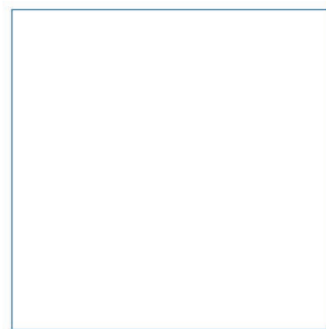
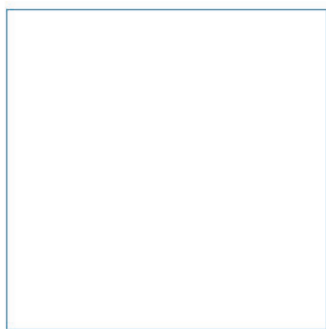
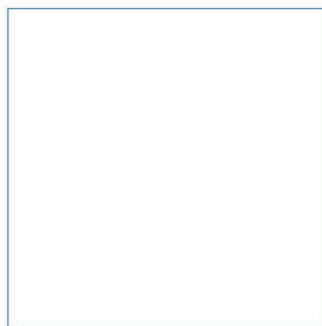


Associated British Ports, South Wales

Marine Licence Support

LU130 Maintenance Dredge Disposal

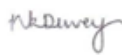
September 2025



Innovative Thinking - Sustainable Solutions

Document Information

Document History and Authorisation		
Title	Marine Licence Support	
	LU130 Maintenance Dredge Disposal	
Commissioned by	Associated British Ports, South Wales	
Issue date	September 2025	
Document ref	R.4983TN	
Project no	R/5658/01	
Date	Version	Revision Details
08/09/2025	1	Issued for client review
26/09/2025	2	Issued for client use

Prepared (PM)	Approved (QM)	Authorised (PD)
N K Dewey	A M Fulford	N J Frost
		

Suggested Citation

ABPmer, (2025). Marine Licence Support, LU130 Maintenance Dredge Disposal, ABPmer Report No. R.4983TN. A report produced by ABPmer for Associated British Ports, South Wales, September 2025.

Notice

ABP Marine Environmental Research Ltd ("ABPmer") has prepared this document in accordance with the client's instructions, for the client's sole purpose and use. No third party may rely upon this document without the prior and express written agreement of ABPmer. ABPmer does not accept liability to any person other than the client. If the client discloses this document to a third party, it shall make them aware that ABPmer shall not be liable to them in relation to this document. The client shall indemnify ABPmer in the event that ABPmer suffers any loss or damage as a result of the client's failure to comply with this requirement.

Sections of this document may rely on information supplied by or drawn from third party sources. Unless otherwise expressly stated in this document, ABPmer has not independently checked or verified such information. ABPmer does not accept liability for any loss or damage suffered by any person, including the client, as a result of any error or inaccuracy in any third party information or for any conclusions drawn by ABPmer which are based on such information.

All content in this document should be considered provisional and should not be relied upon until a final version marked '*issued for client use*' is issued.

All images on front cover copyright ABPmer.

ABPmer

Quayside Suite, Medina Chambers, Town Quay, Southampton, Hampshire SO14 2AQ
T: +44 (0) 2380 711844 W: <http://www.abpmer.co.uk/>

Marine Licence Support: LU130 Maintenance Dredge Disposal

ABP South Wales has an existing Marine Licence (DML 1946) from Natural Resources Wales (NRW), which allows disposal of maintenance dredge material from Port Talbot at the Swansea Bay (Outer) spoil ground LU130. The Marine Licence includes Condition 3.21 that states:

- 3.21.1 *The Licence Holder must implement a program of monitoring and analysis between 01 January 2025 and 30 June 2025 of the dispersive manner of Swansea Bay disposal site (LU130) to the Kenfig SAC in line with the 2020 bathymetric monitoring survey as detailed within 'ABPmer Technical Note R.4226TN'¹, dated 20 February 2020.*
- 3.21.2 *The Licence Holder must submit the monitoring report to NRW acting on behalf of the Licensing Authority for written approval within 3 months of completion of the survey detailed in Condition 3.21.1.*

This Note provides assessment of the newly collected monitoring data, from the survey carried out on 30 June 2025, which is discussed within the following sections.

1 Introduction

NRW is concerned about the potential for material deposited at the LU130 site to be dispersed and subsequently deposited on the bed in the area between the disposal site and the frontage of the Kenfig Special Area of Conservation (SAC). This SAC is designated primarily for its extensive sand dune system and is located to the east of the disposal site (Figure 1).

NRW has previously requested the collection and analysis of baseline data to help inform their considerations for the renewal of the Marine Licence at the LU130 disposal site. Consequently, it was agreed that a set of bathymetric transects, passing through the LU130 site, approaching the coastline south of Port Talbot should be undertaken for licence monitoring purposes (see Figure 1), and the results of the bathymetric profiles compared against historic data.

Separately, NRW's advisors for the Tidal Lagoon Swansea Bay (TLSB) development planning process in 2012 (KPAL- Kenneth Pye Associates Ltd) previously completed an initial preliminary assessment of bathymetric data, digitised from charts from 1883-1884 and from 1980-1998. To inform the previous LU130 renewal application in 2016, NRW requested the collection and analysis of bathymetry data along the same transect profiles (A and B; Figure 1), as defined in the preliminary KPAL study². To address this request, ABP South Wales commissioned a single-beam echosounder (SBES) bathymetry survey of the transect profiles, which was carried out 20-21 October 2016. Subsequently, additional monitoring data was then collected on 21 January 2020 in support of the 2020 renewal application, with a further SBES re-survey of the bathymetry along the transect Profiles A and B.

¹ ABPmer, (2020). ABP South Wales Marine Licence Renewal, LU130 Maintenance Dredge Disposal, ABPmer Report No. R.4223TN, for ABP South Wales, February 2020.

² KPAL Report No.: 160915 (dated 29 September 2014), prepared on behalf of Natural Resources Wales

For the present study, new monitoring data has now been collected to meet the condition of the existing Marine Licence (DML 1946), with another re-survey of the bathymetry along the transect Profiles A and B, using a multibeam echosounder (MBES) with the outputs subsampled to 1 metre to facilitate processing and reporting. This latest survey was carried out on 30 June 2025 (Figure 2).

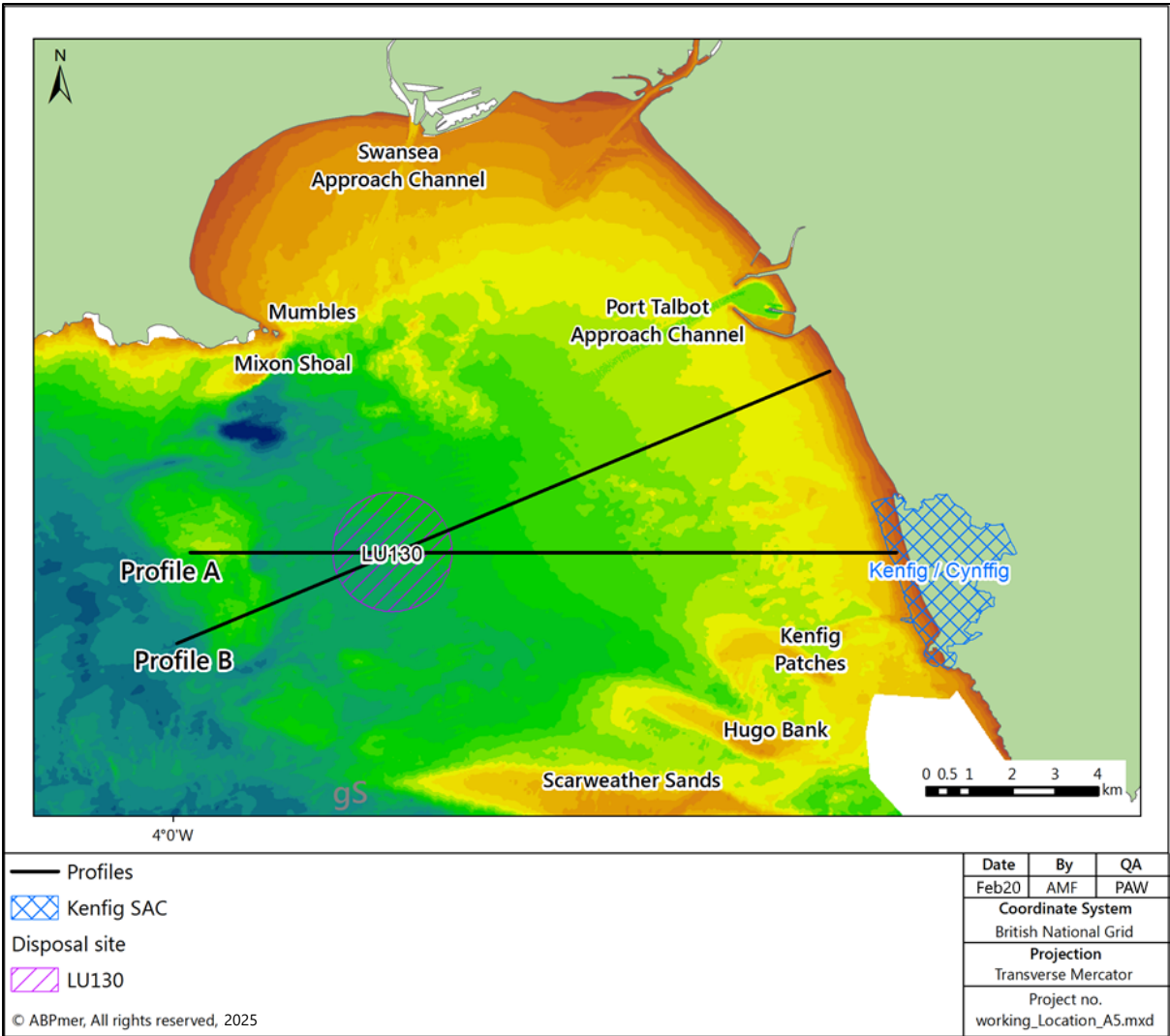


Figure 1. Location of area of interest

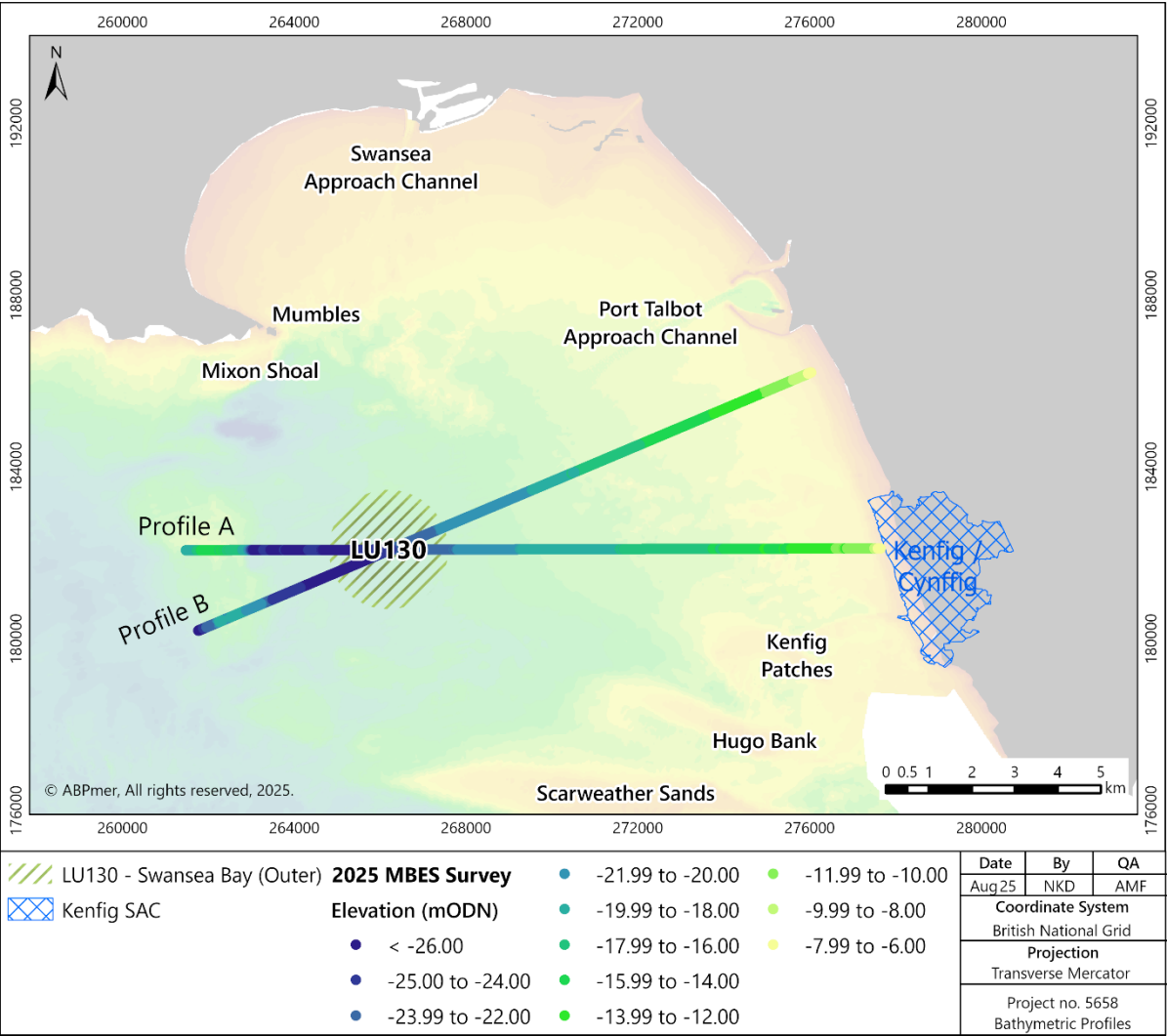


Figure 2. 2025 MBES bathymetry survey

2 Comparison of Bathymetric Data

Table 1 provides a summary of the bathymetric data provided as part of the present analysis, in support of the environmental assessment required to meet the Marine Licence condition (see above).

Comparison of the 2016, 2020 and 2025 bathymetry survey data against the earlier digitised chart data (based on surveys collected between 1883-84 and between 1980-1998) has been carried out to assess the changes to bathymetry along the two surveyed profiles.

The difference in bed elevation along Profiles A and B is shown in Figure 3 and Figure 4, respectively. Generally, the profile comparison shows a variable pattern of change through time, with some parts of the profiles being shallower now than in historic surveys and other parts being deeper. However, the three recent surveys (2016, 2020 and 2025) show very little variation in bed level and indicate the same bed features at the same locations and levels (e.g. the offshore bank feature, between 0 m and 3,000 m chainage on each profile remains consistent in elevation and width across all three survey periods).

Table 1. Bathymetric datasets used in assessment

Date	Source and Date
1883-84	KPAL (2014) – digitised from charts drawn from surveys collected between 1883 and 1884
1980-98	KPAL (2014) – digitised from charts drawn from surveys collected between 1980 and 1998
2016	SBES bathymetric surveys collected on behalf of ABP South Wales 20-21 October 2016
2020	SBES bathymetric surveys collected on behalf of ABP South Wales 21 January 2020
2025	MBES bathymetric surveys (post processed to 1 m grid within profile corridors) collected on behalf of ABP South Wales 30 June 2025

For both profiles, over much of the seabed between the LU130 site and the adjacent coastline to the east, the bed elevation in 2025 is effectively no different to that observed in the 2020 and 2016 survey data. Levels from the latter three datasets are generally similar to those extracted from the earlier surveys from 1883-84 and 1980-1998. Within the LU130 site, the western extent of each profile remains at or below the bed elevation from the earlier survey periods. Across the remainder of the disposal site (LU130), the bed elevations in 2025, 2020 and 2016 tend to be slightly higher (shallower water depths) than from the previous two survey periods. Within the LU130 disposal area across Profile A, the 2025 bed elevation is up to 0.8 m higher than the 1980-1998 survey (with an average difference of 0.3 m higher), whilst for Profile B within the LU130 disposal area, the bed elevation is up to 0.9 m higher over the same period (with an average difference of 0.5 m higher).

It should be noted that the profiles extracted from the earlier 1883-84 and 1980-1998 surveys are based upon an interpolated bathymetry dataset, which has been obtained from digitising charts. This will introduce an element of smoothing to the data as the digitised elevations are at a considerably lower sample density than the collected (raw) survey data. By contrast, the recent 2025 MBES and the 2020 and 2016 SBES survey data is raw data collected along each of the pre-defined profile lines and is plotted on Figure 3 and Figure 4 without any interpolation. As such, direct comparison of plotted elevations will not necessarily provide an accurate quantification of changes in bed level between survey periods. The

plots are, however, considered suitable to assess the general trends in direction of change along each profile, between time periods.

In order to provide a more comparable set of metrics for assessing change along the length of each profile, a statistical average of the profile elevation (along the comparable sections of each profile that have been covered in each of the five survey periods) has been calculated. The survey profiles for 2025 did not run as far inshore as previous years, resulting in less data in the shallower areas, therefore, data for all years was restricted to a similar chainage as 2025 for comparison purposes. Table 2 summarises the average elevation of each profile for the comparable sections, and from each survey period.

Table 2. Average bed elevation along Profiles A and B

Survey Period	Average Bed Elevation (mODN)	
	Profile A	Profile B
1883-84	-19.46	-22.28
1980-98	-18.67	-21.40
2016	-19.18	-21.83
2020	-19.28	-21.90
2025	-19.15	-21.83

From the values in Table 2, it is apparent that the average profile elevation (for both A and B) remains generally similar across each of the five survey periods. Along Profile A, the average elevation varies by 0.31 m across all survey periods, whilst the equivalent value for Profile B is 0.45 m. When comparing the three most recent (repeated survey) datasets, the variation in average elevation is generally within ± 0.1 m.

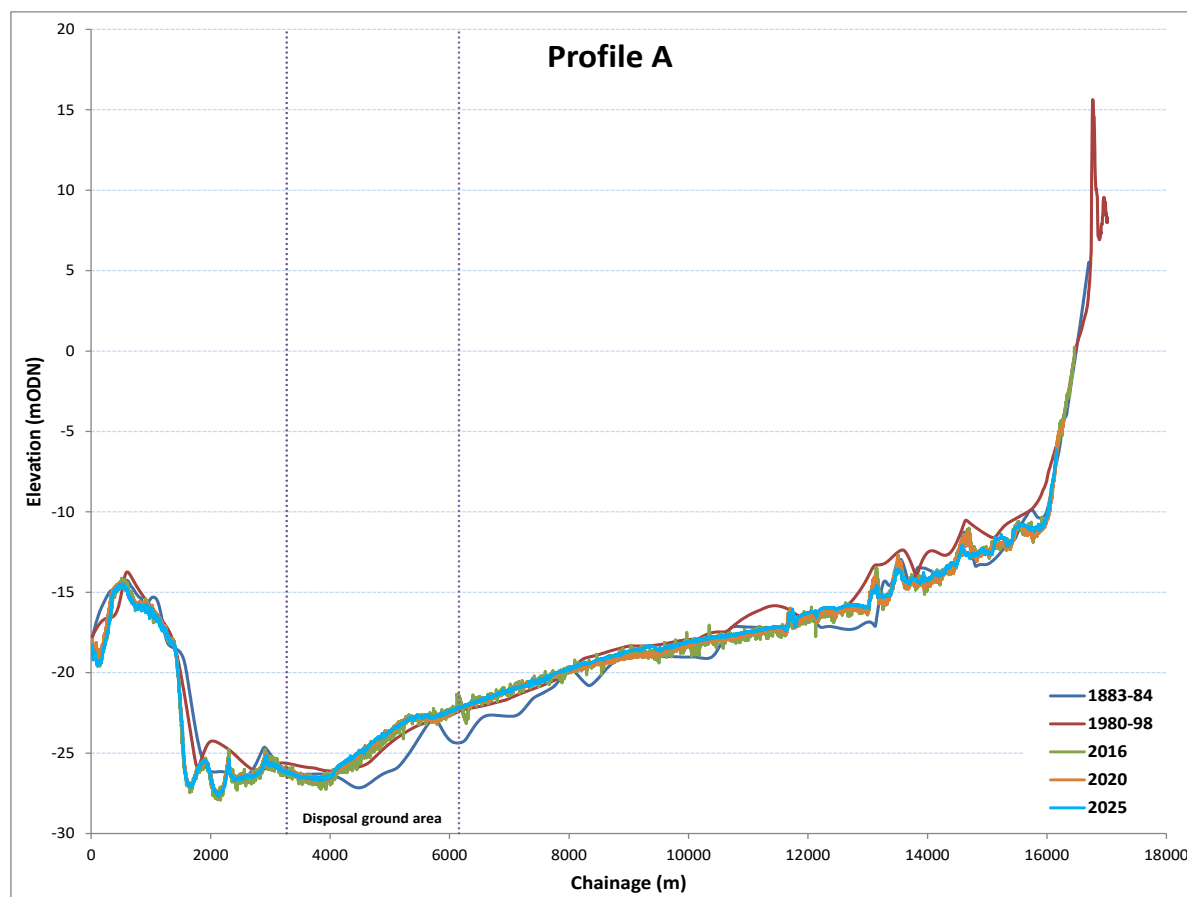


Figure 3. Comparison of bed elevation along Profile A between 1883-84 and 2025

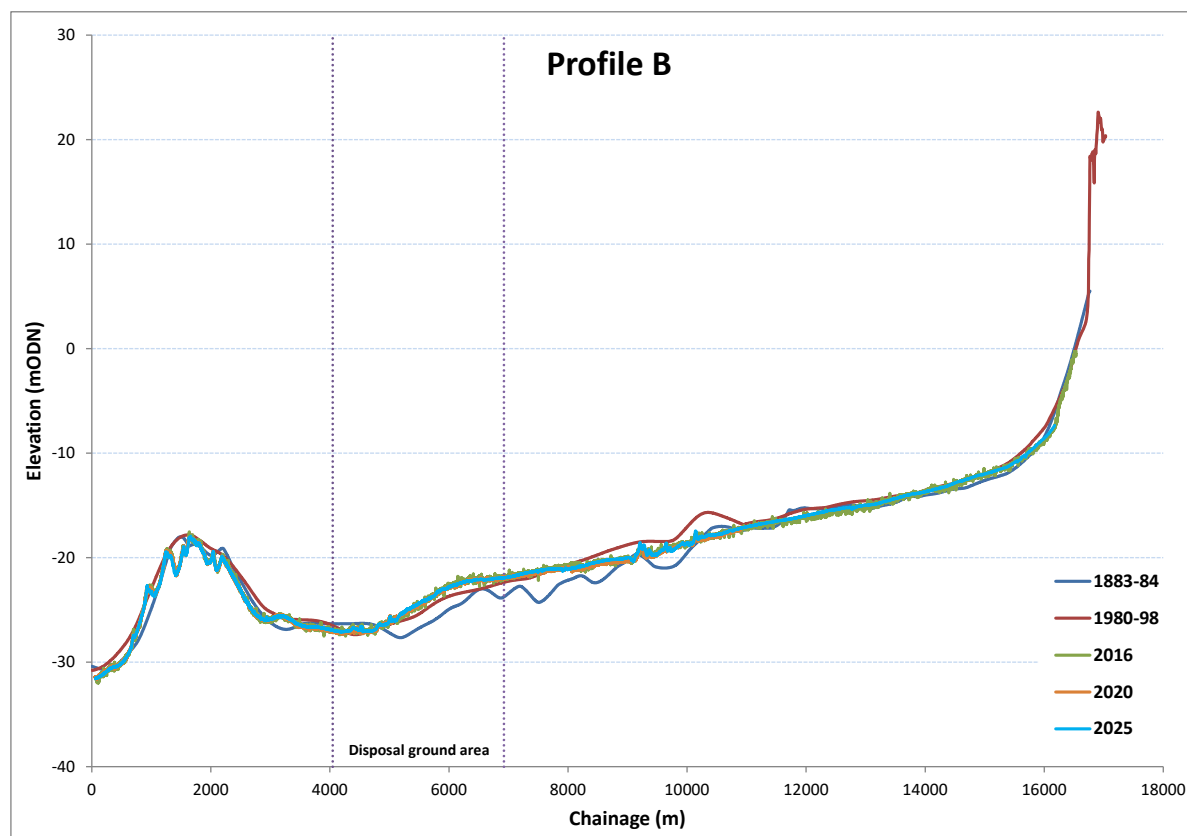


Figure 4. Comparison of bed elevation along Profile B between 1883-84 and 2025

3 Summary

The initial analysis of bed profiles (as reported within the 2020 ABP renewal application) has been updated with analysis of a more recent (2025) bathymetric monitoring survey, comparing the contemporary bed elevations with those interpolated from surveys dating from 1883-83 and 1980-1998 and from SBES survey data collected in 2016 and 2020.

The results of this analysis are summarised below:

- There is little overall variation in seabed elevation, along the defined profiles, between 1883-84, 1980-1998, 2016, 2020 and 2025.
- Particularly when comparing results from the three most recent surveys, bed elevations between 2016 and 2025 exhibit very little variation across both offshore and nearshore regions.
- Comparison of the bed elevation within the LU130 disposal site between 2016 and 2025 reveals very little variation, despite the collective volume of material (from multiple licences) that has been placed there over the intervening period.
- In areas where differences in elevation are apparent, variations from the 2025 survey tend to be small, indicating that the LU130 disposal site (and the surrounding area) remains dispersive for the spoil material disposed there.
- The shallow subtidal, and intertidal foreshore fronting the coastline between Kenfig and Port Talbot shows no notable change between 2016, 2020 and 2025 surveys, supporting the consideration that the underlying sand transport pathways remain unchanged.
- Consequently, it is considered that the continued use of the LU130 site (at its presently licensed disposal rate) will not result in sand transport to Kenfig being inhibited by muddy sediment deposits.

Overall, analysis of the most recent 2025 bathymetric survey data indicates that there remains no evidence (either historic or contemporary) to suggest a link between muddy material (from maintenance dredging) deposited at the LU130 disposal site and sand transport pathways to the Kenfig frontage.

Contact Us

ABPmer

Quayside Suite,
Medina Chambers
Town Quay, Southampton
SO14 2AQ

T +44 (0) 23 8071 1840

F +44 (0) 23 8071 1841

E enquiries@abpmer.co.uk

www.abpmer.co.uk

