

Cardiff Coastal Defences - Saltmarsh Management Plan

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Abréviations

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 Saltmarsh Management Plan (SMP) sets out the 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 in this phase of the works is to ensure that no works temporary or permanent take place within the saltmarsh and to protect the habitat from indirect impacts.

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).

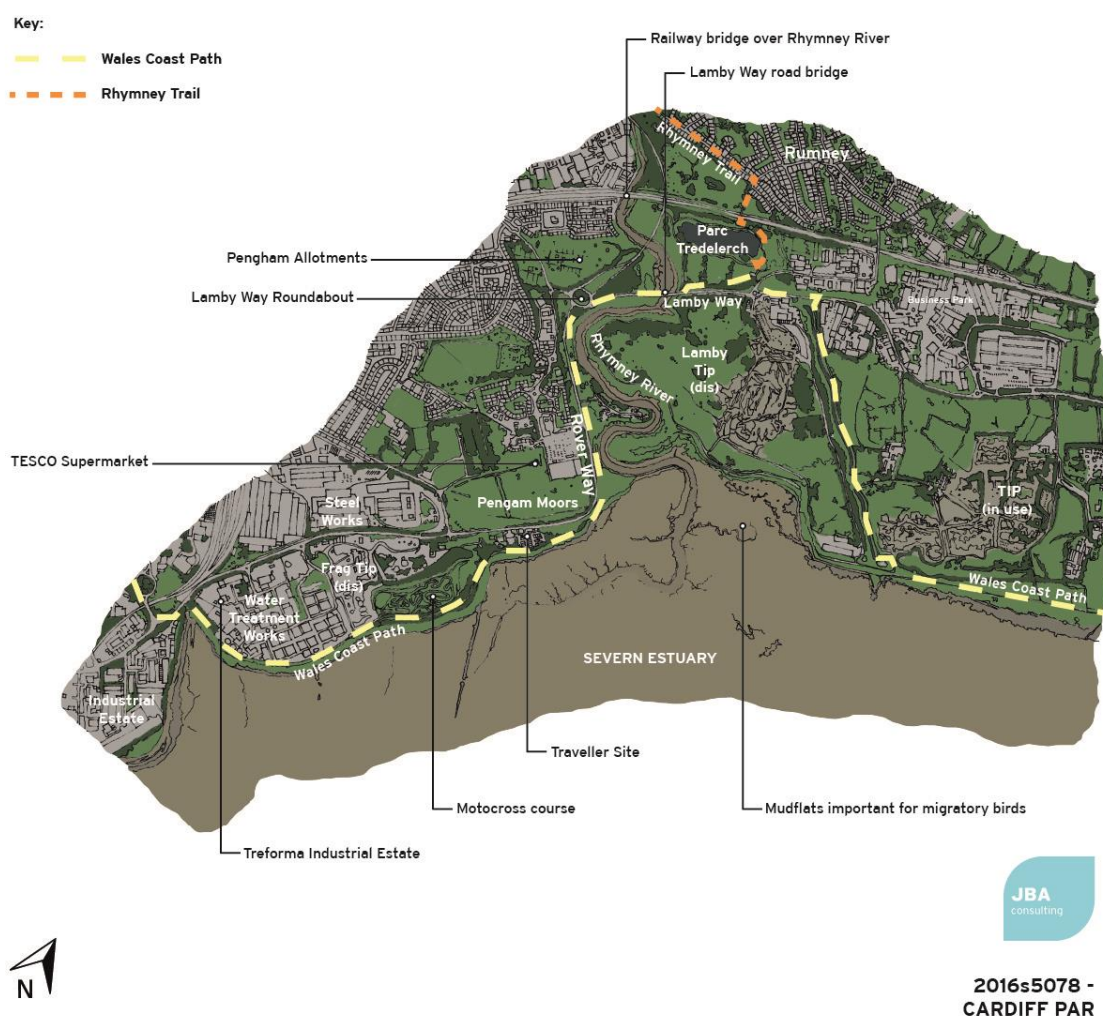


Figure 2-1. Location of Rhymney River and its confluence into the Severn Estuary with key features.

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 and the current extent of the saltmarsh was determined. To more accurately map the western boundary of the saltmarsh Knights Brown took GPS points with the supervision of an ecologist in April 2024. The updated map is shown 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.

The temporary works will encroach into the saltmarsh in one location, between locations 42 and 52. Machinery will track between these location under the road bridge. However, works in this area are not programmed until 2025 and all proposed surveys will take place before this date.

Once these surveys have taken place any access routes across any identified saltmarsh will be formed using track mats placed on top of the existing ground. This will be overseen by the ECoW

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 throughout the survey season (April - September).

The aim of the survey is to provide a baseline condition assessment of the saltmarsh. Therefore, in addition to Shrill Carder Bee the survey will be designed to record all readily apparent pollinator species using a timed walking transect methodology. No invasive methodologies such as sweep netting, pitfall trapping or malaise traps are proposed. Although not part of the saltmarsh plan the survey will also include all other habitats suitable for Shrill Carder Bee within the works boundary.

The survey will be carried out throughout the 2024 survey season, with surveys taking place monthly between April and September.

The survey will include all saltmarsh bordering the Rhymney and provide a baseline for the saltmarsh in its entirety (not just the areas directly impacted by the works).

A full report detailing findings and transect locations will be provided so that similar surveys can be carried out in the future.

No construction works which could damage the saltmarsh will be permitted prior to this survey taking place. Until the survey is available the ECoW will be responsible for providing guidance on operations likely to damage the saltmarsh on a case by case basis.

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 prior to any works being undertaken in the saltmarsh. In addition a repeat NVC survey of all of the saltmarsh bordering the Rhymney. **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 Post Construction Actions

On completion of works, all materials will be removed from the intertidal habitats.

Following the completion of the works the surveys will be repeated.

Immediately following the completion of the works in areas 42 and 52 a survey of the area impacted by the temporary haul roads will be carried out. This will consist of a vegetation and soil condition survey. The soil condition survey will assess whether it is likely that vegetation will reestablish in the impacted areas. This will identify whether further measures are required to encourage vegetation growth.

The post-construction remediation will depend on the findings of these surveys and any further interventions will be made by the ECoW in liaison with NRW. Should they be required Biodegradable Elements for Starting Ecosystems (BESE) grid structures in saltmarsh restoration will be considered.

A NVC survey of the saltmarsh in will be undertaken in the first summer following the works and a further NVC survey will be carried out 3 years post construction. This will monitor the recovery of the saltmarsh where the haul road has been placed and the establishment of saltmarsh in location 32 where mud will be placed following the completion of the works. If the surveys find that the habitat is not recovering and is considered to be in a worse condition than before the works then remedial action will be required. This may include further intervention to encourage saltmarsh growth, however, all measures at this stage should be agreed with NRW.

An invertebrate survey in line with the baseline survey will be carried out in the first summer following the works, this will identify any changes in populations and provide a further baseline for future monitoring of the site.

5 Saltmarsh Management Plan

Table 5-1. Saltmarsh Management Plan

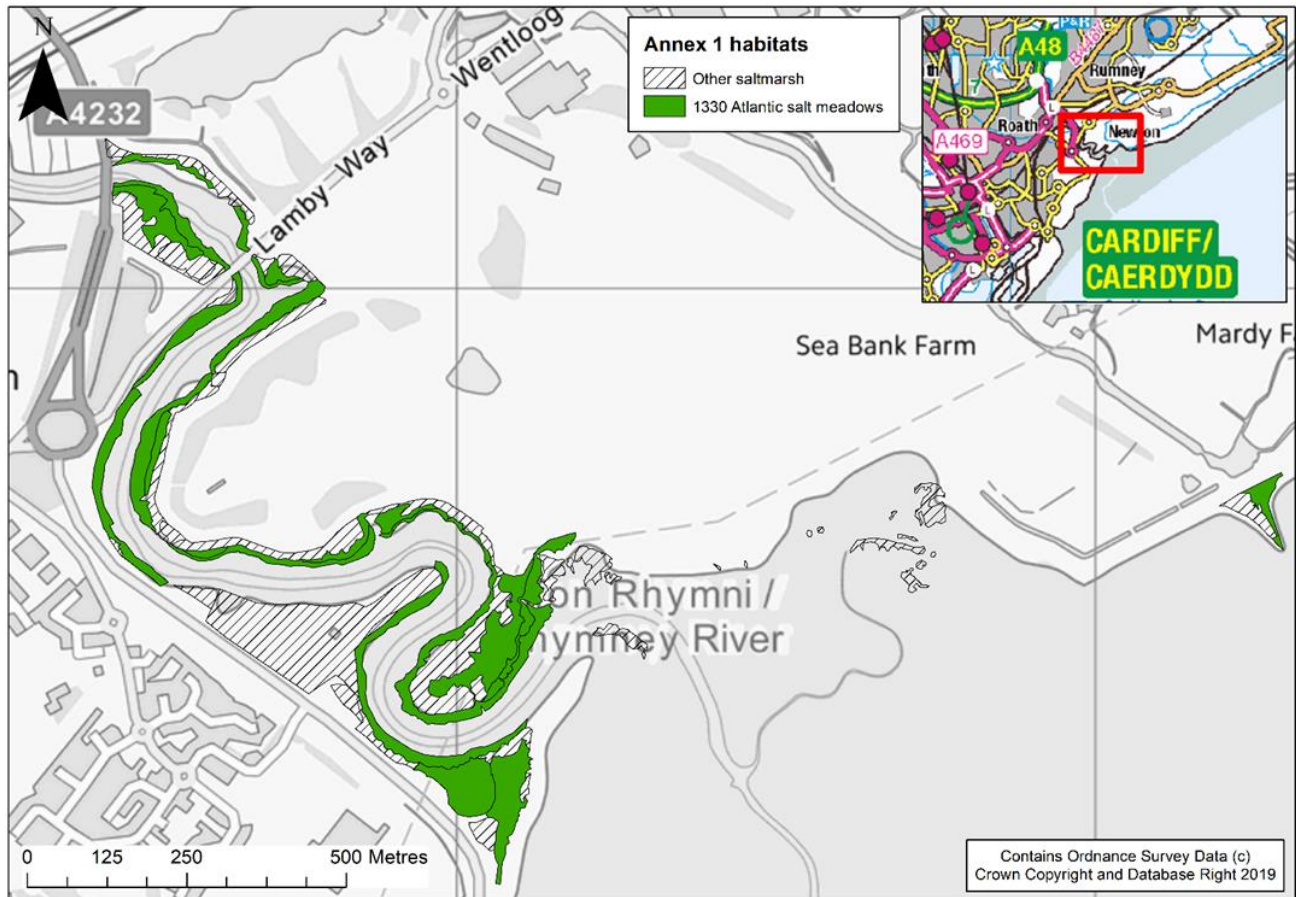
Ref.	Action	Responsibility	Ref to further information	Progress and further action	Sign off and date
Pre-Construction					
P1.1	Confirm extents of valuable and sensitive saltmarsh habitat for future monitoring/comparison.	Construction Contractor ECoW	Environmental Statement	Completed Updated 12/04/2024	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	The saltmarsh has been demarcated and no temporary or permanent works will be permitted within the saltmarsh until surveys have been undertaken. Temporary works methods	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 between April and September 2024.	
P1.5	A baseline rare plant species survey should be completed in the summer months prior to construction. (include NVC)	Construction Contractor	Environmental Statement	To be completed before any works likely to damage the saltmarsh are completed during summer 2024.	

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 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	Track mats placed on top of the existing ground where an access track is required between areas 42 and 52.	Construction Contractor ECoW	CEMP		
C1.4	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 (Permanent Works)					
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	Vegetation and soil condition survey in areas where temporary tracks have been placed. This will identify whether further measures are required to encourage vegetation growth and further intervention measures will be agreed with NRW	Construction Contractor Ecologist			
PC1.3	Monitoring of saltmarsh post-construction to inform future management practices and enhancement opportunities. An NVC survey will be carried out in Year 1 and Year 3.	Construction Contractor Ecologist	Environmental Statement		
PC1.3	Post-construction invertebrate survey to be completed in year 1 and year 3 post-construction to inform management practices.	Construction Contractor Ecologist	Environmental Statement		

A Saltmarsh Maps

A.1 Extent of Saltmarsh



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