

uni
per

Connah's Quay Low Carbon Power

Geomorphological Walkover Survey Report

Planning Inspectorate Reference: EN010166

Document Reference: EN010166/9.12

Planning Act 2008 (as amended)

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations
2009 - Regulation (2)(q)

Revision 00

February 2026

Prepared for:
Uniper UK Limited

Prepared by:
AECOM Limited

© 2026 AECOM Limited. All Rights Reserved.

This document has been prepared by AECOM Limited ("AECOM") for sole use of our client (the "Client") in accordance with generally accepted consultancy principles, the budget for fees and the terms of reference agreed between AECOM and the Client. Any information provided by third parties and referred to herein has not been checked or verified by AECOM, unless otherwise expressly stated in the document. No third party may rely upon this document without the prior and express written agreement of AECOM.

Table of Contents

1. Introduction	1
2. Survey Details.....	1
3. Survey Findings	1
4. Conclusion	4

Plates

Plate 1 Photograph showing the saltmarsh creek (the Existing Surface Water Outfall is 5 m behind), the top of the corridor berm, high water terrace and drainage flattened grasses above the narrow creek.....	2
Plate 2 Photos of the high water strand line (X) and flattened and orientated vegetation towards the outfall in Basin 1	2
Plate 3 Photographs showing the culvert emplacement at the source of the saltmarsh creek, including flap valve and erosion bowl to one side	3

1. Introduction

- 1.1.1 Within the relevant representations, Natural England [RR-026] commented on the assumptions made within the **Report to Inform Habitats Regulations Assessment (RIHRA) [APP-253]** on scour erosion of saltmarsh associated with the proposed surface water outfall. In response to NE29 within the **Applicant's Response to Relevant Representations [REP1-062]** it is confirmed that the assessment does not include scour losses because as detailed in paragraph 10.2.2 of the **RIHRA [APP-253]**, no scour losses are expected. The response to NE29 further states that the applicant undertook a walkover survey on 23 January 2026 to validate this position. The details and findings of this walkover survey are presented in this submission.

2. Survey Details

- 2.1.1 A geomorphological walkover survey was undertaken by a suitably qualified Coastal Geomorphologist on 23 January 2026.
- 2.1.2 The walkover survey was focused on the location of the proposed surface water outfall and the adjacent areas of saltmarsh habitat within the Connah's Quay Nature Reserve. This area is hereafter referred to as the 'saltmarsh drainage basin'.
- 2.1.3 The survey was undertaken between the hours of 0900 and 1600.

3. Survey Findings

- 3.1.1 During the geomorphological walkover survey it was evident that the majority of erosion active within the saltmarsh drainage basin is as a result of tidal ingress and subsequent drainage back into Old Rockcliffe Brook (hereafter referred to as the creek) (see **Plate 1**) and River Dee.
- 3.1.2 The tidal influence has been observed to extend up to the existing surface water outfall associated with the existing Connah's Quay Power Station. Evidence was present to determine that water levels regularly reach the level of the creek top at the location of the existing outfall headwall. Additionally, there is evidence of tidal ingress during higher astronomical tides that extend to within 0.4 m of the top of existing berm tops within the saltmarsh drainage basin as shown in **Plate 1** and **Plate 2**.

Plate 1 Photograph showing the saltmarsh creek (the Existing Surface Water Outfall is 5 m behind), the top of the corridor berm, high water terrace and drainage flattened grasses above the narrow creek

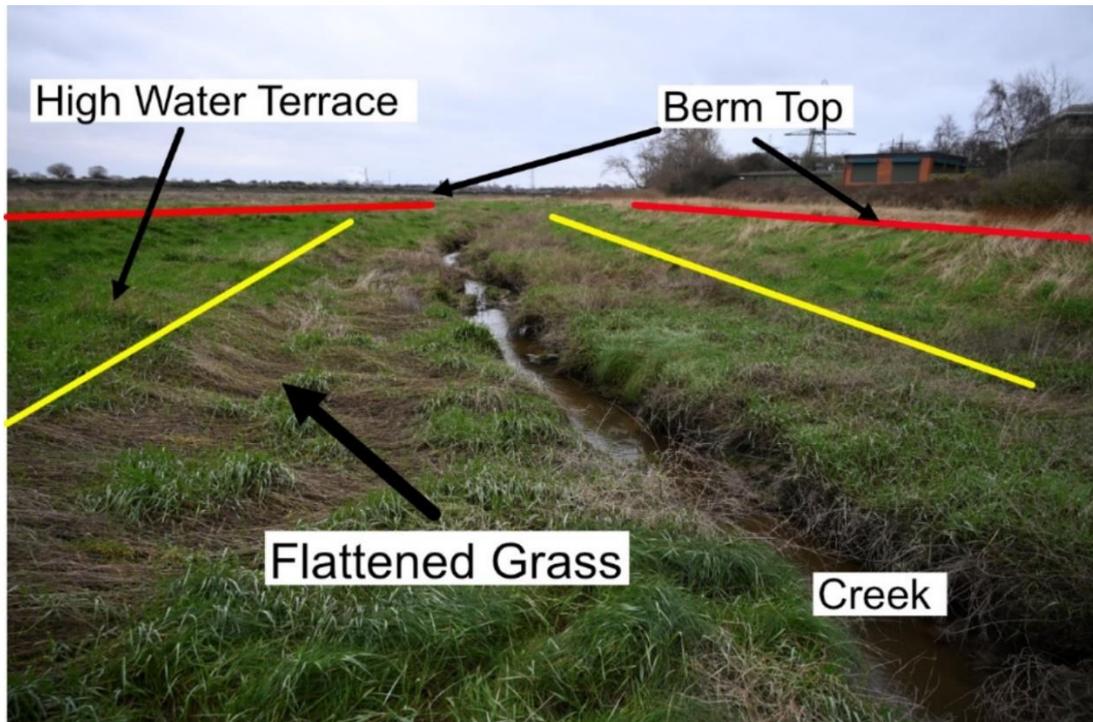
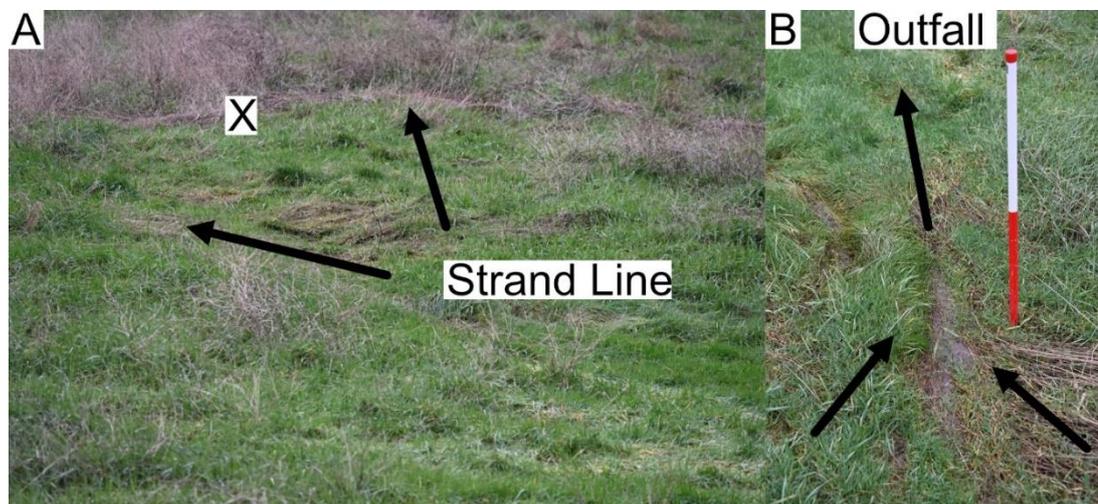


Plate 2 Photos of the high water strand line (X) and flattened and orientated vegetation towards the outfall in Basin 1



3.1.3 Immediately adjacent to the Existing Surface Water Outfall there is evidence of saltmarsh development in the mouth of the outfall, indicating that the existing discharge rates are not high enough to prevent the accumulation of sedimentary material and vegetation. Additionally, there is a region of scour adjacent to the outfall structure (to the north of the outfall apron) that has a likely origin in the combination of outfall discharge and tidal ingress creating a vortex with enough energy to bowl out the area over significant time.

Plate 3 Photographs showing the culvert emplacement at the source of the saltmarsh creek, including flap valve and erosion bowl to one side



- 3.1.4 In summary, the addition of higher discharge flows from the outfall location may, to a limited extent, modify the existing creek channel width and depth, discharge volume and velocity. However, this effect is likely to be minimal compared to the effect of the far greater volume and frequency of tidal ingress within the existing creek channel which does and would form the dominant source of saltmarsh erosion.

4. Conclusion

- 4.1.1 The findings of this walkover survey support the previous conclusions by confirming that detailed modelling is not required to demonstrate that scour erosion associated with the proposed surface water outfall would not occur. The assumption made within the **RIHRA [APP-253]** of a loss of saltmarsh loss at 5m² is, therefore, considered appropriate.

