

APPENDIX D

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Our Ref :ml/0022/6/16
Your Ref :Voyager Marine

19th February 2024

This is to Certify that Mike Lyness

did, on the 19th February 2025, at the request of Voyager Marine Ltd, without prejudice inspect the supporting piles adjacent to the tidal landing pontoon used by Plymouth Boat Trips for embarking and landing passengers which is connected to the shore in Saltash, Cornwall slightly North of the Tamar bridge, to inspect the associated piles and adjacent structure following being damaged in a recent storm.

UPON EXAMINATION FOUND

The pontoons are laid out in around three sections as a hammerhead/T Shaped formation with a pontoon access gangway, fixed gangway and hammerhead pontoon arrangement, the structure is supported and anchored by Five tubular piles set into the sea bed.

The arrangement is typical of this type of landing pontoon and is laid out as walkway for access to floating pontoons with an additional two fingers on either side of the main walkway leading to the main hammerhead landing pontoon, the arrangement allows for the rise and fall of the tidal height in the area and it appears to be in the region of between 0-50 degrees working angle with a articulation or roller for the variable tide heights.

The inspection was mainly to ascertain the general condition of the piles which will temporarily suspend the main gangway while repair works are undertaken to the pontoons themselves and also the requirement for future maintenance works.

INSPECTION

The Pilings

The five piles are located as follows with a reference for each given

Two piles to the main hammerhead, one located at the southerly end the other at the northerly end

Pile 1 Being Southerly

Pile 2 Being Northerly

Two piles located at the base of the main pontoon adjacent to the gangway

Pile 3 being Southerly

Pile 4 being Northerly

One pile located below the articulated gangway supporting a concrete pad which allows the gangway to rest on when at low water, this being pile 5.

On each pile, at least five areas were suitably de-scaled and prepared to allow for ultrasonic thickness readings being taken as well as the minimum of five UTM readings, various other readings were taken in areas of more concern around significant scale and pitted corrosion.

We have not sighted the original specification of the piles with reference to the original wall thickness of the steel thickness however various readings were taken in what appeared to be sound material away from areas of corrosion which would suggest that the original material thickness was **16mm.**

Pile 1

1. 15.9mm
2. 15.7mm
3. 15.8mm
4. 15.4mm
5. 15.9mm

Various other readings taken in random areas giving an average of 15.7mm

Pile 2

1. 15.7mm
2. 15.2mm
3. 15.7mm
4. 15.2mm
5. 15.8mm

Various other readings taken in random areas giving an average of 15.4mm

Pile 3

1. 14.7mm
2. 15.1mm
3. 15.7mm
4. 15.2mm
5. 15.8mm

Various other readings taken in random areas giving an average of 15.3mm

Pile 4

1. 15.9mm
2. 15.6mm
3. 15.7mm
4. 15.5mm
5. 15.8mm

Various other readings taken in random areas giving an average of 15.6mm

Pile 5

1. 15.1mm
2. 14.9mm
3. 14.8mm
4. 14.7mm
5. 15.1mm

Various other readings taken in random areas giving an average of 14.9mm

The meter used at the time of the inspection was a Tritex 5061 last calibrated in June 2024.

Generally the piles appear in good order however significant scale was noted around the upper sections presumably the high water mark area, several areas did appear to show quite significant pitting although the surrounding material did show good material thickness the areas of scale in places were un readable due to the shear between layers of the rust scale. The area at the high water mark would suffer more from corrosion due to the effects of "wind and wave" which always has an effect on any structure in the water.

At present it would appear that the structures are in serviceable condition and fit for purpose however we are unaware of any on going maintenance regime, areas on each pile would benefit from de scaling where necessary and the application of suitable coatings to prevent further degradation, anode monitoring and changing on an annual or bi-annual basis as deemed necessary, we also consider it prudent to annually inspect surfaces and articulated joints as well as the surfaces of the piles themselves to help ensure a long working life of the structures.

REMARKS

1. We enclose photographs showing areas of corrosion

Signed
M Lyness

Enc...