

# Scilly Subsea Cables Superfast Broadband Project

# **Archaeological Recording**



**Cornwall Archaeological Unit** 

# Scilly Subsea Cables Superfast Broadband Project

Archaeological recording

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### **Cornwall Archaeological Unit**

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## Acknowledgements

This study was commissioned by BT PLC and carried out by the Cornwall Archaeological Unit.

The Cornwall Archaeological Unit would like to thank: Mick Glanfield, Neil Pinsent, Mark Morris, Chris Ellis, Tim Wigmore and Jeremy Steventon-Barnes from BT, Falmouth Divers and Wright Construction for their help and cooperation during the watching brief.

The Project Manager was Charles Johns; the fieldwork was carried out by Charles Johns and Carl Thorpe.

The views and recommendations expressed in this report are those of the Cornwall Archaeological Unit and are presented in good faith on the basis of professional judgement and on information currently available.

## Freedom of Information Act

As Cornwall Council is a public authority it is subject to the terms of the Freedom of Information Act 2000, which came into effect from 1st January 2005.



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Cover illustration The cable coming ashore at Porthcressa, St Mary's on 17 July 2014 (photo: CAU)

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# Abbreviations

- CAU Cornwall Archaeological Unit
- HER Cornwall and the Isles of Scilly Historic Environment Record
- MCO Monument number in Cornwall HER
- MMO Marine Management Organisation
- NGR National Grid Reference
- ROV remotely operated vessel
- WSI Written Scheme of Investigation

# 1 Summary

This report describes the results of an archaeological watching brief carried out by the Cornwall Archaeological Unit for BT PLC for the Scilly Subsea Superfast Broadband Project in July 2014.

The watching brief covered the seabed crossing for the new section of seabed cable from the existing cable out of Porthcurno to Scilly and also the subsea routes between, St Mary's and Tresco and Bryher and Tresco. It also covered the following five landfalls in Scilly:

- 1. Anneka's Quay/The Bar, sand and shingle beach on the north-eastern side of Bryher (NGR SV 882260 15241);
- 2. Foreshore below Point Carn on the north-western side of Tresco mapped as rock, boulders and shingle (NGR SV 88647 15316);
- 3. Pendrathen Quay, foreshore at the north-western end of St Mary's mapped as rock and boulders (NGR SV 91170 12749);
- 4. Sandy beach between Crab's Ledge and Bounty Head, Tresco (NGR 89952 13868);
- 5. Porthcressa, the sandy beach at the south-western end of St Mary's where the cable from Porthcurno came ashore (NGR 90315 10434).

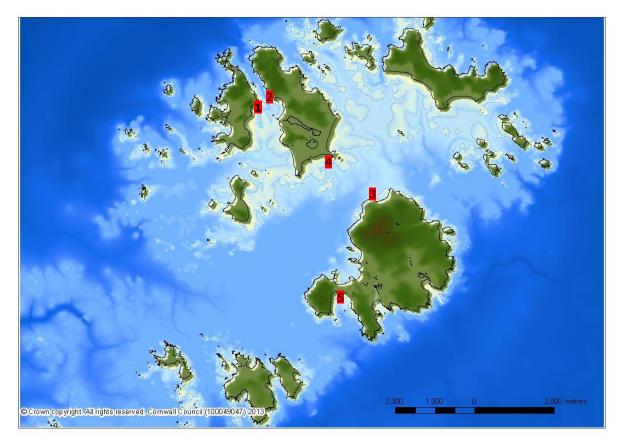
Assessment of the geophysical and bathymetric surveys carried for BT over the final segment connecting the existing cable route out of Porthcurno with Scilly indicated that archaeological potential was low and a protocol for reporting finds of archaeological interest was adopted (Appendix 2), however no archaeological finds or features were reported during the sea bed crossing.

The inter-island cables were surface-laid and did not disturb the seabed, especial care was taken to avoid the area of the submerged forest and peat exposure between St Mary's and Tresco.

A watching brief was maintained during groundworks at the five cable landfall sites but there no archaeological finds or features present.



Fig 1 Subsea cable route.



*Fig 2 Location of the cable landings on Scilly: 1 Anneka's Quay/The Bar, Bryher; 2 Below Point Carn, Tresco; 3 Pendrathen, St Mary's; 4 Bounty Ledge, Tresco, 5 Porthcressa, St Mary's.* 

# 2 Introduction

# 2.1 Project background

BT PLC is working with the Council of the Isles of Scilly Council and the Cornwall Development Company to provide Superfast Broadband to the Isles of ScillyThe project involved a seabed crossing from Cornwall and the installation of subsea telecoms cables at five landings on the Isles of Scilly (Figs 1 and 2) and BT PLC applied for marine licences for these cables from the Marine Management Organisation (MMO).

English Heritage's response to the application was that `The historic environment of the project area is extremely sensitive. This includes the seabed crossing and approaches to Scilly (ship and aircraft wreck), between the islands and at the cable landfalls on Scilly (shipwrecks, prehistoric monuments and landscapes). Owing to this sensitivity and the potential for further discoveries, a historic environment desk-based assessment with recommendations for mitigation will be required following a marine geophysical survey of the cable corridor between Cornwall and Scilly. We appreciate the difficulties of carrying out marine geophysical survey in shallow water but would also recommend that the feasibility of geophysical survey of the inter-island cable routes is also investigated.

The surveys and desk-based assessment should be conducted by specialists with relevant experience of both the project area and the use of marine geophysics in a historic environment context'.

The MMO advised that there were two (draft) licence conditions that could be included in any potential marine licence that may be issued in respect of this application:

`The licence holder must provide the MMO with written confirmation that a qualified marine archaeologist has reviewed and provided a written report on the data gathered during the pre-construction bathymetric and side scan sonar surveys of the cable route, and that any micro-siting of the cable satisfactorily avoids any potential archaeological interests.

For the near shore and intertidal areas likely to be impacted by the works, A Written Scheme of Investigation to describe how damage to potential historic environment assets will be mitigated must be submitted to the MMO for review and approval no less than 4 weeks prior to the first instance that the licensed activity is due to start. Archaeological interests may also include palaeo-environmental investigation and scientific dating if relevant sediments are affected by the works'.

In order to address the comments and advice from English Heritage and the MMO, a Written Scheme of Investigation (WSI) for archaeological recording during the project was prepared for BT PLC by the Cornwall Archaeological Unit (CAU—formerly Historic Environment Projects, Cornwall Council) at the request of Mick Glanfield, Restoration Liaison & Marine Team Front Office, Subsea CoE, in order to meet the of the draft licence conditions (Appendix 1). It was based upon the surveys carried out for BT PLC and informed by discussion with Vanessa Straker, Science Advisor for English Heritage (South West).

# 2.2 Aims

It was possible that ground works associated with the cable laying and landings could disturb buried archaeological remains. It was therefore important that a suitably qualified archaeologist(s) is/are present during these works in order to identify and record any features of interest.

The site specific aims were to:

- Establish the presence/absence of archaeological deposits and remains.
- Determine the extent, condition, nature, character, date and significance of any archaeological deposits and remains encountered.

- To establish the nature of the activity on the site.
- To identify any artefacts relating to the occupation or use of the site.
- To obtain palaeo-environmental material which can be analysed and dated, which will help characterize past environments.
- To provide further information on the archaeology of Scilly from any archaeological remains or deposits encountered.

## 2.3 Working methods

The archaeological work was carried out according to the methodology set out in the WSI (Appendix 1).

# **3 Site history**

The archaeology of Scilly is of international importance with evidence on land and below the present high water mark indicating that Scilly has been settled for at least four thousand years.

A notable aspect of Scilly's historic environment is the presence of stone walls, a paleoenvironmental deposits and other remains below high water, the result of low-lying land being submerged by the gradual rise in sea-level. The timing and nature of changing land areas and the separation of the individual islands has, in the past, been the subject of much conjecture and debate.

There are 238 Scheduled Ancient Monuments. Many of these scheduled sites cover extensive areas on the islands, containing over 900 individual monuments, representing different periods. There are concentrations of prehistoric ritual and burial monuments, field systems and houses, cist grave cemeteries and Romano-British settlements and shrines.

Over the last 400 years a series of military installations has developed from Tudor forts and castles, Civil War batteries, and 18th century fortifications. The Isles of Scilly, the westernmost of the granite masses of south west England, contain a remarkable abundance and variety of archaeological remains from over 4000 years of human activity. The remote physical setting of the islands, over 40 km beyond the mainland in the approaches to the English Channel, has lent a distinctive character to those remains, producing many unusual features important for our broader understanding of the social development of early communities.

Throughout the human occupation there has been a gradual submergence of the islands' land area, providing a stimulus to change in the environment and its exploitation. This process has produced evidence for responses to such change against an independent time-scale, promoting integrated studies of archaeological, environmental and linguistic aspects of the islands' settlement.

The islands' archaeological remains demonstrate clearly the gradually expanding size and range of contacts of their communities. By the post- medieval period (from AD 1540), the islands occupied a nationally strategic location, resulting in an important concentration of defensive works reflecting the development of fortification methods and technology from the mid-16th to the 20th centuries. An important and unusual range of post- medieval monuments also reflects the islands' position as a formidable hazard for the nation's shipping in the western approaches.

The exceptional preservation of the archaeological remains on the islands has long been recognised, producing an unusually full and detailed body of documentation, including several recent surveys.

# 4 Site locations

The WSI covered the seabed crossing for the new section of seabed cable from the existing cable out of Porthcurno to Scilly (Fig 1) and the subsea routes between, St Mary's and Tresco and Bryher and Tresco. It also covered the following landfalls in Scilly:

- 1. Anneka's Quay/The Bar, sand and shingle beach on the north-eastern side of Bryher (NGR SV 882260 15241);
- 2. Foreshore below Point Carn on the north-western side of Tresco mapped as rock, boulders and shingle (NGR SV 88647 15316);
- 3. Pendrathen Quay, foreshore at the north-western end of St Mary's mapped as rock and boulders (NGR SV 91170 12749);
- 4. Sandy beach between Crab's Ledge and Bounty Head, Tresco (NGR 89952 13868);
- 5. Porthcressa, the sandy beach at the south-western end of St Mary's where the cable from Porthcurno came ashore (NGR 90315 10434).

# 5 Archaeological results

# 5.1 The seabed crossing from Porthcurno

The surveys carried for BT by Marine Engineering Solutions (Orr 2014) covered the new final 46.373km segment connecting the existing cable route out of Porthcurno with Scilly (Fig 1). They comprised side scan sonar, sub-bottom profiling and bathymetry. The seabed surface sediment types were identified a gravel, rock, sand and sub-cropping rock. No organic sediments were recorded by the surveys or in the grab samples. Only wreck site was identified approximately 0.75km to the south-east of the final splice with the existing Porthcurno cable. The cable was laid by ROV up to the 20m water depth approximately 0.66km from Porthcressa on St Mary's and then by diver jetting for the final section.

Assessment of the surveys by CAU indicated that the potential for disturbing paleoenvironmental remains was low and a wreck identified near the final splice between the existing and new cables was avoided by the cable route.

Consequently a protocol for reporting finds of archaeological interest was adopted, closely following the British Marine Aggregate Producers Association and English Heritage Protocol (Wessex Archaeology 2005; Appendix 2). The cable-laying contractor, TE SubCom, nominated one of their staff as a Site Champion for archaeology. They were issued with a flow chart setting out the actions to be taken when they are told about a discovery. The Site Champion was to fill in a *pro forma* Preliminary Record sheet for each find, based on the form in the Protocol document and inform the project archaeologist. A Poster accompanying the Protocol was posted in a prominent position in the contractor's vessel CS *Resolute*.

In the event that finds of archaeological importance were encountered in the course of cable laying, the operator was to comply with the Protocol and ensure that the discovery was reported to the MMO, English Heritage and the Cornwall Council Historic Environment Planning Advice Officer (HEPAO).

No archaeological finds or features were reported during the sea bed crossing.

# 5.2 Inter-island cable routes

The inter-island cable routes were not surveyed as these cables were surface-laid and the only excavations were above the Mean Low Water Mark up to the beach joint and covered by the cable landfall sites

Especial care was taken to avoid any seabed disturbance in the area of the submerged forest and sea bed peat exposure between St Mary's and Tresco.

# 5.3 Cable landfalls

## 5.3.1 Anneka's Quay/The Bar, Bryher

Scheduled Monument No. 1016170 'Prehistoric linear boundary and cairns south west of the Bar, Bryher' is located approximately 150m, to the south of Anneka's Quay. The Cornwall and Scilly HER also records a number of findpots in the general vicinity including a prehistoric quernstone (MCO 7624) and flints MCO 7630).

A small area of possible old land surface (MCO 7737) recorded near SM 101617 was sampled and analysed during the Lyonesse Project (Charman *et al* forthcoming) but was found to be weathered periglacial head (ram) which was stained dark brown giving it the appearance of organic-rich sediment. It did not contain any pollen or microfossils.

In 2007 test pits recorded during a watching brief on refurbishments to Anneka's Quay (Johns and Sawyer 2008, 15) revealed layers of sand and gravel overlying ram to depth of 2-3m — no palaeoenvironmental deposits were observed.

The archaeological potential at this location was considered relatively low. A watching brief was carried out during trenching on 19 July (Fig 3) but no finds or features of archaeological interest were found and the trench, which was c 0.7m deep, only contained layers of sand.

## 5.3.2 Below Point Carn, Tresco

This location was also the landing point for the 1985 SWEB off island electricity cable connecting Tesco and Bryher. The Cornwall and Scilly HER records that number of worked flints, including cores and tools (MCO 7635) were collected from trenches about 50 m to the south of this location (Ratcliffe 1991, and that in 1744 a hoard of about 500 Charles I half-crowns of  $17^{\text{th}}$  century date were found about 25m to the south by a mason repairing 'Tresco Palace', a boarding house used by ship masters and visitors (RN 72368; Troutbeck nd *c* 1794).

The archaeological potential at this location was considered relatively low and the cable was laid in a duct on the foreshore so there was no ground disturbance. The Master of the Falmouth Divers cable laying vessel did point out some bones and debris exposed in the low cliff near the landfall but on closer examination this proved to be post-medieval or modern material – the site has reported to the Cornwall and Scilly HER (Fig 4).

### 5.3.3 Pendrathen Quay, St Mary's

The nearest recorded site is the post-medieval quay at Pendrathen (MCO 7489) some 35m to the south-east. Other recorded sites in the near vicinity are an Iron Age/Romano-British occupation site (MCO 7479) centred at 85m to the south-east and the remains of wall at mean low water mark 100m to the north-west (MCO 77641).

The archaeological potential at this location was considered relatively low. A watching brief was carried out during trenching on 21 July but no finds or features of archaeological interest were found (Fig 5).

### 5.3.4 Beach between Crab's Ledge and Bounty Ledge, Tresco

This landing lies approximately 90m to the east of Scheduled Monument 1016422 'Prehistoric settlement and hut circles north of Crab's Ledge, Tresco' and approximately 45m to the south-west of Scheduled Monument 1017782 'Prehistoric field system in southern Pentle Bay, Tresco' (see Fig 3).

The field walls of 1016422 are related to successive intertidal peat deposits on the foreshore and was not known how far these extend below the sand to the east. Therefore the archaeological potential of this location was considered very high. A watching brief was maintained during trenching on 21 July but nor finds or features of archaeological interest were found. The trench only contained sand, and was excavated to a depth of c 1m (Fig 6). The peat deposits further to the west are currently well exposed on the surface of the beach because of last winter's storms, however they evidently come to an end some distance from the cable landfall (Fig 7).

## 5.3.5 Porthcressa, St Mary's

The cable from the mainland came ashore in Scilly at Porthcressa on St Mary's on 23 and 24 July (Fig 8). This location was also the landing point for the 1985 SWEB off island electricity cable connecting St Mary's and St Agnes although it was not monitored during that watching brief (Ratcliffe 1991).

The final approach to Porthcressa was surveyed by Marine Engineering Solutions using a small boat and comprised the navigable areas of 500m swath out to approximately 15m water depth (Orr 2014). Extensive rocks and hazards made navigation of some of the swathe impossible. The foreshore and intertidal areas were characterised by exposed rock or sub-cropping rock with a thin veneer of sand. From Beach probes, the depth of sand ranged from 0 - 0.7m.

Archaeological sites in the vicinity include the site of a World War 2 pillbox or gun position on the upper shore granite outcrop known as Little Carn 75m to the west (MCO 166775), the site of the post-medieval shipyard on Porthcressa Beach (MCO 7814). There is also a linear feature plotted from air photos which might be a modern power cable (MCO 71336). Bronze Age settlement remains and an Iron Age/Romano-British cist (MCO 7581) are exposed in the cliff face on the east side of Porthcressa Bay and the west side is Scheduled Monument 1018370 'Post-medieval breastwork, curtain wall and associated defensive structures on the periphery of The Garrison, St Mary's'.

The landing location at Porthcressa was considered to have moderate archaeological potential because the sand on the beach has frequently been moved by storms and Porthcressa Bank has been frequently remodelled, most recently in 2012/3. The remaining traces of 19<sup>th</sup> century shipbuilding activity on the Porthcressa shore were cleared away by the Council of the Isles of Scilly in 1902 (Bennett *et al* 1991; Johns and Sturgess 2013).

A watching brief was maintained during groundworks but no finds or features of archaeological interest were revealed.

# 6 Conclusions

While unproductive in terms of archaeological finds and features, the watching brief has helped to further define the extent of the Scheduled peat deposits at Crab's Ledge, Tresco. We now know that the deposits do not extend to the east under the sand and shingle as far as Bounty Ledge.

# 7 References

# 7.1 Primary sources

Ordnance Survey, 2007. Mastermap Digital Mapping

# 7.2 Publications

Bennett, M, Bushell, R, Mumford, C T, Pritchard, S, and Watt, S, 1991. *One Hundred Years of the Council of the Isles of Scilly*, St Mary's

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- Johns, C, and Sturgess, J, 2013. *Porthcressa Regeneration Project, St Mary's Isles of Scilly: building recording and archaeological watching brief*, Truro (Historic Environment Projects, Cornwall Council)
- Orr, M, 2104. BT Scilly Isles Cable System Route Review, Marine Engineering Solutions
- Ratcliffe, J, 1991. *Lighting up the Past in Scilly*, Institute of Cornish Studies and Cornwall Archaeological Unit
- Wessex Archaeology 2005. *Protocol for reporting finds of archaeological interest*, British Marine Aggregate Producers Association and English Heritage

# 8 Project archive

The CAU project number is **146383** 

The project's digital and photographic archive is maintained by Cornwall Archaeological Unit, Cornwall Council, Fal Building, County Hall, Treyew Road, Truro, TR1 3AY.

The project's documentary archive has been deposited at the Isles Of Scilly Museum, Church Street, St Mary's TR21 0JT

English Heritage/ADS OASIS online reference: cornwall2-191224



Fig 3 The cable coming ashore on Bryher, Saturday 19 July.



*Fig 4 Post-medieval/modern midden exposed in the cliff face near New Grimsby, Tresco.* 



Fig 5 The cable trench at Pendrathen, St Mary's, Monday 21 July.



Fig 6 Section of trial pit excavated at Bounty Ledge, Tresco, Monday 21 July.



Fig 7 The Scheduled peat exposure at Crab's Ledge, Tresco (foreground) with cablelaying activity in the distance.



Fig 8 The cable being brought ashore at Porthcressa, St Mary's, Wednesday 23 July.

# **Appendix 1: Written Scheme of Investigation**

Scilly Subsea Cables Superfast Broadband Project, WSI, Rev00, CJ, 09/06/2014

# Historic Environment Projects, Cornwall Council



## Scilly Subsea Cables Superfast Broadband Project: Written Scheme of Investigation for archaeological recording

Client: BT PLC Client contact: Mick Glanfield Client tel: 01473 629341 Client email: mick.glanfield@bt.com

## Project background

BT PLC is working with the Council of the Isles of Scilly Council and the Cornwall Development Company to provide Superfast Broadband to the Isles of Scilly. Part of the project is the installation of subsea telecoms cables at five landings on the Isles of Scilly and BT PLC have applied for marine licences for these cables from the Marine Management Organisation (MMO).

English Heritage's response to the application was that 'The historic environment of the project area is extremely sensitive. This includes the seabed crossing and approaches to Scilly (ship and aircraft wreck), between the islands and at the cable landfalls on Scilly (shipwrecks, prehistoric monuments and landscapes). Owing to this sensitivity and the potential for further discoveries, a historic environment desk-based assessment with recommendations for mitigation will be required following a marine geophysical survey of the cable corridor between Cornwall and Scilly. We appreciate the difficulties of carrying out marine geophysical survey in shallow water but would also recommend that the feasibility of geophysical survey of the inter-island cable routes is also investigated.

The surveys and desk-based assessment should be conducted by specialists with relevant experience of both the project area and the use of marine geophysics in a historic environment context'.

The MMO advised that there were two (draft) licence conditions that may be included in any potential marine licence that may be issued in respect of this application:

The licence holder must provide the MMO with written confirmation that a qualified marine archaeologist has reviewed and provided a written report on the data gathered during the pre-construction bathymetric and side scan sonar surveys of the cable route, and that any micro-siting of the cable satisfactorily avoids any potential archaeological interests.

For the near shore and intertidal areas likely to be impacted by the works, A Written Scheme of Investigation to describe how damage to potential historic environment assets will be mitigated must be submitted to the MMO for review and approval no less than 4 weeks prior to the first instance that the licensed activity is due to start. Archaeological interests may also include palaeo-

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environmental investigation and scientific dating if relevant sediments are affected by the works.

This Written Scheme of Investigation (WSI) for archaeological recording during the project has been prepared by Historic Environment Projects, Cornwall Council (HE Projects) for BT PLC at the request of Mick Glanfield, Restoration Liaison & Marine Team Front Office, Subsea CoE, in order to meet the second of the draft licence conditions. It is based upon surveys carried out by BT PLC and informed by discussion with Vanessa Straker, Science Advisor for English Heritage (South West).

## Site locations and description

This WSI covers the seabed cable route for the new section of seabed cable from the existing cable out of Porthcurno to Scilly, the landfall at Porthcressa (a sandy beach at the south-western end of St Mary's NGR 90315 10434), the inter-island routes between St Mary's and Tresco and Tresco and Bryher and four coastal locations where the cables will land or be routed from:

- Pendrathen Quay, foreshore at the north-western end of St Mary's mapped as rock and boulders (approx. NGR SV 91170 12749) (to)
- Sandy beach between Crab's Ledge and Bounty Head, Tresco (approx. NGR 89952 13868)
- Foreshore below Point Carn on the north-western side of Tresco mapped as rock, boulders and shingle (approx. NGR SV 88647 15316)
- Anneka's Quay/The Bar, sand and shingle beach on the north-eastern side of Bryher (approx. NGR SV 882260 15241)

## Archaeological background

The Isles of Scilly, the westernmost of the granite masses of south west England, contain a remarkable abundance and variety of archaeological remains from over 4000 years of human activity. The remote physical setting of the islands, over 40km beyond the mainland in the approaches to the English Channel, has lent a distinctive character to those remains, producing many unusual features important for our broader understanding of the social development of early communities.

Throughout the human occupation there has been a gradual submergence of the islands' land area, providing a stimulus to change in the environment and its exploitation. This process has produced evidence for responses to such change against an independent time-scale, promoting integrated studies of archaeological, environmental and linguistic aspects of the islands' settlement.

The islands' archaeological remains clearly demonstrate the gradually expanding size and range of contacts of their communities. By the post- medieval period (from AD 1540), the islands occupied a nationally strategic location, resulting in an important concentration of defensive works reflecting the development of fortification methods and technology from the mid-16th to the 20th centuries. An important and unusual range of post-medieval monuments also reflects the islands' position as a formidable hazard for the nation's shipping in the western approaches.

The exceptional preservation of the archaeological remains on the islands has long been recognised, producing an unusually full and detailed body of documentation, including several recent surveys.

2 G:\TWE\Waste & Env\Strat Waste & Land\Historic Environment\Projects\Sites\SCILLY\Scilly Subsea Cable Superfast Broadband Project 146383\Project Design\Scilly Subsea Cable Superfast Broadband Project WSI.doc There are 238 Scheduled Ancient Monuments. Many of these scheduled sites cover extensive areas on the islands, containing over 900 individual monuments, representing different periods. There are concentrations of prehistoric ritual and burial monuments, field systems and houses, cist grave cemeteries and Romano-British settlements and shrines.

## Archaeological potential, impacts and suggested mitigation

#### Seabed crossing

The survey by Marine Engineering Solutions (Orr 2014) does not cover the existing cable route out Porthcurno only the new final 46.373km segment connecting it with Scilly (Fig 1). The cable will be laid by ROV up to the 20m water depth approximately 0.66km from Porthcressa on St Mary's and then by diver jetting for the final section.

Surveys comprised side scan sonar, sub bottom profiling and bathymetry. The seabed surface sediment types were identified a gravel, rock, sand and subcropping rock. No organic sediments were recorded by the surveys or in the grab samples. Only wreck site was identified approximately 0.75km to the south-east o<sup>2</sup> the final splice with the existing Porthcurno cable.



Fig 1 Showing the new cable to Scilly branching off the existing cable out of Porthcurno

Assessment of the surveys indicates that the potential for disturbing paleoenvironmental remains is low. The wreck identified near the final splice will be avoided (Orr 2104, 34).

It is recommended that a protocol for reporting finds of archaeological interest should be adopted, closely following the British Marine Aggregate Producers Association and English Heritage Protocol (Wessex Archaeology 2005). The cable laying contractor will nominate one of their staff as a Site Champion for archaeology. They will be issued with a flow chart setting out the actions to be taken when they are told about a discovery. The Site Champion will fill in a pro

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forma Preliminary Record sheet for each find, based on the form in the Protocol document and will inform the project archaeologist. A Poster accompanying the Protocol will be posted in a prominent position in the Contractor's site accommodation.

In the event that finds of archaeological importance are encountered in the course of cable laying operator will comply with the Protocol and ensure that the discovery is reported to the Marine Management Organisation, English Heritage and the Cornwall Council Historic Environment Planning Advice Officer (HEPAO).

#### Porthcressa, St Mary's

The cable will come ashore in Scilly at Porthcressa on St Mary's. This location was also the landing point for the 1985 SWEB off island electricity cable connecting St Mary's and St Agnes although it was not monitored during the watching brief (Ratcliffe 1991).

The final approach to Porthcressa was surveyed by Marine Engineering Solutions using a small boat and comprised the navigable areas of 500m swath out to approximately 15m water depth (Orr 2014). Extensive rocks and hazards made navigation of some of the swathe impossible. The foreshore and intertidal areas were characterised by exposed rock or sub-cropping rock with a thin veneer of sand. From Beach probes, the depth of sand ranged from 0 – 0.7m.

Archaeological sites in the vicinity include the site of a World War 2 pillbox or gun position on the upper shore granite outcrop known as Little Carn 75m to the west (MCO 166775), the site of the post-medieval shipyard on Porthcressa Beach (MCO 7814). There is also a linear feature plotted from air photos which might be a modern power cable (MCO 71336). Bronze Age settlement remains and an Iron Age/Romano-British cist (MCO 7581) are exposed in the cliff face on the east side of Porthcressa Bay and the west side is Scheduled Monument 1018370 'Postmedieval breastwork, curtain wall and associated defensive structures on the periphery of The Garrison, St Mary's'.

This landing location is considered of moderate archaeological potential because the sand on the beach has frequently been moved by storms and Porthcressa Bank has been frequently remodelled, most recently in 2012/3. The remaining traces of shipbuilding activity on the Porthcressa shore were cleared away by the Council of the Isles of Scilly in 1902 (Johns and Sturgess 2013).

Recommended mitigation is an archaeological watching brief during groundworks, with a contingency for further recording, sampling, full analysis of ecofacts and artefacts (including radiocarbon dating), etc if required.

#### Inter-island cable routes

The inter-island cable routes were not surveyed as these cables are going to be surface laid and the only excavation will be above the Mean Low Water Mark up to the beach joint.

Especial care should be taken to avoid any seabed disturbance in the area of the submerged forest and sea bed peat exposure between St Mary's and Tresco (see Fig 2).

#### Pendrathen Quay, St Mary's

The nearest recorded site is the post-medieval quay at Pendrathen (MCO 7489) some 35m to the south-east. Other recorded sites are an Iron Age occupation site, Romano British occupation site (MCO 7479) centred at 85m to the south-east and the remains of wall at mean low water mark 100m to the north-west (MCO 77641).

The archaeological potential at this location is considered relatively low. Recommended mitigation is an archaeological watching brief during groundworks,

4 G:\TWE\Waste & Env\Strat Waste & Land\Historic Environment\Projects\Sites\SCILLY\Scilly Subsea Cable Superfast Broadband Project 146383\Project Design\Scilly Subsea Cable Superfast Broadband Project WSI.doc with a contingency for further recording, sampling, full analysis of ecofacts and artefacts (including radiocarbon dating), etc if required.

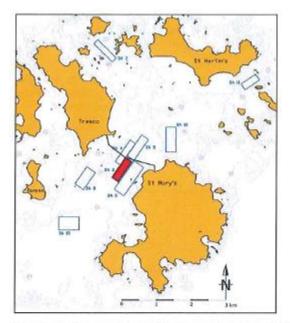


Fig 2 The rectangles on this map are marine geophysical survey areas. The red shaded area is the mapped surface extent of the submerged forest/peat beds. The black line indicates the cable route between St Mary's and Tresco (approx.)

#### Beach between Crab's Ledge and Bounty Ledge, Tresco

This landing lies approximately 90m to the east of Scheduled Monument 1016422 'Prehistoric settlement and hut circles north of Crab's Ledge, Tresco' and approximately 45m to the south-west of Scheduled Monument 1017782 'Prehistoric field system in southern Pentle Bay, Tresco' (see Fig 3).

The field walls of 1016422 are related to successive intertidal peat deposits on the foreshore and it is not known how far these extend below the sand to the east. Therefore the archaeological potential of this location is considered very high and the groundworks here should be undertaken under archaeological direction with provision for further recording, sampling, assessment, full analysis of ecofacts and artefacts (including radiocarbon dating), etc.

#### Below Point Carn, Tresco

This location was also the landing point for the 1985 SWEB off island electricity cable connecting Tesco and Bryher. The Cornwall and Scilly HER records that number of worked flints, including cores and tools (MCO 7635) were collected from trenches about 50 m to the south of this location (Ratcliffe 1991, and that in 1744 a hoard of about 500 Charles I half crowns of  $17^{th}$  century date were found about 25m to the south by a mason repairing 'Tresco Palace', a boarding house used by ship masters and visitors (RN 72368; Troutbeck nd *c* 1794).

The archaeological potential at this location is considered relatively low. Recommended mitigation is an archaeological watching brief during groundworks, with a contingency for further recording, sampling, full analysis of ecofacts and artefacts (including radiocarbon dating), etc if required.

#### Anneka's Quay/The Bar, Bryher

Scheduled Monument No. 1016170 'Prehistoric linear boundary and cairns south west of the Bar, Bryher' is located approximately 150m, to the south of Anneka's

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Quay. The Cornwall and Scilly HER also records a number of findpots in the general vicinity including a prehistoric quernstone (MCO 7624) and flints MCO 7630).

A small area of possible old land surface (MCO 7737) recorded near SM 101617 was sampled and analysed during the Lyonesse Project (Charman *et al* forthcoming) but was found to be weathered periglacial head (*ram*) which was stained dark brown giving it the appearance of organic-rich sediment. It did not contain any pollen or microfossils.

In 2007 test pits recorded during a watching brief on refurbishments to Anneka's Quay (Johns and Sawyer 2008, 15) revealed layers of sand and gravel overlying ram to depth of 2-3m — no palaeoenvironmental deposits were observed.

The archaeological potential at this location is considered relatively low. Recommended mitigation is an archaeological watching brief during groundworks, with a contingency for further recording, sampling, full analysis of ecofacts and artefacts (including radiocarbon dating), etc if required.

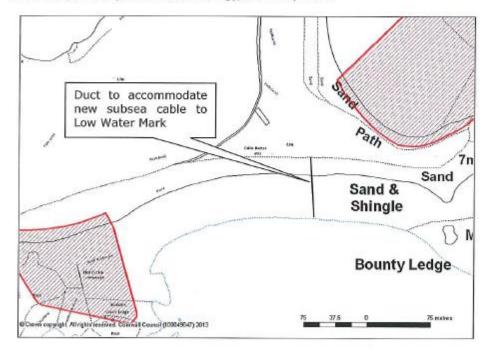


Fig 3 Map showing the location of the cable landing in relation to Scheduled Monuments near Bounty Ledge, Tresco

### Aims and objectives

Excavation from Mean High Water to the beach joint may disturb buried archaeological remains. It is therefore important that a suitably qualified archaeologist(s) is/are present during these works in order to identify and record any features of interest.

The site specific aims are to:

- Establish the presence/absence of archaeological deposits and remains.
- Determine the extent, condition, nature, character, date and significance of any archaeological deposits and remains encountered.

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- To establish the nature of the activity on the site.
- · To identify any artefacts relating to the occupation or use of the site.
- To obtain palaeoenvironmental material which can be analysed and dated, which will help characterise past environments.
- To provide further information on the archaeology of Scilly from any archaeological remains or deposits encountered.

## Working methods

All recording work will be undertaken according to the Institute for Archaeologists *Standards and Guidance for Archaeological Investigation and Recording.* Staff will follow the IfA *Code of Conduct* and *Code of Approved Practice for the Regulation of Contractual Arrangements in Archaeology.* The Institute for Archaeologists is the professional body for archaeologists working in the UK.

#### Desk-based assessment

Prior to the commencement of on site works the project archaeologist will familiarise themselves with the site by examining the information held by the Cornwall and Scilly Historic Environment record (HER) and in published sources.

#### Archaeological recording

A toothless ditching bucket will be used for the removal of any overburden (ostensibly sand and rocks). The first revealed substratum will then be hand cleaned to test for the presence of archaeological features, deposits and finds with resulting evidence being recorded as appropriate.

Any surviving remains which will be disturbed or destroyed by the excavation will be archaeologically excavated and recorded.

If significant archaeological deposits are exposed, all works will cease and a meeting convened with the client and the HEPAO to discuss the most appropriate way forwards.

Recording

- A location plan will be made, plotting the areas of ground works onto the Ordnance Survey Mastermap at 1:200.
- The heights of all features identified will be tied into the Ordnance Datum if appropriate.
- The location of features recorded during the watching brief will be plotted onto a drafting film overlay to the prepared location plan.
- All finds from significant stratified contexts will be accurately located on the location plan at an appropriate scale.
- All archaeological contexts will be described to a standard format linked to a continuous numbering sequence. All contexts recorded will be recorded via the medium of HE pro forma context recording sheets.
- Registers of drawings, photographs, finds and contexts, samples will be maintained during the fieldwork.
- · The excavated spoil will be carefully inspected for finds.

Site planning policy

 Site drawings (plans, sections, locations of finds) will be made by pencil (4H) on drafting film; all plans will be linked to the prepared location map

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and to the national grid; all drawings will include standard information: site details, personnel, date, scale and north-point.

- Site plans will be drawn at 1:20 and sections at 1:10, unless circumstances indicate that other scales would be more appropriate.
- Site drawings (plans and sections) will be digitised and converted into AutoCAD drawings.

Photographic record

- The photographic record will consist of prints in both black and white and colour together with the negatives. Digital photography will be used for report illustration.
- For both general and specific photographs, a photographic scale will be included.
- In the case of detailed photographs a north arrow will be included if appropriate.
- The photographic record will be accompanied by a photographic register detailing as a minimum, feature number, location and direction of shot.

Finds

- · All finds will be retained from each archaeological context excavated.
- All retained finds, where appropriate, will be washed.
- All pottery and other finds where appropriate, will be marked with the site code and context number.
- This WSI includes an agreed list of specialist consultants, who might be required to conserve and/or report on finds, and advise or report on other aspects of the project including environmental sampling.
- The requirements for conservation and storage will be agreed with the appropriate museum prior to the start of work, and confirmed in writing to the HEPAO.
- Finds work will be to accepted professional standards and adhere to the Institute for Archaeologists' Guidelines (IfA 2001b).

Sampling

- The English Heritage (South West) Science Adviser will be consulted for advice (Vanessa Straker 0117 975 0689).
- Environmental sampling will be guided by Environmental Archaeology (English Heritage 2011 (2<sup>nd</sup> edition).
- Other English Heritage guidance will be consulted as appropriate including Geoarchaeology (2004) and Archaeometallurgy (2001).
- The archaeologist undertaking the watching brief will assess the potential for environmental sampling.
- If suitable deposits are identified the following types of sample will be taken as appropriate:
  - Bulk sampling
  - Monolith sampling
  - Macro & Micro Flora Analysis (including pollen analysis)
  - Macro & Micro Fauna Analysis

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#### Scientific dating

o Radiocarbon dating of suitable samples will be undertaken

#### Human remains

Any human remains which are encountered will initially be left *in situ* and reported to the HEPAO and the appropriate authorities. If removal is necessary this will comply with the relevant Government regulations. If burials are encountered their legal status will be ascertained and recording and/or removal will comply with the legal guidelines.

If human remains are not to be removed their physical security will be ensured, if possible by back filling as soon as possible after recording.

If human remains are to be removed this will be done with due reverence and in accordance to current best practice and legal requirements. The site will be adequately screened from public view. Once excavated human remains will not be exposed to public view.

#### Archiving

During this phase the results of the fieldwork will be collated for archiving. This will involve the following tasks.

- Indexing of site drawings and photographs.
- Processing and analysis of artefacts and environmental samples, if appropriate.

Note: The requirements for Archiving and Reporting will be reviewed in the light of the fieldwork results

#### **Report production**

A report will be produced which will describe the results of the desk-based study and the nature of the fieldwork undertaken, the circumstance and conditions under which it occurred and the results that were obtained. Production of the report will involve:

- Producing a descriptive text.
- Producing maps, scaled plans and section drawings.
- Selecting photographs.
- Report design.
- Report editing.
- Dissemination of the finished report.

The report will have the following contents:

- Summary
- Introduction Background, aims, methods
- Results of A concise non-technical summary of the results including building building recording descriptions
- Results of A concise non-technical summary of the results archaeological
- Discussion A discussion of archaeological findings in terms of both the site specific aims and the desk based research
   Specialists' specialists' reports or assessments as appropriate

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- Archive A summary of archive contents and date of deposition
- Appendices Copies of the Brief and WSI, context register
- Illustrations
   Location map
  - Site location plan
  - A drawing showing those areas examined as part of th archaeological watching brief
  - Copies of relevant historical cartography & plans
  - Plan and section drawings resulting from th archaeological recording.
  - Finds drawings (if appropriate)
  - Illustrative photographs
  - Note: All plans will be tied to the national grid.

#### Contingency for assessment, analysis and publication

A contingency is made within the accompanying estimate for an initial assessmen (of potential for full analysis) of a range of micro flora and fauna which will result i costed recommendations for full analysis of samples and artefacts, and publicatio in an appropriate journal if appropriate. The HEPAO will notify the contractor o such a need within four weeks of receipt of the report.

#### Report dissemination

The full report including all specialist assessments of artefact assemblages will b submitted within a length of time (but not exceeding six months) to be agree between the applicant and HE, with copies supplied to the client (two), Cornwa and Scilly Historic Environment Record, the Isles of Scilly Museum, the Courtena Library of the Royal Institution of Cornwall, River Street, Truro and national archiv centres. A further digital copy shall be supplied on CD-ROM in 'Adobe Acrobat' PD format. A draft will initially be submitted to the HEPAO for comment.

The report will be held by the Cornwall and Scilly Historic Environment Record and made available for public consultation. Additional copies will be submitted to the National Record of the Historic Environment (Swindon) via OASIS and to the Planning Department of the Council of the Isles of Scilly.

#### Archive deposition

- An ordered and integrated site archive will be prepared in accordance with the Management of Research Projects in the Historic Environment (MoRPHE (English Heritage 2006b) upon completion of the project. The requirements for final deposition of the project archive will be agreed by HEPAO and HE Projects.
- The archive including a copy of the written report will be deposited at the Isle of Scilly Museum within two months of the completion of the full report an confirmed in writing with the HEPAO.
- Completion of the English Heritage/ADS OASIS online archive index.
- A summary of the contents of the archive shall be supplied to the HEPAO.

#### Monitoring and Signing Off Condition

Monitoring of the project will be carried out by the HEPAO. Where the HEPAO is satisfied with the archive report and the deposition of the archive written discharge of the planning condition will be expected from the Council of the Isles of Scilly.

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Notification of the start of work will be given in writing to the HEPAO as far in advance of its commencement as possible. HEPAO will monitor the work and will be kept regularly informed of the progress.

Any variations to the WSI in shall be agreed with the HEPAO in writing prior to them being carried out.

Monitoring points during the study will include:

- Approval of the WSI
- Completion of fieldwork. When this has been approved by the HEPAO, then
  it should be possible for the client to commence building works
- Completion of archive report
- Deposition of the archive

#### Timetable

The timetable is to be confirmed.

The archive report will be completed within 3 months of the end of the fieldwork. The deposition of the archive will be completed within 3 months of the completion of the archive report.

### Project team HE Projects

The project will be managed by Senior Archaeologist **Charlie Johns (BA, MIFA)**. As a Senior Archaeologist with HE Projects (1991- present) Charlie has special responsibility for projects in the Isles of Scilly where he has worked on numerous projects: notably directing the excavation of the Bryher Iron Age sword and mirror burial in 1999 (Johns 2002-3); updating the popular archaeological field guide 'Scilly's Archaeological Heritage' (Ratcliffe and Johns 2003); managing the Tresco Playing Field watching brief for the Tresco Estate (Taylor and Johns forthcoming); compiling the Isles of Scilly Rapid Coastal Zone Assessment Survey for English Heritage (Johns *et al* 2004) and managing archaeological recording during construction of the off-island quays for the Duchy of Cornwall (Johns and Sawyer 2008) and the St Agnes Affordable Housing site for the Cornwall Rural Housing Association (Taylor and Johns forthcoming).

Current projects include the management of Lyonesse Project, a two-year study of the evolution of the coastal and marine environment of Scilly and the preparation of a Research Framework for the Historic Environment of Scilly (both for English Heritage). Since 2005 he has co-directed the 'Islands in a Common Sea' research project in Scilly with Dr Jacqui Mulville of Cardiff University, and is currently an Honorary Research Fellow in Cardiff University's School of History and Archaeology and representative for Scilly on the CBA SW Committee.

The fieldwork will be carried out by Charlie Johns or **Carl Thorpe BSc** who is experienced in carrying out archaeological projects in Scilly and who will also undertake initial finds processing, identification and cataloguing, he has carried out similar work for Scillonian projects in the last two decades including the Isles of Scilly Electrification Project (Ratcliffe 1991), the Bryher cist burial, Tresco Playing Field and the off-island quays refurbishment. He is currently reassessing the pottery assemblage from the 1971 excavations at East Porth, Samson with a view to final publication in Cornish Archaeology (in Neal forthcoming) and has contributed the early medieval ceramic assessment to the Scilly Historic Environment Research Framework.

#### Specialists

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**Ralph Fyfe, PhD, Palynologist:** Ralph is Associate Professor (Reader) in Geospatial Information School of Geography, Earth and Environmental Sciences Plymouth University in the School of Geography at the University of Plymouth. He has carried out numerous archaeological evaluations for a variety of organisations, including English Heritage, County Councils, National Parks and Archaeological Consultancies and will undertake sampling and assessment and analysis of pollen samples if required.

John Allan MPhil – Medieval/post-medieval pottery specialist: John is the leading authority on medieval and post-medieval pottery in south- west England and author of many publications. He will carry out the pottery assessment and analysis in the event of medieval or post-medieval pottery being recovered

Henrietta Quinnell BA, MIFA, FSA – Prehistoric, Roman, post-Roman pottery: Henrietta is a freelance pottery specialist and the leading authority on prehistoric pottery in the south-west. She will carry out the pottery assessment and analysis in the event of prehistoric pottery being recovered.

Julie Jones BA – Archaeobotanist: An experienced freelance archaeobotanical specialist based in Bristol, Julie has carried out palaeoenvironmental assessments and analyses for numerous HES projects.

**Dana Challinor MA, MSc – Freelance Charcoal Specialist:** Dana's main area of expertise is charcoal analysis and wood species identification, but she also has experience with charred plant remains. For her Masters degree she specialised in Archaeobotany and received a distinction for her dissertation on charcoal in Bronze Age cremation burials. She has produced numerous assessment and evaluation reports, as well as reports for publication in journal and monograph formats and was formerly Head of the Environmental Department at Oxford Archaeology. She will undertake assessment and analysis of any suitable charcoal samples, including identification of samples suitable for radiocarbon dating.

Laura Ratcliffe-Conservationist, BSc, The Royal Cornwall Museum, Truro: Laura graduated In Archeological Conservation from Cardiff University in 2001. Since then she has gained a wide variety of experience both on excavations and in a lab working on a wide variety of archaeological and historical material. She is currently based at the Royal Cornwall Museum where she is the museum's Collections Manager. Laura will carry out the assessment and conservation of pottery and metalwork on a free lance basis if required.

SUERC Radiocarbon Dating Laboratory: Samples for radiocarbon dating will be sent to the Scottish Universities Environmental Research Centre.

## **Historic Environment Projects**

Historic Environment Projects is the contracting arm of Historic Environment, Cornwall Council (HE). HE employs some 20 project staff with a broad range of expertise, undertaking around 100 projects each year.

HE is committed to conserving and enhancing the distinctiveness of the historic environment and heritage of Cornwall and the Isles of Scilly by providing clients with a number of services including:

- Conservation works to sites and monuments
- Conservation surveys and management plans
- Historic landscape characterisation
- Town surveys for conservation and regeneration
- Historic building surveys and analysis

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- Maritime and coastal zone assessments
- Air photo mapping
- Excavations and watching briefs
- Assessments and evaluations
- Post-excavation analysis and publication
- Outreach: exhibitions, publication, presentations

### Standards



HE is a Registered Organisation with the Institute for Archaeologists and follows their Standards and Code of Conduct.

As part of Cornwall Council, the HES has certification in BS9001 (Quality Management), BS14001 (Environmental Management), OHSAS18001 (Health, Safety and Welfare), Investors in People and Charter Mark.

### Terms and conditions

#### Contract

HE Projects is part of Historic Environment, Cornwall Council. If accepted, the contract for this work will be between the client and Cornwall Council.

The views and recommendations expressed will be those of the HE projects team and will be presented in good faith on the basis of professional judgement and on information currently available.

#### Project staff

The project will be managed by Charlie Johns who will:

- Discuss and agree the detailed objectives and programme of each stage of the project with the client and the field officers, including arrangements for health and safety.
- Monitor progress and results for each stage.
- Edit the project report.
- · Liaise with the client regarding the budget and related issues.

#### Report distribution

Paper copies of the report will be distributed to the client, to local archives and national archaeological record centres.

A digital copy of the report, illustrations and any other files will be held in the Cornwall HER and also supplied to the client on CD or other suitable media.

#### Copyright

Copyright of all material gathered as a result of the project will be reserved to the Historic Environment, Cornwall Council. Existing copyrights of external sources will be acknowledged where required.

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Use of the material will be granted to the client.

#### Freedom of Information Act

As Cornwall Council is a public authority it is subject to the terms of the Freedom of Information Act 2000, which came into effect from 1st January 2005.

HE will ensure that all information arising from the project shall be held in strict confidence to the extent permitted under the Act. However, the Act permits information to be released under a public right of access (a "Request"). If such a Request is received HE may need to disclose any information it holds, unless it is excluded from disclosure under the Act.

#### Health and safety statement

As part of Cornwall Council, HE follows the Council's Statement of Safety Policy.

Prior to carrying out on-site work HE will carry out a Risk Assessment.

#### Insurance

As part of Cornwall Council, HE is covered by Public and Employers Liability Insurance and Professional Negligence Insurance

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- Wessex Archaeology 2005. Protocol for reporting finds of archaeological interest, British Marine Aggregate Producers Association and English Heritage

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# Appendix 2: Protocol for reporting archaeological finds

Scilly Subsea Cables Superfast Broadband Project, Protocol, Rev00, CJ,20/06/2014

# Historic Environment Projects, Cornwall Council



### Scilly Subsea Cables Superfast Broadband Project: Protocol for reporting finds of archaeological interest

Client: BT PLC Client contact: Mick Glanfield Client tel: 01473 629341 Client email: mick.glanfield@bt.com

### Purpose of this Protocol

This Protocol has been designed for reporting finds of archaeological interest during cable laying along the new final 46.373km segment from the existing cable route out Porthcurno to Scilly for the Scilly Superfast Broadband project. The cable will be laid by Remotely Operated Vessel (ROV) up to the 20m water depth approximately 0.66km from Porthcressa on St Mary's and then by diver jetting for the final section.

The Protocol is based on the protocol for reporting finds of archaeological interest during aggregate dredging prepared by Wessex Archaeology for the British Marine Aggregate Producers Association (BMAPA) and English Heritage (Wessex Archaeology 2005).

The aim of the Protocol is to reduce any adverse effects of the cable-laying on the historic environment by the team(s) involved in the cable-laying operation to report their finds in a manner that is convenient and effective.

Any archaeological finds made by the cable laying team(s) are important because they shed light on our predecessor's use of the sea and seabed. The information that these finds bring to light helps archaeologists to better understand what happened in times long (and not so long) ago. It also allows archaeologists to better protect aspects of our history that should be conserved on behalf of future generations. Archaeological finds from the seabed also help the public to catch a glimpse of the past in an otherwise unfathomable environment.

### Circumstances of discovery

This Protocol addresses finds of archaeological interest made in the following circumstances:

Discoveries on the seabed: an anomaly (such as resistance to the ROV cable trench excavator or diver jetting) indicates that an object or structure has been encountered on the seabed.

Discoveries on board: a find of archaeological interest is made on the vessel, for instance trapped in the ROV excavation gear.

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### Scope

This Protocol sets out best practice in the reporting of finds of archaeological interest. At all times the responsibility for implementing this Protocol rests with the BT and the cable laying team(s).

## **The Protocol**

### Introduction

The Protocol has been designed to deal with discoveries made on the seabed during cable-laying operations

The Protocol anticipates discoveries being made by Staff, who report to a Site Champion on their vessel or wharf, who then reports to a Nominated Contact acting for the Company as a whole. The Nominated Contact for the Company will liaise with English Heritage.

### Terms and Roles

#### Nominated Contact

BT shall nominate one of their staff to act as the single point of contact for all communications regarding archaeology, referred to as the Nominated Contact.

The Nominated Contact will be issued with a copy of this document.

#### Site Champions

The Nominated Contact will, for each site or vessel operated by the BT, identify a Site Champion to act as a first point of contact for staff, and to liaise with the Nominated Contact in respect of the operation of the Protocol at that site. On vessels, the Site Champion will normally be the Master, though this need not preclude BT from identifying an alternative member of staff.

The name and contact details of the Site Champion shall be written on the Poster accompanying this Protocol.

Site Champions will be issued with a Flow Chart (see below) setting out the actions to be taken when they are told about a discovery.

#### All Staff

BT shall draw the attention of all relevant staff to the potential for archaeological material to be found in the course of cable-laying and inform them of the possible importance of such finds.

Copies of the Poster accompanying this Protocol will be displayed on the on cable laying vessel(s).

#### Historic Environment Projects, Cornwall Council

Historic Environment Projects, Cornwall Council (HE Projects) shall be the principal archaeological contact for BT's Nominated Contact. HE Projects shall:

- advise on the identification of finds and the character of their seabed locations;
- advise on material conservation of any recovered finds;

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- liaise with English Heritage, the Marine Management Organisation and the Receiver of Wreck;
- · liaise with The Crown Estate, in their capacity as landowner;
- · advise on proposals to further evaluate any finds;
- advise on proposals to mitigate the effects of cable-laying on any finds.

#### Timing

The Protocol requires actions to be taken by the various parties. The timescales within which these actions are taken may be critical to safeguarding finds of archaeological interest, and to avoiding unreasonable disruption to commercial operations.

Where Staff or an Officer on Watch notice something on a vessel, it is important that action is taken immediately. The precise position on the seabed of a find or anomaly will be a key piece of information. The occurrence should be noted and brought to the attention of the Master / Site Champion straight away, so that positions can be calculated. Time may also be of the essence in checking the ROV for any artefacts that may have become lodged in it.

The Site Champion will be able to take the actions necessary to safeguard finds, and information relating to them, in the short term. It is important, however, that information is passed on promptly so that decisions – which may have operational implications – can be taken for the medium term. It is expected that the Site Champion will inform the Nominated Contact on the same working day that a find is made.

On receiving a report, the Nominated Contact has a number of obligations that require discussion with third parties, and regarding which the Nominated Contact may wish to take advice. Nonetheless, it is expected that the Nominated Contact will inform the HE Projects within two working days of receiving information from the Site Champion. Subsequently, HE Projects will inform English Heritage and the Marine Management Organisation (MMO) within two working days of receiving information from the Nominated Contact.

Actions taken by BT to safeguard finds may constrain their cable-laying operations. In order that such constraints be removed as swiftly as possible if they are not merited on archaeological grounds, it is important that BT contact HE Projects promptly. For their part, English Heritage may want to obtain specialist advice, on specific finds and their treatment for example. It is expected that English Heritage will provide initial formal advice to HE Projects and the Nominated Contact within two working days of receiving information from HE projects.

In view of these arrangements, the overall timescale between a find occurring, and formal archaeological advice being provided, should be no more than six working days.

If anyone finds or takes possession of wreck, they are committing an offence if they do not report it to the Receiver (Merchant Shipping Act 1995 s. 236). Although the Act does not state a time limit within which notification must occur, it is a matter of policy that the Receiver expects to be notified within 28 days of the find occurring.

#### **Types of Find**

'Finds' are considered here to mean all forms of artefact that can be found on the seabed. To be an artefact, the thing must have been made, modified, used or transported by people, i.e. their presence on the seabed is 'artificial' or 'cultural' rather than 'natural'.

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For legal purposes, finds from the seabed fall into two categories. 'Wreck' has a specific legal definition broadly encompassing all sorts of materials that came to be on the seabed as a direct result of once being aboard or part of a vessel.

All other finds are referred to here as 'non-wreck'. 'Non-wreck' includes things such as prehistoric flint artefacts that were lost on land that has since become submerged by rising sea level, or artefacts that have been eroded from sites on the shore.

A third category of find, 'treasure' as defined by the Treasure Act 1996, is not relevant to this Protocol, as the Treasure Act is limited in its application to land above mean low water.

#### Ownership of Wreck

Statutory law relating to 'wreck' is set out principally in the Merchant Shipping Act 1995. The common law relating to wreck is to be found in legal cases and commentaries.

All wreck is presumed to have an owner, and ownership is not lost through the passage of time. It is a legal requirement under section 236 of the Merchant Shipping Act 1995 that wreck material be reported to the Receiver of Wreck, in order to establish ownership and settle salvage claims. If ownership cannot be established by the Receiver within one year of receipt of the report, the wreck becomes 'unclaimed wreck'.

#### **Original Owners**

Owners of wreck who are able to prove their ownership to the satisfaction of the Receiver of Wreck are entitled to have their property returned to them on payment of a salvage award.

#### Unclaimed Wreck in Territorial Waters

Under the Merchant Shipping Act 1995, wreck that is found in Territorial Waters and is not claimed within a year automatically becomes the property of the Crown. In some areas – usually close to the shore – the Crown's right to unclaimed wreck has been granted to another beneficiary.

#### **Ownership of Non-Wreck**

The law applicable to 'non-wreck' is largely common law, to be found in legal cases and commentaries.

#### **Original Owners**

Finds that are successfully claimed by their owners continue to belong to that owner, though the owner may be obliged to reward the finder for having found and returned their property.

#### Unclaimed Non-wreck Material in Territorial Waters

On land, archaeological material is considered to belong to the owner of the land in which it was found. The Crown generally owns the seabed within territorial waters, hence unclaimed non-wreck material found within territorial waters is considered to belong to the Crown. In some cases a party other than the Crown owns the seabed, and in such instances unclaimed non-wreck material will be considered to belong to that party.

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# Discoveries on the Seabed

# Tell the Site Champion

If an anomaly such as resistance to the ROV indicates that an object or structure has been encountered on the seabed, the Officer on Watch shall inform the Master, who will normally be the Site Champion.

Where it is possible to identify the position of the anomaly, the Officer on Watch shall avoid further cable-laying of the seabed location until archaeological advice has been obtained.

The Officer on Watch will arrange for the ROV to be examined as soon as possible to see if any archaeological material is trapped within it, and will inform the Master accordingly.

# Actions by the Master (Site Champion)

The Master shall note the occurrence as soon as possible in the vessel's log together with the time and exact vessel position. Where possible, the log entry should include a close approximation of the original position of the anomaly on the seabed. Additionally, the area shall be marked on navigational software. The Master shall compile a preliminary record of the occurrence, as shown below.

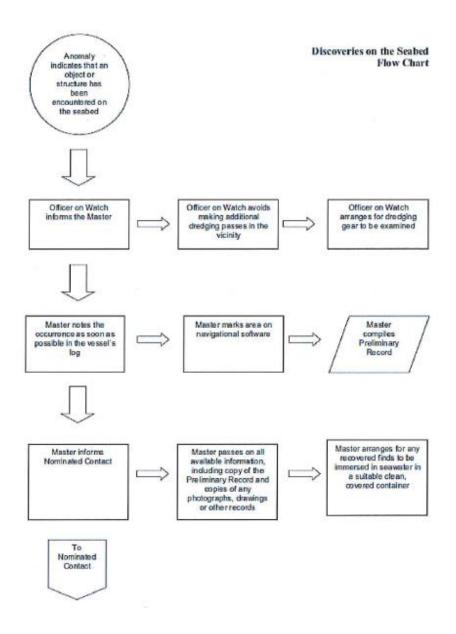
The Master shall inform the Nominated Contact of the occurrence as soon as possible and pass on all available information, including a copy of the Preliminary Record and copies of any photographs, drawings or other records that have been made.

If any finds have been recovered, the Master shall arrange for them to be immersed in seawater in a suitable clean container, which should be covered. Any rust, concretion or marine growth should not be removed.

If no archaeological material has been recovered, then no additional actions are required of staff on the vessel.

Vessel Name:	
Area:	
Date:	
Time of compiling information:	
Name of compiler (Master/Site Champion):	
Name of Officer on Watch:	
Name of finder (if different to above):	
Time at which anomaly encountered:	
Vessel position at time when anomaly was encountered:	
Original position of the anomaly on the seabed:	
Notes on likely accuracy of original position stated above:	
Description of the anomaly:	
Apparent extent of the anomaly:	
Details of examination of trenching gear:	
Were any finds recovered?:	
Description of the find(s):	
Details of photographs taken of the find(s):	
Details of any drawings or other records made of the find(s):	
Details of treatment given to find(s):	
Any other notes:	
Date and time at which Nominated Contact informed:	

**Discoveries on the Seabed: Preliminary Record** (There is a record form at the back of these notes that can be photocopied and filled-in)



(Flow chart copied from the Protocol for reporting finds of archaeological interest during aggregate dredging prepared by Wessex Archaeology for the British Marine Aggregate Producers Association (BMAPA) and English Heritage (Wessex Archaeology 2005)

# **Discoveries on Board**

# Tell the Site Champion

If a find of archaeological interest is made on board the cable laying vessel, trapped in the ROV excavation gear, the vessel staff should inform the Officer on Watch. The Officer on Watch shall inform the Master, who will normally be the Site Champion.

Where it is possible to identify the seabed position from which the find originated, the Officer on Watch shall avoid cable-laying in the vicinity of the seabed location until archaeological advice has been obtained.

#### Actions by the Master (Site Champion)

The Master shall note the occurrence as soon as possible in the vessel's log together with the time and exact position. The log entry should include a close approximation of the original position of the find/anomaly on the seabed.

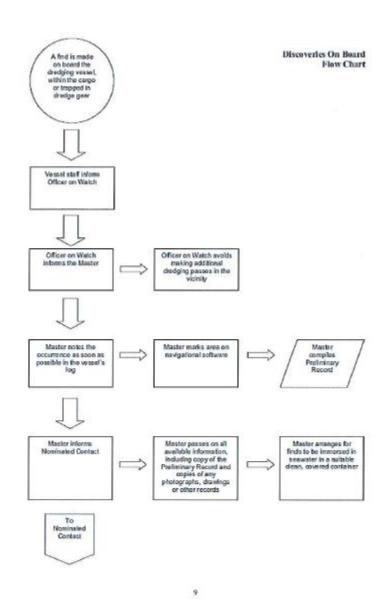
Additionally, the area shall be marked on navigational software. The Master shall compile a preliminary record of the occurrence, as shown below.

The Master shall inform the Nominated Contact of the occurrence as soon as possible and pass on all available information, including a copy of the Preliminary Record and copies of any photographs, drawings or other records that have been made.

The Master shall arrange for the find to be immersed in seawater in a suitable clean container, which should be covered. Any rust, concretion or marine growth should not be removed.

Vessel Name:	
Area:	
Date:	
Time of compiling information:	
Name of compiler (Master/Site Champion):	
Name of Officer on Watch:	
Name of finder (if different to above):	
Time at which find(s) made:	
Vessel position at time of making find:	
Original position of the find(s) on the seabed:	
Notes on likely accuracy of original position stated above:	
Description of the find(s):	
Details of photographs taken of the find(s):	
Details of any drawings or other records made of the find(s):	
Details of treatment given to find(s):	
Any other notes:	
Date and time at which Nominated Contact informed:	

**Discoveries on Board: Preliminary Record** (There is a record form at the back of these notes that can be photocopied and filled-in)



(Flow chart copied from the Protocol for reporting finds of archaeological interest during aggregate dredging prepared by Wessex Archaeology for the British Marine Aggregate Producers Association (BMAPA) and English Heritage (Wessex Archaeology 2005)

# Actions by the Nominated Contact

# Inform HE Projects

Once informed of a find by a Site Champion, the Nominated Contact shall inform HE Projects as soon as possible.

The Nominated Contact will confirm with the Site Champion that all the details set out in the Preliminary Record are comprehensive and correct. The Nominated Contact shall pass on to English Heritage all available information relating to the circumstances of the occurrence, including a copy of the Preliminary Record and copies of any photographs, drawings or other records that have been made.

The HE Projects contact will be

Charlie Johns, Senior Archaeologist

Tel: 01872 322056

Mob: 07968 8902147

e-mail: chjohns@cornwall.gov.uk

### Implement Temporary Exclusion Zone

Where the position of an anomaly or find is reasonably certain, the Nominated Contact shall implement a temporary exclusion zone to ensure all cable-laying operations by the Company are excluded until archaeological advice has been obtained.

#### If Any Finds Have Been Recovered...

The Nominated Contact shall make any recovered finds available for inspection by HE Projects.

If the find is, or appears to be 'wreck', the Nominated Contact shall as soon as possible give notice that a find has been recovered to the Receiver of Wreck in accordance with Section 236(1) of the Merchant Shipping Act 1995. This is a legal requirement.

# **Receiver of Wreck**

Spring Place	tel: 023 8032 9474
105 Commercial Road	fax: 023 8032 9477
SOUTHAMPTON	e-mail: row@mega. gov.uk
S015 1EG	web: www.mega.gov.uk/row

# Actions by HE projects

### Advice

HE Projects shall advise the Nominated Contact of any such further actions as might be required, including:

- advice on immediate actions to be taken in respect of the find;
- advice on the identification of finds and the character of their seabed locations;
- advice on proposals to further evaluate any finds;
- · advice on proposals to mitigate the effects of dredging on any finds.

# Liaison

HE Projects shall liaise, as appropriate, with:

- the Marine Management Organisation
- English Heritage (South West) Science Advisor
- the Historic Environment Planning Advice Officer, Cornwall Council
- the Portable Antiquity Scheme's Finds Liaison Officer for Cornwall
- the Receiver of Wreck;
- the Ministry of Defence;
- The Crown Estate;
- other individuals/institutions having previously declared an interest to BT.

HE Projects shall take account of the advice and views of the above and inform them of subsequent actions.

HE Projects shall pass details of the find, and subsequent data, to the National Record of the Historic Environment (NRHE) and to the Cornwall and Scilly Historic Environment Record.

### If Any Finds Have Been Recovered...

HE Projects shall make arrangements for BT to hold in possession any recovered finds, subject – in the case of wreck – to agreement with the Receiver of Wreck.

HE projects shall advise BT on any additional work required to stabilise, conserve or record recovered finds. BT may regard any such additional work as a service and seek to recover any costs from the owner of the find.

HE projects shall advise BT on the implementation of procedures for resolving ownership and for disposing of any finds.

# References

Wessex Archaeology 2005. Protocol for reporting finds of archaeological interest, British Marine Aggregate Producers Association and English Heritage

# Annex 1: Guidelines to identifying finds of archaeological interest

#### Rubber, Plastic etc.

In most cases, rubber, plastic, bakelite and similar modern materials are not of archaeological interest and can be disregarded.

One exception is where such materials are found in the same area as aluminium objects and structures, which may indicate aircraft wreckage from World War Two. Such material should be reported.

#### Iron and Steel

The potential range and date of iron and steel objects is so wide that it is difficult to provide general guidance. In broad terms, iron and steel objects which are covered by a thick amorphous concrete-like coating ('concretion') are likely to be of archaeological interest and should be reported.

Pieces of metal sheet and structure may indicate a wreck and should be reported.

A Munitions Code of Practice applies in respect of ordnance (cannonballs, bullets, shells) which should take precedence over archaeological requirements. However, discoveries of ordnance may be of archaeological interest, and they should be reported.

#### Other Metals

Items made of thin, tinned or painted metal sheet are unlikely to be of archaeological interest.

Aluminium objects may indicate aircraft wreckage from World War Two, especially if two or more pieces of aluminium are fixed together by rivets. All occurrences should be reported.

Copper and copper alloy (bronze, brass) objects might indicate a wreck, or they may be very old. All occurrences should be reported.

Precious metal objects and coins are definitely of archaeological interest because they are relatively easy to date. All occurrences should be reported.

#### Bone

Occasional discoveries of animal bone, teeth and tusks are of archaeological interest because they may date to periods when the seabed formed dry land, and should be reported. Such bones, teeth, tusks etc. may have signs of damage, breaking or cutting that can be directly attributed to human activity.

Large quantities of animal bone may indicate a wreck (the remains of cargo or provisions) and should be reported.

Human bone is definitely of archaeological interest, and is also subject to special legal requirements under the Burial Act 1857. Any suspected human bone should be reported, and treated with discretion and respect.

Objects made out of bone – such as combs, harpoon points or decorative items – can be very old and are definitely of archaeological interest. All occurrences should be reported.

### Wood

Light coloured wood, or wood that floats easily, is probably modern and is unlikely to be of archaeological interest.

In Scilly, 'Roundwood' with bark – such as branches – is likely to be of archaeological interest; roundwood that has clearly been shaped or made into a point should also be reported.

Pieces of wood that have been shaped or jointed may be of archaeological interest, especially if fixed with wooden pegs, bolts or nails. All occurrences should be reported.

Objects made out of dark, waterlogged wood – such as bowls, handles, shafts and so on – can be very old and are definitely of archaeological interest. All occurrences should be reported.

## Stone

Small to medium size stones that are shaped, polished and/or pierced may be prehistoric axes. All occurrences should be reported.

Objects such as axe heads or knife blades made from flint are of prehistoric date and should be reported.

Large blocks of stone that have been pierced or shaped may have been used as anchors or weights for fishing nets. All occurrences should be reported.

The recovery of numerous stones may indicate the ballast mound of a wreck, or a navigational cairn. All occurrences should be reported.

#### Pottery

Any fragment of pottery is potentially of interest, especially if it is a large fragment.

Items which look like modern crockery can be discarded, but if the item has an unusual shape, glaze or fabric it should be reported.

#### Brick

Bricks with modern proportions and v-shaped hollows ('frogs') are of no archaeological interest. Unfrogged, 'small', 'thin' or otherwise unusual bricks may date back to Medieval or even Roman times and should be reported.

### Peat and Clay

Peat is black or brown fibrous soil that formed when sea level was so low that the seabed formed marshy land, on the banks of a river or estuary for example. The peat is made up of plant remains, and also contains microscopic remains that can provide information about the environment at the time it was formed. This information helps us to understand the kind of landscape that our predecessors inhabited, and about how their landscape changed. It can also provide information about rising sea-level and coastline change, which are important to understanding processes that are affecting us today.

Prehistoric structures (such as wooden trackways) and artefacts are often found within or near peat, because our predecessors used the many resources that these marshy areas contained. As these areas were waterlogged, and have continued to be waterlogged because the sea has risen, 'organic' artefacts made of wood, leather, textile and so on often survive together with the stone and pottery which are found on 'dry' sites.

Fine-grained sediments such as silts and clays are often found at the same places as peat. These fine-grained sediments also contain the microscopic remains that can provide information about past environments and sea-level change.

Any discoveries of such material would be of archaeological interest, and their occurrence should be reported.

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# Annex 2: Mitigation

#### **Temporary Exclusion Zones**

Temporary exclusion zones (TEZs) will be implemented by Nominated Contacts where the position of an anomaly or find is reasonably certain.

Where a TEZ has been introduced, it shall remain in place until the formal advice of English Heritage has been obtained.

Where a TEZ has been introduced, the subsequent options are:

- for it to be revoked if it can be reasonably concluded that no important wreck or other feature on the seabed is present; or
- for it to be formalised in the longer term as an Archaeological Exclusion Zone (AEZ)

if either:

 the presence of an important wreck or other feature on the seabed can be reasonably concluded;

 no conclusion can be drawn because data is insufficient and/or the BT does not wish to resolve the situation by further investigation.

# If no Further Data is Available...

If no further data is available, the temporary exclusion zone will be formalised as an Archaeological Exclusion Zone (AEZ) applicable to all dredging in the licence area.

# If Additional Data is Available ...

If additional data is available, HE Projects shall review the available data in consultation with English Heritage.

It may be advantageous for HE Projects to acquire data to inform their discussions with English Heritage by, for example, geophysical survey (and see 'Additional archaeological investigations', below).

If, on the basis of all the data, English Heritage thinks that it can be reasonably concluded that the anomaly and/or recovered finds indicates the presence of an important wreck or other feature on the seabed, then the temporary exclusion zone will be formalised as an AEZ.

If, on the basis of all the data, English Heritage thinks it can be reasonably concluded that no important wreck or other feature on the seabed is present, then BT may revoke the temporary exclusion zone.

If English Heritage thinks that the available data is insufficient to reasonably conclude whether an important wreck or other feature is present, then BT can either formalise the temporary exclusion zone as a precautionary AEZ, or carry out additional archaeological investigations to resolve the situation.

#### Additional Archaeological Investigations

Additional archaeological investigations may comprise, for example, inspection of the temporary exclusion zone by archaeologists that dive or use ROVs, or high-resolution geophysical survey to a suitable archaeological specification.

Where additional archaeological investigations are to be carried out, English Heritage shall advise BT of the specification for the investigation. On the basis of the specification BT shall submit a Method Statement to English Heritage for its approval.

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BT shall carry out the investigation in accordance with the approved Method Statement.

The results of the investigation shall be reported in writing to English Heritage.

The results of the investigation shall be reviewed by BT in consultation with English Heritage in order that the temporary exclusion zone be revoked, or formalised as an AEZ (see 'If additional data is available...', above).

# Archaeological Exclusion Zones (AEZs)

If a temporary exclusion zone is to be formalised as an AEZ, Companies should seek advice on the specification for the AEZ from English Heritage.

Specifications may include provision for a programme to monitor the zone before, during and after continued dredging in the vicinity of the AEZ.

On the basis of the specification BT shall submit an AEZ Design to English Heritage for approval.

BT will implement the AEZ in accordance with the AEZ Design.

# Other Forms of Mitigation

Subject to agreement with English Heritage, BT may institute a form of mitigation other than an AEZ (e.g. a programme of archaeological recording and/or recovery).

#### Statutory Protection

If a wreck or other feature is of sufficient archaeological importance to warrant statutory protection, English Heritage shall advise BT on the implementation of procedures under the Protection of Wrecks Act 1973 or the Ancient Monuments and Archaeological Areas Act 1979.

Discoveries on the Seabed: Preliminary Record Form	June 2104
Vessel Name:	
Area:	
Date:	
Time of compiling information:	
Name of compiler: (Master/Site Champion)	
Name of Officer on Watch:	
Name of finder (if different from above):	
Time at which anomaly encountered:	
Vessel position when the anomaly was encountered:	
Original position of the anomaly on the seabed:	
Notes on likely accuracy of the original position stated above:	
Description of the anomaly:	
Apparent extent of the anomaly:	
Details of the ROV excavation gear:	
Were any finds recovered:	
Description of the find(s):	
Details of photographs taken of the find(s):	
Details of any drawings or other records made of the find(s):	
Details of treatment given to find(s):	1
Any other notes:	
Date and time at which Nominated Contact informed:	
Signed: Date:	

	y Record Form	
Vessel Name:		
Area:		
Date:		
Time of compiling information:		
Name of compiler: (Master/Site Champion	n)	
Name of Officer on Watch:		
Name of finder (if different from above):		
Time at which anomaly encountered:		
Vessel position at time of making find(s):		
Original position find(s) on the seabed:		
Notes on likely accuracy of the original po	sition stated above:	
Description of the find(s):		
Apparent extent of the anomaly:		
Details of the ROV excavation gear:		
Were any finds recovered:		
Description of the find(s):		
Details of photographs taken of the find(s	;):	
Details of photographs taken of the find(s Details of any drawings or other records r	-	
	-	
Details of any drawings or other records r	-	
Details of any drawings or other records r Details of treatment given to find(s):	-	
Details of any drawings or other records r Details of treatment given to find(s):	made of the find(s):	