

# Tidal Lagoon Swansea Bay

Construction Site Perimeter Plan

Works 7a

DCO Requirement 10

CEMP Supporting Information

April 2020

|                    |                                         |
|--------------------|-----------------------------------------|
| Document title     | Construction Site Perimeter Plan (CSPP) |
| Document reference | CSPP_4.0_April20_TLSB_DCO10             |
| Revision number    | 4.0                                     |
| Date               | 06/05/2020                              |

#### Version history

| Revision | Date       | Description                                    | Author(s) | Reviewer(s)    | Approval |
|----------|------------|------------------------------------------------|-----------|----------------|----------|
| 1.0      | 09/10/2015 | Pre-application to LPAs                        | RH        | AB/FC/GL       | AH       |
| 2.0      | 25/04/2016 | Pre-application to LPAs incorporating comments | RH/FC     | AH/GL/DS       | AH       |
| 3.0      | 24/03/2017 | Formal submission to LPAs                      | FC        | RH/TW/JP/DS/AD | MU/AH/TC |
| 4.0      | 06/05/2020 | Formal submission to LPAs                      | TC        | RA             | GE       |

## Table of Contents

|          |                                                                                                                |           |
|----------|----------------------------------------------------------------------------------------------------------------|-----------|
| <b>1</b> | <b>Introduction .....</b>                                                                                      | <b>1</b>  |
| 1.1      | The TLSB project .....                                                                                         | 1         |
| 1.2      | DCO Requirement.....                                                                                           | 1         |
| 1.3      | Construction Environmental Management Plan (CEMP) .....                                                        | 2         |
| 1.4      | Adaptive Environmental Management Plan (AEMP).....                                                             | 2         |
| 1.5      | Linkages to other plans.....                                                                                   | 2         |
| <b>2</b> | <b>Scope.....</b>                                                                                              | <b>3</b>  |
| 2.1      | Scope of plan.....                                                                                             | 3         |
| 2.2      | Objectives of the Construction Site Perimeter Plan.....                                                        | 3         |
| 2.3      | Definitions.....                                                                                               | 3         |
| <b>3</b> | <b>Details of fencing.....</b>                                                                                 | <b>4</b>  |
| 3.1      | Fence Requirements.....                                                                                        | 4         |
| 3.2      | Weld mesh fencing.....                                                                                         | 4         |
| 3.3      | Heras fencing.....                                                                                             | 4         |
| 3.4      | Netlon fencing.....                                                                                            | 5         |
| 3.5      | Construction fencing height dimensions.....                                                                    | 5         |
| 3.6      | Security.....                                                                                                  | 5         |
| 3.7      | Public information.....                                                                                        | 6         |
| 3.8      | Maintenance .....                                                                                              | 7         |
| <b>4</b> | <b>Sensitive areas.....</b>                                                                                    | <b>8</b>  |
| 4.1      | Port of Swansea .....                                                                                          | 8         |
| 4.2      | Otter access – provision.....                                                                                  | 8         |
| 4.3      | Otter access – monitoring .....                                                                                | 8         |
| <b>5</b> | <b>Training .....</b>                                                                                          | <b>10</b> |
| 5.1      | Instruction and training.....                                                                                  | 10        |
| <b>6</b> | <b>Appendix A1 – Fencing and other means of site perimeter enclosure and provisions for otter access .....</b> | <b>11</b> |
| <b>7</b> | <b>Appendix A2 – otter survey results (ES Technical Appendix 12.6).....</b>                                    | <b>12</b> |

## Table of Figures

|                   |                                                      |          |
|-------------------|------------------------------------------------------|----------|
| <b>Figure 3.1</b> | <b>Weld mesh example .....</b>                       | <b>4</b> |
| <b>Figure 3.2</b> | <b>Figure 4.4 Heras fencing example.....</b>         | <b>4</b> |
| <b>Figure 3.3</b> | <b>High-vis netlon fencing example .....</b>         | <b>5</b> |
| <b>Figure 3.4</b> | <b>Temporary heras fencing supports example.....</b> | <b>7</b> |

## Table of Tables

|                                                              |
|--------------------------------------------------------------|
| <b>Table 5.1 TLSB Construction fencing height dimensions</b> |
|--------------------------------------------------------------|

# 1 Introduction

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## 1.1 The TLSB project

- 1.1.1 Tidal Lagoon Swansea Bay (TLSB) will be the world's first purpose built tidal energy lagoon. The generating station will have an installed capacity of 320 mega watts (MW) and will enclose part of Swansea Bay, from the eastern side of the River Tawe to the eastern edge of the new Swansea University Bay Campus. In total the seawall will form an approximately 9.5km-long, U-shape which will encompass approximately 11.5km<sup>2</sup> of the seabed, foreshore and intertidal area of Swansea Bay.
- 1.1.2 TLSB made an application to the Planning Inspectorate on 7 February 2014 for a Development Consent Order (DCO) for a tidal lagoon (the TLSB Project) in Swansea Bay, South Wales. Examination of the application closed on 10 December 2014 and development consent was granted by the Secretary of State (SoS) on 9 June 2015.

## 1.2 DCO Requirement

- 1.2.1 The development of a Construction Site Perimeter Plan for the construction phase is a Requirement of the DCO, Requirement 10 and as such has been prepared by TLSB for approval by the relevant planning authorities in accordance with the DCO.

- 1.2.2 DCO Requirement 10 - Fencing and other means of perimeter enclosure

*10.—(1) Prior to commencement of each phase of the authorised development, written details of all proposed permanent or temporary fences, walls or other means of enclosure within that phase of the authorised development must be submitted to and approved by the relevant planning authorities.*

*(2) All construction sites must remain securely fenced at all times during construction of the authorised development in accordance with the approved scheme or schemes.*

*(3) All temporary fencing must be removed on completion of construction of the authorised development.*

*(4) All perimeter fences, walls or other means of site perimeter enclosure for the authorised development approved in accordance with sub-paragraph (1) must be completed prior to commencement of operation in accordance with the approved details.*

*(5) Such fencing must make provision for—*

*(a) the secure fencing of the Port of Swansea;*

*(b) fencing and means of access as is required to secure the proper management of access to Crymlyn Burrows SSSI from the authorised development; and*

*(c) alternative access routes for otters.*

- 1.2.3 This Site Construction Site Perimeter Plan provides details with regard to DCO Requirement 10 in relation to Works 7a This plan is submitted to City and County of Swansea Council (CCSC) only since all proposed Works 7a operational activities are within the County boundary.
- 1.2.4 The Construction Site Perimeter Plan has been produced to satisfy the criteria of DCO Requirement 10 in accordance with the Construction Phasing Scheme (DCO Requirement 3) This document will be updated, as appropriate, at the relevant phases of construction following on from works 7a to include details relevant to that phase of DCO Works.
- 1.2.5 DCO Requirement 10 requires the submission of details of all proposed permanent or temporary fences, walls or other means of enclosures. Details of permanent fencing will be provided within the Permanent Site Perimeter Plan prior to the installation for any permanent fencing in accordance with the Construction Phasing Scheme (DCO Requirement 3). The Operational Site Perimeter Plan will be submitted to the relevant planning authorities prior to operation and as such no operational related information is contained within this Construction Site Perimeter Plan. For details surrounding the phasing of the Construction Site Perimeter Plan please see Section 2.

### **1.3 Construction Environmental Management Plan (CEMP)**

- 1.3.1 The Construction Site Perimeter Plan has been included as supporting information to the Construction Environmental Management Plan (CEMP), to ensure accordance with DCO Requirement 5 (CEMP) and to ensure that all construction related information is easily accessible to the relevant authorities, construction contractors and TLSB.

### **1.4 Adaptive Environmental Management Plan (AEMP)**

- 1.4.1 The Adaptive Environmental Management Plan (AEMP) (DCO Requirement 6) relates to monitoring and where necessary, mitigation that must remain adaptive throughout the lifetime of the TLSB Project. Specific mitigation such as access for otters, as set out within this Construction Site Perimeter Plan, will be monitored through the TLSB Project AEMP.

### **1.5 Linkages to other plans**

- 1.5.1 The following DCO plans and environmental strategies provide information relevant to this Construction Site Perimeter Plan:
- DCO Requirement 3 – Construction Phasing Scheme
  - DCO Requirement 5 – CEMP
  - DCO Requirement 6 – AEMP
- 1.5.2 The plans listed above are not required for approval of this Construction Site Perimeter Plan, but are listed for ease of reference only.

## 2 Scope

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### 2.1 Scope of plan

- 2.1.1 This Construction Site Perimeter Plan details the temporary secure fencing and other means of site enclosure of the TLSB Project site during the Works 7a construction phase. A separate Permanent Site Perimeter Plan will be developed detailing permanent fencing and will be submitted for approval by the relevant planning authorities prior to the commencement of the relevant DCO Works in accordance with the Construction Phasing Scheme.

### 2.2 Objectives of the Construction Site Perimeter Plan

- 2.2.1 The objectives of the Construction Site Perimeter Plan are:
- To ensure the construction site remains securely and sufficiently fenced at all times during construction to prevent members of the public and animals from entering a working area;
  - To secure all areas of the construction site of the proposed works against trespass;
  - To secure the Port of Swansea and the various commercial enterprises contained therein against trespass from the site of the proposed works;
  - To provide alternative access routes for otters from the docks to the coast during the construction phase.

### 2.3 Definitions

- 2.3.1 The outer edges of the site that border third party land are referred to as the *Perimeter* of the site.

## 3 Details of fencing

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### 3.1 Fence Requirements

- 3.1.1 To ensure the TLSB Works 7a remain securely fenced at all times during construction, a range of fencing and site enclosures are required. Details of the location and type of enclosure required is presented below.

### 3.2 Weld mesh fencing

- 3.2.1 Weld mesh security fencing will be installed surrounding all open boundaries adjacent to the existing ABP eastern access gatehouse only, as shown on Appendix A1.
- 3.2.2 All open boundary temporary fencing at the Eastern access will be securely fenced with permanent weld mesh fencing prior to the operational phase. Details of the permanent fencing will be provided within the Permanent Site Perimeter Plan, in accordance with the Construction Phasing Scheme, DCO Requirement 3.



Figure 3.1 Weld mesh example

### 3.3 Heras fencing

- 3.3.1 Heras or weldmesh type wire mesh security fencing will be erected temporarily to further secure areas within the Works 7a construction site.



Figure 3.2 Heras fencing example

### 3.4 Netlon fencing

- 3.4.1 Temporary High-vis netlon fencing will be used to fence off areas of invasive species such as Japanese knotweed, if found to be present. Fencing will be placed at least 7.0m from visible above ground plants to ensure that these exclusion areas include any underground parts (rhizomes).



Figure 3.3 High-vis netlon fencing example

### 3.5 Construction fencing height dimensions

- 3.5.1 The height dimensions of each type of fencing required are set out in Table 3.1 below.

| Fence type | Max Height |
|------------|------------|
| Weld Mesh  | 2400mm     |
| Heras      | 2000mm     |
| Netlon     | 1000mm     |

Table 3.1 TLSB construction fencing height dimensions

### 3.6 Security

- 3.6.1 Temporary site security gates erected at access points into the working areas and site compound through the Heras fencing shall be closed and locked outside of working hours.



Figure 3.4 Heras Security Gates

### 3.7 Public information

- 3.7.1 Safety warning signs informing of the dangers of construction sites will be erected on the temporary perimeter fence at all entrances and at 50m intervals. In addition, an information board shall be provided at each site entrance detailing information on the construction programme and estimated duration of the works, together with the web address and 24 hour telephone number for use by members of the public who wish to lodge complaints or comments. Should the construction programme change, the information board will be updated where relevant to reflect this and the relevant planning authorities notified.

### 3.8 Maintenance

- 3.8.1 All new temporary perimeter security measures will be inspected and reviewed by Associated British Ports prior to construction works commencing as stipulated under the protective provisions of the DCO.
- 3.8.2 The Works 7a Site Manager will arrange for perimeter security fencing to be closely inspected at regular intervals, at least once per week during daylight hours, and any defects reported to the Tier One Site Manager and immediately rectified.
- 3.8.3 All temporary fencing will be appropriately installed with supports to withstand the coastal winds surrounding the TLSB Project. This will ensure the risk of temporary fencing collapsing or posing a risk to construction staff and visitors is minimised as far as reasonably practicable. An example of temporary fencing supports is shown in figure 3.4.



Figure 3.4 Temporary Heras fencing supports example.

- 3.8.4 Temporary perimeter security fencing and gates will be removed as early as possible following completion of all works in the relevant secured area. Prior to the installation of any permanent fencing, TLSB will submit the Permanent Site Perimeter Plan to the relevant planning authorities for approval which will detail permanent fencing for the TLSB Project.
- 3.8.5 Existing perimeter security fencing will also be inspected jointly with ABP personnel and TLSB and any areas of weakness strengthened to an appropriate level of security.

## 4 Sensitive areas

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### 4.1 Port of Swansea

- 4.1.1 In line with DCO Requirement 10(5)(a) this Construction Site Perimeter Plan makes provision for the secure fencing of the Port of Swansea during the construction phase of the TLSB Project.
- 4.1.2 All construction working areas of the TLSB Project site are within terrestrial port limits and will be fenced as set out in Appendix A1..
- 4.1.3 All new construction perimeter security measures will be inspected and signed off by the Port of Swansea (ABP) prior to works being undertaken.

### 4.2 Otter access – provision

- 4.2.1 In accordance with DCO Requirement 10(5)(c) TLSB must provide and maintain 'alternative access routes for otters'. This requirement is also listed with DCO Requirement 5(5)(c) 'access for otters, which is to be maintained at all times between the docks, River Tawe and the coastline'. This Construction Site Perimeter Plan details the measures to be in place during the construction phase with regards to access for otters. The Permanent Site Perimeter Plan will include measures for maintaining otter access prior to the installation of permanent fencing in areas determined to be sensitive to otters (see appendix A2).
- 4.2.2 Surveys indicated otters use the pill box at the western end of the TLSB Project to gain access through the ABP splash wall from the docks to the foreshore (see appendix A2).
- 4.2.3 Temporary fencing surround to the western landfall laydown area running along the western edge of Queens Dock will be set back at least 10 m from the foreshore and follow the line of the existing track in order to allow otters to travel by land around the temporary perimeter to the River Tawe. This measure will ensure that access between the coastline, the docks and from there the River Tawe, is maintained (see Appendix A1), yet high risk exclusion zones are maintained.
- 4.2.4 No temporary fencing is proposed between the shoreline and the docks that could potentially impede the otter access between the docks and the shoreline.
- 4.2.5 Toolbox talks will also be provided to make all construction workers aware of the potential presence of otters.

### 4.3 Otter access – monitoring

- 4.3.1 Inspections will be undertaken throughout construction to ensure access is maintained for otters as required within the CEMP, DCO Requirement 5 and Fencing and other means of site perimeter enclosure, DCO Requirement 10. The TLSB Project Manager–experienced in recognising otter activity – will be responsible for identifying field signs indicating the presence of otters and will carry out visual inspections for otter spraints, tar spots, footprints etc. throughout construction (this will build on the otter survey work undertaken to inform the Environmental Statement). They will also check that

access for otters is maintained (under or around any fencing) and that lighting is not directed towards the dark corridors or the water in the docks. The findings will be reported to the TLSB Project Manager. Where necessary, information on otters will be fed back into the AEMP process.

- 4.3.2 Any alterations or maintenance of the provision for otter access throughout construction will be the responsibility of the Works 7a contractor. The TLSB Project Manager will share monitoring information (obtained from otter inspections) with the Works 7a contractor in the monthly TLSB Environmental Update Meetings.
- 4.3.3 Should presence of otters be confirmed during the construction phase, construction staff and visitors will be made aware of the areas of sensitivity and potential crossing points in tool-box talks and inductions by the Works 7a contractor .
- 4.3.4 These measures will ensure that connectivity between the docks, the coastline and the river Tawe is provided and maintained throughout the construction phase of the TLSB Project.
- 4.3.5 Measures to ensure that access for otters is maintained during the operational phase will be provided within the Permanent Site Perimeter Pan prior to the installation of any permanent works as per the Construction Phasing Scheme, DCO Requirement 3 and are not provided for approval in this plan.

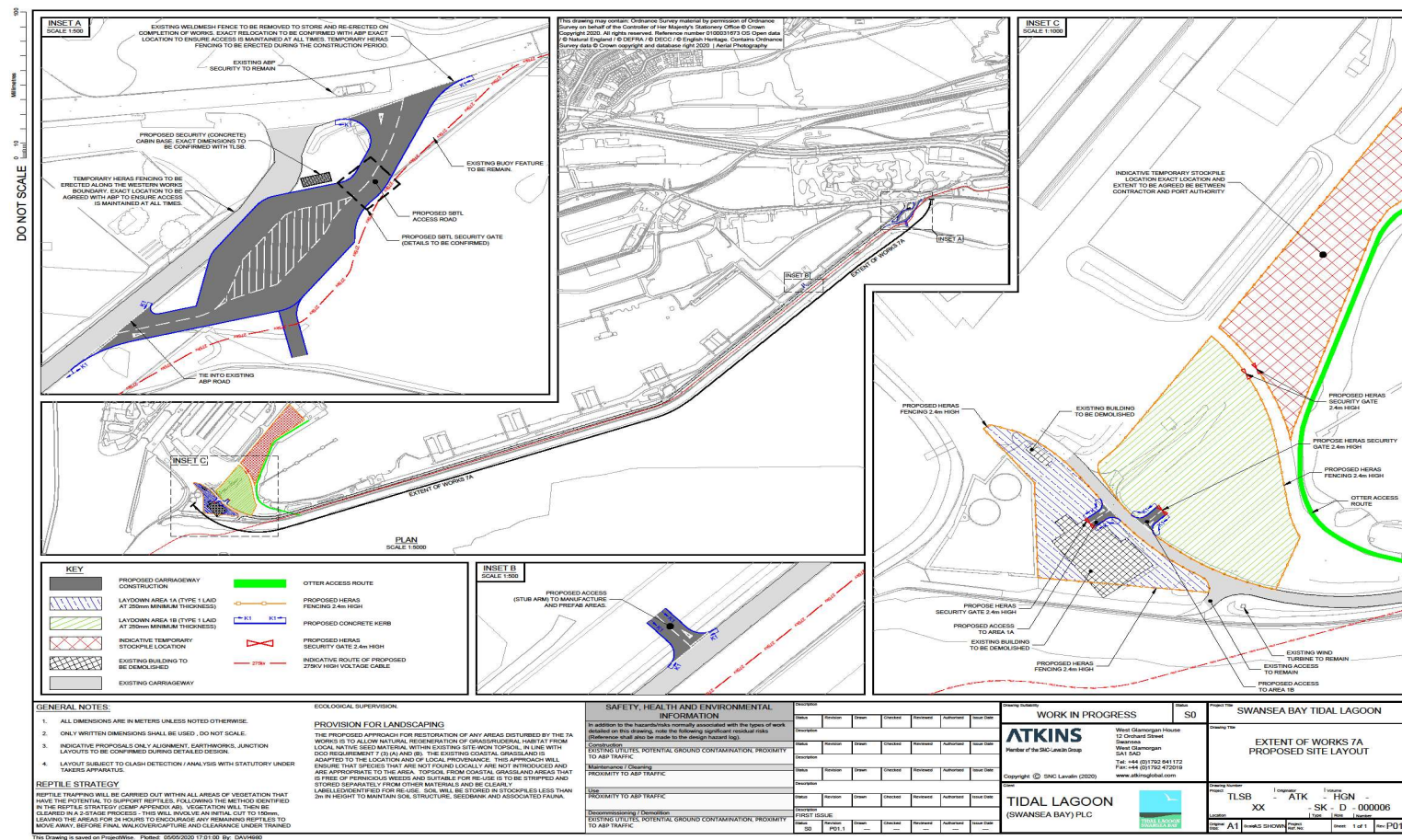
## 5 Training

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### 5.1 Instruction and training

- 5.1.1 All TLSB employees, Works 7a contractors and subcontractors will be given on-site instruction on the location of site boundaries and the requirement to undertake all work within the site perimeter.
- 5.1.2 Daily briefings will inform all those working on site of any temporary changes to boundary security fencing.
- 5.1.3 Any updates to the Construction Site Perimeter Plan will be made in liaison with a both County and City of Swansea Council (CCSC) and ABP.

## 6 Appendix A1 – Fencing and other means of site perimeter enclosure and provisions for otter access



## 7 Appendix A2 – otter survey results (ES Technical Appendix 12.6)

