

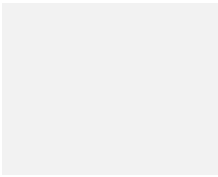
# ISLES OF SCILLY DUNE & FLOOD DEFENCE SCHEME

Site Information- Porthloo

APRIL 2019



## CONTACTS



**MAXIMILLIAN CLAUSEN**  
Civil Engineer

dd +44 (0) 1752 689 056

m +44 (0) 7786 198517

e [max.clausen@arcadis.com](mailto:max.clausen@arcadis.com)

**Arcadis.**

Unit 7, Chamberlain  
House  
Davy Road  
Derriford  
Plymouth  
PL6 8BX  
United Kingdom

# Isles of Scilly Dune & Flood Defence Scheme

## Site Information- Porthloo

Author	M. Clausen
Checker	P. Valvona
Approver	P. Valvona
Report No	UA008878-ARC-XX-XX-SP-CE-0801
Date	APRIL 2019

### VERSION CONTROL

Version	Date	Author	Changes
P1	12-04-19	MC	First Issue

This report dated 12 April 2019 has been prepared for Council of the Isles of Scilly (the “Client”) in accordance with the terms and conditions of appointment dated 28 October 2016(the “Appointment”) between the Client and Error! No text of specified style in document. (“Arcadis”) for the purposes specified in the Appointment. For avoidance of doubt, no other person(s) may use or rely upon this report or its contents, and Arcadis accepts no responsibility for any such use or reliance thereon by any other third party.

# CONTENTS

1.	INTRODUCTION .....	1
2.	SITE LOCATION & ACCESS .....	2
3.	SITE PHOTOS .....	3
4.	TOPOGRAPHIC SURVEY .....	6
5.	SERVICES AND UTILITY SEARCH .....	6
6.	GROUND INVESTIGATION .....	7
7.	DESIGN STATEMENTS .....	7
8.	DESIGNER'S HAZARD RECORD .....	7

# APPENDICES

## APPENDIX A

Topographic Surveys

## APPENDIX B

Service Plans

## APPENDIX C

Ground Investigation

## APPENDIX D

Design Statement

## APPENDIX E

Designer's Hazard Statement

## 1. Introduction

This document forms the Site Information for the *works* at Porthloo on St. Mary's island, in the Isles of Scilly. It describes the existing conditions at the site and presents information collected during the concept and detailed design phases of the scheme.

There are three *works* sites on the main island of St. Mary's, namely Porthloo, Porth Mellon and Porth Hellick with each site having separate Site and Work Information documents. See drawing & document register for details.

## 2. Site location & Access

Porth Loo is located on the western side of St. Marys. The bay measures approximately 300m and is flanked to the north and south by rocky outcrops. At southern end of the beach is a boat yard which is protected from wave run-up by an existing engineered dune which extends halfway along the beach. The northern extent of the beach is backed by an earth embankment which retains the road.

Nearest Postcode: TR21 0NF  
Nation Grid Reference: SV9089011357



Figure 1: Porthloo beach & SSSI wetland area behind (Plymouth Coastal Observatory, 2016)

Porthloo beach is reached via Porthloo lane labelled as 'Road' in figure 1. There is no formal vehicle or pedestrian access to the northern end of the beach, but vehicular access is possible via the boat yard slipway although this will be subject to agreement with the boat yard operator/ land owner.



### 3. Site Photos



*Figure 2: Looking south along Porthloo beach from the northern end. Note boatyard behind beach in the distance.*



*Figure 3: Looking toward the northern end of the beach. Note existing granite rock forming an ad-hoc revetment and Porthloo lane behind the beach.*





*Figure 4: Looking south at the midpoint of the beach showing the interface between the existing dune defence in the background and the ad-hoc revetment in the foreground.*



*Figure 5: View of the existing dune defence and its timber sleeper construction. Note the low spot of the existing bank in the foreground that was formerly used as a temporary beach access point during the St. Mary's quay extension works in 2014/15.*





*Figure 6: Boatyard slipway protected by stop-logs at the southern end of the beach. Logs branded with D of C (Duchy of Cornwall) who are believed to be responsible for slipway and existing dune defence.*



*Figure 7: Looking north along the existing informal revetment where it interfaces with the existing dune defence.*

## 4. Topographic Survey

See Appendix A for topographic survey.

## 5. Services and Utility Search

See Appendix B for utility service plans

A Linesearch – ‘before u dig’ (LSBUD) search was conducted and of its members, only Western Power Distribution was found to have services but these located outside of the proposed works area.

Of its non-members, the following replies were received:

E-mail requests	Sent	Received	Utilities Found	Comments/Notes
BT	09/03/18	09/03/18	Yes	Outside of works area
CityFibre	09/03/18	-	-	Nil reply
Colt	09/03/18	20/03/18	No	
Isles of Scilly Council	09/03/18	14/03/18	Yes	
Energetics Electricity	09/03/18	14/03/18	No	
ENGIE	09/03/18	14/03/18	No	
GTC	09/03/18	-	-	Nil reply
GTT	09/03/18	-	-	Nil reply
Interoute	09/03/18	09/03/18	No	
KPN	09/03/18	12/03/18	No	
Level 3 Communications UK Ltd	09/03/18	-	-	Nil reply
Mobile Broadband Network Limited	09/03/18	-	-	Nil reply
Tata	09/03/18	-	-	Nil reply
Utility assets	09/03/18	-	-	Nil reply
Verizon Business	09/03/18	09/03/18	No	
Virgin Media	09/03/18	-	-	Nil reply
Vodafone	09/03/18	16/03/18	-	Nil reply

Vttesse Networks	09/03/18	-	-	Nil reply
------------------	----------	---	---	-----------

The Council of the Isles of Scilly is responsible for the maintenance of roads, land drainage, mains water and sewer services and details can be found in Appendix E.

See Appendix E for LSBUD results and utility service plans.

## 6. Ground Investigation

Trial pits were undertaken by the Council to determine the material type at the expected revetment toe foundation depth.

See Appendix C for trial pit plans & results at Porthloo.

## 7. Design Statements

For background information on the designs and for remaining hazards see Appendix D for design statements.

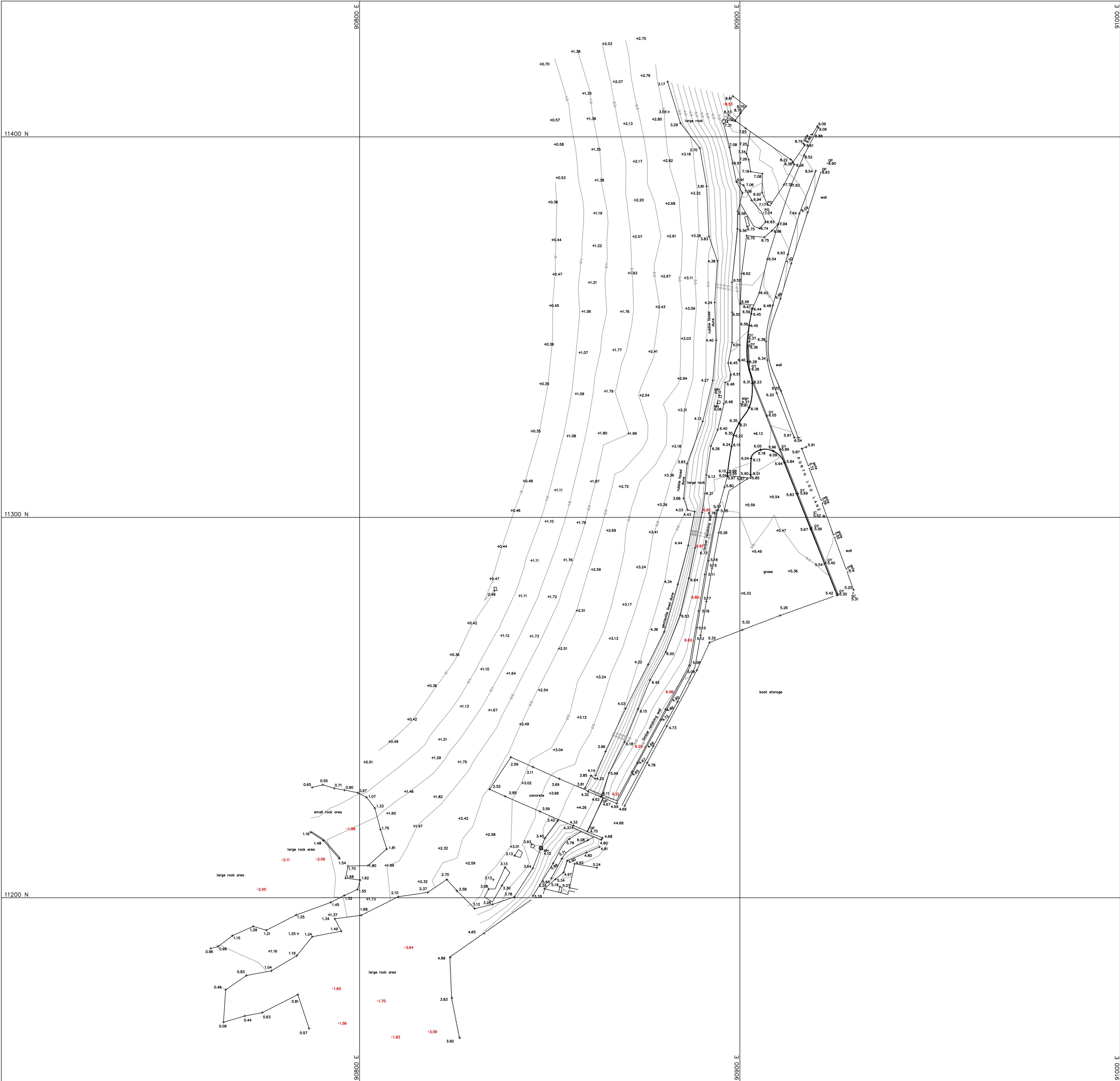
## 8. Designer's Hazard Record

For residual designer identified hazards that remain at the site see Appendix E.

# **APPENDIX A**

## **Topographic Surveys**





THIS DRAWING IS COPYRIGHT. Contractors and Consultants must check all dimensions on site. Only figured dimensions are to be used. Any discrepancies to be reported to the Project Manager before work proceeds. This drawing shall be used only for the purpose intended.

©

NOTES:

GENERAL

Do not scale from this drawing

### Floor Plan Legend

B0.00	floor to beam height
CH0.00	floor to ceiling height
F0.00	floor level
C0.00	cill height
W0.00	window head height
D0.00	door head height

### Underground Utility Legend

Underground Services.	
Underground Comms cables	
Underground Earthrod	
Underground Electricity	
Underground Foul water	
Underground Fuel line	
Underground Gas	
Underground Heating ducts	
Underground Mains water	
Underground Storm water	
All assumed underground services are shown as dashed lines.	

This information must not be solely relied upon in the event of excavation or other works carried out. No liability of any kind whatsoever is accepted by Benchmark Surveys, its servants, or agents, for any error or omission in respect of information contained on this information. The actual position of underground services must be verified and established on site before any mechanical plant is used. All information is complete at time of issue.

### Remarks:

Datum and orientation fixed by  
GPS to Ordnance Survey  
Red = Feature Heights

### Feature Legend

BP — Boundary post	FB — Post box
BS — Boundary stone	FO — Post / bollard
BT — British Telecom cover	RE — Roadside eye
CATV — CATV cover	RS — Ridge
CH — Chimney	SC — Stopcock
DR — Drain	SP — Sign post
DR — Drainage	SV — Stop valve
EP — Electricity pole	TOT — Top of fence
EV — Eave	TOW — Top of wall
FI — Fire hydrant	TL — Traffic light
FL — Floor level	TP — Telegraph pole
GA — Gas cover	WL — Water level
GB — Grit box	WM — Water meter
GP — Gate post	WB — Benchmark
GR — Gully	WO — Borehole
IC — Inspection cover	--- County boundary
IL — Invert level	- - Fence
LB — Light bollard	- - Hedge
LT — Light tower	Pylon
LP — Lamp post	Slope
JB — Junction box	Stone face
MA — Manhole	++ Surface level
m — metres	Survey station
MO — Circular manhole	Triangulation pillar
OC — Overhead Cable	

Benchmark (Exeter) Limited  
Unit 12, Kingfisher Court  
Venny Bridges  
Pinhoe  
Exeter  
EX4 8JN  
TEL: 01392 467836  
FAX: 01392 468617  
email: [sales@benchmarksurveys.co.uk](mailto:sales@benchmarksurveys.co.uk)  
[www.benchmarksurveys.co.uk](http://www.benchmarksurveys.co.uk)

CLIENT

JacksonHyder Ltd

SITE LOCATION

Porth Loo, St. Mary's Island

DRAWING TITLE

Topographic Survey

SCALE	1:500 @ A1	DATE	February 2017
DRAWN BY	D.W.	CHECKED BY	J.R.R.

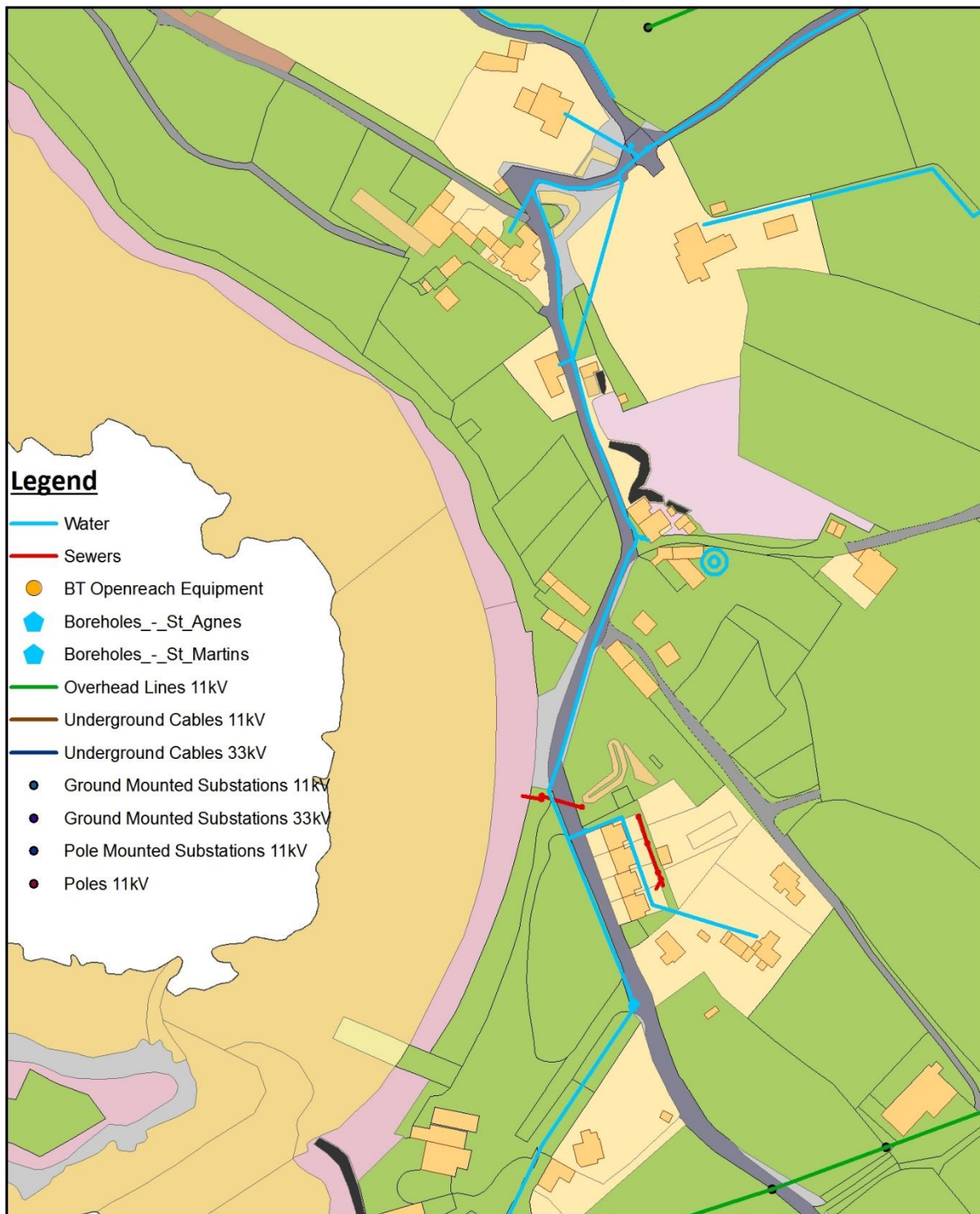
DRAWING NUMBER	BS2443/02.17/02/DW
REVISION	

A

# APPENDIX B

## Service Plans

## Porthloo, St Mary's



0 100 200 metres

1:2,000 @ A4

This product includes mapping data licensed from Ordnance Survey with the permission of the Controller of Her Majesty's Stationery Office Crown copyright 2017. All rights reserved SLA Number 100024679



Council of the  
ISLES OF SCILLY  
Town Hall, The Parade,  
St Mary's, Isles of Scilly, TR21 0LW



# Maps by email Plant Information Reply



## IMPORTANT WARNING

Information regarding the location of BT apparatus is given for your assistance and is intended for general guidance only. No guarantee is given of its accuracy. It should not be relied upon in the event of excavations or other works being made near to BT apparatus which may exist at various depths and may deviate from the marked route.



openreach  
BT

### CLICK BEFORE YOU DIG

FOR PROFESSIONAL FREE ON SITE ASSISTANCE PRIOR TO COMMENCEMENT OF EXCAVATION WORKS INCLUDING LOCATE AND MARKING SERVICE

email [cbyd@openreach.co.uk](mailto:cbyd@openreach.co.uk)

ADVANCE NOTICE REQUIRED  
(Office hours: Monday - Friday 08.00 to 17.00)  
[www.openreach.co.uk/cbyd](http://www.openreach.co.uk/cbyd)

Reproduced from the Ordnance Survey map by BT by permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationary Office  
(C) Crown Copyright British Telecommunications plc 100028040

## KEY TO BT SYMBOLS

DP	
Planned DP	
PCP	
Planned PCP	
Built	
Planned	
Inferred	
Building	
Kiosk	
Hatchings	

Pole	
Planned Pole	
Joint Box	
Change Of State	
Split Coupling	
Duct Tee	
Planned Box	
Manhole	
Planned Manhole	
Cabinet	
Planned Cabinet	

Other proposed plant is shown using dashed lines.  
BT Symbols not listed above maybe disregarded.  
Existing BT Plant may not be recorded.  
Information valid at time of preparation

openreach  
a BT Group business

BT Ref : RYT09005N

Map Reference : (centre) SV9084511372

Easting/Northing : (centre) 90845,11372

Issued : 20/07/2017 09:00:26

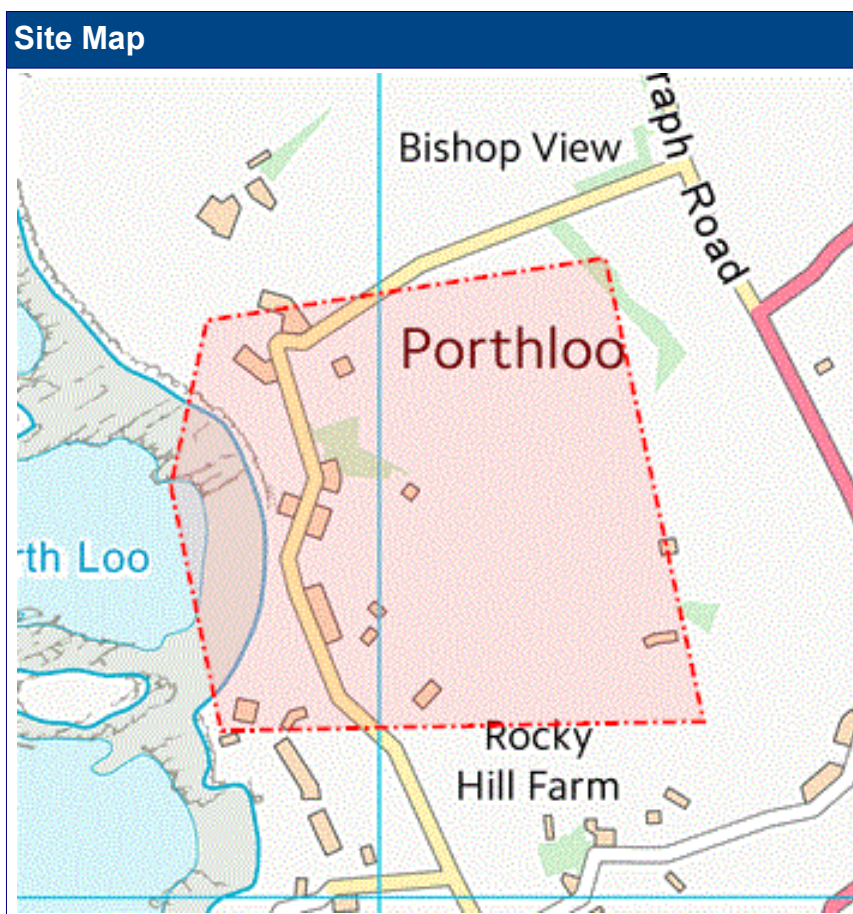
**WARNING: IF PLANNED WORKS FALL INSIDE HATCHED AREA IT IS ESSENTIAL BEFORE PROCEEDING THAT YOU CONTACT THE NATIONAL NOTICE HANDLING CENTRE. PLEASE SEND E-MAIL TO: [nnhc@openreach.co.uk](mailto:nnhc@openreach.co.uk)**



Enquirer			
Name	Mr Ryan Haselden	Phone	4401752689010
Company	Arcadis	Mobile	Not Supplied
		Fax	Not Supplied
Address	Unit 7, Chamberlain House Research way, Plymouth Science Park Plymouth Devon PL6 8BT		
Email	ryan.haselden@arcadis.com		
Notes	Please ensure your contact details are correct and up to date on the system in case the LSBUD Members need to contact you.		

Enquiry Details			
Scheme/Reference	isles of Scilly		
Enquiry type	Planned Works	Work category	Utility Works
Start date	09/03/2018	Work type	Multiple excavations site
End date	09/09/2018	Site size	219865 metres square
Searched location	XY= 90890, 11357 EPSG 27700 Easting/N	Work type buffer*	25 metres
Confirmed location	91038 11501		

\* The WORK TYPE BUFFER is a distance added to your search area based on the Work type you have chosen.



## Asset Owners

**Terms and Conditions.** Please note that this enquiry is subject always to our standard terms and conditions available at [www.lineasearchbeforeudig.co.uk](http://www.lineasearchbeforeudig.co.uk) ("Terms of Use") and the disclaimer at the end of this document. Please note that in the event of any conflict or ambiguity between the terms of this Enquiry Confirmation and the Terms of Use, the Terms of Use shall take precedence.

**Validity and search criteria.** The results of this enquiry are based on the confirmed information you entered and are valid only as at the date of the enquiry. It is your responsibility to ensure that the Enquiry Details are correct, and LineasearchbeforeUdig accepts no responsibility for any errors or omissions in the Enquiry Details or any consequences thereof. LSBUD Members update their asset information on a regular basis so you are advised to consider this when undertaking any works. It is your responsibility to choose the period of time after which you need to resubmit any enquiry but the maximum time (after which your enquiry will no longer be dealt with by the LSBUD Helpdesk and LSBUD Members) is 28 days. If any details of the enquiry change, particularly including, but not limited to, the location of the work, then a further enquiry must be made.

**Asset Owners & Responses.** Please note the enquiry results include the following:

1. "LSBUD Members" who are asset owners who have registered their assets on the LSBUD service.
2. "Non LSBUD Members" are asset owners who have not registered their assets on the LSBUD service but LSBUD is aware of their existence. Please note that there could be other asset owners within your search area.

Below are three lists of asset owners:

1. **LSBUD Members who have assets registered within your search area. ("Affected")**
  - a. These LSBUD Members will either:
    - i. Ask for further information ("Email Additional Info" noted in status). The additional information includes: Site contact name and number, Location plan, Detailed plan (minimum scale 1:2500), Cross sectional drawings (if available), Work Specification.
    - ii. Respond directly to you ("Await Response"). In this response they may either send plans directly to you or ask for further information before being able to do so, particularly if any payments or authorisations are required.
2. **LSBUD Members who do not have assets registered within your search area. ("Not Affected")**
3. **Non LSBUD Members who may have assets within your search area.** Please note that this list is not exhaustive and all details are provided as a guide only. It is your responsibility to identify and consult with all asset owners before proceeding.

**National Grid.** Please note that the LSBUD service only contains information on National Grid's Gas above 7 bar asset, all National Grid Electricity Transmission assets and National Grid's Gas Distribution Limited above 2 bar asset.

For National Grid Gas Distribution Ltd below 2 bar asset information please go to [www.beforeyoudig.nationalgrid.com](http://www.beforeyoudig.nationalgrid.com)

**LSBUD Members who have assets registered on the LSBUD service within the vicinity of your search area.**

### List of affected LSBUD members

Asset Owner	Phone/Email	Emergency Only	Status
Western Power Distribution	08000963080	08006783105	Await response

**LSBUD Members who do not have assets registered on the LSBUD service within the vicinity of your search area. Please be aware that LSBUD Members make regular changes to their assets and this list may vary for new enquiries in the same area.**

### List of not affected LSBUD members

AWE Pipeline	Gateshead Energy Company	Prysmian Cables & Systems Ltd (c/o Western Link)
BOC Limited (A Member of the Linde Group)	Gigaclear PLC	Redundant Pipelines - LPDA
BP Exploration Operating Company Limited	Gtt	RWEnpower (Little Barford and South Haven)
BPA	Humbly Grove Energy	SABIC UK Petrochemicals
Carrington Gas Pipeline	IGas Energy	Scottish Power Generation
CATS Pipeline c/o Wood Group PSN	INEOS FPS Pipelines	Seabank Power Ltd
Cemex	INEOS Manufacturing (Scotland and TSEP)	SGN
Centrica Storage Ltd	INOVYN Enterprises Limited	Shell (St Fergus to Mossmorran)
CLH Pipeline System Ltd	Intergen (Coryton Energy or Spalding Energy)	Shell Pipelines
Concept Solutions People Ltd	Mainline Pipelines Limited	SSE (Peterhead Power Station)
ConocoPhillips (UK) Ltd	Manchester Jetline Limited	Tata Communications (c/o JSM Construction Ltd)
DIO (MOD Abandoned Pipelines)	Manx Cable Company	Total (Colnbrook & Colwick Pipelines)
E.ON UK CHP Limited	Marchwood Power Ltd (Gas Pipeline)	Total Finaline Pipelines
EirGrid	Melbourn Solar Limited	Transmission Capital
Electricity North West Limited	National Grid Gas (Above 7 bar), National Grid Gas Distribution Limited (Above 2 bar) and National Grid Electricity Transmission	UK Power Networks
ENI & Himor c/o Penspen Ltd	Northumbrian Water Group	Uniper UK Ltd
EnQuest NNS Limited	NPower CHP Pipelines	Vattenfall
EP Langage Limited	Oikos Storage Limited	Veolia ES SELCHP Limited
ESP Utilities Group	Ørsted	Westminster City Council
ESSAR	Perenco UK Limited (Purbeck Southampton Pipeline)	Wingas Storage UK Ltd
Esso Petroleum Company Limited	Petroineos	Zayo Group UK Ltd c/o JSM Group Ltd
Fulcrum Pipelines Limited	Phillips 66	
Gamma	Premier Transmission Ltd (SNIP)	

The following Non-LSBUD Members may have assets in your search area. It is **YOUR RESPONSIBILITY** to contact them before proceeding. Please be aware this list is not exhaustive and it is your responsibility to identify and contact all asset owners within your search area.

Non-LSBUD members (Asset owners not registered on LSBUD)			
Asset Owner	Preferred contact method	Phone	Status
BT	<a href="https://www.swns.bt.com/pls/mbe/welcome.home">https://www.swns.bt.com/pls/mbe/welcome.home</a>	08009173993	Not Notified
CenturyLink Communications UK Limited	<a href="mailto:plantenquiries@instalcom.co.uk">plantenquiries@instalcom.co.uk</a>	02087314613	Not Notified
CityFibre	<a href="mailto:asset.team@cityfibre.com">asset.team@cityfibre.com</a>	033 3150 7282	Not Notified
Colt	<a href="mailto:plantenquiries@catelecomuk.com">plantenquiries@catelecomuk.com</a>	01227768427	Not Notified
Energetics Electricity	<a href="mailto:plantenquiries@energetics-uk.com">plantenquiries@energetics-uk.com</a>	01698404646	Not Notified
ENGIE	<a href="mailto:nrsua@cofely-gdfsuez.com">nrsua@cofely-gdfsuez.com</a>	01293 549944	Not Notified
GTC	<a href="https://pe.gtc-uk.co.uk/PlantEnqMembership">https://pe.gtc-uk.co.uk/PlantEnqMembership</a>	01359240363	Not Notified
Interoute	<a href="mailto:interoute.enquiries@plancast.co.uk">interoute.enquiries@plancast.co.uk</a>	02070259000	Not Notified
Isles of Scilly Council	<a href="mailto:planning@scilly.gov.uk">planning@scilly.gov.uk</a>	01720424350	Not Notified
KPN (c/-Instalcom)	<a href="mailto:kpn.plantenquiries@instalcom.co.uk">kpn.plantenquiries@instalcom.co.uk</a>	n/a	Not Notified
Mobile Broadband Network Limited	<a href="mailto:mbnl.plant.enquiries@turntown.com">mbnl.plant.enquiries@turntown.com</a>	01212 621 100	Not Notified
Sota	<a href="mailto:SOTA.plantenquiries@instalcom.co.uk">SOTA.plantenquiries@instalcom.co.uk</a>		Not Notified
Utility assets Ltd	<a href="mailto:assetrecords@utilityassets.co.uk">assetrecords@utilityassets.co.uk</a>		Not Notified
Verizon Business	<a href="mailto:osp-team@uk.verizonbusiness.com">osp-team@uk.verizonbusiness.com</a>	01293611736	Not Notified
Virgin Media	<a href="http://www.digdat.co.uk">http://www.digdat.co.uk</a>	08708883116	Not Notified
Vodafone	<a href="mailto:osm.enquiries@atkinsglobal.com">osm.enquiries@atkinsglobal.com</a>	01454662881	Not Notified
Vtesse Networks	<a href="https://plant.interoute.com/plant-enquiries/">https://plant.interoute.com/plant-enquiries/</a>	01992532100	Not Notified

## Disclaimer

Please refer to LineasearchbeforeUdig's Terms of Use for full terms of use available at [www.lineasearchbeforeudig.co.uk](http://www.lineasearchbeforeudig.co.uk)

The results of this Enquiry are personal to the Enquirer and shall not be shared with or relied upon by any other party. The asset information on which the Enquiry results are based has been provided by LSBUD Members, therefore LineasearchbeforeUdig will provide no guarantee that such information is accurate or reliable nor does it monitor such asset information for accuracy and reliability going forward. There may also be asset owners which do not participate in the enquiry service operated by LineasearchbeforeUdig, including but not exclusively those set out above. Therefore, LineasearchbeforeUdig cannot make any representation or give any guarantee or warranty as to the completeness of the information contained in the enquiry results or accept any responsibility for the accuracy of the mapping images used. LineasearchbeforeUdig and its employees, agents and consultants accept no liability (save that nothing in this Enquiry Confirmation excludes or limits our liability for death or personal injury arising from our negligence, or our fraud or fraudulent misrepresentation, or any other liability that cannot be excluded or limited by English law) arising in respect thereof or in any other way for errors or omissions including responsibility to any person by reason of negligence.



# LIST OF STREETS

## (Highways Maintainable At The Public Expense)

### Council of the Isles of Scilly

All highways maintainable at the public expense (the streets listed) in the Isles of Scilly are located on the island of St Mary's. Please refer to the Attached Maps for the linear extents of the streets listed.

This List was last updated on 1<sup>st</sup> March 2016.

### List, Part I – Roads

The streets listed in Part I (i. and ii.) are public roads.

- i. Roads, classified 'A' (*with or without dedicated footway(s) forming part of the road*)

Reference	Names of street	Route
A3110	Telegraph Road, Town Lane, High Lanes, Carn Friars Lane, Tremelethen Hill, Parting Carn Lane	Circular – names listed clockwise from junction with the A3111 Pump Road to the same junction
A3111	Pump Road, Telegraph Road (Porthmellon), Carn Thomas, Higher Strand, Lower Strand, The Parade (North), Hugh Street, The Bank	A3110 Telegraph Road/Parting Carn Lane junction to the end of the public road at <i>The Quay</i>
A3112	Old Town Lane, Old Town Road, Church Road, Church Street, The Parade (South)	A3110 Parting Carn Lane to the A3111 The Parade (North)

- ii. Roads, unclassified (*with or without dedicated footway(s) forming part of the road*)

Reference	Name or description of street	Running between
U01	Garrison Hill	U03 Jerusalem Terrace and end of road at the frontage of land owned by the Duchy of Cornwall (before the <i>Garrison Gate</i> )
U02	Garrison Lane	A3111 Hugh Street and U01 Garrison Hill
U03	Jerusalem Terrace	A3111 The Bank and U02 Garrison Lane
U04	Sally Port	U01 Garrison Hill south and end of road at frontage of <i>4 Sally Port</i> and end of road at frontage of <i>29 Sally Port</i>
U05	Little Porth Road	U04 Sally Port and U14 Silver Street
U06	Parsons Field (Service Road)	U05 Little Porth Road and end of road where it meets F02 Parsons Field To Garrison Lane (Upper) and F05 Parsons Field (Estate Paths)
U07	Little Porth Slipway	U05 Little Porth Road and end of road at <i>Porthcressa Beach &amp; Little Porth Beach</i>
U08	The Bank (Car Park)	A3111 The Bank and A3111 The Bank
U09	Atlantic Hotel Slipway	A3111 The Bank and end of road at <i>Town Beach</i>
U10	Well Lane	A3111 Hugh Street and U02 Garrison Lane
U11	Back Lane (Off Garrison Lane)	U02 Garrison Lane and U10 Well Lane

U12	<b>Thorofare</b>	A3111 The Parade (North) and (in two places) A3111 Hugh Street and ends of road (in two places) at <i>Town Beach</i>
U13	<b>The Parade (East)</b>	A3111 The Parade (North) and A3112 The Parade (South)
U14	<b>Silver Street</b>	A3111 Hugh Street and U16 Porthcressa Road
U15	<b>Ingram's Opening</b>	A3112 The Parade (South) and U16 Porthcressa Road
U16	<b>Porthcressa Road</b>	U14 Silver Street and U20 Buzza Street
U17	<b>Porthcressa Road (Lane To South)</b>	U16 Porthcressa Road and end of road where it meets F10 Porthcressa Promenade And Connecting Ways
U18	<b>Porthcressa</b>	U16 Porthcressa Road and U20 Buzza Street
U19	<b>Buzza Road</b>	U20 Buzza Street and end of road where it meets F12 Porthcressa Terrace To Buzza Road
U20	<b>Buzza Street</b>	A3112 Church Street and U19 Buzza Road
U21	<b>Ram's Valley</b>	U20 Buzza Street and end of road at a private gate (road inclusive of frontage of <i>Arden House</i> )
U22	<b>Porthcressa Terrace</b>	U20 Buzza Street and U21 Ram's Valley
U23	<b>Rechabite Slipway</b>	A3111 Lower Strand and end of road at <i>Town Beach</i>
U24	<b>Well Cross</b>	A3111 Lower Strand and A3112 Church Street
U25	<b>Back Lane (Off Well Cross)</b>	U24 Well Cross and U26 Church Road (North)
U26	<b>Church Road (North)</b>	A3111 Carn Thomas and A3112 Church Street
U27	<b>Branksea Close</b>	A3112 Church Road and end of road where it meets F15 Branksea Close (Estate Paths)
U28	<b>Hospital Lane</b>	A3112 Church Road and end of road where it meets F13 Mill Hill
U29	<b>Moor Well Lane</b>	A3111 Telegraph Road (Porthmellon) and end of road at entrance to the <i>Porthmellon waste management site</i>
U30	<b>Porthmellon Industrial Estate Roads</b>	A3111 Telegraph Road (Porthmellon) and all ends of road within the industrial estate
U31	<b>Porthloo Lane</b>	A3111 Pump Road and U33 Telegraph Road (North)
U32	<b>Mount Flagon And Thomas' Porth</b>	U31 Porthloo Lane and end of road at the frontage of <i>Camberdown</i> (inclusive)
U33	<b>Telegraph Road (North)</b>	A3110 Telegraph Road and U34 Pungie's Lane
U34	<b>Pungie's Lane</b>	U33 Telegraph Road (North) and A3110 High Lanes (a forked junction)
U35	<b>McFarland's Down</b>	U34 Pungie's Lane and end of road immediately before the junction with track leading to Long Rock
U36	<b>Holy Vale</b>	A3110 High Lanes and U37 Holy Vale Lane and looping onto itself
U37	<b>Holy Vale Lane</b>	A3110 Telegraph Road and U36 Holy Vale
U38	<b>Ennor Close (Estate Roads)</b>	A3112 Old Town Lane and A3112 Old Town Lane and the two ends of road which meet F19 Ennor Close (Estate Paths)

End of Part I

## List, Part II – Footways

The streets listed in Part II are public footways or public footpaths (*not forming part of a road*)

Reference	Name or description of street	Running between
F01	<b>The Bank To Jerusalem Terrace</b>	A3111 The Bank and U03 Jerusalem Terrace
F02	<b>Parsons Field To Garrison Lane (Upper)</b>	U06 Parson's Field (Service Road) and junction of U02 Garrison Lane & U04 Sally Port
F03	<b>Parsons Field To Garrison Lane (West)</b>	U06 Parsons Field (Service Road) and U02 Garrison Lane
F04	<b>Parsons Field To Garrison Lane (East)</b>	U06 Parsons Field (Service Road) and U02 Garrison Lane
F05	<b>Parsons Field (Estate Paths)</b>	U04 Sally Port and U05 Little Porth Road and U06 Parsons Field (Service Road)
F06	<b>Sally Port Steps And Passage</b>	U04 Sally Port (in two places) and end of footway at line of boundary of housing estate with land owned by the Duchy of Cornwall
F07	<b>Little Porth</b>	U05 Little Porth Road and end of footway at frontage of <i>29 Sally Port</i> and U07 Little Porth Slipway
F08	<b>Customs House To Town Beach</b>	A3111 Lower Strand and end of footway at <i>Town Beach</i>
F09	<b>The Parade To Porthcressa Road</b>	A3112 The Parade (South) and U16 Porthcressa Road
F10	<b>Porthcressa Promenade And Connecting Ways</b>	U07 Little Porth Slipway and U14 Silver Street and U16 Porthcressa Road and U17 Porthcressa Road (Lane To South) and U18 Porthcressa and F11 Buzza Road Slipway
F11	<b>Buzza Road Slipway</b>	U19 Buzza Road and end of footway at <i>Porthcressa Beach</i>
F12	<b>Porthcressa Terrace To Buzza Road</b>	U22 Porthcressa Terrace and U19 Buzza Road
F13	<b>Mill Hill</b>	U19 Buzza Road and U28 Hospital Lane
F14	<b>Hospital Lane To Dracaena</b>	U28 Hospital Lane and end of footway at gate at the frontage of <i>Dracaena</i>
F15	<b>Branksea Close (Estate Paths)</b>	U27 Branksea Close and looping onto itself (within the housing estate)
F16	<b>Rear Of Museum</b>	A3112 Church Street and A3112 Church Street
F17	<b>Strand Promenade And Way To Lifeboat Station</b>	A3111 Higher Strand and A3111 Carn Thomas and ends of footway at the <i>RNLI Lifeboat Station</i> and <i>Town Beach</i>
F18	<b>Carn Thomas To Church Road (North)</b>	A3111 Carn Thomas and U26 Church Road (North)
F19	<b>Ennor Close (Estate Paths)</b>	U38 Ennor Close (Estate Roads) and U38 Ennor Close (Estate Roads) and ends of footway within the housing estate
F20	<b>Mermaid Inn Slipway</b>	A3111 The Bank and end of footway at <i>Town Beach</i>




End of Part II

## Attached Maps

1. Hugh Town
2. Old Town
3. Mount Flagon and Thomas' Porth
4. Maypole and Holy Vale
5. St Mary's (*showing maps 1 to 4 inset*)

### Key to the Attached Maps

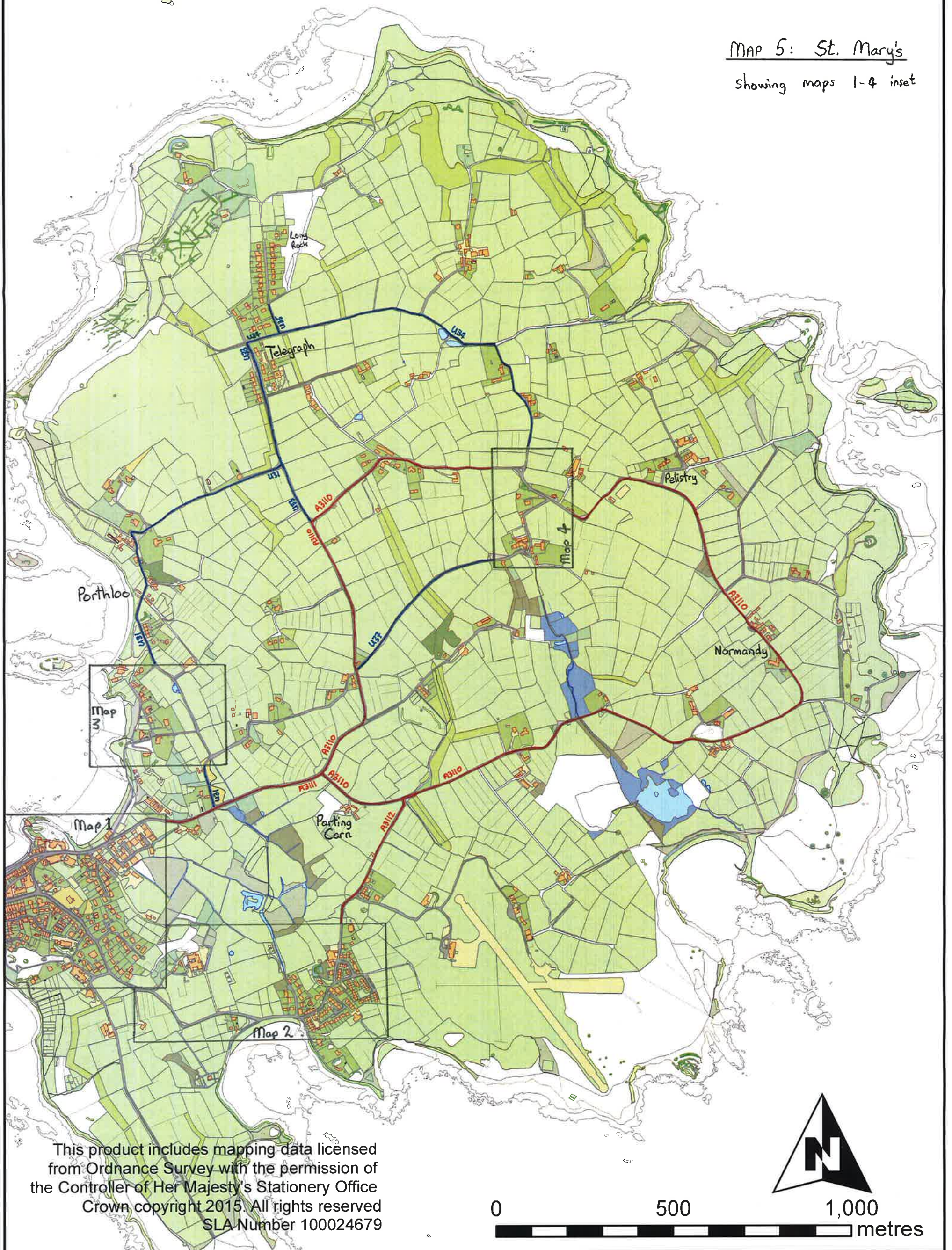
Colour lines denote approximate centre lines of highway, and are intended primarily to show the linear extents of the highway and individual streets listed.

	Road, classified 'A'	( <i>with or without dedicated footway(s) forming part of the road</i> )
	Road, unclassified	( <i>with or without dedicated footway(s) forming part of the road</i> )
	Footway	( <i>not forming part of a road</i> )

The Reference for each street listed is written at least once by the particular street.



MAP 5: St. Mary's  
showing maps 1-4 inset

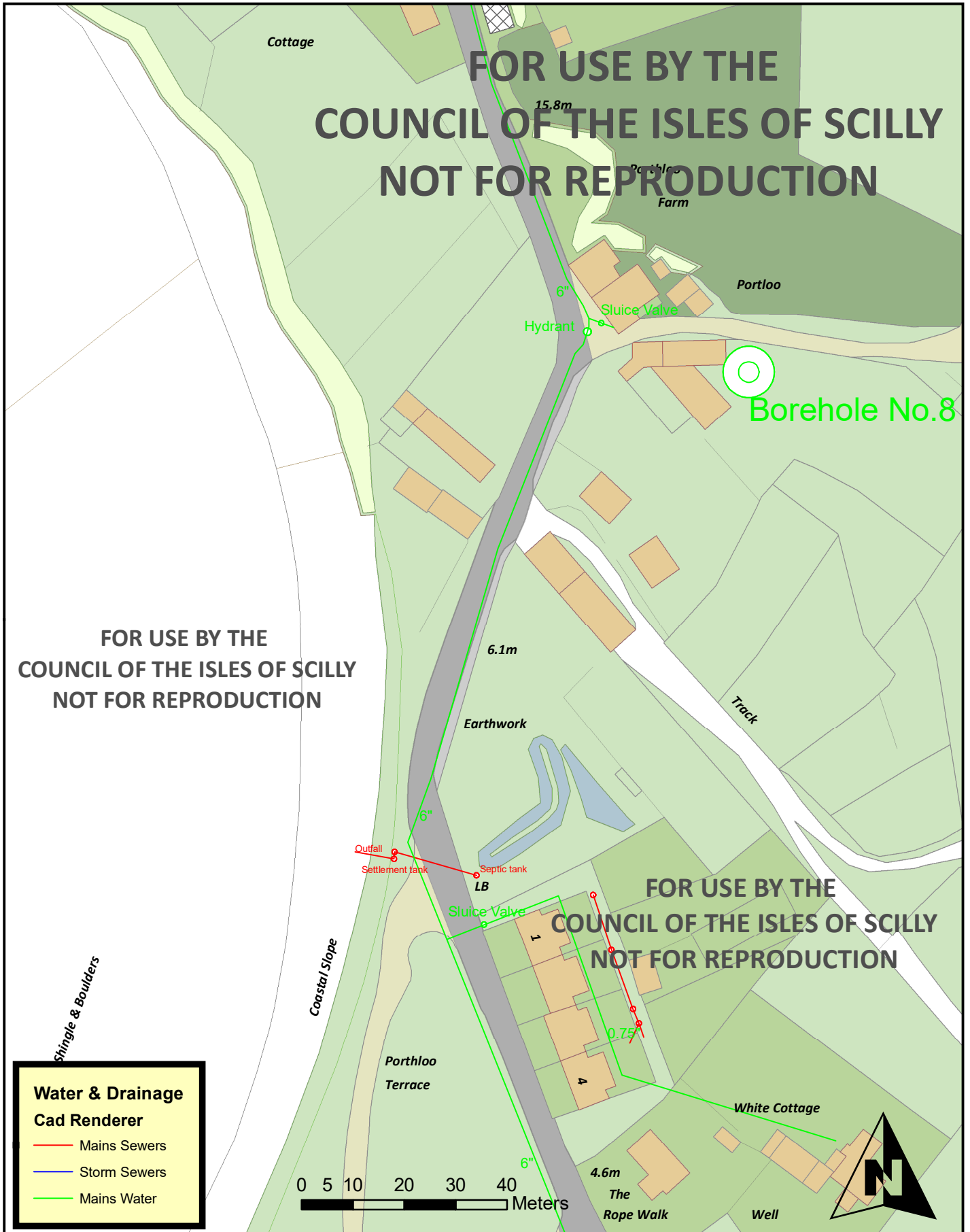


This product includes mapping data licensed from Ordnance Survey with the permission of the Controller of Her Majesty's Stationery Office  
Crown copyright 2015. All rights reserved  
SLA Number 100024679

0 500 1,000 metres



# Porthloo, St Mary's



Contact Us

Mapping Enquiries:

All areas0121 623 9780

General Enquiries:

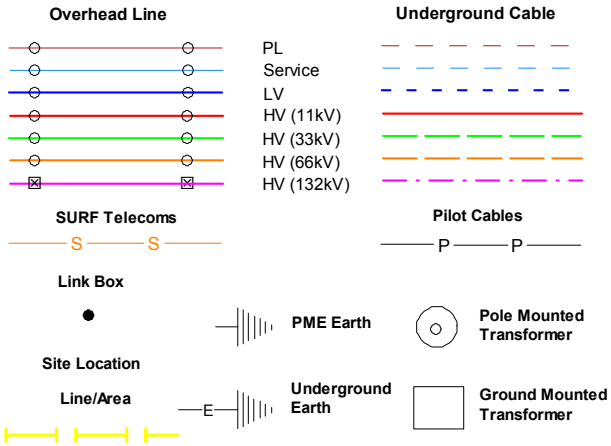
All areas0800 096 3080

Report damage immediately – KEEP EVERYONE AWAY FROM THE AREA  
0800 6783 105

Date Requested: 08/03/2018  
Job Reference: 12386257  
Site Location: 91060 11421  
Requested by: Mr Ryan Haselden  
Your Scheme/Reference: isles of Scilly

IMPORTANT NOTICES

- This information is given as a guide only and its accuracy cannot be guaranteed. Services or recent additions to the network may not be shown.
- Cables, overhead lines & substations owned by other electricity network owners or private companies may be present and may not be shown.
- You should always verify exact locations of cables using a cable locator and by careful use of hand tools in accordance with HSE guidance note HSG47.
- When working within 10m of any overhead electric line you should follow the requirements of HSE Guidance Note GS6.
- For further advice on working near our electricity cables or lines, call our Contact Centre on 0800 096 3080.
- Advice should be sought from the Western Power Distribution Contact Centre for any work that is to take place in proximity to 66kV or 132kV underground cables and 66kV 132kV overhead lines – 0800 096 3080



Crown Copyright © All Rights Reserved. Ordnance Survey Licence numbers: EL27318X, 100024877 and 100021807.  
WPD Copyright: This copy has been made by or with the authority of Western Power Distribution (WPD) pursuant to Section 47 of the Copyright Designs and Patents Act 1988 unless that Act provides a relevant exception to copyright the copy must not be copied without the prior permission of the copyright owner

Warning: PDF designed for A3 colour print only with no page scaling.

Contact Us

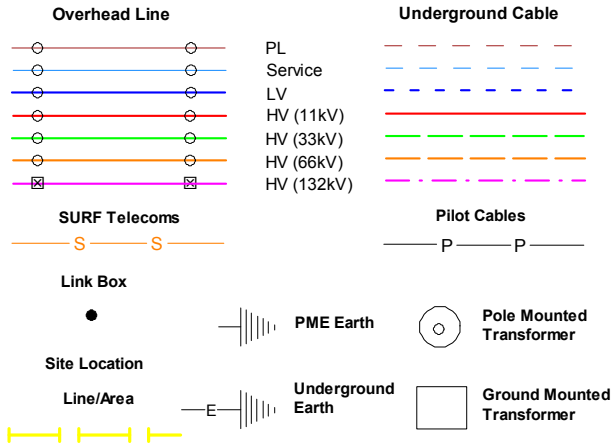
Mapping Enquiries: All areas 0121 623 9780 General Enquiries: All areas 0800 096 3080

Report damage immediately – KEEP EVERYONE AWAY FROM THE AREA  
0800 6783 105

Date Requested: 08/03/2018  
Job Reference: 12386257  
Site Location: 91060 11421  
Requested by: Mr Ryan Haselden  
Your Scheme/Reference: isles of Scilly  
Exact Scales:  
1:1250 Area or Circle dig site  
1:500 Line dig site

IMPORTANT NOTICES

- This information is given as a guide only and its accuracy cannot be guaranteed. Services or recent additions to the network may not be shown.
- Cables, overhead lines & substations owned by other electricity network owners or private companies may be present and may not be shown.
- You should always verify exact locations of cables using a cable locator and by careful use of hand tools in accordance with HSE guidance note HSG47.
- When working within 10m of any overhead electric line you should follow the requirements of HSE Guidance Note GS6.
- For further advice on working near our electricity cables or lines, call our Contact Centre on 0800 096 3080.
- Advice should be sought from the Western Power Distribution Contact Centre for any work that is to take place in proximity to 66kV or 132kV underground cables and 66kV 132kV overhead lines – 0800 096 3080



Crown Copyright © All Rights Reserved. Ordnance Survey Licence numbers: EL27318X, 100024877 and 100021807.  
WPD Copyright: This copy has been made by or with the authority of Western Power Distribution (WPD) pursuant to Section 47 of the Copyright Designs and Patents Act 1988 unless that Act provides a relevant exception to copyright the copy must not be copied without the prior permission of the copyright owner

Warning: PDF designed for A3 colour print only with no page scaling.



Contact Us

Mapping Enquiries:

All areas0121 623 9780

General Enquiries:

























All areas0800 096 3080

Report damage immediately – KEEP EVERYONE AWAY FROM THE AREA  
0800 6783 105

Date Requested: 08/03/2018  
Job Reference: 12386257  
Site Location: 91060 11421  
Requested by: Mr Ryan Haselden  
Your Scheme/Reference: isles of Scilly  
Exact Scales:  
1:1250 Area or Circle dig site  
1:500 Line dig site

IMPORTANT NOTICES

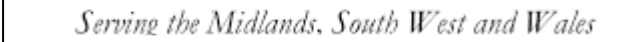
- This information is given as a guide only and its accuracy cannot be guaranteed. Services or recent additions to the network may not be shown.
- Cables, overhead lines & substations owned by other electricity network owners or private companies may be present and may not be shown.
- You should always verify exact locations of cables using a cable locator and by careful use of hand tools in accordance with HSE guidance note HSG47.
- When working within 10m of any overhead electric line you should follow the requirements of HSE Guidance Note GS6.
- For further advice on working near our electricity cables or lines, call our Contact Centre on 0800 096 3080.
- Advice should be sought from the Western Power Distribution Contact Centre for any work that is to take place in proximity to 66kV or 132kV underground cables and 66kV 132kV overhead lines – 0800 096 3080

Overhead Line		Underground Cable
	PL	
	Service	
	LV	
	HV (11kV)	
	HV (33kV)	
	HV (66kV)	
	HV (132kV)	
		
		
		
		
		
		

Crown Copyright © All Rights Reserved. Ordnance Survey Licence numbers: EL27318X, 100024877 and 100021807.  
WPD Copyright: This copy has been made by or with the authority of Western Power Distribution (WPD) pursuant to Section 47 of the Copyright Designs and Patents Act 1988 unless that Act provides a relevant exception to copyright the copy must not be copied without the prior permission of the copyright owner

Warning: PDF designed for A3 colour print only with no page scaling.

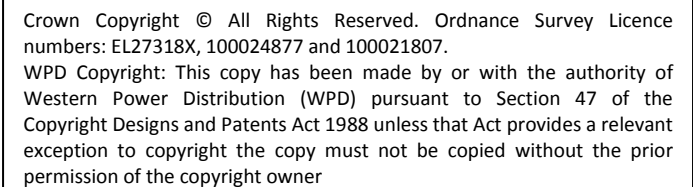




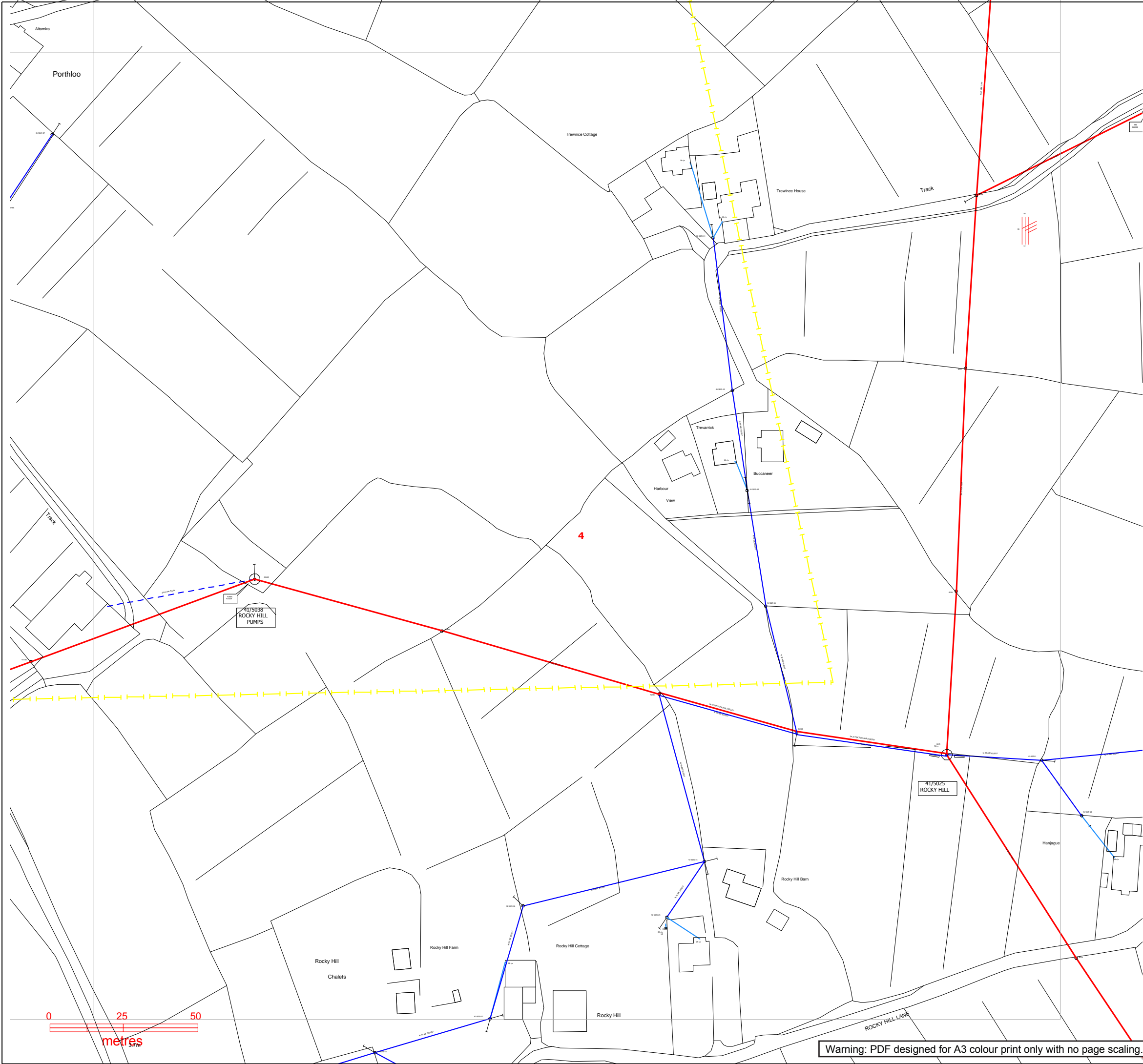
<b>Mapping Enquiries:</b>	<b>General Enquiries:</b>
All areas      0121 623 9780	All areas      0800 096 3080

Date Requested: 08/03/2018  
Job Reference: 12386257  
Site Location: 91060 11421  
Requested by: Mr Ryan Haselden  
Your Scheme/Reference: isles of Scilly  
Exact Scales:  
1:1250 Area or Circle dig site  
1:500 Line dig site

- This information is given as a guide only and its accuracy cannot be guaranteed. Services or recent additions to the network may not be shown.
- Cables, overhead lines & substations owned by other electricity network owners or private companies may be present and may not be shown.
- You should always verify exact locations of cables using a cable locator and by careful use of hand tools in accordance with HSE guidance note HSG47.
- When working within 10m of any overhead electric line you should follow the requirements of HSE Guidance Note GS6.
- For further advice on working near our electricity cables or lines, call our Contact Centre on 0800 096 3080.
- Advice should be sought from the Western Power Distribution Contact Centre for any work that is to take place in proximity to 66kV or 132kV underground cables and 66kV 132kV overhead lines – 0800 096 3080



Warning: PDF designed for A3 colour print only with no page scaling.



WESTERN POWER DISTRIBUTION

Serving the Midlands, South West and Wales

Contact Us

Mapping Enquiries:

All areas0121 623 9780

General Enquiries:

All areas0800 096 3080

Report damage immediately – KEEP EVERYONE AWAY FROM THE AREA

0800 6783 105

Date Requested: 08/03/2018

Job Reference: 12386257

Site Location: 91060 11421

Requested by: Mr Ryan Haselden

Your Scheme/Reference: isles of Scilly

Exact Scales:

1:1250 Area or Circle dig site

1:500 Line dig site

IMPORTANT NOTICES

This information is given as a guide only and its accuracy cannot be guaranteed. Services or recent additions to the network may not be shown.

Cables, overhead lines & substations owned by other electricity network owners or private companies may be present and may not be shown.

You should always verify exact locations of cables using a cable locator and by careful use of hand tools in accordance with HSE guidance note HSG47.

When working within 10m of any overhead electric line you should follow the requirements of HSE Guidance Note GS6.

For further advice on working near our electricity cables or lines, call our Contact Centre on 0800 096 3080.

Advice should be sought from the Western Power Distribution Contact Centre for any work that is to take place in proximity to 66kV or 132kV underground cables and 66kV 132kV overhead lines – 0800 096 3080

Overhead Line

PL

Service

LV

HV (11kV)

HV (33kV)

HV (66kV)

HV (132kV)

Underground Cable

PME Earth

Pole Mounted Transformer

SURF Telecoms

S

S

Link Box

Site Location

Line/Area

Underground Earth

Ground Mounted Transformer

Crown Copyright © All Rights Reserved. Ordnance Survey Licence numbers: EL27318X, 100024877 and 100021807.

WPD Copyright: This copy has been made by or with the authority of Western Power Distribution (WPD) pursuant to Section 47 of the Copyright Designs and Patents Act 1988 unless that Act provides a relevant exception to copyright the copy must not be copied without the prior permission of the copyright owner

# APPENDIX C

## Ground Investigation







## TRIAL PIT – SUMMARY RESULTS Porthloo

### PORTHLOO

Trial Pit Number	Depth from beach level to bottom of excavation	Ordnance Datum Newlyn Level of beach prior to trial pit being undertaken (See Site Plan for level info.)
1	2m	c.3.2m (note sand levels appear lower than when topo survey undertaken)
2	2m	c.3.7m (sand level locally raised at this site)
3	2m	c.3.2m (sand levels appear lower than when topo survey was undertaken)

#### Pit 1 Results

1.2 – 2m (Ground Level) Loose sand with loose boulders and large cobbles (local beach material)

0.4 – 1.2 Brown Ram (relatively unconsolidated) – Medium dense gravel and sandy gravel with firm/stiff clay cement

0 (base of pit)-0.4m Light Grey Claystone, stiff to firm



Figs 1 and 2 – Pit 1





Fig 3 and 4 - Pit 1 mix of lumps of clay and ram from spoil heap



Fig 5 – Pit 1 Position beyond rocks at base of Bank



## PIT 2

0.9 – 2.0m (ground level) Loose sand with individual boulders and large cobbles (local beach material)

0.3-0.9 Ram – sand, gravel and clay composite deposit (firm/stiff to dense/compact)

0.0 (base of pit) – 0.3 Stiff clay



Fig 6-7 – Pit 2



Fig 8 – Pit 8 position at base of rocks



Fig 9 – Lumps of ram from spoil heap



### PIT 3

1.0-2.0 (ground level) Loose sand with loose boulders and large cobbles

0(base of pit) – 1.0m Stiff Clay



Fig 10 and 11 – Pit 3



Fig 12 – Pit 3 location




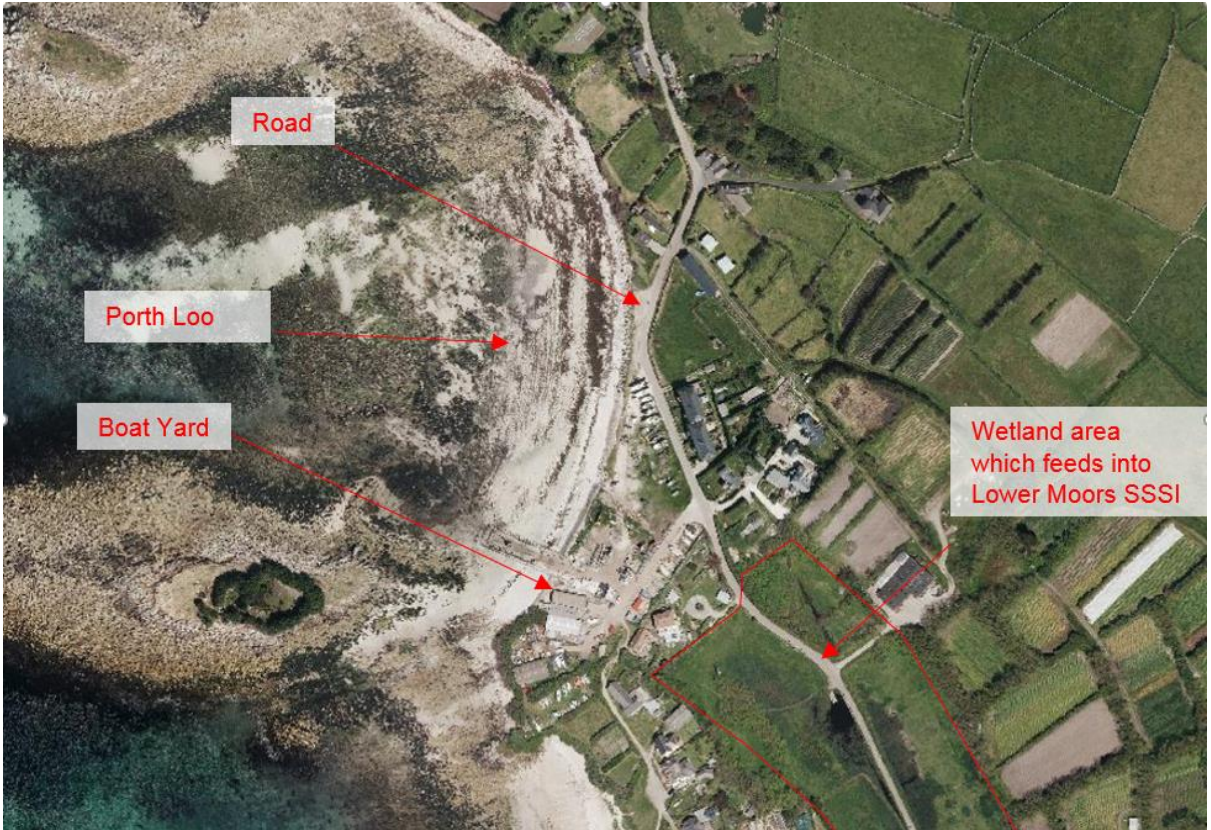
Fig 13 – Pit 3 – Clay in swing shovel

# APPENDIX D

## Design Statement



## SHORT FORM DESIGN STATEMENT

 <b>ARCADIS</b> <small>Design &amp; Consultancy for natural and built assets</small>	Project Name	Number and Activity code
	Isles of Scilly – Porthloo	UA008878-ARC-XX- XX-RP-CE-0260-P3
<b>Brief Description:</b> <p>Porthloo is located on the western side of St. Marys. The bay measures approximately 300m and is flanked to the north and south by rocky outcrops. At southern end of the beach is a boat yard which is protected from wave run-up by an engineered dune which extends half way along the beach. The northern extent of the beach is backed by an earth embankment which retains the road. The embankment is protected by an assortment of various size rocks and is currently susceptible to erosion and overtopping from wave events.</p> 		
<p>Figure 1: Porth Loo beach &amp; wetland area which feeds into Lower Moors SSSI (Channel Coastal Observatory, 2016)</p> <p>The aims of the scheme are to reduce the vulnerability of the embanked road from undermining, decrease the risk of coastal flooding to properties and the boat yard located behind the beach and to reduce saline intrusion into the Lower Moors SSSI. This will be achieved by formalising the de-facto rock defence along the northern half of the beach and tying into the existing engineered defence. Therefore the scheme will:</p> <ul style="list-style-type: none"><li>• Increase protection for critical infrastructure (Porthloo Road)</li><li>• Increase protection for properties and the boat yard situated behind the beach</li><li>• Increase protection for the Lower Moors SSSI</li></ul> <p>The project will not address any issues associated with the existing engineered defence protecting the boat yard.</p>		

**Assumptions:**

- The proposed works are located above the MHWS mark although the construction area could still be effected by storm events.
- Existing water levels:

	Chart Datum (CD)	Ordnance Datum Local (ODL)
HAT	6.3	3.39
MHWS	5.7	2.79
MHWN	4.3	1.39
MLWN	2.0	- 0.91
MLWS	0.7	- 2.21

- Numerical modelling using MIKE21 software was undertaken to identify the design parameters for the site. The design was undertaken using a 1:200yr joint probability wave and water level event with allowance for climate change, assuming a 50yr design life.
- It is assumed that the existing ground is suitable and accessible for the construction of the new revetment rock armour.
- It is assumed that ground conditions on the foreshore are suitable for placing rock armour without resulting in any significant settlement
- It is assumed that the revetment will tie into the cliffs north of the site and into the existing engineered dune to the south of the proposed works.

**Design Basis:**

Design water and wave conditions:

SWL (mAOD)	Hs (m)	Tm (s)	Comments
4.18	1.31	10.72	1:200yr joint probability

**Designer's Risk Assessment:** *incl. Hazards that cannot be designed out. See Designer's Hazard Record for further information*


- A- Working adjacent to water
- B- Soft & unstable ground
- C- Public beach
- D- Services
- E- Unstable rock armour
- F- Porth Loo SSSI

**References:** *incl. references to NWR standard guides, British Standards and relevant Codes of Practice.*

- CIRIA, CUR, CETMEF (2007). The Rock Manual. The use of rock in hydraulic engineering (2nd edition). C683, CIRIA, London
- Eurotop: Wave Overtopping of Sea Defences and Related Structures: Assessment Manual (2007)
- Reeve, D et al (2004). Coastal Engineering: Processes, theory and design practice. UK: Spon Press
- Kirsty McConnell (1998). Revetment systems against wave attack - A design manual. London: Thomas Telford Publishing.
- Geofabrics - Coastal and River Defence Systems: Design Guidance High Performance Square


**Signed:** ..... 

**Reviewed:** ...  .....

**Approved:** .....  .....

# APPENDIX E

## Designer's Hazard Statement

	Health & Safety - Designer's Hazard Record	
	<b>Project Title</b> Isles of Scilly Flood Defence and Dune Management Project – Porth Loo	<b>Project Code</b> UA008878-ARC-XX-XX-HS-CE-0261-P2

**Assessment Coverage:**

The installation of a 110m rock armour revetment along the northern half of Porth Loo beach

**1. Scope of Commission and Assessment of Coverage:**

The embankment along the northern half of Porth Loo beach is susceptible to erosion and overtopping during storm events. The loss of the embankment would lead to undermining of the road; would increase coastal flooding risk to properties and the boat yard as well increase the vulnerability of Lower Moors SSSI to saline intrusion.

Modelling of the water levels and wave environment has been undertaken for the Isles of Scilly to identify the 1 in 200-yr return events for Porth Loo beach. The modelling results have been utilised in the design of the rock armour revetment and the production of design drawings accordingly.

**2. Brief Description of the Works:**

1. Carry out a walkover of the site and conduct a visual inspection of the existing conditions along the beach.
2. Design of a rock revetment, to provide protection for a 1:200-yr joint probability event.
3. Installation of new rock armour in accordance with the design to provide protection for the existing embankment

**3. Key Risk Reduction measures taken during design process:**

1. Hazard markers added to drawings to identify know utility services or other known hazards.

**4. Significant Project Specific Hazards Remaining:**

- A. Working adjacent to water. Risk that access or egress could be cut off. Working in an exposed location which could expose works area to wave/storm events.
- B. Soft & unstable ground. Risk excavations within tidal zone could flood and become unstable. Beach material likely to contain soft spots that could cause issues for machinery, especially during high tides.
- C. Public Beach. Risk of public entering the works area
- D. Services. There is an existing outfall located on the beach which is believed to be discontinued but unconfirmed.
- E. Unstable armour stone. Risk rocks may be unstable when initial placed. Rocks should be placed by a machine and their stability ensured before operative's approach
- F! Porth Loo SSSI. Cliff and foreshore designated a Site of Special Scientific Interest. Works shall not impact upon designation.

**5. Specific Construction Requirements**

1. Site access and works will be tide dependant and should be via the slipway in the boat yard (subject to approval).


2. Neither machinery or foot traffic is to pass over the existing embankment to avoid further degradation.
3. At no time are the works to affect the ability for stop logs to be deployed across the slipway when required.

**6. Means by which significant hazards conveyed to contractors and others:**


1. Hazard markers added to drawings

Date of Review



**Assessed by:**

Name G. McDonnell Signature  Date 27/09/17

**Reviewed by:**

Name Ian Cooke Signature  Date 27/09/2017



	<b>Health &amp; Safety - Designer's Hazard Record</b>			Project Code/Doc No: UA008878-ARC-XX-XX-HS-CE-0261-P2	
	Project Title: Isles of Scilly Flood Defence and Dune Management Project – Porth Loo	Assessor (Name): Gary McDonnell	Assessor (Signature): 	Date: 27/09/17	Revision: P2

Ref	Activity & Hazard	Level of Risk (optional)	Design Input to Eliminate or Reduce Hazards, and Hazards Remaining	Residual Hazard?
A	Working adjacent to water – machinery could be cut off & possibility of inundation of the site due to wave action		This is an unavoidable consequence of the works and contractor is to mitigate the associated risks.	Yes
B	Soft & unstable ground – risk of machinery overturning		This is an unavoidable consequence of the works and contractor is to mitigate the associated risks	Yes
C	Public beach – risk of public entering the works area.		This is an unavoidable consequence of the works and contractor is to mitigate the associated risks.	Yes
D	Services – existing manholes on the beach. Other services may be present.		This is an unavoidable consequence of the works and contractor is to mitigate the associated risks.	Yes
E	Unstable rock armour – rocks may be unstable when initial placed. Rocks should be placed by a machine and their stability ensured before operative's approach.		This is an unavoidable consequence of the works and contractor is to mitigate the associated risk.	Yes
F	Porth Loo SSSI- Works shall not impact upon designation		This is an unavoidable consequence of the works and contractor is to mitigate the associated risk.	Yes

Unit 7, Chamberlain House  
Davy Road  
Derriford  
Plymouth  
PL6 8BX  
United Kingdom  
T: +44 (0)1752 689 000

[arcadis.com](https://www.arcadis.com)

A decorative graphic consisting of three thin orange lines. One line is horizontal, extending across the width of the page. Two other lines are diagonal, starting from the bottom left and extending towards the top right, intersecting the horizontal line.