

# Cardiff Coastal Defences - Outline Saltmarsh Management Plan

February 2024

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Llywodraeth Cymru  
Welsh Government

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|-------------|-------------------------------------|
| Prepared by | Hannah Webster BSc MSc<br>Ecologist |
|-------------|-------------------------------------|

|             |                                                      |
|-------------|------------------------------------------------------|
| Reviewed by | Jonathan Harrison BSc MSc MCIEEM<br>Senior Ecologist |
|-------------|------------------------------------------------------|

|               |                                                       |
|---------------|-------------------------------------------------------|
| Authorised by | Anne-Marie Moon BSc MSc CEng MICE<br>Project Director |
|---------------|-------------------------------------------------------|

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# Contract

JBA Project Manager      Hannah Webster  
Address                      Kings Chambers, 8 High Street, Newport NP20 1FQ  
JBA Project Code            2024s0084

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## Abbreviations

|      |                                            |
|------|--------------------------------------------|
| CEMP | Construction Environmental Management Plan |
| EIA  | Environmental Impact Assessment            |
| SAC  | Special Area of Conservation               |
| SMP  | Saltmarsh Management Plan                  |
| SSSI | Site of Special Scientific Interest        |
| NRW  | Natural Resources Wales                    |

# 1 Introduction

## 1.1 Purpose of the Saltmarsh Management Plan

This Outline Saltmarsh Management Plan (SMP) sets out the outline management approach, as agreed during consultation with Natural Resources Wales (NRW) for protection of the saltmarsh at the mouth of the Rhymney River and Severn Estuary to the east of Cardiff City Centre during the works to upgrade the flood defences at this location.

This management plan has been identified as essential mitigation within the Environmental Impact Assessment Report (EIA Report) and details other essential mitigation identified to avoid or minimise effects on the saltmarsh. Much of the proposed works and the surrounding saltmarsh habitat fall within the Severn Estuary Special Area of Conservation (SAC) and border the Gwent Levels Site of Special Scientific Interest (SSSI).

## 1.2 Aim of the Saltmarsh Management Plan

The aim of the Saltmarsh Management Plan is to enable successful recovery of the saltmarsh to its preconstruction state and to avoid compromise of the saltmarsh ecosystem. This will include pre- and post-construction monitoring and identify points at which intervention may be required. This plan is a live document which will be updated throughout the construction period. The plan will ensure that essential mitigation strategies required for safeguarding protected species and habitats are implemented as part of the contract.

This Management Plan will be included as an annex to the Construction Environmental Management Plan (CEMP) which will be developed by the Contractor prior to construction.

## 2 Summary of the Scope of Works

### 2.1 Site Location and Description

The proposed development comprises new fluvial and coastal flood defences along both banks of the River Rhymney on the outskirts of Cardiff from where the A4232 crosses the river down to the confluence between the river and the Severn Estuary. The defences will then extend along the Severn Estuary coastline, east and west from the River Rhymney. This area includes the DCWW Cardiff East WWTW and northwards along the eastern extent of the Lamby Way landfill site (see Figure 2-1).

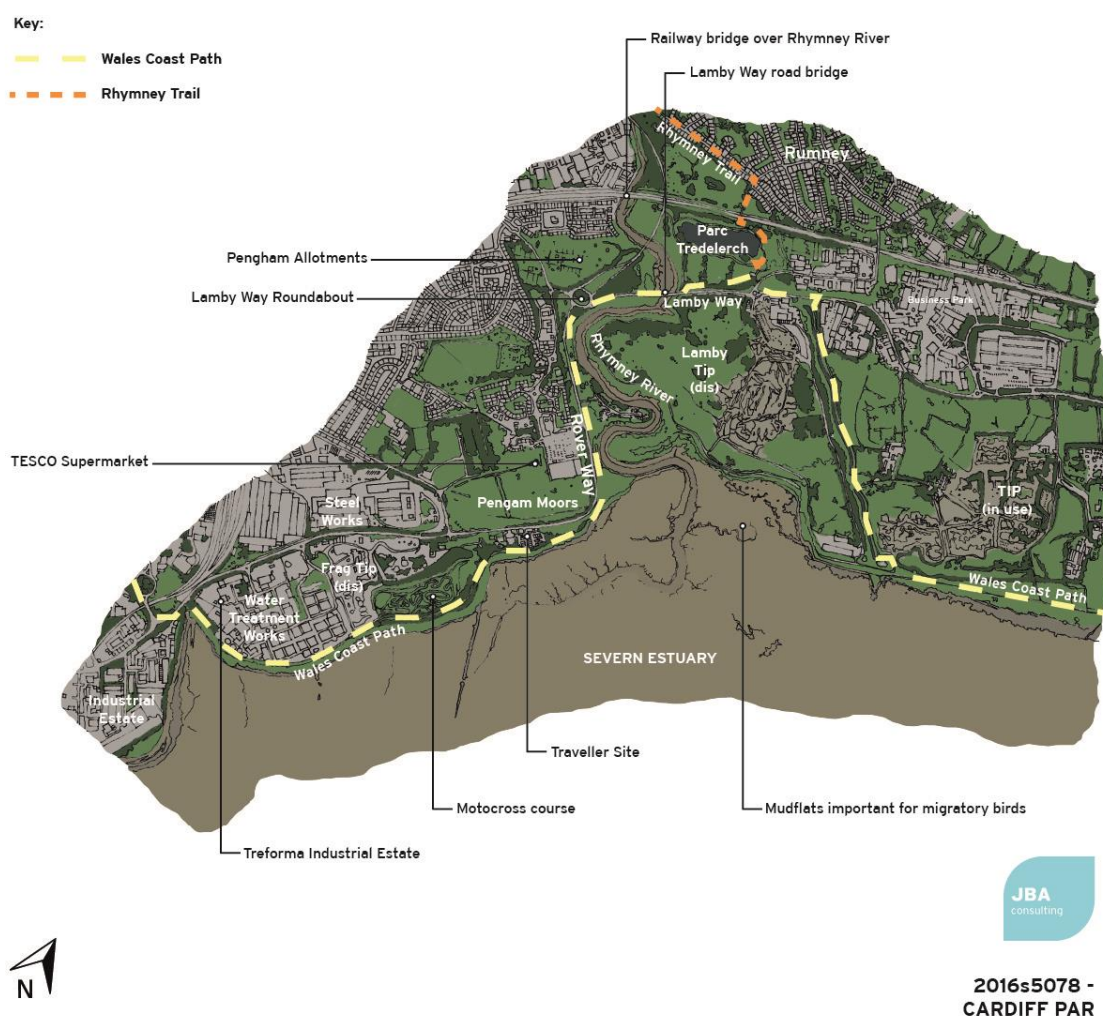


Figure 2-1. Location of Rhymney River and its confluence into the Severn Estuary with key features.



## 2.2 Proposed Works

The proposed scheme is to improve the coastal and estuarine defences either side of the River Rhymney and upstream to the railway bridge. Works include the addition of rock armour, sheet piling, erosion protection and embankment raising. The defences will manage flood and erosion risk to over 2,500 properties over 100 years and manage erosion risk to key infrastructure including historical landfill sites and vital arterial roads.

### 3 Pre-Construction Actions

The following conditions regarding the saltmarsh have been put in place during the planning process and the actions undertaken to date are detailed.

**P1.1 - Confirm extents of valuable and sensitive saltmarsh habitat for future monitoring/ comparison. P1.2 - Conduct walkover survey to identify areas of erosion/accretion.**

A site survey was undertaken on the 6th of November 2023 by Jonathan Harrison and Hannah Webster of JBA consulting. Habitats including Saltmarsh within and adjacent to the site boundary were surveyed using the UK Habitat Classification (UKHab) methodology and 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). The Saltmarsh habitat extents can be seen in the Habitat Maps provided in Appendix A.

**P1.3 - Ensure mitigation of temporary works impacts is agreed. This should involve the production of a temporary works methods statement detailing mitigation measures for saltmarsh. This should also include details of the type of track matting to be used, the length of tracks required, and plant to be used on top of areas of saltmarsh.**

It has been identified that the use of track mats is likely to result in damage to the topsoil over a 2.5 year period, with the movement caused by plant and machinery running over the matts creating slurry in winter months which will then dry hard in the summer months. Therefore, it is intended to strip the topsoil along the haul roads, and store this in situ at the edge of the stripped area. This stored topsoil, which will contain the root mass and seed bank from the surrounding saltmarsh, will then be reinstated at the end of the project.

The stored topsoil along the edge of the haul roads will help to contain plant and vehicle movement within a single agreed route and will not allow site traffic to deviate from the agreed single route of the track. Fencing will also be erected to segregate the agreed route from surrounding saltmarsh areas.

There will be dedicated breaks in the bunds at low spots to allow rainwater to dissipate, with silt fencing erected to control silt run off from the site at these locations.

The placement of the access tracks will be set out following the completion of the baseline surveys and under the supervision of the ECoW.

Japanese Knotweed is present in the adjacent rough grassland areas. The species is not present in the saltmarsh. The risk that Japanese Knotweed will spread into saltmarsh habitats is extremely low, however, the management of risk from adjacent knotweed parcels and other marine / non marine invasive species has been addressed in the INNS management plan and Japanese Knotweed Management Plan. The plans put in place

measures to ensure that Japanese Knotweed is not spread from the identified contaminated areas and biosecurity measures that will ensure that other INNS are not introduced to the area.

**P1.4 - Baseline invertebrate survey should be conducted to inform post-works monitoring – including Shrill Carder Bee.**

A baseline invertebrate survey to include the Shrill Carder Bee will be completed in March. Prior to this Shrill Carder Bee are unlikely to be present and the survey will not be representative. **No construction works which could damage the saltmarsh will be permitted prior to this initial survey taking place.** Until the survey is available the ECoW will be responsible for providing guidance on operations likely to damage the saltmarsh on case by case basis. Further surveys on the undisturbed saltmarsh will be undertaken between April and September.

**P1.5 - A baseline rare plant species survey should be completed in the summer months prior to construction.**

A baseline rare plant species survey will be completed in March/April. **No construction works likely to damage the saltmarsh will be permitted prior to this survey taking place.**

**P1.6 - Review the need for further mitigation measures in the Environmental Statement and habitat losses from temporary works should be revisited to identify further relevant actions.**

A review of the Environmental Statement has been completed and no further mitigation measures have been identified.

It is intended that this document will be live throughout the construction period. It will be updated following the relevant baseline surveys and with further mitigation identified. Further enhancement measures will be included if opportunities are identified through the construction period.

## 4 Saltmarsh Management Plan

Table 4-1. Saltmarsh Management Plan

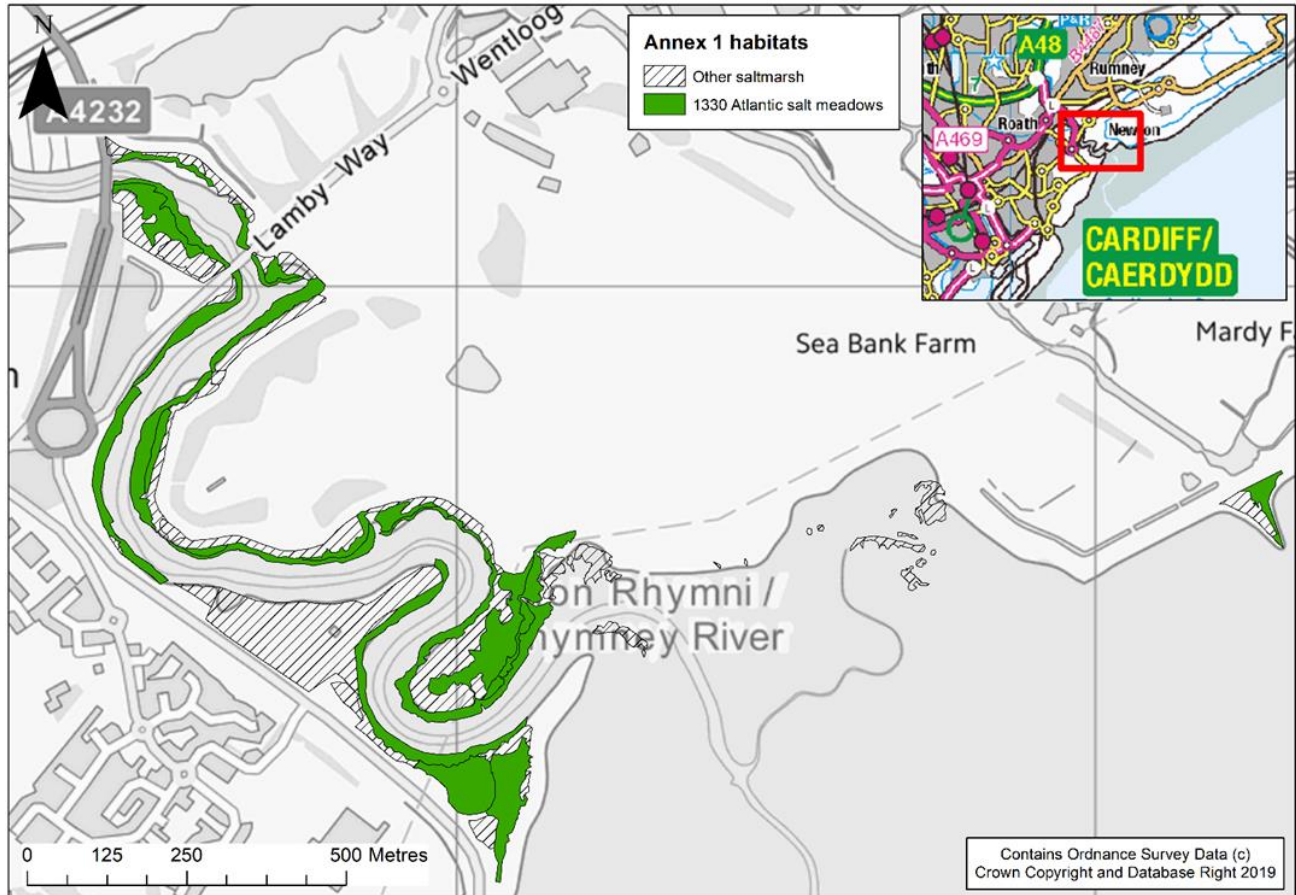
| Ref.             | Action                                                                                                                                                                         | Responsibility               | Ref to further information         | Progress and further action                                                                    | Sign off and date |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|------------------------------------|------------------------------------------------------------------------------------------------|-------------------|
| Pre-Construction |                                                                                                                                                                                |                              |                                    |                                                                                                |                   |
| P1.1             | Confirm extents of valuable and sensitive saltmarsh habitat for future monitoring/comparison.                                                                                  | Construction Contractor ECoW | Environmental Statement            | Completed                                                                                      | 6/11/23           |
| P1.2             | Conduct walkover survey to identify areas of erosion/accretion.                                                                                                                | Construction Contractor ECoW | Environmental Statement NVC Survey |                                                                                                | 6/11/23           |
| P1.3             | Ensure mitigation of temporary works impacts is agreed. This should involve the production of a temporary works methods statement detailing mitigation measures for saltmarsh. | Construction Contractor      | Environmental Statement            | Stripping and storing of material proposed                                                     | 27/02/24          |
| P1.4             | Baseline invertebrate survey should be conducted to inform post-works monitoring – including Shrill Carder Bee.                                                                | Construction Contractor      | Environmental Statement            | Will be completed in April 2024 before any works likely to damage the saltmarsh are completed. |                   |
| P1.5             | A baseline rare plant species survey should be completed in the summer months prior to construction.                                                                           | Construction Contractor      | Environmental Statement            | Will be completed in April 2024 before any works likely to damage the saltmarsh are completed. |                   |

| Ref.                | Action                                                                                                                                                                                                                                                                                     | Responsibility                  | Ref to further information | Progress and further action       | Sign off and date |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|----------------------------|-----------------------------------|-------------------|
| During Construction |                                                                                                                                                                                                                                                                                            |                                 |                            |                                   |                   |
| C1.1                | Presence of a suitably qualified Ecological Clerk of Works (ECoW) is required to ensure that all mitigation measures are implemented                                                                                                                                                       | Construction Contractor<br>ECoW | Environmental Statement    | ECoW appointed by Cardiff Council |                   |
| C1.2                | Best practice construction methods (CIRIA 2015) will be used including the use of appropriate pollution controls (i.e. Guidance for Pollution Prevention (GPPs)), such as construction drainage, a strict re-fuelling protocol and removal of all loose materials from the intertidal area | Construction Contractor         | Environmental Statement    |                                   |                   |
| C1.3                | On completion of the works all access tracks and working platforms will be removed in their entirety from the saltmarsh.                                                                                                                                                                   | Construction Contractor         | Environmental Statement    |                                   |                   |

| Ref.              | Action                                                                                                                                                                                                                                                                                                                                                                                                                    | Responsibility                                                      | Ref to further information | Progress and further action | Sign off and date |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|----------------------------|-----------------------------|-------------------|
| Post Construction |                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                     |                            |                             |                   |
| PC1.1             | Surveys of the saltmarsh plant species composition will be important to inform the restoration of the saltmarsh and to demonstrate enhancement in the areas of saltmarsh that are retained. Monitoring of rare plant species should be undertaken to inform management practices. This should take the form of a fixed-point quadrat survey to record abundance, as well as an updated NVC survey to record habitat type. | Contractor – survey subsequent two years after completion of works. | Environmental Statement    |                             |                   |
| PC1.2             | Monitoring of saltmarsh post-construction to inform future management practices and enhancement opportunities. Methods and frequency of monitoring to be agreed with NRW, and would likely include surveys of accretion/erosion, grazing pressure etc.                                                                                                                                                                    | Construction Contractor                                             | Environmental Statement    |                             |                   |
| PC1.3             | Post-construction invertebrate survey to be completed in subsequent years post-construction to inform management practices.                                                                                                                                                                                                                                                                                               | Construction Contractor                                             | Environmental Statement    |                             |                   |

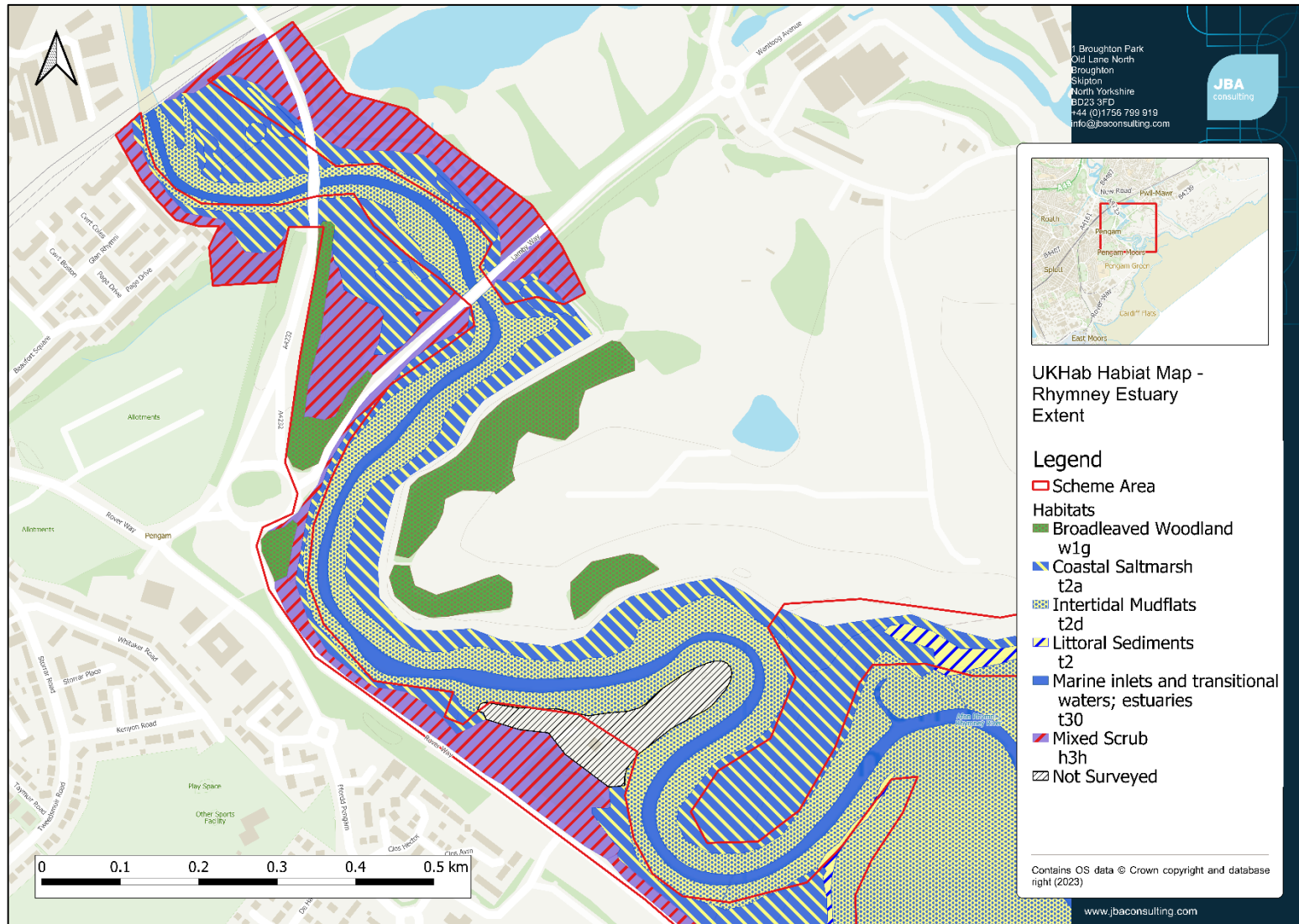
# A Saltmarsh Maps (November 2023 Surveys)

## A.1 Extent of Saltmarsh (November 2023)



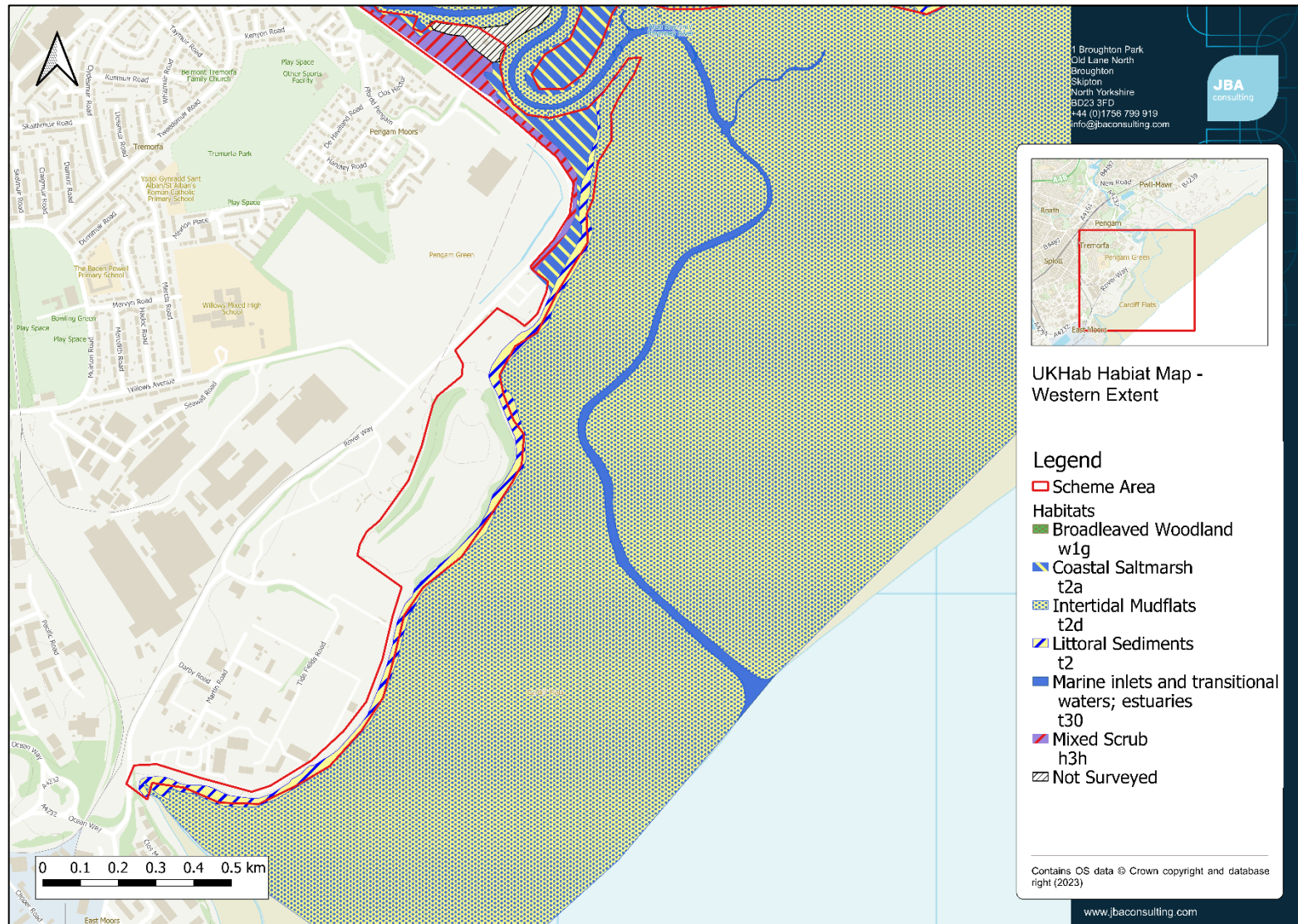


## A.2 UKHab baseline habitat map - Rhymney Estuary extent (Nov 2023)



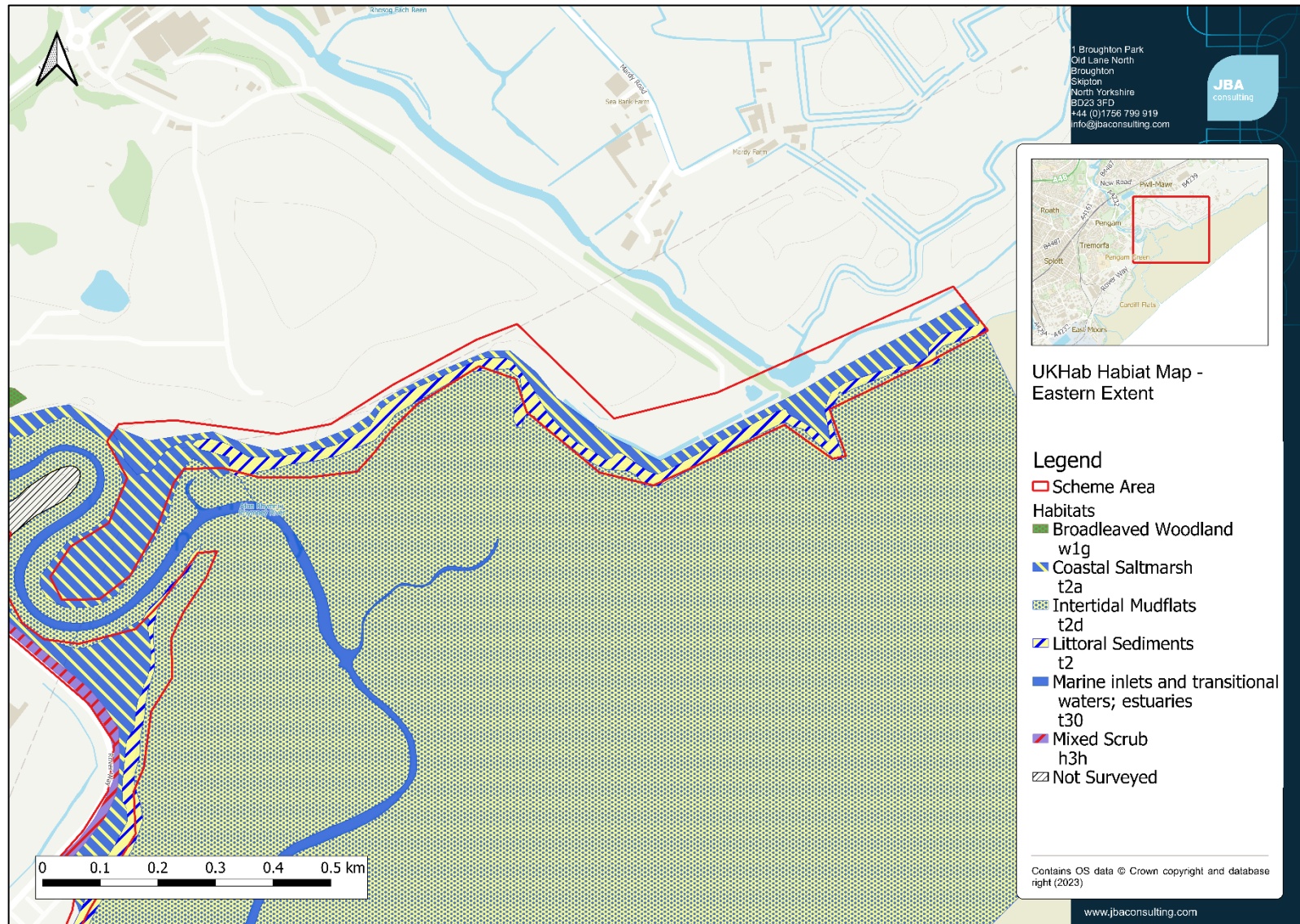


### A.3 UKHab baseline habitat map - Western extent (Nov 2023)





#### A.4 UKHab baseline habitat map - Eastern extent (Nov2023)



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Registered Office  
1 Broughton Park  
Old Lane North  
Broughton  
SKIPTON  
North Yorkshire  
BD23 3FD  
United Kingdom

+44(0)1756 799919  
[info@jbaconsulting.com](mailto:info@jbaconsulting.com)  
[www.jbaconsulting.com](http://www.jbaconsulting.com)  
Follow us:  

Jeremy Benn  
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