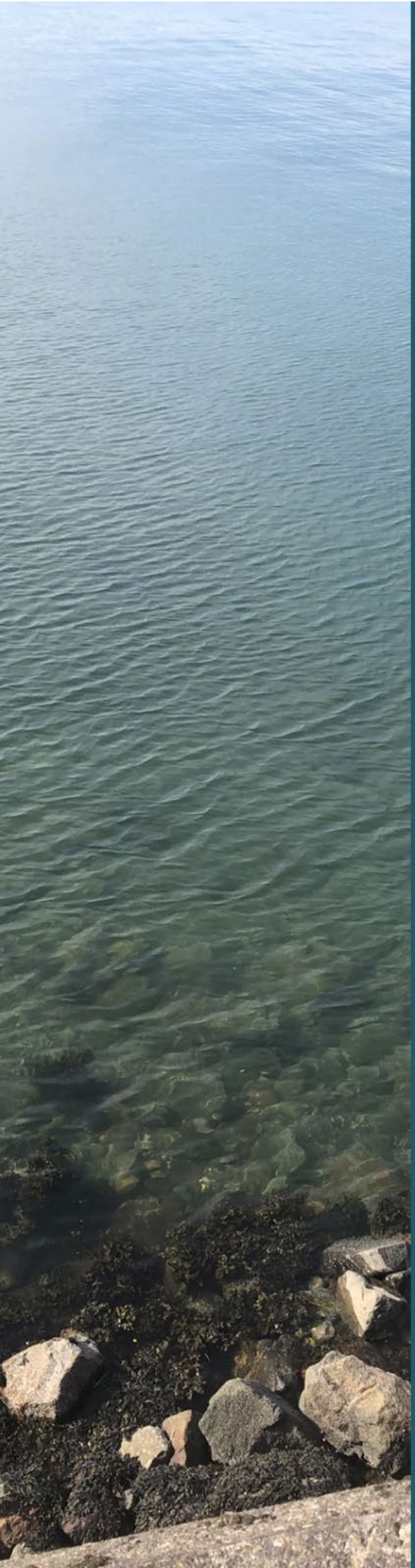

BLUESTONE NATIONAL PARK RESORT – CEMP

MAY 2026

CHAPPLE Environmental Consulting

CONSTRUCTION ENVIRONMENT MANAGEMENT PLAN (CEMP)

Document Ref.:

ITH101-CEMP.R0

DOCUMENT CONTROL

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Construction Environment Management Plan

Project:
Bluestone National Park Resort – Black Pool Mill CEMP

Prepared on Behalf of:
ITH Construction Ltd
Principal Contractor

Client:
Bluestone Resorts Ltd

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AQMA – Air Quality Management Area

CEMP – Construction Environment Management Plan

CIRIA – Construction Industry Research and Information Association

COSHH – Control of Substances Hazardous to Health

ERA – Environmental Risk Assessment

HRA – Habitat Regulations Assessment

INNS – Invasive Non-Native Species

IRP – Incident Response Plan

LNR – Local Nature Reserve

NGR – National Grid Reference

NNR – National Nature Reserve

NRW – Natural Resources Wales

NVZ – Nitrate Vulnerable Zone

PCI – Pre-Construction Information

PEA – Preliminary Ecological Appraisal

PPE – Personal Protective Equipment

QS – Quantity Surveyor

RCAHMW – Royal Commission on the Ancient and Historical Monuments of Wales

RPE – Respiratory Protection Equipment

SAC – Special Area of Conservation

SPA – Special Protected Area

SPR – Source-Pathway-Receptor

SSSI – Site of Special Scientific Interest

TPA – Tree Protection Area

WAC – Waste Acceptance Criteria

0.0 EXECUTIVE SUMMARY

SECTION 1.0 – Introduction & Background:	This Construction Environment Management Plan (CEMP) has been prepared to support the reconstruction of the collapsed riverbank retaining wall at Black Pool Mill, Eastern Cleddau, Pembrokeshire, in accordance with Marine Licence CML2492. The document sets out the environmental management measures to be implemented during temporary cofferdam installation, dewatering and construction of the Redi-Rock retaining wall to protect the River Cleddau Special Area of Conservation (SAC) and Milford Haven Waterway Site of Special Scientific Interest (SSSI). The CEMP secures mitigation identified within the Habitats Regulations Assessment (HRA) and Environmental Risk Assessment (ERA), including seasonal working restrictions, pollution prevention controls and provision for fish rescue where required, ensuring the works are undertaken in a controlled and environmentally responsible manner.
SECTION 2.0 – Roles & Responsibilities:	Bluestone Resorts Ltd is the Marine Licence Holder for the works and is responsible for ensuring compliance with Marine Licence CML2492. ITH Construction Ltd, as Principal Contractor, will implement the mitigation measures set out within this CEMP during construction, supported by appointed subcontractors. All parties involved in the project will ensure that environmental management controls are applied throughout the works to protect the Eastern Cleddau and associated designated sites and receptors. The Marine Licence holder will submit the CEMP to NRW for approval.
SECTION 3.0 – Project Description:	The works comprise of the reconstruction of a collapsed section of riverbank retaining wall immediately downstream of Black Pool Mill on the southern bank of the Eastern Cleddau, replacing temporary emergency stabilisation works installed in November 2023 using Salix Aqua Rock Bags. The scheme includes removal and reuse of the existing rock bags to form a temporary cofferdam extending no more than one third of the channel width, controlled dewatering of the isolated working area, excavation to formation level, and construction of a reinforced concrete foundation and Redi-Rock modular gravity retaining wall, together with associated drainage outfalls, access improvements and reinstatement works. Construction will be undertaken from the southern bank using land-based plant operating from a temporary compound within the existing car park area and is anticipated to take approximately 50 working days between July and September 2026, with in-channel works restricted to the ecological working window specified in Marine Licence CML2492. Works will only take place during daytime hours (typically Monday to Friday 07:30 – 17:00), with no night-time working. While working hours may change or extend (particularly with dependence on the tides), all works will only be completed during daytime hours and will cease between dusk and dawn. Environmental constraints, including protection of designated habitats and migratory fish species, have been incorporated into the construction methodology and programme.
SECTION 4.0 – Marine Licence Conditions & Compliance:	The requirements of Marine Licence CML2492 have been reviewed and cross-referenced within this CEMP to demonstrate how each condition will be implemented during the construction works; ensuring compliance through appropriate mitigation measures, notification procedures, environmental controls and monitoring arrangements.

SECTION 5.0 – Environmental Risk Assessment:	An Environmental Risk Assessment (ERA) has been undertaken using the Source–Pathway–Receptor rationale to identify potential risks to the Eastern Cleddau and associated designated sites and ecological receptors during construction. The assessment confirms that, with the implementation of the mitigation measures set out within this CEMP, residual environmental risks associated with the works are low and acceptable.
SECTION 6.0 – Environmental Management:	Environmental management measures have been developed to protect the Eastern Cleddau and its associated SAC and SSSI designations throughout the construction period. Controls include management of emissions, dust and plant operation to minimise air quality impacts; protection of migratory fish, otter, bats and nesting birds through seasonal working restrictions and ecological safeguards; implementation of cofferdam isolation and monitored dewatering to protect water quality; adherence to pollution prevention best practice for fuels, materials and site runoff; and careful handling of concrete and construction materials to prevent alkaline contamination. Additional measures address protection of heritage features, retained trees and vegetation, and surrounding habitats, together with controls on construction noise, lighting and vehicle movements. Waste will be managed in accordance with the waste hierarchy, resource efficiency principles will be applied where practicable, and flood risk considerations have been incorporated into programming and site setup. An Incident Response Plan, monitoring and inspection procedures, and post-works site clearance checks will ensure compliance with the Marine Licence requirements and protection of the receiving environment throughout the construction period.
SECTION 7.0 – Environmental Policy:	ITH Construction Ltd is committed to delivering the reconstruction works in compliance with Marine Licence CML2492 and all relevant environmental legislation, with particular emphasis on protecting the Eastern Cleddau and its associated SAC and SSSI designations. The project will be undertaken in accordance with the mitigation measures set out within this CEMP and the Habitats Regulations Assessment, supported by good site practice, pollution prevention controls, responsible materials and waste management, and environmental awareness through inductions and toolbox talks to ensure works are completed in an environmentally responsible manner.
SECTION 8.0 – Report Closure:	This CEMP sets out the environmental management measures required to support reconstruction of the retaining wall at Black Pool Mill in compliance with Marine Licence CML2492. The Environmental Risk Assessment confirms that, with the implementation of the specified mitigation measures, the residual environmental risks associated with the works are low and acceptable.

The above executive summary provides a concise overview of the proposed works and the environmental management measures set out within this Construction Environment Management Plan (CEMP). Further detail is provided within the main body of the document and supporting appendices; therefore, the executive summary should not be relied upon in isolation from the full report.

1.0 INTRODUCTION & BACKGROUND

1.1 Project Overview & Consents

1.1.1 This Construction Environment Management Plan (CEMP) has been written to support the required construction work on the riverbank wall at Black Pool Mill following its failure and collapse (**Figure 1**) and the subsequent temporary emergency stabilisation via 48 Salix Aqua Rock Bags (**Figure 2**) which were placed in November 2023.

Figure 1: The riverbank wall photographed post-collapse in 2023

Figure 2: Emergency stabilisation works on the riverbank wall at Black Pool Mill - 48 x Salix Aqua Rock Bags (placed in November 2023)

1.1.2 Bluestone Resorts Ltd commissioned the permanent design of a Redi-Rock modular gravity retaining wall to replace the rock bags. The proposed construction works are outlined in **Section 3.0.** To facilitate the works, an application for a

Marine Licence for Marine Works was submitted in January 2025 to Natural Resources Wales (NRW) and this was determined in April 2025. The Marine Licence (**Appendix 1**) is held by Bluestone Resorts Limited and is for the "*Reconstruction of the collapsed wall along the section of riverbank immediately downstream of Blackpool Mill, Eastern Cleddau, Pembrokeshire"*. The licence reference number is: **CML2492**.

1.1.3 The licence permits the Licence Holder to carry out activities for which a licence is required under Part 4 of the Marine and Coastal Access Act 2009. The licence is valid from 8th April 2025 and ends on 31st October 2026. The licenced activities are summarised in **Table 1**, below.

Table 1: Licenced Activities

Activity 1 – Removal of Rock Bags	
Type of Licenced Activity:	Removal
Description:	Removal of existing temporary rock bag wall
Material Types to be Removed:	Salix Aqua Rock Bags
Activity 2 – Creation of Temporary Cofferdam	
Type of Licenced Activity:	Deposit and Removal
Description:	Creation of a temporary cofferdam within the watercourse by re-locating the existing rock bags. The cofferdam will extend no further than 1/3 of the way into the river channel. The cofferdam will be removed following completion of wall reconstruction.
Material Types to be Deposited:	Salix Aqua Rock Bags
Activity 3 – Removal of Existing Collapsed Wall	
Type of Licenced Activity:	Removal
Description:	Demolish and remove collapsed wall and other debris including failed timber railing. Bank excavated to formation level.
Material Types to be Removed:	Timber / Stone / Rock
Activity 4 – Reconstruct wall along the section of riverbank immediately downstream of Black Pool Mill	
Type of Licenced Activity:	Construction
Description:	Construct reinforced concrete foundation and installation of new Redi-Rock gravity retaining wall
Material Types to be Deposited:	Concrete, Iron / Steel, Stone / Rock

1.1.4 The licenced area is within the coordinates outlined in **Table 2** and is shown in **Drawing No.: ITH101-03-03**.

Table 2: Coordinates of the Licenced Area

Latitude:	Longitude:
51.795402	-4.814880
51.795343	-4.815237
51.795246	-4.815191
51.795268	-4.814950
51.795342	-4.814838

1.1.5 Condition 3.25 of the licence stipulates the requirement for a Construction Environment Management Plan (CEMP):

"3.25.1 The Licence Holder must submit a Construction Environment Management Plan (CEMP) to the Licensing Authority for written approval at least 6 weeks prior to the commencement of the Licenced Activities. No Licenced Activities may be undertaken prior to written approval from the Licensing Authority.

3.25.2 The Licence Holder must ensure that any actions outlined in the documents detailed in condition 3.25.1 are implemented as approved in writing by the Licensing Authority. Any proposed changes to the actions outline in the documents must be submitted to, and approved in writing by the Licensing Authority prior to any changes being enacted."

1.1.6 Correspondence available on the Public Register between NRW Marine Licencing officer, Stephen Treby, and Assistant Marine Advisor, Poppy Brewer, in March 2025 show that a CEMP was conditioned in the permit as the 'Habitats Regulations Assessment' (HRA) (**Appendix 3**) made reference to such a document. Resultantly, the advisors deemed that if a CEMP was not provided, then the HRA wouldn't stand. Furthermore, details on potential fish rescue methods were required to be detailed within the CEMP. The HRA stated that the "need for a potential fish rescue has been included in a CEMP that will be approved by NRW fisheries officer before the works take place". The procedures for this to be followed have been outlined in **Section 6.5**.

1.1.7 In November 2023 a consent under Section 28E of the Wildlife and Countryside Act 1981 was issued due to the Milford Haven Waterway Site of Special Scientific Interest (SSSI) (Consent Ref No.: C003608/1) for the temporary stabilisation works. For the permanent stabilisation works, Natural Resources Wales confirmed in Section 4.1.6 of the Marine Licence Decision Document that the authorised activities are not operations likely to damage the SSSI. Therefore, no separate consent under Section 28E of the Wildlife and Countryside Act 1981 is required.

1.2 Document Scope & Purpose

1.2.1 This Construction Environment Management Plan (CEMP) has been prepared by Chapple Environmental Consulting on behalf of ITH Construction Ltd, with formal submission of the document to NRW to be undertaken by Bluestone Resorts Ltd (the licence holder), to discharge the conditions of NRW Marine Licence CML2492; in particular the requirement of a CEMP to ensure that the mitigation measures identified within the HRA are secured and implemented during construction (see **Section 6.0**). The purpose of this CEMP is to consolidate the environmental requirements for the construction works to facilitate the efficient management and delivery of these requirements. This document will provide the framework through which the potential environmental impacts associated with the construction works are managed.

1.2.2 The CEMP is a 'live' document that will be regularly and routinely reviewed and amended as necessary to ensure that it is kept up to date to remain effective. Any changes to the project scope, site conditions or requirements from the regulator, NRW, will be reflected in the CEMP. The CEMP will be applicable to all personnel carrying out work associated with the licenced activities.

1.2.3 The CEMP aims to:

- Identify potential environmental risks resulting from the construction work via the Source-Pathway-Receptor (SPR) model.

- Provide a framework for the delivery of the control measures to reduce the environmental impact in line with the Environmental Risk Assessment (ERA).
- Ensure compliance with regulatory guidance and legislation, as well as the Marine Licence CML2492.
- Set out clear roles and responsibilities for environmental management on site during the construction works.
- Promote resource efficiency and sustainability during construction.
- Establish effective communication and training protocols for all personnel involved in the construction works regarding environmental responsibilities.
- Set out monitoring and recording requirements for environmental performance throughout the construction works to allow for continuous improvement.

1.2.4 Specific management plans were written for the Marine Licence application which was submitted in January 2025. This CEMP focuses on the management of potential environmental impacts of the works and will reference the specific plans where required as appendices.

1.3 Site Setting

1.3.1 The construction works will take place in Black Pool Mill, Narberth, SA67 8BL. The site location is illustrated in **Drawing No. ITH101-03-01**. Access to the site is from the A40, Canaston Bridge Roundabout, via the A4075. There is a gated access point off the main road which leads to the Mill. The site is located approximately 5km west of the market town of Narberth. The A40 runs ~700m north of the site boundary (as defined in the Marine Licence). The licenced site is centred on National Grid Reference (NGR): SN 05976 14490 and covers an area of ~300m^2.

1.3.2 Construction traffic will be directed through the southern entrance only (**Figure 3**), as shown in the Indicative Boundaries and Operational Layout Plans (**Drawing No.: ITH101-03-02** and **Drawing No.: ITH101-03-03**). The southern entrance enables access to the Mill carpark which has capacity for two articulated lorries (<40ft in length) to park for unloading. Part of the carpark will also be utilised for a site compound, the majority of which will be sited with an appropriate intervening distance from the Eastern Cleddau river.

Figure 3: Photograph of the southern entrance point to be used by construction traffic

1.3.3 The site is bounded to the north by the Eastern Cleddau river, to the east by the Black Pool Mill building and restaurant, to the south by the store building and car park, and to the west by a small area of woodland, beyond which lies an open field. The surrounding areas generally comprise of agricultural land, woodland, Bluestone National Park Resort and scattered residential housing.

1.3.4 With regards to designated sites, there are no Special Protection Areas (SPA), Local Nature Reserves (LNR), National Nature Reserves (NNR), Ramsar sites, Air Quality Management Areas (AQMA) or Nitrate Vulnerable Zones (NVZ) within 2km of the permitted area where the construction works will take place.

1.3.5 The site falls within the Milford Haven Waterway Site of Special Scientific Interest (SSSI) (ID: 282, designated in 1993) and lies 40m to the west (downstream) of the Eastern Cleddau River SSSI (ID: 2644, designated in 2003). Natural Resources Wales confirmed within the Marine Licence Decision Document that the authorised activities are not operations likely to damage the SSSI.

1.3.6 The site is also within the Pembrokeshire Marine / Sir Benfro Forol Special Area of Conservation (SAC) (ID: UK0013116, designated in 1997) and lies c.40m west (downstream) of the Cleddau Rivers SAC (ID: UK0030074, designated in 2004). The Eastern Cleddau forms part of the River Cleddau SAC, which is designated for migratory fish species, including Atlantic salmon, sea lamprey, river lamprey and bullhead. As such, the timing and methodology of the works have been developed to minimise disturbance to qualifying features, including implementation of a seasonal working window and provision for fish rescue where required in accordance with the Habitats Regulations Assessment. These statutory designated sites are the closest sensitive receptors to the area where the construction works will take place. The habitats and protected species in the local area are further discussed in **Section 6.3**.

1.3.7 The works are to be located on the southern bank of the Eastern Cleddau, which is designated as an NRW Main River under the Environmental Permitting (England and Wales) Regulations 2016 and is tidally influenced at the project location. The tidal range of the Cleddau River is approximately 7m (Pre-Construction Information (PCI) Report, Section 3.11).

1.3.8 Works within the channel will be undertaken under temporary isolation provided by a cofferdam formed from re-used Salix Aqua Rock Bags, enabling controlled construction within the wetted channel margin.

1.3.9 The site and the immediately surrounding areas are within Flood Zone 3 areas for the sea and rivers and are also in a flood risk area for reservoirs, in line with NRW's Flood Map for Planning[1], which gives cognisance to the impact of climate change. The site and immediate surroundings are not within a Flood Zone area for surface water and small watercourses. Flood Zone 3 areas for rivers are those with more than 1% (1 in 100) chance of flooding from rivers in a given year. Flood Zone 3 areas for the sea are those with more than 0.5% (1 in 200) chance of flooding from the sea in a given year.

1.3.10 The site is underlain by bedrock geology of Milin Mudstone Formation Mudstone, with superficial deposits of Alluvium – Clay, silt, sand and gravel. A low-productivity undifferentiated (Llandovery Rocks) aquifer is present below the site. Undifferentiated aquifers have minor value and limited groundwater and comprise of aquifers where it Is not possible to apply either a Secondary A or B definition

[1] NRW (2026) - https://flood-map-for-planning.naturalresources.wales/ *[Accessed May 2026]*

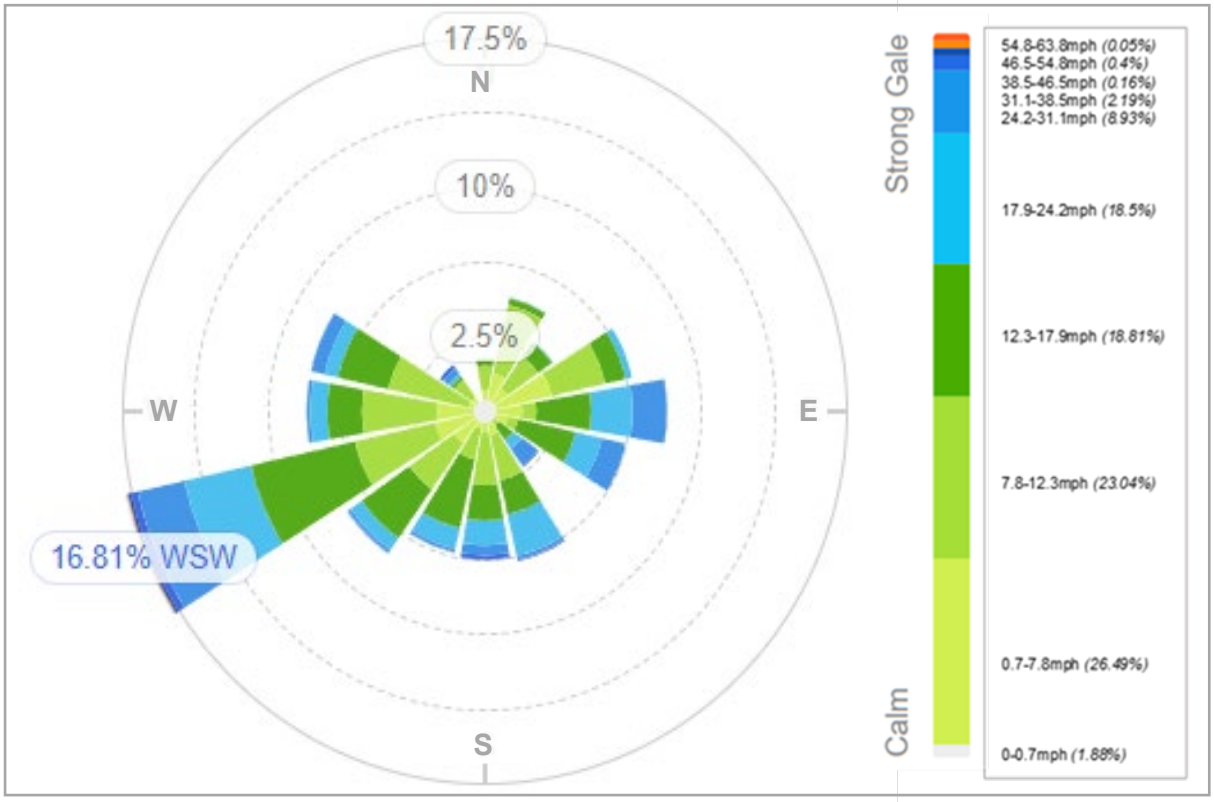
due to the variable characteristics of the rock type. A Ground Investigation Report for the site written in 2024 found made ground in all four boreholes that were sampled and analysed and, therefore, concluded that it is assumed to extend across the site. The made ground was generally found to comprise sandy gravel, with minor components of silt and clay.

1.3.11 The site is located within a wooded river valley setting with mature trees present adjacent to the working area. Tree Protection Areas and Construction Exclusion Zones identified within the Arboricultural Method Statement (**Appendix 5**) will be implemented during construction to prevent damage to vegetation.

1.3.12 There are five Scheduled Monuments within 2km of the site, the closest of which lies c. 540m east of the site. There are no historical landfills or currently permitted waste sites within 2km of the site. There are six licenced water abstractions and three licenced discharge consents to controlled waters within 2km of the site, all of which are regulated by NRW.

1.3.13 Data from the WillyWeather data archive[2], for a 5-year period has been utilised for the area in order to typify the meteorological conditions likely at the site. The wind rose, as shown in **Figure 4**, illustrates the percentage of wind vector that could be generated in each of the 16 points of a compass. The wind rose indicates that the predominant wind directions are from the south-western quadrant, which makes up ~45.75% of the winds. It can be observed from **Figure 4** that the wind will be blowing primarily from the west-southwest.

Figure 4: Wind rose for Canaston Bridge for a 5-year period (Source: WillyWeather)



[2] WillyWeather (2026) - https://wind.willyweather.co.uk/wl/pembrokeshire/canaston-bridge.html *[Accessed May 2026]*

1.4 Structure of the CEMP

- **Executive Summary –** This section provides a concise overview of the project, key environmental risks, mitigation measures and the purpose of the CEMP to support the implementation of the Marine Licence CML2492.
- **Section 1.0: Introduction & Background –** This section describes the project context, regulatory framework, site setting and the purpose of the CEMP, including its relationship to the Marine Licence and Habitats Regulations assessment (HRA).
- **Section 2.0: Roles & Responsibilities –** This section defines the roles and responsibilities of the Client, Principal Contractor and subcontractors in implementing environmental mitigation measures and ensuring compliance with licence conditions.
- **Section 3.0: Project Description –** This section sets out the construction activities, methodology, programme, working hours, environmental constraints and site compound arrangements associated with the authorised works.
- **Section 4.0: Marine Licence Conditions & Compliance –** this section identifies the relevant conditions of the Marine Licence CML4292 and sets out how compliance will be achieved through the implementation of this CEMP.
- **Section 5.0: Environmental Risk Assessment –** This section presents the environmental risk assessment undertaken via the Source–Pathway–Receptor (SPR) model to identify potential impacts associated with the construction works and define appropriate mitigation measures.
- **Section 6.0: Environmental Management –** This section describes the mitigation measures and management controls that will be implemented to protect environmental receptors during construction, including ecology, water resources, pollution prevention, materials handling, noise, transport, waste and incident response procedures.
- **Section 7.0: Environmental Policy –** This section summarises the environmental management principles adopted for the project and the commitment of the project team to regulatory compliance and good environmental practice.

2.0 ROLES & RESPONSIBILITIES

2.1 Overview

2.1.1 This section defines the roles and responsibilities of the organisations involved in the implementation of this Construction Environment Management Plan (CEMP) during the reconstruction of the riverbank retaining wall at Black Pool Mill. All personnel involved in the works are responsible for complying with the requirements of this CEMP and for implementing mitigation measures to prevent or minimise impacts on the receiving environment.

2.1.2 The key roles responsible for the delivery of this CEMP are:

- The Client and Marine Licence Holder (Bluestone Resorts Ltd);
- The Principal Contractor (ITH Construction Ltd); and
- Sub-Contractor (Trueform Civil Engineering Ltd).

2.1.3 The responsibilities of each are summarised in **Table 3**, below.

Table 3: Roles & Responsibilities

Role:	Responsibilities:
The Client *Bluestone Resorts Ltd*	• Acting as the Marine Licence Holder under Marine Licence CML2492 • Submitting the CEMP to NRW for approval in accordance with Marine Licence Condition 3.25 • Ensuring that the licenced activities are undertaken in accordance with the conditions of the Marine Licence • Ensuring that the Principal Contractor implements the mitigation measures set out within this CEMP and the Habitats Regulations Assessment (HRA) • Providing sufficient resources to enable implementation of environmental mitigation measures • Maintaining oversight of compliance with licence conditions during the construction works • Liaising with NRW where required in relation to licence compliance • The client, or an appointed agent, will contact NRW fisheries prior to dewatering of the cofferdam for agreement on the appropriate response for fish rescue • Ensuring that any changes to the approved works are communicated to the Licensing Authority where necessary
The Principal Contractor *ITH Construction Ltd*	• Managing and undertaking construction works in accordance with Marine Licence CML2492 and this CEMP • Ensuring environmental mitigation measures identified within the HRA and supporting assessments are implemented on site • Ensuring works are undertaken in accordance with relevant pollution prevention measures and guidance, including current NRW and CIRIA best practice for working near water • Preparing and implementing site-specific risk assessments and method statements (RAMS) consistent with this CEMP

Role:	Responsibilities:
	• Ensuring all personnel and subcontractors are informed of environmental constraints through inductions and toolbox talks • Monitoring the area during cofferdam installation and dewatering; ensuring dewatering ceases if fish are observed within the cofferdam area; liaising with NRW fisheries for guidance; and where required coordinating ecological supervision and fish rescue operations (See **Section 6.5** for procedures) • Undertaking routine environmental inspections of the works • Maintaining records of compliance with CEMP requirements • Reporting environmental incidents and near misses in accordance with the Incident Response Procedure (**Appendix 6**) and notifying Natural Resources Wales where required • Acting as the primary point of contact on site for environmental matters during construction
Construction Sub-Contractor *Trueform Civil Engineering Ltd*	• Undertaking the reinforced concrete works, installation of steel reinforcement, and lifting and placement of Redi-Rock retaining wall units. • Complying with the requirements of this CEMP and site method statements • Attending site environmental inductions and toolbox talks • Implementing pollution prevention and good housekeeping measures • Reporting environmental incidents, near misses or unexpected ecological findings immediately to the Principal Contractor • Following instructions provided by the Principal Contractor during sensitive works
Environmental Consultant Sub-Contractor *Chapple Environmental Consulting*	• Writing the Construction Environment Management Plan (CEMP) • Providing environmental advice to the Client and Principal Contractor where required • Supporting interpretation of Marine Licence conditions • Assisting with updates to CEMP if required during the construction phase

2.1.4 The Licence Holder (Bluestone Resorts Ltd) has ensured that all parties involved (i.e. the principal contractor and subcontractor(s)) have a copy of the Marine Licence. Copies of the licence are available and have been circulated digitally. Furthermore, copies will be made available at the site address of the Licence Holder, in the welfare area of the site compound where the works will take place and onboard each vehicle undertaking work at the site.

3.0 PROJECT DESCRIPTION

3.1 Project Details

3.1.1 The works comprise reconstruction of a collapsed section of riverbank retaining wall immediately downstream of Black Pool Mill on the southern bank of the Eastern Cleddau, Pembrokeshire. The scheme replaces temporary emergency stabilisation works installed in November 2023 using Salix Aqua Rock Bags with a permanent Redi-Rock modular gravity retaining wall.

3.1.2 The works are authorised under Marine Licence CML2492, issued by Natural Resources Wales under Part 4 of the Marine and Coastal Access Act 2009. Works will be undertaken within the licenced footprint (as shown in **Drawing No.: ITH101-03-03**) on the southern bank of the Eastern Cleddau.

3.1.3 The principal elements of the construction works include:

- The removal and relocation of the existing Salix Aqua Rock Bags
- Installation of a temporary cofferdam formed using the existing rock bags
- Underpinning works to the adjacent store building
- Excavation to formation level
- Construction of reinforced concrete foundations
- Installation of Redi-Rock gravity retaining wall units with ties to the Mill
- Installation of drainage outfalls through the retaining wall (from the adjacent store building and the Mill building)
- Reinstatement of access steps
- Bank-top repairs and hardstanding works
- Installation of security rails along the retaining wall

Construction Materials

3.1.4 The construction materials to be used during the works include the following:

- Redi-Rock gravity retaining wall units
- Reinforced concrete foundations
- Steel reinforcement (rebar and ties to the mill)
- Excavated soils
- Drainage pipework
- Security railings
- Hardstanding / surfacing materials
- Concrete blinding layer

3.1.5 Temporary works will also include aqua bags filled with jumbo bags of clay which will be placed on the working side of the temporary cofferdam formed by the Salix Aqua Rock Bags which will seal gaps and reduce seepage to improve the hydraulic isolation of the working area. The cofferdam will not extend further than one third of the channel width of the Eastern Cleddau in accordance with the requirements of Marine Licence CML2492.

Vehicles, Mobile Plant & Equipment

3.1.6 Mobile plant and equipment will not be parked within 10m of the river channel outside of working hours. The following plant and equipment will be used during the construction works:

- Transit tipper

- Van
- 9-tonne excavator
- Pecker / Hydraulic breaker
- 6-tonne dumper
- 60-tonne crane
- 150 mm silent diesel pump
- Self-contained welfare unit
- Small hand / power tools

Refuelling Arrangements

3.1.7 The refuelling of plant will occur within the site compound, at an appropriate intervening distance from the watercourse (>10m), with suitable refuelling practices and pollution prevention controls in place to prevent emissions to land and water. Refuelling will not take place within the river channel or on the foreshore. Where possible, refuelling will occur on an area with hardstanding. The pollution prevention controls will include drip trays to prevent pollution by fuel / oil leaks and emergency spill kits will also be present on site. Staff will undergo toolbox talks on the use of the spill kits and the Incident Response Procedures (**Appendix 6**), which include procedures for spills.

3.1.8 Fuels will be delivered daily and will not be stored overnight on site. A fuel storage area will be present for day-to-day use only, with no overnight storage. The fuel storage area will be located at an appropriate intervening distance from the river channel (>10m).

Concrete Washout Arrangements

3.1.9 Concrete will be delivered to site from A&C Aggregates Ltd in a ready-mix format. A plastic container will be present within the site compound area for concrete wash out (>10m from the river channel). Concrete washout water and cementitious residues will be contained within the designated washout container and removed from site by a registered waste carrier (A & C Aggregates Ltd; CBDU015539) for treatment at A & C Aggregates Ltd's permitted site (EPR/DB3593FH; SR2010 No.12), in accordance with the environmental permitting regulations.

Excavated Soils & Construction Waste Management

3.1.10 Excavated soils will be transported from the excavation area via dumper to a designated location within the site compound prior to removal by licenced waste carriers to an appropriately permitted site. Ground investigation works carried out to inform the 2024 Ground Investigation Report have identified the presence of made ground across the site, which is inherently variable and may contain anthropogenic materials. In addition, two isolated occurrences of chrysotile asbestos have been identified within made ground at low concentrations. Accordingly, excavated made ground will not be assumed to be clean, inert or suitable for unrestricted reuse or disposal. All excavated soils will be subject to appropriate waste classification prior to off-site removal, including assessment for hazardous properties and Waste Acceptance Criteria (WAC) testing where required, in line with Technical Guidance WM3[3]. Materials identified as containing, or potentially containing, asbestos will be managed as a known project constraint and handled in accordance with the Principal Contractor's RAMS and relevant

[3] Technical Guidance WM3 (October 2021) - https://assets.publishing.service.gov.uk/media/6152d0b78fa8f5610b9c222b/Waste_classification_technical_guidance_WM3.pdf *[Accessed May 2026]*

health and safety requirements. Excavated materials will be segregated where necessary and stockpiled in designated areas to minimise cross-contamination, dust generation and the risk of contaminated runoff. Stockpiled materials will be managed to prevent environmental impact, including the use of damping down or covering where required, and positioning to avoid the generation of dust or the migration of sediments or contaminants to the adjacent watercourse.

3.1.11 Construction waste will be kept to a minimum. Wastes arising will be sent to an appropriately permitted facility for recycling where possible. All wastes, including excavated soils and construction waste will be managed in accordance with the Waste Hierarchy and Duty of Care Requirements. Records of waste movements, including waste transfer notes and hazardous waste consignment notes (where applicable), will be retained as part of the project documentation.

Temporary Cofferdam Dewatering Methodology

3.1.12 Following the installation of the temporary cofferdam using relocated Salix Aqua Rock Bags supplemented with clay-filled geotextile bags, the isolated working area will be dewatered to enable excavation to formation level and construction of the reinforced concrete foundation and Redi-Rock retaining wall. Dewatering will be undertaken using a 150 mm silenced diesel-powered pump positioned at the downstream end of the working area, with additional submersible pumps used as necessary to manage groundwater ingress. Water within the isolated area will be directed to a sump located downstream prior to controlled over-pumping back to the Eastern Cleddau. Discharged water will be filtered prior to re-entry to the river using proprietary filtration (“dirt bags”) to remove suspended solids greater than approximately 260 microns, with secondary treatment through hay bale filtration where required to further reduce turbidity. These measures will minimise sediment mobilisation and ensure that pumped discharge does not adversely affect water quality within the receiving environment. Pumping operations will be monitored throughout the dewatering activities and adjusted as necessary to prevent scour, excessive turbidity or entrainment of aquatic fauna.

3.1.13 Pump intakes will be fitted with appropriate screening where practicable, and the isolated area will be inspected during dewatering. Should fish become trapped within the cofferdam footprint, works will cease and NRW Fisheries will be consulted to agree appropriate rescue measures prior to continuation of pumping. Any fish rescue, if required, will be undertaken by a suitably qualified ecologist (Sian Williams, Kite Ecology) under agreement with NRW fisheries (See **Section 6.5**).

Site Compound & General Site Facilities

3.1.14 The site compound will be located within a section of the Black Pool Mill Car Park and will be enclosed with a Heras fence with access gates and pedestrian barriers to prevent unauthorised access. All entry points will be clearly sign posted with appropriate warning notices and guidance.

3.1.15 The site compound will house the welfare unit for workforce amenities. This will comprise of a portable self-contained Groundhog Unit containing facilities such as a toilet, drying facilities and a canteen and will also be supplied with adequate heating, lighting and ventilation, in line with HSE legislation.

3.1.16 The site compound will contain temporary storage areas for excavated materials and aggregates upon the car park’s hardstanding surface.

3.1.17 It is unlikely that temporary site lighting will be required during the construction as no nighttime working will take place, with all works ceasing between dusk and dawn. Should temporary site lighting be required, it will be directional and hooded and it will not be directed towards the Mill or the river channel.

3.2 Construction Methodology Overview

3.2.1 Construction will be undertaken from the southern bank of the Eastern Cleddau using land-based plant operating from the existing car park and temporary working areas adjacent to the mill.

3.2.2 As aforementioned, a temporary cofferdam will be formed by relocating the existing Salix Aqua Rock Bags to isolate the working area from the main river channel. Excavation and wall construction will then proceed within dry working conditions maintained through controlled over-pumping of water from the isolated area.

3.2.3 Initially, the site compound, welfare facilities and pedestrian safety controls will be established. Pre-construction activities scheduled prior to 15th July 2026 are limited to these site establishment works which lie outside of the river channel and will not involve in-channel activities.

3.2.4 A temporary cofferdam will be installed on 23rd July 2026 and maintained for approximately four weeks to enable construction of the reinforced concrete foundation and installation of the Redi-Rock retaining wall within dry working conditions, before removal on 20th August 2026.

3.2.5 There will be a small amount of vegetation clearance (mainly grass) on the riverbank to form an access track. No hedgerows or trees will be cleared as part of the works.

3.2.6 All works within the isolated channel area will be undertaken in accordance with the mitigation measures set out within this CEMP and the Habitats Regulations Assessment (HRA).

3.3 Construction Programme

3.3.1 The overall construction programme (**Appendix 2**) is anticipated to extend over approximately 50 working days, with site establishment commencing in early July 2026 and completion of works scheduled for September 2026. This will be in line with the Marine Licence working window of 15th July – 30th September 2026 inclusive (Condition 3.22).

3.3.2 In-channel works associated with cofferdam installation are currently programmed to commence in late July 2026, with removal of the cofferdam anticipated in August 2026.

3.3.3 The relevant regulatory bodies will be notified 10 days before the commencement of the Licenced Activities (see **Table 5** for further details) with details on the date the works will commence, the plant / equipment to be used and the roles and responsibilities of those involved. The relevant regulatory bodies will also be notified within 10 days of the completion of the works. Regulatory bodies will be granted access to the site at any reasonable time for inspection.

3.4 Site Working Hours

3.4.1 Construction works will normally be undertaken during standard daytime working hours; however, this may change on a daily or weekly basis depending on the tides:

- Monday – Friday: 07:30 – 17:00
- No routine Weekend or Bank Holiday working

3.4.2 Activities outside these hours may also occur where required for:

- Plant mobilisation and demobilisation
- Delivery of abnormal loads
- Emergency works
- Activities that cannot be safely interrupted (if applicable)

3.4.3 Any works outside standard hours will be agreed with the Client and undertaken in accordance with the Marine Licence requirements and environmental constraints.

3.4.4 No night-time working within the river channel will occur; all works will cease between dusk and dawn.

3.5 Environmental Constraints on Construction Activities

3.5.1 The construction methodology has been developed to reflect environmental constraints associated with the location of the works within the River Cleddau SAC and Milford Haven Waterway SSSI.

3.5.2 In particular:

- In-channel works are restricted to the agreed ecological working window
- Temporary channel isolation will be undertaken using a cofferdam
- If fish are observed to be with the isolated cofferdam area during dewatering, works will cease and NRW fisheries will be consulted
- In the event that fish rescue is required, this will be undertaken by a suitably competent person following inspection of the isolated working area during dewatering, in consultation with NRW fisheries (See **Section 6.5**).
- Pollution prevention controls will be implemented during all works within the tidal river environment

3.5.3 These measures ensure compliance with the mitigation requirements identified within the HRA and Marine Licence (CML2492).

3.6 Site Compound & Access Arrangements

3.6.1 Access to the site will be via the southern entrance to Black Pool Mill from the A4075. Construction vehicles will utilise the existing mill car park for unloading, temporary plant storage and siting of welfare facilities. The wider site extents and context is illustrated via the Indicative Site Boundaries Plan (**Drawing No.: ITH101-03-02**). The compound layout is shown on the Indicative Operational Layout Plan (**Drawing No. ITH101-03-03**).

3.6.2 A temporary site compound will be established within the car park area at a suitable distance from the river channel to minimise pollution risk to the Eastern Cleddau.

3.6.3 The compound will accommodate:

- Welfare facilities and Site parking
- Temporary mobile plant and equipment parking
- Lay down area and construction waste material storage area
- Lifting area
- Fuel storage (max 200 litres of White Diesel in a bunded bowser; no overnight storage)
- Spill Kits
- Concrete washout container
- Refuelling activities

3.7 Key Project Contacts

3.7.1 The key project contacts responsible for implementing this CEMP are provided in **Table 4**, below.

Table 4: Key Project Contacts

Name:	James Thomas
Role:	Project Manager & Quantity Surveyor (QS)
Organisation:	ITH Construction Ltd (Principal Contractor)
Contact Details:	**Email**: RJTQuantitySurveyor@outlook.com
Name:	Tony Thomas
Role:	Setting Out Engineer
Organisation:	ITH Construction Ltd (Principal Contractor)
Contact Details:	**Email**: Majella128@btinternet.com
Name:	John Soar
Role:	Site Manager
Organisation:	ITH Construction Ltd (Principal Contractor)
Name:	James Elkins
Role:	H&S Manager
Organisation:	ITH Construction Ltd (Principal Contractor)
Contact Details:	Email: James.Elkins@acaggregates.co.uk
Name:	Rhiannon Chapple
Role:	Environmental Consultant
Organisation:	Chapple Environmental Consulting
Contact Details:	rhia@chappleenvironmental.co.uk

4.0 MARINE LICENCE CONDITIONS & COMPLIANCE

4.1 Overview

4.1.1 **Table 5**, below, identifies the conditions of Marine Licence CML2492 and summarises how each one will be addressed, as appropriate, identifying the mechanism within the CEMP to ensure compliance.

4.1.2 **Appendix 7** provides a 'Notification Schedule' summarising the communication requirements arising from the conditions of the Marine Licence whereby the due date for each notification has been outlined in line with the current construction programme (**Appendix 2**) prepared by ITH Construction Ltd.

Table 5: NRW Marine Licence (CML2492) Conditions

Condition	CEMP Reference or Compliance Mechanism	Where the condition has been addressed in this CEMP	Contact Detail (Where Applicable)
Notification & Inspection			
3.1 Notification of Commencement			
3.1.1	The Licence Holder must notify the Licensing Authority no less than **10 days before** the commencement of the Licensed Activities, or an individual phase of the Licensed Activities, is expected to commence.	See **Section 3.3.3** and **Appendix 7**	marinelicensing@cyfoethnaturiolcymru.gov.uk
3.1.2	The Licence Holder must notify Welsh Government Marine & Fisheries Division (Control & Enforcement Branch) no less than **10 days** before the commencement of the Licensed Activities, or an individual phase of the Licensed Activities, is expected to commence.	See **Section 3.3.3** and **Appendix 7**	MarineLicencingEnforcement@gov.wales
3.1.3	The Licence Holder must ensure that local mariners and fishermen's organisations are made fully aware of the Licensed Activities through local notices to mariners **10 days prior** to the commencement of the Licensed Activities.	See **Section 3.3.3** and **Appendix 7**	Local mariners and fishermen's organisations to be notified through notices to mariners (https://kingfisherbulletin.org/) and to local harbours and ports
3.1.4	The Licence Holder must ensure that notification is sent to The Source Data Receipt team, UK Hydrographic Office at least **10 days prior** to commencement of the works. The information supplied must include the start date and end date, a description of the works, positions of the work area (WGS84), and details of any marking arrangements.	See **Section 3.3.3** and **Appendix 7**	sdr@ukho.gov.uk
3.2 Notification of Vessels and / or Vehicles			
3.2	The Licence Holder must ensure that the details of the vessels and/or vehicles utilised to undertake the Licensed Activities are submitted to the Licensing Authority and Welsh Government Marine & Fisheries Division (Control & Enforcement Branch) at least **24 hours prior** to the commencement of the Licensed Activities.	See **Sections 3.1.6, 3.3.3** and **Appendix 7**	MarineLicencingEnforcement@gov.wales

Condition	CEMP Reference or Compliance Mechanism	Where the condition has been addressed in this CEMP	Contact Detail (Where Applicable)
3.3 Notification of Agents/Contractors/Sub-contractors			
3.3	The Licence Holder must ensure that details of any agent(s), contractor(s) or sub-contractor(s) utilised to undertake the Licensed Activities are submitted to the Licensing Authority at least **24 hours prior** to the commencement of Licensed Activities.	See **Section 2.0** for details, as well as **Section 3.3.3** and **Appendix 7**	MarineLicencingEnforcement@gov.wales
3.4 Notification of HM Coastguard			
3.4	The Licence Holder must ensure that HM Coastguard is made aware of the Licensed Activities at least **24 hours prior** to commencement by contacting The National Maritime Operations Centre	See **Section 3.3.3** and **Appendix 7**	zone28@hmcg.gov.uk.
3.5 Inspection of Licenced Activities			
3.5	The Licence Holder must allow Marine Enforcement Officers or any other person authorised by the Licensing Authority to inspect the Works at any reasonable time.	See **Section 3.3.3**	N/A
3.6 Notification of Completion			
3.6.1	The Licence Holder must notify the Licensing Authority **within 10 days** of completion of the Licensed Activities.	See **Section 3.3.3** and **Appendix 7**	marinelicensing@cyfoethnaturiolcymru.gov.uk
3.6.2	The Licence Holder must notify Welsh Government Marine & Fisheries Division (Control & Enforcement Branch) **within 10 days** of completion of the Licensed Activities.	See **Section 3.3.3** and **Appendix 7**	MarineLicencingEnforcement@gov.wales
3.7 Accident or Emergency			
3.7.1	If, by reason of force majeure any substances or articles are deposited otherwise than as permitted as part of the Licensed Activities or in the Licensed Area full details of the circumstances shall be notified to the Licensing Authority **within 48 hours** of the incident occurring.	See **Section 6.15** and **Appendix 7**	marinelicensing@cyfoethnaturiolcymru.gov.uk
3.7.2	If it is necessary for the Licence Holder to recover or remove any equipment, plant or machinery used to undertake the Licensed Activities that have been dropped as a result of an accident or emergency, the Licence Holder is permitted to	See **Section 6.15**	marinelicensing@cyfoethnaturiolcymru.gov.uk

Condition	CEMP Reference or Compliance Mechanism	Where the condition has been addressed in this CEMP	Contact Detail (Where Applicable)
	do so provided that the methodology for such recovery or removal has been approved by the Licensing Authority.		
3.8 Distribution of Copies of this Licence			
3.8	The Licence Holder is required to ensure that a copy of this Licence is given to: • All agent(s), contractor(s) and sub-contractor(s) whose names have been provided to the Licensing Authority under condition 3.3 and • The Masters of any vessels and transport managers responsible for the vehicles employed in accordance with this Licence whose details have been submitted to the Licensing Authority under condition 3.2.	See **Section 2.1.4**	N/A
3.9 Inspection of Documents			
3.9	Copies of this Licence shall be made available at the following locations: • At the address of the Licence Holder specified in section 1.2; • At any site office, located at or adjacent to the Licensed Area, used by the Licence Holder or its agent(s), contractor(s) or sub-contractor(s) responsible for the loading transportation or deposit of any substances or articles permitted as part of the Licensed Activities; • On board each vessel or vehicle carrying out Licensed Activities. The documents referred to in this Condition shall be available at all reasonable times for inspection by officers appropriately authorised by the Licensing Authority and authorised Marine Enforcement Officers at the locations stated in that paragraph.	See **Section 2.1.4**	N/A
Vessels, Plant & Equipment			

Condition	CEMP Reference or Compliance Mechanism	Where the condition has been addressed in this CEMP	Contact Detail (Where Applicable)
3.10 Notified Contractors, Vessels and/or Vehicles only to Carry out Licensed Activities			
3.10	Only those agent(s), contractor(s), sub-contractor(s), vessels and/or vehicles whose details have been notified to the Licensing Authority may operate under the terms of this Licence. Any changes must be notified to and be approved by the Licensing Authority in writing prior to any such agent, contractor, subcontractors or vehicles carrying out any Licensed Activities pursuant to or otherwise operating under this Licence.	N/A	marinelicensing@cyfoethnaturiolcymru.gov.uk
3.11 Refuelling of Plant & Equipment			
3.11	The Licence Holder must ensure that plant, vehicles and machinery are not refuelled on the foreshore or in the sea.	See **Sections 3.1.7** and **6.6.3**, as well as **Table 7** of **Section 5.0**	N/A
3.12 Equipment, Structures & Access			
3.12	The Licence Holder must ensure that all equipment, temporary structures, access tracks, waste and/or debris associated with the Licensed Activities are removed on completion of the Licensed activities.	See **Table 7** of **Section 5.0** and **6.17**	N/A
Safety			
3.13 Removal of Deposited Material			
3.13	If the Licensing Authority considers it necessary or advisable for the safety of navigation, the Licence Holder must remove any deposit specified by the Licensing Authority or Marine Enforcement Officers within one month of notice being given by the Licensing Authority, and shall not replace such material until the Licensing Authority has given its written approval.	N/A	marinelicensing@cyfoethnaturiolcymru.gov.uk
Pollution Control			
3.14 Pollution Prevention			

Condition	CEMP Reference or Compliance Mechanism	Where the condition has been addressed in this CEMP	Contact Detail (Where Applicable)
3.14	The Licence Holder must ensure that pollution prevention best practice is adhered to at all times. Any incidents must be reported to the Licensing Authority as soon as possible using the hotline number 0300 065 3000.	See **Sections 5.0, 6.6** and **6.15** as well as **Appendix 7**	0300 065 3000
3.15 Spillage of Pollutants			
3.15	The Licence Holder must employ bunding, storage facilities and spill kits to contain and prevent the release of fuel, oils and chemicals associated with the plant, refuelling and construction equipment into the marine environment. Secondary containment must be used with a capacity of no less than 110% of the container's storage capacity	See **Sections 5.0** and **6.6**	N/A
3.16 Prevention of Disposal of Man-Made Debris			
3.16	The Licence Holder must ensure that all reasonable precautions are taken to prevent the disposal of man-made debris to the marine environment. Such material must be removed immediately and be disposed of appropriately. If it is not possible to prevent manmade debris from entering the marine environment during the Licensed Activities, the Licensed Activities must cease immediately.	See **Sections 5.0, 6.6, 6.11** and **6.17**	N/A
3.17 Cleanliness of Equipment			
3.17	The Licence Holder must ensure that equipment, machinery and PPE are washed with freshwater and/or thoroughly airdried before deployment and before moving between locations.	See **Section 6.4.10**	N/A
Activity-Specific Conditions			
3.18 Coatings			
3.18	The Licence Holder must ensure that any coatings/treatments used in carrying out the Licensed Activities are suitable for use in the marine environment and are used in accordance with best environmental practice.	N/A	N/A

Condition	CEMP Reference or Compliance Mechanism	Where the condition has been addressed in this CEMP	Contact Detail (Where Applicable)
3.19 Use of Render and Concrete			
3.19	The Licence Holder must ensure that no waste concrete slurry or wash water from the use of concrete or cement are discharged into the marine environment. Concrete and cement mixing and washing areas should be contained and sited at least **10 metres** from any watercourse or surface water drain to minimise the risk of runoff entering a watercourse.	See **Sections 5.0** and **6.6,** as well as **Drawing No.: ITH101-03-03**	N/A
3.20 Concrete Cure Time			
3.20	The Licence Holder must ensure materials used are suitable for use in the marine environment and works should be timed to ensure maximum concrete cure time.	See **Section 6.6**	N/A
3.21 Works Affecting a Watercourse			
3.21	The Licence Holder must ensure that time spent in the watercourse is kept to a minimum.	See **6.4.8**	N/A
3.22 Construction Time Restrictions			
3.22	The Licence Holder must ensure that no Licensed Activities take place between 01 March and 15 July or between 01 October and 31 December inclusive, without prior written approval from the Licensing Authority.	See **Sections 3.3.1, 6.3.2** and **6.14.2**	N/A
3.23 Reporting of Artefacts			
3.23	The Licence Holder must ensure that any artefacts accidently recovered are retained and reported through the Marine Portable Antiquities Scheme.	See **Section 6.8.5** and **Appendix 7**	Nicola Kelly, Swansea Museum (covering South / West Wales). 01792 653763 Nicola.kelly@amgueddfacymru.ac.uk
3.24 Recording Historic Assets			
3.24	The Licence Holder must submit a record of the surviving section of wharf wall to the Licensing Authority for written approval at least **6 weeks prior** to commencement of the Licensed Activities. No Licensed Activities may be	See **Section 6.8.2** and **Appendix 7**	Dr Julian Whitewright, Senior Investigator (Maritime) for Royal Commission on the Ancient and Historical Monuments of Wales. 01970 621 217 julian.whitewright@rcahmw.gov.uk

Condition	CEMP Reference or Compliance Mechanism	Where the condition has been addressed in this CEMP	Contact Detail (Where Applicable)
	undertaken prior to written approval from the Licensing Authority.		
3.25 Construction Environment Management Plan			
3.25.1	The Licence Holder must submit a Construction Environment Management Plan (CEMP) to the Licensing Authority for written approval at least **6 weeks prior** to commencement of the Licensed Activities. No Licensed Activities may be undertaken prior to written approval from the Licensing Authority.	See Document Ref.: **ITH101-CEMP.R0**	marinelicensing@cyfoethnaturiolcymru.gov.uk
3.25.2	The Licence Holder must ensure that any actions outlined in the documents detailed in condition 3.25.1 are implemented as approved in writing by the Licensing Authority. Any proposed changes to the actions outlined in the documents must be submitted to, and approved in writing by the Licensing Authority prior to any changes being enacted.	See Document Ref.: **ITH101-CEMP.R0**	marinelicensing@cyfoethnaturiolcymru.gov.uk

5.0 ENVIRONMENTAL RISK ASSESSMENT

5.1 Rationale

5.1.1 An Environmental Risk Assessment (ERA) has been undertaken to identify potential environmental risks associated with the construction activities and to define mitigation measures required to minimise impacts on sensitive receptors and the receiving environment.

5.1.2 The assessment has been conducted using the Source-Pathway-Receptor (SPR) model which identifies:

- The source of potential environmental harm
- The pathway through which effects could occur
- The receptor that may be affected

5.1.3 Where a complete SPR linkage exists, mitigation measures have been identified and incorporated within this CEMP to reduce risks to an acceptable level. The magnitude of any such risk is qualified by the probability and consequence of any such risk occurring. The criteria to be adopted for the risk assessment are present in **Table 6**, below.

5.1.4 Sensitive receptors considered within this assessment include:

- The Eastern Cleddau River
- Milford Haven Waterway SSSI
- Pembrokeshire Marine SAC
- Eastern Cleddau River SSSI
- Cleddau Rivers SAC
- Migratory fish species
- Otter and bat populations
- Adjacent woodland and riparian habitats
- Nearby buildings and site users

Table 6: Risk Assessment Criteria

Probability → / Consequence ↓	Very Low	Low	Moderate	High
Very Low	Negligible	Very Low	Low	Low-Moderate
Low	Very Low	Low	Low-Moderate	Moderate
Moderate	Low	Low-Moderate	Moderate	High
High	Low-Moderate	Moderate	High	Very High

Table 7: Environmental Risk Assessment

Activity	Source	Pathway	Receptor	Potential Impact	Mitigation Measures	Residual Risk
Cofferdam installation	Placement of Salix Aqua Rock Bags and aqua bags filled with jumbo bags of clay to seal gaps	Disturbance of riverbed sediments	Eastern Cleddau River / SAC fish species	Increased turbidity affecting fish migration	• Installation within restricted ecological working window when migratory fish species are unlikely to be encountered. • Staged placement of rock bags to minimise sediment disturbance. • Cofferdam will not extend more than 1/3 of the channel width to prevent impact to fish movement / migration and limit the temporary loss of exploitable water column.	Low
Dewatering of isolated area	Pumped water discharge	Suspended solids entering river	SAC water quality receptors	Localised increase in turbidity	• Sediment control measures for dewatering (filtration to remove solids >260µm and secondary filtration via hay bales if required). • Pumping operations will be closely monitored and adjusted where necessary to prevent scour, excessive turbidity or entrainment of aquatic fauna. • Visual monitoring during pumping for plumes or discolouration. • Cessation of pumping if fish are present, consultation with NRW fisheries with ecologist attendance if required (e.g. to conduct fish rescue if necessary). [See **Section 6.5** for details]. • Best practice guidance on in-channel sediment control will be followed.	Low
Dewatering pumps	Pump suction	Fish entrainment	Migratory fish species	Injury or displacement of fish	• Restricted ecological working window when migratory fish species are unlikely to be encountered.	Low

Activity	Source	Pathway	Receptor	Potential Impact	Mitigation Measures	Residual Risk
					• Pump intake screening where practicable. • Inspection of isolated area prior to pumping. • Cessation of pumping if fish present and consultation with NRW. • In the event that fish rescue is required, this will be carried out by an appropriately qualified ecologist (Sian Williams, Kit Ecology). [See **Section 6.5** for details].	
Concrete works	Wet concrete / wash-out	Runoff to river	Water environment	Alkalinity increase affecting aquatic ecology	• Wash-out container within site compound >10m from the waterway. • No discharge to river. • Controlled mixing areas if needed; ready-mix will be used, so this is unlikely. • The use of the cofferdam will isolate the construction zone and limit the spread of potential sediment disturbance and pollution. • Controlled concrete handling and placement.	Low
Refuelling plant	Fuel storage and transfer	Spillage to ground or surface water	River / SAC habitats	Hydrocarbon pollution	• Bunded storage area (>10m from the watercourse) for day-to-day use only; no overnight storage of fuel will take place. • Spill kits available within site compound (and plant where practicable). • Refuelling activities within the site compound at a significant intervening distance from the watercourse (>10m). • Use of drip trays. • Refuelling supervised at all times.	Low

Activity	Source	Pathway	Receptor	Potential Impact	Mitigation Measures	Residual Risk
					• Best practice guidance on pollution prevention will be followed. • Refuelling will not take place within the river channel or on the foreshore.	
Excavation works	Exposed soils (Including made ground and potential asbestos impacted soils)	Sediment runoff & Airborne dust and fibres	River channel, site workers & local environment	Increased suspended solids & potential exposure to contaminants	• Cofferdam isolation. • Controlled discharge via filtration. • Excavated soils will be moved via a dumper to a designated location at an appropriate distance away from the watercourse to prevent run off from entering the water, before being taken off site to an appropriately permitted facility for disposal. • Made ground will not be assumed to be clean or inert; excavated materials will be subject to appropriate waste classification prior to removal, including hazardous waste assessment and WAC testing where required. • Ground investigation has identified isolated asbestos within made ground; asbestos-impacted soils will be treated as a known constraint and managed in accordance with the Principal Contractor's RAMS. • Segregation of excavated materials will be undertaken where necessary to prevent cross-contamination. • Stockpiled materials will be located away from drainage pathways and managed using damping down or covering where required to control dust, fibres and runoff. • Appropriate PPE (including RPE where required) will be used during	Low

Activity	Source	Pathway	Receptor	Potential Impact	Mitigation Measures	Residual Risk
					excavation and handling of potentially contaminated soils. • Any excavations during the works will be covered overnight or provided with escape ramps where required to prevent wildlife entrapment. • Wheel wash / road cleaning will be undertaken where needed (with no run-off entering the watercourse).	
Vegetation clearance (where applicable)	Removal of grassed areas where needed to form an access track	Habitat disturbance	Nesting birds	Disturbance to breeding birds	• Clearance limited to grassed areas required for access. • No clearance of trees or hedgerow expected. In the event that this is required, there will be an ecological check prior by a competent person (i.e. ecologist) if it is due to occur during nesting season.	Low
Noise / vibration from plant	Mechanical equipment	Airborne transmission	Otter / bats	Temporary disturbance	• Daytime working planned. • No idling vehicles permitted. • Generator will only be in use / turned on during working hours. • Night-time working will not occur. • Plant maintained in good working order with silencers where required.	Low
Possible light pollution	Mechanical equipment	Airborne transmission	Otter / bats	Temporary disturbance	• Daytime working only planned. • No idling vehicles permitted. • Night-time working will not occur. • Temporary lighting only used if required for safety. • Where lighting is required, it will be directional (away from known areas of bat roosts i.e. the Mill, and the watercourse), and hooded.	Low
Materials handling	Dropped debris	Direct entry to river	Aquatic habitat	Physical contamination	• Daily inspections of working area and channel margins.	Low

Activity	Source	Pathway	Receptor	Potential Impact	Mitigation Measures	Residual Risk
					• Good housekeeping procedures implemented. • Debris removal and subsequent disposal at a suitably permitted facility where required.	
Fuel / Oil / Chemical Storage during the works	Stored Fuel / Oil / Chemicals	Spill / Run off to land and river	Habitats (land and water) and species present	Pollution / contamination	• Fuels / oils will be stored within the site compound >10m away from the river and will not be stored overnight. • Storage will be within double skinned bowser in a bund with 110% capacity as secondary containment. • Emergency spill kits will be present on site. • COSHH Assessments maintained within the site file. • Staff will be trained via the IRP on spillage procedures and how to use spill kits.	Low
Temporary works removal	Residual materials	Remaining in channel	River environment	Habitat obstruction	• Post-work inspection and clearance (See **Section 6.16**). • Removal of all temporary materials including rock bags, clay bags and protection materials. • Final visual inspection of channel margins following cofferdam removal.	Negligible

6.0 ENVIRONMENTAL MANAGEMENT

6.1 Introduction

6.1.1 This section sets out the environmental management measures that will be implemented during construction of the riverbank retaining wall at Black Pool Mill to prevent or minimise adverse effects on the receiving environment. The measures described within this section reflect the mitigation requirements identified within the Marine Licence (CML2492), Habitats Regulations Assessment (HRA), Environmental Method Statement (EMS), Preliminary Ecological Appraisal (PEA) and supporting technical documentation prepared for the project.

6.1.2 Environmental controls have been developed in recognition of the location of the works within the Eastern Cleddau, which forms part of the River Cleddau Special Area of Conservation (SAC), the Milford Haven Waterway Site of Special Scientific Interest (SSSI), and the Pembrokeshire Marine SAC. These are considered to be sensitive receptors, along with the nearby buildings associated with the Black Pool Mill complex. Particular emphasis is therefore placed on the protection of water quality, migratory fish passage, protected species, historic features and surrounding habitats during temporary channel isolation, excavation, dewatering and installation of the new retaining wall. The mitigation measures described in the following sections will be implemented by the Principal Contractor throughout the construction period and monitored to ensure compliance with licence conditions and best practice guidance for works undertaken within or adjacent to the water environment.

6.2 Emissions, Dust and Air Quality

6.2.1 The main sources of emissions during the construction period are anticipated to arise from the operation of mechanical plant, construction vehicles and associated equipment (e.g. excavators, dumper, crane and generator) required to undertake the works. Emissions will be minimised through good site management practices, including avoiding unnecessary engine idling and ensuring plant and equipment are switched off when not in active use.

6.2.2 All plant and equipment will be subject to routine inspection and maintenance in accordance with manufacturer’s recommendations. Daily pre-use checks will be undertaken to ensure equipment is operating efficiently and to minimise exhaust emissions. Where practicable, construction vehicles accessing the site will comply with emissions standards equivalent to Euro 6 for road vehicles (or Stage V for non-road mobile machinery).

6.2.3 Dust generation during the works is expected to be limited due to the small scale and short duration of the construction activities and the predominately damp ground conditions associated with the riverside location. Potential dust sources include excavation activities, movement of vehicles within the site compound and handling of construction materials.

6.2.4 Ground Investigation works have identified made ground across the site, including two isolated occurrences of asbestos within soils. As such, there is potential for the generation of dust and fibres during excavation and handling activities. Where required, dust and fibre generation will be controlled through damping down of exposed surfaces (particularly during dry weather), minimising drop heights during material handling and minimising unnecessary vehicle movements within the working area.

6.2.5 Appropriate control measures will be implemented during excavation and handling of potentially contaminated soils, including the use of suitable personal protective equipment (PPE) and respiratory protective equipment (RPE) where required, in accordance with the Principal Contractor's RAMS.

6.2.6 Stockpiled materials will be stored within the designated compound area and managed to prevent wind entrainment. Vehicles transporting materials to and from site will be appropriately managed to prevent the release of dust or debris onto adjacent surfaces (i.e. they will be fully enclosed or sheeted).

6.2.7 Given the temporary nature and limited scale of the works, no significant impacts on local air quality are anticipated.

6.3 Ecology & Protected Species

6.3.1 As aforementioned, works are located adjacent to the Eastern Cleddau, which forms part of the River Cleddau SAC and Milford Haven Waterway SSSI. These designations support migratory fish species including Atlantic salmon (*Salmo salar*), sea lamprey (*Petromyzon marinus*), river lamprey (*Lampetra fluviatilis*), Allis shad (*Alosa alosa*) and twaite shad (*Alosa fallax*), together with otter (*Lutra lutra*). The construction methodology has been developed to minimise disturbance to these qualifying features.

6.3.2 In-channel works will be undertaken within the seasonal working window specified within the Habitats Regulations Assessment (HRA) and Marine Licence CML2492 (15th July to 30th September inclusive) in order to avoid sensitive migration periods for designated fish species.

6.3.3 Temporary channel isolation will be undertaken using a cofferdam formed from relocated Salix Aqua Rock Bags supplemented with clay-filled geotextile bags. The cofferdam will extend no more than one third of the channel width and will not obstruct fish passage within the main river corridor.

6.3.4 Dewatering of the isolated working area will be undertaken using controlled over-pumping with filtration prior to discharge to the river. Pump intakes will be fitted with appropriate screening where practicable to minimise the risk of fish entrainment. The isolated area will be inspected during dewatering and, should fish be observed within the working footprint, works will cease and Natural Resources Wales (NRW) Fisheries will be consulted. In the event that fish rescue is required, this will be undertaken by a suitably qualified ecologist (Sian Williams, Kite Ecology) prior to the continuation of pumping. The procedures to be followed have been outlined in full in **Section 6.5**.

6.3.5 Habitats within and surrounding the site provide nesting opportunities for breeding birds. The Preliminary Ecological Appraisal (PEA) (**Appendix 4**) concluded that impacts to birds are expected to be minimal. In line with the PEA, precautionary checks by a suitably qualified ecologist will be undertaken where vegetation clearance (e.g. single tree removal) is required during the nesting season (March - September). Vegetation clearance associated with the works will be limited to minor grass removal required to facilitate access to the working area; which would not affect nesting birds. No hedgerows or trees will be removed as part of the scheme. Should any additional vegetation clearance be required during the bird breeding season (March to September inclusive), a check will be undertaken by a suitably qualified ecologist prior to works commencing.

6.3.6 Several bat species are known to be present within the Black Pool Mill complex and surrounding woodland habitats, with potential roosting habitats. To minimise disturbance to roosting and commuting bats, construction activities will avoid night-time working; with all works ceasing between dusk and dawn. It is not anticipated that temporary site lighting will be required. However, should temporary lighting be required, it will be directional and hooded where practicable in order to minimise disturbance to nearby bat roosts. Any temporary site lighting would be directed away from the Mill and the river course. Where required, works will be undertaken in accordance with the approved bat mitigation strategy.

6.3.7 The river corridor and surrounding habitats provide suitable habitat for otter and badger. Although significant impacts are not anticipated, good site housekeeping measures will be maintained throughout construction, including appropriate storage of materials, controlled lighting (if applicable), noise management and prevention of overnight hazards, to minimise disturbance to these species. Any excavations during the works will be covered overnight or provided with escape ramps where required to prevent wildlife entrapment. As aforementioned, all works will cease between dusk and dawn, with works taking place within daylight hours only.

6.3.8 The Preliminary Ecological Appraisal identified no habitats suitable for reptiles or amphibians within the working footprint. No invasive non-native plant species were recorded within the immediate works area; however, precautionary biosecurity measures will be implemented during construction to prevent the introduction or spread of invasive species.

6.4 Water Resources & Dewatering

6.4.1 Due to the location of the construction works, the protection of water quality during temporary channel isolation, excavation and foundation construction is a key environmental requirement of the project.

6.4.2 A temporary cofferdam will be formed using relocated Salix Aqua Rock Bags supplemented with clay-filled geotextile bags to isolate the working area from the main river channel. The cofferdam will extend no more than one third of the channel width in accordance with Marine Licence CML2492 and will maintain fish passage within the remaining channel.

6.4.3 Following installation of the cofferdam, the isolated working area will be dewatered to allow excavation to formation level and construction of the reinforced concrete foundation and Redi-Rock retaining wall in dry working conditions. Dewatering will be undertaken using a 150 mm silenced diesel-powered pump positioned at the downstream end of the working area, together with smaller submersible pumps where necessary to manage groundwater ingress.

6.4.4 Water within the isolated working area will be directed to a sump prior to controlled over-pumping back to the Eastern Cleddau downstream of the works. Discharge water will pass through proprietary filtration measures (“dirt bags”) to remove suspended solids greater than approximately 260 microns, with secondary filtration through hay bales where required to further reduce turbidity prior to discharge.

6.4.5 Pumping operations will be monitored throughout dewatering activities to ensure that discharge does not result in visible sediment plumes, excessive turbidity or scour within the receiving environment. Pumping rates will be adjusted where necessary to maintain water quality within acceptable limits.

6.4.6 All works involving excavation, concrete placement and material handling adjacent to the river channel will be undertaken in accordance with pollution prevention best practice guidance to minimise the risk of sediment mobilisation or accidental release of contaminants to controlled waters.

6.4.7 Refuelling of plant and storage of fuels, oils and chemicals will take place within the designated site compound located at an appropriate distance from the river channel and will be undertaken using suitable secondary containment and spill response measures to prevent pollution of surface waters. This will be for daily use only; not fuel will be stored overnight.

6.4.8 Time spent in the watercourse will be kept to a minimum during the construction phase.

6.4.9 These measures will ensure that the temporary cofferdam installation, excavation and dewatering activities do not adversely affect water quality within the Eastern Cleddau or the qualifying features of the River Cleddau SAC.

6.4.10 All plant, equipment and PPE will be inspected and, where necessary, washed with freshwater and / or thoroughly air dried prior to deployment to site and before movement between locations in accordance with Marine Licence Condition 3.17. Cleaning will be undertaken within the site compound on hardstanding areas located at an appropriate distance from the river channel. Wash water will not be discharged to the Eastern Cleddau and will be managed to prevent runoff to the water environment. These measures will reduce the risk of transferring sediment, contaminants or invasive non-native species between locations.

6.5 Procedures for Fish Rescue

6.5.1 The following sequence shall be carried out prior to and during the dewatering of the cofferdam:

1) NRW fisheries shall be consulted by the licence holder, or appointed agent, for agreement on the appropriate response prior to dewatering;

2) The isolated area will be inspected during dewatering;

3) Should fish be observed within the cofferdam area, pumping shall cease immediately;

4) If required, a suitably qualified ecologist will attend to carry out the fish rescue. The Principal Contractor has engaged with Sian Willaims of Kite Ecology who will be on call during dewatering and is based 30 minutes from Black Pool Mill, which will ensure a quick response time in the event that fish rescue is required;

5) Any fish rescue / relocation from the cofferdam area back to the main river channel will be undertaken by the appropriately qualified ecologist (Sian Williams, Kite Ecology) and in line with the method agreed with NRW fisheries;

6) Pumping will only recommence once points 4 and 5 of the above process have been successfully carried out.

6.6 Pollution Prevention

6.6.1 Owing to the sensitive receptors present at the site (i.e. SSSI and SAC associated with the Eastern Cleddau River), pollution prevention measures will be undertaken throughout the construction period to minimise the risk of contamination to

controlled waters arising from plant operation, fuel storage, material handling and in-channel works. Ground investigation works have identified made ground across the site, including isolated occurrences of asbestos within soils. These materials will be treated as a known constraint and managed to prevent the release of contaminated sediments, dust or fibres to the water environment.

6.6.2 All works will be undertaken in accordance with recognised pollution prevention best practice guidance, including current Natural Resources Wales (NRW) guidance and relevant CIRIA publications for construction activities near watercourses.

6.6.3 All oils and fuels will be stored in compliance with The Water Resources (Control of Pollution) (oil Storage) (Wales) Regulation 2016. The control measures outlined below will be adhered to:

- Fuel required for construction plant will be stored within the designated site compound, at an appropriate intervening distance of >10m from the watercourse.
- Fuel shall be stored in a dedicated, bunded, impervious storage area, away from drains.
- Fuels will be delivered daily and will not be stored on site overnight.
- Refuelling of plant and equipment shall take place on a hardstanding surface, within the site compound at least 10m from the watercourse and drip trays shall be used. Appropriate supervision to prevent accidental release of fuel to ground or surface waters will be undertaken.
- Refuelling will not take place within the river channel or on the foreshore.
- The maximum quantity of fuel stored on site will within a double skinned bowser with a capacity of 200 litres (white diesel).
- Secondary containment will be provided via the bund with a capacity of no less than 110% of stored volume (i.e. 220l). All pipes and gauges will be within the wall of the bund.
- Small mobile plant shall be placed on drip trays.
- Spill kits will be available within the compound and working area at all times during construction.
- COSHH Assessments will be available within the site management file.

6.6.4 All plant and machinery operating near the watercourse will be maintained in good working order and subject to routine inspection to minimise the risk of leaks or spillages. Plant will not be left unattended while refuelling and engines will be switched off when not in active use.

6.6.5 Construction materials and excavated soils will be stored within the designated compound area where practicable and managed to prevent accidental release into the water environment. Materials will be secured appropriately to prevent displacement during periods of high wind or rainfall. Stockpiles of excavated materials, including made ground, will be located away from drainage pathways and the watercourse and managed to prevent sediment runoff and the migration of contaminants. Where required, stockpiles will be damped down or covered to control dust, fibres and runoff, and segregated where necessary to prevent cross-contamination.

6.6.6 During cofferdam installation, excavation and foundation construction, appropriate measures will be implemented to minimise sediment mobilisation within the river. Pumped water from the isolated working area will be filtered prior to discharge to the river downstream in order to control suspended solids and prevent

deterioration in water quality. Where excavation is undertaken within made ground, additional care will be taken to prevent the entrainment of contaminated sediments or asbestos-containing materials into the water environment.

6.6.7 All reasonable precautions will be taken to prevent debris, waste materials, contaminated soils or construction residues entering the river channel. Any material entering the water environment inadvertently will be recovered immediately where practicable and works paused where necessary in accordance with Marine Licence Condition 3.16.

6.6.8 At the end of each working day, plant, equipment and loose materials will be removed from the cofferdam footprint and stored within the site compound, away from the watercourse.

6.6.9 In the event of a pollution incident, works will cease immediately within the affected area and appropriate containment measures will be implemented. The incident will be reported to Natural Resources Wales in accordance with the procedures set out in **Section 6.14** of this CEMP.

6.7 Concrete, Cement & Materials Management

6.7.1 Concrete and cementitious materials present a potential risk to water quality due to their highly alkaline nature if released to the water environment prior to curing. Particular care will therefore be taken during handling, placement and curing of concrete associated with the reinforced concrete foundation, blinding layer and associated structural elements of the Redi-Rock retaining wall.

6.7.2 Concrete required for construction works will be delivered to site in ready-mix form and placed within the isolated working area formed by the temporary cofferdam. Concrete placement will be undertaken in a controlled manner to minimise the risk of material entering the surrounding water environment.

6.7.3 Concrete works will be timed to ensure adequate curing prior to removal of the temporary cofferdam and reintroduction of normal river flows to the working area. This will reduce the potential for alkaline leachate entering the Eastern Cleddau during early curing stages.

6.7.4 Concrete required for construction of the retaining wall foundation will be delivered to site in ready-mix form. A designated wash-out container will be provided within the site compound for cleaning of concrete equipment. Washout water will be contained and removed from site for disposal at an appropriately permitted facility (A&C Aggregate Ltd's site). No concrete washout water or cementitious materials will be permitted to enter the river channel or surface water drainage pathways. The concrete wash-out area at the Black Pool Mill site will be located >10m from the watercourse in line with Condition 3.19 of the Marine Licence.

6.7.5 Precast Redi-Rock modular retaining wall units will be delivered to site and installed using a crane operating from the southern bank. As these units are pre-cured prior to delivery, the risk of alkaline runoff to the water environment during installation is minimal.

6.7.6 Steel reinforcement associated with the concrete foundation works will be stored within the designated site compound and installed within the isolated working area only. Cutting or preparation of reinforcement will be undertaken in a controlled manner to prevent debris entering the river channel.

6.7.7 Temporary clay-filled geotextile bags used to supplement the Salix Aqua Rock Bag cofferdam will be installed to reduce seepage through the temporary structure and improve hydraulic isolation of the working area during construction. These materials will be removed following completion of the works.

6.7.8 All construction materials will be stored within the designated compound area and handled in a manner that prevents accidental release to the surrounding environment. Materials will be secured appropriately to prevent displacement during adverse weather conditions.

6.8 Heritage & Archaeological Receptors

6.8.1 The construction works are located adjacent to Black Pool Mill within a historically sensitive river corridor associated with former industrial use of the Eastern Cleddau. The surviving sections of the wharf wall form part of the historic setting of the mill complex and are therefore considered a heritage receptor requiring appropriate recording prior to construction works.

6.8.2 In accordance with Marine Licence Condition 3.24 (see **Table 5** and **Appendix 1**), a photographic record of the surviving section of the wharf wall will be prepared and submitted to Natural Resources Wales (NRW) for written approval at least six weeks prior to commencement of the licensed activities. No works affecting the surviving wall structure will take place until written approval has been received from the Licensing Authority. Correspondence between Dr Julian Whitewright of the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) and NRW in March 2025 show that Dr Whitewright advised that the RCAHMW can do the recording in accordance with their normal survey methodology and archiving. Dr Whitewright will be contacted in plenty of time to allow for the written approval six weeks ahead of the commencement of the works.

6.8.3 The heritage record will comprise a photographic survey of the remaining wall structure and its relationship to the surrounding mill buildings and river corridor. This record will document the construction materials, condition and extent of surviving features prior to reconstruction of the retaining wall.

6.8.4 Construction activities will be undertaken in a controlled manner to avoid unnecessary disturbance to adjacent historic fabric associated with the Black Pool Mill complex. Plant movements and material storage areas will be confined to designated working areas identified within the site layout drawings.

6.8.5 In the event that previously unidentified archaeological remains or historic structural features are encountered during excavation works, works will cease in the immediate area, and the Client will be notified. Appropriate advice will then be sought from Natural Resources Wales and Swansea Museum under the Marine Portable Antiquities Scheme before works recommence, in line with **Table 5** (Condition 3.23).

6.9 Trees, Vegetation and Landscape Protection

6.9.1 The construction works are located within a wooded river valley setting adjacent to the Eastern Cleddau, with mature trees present in the surrounding area. These features contribute to the ecological and landscape character of the river corridor and form part of the wider setting of the Black Pool Mill complex. Protection of retained vegetation during construction will therefore be implemented in accordance with the Arboricultural Method Statement prepared for the scheme (**Appendix 5**).

6.9.2 Vegetation clearance associated with the works will be limited to minor removal of grass and low-level vegetation required to facilitate access to the working area and installation of the temporary cofferdam. No removal of trees or hedgerows is required as part of the construction works.

6.9.3 Tree Protection Areas (TPAs) and Construction Exclusion Zones identified within the Arboricultural Method Statement will be maintained throughout the construction period. No storage of materials, plant movements or excavation works will take place within these protected areas unless otherwise agreed in advance.

6.9.4 The site compound will be located within the existing car park area at Black Pool Mill, thereby minimising disturbance to surrounding vegetation and reducing the potential for impacts on adjacent woodland habitats.

6.9.5 Any open excavations will be protected appropriately at the end of each working day to prevent risks to personnel, the public and wildlife.

6.9.6 All disturbed areas will be reinstated following completion of the works in accordance with the approved construction drawings and site restoration requirements.

6.10 Noise, Nuisance & Disturbance

6.10.1 Construction activities associated with the reconstruction of the retaining wall will generate temporary noise from the operation of plant and equipment including excavators, dumper, crane and pumps. These activities will be short-term and localised within the immediate working area adjacent to Black Pool Mill.

6.10.2 Sensitive receptors in the vicinity of the works include the Black Pool Mill buildings and restaurant, visitors to the surrounding area and ecological receptors associated with the Eastern Cleddau River corridor, which forms part of the River Cleddau Special Area of Conservation (SAC) and Milford Haven Waterway Site of Special Scientific Interest (SSSI). Construction activities will be managed to minimise disturbance to these receptors as far as reasonably practicable.

6.10.3 Works will be undertaken during standard daytime working hours where practicable and in accordance with the programme described in **Section 3.4**. No night-time working within the river channel will occur. Restricting works to daylight hours will reduce disturbance to nearby receptors and minimise potential impacts on nocturnal wildlife, including commuting and roosting bat species.

6.10.4 Plant and equipment used during construction will be maintained in good working order and fitted with appropriate silencers where required. Engines will be switched off when not in active use to reduce unnecessary noise generation from idle vehicles.

6.10.5 Construction traffic movements will be limited to the existing access route via the southern entrance to the Black Pool Mill car park. Vehicle movements within the site will be managed to minimise disturbance to site users and surrounding receptors.

6.10.6 Temporary lighting is not anticipated to be required during construction. Where lighting is necessary for safety purposes, it will be directional and positioned to minimise light spill toward adjacent woodland, river corridor habitats and the Black Pool Mill buildings.

6.10.7 Given the short duration and limited scale of the works, significant adverse impacts associated with construction noise, vibration or disturbance are not anticipated.

6.11 Waste Management

6.11.1 Construction activities associated with the reconstruction of the retaining wall will generate limited quantities of waste materials, primarily comprising excavated soils, removed rock bags, construction packaging and minor quantities of surplus construction materials. Waste will be managed in accordance with the waste hierarchy, prioritising prevention, reuse and recycling where practicable.

6.11.2 Ground investigation works have identified made ground across the site, including isolated occurrences of asbestos within soils. These materials will be treated as a known constraint for the purposes of excavation, handling and disposal.

6.11.3 Excavated soils arising from formation excavation will be temporarily stored within the designated compound area prior to removal from site by appropriately licensed waste carriers to suitably permitted disposal or recovery facilities. Excavated made ground will not be assumed to be clean, inert or suitable for unrestricted rescue. All soils requiring removal from site will be subject to appropriate waste classification prior to disposal to a suitably permitted site, including assessment for hazardous properties and Waste Acceptance Criteria (WAC) testing where required.

6.11.4 Existing Salix Aqua Rock Bags forming part of the temporary emergency stabilisation works will be reused during construction to form the temporary cofferdam. Following completion of the works, these materials will be removed from the river channel.

6.11.5 Concrete washout water and cementitious residues will be contained within the designated washout container located within the site compound and removed from site for disposal at an appropriately permitted facility. No washout materials will be discharged to the river channel or surrounding ground.

6.11.6 All construction materials and wastes, including excavated soils, will be stored securely within the designated site compound to prevent accidental release to the surrounding environment. Particular care will be taken to prevent debris entering the Eastern Cleddau during in-channel works. Stockpiled materials will be segregated where necessary and managed to prevent cross-contamination, dust generation and the migration of sediments or contaminants to the adjacent watercourse.

6.11.7 General construction waste such as packaging materials and surplus consumables will be collected regularly and removed from site to appropriately permitted recycling or disposal facilities.

6.11.8 All reasonable precautions will be taken to prevent waste materials, including contaminated soils, from entering the river channel during construction. Any material entering the watercourse inadvertently will be recovered immediately where practicable and disposed of appropriately. Where material cannot be safely recovered, works will cease and Natural Resources Wales will be notified in accordance with Marine Licence Condition 3.16.

6.11.9 Waste transfer and Duty of Care documentation will be retained by the Principal Contractor in accordance with statutory requirements, including waste transfer notes and hazardous waste consignment notes where applicable.

6.12 Transportation & Vehicle Movements

6.12.1 The Construction traffic associated with the works will access the site via the southern entrance to Black Pool Mill from the A4075. This route provides direct access to the existing car park area, which will be used for site compound establishment, plant parking, materials storage and welfare facilities.

6.12.2 Vehicle movements associated with the construction works will be limited to deliveries of plant and materials, as well as removal of excavated soils (if required) and construction wastes. Due to the relatively small scale and short duration of the project, traffic volumes associated with the works are expected to be low.

6.12.3 Deliveries to site will be scheduled where practicable to minimise disruption to existing site users and visitors to the Black Pool Mill restaurant. Banksmen will be used where required to manage vehicle movements within the site compound and working area.

6.12.4 All vehicles and plant operating on site will utilise designated access routes and working areas identified within the Indicative Operational Layout Plan (**Drawing No. ITH101-03-03**). Vehicle movements will be confined to these areas in order to minimise disturbance to surrounding habitats and prevent unnecessary ground damage.

6.12.5 Construction vehicles will be maintained in good working order and engines will not be left idling unnecessarily. These measures will reduce emissions, noise and disturbance within the surrounding environment.

6.12.6 Where required, materials will be securely loaded and transported to prevent the release of debris or sediment during transit to and from the site.

6.12.7 Vehicle wheels and access routes will be cleaned as required to prevent tracking of mud and debris onto surrounding surfaces and public highways.

6.12.8 Given the short-term nature of the works and the use of existing access infrastructure, significant impacts associated with construction traffic are not anticipated.

6.13 Carbon Impact & Resource Efficiency

6.13.1 The reconstruction of the retaining wall at Black Pool Mill represents a small-scale construction scheme with a short programme duration and limited requirement for plant, materials and vehicle movements. As such, the overall carbon impact associated with the works is expected to be low.

6.13.2 Resource efficiency has been incorporated into the construction methodology through the reuse of existing Salix Aqua Rock Bags currently forming part of the temporary emergency stabilisation works. These materials will be relocated to form the temporary cofferdam during construction, reducing the requirement for additional imported materials.

6.13.3 Construction plant and vehicles will be used efficiently throughout the works, with engines switched off when not in active use to minimise fuel consumption and associated emissions.

6.13.4 Materials required for the works will be delivered to site in accordance with the construction programme to avoid unnecessary storage and repeated vehicle movements. Where practicable, materials will be sourced locally to reduce

transport-related emissions (e.g. ready-mix concrete from A&C Aggregates will be delivered from their site which lies just 5.2 miles by road from Black Pool Mill).

6.13.5 Waste generation will be minimised through careful material handling and reuse of suitable excavated materials where appropriate. Remaining wastes will be removed from site by licensed carriers for recovery or disposal at appropriately permitted facilities.

6.13.6 Following completion of the works, disturbed areas will be reinstated in accordance with the approved drawings, ensuring the long-term stability of the riverbank and reducing the need for future maintenance works and associated environmental impacts.

6.14 Climate Change Resilience & Flood Preparedness

6.14.1 The construction works are located within Flood Zone 3 associated with tidal and fluvial flood risk from the Eastern Cleddau. Construction activities have therefore been planned to take account of variable river levels, tidal influence and the potential for periods of elevated flow during the construction programme.

6.14.2 In-channel works will be undertaken within the seasonal working window specified within Marine Licence CML2492 and the Habitats Regulations Assessment (15th July to 30th September inclusive), when river conditions are typically more stable and the likelihood of prolonged high flows is reduced.

6.14.3 The temporary cofferdam formed from relocated Salix Aqua Rock Bags and supplementary clay-filled geotextile bags has been designed to allow overtopping during periods of increased river flow. This approach reduces the risk of structural instability and minimises the potential for unintended obstruction to river conveyance during elevated water levels.

6.14.4 Construction materials, plant and fuels will be stored within the designated site compound located in the existing car park area at an appropriate distance from the river channel (>10m) in order to reduce the risk of mobilisation during flood events. Fuel and oil will not be stored over night at the site.

6.14.5 Weather conditions and river levels will be monitored throughout the construction period. Where significant increases in flow levels are forecast, works within the isolated channel area will be suspended where necessary and plant and materials secured in safe locations.

6.14.6 Upon completion of the works, reinstatement of the riverbank using a permanent Redi-Rock retaining wall will improve the long-term stability and resilience of the riverbank in response to future flood events and changing climatic conditions.

6.15 Incident Response Plan

6.15.1 An Incident Response Plan (IRP) has been prepared for the construction works to ensure that appropriate procedures are in place to respond effectively to environmental incidents, accidents or emergencies that may occur during the implementation of the project. The IRP provides a structured framework for identifying, managing and reporting incidents that have the potential to affect the water environment, ecological receptors or surrounding land, including those associated with contaminated materials.

6.15.2 Potential incidents associated with the works may include fuel or chemical spillages, release of concrete or cementitious materials, excessive sediment

discharge during dewatering operations, loss of materials to the river channel or unexpected ecological discoveries, and the identification of previously unrecorded contamination (including suspected asbestos-containing materials). The IRP sets out the actions to be taken in the event of such incidents to minimise environmental harm and ensure compliance with Marine Licence CML2492. In the event that unexpected contamination is encountered (e.g. suspect ACMs, staining, odours or unusual ground conditions), works in the affected area will cease immediately and the area will be secured. Appropriate specialist advice will be sought, and additional investigation, sampling and risk assessment will be undertaken where required prior to recommencement of works.

6.15.3 The IRP includes procedures for spill response, containment measures, communication routes, emergency contacts and notification requirements to Natural Resources Wales (NRW) and other relevant stakeholders where necessary. Spill kits will be maintained within the site compound and working areas throughout the construction period.

6.15.4 All site personnel will be made aware of the incident response procedures through site inductions and toolbox talks prior to commencement of works. The Principal Contractor will be responsible for implementing the IRP and ensuring that appropriate response measures are available on site at all times.

6.15.5 The detailed Incident Response Plan, including spill response procedures, unexpected contamination procedures and emergency contact information, is provided in **Appendix 6** of this CEMP.

6.16 Monitoring, Inspection & Reporting

6.16.1 Environmental monitoring and inspection will be undertaken throughout the construction period to ensure that the mitigation measures set out within this CEMP are implemented effectively and that the requirements of Marine Licence CML2492 are met.

6.16.2 The Principal Contractor will be responsible for carrying out routine environmental inspections of the working area, site compound and temporary cofferdam to identify any risks to the water environment, land, ecological receptors or surrounding habitats. Inspections will include checks on sediment control measures, plant condition, fuel storage arrangements, waste management practices and material storage areas.

6.16.3 Dewatering activities associated with the temporary cofferdam will be monitored closely during pumping operations to ensure that discharge water remains appropriately filtered and does not result in visible sediment plumes or deterioration in water quality within the Eastern Cleddau.

6.16.4 Pollution prevention measures, including spill kits, bunded storage and designated refuelling arrangements, will be inspected regularly to confirm that they remain in place and fully operational throughout the works.

6.16.5 Where ecological sensitivities are identified during construction activities, including the presence of fish within the isolated working area or unexpected protected species observations, works will pause where necessary and Natural Resources Wales (NRW) will be consulted prior to continuation of activities.

6.16.6 Any environmental incidents, near misses or non-compliances identified during construction will be recorded and managed in accordance with the Incident Response Plan provided in **Appendix 6**. Where required, incidents will be reported

to Natural Resources Wales in line with Marine Licence conditions and relevant reporting procedures.

6.16.7 Records of environmental inspections, toolbox talks, incident reports and waste transfer documentation will be maintained by the Principal Contractor for the duration of the construction works and made available for inspection by Natural Resources Wales upon request.

6.16.8 This CEMP is a 'live' document and will be reviewed periodically during the construction period. Where changes to construction methods or environmental controls are required, these will be agreed with the Client and, where necessary, submitted to Natural Resources Wales for approval prior to implementation.

6.17 Post-Works Site Checks

6.17.1 Post-work site inspections will be undertaken throughout the construction period and following completion of the licensed activities to ensure that no construction materials, waste, plant residues or debris enter or remain within the Eastern Cleddau or adjacent riparian habitats.

6.17.2 Daily visual checks of the working area, temporary cofferdam footprint and surrounding riverbank will be carried out by the Principal Contractor during active construction works to identify any accidental release of materials to the water environment. Any debris identified will be removed immediately and disposed of appropriately at a suitably permitted facility.

6.17.3 Particular attention will be given to the removal of temporary works associated with the construction activities to ensure no materials remain within the channel or intertidal margins, including:

- Salix Aqua Rock Bags following completion of wall installation
- Clay-filled geotextile sealing bags
- Temporary access materials
- Plant protection materials (e.g. drip trays or spill absorbents)
- Construction offcuts and packaging materials

6.17.4 Following removal of the temporary cofferdam, the riverbank and channel margin will be inspected to confirm that no residual artificial materials or obstructions remain within the river corridor that could affect water quality, navigation, habitat condition or fish passage.

6.17.5 Where any material is identified as having entered the watercourse during the licensed activities and cannot be safely recovered immediately, works will cease where necessary and Natural Resources Wales will be notified in accordance with Marine Licence Condition 3.16 and the Incident Response Plan (**Appendix 6**).

6.17.6 On completion of the construction works, a final site inspection will be undertaken by the Principal Contractor to confirm that the site has been left in a clean and environmentally acceptable condition. The final inspection will include checks that:

- All temporary structures have been removed
- All plant and equipment have been demobilised
- No construction waste remains within the working area
- Pollution prevention materials have been removed appropriately
- The riverbank has been reinstated as required

6.17.7 Records of post-work inspections will be retained by the Principal Contractor and made available to Natural Resources Wales upon request to demonstrate compliance with Marine Licence Condition 3.16.

7.0 ENVIRONMENTAL POLICY

7.1 Overview

7.1.1 ITH Construction Ltd is committed to carrying out the reconstruction of the riverbank retaining wall at Black Pool Mill in a manner that protects the surrounding environment and ensures compliance with all relevant environmental legislation, regulatory requirements and Marine Licence CML2492.

7.1.2 The construction works take place within the Milford Haven Waterway Site of Special Scientific Interest (SSSI) and the Pembrokeshire Marine Special Area of Conservation (SAC), adjacent to the Eastern Cleddau river. As such, particular care will be taken to minimise disturbance to sensitive habitats, protected species and water quality throughout the construction period.

7.1.3 The Principal Contractor will implement this Construction Environment Management Plan (CEMP) to ensure that environmental risks associated with the works are identified, managed and controlled through appropriate mitigation measures and good site practices.

7.1.4 During the works, ITH Construction Ltd will:

- Comply with all conditions of Marine Licence CML2492 and associated environmental consents
- Implement mitigation measures identified within the Habitats Regulations Assessment (HRA)
- Prevent pollution to the Eastern Cleddau and surrounding environment
- Minimise disturbance to designated habitats and protected species
- Ensure appropriate management of fuels, materials and wastes
- Control noise, dust and emissions from plant and construction activities
- Ensure all personnel understand their environmental responsibilities through site inductions and toolbox talks
- Respond promptly and effectively to any environmental incidents
- Maintain records demonstrating compliance with this CEMP

7.1.5 Environmental performance will be monitored throughout the construction period through routine inspections and review of site activities. Where improvements to environmental management practices are identified, these will be implemented as part of the ongoing management of the works.

7.1.6 ITH Construction Ltd and all subcontractors involved in the works will cooperate with Natural Resources Wales and other relevant stakeholders to ensure the project is delivered in an environmentally responsible manner consistent with the sensitivity of the surrounding river corridor.

8.0 REPORT CLOSURE

8.1.1 This Construction Environment Management Plan (CEMP) has been prepared to identify the potential environmental risks associated with the reconstruction of the riverbank retaining wall at Black Pool Mill and to define the mitigation and management measures required to ensure the works are undertaken in a controlled and environmentally responsible manner. The document sets out procedures to protect the Eastern Cleddau and its associated statutory designations, including the River Cleddau Special Area of Conservation (SAC) and Milford Haven Waterway Site of Special Scientific Interest (SSSI), during all stages of construction.

8.1.2 The mitigation measures described within this CEMP have been developed to ensure compliance with the requirements of Marine Licence CML2492, the Habitats Regulations Assessment (HRA), and supporting environmental documentation prepared for the scheme. These measures will be implemented by the Principal Contractor throughout the construction period and monitored in accordance with the inspection and reporting procedures set out within this document.

8.1.3 The Environmental Risk Assessment presented within this CEMP concludes that, with the application of the specified control measures, the residual environmental risks associated with the proposed works are low and acceptable. Accordingly, the works can be undertaken without significant adverse effects on the receiving environment, provided that the mitigation measures and management procedures outlined within this CEMP and the supporting documents are followed.

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APPENDICES

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APPENDIX 1 -

Marine Licence (CML2492)

Marine Licence with introductory note

The Marine and Coastal Access Act (2009)

Licence Holder: Bluestone Resorts Limited

Company Number: 06797991

The Grange,
Canaston Wood,
Narberth,
Pembrokeshire,
SA67 8DE

Reconstruction of the collapsed wall along the section of riverbank immediately downstream of Blackpool Mill, Eastern Cleddau - Pembrokeshire

Licence Number: CML2492

Reconstruction of the collapsed wall along the section of riverbank immediately downstream of Blackpool Mill, Eastern Cleddau - Pembrokeshire

Marine Licence number: CML2492

Introductory note

This introductory note does not form a part of the marine licence

The main features of the marine licence are as follows.

Reconstruction of the collapsed wall along the section of riverbank immediately downstream of Blackpool Mill, Eastern Cleddau - Pembrokeshire.

The status log of the marine licence sets out the marine licence history, including any subsequent marine licence variation(s)

Status log of this marine licence		
Description	**Date**	**Comments**
Application	28 January 2025	Application received and considered to be duly made
Date licence determined	08 April 2025	Determination date

Related marine licences or applications under determination

Not applicable

End of introductory note.

MARINE LICENCE, NUMBER CML2492

1 LICENCE DETAILS

1.1 Marine Licence

This is a licence granted by the Licensing Authority in respect of an application numbered **CML2492** and duly made on **28 January 2025** and authorises the Licence Holder to carry out activities for which a licence is required under Part 4 of the Marine and Coastal Access Act 2009, (2009 Act). This licence should be interpreted in accordance with **Section 4**.

1.2 Licence Holder

The Licence Holder is the company set out below:

Company name: Bluestone Resorts Limited

Company number: 06797991

Address: The Grange, Canaston Wood, Narberth, Pembrokeshire, SA67 8DE

1.3 Licence Validity

Licence Start Date	**08 April 2025**
Licence End Date	**31 October 2026**
Licence Issue Date	**08 April 2025**

1.4 Conditions

This licence is subject to the conditions set out in **Section 3.**

Signed:

Dr. Emmer Litt – Marine Licensing Team Leader

For and on behalf of the Licensing Authority

2 LICENSED ACTIVITIES

2.1 Project

Reconstruction of the collapsed wall along the section of riverbank immediately downstream of Blackpool Mill, Eastern Cleddau - Pembrokeshire.

The following Licensed Activities can be conducted within the Licence Period, within the Licensed Area and in accordance with the Approved Application and the Approved Supporting Documents:

Table 1 Licensed Activities

Activity 1 Removal of rock bags	
Type of Licensed Activity	Removal
Description	Removal of existing temporary rock bag wall
Material types to be removed	Salix Aqua Rock Bags
Activity 2 Creation of a temporary cofferdam	
Type of Licensed Activity	Deposit and Removal
Description	Creation of a temporary cofferdam within the watercourse by re-locating the existing rock bags. The cofferdam will extend no further than 1/3 of the way into the river channel. The cofferdam will be removed following completion of wall reconstruction.
Material to be deposited	Salix Aqua Rock Bags
Activity 3 Removal of existing collapsed wall	
Type of Licensed Activity	Removal
Description	Demolish and remove collapsed wall and other debris including failed timber railing. Bank excavated to formation level.
Material to be removed	Timber / Stone/Rock
Activity 4 Reconstruct wall along the section of riverbank immediately downstream of Blackpool Mill	
Type of Licensed Activity	Construction

Description	Construct reinforced concrete foundation and installation of new Redi-Rock gravity retaining wall
Material to be deposited	Concrete, Iron/steel, stone/rock

2.2 Licensed Area

The Licence Holder is authorised to conduct the activities described in Table 1 in the vicinity of Blackpool Mill, Eastern Cleddau - Pembrokeshire, bounded by the coordinates specified in Table 2 and as indicated in the plan attached at Appendix 1:

Table 2 Coordinates

Latitude	**Longitude**
51.795402	-4.814880
51.795343	-4.815237
51.795246	-4.815191
51.795268	-4.814950
51.795342	-4.814838

In the event of any discrepancy between the coordinates set out above and the plan attached at Appendix 1, the coordinates shall take precedence.

2.3 Approved Supporting Documents

Title/Description of Document	**Date Submitted**
CML2492 - LTU-JBA-XX-XX-AP-EN-0001-S0-P01.02-Marine_Licence_Application	09 December 2024
CML2492 - LTU-JBA-XX-XX-DR-C-0004-S3-P01-Location_Plan	09 December 2024
CML2492 - BPM Flood Emergency Plan Rev 2 HD 23022023	09 December 2024
CML2492 - LTU-EDS-XX-XX-MS-C-0001-S2-P01-Outline_Construction_Methodology	09 December 2024
CML2492 - LTU-EDS-XX-XX-MS-EN-0001-S3-P02-Environmental_Method_Statement	09 December 2024
CML2492 - LTU-JBA-XX-XX-AS-EN-0001-S3-P01-HRA_Screening_and_Assessment	09 December 2024

Licence Number: CML2492

CML2492 - LTU-JBA-XX-XX-AS-EN-0002-S3-P01-WFD_Assessment	09 December 2024
CML2492 - LTU-JBA-XX-XX-RP-BD-0001-S3-P03-Preliminary_Ecological_Appraisal	09 December 2024
CML2492 - LTU-JBA-XX-XX-RP-Z-0001-S3-P01-Blackpool_Mill_FCA	09 December 2024
CML2492 - Blackpool_Mill_WNMP_signposting-en-only_v2	24 January 2025
CML2492 - HRA	11 February 2025
CML2492 - WFD	11 February 2025
CML2492 - Blackpool_Mill_wharf_heritage_statement	14 February 2025

3 CONDITIONS

Notification and Inspection

3.1 Notification of Commencement

3.1.1 The Licence Holder must notify the Licensing Authority no less than **10 days** before the commencement of the Licensed Activities, or an individual phase of the Licensed Activities, is expected to commence.

3.1.2 The Licence Holder must notify Welsh Government Marine & Fisheries Division (Control & Enforcement Branch) no less than **10 days** before the commencement of the Licensed Activities, or an individual phase of the Licensed Activities, is expected to commence.

3.1.3 The Licence Holder must ensure that local mariners and fishermen's organisations are made fully aware of the Licensed Activities through local notices to mariners **10 days** prior to the commencement of the Licensed Activities.

3.1.4 The Licence Holder must ensure that notification is sent to The Source Data Receipt team, UK Hydrographic Office (email: sdr@ukho.gov.uk) at least **10 days** prior to commencement of the works. The information supplied must include the start date and end date, a description of the works, positions of the work area (WGS84), and details of any marking arrangements.

3.2 Notification of Vessels and/or Vehicles

The Licence Holder must ensure that the details of the vessels and/or vehicles utilised to undertake the Licensed Activities are submitted to the Licensing Authority and Welsh Government Marine & Fisheries Division (Control & Enforcement Branch) at least **24 hours** prior to the commencement of the Licensed Activities.

3.3 Notification of Agents/Contractors/Sub-contractors

The Licence Holder must ensure that details of any agent(s), contractor(s) or sub-contractor(s) utilised to undertake the Licensed Activities are submitted to the Licensing Authority at least **24 hours** prior to the commencement of Licensed Activities.

3.4 Notification of HM Coastguard

The Licence Holder must ensure that HM Coastguard is made aware of the Licensed Activities at least **24 hours** prior to commencement by contacting The National Maritime Operations Centre at **zone28@hmcg.gov.uk**.

3.5 Inspection of Licensed Activities

The Licence Holder must allow Marine Enforcement Officers or any other person authorised by the Licensing Authority to inspect the Works at any reasonable time.

3.6 Notification of Completion

3.6.1 The Licence Holder must notify the Licensing Authority within **10 days** of completion of the Licensed Activities.

3.6.2 The Licence Holder must notify Welsh Government Marine & Fisheries Division (Control & Enforcement Branch) within **10 days** of completion of the Licensed Activities.

3.7 Accident or Emergency

3.7.1 If, by reason of force majeure any substances or articles are deposited otherwise than as permitted as part of the Licensed Activities or in the Licensed Area full details of the circumstances shall be notified to the Licensing Authority within **48 hours** of the incident occurring.

3.7.2 If it is necessary for the Licence Holder to recover or remove any equipment, plant or machinery used to undertake the Licensed Activities that have been dropped as a result of an accident or emergency, the Licence Holder is permitted to do so provided that the methodology for such recovery or removal has been approved by the Licensing Authority.

3.8 Distribution of Copies of this Licence

The Licence Holder is required to ensure that a copy of this Licence is given to:

- All agent(s), contractor(s) and sub-contractor(s) whose names have been provided to the Licensing Authority under condition 3.3 and
- The Masters of any vessels and transport managers responsible for the vehicles employed in accordance with this Licence whose details have been submitted to the Licensing Authority under condition 3.2.

3.9 Inspection of Documents

Copies of this Licence shall be made available at the following locations:

- at the address of the Licence Holder specified in section 1.2;
- at any site office, located at or adjacent to the Licensed Area, used by the Licence Holder or its agent(s), contractor(s) or sub-contractor(s) responsible for the loading transportation or deposit of any substances or articles permitted as part of the Licensed Activities;
- on board each vessel or vehicle carrying out Licensed Activities.

The documents referred to in this Condition shall be available at all reasonable times for inspection by officers appropriately authorised by the Licensing Authority and authorised Marine Enforcement Officers at the locations stated in that paragraph.

Vessels, Plant and Equipment

3.10 Notified Contractors, Vessels and/or Vehicles only to Carry out Licensed Activities

Only those agent(s), contractor(s), sub-contractor(s), vessels and/or vehicles whose details have been notified to the Licensing Authority may operate under the terms of this Licence. Any changes must be notified to and be approved by the Licensing Authority in writing prior to any such agent, contractor, subcontractors or vehicles carrying out any Licensed Activities pursuant to or otherwise operating under this Licence.

3.11 Refuelling of Plant and Equipment

The Licence Holder must ensure that plant, vehicles and machinery are not refuelled on the foreshore or in the sea.

3.12 Equipment, Structures and Access

The Licence Holder must ensure that all equipment, temporary structures, access tracks, waste and/or debris associated with the Licensed Activities are removed on completion of the Licensed activities.

Safety

3.13 Removal of Deposited Material

If the Licensing Authority considers it necessary or advisable for the safety of navigation, the Licence Holder must remove any deposit specified by the Licensing Authority or Marine Enforcement Officers within one month of notice being given by the Licensing Authority, and shall not replace such material until the Licensing Authority has given its written approval.

Pollution control

3.14 Pollution Prevention

The Licence Holder must ensure that pollution prevention best practice is adhered to at all times. Any incidents must be reported to the Licensing Authority as soon as possible using the hotline number **0300 065 3000**.

3.15 Spillage of Pollutants

The Licence Holder must employ bunding, storage facilities and spill kits to contain and prevent the release of fuel, oils and chemicals associated with the plant, refuelling and construction equipment into the marine environment. Secondary containment must be used with a capacity of **no less than 110%** of the container's storage capacity

3.16 Prevention of Disposal of Man-made Debris

The Licence Holder must ensure that all reasonable precautions are taken to prevent the disposal of man-made debris to the marine environment. Such material must be removed immediately and be disposed of appropriately. If it is not possible to prevent manmade debris from entering the marine environment during the Licensed Activities, the Licensed Activities must cease immediately.

3.17 Cleanliness of Equipment

The Licence Holder must ensure that equipment, machinery and PPE are washed with freshwater and/or thoroughly airdried before deployment and before moving between locations.

Activity-specific Conditions

3.18 Coatings

The Licence Holder must ensure that any coatings/treatments used in carrying out the Licensed Activities are suitable for use in the marine environment and are used in accordance with best environmental practice.

3.19 Use of Render and Concrete

The Licence Holder must ensure that no waste concrete slurry or wash water from the use of concrete or cement are discharged into the marine environment. Concrete and cement mixing and washing areas should be contained and sited at least **10 metres** from any watercourse or surface water drain to minimise the risk of runoff entering a watercourse.

3.20 Concrete Cure Time

The Licence Holder must ensure materials used are suitable for use in the marine environment and works should be timed to ensure maximum concrete cure time.

3.21 Works affecting a watercourse

The Licence Holder must ensure that time spent in the watercourse is kept to a minimum.

3.22 Construction Time Restrictions

The Licence Holder must ensure that no Licensed Activities take place between 01 March and 15 July or between 01 October and 31 December inclusive, without prior written approval from the Licensing Authority.

3.23 Reporting of Artefacts

The Licence Holder must ensure that any artefacts accidently recovered are retained and reported through the Marine Portable Antiquities Scheme.

3.24 Recording of Historic Assets

The Licence Holder must submit a record of the surviving section of wharf wall to the Licensing Authority for written approval at least **6 weeks** prior to commencement of the Licensed Activities. No Licensed Activities may be undertaken prior to written approval from the Licensing Authority.

3.25 Construction Environment Management Plan

3.25.1 The Licence Holder must submit a Construction Environment Management Plan (CEMP) to the Licensing Authority for written approval at least **6 weeks** prior to commencement of the Licensed

Activities. No Licensed Activities may be undertaken prior to written approval from the Licensing Authority.

3.25.2 The Licence Holder must ensure that any actions outlined in the documents detailed in condition 3.25.1 are implemented as approved in writing by the Licensing Authority. Any proposed changes to the actions outlined in the documents must be submitted to, and approved in writing by the Licensing Authority prior to any changes being enacted.

4 INTERPRETATION

In this Licence terms are as defined in section 115 of the Marine and Coastal Access Act unless otherwise stated.

(a) "**2009 Act**" means the Marine and Coastal Access Act 2009;

(b) "**Approved Application**" means the Marine Licence Application Form together with the Approved Supporting Documents;

(c) "**Approved Supporting Documents**" means the documents supporting, or supplementary to, the Approved Application, submitted prior to the Licence Issue Date, listed in the Table at paragraph 2.3 above;

(d) "**Commencement**" means the first undertaking of any Licensed Activities;

(e) **"Force majeure**" may be deemed to apply when, due to stress of weather or any other cause, the master of a vessel determines that it is necessary to deposit the substances or articles because the safety of human life and/or of the vessel is threatened;

(f) "**Licensed Activities**" means the activities authorised by this licence as specified in 2.1;

(g) "**Licensed Area**" means the area within which Licensed Activities are authorised by this licence as specified in section 2.2;

(h) "**Licence Holder**" means the person(s) or organisation(s) named in section 1.2 to whom this licence is granted;

(i) "**Licence Period**" means the period beginning with the Licence Start Date and ending on the Licence End Date;

(j) "**Licensing Authority**" means Natural Resources Wales acting on behalf of the Welsh Ministers;

(k) "**Marine Enforcement Officers**" means the relevant officers appointed by Welsh Ministers under section 235 of the 2009 Act, contact details for whom are provided in section 5;

(l) **"Marine Licence Application Form"** means the application form forming part of the application referred to in paragraph 1.1;

(m) "**Method Statement"** means the Method Statement(s) forming part of the Approved Application or Approved Supporting Documents;

(n) "**Works**" means any construction activities comprised in the Licensed Activities and, where the context permits, includes any plant, equipment or materials used to carry out those activities or operations but excludes monitoring, minor routine maintenance or other ongoing operational activities following completion of any construction activities;

(o) all times shall be taken to be the time in Greenwich Mean Time (GMT) on any given day;

(p) all co-ordinates shall be taken to be latitude and longitude decimal degree (WGS 84)

(q) in the event of any discrepancy between the coordinates listed in paragraph 2.2 and the plan attached at Appendix 1, the coordinates shall take precedence.

5 CONTACTS

Except where otherwise indicated, the primary point of contact with the Licensing Authority and the address for returns, correspondence and requests for variations of the licence is:

Marine Licensing Team
Natural Resources Wales
Welsh Government Offices
Cathays Park
King Edward VII Avenue
Cardiff
CF10 3NQ
Tel: 0300 065 3000
Email: marinelicensing@naturalresourceswales.gov.uk

Welsh Government Marine Enforcement Officers may be contacted at:

Welsh Government
Suite 3
Cedar Court
Haven's Head Business Park
Milford Haven Pembrokeshire
SA73 3LS

Tel: 03000253500
Email: MarineLicencingEnforcement@gov.wales

Licence Number: CML2492

Appendix 1

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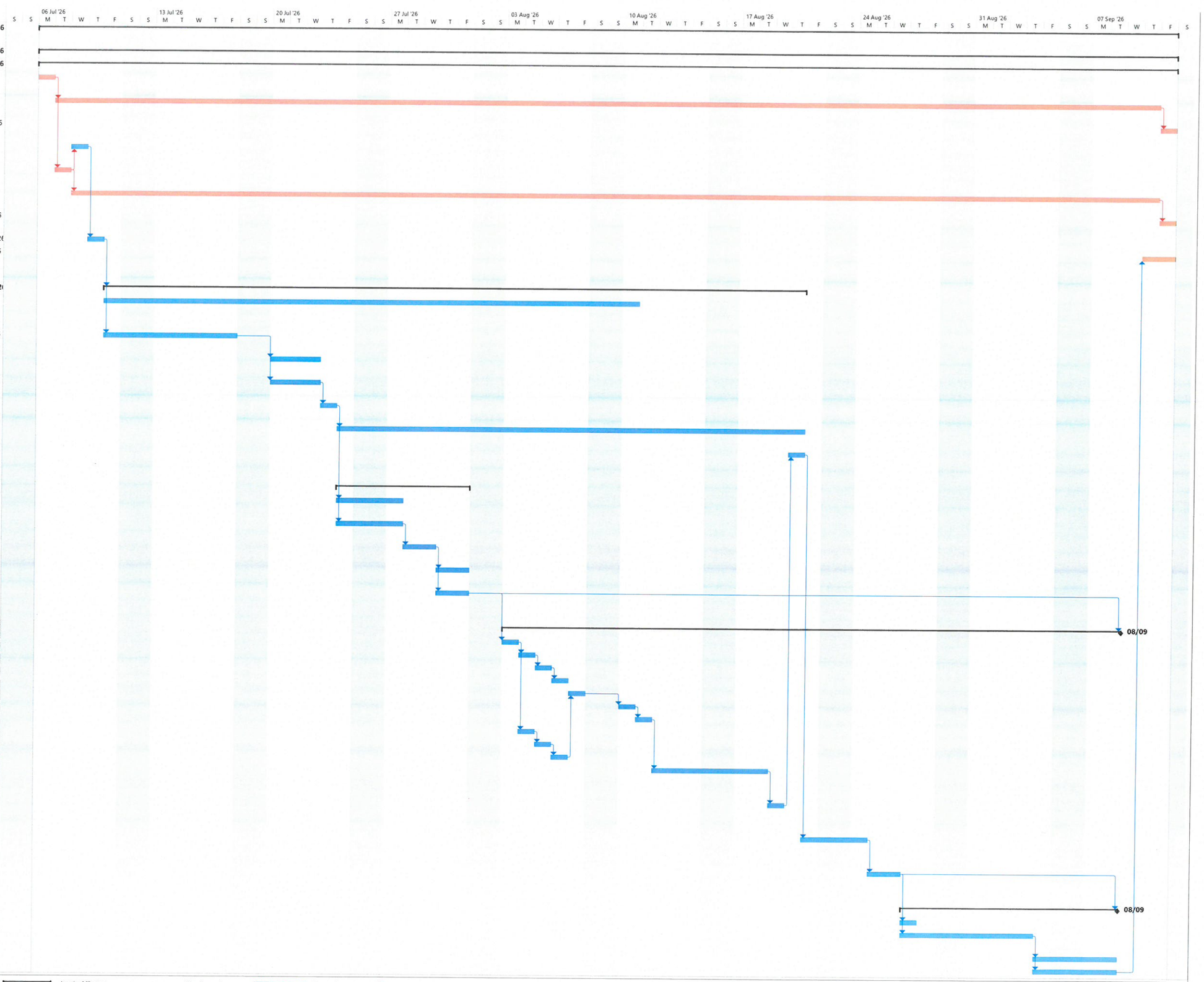
APPENDIX 2 -

Programme of Works

ID	Task Mode	Task Name	Duration	Start	Finish
1		**Blackpool Mill Retaining wall Reconstruction**	**50 days**	**Mon 06/07/26**	**Fri 11/09/26**
2		**Construction Programme**	**50 days**	**Mon 06/07/2**	**Fri 11/09/26**
3		**Preliminaries**	**50 days**	**Mon 06/07/2**	**Fri 11/09/26**
4		Set up welfare arrangements	1 day	Mon 06/07/26	Mon 06/07/26
5		Maintain Welfare arrangements	48 days	Tue 07/07/26	Thu 10/09/26
6		Dismantle Welfare arrangements	1 day	Fri 11/09/26	Fri 11/09/26
7		Set up compound and crane landing	1 day	Wed 08/07/26	Wed 08/07/26
8		Set up pedestrian safety arrangements	1 day	Tue 07/07/26	Tue 07/07/26
9		Maintain pedestrian safety arrangements	47 days	Wed 08/07/26	Thu 10/09/26
10		Dismantle pedestrian safety	1 day	Fri 11/09/26	Fri 11/09/26
11		Construct crane mat	1 day	Thu 09/07/2	Thu 09/07/2
12		Dismantle crane mat and reinstate	2 days	Thu 10/09/26	Fri 11/09/26
13					
14		**Construction work.**	**30 days**	**Fri 10/07/26**	**Thu 20/08/2**
15		Assessments of tidal flows and comparison with	22 days	Fri 10/07/26	Mon 10/08/26
16		Hand excavation of hit and miss under	6 days	Fri 10/07/26	Fri 17/07/26
17		Temporary formwork hit and	3 days	Mon 20/07/26	Wed 22/07/26
18		Concrete to hit and miss bays	3 days	Mon 20/07/26	Wed 22/07/26
19		Construct cofferdam and install pumps	1 day	Thu 23/07/26	Thu 23/07/26
20		maintenance of cofferdam and	20 days	Fri 24/07/26	Thu 20/08/26
21		Remove cofferdam and pumps	1 day	Thu 20/08/26	Thu 20/08/26
22					
23		**Earthworks**	**6 days**	**Fri 24/07/26**	**Fri 31/07/26**
24		Excavation of ramp to working	2 days	Fri 24/07/26	Mon 27/07/26
25		Disposal Excavated	2 days	Fri 24/07/26	Mon 27/07/26
26		Option 1 concrete thrust block and	2 days	Tue 28/07/26	Wed 29/07/26
27		Excavation to foundation	2 days	Thu 30/07/26	Fri 31/07/26
28		Disposal of excavated	2 days	Thu 30/07/26	Fri 31/07/26
29					
30		**Structural Concrete**	**27 days**	**Mon 03/08/2**	**Tue 08/09/2**
31		Blind entire area	1 day	Mon 03/08/2	Mon 03/08/2
32		Fix steel to Footing 1	1 day	Tue 04/08/2	Tue 04/08/2
33		Formwork to Footing	1 day	Wed 05/08/2	Wed 05/08/2
34		Concrete to Footing 1	1 day	Thu 06/08/2	Thu 06/08/2
35		Fix steel to Footing 2	1 day	Fri 07/08/26	Fri 07/08/26
36		Formwork to Footing	1 day	Mon 10/08/2	Mon 10/08/2
37		Concrete to Footing 2	1 day	Tue 11/08/2	Tue 11/08/2
38		Fix steel to Footing 3	1 day	Tue 04/08/2	Tue 04/08/2
39		Formwork to Footing	1 day	Wed 05/08/2	Wed 05/08/2
40		Concrete to Footing 3	1 day	Thu 06/08/2	Thu 06/08/2
41		Install Concrete Retaining wall sections above	5 days	Wed 12/08/26	Tue 18/08/26
42		Backfill retaining wall sections above cofferdam level	1 day	Wed 19/08/26	Wed 19/08/26
43		Install remaining concrete retaining wall sections	2 days	Fri 21/08/26	Mon 24/08/26
44		Backfill remaining retaining wall	2 days	Tue 25/08/26	Wed 26/08/26
45					
46		**Completion works**	**9 days**	**Thu 27/08/2**	**Tue 08/09/2**
47		Drainage	1 day	Thu 27/08/2	Thu 27/08/2
48		Kerbs and paving including subbase	6 days	Thu 27/08/26	Thu 03/09/26
49		Guard Rails and ha	3 days	Fri 04/09/26	Tue 08/09/2
50		Tidy site	3 days	Fri 04/09/26	Tue 08/09/2



Project: Programme of works P
Date: Tue 31/03/26

Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual Progress

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APPENDIX 3 -

Habitat Regulations Assessment (HRA)

Black Pool Mill Wall Repair

Habitats Regulations Assessment (HRA)

Final Report

November 2024

Prepared for:

Bluestone Resorts Ltd

www.jbaconsulting.com

Document Status

Issue date	November 2024
Issued to	Liz Weedon
BIM reference	LTU-JBA-XX-XX-AS-EN-0001-S3-P01-HRA_Screening_and_Assessment
Revision	P01
Prepared by	Robin Searle BSc ACIEEM Senior Ecologist
Reviewed by	Jonathan Harrison BSc MSc MCIEEM Senior Ecologist
Authorised by	Jonathan King MEng PhD CEng MICE Project Manager

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Contract

JBA Project Manager	Jonathan King MEng PhD CEng MICE
Address	Kings Chambers, 8 High St, Newport NP20 1FQ
JBA Project Code	2023s1481

This report describes work commissioned by Bluestone Resorts Ltd, by an instruction dated 7th February 2024. Robin Searle and Jonathan Harrison of JBA Consulting carried out this work.

Purpose and Disclaimer

Jeremy Benn Associates Limited ("JBA") has prepared this Report for the sole use of Bluestone Resorts Ltd and its appointed agents in accordance with the Agreement under which our services were performed.

JBA has no liability for any use that is made of this Report except to Bluestone Resorts Ltd for the purposes for which it was originally commissioned and prepared.

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Abbreviations

CEMP	Construction Environmental Management Plan
CSZ	Core Sustenance Zone
PCNPA	Pembrokeshire Coast National Park Authority
EC	European Community
EPS	European Protected Species
HRA	Habitats Regulations Assessment
INNS	Invasive Non-Native Species
JBA	Jeremy Benn Associates
JNCC	Joint Nature Conservation Committee
NPPF	National Planning Policy Framework
PEA	Preliminary Ecological Appraisal
RPA	Root Protection Area
SAC	Special Area of Conservation
SPA	Special Protection Area for birds
SSSI	Site of Special Scientific Interest

1 Introduction

1.1 Purpose of this Report

This report has been produced by JBA Consulting on behalf of Bluestone Resorts Ltd to undertake a Habitat Regulations Assessment (HRA) in relation to wall repair works on the riverbank downstream of Blackpool Mill, Narberth.

A Preliminary Ecological Appraisal (PEA) was carried out by JBA Consulting at the site in November 2023 (JBA, 2024a) identified two international-level sites designated as Special Area of Conservation (SAC) within and directly adjacent to the proposed works area. These are:

- Pembrokeshire Marine/Sir Benfro Forol SAC
- Afonydd Cleddau / Cleddau Rivers SAC
- Pembrokeshire Bat Sites and Bosherton Lakes SAC

This Habitats Regulations Assessment (HRA) document provides Pembrokeshire Coast National Park Authority (PCNPA) information to assist in their consideration of whether the proposed works will have likely significant effects on European Sites, and in ascertaining any adverse effects on their integrity.

1.2 Legislative Context

The Conservation of Habitats and Species Regulations 2017 (as amended by the Conservation of Habitats and Species (amendment) (EU Exit) Regulations 2019), also known as the 'Habitats Regulations', provide legal protection to habitats and species of national importance. The regulations also secure an ecological network of protected sites, consisting of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). Government guidance also requires that Ramsar sites (which support internationally important wetland habitats and are listed under the Convention on Wetlands of International Importance [Ramsar Convention]) are given the same level of protection as SACs and SPAs.

Prior to the UK's withdrawal from the EU, SACs were designated and protected under domestic legislation transposed from European Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna (Habitats Directive), and SPAs under European Directive 2009/147/EC on the Conservation of Wild Birds (Birds Directive). Together these sites formed a European-wide Natura 2000 network of protected sites. Since 31 December 2020, SACs and SPAs within the UK no longer fall within the Natura 2000 network, and instead form a National Site Network. SPAs and SACs continue to be referred to collectively as 'European sites' within the context of the Habitats Regulations, reflecting their international importance for the conservation of biodiversity.

SACs and SPAs within the National Site Network are also still designated for habitats listed on Annex I and for species listed on Annex II of the Habitats Directive, and criteria listed

under the Birds Directive, and it is these Annex I habitats, Annex II species and Birds Directive Criteria against which assessments under the Habitats Regulations are still made.

Regulation 63 of the Habitats Regulations states that “A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which (a) is likely to have a significant effect on a European Site or a European offshore marine site (either alone or in-combination with other plans or projects), and (b) is not directly connected with or necessary to the management of that site, must make an appropriate assessment of the implications of the plan or project for that site in view of that site’s conservation objectives.” This process is commonly referred to as Habitats Regulations Assessment (HRA).

2 Habitat Regulations Assessment Methods

2.1 Overview

Habitat Regulations Assessment follows a four-stage process as outlined in the Habitats Regulations Assessment Handbook (DTA, 2019) and summarised in Table 2-1 below.

This report provides evidence to support Stage 1 of the HRA process, to provide the Competent Authority(s) with information to make their assessment.

Table 2-1: The HRA Process

HRA Stage	Description
Stage 1: Screening	This process identifies the likely significant effects upon a European site of a project or plan, either alone or in-combination with other projects or plans and determines whether these impacts are likely to be significant. Following the ECJ judgement in the case of "people over wind" (Case C-323/17). Measures that are necessary to avoid or reduce impacts on the European site, even when considered standard environmental best-practice, can only be assessed at Stage 2. If no likely significant effect is determined, the project or plan can proceed. If a likely significant effect is identified, Stage 2 is commenced.
Stage 2: Appropriate Assessment	Stage 2 is subsequent to the identification of likely significant effects upon a European site in Stage 1. This assessment determines whether a project or plan would have an adverse impact on the integrity of a European site, either alone or in-combination with other projects or plans. This assessment is confined to the effects on the internationally important habitats and species for which the site is designated (i.e., the interest features of the site). Appropriate Assessments, in line with ECJ Case C-461/17 Holohan v An Bord Pleanála, must also consider impacts upon habitats and species within or outside of a site boundary if they support a qualifying feature and could impact upon the conservation objectives of the site. If no adverse impact is determined, the project or plan can proceed. If an adverse impact is identified, Stage 3 is commenced.
Stage 3: Assessment where no alternatives and adverse impacts remain	Where a plan or project has been found to have adverse impacts on the integrity of a European site, potential avoidance/mitigation measures or alternative options should be identified. If suitable avoidance/mitigation or alternative options are identified, that result in there being no adverse impacts from the project or plan on European sites, the project or plan can

HRA Stage	Description
	proceed. If no suitable avoidance/mitigation or alternative options are identified, as a rule the project or plan should not proceed. However, in exceptional circumstances, if there is an 'imperative reason of overriding public interest' for the implementation of the project or plan, consideration can be given to proceeding in the absence of alternative solutions. In these cases, compensatory measures will have to be put in place to offset any negative impacts.
Stage 4: Compensatory measures	Stage 4 comprises an assessment of the compensatory measures where, in light of an assessment of imperative reasons of overriding public interest, it is deemed that the project should proceed.

2.2 Guidance

The methodology used for this assessment is based on guidance in The Habitats Regulations Assessment Handbook (DTA, 2019). In addition, the following guidance documents were also consulted:

- European Commission Notice: Managing Natura 2000 sites. The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (EC, 2018)
- UK Government Guidance on the Use of Habitats Regulations Assessment (UK Government, 2019).
- Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (European Commission 2002)
- Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC (European Communities, 2007)
- The National Planning Policy Framework (NPPF) and National Planning Practice Guidance (NPPG)
- The Planning Inspectorate PINS Note 05/ 2018: Consideration of avoidance and reduction measures in Habitats Regulations Assessment: People over Wind, Peter Sweetman, v Coillte Teoranta (The Planning Inspectorate, 2018)

2.3 HRA Stage 1: Screening Methodology

The principles of 'screening' are applied to a project and its components to allow the assessment stage to focus on those aspects that are most likely to have potentially significant or adverse effects on European sites. Screening aims to determine whether the project will have any 'likely significant effects' on any European site as a result of its implementation. It is intended to be a coarse filter for identifying effects (positive and negative) that may occur, to allow the assessment stage to focus on the most important aspects. A project should be considered 'likely' to have an effect if it is not possible (on the

basis of objective information) to exclude the likelihood that the project could have significant effects on any European site, either alone or in-combination with other plans or projects; an effect will be 'significant' if it could undermine the site's conservation objectives.

Screening can be used to 'screen-out' European sites and project components from further assessment, if it is possible to determine that significant effects are unlikely (e.g. if sites or interest features are clearly not vulnerable (exposed and/or sensitive) to the outcomes of a project due to the absence of any reasonable impact pathways).

To undertake the screening of Cherry Cobb habitat creation scheme, it is necessary to:

- Identify the European site(s) likely to be affected by the project, reasons for their designation and their conservation objectives.
- Describe the project and identify the potential impact pathways/effects on the European site(s).
- Identify any other plans or projects that could act in-combination.
- Assess the significance of these potential impacts pathways/effects on the European site(s).

2.3.1 The Precautionary Principle

If there is uncertainty, and it is not possible, based on the information available, to confidently determine no significant effects on a site then the precautionary principle will be applied, and the project will be subject to an appropriate assessment (HRA Task 2).

2.3.2 Mitigation, Avoidance and Protective Measures

Following the *People over Wind & Sweetman v Coillte Teoranta* Case C-323/17, the assessment does not consider protective, avoidance or mitigation measures for stage 1 Screening. These measures are carried forward and considered as part of the stage 2 Appropriate Assessment.

2.4 HRA Stage 2: Appropriate Assessment Methodology

For those European sites screened into the HRA, it is necessary to undertake an Appropriate Assessment to explore the potential adverse effects on their integrity and develop measures to avoid these effects entirely, or if not possible, to mitigate the impacts sufficiently that effects on the European sites are rendered effectively insignificant.

The stages involved in the Appropriate Assessment are to:

- Explore the reasons for the European designation of the "screened in" European site(s)
- Explore the environmental conditions required to maintain the integrity of the "screened in" European site(s) and become familiar with the current trends in these environmental processes

- Gain a full understanding of the project and its components and consider each within the context of the environmental processes – would the project lead to an impact on any identified process?
- Decide whether the identified impact(s) will lead to an adverse effect on the integrity of the European site(s)
- In reference to ECJ case C-462/17 (Nov 18) Holohan v An Bord Pleanala, the Appropriate Assessment needs to include all typical habitats and species present within and outside of the boundaries of the European site, if they are necessary for the conservation of the habitats and species listed for the protected area.
- Identify other plans and/or projects that might affect the European site(s) in combination with the project and decide if there are any adverse effects that might not result from the project in isolation but will do so in-combination.
- Develop measures to avoid the effect entirely, or if not possible, to mitigate the impact sufficiently such that its effect on the European site is rendered effectively insignificant.

If no adverse effect on site integrity is determined, the project or plan can proceed. If adverse effects cannot be ruled out, Stage 3 is commenced.

2.5 Assumptions and limitations

Information on the works and conditions on site are based on current knowledge at the time of writing.

Cumulative impacts are based on published documentation. If other projects with the potential for cumulative impacts are identified, it may be necessary to re-assess this project.

3 Description of the project

3.1 Site Location

The site is located to the west of Narbeth, adjacent to Black Pool Mill and consists of the riverbank and wall failure at National Grid Reference (NGR) SN 05979 14485. The site sits within the administrative boundary of the PCNPA. The location of the scheme can be seen in Figure 3-1 below.

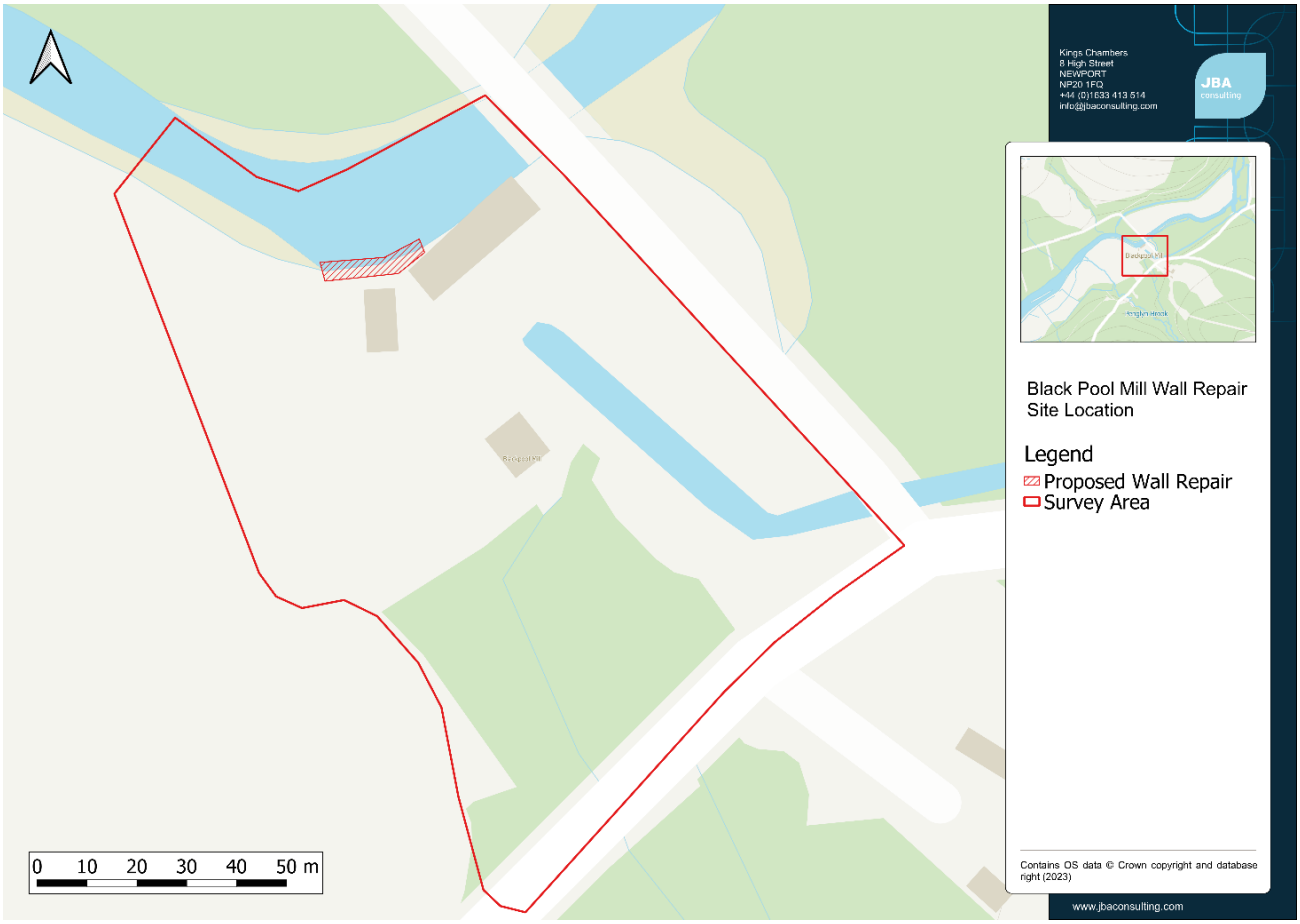

Figure 3-1: Site location

3.2 Proposed works

Bluestone Resorts Ltd commissioned JBA Consulting to undertake the permanent design of a failed masonry wall at Black Pool Mill in Pembrokeshire, Wales, herein called the Mill. The wall failed following flooding of the Cleddau Ddu river on the 25th of October 2023. JBA

Consulting designed emergency works to stabilise the exposed embankment using 48 no. 2T Salix Aqua Rock Bags, constructed in November 2023 as shown on Figure 3-2 below.

Figure 3-2: Emergency repair works to wall failure

Concept design optionneering for the permanent works is shown in the drawing LTU-JBA-XX-XX-PP-C-0001-S3-P01-Concept_Design_Development and described in the Design and Input Statement (JBA Consulting, 2024b). The preferred option is a Redi-Rock modular gravity retaining wall which will replace the existing temporary rock bag wall in Figure 3-2. The works will include minor repairs to adjacent concrete steps and construction of roof drainage outfalls for the adjacent store building.

The proposed construction works will include the following:

- Underpinning of the adjacent store building.
- Removal of existing emergency works (48 no. 2T Salix Aqua Rock Bags).
- Creation of temporary cofferdam using the removed Aqua Rock Bags.
- Installation of new Redi-Rock gravity retaining wall including the foundation and tie in with the Mill.
- Repair/replacement of existing access steps.
- 2 no. roof drainage pipes from the adjacent store building to outfall from the retaining wall.
- 1no. unknown drainage pipe adjacent to the Mill building to outfall from the retaining wall.
- Hard standing area on the repaired bank top.
- Security railings at the crest of the retaining wall.

The retaining wall will be constructed using the Redi-Rock gravity retaining wall modular system with a Cobblestone textured finish.

The top of wall level shall match that of the existing wall pre-failure. The top of wall level shall be 4.4mAOD.

The pedestrian handrail will be installed alongside the access steps leading to the seating area adjacent to the wall. The handrail will be 1m above pitch line of steps and will be designed to match the existing railings in front of the mill.

3.3 Site access for construction

Access to the site will be gained from the A4075 near Canaston Bridge at SN 06956 14835. The access is a narrow country lane that leads directly to the entrance to Black Pool Mill at SN 06056 14414.

The area of modified grassland within the site boundary will be used as site compound throughout the construction phase of the project. This area was previously used for the crane pad during the emergency works.

If the site entrance to Black Pool Mill is impassable for larger vehicles, the adjacent field may be used: materials or similar will be craned over the hedgerow.

4 European sites

4.1 Project Area of Influence and European Sites

Despite the low impact and discrete/temporary nature of the works, the project area of influence was extended to 3km, due to the known presence of highly mobile species at the site including bats, Otter and fish.

The following European sites have been identified within the area of influence, and shown on Figures 4-1 and 4-1 below:

- Pembrokeshire Marine/Sir Benfro Forol SAC (on-site)
- Afonydd Cleddau / Cleddau Rivers SAC (40m upstream)
- Pembrokeshire Bat Sites and Bosherton Lakes SAC (2.9km)

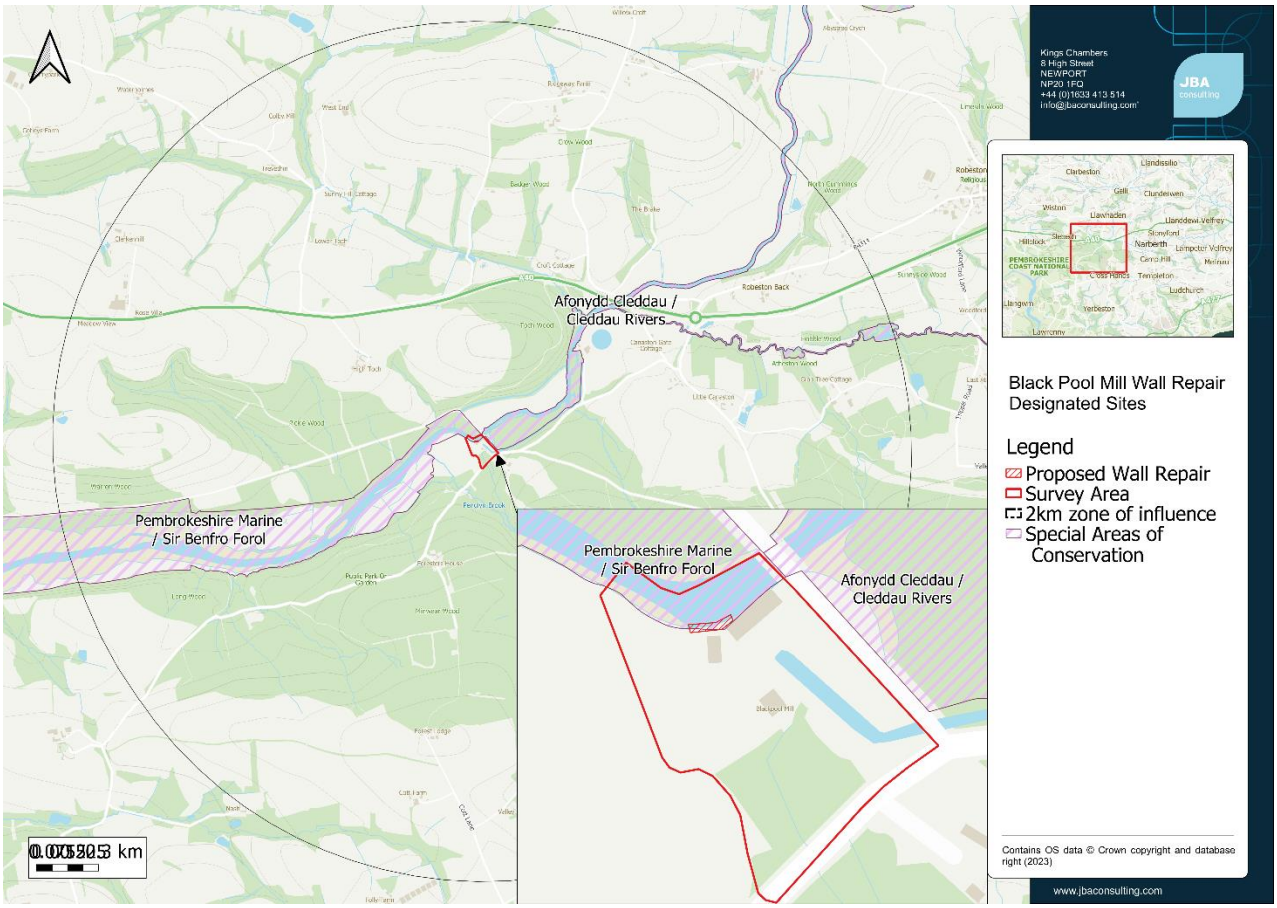

Figure 4-1: Location of site in relation to designated sites

4.2 Pembrokeshire Marine / Sir Benfro SAC

4.2.1 Qualifying Features

The site is designated under article 4(4) of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I (Natural England, 2014a):

- 1110 -Sandbanks which are slightly covered by sea water all the time
- 1130 - Estuaries
- 1140 - Mudflats and sandflats not covered by seawater at low tide
- 1150 - Coastal lagoons*
- 1160 - Large shallow inlets and bays
- 1170 – Reefs*
- 1330 - Atlantic salt meadows (Glauco-Puccinellietalia maritimae)
- 8330 - Submerged or partially submerged sea caves

The site is designated under article 4(4) of the Directive (92/43/EEC) as it hosts the following species listed in Annex II:

- Allis shad *Alosa alosa*
- Twait shad *Alosa fallax*
- Grey seal *Halichoerus grypus*
- European river lamprey *Lampetra fluviatilis*
- Otter *Lutra lutra*
- Sea lamprey *Petromyzon marinus*
- Harbour porpoise *Phocoena Phocoena*
- Shore dock *Rumex rupestris*
- Common bottlenose dolphin *Tursiops truncatus*

4.2.2 Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats and habitats of qualifying species
- The structure and function (including typical species) of qualifying natural habitats
- The structure and function of the habitats of qualifying species
- The supporting processes on which qualifying natural habitats and habitats of qualifying species rely
- The populations of qualifying species, and,
- The distribution of qualifying species within the site.

4.3 Afonydd Cleddau/ Cleddau Rivers SAC

4.3.1 Qualifying Features

The site is designated under article 4(4) of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I (Natural England, 2014a):

- 3260 - Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation
- 7110 - Active raised bogs
- 7120 - Degraded raised bogs still capable of natural regeneration
- 91E0 - Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)

The site is designated under article 4(4) of the Directive (92/43/EEC) as it hosts the following species listed in Annex II:

- Allis shad *Alosa alosa*
- European bullhead *Cottus gobio*
- European river lamprey *Lampetra fluviatilis*
- Brook lamprey *Lampetra planeri*
- Otter *Lutra lutra*
- Sea lamprey *Petromyzon marinus*
- Atlantic salmon *Salmo salar*

4.3.2 Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

4.4 Pembrokeshire Bat Sites and Bosherton Lakes SAC

4.4.1 Qualifying features

The site is designated under article 4(4) of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I (Natural England, 2014a):

- 3140 - Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.
- 6210 - Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (*important orchid sites)

The site is designated under article 4(4) of the Directive (92/43/EEC) as it hosts the following species listed in Annex II:

- European bullhead *Cottus gobio*
- Otter *Lutra lutra*
- Greater horseshoe bat *Rhinolophus ferrumequinum*

- Lesser horseshoe bat *Rhinolophus hipposideros*

This SAC is formed of a group of Sites of Special Scientific Interest (SSSI) sites which are scattered across Pembrokeshire. One SSSI sites falls within 3km, the Slebech Stable Yard Loft, Cellars & Tunnels. This site in particular is designated for supporting a one of two known breeding colonies in Wales of greater horseshoe bat. The tunnels have also been used by other bat species for hibernation. Lesser horseshoe bats are the most numerous. Natterer's bats Myotis nattereri hibernate in the tunnel during mid-winter. Lesser horseshoe bats, pipistrelle *Pipistrellus pipistrellus* and brown long-eared bats *Plecotus auritus* have been found in the breeding loft, and whiskered bat *Myotis mystacinus* in the adjacent access loft.

Previous surveys have identified a number Greater Horseshoe Bats and a smaller number of Lesser Horseshoe Bats roosing within Black Pool Mill and a licence to disturb bat species has been obtained for previous refurbishments to Black Pool Mill. As part of this licence monitoring of the bat population is ongoing and data is available throughout the 2023 season and up to January 2024. During this period a number of construction activities have been undertaken at the Mill including the emergency works for the riverbank which these works are seeking to formalise. During this period the population of Greater Horseshoe Bats has shown a steady increase, this potentially indicates that the disturbance has not had a detrimental effect on the population.

5 Screening Assessment

5.1 Introduction

The project is not wholly directly connected with, or necessary to, the conservation management of the site's qualifying features. Therefore, a HRA screening assessment is required.

The following section identifies potential hazards of the proposed works. The effects of relevant hazards are then assessed in relation to each of the relevant qualifying features of the European sites.

The likelihood of potential exposure to the hazard and the mechanism of effect are also identified where possible. This then allows for likely significant effects on the interest features of the designated sites to be identified.

5.2 Potential Hazards to European Sites

The proposed works, as detailed in Section 3, were assessed in order to identify potential hazards that might arise to the relevant interest features of the European sites.

The list of potential hazards to the identified European sites are based on the designated site features and conservation objectives. These are:

- Direct habitat loss
- Noise and visual disturbance
- Water pollution
- Sediment release (temporary during construction)
- Physical damage/mortality

The results of this screening assessment are shown in Table 5-1.

Table 5-1: Assessment of potential hazards upon designated features

Species and Habitat Groups of Designated Features	Potential Hazards						
	Habitat Loss	Noise and visual disturbance	Water pollution	Sediment release	Alteration to coastal processes	Physical damage/ mortality	Competition from, or mortality due to, invasive non-native species (INNS)
Breeding and migratory fish	✓	X	✓	✓	X	✓	X
Lamprey spp.	X	✓	✓	✓	X	X	X
Otter	X	✓	✓	✓	X	X	X
Dolphins, Seals and Porpoises	X	X	X	X	X	X	X
Shore dock	X	X	✓	✓	X	✓	X
Estuaries	X	X	✓	✓	X	X	X
Coastal and Estuary habitats	X	X	✓	✓	X	X	X
Bogs	X	X	✓	✓	X	X	X
Alluvial forests	X	X	✓	✓	X	X	X
Bats	X	✓	X	X	X	X	X
Table key: ✓ = hazard potentially relevant, X = hazard not relevant							

5.3 Assessment of Likely Significant Effects

Assessment of the hazards identified in Table 5-1 was undertaken to determine whether they would be likely to have a significant effect on the relevant qualifying features of the European sites, either alone, or in combination with other plans or projects. The results of the screening assessment are given in Table 5-2. Plans and projects considered for the in-combination assessment are outlined in Section 6.4. Where appropriate, both construction and operational phase effects are considered.

Table 5-2: Screening assessment

Qualifying Feature	Risk (Pressure)	Likely Significant Effect Alone	Yes or No	Likely Significant Effect in Combination	Yes or No
Pembrokeshire Marine/Sir Benfro Forol SAC					
Coastal Habitats:	Direct habitat loss Physical damage Alteration to coastal processes	None of these Annex 1 habitats are present within the site boundary. They are more closely associated with coastal environments of the SAC, whereas the site is located over 10km inland from the coast in the upper reaches of the River Cleddau, which is more fresh water dominated. These habitats are sufficient distance from the site, so that no direct impacts would occur.	No	n/a	No

Qualifying Feature	Risk (Pressure)	Likely Significant Effect Alone	Yes or No	Likely Significant Effect in Combination	Yes or No
Coastal Habitats	Water pollution Sediment release Competition from, or mortality due to, INNS	These habitats are likely to be present downstream of the works. The repair works are situated in the river channel and have the potential to release pollutants (e.g. through spillages/leaks) or mobilise sediment which could adversely impact on these habitats. The use of a cofferdam will isolate the construction zone and limit the spread of pollution and sediment disturbance to the contained area and will thereby protect surrounding habitats. No INNS were noted during the PEA survey and there are no INNS likely to be introduced or spread which would impact the Annex I habitats. There is therefore negligible risk of spreading or introducing INNS. Industry standard, appropriate pollution prevention, dust management and silt control measures will be implemented, along with biosecurity protocols. These measures are put in place on all construction sites so are not considered to be avoidance or reduction measures for a European site in the context of the Conservation of habitats and species regulations (2019, as amended). These measures will reduce any potential small scale minor impacts to negligible levels. Therefore, there is no likely significant effect from this potential impact pathway. **No likely significant impact**	No	No	No

Qualifying Feature	Risk (Pressure)	Likely Significant Effect Alone	Yes or No	Likely Significant Effect in Combination	Yes or No
Breeding and migratory fish: Bullhead European river lamprey Brook lamprey Sea lamprey Twaite shad Allis shad	Direct habitat loss	Fish species are protected features of the adjacent designated sites, a number of these were for migratory species that are likely to spawn further up the Cleddau. Whilst the construction phase will result in loss of exploitable water column for the duration of the works, the very limited footprint of the temporary works and dewatered area is highly unlikely to represent a loss of exploitable habitat that results in any discernible impacts on these qualifying features. Similarly, the bed substrates within the footprint of the temporary works and dewatered area are highly unlikely to be of exploitable value (likely being coarse due to being on the outside of the meander bend, and so sub-optimal for all life stages of all these features) and so restricted access to such again unlikely to result in any discernible impacts on these qualifying features. These pressures will not be relevant in the operational phase. **No Likely significant effect**	Yes	No	Yes
Breeding and migratory fish:	Physical damage Water pollution Sediment	During the construction phase, sediment mobilisation and accidental chemical (e.g. fuel or concrete) spills could cause changes in water chemistry and impact both directly and indirectly upon either catadromous features (Bullhead; Brook Lamprey) or those life stages of the anadromous features (shad species; Sea Lamprey; River Lamprey) of the SAC which could be migrating past the works area, in the absence of suitable on-site avoidance and	Yes	No	Yes

Qualifying Feature	Risk (Pressure)	Likely Significant Effect Alone	Yes or No	Likely Significant Effect in Combination	Yes or No
	release Alteration to coastal processes	mitigation measures. **Likely significant effect**			
Dolphins, Seals and Porpoises *Grey seal Halichoerus grypus* *Harbour porpoise Phocoena Phocoena* *Common bottlenose dolphin Tursiops truncatus*	Habitat loss Physical damage Noise and visual disturbance Alteration to coastal processes	None of these Annex II species are likely to be present within the site boundary. They are more closely associated with coastal environments of the SAC, whereas the site is located over 10km inland from the coast in the upper reaches of the River Cleddau which is more fresh water dominated. These species are likely to be sufficient distance from the site, so that no direct impacts would occur. **No significant impact**	No	n/a	No

Qualifying Feature	Risk (Pressure)	Likely Significant Effect Alone	Yes or No	Likely Significant Effect in Combination	Yes or No
Otter	Habitat loss Physical damage Alteration to coastal processes	During a PEA conducted at the site in 2016, Otter footprints were identified beneath the Mill's basement bridge, there are also numerous WWBIC records for Otter along the Eastern Cleddau River. The banks of the Eastern Cleddau River and the alluvial woodland on the opposite bank have potential to support Otter holts or resting places, and the scheme area is likely to be used for commuting and foraging by Otters. As Otter are highly mobile species and are known for their ability to build new holts as they adapt to changing conditions, there is a low risk that Otters could build new holts prior to the works taking place. As the proposed works will utilise habitats south of the river adjacent to the woodland and hedgerow, there is a risk of disturbing holts if present in this location. **Likely significant effect**	Yes	.	Yes

Qualifying Feature	Risk (Pressure)	Likely Significant Effect Alone	Yes or No	Likely Significant Effect in Combination	Yes or No
Otter	Noise and visual disturbance	The proposed works are likely to result in temporary noise and disturbance to commuting and foraging Otter. The use of a cofferdam will limit the impact of disturbance to this species by isolating the construction into a contained area. However, the noise and visual disturbance form machinery could have a significant effect on otters utilising the site. There is potential for otters to be disturbed through noise and visual disturbance throughout the duration of the works. **Likely significant effect**	Yes		Yes
Otter	Water pollution Sediment release	The repair works have the potential to release pollutants (e.g. through spillages/leaks) or mobilise sediment which could adversely impact on these species. The use of a cofferdam will isolate the construction zone and limit the spread of pollution and sediment disturbance to the contained area and will thereby protect surrounding habitats. Industry standard, appropriate pollution prevention, dust management and silt control measures will be implemented, along with biosecurity protocols. These measures are put in place on all construction sites so are not considered to be avoidance or reduction measures for a European site in the context of the Conservation of habitats and species regulations (2019, as amended). These measures will reduce any potential small scale minor	No	n/a	No

Qualifying Feature	Risk (Pressure)	Likely Significant Effect Alone	Yes or No	Likely Significant Effect in Combination	Yes or No
		impacts to negligible levels. Therefore, there is no likely significant effect from this potential impact pathway. **No likely significant impact**			
Shore dock *Rumex rupestris*	Direct habitat loss	No Shore Dock was recorded on site during the site survey (JBA 2023), and it is believed to be absent from the scheme area. It is only known in two locations within the SAC at 1) Watery Bay; and 2) Hooper's Point as shown on the Figure in Appendix A. The location of the wall repair is unlikely to support this species as it has been recently created as part of emergency repair works and it is unlikely this species would colonise during this short time. **No likely significant impact**	No	n/a	No
Shore Dock	Water pollution Sediment release	Shore dock may be present downstream of the works. The repair works are situated within the river and have the potential to release pollutants (e.g. through spillages/leaks) or mobilise sediment which could adversely impact on these habitats. The use of a cofferdam will isolate the construction zone and limit	No	n/a	No

Qualifying Feature	Risk (Pressure)	Likely Significant Effect Alone	Yes or No	Likely Significant Effect in Combination	Yes or No
		the spread of pollution and sediment disturbance to the contained area and will thereby protect surrounding habitats. Industry standard, appropriate pollution prevention, dust management and silt control measures will be implemented, along with biosecurity protocols. These measures are put in place on all construction sites so are not considered to be avoidance or reduction measures for a European site in the context of the Conservation of habitats and species regulations (2019, as amended). These measures will reduce any potential small scale minor impacts to negligible levels. Therefore, there is no likely significant effect from this potential impact pathway. **No likely significant impact**			
Afonydd Cleddau/ Cleddau Rivers SAC					
3260 - Water courses of plain to montane levels with *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation	Direct habitat loss Physical damage/mortality Alteration to coastal processes	These Annex I habitat are not present within the site boundary, and the proposed works will not result in any direct habitat loss or damage to this habitat. **No likely significant impact**	No	n/a	No

Qualifying Feature	Risk (Pressure)	Likely Significant Effect Alone	Yes or No	Likely Significant Effect in Combination	Yes or No
3260 - Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation Bogs	Water pollution Sediment release	These habitats all have a significant presence in the SAC located 40m upstream. The repair works have the potential to release pollutants (e.g. through spillages/leaks) or mobilise sediment which could adversely impact on these species. The use of a cofferdam will isolate the construction zone and limit the spread of pollution and sediment disturbance to the contained area and will thereby protect surrounding habitats. No INNS were noted during the PEA survey and there are no INNS likely to be introduced or spread which would impact the Annex II species. There is therefore negligible risk of spreading or introducing INNS. Industry standard, appropriate pollution prevention, dust management and silt control measures will be implemented, along with biosecurity protocols. These measures are put in place on all construction sites so are not considered to be avoidance or reduction measures for a European site in the context of the Conservation of habitats and species regulations (2019, as amended). These measures will reduce any potential small scale minor impacts to negligible levels. Therefore, there is no likely significant effect from this potential impact pathway. **No likely significant impact**	No	No	No

Qualifying Feature	Risk (Pressure)	Likely Significant Effect Alone	Yes or No	Likely Significant Effect in Combination	Yes or No
91E0 - Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*	Direct habitat loss Physical damage/mortality Alteration to coastal processes	This habitat is not present within the proposed works area and no habitat loss will occur as a result on the works. However, the woodland present on site and the opposite bank of the river, approximately 20m away likely qualifies as this Annex I habitat. **No Likely significant effect**	No	No	No

Qualifying Feature	Risk (Pressure)	Likely Significant Effect Alone	Yes or No	Likely Significant Effect in Combination	Yes or No
91E0 - Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*	Water pollution Sediment release	These habitats all have a significant presence in the SAC located 40m upstream. The repair works have the potential to release pollutants (e.g. through spillages/leaks) or mobilise sediment which could adversely impact on these species. The use of a cofferdam will isolate the construction zone and limit the spread of pollution and sediment disturbance to the contained area and will thereby protect surrounding habitats. Industry standard, appropriate pollution prevention, dust management and silt control measures will be implemented, along with biosecurity protocols. These measures are put in place on all construction sites so are not considered to be avoidance or reduction measures for a European site in the context of the Conservation of habitats and species regulations (2019, as amended). These measures will reduce any potential small scale minor impacts to negligible levels. Therefore, there is no likely significant effect from this potential impact pathway. **No likely significant impact**	No	No	No

Qualifying Feature	Risk (Pressure)	Likely Significant Effect Alone	Yes or No	Likely Significant Effect in Combination	Yes or No
Breeding and migratory fish: Allis shad European bullhead European river lamprey Brook lamprey Sea lamprey Atlantic salmon	Direct habitat loss	Fish species are protected features of the adjacent designated sites, a number of these were for migratory species that are likely to spawn further up the Cleddau. Whilst the construction phase will result in loss of exploitable water column for the duration of the works, the very limited footprint of the temporary works and dewatered area is highly unlikely to represent a loss of exploitable habitat that results in any discernible impacts on these qualifying features. Similarly, the bed substrates within the footprint of the temporary works and dewatered area are highly unlikely to be of exploitable value (likely being coarse due to being on the outside of the meander bend, and so sub-optimal for all life stages of all these features) No likely significant effect	No	No	No

Qualifying Feature	Risk (Pressure)	Likely Significant Effect Alone	Yes or No	Likely Significant Effect in Combination	Yes or No
Breeding and migratory fish:	Physical damage Water pollution Sediment release	During the construction phase, sediment mobilisation and accidental chemical (e.g. fuel or concrete) spills could cause changes in water chemistry and impact both directly and indirectly upon either catadromous features (Bullhead; Brook Lamprey) or those life stages of the anadromous features (shad species; Sea Lamprey; River Lamprey) of the SAC which could be migrating past the works area, in the absence of suitable on-site avoidance and mitigation measures. **Likely significant effect**	Yes	No	Yes
Otter *Lutra lutra*	Habitat loss Physical damage Alteration to coastal processes	During a PEA conducted at the site in 2016, Otter footprints were identified beneath the Mill's basement bridge, there are also numerous WWBIC records for Otter along the Eastern Cleddau River. The banks of the Eastern Cleddau River and the alluvial woodland on the opposite bank have potential to support Otter holts or resting places, and the scheme area is likely to be used for commuting and foraging by Otters. As Otter are highly mobile species and are known for their ability to build new holts as they adapt to changing conditions, there is a low	Yes	No.	Yes

Qualifying Feature	Risk (Pressure)	Likely Significant Effect Alone	Yes or No	Likely Significant Effect in Combination	Yes or No
		risk that Otters could build new holts prior to the works taking place. As the proposed works will utilise habitats south of the river adjacent to the woodland and hedgerow, there is a risk of disturbing holts if present in this location. **Likely significant effect**			
Otter	Noise and visual disturbance	The proposed works are likely to result in temporary noise and disturbance to commuting and foraging Otter. The use of a cofferdam will limit the impact of disturbance to this species by isolating the construction into a contained area. However the noise and visual disturbance form machinery could have a significant effect on otters utilising the site. There is potential for otters to be disturbed through noise and visual disturbance throughout the duration of the works. **Likely significant affect**	Yes	No	Yes
Otter	Water pollution Sediment release	The repair works have the potential to release pollutants (e.g. through spillages/leaks) or mobilise sediment which could adversely impact on these species. The use of a cofferdam will isolate the construction zone and limit the spread of pollution and sediment disturbance to the contained area and will thereby protect surrounding habitats. Industry standard, appropriate pollution prevention, dust management and silt control measures will be implemented, along	No	No	No

Qualifying Feature	Risk (Pressure)	Likely Significant Effect Alone	Yes or No	Likely Significant Effect in Combination	Yes or No
		with biosecurity protocols. These measures are put in place on all construction sites so are not considered to be avoidance or reduction measures for a European site in the context of the Conservation of habitats and species regulations (2019, as amended). These measures will reduce any potential small scale minor impacts to negligible levels. Therefore, there is no likely significant effect from this potential impact pathway. **No likely significant impact**			
Pembrokeshire Bat Sites and Bosherton Lakes SAC (Slebech Stable Yard Loft, Cellars & Tunnels SSSI Units 3a and 3b)					
Annex I habitats; primary reason for selection					

Qualifying Feature	Risk (Pressure)	Likely Significant Effect Alone	Yes or No	Likely Significant Effect in Combination	Yes or No
3140 - Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. *6210 - Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (*important orchid sites)*	Habitat loss	These habitats are not present within the site boundary and are sufficient distant and disconnected from the site so that no impacts would occur. Oligotrophic waters are found in areas of still water and is associated with the Bosherton Lakes component of this SAC which is located over 10km from the site. Semi-natural dry grasslands of this type are associated with the Stackpole SSSI which is located over 10km from the site. **No likely significant impact**	No	n/a	No
European bullhead		The section of SAC which is likely to support this qualifying species is located at Bosherton Lakes which is over 10km from the site and unlikely to be affected by the proposed works which are low impact and isolated to the small section of riverbank. Therefore, no direct impacts on this feature are envisaged. Appropriate mitigation will be followed in relation to fish species present on site, including European bullhead, as described for the Pembrokeshire Marine/Sir Benfro SAC and Afonyd Cleddau SAC described above.	No	n/a	No

Qualifying Feature	Risk (Pressure)	Likely Significant Effect Alone	Yes or No	Likely Significant Effect in Combination	Yes or No
Bats Greater Horseshoe Bat Lesser Horseshoe Bat	Noise and Visual Disturbance	Previous surveys have identified a number Greater Horseshoe Bats and a smaller number of Lesser Horseshoe Bats roosing within Black Pool Mill. As part of the licence already obtained monitoring of the bat population is ongoing and data is available throughout the 2023 season and up to January 2024. During this period a number of construction activities have been undertaken at the Mill including the emergency works for the riverbank which these works are seeking to formalise. During this period the population of Greater Horseshoe Bats has shown a steady increase, this potentially indicates that the disturbance has not had a detrimental effect on the population. The works will not have a direct impact upon the mill and potential impacts are limited to potential disturbances, the works will involve the placement of rock in the river and will not involve percussive techniques such as piling. Given the above it is considered that the works will not have a significant impact upon the bat populations in the Mill. However, it is recommended that this is continually reviewed as monitoring of the bat roost is ongoing. Surveys will be undertaken immediate before the proposed works to ensure that the situation has not changed. The works will not be carried out at night and no lighting of the building will be required. This will ensure that bats can continue to enter and leave the building undisturbed.	No	No	No

5.4 In combination assessment

A search of the Pembrokeshire Coast National Park Authority Planning Portal (https://planning.agileapplications.co.uk/pcnpa [Accessed: 23/10/2024] was undertaken to identify other plans or projects that could act in-combination with these works. Only applications made within the last 5 years and within 1km of the site were included in the search.

One planning application was identified within 1km which could have in-combination effects with the proposed works. This relates to an application approved in 2020 under the following description:

NP/20/0101/FUL - Change of use of Blackpool Mill from a museum with ancillary shop and café (D1 with ancillary A1/A3 uses) to a heritage restaurant (A3 use) with café and exhibition space in former cottage/forge building (D1/ A3 uses).

However, after assessing the LSE of the proposed works in table 5-2 against this no in-combination effects have been detected. The planning application above was approved in 2020 and the works are now complete. There are no long-term impacts on the qualifying features of the European sites, therefore cumulative affects are considered unlikely.

No other plans were identified that could potentially act in-combination with the proposed works. The remaining planning applications within 1km of each of the sites are all small-scale works that have no direct connection to the site. There are no other Nationally Significant Infrastructure projects within 1km of the site.

5.5 Screening Statement Conclusion

At stage 1 certain effects could not be screened out without appropriate mitigation/ avoidance strategies put in place; consequently, a stage 2 appropriate assessment is required. Those effects requiring appropriate assessment are summarised in Table 5-3 below.

Table 5-3. Summary of screening conclusions for the proposed scheme showing all screened in hazards and European Sites.

Qualifying Feature	Hazard	Likely significant effect alone or in combination
Pembrokeshire Marine/Sir Benfro Forol SAC		
Breeding and migratory fish: Allis shad Twait shad European river lamprey Sea lamprey	Water pollution Sediment disturbance	Alone
Otter	Habitat loss Noise and visual disturbance	Alone
Afonydd Cleddau/ Cleddau Rivers SAC		
Breeding and migratory fish: Allis shad European bullhead European river lamprey Brook lamprey Sea lamprey Atlantic salmon	Water pollution Sediment disturbance	Alone
Otter *Lutra lutra*	Habitat loss Noise and disturbance	Alone

6 Appropriate Assessment

6.1 Introduction

Stage 2 of the HRA process is an Appropriate Assessment, which is required because likely significant effects caused by the proposed works have been identified on the Pembrokeshire Marine/Sir Benfro Forol SAC and Afonydd Cleddau/ Cleddau Rivers SAC.

The Appropriate Assessment determines whether the project will have an adverse impact on the integrity of the European sites. In this assessment, avoidance or mitigation measures are applied to a point where the effects identified are no longer significant. If no significant impact on site integrity can be demonstrated, beyond reasonable scientific doubt, the project can proceed. If sufficient avoidance or mitigation measures cannot be applied, the project should not be taken forward in its current form unless there is a demonstration of no suitable alternatives and there are reasons of overriding public interest.

6.2 General Scheme Mitigation Measures

Appropriate pollution prevention measures will be implemented to ensure that the habitats within proximity of the works, and hydrologically connected to them, including the interest features and supporting habitats of the European sites are not degraded as a result of pollution events during the construction phase. Pollution prevention measures will be agreed with the contractor prior to the commencement of the scheme and will be outlined in a CEMP. Pollution prevention measures will include, but are not limited to:

- Abiding by industry standard pollution prevention guidelines, such as those given in CIRIA Guidance: Control of water pollution from construction sites. Guidance for consultants and contractors (C532D) (Masters-Williams, 2001).
- Any chemical, fuel and oil stores should be located on impervious bases within a secured bud with a storage capacity 110% of the stored volume.
- Biodegradable oils and fuels should be used where possible.
- Drip trays should be placed underneath and standing machinery to prevent pollution by oil/fuel leaks. Where practicable, refuelling of vehicles and machinery should carried out on an impermeable surface in one designated area well away from any watercourse or drainage (at least 10m).
- Emergency spill kits should be available on site and staff trained in their use.
- Operators should check their vehicles daily before starting work to confirm the absence of leakages. Any leakages should be reported immediately.
- Daily checks should be carried out and records kept on a weekly basis and any items that have been repaired/replaced/rejected noted and recorded. Any items of plant machinery found to have been defective should be removed from site immediately or positioned in a place safely until such time that it can be removed.

With appropriate pollution prevention measures put in place the proposed works will not impact upon the integrity of any European sites.

6.3 Appropriate Assessment of Project Impacts and Mitigation

Taking into account the prevailing site conditions, screened in qualifying features, and the typical habitats and species necessary to the conservation of these features, the proposed works and mitigation measures and the conservation objectives for each European site, the following table details the Appropriate Assessment undertaken for the project. In Table 6-2 avoidance and mitigation measures are presented, and an assessment is made on whether an adverse impact remains after the mitigation is applied.

Table 6-1. Appropriate Assessment of Hazards and Mitigation

Qualifying Features	Description of adverse effect(s)	Can adverse effect(s) be mitigated	Description of mitigation measures and how they would be applied	Can adverse effect on site integrity be ruled out
Pembrokeshire Marine/Sir Benfro Forol SAC				
Breeding and migratory fish: Allis shad Twait shad European river lamprey Sea lamprey European bullhead Brook lamprey	Release of polluting material (chemical e.g. fuel, or physical e.g. sediments) that causes direct or indirect harm to resident or transitory life stages or the features of interest	Yes	The works will require only a small coffer dam and will not hinder the ability for fish to migrate though the area. No percussive techniques are proposed. The need for a potential fish rescue has been included in a CEMP that will be approved by NRW fisheries officer before works take place. The works will take place in the period July to end of September (inclusive) when migratory species are unlikely to be encountered. Best practice guidance on pollution prevention and in-channel sediment control measures should be followed during temporary and permanent works construction.	Yes
Otter	Noise and Visual Disturbance	Yes	Although no holts were identified during the PEA survey, Otters are highly mobile and there is potential for holts to be built prior to construction.	Yes

Qualifying Features	Description of adverse effect(s)	Can adverse effect(s) be mitigated	Description of mitigation measures and how they would be applied	Can adverse effect on site integrity be ruled out
			An Otter survey will be undertaken as soon as possible and prior to works taking place to check for signs of Otter and any newly created holts within the site boundary. All light should be fitted with a directional cowl which is directed away from the watercourses, to minimise the risk of disturbance of commuting and or foraging otters. Any excavations during the works will be covered overnight to prevent otters from being trapped along with otter proof fencing around it. There should be suitable silt mitigation and pollution prevention measures installed, which aligns with industry best practice. The works should not result in any in channel barriers for otter migration through the river. A channel should be kept clear for the otters to pass through at all times.	
Afonydd Cleddau/ Cleddau Rivers SAC				

Qualifying Features	Description of adverse effect(s)	Can adverse effect(s) be mitigated	Description of mitigation measures and how they would be applied	Can adverse effect on site integrity be ruled out
Breeding and migratory fish: Allis shad European bullhead European river lamprey Brook lamprey Sea lamprey Atlantic salmon	Direct habitat loss Water pollution Sediment	Yes	The works will require only a small coffer dam and will not hinder the ability for fish to migrate though the area. No percussive techniques are proposed. The need for a potential fish rescue has been included in a CEMP that will be approved by NRW fisheries officer before works take place. The works will take place in the period July to end of September (inclusive) when migratory species are unlikely to be encountered. Best practice guidance on pollution prevention and in-channel sediment control measures should be followed during temporary and permanent works construction.	Yes
Otter			See mitigation for Otter in the above.	

7 Conclusion

The proposed scheme will not have an adverse impact upon the European sites assed within this document either alone or in combination with any other plans or projects, providing the following mitigation measures are implemented, as detailed in Table 6-1:

- Best practise pollution prevention measures will be implemented to ensure that the habitats within proximity of the works, and hydrologically connected to them, including the interest features and supporting habitats of the European sites are not degraded as a result of pollution events during the construction phase.
- The works will be undertaken outside of seasons key to recruitment success of the fish species listed as features of interest; accordingly, the works period should be confined to the period mid-July to end of September (inclusive) or January to February (inclusive).
- An Otter survey will be undertaken as soon as possible and prior to works taking place to check for signs of Otter and any newly created holts within the site boundary.
- Precautionary working practices are followed to limit disturbance to Otter during construction:
    - Any night-time working should be avoided. However, if this is not possible then all light should be fitted with a directional cowl which is directed away from the watercourses, to minimise the risk of disturbance of commuting and or foraging otters.
    - Any excavations during the works should be covered overnight to prevent otters from being trapped along with otter proof fencing around it.
    - There should be suitable silt mitigation and pollution prevention measures installed, which aligns with industry best practice.
    - The works should not result in any in channel barriers for otter migration through the river. A channel should be kept clear for the otters to pass through at all times.

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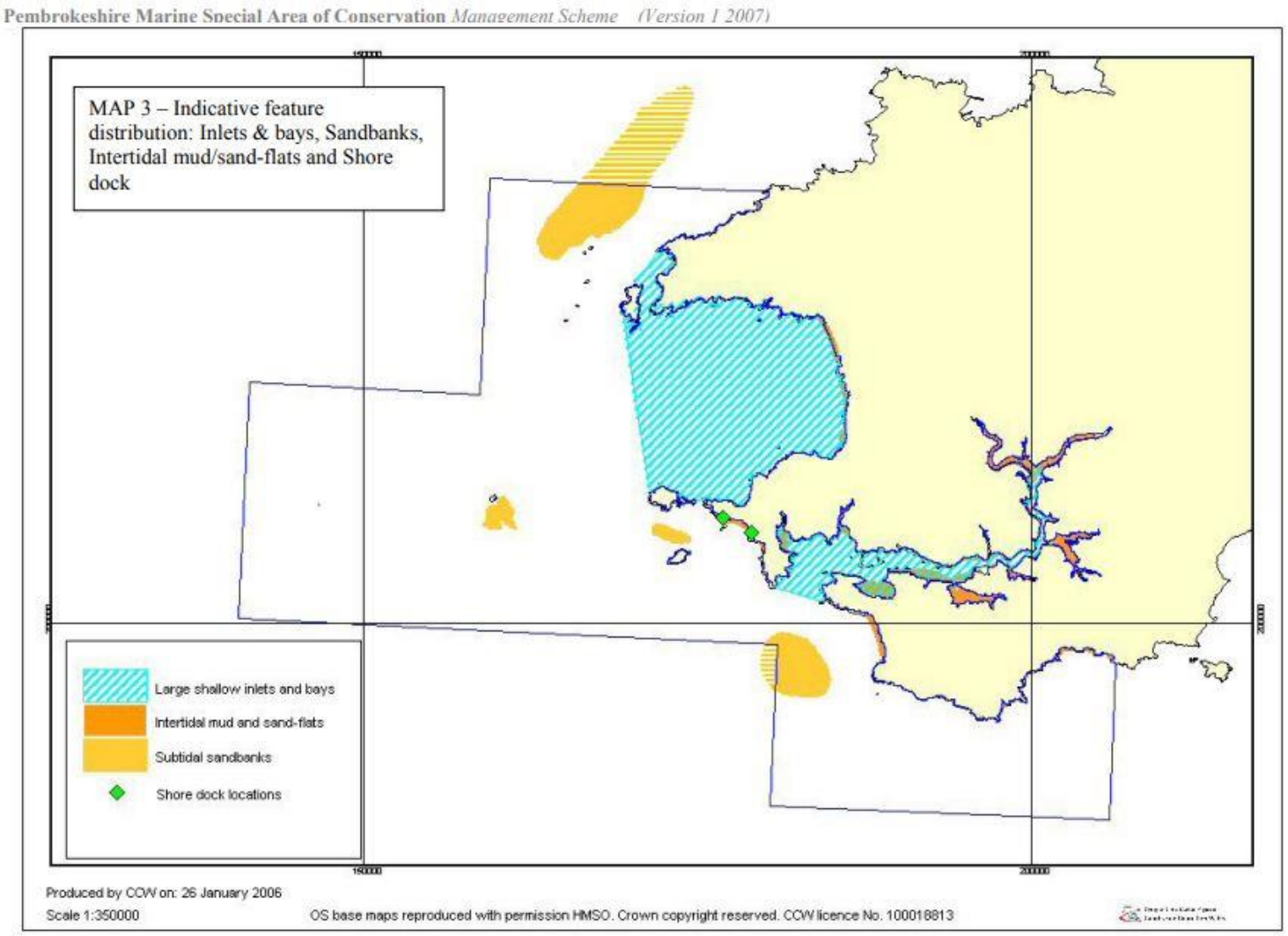
A Appendix


Pembrokeshire Marine Special Area of Conservation Management Scheme (Version 1 2007)
MAP 3 – Indicative feature distribution: Inlets & bays, Sandbanks, Intertidal mud/sand-flats and Shore dock
Large shallow inlets and bays
Intertidal mud and sand-flats
Subtidal sandbanks
Shore dock locations
Produced by CCW on: 26 January 2006
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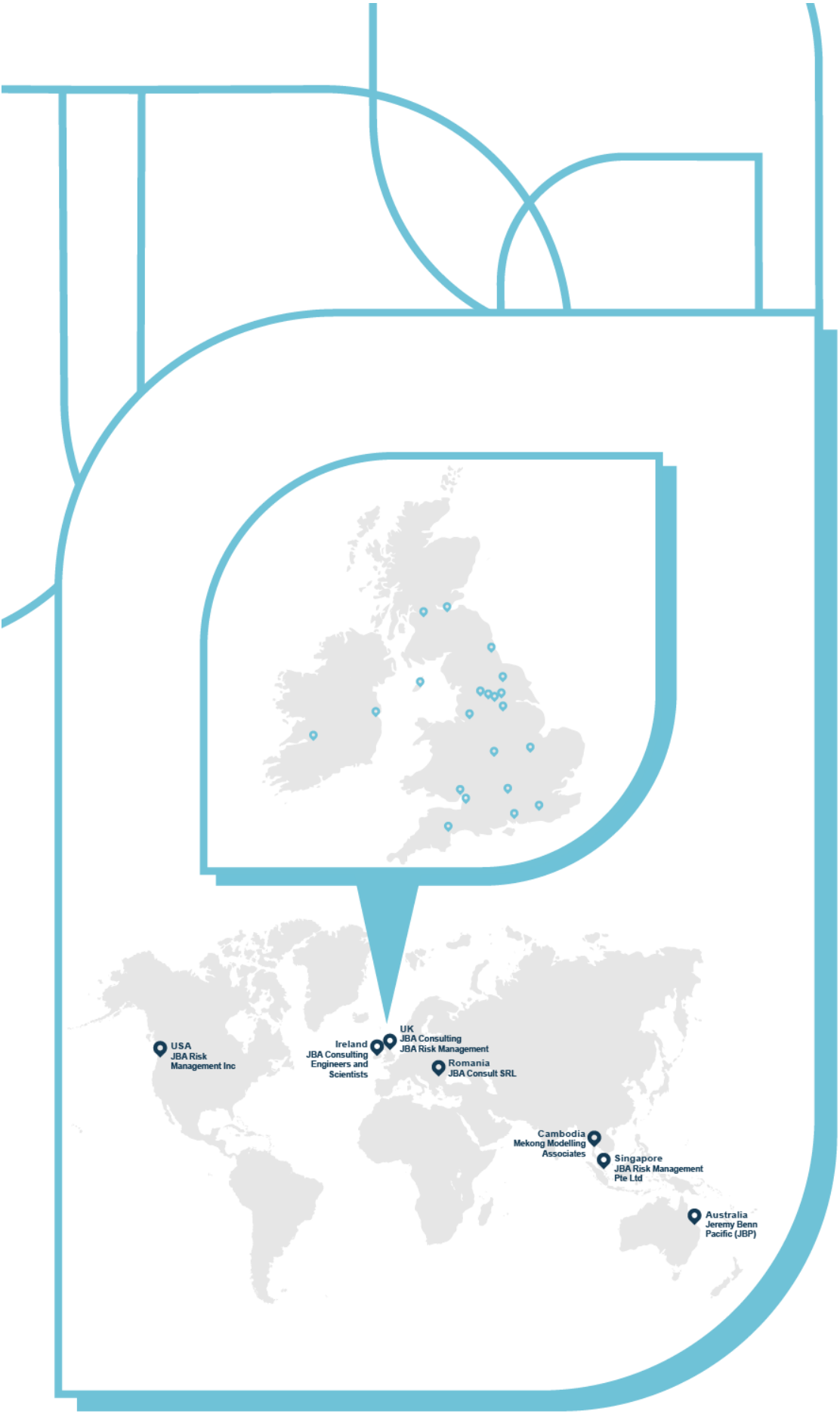

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APPENDIX 4 -

Preliminary Ecological Appraisal (PEA)

Black Pool Mill Wall Repair -

Preliminary Ecological Appraisal

November 2024

Prepared for:
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Contract

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This report describes work commissioned by Bluestone Resorts Ltd. Jonathan Harrison of JBA Consulting carried out this work.

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Where field investigations are carried out, these have been restricted to a level of detail required to meet the stated objectives of the services. The results of any measurements taken may vary spatially or with time and further confirmatory measurements should be made after any significant delay in issuing this Report.

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Abbreviations

AONB	Area of Outstanding Natural Beauty
BAP	Biodiversity Action Plan
CIEEM	Chartered Institute of Ecology and Environmental Management
CRoW	Countryside and Rights of Way Act
EPS	European Protected Species
HPI	Habitats of Principal Importance
HRA	Habitat Regulations Assessment
INNS	Invasive Non-native Species
JNCC	Joint Nature Conservation Committee
LBAP	Local Biodiversity Action Plan
LNR	Local Nature Reserve
MAGIC	Multi-Agency Geographic Information for the Countryside
NERC	Natural Environment and Rural Communities
NNR	National Nature Reserve
NRW	Natural Resources Wales
PEA	Preliminary Ecological Appraisal
PPW	Planning Policy Wales
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SINC	Site of Importance for Nature Conservation
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
WCA	Wildlife and Countryside Act

1 Introduction

1.1 Project Background

JBA Consulting was commissioned by Bluestone Resorts Ltd. to undertake a Preliminary Ecological Appraisal (PEA) in relation to emergency works on the riverbank downstream of Blackpool Mill, Narberth. This report and survey were commissioned to provide baseline data and identify any likely ecological constraints to the proposed works. Where applicable, recommendations for further surveys, mitigation and ecological enhancements have been provided, in relation to ecological features which may be impacted upon.

1.2 Site Location

The site is located to the west of Narbeth, adjacent to Black Pool Mill and consists of the riverbank and wall failure at National Grid Reference (NGR) SN 05979 14485. The site sits within the administrative boundary of the Pembrokeshire Coast National Park Authority (PCNPA).

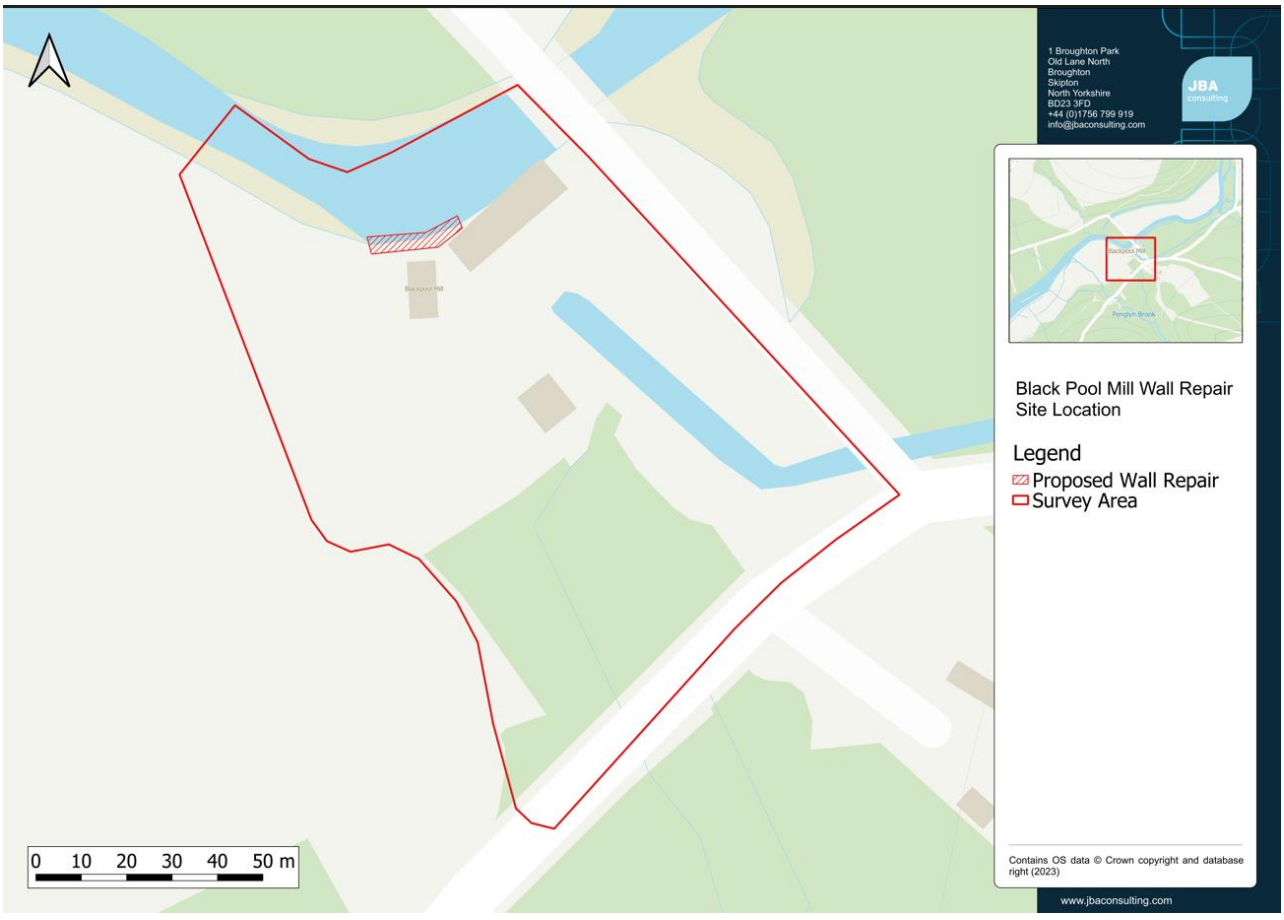


Figure 1-1. Site Location

1.3 Proposed works

Bluestone Resorts Ltd commissioned JBA Consulting to undertake the permanent design of a failed masonry wall at Black Pool Mill in Pembrokeshire, Wales, herein called the Mill. The wall failed following flooding of the Cleddau Ddu river on the 25th of October 2023. JBA Consulting designed emergency works to stabilise the exposed embankment using 48 no. 2T Salix Aqua Rock Bags, constructed in November 2023 as shown on Figure 3-2 below.

Figure 1-2: Emergency repair works to wall failure

Concept design optionneering for the permanent works is shown in the drawing LTU-JBA-XX-XX-PP-C-0001-S3-P01-Concept_Design_Development and described in the Design and Input Statement (JBA Consulting, 2024b). The preferred option is a Redi-Rock modular gravity retaining wall which will replace the existing temporary rock bag wall in Figure 3-2. The works will include minor repairs to adjacent concrete steps and construction of roof drainage outfalls for the adjacent store building.

The proposed construction works will include the following:

- Underpinning of the adjacent store building.
- Removal of existing emergency works (48 no. 2T Salix Aqua Rock Bags).
- Creation of temporary cofferdam using the removed Aqua Rock Bags.
- Installation of new Redi-Rock gravity retaining wall including the foundation and tie in with the Mill.
- Repair/replacement of existing access steps.
- 2 no. roof drainage pipes from the adjacent store building to outfall from the retaining wall.

- 1no. unknown drainage pipe adjacent to the Mill building to outfall from the retaining wall.
- Hard standing area on the repaired bank top.
- Security railings at the crest of the retaining wall.

The top of wall level shall match that of the existing wall pre-failure. The top of wall level shall be 4.4mAOD.

The pedestrian handrail will be installed alongside the access steps leading to the seating area adjacent to the wall. The handrail will be 1m above pitch line of steps and will be designed to match the existing railings in front of the mill.

1.4 Site access for construction

Access to the site will be gained from the A4075 near Canaston Bridge at SN 06956 14835. The access is a narrow country lane that leads directly to the entrance to Black Pool Mill at SN 06056 14414.
The area of modified grassland within the site boundary will be used as site compound throughout the construction phase of the project. This area was previously used for the crane pad during the emergency works.
If the site entrance to Black Pool Mill is impassable for larger vehicles, the adjacent field may be used: materials or similar will be craned over the hedgerow.

2 Methods

A PEA of the site has been undertaken in line with current best practice guidance (CIEEM, 2017) and included:

- A desk-based assessment to identify any records of protected and/or notable habitats and species, and designated nature conservation sites in the vicinity of the proposed works.
- A review of the previous PEA of the site undertaken by Soltys Brewster Ecology (2016).
- A site survey comprising a UKHab Survey including and an assessment of the possible presence of protected or priority species, and (where relevant) an assessment of the likely importance of habitat features present for such species.
- An assessment of the potential impacts of the works on the habitats and species present at the site and the surrounding areas.

2.1 Desk-Based Assessment

Prior to undertaking the site survey, searches of databases containing ecological records, priority habitats, and information on statutory and non-statutory designated sites were made. The following sources were included in these searches:

- MAGIC mapping service (www.magic.gov.uk)
- Natural Resources Wales GIS data

Due to the size of the site, it is considered that the zone of influence would be up to 2km radius from central grid reference SN 05979 14485 and therefore the desk-based assessment was conducted within this search area.

2.2 Site Survey

A site survey was undertaken on the 16th of November 2023 by Jonathan Harrison BSc MSc MCIEEM. The PEA was based upon a UKHab Survey, conducted using the UK Habitat Classification (UKHab) methodology. The method was extended to identify any features suitable for use by legally protected or notable species and locate evidence for their presence or likely absence based on standard techniques.

2.2.1 Habitats

Habitats within and adjacent to the site boundary were surveyed using the UK Habitat Classification (UKHab) methodology. The survey was undertaken within the redline boundary shown in Figure 1-1. Habitats were mapped to level 4 of the UK Habitat Classification scheme (UK Habitat Classification Working Group, 2018a) implemented using the field key (Carey & Butcher, 2018) with reference to the relevant definitions (UK Habitat Classification Working Group, 2018b). All habitats within the site were recorded

during the site survey and a description of each habitat type collected. Botanical names follow Stace (2010).

2.2.2 Protected and Notable Species

Habitats were also assessed for their potential to support any legally protected species or species of conservation concern and any incidental faunal sightings, or field signs discovered during the survey, were recorded. The following sections provide further details on the assessments undertaken in relation to specific species. Legislative guidance relating to protected species is outlined in Appendix A, along with details of other relevant policy and legislation.

2.2.2.1 Birds

Vegetation and habitats around the site were assessed for their suitability to support nesting birds. Special consideration was given to bird species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). Furthermore, any birds seen or heard on site during the survey were recorded as incidental observations.

2.2.2.2 Badger

The survey area was searched for signs of Badgers Meles meles, and where evidence was found details were recorded following Harris et al. (1989). In addition to recording the presence of setts and the level of activity at them, the following signs of activity were also searched for: latrines, footprints, evidence of feeding activity and well-worn paths through vegetation. Badgers will use a number of setts throughout their territory at different times of year; any large holes with the potential to be used by Badgers, but not showing obvious signs of recent activity, were therefore also recorded.

2.2.2.3 Bats

The suitability of habitats across the survey area to support commuting and foraging bats was assessed in terms of habitat type, abundance, connectivity and distribution. These were categorised as having either 'negligible', 'low', 'moderate' or 'high' suitability for bats which was determined by applying the categories given within the BCT Guidelines (Collins, 2016) (Table 2-1).

Table 2-1. Definitions of Roost Suitability (From Collins, 2016).

Suitability	Roosting Habitats	Commuting and Foraging Habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, treelined watercourses and grazed parkland. Site is close to and connected to known roosts.

2.2.2.4 Otter

Watercourses and surrounding areas within the site were assessed for their potential to support Otter *Lutra lutra*, based on RSPB (1994) and Chanin (2003). This involved walking the survey section and recording any spraints (droppings), slides, feeding remains and footprints. A search was also made for possible holt and couch (resting) sites. Otters are extremely difficult to observe, and this method provides the most effective and efficient means of investigating presence or absence.

2.2.2.5 Water Vole

The field survey assessed watercourse suitability for Water Vole *Arvicola amphibius*, based on initial habitat assessment criteria outlined in Dean et al. (2016). The assessment of habitat suitability for Water Vole is based on the availability and nature of dry areas above water level for burrowing/nesting (e.g. bank profile, bank substrate), vegetation (i.e. the quantity and cover of herbaceous species) and the presence of water. Any field signs observed within the survey area, informed by Strachan et al. (2011), were also noted. The most important, diagnostic field sign for Water Vole is the presence of latrine sites. These are locations repeatedly used by Water Vole to deposit their droppings, often in prominent locations along the bank. Other field signs include the presence of burrows, feeding sites and footprints. Although these other signs provide indications of presence and are useful supporting evidence to latrines, they are of limited value on their own.

2.2.2.6 Great Crested Newts

Habitat features with the potential to support Great Crested Newt *Triturus cristatus*, and other amphibians, were recorded. Such features can include: ponds with habitat suitable for breeding newts within 500m of the proposed works; piles of logs, stones or other debris; cracks in the ground; stone or rubble covered ground, and any other features that could support newts. Where access was possible, any substantial waterbodies within 500m of the site, and which had ecological connectivity to the site, were assessed for their potential to support newts. This assessment was based on the Habitat Suitability Index (HSI) (Oldham et al., 2000; ARG UK, 2010). This system involves assessment of ten suitability indices per waterbody and is an accepted method of assessing the likelihood for a particular pond to hold breeding Great Crested Newts.

2.2.2.7 Reptiles

As part of the site survey, an assessment of the habitat suitability for common reptiles was made. This involved inspection of the site for key habitat features/microhabitats which may be favoured by reptiles, such as embankments, log, brash or rock piles, dry stone walls, hedgerows, open sandy areas, woodland edges and rides and interfaces between different habitat types (Froglife 1999).

2.2.3 Other Notable Species and Environmental Constraints

During the site survey, any signs or sightings of other notable species were also recorded. In addition, any environmental features that might constrain the works were also recorded (e.g. access restrictions).

2.2.4 Invasive Non-Native Species

Any Invasive Non-native Species (INNS) observed during the survey were recorded. For stand-forming plant species, the extents of such stands were noted.

2.3 Limitations

The habitats and species present in a given area are subject to change over time. A single field visit of this nature captures and reports the situation at the time of survey. As such, the advice contained within this report is considered valid for a period of 18 months before a review on the need for an updated survey/assessment must be made by an ecologist (CIEEM 2019). Data from biological records centres or online databases is historical information, and datasets might be incomplete, inaccurate or missing. It is important to note that even where data is held, a lack of records for a defined geographical area does not necessarily mean that the species is absent; the area may simply be under-recorded. As such, records cannot be relied on and serve only as an indication of what might/ might not be found.

3 Results and Evaluation

3.1 Desk-Based Assessment

3.1.1 Statutory Designated Sites

A search via the MAGIC database showed that the proposed works area is located within the Pembrokeshire Marine/Sir Benfro Forol Special Area of Conservation (SAC) and Milford Haven Waterway Sites of Special Scientific Interest (SSSI). The Afonydd Cleddau / Cleddau Rivers SAC and Afon Cleddau Dwyreiniol / Eastern Cleddau River SSSI are both located approximately 40 meters upstream.

Figure 3-1 shows the site location in relation to the statutory designated sites within a 2km search and the designations and their features are detailed in Table 3-1 below.

Table 3-1. Statutory Designated Sites Within 2km of the Proposed Works

Site Name	Features of Designation	Distance From Proposed Scheme
Special Area of Conservation (SAC)		
Pembrokeshire Marine/Sir Benfro Forol	Annex I habitats; primary reason for selection: -1130 Estuaries -1160 Large shallow inlets and bays -1170 Reefs Annex I habitats; not primary reason for selection: -1110 Sandbanks which are slightly covered by sea water all the time -1140 mudflats and sandflats not covered by seawater at low tide -1150 Coastal lagoons -1330 Atlantic salt meadows -8330 Submerged or partially submerged sea caves Annex II species; primary reason for selection -1364 Grey seal *Halichoerus grypus* -1441 Shore dock *Rumex rupestris* Annex II species; not primary reason for selection: -1095 Sea lamprey *Petromyzon marinus* -1099 River lamprey *Lampetra fluviatilis* -1102 Allis shad *Alosa alosa* -1103 Twaite shad *Alosa fallax* -1355 Otter *Lutra lutra*	Immediately adjacent

Site Name	Features of Designation	Distance From Proposed Scheme
Afonydd Cleddau / Cleddau Rivers	Annex I habitats; not primary reason for selection: -3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation -7110 Active raised bogs -91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) Annex II species; primary reason for selection: -1096 Brook lamprey *Lampetra planeri* -1099 River lamprey *Lampetra fluviatilis* -1163 Bullhead *Cottus gobio* -1355 Otter *Lutra lutra* Annex II species; not primary reason for selection: -1095 Sea lamprey *Petromyzon marinus*	40m upstream
Sites of Special Scientific Interest (SSSI)		
Milford Haven Waterway	Milford Haven Waterway is of special interest for its geology, ancient woodland, marine biology, saltmarsh, swamp, saline lagoons, rare and scarce plants and invertebrates, nationally important numbers of migratory waterfowl, Greater and Lesser Horseshoe bats *Rhinolophus ferrumequinum* and *R. hipposideros*, and Otter *Lutra lutra.*	Immediately adjacent 0m upstream
Afon Cleddau Dwyreiniol / Eastern Cleddau River	The Eastern Cleddau River is of special interest primarily for important populations of Otter *Lutra lutra*, Bullhead *Cottus gobio*, River Lamprey *Lampetra fluviatilis* and Brook Lamprey *Lampetra planeri*. It is also of special interest for Sea Lamprey *Petromyzon marinus*; for its range of river habitats including beds of submerged aquatic plants often dominated by Watercrowfoot *Ranunculus spp*, the aquatic plant *Potamogeton berchtoldii x P. polygonifolius (cf.)* as well as a variety of associated riverside habitats.	40m upstream

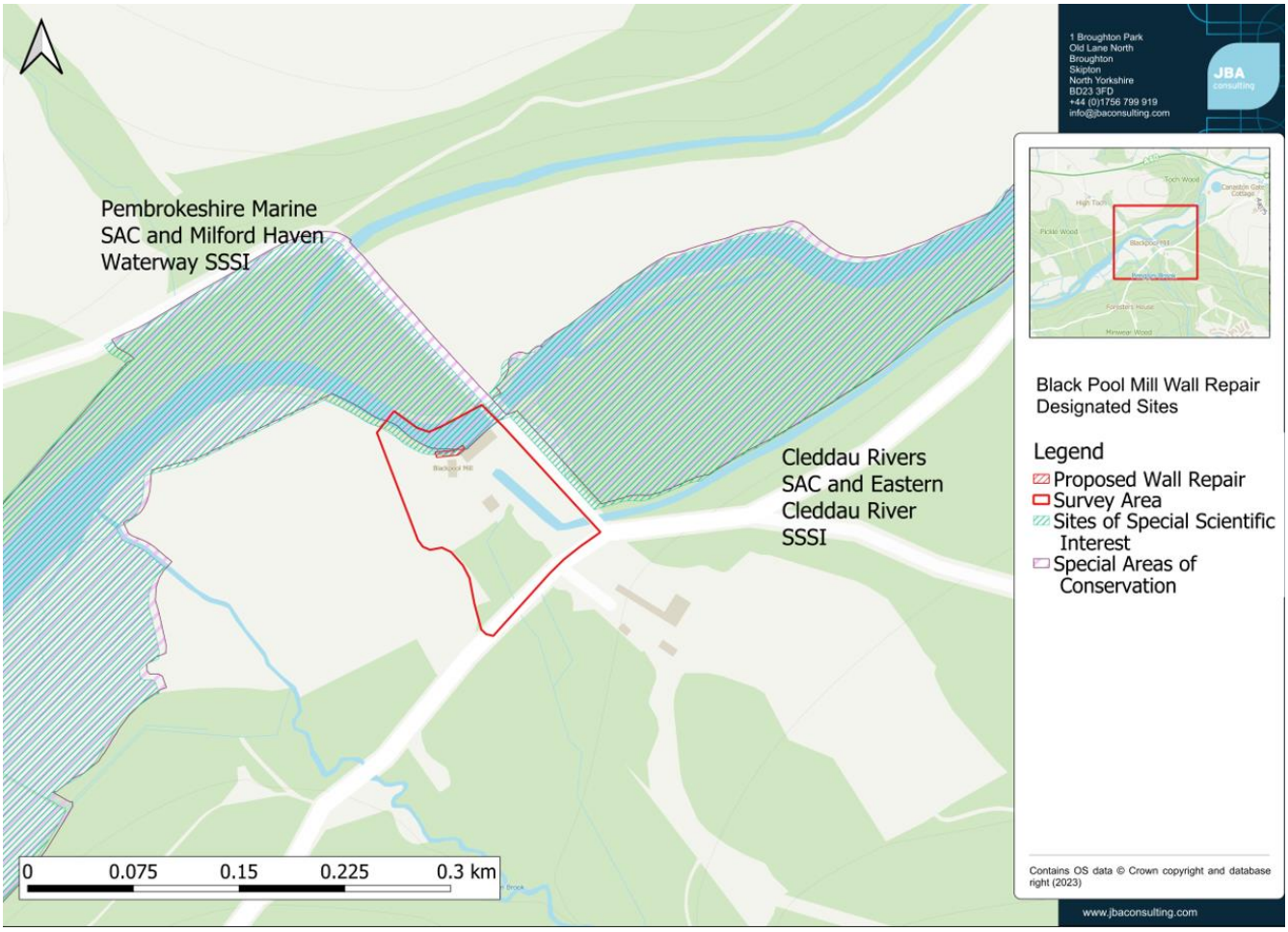


Figure 3-1. Statutory Designated Sites

3.2 Phase 1 Habitat Survey

The results of the extended UKHab survey are described in the following sections below.

3.2.1 Habitats

g4 Modified Grassland

The majority of the survey area is comprised of improved modified grassland. The grassland is heavily grazed by sheep and dominant species present include Perennial Rye Grass *Lolium perenne* and White Clover *Trifolium repens*, with occasional Dandelion *Taraxacum sp*., Ribwort Plantain *Plantago lanceolata* and Yorkshire Fog *Holcus Lanatus*. in wetter areas Soft Rush *Juncus effusus* is present.

f2 Fen marsh and swamp

To the northwest of the survey area is an area of marshy grassland that is relatively species poor and dominated by Soft Rush *Juncus effusus.* Common Reed *Phragmites australis* was also present in this area.

w1g Other woodland; broadleaved

Directly south of the main Black Pool Mill building is an area of broadleaved woodland made up of semi mature and mature trees with species including Oak *Quercus sp*., Beech *Fagus sylvatica*, Alder *Alnus glutinosa,* Willow *Salix sp.* and Ash *Fraxinus excelsior.*

There is also an area of woodland in the southwest corner of the survey area with species including Oak, Beech, Alder and Ash.

h2a Hedgerows

Directly south of the main Black Pool Mill building, in the private grounds, is a large species poor hedgerow dominated by Blackthorn *Prunus spinosa* and Hawthorn *Crataegus monogyna.*

Along the western boundary of the survey area is a large hedgerow made up of species including Ash, Willow, Alder, Oak and Holly *Ilex aquifolium*.

r2 Rivers and streams

The wall failure at the centre of the proposed works is located on the left riverbank of the Eastern Cleddau that runs adjacent to Black Pool Mill.

Within the survey there are three streams that run through the site. Entering from the southeast corner of the survey area and running along the main entrance road to Black Pool Mill is the historic feed stream for the Mill. The stream is heavily silted with Reed present within the channel.

A stream also flows through the broadleaved woodland located in the southwest corner of the survey area before joining the historic feeder stream.

There is also a stream located on the western boundary of the survey area that flows directly into the Eastern Cleddau.

3.2.2 Assessment for Protected and Notable Species

3.2.2.1 Birds

There are multiple species records for birds within the survey area held by WWBIC including Schedule 1 species reliant on the watercourses on site such as Kingfisher *Alcedo atthis*.

Throughout the survey area there are habitats that are likely to support a wide range of bird species and offer nesting opportunities for breeding birds. These habitats include the reed bed, open grassland and hedgerows present throughout the site as well as the Eastern Cleddau river channel.

3.2.2.2 Badger

WWBIC identified multiple records of badgers *Meles meles* within the broadleaved woodland surrounding the site.

No signs of Badger (including setts, runs, latrines etc.) were recorded during the survey, however the areas of grassland and woodland throughout the survey area provides suitable foraging habitat for Badger.

3.2.2.3 Bats

WWBIC data identified records from bat emergence surveys conducted at the Blackpool Mill, which included records of Lesser Horseshoe bats *Rhinolophus hipposideros*,, Greater Horseshoe bats *Rhinolophus ferrumequinum*, Brown Long-eared Bats *Plecotus auritus* and Pipistrelle spp. *Pipistrellus* bats. The data also included records of Noctule *Nyctalus noctula* and Daubenton's Bat *Myotis daubentonii* maternity roosts within trees located east of site along the Cleddau.

Roosting bats have been identified in the main building and previous renovation works required extensive mitigation measures carried out under appropriate NRW licensing.

The closest building to the proposed works is an outbuilding that has been converted into office space following the previous renovation works. It is unknown whether this building contains known bat roosts following this renovation, however, examination of the building shows that potential ingress and egress routes for bats remain and there is the potential for it to be utilised by roosting bats.

Previous surveys have identified a number Greater Horseshoe Bats and a smaller number of Lesser Horseshoe Bats roosing within Black Pool Mill and a licence to disturb bat species has been obtained for previous refurbishments to Black Pool Mill. As part of this licence monitoring of the bat population is ongoing and data is available throughout the 2023 season and up to January 2024. During this period a number of construction activities have been undertaken at the Mill including the emergency works for the riverbank which these works are seeking to formalise. During this period the population of Greater Horseshoe Bats has shown a steady increased.

Areas of broadleaved woodland within the site and surrounding area contain a number of mature trees that may have bat roost potential. The areas of woodland, grassland and hedgerow habitat present on site provide foraging habitat for bat species and the water channels may also be used as linear commuting features.

3.2.2.4 Otter

During the previous PEA conducted in 2016 Otter footprints were identified beneath the Mill's basement bridge, there are also numerous WWBIC records for Otter along the Eastern Cleddau River.

No direct evidence of Otter such as spraints, holts or resting sites were observed during the recent survey however the section of the Eastern Cleddau River within the proposed scheme area is likely to be used for commuting and foraging by Otters.

The area of the proposed works footprint was considered unsuitable for resting Otter, however, the banks of the Eastern Cleddau River and the alluvial woodland on the opposite bank have potential to support Otter holts or resting places.

3.2.2.5 Water Vole

No Water Vole field signs or burrows were observed during the survey. The Eastern Cleddau within the proposed scheme area was deemed unsuitable for Water Vole due the lack of vegetation, the structure of the banks and the exposed tidal nature of the river. The streams onsite also lacked suitable habitat.

No records for Water Vole within 2km of the scheme area were returned in the desk study.

3.2.2.6 Reptiles and Amphibians

Areas of grassland on site have the potential to support a common reptile species throughout the survey area. Records for Common Lizard *Zootoca vivipara* within the Blackpool Mill were identified in the desk study with Adder *Vipera berus*, Grass Snake *Natrix natrix* and Slow-worm *Anguis fragilis* being identified within 1km radius of site (Minwear Wood).

Suitable terrestrial habitat for common amphibians is also present in the form of marshy grassland. The likely presence of fish in the Eastern Cleddau River and a general lack of aquatic vegetation as well as its fast flow at the proposed scheme area suggests that it is not suitable habitat for amphibians, including Great Crested Newt. No records for Great Crested Newt within 2km of the scheme area were returned in the desk study.

3.2.2.7 Fish

The water channels running throughout the survey area have the potential to support freshwater and marine fish species, however no fish species data was available during the data search or on the Fish Data Explorer. Pembrokeshire Marine SAC is designated for Sea lamprey, River lamprey, Allis shad and Twaite and Cleddau Rivers SAC is designated for River lamprey, Brook lamprey, Bullhead and Sea lamprey. Given hydrological connectivity to the site these species have the potential to be present within the channel.

3.2.2.8 Invasive Non-Native Species

No invasive non-native species were identified in the desk study and no species were recorded during the site survey.

4 Assessment of Impacts and Recommendations

4.1 Designated Sites

The Annex I habitats for which the Pembrokeshire Marine/Sir Benfro Forol SAC is designated are not present within close proximity of the proposed works. However, there is the potential for fish species associated with the site to migrate through this section of the river, potentially breeding and spawning further upstream. Otter are also known to be present and potential impacts are considered below.

Habitats associated with the Afonydd Cleddau / Cleddau Rivers SAC are not present within the proposed works area, however, woodland present on the opposite bank likely qualifies as the Annex I habitat 91E0 Alluvial forests with Alnus glutinosa and Fraxinus excelsior. This will not be directly impacted by the proposed works, however, mitigation will be required to ensure that this habitat is not indirectly impacted. There is the potential for Annex II fish species to commute through the river in this area.

There is a potential for the construction of the flood defences to impact upon the features of the two adjacent SAC's through disturbance or changes in water quality. These potential impacts are directly linked to the construction of the project and the construction methodology and working practices to be employed. Appropriate control measures including Method Statements and an Environmental Action Plan (EAP) are likely to be required to manage any potential risks. It is likely that the scheme will require the completion of Habitat Regulation Assessment (HRA) with regards to these sites.

The proposed works would need to demonstrate no adverse effect on the nature conservation interest of the site or would be required to provide adequate compensatory measures to preserve its wildlife value.

4.2 Habitats

The potential for significant direct impacts to adjacent habitats is considered low, ideally the works will consist of renewal of existing flood walls and defences in this area.

There is the potential that the scheme will directly result in the small scale loss of riparian habitats. In area of the proposed works, the channel has already been modified as part of mill structure. It is considered unlikely that renewing the wall in this area will have a significant permanent impact upon the river. However, depending on the option selected in-channel habitats may also be impacted.

The potential for the creation of pathways for pollution incidents or contamination migration, either from soils or impacted ground waters, to adjacent waters should be considered and managed within appropriate control measures including Method Statements and an

Environmental Action Plan (EAP). An aim of the proposed works is to prevent further contaminated material from being eroded and entering the surrounding waters.

Freshwater habitats are a Priority habitat nationally and is also a feature of the adjacent protected sites. It is recommended that the amount and nature of habitat to be lost is calculated and discussions with NRW undertaken on the requirement for the provision of compensatory habitat.

Once a preferred option is selected the potential for impacts on the river should be assessed through a WFD assessment. This will also include assessment of potential geomorphological impacts.

4.3 Protected Species

4.3.1 Birds

Impacts to habitats suitable for nesting birds are unlikely. However, should any vegetation clearances such as single tree removals become necessary an ecologist should be consulted and a nesting bird check carried out before hand if works take place in the bird nesting season (March to September inclusive).

4.3.2 Badger

Whilst the surrounding area provides potential for badger, direct impacts to this species is unlikely. Impacts to badger that may forage in the surrounding area can be effectively mitigated through good working practices.

- The installation of protective fencing around the works area will be undertaken to prevent Badger from accessing the construction site;
- All excavations will be backfilled on the same day to avoid the risk of Badger falling in, or all open excavations over 600mm in depth will be covered at night. If this is not possible, a means of escape for small animals will be provided

4.3.3 Bats

No bat roost will be directly impacted by the works. Previous surveys have identified a number Greater Horseshoe Bats and a smaller number of Lesser Horseshoe Bats roosting within Black Pool Mill. As part of the licence already obtained monitoring of the bat population is ongoing and data is available throughout the 2023 season and up to January 2024. During this period a number of construction activities have been undertaken at the Mill including the emergency works for the riverbank which these works are seeking to formalise. During this period the population of Greater Horseshoe Bats has shown a steady increase, this potentially indicates that disturbance to bats has not arisen from these works and has not had a detrimental effect on the population.

The works will involve the placement of rock in the river and will not involve percussive techniques such as piling, similar to ongoing works at the mill. Given the above it is

considered that the works will not have a significant impact upon the bat populations in the Mill. However, it is recommended that this is continually reviewed as monitoring of the bat roost is ongoing. Surveys will be undertaken immediate before the proposed works to ensure that the situation has not changed.

The works will not be carried out at night and no lighting of the building will be required. This will ensure that bats can continue to enter and leave the building undisturbed.

4.3.4 Otter

It is likely that Otter will commute through the works area. The woodland on the opposite side of the bank holds potential for resting Otter and Otter footprints have been recorded under the mill itself.

If any works to these areas are proposed it is recommended that a targeted Otter survey is undertaken during the detailed design phase to identify the presence of Otter holts or lying-up areas. Further mitigation measures will then be developed and agreed as required. In addition, a further

Otter survey should be undertaken prior to any works being carried out along the Cleddau. This should seek to identify whether there are any newly established Otter field signs, holts and resting places along the river.

Disturbance to Otter due to noise and light pollution during construction of the scheme will be avoided through the implementation of the EAP. The EAP will include the following actions:

- Any site lighting required will be positioned so that no light falls onto the adjacent river bank;
- The installation of protective fencing around the works area will be undertaken to prevent Otters from accessing the construction site;
- All excavations will be backfilled on the same day to avoid the risk of Otter falling in, or all open excavations over 600mm in depth will be covered at night. If this is not possible, a means of escape for small animals will be provided; and
- Should an Otter be encountered on site during the works, all works will cease immediately.

4.3.5 Reptiles and Amphibians

Habitats suitable for reptiles and amphibians will not be directly impacted and impacts to these species are not anticipated.

4.3.6 Fish

Fish species are protected features of the adjacent designated sites, a number of these were for migratory species that are likely to spawn further up the Cleddau.

There are no known spawning sites within close proximity of the proposed works.

Whilst the construction phase will result in loss of exploitable water column for the duration of the works, the very limited footprint of the temporary works and dewatered area is highly unlikely to represent a loss of exploitable habitat that results in any discernible impacts on these qualifying features. Similarly, the bed substrates within the footprint of the temporary works and dewatered area are highly unlikely to be of exploitable value (likely being coarse due to being on the outside of the meander bend, and so sub-optimal for all life stages of all these features)

During the construction phase, sediment mobilisation and accidental chemical (e.g. fuel or concrete) spills could cause changes in water chemistry and impact both directly and indirectly upon either catadromous features (Bullhead; Brook Lamprey) or those life stages of the anadromous features (shad species; Sea Lamprey; River Lamprey) of the SAC which could be migrating past the works area, in the absence of suitable on-site avoidance and mitigation measures.

4.3.7 General Avoidance Measures

General avoidance measures that should be incorporated within the scheme include:

- Limit the hours of working to daylight hours, to limit disturbance to nocturnal and crepuscular animals;
- Due to the potential presence of bats and Otters the use of lighting at night should be avoided. If the use of lighting is essential, then a directional cowl should be fitted to all lights to prevent light spill and to be directed away from the watercourses.
- Contractors must ensure that no harm comes to wildlife by maintaining the site efficiently and clearing away materials which are not in use, such as wire or bags in which animals can become entangled;
- Any pipes should be capped when not in use (especially at night) to prevent animals becoming trapped. Any excavations should be covered overnight to prevent animals from falling and getting trapped. If that is not possible, a strategically placed plank should be placed to allow animals to escape.

4.3.8 Biosecurity

Measures will need to be put in place to ensure that there is no spread of invasive non-native species or diseases. The Check-Clean-Dry approach should be followed, ensuring that all PPE and equipment is cleaned before leaving site. For more information go to: www.nonnativespecies.org/checkcleandry.

4.3.9 Pollution Prevention Measures

Appropriate mitigation measures should be implemented prior to the construction phase to ensure that the water quality is not adversely affected through pollution incidents and the release of contaminants from the site. This mitigation could include, but is not limited to:

- Following relevant pollution prevention measures e.g. CIRIA Guidance:

- Control of water pollution from construction sites. Guidance for consultants and contractors (C532D) (Masters-Williams, 2001). Information useful for Toolbox Talks on working near water and pollution prevention can be found at: https://www.ciria.org/Resources/All_toolbox_talks/Env_toolbox_talks/Working_on _or_near_watercourses.aspx [site accessed 27/07/2023].

- Minimising the impacts of oil and fuel leaks can be achieved by the following actions:
  - Any chemical, fuel and oil stores should be located on impervious bases within a secured bund with a storage capacity 110% of the stored volume.
  - Biodegradable oils and fuels should be used where possible.
  - Drip trays should be placed underneath any standing machinery to prevent pollution by oil/fuel leaks. Where practicable, refuelling of vehicles and machinery should be carried out on an impermeable surface in one designated area well away from any watercourse or drainage (at least 10m).
  - Emergency spill kits should be available on site and staff trained in their use.
  - Operators should check their vehicles on a daily basis before starting work to confirm the absence of leakages. Any leakages should be reported immediately.
  - Daily checks should be carried out and records kept on a weekly basis and any items that have been repaired/replaced/rejected noted and recorded. Any items of plant machinery found to be defective should be removed from site immediately or positioned in a place of safety until such time that it can be removed.

Appendices

A Relevant Policy and Legislation

The legislation discussed below is intended as a guide only and does not replace formal legal advice.

A.1 Planning Policy

A.1.1 Planning Policy Wales (Edition 9, July 2016)

Planning Policy Wales (PPW) sets out the broad principles for the operation of the planning system in Wales. The document contains general commitments to sustainable development, the protection of biodiversity and protection of the environment as a whole. It is supplemented by a series of Technical Advice Notes (TAN) and Circulars. Together these documents comprise national planning policy in Wales, which should be taken into account by local planning authorities in the preparation of development plans and assessment of planning applications.

A.2 Legislation

A.2.1 Conservation of Habitats and Species Regulations 2017

The Conservation of Habitats and Species Regulations 2017 are the means by which the EC Habitats Directive (92/43/EC) is transposed in England and Wales and updates and consolidates previous legislation. This has been updated by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. These Regulations provide protection for European Protected Species (EPS) (animals and plants listed in Annexe IV Habitats Directive which are resident in the wild in Great Britain) including bats, Dormice Muscardinus avellanarius, Great Crested Newts Triturus cristatus and Otters Lutra lutra. The Conservation of Habitats and Species (Amendment) Regulations 2012 placed new duties on public bodies to help “preserve, maintain and re-establish habitat for wild birds”. The designation and protection of national site network sites e.g. Special Protection Areas (SPA) and Special Areas of Conservation (SAC) also falls within these Regulations. Public bodies (including the Local Planning Authority) have a duty to have regard to the requirements of the Habitats Directive in carrying out their duties i.e. when determining a planning application.

A.2.2 Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act (WCA) 1981 (as amended) is the primary legislation for England and Wales for the protection of flora, fauna and the countryside. Part 1 of the Act deals with the protection of wildlife. KKH-JBAU-XX-XX-RP-EN-0001-Castlemartin_Corse_Preliminary_Ecological_Appraisal A-2 Most European Protected Species are now covered under the Conservation of Habitats and Species Regulations (see

above) but some activities are still covered by the WCA such as obstructing access to a bat roost. All British birds, their nests and eggs are protected in law. It is an offence to deliberately take, kill or injure any wild bird or to take, damage, or destroy any nest or egg of any wild bird under Section 1 of the Act. In addition, certain species such as the Barn Owl Tyto alba are included in Schedule 1 of the Act and are protected against disturbance while nesting and when they have dependent young. Offences against birds listed on Schedule 1 are subject to special penalties.

A.2.3 Natural Environment and Rural Communities Act 2006 (NERC)

The Natural Environment and Rural Communities Act (NERC) requires all public authorities, including planning authorities to have regard to the purpose of conserving biodiversity whilst carrying out their normal functions. The NERC Act includes lists of Habitats and Species of Principal Importance (HPIs and SPIs) to the conservation of biodiversity (Section 42) which should be considered in the implementation of duties under the NERC Act. In line with government circular 06/2005 (ODPM, 2005) which provides supplementary guidance, the presence of a Priority species may be a material consideration when a planning authority is considering a development proposal. The HPI and SPI listed under the NERC Act are largely also UK BAP Priority habitats and species. The UK Post-2010 Biodiversity Framework succeeds the UK BAP partnership; though its list of Priority species and habitats agreed under the UK BAP still form the basis of much biodiversity work in the UK. Although the UK BAP has been succeeded, Species Action Plans (SAPs) developed under the UK BAP still remain important and valuable reference sources for background information on Priority species under the UK Post-2020 Biodiversity Framework.

A.2.4 Biodiversity Strategies

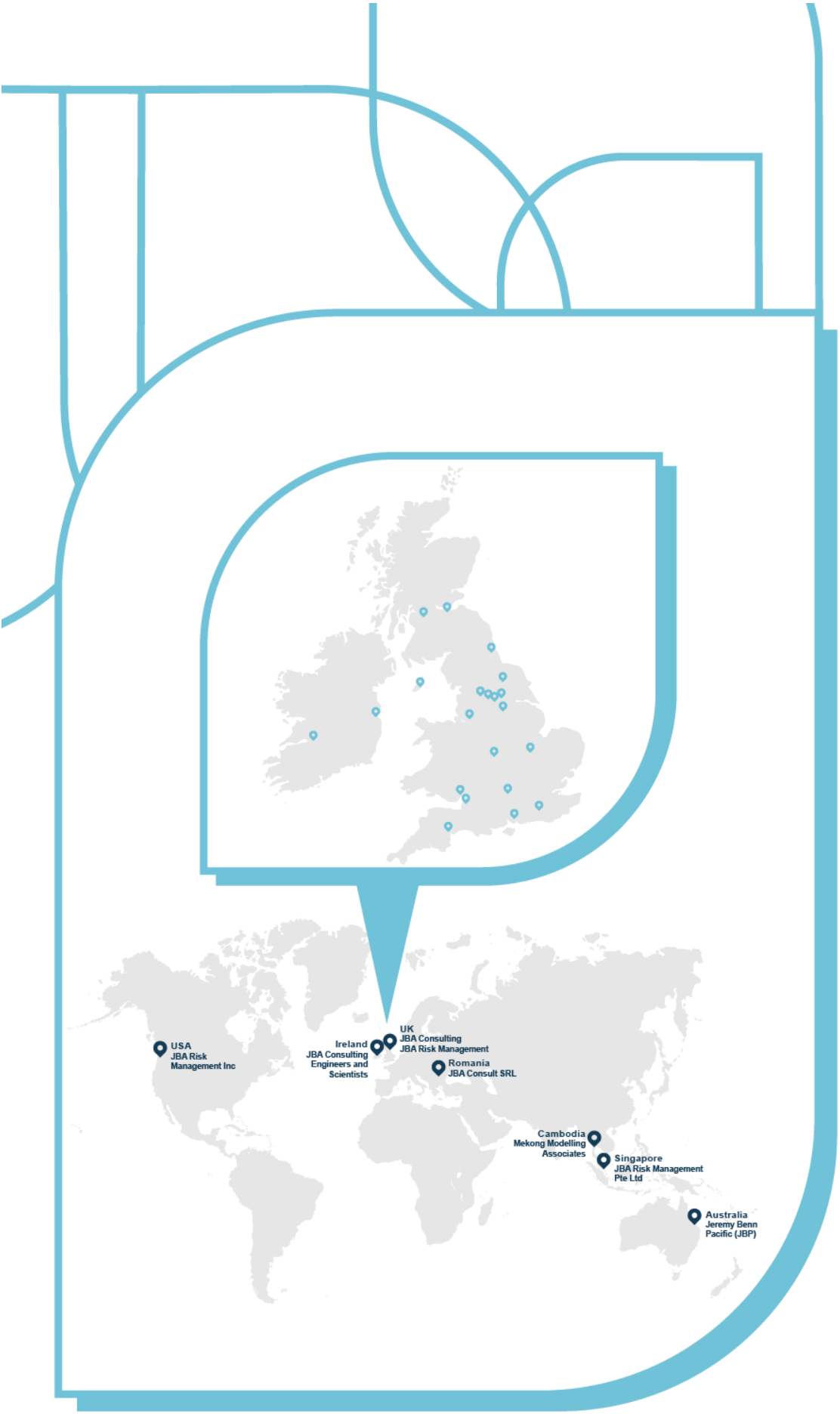
Habitats and Species of Principal Importance (HPI and SPI) listed under the NERC Act are largely also UK BAP Priority habitats and species. The UK Post-2010 Biodiversity Framework succeeds the UK BAP partnership; though its list of Priority species and habitats agreed under the UK BAP still form the basis of much biodiversity work in the UK. The Welsh Biodiversity Strategy, ‘Environment Strategy for Wales' was published in 2006 and explains how Wales will tackle the challenge it faces over the next 20 years. The Environment (Wales) Bill was introduced in May 2015 and creates legislation needed to plan and manage Wales' natural resources in a more sustainable and joined-up way. Following on from the introduction of the Bill 'A Snapshot of the State of Wales' Natural Resources' was produced. This report was prepared to inform the passage of the Environment Bill through the National Assembly. Although the UK BAP has been succeeded, Species Action Plans (SAPs) developed under the UK BAP still remain important and valuable reference sources for background information on Priority species under the UK Post-2010 Biodiversity Framework.

A.2.5 Invasive Non-Native Species

Certain non-native invasive plant species are listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to plant them in the wild or otherwise cause them to grow in the wild. The Wildlife and Countryside Act 1981 (Variation of Schedule 9) (England and Wales) Order 2010 added a number of plant species to the list including Himalayan Balsam Impatiens glandulifera, Montbretia Crocosmia x crocosmiiflora, Rhododendron Rhododendron ponticum and Wall Cotoneaster Cotoneaster horizontalis. The Environmental Protection Act 1990 has limited provisions for non-native invasive species but is included here due to the classification of soil and other waste containing viable propagules of invasive non-native plant species as controlled waste. This has been applied to Japanese Knotweed Fallopia japonica and Giant Hogweed Heracleum mantegazzianum with the result that waste containing these species must be disposed of in accordance with the duty of care set out in section 34 of the Act.

References

CIEEM (2019), Guidelines for Preliminary Ecological Appraisal. CIEEM. Winchester
CIEEM (2019), Guidelines for Ecological Report Writing. CIEEM, Winchester.
HMSO (Her Majesty's Stationery Office) (1981), Wildlife and Countryside Act (as amended by the Countryside and Rights of Way Act 2000). [online] Available at: <http://www.legislation.gov.uk/ukpga/1981/69>
HMSO (1992), The Protection of Badgers Act 1992. [online] Available at: <http://www.legislation.gov.uk/ukpga/1992/51/contents>
HMSO (2006), Natural Environment and Rural Communities Act. [online] Available at: <http://www.legislation.gov.uk/ukpga/2006/16/contents>
HMSO (2012), Conservation of Habitat and Species Regulations [online] Available at: <http://www.legislation.gov.uk/uksi/2010/490/contents/made>



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APPENDIX 5 -

Arboricultural Method Statement

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Bluestone Blackpool Mill
Arboricultural Method Statement

with Tree Protection Plan

Report reference / version no:	RMWS-2022-BS-BM-AMS_01a

Client:	Bluestone Resorts Ltd.
Client contact:	Liz Weedon
Client address:	The Grange Canaston Wood Narberth Pembrokeshire SA67 8DE
Report by:	Rob Marsh MICFor
Report date:	09 June 2022
Site visit date:	24 May 2022
Site grid reference:	SN 060 144

Bluestone Blackpool Mill

Arboricultural Method Statement

Table of Contents

1 - Introduction: instructions and scope

1.1 Blackpool Mill is a historic water mill at Blackpool Bridge, Narberth, Pembrokeshire, under the management of Bluestone Resorts Ltd.

Planning Permission has been granted for works pertaining to change of use of the Mill to a heritage restaurant with café and exhibition space, subject to Conditions. The Local Planning Authority (LPA) is Pembrokeshire Coast National Park Authority, the Application Number is NP/20/0101/FUL.

I am instructed to provide a Tree Protection Plan and Arboricultural Method Statement in connection with these works, in order to satisfy a pre-commencement condition (No. 4) of the Planning Permission.

1.2 ***Overview of tree issues on site:*** The mill site includes an area of mature broadleaf woodland, to the southwest of the main drive, which is covered by a Tree Preservation Order (TPO). There is no public access in this area, and it is mainly overgrown with no likelihood of access; however it includes some large ash trees with advanced dieback, which are liable to cause a significant risk to users of the site (woodland edge trees close to the site). Ash dieback is also altering the ecological condition of the woodland, which would benefit from some additional planting as more light is reaching the woodland floor and ground vegetation is becoming more dense.

The proposed development includes surfacing, landscaping, fencing and construction of a storage compound in the adjacent area to the north of this woodland. No direct impacts are envisaged, but protection of this area from damage (in accordance with industry standards and LPA policy) is recommended here.

Other trees on site include groups by the river to the south west of the mill building, and a row of (mainly ash) trees with high landscape amenity value along the northeast boundary of the site. These are not covered by TPOs, but are highly valued by Bluestone and the intention is to protect and retain them. They are a greater distance from the main development works at the Mill, and unlikely to be affected by it, however provision for tree protection is included here to ensure no negative impacts during landscaping works.

Hedgerows to the southeast of the site are unaffected by the development, measures for their protection during landscaping are included here.

1.3 ***Information provided and other relevant documents:***
The following information was supplied by Bluestone Resorts:

A copy of Pembrokeshire Coast NPA Discharge of Conditions Consultation from Mike Higgins (Tree & Landscape Officer) dated 30th March 2022 (Planning Ref. NP/22/0168/DoC)

Proposed Landsape Plan for Blackpool Mill by Graham Frecknall Architecture and Design, Drawing AL.0.101 Rev D (used as basis of Tree Protection Plan in this report).

Arboricultural Report for the wider Blackpool area (including the entire Blackpool Mill development area), dated April 2017, by Stephen Lucocq of Arboricultural Technician Services. Tree positions (which were based on topographical survey), categorisation and measurements were used in the present report.

1.4 ***Changes to site since the previous tree survey:*** Tree measurements have not changed appreciably since the 2017 tree survey, however it was necessary to re-survey tree condition to check for recent storm damage and changes to the site in the intervening years. The most obvious change is that several mature ash trees have been badly affected by ash dieback disease *(Hymenocyphus fraxinea)* with implications for public safety.

For the present report, only trees with potential to be affected by the Blackpool Mill development area were re-surveyed (Mr. Lucocq's report covered a much larger area). There have been no changes to tree categories except in the following cases:

- ash trees with evident dieback (note that only trees with dieback over 50% of crown, close to public areas, are recommended for removal)
- trees where other defects were noted for the first time, with relevance to tree condition (specifically, Trees 555 and 562)
- two small trees (676 and 677) were felled since the previous tree survey. Neither were in the TPO area.

1.5 ***British Standard:*** This report, tree survey procedure and tree categorisation are based on British Standard BS 5837 (2012): *Trees in relation to design, demolition and construction - Recommendations.*

Tree work specifications and related terminology are as defined in BS 3998:2010 (*Tree Work - Recommendations*) unless otherwise stated.

2 - Tree schedule

Tree no.	Tag no.	TPO?	Record type	Species	Growth form	Life stage	Remain contrib.	Ht (m)	Stem Diameter(s) (cm)	RPA type	RPA radius (m)	Crown spr (m)	BS CAT	Recommendations
001	001	None	Individual tree	Alder	Single stem	Mature	20-40 years	8	25	Standard	3.00	3	C	Retain
	Notes: High cat C. Small open-grown tree.													
552	552	TPO	Individual tree	Sessile oak	Single stem	Mature	20-40 years	18	110	Standard	13.20	10	B	Retain w. tree work
	Defects: Stem - active fungal decay ***Notes:*** Extensive Inon. Dryadeus around lower stem base to 1m E,W,S sides. Recom crown reduction to reduce load on lower stem while retaining tree which has high habitat value. Subject to ecologist advice (PRFs).													
553	553	TPO	Individual tree	Ash	Single stem	Mature	10-20 years	19	51	Standard	6.12	6	C	Retain
	Defects: Crown - Dieback ***Notes:*** Dieback ~30%													
554	554	TPO	Individual tree	Ash	Single stem	Declining	< 10 years	19	60	Standard	0.00	9	U	Retain
	Defects: Crown - Dieback ***Notes:*** 95% dieback but not a current hazard, can be left for wildlife.													
555	555	TPO	Individual tree	Sycamore	Single stem	Mature	20-40 years	18	100	Standard	12.00	12	B	Retain w. tree work
	Defects: Stem(s) - Cavity ***Notes:*** Open cavity W side of S'most fork 6.5m. Recom. Weight reduction on road-side above cavity, subject to initial aerial inspection of defect and ecologists advice (PRF).													
556	556	TPO	Individual tree	Ash	Single stem	Mature	< 10 years	17	42	Adjusted	0.00	8	U	Remove
	Notes: Dieback ~80%, leaning t/w Mill driveway, recommend fell.													
557	557	TPO	Individual tree	Ash	Single stem	Mature	< 10 years	18	40	Adjusted	0.00	10	U	Remove
	Defects: Crown - Dieback ***Notes:*** (Includes another stem 2m to SW) Dieback ~80% (both stems), leaning t/w Mill driveway, recommend fell.													
558	558	TPO	Individual tree	Ash	Single stem	Mature	< 10 years	15	50	Adjusted	0.00	10	U	Remove
	Defects: Crown - Dieback ***Notes:*** Leans t/w Mill driveway. 95% crown dieback. Recommend felling.													
560	560	TPO	Individual tree	Sycamore	Single stem	Mature	20-40 years	15	65	Standard	7.80	8	B	Retain
	Notes: Twin leader from 2.5m, upright form. No sig. change in condition.													

Tree work recommendations and envisaged impacts are itemised in Section 8.13. Categorisation and measurement conventions are based on British Standard 5837:2012 unless otherwise stated. Other parameters included in the Standard (e.g. branch height and aspect) are recorded on-site but not shown here unless relevant. ***Tag no.*** corresponds with plastic tags affixed to trees where applicable. ***Protected.*** where indicated, TPO = Tree Preservation Order; CA = Conservation Area. Note that a Felling Licence may be required to remove trees not otherwise protected. ***Ht*** = tree height ***RPA*** = Root Protection Area. Standard RPA is radius 12x stem diameter. Modified RPAs (where indicated under RPA type) are used where appropriate as specified in BS 5837 or where removal is recommended. ***Crown spread*** is indicative of overall crown radius. ***BS CAT (Tree Quality Category)*** as follows: A - High quality, B - moderate quality, C - low quality (or young trees with stem dia<15cm), U - unsuitable for retention. Further guidance is provided in the report

2 - Tree schedule

Tree no.	Tag no.	TPO?	Record type	Species	Growth form	Life stage	Remain contrib.	Ht (m)	Stem Diameter(s) (cm)	RPA type	RPA radius (m)	Crown spr (m)	BS CAT	Recommendations
561	561	TPO	Individual tree	Ash	Single stem	Mature	< 10 years	19	75	Standard	9.00	9	U	Retain
	Defects: Crown - Dieback ***Notes:*** Dieback 80%. A lot of DW but not o'h public area, not necessary to fell for current project but regularly check condition.													
562	562	TPO	Individual tree	Alder	Single stem	Mature	10-20 years	14	41	Standard	4.92	10	C	Retain
	Defects: Stem(s) - Physical damage, Gen - Lean ***Notes:*** Old abrasion wound 1.8-2.2m NE. Lean t/w driveway, now more exposed because of nearby ash decline. Not currently problematic but continue to check condition.													
567	567	TPO	Individual tree	Ash	Single stem	Dead	< 10 years	19	57	Adjusted	0.00	9	U	Retain
	Defects: Crown - Dieback ***Notes:*** Appears completely dead (ash dieback)													
568	568	TPO	Individual tree	Sycamore	2x stems	Mature	20-40 years	12	65	Standard	7.80	3	B	Retain
587	587	TPO	Individual tree	Sycamore	Single stem	Mature	20-40 years	13	40	Standard	4.80	6	B	Retain
	Notes: Low Cat B, suppressed													
588	588	TPO	Individual tree	Sycamore	Single stem	Mature	20-40 years	12	44	Standard	5.30	8	B	Retain
	Notes: Low Cat B, suppressed.													
589	589	TPO	Individual tree	Ash		Mature	10-20 years	15	56	Standard	6.72	6	C	Retain
597	597	TPO	Individual tree	Ash	Single stem			15	60	Adjusted	0.00	8	U	Retain
	Defects: Crown - Dieback ***Notes:*** Dieback 60-70%. Not necessary to remove yet as some distance from public areas but should be monitored for deterioration at base.													
598	598	TPO	Individual tree	Alder	Single stem	Mature	10+	12	55	Standard	6.60	7	B	Retain
	Notes: Low cat B, edge of bank, vitality fair, foliage sparse. Recent wind damage to low branch.													
599	599	TPO	Individual tree	Alder	Single stem	Mature	10+	10	40	Standard	4.80	5	C	Retain
	Notes: High Cat C, edge of bank, sparse foliage													

Tree work recommendations and envisaged impacts are itemised in Section 8.13. Categorisation and measurement conventions are based on British Standard 5837:2012 unless otherwise stated. Other parameters included in the Standard (e.g. branch height and aspect) are recorded on-site but not shown here unless relevant. ***Tag no.*** corresponds with plastic tags affixed to trees where applicable. ***Protected.*** where indicated, TPO = Tree Preservation Order; CA = Conservation Area. Note that a Felling Licence may be required to remove trees not otherwise protected. ***Ht*** = tree height ***RPA*** = Root Protection Area. Standard RPA is radius 12x stem diameter. Modified RPAs (where indicated under RPA type) are used where appropriate as specified in BS 5837 or where removal is recommended. ***Crown spread*** is indicative of overall crown radius. ***BS CAT (Tree Quality Category)*** as follows: A - High quality, B - moderate quality, C - low quality (or young trees with stem dia<15cm), U - unsuitable for retention. Further guidance is provided in the report

2 - Tree schedule

Tree no.	Tag no.	TPO?	Record type	Species	Growth form	Life stage	Remain contrib.	Ht (m)	Stem Diameter(s) (cm)	RPA type	RPA radius (m)	Crown spr (m)	BS CAT	Recommendations
600	600	TPO	Individual tree	Alder	2x stems	Mature	10-20 years	12	35	Standard	4.25	5	C	Retain
	Notes: Ivy partly obscures													
670	670	None	Individual tree	Sycamore	Single stem	Mature	20-40 years	11	50	Standard	6.00	6	B	
	Notes: High cat B. Open grown, l'scape value													
671	671	None	Individual tree	Ash	Single stem	Mature	10-20 years	16	52	Standard	6.20	7	C	Retain w. tree work
	Defects: Crown - Deadwood ***Notes:*** Flushed early, a little crown decline, may be suppression by nearby trees, dieback appears ~10%. Removal of deadwood advisable before site opens.													
672	672	None	Individual tree	Ash	Single stem	Mature	10-20 years	19	75	Standard	9.00	10	C	Retain w. tree work
	Defects: Crown - Dieback, Crown - Deadwood ***Notes:*** Pruned for phone line, lost branch 3mW, deadwood in crown incl large branch to SE side with Daldinia concentrica. Dieback appears 20% but leaves small, late flushing. Recom. Deadwood removal.													
673	673	None	Individual tree	Ash	Single stem	Mature	10+	11	44	Standard	5.20	6	C	Retain
	Defects: Stem(s) - Cavity ***Notes:*** Butt-rot, extensive cavities N+S, Eiffel-towered but good woundwood around cavities. Dieback ~10%., vitality fair.													
674	674	None	Individual tree	Ash	Single stem	Mature	< 10 years	11	55	Adjusted	0.00	7	U	Remove
	Defects: Crown - Dieback, Crown - Deadwood ***Notes:*** Thick ivy. DW in crown, Daldinia concentrica on large branches. Dieback 60%, appears to have been declining for several years.													
675	675	None	Individual tree	Holly	Single stem	Mature	10-20 years	8	25	Standard	3.00	2	C	Retain
	Notes: Small poor-quality holly													
676	676	None	Individual tree	Ash	3x stems	Mature	20+	9	32	Adjusted	0.00	5	C	Felled
	Defects: FELLED ***Notes:*** FELLED Multistem, old coppice, close to shed													
677	677	None	Individual tree	Sycamore	2x stems	Mature	20+	8	25	Adjusted	0.00	4	C	Felled
	Defects: FELLED ***Notes:*** FELLED Multistem, old coppice, close to shed													

Tree work recommendations and envisaged impacts are itemised in Section 8.13. Categorisation and measurement conventions are based on British Standard 5837:2012 unless otherwise stated. Other parameters included in the Standard (e.g. branch height and aspect) are recorded on-site but not shown here unless relevant. ***Tag no.*** corresponds with plastic tags affixed to trees where applicable. ***Protected.*** where indicated, TPO = Tree Preservation Order; CA = Conservation Area. Note that a Felling Licence may be required to remove trees not otherwise protected. ***Ht*** = tree height ***RPA*** = Root Protection Area. Standard RPA is radius 12x stem diameter. Modified RPAs (where indicated under RPA type) are used where appropriate as specified in BS 5837 or where removal is recommended. ***Crown spread*** is indicative of overall crown radius. ***BS CAT (Tree Quality Category)*** as follows: A - High quality, B - moderate quality, C - low quality (or young trees with stem dia<15cm), U - unsuitable for retention. Further guidance is provided in the report

2 - Tree schedule

Tree no.	Tag no.	TPO?	Record type	Species	Growth form	Life stage	Remain contrib.	Ht (m)	Stem Diameter(s) (cm)	RPA type	RPA radius (m)	Crown spr (m)	BS CAT	Recommendations
678	678	None	Individual tree	Sycamore	Single stem	Mature	20+	9	40	Adjusted	0.00	5	C	Remove
		Defects: Roots - Damaged or decayed ***Notes:*** Small tree beside forge building. Too close to building for retention, also damage to roots.												
679	679	TPO	Individual tree	Alder	2x stems	Mature	10-20 years	6	30	Standard	3.70	4	C	Retain
		Defects: Crown - Dieback ***Notes:*** Main stem appears in decline. Thick ivy obscures.												
680	680	None	Individual tree	Ash	2x stems	Mature	10-20 years	16	85	Standard	10.20	9	C	Retain
		Defects: Crown - Dieback ***Notes:*** Dieback ~40% (patchy, worse to N of crown, better to S).												
681	681	None	Individual tree	Ash	5x stems	Mature	10-20 years	17	67	Standard	8.04	10	C	Retain
		Defects: Crown - Dieback ***Notes:*** Multistem, old coppice, ivy partly obscures. Dieback 20-30% (worse on W side of crown).												
682	682	None	Individual tree	Sessile oak	2x stems	Mature	40+	13	92	Standard	11.10	11	A	Retain
		Notes: Low Cat A; old, dense ivy, recent low pruning.												
914	914	TPO	Individual tree	Ash	Single stem	Mature	< 10 years	12	25	Adjusted	0.00	6	U	Remove
		Defects: Crown - Dieback ***Notes:*** Wood bdry tree with lean to north. Dieback 70%, not appropriate to retain (proximity to car park / storage compound)												
G01		None	Small group	Mixed broadleaf	Various	Early mature	20-40 years				0.00		B	Retain w. tree work
		Defects: Crown - Dieback ***Notes:*** Close-growing riverside trees incl. willow, alder, ash, hawthorn. Various dieback in ash. Recom. Coppicing-back the willow and allowing to re-grow from base to reduce risk of water damage / bank erosion. Ash w. dieback >50% to be felled before opening.												
H01		None	Hedgerow	Mixed shrub	Trimmed hedge		> 40 years				0.00		C	Retain
		Notes: Blackthorn / hawthorn hedge. Slightly sparse.												
H02		None	Hedgerow	Mixed shrub	Trimmed hedge						0.00		B	Retain
		Notes: Blackthorn, hawthorn, elder, holly, sycamore, hazel. Slightly sparse.												

Tree work recommendations and envisaged impacts are itemised in Section 8.13. Categorisation and measurement conventions are based on British Standard 5837:2012 unless otherwise stated. Other parameters included in the Standard (e.g. branch height and aspect) are recorded on-site but not shown here unless relevant. ***Tag no.*** corresponds with plastic tags affixed to trees where applicable. ***Protected.*** where indicated, TPO = Tree Preservation Order; CA = Conservation Area. Note that a Felling Licence may be required to remove trees not otherwise protected. ***Ht*** = tree height ***RPA*** = Root Protection Area. Standard RPA is radius 12x stem diameter. Modified RPAs (where indicated under RPA type) are used where appropriate as specified in BS 5837 or where removal is recommended. ***Crown spread*** is indicative of overall crown radius. ***BS CAT (Tree Quality Category)*** as follows: A - High quality, B - moderate quality, C - low quality (or young trees with stem dia<15cm), U - unsuitable for retention. Further guidance is provided in the report

2 - Tree schedule and categorisation

Please refer to the Tree Schedule on the previous page.

Tree measurements and Root Protection Areas are taken from the 2017 arboricultural report (referenced above).

2.1 ***Notes on tree categorisation:*** Categorisation is based on the criteria defined in BS 5837 (2012) section 4.5 and Table 1, as clarified in guidance produced by the Arboricultural Association (Barrell 2016).

Categories for individual trees and groups are indicated on the Schedule (above).

Category A trees are "of high quality with an estimated remaining life expectancy of at least 40 years".

Category B trees are "trees of moderate quality with an estimated remaining life expectancy of at least 20 years"

Category C are "trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm".

Category U are trees "in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years".

2.2 Trees have not been assigned individually to sub-categories in this assessment, in accordance with recent guidance that sub-categories tend to create confusion regarding the merits of trees and the relative desirability of retaining them.

2.3 34 x individual trees, 1x group of trees and 2x sections of hedgerow are included in this assessment, which found:

1 x Category A,
10x Category B (including 1x group and 1x hedgerow),
17x Category C (including 1x hedgerow)
9x Category U (all of which are ash with significant dieback)

2.4 ***Root Protection Area (RPA)*** is defined for each recorded tree on the Tree Schedule, and shown to scale on the Tree Protection Plan (red dashed lines).

RPA is used here as defined in BS 5837 (2012), i.e. for single-stem trees an area equivalent to a circle with radius twelve times the stem diameter (as measured at 1.5m above ground). For trees with more than one stem the formulae in BS 5837 (section 4.6.1) are used to calculate the RPA.

This method is applied for all trees where RPA type is recorded as "Standard" in the Tree Schedule, and means that a standardised, circular rooting pattern has been assumed and applied.

RPAs are not shown for trees where removal is recommended, RPA type is marked as "Adjusted" in the Tree Schedule. This report does not include any trees where RPAs have been adjusted for other reasons.

2.5 ***Tree Preservation Orders:*** TPO 9 (Group 4) applies to the woodland area southwest of the Mill drive. Trees covered by the Order are identified in the Tree Schedule.

2.6 ***Ash dieback:*** Many of the trees considered in this report are common ash (*Fraxinus excelsior*) which is susceptible to *Chalara* dieback, now known to be caused by the fungal pathogen *Hymenoscyphus fraxineus* (previously called *Chalara fraxinea*).

This pathogen is associated with rapid decline of ash trees around the British Isles, having first been confirmed here in 2012. Dieback associated with the disease can already be seen throughout the

Blackpool area, both on the Mill site and in the nearby woodlands.

Current experience suggests that this dieback can cause severe loss of vitality in the tree within a few years of infection; this makes the affected trees far more susceptible to other pathogens, and simultaneously less able to put on adaptive growth to compensate for defects and weaknesses.

For the purposes of tree categorisation, this report follows the guidance issued by the Tree Council in their "Ash Dieback Toolkit", within the framework of the *BS 5837:2012* guidelines.

Ash trees are ***not*** recommended for removal unless they are in Health Class 3 or 4 as defined in the Tree Council Toolkit (in some cases, badly affected trees are retained for their habitat value, where this can be done safely).

Trees by category:
- A
- B
- C
- U
- Felled
- Root Protection Areas

Tree recommendations:
- Remove
- Retain
- Retain w. tree work
- Tree groups and hedges
- Construction Exclusion Zone

TPP_2mMeshFence
- 1m Flexi-fence
- 2m Steel mesh fence
- New Estate rail fence

Drawing Notes

1 - All dimensions are taken to structure unless indicated.
2 - Any errors indentified in the drawing to be reported to architect immediately
3 - Topographical survey provided by others

Structure
Existing Tarmac Surface
Existing Gravel Surface
New Gravel Surface
Cut Grass
Wild Flower Meadow Grass
New Paving

Landscape Plan Key Notes

1	Existing entrance gates & railings to be retained
2	New Metal Estate Fencing
3	Wild Flower Meadow grass with cut grass verge
4	Cut grass
5	existing tarmac passing bay to be retained
6	New Metal Estate Fencing to surround Leat, with wild flower margin
7	low level timber post & rail to be located round water course level drop
8	low level timber post & rail to be located around parking bays
9	Existing gravel area to be extended to house parking bays
10	Wild Flower Meadow grass with mown pedestrian pathways leading to existing field gate access to Meadow beyond
11	Existing field gate access to Meadow beyond
12	Access area - Paths TBC. new railings to be located towards quay side to prevent public access
13	existing paved Terrace to be retained with open handrial to perimeter - see RAMP details
14	new paved ramp access
15	existing paved terrace to be retained. raised planters with cut box hedge & lavender to be located along level drop edge
16	new metal Estate style vehicle gate (maintenance access only) with side pedestrian gate.

1:500 (at A3)

0 5 10 15 20 m

Points labelled with letters are referred to in the report text.This plan should be used in conjunction with the Arboricultural Method Statement. See Tree Schedule for extent of Root Protection Areas (distance from tree stem).

Based on Landscape Plan AL.0.101 Rev D by Graham Frecknall Architecture and Design on behalf of Bluestone. Tree positions and measurements taken from topo survey provided by Bluestone and tree report by Steve Lucocq / Arb TS, April 2017, with tree categories updated May 2022.

4 - Arboricultural method statement

Please refer to the annotated plan drawings (above).

4.1 ***Tree works*** shall be carried out prior to the installation of tree protection fencing , and before the commencement of works on site, except where deferral of tree works is necessary to avoid disturance of nesting birds or otherwise on ecologist's advice in relation to bats and Potential Roost Features (PRFs).

The following preliminary works are required:

Felling of Trees 586-8, 674, 678 and 914. These are all ash with advanced dieback. (All except 674 are within the TPO area)

Cutting back (coppicing) of 1x multi-stemmed goat willow in Group 1 (on the river bank). This low-growing tree is already hanging in the water and catching debris during high water levels, and it is liable to be damaged by the current, which risks causing further erosion of the river bank. By cutting back and allowing to re-grow, the bank will continue to be consolidated by its roots without the risk of sudden damage and subsequent undermining of the bank. The work shall be done outside of the bird nesting season.

Felling of Tree 678: this is a small Cat C sycamore growing too close to the Forge building for retention; it has damage to roots from nearby trenching. (Non-TPO tree)

Crown reduction of Tree 552 (this TPO'd oak has extensive fungal colonisation at base, and is close to the minor road. Reduction is recommended to prolong the life of the tree, and is subject to ecologists advice because of PRFs).

Aerial inspection and appropriate reduction of Tree 555 (TPO'd sycamore with cavity, growing near the road, the work is recommended for safety reasons)

Deadwood removal on Trees 671 and 672 (non-TPO'd). These are ash growing in a public area of the site. Dieback does not currently warrant removal of the trees but deadwood should be removed to avoid a hazard.

4.2 ***Temporary ground protection during construction:*** No temporary ground protection measures are specified for this site, other than Construction Exclusion Zones which are described below.

4.3 ***RPA Construction Exclusion Zones*** are indicated with red shading on the Tree Protection Plan (above). There will be no incursion into these areas during construction works whatsoever. These areas will not be used for storage of any materials or machinery (including temporary use or for contractors' private vehicles).

Construction Exclusion Zones will be surrounded by tree protection fencing, to the specification stipulated below, prior to commencement of works, as indicated on the Tree Protection Plan. All fencing should be installed ***after*** preliminary tree work has been carried out , but ***before*** any other site work, including clearance is carried out, and ***before*** any other materials or machines are taken onto the site.

Works Exclusion Zones will remain fenced until all construction and associated work is complete and machinery and waste materials (etc.) have been entirely removed from the site.

Soft landscaping within areas covered by Construction Exclusion Zones shall be carried out using non-mechanised techniques, i.e. there shall be no removal of topsoil, alteration of soil levels, ploughing or rotovation within these areas. Vegetation control and clearance of paths with mower and strimmer is acceptable.

Please see the section below regarding the perimeter of the woodland area.

4.4 ***Tree protection fencing:*** Fencing positions are marked on the Tree Protection Plan (above). Minimum distance of fences to tree trunks can be confirmed by consulting the Tree Schedule (Section 2 above). Light pruning of low-hanging branches to allow fence installation is acceptable providing it is carried out to a high standard by suitably qualified arborists.

Tree protection fencing should not be removed or altered during the construction phase without the prior approval of the Local Planning Authority.

2m rigid mesh fence is the standard / default specification for tree protection. Please note that flexible and readily-movable barriers, marker tape etc. ***are not*** appropriate for tree protection and should not be used except for temporary applications and as markers when initially laying out the site. Rigid mesh fence means two metre high steel mesh perimeter barriers, as per specifications in BS 5837 (2012) section 6.2.2; see diagram / specifications in Appendix 4 of this report. This is commonly known as "Heras Fence" though other suppliers are available. This should ordinarily be fixed in position and braced to ground poles; where this is not possible because of the terrain, or where fencing is to be installed on existing hard surfacing, base plates / blocks may be used. At all times the fencing should be firmly fixed, and braced if necessary.

1m Flexi fence means one metre high high-visibility plastic fence secured with steel ground pins. This is specified to indicate the foot of the hedgerow (C-D on the plan above) and shall be positioned at the field / ground level at the foot of the existing hedgebank. The purpose of this is to indcate the outer perimeter of landscaping works, which will not affect the hedgebank.

Estate rail fence means permanent metal rail fencing as specified on the Landscaping plan. This is used to permanently mark the woodland boundary, in accordance with its historic position and in keeping with the aesthetic of the site. Installation shall be via knocked-post, screw auger or screw-pile ***only:*** no trenching shall be used to install the fence, to minimise impact on trees near the woodland boundary. There shall be no use of machinery other than an agricultural tractor for installation of this fencing.

Note that this metal fencing is sufficient to afford tree protection to the woodland area, as there are no construction works immediately adjacent, subject to the following proviso:

If the Estate rail fence is not installed prior to hard landscaping in the vicinity of Points B and C, 2m steel mesh ("Heras") fence shall be temporarily installed in its stead along the fenceline B-C, in advance of the hard landscaping works in this area, and retained *in situ* until the works are completed or the permanent fencing is installed.

Note that there is already 2m steel mesh "Heras" fence in place along the southwest side of the main driveway and its layby, to the northeast of the final fencing position along the line A-B.

4.5 ***Installation of permanent surfacing within RPAs:*** Not applicable to this site.

4.6 ***Installation of permanent or semi-permanent structures within RPAs:*** Not applicable to this site.

4.7 ***Tree work and bats:*** All bats and their roosts are highly protected in law, and a Licence may be required to carry out tree work which affects bat roosts. An assessment of bat roost potential shall be made prior to implementing all tree work specified in this report, and a suitably qualified ecologist's advice followed for work on all trees where bat roost potential is "medium" or higher, as defined in the current Bat Survey Guidelines.

4.8 ***Supervision by project arboriculturalist:*** the project arboriculturalist should carry out site checks to confirm and document completion of works as follows:

1. Completion of tree works
2. Installation of tree protection fencing
3. Confirm completion of works and removal of materials prior to
4. Removal of tree protection fencing

5 - Landscaping and tree planting

5.1 ***Hard landscaping:*** Please refer to proposals supplied separately, and Proposed Landscape Plan AL.0.101. Rev D.

5.2 ***Tree planting:*** The following tree planting specification is intended to provide ***mitigation*** for the removal 11 diseased ash and one sycamore as specified above, in addition to one ash and one sycamore which were felled in the last five years (14x trees total) . It should be noted that almost all tree impacts are due to ash dieback damage which has occurred irrespective of the development.

In addition it provides ***enhancement*** by means of additional tree planting. This is an opportunity to reduce the long-term impact of ash dieback disease at the site, by establishing suitable native broadleaf successor trees and increasing species diversity at the site, also improving landscape quality and enhancing biodiversity.

The following tree planting shall be undertaken in the two planting seasons (winter) following completion of the construction works (for specifications see below):

Planting of 50x site-native broadleaves in the woodland area (south of point B) as per detailed specification below. These trees are specified as smaller "forestry" stock for suitability to the shaded environment and easier establishment. Exact tree positions within the woodland to be selected by Bluestone's forester in accordance with micro conditions within the wood: it is intended that oak (a light-demanding species) be planted near the woodland edges, while more shade-tolerant lime and hazel are suited further into the wood, and alder in wetter ground.

Planting of 7x light standard trees as landscaping enhancement: 1x tree as direct replacement for Tree 674, with a further 4x trees along the site boundary E-F, and two trees to the driveway side of the fenceline A-B.

5.3 ***Schedule of trees required:***
50x trees of "woodland" mix, size 40-60cm bare root planting stock, as follows:

10x sessile oak (*Quercus petraea)*
15x small-leaved lime (*Tilia cordata)*
15x hazel (*Corylus avellana)*
10x alder (*Alnus glutinosa)*

7x trees of Light Standard size or larger, i.e. 6-8cm minimum girth when measured at 1m from ground:

3x sessile oak (*Quercus petraea)*
2x small-leaved lime (*Tilia cordata)*
2x wild cherry (*Prunus avium)*

5.4 ***Planting method:*** The "woodland mix" must be planted in winter when the trees are dormant. The trees can be planted without support in suitable positions within the woodland, but it is advisable to mark their position with stakes or canes (or use spiral rabbit guards) for ease of finding the trees when weeding.

Suitable positions should be found after considering ground conditions at the time of planting, note that:
- Sessile oak is better suited to positions with more light, i.e. woodland edges and within the woodland where canopy cover is particularly sparse due to dieback.
- Lime and hazel are both more shade-tolerant
- Alder is suited to wetter / seasonally waterlogged positions
- Hazel is appropriate for woodland edges close to buildings, terraces etc. because it will not grow large enough to become a safety concern, and can be readily coppiced if it becomes problematic.

The larger "light standard" trees are to be planted in the open area around the site perimeter as described above. Containerised stock can be planted at any time of year, though winter is preferable, and regular watering will be necessary for trees planted in spring / summer. These trees should be planted with appropriate support, i.e. stakes / ties which do not rub against the tree, and which allow a small amount of movement and do not hold the tree too rigidly.

5.5 ***Monitoring and maintenance:*** All trees should be checked at least twice annually and weeded as necessary until they are fully established, i.e. growing strongly and at a size clearly beyond all competing vegetation. Small stock established in woodland are unlikely to need watering, but the larger semi-standard trees should be watered as necessary to ensure establishment.

Appendix 1 - References

This report has been designed in accordance with current industry Best Practice and the latest published guidance. The following reference list includes relevant standard texts and general guidance documents which may be of use to clients.

BTHK 2018. Bat Roosts in Trees - A Guide to Identification and Assessment for Tree-Care and Ecology Professionals. **Andrews and Gardener.** Exeter: Pelagic Publishing, 2018.

BS 5837 - Advanced: Tree assessment for planning. **Barrell.** Arboricultural Association, 2016.

Site Guidance Note 3: Ground protection. **Barrell Tree Consultancy,** 2018.

Site Guidance Note 9: Installing / upgrading surfacing in root protection areas. **Barrell Tree Consultancy,** 2018.

Site Guidance Note 10: Installing structures in root protection areas. **Barrell Tree Consultancy,** 2018.

British Standard BS 3998:2010 Tree work – Recommendations. **British Standards Institute,** 2010.

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Guidance on Managing Health and Safety in Forestry – **Forest Industry Safety Accord (FISA),** 2014.

Geosynthetics Cellweb ® TRP Installation Guide. **Geosynthetics Ltd.** 2016.

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Five Steps to risk assessment – **Health and Safety Executive,** 2012 (revised).

Managing health and safety in forestry – **Health and Safety Executive,** 2004.

Collins Tree Guide - **Johnson.** Collins, 2004.

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Hazards from trees – a general guide. **Lonsdale.** Forestry Commission, 2000.

Updated field guide for Visual Tree Assessment. **Mattheck.** 2007.

The body language of trees – a handbook for failure analysis. **Mattheck and Breloer.** The Stationary Office, 1994.

A field guide to the trees of Britain and Northern Europe. **Mitchell.** Collins, 1974.

Common sense risk management of trees – guidance on trees and public safety in the UK for owners, managers and advisers. **National Tree Safety Group**. Forestry Commission, 2011.

Veteran trees: a guide to good management. **Read.** English Nature, 2000.

The Countryside Access Design Guide. **Scottish Natural Heritage.** 2002

Diagnosis of ill-health in trees. **Strouts and Winter.** Forestry Commission / The Stationary Office, 2004.

Trees: their use, management, cultivation and biology. **Watson, B.** Crowood Press, 2006.

Tree pests and diseases - an arborist's field guide. **Watson, G.** Arboricultural Association, 2013.

Fungi on trees - an arborist's field guide. **Watson, G and Green.** Arboricultural Association, 2011.

Manual of wood decays in trees. **Weber and Mattheck.** Arboricultural Association, 2003.

Appendix 2 - Species list

Common name	Scientific name	Abbreviation	Type
Alder	*Alnus glutinosa*	**AL**	Broadleaf
Ash	*Fraxinus excelsior*	**AH**	Broadleaf
Blackthorn	*Prunus spinosa*		Shrub
Cherry (Wild)	*Prunus avium*		Broadleaf
Hawthorn	*Crataegus monogyna*	**HAW**	Broadleaf
Hazel	*Corylus avellana*	**HZ**	Broadleaf
Holly	*Ilex aquifolium*	**HO**	Broadleaf
Lime (Small leaved)	*Tilia cordata*		Broadleaf
Oak (Sessile)	*Quercus petraea*	**SOK**	Broadleaf
Sycamore	*Acer pseudoplatanus*	**SY**	Broadleaf
Willow (Goat)	*Salix caprea*		Broadleaf
Willow spp.	*Salix spp.*	**WI**	Broadleaf

Appendix 3 - Tree work and the law

A.3.1 ***Context:*** Trees and woodlands have protection in law, however it is usually possible to obtain the necessary consents to carry out tree work for safety reasons. In some cases no consents are necessary. Clients are advised to consider whether permissions are necessary well in advance of carrying out work, as applications for consent can take some time.

The principle areas in which consents may be required for working on trees, and other related regulations, are briefly described here. Please note that this summary is not exhaustive and other legal constraints, obligations and liabilities may apply.

A.3.2 ***Felling licences:*** A Felling Licence is required to fell more than 5 cubic metres of timber in any calendar quarter (or 2 cubic metres if any of the material is to be sold).

- The volume limits apply to all the property within the ownership
- Felling licences are not necessary for tree surgery work in which the tree will be retained (although section-felling of an entire tree may require a licence).
- It is possible to fell trees under an exemption for "trees that are dangerous or cause a nuisance". We advise that this exemption should ***only*** be used if a tree is immediately hazardous, and felling is urgently necessary to protect people or property. If it is possible to do so safely, photographs should be taken of the dangerous tree, to be used if there is a subsequent investigation into the case.
- Felling licences are not required to fell trees on land where ***full planning consent*** has been approved by the Local Planning Authority. Note that conditions pertaining to trees and their management may apply.
- Various other exemptions may apply. For further details please refer to the Natural Resources Wales website.

A.3.3 ***Tree Preservation Orders (TPOs) and Conservation Areas*** are administered by the Local Planning Authority. Unless otherwise stated no checks for these areas were made during the preparation of this report.

- Consent must normally be obtained from the Local Authority for felling or tree surgery work on trees within TPOs / Conservation Areas
- Trees which are "dying, dead or dangerous" may be cut down or pruned without the Authority's consent; however as above clients are advised to use this exemption with caution, and ideally take photographs of the tree before carrying out the work.

A.3.4 ***All birds, their nests and eggs*** are protected in law (Wildlife and Countryside Act 1981). It is an offence to intentionally damage or destroy the nest of any wild bird while it is in use or being built. Some birds (such as "Schedule 1" birds) have a higher level of protection, which extends to disturbance of the bird.

The bird nesting season typically runs from 1st March to the end of August. Where there is potential for nesting birds to be affected by works, the works should be implemented outside of the nesting season. If this is not possible, checks should be made by an appropriately qualified person before commencing works. Further advice should be sought from an ecologist in situations where birds may be affected.

A.3.5 ***European Protected Species***: Some animal species have a higher level of protection under European Protected Species (EPS) regulations. These include otter, dormouse and all species of bat which are wild in the UK.

- It is an offence to harm, injure, kill or disturb these species, or damage or destroy their "resting places", without a valid EPS licence.
- This means, for example, that damage to a bat roost (except under a valid EPS licence) is an offence, even if it is accidental / incidental, and even if no bats are present at the time.

A.3.6 ***Protected sites:*** Tree work and other related work such as track construction and timber extraction may be affected by conservation designations (e.g. Sites of Special Scientific Interest, Special Areas of

Conservation, Special Protection Areas etc.). In some cases a Consent must be obtained from the Competent Authority (usually Natural Resources Wales).

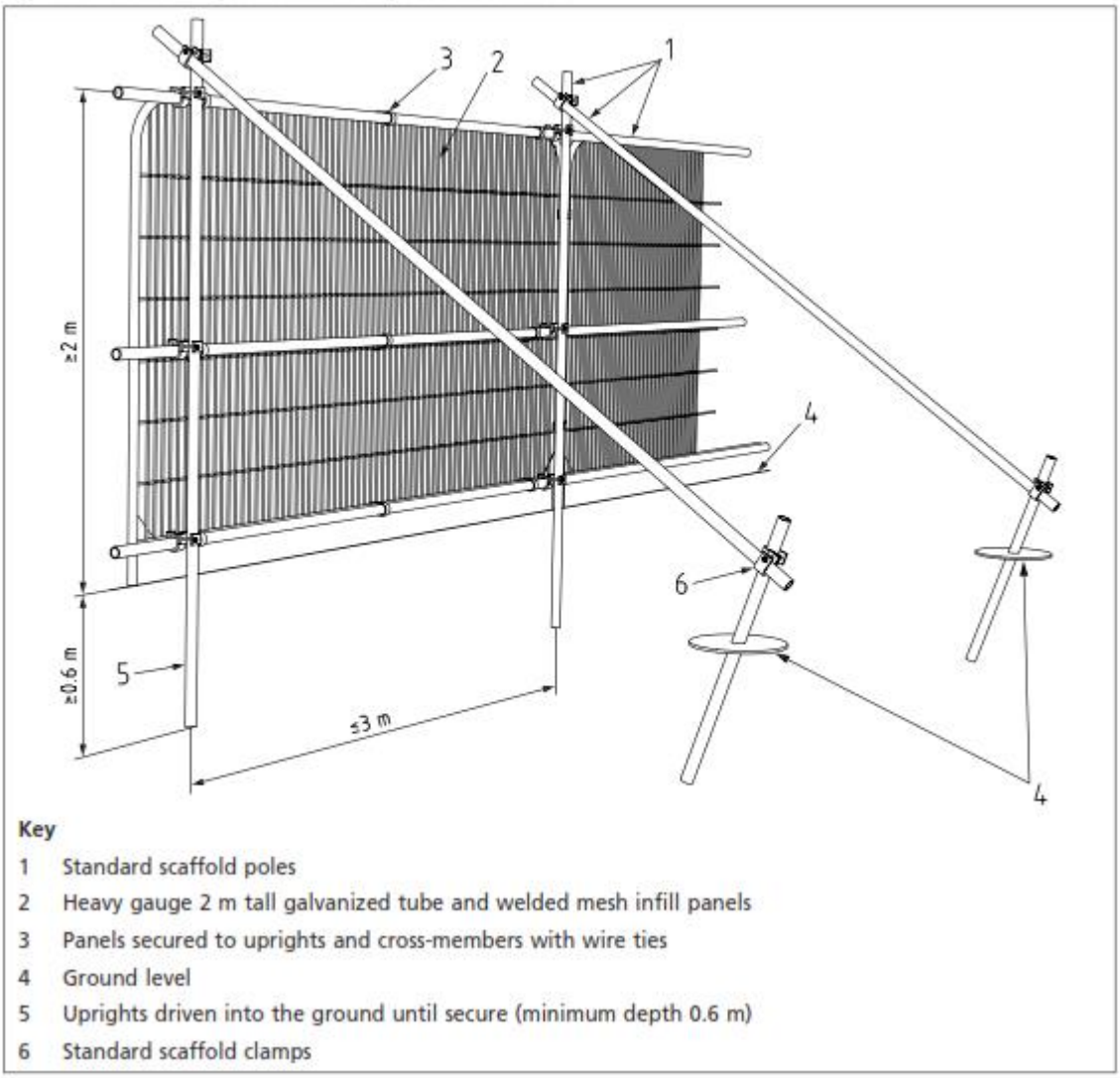
A.3.7 ***Contractual constraints:*** Work on trees and hedgerows may be constrained by contractual arrangements, including participation in agricultural, woodland and land stewardship grant schemes. If tree or hedgerow work contravenes scheme rules, individual contractual arrangements, or causes cross-compliance issues, it could cause the landowner to incur serious financial penalites and / or delayed payments. On land where grant is claimed, it is advisable to check with the landowner or their agent before undertaking tree work.

Private contracts (including terms of leaseholds and tenancy arrangements) should also be considered before carrying out tree work.

Appendix 4 - British Standard 5837 barrier specification diagrams

Reproduced from the British Standard, with permission:

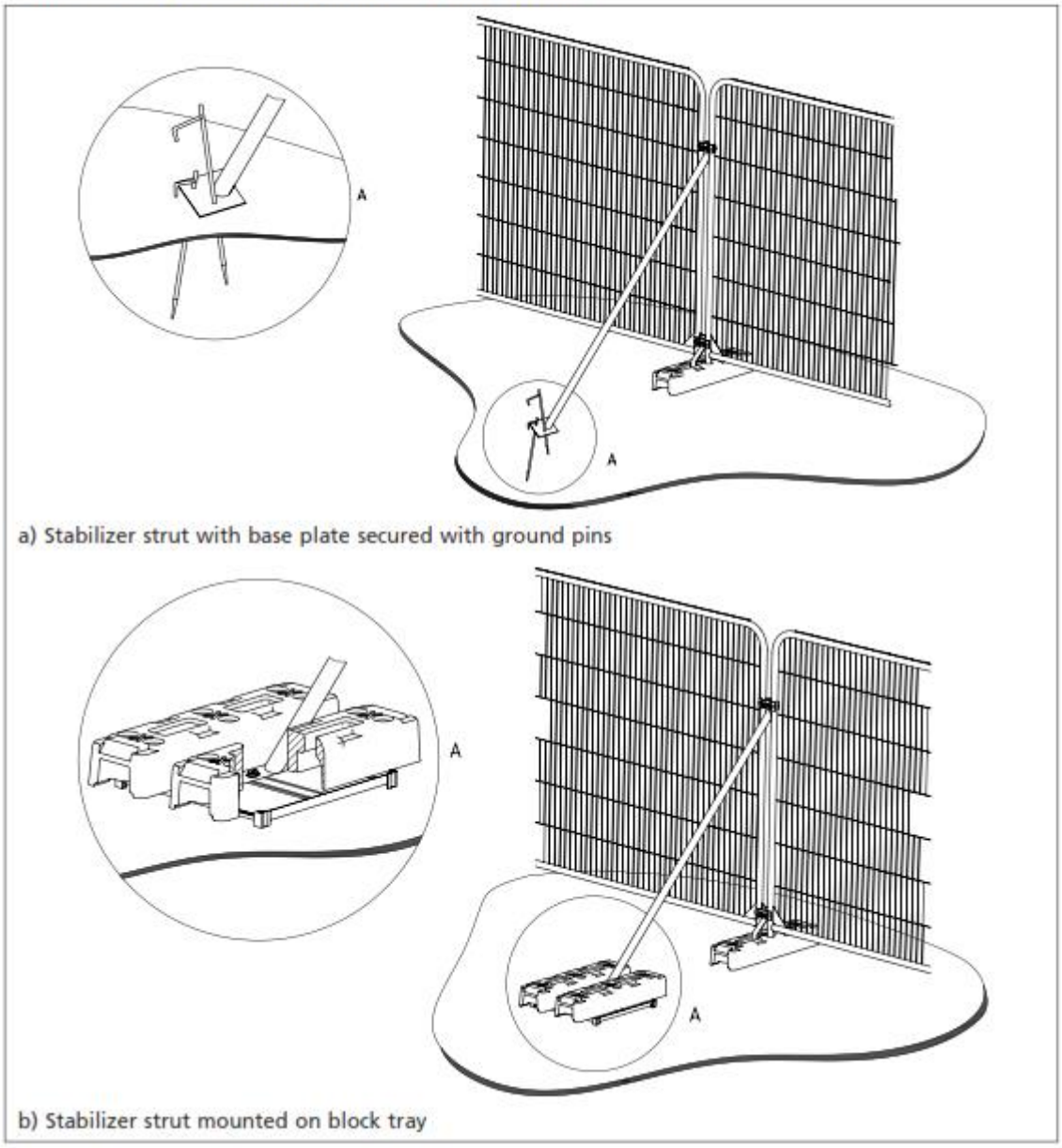
Figure 2 **Default specification for protective barrier**



Key

1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

Figure 3 **Examples of above-ground stabilizing systems**



a) Stabilizer strut with base plate secured with ground pins

b) Stabilizer strut mounted on block tray

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APPENDIX 6 -

Incident Response Plan

Incident Response Plan (IRP):

Black Pool Mill Riverbank Wall Reconstruction – Eastern Cleddau

Contents:
1. Introduction
2. Site Environmental Sensitivities
3. Types of Environmental Incidents Covered
4. Emergency Contact Procedures
5. Incident Response Roles
6. General Incident Response Procedure
7. Spill Response Procedures
8. Sediment Control Incident Response
9. Concrete Release Response
10. Fish Encounter Procedure During Dewatering
11. Flood Event Response
12. Discovery of Protected Species
13. Archaeological Discovery Response
14. Unexpected Contamination Procedure
15. Training & Awareness
16. Incident Reporting & Review

1. Introduction:

This Incident Response Plan (IRP) sets out procedures to be followed in the event of environmental incidents occurring during the reconstruction of the retaining wall at Black Pool Mill, Eastern Cleddau. The purpose of this plan is to ensure that any incident with the potential to affect the water environment, designated ecological receptors, site personnel or members of the public is managed promptly and effectively.

This IRP supports compliance with **Marine Licence CML2492** and forms part of the Construction Environmental Management Plan (CEMP).

The procedures apply to all personnel working on site during:

- Cofferdam installation
- Dewatering operations
- Excavation and foundation works
- Concrete placement
- Material handling
- Plant operation within or adjacent to the river channel

2. Site Environmental Sensitivities:

The works take place adjacent to the **Eastern Cleddau**, which forms part of:

- River Cleddau SAC
- Milford Haven Waterway SSSI
- Pembrokeshire Marine SAC

Key receptors requiring protection include:

- Migratory fish species
- Otter

- Water quality
- Riparian habitats
- Channel morphology

As a result, rapid response to pollution incidents is essential.

3. Types of Environmental Incidents Covered:

This IRP applies to:

- Fuel or oil spillages
- Concrete or cementitious material release
- Excessive sediment discharge during dewatering
- Plant leaks within the working area
- Loss of materials to the river channel
- Unexpected fish presence requiring rescue
- Flooding overtopping the cofferdam
- Unexpected protected species presence
- Discovery of archaeological material
- Unexpected contamination procedure

4. Emergency Contact Procedures:

Immediate emergency *(Risk to life or major pollution)*	Environmental Incident *(Pollution risk)*
Dial: 999 **Request**: • Fire & Rescue Service • Ambulance • Police (if required)	**Notify**: Natural Resources Wales (NRW) Incident Hotline - 0300 065 3000 Marine Licence compliance contact: NRW Marine Licensing Team - marinelicensing@cyfoethnaturiolcymru.gov.uk **Provide**: • Location (Black Pool Mill, Eastern Cleddau) • Nature of incident • Material involved • Estimated quantity of pollutant (if applicable) • Whether the river has been affected • Actions already taken

5. Incident Response Roles:

Site Manager (Responsible Person)	Principal Contractor
Responsible for: • Stopping works if required • Assessing severity • Implementing containment • Notifying NRW where necessary • Coordinating response actions	Responsible for: • Ensuring spill kits are available • Implementing containment measures • Recording incidents • Arranging specialist cleanup where required • Maintaining COSHH Assessment file

6. General Incident Response Procedure:

If an environmental incident occurs:

STOP

- Cease works immediately where necessary
- Shut down plant if safe to do so
- Isolate source of pollution

CONTAIN

- Deploy spill kits
- Prevent entry to river
- Protect drainage pathways
- Install absorbent booms if required

NOTIFY

- Inform:
  - Site Manager
  - Principal Contractor
  - NRW (if pollution risk exists)

CLEAN UP

- Recover spilled material
- Remove contaminated absorbents
- Dispose via licenced waste contractor

INVESTIAGTE & RECORD

- Complete incident record
- Identify root cause
- Implement corrective actions
- Restock spill kits

7. Spill Response Procedures:

7.1 Spill Response Principles:

All spill incidents will follow the established spill response principles in line with:
STOP – CONTAIN – NOTIFY – CLEAN UP – INVESTIAGTE

The full Spillage Emergency Response Plan is included at the rear of this IRP.

7.2 Likely Spill Types at Black Pool Mill:

Potential spill sources include:

- Diesel from plant
- Hydraulic oils
- Lubricants
- Wet concrete
- Cement wastewater
- Sediment-laden discharge during pumping

7.3 Minor Spill Procedure:

Defined as:

- Small quantities
- Contained within the working area
- No entry to river channel

Response:

1. Stop source of spill
2. Deploy absorbent pads / booms
3. Prevent migration toward river
4. Collect contaminated materials
5. Dispose appropriately
6. Record and investigate the incident

7.4 Major Spill Procedure:

Defined as:

- Uncontrolled release
- Spill entering the river
- Spill entering the drainage pathway
- Large fuel release
- Concrete entering the channel

Response:

1. Stop works immediately
2. Shut down source if safe
3. Deploy spill containment
4. Protect river channel immediately
5. Contact NRW Incident hotline
6. Notify Site Manager
7. Arrange specialist cleanup contractor if required
8. Record and investigate the incident

Works will not recommence until the incident has been controlled

7.5 Spill Kit Provision:

Spill kits will be located:

- Within the site compound

- Adjacent to refuelling area
- Within working area near cofferdam operations
- On plant where practicable

Spill kits will contain:

- Absorbent pads
- Absorbent booms
- Drain covers
- Disposal bags

Used materials will be removed for disposal via licensed waste contractor.

8. Sediment Control Incident Response:

If excessive turbidity occurs during dewatering:

- Pumping will cease immediately
- The filtration system will be checked
- The hay bale secondary filtration will be deployed if required
- The discharge location will be inspected
- NRW will be consulted if the plume persists

9. Concrete Release Response:

If wet concrete enters the river:

- Works stopped immediately
- Release contained where practicable
- Affected material recovered
- NRW notified
- Discharge pathway inspected before restart

10. Fish Encounter Procedure During dewatering:

The following sequence shall be carried out prior to and during the dewatering of the cofferdam:

1) NRW fisheries shall be consulted by the licence holder, or appointed agent, for agreement on the appropriate response prior to dewatering;

2) The isolated area will be inspected during dewatering;

3) Should fish be observed within the cofferdam area, pumping shall cease immediately;

4) If required, a suitably qualified ecologist will attend to carry out the fish rescue. The Principal Contractor has engaged with Sian Williams of Kite Ecology who will be on call during dewatering and is based 30 minutes from Black Pool Mill, which will ensure a quick response time in the event that fish rescue is required;

5) Any fish rescue / relocation from the cofferdam area back to the main river channel will be undertaken by the appropriately qualified ecologist (Sian Williams, Kite Ecology) and in line with the method agreed with NRW fisheries;

6) Pumping will only recommence once points 4 and 5 of the above process have been successfully carried out.

11. Flood Event Response:

If rising water levels threated the cofferdam:

- Works will be halted
- All plant will be removed from the working area
- Fuels will be secured in the site compound or taken off site
- Temporary materials will be stabilised or removed where safe
- The site will be monitored until conditions stabilise

12. Discovery of Protected Species:

If otter, bats, nesting birds or other protected species are discovered:

- The works in the affected area will cease
- An exclusion zone will be secured
- An ecological advisor will be notified
- NRW will be consulted if required

13. Archaeological Discovery Procedure:

In the event that artefacts are discovered:

- Works will cease immediately
- The discovery location must be protected
- Client must be notified
- RCAHMW / Swansea Museum must be notified under Marine Licence Condition 3.23

14. Unexpected Contaminant Procedure:

Ground investigation works have identified made ground across the site, including isolated occurrences of asbestos within soils. However, due to the inherent variability of made ground, there remains the potential for previously unidentified contamination to be encountered during excavation works.

This procedure sets out the actions to be taken in the event that unexpected contamination is discovered, including suspect asbestos-containing materials (ACMs), staining, odours, buried waste or unusual ground conditions.

Indicators of potential contamination:

- Visible asbestos-containing materials (e.g. fragments, fibres, sheeting)
- Unusual soil discolouration or staining
- Strong or unusual odours (e.g. hydrocarbons, chemicals)
- Presence of buried waste materials (e.g. metal, plastic, drums)
- Oily residues or sheen
- Unexpected groundwater conditions or discoloured water

All site personnel will be made aware of these indicators through site inductions and toolbox talks.

Procedure:

If unexpected contamination is encountered, the following procedure shall be implemented:

STOP:

- Works in the affected area will cease immediately
- Plant will be shut down if safe to do so
- The area will be isolated to prevent further disturbance

SECURE:

- An exclusion zone will be established
- Access will be restricted to authorised personnel only
- Measures will be taken to prevent spread of contamination (e.g. sheeting, damping down)

NOTIFY:

- The Site Manager and Principal Contractor will be informed immediately
- The Environmental Manager (if applicable) will be notified
- Natural Resources Wales (NRW) will be contacted where there is a risk to controlled waters or significant contamination is identified

Assessment & Investigation:

A suitably qualified geotechnical specialist will be consulted to assess the nature and extent of the contamination. Additional sampling and laboratory analysis will be undertaken where required. Materials will be assessed in accordance with current waste classification guidance (e.g. WM3).

Control Measures:

Based on the findings of the assessment, appropriate control measures will be implemented, which may include:

- Controlled excavation techniques
- Segregation of contaminated and non-contaminated materials
- Use of appropriate PPE and RPE
- Dust and fibre suppression measures
- Controlled storage of contaminated materials
- Specialist handling or removal procedures

Waste Management:

- Any contaminated material will be classified prior to removal from site
- Disposal will be undertaken via appropriately licensed waste carriers to suitably permitted facilities
- Hazardous waste procedures will be followed where applicable
- All waste transfer and/or hazardous waste consignment documentation will be retained

Restart of Works:

Works in the affected area will only recommence once:

- The contamination has been assessed and appropriately managed
- Control measures have been implemented and deemed effective
- Relevant approvals or agreements have been obtained (where required)

Recording & Reporting:

- All incidents of unexpected contamination will be recorded in the site records
- Details of the material encountered, actions taken and disposal routes will be documented
- Records will be made available to NRW upon request

15. Training & Awareness:

All site personnel will receive:

- Site induction covering pollution risks
- Toolbox talk on spill procedures
- Instruction on spill kit use
- Emergency contact procedures

16. Incident Reporting & Review:

Following any incident:

- Incident report completed
- Root cause identified
- Corrective actions implemented
- Procedures updated if necessary
- Spill kits restocked

Records will be retained by the Principal Contractor and made available to NRW on request.

SPILLAGE EMERGENCY RESPONSE PLAN

What to do if you find a spillage of any substance at the Black Pool Mill construction site.

STOP – CONTAIN – NOTIFY – CLEAN UP – INVESTIGATE & RESTOCK

STOP

The most senior person on site becomes the **RESPONSIBLE PERSON** and **STOPS** work immediately

Identify the substance spilt, refer to the spillage IRP, obtain the SDS, COSHH Risk Assessments and required PPE e.g. disposable gloves.

STOP anymore material spilling (i.e. switch off source e.g. plant) **ONLY** if safe to do so

CONTAIN

CONTAIN the spillage using the spill kits.

Check that the spill has not reached the river channel or drainage pathways - stop or divert the flow if possible. Deploy spill kits to prevent the spilled substance from entering the drainage pathways. **DO NOT** wash spillage / runoff into the drainage system.

NOTIFY

NOTIFY THE SITE MANAGER immediately and give the following info:

- Whether the material has entered the drainage pathways, river channel or is affecting the environment
- Substance(s) involved
- Location
- Cause of the incident
- Volume involved

Site Manager must be **NOTIFIED** immediately and inform the relevant person(s) i.e. regulatory body – NRW

CLEAN UP

CLEAN UP the spill:
MAJOR – Call in expert advice / specialist clean up contractor.
MINOR – Clean up the spill using appropriate spill materials.

CLEAN UP, quarantine and dispose of waste material (**as hazardous waste**):

- Bag up used spill materials

INVESTIGATE & RESTOCK

RESPONDIBLE PERSON fills in a Spillage Incident Report form and files it with near misses.

SITE MANAGER **INVESTIGATES** the incident to find root causes, lessons learnt, corrective actions to be taken to prevent reoccurrence. This information is fed into training, toolbox talks, procedural changes, risk assessments, updates to the Spillage IRP if needed etc. **RESTOCK** SPILL KITS.

SPILL TYPE DEFINITIONS:
MAJOR – Cannot be controlled, significant quantities, spilled substance has entered the drainage system.
MINOR – Can be controlled, small-medium quantities, spilled substance has not entered the drains.

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APPENDIX 7 -

Notification Schedule

Appendix 7 - Notification Schedule:

The notification schedule below (**Table 7.1**) summarises the communication requirements arising from Marine Licence CML2492 and reflects the current construction programme prepared by ITH Construction Ltd (**Appendix 2**). Dates will be confirmed with Natural Resources Wales prior to commencement of licensed activities where required.

Table 7.1: Notification Schedule

Condition No.:	Notification Information	Notification Due By:	Contact Detail:	Notes:
3.1.1	Notify NRW Marine Licensing Team of commencement of licensed activities.	13th July 2026	marinelicensing@cyfoethnaturiolcymru.gov.uk	≥10 days before start (23rd July 2026)
3.1.2	Notify Welsh Government Marine & Fisheries Division (Control & Enforcement Branch) of commencement.	13th July 2026	MarineLicencingEnforcement@gov.wales	≥10 days before works (23rd July 2026)
3.1.3	Issue Notice to Mariners and notify fishermen's organisations.	13th July 2026	https://kingfisherbulletin.org/ and local harbour authorities	≥10 days before start (23rd July 2026). Include works description and location
3.1.4	Notify UK Hydrographic Office Source Data Receipt Team.	13th July 2026	sdr@ukho.gov.uk	≥10 days before start (23rd July 2026). Include WGS84 coordinates and marking arrangements
3.2	Submit vessel / vehicle details to Licensing Authority and WG Marine Enforcement.	22nd July 2026	MarineLicencingEnforcement@gov.wales	≥24 hrs before works (23rd July 2026)
3.3	Submit contractor / subcontractor details to Licensing Authority.	22nd July 2026	marinelicensing@cyfoethnaturiolcymru.gov.uk	Principal Contractor already identified in the CEMP (***Doc Ref.: ITH101-CEMP.R0***)
3.4	Notify HM Coastguard National Maritime Operations Centre.	22nd July 2026	zone28@hmcg.gov.uk	≥24 hrs before works (23rd July 2026)
3.6.1	Notify NRW Marine Licensing Team of completion of licensed activities.	By 25th September 2026	marinelicensing@cyfoethnaturiolcymru.gov.uk	Within 10 days of completion (Approx. 15th September 2026)

Condition No.:	Notification Information	Notification Due By:	Contact Detail:	Notes:
3.6.2	Notify WG Marine & Fisheries Division of completion.	By 25th September 2026	MarineLicencingEnforcement@gov.wales	Within 10 days of completion (Approx. 15th September 2026)
3.7.1	Notify Licensing Authority of accidental deposit / emergency event.	Within 48 hrs of incident	marinelicensing@cyfoethnaturiolcymru.gov.uk	Triggered only if incident occurs
3.14	Report pollution incidents via NRW incident hotline.	Immediately if incident occurs	0300 065 3000	Refer to Incident Response Plan (***Appendix 6***)
3.23	Report archaeological artefacts to Marine Portable Antiquities Scheme.	As required if encountered	Nicola.kelly@amgueddfacymru.ac.uk 01792 653763	Swansea Museum regional contact
3.24	Contact RCAHMW to complete the photographic record and survey of the surviving wharf wall in accordance with their normal survey methodology and archiving.	May 2026	julian.whitewright@rcahmw.gov.uk 01970 621 217	Allow sufficient time for Dr Whitewright to complete the record by the 10th June 2026, for submission to NRW by 11th June.
	Submit photographic record / survey of surviving wharf wall for approval to the licencing authority.	11th June 2026	marinelicensing@cyfoethnaturiolcymru.gov.uk	≥6 weeks before commencement (23rd July 2026)
3.25.1	Submit CEMP to Licensing Authority for written approval.	11th June 2026	marinelicensing@cyfoethnaturiolcymru.gov.uk	≥6 weeks before commencement (23rd July 2026)
3.25.2	Notify Licensing Authority of any proposed amendments to approved CEMP.	Prior to implementation of changes	marinelicensing@cyfoethnaturiolcymru.gov.uk	Applies throughout works

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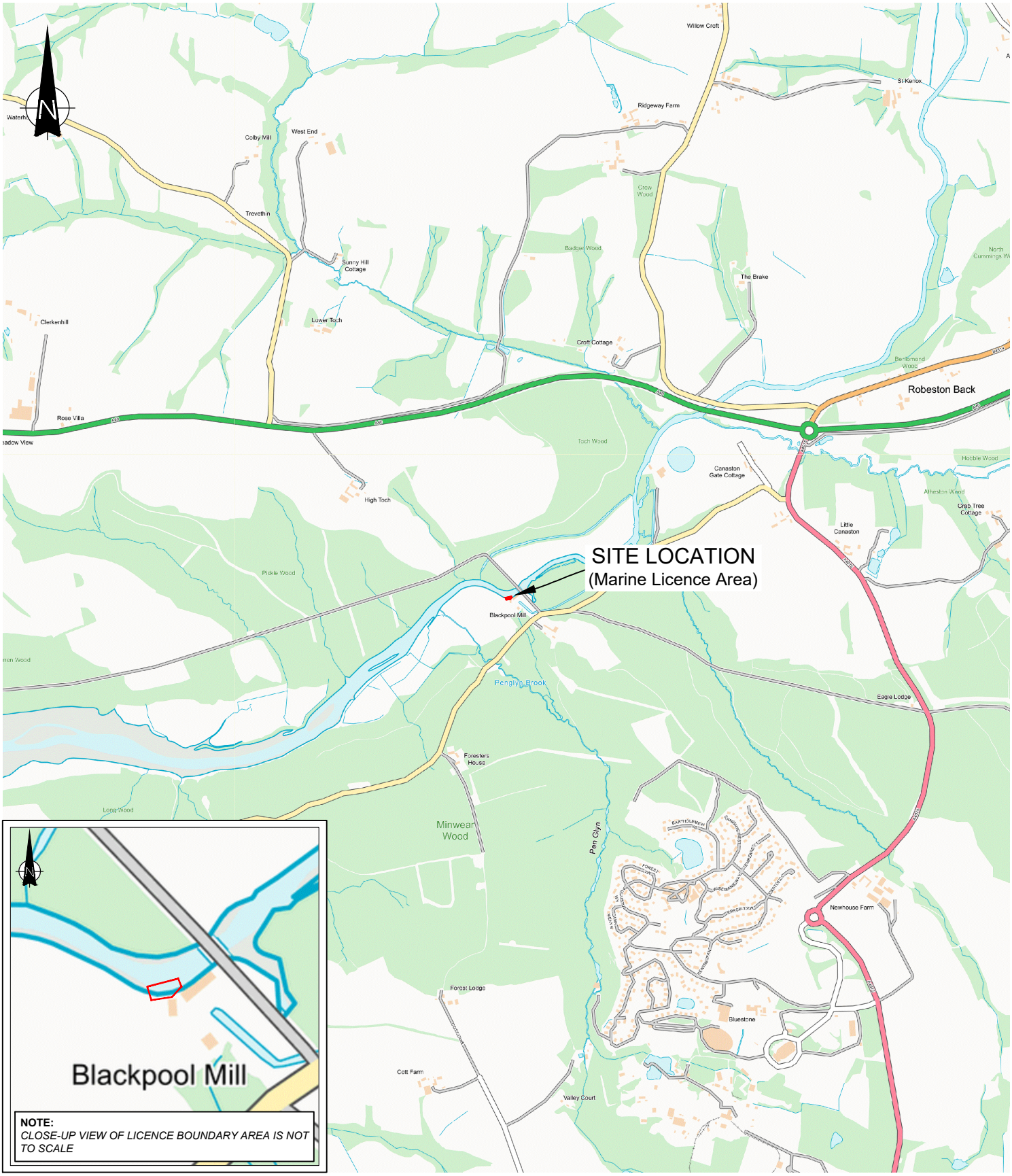
DRAWINGS



CLIENT

ITH CONSTRUCTION LTD

PROJECT

BLUESTONE NATIONAL PARK RESORT - BLACK POOL MILL CEMP

DRAWING TITLE

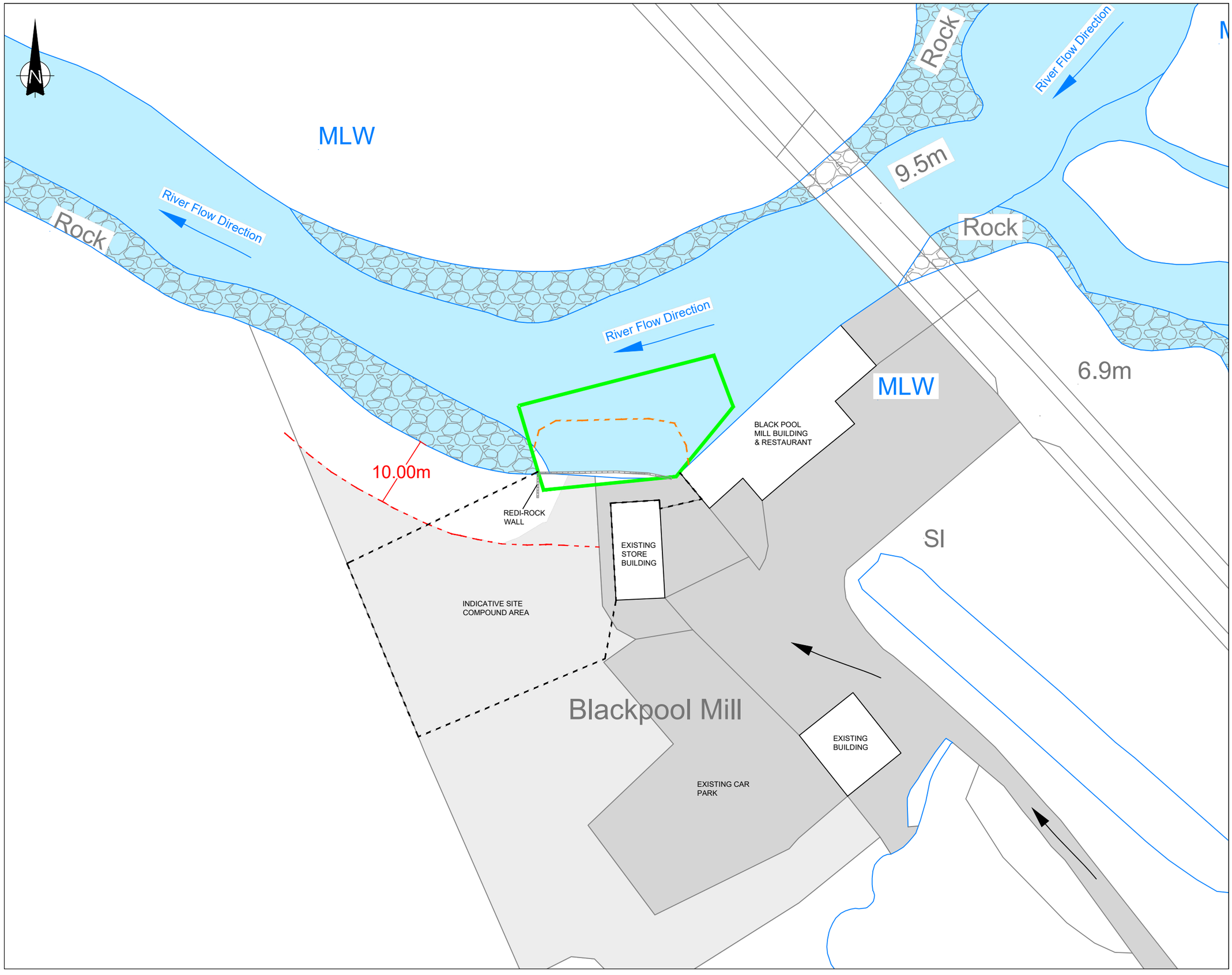
SITE LOCATION PLAN

CHAPPLE Environmental Consulting

REV	DESCRIPTION	DATE	BY

DRAWN BY	DATE
R.C	03/04/2026

SCALE	SHEET	DRAWING NUMBER	REVISION
1:20,000	A4P	ITH101/03/01	0



PROJECT

BLUESTONE NATIONAL PARK RESORT - BLACK POOL MILL CEMP

DRAWING TITLE

INDICATIVE SITE BOUNDARIES PLAN

CLIENT

ITH CONSTRUCTION LTD

KEY

- MARINE LICENCE BOUNDARY
- MAX EXTENT OF COFFERDAM (< ⅓ OF CHANNEL WIDTH)
- 10M BUFFER ZONE FROM RIVER CHANNEL
- INDICATIVE SITE COMPOUND AREA
- TIDAL WATER
- IMPERMEABLE HARDSTANDING
- PERMEABLE HARDSTANDING
- DIRECTION OF TRAFFIC FLOW IN (SITE ACCESS)

REV	DESCRIPTION	DATE	BY

CHAPPLE Environmental Consulting

DRAWN	DATE
R.C	15/04/2026

SCALE	SHEET	DRAWING NUMBER	REVISION
2:1	A3L	ITH101/03/02	0

River Flow Direction

10.00m

REDI-ROCK
WALL

BLACK POOL
MILL BUILDING
& RESTAURANT

ML

EXISTING
STORE
BUILDING

P P P P

INDICATIVE SITE
COMPOUND AREA

EXISTING
BUILDING

Blackpool Mill

PROJECT
BLUESTONE NATIONAL PARK RESORT - BLACK POOL MILL CEMP

DRAWING TITLE
INDICATIVE OPERATIONAL LAYOUT

CLIENT
ITH CONSTRUCTION LTD

KEY

- MARINE LICENCE BOUNDARY
- MAX EXTENT OF COFFERDAM (< ⅓ OF CHANNEL WIDTH)
- 10M BUFFER ZONE FROM RIVER CHANNEL
- INDICATIVE SITE AREAS
- TIDAL WATER
- IMPERMEABLE HARDSTANDING
- PERMEABLE HARDSTANDING
- DIRECTION OF TRAFFIC FLOW IN (SITE ACCESS)
- TEMPORARY PLANT & EQUIPMENT PARKING AREA
- LAY DOWN AREA
- CONSTRUCTION WASTE MATERIAL STORAGE AREA
- LIFTING AREA
- WELFARE ARRANGEMENT
- P SITE PARKING
- REFUELING AREA
- CONCRETE WASH OUT AREA

REV	DESCRIPTION	DATE	BY

CHAPPLE Environmental Consulting

DRAWN	DATE
R.C	15/04/2026

SCALE	SHEET	DRAWING NUMBER	REVISION
4:1	A3L	ITH101/03/03	0