



SHORE END REMEDIALS METHOD STATEMENT

BMC Ref: CB0262-4001

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Amendment Register

Revision	Date	Issued by	Approved by	Amendments
1	28/09/23	JR	SG	
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Supporting Documentation

Document Ref	CB0262-4001 Shore End Works
Assessments	CB0262-3002 Shore End Works Risk Assessment CB0262-3003 Environmental Risk Assessment
Permits	N/A
Lifting Plans	N/A
Drawings	N/A

Abbreviations

Abbreviation	Definition
BMC	Briggs Marine Contractors Limited
ECoW	Ecological Clerk of Works
IS	In Service
MHWS	Mean High Water Springs
MLWS	Mean Low Water Springs
OOS	Out of Service
SAP	Senior Authorised Person
SSEN	Scottish and Southern Electricity Network
SWL	Safe Working Load
VTS	Vessel Traffic Service
WON	Wasted materials as a direct consequence of the work being undertaken on site, that have the potential to be re-used

1. INTRODUCTION

1.1. Purpose and Scope

The purpose of this document is to detail the procedures to be followed by Briggs Marine Contractors (BMC) during maintenance work required on Loch Glasscarnoch (1), Stronsay – Sanday (2), Mainland Orkney – Graemsay (3), Islay – Orsay (4), Loch Awe (5) Mull – Ulva (6), Carradale – Arran South (7).

Additionally, remedial works will also be completed in Mull Iona – Mull landfall (9). For further information on remedial works for these locations, please refer to CB0262-4001 Shore end Method Statement.

This document is provided primarily for use by the responsible persons noted below and as a reference document for BMC Project Manager and the client SSEN and its representatives.

For further detail including maps/charts and environmental information please see CB0262-1003 CEMP.

2. PROCEDURE

2.1. Remedial 1 – Loch Glasscarnoch

2.1.1. Operational Activity (In service cable)

1. Placement of approximately 150m split pipe/iron shells on in service cable and removal of OOS cable. Works will commence once SAP permit to work is received.
2. Mobilisation of mobile welfare unit and equipment close to project location. Access to Vaich side will be achieved via launching a pioneer/small support boat (RHIB) from a slipway.
3. If Whaly RHIB used, note it has a weight limit of 1 tonne so several trips may be required. Whaly specification attached in Appendix A.
4. Where the cable is exposed, this area requires placement of split pipe/iron shells where possible from MLWS to MHWS.
5. The iron half shells will be delivered by HIAB lorries to small boat berthing location.
6. Iron shells will then be transferred from the HIAB lorry into the landing craft for onward transport to the cable.
7. Personnel will utilise lifting frames rigged suitably with a chain block and webbing sling with a minimum SWL of 3 tonnes to lift the cable. The shore team will feed the strop under the cable, then hoist the cable upwards to approximately 100mm clear of the beach.
8. 10m of split pipe will be allowed for potential installation and removal of any concrete bags.
9. Individual iron half shells will be manually placed around the exposed cable. To ensure that they sufficiently cover the cable the two half shells will be fused together.
10. The half shell will then be secured to each other and held in place by clamps.
11. Removal of any excess shells and equipment from the project locations.
12. The shells will stay in place until further maintenance work is required.

Out of Service cable

13. Correct cable will be confirmed by SSEN SAP. OOS cable identified (it has already been cut) will be earthed, capped (with cold shrink cap at low water) from both sides of the loch then removed from low water and shore environment.
14. Depending on the outcome of environmental survey an ECoW presence may be required.
15. Cut cables into sections and recycle (through an official recycling merchant).
16. Reinstatement of working area using sand from local environment.

2.2. Remedial 2 – Stronsay - Sanday

2.2.1. Operational Activity (OOS cable)

1. Removal of 100m OOS cable. Correct cable will be confirmed by SSEN SAP.
2. Mobilisation of 7Te excavator, Groundhog unit and cable cutting equipment close to project location via Sanday - Orkney ferry terminal. Access to site will be achieved through clearance works with the plant machinery (following granted wayleave).
3. Disconnected subsea cable to be cut within the marine channel at low water. Cable to be removed from MLWS up to the shore end, approximately 100m.
4. The cables will then be cut in 10m lengths, with handheld cutting tool, b) earthed and c) capped, with cold shrink cap at low water. The cut cables will then be removed from low water and shore environment.
5. Depending on the outcome of environmental survey an ECoW presence may be required.
6. An excavator will then assist to pull the disconnected cable from the beach.
7. Cut cable into sections and recycle (through an official recycling merchant).
8. Reinstatement of working area using sand from local environment.

2.3. Remedial 3 – Mainland Orkney – Graemsay

2.3.1. Operational Activity (OOS cable)

1. Removal of 30m OOS cable. Note - IS cable located 50m from the OOS. Correct cable will be confirmed by SSEN SAP.
2. Mobilisation of 7Te excavator, mobile welfare unit and equipment close to project location via Sanday - Orkney ferry terminal. Following permission, access to site will be achieved via landowners fields.
3. Disconnect subsea cable to be cut within the marine channel at low water. Cable to be removed from MLWS up to the shore end embankment/terminal pole, approximately 30m.
4. The cables will then be cut, with handheld cutting tool, b) earthed and c) capped, with cold shrink cap at low water. The cut cables will then be removed from low water and shore environment.
5. Depending on the outcome of environmental survey an ECoW presence may be required.
6. An excavator will then assist to pull the disconnected cable from the beach.
7. Cut cable into sections and recycle (through an official recycling merchant).
8. Reinstatement of working area using sand from local environment.

2.4. Remedial 4 – Islay – Orsay

2.4.1. Operational Activity (In service cable)

1. Islay landfall: Placement of approximately 20m split pipe/iron shells and cable burial. Orsay landfall: 40m split pipe/iron shells installation. Works will commence once SAP permit to work is received.
2. Mobilisation of 8 tonne excavator, mobile welfare unit and equipment close to project location (Islay). Access to Orsay will be achieved via launching a pioneer/small support boat (RHIB) from a slipway.
3. The iron half shells will be delivered by HIAB lorries to Islay and the Orsay landing craft berthing location.
4. Iron shells will then be transferred from the HIAB lorry into the landing craft for onward transport to the cable.
5. Where necessary, loose stones from low water or shore end will be cleared from around the cable manually by hand.
6. Individual iron half shells will be manually placed around the exposed cable. To ensure that they sufficiently cover the cable the two half shells will be fused together.
7. The half shell will then be secured to each other and held in place by clamps.
8. Removal of any excess shells and equipment from the project locations.
9. The shells will stay in place until further maintenance work is required.
10. Where the cable is exposed at the Islay landfall, this area requires burial of the exposed cable where possible from MLWS to MHWS.
11. This will be achieved by using a 8 tonne excavator to create trenches (at low water) alongside the existing cable route on Islay.
12. The existing cable will then be secured within this trench.
13. The trench will then be backfilled with 'won' material, to ensure minimal disruption to ecological habitats.
14. In case burial cannot be achieved on site, 10m of split pipe will be allowed for potential installation.
15. Depending on the outcome of environmental survey an ECoW presence may be required.

2.5. Remedial 5 – Loch Awe (5)

2.5.1. Operational Activity (In service cable)

1. Placement of approximately 30m of split pipe/iron shells. Cable burial (where possible). Removal of concrete bags. Works will commence once SAP permit to work is received.
2. Mobilisation of 3Te excavator, mobile welfare unit and equipment close to the project location. Access will be achieved via the Portsonachan hotel or slip way/track (once landowner permission is granted)
3. The iron half shells will be delivered by HIAB lorries close to the project location.
4. Iron shells will then be transferred from the HIAB lorry into a tracked excavator for transport to the cable.
5. Where necessary, ground protection mats will be placed down to minimise disturbance to land.
6. Individual iron half shells will be manually placed around the exposed cable. To ensure that they sufficiently cover the cable the two half shells will be fused together.
7. The half shell will then be secured to each other and held in place by clamps.
8. Removal of any excess shells and equipment from the project locations.
9. The shells will stay in place until further maintenance work is required.

2.6. Remedial 6 – Mull – Ulva (6)

2.6.1. Operational Activity (In service cable)

Works to commence into the low water periods.

1. Installation of 5m split pipe/iron shells. Works will commence once SAP permit to work is received.
2. Mobilisation of mobile welfare unit (stationed at the Mull shoreside), portable dive spread, equipment and half shells close to project location. Access to the island will be achieved via launching a pioneer/small support boat (RHIB).
3. 5m split pipe required for exposed sections from MLWS towards the top of shore. Approximately 5m of subsea cable exposed.
4. Dive supervisor will inform local VTS that personnel will be working on the shoreline
5. Starting from the highest point from MLWS, team will place the shells on whilst following the tide down to lowest point.
6. Surface diving personnel (Suits only) will utilise lifting frames (with adjustable legs) rigged suitably with a lever hoist and webbing sling with a minimum SWL of 3 tonnes to lift the cable. The surface diving personnel will feed the strop under the cable in a cradle position to relieve single point of pressure strain whilst lifting the cable.
7. The cable will gently be lifted upwards to approximately 100mm clear of the beach.
8. Individual iron half shells will be manually placed around the exposed cable, clamping both halves together and securing with bolts along the length of the exposed area of cable.
9. The half shell will then be secured to each other and held in place by clamps at either end of the split shell installation.
10. Removal of any excess shells and equipment from the project locations.
11. The shells will stay in place until further maintenance work is required.

Contingency

2.6.2. Operational Activity (In service cable)

If the tides and dates are unfavourable and the only options are to dive the location - works to commence into the high-water periods. Works will commence once SAP permit to work is received.

1. Installation of 5m split pipe/iron shells.
2. Mobilisation of mobile welfare unit, portable dive spread, equipment and half shells close to project location. Access to the island will be achieved via launching a pioneer/small support boat (RHIB).
3. Portable dive spread is to be mobilised onto a vessel suitable for the equipment and tasks
4. 5m split pipe required for exposed sections from MLWS towards the top of shore. Approximately 5m of subsea cable exposed.
5. Vessel will be secured via small anchor from stern and line from the shore for diving ops
6. Dive supervisor will inform local VTS that divers will be working on the shoreline
7. Dive team will perform all pre-dive checks of plant and equipment prior to operations
8. Permit to dive will be opened with vessel master

9. Starting from the highest point from MLWS, team will place the shells on whilst following the tide down to lowest point.
10. Divers will utilise pioneer vessel rigged suitably with a lever hoist and webbing sling with a minimum SWL of 1 tonne to lift the cable. The divers will feed the strop under the cable in a cradle position to relieve single point of pressure strain whilst lifting the cable.
11. The cable will gently be lifted upwards to approximately 100mm clear of the seabed
12. Split shells will be lowered to the diver using a down line and placed along the length of the cable
13. Individual iron half shells will be manually placed around the exposed cable, clamping both halves together and securing with bolts along the length of the exposed area of cable.
14. The half shell will then be secured to each other and held in place by clamps at either end of the split shell installation.
15. As left survey to be performed
16. Diver exits water, DS informs VTS diving complete and closes permit with vessel master
17. Removal of any excess shells and equipment from the project locations.
18. The shells will stay in place until further maintenance work is required.



Figure 1 - Proposed or similar RHIB will be used

2.7. Remedial 7 – Carradale – Arran (South) (7)

2.7.1. Operational Activity (In service cable)

1. Installation of 30m split pipe/iron shells. Works will commence once SAP permit to work is received.
2. Mobilisation of 7Te excavator, mobile welfare unit and equipment close to project location. Access to site will be achieved via main road.
3. The iron half shells will be delivered by HIAB lorries close to the project location.
4. Iron shells will then be transferred from the HIAB lorry into a tracked excavator for transport to the cable.
5. 30m split pipe required for exposed sections from MLWS towards the top of shore. Approximately 30m of subsea cable exposed.
6. Individual iron half shells will be manually placed around the exposed cable. To ensure that they sufficiently cover the cable the two half shells will be fused together.
7. The half shell will then be secured to each other and held in place by clamps.
8. Removal of any excess shells and equipment from the project locations.
9. The shells will stay in place until further maintenance work is required

Note

All cables will be under outage via the Region and that works will come under a safety document issued by SSEN SAP.

Person on site in receipt of the safety document must be Authorised in accordance with SSEN Operational Safety Rules.

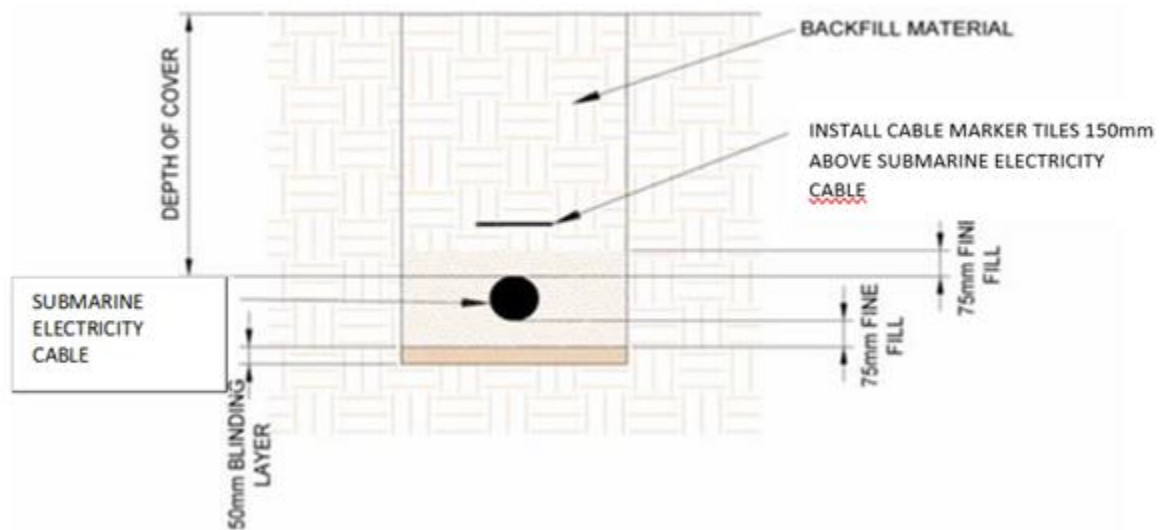


Figure 2 - Cross section of proposed cable burial

2. BRIEFING RECORD

The following briefing record will be filled out and signed by all personnel to confirm and record that all personnel have received and understood the necessary briefing:

Briefing Record	
Method Statement Title & Number	CB0262-4001: Shore Ends Method Statement
Revision Number	1
Permit to Work	N/A

This record is to certify that the method statement including risk assessment and all other relevant documentation has been briefed to the working party

Briefed by:

Name	Signature	Date	Designation

Before work can commence the working party must sign the record below, confirming that they have received the briefing and they fully understand the method statement including risk assessment and all other relevant documentation:

Name	Signature	Date	Designation

Continue Overleaf if Required.



3. APPENDIX A – WHALY (500R) SPECIFICATION

