6.1.25 The modifications to the land areas of this scheme will result in reduced permeable areas.

6.1.26 Surface water flows will need to be reviewed in detail. NCC will be approached to approve any drainage connections under a watercourse consent.

6.1.27 Foul flows from the Proposed Development will need to be reviewed in detail. Capacity of the wider network for the foul water flows also needs to be assessed.

6.1.28 Proposed arrangements for the disposal of both surface and foul water from the application site should be in compliance with the Sustainability Appraisal of the Adopted Local Development Plan (LDP).

6.2 Specific Requirements

6.2.1 A construction drainage system will be established that shall comply with BS6031:2009 and the site-specific FCA and SUDs. The works shall be undertaken in accordance with the pollution prevention guidelines of the local authority. This includes the installation and management of oil interceptors/separators in high risk areas.

6.2.2 No specific constraints to the proposed drainage systems have been determined by this report.

6.2.3 A climate change allowance of 40% should be included for in the design of surface water drainage proposals across the range of storm durations for the 1 in 100-year events.

6.2.4 Surface water will be freely discharged into the Ebbw River as it is unaffected by either the discharge rate or volume of runoff adjacent to the site.

6.2.5 The manufacturing process is closed system and does not require discharge. Therefore, the only generated flows are domestic equivalent and will be treated by a package treatment plant and discharged to the Ebbw River.

6.2.6 From 7th January 2019, excluding single dwellings and developments with a construction area of less than 100 square meters, all construction work requiring

planning permission which has drainage implications requires SuDS Approval Body approval.

6.2.7 Mitigation measures during construction comprise measures to prevent runoff carrying sedimentation or construction materials into local watercourses via the use of bunds and interceptors where necessary. Surface water shall be prevented from entering excavations also.

6.2.8 The process for manufacturing is a closed system and does not produce effluent which would run through the foul system. Therefore, the only effluent being processed would be domestic equivalent and suitable for a standard package treatment plant.

6.2.9 Preventative actions include:

- Any water that has come into contact with contaminated materials shall be disposed of in accordance with the Water Resources Act 1991 and the Water Industry Act 1991 (if disposed to public sewer) to the satisfaction of regulatory bodies (e.g. NRW), sewerage provider and local authority as applicable;
- Containers of contaminating substances will be leakproof and kept secure to prevent spills and vandalism. The containers and areas for transfer will be protected by temporary impermeable bunds with a capacity of 110% of maximum stored volume;
- All refuelling, oiling, and greasing will take place above drip trays or on an impermeable surface which provides protection to ground and away from drains. Vehicles will not be left unattended during refuelling;
- Only vehicles and construction equipment free of leaks will be permitted onsite. Drip trays will be placed below static mechanical plant;
- All wash down of vehicles and equipment will take place in designated areas and wash water will be prevented from passing untreated into watercourses and will comply with best guidance (i.e. PPG13);
- Restriction on the use of List I and List II substances (Dangerous Substances Inventory) during construction;
- Measures required ensuring List I and List II substances are not released to the water table during construction activities;
- Where applicable, carrying out regular inspections of discharges, drainage

systems, collection ditches, lagoons, interceptors, and watercourses to ensure that they are in good order;

- Where possible, the installation of SuDS at the beginning of the project to assist in dealing with the construction site run-off;
- Providing and maintaining spill clean-up kits on site at all times and training staff in their use; and stabilising surfaces and/or re-vegetating as soon as possible; and
- Foul water and sewage effluents produced by the construction workforce shall be contained by temporary foul drainage facilities to be installed. A suitably licensed subcontractor shall dispose of all foul water and sewage effluents off-site.

6.2.10 Risks to the water environment and control measures are set out overleaf in Table 6.1.

Table 6.1 General Risks

| Issue | Requirements |
|------------------------------------|--|
| Earthworks, excavation and digging | Run-off from earthworks, excavation and digging activities shall be appropriately managed. |
| Completed earthworks | Stabilise surfaces and / or re-vegetate as soon as possible. |
| Storage mounds | Cover with correctly secured tarpaulins. |
| Temporary soil mounds | Where appropriate, soil mounds shall be treated with surface binding agents to reduce wind erosion. Re-seed any exposed ground and stockpiles to stabilise the ground and reduce erosion. Consultation with NRW is necessary before employing any binding agent. |
| Mixing and granular materials | The use of pre-mixed plasters and masonry compounds is recommended. The mixing of concrete or bentonite slurries shall take place in designated and approved areas. |
| Materials Storage | All waste produced during the works must be stored in designated areas and isolated from surface drains. All oil storage tanks and drums must be stored on an impervious base within an oil tight bund. Use of banded pallets for storage of plant. |

| Issue | Requirements |
|---|--|
| Water, which has come into contact with contaminated material | The contaminated land assessment shall be referred to and complied with, and all arisings to be disposed of in accordance with regulatory body advice or to the satisfaction of water and sewerage supplier. |
| Non-compliance with permits; sub-standard treatment facilities | Maintain a full record of inspections, maintenance and measures required to ensure compliance with consents and permits. Treatment facilities to be regularly inspected and properly maintained. |
| Vandalism resulting in a pollution incident | Work sites to be adequately protected from intruders. |
| Suspended solids reaching water bodies | Where appropriate cut-off ditches shall be used at the edge of the work site. |
| Completion of Construction Activities - The completion of construction activities and site demobilisation carry significant risk of causing water pollution. | |
| Laying of surface courses on hardstanding will effectively mean that drainage systems become operational | Ensure that pollutants do not become mobilised via operational drains. |
| Paints and treatment products | Ensure pollutants do not become mobilised via operational drains. |
| Topsoil stored on finished hardstanding | Other sites/locations for such activities or control measures to be put in place. |
| Washing of finished surfaces | Conducted in such a manner that pollution does not reach surface water outfalls. |
| Demobilisation (if required) | |
| Removal of storage facilities and plant | Measures to ensure that open ground is not exposed to erosion and formation of gullies. |
| Contaminants liberated from plant wash-down | Appropriate control measures such as the management of wastewater and other arisings. |
| Decommissioning fuel storage areas, septic tanks, decontamination units and mess facilities | To follow pollution prevention measures. |

Silt

6.2.11 Table 6.2 provides guidance for managing silty water which can arise from excavations, exposed ground, stockpiles, plant and wheel washing and site roads.

Adequate provision shall be made for dealing with silty water within site-working plans.

6.2.12 All discharges off the site shall have formal approval from NRW.

Table 6.2 Potential Sources of Silt and Control Measures

| Issue | Requirements |
|---|---|
| Water containing silt | No silty water shall be pumped directly into a river, stream or surface water drain but, where possible disposed of to the foul sewer with the prior agreement of the appropriate authority. |
| Water entering excavations | Use cut-off ditches to prevent entry of surface water and well point dewatering or cut-off walls for groundwater. The corner of the excavation can be used as a pump sump. Do not allow personnel or plant to disturb water in excavations. |
| Exposed soil and material stockpiles | Minimise the amount of exposed ground and soil stockpiles. Covering stockpiles and constructing silt fences from a suitable geotextile may be useful in reducing silt levels in run-off water. |
| Dusts and mud from roads | Site roads to be regularly brushed or scraped and kept free from dust and mud deposits. |
| Wheel washes and plant washing facilities | Constructed securely with no overflow, the effluent contained for proper treatment and disposal in accordance with regulatory body guidelines. |
| Discharging to watercourse of any pumped clean water from dewatering or over pumping operations | Care shall be taken when using powerful pumping equipment as disturbance / erosion of receiving water body (i.e. riverbed and bank) could occur, producing silty water. |

6.2.13 For long-term projects, involving onsite concrete production, careful initial siting of concrete mixing facilities is vital. A settlement and recirculation system for water re-use shall be considered. At no point shall concrete or cement derived products enter a water body or drain. Table 6.3 below details management procedures for concrete and cement.

Table 6.3 Managing Concrete and Cement

| Potential Pollution Source | Control Measures |
|---|---|
| Washing out and cleaning of concrete batching plant or ready-mix lorries | Carried out in a contained area as far from watercourses as practical – referred to as the wash-down area. All wash-down areas to be signposted. All plants contaminated with concrete to be cleaned in designated wash-down areas. Washout shall not be allowed to flow into any drain or watercourse. |
| Concrete spills during site transportation | Loads managed to avoid spillages – select load dependant on vehicle, slump of concrete and prevalent ground conditions. |
| Silane (trialkoxo isobutyl silane) is used to protect concrete structures against chlorides | Silane is highly damaging to the aquatic environment and rigorous containment measures shall be implemented especially considering the proximity of the minor watercourses. |

Wastewater and Drainage

- 6.2.14 Liquid wastes, including runoff from material storage areas and from wet methods of preparation, should never be released directly into surface waters or surface water drains without prior approval from the relevant regulatory bodies.
- 6.2.15 Table 6.4 details associated risks and management of wastewater.

Table 6.4 Wastewater Control Measures

| Potential Pollution Source | Control Measures |
|---|---|
| Surface washing | The most efficient method of containing generated waters is by a vacuum attached to the spray nozzle. |
| Wastewater used for pressure washing | To be contained and the resultant waste managed. |
| Dewatered from conduits / ducts may be contaminated with silt, oil, or other substances | To be contained and the resultant waste managed. |
| Uncontrolled releases and spillages | Implementation of the site emergency response plan |

7 ECOLOGICAL MANAGEMENT PLAN

7.1 Basic Requirements

7.1.1 The contractor shall incorporate the specific requirements of all recommended ecological mitigation measures. An Ecological Management Plan (EMP) is currently being prepared for this project and will be available as part of the supporting documents for the planning application.

7.1.2 This report must be reviewed in detail prior to any construction phase on site.

7.2 Background

7.2.1 The potential for adverse impacts on the application site arises largely from disturbance (noise, vibration, light, dust, and human presence), the presence of construction equipment (e.g. security fencing, buildings that act as barriers or deterrents) and habitat loss due to de-vegetation and creating site access and work compounds.

7.2.2 The potential for adverse impacts will be minimised as far as possible through the application of good practice techniques and adherence to well-designed method statements managed through the CEMP and relevant ecological mitigation measures.

7.2.3 The EMP aims to avoid and/or minimise impacts by incorporating measures into the scheme design at the earliest stages. This approach has been adopted to inform the size and location of the development site, thereby avoiding some significant effects upon ecological features from the outset.

7.2.4 The following reports have been prepared in relation to the site and shall form a part of ecological management of the Proposed Development:

- Terrestrial Invertebrate Assessment (Ref. Project No.: AABP122/006 Report No.006 - September 2019 - *Thomson Environmental Consultants*)
- Preliminary Ecological Appraisal (Ref. Project No.: AABP122/001 – Report No.001 - June 2019 - *Thomson Environmental Consultants*)
- Breeding Birds Survey (Ref. Project No.: AABP122/002, Report No.003 - September 2019 - *Thomson Environmental Consultants*)
- Reptile Survey (Ref. Project No.: AABP122/003, Report No.003 - September 2019 - *Thomson Environmental Consultants*)

- Bat Survey (Ref. Project No.: AABP122/004, Report No.001 - September 2019 - Thomson Environmental Consultants)

7.2.5 An Ecological Impact Assessment (EclA) (Ref. Project No.: CA11637, Report No.0004-v1.0 – January 2020) and Ecological Management Plan (Ref. Project No.: CA11637, Report No.0008-v1.0 – January 2020) have been produced to accompany the planning application.

7.2.6 EclA is a process of identifying, quantifying and evaluating potential effects of development on habitats, species and ecosystems. EclA supports implementation of national biodiversity strategies and national planning policies for safeguarding biodiversity and supporting the delivery of sustainable development. The EclA assessment will demonstrate how the Proposed Development accords with relevant planning policy and legislation.

7.2.7 The EMP will provide a single document that describes the ecology and nature conservation mitigation measures that will be undertaken prior to, during and post construction of the Proposed Development, and the long-term management measures to be set in place for reinstated and enhanced habitats.

7.3 Specific Requirements

7.3.1 The EMP shall provide an overarching ecological mitigation strategy for the site, covering the mitigation required for the ecological receptors identified in the previous ecological assessments and further surveys as being subject to adverse effects from the Proposed Development. Receptors where adverse effects are not anticipated are excluded.

7.3.2 WA LLP have prepared an EMP in relation to the redevelopment of the site.

7.3.3 This EMP is intended to cover the first 20-year management period. A landscape contractor should be appointed by the client or owner of the manufacturing facility (those who will be responsible for the operations set out in the EMP).

7.3.4 Sufficient resources must be allocated to carry out the operations set out in this EMP to a satisfactory standard.

7.3.5 The success of the prescribed management as detailed in this EMP will be assessed on an annual basis for the first 5-year period and revised prescriptions considered, if necessary.

- 7.3.6 Monitoring of habitats must be undertaken by a suitably qualified ecologist.
- 7.3.7 Ecological surveys undertaken identified the site as supporting scrub and ephemeral short perennial habitats characteristic of previously developed industrial land. The habitats are considered to have potential to support terrestrial invertebrates, nesting birds, common reptiles and foraging bats. The EclA of the application area identified measures which will be implemented to minimise the significance of effects on the habitats and species because of the proposed development.
- 7.3.8 Reasonable Avoidance Measures via a Precautionary Working Method Statement for reptiles are outlined via Appendix 12 of the EclA.
- 7.3.9 No vegetation clearance will be undertaken during the breeding season (March to August inclusive). If this is not possible, then areas of vegetation requiring clearance will be checked by a suitably qualified ecologist 24 hours in advance of works for the presence of occupied nests. Any subsequent advice provided by the ecologist, especially in relation to according with legislation, will be followed.
- 7.3.10 Suitable pre-construction surveying for badger activity prior to commencement for any site activities will be undertaken.
- 7.3.11 Prior to commencement of any drainage outfall works, checks will be undertaken by a suitably qualified ecologist for otter activity. If evidence of otter activity is found, work will cease and licence applications prepared and submitted to Natural Resources Wales to allow the works to proceed.
- 7.3.12 The purpose of this EMP is to outline the mitigation and enhancement measures that will be undertaken. It also describes the management objectives and prescriptions for each habitat and/or feature retained, enhanced or created and sets out an appropriate future management and monitoring programme.
- 7.3.13 Proposed enhancement measures include provision of nest boxes for birds and bat boxes within the Habitat Corridor, increased diversity of foraging for birds within the HEA and increased opportunities for hibernating reptiles and invertebrates within the HEA.
- 7.3.14 Post construction monitoring surveys for breeding birds and invertebrates will be undertaken as described in the EMP.
- 7.3.15 The EMP provides recommendations for landscape planting to include native shrub and tree planting foraging and shelter/nesting opportunities for birds.

7.3.16 The development proposals have sought to retain habitats including the western boundary scrub habitat and an area of ephemeral, short perennial and scattered scrub vegetation within the HEA in order to enhance existing habitats present within the application site. Additional planting will ensure connectivity of retained and enhanced habitats and provide a benefit to protected species and other wildlife by providing berry producing species to benefit bird species and other wildlife, provide nesting and roosting opportunities for birds and bats.

7.3.17 Increased light levels have the potential to temporarily disturb wintering birds if the construction works are undertaken during hours of darkness between November and February and if lighting is not directed away from the western boundary. The Habitat Corridor along the western boundary which will act as a buffer and will be unlit to maintain a bat foraging corridor therefore no significant effects on wintering birds from lighting is expected.

7.3.18 Noise and lighting levels associated with the construction activities will be kept to a minimum where possible. Night-time working will be avoided, and no direct illumination of hedgerows, watercourses and/or potential roosting sites will occur.

7.3.19 A sensitive lighting scheme for both the construction and the operational phase will be implemented to minimise light spill onto retained habitat and ecologically sensitive receptors. Recommended measures include:

- Reducing the intensity of lighting through dimming, creation of light barriers (e.g. vegetation, fences, walls, or buildings), increasing the spacing between lights and reducing the height of lighting.
- The use of warm-white LEDs or low-pressure sodium bulbs will be used where possible.
- Lights with a blue-white short wavelength will be avoided.
- Use of lights with a high UV content will be avoided.
- Lighting units will be pointed towards the ground below the horizontal (ideally below 70°) and will point away from hedgerows and/or woodland. Directional, full cut off lights can be used, or cowl/hoods utilised to achieve this. Lighting will point away from the western boundary.

7.3.20 Night-time working is not scheduled to take place during the construction works. In relation to ecological impact, night-time working and noisy piling activities are

specifically prohibited during November and February or at times when the air temperature is below freezing.

7.3.21 The EMP sets out general management considerations for the habitats and species present within the development site and HEA. Section 4 of the EMP sets out the objectives and specifications for the three Habitat Management Areas. These specifications must be adhered to as part of the proposed construction works at the development.

8 NOISE AND VIBRATION MANAGEMENT PLAN

8.1 Background

8.1.1 A Noise Assessment (*Noise Impact Assessment, dated November 2019 - report ref. 5238/NIA1/Rev7*) has been undertaken by Hunter Acoustic Consultancy Practice and its findings will be available as part of the supporting documents submitted with the planning application.

8.1.2 The site is approximately 680m from the closest farmhouse receiver, and 1.4km from the closest residential estates situated off Morgan Way, on the west side of Lighthouse Road.

8.2 Specific Requirements

8.2.1 The Proposed Development is to be operational 24 hours a day and 7 days a week. Environmental noise limits are proposed, based on results of an environmental noise survey covering weekday and weekend periods. These limits should be confirmed acceptable with the Local Authority planners/Environmental Health Officer (EHO) prior to any orders being placed.

8.2.2 A noise breakout assessment has been carried out to the closest residential receivers covering daytime and night-time operation, with specifications included for the main factory wall/roof cladding, access doors and service/ventilation plant/intakes/discharges.

8.2.3 The Client's proposals to limit noise impact from the facility itself have been incorporated into the assessment. This includes enclosing the Silo feeder station (wheeled loader loading raw material into Silo feeder hopper) at the Newport facility.

8.2.4 With a minimum 680m to the closest Sound Sensitive Receiver (SSR), implications for controlling plant and operational noise emissions are not indicated to be excessive. Insulated panels and roller shutter doors are commercially available capable of meeting the required sound reduction performance.

8.2.5 A detailed noise map analysis has been carried out incorporating main factory building and external operation sources, confirming the proposed site meets proposed environmental noise criteria daytime and night-time.

8.2.6 To reduce the potential impact of noise levels generated by the construction phase of the Proposed Development, mitigation measures will be required. These mitigation measures should ensure that impacts on any potential existing receptor locations in the immediate vicinity of the site are minimised.

8.2.7 The following is proposed to reduce noise impact during the construction phase:

- Articulated Lorry 'Goods-out' has direct access to Tom Lewis Way.
- Silo feeder loading operations to be enclosed.
- Access road for Tipper Lorries designed to minimise use of reversing beepers.

8.3 Good Practice / Best Available Techniques (BAT)

8.3.1 Best practicable means (BPM) shall be used during the construction phase in order to minimise levels of construction noise and vibration. The use of BPM to control emissions constitutes a ground of defence against charges that a nuisance is being caused under Part III of the Control of Pollution Act 1974 or Part III of the Environmental Protection Act 1990 and should always be applied.

8.3.2 Nearby residents and users of buildings within the vicinity shall, as far as practicable, be protected from vibration. The Vibration Dose Values (VDV) shall not exceed those specified in 'BS 6472:2008 Guide to evaluation of human exposure to vibration in buildings (1 Hz to 80 Hz)' which will result in a "low probability of adverse comment".

8.3.3 Bearing in mind the large distance losses to the closest Sound Sensitive Receiver (680m minimum), this site should not be considered critical with respect to site noise emissions. The adjacent industrial sites on the docks should be checked for any vibration sensitive equipment, bearing in mind potential piling operations.

8.3.4 To protect buildings from physical damage, it is recommended that appropriate peak particle velocity criteria shall be reviewed. There are no known particularly sensitive buildings in the vicinity of construction operations. However, a constraint should still remain and suitable peak particle velocity thresholds at particularly sensitive buildings should be assessed.

8.3.5 As a detailed construction programme is not currently available, detailed quantitative predictions of site noise have not been undertaken at this stage. However, an initial

noise map has been plotted for a 'worst case' drop hammer tubular steel casing piling site source for initial guidance.

- 8.3.6 Activities onsite which could give rise to construction related noise impacts include vegetation clearance, site preparation including excavations, unloading, and levelling of hardcore, compaction, and construction of the Proposed Development including piling, construction of access roads, and laying foundations.

Reversing Alarms

- 8.3.7 Should be broadband self-adjusting volume systems that automatically set the volume relative to the prevailing ambient level, rather than tonal (provided this is acceptable from a Health & Safety viewpoint).

Access Routes/Yard areas

The yards and access roads shall be smooth with no speed humps, as these could:

- Generate impact noise.
- Generate higher vehicle noise levels while braking and accelerating.

- 8.3.8 Preventative actions during the construction phase include:

- All plant onsite will comply with the noise limits quoted in the Directive 2000/14/EC/United Kingdom Statutory Instruments (S) 2001/1701;
- Adopt recommendations of BS 5228-1:2009+A1:2014 'Code of practice for noise and vibration control on construction and open sites';
- Adopt guidance in BRE Controlling particles, vapour and noise pollution from construction sites, Parts 1 to 5, 2003;
- As far as reasonably practicable, plant or equipment liable to create noise and/or vibration will be located away from sensitive receptors. Temporary screens or barriers may be employed;
- Plant and equipment will be maintained in good working order, including noise control measures;
- Electrically powered plant, equipment and tools will be preferred over diesel or petrol-driven;
- Machines not in use will be shut down or throttled down to a minimum;

- Receptors will be given 24-hours notification in advance of works with high levels of noise and/or vibration giving details of duration and likely impacts. The Contractor will most likely complete this via a letter drop;
- Toolbox talks will be carried out to make staff aware of the sensitivity of the site location and avoid all unnecessary noise due to misuse of tools and equipment, unnecessary shouting, and radios;
- A further measure to reduce noise levels at the sensitive receptors would include, as far as possible, the avoidance of two noisy operations occurring simultaneously in close proximity to the same sensitive receptor;
- Adequate lubrication to all plant including cranes and working platforms will be provided to control unnecessary noise and integrity of silencers will be reviewed;
- Materials will be carefully handled to minimise noise and vibration;
- Working construction hours are proposed to be between 07:30-18:00 Monday to Friday inclusive. The possibility of weekend work, and work on bank holidays shall be reviewed with the LPA. The Contractor shall review construction hours in detail with the LPA prior to commencing any construction works. The LPA will recommend suitable working hours on the development;
- Restricting the scope of works undertaken outside of normal working hours;
- Where work is required at night and approved by the LPA, noise reducing equipment such as silencers and non-vibration rollers shall be used; and
- A noise survey of the existing environment will be used as a baseline to compare working levels.

8.3.9 Environmental monitoring during works at the site will be carried out to ensure compliance with local authority requirements and government legislation for monitoring and storing weather data.

8.3.10 Further BPM to be used during the construction phase relevant to vehicles and plant is detailed in Table 8.1.

Table 8.1 Best Practicable Means to Minimise Construction Noise and Vibration Impacts

| Issue | Control Measures |
|---------------------|--|
| Noise and Vibration | <p><u>Vehicles and Plant</u> All vehicles and mechanical plant used for the works shall be fitted with effective exhaust silencers and shall be maintained in good and efficient working order.</p> <p>Lorries shall enter and exit work sites in a forward direction, except where space restriction does not permit this. This will assist in the minimisation of noise from reversing alarms.</p> <p>All compressors shall be “sound reduced” models fitted with properly lined and sealed acoustic covers which shall be kept closed whenever the machines are in use, and all pneumatic percussive tools shall be fitted with mufflers or silencers of the type recommended by the manufacturers.</p> <p>All machines in intermittent use shall be shut down in the intervening periods between the proposed works or throttled down to a minimum.</p> <p>Items of plant shall be maintained in good working condition so that extraneous noises from mechanical vibration, creaking and squeaking are reduced to a minimum.</p> |

Monitoring

- 8.3.11 Subjective noise and vibration monitoring shall be undertaken as part of the weekly site audits and inspections. More detailed monitoring shall be undertaken shall it be considered necessary.
- 8.3.12 Occupants/residents of nearby properties are a key receptor and landowners are therefore incentivised to guard against the contractors causing uncontrolled noise wherever possible.
- 8.3.13 All construction works must be monitored and reviewed in collaboration with any utility providers on the site (especially with regards to Wales and West Utilities assets identified on site).
- 8.3.14 To provide some initial guidance, Table 8.2 below outlines example threshold categories used to establish suitable noise limits during construction.
- 8.3.15 Depending on the number of nearest noise sensitive receptors (NSRs), the site may need more than one noise limit.

Table 8.2 Example Assessment Category and Threshold Value Periods (LAeq)

| Assessment Category and Threshold Value Period (LAeq) | Threshold Value, in decibels (dB) | | |
|---|-----------------------------------|--------------------------|--------------------------|
| | Category A ^{*1} | Category B ^{*2} | Category C ^{*3} |
| Daytime (0700 to 1900 hours) and Saturdays (0700 to 1300 hours) | 65 | 70 | 75 |
| *1 Category A: Threshold values to use when ambient noise levels (when rounded to the nearest 5dB) are less than this value. | | | |
| *2 Category B: Threshold values to use when ambient noise levels (when rounded to the nearest 5dB) are the same as Category A values. | | | |
| *3 Category C: Threshold values to use when ambient noise levels (when rounded to the nearest 5dB) are higher than Category A values. | | | |

8.3.16 For the purposes of this assessment, the occupants of existing residential properties in the vicinity of the site are considered to be the receptors most likely to be affected by the construction phases of the development. Details of the existing noise sensitive receptors which are most likely to be impacted by the construction noise are set out in Table 8.3.

Table 8.3 Existing Noise Sensitive Receptor Locations

| Existing Receptors | Address | Receptor Type | Bearing from the Site | Grid reference | Approx. Distance to Site Boundary |
|--------------------|---------------------------------|---------------|-----------------------|----------------|-----------------------------------|
| Position A | Properties at John Frost School | Residential | North-west | ST300847 | 1.3km |
| Position B | Closest farmhouse | Residential | South-east | ST306839 | 680m |

8.3.17 Ambient and background levels at position A on the John Frost school site were controlled by road traffic. The meter position was away from external areas accessed by pupils during the day. Night-time background levels were controlled by distant road traffic noise and possibly an element from Newport docks 1.3km to the east.

8.3.18 These results are used as the basis for setting environmental noise criteria at residential SSRs.

8.3.19 The average daytime Ambient Noise levels measured by Hunter Acoustics over a five-day period at position A and B are shown in Table 8.4 along with the corresponding assessment category and threshold noise level.

Table 8.4: Summary of Monitoring Data (Figures in dB)

| Monitoring Location | Average Measured Daytime Noise Level LAeq | Assessment Category | Threshold Value LAeq |
|---------------------|---|---------------------|----------------------|
| Position A | 52.9 | A | 65 |
| Position B | 58.5 | A | 65 |

8.3.20 As part of the Noise Assessment, the ambient daytime levels were rounded to the nearest 5dB and outlined as 55dB LAeq for Position A and 60db LAeq for Position B.

8.3.21 Predicted levels at residential receivers are indicated to meet daytime (Monday-Friday and Saturday morning) site noise limits proposed using BS5228 Part 1 2009 methodology.

8.3.22 An initial review of the impact of off-site construction and operation traffic on existing roads has also been included. Impact of traffic associated with the construction site and operations on existing roads is indicated to be negligible.

9 TRAFFIC AND TRANSPORT

9.1 Background

9.1.1 A Transport Assessment has been submitted to support the planning application.

9.1.2 The Contractor shall incorporate Traffic and Transport Management Plan requirements into the works.

9.2 Specific Requirements

9.2.1 A Traffic Management Plan will be prepared in relation to the development. This will identify how construction traffic will be managed to maintain highway safety; including delivery routes to the site.

9.2.2 Construction plant and materials will be conveyed to the site by a suitable access road with a clean surface to avoid taking any mud onto the public road. A road sweeper will be utilised to maintain the access road in a clean state.

9.2.3 All fuels will be stored in fully bunded fuel tanks within the site compound area and the plant storage area. Fully bunded mobile fuel bowsers will be utilised to distribute fuel to plant working on site. A designated fuelling area will be set up where plant will be re-fuelled.

9.2.4 Fuel/oil spillage kits will be available at both re-fuelling areas and within each item of operational plant. All plant operators will be fully trained on the emergency application of these kits should an accidental spillage occur.

9.2.5 The fixed access points, footpath and any temporary diversions are yet to be determined but shall be carefully managed.

9.2.6 A freight management strategy will be developed to control the movement of Heavy Goods Vehicles (HGVs). Weigh load indicators are fitted to HGVs to prevent overloading. Fuel tankers and roll on-off bins cannot operate when overloaded. Vehicles such as flatbed trucks, trailers or low loaders cannot be fitted with weight loaders.

9.2.7 All vehicles hold current MOT certificates, except when not required due to vehicle's age.

9.2.8 During the earthworks phase, granular material will be imported on site and the Contractor must install a temporary wheel wash facility along the new access road.

This will be supplemented by using a manually operated pressure jet wash to clean the vehicles as they exit the hardstanding area prior to trafficking the access road.

- 9.2.9 During construction, deliveries will be scheduled to arrive at the site outside of the peak periods.
- 9.2.10 During construction, parking off site will not be permitted and construction vehicles allowed to park only within designated parking areas within the works compounds.
- 9.2.11 Local suppliers will be used where possible to keep distances travelled to a minimum.
- 9.2.12 Monitoring shall be conducted by the Contractor to ensure traffic and transport management is acceptable.
- 9.2.13 The internal areas of the Proposed Development will be checked and should accord with the requirements of local policy in relation to parking and servicing provision.

10 AIR QUALITY MANAGEMENT PLAN

10.1 Background

- 10.1.1 An Air Quality Assessment has been prepared and submitted as part of the planning application.
- 10.1.2 Hawkins Environmental Limited were instructed by Stroma Built Environment Limited to undertake an air quality assessment (*Report Ref. H2989. V5, January 2020*) for the Proposed Development.
- 10.1.3 The Contractor shall incorporate the necessary elements of this assessment into the works.
- 10.1.4 During the planning process, it was identified that the site potentially required an air quality assessment to determine whether the site is suitable for use and to determine whether the Proposed Development would have an adverse impact on the surrounding environment. Consequently, the air quality assessment was completed in order to determine whether the Proposed Development achieves compliance with the National Air Quality Objectives, as well as national, regional and local planning policy.
- 10.1.5 The air quality assessment was undertaken in accordance with the Department of Environment, Food and Rural Affairs' (Defra) current Technical Guidance on Local Air Quality Management (LAQM) (TG16) and the Institute for Air Quality Management and Environmental Protection UK's Land-Use Planning & Development Control: Planning for Air Quality (January 2017).
- 10.1.6 The assessment addresses the effects of air pollutant emissions from traffic using the adjacent roads and emissions associated with the development of the site. In addition, a risk-based assessment of the likely impact of construction on the air quality of the local environment was conducted in accordance with the Institute of Air Quality Management's 2014 edition of the Guidance on the assessment of dust from demolition and construction.
- 10.1.7 The air quality report outlined assessment of the overall levels of nitrogen dioxide (NO₂) and particulates (PM₁₀ and PM_{2.5}) in the vicinity of the site.
- 10.1.8 The constraints which existing air quality may have on the Proposed Development were considered and formed part of the assessment. However, the impacts of the development on the air quality of surrounding properties were also been considered.
- 10.1.9 The works have the potential to affect air quality as a result of:

- Dust deposition, resulting in the soiling of surfaces from construction activities;
- Visible dust plumes;
- Elevated particulate matter concentrations for PM10/PM2.5 micron grading; and
- Increase in concentrations of airborne particles and nitrogen dioxide due to exhaust emissions and equipment used on site.

10.1.10 Measures outlined within Table 10.1 are required to be implemented to ensure that adequate mitigation procedures are in place on site.

10.2 Specific Requirements

10.2.1 Pollutant concentrations on-site have not been explicitly modelled due to a lack of proposed high sensitivity receptors. However, given the low regional background concentrations, distance from highly trafficked roads, and height of nearby industrial flues to encourage dispersion, it is highly unlikely that on-site pollutant concentrations would exceed either long- or short-term air quality objectives.

10.2.2 The table overleaf sets out the specific requirements that the Contractor will need to implement and observe during construction.

10.2.3 In relation to the impacts of construction on air quality, dust and other pollutant emissions from the proposed construction and demolition phases will result in the site being designated a “High Risk Site”. However, with risk-appropriate mitigation, residual effects will not be considered significant.

10.2.4 A best practice dust mitigation plan must be prepared for the proposed development. This will set out the practical measures that will be incorporated as part of a best working practice scheme. This will take into account the recommendations included within the Institute of Air Quality Management guidance, which will include (but not be limited to):

- Plan site layout, locating dust generating activities away from receptors where possible or use of solid barriers;
- Use enclosed conveyors, chutes and covered skips;
- Avoid dry sweeping of large areas;
- Implement a dust suppression system; and

- Ensure vehicles entering and leaving the site are covered to prevent escape of materials during transport.

Table 10.1 Air Quality Requirements

| Action | Issue | Requirements |
|--|--|--|
| <p style="text-align: center;">Site Planning</p> | <p style="text-align: center;">General dust-causing activities</p> | <p>Implement a Dust Management Plan</p> <p>Ensure an adequate water supply on the site for effective dust/particulate matter mitigation (using recycled water where possible).</p> <p>Ensure all vehicles switch off engines when stationary – no idling vehicles.</p> <p>Carry out main dust-causing activity in spring or autumn wherever possible and with due regard for prevailing weather.</p> <p>Plan site layout such that: Potentially dusty activities and stockpiles are located away from sensitive receptors; and movement of construction traffic around the site is minimised.</p> <p>Prohibit bonfires on site.</p> <p>Trained and responsible person to undertake site inspections and maintain logbook.</p> |

| Action | Issue | Requirements |
|----------------------------|--|---|
| Roads, Surfaces & Highways | Major haul roads, unsealed site surfaces and traffic routes (including vehicles travelling along them) | <p>Dust suppression/damping: during spells of dry weather haul roads will be sprayed using a dumper/water bowser with a spray attachment.</p> <p>A 10mph speed limit will be enforced across site.</p> <p>Install permanent surfaces and conduct regular inspection and maintenance.</p> <p>Plan routes to be away from local / neighbouring residents and other sensitive receptors, such as surface water receptors and ecologically sensitive areas wherever possible.</p> <p>Hard landscaping of haul routes.</p> |
| | Construction and maintenance of unsurfaced roads and verges | <p>Keep roads in compacted and dampened condition using static sprinklers, bowzers, commercially available additives, and binders.</p> <p>In certain cases, permanent surfacing (e.g. concrete, tarmac, etc.) may be required.</p> |
| | Public roads | Clean regularly subject to Local Authority (LA) or Highways Authority (HA) approval. Road sweepers will be utilised to keep public roads clean. |
| | Edges of roads and footpaths | Clean by using hand broom whilst damping as necessary. |
| | Vehicle waiting areas and hardstanding | <p>Provide easily cleaned hardstanding areas for vehicles entering, parking on and leaving the site or construction compound.</p> <p>Regularly inspect and keep clean by regularly brushing or vacuum sweeping.</p> <p>Spray regularly with water to maintain surface moisture if needed.</p> |
| | Vehicle and wheel cleaning | During earthworks phase a temporary wheel wash facility will be installed along the access road. |
| | Exhaust heights | Exhausts shall be positioned at a sufficient height to ensure adequate local dispersal of emissions. |
| | Location of plant and equipment | Plant and equipment shall be operated away from residential areas or sensitive receptors near to the site. |

| Action | Issue | Requirements |
|---|---|--|
| Surfacing Activities | Bitumen overheating | Do not overheat bitumen but use minimum acceptable temperature. Measure temperature directly, especially on large heating plant. Avoid if possible, heating with open flame burners. |
| | Fume production | Cover pots or tanks containing hot bitumen, including during transportation. If necessary, water sprays shall be used to reduce vapour emissions. As far as practical, locate production away from sensitive receptors. |
| | Small accidental fires | Extinguish immediately. |
| | Spillage | Minimise spillages likely to contact open flames. |
| | Direct application of open flames ('torching') | Minimise its use. Overheating the surface is prohibited. |
| Material Handling | Material handling operations | Keep the number of handling operations to a minimum by ensuring that dusty material is not moved or handled unnecessarily. |
| | Transport of fine powdery materials | Use closed tankers. |
| | Transport of dusty materials and aggregates | All material deliveries will be sheeted to prevent generating air-borne dust. |
| | Handling areas | Keep clean and free from dust. |
| | Vehicle loading | Use material handling methods that minimise the generation of airborne dust. Damp down using water as dust suppressant whilst having regard for BRE guidance 'Control of Dust from Construction and Demolition Activities'. |
| Loading materials onto vehicles and conveyors | Ensure that vehicles are loaded in such a manner as to prevent spoil falling off during their journey. Drop heights must be kept to a minimum and enclosed wherever possible. Damp down with water. | |

| Action | Issue | Requirements |
|---------------------------|--|---|
| Material Handling (cont.) | Chutes, skips and conveyor transfer | Drop heights must be kept to a minimum and points enclosed wherever possible. Damp down with water. |
| | Conveyor loads | Damp down wherever possible. |
| | Dust dispersing over the site boundary | Use static sprinklers, bowsers, hand-held hoses, and other watering methods as necessary. |
| Stockpiling | Stockpile location | Allocate suitable location on site for the storage of topsoil or surplus soil arising from the works. |
| | Building stockpiles | Ensure slopes of stockpiles, tips and mounds are at an angle no greater than the natural angle of repose of the material. Avoid sharp changes of shape. |
| | Small and short-term stockpiles | Where possible, ensure stockpiles are protected from wind erosion (enclosed or under sheeting). Dusty materials can be dampened down using suitable and sufficient water sprays. Wind barriers (protective fences) of comparable size and height to the stockpile shall be used. |
| Spillages | Cleaning up | Methods and equipment shall be in place for immediate clean-up of spillages of dusty or potentially dusty materials. |
| | Inspection | Regularly inspect site for spillages. |
| | Cement powder (and similar) | Clean up spillages using wet handling methods. |

| Action | Issue | Requirements |
|--------------------------------|------------------------------------|--|
| Site Preparation & Restoration | Earthworks, excavation and digging | <p>Minimise dust generating activities on windy and dry days.</p> <p>Vegetation and cover shall be removed in discrete sections and not all at once (and in line with ecological constraints as applicable).</p> <p>Earthworks, excavation and digging activities shall be kept damp and, if possible, be avoided during exceptionally dry weather periods.</p> <p>Use water as a dust suppressant whilst having regard for BRE guidance 'Control of Dust from Construction and Demolition Activities'.</p> <p>Use covered skips.</p> <p>Cutting equipment to use water as a suppressant whilst ensuring suitable local exhaust ventilation.</p> |
| | Completed earthworks | Stabilise surfaces and / or re-vegetate as soon as possible. |
| | Storage mounds | <p>Seal surfaces by seeding or surface with vegetation that has previously been removed from the site e.g. turf that has been removed shall be stored and re-used.</p> <p>Alternatively, fence off and / or cover with secured tarpaulins.</p> |

| Action | Issue | Requirements |
|-------------------------|--|--|
| Construction Activities | Cutting, grinding, drilling, sawing, trimming, planting, sanding | <p>Cutting on site shall be avoided by using prefabrication whenever possible.</p> <p>Avoid cutting errors and re-bars. Employ equipment and techniques that minimise dust emissions, using best available dust suppression measures whilst having regard for BRE guidance 'Control of Dust from Construction and Demolition Activities'.</p> <p>Use water sprays to minimise dust from cutting equipment.</p> <p>Local exhaust ventilation shall be used where possible.</p> <p>Fans and filters shall be serviced and maintained to ensure correct operation.</p> <p>Design to fill wherever feasible rather than cutting back oversized work.</p> |
| | Cutting roadways, pavements, blocks etc. | <p>Use a diamond bladed floor saw with water pumped through to suppress dust.</p> <p>Standard angle grinders and disk cutters with no dust control shall not be used for this purpose.</p> |
| | Raking out mortar / pointing | <p>Standard angle grinders and disk cutters with no dust control features shall not be used.</p> <p>A mortar raking kit, fitted on to a standard 5" angle grinder can be used on soft mortar but for hard mortar, a super-saw with oscillating blades should be used.</p> |
| | Angle grinders and disk cutters | <p>Dust extraction / minimisation systems shall always be used.</p> |

| Action | Issue | Requirements |
|-----------------|---|--|
| Dust Monitoring | Sensitive properties within dust dispersal zone | <p>A dust monitoring programme, using real-time particulate matter automatic monitors, should be considered. This process should be used throughout construction where required. Where undertaken, the monitors should be positioned at locations adjacent to site boundaries (closest to neighbouring properties or sensitive receptors) in order to assess any dust arising during construction activities. At least three locations should be selected.</p> <p>Ensure an adequate water supply on the site for effective dust/particulate matter mitigation (using recycled water where possible).</p> <p>Ensure all vehicles switch off engines when stationary – no idling vehicles.</p> <p>Summaries of monitoring results and complaints' issues to be circulated to the local community to demonstrate the developer's quality assurance/quality control procedures.</p> |

10.2.5 The assessment deems that the Proposed Development meets the relevant guidance and it is subsequently considered that the Proposed Development adheres to the principles of the National Planning Policy Framework since the new development will not be “put at risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution”. Since it has been confirmed that the Proposed Development adheres to local and national planning policy, it is considered that air pollution should not be considered a limitation on the currently proposed design for the site.

11 LANDSCAPE AND ARBORICULTURAL MANAGEMENT PLAN

11.1 Background

11.1.1 A Landscape and Visual Appraisal (*Report Ref. CA11637-003 Rev B, January 2020*) and an Arboricultural Impact Assessment (*Report Ref. CA11637-007-V1 Rev G, January 2020*) have been prepared and submitted in support of the planning application.

11.1.2 The Contractor shall incorporate the requirements of the Landscaping proposals and Arboricultural Method Statement into the works.

Landscape and Visual Assessment

11.1.3 The Landscape and Visual Impact Assessment (LVIA) can be key to effective planning decisions since it helps identify the effects of new developments on views and on the landscape itself. These effects can be quite different. Some developments can have visual effects but none on landscape character and some vice versa. A depth of analysis and understanding of these two interrelated aspects is required to produce a successful LVIA.

11.1.4 The LVIA will determine a 'local landscape character rating' and overall 'visual sensory rating'.

11.1.5 Construction activities that would give rise to landscape and visual impacts of the scheme would include the following temporary activities:

- Presence of construction compounds and activities within them;
- Movement of construction machinery, plant and HGV delivery vehicles on the existing access route / road network and on the site; and
- Removal or changes to landform, including stripping of grassland, removal of existing hedgerows and trees where absolutely necessary and the formation of temporary stockpiles of soil.

Arboriculture

11.1.6 Development can have an adverse impact on trees and other woody vegetation within a site. This can result in: (1) immediate vegetation removal to facilitate the footprint of a new development; (2) potential future tree loss through the early decline of trees due to soil compaction; and (3) root disturbance and damage within a tree's rooting area.

- 11.1.7 Where a Proposed Development site supports a number of trees on or immediately adjacent to the site an “Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP) is often required to support a planning application. Where not supplied as part of an application, a condition may be imposed requesting an AMS and TPP is submitted and approved prior to development commencing. This document effectively shows the location of retained trees, their RPZs and how these trees will be protected during the construction and operational phases of the development. Such a document also allows a more bespoke buffer to be implemented, thus allowing the developable area of a site to be maximised.
- 11.1.8 Implementation of the proposed scheme will necessitate the removal of two individual trees, four tree groups and sections from two tree groups (G5, G8), as detailed in full within the Arboricultural Impact Assessment.
- 11.1.9 These trees are generally of low quality and therefore should not be a constraint to the development. Landscaping or ecological habitat creation/ management for the development will mitigate for the minor loss of low-quality trees from the site.
- 11.1.10 In assessing the impacts of the Proposed Development on the trees on and adjacent to the site and in proposing mitigation for these impacts, the planning application for development of the site accords with the requirements of British Standard 5837:2012 and local and national planning policies for trees and development.
- 11.1.11 An auditable system of arboricultural site monitoring is recommended to ensure that (when construction activities commence) the tree protection measures are in place and maintained for the lifetime of the construction phase.
- 11.1.12 The minimum Root Protection Areas (RPAs) as calculated using BS 5837 shall be regarded as being restricted areas within which no construction shall take place, no materials stored, fires lit, or other activities undertaken that could be harmful or injurious to the trees or their rooting environments.
- 11.1.13 In addition, encroachments within retained tree’s RPAs or Construction Exclusion Zones (CEZs) should be undertaken under arboricultural supervision and in accordance with an LPA approved AMS and TPP. Many LPAs will not discharge Tree Protection/AMS conditions unless adequate measures are put in place for supervision of tree protection measures and authorised works/ encroachment into RPAs/CEZs. To ensure compliance with conditions of consent and to prevent planning enforcement

action, it is recommended that tree protection measures and authorised encroachments are supervised by the appointed arboriculturist.

11.1.14 All specified and approved tree work shall be completed, and the protection areas established before any construction or groundwork operations are commenced and prior to the installation of the site offices, compound facilities and storage and yard areas.

11.2 Specific Requirements

Landscape and Visual Assessment

11.2.1 Where possible, the Contractor should consider implementing the following measures to reduce visual impacts:

- Locate site offices and storage of plant to reduce any potential and unnecessary impacts upon sensitive receptors;
- Avoid unnecessary impacts being introduced, such as the formation of unreasonably high spoil mounds;
- Keep the maximum heights of the buildings with the heights of the adjacent vegetation;
- Use hoardings to screen site activities;
- Route construction traffic to avoid residential/high-risk areas;
- Any temporary lighting required within the working area will be task specific and located directly at the place of work;
- Intensify visual screening by enhancing the existing vegetation and by designing additional planting; and
- Develop a planting plan using native trees and shrubs of Local Provenance wherever possible.

Arboriculture

11.2.2 All landscape work, including new planting, seeding and aftercare shall be carried out in accordance with submitted landscape plans and approved as part of the Planning Permission.

- 11.2.3 Protective fencing should remain intact throughout the duration of the scheme and only be removed upon completion. Weather-proof notices should be placed on the fences that clearly indicate 'NO ACCESS'.
- 11.2.4 Any proposed new hard surface located within the RPAs of the retained trees should be installed at ground level without soil stripping or excavation. Any excavations within the RPAs that cannot be avoided should be limited to careful, hand-digging operations under the supervision of a competent arboriculturist.
- 11.2.5 There are no Tree Preservation Orders (TPOs) or Conservation Area constraints on the site and there are no veteran trees or ancient woodlands within or adjacent to the site.
- 11.2.6 The dense vegetation within sections of site, which prevented access to specific tree groups, is to be removed as part of the development. It is recommended that following this, the trees in the specific group are re-surveyed prior to construction works commencing on site to confirm their RPAs and assess any potential risk / safety issues with respect to the site.
- 11.2.7 Implementation of the proposed scheme will necessitate the removal of two trees, three groups and two sections from a further two groups. These trees are of low quality and value and therefore their loss will have a low impact on the amenity of the locality.
- 11.2.8 The trees that are to be retained on the site will be protected during the proposed works with tree protection fencing. Unless otherwise stated, in an Arboricultural Method Statement (AMS), the protective fencing will comprise the default barrier described in BS5837:2012. A diagram of this fencing and the location of the protective fencing is included within the Arboricultural Impact Assessment.
- 11.2.9 Signage on the fencing will also be required and an example of this is included in Arboricultural Impact Assessment. The tree protection fencing shall be erected prior to all development works commencing on site, including ground works and shall not be removed until the development is completed. Any changes required to the location or erection and dismantling timescales of the tree protection fencing shall be notified to the LPA in writing, with these changes only being made after receiving written confirmation by the LPA that these changes can be made.

New Planting

- 11.2.10 If possible, any areas identified for new planting should be protected during construction to prevent damage to the soils structure and consequent requirement for expensive re-instatement. The areas should be fenced off to prevent access and storage. Failing that, soils should be stripped and re-instated following completion of construction activities. This remediation will include the turnover of material within the subsoil layers and planting medium, and the re-instatement or importing of topsoil in accordance with the recommendations in BS 3882:2015 'Specification for topsoil'.
- 11.2.11 Planting of replacements for removed trees or new plants shall be done at the end of the construction phase or at a time agreed with the LPA. Species, sizes and positions shall also be agreed with the LPA and shall be marked on the landscape plan. The arboricultural consultant or landscape architect shall oversee any required planting.
- 11.2.12 The successful integration of the planting proposal needs to take account of the following points:
- Plan of underground service routes;
 - Schedule of tree protection measures, including the management of harmful substances;
 - Method statements for constructional variations with regard to tree proximity (e.g. foundations, surfacing, scaffolding, etc.);
 - Site logistics plan to include storage, plant parking/stationing, materials handling;
 - Tree works – required pruning and new planting. All tree works must be carried out by a competent arborist in accordance with BS 3998:2010 and any other prevailing good professional practice;
 - Site supervision – WA LLP has been appointed as the project Arboricultural consultant, and will be responsible for all Arboricultural matters on site.

12 CULTURAL HERITAGE ASSETS MANAGEMENT PLAN

12.1 Background

12.1.1 A Heritage Impact Assessment (*Report Ref. CA11637-005-V0.7, January 2020*) has been undertaken by WA LLP and its findings are available as part of the supporting documents submitted with the planning application.

12.1.2 The Contractor shall incorporate the requirements of the Heritage Impact Assessment into the works.

12.1.3 Cadw have prepared and published a series of best-practice guidance documents, which along with TAN24, are intended to enhance the provisions of the Historic Environment (Wales) Act which was passed by the National Assembly for Wales on 9 February 2016 and became law after receiving Royal Assent on 21 March 2016.

12.1.4 These documents are intended to help manage change within the Welsh historic environment in line with conservation philosophies and values set out Conservation Principles. Specifically, the following best practice guidance documents have been consulted as part of the development of this report:

- Setting of Historic Assets in Wales (May 2017);
- Heritage Impact Assessment in Wales (May 2017);
- Caring for Historic Landscapes (2007); and
- A Guide to Good Practice on Using the Register of Landscapes in the Planning and Development Process.

12.1.5 A response to the EIA Screening Opinion Request to Newport City Council from the Glamorgan-Gwent Archaeological Trust (GGAT) (15th July 2019) stated that as it is 'unlikely that archaeological deposits will be encountered during the work, and that it would not be possible to acquire any information from the piling where it would reach beneath these depths, ...we do not recommend any archaeological mitigation'. As such, archaeology has been scoped out of this assessment and no further archaeological work is anticipated. The trust made no comments with regards to designated historic assets.

12.1.6 A pre-application meeting with Newport City Council (19th August 2019) confirmed that the site was not part of Gwent Levels Historic Landscape Area, and that the site would not impact upon it.

12.1.7 It was agreed that an Assessment of the Significance of Development on Historic Landscape (ASIDOHL) was not required to accompany the application.

12.2 Specific Requirements

12.2.1 The WA LLP Heritage Impact Assessment, undertaken with due respect to guidance published by the Welsh Government & Cadw, has assessed the potential impact of the Proposed Development on the significance of designated historic assets within the vicinity of the site.

12.2.2 The baseline identified that the site is located to the east of the Gwent Levels Historic Landscape, a landscape included on the Register of Landscapes of Outstanding Historic Interest in Wales. The site is specifically adjacent to Historic Landscape Character Area (HLCA) 15 Eastern St Brides which contributes to the significance of the wider landscape area as a medieval relict landscape which retains evidence of the adaptation and management of the land for agrarian purposes.

12.2.3 The assessment process has anticipated that the Proposed Development would result in no change to the elements of the HLCA's setting which contribute towards an understanding and appreciation of its heritages values. As such no harm to the overall significance of the Historic Landscape has been identified.

12.2.4 The proposals comply with national and local policy on heritage grounds.

APPENDICES

APPENDIX A: Drawings & Plans (provided by Wardell Armstrong)

CA11637 - 003 Site Location Plan

APPENDIX A: Drawings & Plans (provided by Stride Treglown)

153091_STL_00_00_DR_A_ZZZZ_00002 - Site Location Plan

153091_STL_00_00_DR_A_ZZZZ_00003 – Existing and Proposed Site Levels

153091_STL_00_00_DR_A_ZZZZ_01001 - Proposed Site Plan

153091_STL_00_00_DR_A_ZZZZ_01002 - GA Plan - Level 00

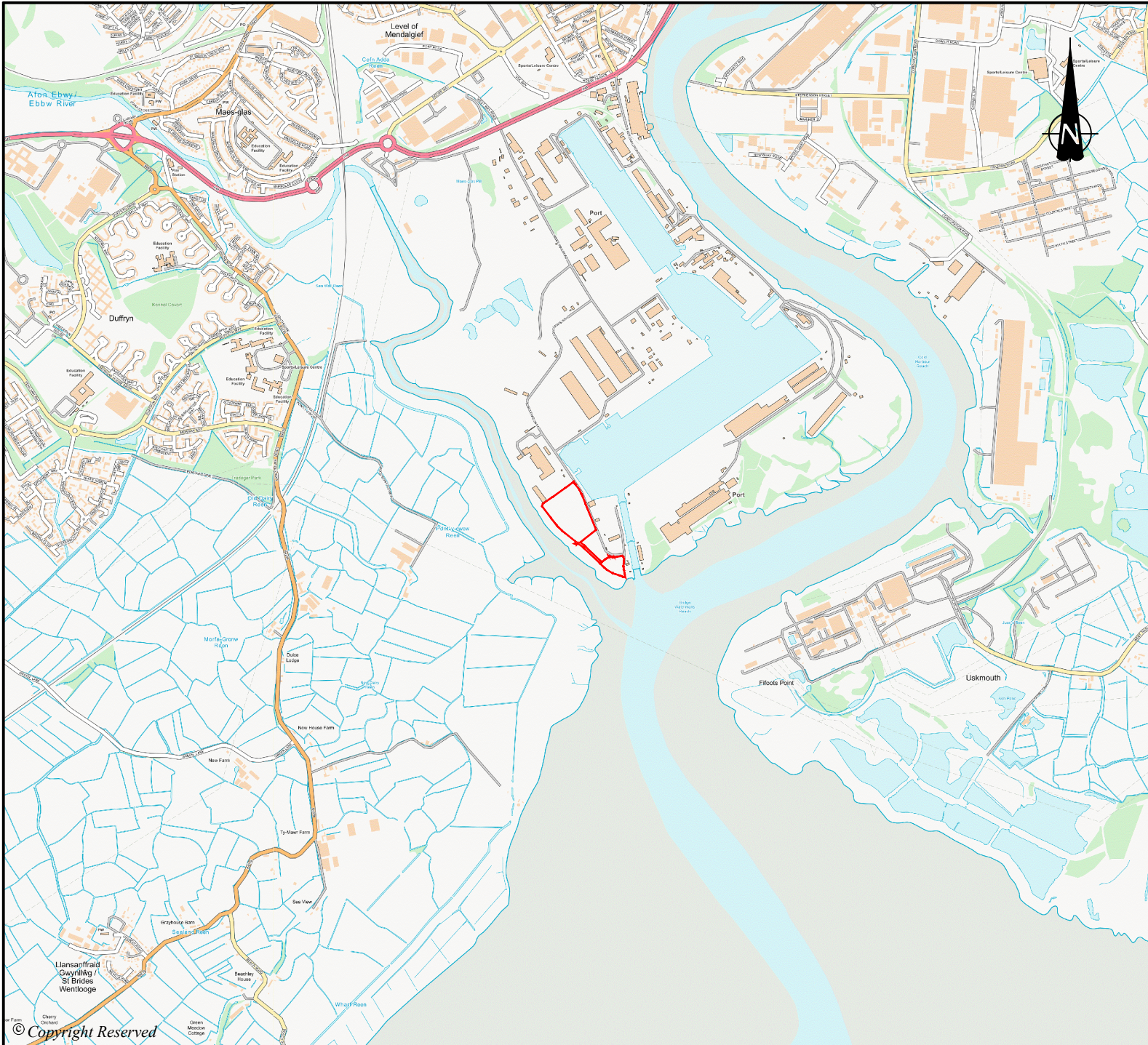
153091_STL_00_01_DR_A_ZZZZ_01003 - GA Plan - Level 01

153091_STL_00_02_DR_A_ZZZZ_01004 - Proposed Roof Plan

153091_STL_00_ZZ_DR_A_ZZZZ_02001 - Proposed Elevations

153091_STL_00_ZZ_DR_A_ZZZZ_03001 - Proposed Sections

153091-STL-00-ZZ-DR-A-ZZZZ-06001 - Proposed 3D Visualisation



DO NOT SCALE FROM THIS DRAWING

LEGEND

Site Boundary —



| | | | | | |
|----------|--------------------------|----------|-------|------|------|
| B | Update Red Line Boundary | 21.01.20 | AW | | |
| A | Update Red Line Boundary | 03.10.19 | AW | | |
| REVISION | DETAILS | DATE | DRAWN | CHKD | APPD |

CLIENT
Associated British Ports

PROJECT
New Manufacturing Plant Newport

DRAWING TITLE
Site Location Plan

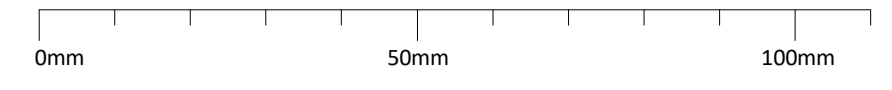
| | | | |
|----------|-------------|-------------|------------|
| DRG No | CA11637-003 | REV | B |
| SIZE | A4 | SCALE | 1:25000 |
| | | DATE | 13.08.2019 |
| DRAWN BY | AW | CHECKED BY | LD |
| | | APPROVED BY | LD |

■ CARDIFF | TEL 0292 072 9191
WWW.WARDELL-ARMSTRONG.COM

| | |
|-------------------------------------|---|
| <input type="checkbox"/> BIRMINGHAM | <input type="checkbox"/> LONDON |
| <input type="checkbox"/> BOLTON | <input type="checkbox"/> MANCHESTER |
| <input type="checkbox"/> CARLISLE | <input type="checkbox"/> N-U-T |
| <input type="checkbox"/> EDINBURGH | <input type="checkbox"/> SHEFFIELD |
| <input type="checkbox"/> GLASGOW | <input type="checkbox"/> STOKE ON TRENT |

© Copyright Reserved

Responsibility is not accepted for errors made by others in scaling from this drawing.
All construction information should be taken from figured dimensions only.

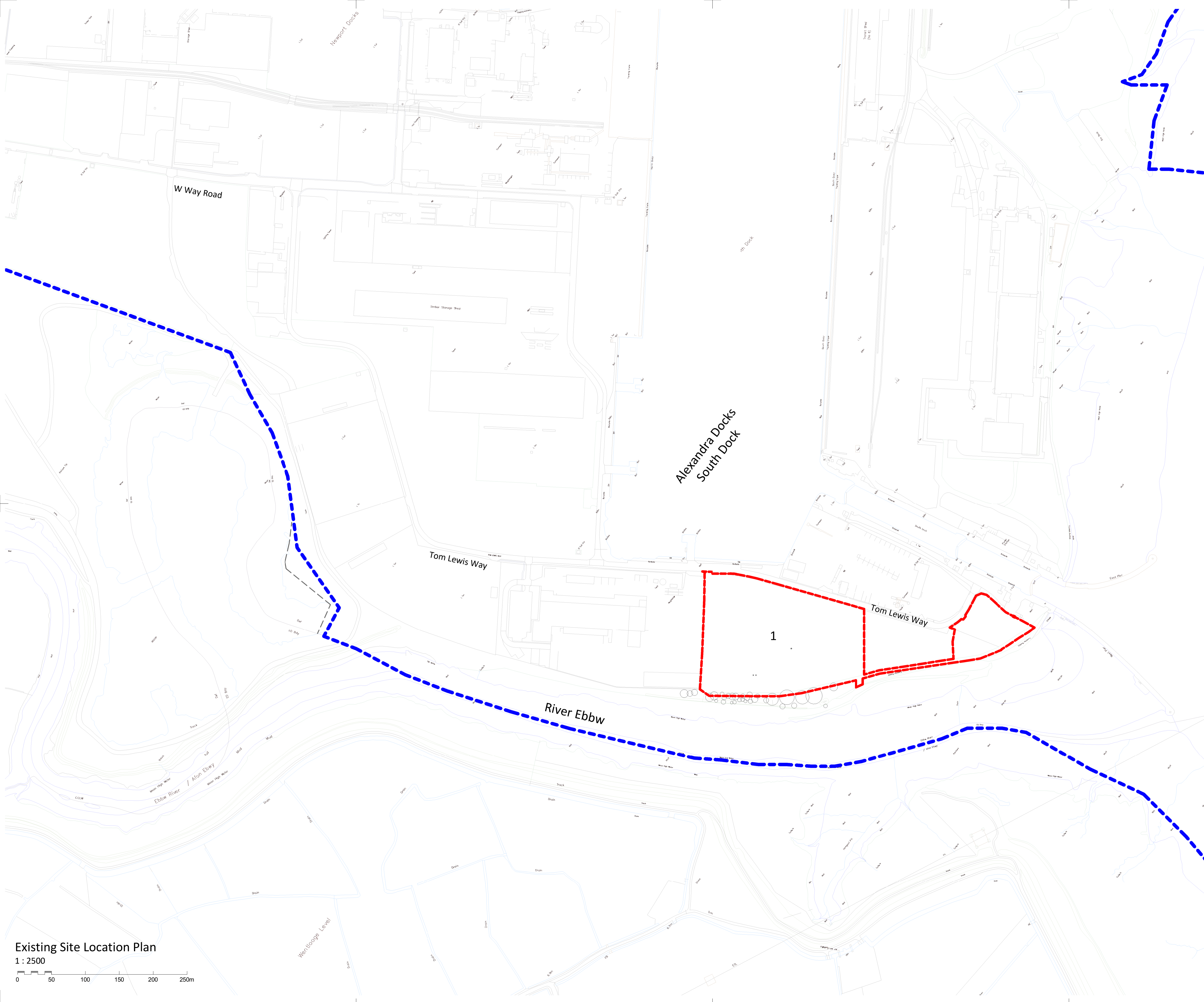
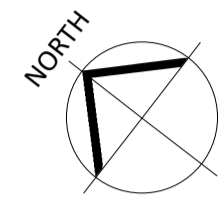


ALL DIMENSIONS IN METERS

Planning Application Boundary

ABP Land Ownership Boundary

1 Manufacturing facility and habitat enhancement area



| | | | |
|--------|-----|------------|----------------|
| PL | P20 | 21/01/2020 | PLANNING ISSUE |
| STATUS | REV | DATE | DESCRIPTION |

CLIENT
Associated British Ports

REVISED BY
Gareth Brown

CHECKED BY
Martin Long

ORIGINATOR NO
153091

CONSULTANT
STRIDE TREGLOWN
www.stride-treglown.com © Stride Treglown Limited 2019

PROJECT
ABP New Manufacturing Plant
Land adjacent West Way Road
Alexandra Docks
Newport

DRAWING TITLE
Existing Site Location Plan

| | |
|-------------------------------------|-------------------------------|
| SUITABILITY STATUS PL : PLANNING | SCALE As indicated @ A1 |
|-------------------------------------|-------------------------------|

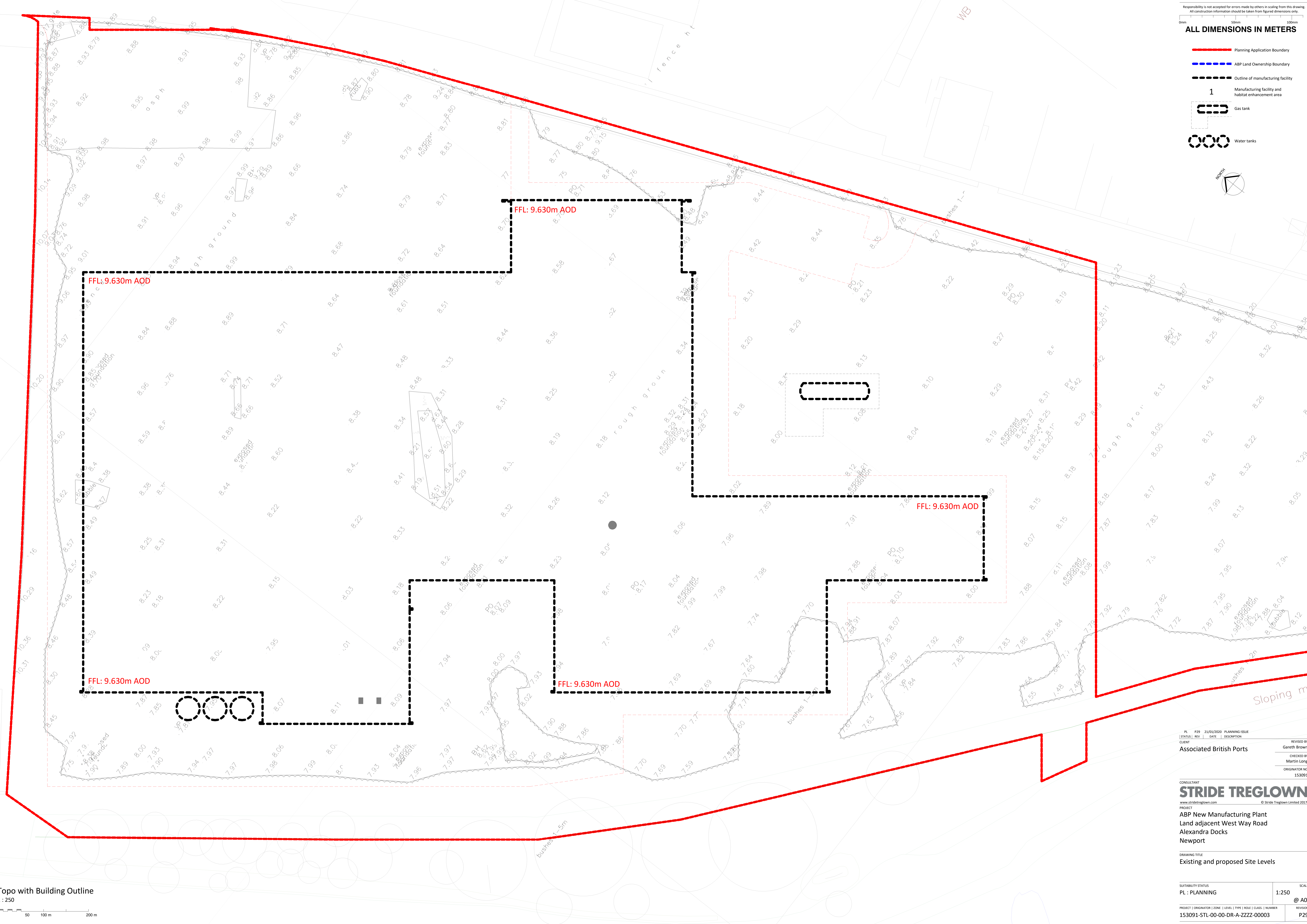
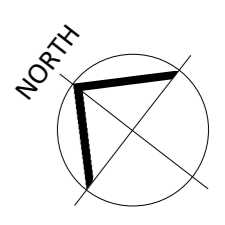
| | |
|--|-----------------|
| PROJECT ORIGINATOR ZONE LEVEL TYPE ROLE CLASS NUMBER 153091-STL-00-00-DR-A-ZZZZ-00002 | REVISION P29 |
|--|-----------------|

Existing Site Location Plan

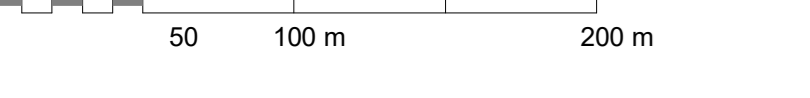
1 : 2500



- Planning Application Boundary
- ABP Land Ownership Boundary
- Outline of manufacturing facility
- 1** Manufacturing facility and habitat enhancement area
- Gas tank
- Water tanks



Topo with Building Outline
 1 : 250



| | | | | |
|--------------------------|------------|----------------|---------------|--------------|
| PL P29 | 21/01/2020 | PLANNING ISSUE | REVIEWED BY | Gareth Brown |
| STATUS REV | DATE | DESCRIPTION | CHECKED BY | Martin Long |
| CLIENT | | | ORIGINATOR NO | 153091 |
| Associated British Ports | | | | |

CONSULTANT
STRIDE TREGLOWN
 www.stride-treglow.com © Stride-Treglow Limited 2017

PROJECT
 ABP New Manufacturing Plant
 Land adjacent West Way Road
 Alexandra Docks
 Newport

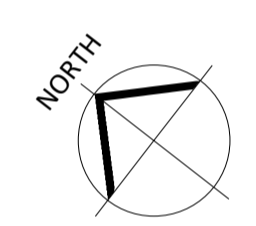
DRAWING TITLE
 Existing and proposed Site Levels

| | |
|---|-----------------|
| SUITABILITY STATUS | SCALE |
| PL : PLANNING | 1:250 |
| PROJECT ORIGINATOR ZONE LEVEL TYPE ROUE CLASS NUMBER | REVISION |
| 153091-STL-00-00-DR-A-ZZZZ-00003 | @ AO |
| | P29 |

ALL DIMENSIONS IN METERS

- 1a** Single skin profiled metal cladding - Grey
- 1** Grey insulated built-up cladding system
- 2** Blue insulated built-up cladding system
- 3** Concrete upstand
- 4** Double glazed PPC aluminium windows in RAL 7012
- 5** Translucent roof lights/windows as part of cladding system
- 6** Steel doors in RAL 7012
- 7** Roller shutter doors in RAL 7012

- Planning Application Boundary
- - - ABP Land Ownership Boundary
- 1** Manufacturing facility and habitat enhancement area



See drawing number 72689-CUR-00-XX-DR-C-SK001 for further detail regarding existing and proposed levels.
See drawing number 72689-CUR-00-XX-DR-C-92000 for details of drainage strategy proposals.

| PL | P20 | 21/01/2020 | PLANNING ISSUE |
|--------------------------|-----|------------|---------------------------|
| STATUS | REV | DATE | DESCRIPTION |
| CLIENT | | | |
| Associated British Ports | | | REVISOR Gareth Brown |
| | | | CHECKED BY Martin Long |
| | | | ORIGINATOR NO 153091 |

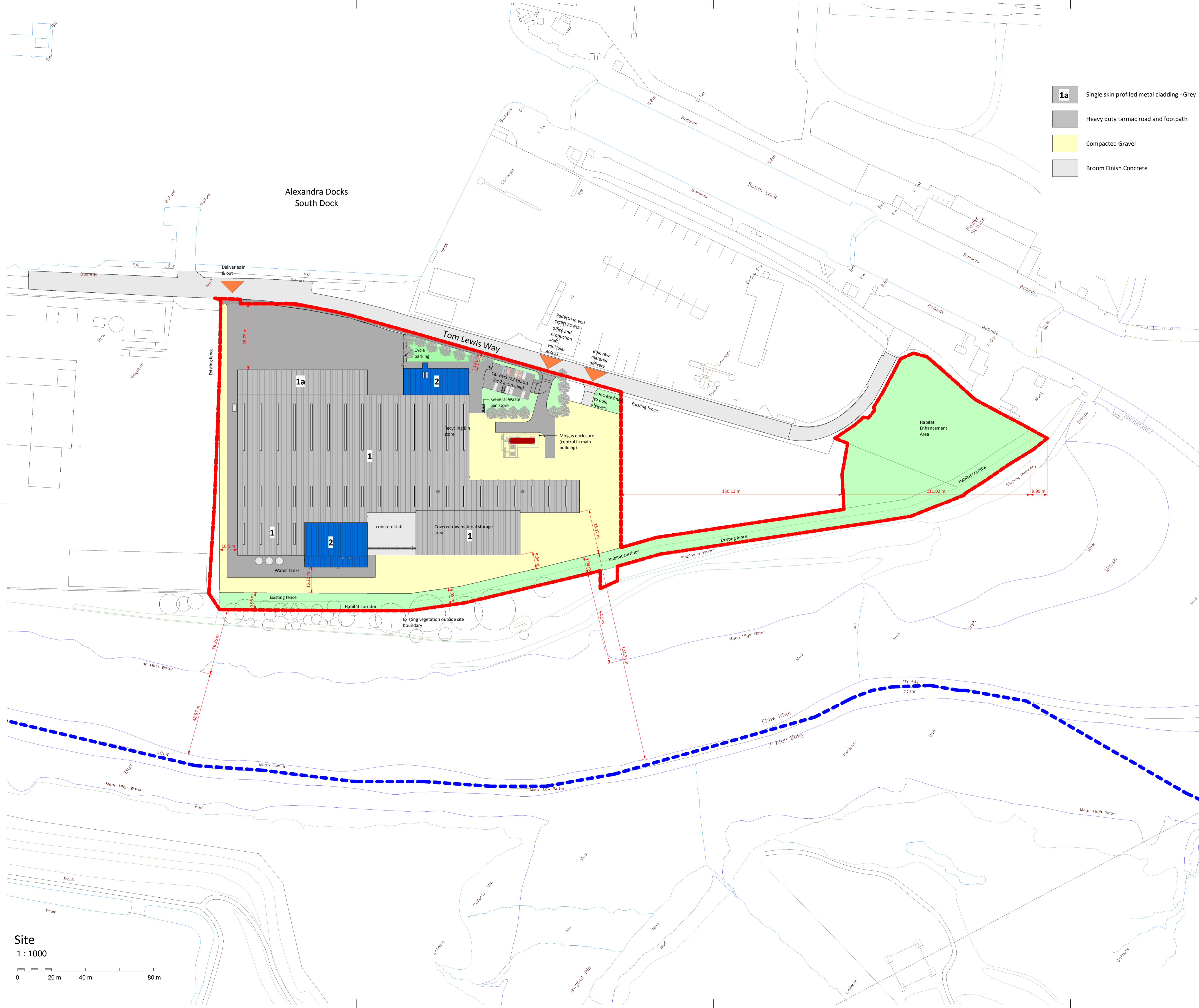
CONSULTANT
STRIDE TREGLOWN
www.stride-treglow.com © Stride Treglow Limited 2019

PROJECT
**ABP New Manufacturing Plant
Land adjacent West Way Road
Alexandra Docks
Newport**

DRAWING TITLE
Proposed Site Plan

| | |
|--|---------------------------------------|
| SUITABILITY STATUS PL : PLANNING | SCALE As indicated @ A1 |
|--|---------------------------------------|

| | |
|--|----------|
| PROJECT ORIGINATOR ZONE LEVEL TYPE ROLE CLASS NUMBER | REVISION |
| 153091-STL-00-00-DR-A-ZZZZ-01001 | P29 |



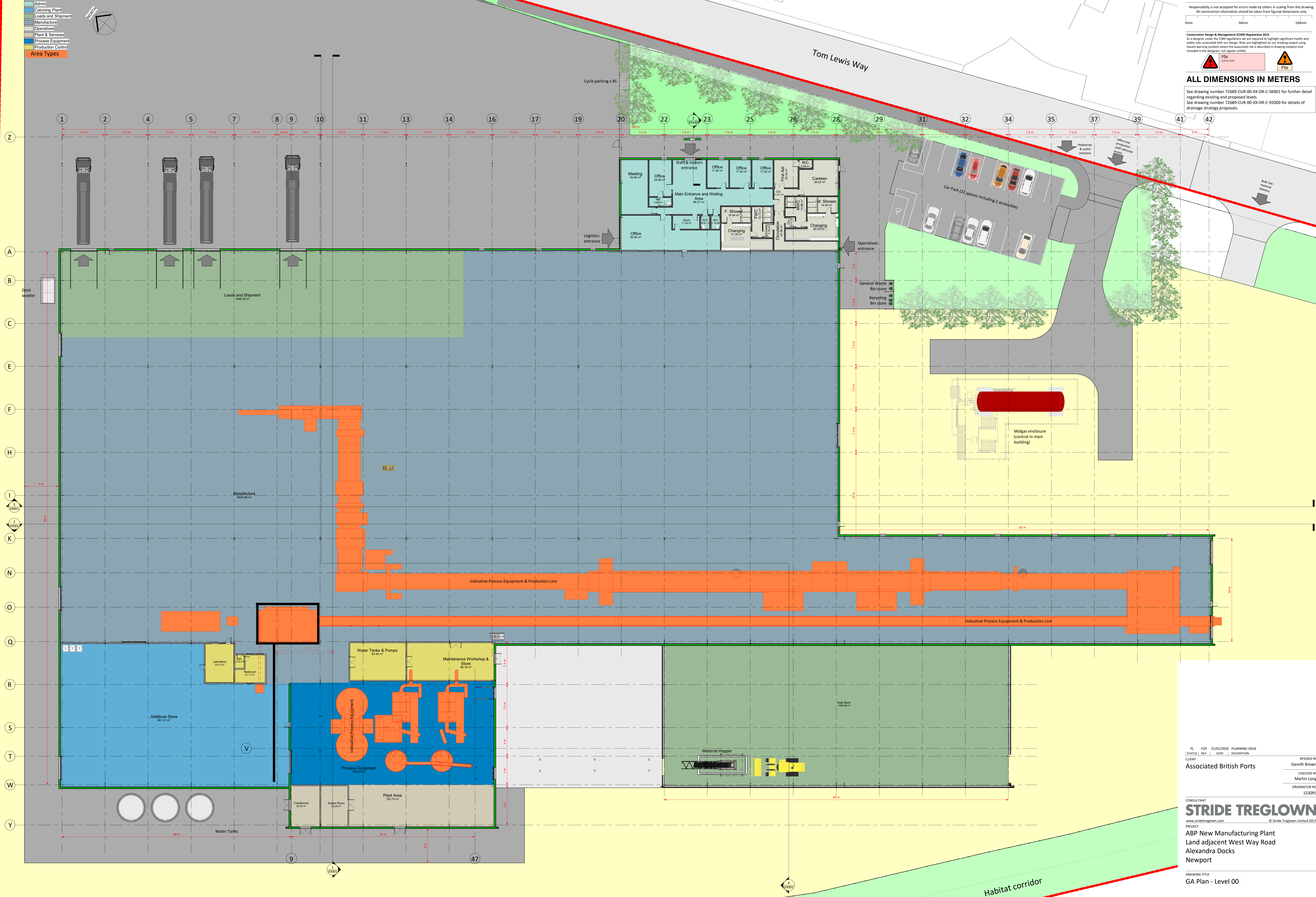
- Admin
- Calcining Plant
- Loads and Shipment
- Manufacture
- Operatives
- Plant & Services
- Process Equipment
- Production Control
- Area Types

Responsibility is not accepted for errors made by others in scaling from this drawing.
 All construction information should be taken from figured dimensions only.

Construction Design & Management (CDM) Regulations 2015
 As a designer under the CDM regulations we are required to highlight significant health and safety risks associated with our design. Risks are highlighted on our drawing output using hazard warning symbols where the associated risk is described in drawing notation and included in the designers risk register (DARR).

ALL DIMENSIONS IN METERS

See drawing number 72689-CUR-00-XX-DR-C-SK001 for further detail regarding existing and proposed levels.
 See drawing number 72689-CUR-00-XX-DR-C-92000 for details of drainage strategy proposals.



Level 0
 1 : 200

| | | | | | |
|--------------------------|-----|------------|----------------|---------------|--------------|
| PL | P29 | 21/05/2020 | PLANNING ISSUE | REVIEWED BY | Gareth Brown |
| STATUS | REV | DATE | DESCRIPTION | CHECKED BY | Martin Long |
| Associated British Ports | | | | ORIGINATOR NO | 153091 |

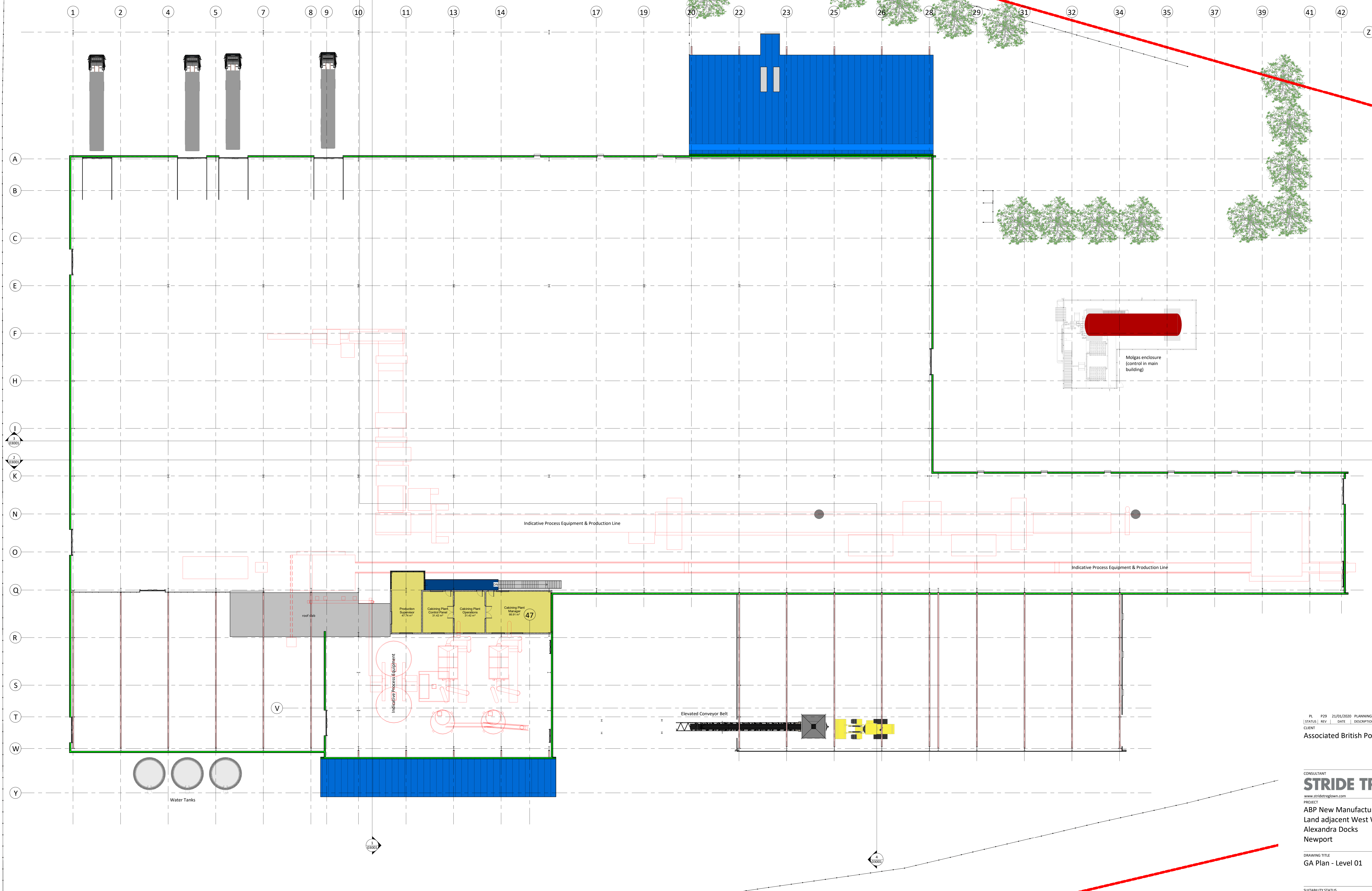
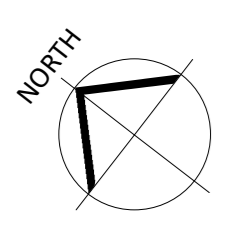
STRIDE TREGLOWN
 www.stride-treglow.com © Stride Treglow Limited 2017

PROJECT
 ABP New Manufacturing Plant
 Land adjacent West Way Road
 Alexandra Docks
 Newport

DRAWING TITLE
 GA Plan - Level 00

| | |
|--|--------------|
| SUITABILITY STATUS | SCALE |
| PL : PLANNING | 1 : 200 @ A0 |
| PROJECT ORIGINATOR ZONE LEVEL TYPE ROLE CLASS NUMBER | REVISION |
| 153091-STL-00-00-DR-A-ZZZZ-01002 | P29 |

Production Control
Area Types



| | | | | | |
|--------------------------|-----|------------|----------------|---------------|--------------|
| PL | P29 | 21/01/2020 | PLANNING ISSUE | REVIEWED BY | Gareth Brown |
| STATUS | REV | DATE | DESCRIPTION | CHECKED BY | Martin Long |
| Associated British Ports | | | | ORIGINATOR NO | 153091 |

CONSULTANT
STRIDE TREGLOWN
www.stride-treglow.com © Stride Treglow Limited 2017
PROJECT
ABP New Manufacturing Plant
Land adjacent West Way Road
Alexandra Docks
Newport

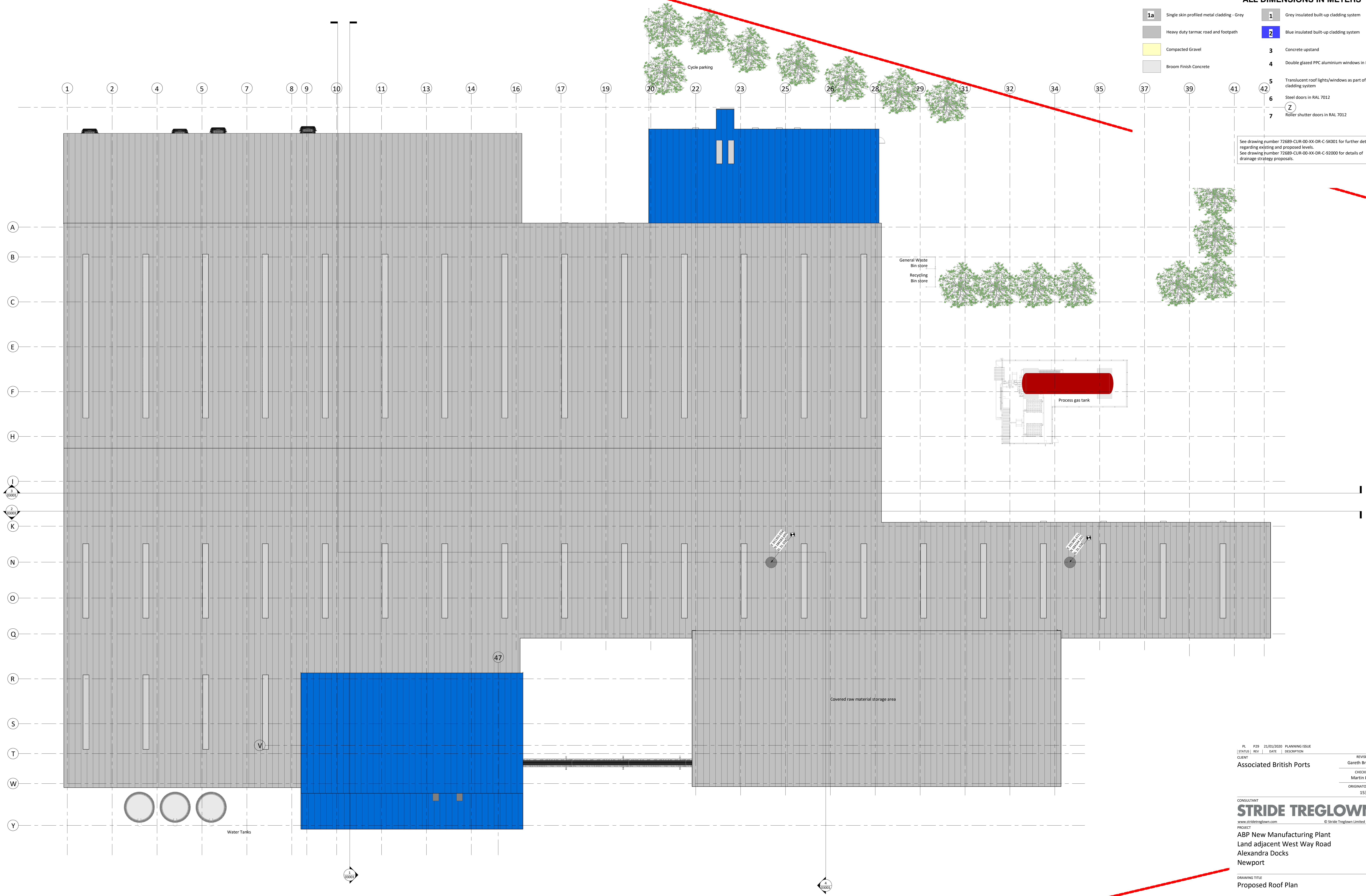
DRAWING TITLE
GA Plan - Level 01

| | |
|--------------------|--------------|
| SUITABILITY STATUS | SCALE |
| PL : PLANNING | 1 : 200 @ AO |

| | |
|--|----------|
| PROJECT ORIGINATOR ZONE LEVEL TYPE ROLE CLASS NUMBER | REVISION |
| 153091-STL-00-01-DR-A-ZZZZ-01003 | P29 |

- 1a** Single skin profiled metal cladding - Grey
- 1** Grey insulated built-up cladding system
- 2** Heavy duty tarmac road and footpath
- 2** Blue insulated built-up cladding system
- 3** Compacted Gravel
- 3** Concrete upstand
- 4** Broom Finish Concrete
- 4** Double glazed PPC aluminium windows in RAL 7012
- 5** Translucent roof lights/windows as part of cladding system
- 6** Steel doors in RAL 7012
- 7** Roller shutter doors in RAL 7012

See drawing number 72689-CUR-00-XX-DR-C-SK001 for further detail regarding existing and proposed levels.
See drawing number 72689-CUR-00-XX-DR-C-92000 for details of drainage strategy proposals.



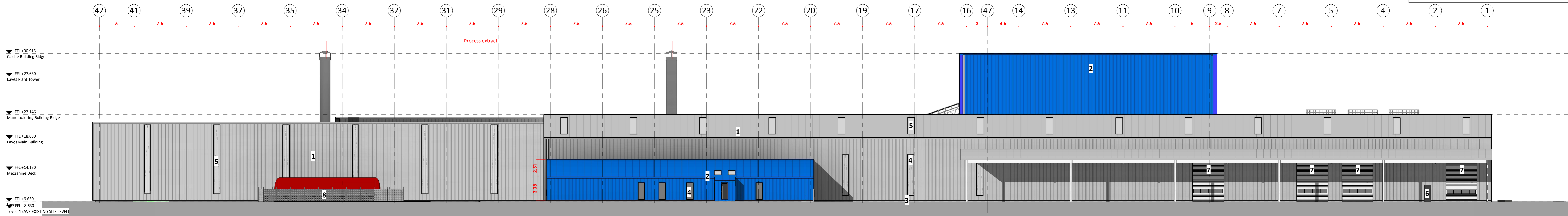
Roof Plan
1 : 200

PL P29 21/01/2020 PLANNING ISSUE
 STATUS | REV | DATE | DESCRIPTION
 CLIENT Associated British Ports
 REVISIONS
 CHECKED BY Martin Long
 ORIGINATOR NO 153091

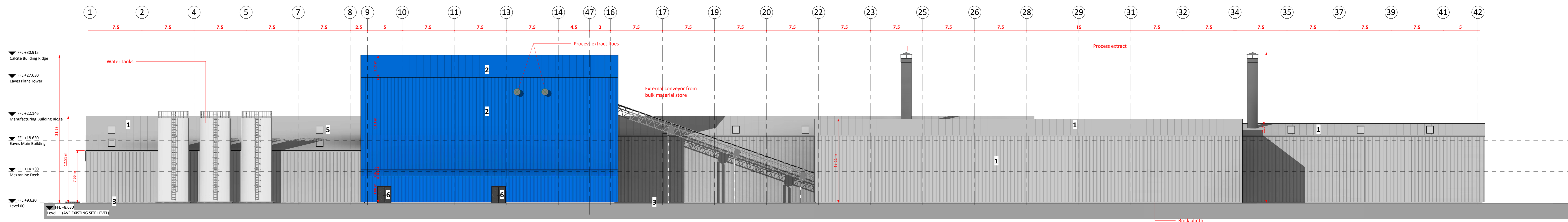
CONSULTANT
STRIDE TREGLOWN
 www.stride-treglow.com © Stride Treglow Limited 2017
 PROJECT
 ABP New Manufacturing Plant
 Land adjacent West Way Road
 Alexandra Docks
 Newport

DRAWING TITLE
Proposed Roof Plan

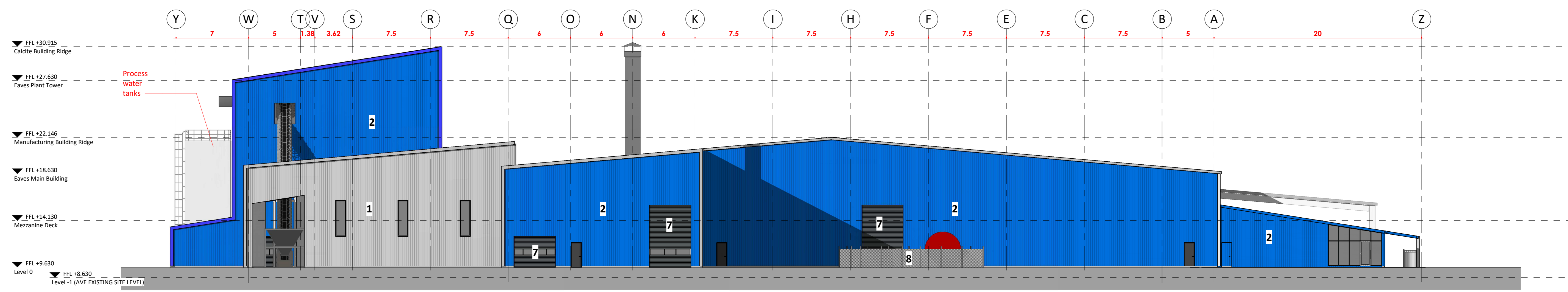
SUITABILITY STATUS
 PL : PLANNING
 SCALE
 1 : 200 @ AO
 PROJECT | ORIGINATOR | ZONE | LEVEL | TYPE | CLASS | NUMBER
 153091-STL-00-02-DR-A-ZZZZ-01004
 REVISION
 P29



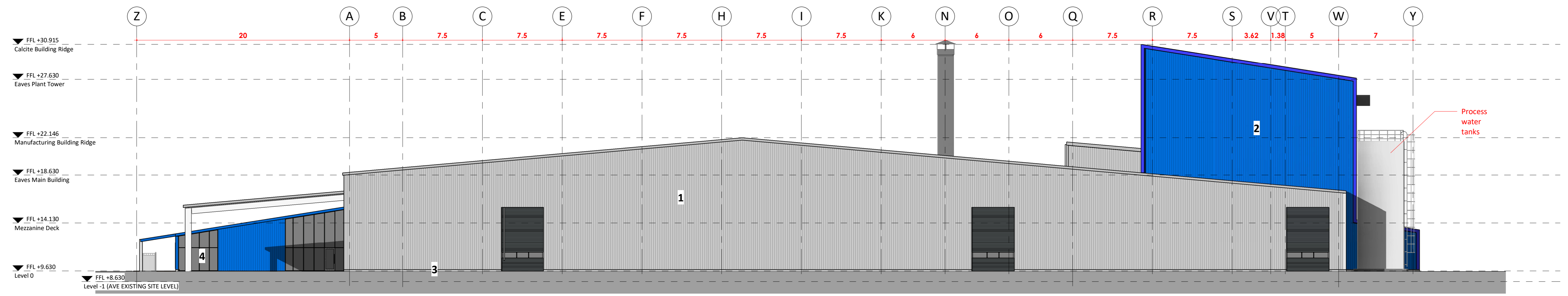
North East Elevation
1:200



South West Elevation
1:200

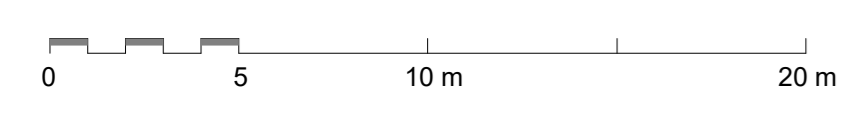


South East Elevation
1:200



North West Elevation
1:200

- 1** Grey insulated built-up cladding system
- 1a** Single skin profiled metal cladding - Grey
- 2** Blue insulated built-up cladding system
- 3** Concrete upstand
- 4** Double glazed PPC aluminium windows in RAL 7012
- 5** Translucent roof lights/windows as part of cladding system
- 6** Steel doors in RAL 7012
- 7** Roller shutter doors in RAL 7012
- 8** Chain link fence in RAL 7012

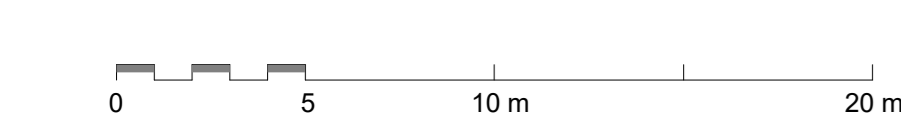
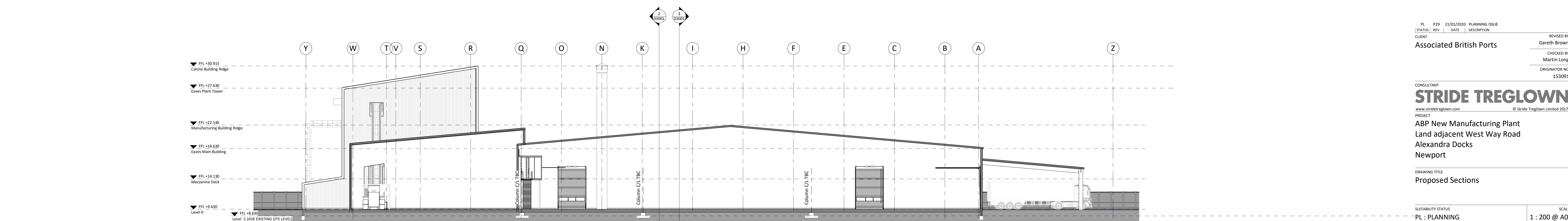
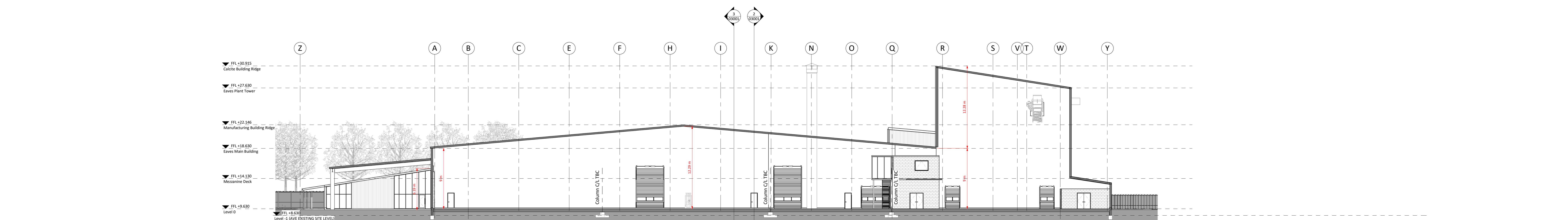
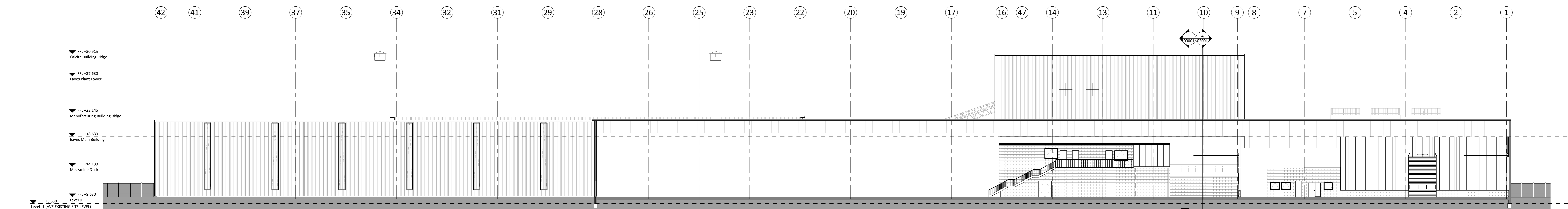
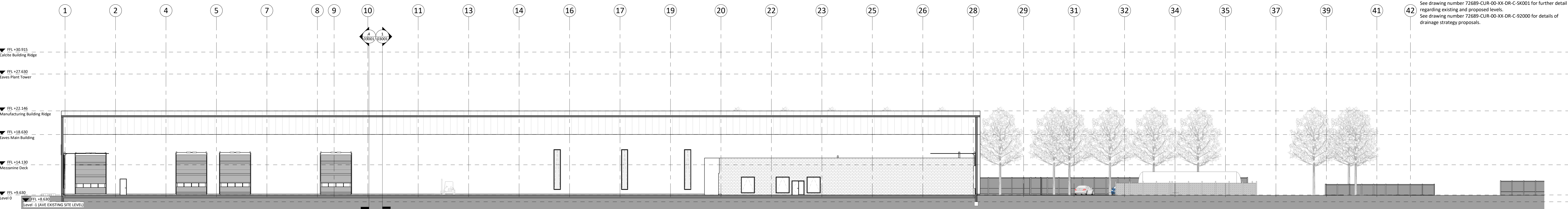


| | | | | |
|--------------------------|------------|----------------|-------------|---------------|
| PL P29 | 21/03/2020 | PLANNING ISSUE | REVISION | REVISOR |
| STATUS | REV | DATE | DESCRIPTION | |
| Associated British Ports | | | | REVISION |
| | | | | Gareth Brown |
| | | | | CHECKED BY |
| | | | | Martin Long |
| | | | | ORIGINATOR NO |
| | | | | 153091 |

CONSULTANT
STRIDE TREGLOWN
www.stride-treglow.com © Stride Treglow Limited 2017
PROJECT
ABP New Manufacturing Plant
Land adjacent West Way Road
Alexandra Docks
Newport

DRAWING TITLE
Proposed Elevations

| | |
|--|--------------|
| SUITABILITY STATUS | SCALE |
| PL : PLANNING | 1 : 200 @ AO |
| PROJECT ORIGINATOR ZONE LEVEL TYPE ROLE CLASS NUMBER | REVISION |
| 153091-STL-00-ZZ-DR-A-ZZZZ-02001 | P29 |



| | | | | | |
|--------------------------|------------|----------------|---------------|--------------|-------------|
| PL P29 | 21/01/2020 | PLANNING ISSUE | REVISION | DATE | DESCRIPTION |
| Associated British Ports | | | REVIEWED BY | Gareth Brown | |
| | | | CHECKED BY | Martin Long | |
| | | | ORIGINATOR NO | 153091 | |

CONSULTANT
STRIDE TREGLOWN
 www.stride-treglown.com © Stride Treglown Limited 2017

PROJECT
ABP New Manufacturing Plant
 Land adjacent West Way Road
 Alexandra Docks
 Newport

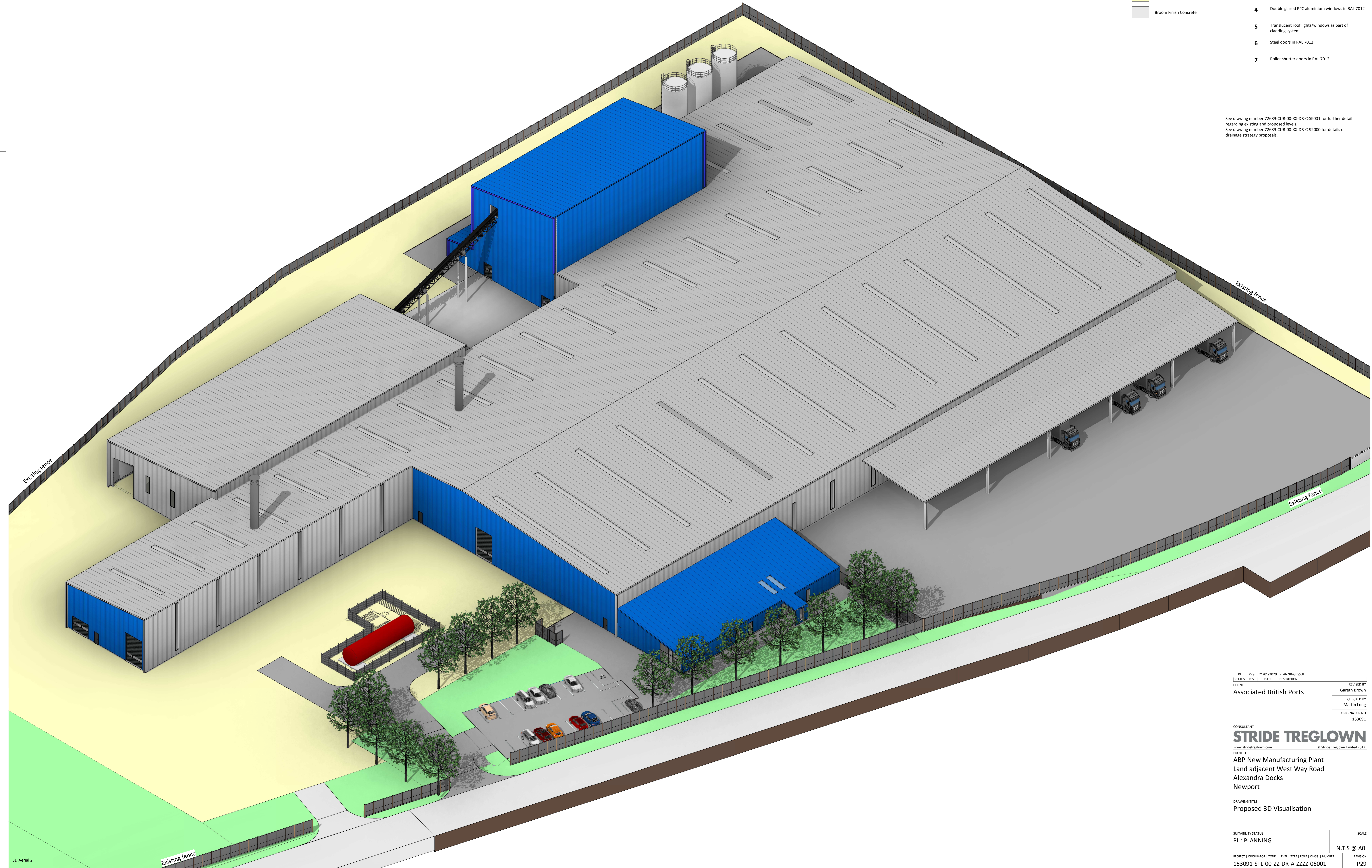
DRAWING TITLE
Proposed Sections

| | |
|--------------------|--------------|
| SUITABILITY STATUS | SCALE |
| PL : PLANNING | 1 : 200 @ AO |

| | |
|--|----------|
| PROJECT ORIGINATOR ZONE LEVEL TYPE ROLE CLASS NUMBER | REVISION |
| 153091-STL-00-ZZ-DR-A-ZZZZ-03001 | P29 |

- | | |
|--|--|
| 1a Single skin profiled metal cladding - Grey | 1 Grey insulated built-up cladding system |
| Heavy duty tarmac road and footpath | 2 Blue insulated built-up cladding system |
| Compacted Gravel | 3 Concrete upstand |
| Broom Finish Concrete | 4 Double glazed PPC aluminium windows in RAL 7012 |
| | 5 Translucent roof lights/windows as part of cladding system |
| | 6 Steel doors in RAL 7012 |
| | 7 Roller shutter doors in RAL 7012 |

See drawing number 72689-CUR-00-XX-DR-C-SK001 for further detail regarding existing and proposed levels.
See drawing number 73609-CUR-00-XX-DR-C-92000 for details of drainage strategy proposals.



| | |
|-----------------------------------|---------------|
| PL P29 21/01/2020 PLANNING ISSUE | REVIEWED BY |
| STATUS REV DATE DESCRIPTION | Gareth Brown |
| CLIENT | CHECKED BY |
| Associated British Ports | Martin Long |
| | ORIGINATOR NO |
| | 153091 |

CONSULTANT
STRIDE TREGLOWN
www.stride-treglow.com © Stride Treglow Limited 2017
PROJECT
ABP New Manufacturing Plant
Land adjacent West Way Road
Alexandra Docks
Newport

DRAWING TITLE
Proposed 3D Visualisation

| | |
|--|------------|
| SUITABILITY STATUS | SCALE |
| PL : PLANNING | N.T.S @ A0 |
| PROJECT ORIGINATOR ZONE LEVEL TYPE ROLE CLASS NUMBER | REVISION |
| 153091-STL-00-ZZ-DR-A-ZZZZ-06001 | P29 |

APPENDIX B: CEMP Review Table

REVIEWED BY _____

| PROPOSED REVIEW PERIOD | DUE DATE OF REVIEW | ACTUAL DATE OF REVIEW | SECTIONS AMENDED | CEMP ISSUE No. | Project Manager | Contractor's Project Manager | Environmental Manager /Co-ordinator |
|---|---------------------------|------------------------------|-------------------------|-----------------------|------------------------|-------------------------------------|--|
| 6 Weeks after Contractor Contract Award | | | | | | | |
| 3 Weeks before first access date for Contractor | | | | | | | |
| 3 months after start of Contractor works | | | | | | | |
| 6 months after start of the works | | | | | | | |
| 9 Months after start of the works | | | | | | | |
| At Phase 1 completion | | | | | | | |
| Phase 1 + 12 months | | | | | | | |
| Phase 1 + 24 months | | | | | | | |

APPENDIX C: Example of Environmental Aspects & Impacts Register

IMPACT – BUSINESS TRANSPORT

| Activity being carried out | Applicable Legislation | Control | | Inherent Risk | | | Actions to be completed | Applicable Guidance Notes to reference | Residual Risk | | | Person Responsible | When applicable ? | Complete? |
|----------------------------|------------------------|---------|----------|---------------|-------------|--------------|--|--|---------------|-------------|--------------|--------------------|--------------------|-----------|
| | | Direct | Indirect | Likelihood | Consequence | Significance | | | Likelihood | Consequence | Significance | | | |
| Use of Resources | ---- | ✓ | | 4 | 1 | 4 | <ul style="list-style-type: none"> * sourced resources (i.e. plant, materials and labour). * Engage subcontractors and suppliers in sustainable transport policies. * Where possible and design allows, use pre-fabrication methods in construction to minimise on the number of deliveries to site. * Devise plans that optimise resources used. * Maximise reuse of materials on site | 48 | 3 | 1 | 3 | SL | Construction Phase | Y |
| Use of Transportation | Road Traffic Act 1991 | ✓ | | 4 | 1 | 4 | <ul style="list-style-type: none"> * Devise a green travel plan. * Where possible, encourage the use of pedal bikes by providing suitable storage/bike stands. * Where practicable, choose public transportation over car use. * Maximise use of tele/video conferencing to avoid unnecessary journeys for meetings. | --- | 3 | 1 | 3 | SL | Construction Phase | Y |
| Use of Fuel | | ✓ | | 4 | 2 | 8 | <ul style="list-style-type: none"> * Switch off all vehicles and plant when not in use. * Consider biofuel over fossil fuels. * Car share where practicable on business journeys. * Locate materials and stockpiles to avoid double handling. | --- | 1 | 2 | 2 | SL | Construction Phase | Y |

APPENDIX D: Example Register of Consents, Undertakings & Assurances

| Permit/Licence | Purpose | Needed (Y/N) | Date Applied | Date Rec'ed |
|---------------------------------------|---|--------------|--------------|-------------|
| Environmental Permit | for concrete crushing (previously known as a Part B permit) | Yes | | |
| Abstraction licence | usually for open loop boreholes, the application process can take 3 months following testing of the boreholes and has a cost implication, if the dewatering will be for less than 28 days a temporary licence can be applied for and takes around 1 month. | No | | |
| Section 32 Consent | required for drilling boreholes and requires a form to be submitted to Natural Resources Wales / the Environment Agency. If applying to drill boreholes for water abstraction i.e. open loop boreholes the relevant regulatory bodies will set conditions on the drilling and subsequent testing of the boreholes. Consent will take 1-2 weeks. | No | | |
| Water Discharge Consent | required to discharge to either groundwater or surface water i.e. discharging back to a borehole following abstraction, pumping dewatering water to a river/ stream. Requires an application to be made to Natural Resources Wales / the Environment Agency and the application process can take 4 months. | No | | |
| Trade Effluent Consent | required to discharge anything other than 'domestic' sewage to a foul sewer, therefore any dewatering water, testing water or other discharge other than toilet and kitchen waste will require consent from the sewerage company/ authority. This can take 4-6 weeks and has an additional cost dependent on the sewerage provider. | No | | |
| Section 61 Consent | required when noisy works are likely to occur. Requires an application to be made to the local authority giving details of the methods to be used and anticipated noise levels. | Yes | | |
| Waste Permits & Exemptions | Refer to Waste Guidance Notes | Yes | | |
| Flood Defence Consents | Refer to Flood and Water Management Guidance Notes and Flood Defence Consent Guidance Notes | No | | |
| Wildlife | Numerous wildlife permits are likely to be required which will be determined by what wildlife is on the site e.g. badgers, bats etc. For further information please refer to the ecology report and consult with your environmental manager. | No | | |
| Footpaths | Footpath diversion order required? Consent in the form of a 'public footpath diversion order' is required from the local authority to enable any public footpaths to be diverted, it is likely that this will require the proposal to be advertised and any objections considered and therefore will take some time, and also involves the cost of application and advertising. | Yes | | |

APPENDIX E: Contacts List

| Name | Company | Contact Name | Contact Number | Contact Address |
|--|--------------------------------|------------------------------|---|---|
| Client | Associated British Ports (ABP) | Ralph Windeatt | 08706 096 699 | Queen Alexandra House, Cargo Road, Cardiff, CF10 4LY |
| Proposed Tenant | | | | TBC |
| Contractor | TBC | | | |
| Project Manager | Gleeds Management Services Ltd | Simon Williams | 02920 538 100 | First floor suite, Park House, Greyfriars Road, Cardiff, CF10 3AF |
| Quantity Surveyor | Gleeds Cost Management Ltd | Nigel Watkins | 02920 538 100 | First floor suite, Park House, Greyfriars Road, Cardiff, CF10 3AF |
| Architecture & Design | Stride Treglown | Gareth Brown | 02920 435 660 | Treglown Court, Dowlais Road, Cardiff, CF24 5LQ |
| Planning Consultant | Adams Hendry Consulting Ltd | Suzanne Pidgeon | 01962 877414 | Sheridan House, 40-43 Jewry Street, Winchester, Hampshire, SO23 8RY |
| Design and Access Statement | Adams Hendry Consulting Ltd | Suzanne Pidgeon | 01962 877414 | Sheridan House, 40-43 Jewry Street, Winchester, Hampshire, SO23 8RY |
| Environment Manager | TBC | | | |
| Natural Resources Wales (NRW) EA Pollution Hotline EA Flood-line | Natural Resources Wales | | 0300 065 3000 0800 80 70 60 0845 988 1188 | https://www.naturalresourceswales.gov.uk/ |
| Environment Agency | Environment Agency | | 08708 506506 | http://www.environment-agency.gov.uk/ |
| Ecology Consultant | Wardell Armstrong | Ali Bennett Abigail Coe | 02920 729 191 | Tudor House, 16 Cathedral Road, Cardiff, CF11 9LJ |
| Ecology Support | ABPmer | Jamie Oaten Natalie Frost | +44 (0)23 8071 1850 | Quayside Suite, Medina Chambers, Town Quay, Southampton, SO14 2AQ |
| Arboriculturist | Wardell Armstrong | Moray Simpson | 02920 729 191 | Tudor House, 16 Cathedral Road, Cardiff, |

| | | | | |
|---|---|--------------------------|---------------|--|
| | | | | CF11 9LJ |
| Landscape Assessment | Wardell Armstrong | Katherine Schofield | 02920 729 191 | Tudor House, 16 Cathedral Road, Cardiff, CF11 9LJ |
| Heritage Impact Statement | Wardell Armstrong | Alice Howell | 02920 729 191 | Tudor House, 16 Cathedral Road, Cardiff, CF11 9LJ |
| Archaeology Consultant | Glamorgan Gwent Archaeological Trust - GGAT | TBC | | |
| Construction Environmental Management Plan | Wardell Armstrong | Sam Folarin | 02920 729 191 | Tudor House, 16 Cathedral Road, Cardiff, CF11 9LJ |
| Ground Conditions/Contaminated Land & Site Investigation, Geotechnical Design | Wardell Armstrong | Louise Dow Liam Price | 02920 729 191 | Tudor House, 16 Cathedral Road, Cardiff, CF11 9LJ |
| Site Waste/Natural Material Management Plan | Wardell Armstrong | Ali Kemp | 02920 729 191 | Tudor House, 16 Cathedral Road, Cardiff, CF11 9LJ |
| Water Management & Drainage Consultant | Curtins Consulting Ltd | David Jones | 02920 680 900 | 3 Cwrt-y-Parc, Earlswood Road, Cardiff, CF14 5GH |
| Flood Consequences Assessment | Curtins Consulting Ltd | David Jones | 02920 680 900 | 3 Cwrt-y-Parc, Earlswood Road, Cardiff, CF14 5GH |
| Acoustic Consultant – Noise Assessment | McCann & Partners | Justin Thomas | 02920 352 450 | Faraday House, Terra Nova Way, Penarth Marina, Cardiff, CF64 1SA |
| Air Quality Consultant | McCann & Partners | Justin Thomas | 02920 352 450 | Faraday House, Terra Nova Way, Penarth Marina, Cardiff, CF64 1SA |
| Transport & Traffic Consultant | Curtins Consulting Ltd | David Jones | 02920 680 900 | 3 Cwrt-y-Parc, Earlswood Road, Cardiff, CF14 5GH |
| Civils & Structures Consultant | Curtins Consulting Ltd | David Jones | 02920 680 900 | 3 Cwrt-y-Parc, Earlswood Road, Cardiff, CF14 5GH |
| Waste Management Contractor | TBC | | | |
| Emergency Services | Fire, Ambulance & Police | | 999 or 112 | |

| | | | | |
|------------------------------|----------------------------|--|----------------|--|
| Water Company | Welsh Water / Dŵr Cymru | | 0800 052 0145 | |
| Gas Supplier | Wales & West Utilities | | 0800 912 29 99 | |
| Electricity Supplier | Western Power Distribution | | 0121 623 9780 | |
| Telephone/Internet Provider | BT Openreach | | 0800 783 2023 | |
| Specialist Incident Response | TBC | | | |

STOKE-ON-TRENT

Sir Henry Doulton House
Forge Lane
Etruria
Stoke-on-Trent
ST1 5BD
Tel: +44 (0)1782 276 700

BIRMINGHAM

Two Devon Way
Longbridge Technology Park
Longbridge
Birmingham
B31 2TS
Tel: +44 (0)121 580 0909

BOLTON

41-50 Futura Park
Aspinall Way
Middlebrook
Bolton
BL6 6SU
Tel: +44 (0)1204 227 227

CARDIFF

Tudor House
16 Cathedral Road
Cardiff
CF11 9LJ
Tel: +44 (0)292 072 9191

CARLISLE

Marconi Road
Burgh Road Industrial Estate
Carlisle
Cumbria
CA2 7NA
Tel: +44 (0)1228 550 575

EDINBURGH

Great Michael House
14 Links Place
Edinburgh
EH6 7EZ
Tel: +44 (0)131 555 3311

GLASGOW

2 West Regent Street
Glasgow
G2 1RW
Tel: +44 (0)141 433 7210

LEEDS

36 Park Row
Leeds
LS1 5JL
Tel: +44 (0)113 831 5533

LONDON

Third Floor
46 Chancery Lane
London
WC2A 1JE
Tel: +44 (0)207 242 3243

MANCHESTER

76 King Street
Manchester
M2 4NH
Tel: +44 (0)161 817 5038

NEWCASTLE UPON TYNE

City Quadrant
11 Waterloo Square
Newcastle upon Tyne
NE1 4DP
Tel: +44 (0)191 232 0943

TRURO

Baldhu House
Wheal Jane Earth Science Park
Baldhu
Truro
TR3 6EH
Tel: +44 (0)187 256 0738

International offices:

ALMATY

29/6 Satpaev Avenue
Regency Hotel
Office Tower
Almaty
Kazakhstan
050040
Tel: +7(727) 334 1310

MOSCOW

21/5 Kuznetskiy Most St.
Moscow
Russia
Tel: +7(495) 626 07 67