ZTN201121C - As-left Report Gwynt Y Mor Met Mast

RWE

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2 Project scope

The scope of the project was to remove the entire metmast structure to a level of 2.5m below actual seabed. This included the lattice mast structure, the platform and upper monopile structure and the lower monopile structure to a level of 2.5m below actual seabed, leaving the lower part of the monopile structure in situ.

Work was carried out in accordance with Natural Resources Wales Marine Licence RML2109v2 under a contract between RWE and ZITON.

3 Document scope

This document summarizes the post-decommissioning condition of the area and provides an overview of site conditions and events preceding the removal of the met mast structure.

4 Project Timeline

4.1 1st visit, removal of the Lattice Mast

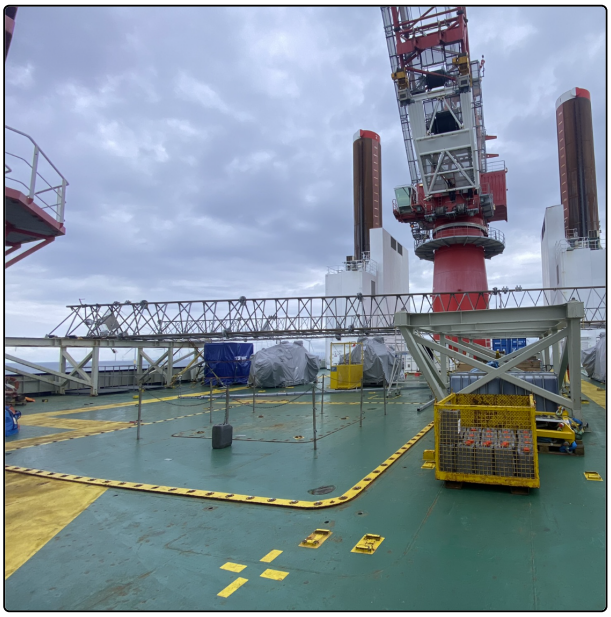
4.1.1 Arrival at site

The WIND SERVER touched down at the Gwynt Y Mor Meteorological Mast at 11:08 on the 11 July 2024.

1 Lattice mast prior to removal.

4.1.2 Lattice mast removal

On 13 July 2024, the lattice mast was safely removed and secured on deck. Following installation of temporary aids to navigation a walkdown of the Meteorological Mast Platform was conducted at 14:55, after which WIND SERVER initiated leg retraction and commenced transit to port at 15:30.



2 Lattice mast landed on deck.

4.1.3 Transit to port

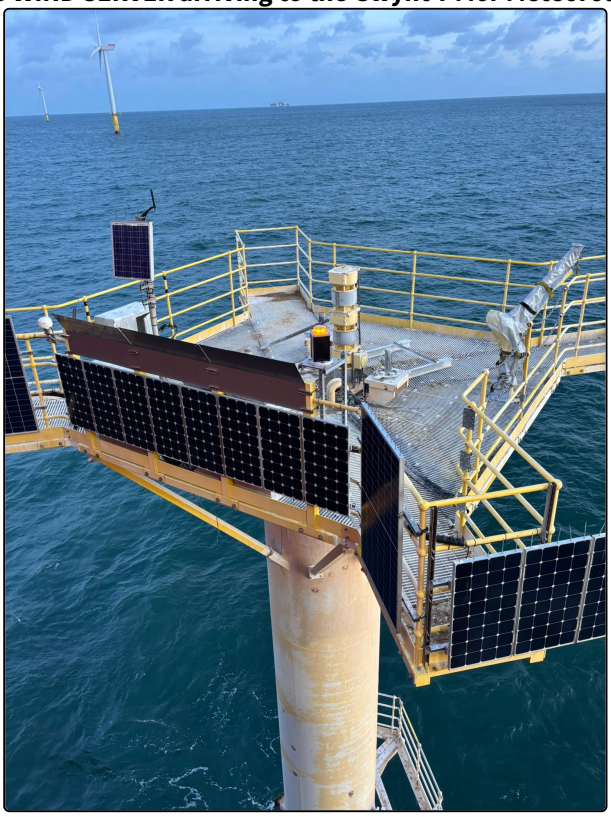
WIND SERVER arrived at Oostende Port on 17 July 2024. The gangway was rigged at 09:50, and demobilization began immediately thereafter with the scrapped structure being handed over to a local disposal facility.

4.2 2nd Visit, removal of platform and monopile.

4.2.1 Arrival at site

The WIND SERVER touched down at Gwynt Y Mor Meteorological Mast at 02:30 on 13 September 2025.

3 WIND SERVER arriving to the Gwynt Y Mor Meteorological Mast

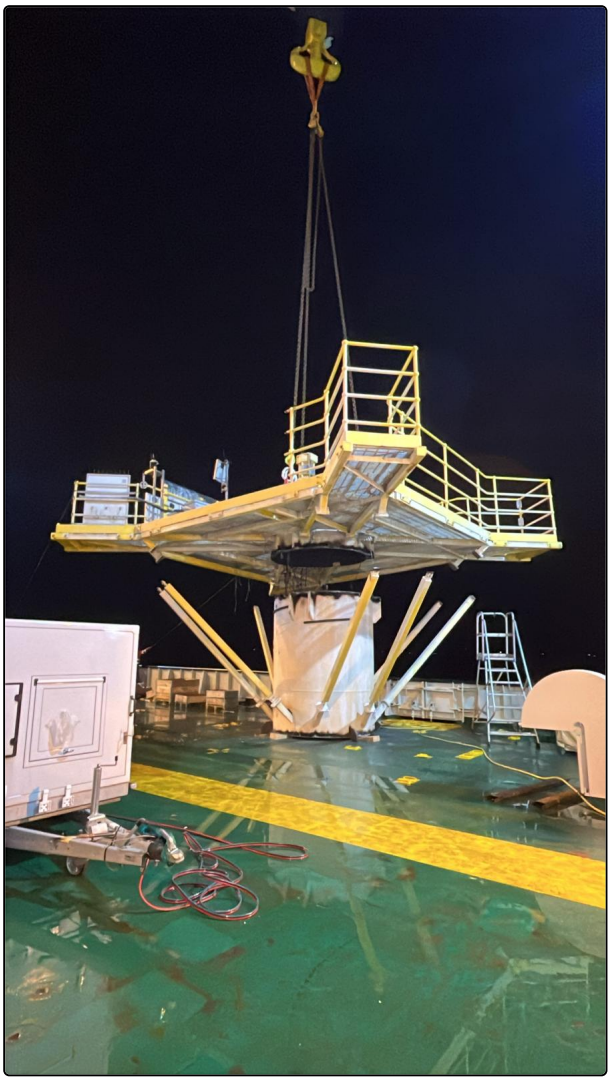


4 Gwynt Y Mor Meteorological Mast - platform as seen upon arrival.

4.2.2 Platform removal

Immediately upon completion of jacking operations, work commenced on the removal of the upper platform of the meteorological mast. At 19:20 on 13 September 2025, the platform was lifted off at a weight of 18t and landed on the deck of WIND SERVER. Subsequent work focused on separating the platform struts and the cut monopile section. By approximately 23:40, both the platform and monopile section were fully disconnected and properly seafastened on deck.

5 Upper platform cut and being lifted.



6 Upper platform separated from monopile section.

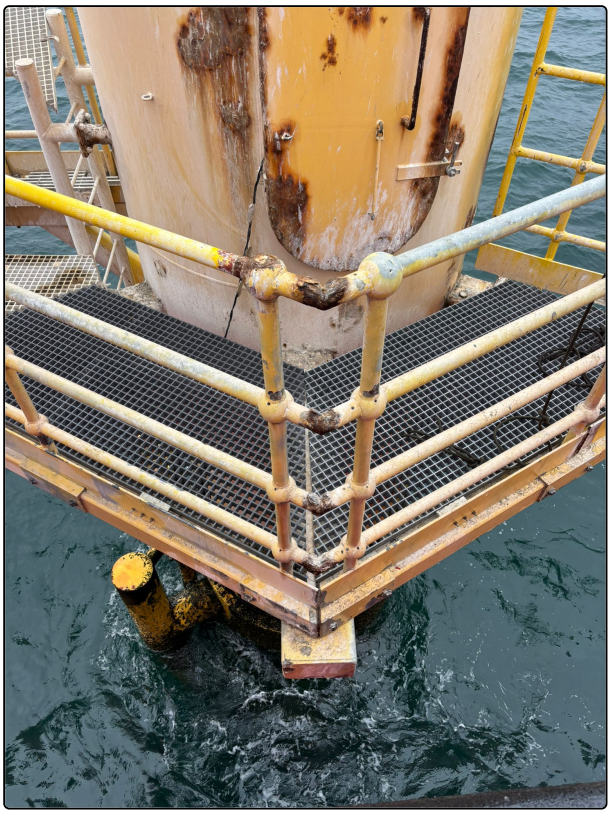
4.2.3 Upper monopile removal

At 10:48 on the 14 September 2025 the upper monopile section had been cut from the remaining monopile and it was lifted to the deck of the WIND SERVER at a weight of 9.5t. At 12:30 the same day the section had been properly seafastened onto deck.

7 Upper monopile section cut from lower monopile section.

4.2.4 Internal obstructions in monopile

Over the following days, adverse weather conditions limited progress, and work was carried out whenever conditions permitted. During this period, the external platform was refurbished to serve as a working area and the WIND SERVER had been repositioned to enable these tasks and to prepare for the final scope of operations. By 01:00 on 22 September, the upper internal platform had been removed, along with the internal ladder and lower internal platform. Finally, lifting brackets were installed on the monopile.



8 Access platform with new grating installed. Serving as working area.

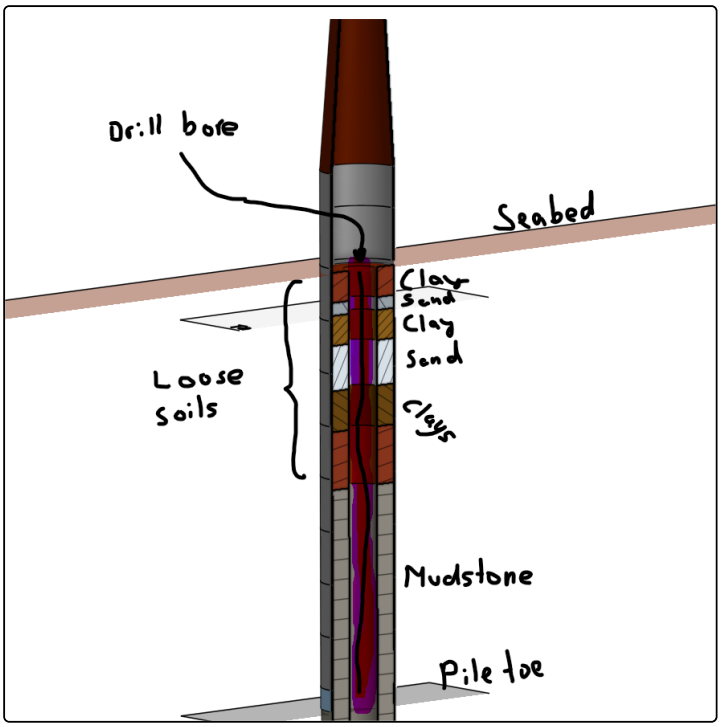
9 Lifting brackets installed.

10 Lifting brackets installed.

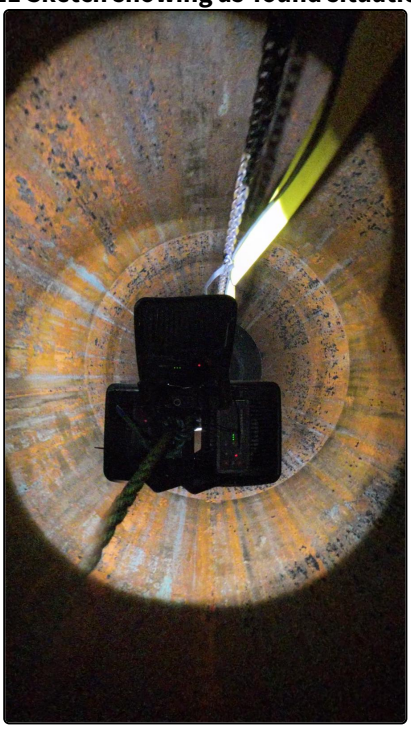
4.2.5 Internal Inspection of the monopile.

Whilst removal of the internal obstructions was ongoing, drainage of the monopile was carried out whenever conditions allowed. At the same time, external and internal soundings were taken, which revealed internal depths significantly greater than anticipated—approximately 10 metres below the surrounding seabed. The client subsequently advised that a significant internal volume had been drilled during the installation of the meteorological mast. It was concluded that the loose top layers (approx. depth 10m-11m) had collapsed into the drill bore, resulting in an internal seabed level substantially lower than the surrounding seabed.

Subsequent inspections confirmed that no cleaning was required, as the entire almost 10 meters was completely clean and free from objects, marine growth, pebbles, or stones—contrary to what had been observed at some previous MP removal cases.



11 Sketch showing as-found situation.



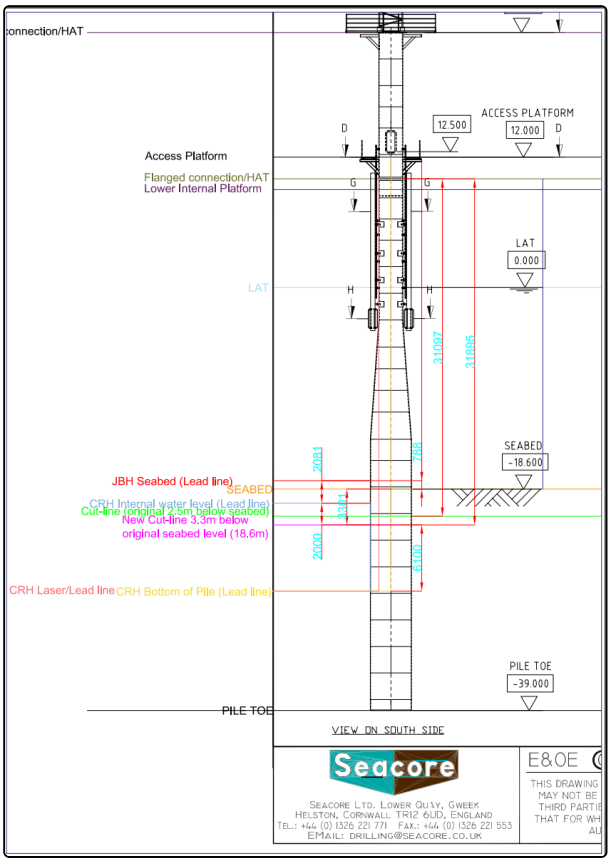
12 Camera and Lights being lowered into the monopile.

13 Camera and Lights at the bottom of the monopile.

4.2.6 Cutting of monopile

On 21 September 2025, the complete monopile lifting rigging was connected to the monopile, and a 200-tonne test lift was carried out for 10 minutes. The test concluded with a visual inspection of the rigging and welds.

Final checks were performed in order to assess the cut-level which was decided to be 3.3m below external seabed level.



14 Cut line illustrated.

Following completion of the final internal preparations and removal of obstacles, the rigging was reconnected to the monopile.

On 22 September 2025, the cutting rig was deployed into the monopile with a target depth below surrounding seabed of 3.3m. Cutting was initiated 9:25 LT and continued until 02:46 LT on 23 September 2025 at which time pull was applied to the MP. No movement could be observed why it was decided to reverse the cutting rig to it's starting position. Cutting was resumed and continued until 04:58 LT at which time the cutting rig was recovered.

Successful cutting of MP.

At approximately 05:30 on 23 September 2025, movement of the monopile was observed, indicating successful completion of the circumferential cut.

Subsequently, the monopile was lifted from the seabed, weighing 153.0 tonne.

15 MP being lifted out of the water

16 Level of barnacles indicated the external seabed level

17 3.5m

Landing, cutting and seafastening the MP.

The monopile was landed and cut into 10 pieces and made ready for sea transport by properly seafastening them all.

18 Cutting into 5m sections

Seafastening of the structure sections was completed at 11:30 on 24 September and WIND SERVER left location at 13:15 on 24 September 2025.

4.2.7 Transit to port

WIND SERVER arrived at Dun Laoghaire on 25 September 2025 at 15:15. Demobilization began immediately thereafter with discharge of tools, equipment and the scrapped structure

5 Tally of removed material

A total of 177.5t was removed offshore and landed (loaded) on WIND SERVER, as measured by the crane's load indicator. The parts removed are detailled in below table

Object	G.weight	N.weight	Note
Platform	18	17.5	
Upper pile	9.5	9	
Lower pile	153	150	
Minor ancilliary steel parts		1	(hatches, ladders)(estimated)
Total		177.5	

6 Tally of disposed material

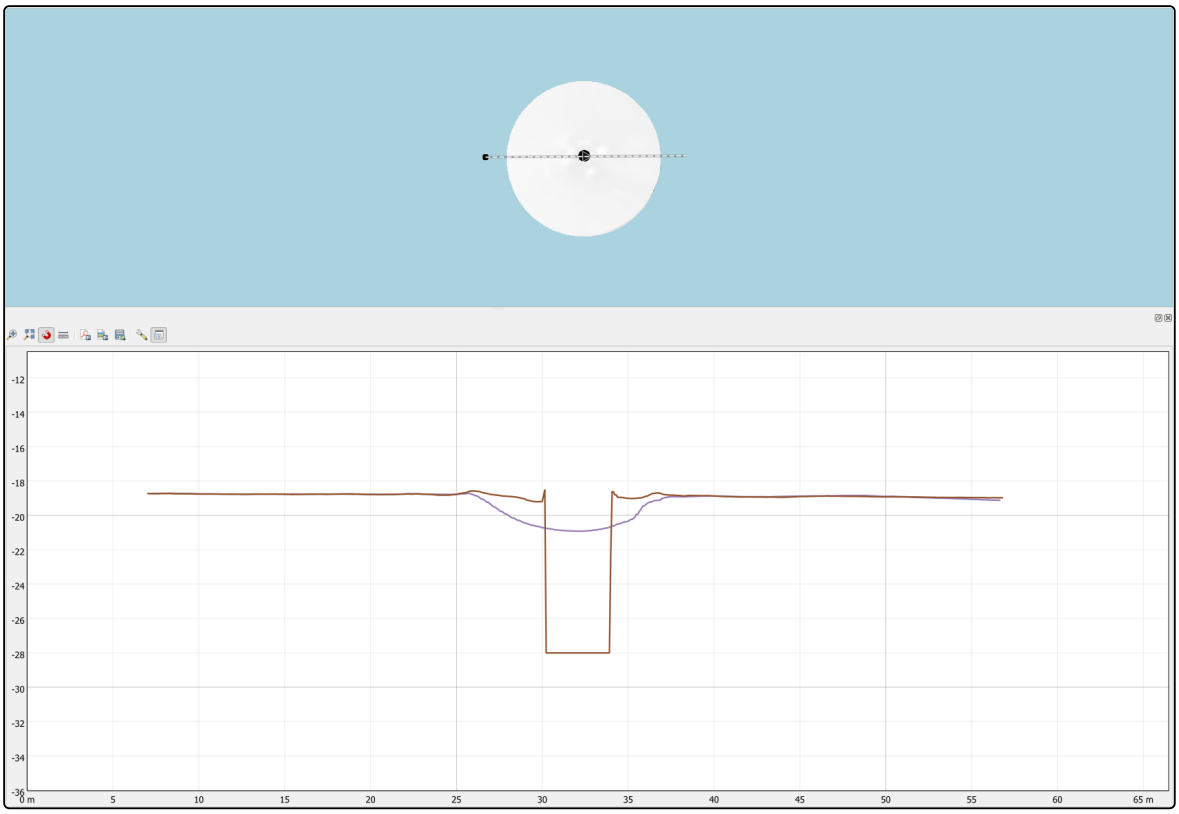
The removed material was disposed of at Dun Laorghaire except for the metmast itself which was previously discharged at Oostend. A total of 175.5t was discharged from WIND SERVER with the difference between 177.5t loaded and 175.5t discharged accounted for by drainage/drying of marine growth and measurement tolerances.

Fraction	N.weight	Disposed to	Documentation	Note
Lattice Mast	13.86	Galloo	Galloo Waste Recipt	Discharged at Oostend
Steel	69.3	The Hammond Lane Metal Co. Ltd.	The Hammond Lane Metal Co. Ltd. Waste Receipt	RWE Waste Returns Form - Hammond Lane Group
Steel	98.7	UMR Group	UMR Group Waste Receipt	RWE Waste Returns Form - UMR GROUP
Marine growth	2	Doyle Shipping Group		(estimated)
Soils	1	Doyle Shipping Group		(estimated)
Ancilliary parts	2	Doyle Shipping Group		(solar panels, cabinets, instrumentation)
Others	2.5	Doyle Shipping Group		Retained on board as ships operational waste per MARPOL
Total	**175.5**			**Net Total weight *without* lattice mast.**

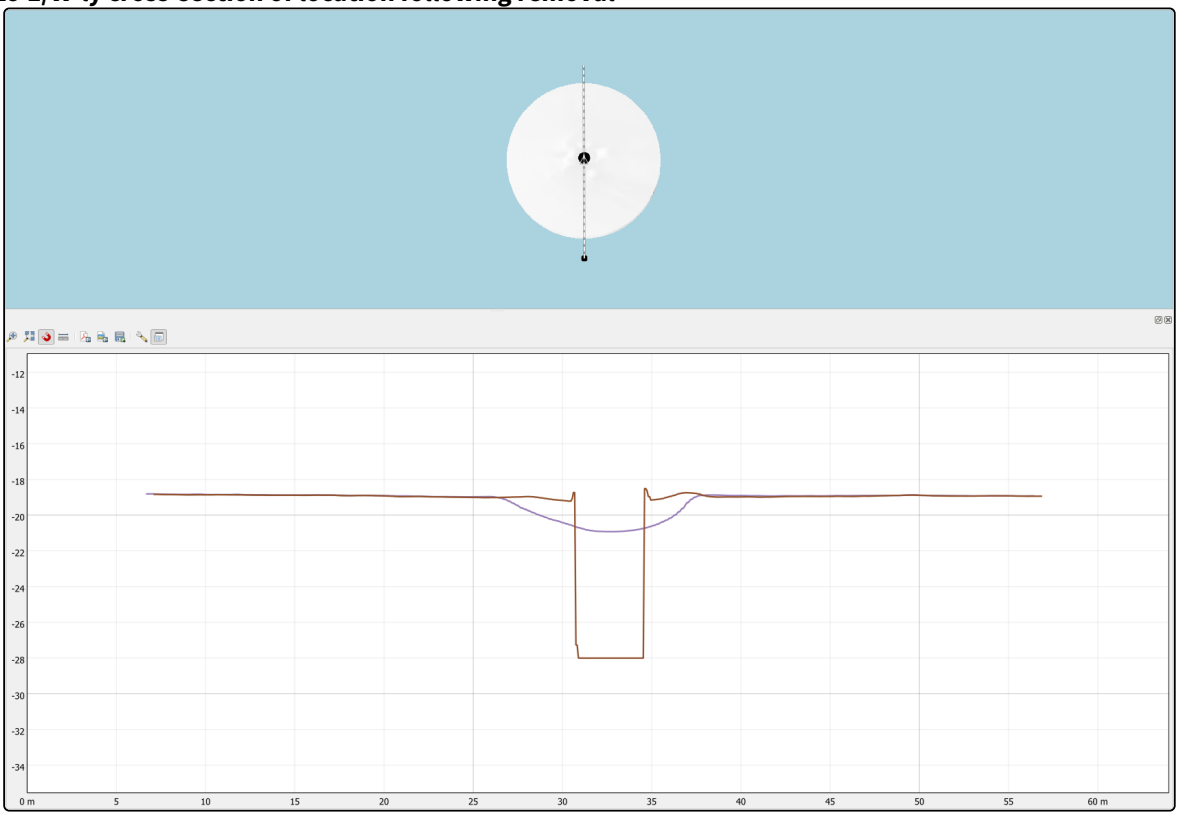
A further approx. 100kg of the MP was cut off and handed-over to Imperial College, London for scientific purposes.

7 Post removal survey

A post-removal survey was carried out the location on 15 October 2025. The survey covered 100m x 100m box to cover the monopile position and the immediate surroundings. Data acquisition was carried out using multi-beam echosounder and side-scan sonar in order to map the bathymetry and detect any foreign object on the seabed. The survey report is attached to this report.



19 E/W-ly cross-section of location following removal



20 N/S-ly cross-section of location following removal

The main conclusion from the survey are:

1. No scour protection was identified or seen exposed.
2. There is no presence of objects on the seabed in the vicinity of the location which have not been detected on previous surveys except for one object of approximate dimensions L2m x H0.1m x W0.1m. No loss over-board of any object was reported during the removal work.
3. The general depth of the seabed is 18.9mLAT with the foundation cavity extending to at least 20.9mLAT. Prior to removal the cavity extended to approx. 28mLAT. Comparing to previous surveys it is evident that significant collapsing of the seabed into the cavity has taken place and it is expected that the cavity will eventually fill-in as indicated by the in-fill of previous spudcan impressions in the vicinity of the location.
4. No signs of the foundation can be detected and it is now covered completely by the cavity in-fill.

8 Conclusion

The Gwynt Y Mor metmast was removed and disposed of in compliance with the requirements of Natural Resources Wales Marine Licence and the contract between RWE and Ziton.

9 References

UHC25021 - Report "GyM Met Mast Decom Survey Operations and Results Rev00"