

Scottish Hydro Electric Power Distribution Plc

Fishing Liaison Mitigation Action Plan **(covering all sea users)**

Shetland



	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
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1 Introduction

- 1.1 Scottish Hydro Electric Power Distribution Plc (SHEPD) would like to make it easy for all stakeholders who have interests in the submarine electricity cable planning process to have a strong voice in helping us determine our installation and protection practices but also inform our inspection and maintenance works. We are committed to open, honest and transparent communication and engagement.
- 1.2 This Fishing Liaison Mitigation Action Plan (FLMAP) outlines how SHEPD will interact with all sea users, prior to and during any works relating to 13 submarine cables at the following locations:
- Clift Sound
 - Papa Stour-Mainland Shetland
 - Shetland-West Linga
 - Shetland-Whalsay
 - West Linga-Whalsay
 - Whalsay-Out Skerries
 - Yell-Fetlar 1
 - Yell-Fetlar 2
 - Yell-Unst North
 - Yell-Unst South
 - Lerwick-Bressay South
 - Mossbank-Yell North
 - Mossbank-Yell South
- 1.3 The purpose of the FLMAP is to:
- Illustrate the potential interactions with the commercial fisheries industry and other sea users and address the potential effects (highlighted in the marine licensed evidence)
 - Identify how to minimise and mitigate potential impacts on local communities
- 1.4 SHEPD aim to facilitate co-existence between all parties as recommended in the FLOWW¹ and ESCA² (previously SCUK) guidelines. SHEPD has also developed the policy document *How Scottish Hydro Electric Power Distribution co-exists with other marine users*³ which should be used in conjunction with this FLMAP.
- 1.5 To help us understand the impacts that our cable installation decisions have, we work proactively with our regulators, customers and stakeholders. This helps our collaborators to better understand the impacts our engineering decisions can have on the safety of mariners,

¹ Fishing Liaison with Offshore Wind and Wet Renewables Group (FLOWW) Best Practice Guidance for Offshore Renewables Developments: Recommendations for Fishing Liaison, 2014

² European Subsea Cables Association

³ Scottish and Southern Electricity Networks: *How we co-exist with other marine users*, available: <https://www.ssen.co.uk/SubmarineCables/AboutUs/>

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energy costs for communities we serve, on local and national economic activity and on the natural environment⁴.

- 1.6 Cable works that will be covered by this FLMAP include cable inspections, surveys and cable installations. This FLMAP operates in conjunction with the Shetland FLMAP Delivery Programme, which outlines the programme of communication for the identified stakeholders during the cable works activities and sets out the register of commitments for disseminating this information. The FLMAP Delivery Programme also forms an audit trail, documenting communication and agreed mitigation between SHEPD and sea users during specific cable works. This will advise SHEPD's approach to continuous improvement on mitigating cable activities throughout the region and will be developed and updated accordingly.
- 1.7 A summary table of potential interactions for each cable outlines key potential interactions with the fisheries industry and other sea users. These are given in *Appendix E Cable-Specific Interactions*.
- 1.8 This FLMAP identifies the respective responsibilities of the Company Fishing Liaison Officer (CFLO) and the Fishing Industry Representative (FIR), and how the FIR and CFLO will operate. The FLMAP has been constructed to facilitate co-existence between SHEPD and other sea users.
- 1.9 The potential marine activities relevant to the area of cable works are summarised below. A more detailed review of activities is provided in Chapters 6 and 7 and visual representations of relevant activities are provided in Appendix C and Appendix D:
- The Shetland Islands are a popular area for marine recreation.
 - There are medium to high levels of bird and wildlife watching.
 - Activity levels range from very low to high for coasteering (with hotspots around the Lerwick-Bressay South and Papa Stour Shetland cables), visits to historic sites or to attractions, canoeing/kayaking and scuba diving.
 - There are very low to medium levels of motor cruising, sea angling from shore and motor cruising.
 - There are low levels of long distance swimming, sailing and cruising, rowing and sculling, chartered angling and wild fowling.
 - There are ferry routes overlapping Whalsay-Out Skerries, West Linga-Whalsay and Lerwick-Bressay South, with ferry routes in the vicinity of the other cables. These are operated by Shetland Council, Northlink Ferries and W B Marine.
 - There are a number of shellfish and finfish aquaculture sites in the vicinity of the cable works.
 - There are no wave, wind or tidal arrays in the vicinity of the cable locations.
 - Conservation designations within the vicinity of the cable locations include:
 - National Scenic Area (NSA): Shetland.
 - Nature Conservation Marine Protected Area (MPA): Fetlar to Haroldswick.

⁴ For further details see Scottish and Southern Electricity Networks: *Submarine Electricity Cable Cost Benefit Analysis Method Statement*: <https://www.ssen.co.uk/CBAFULL/> and *Method Statement Executive Summary*: <http://news.ssen.co.uk/media/266234/CBA-Model-Statement-Executive-Summary.pdf>

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- Special Areas of Conservation (SACs) with marine components: Yell Sound Coast; Papa Stour.
- Special Protection Areas (SPAs) with marine components: Fetlar; Bluemull and Colgrave Sounds; East Mainland Coast, Shetland.
- There are a number of wreck sites over Lerwick-Bressay South, with others in the vicinity of the cables Yell-Unst, Yell-Fetlar, Mossbank-Yell, Whalsay-Out Skerries, West Linga-Whalsay, Shetland-Whalsay and Papa Stour Shetland.
- A number of cables fall within the following Harbour Authority boundaries:
 - Cullivoe Harbour⁵ – covers Yell landfall of Yell-Unst cables
 - Hamars Ness, Fetlar⁶ – adjacent to Yell-Fetlar cables
 - Sullom Voe, Shetland⁷ – covers Mossbank-Yell cables
 - Out Skerries Harbour⁸ – adjacent to Whalsay-Out Skerries cable
 - Symbister Harbour⁹ – adjacent to Shetland-Whalsay cable
 - Lerwick Harbour¹⁰ – covers Lerwick-Bressay South
 - Scalloway Harbour¹¹ – covers Clift Sound
- The cables Shetland-West Linga, West Linga-Whalsay and Papa Stour-Shetland do not fall within any harbour authority boundaries.

1.10 The predominant fishing activities in areas relevant to the identified Shetland cables are midwater and bottom otter trawls.

⁵ <http://www.shetland.gov.uk/ports/smallports/cullivoe.asp>

⁶ <https://www.shetland.gov.uk/ports/smallports/>

⁷ <http://www.shetland.gov.uk/ports/sullomvoe/>

⁸ <https://www.shetland.gov.uk/ports/smallports/outskerries.asp>

⁹ <https://www.shetland.gov.uk/ports/smallports/symbister.asp>

¹⁰ <https://www.lerwick-harbour.co.uk/>

¹¹ <http://www.shetland.gov.uk/ports/scalloway/>

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2 Communications

- 2.1 Information regarding any cable survey or construction works (referred to as works hereafter) will be issued to all fishing and other relevant statutory and non-statutory stakeholders to ensure effective co-existence during the works (this includes inspection surveys and any subsequent requirement for cable installation).
- 2.2 Some activities such as cable installation works require additional information which will inform the potential interactions with sea users. When required SHEPD will provide the Project Description and other necessary documents.
- 2.3 Survey contractors shall provide details of all vessel movements, works and relevant co-ordinates to the CFLO and the FIR who will disseminate this information.
- 2.4 Relevant stakeholders will be contacted before planned works which have the potential to impact them and, depending on the progress of this activity; it would also be common practice for there to be regular contact throughout the works.
- 2.5 In addition to statutory stakeholder engagement, SHEPD also has a number of obligations where it is necessary to engage with non-statutory stakeholders prior to, during and/or upon completion of certain work activities.
- 2.6 In the event that the date or duration of works deviates from the notification timings (e.g. Notice to Mariners, NtM) outlined in the *Shetland FLMAP Delivery Programme*¹², an update will be issued to the relevant stakeholders. Similarly, if the scope or methodology of the planned works activity changes, then any stakeholder likely to be affected, including any relevant licensing authority, would be consulted. Any change to associated timelines would be agreed prior to the works commencing.

¹² The Delivery Programme is to cover the entire period to April 2023.

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3 Scheduling of liaison and information distribution

- 3.1 Dissemination of information to the fishing industry and other sea users will be issued as described in Table 1.

Table 1 Schedule for dissemination of information

Activity	Timescale for distribution
Inspection Programme	- Notice and information to be distributed at the earliest opportunity once information is available. - Regular liaison and updates by the Fishing Industry Representative (FIR) with local fishermen of proposed timings with confirmations of when works are finalised. - Regular liaison and updates by the Company Fishing Liaison Officer (CFLO) with other sea users of proposed timings with confirmations when operations are finalised.
Surveys (including any requirement for Pre-construction surveys) that have the potential to require gear relocation	- Regular liaison and updates by FIR with local fishermen, well in advance of disruption, defining who might be affected, where and when. Liaison to take into account weather, number of creels to be moved, bait ordering etc. - Notices to Mariners and information distributed not less than 20 days prior to survey mobilisation, if possible, to allow inclusion in the Kingfisher Fortnightly Bulletin.
Specific construction activities i.e. installation works	- Notices to Mariners and information distribution not less than 20 days, if possible, for individual construction vessel mobilisations. - Regular liaison and updates by FIR with local fishermen of proposed timings with confirmations when operations are finalised. - Regular liaison and updates by CFLO with other sea users of proposed timings with confirmations provided when planned works are finalised.
Meetings with fishery stakeholders	Meetings as required during all works i.e. the inspection surveys and any subsequent requirements for pre-construction and construction phases.
Meetings with other sea users	Meetings as required during all works i.e. the inspection surveys and any subsequent requirements for pre-construction and construction phases.
Ongoing Liaison	Additional unscheduled liaison and consultation will be undertaken by either the CFLO or the FIR as required to address issues or fishermen's concerns as they arise.

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4 Formal Notifications

4.1 Details of the works will be distributed to all appropriate sea users. The anticipated formal communications are provided in Table 2.

Table 2 Formal notifications

Type	Function	Distribution
Submarine electricity cable flyer	- Flyers may be issued for specific cable works. - This is not a requirement set out in the marine licences but are a proactive initiative taken by SHEPD to provide as much advance warning of the forthcoming works as possible.	- Flyers¹³ will be published through Kingfisher Information Service Offshore Renewables and Cable Awareness (KIS-ORCA) and Fishing News. - Flyers will be issued nominally at least 4 weeks, if possible, prior to commencing the works to which they relate.
Notices to Mariners (NtM)	- NtM and/or radio navigational warnings and publication in appropriate bulletins to comply with the conditions in the marine licences. - Each NtM will contain full details of the vessel, location, activities, contact details etc. - In the case of incidents or emergencies requiring notification, the NtM will be issued as soon as reasonably possible. Any actions required to notify an incident or emergency will go ahead even if there is not sufficient time for it to appear in the Kingfisher Fortnightly Bulletin.	- All NtM¹⁴ will be issued by the CFLO - NtMs will be published through KIS-ORCA - Details of the works will be promulgated to all appropriate sea users - NtMs will be issued at least 20 days prior to works' start date, if possible, to allow inclusion in the Kingfisher Fortnightly Bulletin. - NtMs will be issued using the example NtM document at relevant stages of cable surveys and works.
NtM updates	It is intended that the issued NtMs will comprehensively describe the planned activities. However, in the unlikely event that a significant change to these activities becomes apparent, an update will be issued.	If required, the NtM update to be issued by email to the Source Data Receipt at the UK Hydrographic Office and copied to the distribution list set out in the NtMs.

¹³ The flyer will contain the following information: submarine electricity cable specific information; useful contacts; working area; national and regional charts; site specific charts.

¹⁴For details see Appendix A: Notice to Mariners example template.

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Type	Function	Distribution
Notices to static gear fishermen	Further specific liaison will take place between SHEPD's FIR and the fishermen who have static fishing gear in the works areas to agree the detailed arrangements for removal of static gear. This will include details of dates and numbers of creels.	The static gear fishermen will receive the NtMs.
Notices to mobile gear fishermen	Specific liaison between SHEPD's FIR and the fishermen who will be affected by the survey and installation operations will take place to ensure that they are given a minimum of 24 hours' notice that vessels of restricted mobility will be in the area.	The mobile gear fishermen will receive the NtMs.
Notices to other sea users	Specific liaison between SHEPD's CFLO and the sea users who will be affected by operations will take place to ensure that they are given a minimum of 24 hours' notice that vessels of restricted mobility will be in the area.	Other sea users identified through consultation will receive the NtM (the distribution lists are given in Table 3, and Table 4).

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5 Communication Distribution List

- 5.1 A key aim is to co-exist with sea users in the marine environment. Coexistence is assisted by actively engaging with sea users and stakeholders and those with consented development rights. The way we approach engagement is specific to each cable although there is a generic set of *Standard Operating Procedures*¹⁵ to ensure our approach is consistent and fair to all sea users in the area.
- 5.2 The Shetland submarine electricity cables have a discrete footprint in a small regional area. For simplicity, the communication distribution list has been separated into regional stakeholders, given in Table 3, and cable specific stakeholders in Table 4.
- 5.3 The communication distribution list provides the following information on each stakeholder:
- Stakeholder name
 - SHEPD point of contact
 - Role of the stakeholder in the consent procedure
 - Details of specific contact to be made by SHEPD with a given stakeholder.

¹⁵ Scottish and Southern Electricity Networks: *Standard Operating Procedures*, available: <https://www.ssen.co.uk/SubmarineCables/AboutUs/>

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Table 3 Regional stakeholders' roles and duties

Regional Stakeholder	SHEPD point of contact	Role	Details
Marine Scotland (MS)	Subsea Project Liaison Manager Lead Marine Consents Manager	MS is the licensing authority for all works and as such all consent conditions that require to be met must be demonstrated to them either upon request or as agreed in the licence.	Specific contact with MS will be made ▪ Prior to commencement of the works: · Marine Scotland is responsible for the integrated management of Scotland's seas. This includes consultation on the proposed FLMAP and delivery plan; and inclusion of compliance with it as a licence condition. ▪ During the works: · to allow access for an authorised Enforcement Officer to inspect the works · to notify any changes to the works that may affect the validity of the licence · to submit and seek approval of plans to mitigate navigational dangers or risks, where required ▪ On completion of the works: · to notify the completion of the works · to submit an assessment of any risks posed by the installed cable
NatureScot	Subsea Project Liaison Manager	NatureScot is the Scottish public body responsible for natural heritage. They advise the Scottish Government regarding nature conservation requirements when deciding whether to consent activities. NatureScot is a consultee to Marine Scotland and as such they can influence licence conditions.	SHEPD will engage on matters related to the project as required.

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Regional Stakeholder	SHEPD point of contact	Role	Details
Maritime and Coastguard Agency (MCA)	Up to work starting Subsea Project Liaison Manager During Works - Project Manager	The MCA is an executive agency of the United Kingdom and is responsible for implementing British and international maritime law and safety policy. The MCA is a consultee to Marine Scotland and as such they can influence licence conditions.	SHEPD will engage on matters related to the project as required.
Northern Lighthouse Board (NLB)	Up to work starting Subsea Project Liaison Manager During Works – Project Manager	The NLB is a consultee to Marine Scotland and as such they can influence licence conditions.	SHEPD will engage on matters related to the project as required.
Scottish Environmental Protection Agency (SEPA)	Up to work starting Subsea Project Liaison Manager During Works – Project Manager	SEPA is Scotland's environmental regulator. SEPA is a consultee to Marine Scotland and as such they can influence licence conditions.	SHEPD will engage on matters related to the project as required.
Royal Society for the Protection of Birds (RSPB)	Subsea Project Liaison Manager Subsea Project Environmental Manager	The RSPB is a consultee to Marine Scotland and as such they can influence licence conditions.	SHEPD will engage on matters related to the project as required.

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Regional Stakeholder	SHEPD point of contact	Role	Details
Scottish Fishermen's Federation (SFF)	Company Fishing Liaison Officer (CFLO)	The SFF represent predominantly the mobile commercial fishing fleet that operate in deeper waters outside of where the cables will be replaced. The Shetland Fishermen's Association (SFA) is represented by the SFF.	Specific contact will be made with the SFF and the associations that are represented by the SFF. Regular liaison and updates by CFLO will be undertaken with meetings as required. As part of ongoing regular liaison with the SFF, SHEPD will keep the SFF apprised of the installation as it proceeds, specifically in relation to the presence of support vessels.
	Subsea Project Liaison Manager		
	Lead Marine Consents Manager		
Regional Inshore Fisheries Group (RIFG)	Company Fishing Liaison Officer (CFLO)	The organisation is legally authorised to impose restrictions and regulations, to issue licences and the right to set tolls.	Specific contact will be made with the RIFG. Regular dialogue between the CFLO and the RIFG will be maintained prior to and during the cable works, noting that both mobile and static gear commercial fishing operations are present in the area.
	Subsea Project Liaison Manager		
	Lead Marine Consents Manager		
Shetland Fishermen's Association	Company Fishing Liaison Officer (CFLO)	The SFA represents the interests of around 90 members, mainly in the political arena. It has three sub committees representing pelagic, white fish and small boat interests.	Shetland Fishermen's Association
Scottish Creel Fishermen's Federation (SCFF)	Subsea Project Liaison Manager		
	Lead Marine Consents Manager		
	Company Fishing Liaison Officer (CFLO)	SCFF is the national trade association for the creel fishing industry. It is comprised of ten fishermen's associations including the Scottish Scallop Divers Association and Scottish Creelers and Divers.	Specific contact will be made with the SCFF. Regular dialogue between the CFLO and the SCFF will be maintained prior to and during any installation work.

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Regional Stakeholder	SHEPD point of contact	Role	Details
Unaffiliated commercial fishermen	Company Fishing Liaison Officer (CFLO)	There are independent commercial fishing operators who are not affiliated with the RIFG.	Specific contact will be made with relevant unaffiliated commercial fishermen. The CFLO and FIR will identify these individuals and maintain liaison with them, particularly in relation to the requirement to remove creels to allow the works to be carried out.
Crown Estate Scotland (CES)	Wayleaves Project Manager	CES manages property belonging to the Sovereign. Part of the HDD installation (seaward of MHWS) is located within Sovereign territory and, as such, SHEPD is required to obtain permission via survey licences and wayleave consent in terms of the Master Wayleave Agreement from CES.	SHEPD will engage on matters related to the project as required.
United Kingdom Hydrographic Office (UKHO)	Project Manager and Company Fishing Liaison Officer (CFLO)	The UKHO is the UK's agency providing hydrographic and geospatial data to mariners and maritime organisations across the world.	SHEPD will maintain contact with the UKHO to provide regular updates on progress of the works provide a copy of the marine licence and provide as-built details upon completion. The CFLO will maintain contact with the UKHO via NtMs or Hydrographic notes.
Kingfisher Information Service Offshore Renewables and Cable Awareness (KIS-ORCA)	Company Fishing Liaison Officer (CFLO)	Kingfisher works with all the offshore industries, including oil & gas, subsea cable, renewable energy and marine aggregates to provide the latest news and most accurate information to the fishing industry. Information is in relation to the latest hazards, planned developments, new structures being installed and zones created.	SHEPD will maintain contact with KIS-ORCA to provide regular updates on progress of the works and provide as-built details upon completion. The CFLO will maintain contact with KIS-ORCA via NtMs for the Kingfisher bulletin.

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Regional Stakeholder	SHEPD point of contact	Role	Details
Ministry of Defence (MoD)	Company Fishing Liaison Officer (CFLO)	The MoD is the British government department responsible for implementing the defence policy set by Her Majesty's Government and is the headquarters of the British Armed Forces. The MoD has access to training areas and ranges in marine areas.	SHEPD and CFLO will engage on matters related to the project as required.
Royal Yacht Association (RYA)	Company Fishing Liaison Officer (CFLO)	The RYA is the national governing body for certain water sports in the United Kingdom. Activities it covers include Sailing, Windsurfing, Motor cruising, Powerboating and Personal watercraft.	Specific contact will be made with the RYA. Regular dialogue between the CFLO and the RYA will be maintained prior to and during the installation work that may affect recreational activities in the area.
Association of Shetland Community Councils (ASCC)	Company Fishing Liaison Officer (CFLO) Subsea Project Liaison Manager	The ASCC will keep the local community up to date on proposals.	SHEPD will engage on matters related to the project as required.
NAFC Marine Centre	Company Fishing Liaison Officer (CFLO)	The NAFC marine centre is an educational and scientific institute. Research and development in subjects relevant to the fishing and aquaculture industries and marine spatial planning.	CFLO will engage on matters related to the project as required.

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Regional Stakeholder	SHEPD point of contact	Role	Details
Shetland Islands Council (SIC) Coastal Zone Management	Company Fisheries Liaison Officer (CFLO) Subsea Project Liaison Manager Lead Marine Consents Manager	SIC is the local authority for Shetland. It was established by the Local Government (Scotland) Act 1973 and is the successor to the former Lerwick Town Council and Zetland County Council. Coastal Zone Management falls under the Development Services directorate, and aims to harness the productive capacity of the marine and coastal area whilst preserving its unique environmental qualities, through sustainable development.	SHEPD and CFLO will engage on matters related to the project as required.
Shetland Amenity Trust (SAT)	Company Fisheries Liaison Officer (CFLO)	SAT is a trust involved in the preservation and enhancement of cultural and natural heritage sites around Shetland.	SHEPD will engage on matters related to the project as required.
Scottish Coastal Forum	Company Fishing Liaison Officer (CFLO)	The Scottish Coastal Forum was formed in 1996 to encourage debate at national level on coastal issues. Its members advise Marine Scotland, from an operational perspective, on the development of policy relating to marine planning and licensing within a sustainable marine environment.	CFLO will engage on matters related to the project as required.

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Table 4 Cable specific stakeholders

Cable specific stakeholder	SHEPD point of contact	Role	Details
Nova Innovation	Company Fisheries Liaison Officer (CFLO)	Edinburgh based renewable energy developer. Deployed the first fully operational, commercial grid connected offshore tidal array in Shetland.	CFLO will engage on matters related to the project as required.
Shetland Renewable Energy Forum (SREF)	Company Fishing Liaison Officer (CFLO)	Shetlands Renewable Energy Forums aim is to help develop a thriving renewable energy in Shetland by providing help and advice to those seeking to bring new projects online and by speaking up in a political arena.	CFLO will engage on matters related to the project as required.
Ferries	Company Fisheries Liaison Officer (CFLO) Subsea Project Liaison Manager	Shetland Islands Council operate the Shetland Islands ferry services. Ferry services from Shetland operate out of Unst, Fetlar, Yell, Whalsay, Skerries and Papa Stour and Bressay.	CFLO will engage on matters related to the project as required.
Blueshell Mussels	Company Fisheries Liaison Officer (CFLO)	Rope-grown mussel farmer based in Shetland	CFLO will engage on matters related to the project as required.

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Cable specific stakeholder	SHEPD point of contact	Role	Details
Seafood Shetland	Company Fishing Liaison Officer (CFLO)	Seafood Shetland was formed in 2003 following the amalgamation of Shetland Fish Processors Association (SFPA) and Shetland Shellfish Growers Association (SSGA). The organisation represents the interests of companies involved in all aspects of fish processing and shellfish growing.	CFLO will engage on matters related to the project as required.
The Fair Isle Marine Environment and Tourism Initiative (FIMETI)	Company Fisheries Liaison Officer (CFLO)	FIMETI is a community led initiative in partnership with Fair Isle Bird Observatory and the National Trust for Scotland. The initiative was set up in 1995 by the fair isle community, concerned at steady and unremitting damage to its marine environment.	CFLO will engage on matters related to the project as required.
Shetland Islands Council (SIC) Ports and Harbours	Company Fisheries Liaison Officer (CFLO)	SIC ports and harbours are responsible for a number of ports and piers located around the isles including the largest, Sullom Voe oil terminal.	Specific contact will be made with the Shetland Islands Council Ports and Harbours Division. Regular dialogue between the CFLO and the SCFF will be maintained prior to and during the cable works.
Halton Charters	Company Fisheries Liaison Officer (CFLO)	Liveaboard dive charter offering trips in the Flow, Mull, Shetland and Norway.	CFLO will engage on matters related to the project as required.

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Cable specific stakeholder	SHEPD point of contact	Role	Details	
Orkney and Shetland Charters	Company Fisheries Liaison Officer (CFLO)	Dive charter based in Orkney and Shetland.	CFLO will engage on matters related to the project as required.	
Scapa Flow MV Invincible	Company Fisheries Liaison Officer (CFLO)	Dive charter offering trips at Scapa Flow and Shetland.	CFLO will engage on matters related to the project as required.	
Scottish Canoe Association	Company Fisheries Liaison Officer (CFLO)	Canoe club association with interest in canoeing activity across Scotland. The association keeps records of NtM relevant to canoeing activity in the Shetland area. There is a Regional Office for Grampian and Shetland.	CFLO will engage on matters related to the project as required.	
Shetland Sub Aqua Club	Company Fisheries Liaison Officer (CFLO)	Diving club based in Shetland.	CFLO will engage on matters related to the project as required.	
Shetland Anglers Association	Company Fisheries Liaison Officer (CFLO)	Angling association based in Shetland.	CFLO will engage on matters related to the project as required.	
Lerwick Boating Club	Company Fisheries Liaison Officer (CFLO)	Organises junior, race and adult sail training, dinghy / Shetland model races and yoal rowing training sessions as well as sailing / rowing regattas.	CFLO will engage on matters related to the project as required.	

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Cable specific stakeholder	SHEPD point of contact	Role	Details
Shetland Yachting	Company Fisheries Liaison Officer (CFLO)	Bareboat yacht charterer based in Shetland.	CFLO will engage on matters related to the project as required.
Shetland Canoe Club	Company Fisheries Liaison Officer (CFLO)	Canoe club based in the Shetland Islands.	CFLO will engage on matters related to the project as required.
Sea Kayak Shetland	Company Fisheries Liaison Officer (CFLO)	Provides guided kayak trips around Shetland.	CFLO will engage on matters related to the project as required.
BK Marine	Company Fisheries Liaison Officer (CFLO)	Multi-purpose work boat hire and marine logistics in Shetland that operates the passenger ferry to/from Scalloway-Foula.	CFLO will engage on matters related to the project as required.
Northlink Ferries	Company Fisheries Liaison Officer (CFLO)	Ferry operator between mainland Scotland and Orkney and Shetland. The Aberdeen-Lerwick (Holmsgarth) route is run by Northlink.	CFLO will engage on matters related to the project as required.
Shetland Islands Council (SIC)	Company Fishing Liaison Officer (CFLO) Subsea Project Liaison Manager Lead Marine Consents Manager	SIC is the local authority for Shetland. It was established by the Local Government (Scotland) Act 1973 and is the successor to the former Lerwick Town Council and Zetland County Council.	SHEPD and CFLO will engage on matters related to the project as required.

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Cable specific stakeholder	SHEPD point of contact	Role	Details	
Cooke Aquaculture Scotland Ltd	Company Fisheries Liaison Officer (CFLO)	Scottish salmon aquaculture company with farms on the Shetland and Orkney islands as well as in mainland Scotland and Northern England.	CFLO will engage on matters related to the project as required.	
Grieg Seafood Shetland Ltd	Company Fisheries Liaison Officer (CFLO)	Salmon farmer operating in Shetland and on the Isle of Skye.	CFLO will engage on matters related to the project as required.	
Scottish Sea Farms Ltd	Company Fisheries Liaison Officer (CFLO)	Scottish salmon aquaculture company with farms on the Shetland and Orkney Islands, around Oban and the Highlands.	CFLO will engage on matters related to the project as required.	
Eastvoe Shellfish	Company Fisheries Liaison Officer (CFLO)	Mussel farming company based in Scalloway.	CFLO will engage on matters related to the project as required.	

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6 Commercial Fishing

- 6.1 This section summarises the existing commercial fishing activity in relation to the subsea submarine electricity cable assets. Commercial fishing activity is defined as the activity undertaken by licensed fishing vessels for the capture and sale of finfish and shellfish. The commercial fishing overview will focus specifically on those fleets which are active in areas relevant to the identified cables. The commercial fisheries charts are given in Appendix C (Figure 2 to Figure 15).
- 6.2 Commercial fishing in European Union (EU) waters was subject to numerous controls and regulations at European, national and local levels under the Common Fisheries Policy (CFP). In 2021, the UK left the EU and the CFP, with fisheries in the UK now governed by the Fisheries Act (2020). Relations with the EU, including TACs and quotas are governed under the EU – UK Trade and Cooperation Agreement (24/12/2020). Controls and regulations remain in place under the Fisheries Act, with direct impacts on fishing effort, landings weights and values. The main bodies regulating fishing in sea areas in which the cable is located is Marine Scotland (MS) and the Inshore Fisheries Management and Conservation (IFMAC) through national and regional regulations, and regional Inshore Fisheries Groups (rIFGs).
- 6.3 The 13 Shetland cables are located within International Council for the Exploration of the Sea (ICES) Rectangles 50E9, 49E8 and 49E9. Pressure stocks are managed by ICES Division and quota is also allocated at this scale. Fishing data are recorded, collated and analysed by ICES rectangles within each division. ICES rectangles are the smallest spatial unit available for the collation of fishing data and have therefore been used to define the analysis areas for the proposed cable replacements.
- 6.4 The Shetland submarine electricity cables are sited within the 6nm limit, within which the UK has exclusive fishing rights. The territorial fishing limits of the UK extend out to 12nm, within which only the vessels of the UK or vessels from other states with historical rights are entitled to legally fish.
- 6.5 There is no single data source or recognised model for establishing a baseline of commercial fishing activity within discrete sea areas such as those encompassed by the footprint of submarine electricity cables. The overview has therefore been derived using data and information from a number of sources. In addition to analysis of fisheries statistical datasets, emphasis has been placed on undertaking direct consultation with the relevant national fishermen's federations, local associations and skippers whose fishing grounds are located within the vicinity of the cable corridor.
- 6.6 The key data sources used to characterise the baseline of the commercial fishing receptors are summarised in Table 5. It should be noted that Vessel Monitoring Systems (VMS) datasets show activity for the over-15m fleet only and will therefore underrepresent total fishing activity. It is considered that the surveillance sightings and effort data will be more representative as vessels working in the vicinity of the cable corridors will often be under 10m vessels.

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Table 5 Commercial fishing key data sources

Data	Year	Coverage	Confidence	Notes
UK Marine Management Organisation (MMO) Fishing Statistics (landings values data)	2015 to 2019	UK vessels landing into UK and European ports. Non-UK vessels landing into UK ports.	High	Landings data provided by value (£).
UK MMO Surveillance Sightings	2016 to 2020	Sightings of vessels by gear type (all nationalities) recorded in UK waters on weekly surveillance fly overs during daylight hours.	Medium to high	May underestimate total extent of fishing activity due to flyover frequency and timing. Data for 2016-2017 is provided by the MMO, whilst data for 2018-2020 is from Marine Scotland.
UK MMO Satellite Tracking (VMS) Data	2015 to 2019	Aggregated VMS pings recorded in 0.05° by 0.05° grids from UK vessels only in European waters. Only vessels over 15m.	High	VMS provided by value (£). As dataset limited to vessels over 15m this will not be indicative of the inshore fleet.
European Marine Observation and Data Network (EMODnet)	2019	The maps are based on AIS data purchased by CLS and show shipping density in 1km*1km cells of a grid covering all EU waters (and some neighbouring areas). Density is expressed as hours per square kilometre per month. The following ship types have been covered in this dataset: other, fishing, service, dredging or underwater ops, sailing, pleasure craft, high speed craft, tug and towing, passenger, cargo, tanker, military and law enforcement, unknown and all ship types.	Low - High	EMODnet Vessel Density Maps were created by COGEA in 2020 in the framework of EMODnet Human Activities, an initiative funded by the EU Commission.

- 6.7 The potential fishing activity methods in the vicinity of the Shetland submarine electricity cables are reviewed in order to assess possible interaction scenarios. A brief characterisation of the fishing methods identified in the area around the Shetland cable corridors, with a description of the gear and photographic examples of the types of vessels is given in Table 11.
- 6.8 Surveillance sightings by method (shown in Figure 2) have recorded predominantly demersal trawling, especially within ICES 50E9 and 49E9, and split between demersal trawler and unspecified trawlers in ICES 49E8. There are a few sightings of potting/whelking vessels closer to the coastline. Surveillance sightings do not overlap with the majority of cables – the exception is West Linga – Whalsay which overlaps with low activity by scallop dredges.

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Surveillance sightings by nationality, shown in Figure 3, show that almost all fishing activity is conducted by UK registered vessels within the region.

Table 6 MMO surveillance sightings 2016 to 2020

Cable Name	Interaction on chart	Notes
Yell-Unst (North and South)	No	
Yell-Fetlar (1 and 2)	No	
Mossbank-Yell (North and South)	No	Within 10km there are two sightings of pelagic/demersal stern trawlers, and a single scallop dredger (French/Newhaven type).
Whalsay-Out Skerries	No	Within 10km radius there are low levels of activity from demersal trawlers, unspecified trawlers, bottom seiners and scallop dredgers, as well as two Norwegian stern trawlers (pelagic/demersal), a French trawler.
Shetland-West Linga	No	Within 10km radius there are low levels of activity from demersal trawlers, unspecified trawlers, a bottom seiner, scallop dredgers and potters/whelkers. There is a single Norwegian stern trawler (pelagic/demersal) sighted
West Linga-Whalsay	Yes	Single sighting of a scallop dredger (French/Newhaven type). Within 10km radius there are low levels of activity from demersal trawlers, unspecified trawlers, a bottom seiner, scallop dredgers and potters/whelkers. There is a single Norwegian stern trawler (pelagic/demersal) sighted.
Shetland-Whalsay	No	Within 10km radius there are low levels of activity from unspecified trawlers, scallop dredgers a bottom seiner and demersal trawlers. There is also a single Norwegian stern trawler sighting.
Lerwick-Bressay South	No	Within 10km radius there are low levels of activity from demersal trawlers, unspecified trawlers, a single hand gatherer/liner, scallop dredgers and potters/whelkers. Two German pelagic stern trawlers have been sighted approximately 10km south of the cable.
Clift Sound	No	Within 10km there is a single demersal stern trawler sighting.
Papa Stour Shetland	No	Within 10km radius there are low levels of activity from pelagic and demersal trawlers (one of which is a pair trawler), and a sighting of a bottom seiner.

- 6.9 Average MMO landings value (£) by method show that demersal trawls/seines return the highest landings in the area (88%), followed by dredges (4%) and pots and traps (3%) (Figure 5).
- 6.10 Figure 4 indicates that 54% of the landing values are derived from mackerel in the Shetland region. 9% of the landings in the region are derived from cod, and 7% from herring.
- 6.11 94% of the fishing vessels in the area are from the over 10m fleet, with 6% in the 10m and under fleet (Figure 6).

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6.12 Landings value by species, gear type and vessel length and ICES rectangle is summarised in Table 7.

Table 7 MMO landings value (£) 2015 - 2019 by species, gear type and vessel length

ICES rectangle	Cable Name	Interaction on chart	Notes
50E9	Yell-Unst (North and South)	Yes	Average of £10,541,602 landings value per year, primarily by demersal trawls/seines, and gears using hooks. Landings value by species is mixed, with mackerel, cod, herring, haddock, hake, monks and anglers being the primary species landed by vessels over 10m.
	Yell-Fetlar (1 and 2)	Yes	
49E8	Mossbank-Yell (North and South)	Yes	Average of £34,821,875 landings value per year, predominantly landed by demersal trawls/seines, with smaller values landed by dredges and pots and traps. The largest proportion of landings value comes from mackerel, followed by cod and scallops by vessels over 10m.
	Shetland-West Linga	Yes	
	West Linga-Whalsay	Yes	
	Shetland-Whalsay	Yes	
	Lerwick-Bressay South	Yes	
	Clift Sound	Yes	
	Papa Stour Shetland	Yes	
49E9	Whalsay-Out Skerries	Yes	Average of £12,332,567 landings value per year, the vast majority of which is landed by demersal trawls/seines. Just over half of landings value is from mackerel, followed by herring, cod and haddock, landed by vessels over 10m.

6.13 VMS by all fishing gears indicates that the Shetland Islands experiences a great deal of fishing activity, with the east coast of Unst, and the area over the Whalsay-Out Skerries cable recording an average of over 100 hours of annual fishing effort (Figure 7). An average of 50-100 hours of effort were recorded over Clift Sound, and 50 hours of effort or fewer were recorded over all other cables.

6.14 The VMS of dredging effort indicates that effort focuses north of Whalsay and Bruray (Figure 8), with 50-100+ hours of effort recorded over parts of Whalsay-Out Skerries and 20-50 hours over Shetland-West Linga and Shetland-Whalsay. There are <5 hours of effort recorded over all other cables.

6.15 High levels of mobile gear fishing effort were recorded in the Shetland region (Figure 9), with levels recorded at an average of 50-100+ hours over the landfall sections of Whalsay-Out Skerries, and 20-50 hours recorded over Shetland-West Linga, Clift Sound and Shetland-

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Whalsay. Moderate levels (10-20 hours) were recorded over Yell-Unst and the Yell landfall of Yell-Fetlar, with low levels (<10 hours) over all other cables.

6.16 As indicated earlier in this report, VMS only represents vessels over 15m in length, as a result of this the potting and creeling activity is under represented (Figure 10) as this activity is predominately undertaken by the small vessels in the fleet.

6.17 Fishing effort by VMS is summarised in Table 8 below.

Table 8 MMO VMS effort (hours) 2015 -2019

Cable Name	Interaction on chart	Notes
Yell-Unst (North and South)	Yes	For mobile gears, average fishing effort is between 10 – 20 hours.
Yell-Fetlar (1 and 2)	Yes	Low activity with fishing effort for all gears less than 1 hour, except for Yell landfall, for which there are 10-20 hours for mobile gear. Adjacent to area of fishing effort between 10-20 hours.
Mossbank-Yell (North and South)	Yes	Average fishing effort for pots and traps between 1 – 5 hours.
Whalsay-Out Skerries	Yes	Average fishing effort of up to over 100 hours by dredges and mobile gears around the Out Skerries landfall, and between 50 and 100 hours of effort closer to the Whalsay landfall. Small area where no fishing effort is recorded.
Shetland-West Linga	Yes	Average fishing effort of between 20 and 50 hours by dredges and mobile gear.
West Linga-Whalsay	Yes	Average fishing effort of between 20 and 50 hours by dredges and mobile gear.
Shetland-Whalsay	Yes	Average fishing effort of between 20 and 50 hours by dredges, except at the Whalsay landfall where fishing effort is low at up to 5 hours.
Lerwick-Bressay South	Yes	Average fishing effort for mobile gears between 5 and 20 hours, with higher effort close to the Lerwick landfall.
Clift Sound	Yes	Average fishing effort for mobile gears between 20 – 50 hours.
Papa Stour Shetland	Yes	Average fishing effort for dredges, mobile gears and traps between 5 and 10 hours.

6.18 VMS values for all gears (Figure 11) show landings values greater than £35,000 recorded along almost the entirety of the Shetland Islands' coastline, though over the cables themselves, only Lerwick-Bressay and Clift Sound experience these levels. There are landings values of up to £35,000 over Whalsay-Out Skerries and £10,000-£20,000 over Yell-Unst and West Linga-Whalsay. There are lower landings values (<£10,000) over all other cables.

6.19 There are much lower values for VMS dredging recorded in proximity to the cable locations, with less than £10,000 recorded over all cables except Whalsay-Out Skerries, for which values of

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up to £35,000 have been recorded, and Shetland-West Linga and West Linga-Walsay, for which values of up to £20,000 have been recorded (Figure 12).

6.20 VMS value by mobile gear indicates high values over Clift Sound and Lerwick-Bressay (>£35,000), values between £20,000-£35,000 recorded over Whalsay-Out Skerries, £10,000-£20,000 recorded over West Linga-Whalsay, Shetland-West Linga and Yell-Unst, and values under £10,000 recorded over all other cables (Figure 13). As before, landings values for pots and traps will be underrepresented by VMS data, as it mostly undertaken by the <15m fleet (Figure 14).

6.21 Table 9 provides a summary of landings value by VMS for all cables.

Table 9 MMO VMS landings value (£) 2015 -2019

Cable Name	Interaction on chart	Notes
Yell-Unst (North and South)	Yes	Average landings values of £10,000 to £20,000 per year for mobile gears.
Yell-Fetlar (1 and 2)	Yes	Cable 1 Yell landfall average landings values of £10,000 to £20,000 per year for mobile gears. Low landings value of less than £1,000 for all gears over the cable.
Mossbank-Yell (North and South)	Yes	Average landings value between £1,000 and £3,000 per year for pots and traps.
Whalsay-Out Skerries	Yes	Average landings values of £10,000 to £35,000 per year along most of the cable for mobile gears and dredges. Small area where no value is recorded.
Shetland-West Linga	Yes	Average landings values of £6,000 to £20,000 per year for mobile gears and dredges.
West Linga-Whalsay	Yes	Average landings value between £10,000 and £20,000 for mobile gears and dredges.
Shetland-Whalsay	Yes	Average landings values of £3,000 to £6,000 per year for mobile gears and dredging, except at landfall on Whalsay where values are between £1,000 and £3,000.
Lerwick-Bressay South	Yes	Average landings values of more than £35,000 per year for mobile gear.
Clift Sound	Yes	Average landings values of more than £35,000 per year for mobile gear.
Papa Stour Shetland	Yes	Average landings value between £1,000 and £3,000 per year for pots and traps.

6.22 EMODnet fishing vessel AIS density (Figure 15) shows generally low to medium levels of activity (0.5-10 hours per km² per month) over the cables, with high levels (100+ hours) recorded over Clift Sound and Lerwick-Bressay. This activity is summarised below for all cables in Table 10.

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Table 10 EMODnet AIS vessel density (fishing) 2019

Cable Name	Interaction on chart	Notes
Yell-Unst (North and South)	Yes	Average of 5 hours of AIS activity per square km per month over the cable, and directly adjacent to area of high activity (100+ hours).
Yell-Fetlar (1 and 2)	Yes	Average of 1 – 2 hours of AIS activity per square km per month.
Mossbank-Yell (North and South)	Yes	Very low levels of activity, with an average of <1 hours of AIS activity per square km per month.
Whalsay-Out Skerries	Yes	Average of 0 – 2 hours of AIS activity per square km per month.
Shetland-West Linga	Yes	Average of <2 hours of AIS activity per square km per month.
West Linga-Whalsay	Yes	Average of 2 hours of AIS activity per square km per month, but adjacent to areas of higher activity (5 – 100+ hours).
Shetland-Whalsay	Yes	Average of 2 hours of AIS activity per square km per month along majority of cable route. Higher activity (10+ hours) close to landfall at Whalsay.
Lerwick-Bressay South	Yes	Average of 100+ hours of AIS activity per square km per month.
Clift Sound	Yes	Average of 100+ hours of AIS activity per square km per month.
Papa Stour Shetland	No	

- 6.23 A brief characterisation of the fishing methods identified in the area of the submarine electricity cables in Shetland including a description of the gear and photographic examples of the types of vessels are given in Table 11.

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Table 11 Characterisation of the fishing methods in the area

Fishing gear	Description	Pictorial representation
Demersal otter trawling	Otter/demersal trawling is the primary fishing method in the Shetland Isles. The Shetland Fishermen's Association, represents around 80 local registered vessels, most of which are otter or demersal trawlers of 15m and above. Pelagic species, predominately mackerel account for up to 77% of the total landings by weight in Shetland with whitefish (cod, haddock etc.) accounting for 21% of the total landings by weight¹⁶. Otter trawls are a basic funnel shaped net tapering towards the cod-end, with the sides of the net extended to form wings which herd the fish into the net. The net is held open by trawl doors which are designed to flow through the water at an angle causing them to spread away from each other and therefore opening the net horizontally. The net is held open vertically by the ballooning effect of the net and by a series of floats attached to the headline. The ground lines of nets are weighted to maintain contact with the seabed and can vary in design depending on the type of ground fished.	 Source: (above) Shetland Fishermen's Association; Anne MacDonald

¹⁶ NAFC Marine Centre, University of the Highlands and Islands, Shetland Fisheries Statistics 2014, Ian R. Napier.

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Fishing gear	Description	Pictorial representation
Creeling	In comparison to other Isles across Scotland, Shetland's shellfish sector is relatively small, accounting for just 12% of the total landings by value in Shetland. However, >99% of landings are from Shetland registered fishing boats; thus, the shellfish sector forms an important part of the local economy¹⁷. Principal landing locations around Shetland for Shellfish include West Burrafirth, Sullom Voe / Toft, Whalsay, Skeld, Collafirth and Mid Yell. Creels (pots) are static traps commonly baited with low value fish such as mackerel, herring, and dogfish. Creels are the principal method used to target active scavenging crustaceans such as brown crab, velvet crab, lobster, Nephrops, green crab and whelks. A number of pots are set on a main line anchored to the seabed and marked with a buoy or a 'dhan' (flag and buff) at either end. The number of pots per string can vary from 5-50. Vessels generally work between 200-500 pots at sea, which are fished on a continuous cycle to maintain cover of the ground. Fishing effort follows a seasonal pattern with activity varying to shelter from adverse weather conditions, react to seasonal changes and exploit target species.	 Source: (above) Shetland Fishermen's Association; Ian Leask

¹⁷ NAFC Marine Centre, University of the Highlands and Islands, Shetland Fisheries Statistics 2014, Ian R. Napier.

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Fishing gear	Description	Pictorial representation
Scallop Dredging	Queen scallops (<i>Aequipecten opercularis</i>) is the predominant species targeted by scallopers in Shetland. Each dredge consists of a ruggedly constructed triangular steel frame and a tooth bar, behind which a mat of linked steel rings is secured. Heavy netting is laced into the frame to form a bag into which the catch is retained. As scallops usually lie recessed in sand and fine gravel, they are raked out by the teeth and swept into the bag. A number of dredges are attached to a bar fitted with bridles and is towed using a single warp. The dredges are usually deployed from outrigger booms. The number of dredges deployed varies with the size of the vessel, with the maximum number permitted being eight aside (16 in total).	 Source: (above) Shetlands Fisherman Association; Ian Leask

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7 Other Sea Users

- 7.1 This section of the report provides a brief overview of other sea users in relation to the submarine electricity cable assets. For the purposes of these interaction tables, named cables with multiple components (e.g. Mossbank-Yell North and Mossbank-Yell South) are treated as one. Other sea users that may be affected by cable replacement works include:
- Aquaculture
 - Marine Archaeology
 - Wave and Tidal developments
 - Ferries
 - Shipping
 - Sailing
 - Recreational: bird and wildlife watching, visits to historic sites and attractions, power boating, canoeing/kayaking, long distance swimming, motor cruising, sailing and cruising, angling, coastering, wild fowling, scuba diving and rowing and sculling.
 - MoD
 - Conservation sites/areas
 - Telecommunications
 - Subsea cables
- 7.2 There is no single data source or recognised model for determining the activity of all other sea users within discrete sea areas such as those encompassed by the footprint of the Shetland sub-sea cables. It is beyond the scope of this report to produce a complete baseline overview for all other sea users; therefore data and information are derived from assessments utilised by regional marine spatial plans and the PAC report.
- 7.3 AIS vessel density data for all vessels in 2017 has been published by EMODnet, showing hours of activity per km² per month (Figure 16). This shows generally moderate to high levels of activity (5-100+ hours per km² per month) over the cables, with high levels (20+ hours) recorded over Yell-Unst, Yell-Fetlar, Shetland-Whalsay, Lerwick-Bressay, Clift Sound and adjacent to Mossbank-Yell, Shetland-West Linga and West Linga-Whalsay. There are low levels (<2 hours) over Papa Stour-Shetland and Whalsay-Out Skerries. This data has been further separated into the categories of fishing vessels (as detailed in the previous chapter), cargo vessels, high speed vessels, passenger vessels, sailing vessels, tankers and tugs, shown in Figure 15, and Figure 17-Figure 22.
- 7.4 The Scottish Marine Recreation and Tourism Survey (SMRTS) 2015¹⁸ and the Marine Scotland interactive Marine Plan¹⁹ have been the main sources of reference for sea users listed in Table 12. Additional data on conservation sites has been sourced from the Scottish Government SpatialData.gov.scot website, Royal Society for the Protection of Birds (RSPB) Reserves web map

¹⁸ Scottish Marine Recreation and Tourism Survey (SMRTS) 2015; <http://www.gov.scot/Resource/0049/00497904.pdf>

¹⁹ Marine Scotland National Marine Plan Interactive; <https://marinescotland.atkinsgeospatial.com/nmpi/>

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service, European Marine Observation and Data Network (EMODnet) and the website Ports and Harbours of the UK²⁰. Where information is available, charts of spatial activity are provided for each of the sea users defined above.

Table 12 Other sea users data sources

Data	Year	Coverage	Confidence	Notes
Marine Scotland National Marine Plan Interactive	Varied	Overall Assessment Physical Characteristics Clean and Safe Healthy and Biologically Diverse Productive Climate Change Administrative Regions National Marine Plan Aerial Photography Base Layers	Low - High	National Marine Plan interactive (NMPI) allows you to view different types of information and, where appropriate, links have been provided to the related parts of Scotland's Marine Atlas and will also be provided to the National Marine Plan in due course.
Scottish Marine Recreation and Tourism Survey (SMRTS) 2015	2015	The SMRTS survey was carried out between August and October 2015. The survey provides baseline information to inform marine planning in Scotland. More than 2100 individuals, 137 clubs and 279 businesses completed the survey, indicating areas where people conducted different activities.	Low-High	Commissioned by the Scottish Government, the Firth of Clyde Forum, The Crown Estate and Scottish Coastal Forum. Aim to gather robust information on marine recreation and tourism activity around Scotland.
Scottish Government SpatialData.gov.scot	2018	National Scenic Areas (NSAs) are Scotland's only national landscape designation, and defined as areas "of outstanding scenic value in a national context" for which special protection measures are required. NSAs are broadly equivalent to the Areas of Outstanding Natural Beauty found in England, Wales and Northern Ireland. There are 40 NSAs in total covering roughly 1 million hectares (13% of Scotland).	High	The designation's purpose is both to identify our finest scenery and to ensure its protection from inappropriate development.

²⁰ Ports and Harbours of the UK; <http://ports.org.uk/>

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Data	Year	Coverage	Confidence	Notes
Joint Nature Conservation Committee (JNCC) Marine Protected Area (MPA) mapper	2021	The JNCC Marine Protected Area (MPA) mapper is an interactive resource containing information on the MPAs designated in UK and Crown Dependency waters.	High	This includes certain Special Areas of Conservation (SACs) for habitats and non-avian species and Special Protection Areas (SPAs) for birds. The JNCC MPA mapper only displays SACs and SPAs that protect the marine environment - so called SACs and SPAs with 'marine components'.
Royal Society for the Protection of Birds (RSPB)	2021	All RSPB reserve boundaries.	High	The dataset contains the boundaries of all land managed, leased or owned as part of publicly accessible RSPB reserves.
European Marine Observation and Data Network (EMODnet)	2019	The maps are based on AIS data purchased by CLS and show shipping density in 1km*1km cells of a grid covering all EU waters (and some neighbouring areas). Density is expressed as hours per square kilometre per month. The following ship types have been covered in this dataset: other, fishing, service, dredging or underwater ops, sailing, pleasure craft, high speed craft, tug and towing, passenger, cargo, tanker, military and law enforcement, unknown and all ship types.	Low - High	EMODnet Vessel Density Maps were created by COGEA in 2020 in the framework of EMODnet Human Activities, an initiative funded by the EU Commission.
Ports and Harbours of the UK	2019	Online resource containing information on over 950 ports, harbours, jetties and piers around the coastline of the UK.	Low-High	The site has been compiled by a volunteer and is not an official list.

7.5 The main water sports undertaken in Shetland are motor cruising, power boating, sailing and cruising, long distance swimming, surfing, diving, private charter fishing, scuba diving, rowing and sculling, yacht racing, dinghy racing and canoeing and kayaking. A heat map using the data collated from the Scottish Marine Recreation and Tourism Survey (SMRTS) is used to summarise

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all recreational activity around the cables. The recreational activities recorded in the vicinity of the submarine electricity cable assets are:

- Bird and wildlife watching
- Historic sites and attractions
- Power boating
- Canoeing and kayaking
- Long distance swimming
- Motor cruising
- Sailing and cruising
- Chartered angling
- Sea angling from shore
- Coasteering
- Wild fowling
- Scuba diving
- Rowing and sculling
- Surfing and paddle boarding

- 7.6 Recreational activity has been assessed using regional datasets as there is little information on discrete sea areas such as those encompassed by the footprint of the Shetland cables.
- 7.7 The charts showing recreational activity are given in Appendix D (Figure 23 to Figure 35).
- 7.8 The SMRTS 2015 survey around Scotland show low levels of bird and wildlife watching across the cable locations (944 people provided spatial information). This activity and possible interaction is summarised in Table 13 below and shown in Figure 23.

Table 13 Bird and wildlife watching

Cable Name	Interaction on chart	Notes
Yell-Unst (North and South)	Yes	Low levels of activity over the cables.
Yell-Fetlar (1 and 2)	Yes	Low levels of activity over the cables.
Mossbank-Yell (North and South)	Yes	Low levels of activity over the cables.
Whalsay-Out Skerries	Yes	Low levels of activity over the cable.
Shetland-West Linga	Yes	Low levels of activity over the cable.
West Linga-Whalsay	Yes	Low levels of activity over the cable.
Shetland-Whalsay	Yes	Low levels of activity over the cable.
Lerwick-Bressay South	Yes	Low levels of activity over the cable.
Clift Sound	Yes	Low levels of activity over the cable.
Papa Stour Shetland	Yes	Low levels of activity over the cable.

- 7.1 The SMRTS 2015 survey around Scotland for visits to historic sites or to attractions show activity levels ranging from very low to high in the vicinity of all cables, depending on cable location

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(924 people provided spatial information). This activity and possible interaction is summarised in Table 14 below and shown in Figure 24.

Table 14 Visits to historic sites or to attractions

Cable Name	Interaction on chart	Notes
Yell-Unst (North and South)	Yes	Very low levels of activity over the cables.
Yell-Fetlar (1 and 2)	Yes	Very low levels of activity over the cables.
Mossbank-Yell (North and South)	Yes	Very low levels of activity over the cables.
Whalsay-Out Skerries	Yes	Very low levels of activity over the cable.
Shetland-West Linga	Yes	Very low levels of activity over the cable.
West Linga-Whalsay	Yes	Very low levels of activity over the cable.
Shetland-Whalsay	Yes	Very low levels of activity over the cable, with an area of low activity over the Whalsay cable landfall.
Lerwick-Bressay South	Yes	High levels of activity over the cable.
Clift Sound	Yes	High levels of activity over the cable.
Papa Stour Shetland	Yes	Very low levels of activity over the cable.

- 7.2 The SMRTS 2015 survey results for power boating show very low, to no levels of activity in the vicinity over the cable locations (204 people provided spatial information). This activity and possible interaction is summarised in Table 15 below and shown in Figure 25.

Table 15 Power boating

Cable Name	Interaction on chart	Notes
Yell-Unst (North and South)	Yes	Very low levels of activity over the cables.
Yell-Fetlar (1 and 2)	Yes	Very low levels of activity over the cables.
Mossbank-Yell (North and South)	Yes	Very low levels of activity over the cables.
Whalsay-Out Skerries	No	
Shetland-West Linga	Yes	Very low levels of activity over the cable.
West Linga-Whalsay	Yes	Very low levels of activity over the cable.
Shetland-Whalsay	Yes	Very low levels of activity over the cable.
Lerwick-Bressay South	No	
Clift Sound	Yes	Very low levels of activity over the cable.
Papa Stour Shetland	No	

- 7.3 The SMRTS 2015 survey results for canoeing and kayaking show activity levels ranging from very low to high depending on cable location (418 people provided spatial information). This activity and possible interaction is summarised in Table 16 below and shown in Figure 26.

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Table 16 Canoeing and kayaking

Cable Name	Interaction on chart	Notes
Yell-Unst (North and South)	Yes	Very low levels of activity over the cables.
Yell-Fetlar (1 and 2)	Yes	Very low to low levels of activity over the cables.
Mossbank-Yell (North and South)	Yes	Very low levels of activity over the cables.
Whalsay-Out Skerries	Yes	Very low levels of activity over the cable.
Shetland-West Linga	Yes	Low levels of activity over the cable.
West Linga-Whalsay	Yes	Very low to low levels of activity over the cable.
Shetland-Whalsay	Yes	Low levels of activity over the cable.
Lerwick-Bressay South	Yes	High levels of activity over the cable.
Clift Sound	Yes	Low levels of activity over the cable.
Papa Stour Shetland	Yes	Moderate to high levels of activity over the cable.

- 7.4 The SMRTS 2015 survey results for long distance sea swimming show very low levels of activity in the immediate vicinity of all cable locations (79 people provided spatial information). This activity and possible interaction is summarised in Table 17 below and shown in Figure 27.

Table 17 Long distance swimming

Cable Name	Interaction on chart	Notes
Yell-Unst (North and South)	Yes	Very low levels of activity over the cables.
Yell-Fetlar (1 and 2)	Yes	Very low levels of activity over the cables.
Mossbank-Yell (North and South)	Yes	Very low levels of activity over the cables.
Whalsay-Out Skerries	Yes	Very low levels of activity over the cable.
Shetland-West Linga	Yes	Very low levels of activity over the cable.
West Linga-Whalsay	Yes	Very low levels of activity over the cable.
Shetland-Whalsay	Yes	Very low levels of activity over the cable.
Lerwick-Bressay South	Yes	Very low levels of activity over the cable.
Clift Sound	Yes	Very low levels of activity over the cable.
Papa Stour Shetland	Yes	Very low levels of activity over the cable.

- 7.5 The SMRTS 2015 survey results for motor cruising show activity levels ranging from very low to moderate depending on cable location (163 people provided spatial information). This activity and possible interaction is summarised in Table 18 below and shown in Figure 28.

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Table 18 Motor cruising

Cable Name	Interaction on chart	Notes
Yell-Unst (North and South)	Yes	Moderate levels of activity over the cables.
Yell-Fetlar (1 and 2)	Yes	Low levels of activity over the cables.
Mossbank-Yell (North and South)	Yes	Very low levels of activity over the cables.
Whalsay-Out Skerries	Yes	Low levels of activity over the cable.
Shetland-West Linga	Yes	Very low to low levels of activity over the cable.
West Linga-Whalsay	Yes	Low levels of activity over the cable.
Shetland-Whalsay	Yes	Low to moderate levels of activity over the cable.
Lerwick-Bressay South	Yes	Low levels of activity over the cable.
Clift Sound	Yes	Low to moderate levels of activity over the cable.
Papa Stour Shetland	Yes	Very low levels of activity over the cable.

- 7.6 The SMRTS 2015 survey results for sailing and cruising show activity levels ranging from very low to low in the immediate vicinity of the cables, depending on the cable location (542 people provided spatial information). This activity and possible interactions is summarised in Table 19 below and shown in Figure 29.

Table 19 Sailing and cruising

Cable Name	Interaction on chart	Notes
Yell-Unst (North and South)	Yes	Very low levels of activity over the cables.
Yell-Fetlar (1 and 2)	Yes	Low levels of activity over the cables.
Mossbank-Yell (North and South)	Yes	Very low levels of activity over the cables.
Whalsay-Out Skerries	Yes	Very low levels of activity over the cable.
Shetland-West Linga	Yes	Low levels of activity over the cable.
West Linga-Whalsay	Yes	Very low levels of activity over the cable.
Shetland-Whalsay	Yes	Very low to low levels of activity over the cable.
Lerwick-Bressay South	Yes	Low levels of activity over the cable.
Clift Sound	Yes	Very low levels of activity over the cable.
Papa Stour Shetland	Yes	Very low levels of activity over the cable.

- 7.7 The SMRTS 2015 survey results for chartered angling show activity levels ranging from very low to none over the cables, depending on cable location (353 people provided spatial information). This activity and possible interactions is summarised in Table 20 below and shown in Figure 30.

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Table 20 Chartered angling

Cable Name	Interaction on chart	Notes
Yell-Unst (North and South)	Yes	Very low levels of activity over the cables.
Yell-Fetlar (1 and 2)	Yes	Very low levels of activity over the cables.
Mossbank-Yell (North and South)	No	
Whalsay-Out Skerries	Yes	Very low levels of activity over the cable.
Shetland-West Linga	Yes	Very low levels of activity over the cable.
West Linga-Whalsay	Yes	Very low levels of activity over the cable.
Shetland-Whalsay	Yes	Very low levels of activity over the cable.
Lerwick-Bressay South	Yes	Very low levels of activity over the cable.
Clift Sound	No	
Papa Stour Shetland	No	

- 7.8 The SMRTS 2015 survey results for sea angling from shore show activity levels ranging from very low to moderate in the immediate vicinity of the cables, depending on cable location (368 people provided spatial information). This activity and possible interactions is summarised in Table 21 below and shown in Figure 31.

Table 21 Sea angling from shore

Cable Name	Interaction on chart	Notes
Yell-Unst (North and South)	Yes	Very low levels of activity over the cables.
Yell-Fetlar (1 and 2)	Yes	Very low levels of activity over the cables, with an area of low activity at the Fetlar landfall of the cables.
Mossbank-Yell (North and South)	Yes	Very low levels of activity over the cables.
Whalsay-Out Skerries	Yes	Very low levels of activity over the cable.
Shetland-West Linga	Yes	Very low levels of activity over the cable.
West Linga-Whalsay	Yes	Very low levels of activity over the cable.
Shetland-Whalsay	Yes	Very low levels of activity over the cable.
Lerwick-Bressay South	Yes	Low levels of activity over the cable.
Clift Sound	Yes	Very low levels of activity over the cable.
Papa Stour Shetland	Yes	Low to moderate levels of activity over the cable, with moderate activity concentrated around the Shetland landfall of the cable.

- 7.9 The SMRTS 2015 survey does not show any surfing/paddle boarding activity in the immediate vicinity of the cables (or Shetland altogether) (201 people provided spatial information).

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However, records of surfing have been shown on magicseaweed²¹ at Quendale Bay, Melby, Gulberwick (on Mainland) and Breckon (on Yell).

- 7.10 The SMRTS 2015 survey results for coasteering show hotspots of activity in the immediate vicinity of Lerwick-Bressay South and Papa Stour Shetland. There are very low levels of activity over all other cables (238 people provided spatial information). This activity and possible interactions is summarised in Table 22 below and shown in Figure 32.

Table 22 Coasteering

Cable Name	Interaction on chart	Notes
Yell-Unst (North and South)	Yes	Very low levels of activity over the cables.
Yell-Fetlar (1 and 2)	Yes	Very low levels of activity over the cables.
Mossbank-Yell (North and South)	Yes	Very low levels of activity over the cables.
Whalsay-Out Skerries	Yes	Very low levels of activity over the cable.
Shetland-West Linga	Yes	Very low levels of activity over the cable.
West Linga-Whalsay	Yes	Very low levels of activity over the cable.
Shetland-Whalsay	Yes	Very low levels of activity over the cable.
Lerwick-Bressay South	Yes	Moderate levels of activity over the cable.
Clift Sound	Yes	Very low levels of activity over the cable.
Papa Stour Shetland	Yes	Moderate levels of activity over the majority of the cable, though there is a hotspot of high activity off the Shetland landfall of the cable.

- 7.11 The SMRTS 2015 survey results for wild fowling show very low levels of activity over all cables (59 people provided spatial information). This activity and possible interactions is summarised in Table 23 below and shown in Figure 33.

²¹ <https://magicseaweed.com/UK-Ireland-Surf-Forecast/1/>

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Table 23 Wild fowling

Cable Name	Interaction on chart	Notes
Yell-Unst (North and South)	Yes	Very low levels of activity over the cables.
Yell-Fetlar (1 and 2)	Yes	Very low levels of activity over the cables.
Mossbank-Yell (North and South)	Yes	Very low levels of activity over the cables.
Whalsay-Out Skerries	Yes	Very low levels of activity over the cable.
Shetland-West Linga	Yes	Very low levels of activity over the cable.
West Linga-Whalsay	Yes	Very low levels of activity over the cable.
Shetland-Whalsay	Yes	Very low levels of activity over the cable.
Lerwick-Bressay South	Yes	Very low levels of activity over the cable.
Clift Sound	Yes	Very low levels of activity over the cable.
Papa Stour Shetland	Yes	Very low levels of activity over the cable.

- 7.12 The SMRTS 2015 survey results for scuba diving show activity levels ranging from very low to high in the immediate vicinity of the cables, depending on cable location (168 people provided spatial information). This activity and possible interactions is summarised in Table 24 below and shown in Figure 34.

Table 24 Scuba diving

Cable Name	Interaction on chart	Notes
Yell-Unst (North and South)	Yes	Very low levels of activity over the cables.
Yell-Fetlar (1 and 2)	Yes	Very low levels of activity directly over the cables, though there is a hotspot of activity adjacent to the north east of the route.
Mossbank-Yell (North and South)	Yes	Very low levels of activity over the cables.
Whalsay-Out Skerries	Yes	Very low levels of activity over the cable.
Shetland-West Linga	Yes	Very low levels of activity over the cable.
West Linga-Whalsay	Yes	Very low levels of activity over the cable.
Shetland-Whalsay	Yes	Very low levels of activity over the cable.
Lerwick-Bressay South	Yes	High levels of activity over the cable.
Clift Sound	Yes	Very low levels of activity over the cable.
Papa Stour Shetland	Yes	Very low levels of activity over the cable.

- 7.13 The SMRTS 2015 survey results for rowing and sculling show very low to no levels of activity over all cables (237 people provided spatial information). This activity and possible interactions is summarised in Table 25 below and shown in Figure 35.

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Table 25 Rowing and sculling

Cable Name	Interaction on chart	Notes
Yell-Unst (North and South)	No	
Yell-Fetlar (1 and 2)	No	
Mossbank-Yell (North and South)	No	
Whalsay-Out Skerries	No	
Shetland-West Linga	No	
West Linga-Whalsay	No	
Shetland-Whalsay	No	
Lerwick-Bressay South	Yes	Very low levels of activity over the cable.
Clift Sound	No	
Papa Stour Shetland	No	

- 7.14 There are potential wreck sites within the cable corridors as indicated in Figure 36 and summarised in Table 26. An online database of historical wreck sites, Canmore, has been used to assess the potential for interaction between wreck sites and submarine electricity cables. It includes a record of Scotland's maritime heritage and any current or scheduled archaeological sites of national importance, legally protected under the Ancient Monuments and Archaeological Areas Act 1979. This database has been compiled and managed by Historic Environment Scotland, and is available as part of Marine Scotland's NMPI.

Table 26 Marine archaeology

Cable Name	Interaction on chart	Notes
Yell-Unst (North and South)	Possible	No wreck sites directly over the cables, but the nearest is 1.5km north.
Yell-Fetlar (1 and 2)	Possible	No wreck sites directly over the cables, but the nearest is 900m east.
Mossbank-Yell (North and South)	Possible	No wreck sites directly over the cable, but the nearest is 1.6km west.
Whalsay-Out Skerries	Possible	No wreck sites directly over the cable, but the nearest are 1.1km south at the Bruray landfall, and there are protected wrecks further east on the island of Bruray.
Shetland-West Linga	No	
West Linga-Whalsay	Possible	No wreck sites directly over the cable, but the nearest is 2km south.
Shetland-Whalsay	Possible	No wreck sites directly over the cable, but the nearest is 1km east.
Lerwick-Bressay South	Yes	Possible interaction with wreck sites.
Clift Sound	No	
Papa Stour Shetland	Possible	No wreck sites directly over the cable, but the nearest is 840m east.

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- 7.15 The Fetlar to Haroldswick nature conservation Marine Protected Area (MPA) with marine components, covers Yell-Fetlar. The Fetlar Special Protection Area (SPA) with marine components covers the majority of the Yell-Fetlar cables, and the Bluemull and Colgrave Sounds SPA covers the both the Yell-Fetlar and Yell-Unst cables. The East Mainland Coast SPA and Shetland SPA covers the Whalsay landfall of the Whalsay-Out Skerries cable. The Yell Sound Coast and Papa Stour Special Areas of Conservation (SACs) with marine components cover Mossbank-Yell and Papa Stour respectively. The Shetland National Scenic Area (NSA) interacts with Clift Sound. The Yell RSPB reserve covers the Yell landfall of Yell-Fetlar. The nature conservation designations in the vicinity of the cable corridors are shown in Figure 37, Figure 38 and Figure 39 and summarised in Table 27.

Table 27 Conservation designations

Cable Name	Interaction on chart	Notes
Yell-Unst (North and South)	Yes	Bluemull and Colgrave Sounds SPA covers entirety of the cables.
Yell-Fetlar (1 and 2)	Yes	Fetlar to Haroldswick MPA – covers entirety of the cables. Fetlar SPA – covers majority of the cables. Bluemull and Colgrave Sounds SPA – covers entirety of the cables. RSPB Reserve Yell – covers Yell landfall of the cables.
Mossbank-Yell (North and South)	Yes	Yell Sound Coast SAC – covers Yell landfall of the cables.
Whalsay-Out Skerries	Yes	East Mainland Coast, Shetland SPA – covers Whalsay landfall of the cable.
Shetland-West Linga	No	
West Linga-Whalsay	No	
Shetland-Whalsay	No	
Lerwick-Bressay South	No	
Clift Sound	Yes	Shetland NSA – covers entirety of the cable.
Papa Stour Shetland	Yes	Papa Stour SAC – covers entirety of the cable.

- 7.16 There are a number of recorded finfish and shellfish aquaculture farms within the vicinity of the cables, operated by Cooke Aquaculture Scotland Ltd, Grieg Seafood Shetland Ltd, Scottish Sea Farms Ltd, Blueshell Mussels Ltd and Eastvoe Shellfish. The potential interaction is summarised in Table 28 and shown in Figure 40

Table 28 Aquaculture sites

Cable Name	Interaction on chart	Notes
Yell-Unst (North and South)	Possible	None directly over the cable, though there is a finfish site approximately 1.8km south of the cable, Wick of Belmont, operated by Cooke Aquaculture Scotland Ltd.
Yell-Fetlar (1 and 2)	Yes	Sandwick finfish site is approximately 420m east of Cable 1, and Kirkabister finfish site is located approximately 1.2km west of Cable 2 (both operated by Cooke Aquaculture Scotland Ltd).

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Mossbank-Yell (North and South)	No	
Whalsay-Out Skerries	No	
Shetland-West Linga	Possible	One finfish aquaculture farm, North Voe (run by Grieg Seafood Shetland Ltd), approximately 2.2km east of the cables.
West Linga-Whalsay	Possible	One finfish aquaculture farm, North Voe (run by Grieg Seafood Shetland Ltd), approximately 1.4km south of the cables.
Shetland-Whalsay	Yes	Bight of Bellister, Dury Voe finfish site (run by Scottish Sea Farms Ltd) is approximately 330m north of the cable, and the North Voe site (run by Greig Seafood Shetland Ltd) is located approximately 1.3km north of the cable at the Whalsay landfall. Another finfish aquaculture farm operated by Scottish Sea Farms within 3km of the cable is Swarta Skerry, Dury Voe. East of Little Ness shellfish aquaculture farm (operated by Blueshell Mussels Ltd) is located just under 2km northwest of the cable.
Lerwick-Bressay South	No	
Clift Sound	Yes	The shellfish aquaculture site Booth (operated by Eastvoe Shellfish) is located approximately 770m south of the cable.
Papa Stour Shetland	No	

7.17 There are a number of ferries that overlap with the cables. The proximity of these ferry routes to the cable works is summarised in Table 29. There is an average of 50+ transits undertaken in the immediate vicinity of Mossbank-Yell, Shetland-Whalsay and Lerwick-Bressay South. There are 20 or fewer transits over all other cables, shown in AIS density data for passenger vessels, Figure 41.

Table 29 Ferry routes

Cable Name	Interaction on chart	Notes
Yell-Unst (North and South)	Possible	None directly over the cables, though there is a ferry route Yell (Gutcher)-Unst (Belmont) operated by Shetland Council that runs parallel to the cable route approximately 1.6km south.
Yell-Fetlar (1 and 2)	Possible	None directly over the cables, though there is a ferry route Fetlar (Hamars Ness)-Yell (Gutcher) operated by Shetland Council that runs parallel to the cable route approximately 680m east of Cable 1. Another, Unst (Belmont)-Fetlar (Hamars Ness), also operated by Shetland Council, runs parallel to the route approximately 800m west of Cable 1. They both cross the mouth of the Holy Loch in which the cable is contained, so vessels accessing the cable may interact with these routes.
Mossbank-Yell (North and South)	Possible	None directly over the cable, though there is a ferry route, Toft-Yell (Ulsta), that runs parallel to the cable route approximately 670m east at its nearest point. This is operated by Shetland Council.

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Whalsay-Out Skerries	Yes	The ferry route Out Skerries (Bruray)-Whalsay (Symbister), operated by Shetland Council, intersects the cables. Two further routes are located within 3km of the cable, Vidlin-Out Skerries (Bruray) and Lerwick (Esplanade)-Out Skerries (Bruray), also operated by Shetland Council.
Shetland-West Linga	Possible	None directly over the cable, though there is a ferry route, Vidlin-Whalsay (Symbister), that runs parallel to the cable route approximately 2.1km north at its nearest point. This is operated by Shetland Council.
West Linga-Whalsay	Yes	The ferry routes Vidlin-Whalsay (Symbister) and Out Skerries (Bruray)-Whalsay (Symbister) both intersect the cable route. These are both operated by Shetland Council.
Shetland-Whalsay	Possible	None directly over the cable, though there is a ferry route Laxo-Whalsay (Symbister), operated by Shetland Council, that runs approximately 170m north of the cable at its closest point.
Lerwick-Bressay South	Yes	The ferry routes Aberdeen-Lerwick (Holmsgarth) and Lerwick (Esplanade)-Out Skerries (Bruray) both intersect the cable routes. These are operated by Northlink Ferries and Shetland Council respectively. Additional routes, Lerwick-Bressay and Lerwick (Esplanade)-Fair Isle run approximately 440m south of the cable at the nearest point. These are both operated by Shetland Council.
Clift Sound	Possible	None directly over the cable, though there is a ferry route Scalloway-Foula, operated by B K Marine, that departs approximately 500m north of the cable.
Papa Stour Shetland	Possible	None directly over the cable, though there is a ferry route West Burrafirth-Papa Stour, operated by Shetland Council, that runs approximately 1.9km east of the cable at its closest point.

7.18 The nearest ports to each of the cable works is summarised in Table 30 below. Information on these ports is gathered from the website, Ports and Harbours of the UK.²² A summary of vessel movements (by AIS) is shown in Figure 42 (all vessels), broken down into the categories of cargo vessels (Figure 43), port service craft (Figure 44), tankers (Figure 45) and passenger vessels (previously shown in Figure 41).

Table 30 Local ports

Cable Name	Interaction on chart	Notes
Yell-Unst (North and South)	Yes	Cullivoe (Yell) quay sits 400m north of the northern cable landfall, and is used primarily for fishing and leisure vessels.
Yell-Fetlar (1 and 2)	Yes	The nearest ferry terminal is Oddsta (750m east), used for the 'Bluemull' car ferry service from Gutcher (Yell) and Belmont (Unst).

²² <http://ports.org.uk/>.

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Mossbank-Yell (North and South)	Possible	The nearest port is Ulsta (Yell), which is used for commercial vessels and as a ferry terminal for the Toft-Yell (Ulsta) service.
Whalsay-Out Skerries	Possible	The nearest port is Bruray (Out Skerries) (4.6km east), used primarily by commercial, fishing and leisure vessels, and acts as the ferry terminal for the Out Skerries (Bruray)-Whalsay (Symbister) and Lerwick (Esplanade)-Out Skerries (Bruray) services.
Shetland-West Linga	Possible	The nearest port is Symbister (Whalsay), approximately 2.3km south of the cable, which is used by leisure, fishing and commercial vessels, and acts as the ferry terminal for the Laxo-Whalsay (Symbister), Vidlin-Whalsay (Symbister) and Out Skerries (Bruray)-Whalsay (Symbister) services.
West Linga-Whalsay	Possible	The nearest port is Symbister (Whalsay), approximately 2km south of the cable, which is used by leisure, fishing and commercial vessels, and acts as the ferry terminal for the Laxo-Whalsay (Symbister), Vidlin-Whalsay (Symbister) and Out Skerries (Bruray)-Whalsay (Symbister) services.
Shetland-Whalsay	Possible	The nearest port is Symbister (Whalsay), approximately 1.1km east of the cable at the Whalsay landfall, which is used by leisure, fishing and commercial vessels, and acts as the ferry terminal for the Laxo-Whalsay (Symbister), Vidlin-Whalsay (Symbister) and Out Skerries (Bruray)-Whalsay (Symbister) services.
Lerwick-Bressay South	Yes	Lerwick Harbour, the principal port for Shetland, is located approximately 510m south of the cable route at its nearest point. It handles over 5000 vessels annually, from the commercial and fishing sectors as well as leisure vessels.
Clift Sound	Yes	Scalloway Harbour is located approximately 600m north of the cable, and handles general and reefer cargo. It is also an important fishing harbour.
Papa Stour Shetland	Yes	Melby Slipway is located at the Mainland Shetland landfall of the cable. Housa Voe (Papa Stour) ferry terminal is located approximately 2km east of the cable, and is used both by fishing vessels and the West Burrafirth-Papa Stour ferry service.

- 7.19 There has been no activity recorded for yacht racing, dinghy racing, personal water craft (jet skiing) and water skiing/wakeboarding in the location of the cables.
- 7.20 There are currently no operational wave or tidal energy farms in the vicinity of the cables.
- 7.21 A summary of the potential interactions between the Shetland submarine electricity cables and other sea users is given in Table 31.
- 7.22 The key points of contact for these sea users are identified in Appendix B: *Communication Strategy*.

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Table 31 Summary of other sea users' interactions

Activity		Interaction on chart	Notes
Recreational	Bird and wildlife watching	Yes	Low levels of activity over the cables.
	Visits to historic sites or to	Yes	Very low to high levels of activity over the cables.
	Power boating	Yes	Very low to no levels of activity over the cables.
	Canoeing/kayaking	Yes	Very low to high levels of activity over the cables.
	Long distance swimming	Yes	Very low levels of activity over the cables.
	Motor cruising	Yes	Very low to moderate levels of activity over the cables.
	Sailing and cruising	Yes	Very low to low levels of activity over the cables.
	Chartered angling	Yes	Very low to no levels of activity over the cables.
	Sea angling from shore	Yes	Very low to moderate levels of activity over the cables.
	Surfing and paddle boarding	No	
	Yacht racing	No	
	Dinghy racing	No	
	Coasteering	Yes	Hotspots of activity in the immediate vicinity of Lerwick-Bressay South and Papa Stour Shetland. Very low levels of activity over all other cables.
	Personal water craft (jet skis)	No	
	Water skiing/wakeboarding	No	
	Wild fowling	Yes	Very low levels of activity over the cables.
	Scuba diving	Yes	Very low to high levels of activity over the cables.
	Rowing and sculling	Yes	Very low to no levels of activity over the cables.

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Activity	Interaction on chart	Notes
Conservation sites	Yes	The nature conservation Marine Protected Area (MPA) with marine components Fetlar to Haroldswick, covers Yell-Fetlar. The Special Protection Area (SPA) with marine components Fetlar covers the majority of the Yell-Fetlar cables, and the SPA Bluemull and Colgrave Sounds covers the both the Yell-Fetlar and Yell-Unst cables. The SPA East Mainland Coast, Shetland SPA covers the Whalsay landfall of the Whalsay-Out Skerries cable. The Special Areas of Conservation (SACs) with marine components Yell Sound Coast and Papa Stour cover Mossbank-Yell and Papa Stour Shetland respectively. The National Scenic Area (NSA) Shetland interacts with Clift Sound. The RSPB reserve Yell covers the Yell landfall of Yell-Fetlar.
Wave/Tidal	No	
Aquaculture (finfish and shellfish)	Yes	Some local finfish and shellfish sites in the vicinity of the cable locations.
Marine Archaeology	Yes	Possible interaction with wreck sites.
Shipping	Yes	AIS indicates that there are moderate to high levels of cargo vessel transits (10-20 transits) over all cable routes, except Lerwick-Bressay South, for which there are high levels (20-50 transits).
Ferries	Yes	There are ferry routes overlapping Whalsay-Out Skerries, West Linga-Whalsay and Lerwick-Bressay South, with ferry routes in the vicinity of the other cables.

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8 Cable Asset Interactions: Commercial Fishing and Other Sea Users

- 8.1 The potential interactions to fishing stakeholders and other sea users, based on the site specific proposed construction methods, are specified in the Cefas and MCEU (2004)²³ guidelines and summarised in the Cost Benefit Analysis Model²⁴. It should be noted that stakeholders will vary in their sensitivity to socio-economic pressures depending on:
- Spatial adaptability based on operational range and
 - Spatial tolerance based on dependency on fishing grounds and specific sea areas
- 8.2 The main gear types used in the Shetland Islands are midwater trawls, bottom otter trawls and Scottish seines. However, potting (creeling) and scallop dredging vessels represent the primary fishery that may interact with the cable locations, due to creeling's nearshore activity and scalloping activity appears to be particularly prevalent in the area covered by the Whalsay-Out Skerries cable, towards the eastern end of the cable at the Out Skerries landfall.
- 8.3 While fishermen will be kept up to date with construction areas by Notices to Mariners (NTMs), Weekly Notices of Operations (WNO) and update emails from the developer and their subcontractors, there is scope for conflicting demands on the same area of sea. Construction schedules are fluid and dependent upon many factors and fishermen may not regularly read emails, if they have access to the internet at all, and therefore may not be aware of recent updates.
- 8.4 In most cases the presence of a FIR onboard the survey boats should prevent fishing gear interactions by survey/construction vessels. However, it may not be feasible for all vessels to have an offshore FIR on board therefore a standard operating procedure (SOP) has been created for the FIR and crew of the survey and construction vessels to follow (Fishing Gear Interaction SOP)²⁵.
- 8.5 The potential interactions between fishing stakeholders and other sea users with survey vessels (and construction vessels if cable installation is required following inspection surveys) are dependent on the survey and installation methods to be used.
- 8.6 Inspections will be carried out on SHEPD's submarine electricity cables to identify the behaviour and integrity of the cable. This will inform the ongoing maintenance plan and influence cable replacement decisions. Survey information obtained along the cable route will include ROV

²³ Cefas, Marine Consents and Environment Unit (MCEU), Department for Environment, Food and Rural Affairs (DEFRA) and Department of Trade and Industry (DTI) (2004) Offshore Wind Farms - Guidance note for Environmental Impact Assessment In respect of FEPA and CPA requirements, Version 2

²⁴ Please refer to Scottish and Southern Electricity Networks: *Submarine Electricity Cable Cost Benefit Analysis Method Statement*: <https://www.ssen.co.uk/CBAFULL/> and *Method Statement Executive Summary*: <http://news.ssen.co.uk/media/266234/CBA-Model-Statement-Executive-Summary.pdf>

²⁵ Scottish and Southern Electricity Networks: *Standard Operating Procedures*, available: <https://www.ssen.co.uk/SubmarineCables/AboutUs/>

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mountable magnetometer, MBES and SSS, and a gradiometer array for a minimum corridor width of +/-7.5m, centred on the existing cable route. Please refer to the *Construction Method Statement* for full details where cable installation is identified, following the inspection surveys.

- 8.7 Due to the range in levels of activity for all other sea users there is scope for conflicting demands on the same area of sea. It is anticipated that the formal notifications such as NtMs, COLREGS and the code of good practise for all vessels will provide sufficient mitigation for potential interactions.

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9 Safety

9.1 Safety management is a key aspect of the FLMAP. SHEPD's approach to safety and to ensuring co-existence has been outlined in the document *How Scottish Hydro Electric Power Distribution co-exists with other marine users*²⁶. With regards to commercial fishing, Safety Management Plans produced by SHEPD for submarine cable works will include reference to the following elements:

- Code of Good Practice for all Vessels
- Procedures in Relation to Gear Fastening or Loss
- Safety Zones (500m) around Active Construction Areas
- *Appendix B: Communication Strategy*

9.2 When we employ contractors for the surveys and construction required for the Shetland cables, we will outline certain obligations to which the contractors must follow in order to ensure external communication is accurate and to aid coexistence with sea users. These may include ensuring:

- Any debris accidentally dropped during any construction and maintenance activities (if required following inspection surveys) is removed if practicably feasible and safe to do so
- All vessels under contract with us adhere to COLREGS and SOLAS requirements
- All vessels under contract with us do not engage in any commercial or recreational fishing activities whatsoever
- All vessels under contract with us will maintain polite, proactive and professional communications with fishing vessels and other sea users during offshore operations
- All vessels under contract with us will monitor the required VHF channels at all times so as to receive communications directly from fishing vessels and other sea users
- All vessels contracted to undertake project specific work will have undertaken appropriate risk assessments in respect of potential interactions with commercial fishing vessels and their gears
- Where appropriate, for vessels using anchored positioning, contractors will be obliged wherever possible to adopt anchor release procedures to minimise the size of anchor mounds and where necessary undertake remedial actions to level any significant anchor mounds
- All vessels contracted with us will have on board approved fishing liaison/interaction manuals
- Where appropriate, suitably qualified and certified offshore FIRs will be on board certain project vessels
- Standard transit routes for vessels engaged by us will be discussed with fishing stakeholders prior to operations commencing and vessels transiting to the site shall follow these where possible.

²⁶ Scottish and Southern Electricity Networks: *How we co-exist with other marine users*, available: <https://www.ssen.co.uk/SubmarineCables/AboutUs/>

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9.3 The following procedure outlined below replicates that which has been in place in respect of the UK offshore oil and gas industry and describes the steps that should be undertaken in the event of fishing gear becoming fastened on or in the vicinity of a submarine electricity cable:

- If the fastened gear is not easily retrieved, fishermen should not apply excessive winch, line or net hauler loads or engine powers in attempts to retrieve fastened gear
- Fishermen are to advise the coastguard and the CFLO/FIR immediately, giving an accurate position of the vessel and/or lost gear
- If the coastguard or CFLO/FIR confirms that the vessel is in the immediate vicinity of a cable, serious consideration will be given to the slipping of the gear and buoying and recording of its position;
- If the gear is slipped, after buoying off the gear, the position should be confirmed with the coastguard and the CFLO/FIR
- On return to port, the skipper is to contact the local Fishery Office and register the incident in the normal manner
- On no account should skippers grapple in an attempt to recover fishing gear lost or cut away in the vicinity of a submarine electricity cable.

9.4 The purpose of a safety zone is to ensure the safety of other sea users by communicating a safe distance between other users and the construction, operation and maintenance activities related to the submarine electricity cables.

9.5 Whilst 500m is the maximum permissible size for a safety zone, it could be that during any required construction phases, the safety of other users is better served through an additional precautionary area communicated by Notice to Mariners in which it is recommended other sea users do not enter. If entry is unavoidable, then navigation with extreme caution is advised.

9.6 SHEPD will aim to organise construction schedules as far as is practicably possible with the aim of reducing potential combined loss of fishing area during the construction phase.

9.7 Fishing stakeholders will be informed of all the cable works throughout the inspection surveys (and any subsequent pre-construction or construction phases).

9.8 SHEPD will, in consultation with commercial fishing stakeholders, work towards identifying acceptable and feasible mitigation options with the aim of minimising any potential effects on commercial fishing associated with the replacement of submarine electricity cables. There are various options available to mitigate the risks describe previously, including:

- Continuing effective positive liaison with commercial fishing stakeholders through the pre-construction, construction and operational phases of any cable replacement
- Continued employment of CFLO/FIR services until the completion of the replacement works
- Ensuring contractors comply with the contractor's obligations outlined above so as to minimise any interference to commercial fishing activities
- Managing the cable replacement works so as to minimise any potential effects on the marine environment, habitats and commercial fishing
- Raising awareness of the danger of fishing in the vicinity of submarine cables

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- Adopting a hierarchical approach to submarine cable protection, taking account of sea users concerns
- Organising a construction phasing workshop (if new cable is required) to inform commercial fishermen of planned activities
- Organising construction schedules (if new cable is required) as far as is practicably possible in order to reduce the combined loss of fishing area associated with safety zones
- Distributing weekly notice of operations
- Providing information in plotter format to enable fishermen to easily interpret the information
- Scouting surveys to identify potting areas and any other relevant static gear areas.

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10 UK Legislation, References and Guidance

- 10.1 Damage to submarine cables is expensive to repair and can cause disruption to power distribution to often sparsely populated islands. There is applicable legislation in respect to safety zones (Energy Act 2004), navigation (International Regulations for Preventing Collisions at Sea 1972; COLREGS) and submarine cable protection (United Nations Convention on the Law of the Sea (UNCLOS) Article 113, 1982, and UK 1964 Continental Shelf Act). It is an offence to wilfully damage submarine cables (UNCLOS, 1982; UK 1964 Continental Shelf Act).
- 10.2 In regards to navigation, in normal circumstances, the provisions laid down by COLREGs are sufficient to ensure that actions taken by fishing vessels and those restricted in their ability to manoeuvre when two vessels are approaching allow both to continue operating with minimum disruption.
- 10.3 Further information on UK and international legislation for subsea cables, safety zones and navigation is provided in the document *How Scottish Hydro Electric Power Distribution co-exists with other marine users*²⁷.

²⁷ Scottish and Southern Electricity Networks: *How we co-exist with other marine users*, available: <https://www.ssen.co.uk/SubmarineCables/AboutUs/>

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Appendix A Notice to Mariners Example Template

Notice to Mariners

Scottish Hydro Electric Power Distribution (SHEPD) – Notice to Mariners [Month Year].

Issued [Date].

Please be advised that [Contractor] (on behalf of SHEPD) will be undertaking a [description of works, e.g.: survey across the CABLE ROUTE submarine electricity cable corridor]. The survey will utilise four different vessels to complete survey operations:

- Vessel 1
- Vessel 2
- Vessel 3
- Vessel 4

The survey operations will commence during an appropriate weather window following [date] and will continue over a planned minimum period of [16 weeks], weather permitting.

The survey operations will be concentrated across the cable corridor within the boundary defined by the following coordinates.

[Chart of survey area]

[Coordinates of survey area boundary]

The survey operations will be undertaken by the [vessel 1, vessel 2, vessel 3...] pictured below. The vessels may not commence their activities at the same time but may operate simultaneously at times over the survey duration. The vessels may operate primarily from [Port 1] but may use other ports along the coastlines, such as [Port 2] or [Port 3].

Vessel Photo	Vessel Description
[Photo of vessel 1]	[Description, contact details and call sign of vessel 1, e.g.: The M.V. [vessel name] is a multi-purpose survey vessel, 65.2 m in length with a beam of 14m and a draft of 5.3 m; transit speed of 12 kts and a survey speed of ~5 kts (geophysical survey). Operating on a 24-hour basis]
[Photo of vessel 2]	[Description, contact details and call sign of vessel 2]
[Photo of vessel 3]	[Description, contact details and call sign of vessel 3]
[Photo of vessel 4]	[Description, contact details and call sign of vessel 4]

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Survey Description

The [survey/installation] will involve [the coverage of dedicated survey lines by the vessel(s) with a full suite of geophysical survey systems (Multi beam Echo Sounder, Side Scan Sonar and Magnetometer)] mounted on the vessel or towed from the stern of the vessel.

Other vessels should maintain an appropriate and safe distance of 500 m when passing the [survey] vessel(s) whilst undertaking survey operations, and should pass at the lowest possible speed to avoid vessel wash effects. The vessel(s) will be working [24-hour operations] and will display appropriate day shapes and lights during reduced visibility and night operations. The vessel(s) will also monitor VHF Channels 16 and 12.

Primary Survey Equipment

Primary equipment	Towed / Hull mounted / Sampling	Approximate tow length (if applicable)	Vessel
Multibeam Echosounder	Hull mounted	N/A	Vessel 1, Vessel 2
Sidescan Sonar	Towed	50-350m	Vessel 1, Vessel 2
Magnetometer Array	Towed	50-350m	Vessel 1, Vessel 2
Remotely Operated Vehicle (ROV)	Tether Management System	N/A	Vessel 1
Subsea Crane Operations	Crane	WD 140 max	Vessel 1

Contact Details

The vessel contact details are given in the tables below

VESSEL 1	
Call sign	
Bridge	
Offshore manager / Party Chief	
Email	
Onshore Site Manager	

VESSEL 2	
Call sign	
Bridge	
Offshore manager / Party Chief	
Email	
Onshore Site Manager	

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Fishing Liaison Officers

Fishing liaison for the [survey] will be co-ordinated by Brown and May Marine (BMM). For any commercial fishery queries please contact the Company Fishing Liaison Officer (CFLO) Alex Winrow-Giffin on [Redacted] / 01379 872144, alex@brownmay.com. A local Fishing Industries Representative (FIR) will also be in place to liaise with the vessel and fishing operations in the area. The vessel master will issue regular broadcasts whilst the survey vessel is operating to ensure minimal disruption and that vessels maintain an appropriate and safe distance.

Further Details

Further enquiries should be addressed to the following people in the following order:

Name	Contact Number	Email

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Appendix B Communication Strategy

An example standardised high level cable replacement communication plan is given in Table 32. (This is in the event that cable replacement is identified following inspection surveys). A programme of actions to be undertaken in the event of an unplanned outage is given in Table 33. Please note that the communication plan will need to be applied for each cable.

Table 32 Example of a communication programme for cable replacement

Stage	What's happening	What we want to communicate	Who we are speaking to and frequency
1	<u>Cable inspection list created for [year]</u> We have developed a list based on a number of factors and previous cable history. This allows us to forecast future health, where the most vulnerable cables will be and their importance on the network. This includes roughly 150% of the cable projects we intend to deliver, so we make sure we capture the right projects.	Advance warning of high level plans to inspect cables.	- Primarily stakeholders with shipping and navigation interests. - Engagement carried out as part of scheduled regular meetings
2	<u>Mobilisation of inspection vessels for [year]</u> <u>programme of cable replacement</u> Sending out inspection vessel, divers and/or ROV to closely follow cables to inspect cable condition and record video footage. This is then used to inform our health assessment of the cable.	Notice to Mariners issued. Essentially a safety message to let mariners know that we will have vessels in the area.	Mariners: the number of vessels, routes they are taking and activities they will be completing (daily)

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Stage	What's happening	What we want to communicate	Who we are speaking to and frequency
3	<u>Review inspections from 2 years ahead to create 1 year ahead survey list</u> From Inspection data we refine our project list to 125% of projects to make sure we survey as much as possible without wasting these works on cables which are healthy.	No communications at this stage, unless there has been engagement with stakeholders who have experienced wet outages.	Domestic and generation SHEPD customers to advise them that we will be replacing the cable (one off).
4	<u>Survey [year] Cable routes</u> With our 125% list we then issue instruction to survey the cable routes. This uses a vessel dragging a sonar device across a wide area multiple times to build up an image of the sea bed. It may also include carrying out intrusive geotechnical investigations.	- Notice to Mariners issued. Essentially a safety message to let mariners know that we will have vessels in the area. - Messaging to highlight any environmental mitigation measures we have implemented to safeguard marine life (e.g. checking for cetaceans before beginning certain geophysical survey operations)	- Mariners: the number of vessels, routes they are taking and activities they will be completing (daily). - Environmental groups: to highlight any mitigation measures (one off).
5	<u>Select [year] cable routes and advise Marine Scotland (licensing)</u> From our survey we will then define the project which is to be delivered. Reducing our project list to 100% of what we are able to deliver.	Regular stakeholder meetings to provide updates on project development activities.	Regulators and wider stakeholder groups.

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Stage	What's happening	What we want to communicate	Who we are speaking to and frequency
6	<u>PAC events and licence application</u> Pre-application consultation events are advertised and held. Comments received are noted and addressed as part of the licence application.	The proposed project including location and route along with possible protection methods.	Statutory and non-statutory stakeholders as well as communities and mariners (one off).
7	<u>Mobilisation of vessels for cable installation</u> With all cable projects now consented and licences approved, cable laying vessels are in the water. The boat(s) will collect all cables and fittings from our storage depot.	Notice to Mariners issued. Essentially a safety message to let mariners know that we will have vessels in the area.	Mariners: the number of vessels, routes they are taking and activities they will be completing (daily).
8	<u>Start to completion of installation works</u> - From there the vessel will transit to the cable installation location and begin works. Dependent on the projects the vessel(s) might do one or more than one cable installation during one voyage. - Dependent on physical protection levels of cables there may be a number of extra vessels dispatched to complete the works. - In parallel there will be onshore works which will be connecting the cable from the sea/shore end into the existing electrical network. - All vessel(s) return to port(s)	- Notice to Mariners updates as required. - Community Council meetings in advance to advise of forthcoming works - Stakeholder updates to advise of forthcoming works - Press release to be issued to advise community of forthcoming works - Additional communication channels to advise community & stakeholders of forthcoming works	- Mariners: the number of vessels, routes they are taking and activities they will be completing (daily). - Community to be advised of any potential disruption (roads & noise) - Domestic and business customers to be advised of any planned outages to allow us to carry out works (as required).

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Stage	What's happening	What we want to communicate	Who we are speaking to and frequency
Within 18 months of installation	<u>Post installation cable inspections</u> - Sending out inspection vessel, divers and/or ROV to inspect the cables most recently installed. This will allow us to decide what remedial works are required. - The cable is inspected by closely following cable to inspect cable condition and record it on film. This is then used to inform our assessment.	- Notice to Mariners to let mariners know that we will have vessels in the area - Update community to advise of works and reason for presence	- Mariners: the number of vessels, routes they are taking and activities they will be completing (daily) - Communities, local stakeholders and customers
Remedial works following cable inspection (if required)	<u>Remedial works</u> If required, we will send more vessels to complete any works which are required (from protection to complete cable replacement).	- Notice to Mariners to let mariners know that we will have vessels in the area - Update community to advise of works and reason for presence	- Mariners: the number of vessels, routes they are taking and activities they will be completing (daily). - Communities, local stakeholders and customers

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Table 33 Example of unplanned outage due to wet fault in a cable

Stage	What's happening	What we want to communicate	Who we are speaking to
1	- Declared a wet fault following testing at termination poles at both shore ends. This will give the distance to the fault location within the sea. - Depending on the severity of the fault and the demand of the network we may be able to restore power whilst still investigating the fault. - Embedded generation team will be deployed to operate the generators. - We formally notify Marine Scotland, Northern Lighthouse Board and Fishing Liaison Officer at this point.	- We are aware of a submarine electricity cable fault. - Our engineers are on site and are connecting generators to restore your power. - Open and consistent communication with local stakeholders and community to inform them of issue and actions being carried out to address the issue and restore normal service	- Domestic and business demand and generation customers. - Work with Corporate Communications team to keep local stakeholders and community informed through press release, website and social media channels
2	We are mobilising our marine contractors (divers, vessels and crew).	- Power will have been restored from the customers' perspective. - Generation customers may be assisting islands in maintaining supply stability. - Open and consistent communication with local stakeholders and community to update them on actions being carried out to address the issue and restore normal service	- Domestic and business demand customers - Work with Corporate Communications team to keep local stakeholders and community informed through press release, website and social media channels
3	<u>Locating the fault</u> - If the cable is less than 30m deep then divers may visually inspect the cable fault location. - If it is deeper than this Remote Operated Vehicles are deployed to do the same job.	We need to be sharing safety message with the marine community to be aware that we have vessels operating in the area.	- Mariners: We will have vessels operating in and around the cables. - This should advise of specific movements.

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Stage	What's happening	What we want to communicate	Who we are speaking to
	Visibility can be very poor so this will impact on how long this takes.	This should highlight how many there are in the water and what they are doing.	
4	<u>Fault zone found</u> Fault zone may be found. There is still work to be done in actually pin pointing the fault.	- We need to be sharing safety message(s) with the marine community to beware that we have vessels operating in the area. - This should highlight how many there are in the water and what they are doing.	Mariners: We will have vessels operating in and around the cables.
5	<u>Fault finding</u> - Cable recovered onto the cable vessel and cut. Jointers strip the cable ready for testing. Cable is cut until the tests show that the remaining cable is healthy. Once it is known the cable is healthy it is made waterproof and returned to seabed. - Options for repair or replacement have to be considered.	- We need to be sharing safety message(s) with the marine community to beware that we have vessels operating in the area. This should highlight how many there are in the water and what they are doing. Especially since there may be a number of anchors temporarily in the area whilst we are looking for the fault and fixing it. - Open and consistent communication with local stakeholders and community to update them on actions being carried out to address the issue and restore normal service	- Mariners: We will have vessels operating in and around the cables. - This should tell mariners where the buoys are and that the cable is at this location - Work with Corporate Communications team to keep local stakeholders and community informed through press release, website and social media channels
6	<u>Option A</u>	We need to be sharing safety message(s) with the marine community to beware that we still have vessels operating in the area.	<u>Option A and B</u> Mariners: We will have vessels operating in and around the

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Stage	What's happening	What we want to communicate	Who we are speaking to
	We call this a piece-in where we are able to re-joint the cable with a new section of cable. <u>Option B</u> Depending on the distance from shore, we may take at new section of cable from the shore end to the existing cable (only needing one joint) <u>Option C</u> If the cable is too deep (greater than 50 metres) we may not be able to repair the cable So entire end to end replacement may be necessary. <u>Option D</u> If cable has faulted and is planned for replacement due to health of cable we will replace entire cable end to end.	■ This should highlight how many there are in the water and what they are doing. <u>Option A and B</u> Estimate how long we will be in the area mending the cable for and advise of vessel movements. <u>Option C and D</u> We need to apply for a marine licence. Please refer to other communication plan from here on.	cables and estimate when we will be away. <u>Option C and D</u> Mariners and statutory consultees: We need to do a full cable replacement and so need to apply for a marine licence which gives us consent to carry out the work When appropriate, work with Corporate Communications team to keep local stakeholders and community informed through press release, website and social media channels
7	<u>Option A</u> Take cable vessel to fault location and joint new piece in between the two ends. The cable is tested to make sure it is healthy and then lowered back onto the sea bed. We will then re-energise cable when safe to restore power. <u>Option B</u> Position the cable vessel close to the shore in line with the point of termination in land. We float the cable from the cable vessel to	■ We need to be sharing safety message(s) with the marine community to beware that we still have vessels operating in the area. ■ This should highlight how many there are in the water and what they are doing ■ Keep stakeholders informed throughout	■ Domestic and business demand and generation customers: The submarine electricity cable has been repaired and mobile generators have been removed from the island. ■ Mariners: We will have vessels operating in and around the cables and estimate when we will be away

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Stage	What's happening	What we want to communicate	Who we are speaking to
	connection point on shore. The floats are removed when cable is in position and install the cable to the jointing location where it meets the cable which we left in the sea attached to a buoy (the original fault location) and joint the cable. We test the cable to make sure it is clear of all faults. We will then re-energise cable when safe to restore power.	Update local stakeholders, media and community with open, clear and consistent communication	Work with Corporate Communications team to keep local stakeholders and community informed through press release, website and social media channels

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

Appendix C

Commercial Fishing Charts

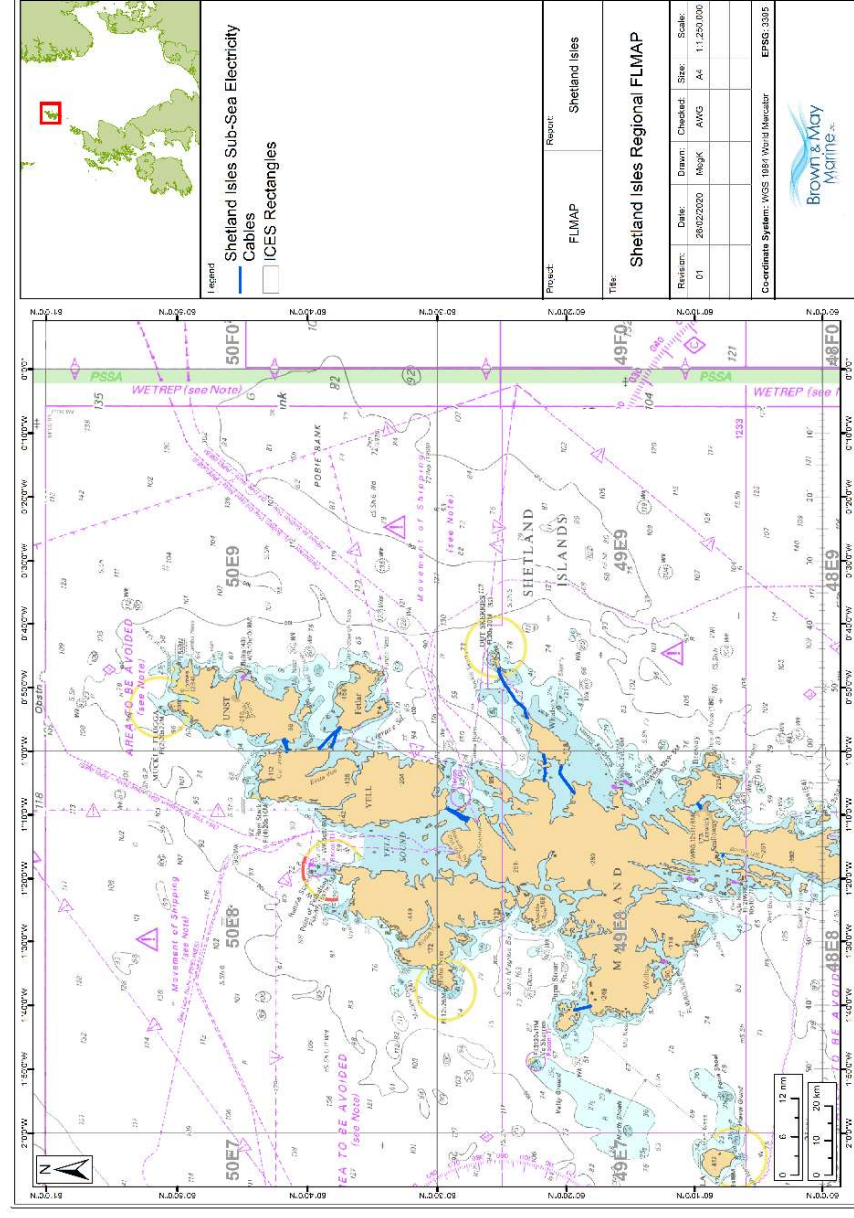


Figure 1 Shetland study area

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

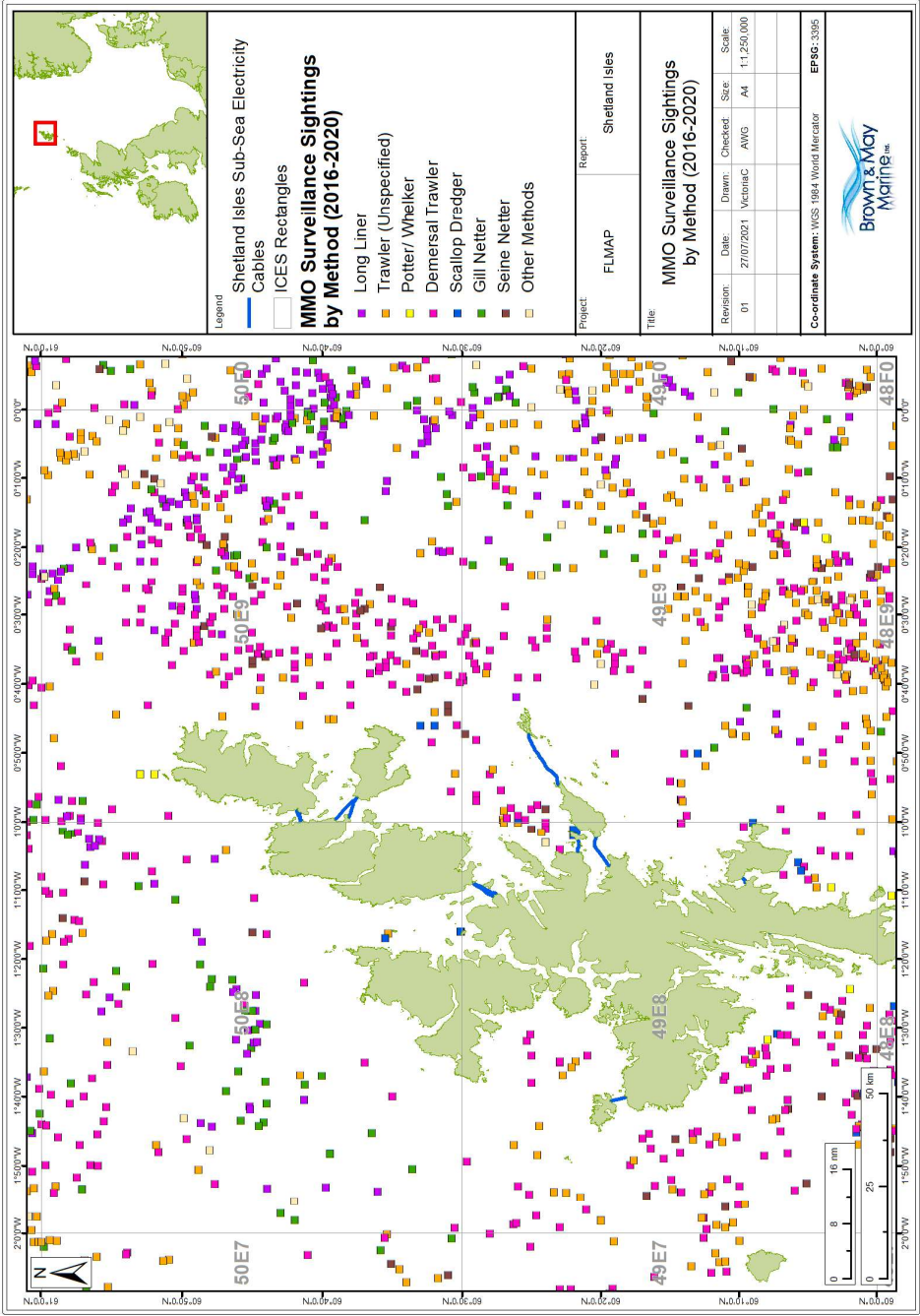


Figure 2 MMO surveillance sightings by method (2016-2020)

	Fishing Liaison Mitigation Action Plan for Shetland			Applies to	
		Distribution	✓	Transmission	✗
Revision: 1.00	Internal Use	Issue Date:		Review Date:	

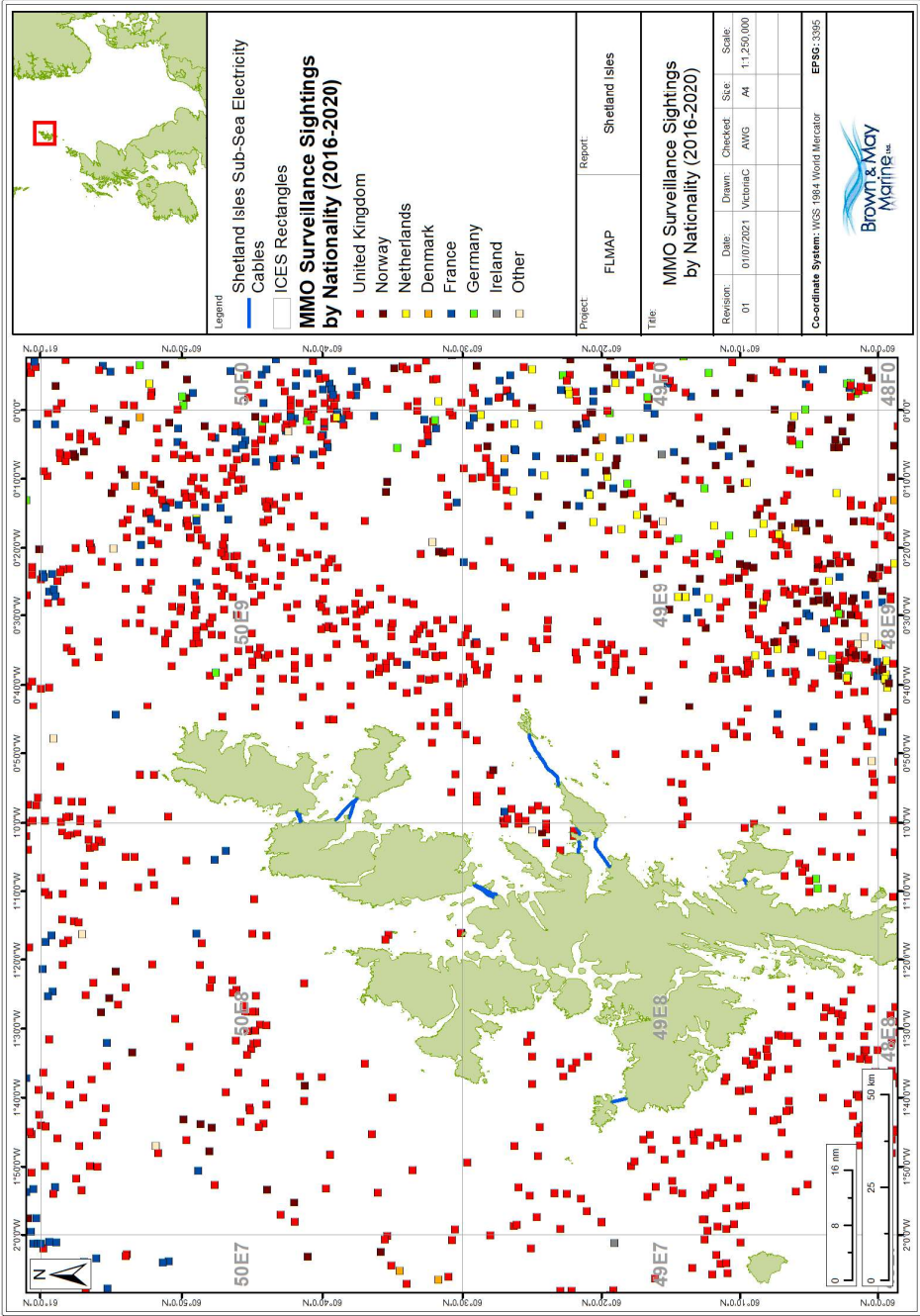


Figure 3 MMO surveillance sightings by nationality (2016-2020)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

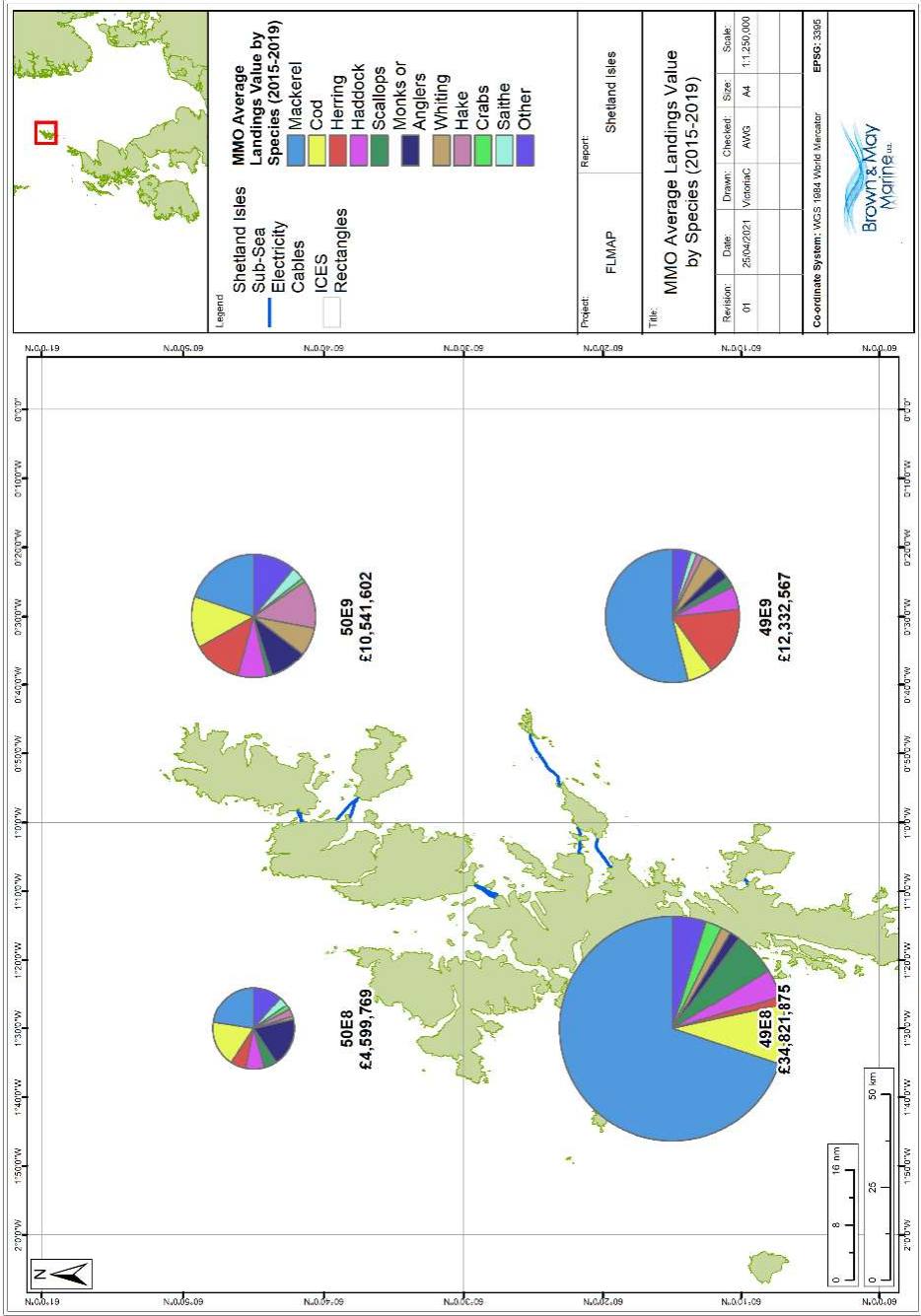


Figure 4 Average MMO landings value by species (2015-2019)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
	Revision: 1.00	Internal Use	Distribution ✓	Transmission ✗
	Issue Date:		Review Date:	

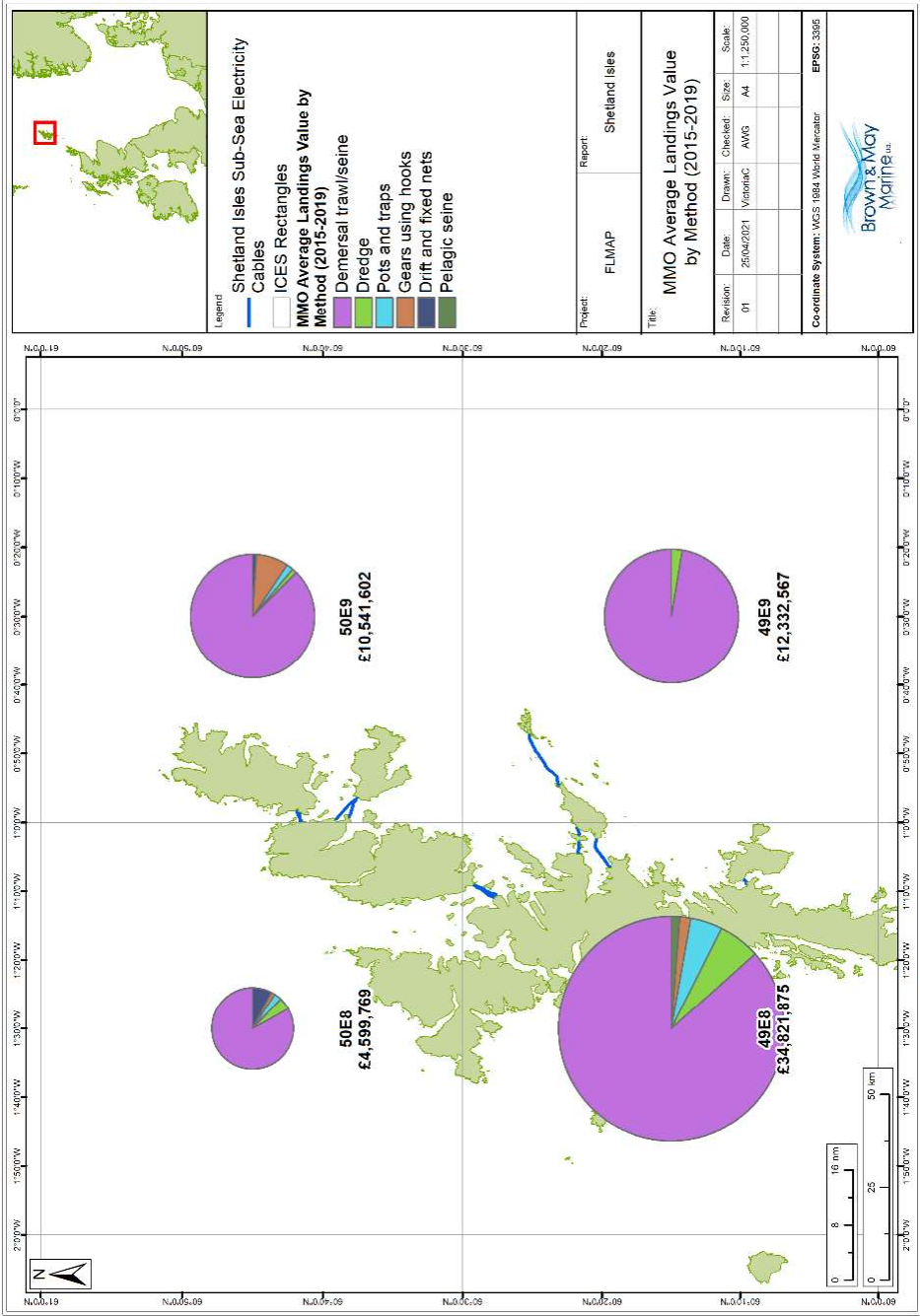


Figure 5 Average MMO landings value by method (2015-2019)

	Fishing Liaison Mitigation Action Plan for Shetland		Revision: 1.00	Internal Use	Issue Date:	Applies to	
	Distribution ✓	Transmission ✗				Review Date:	

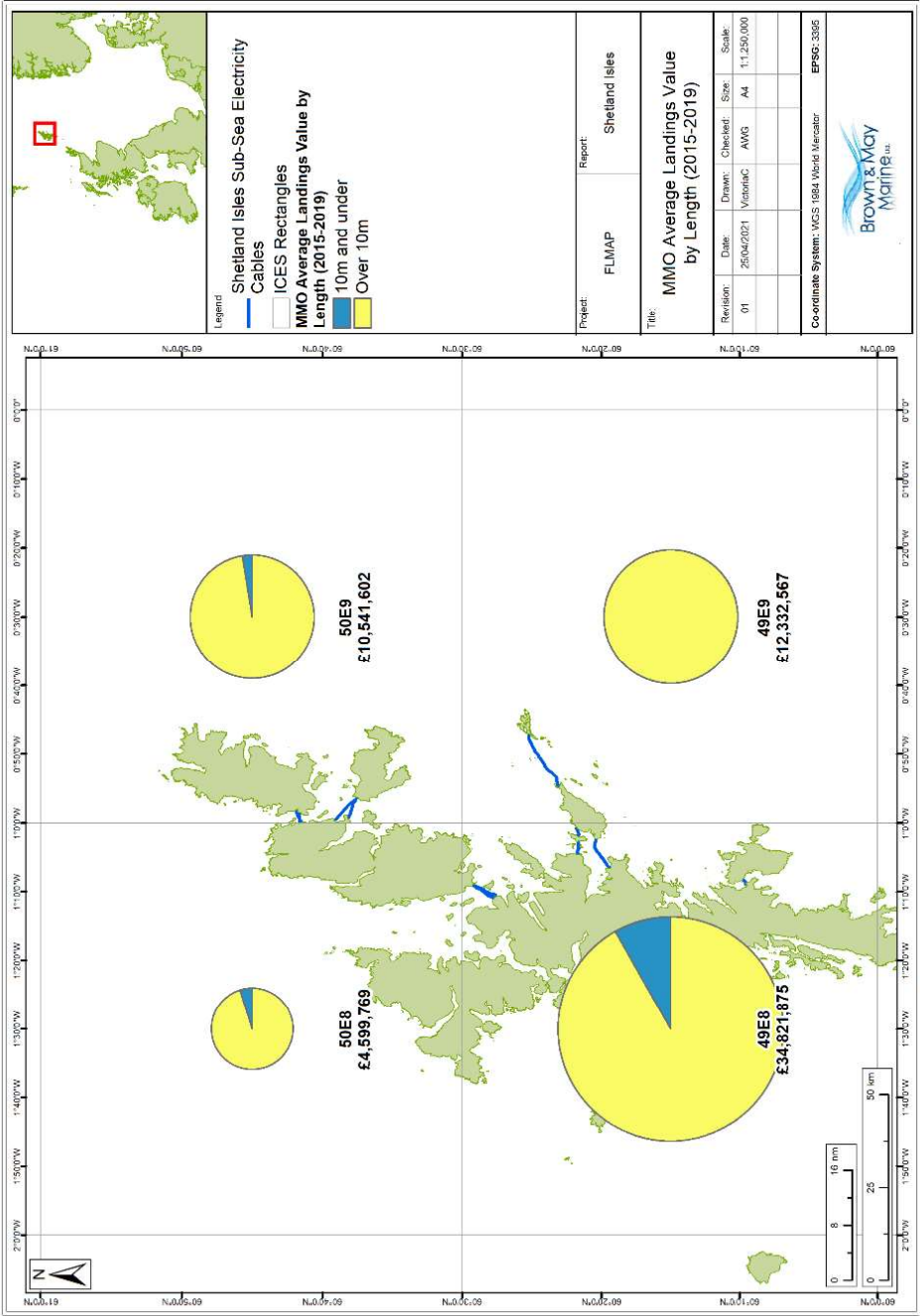


Figure 6 Average MMO landings value by vessel length (2015-2019)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

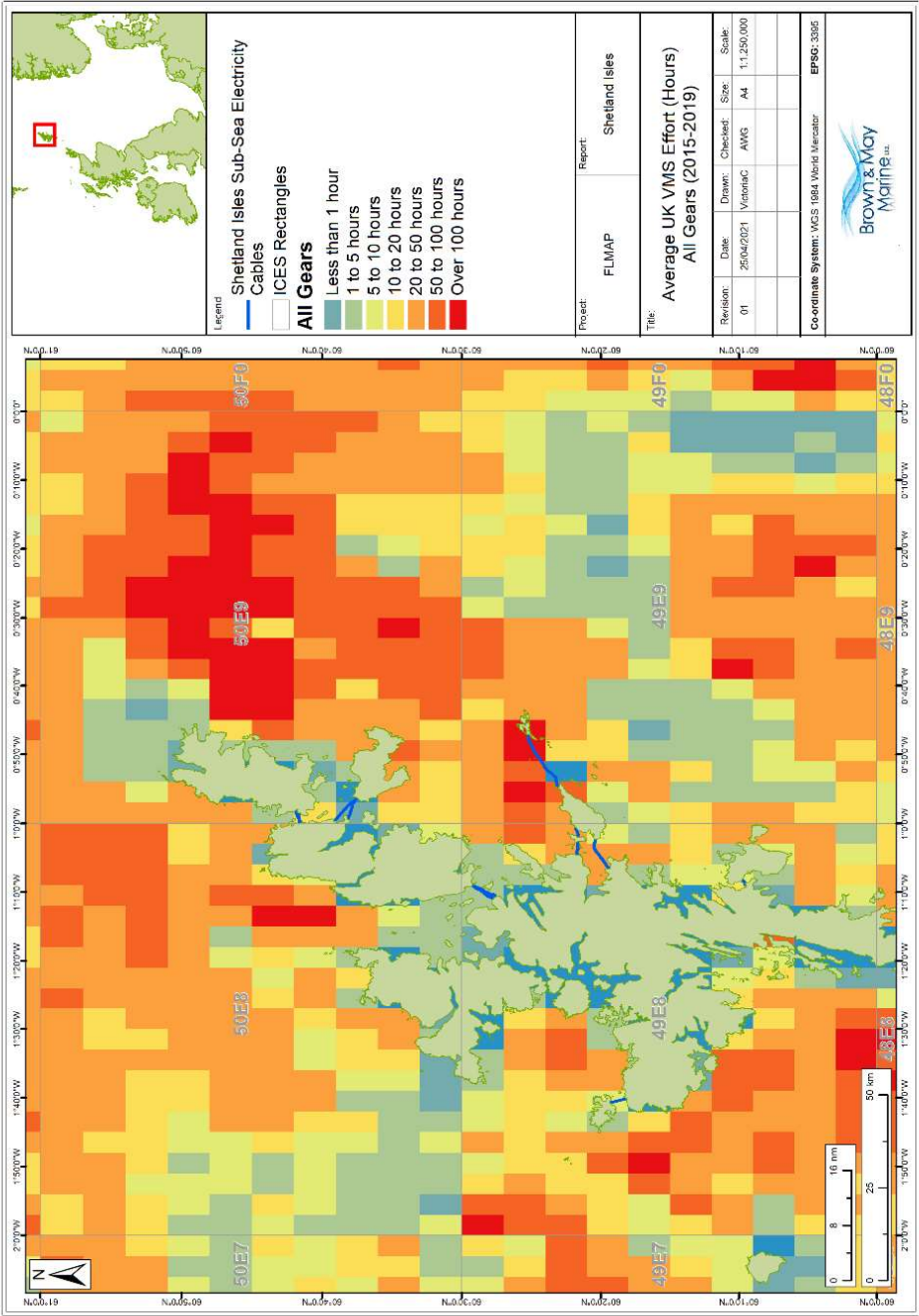


Figure 7 Average UK MMO VMS effort (hours) all gears (2015 to 2019)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
	Distribution	✓	Transmission	✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

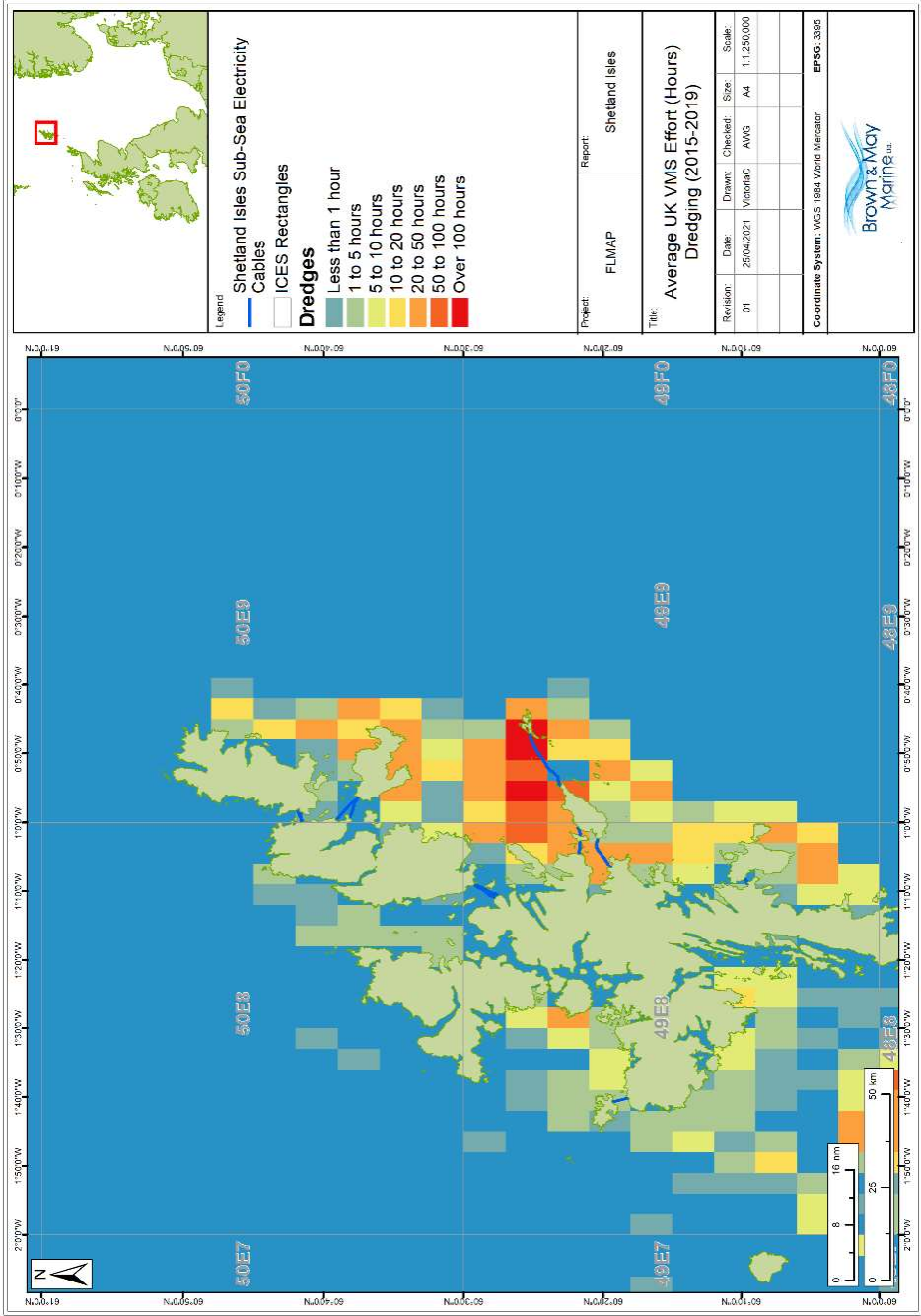


Figure 8 Average UK MMO VMS effort (hours) for dredges (2015 to 2019)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

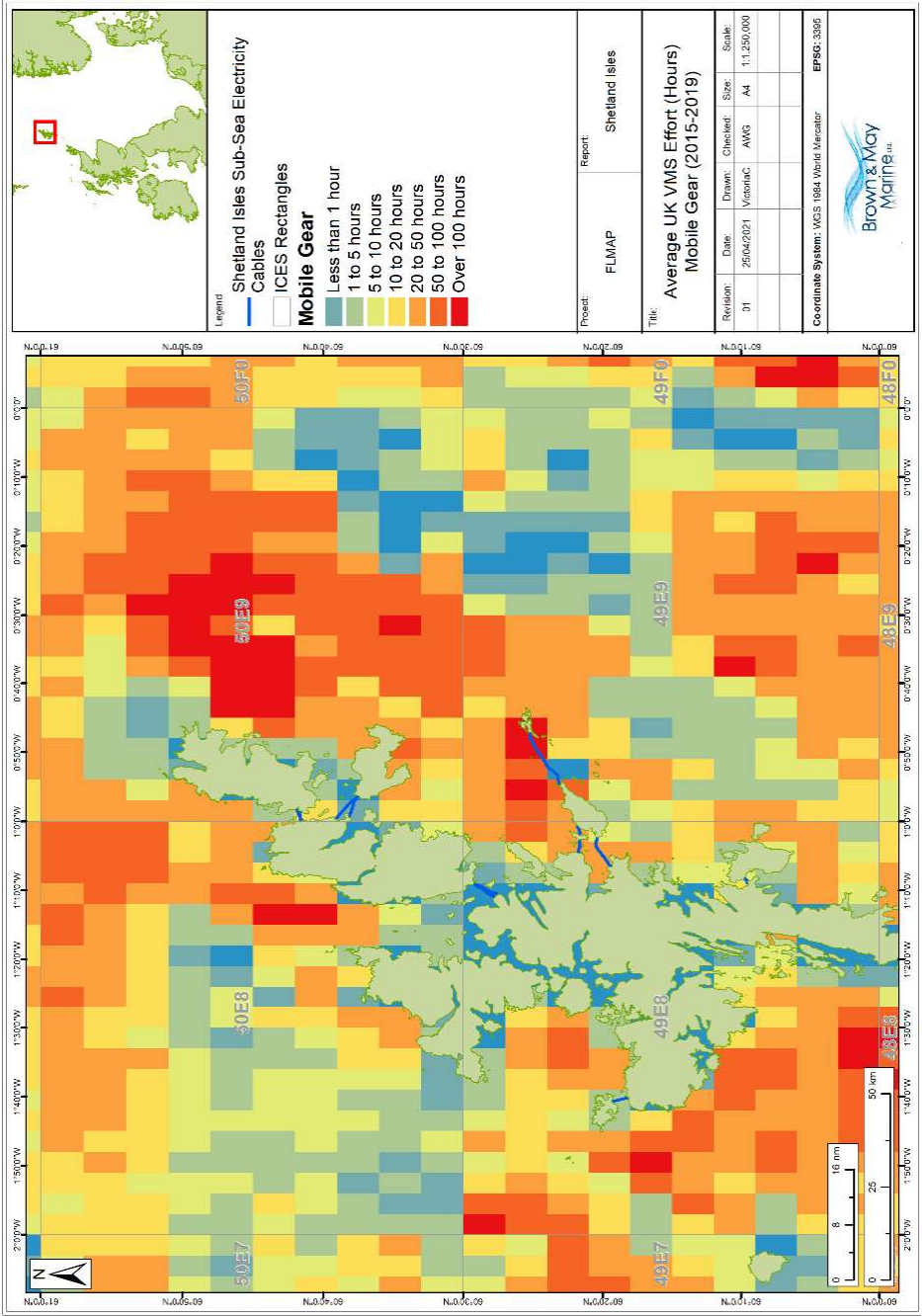


Figure 9 Average UK MMO VMS effort (hours) for mobile gear (2015 to 2019)

	Fishing Liaison Mitigation Action Plan for Shetland	Applies to	
		Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	
		Review Date:	

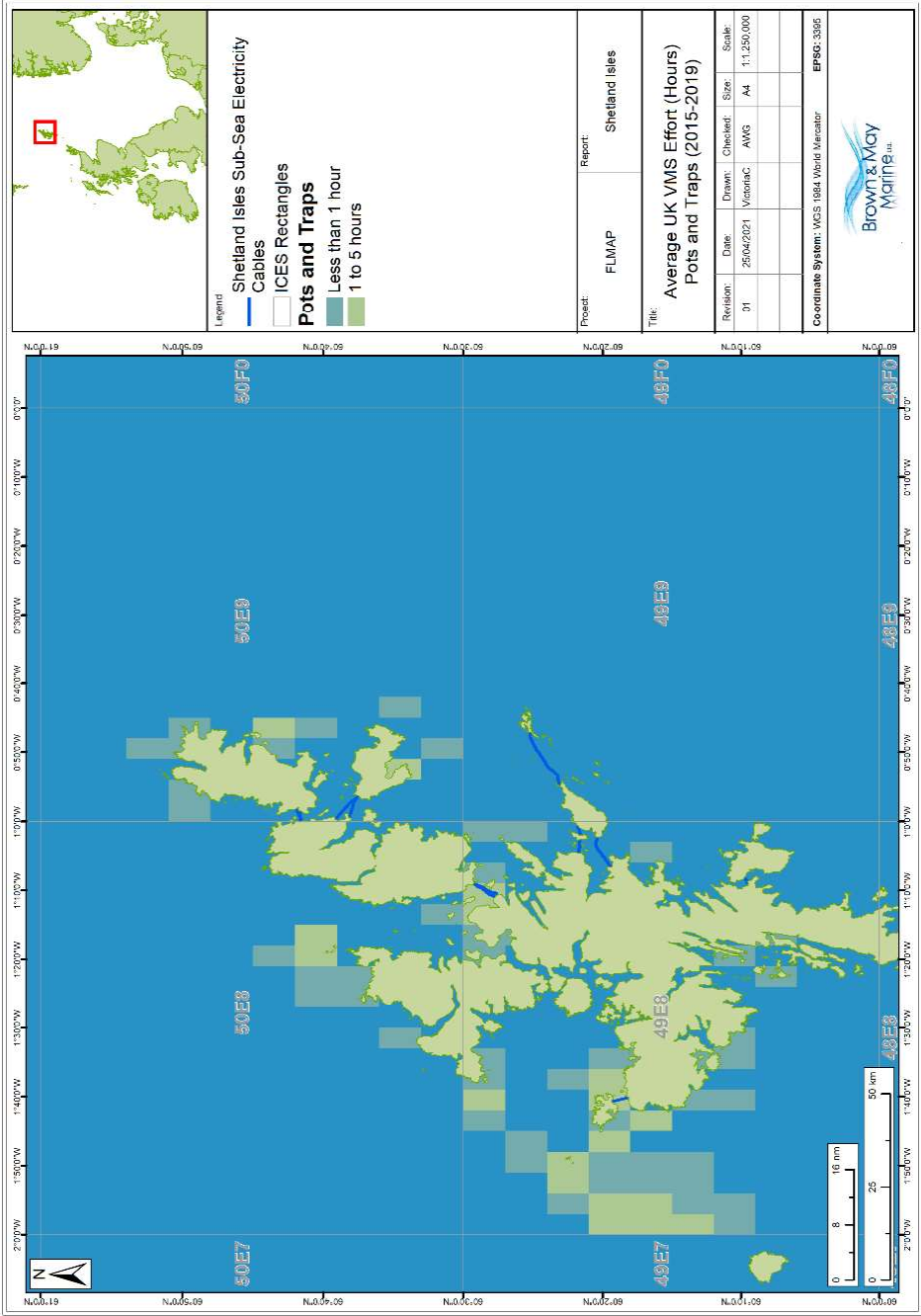


Figure 10 Average UK MMO VMS effort (hours) for pots & traps (2015 to 2019)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
	Revision: 1.00	Internal Use	Distribution ✓	Transmission ✗
		Issue Date:	Review Date:	

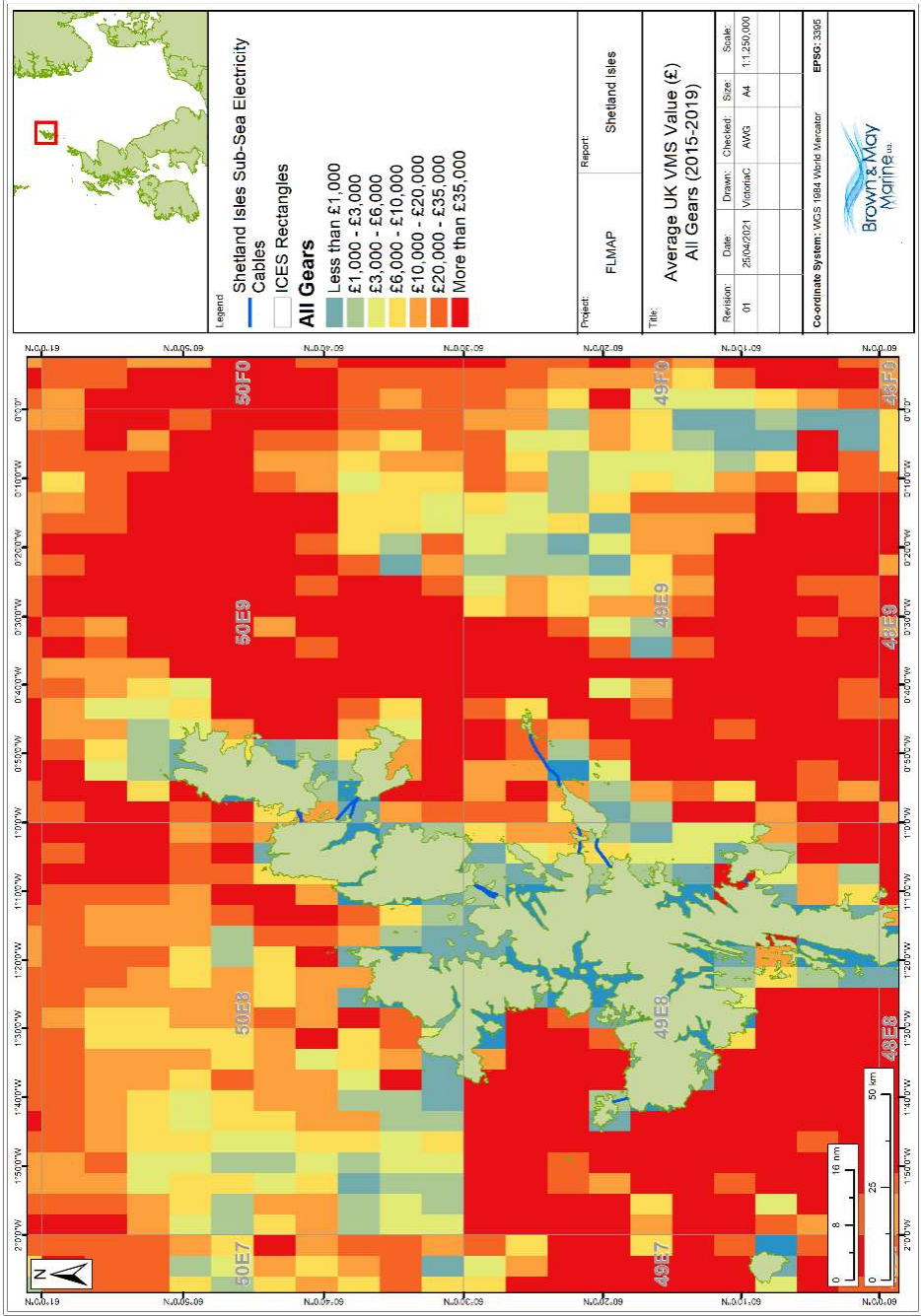


Figure 11 Average UK VMS value (£) for all gears (2015-2019)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

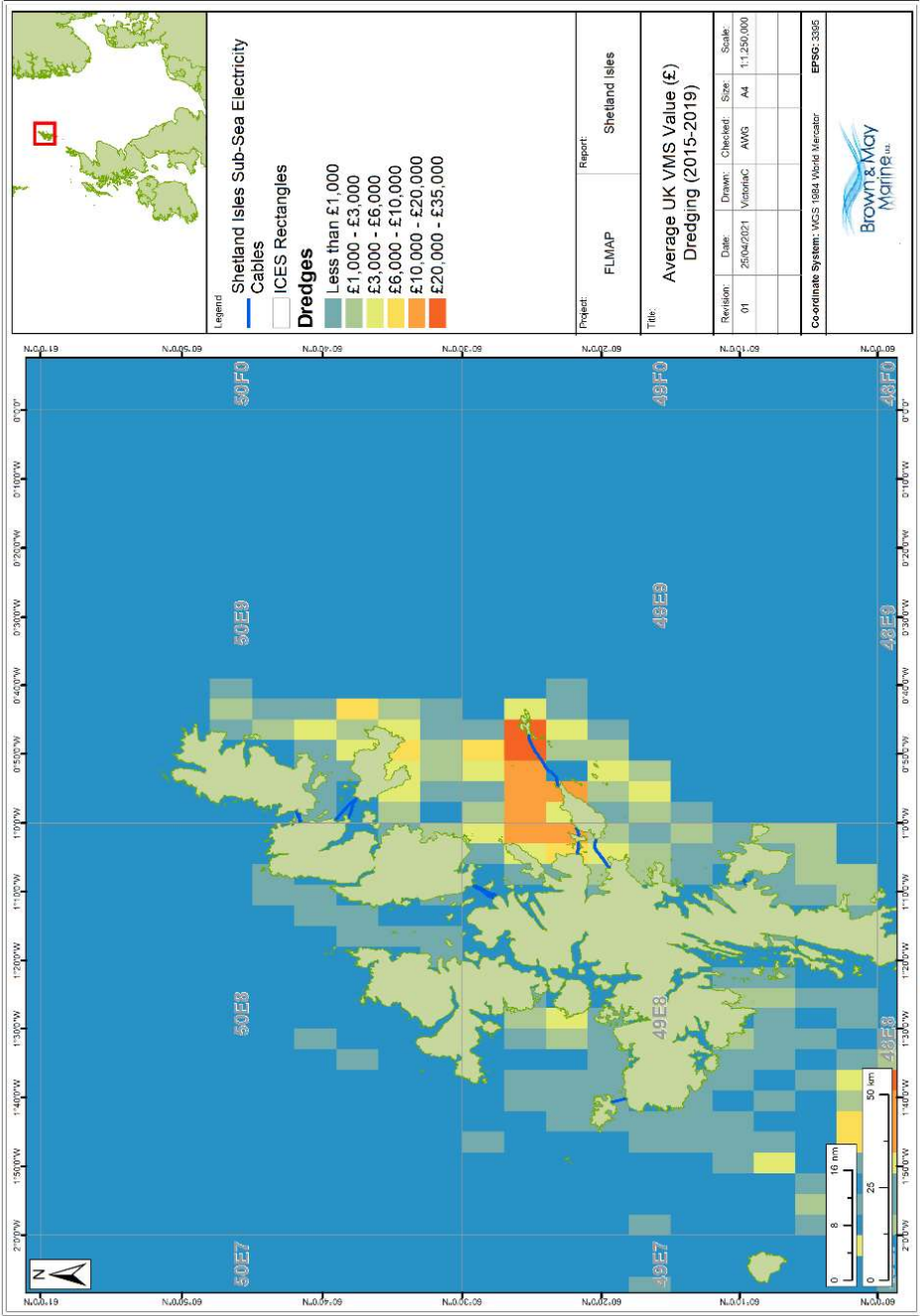


Figure 12 Average UK VMS value (£) for dredging (2015-2019)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

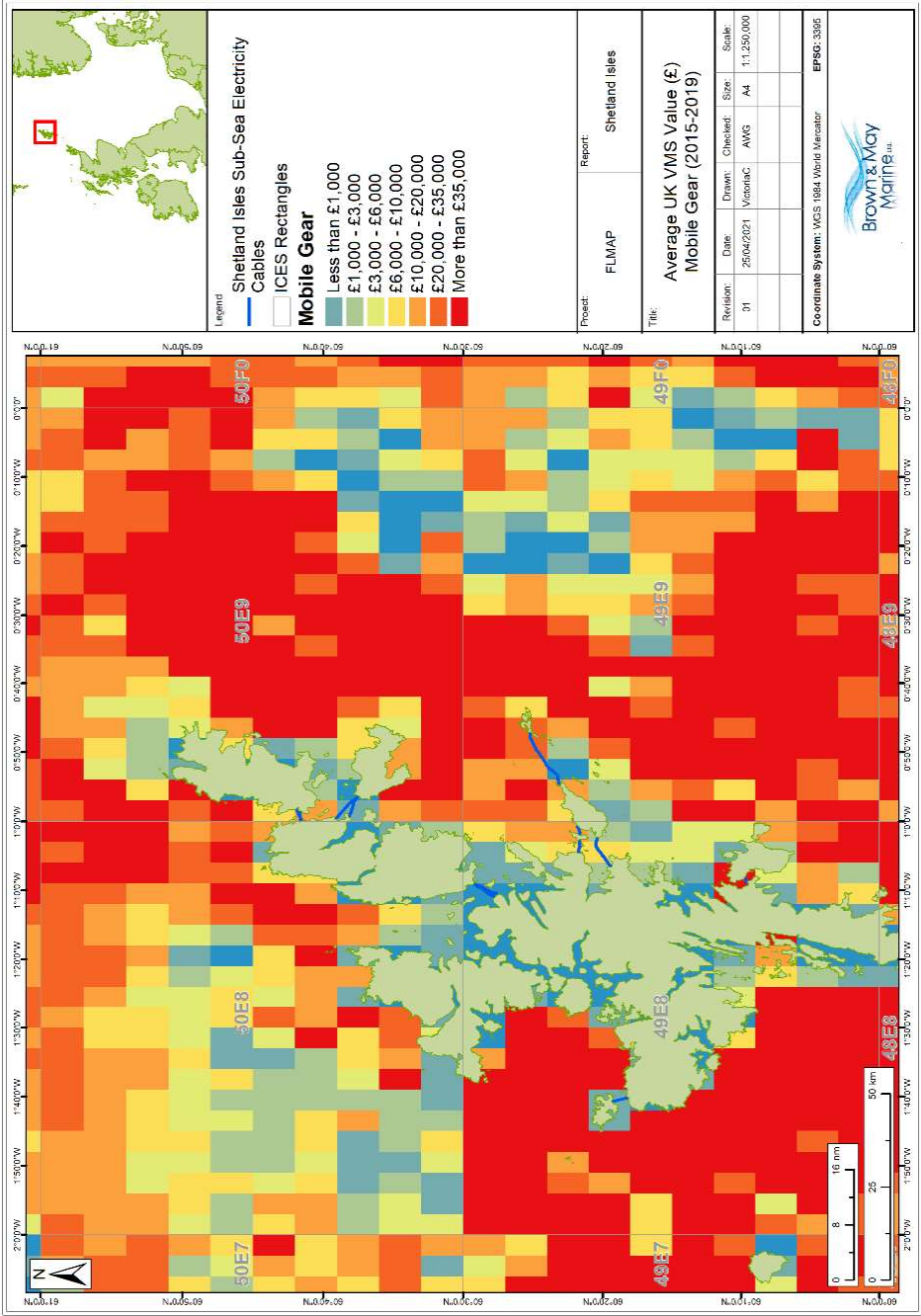


Figure 13 Average UK VMS value (£) for mobile gears (2015-2019)

	Fishing Liaison Mitigation Action Plan for Shetland			Applies to	
		Distribution	✓	Transmission	✗
Revision: 1.00	Internal Use	Issue Date:		Review Date:	

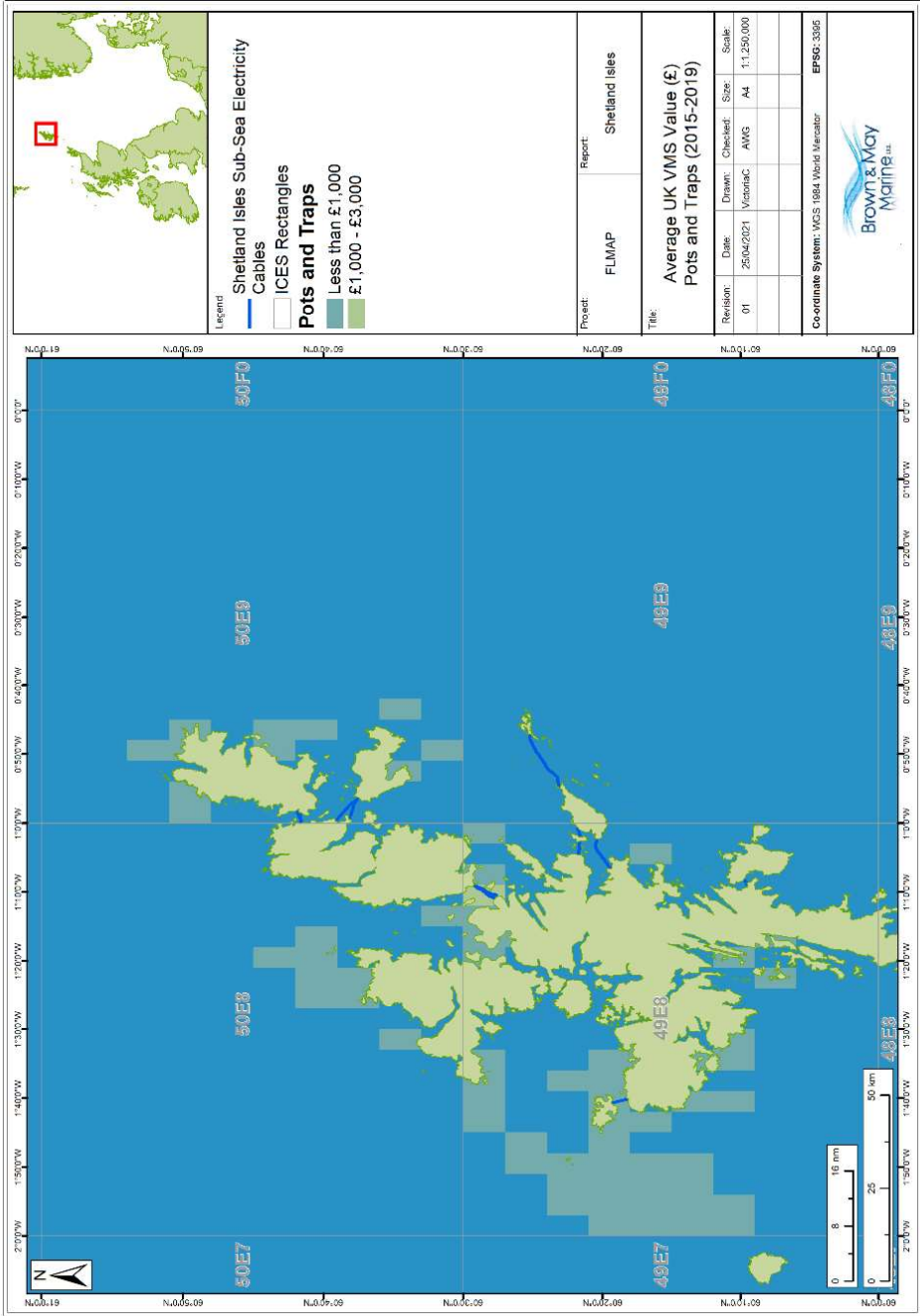


Figure 14 Average UK VMS value (£) for pots and traps (2015-2019)

	Fishing Liaison Mitigation Action Plan for Shetland	Applies to	
		Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	
		Review Date:	

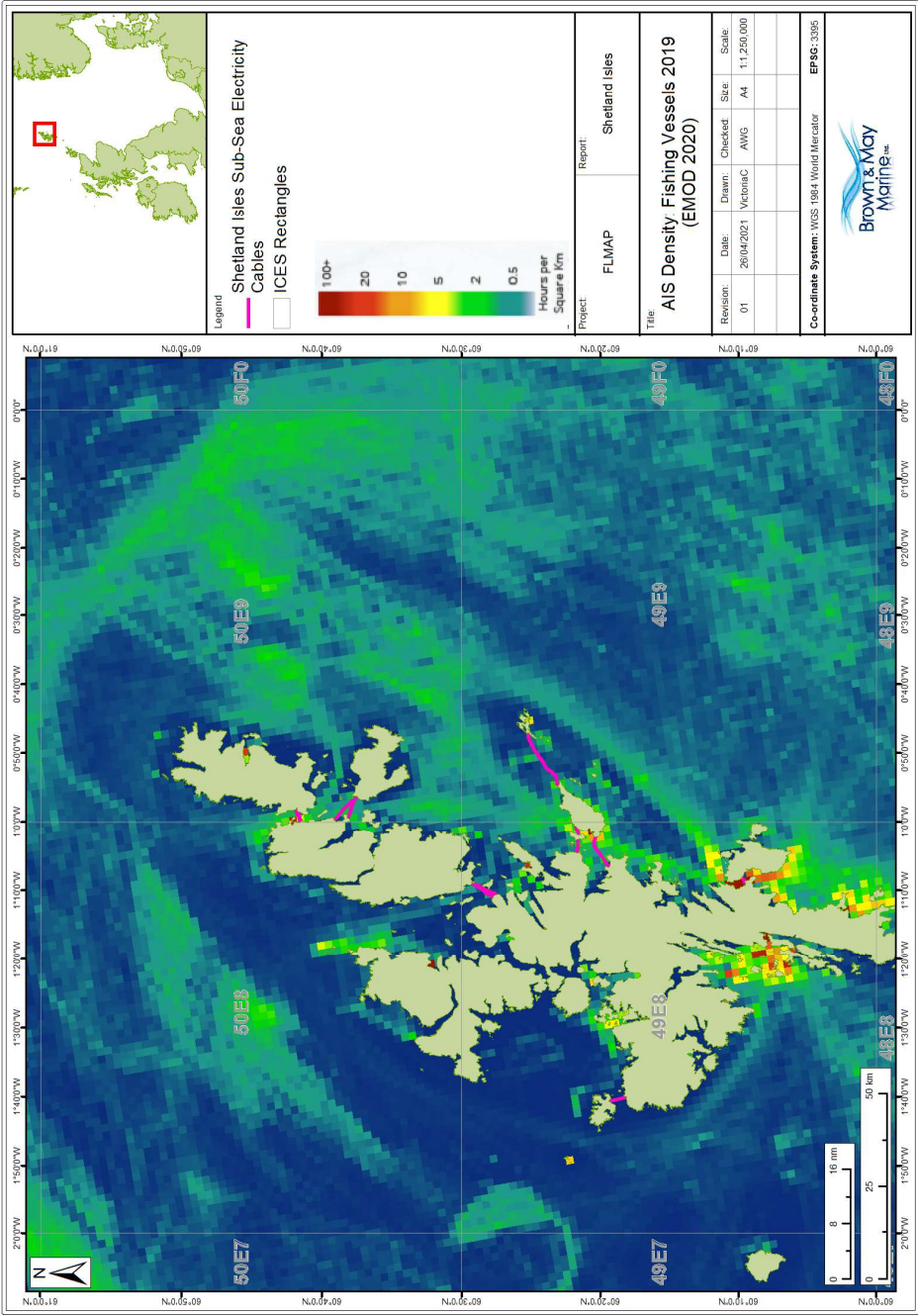


Figure 15 AIS density for fishing vessels in 2019 (EMODnet, 2020)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

Appendix D Other Sea Users Charts

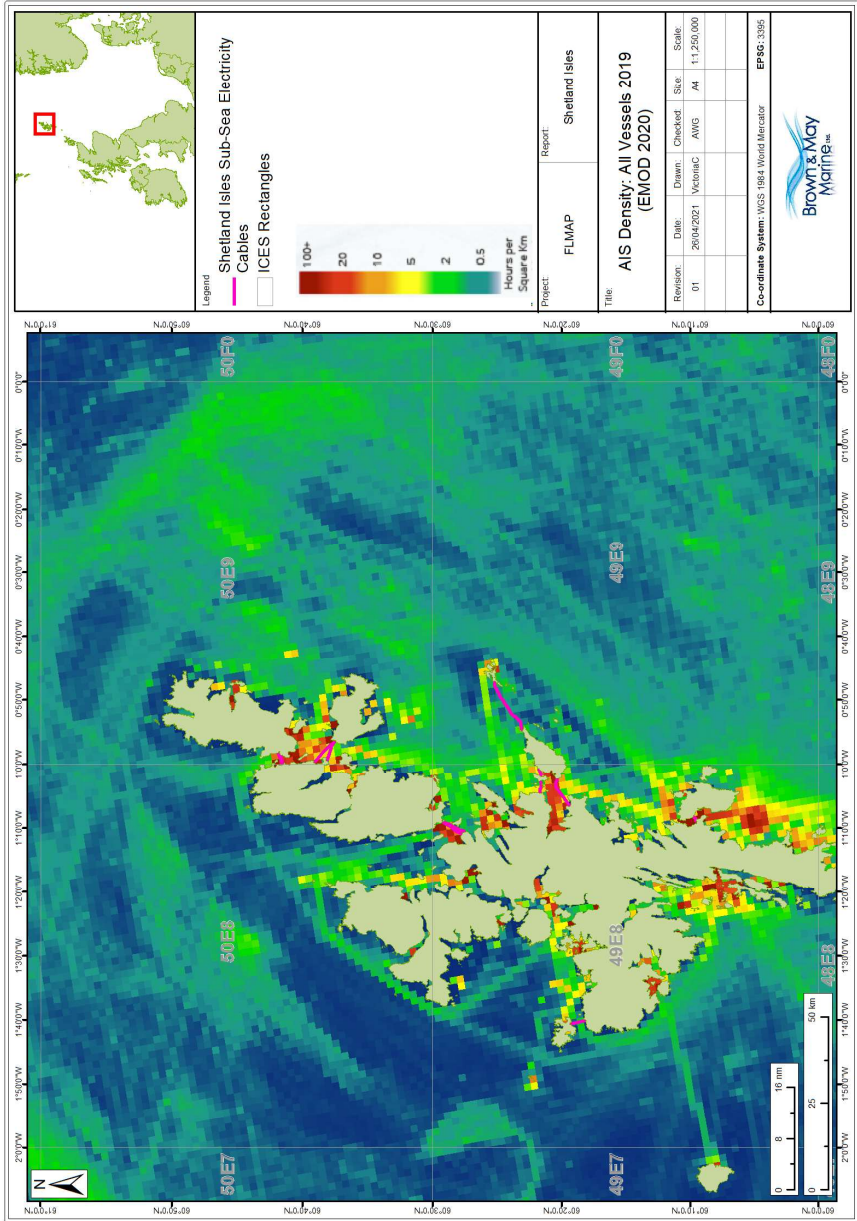


Figure 16 AIS density for all vessels (EMODnet, 2020)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

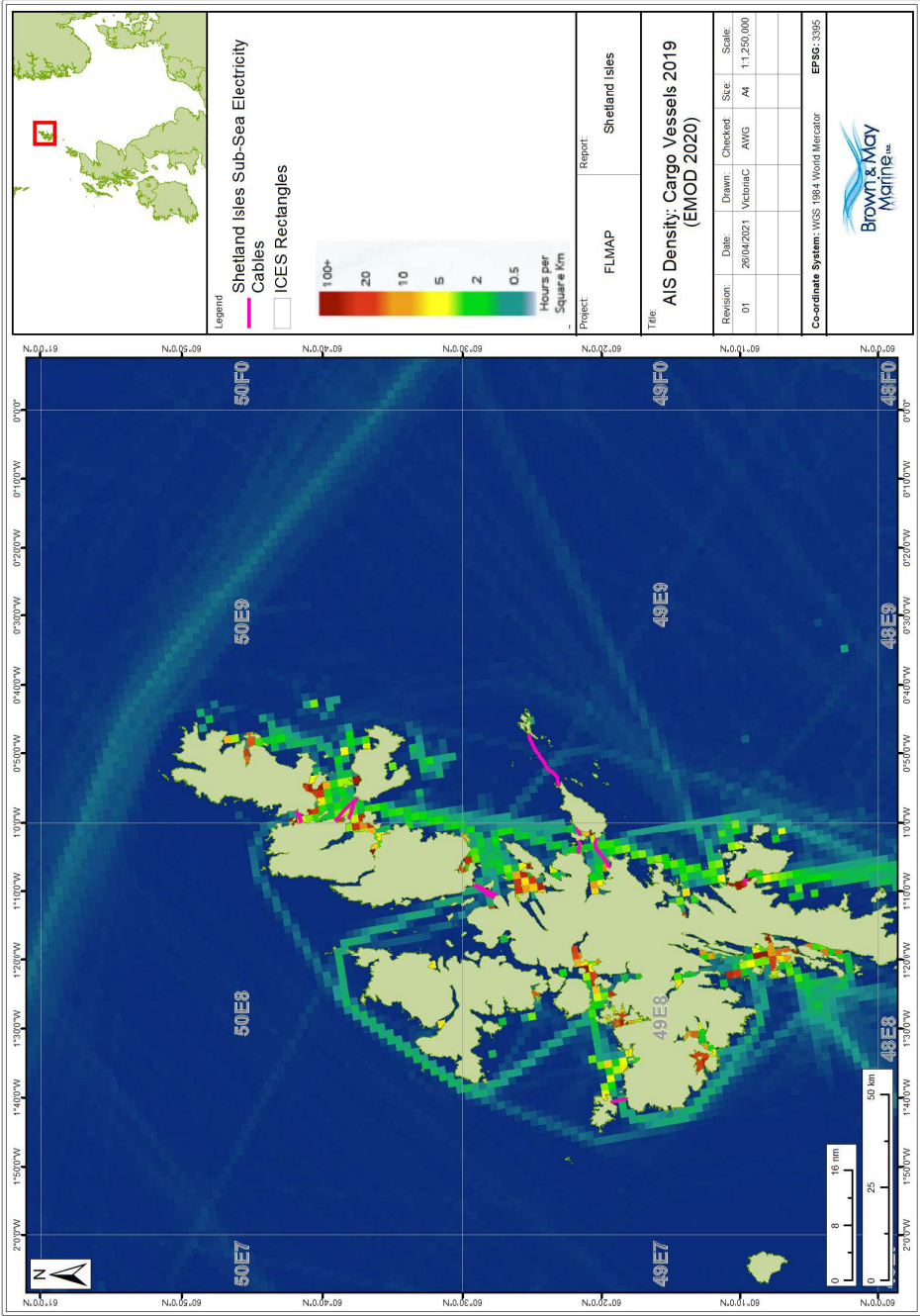


Figure 17 AIS density for cargo vessels (EMODnet, 2020)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

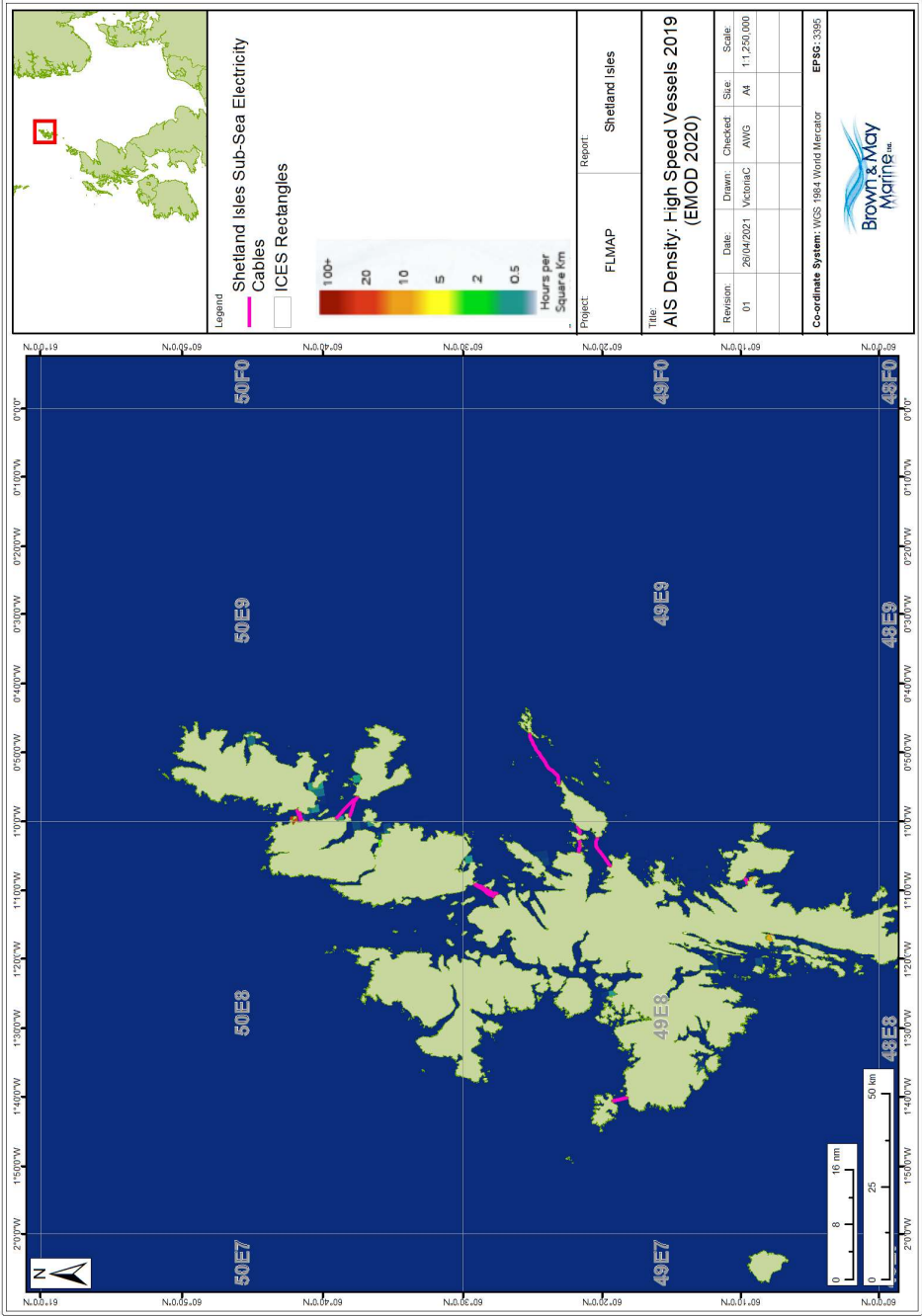


Figure 18 AIS density for high speed vessels (EMODnet, 2020)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
	Distribution	✓	Transmission	✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

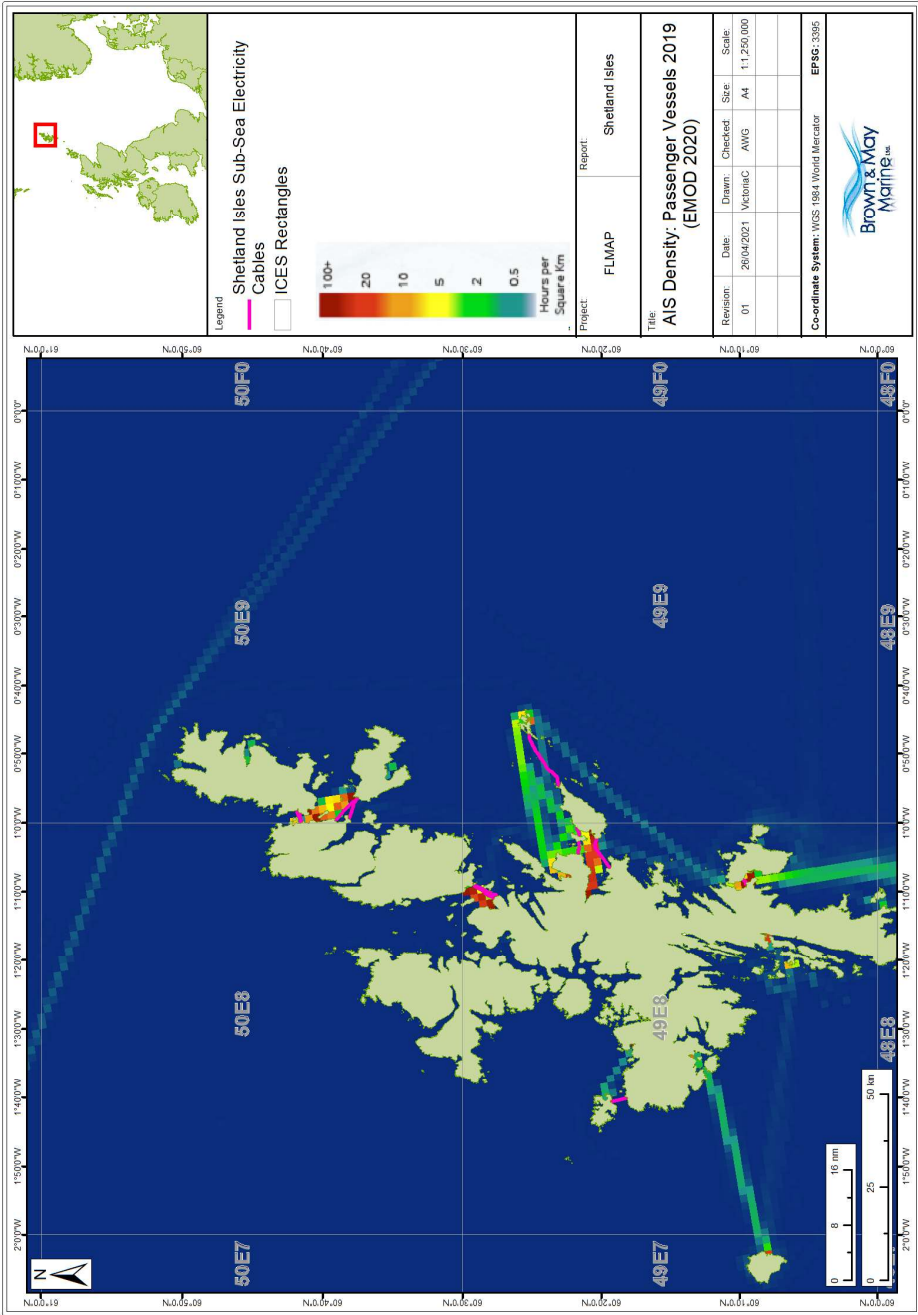


Figure 19 AIS density for passenger vessels (EMODnet, 2020)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00		Internal Use	Issue Date:	Review Date:

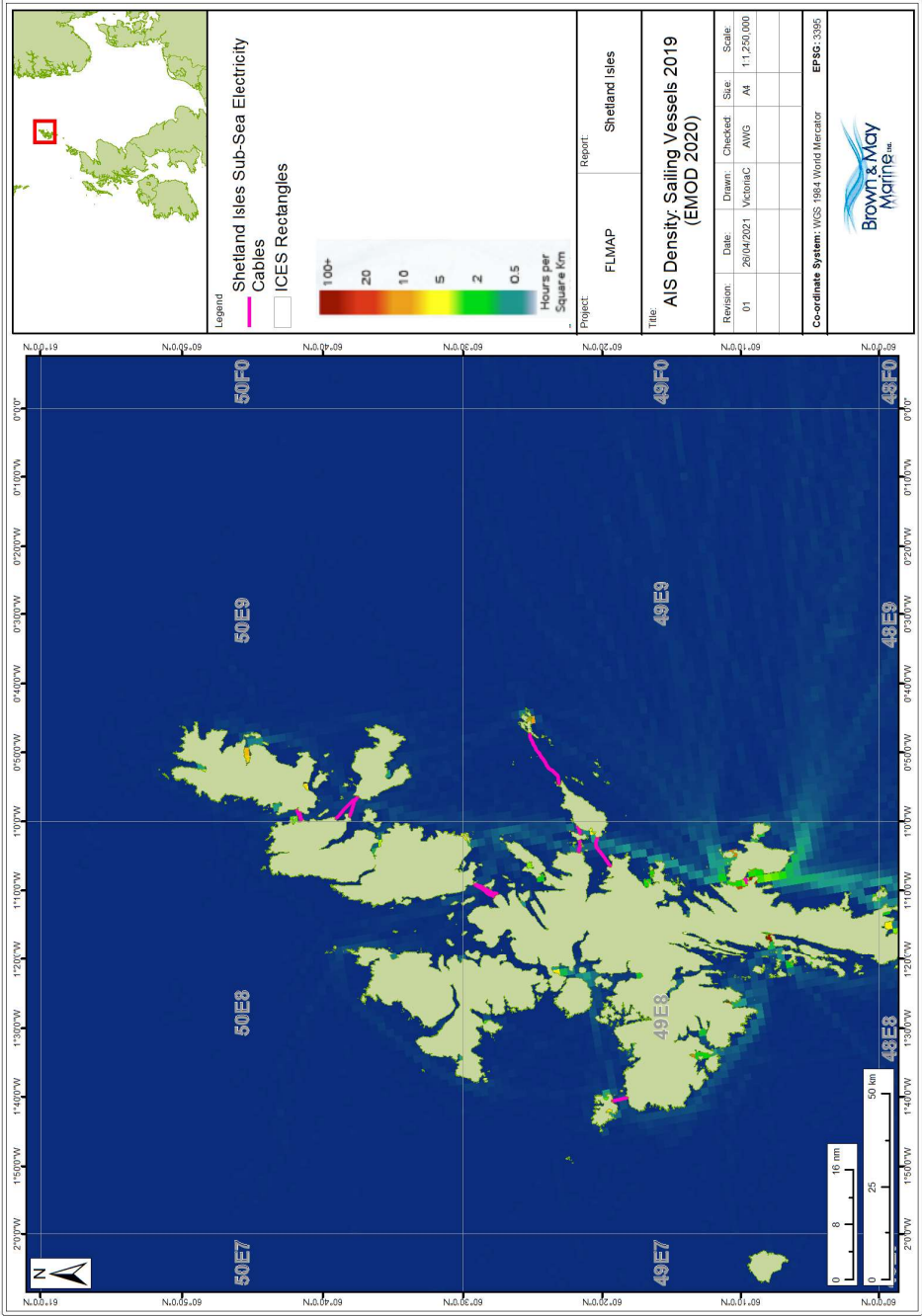


Figure 20 AIS density for sailing vessels (EMODnet, 2020)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

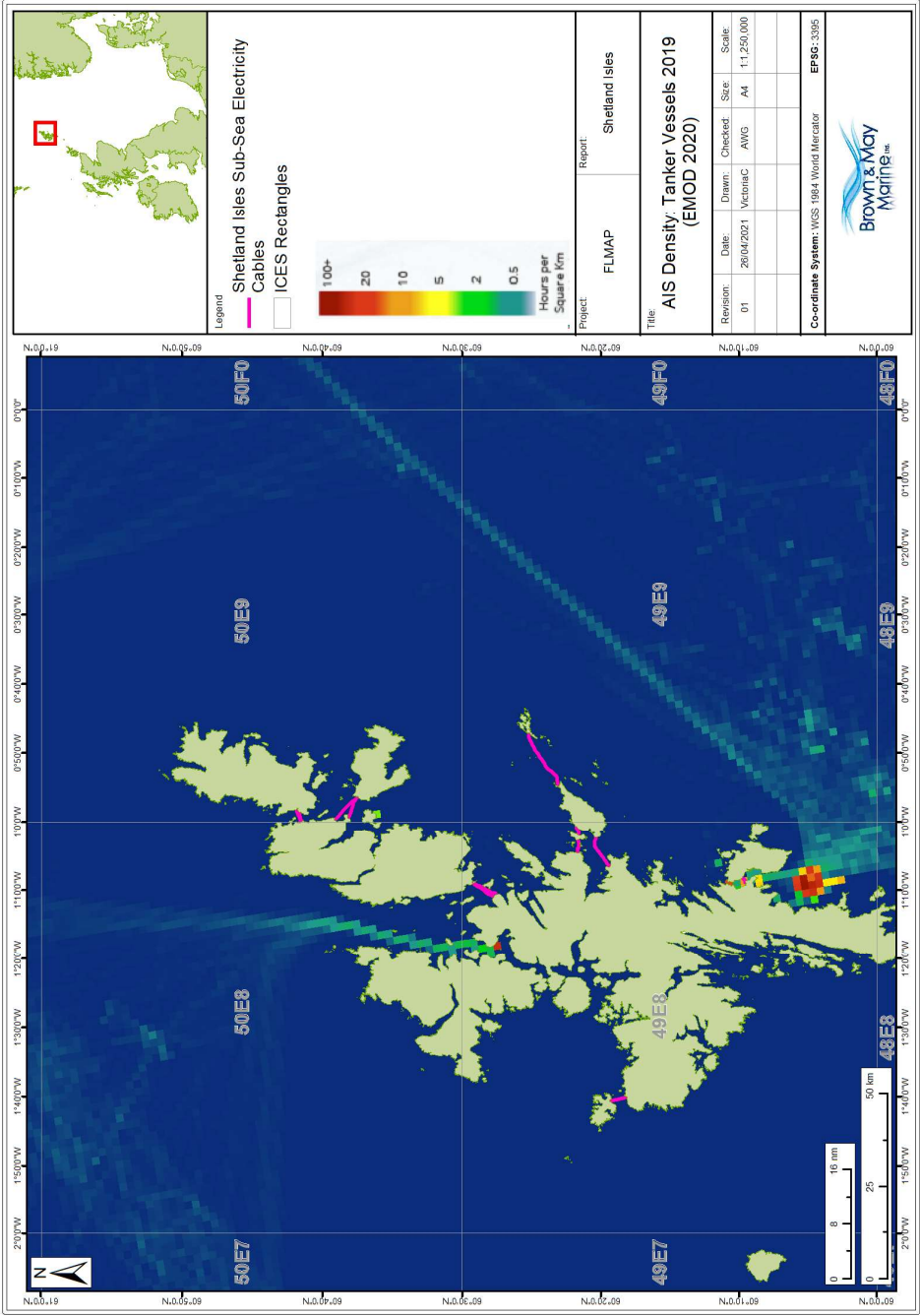


Figure 21 AIS density for tankers (EMODnet, 2020)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
	Internal Use		Distribution ✓	Transmission ✗
Revision: 1.00	Issue Date:		Review Date:	

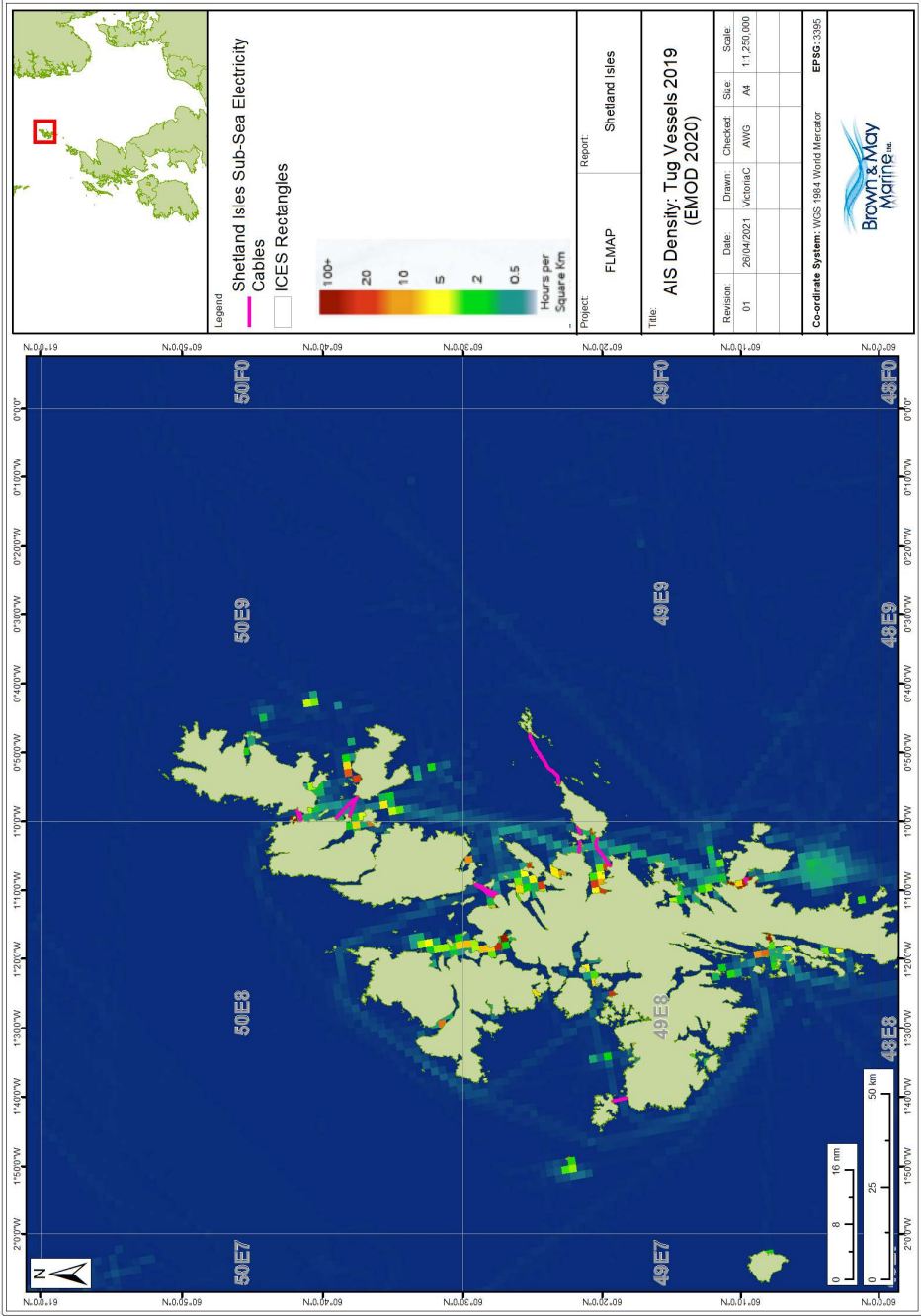


Figure 22 AIS density for tugs (EMODnet, 2020)

	Fishing Liaison Mitigation Action Plan for Shetland			Applies to	
		Distribution	✓	Transmission	✗
Revision: 1.00	Internal Use	Issue Date:		Review Date:	

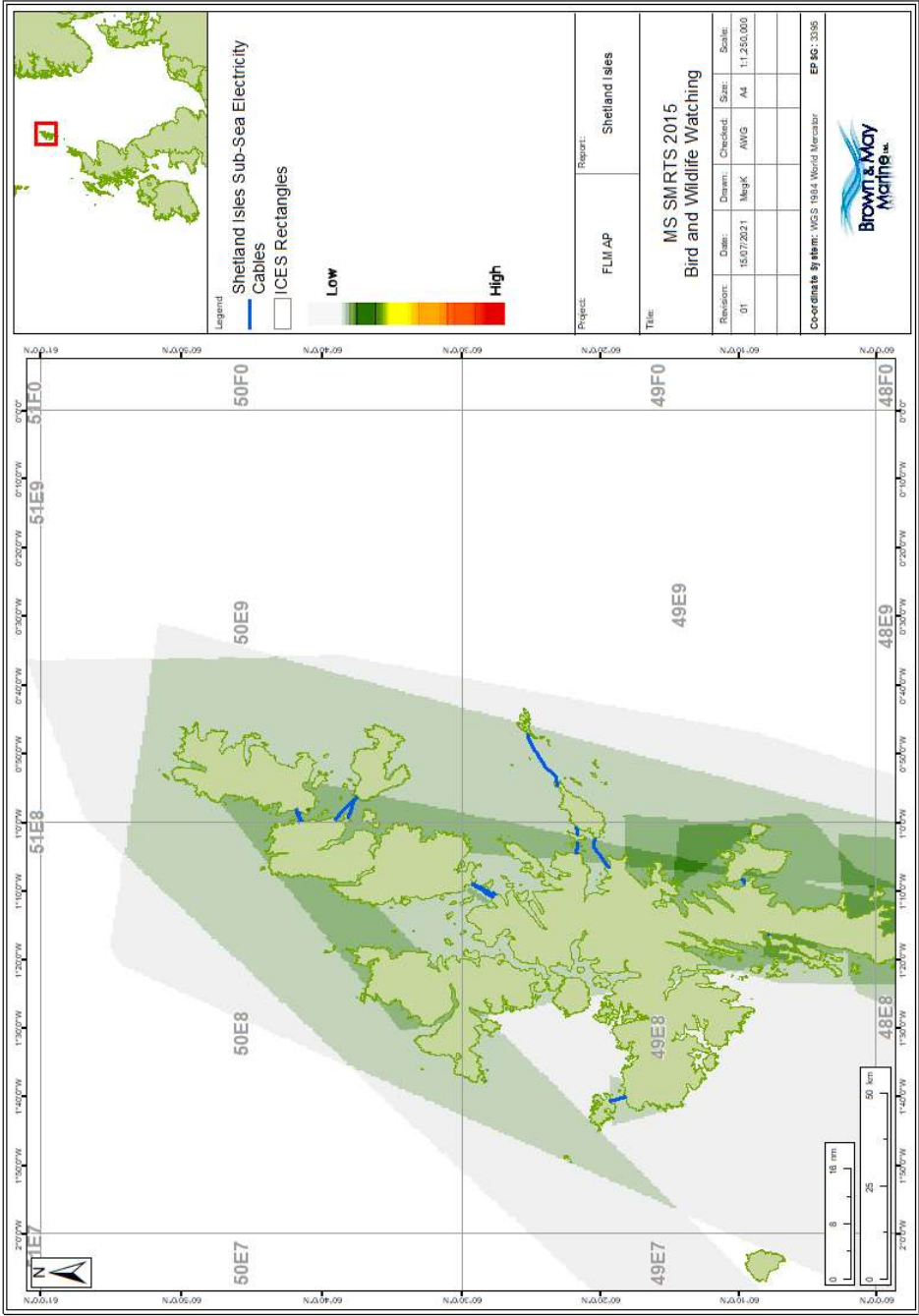


Figure 23 Bird and wildlife watching (Marine Scotland 2018)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

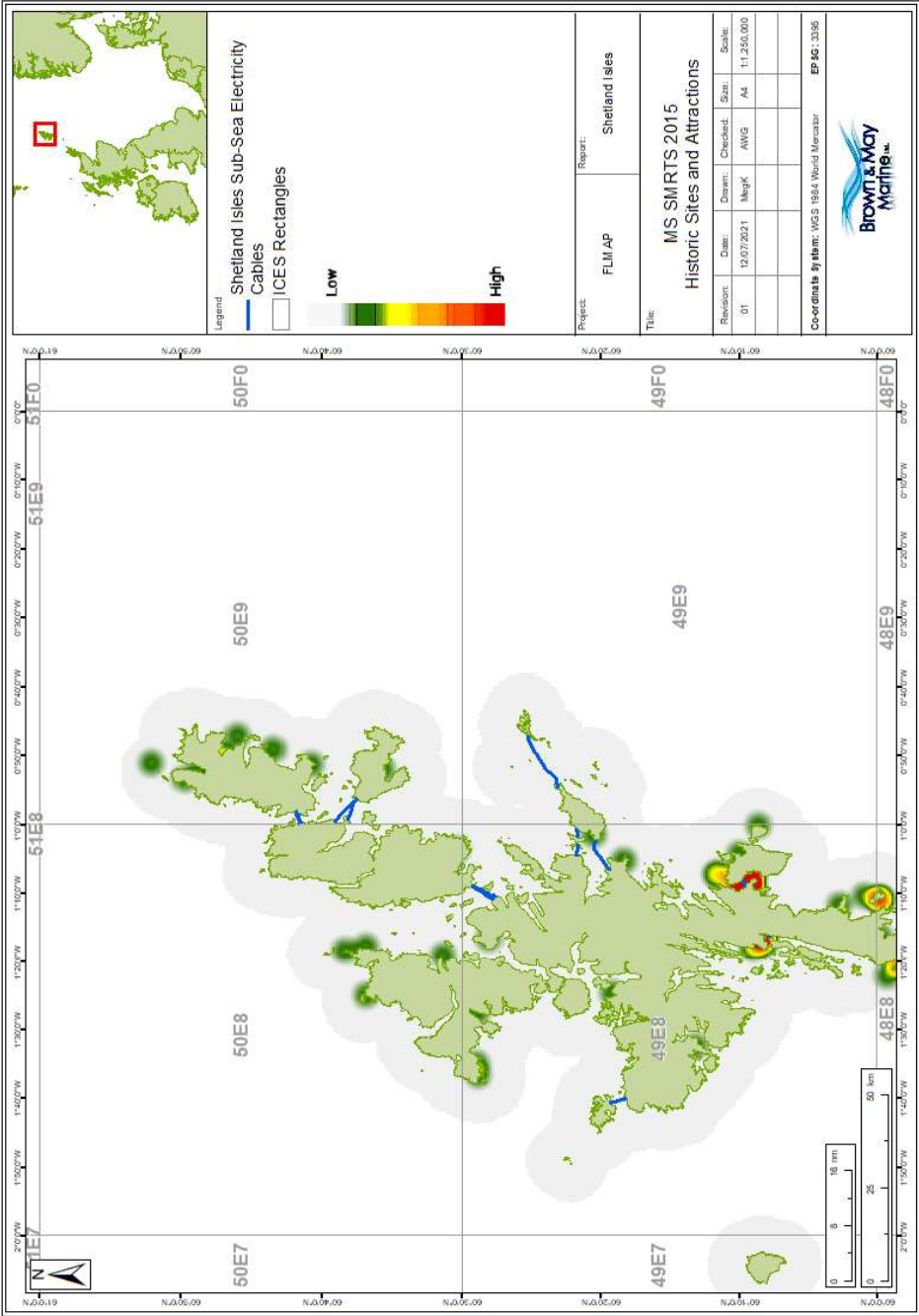


Figure 24 Historic sites and attractions (Marine Scotland 2018)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

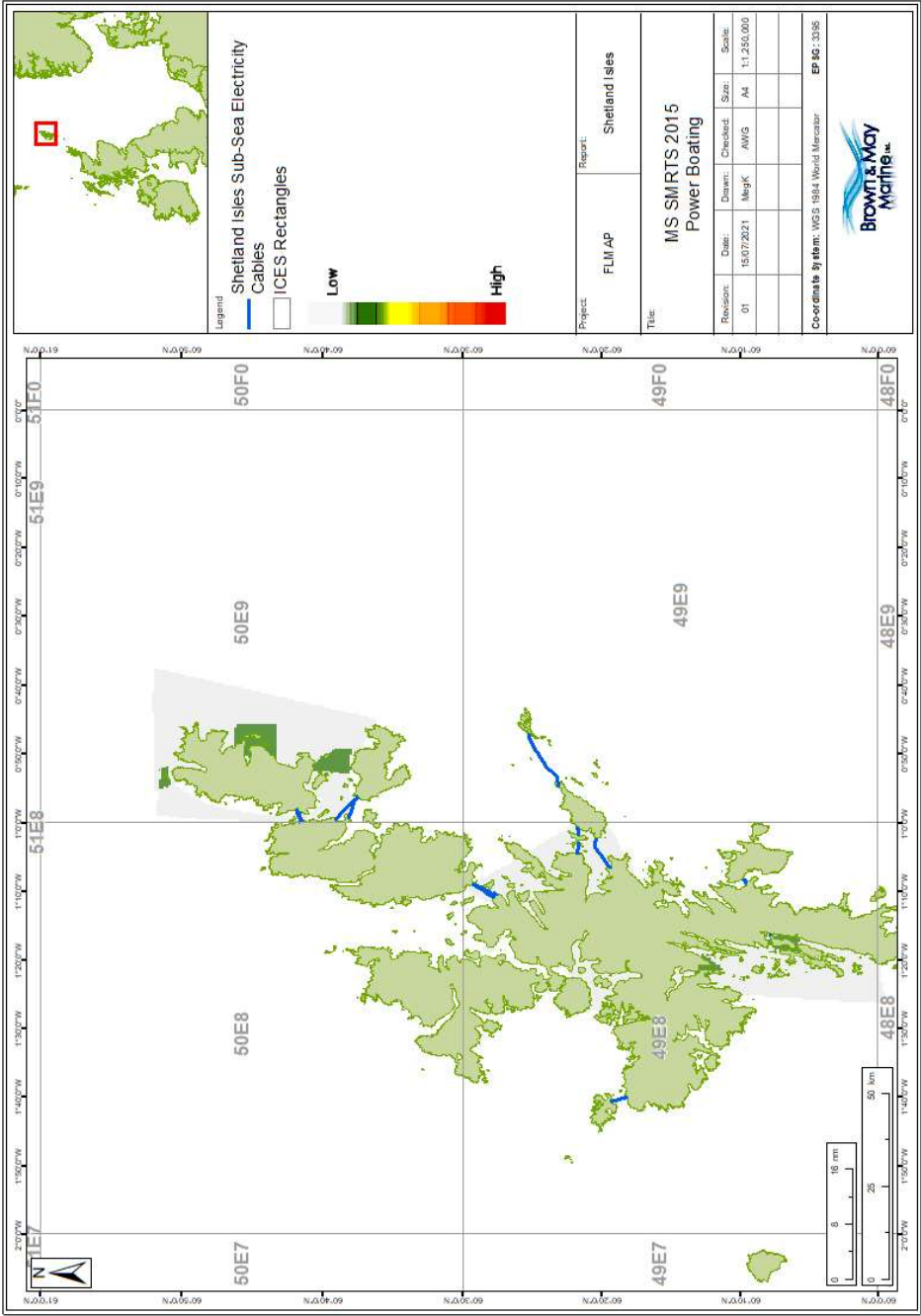


Figure 25 Power boating (Marine Scotland 2018)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
	Distribution	✓	Transmission	✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

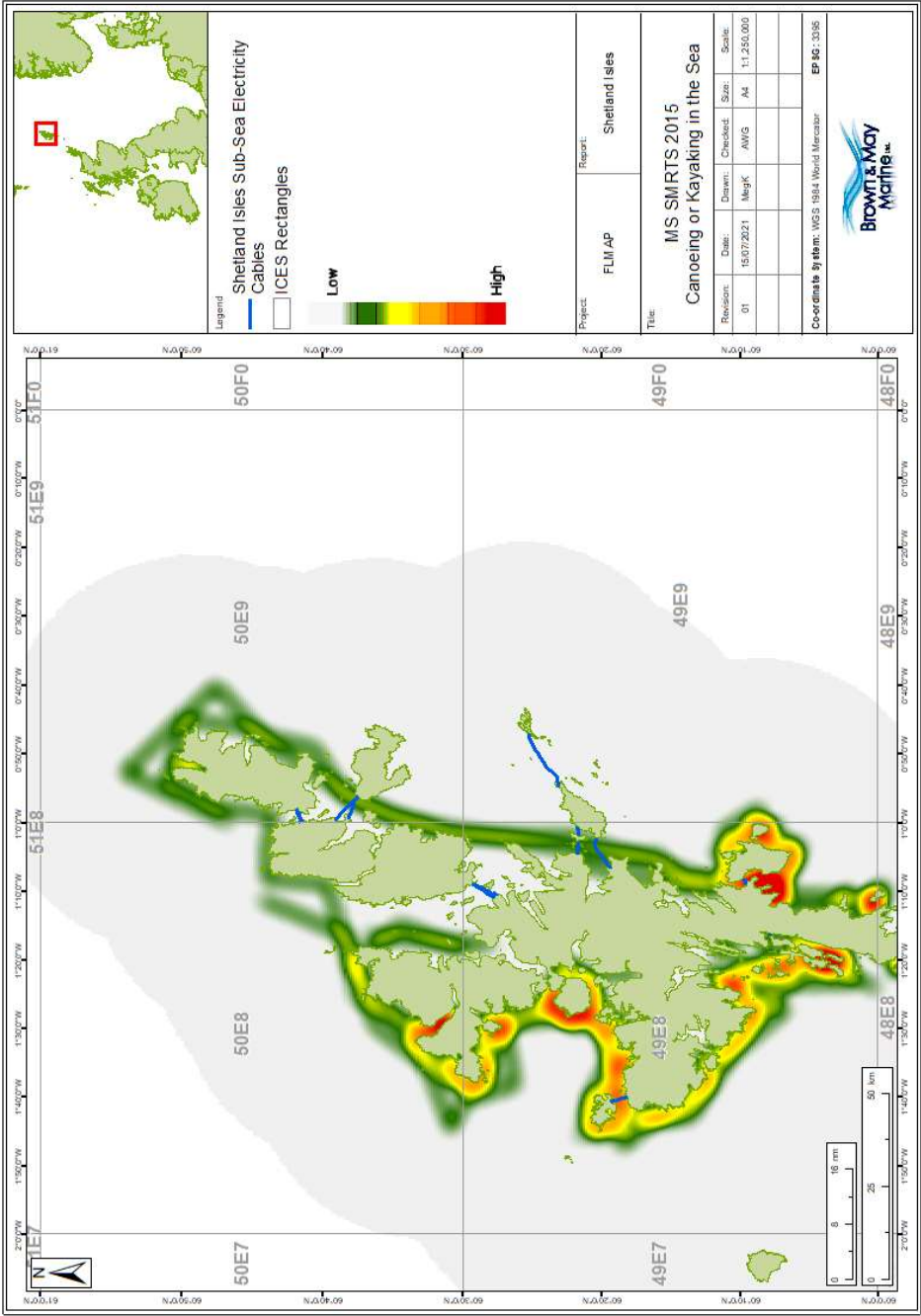


Figure 26 Canoeing and kayaking (Marine Scotland 2018)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
	Distribution	✓	Transmission	✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

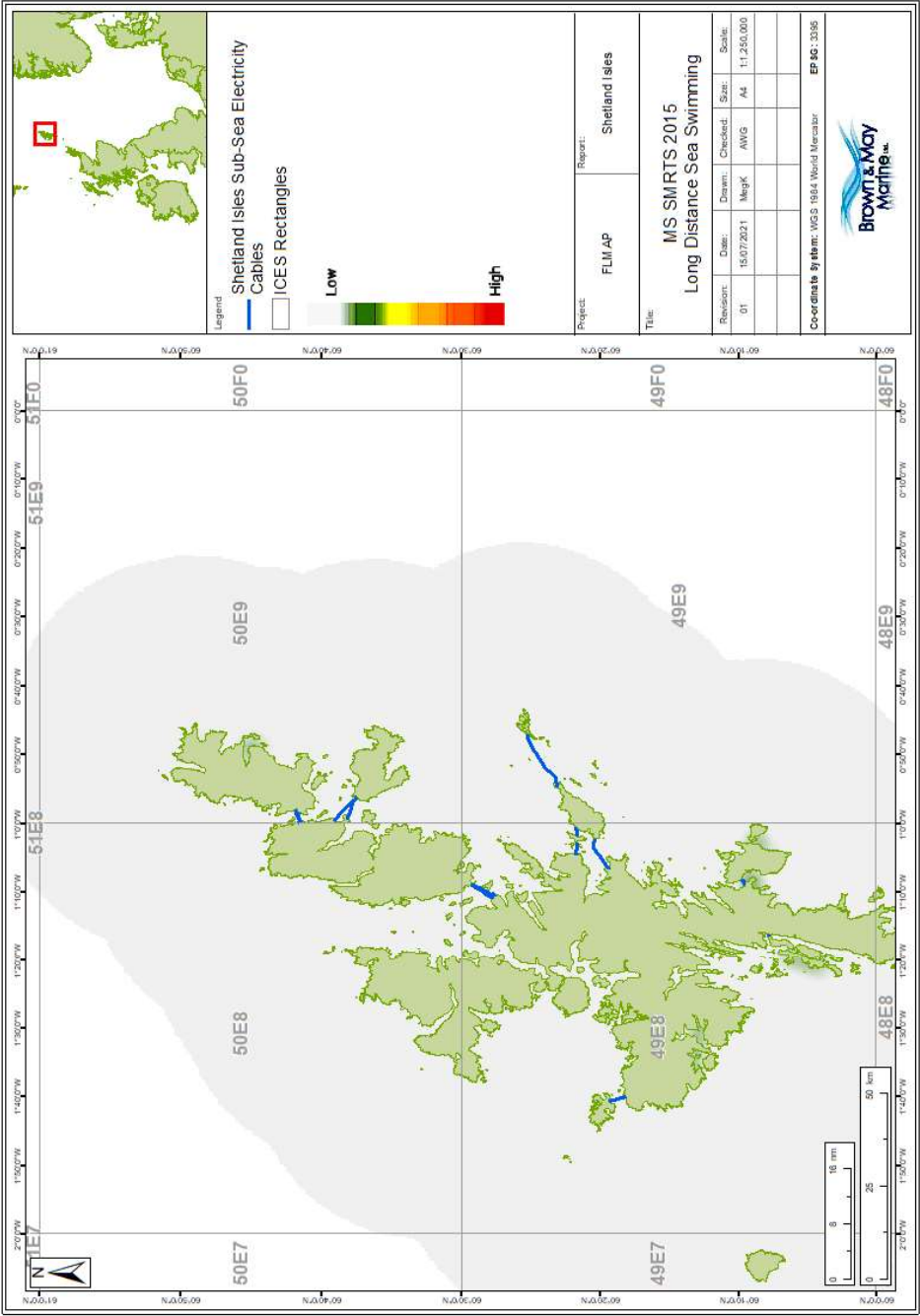


Figure 27 Long distance swimming (Marine Scotland 2018)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

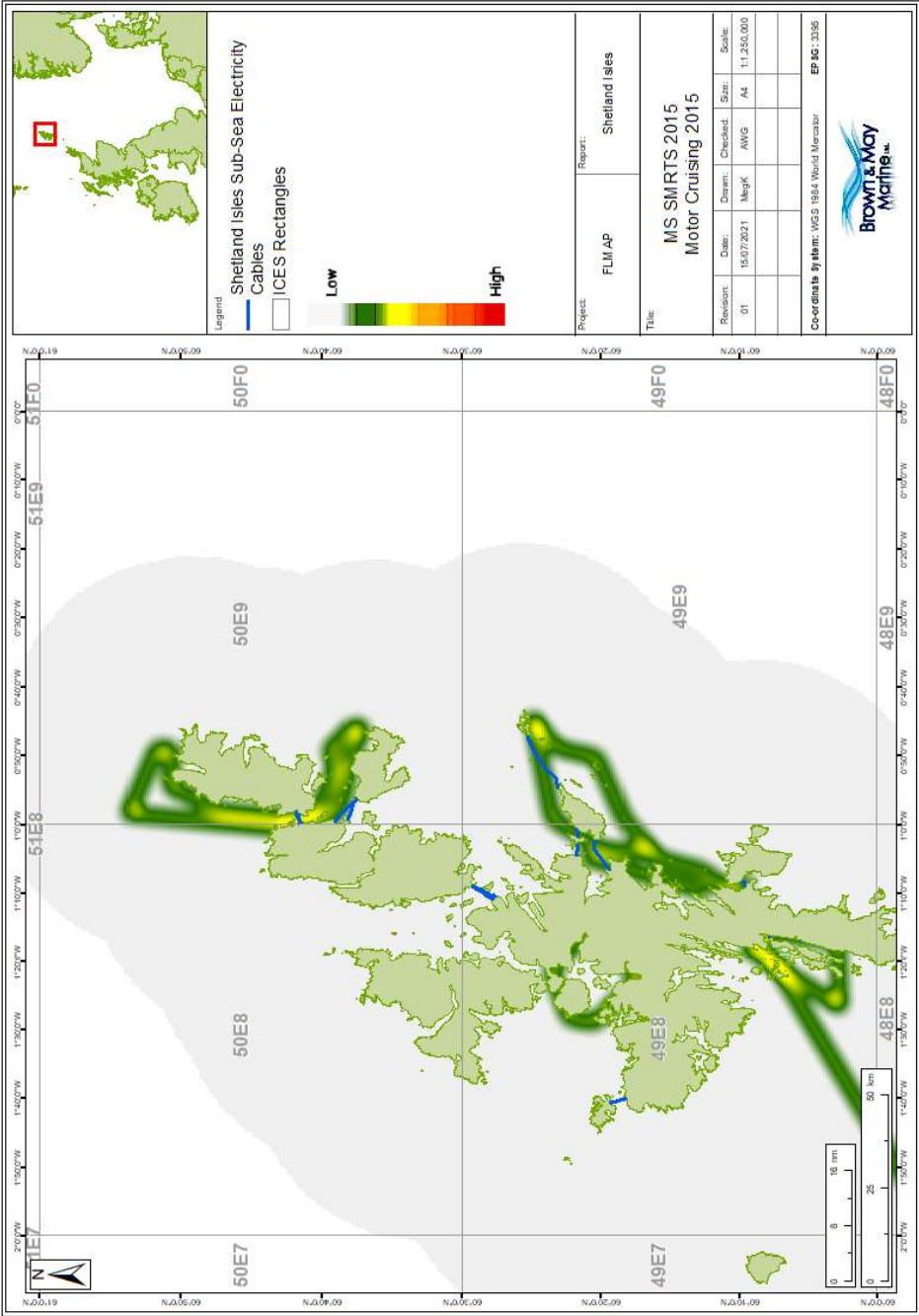


Figure 28 Motor cruising (Marine Scotland 2018)

	Fishing Liaison Mitigation Action Plan for Shetland			Applies to	
		Distribution	✓	Transmission	✗
Revision: 1.00	Internal Use	Issue Date:		Review Date:	

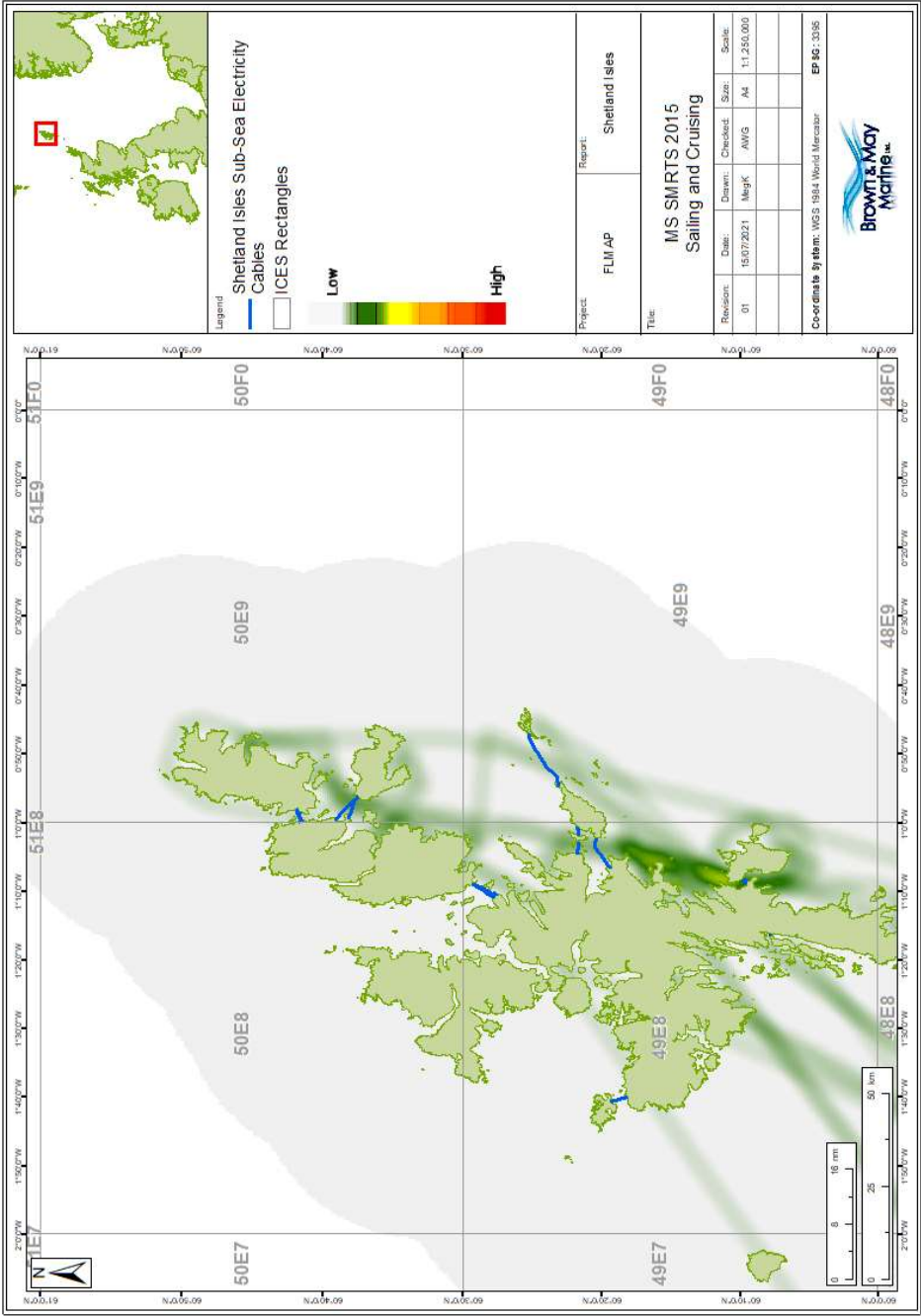


Figure 29 Sailing and cruising (Marine Scotland 2018)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

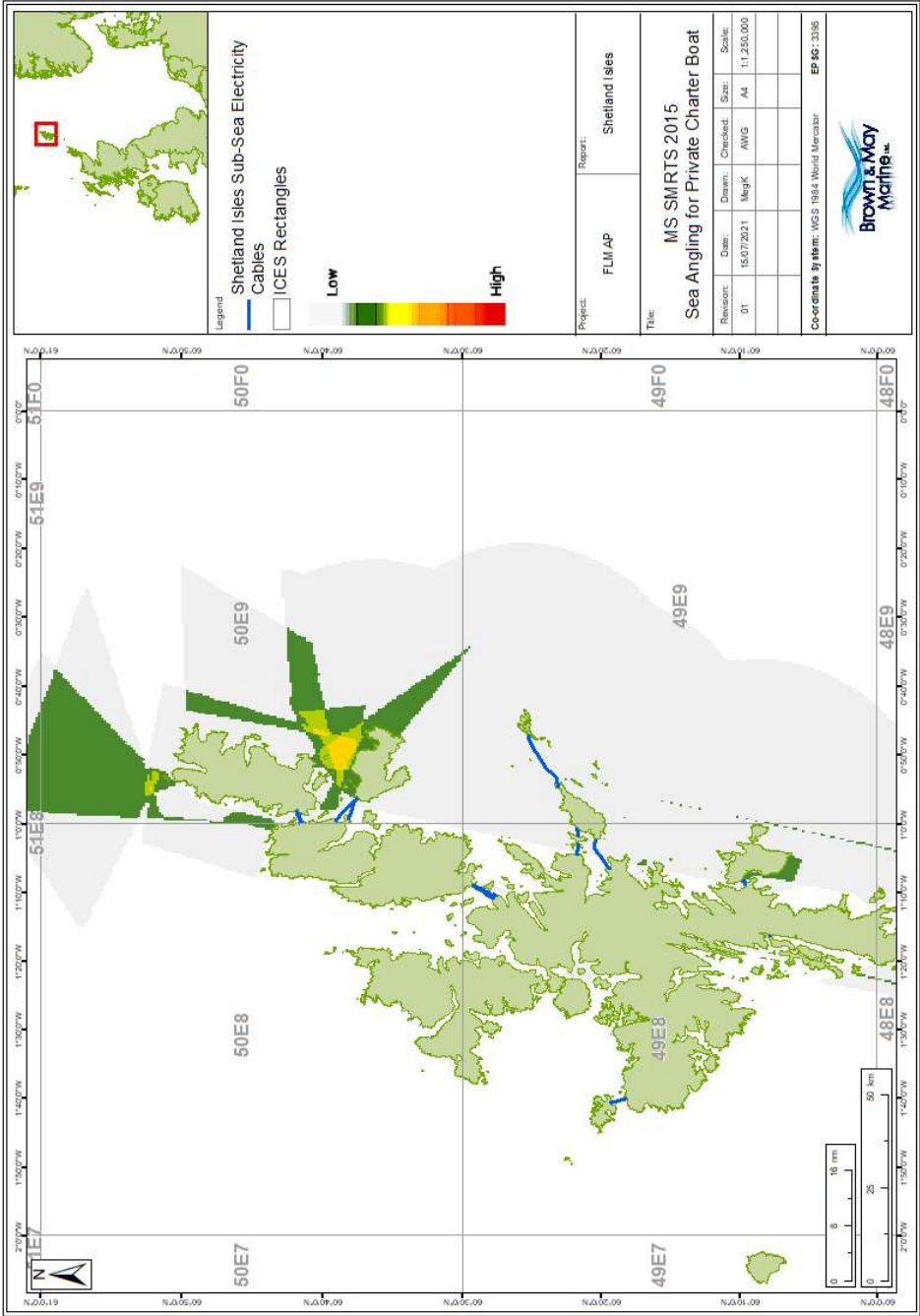


Figure 30 Chartered angling (Marine Scotland 2018)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

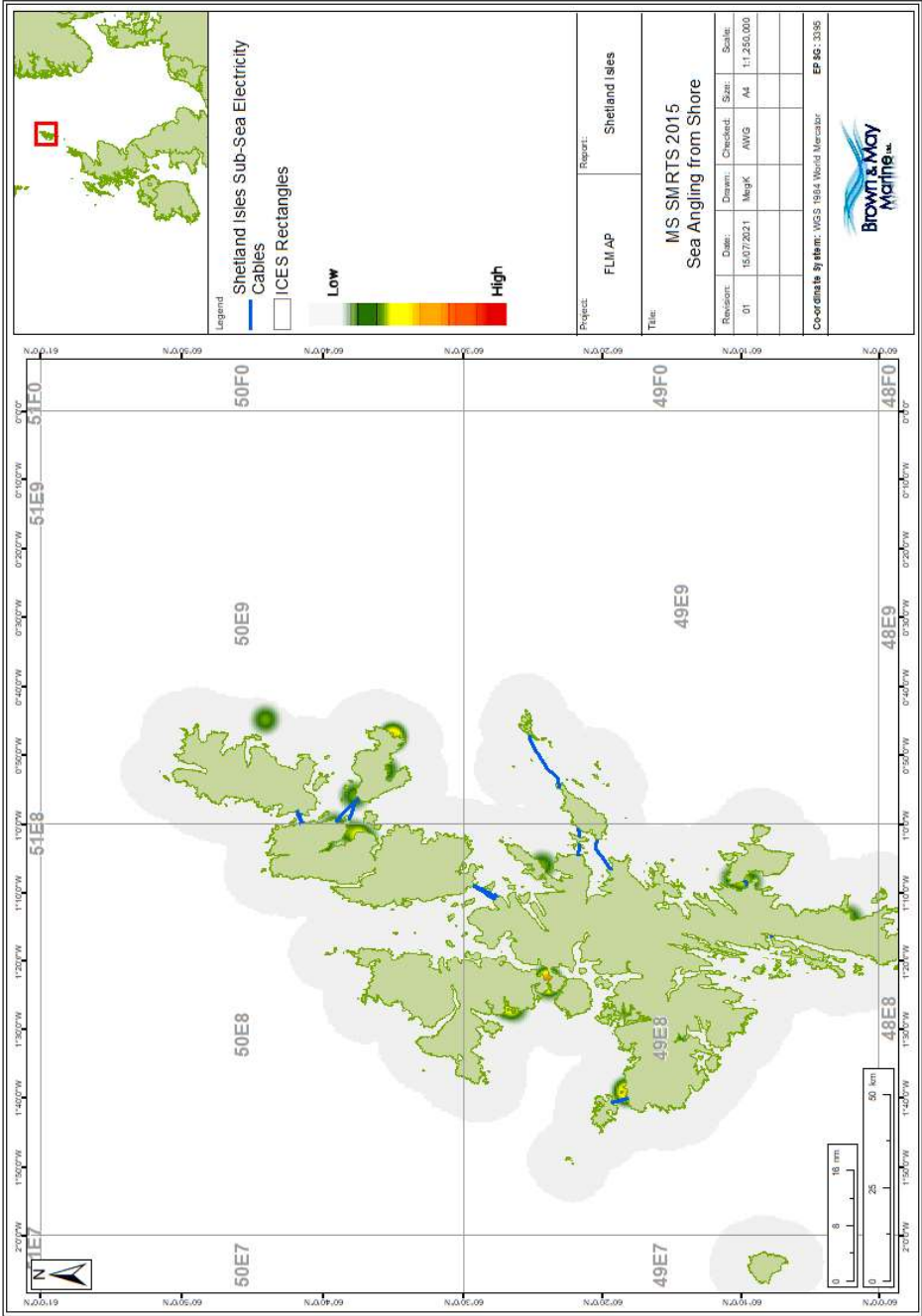


Figure 31 Sea angling from shore (Marine Scotland 2018)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

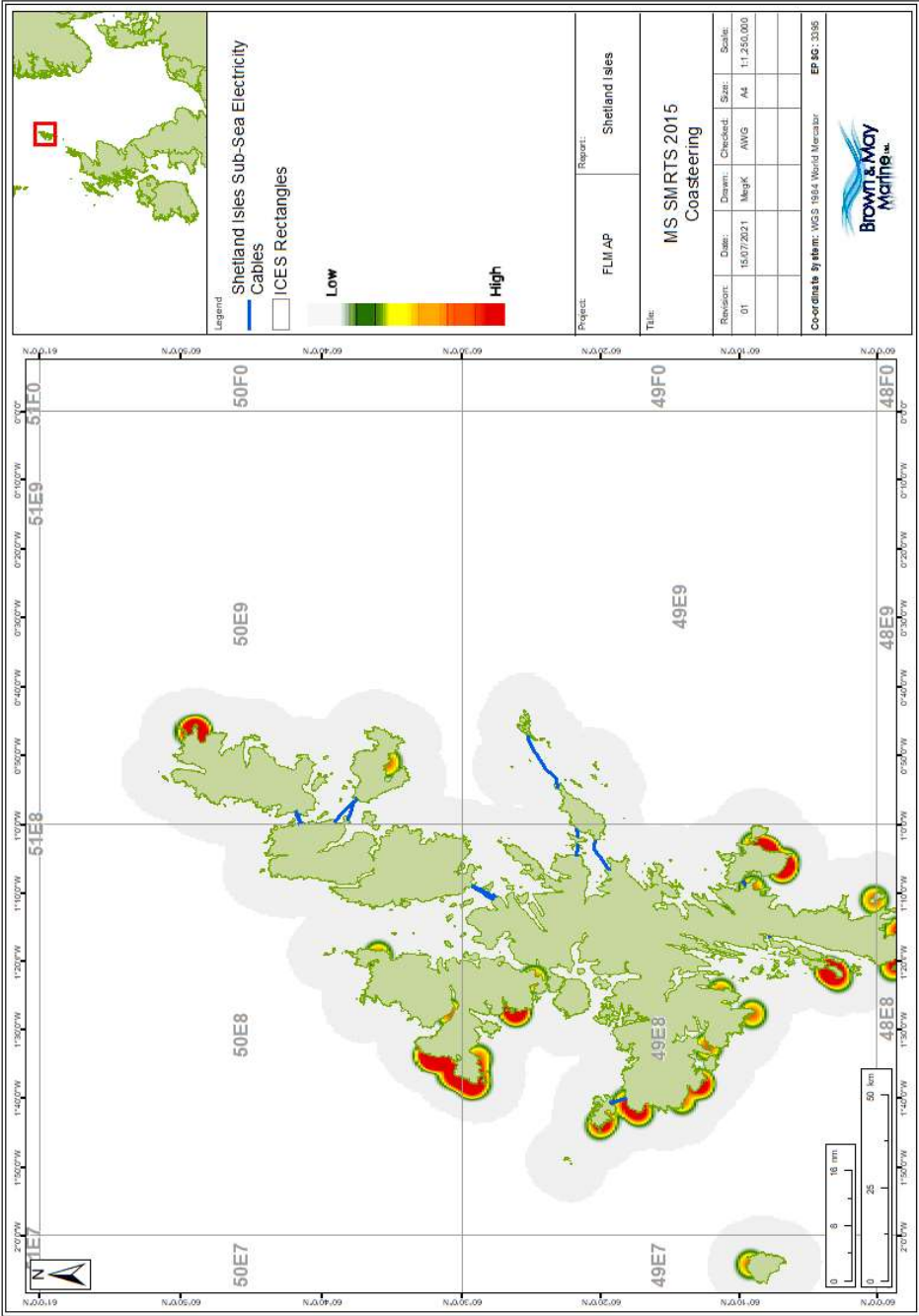


Figure 32 Coasteering (Marine Scotland 2018)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

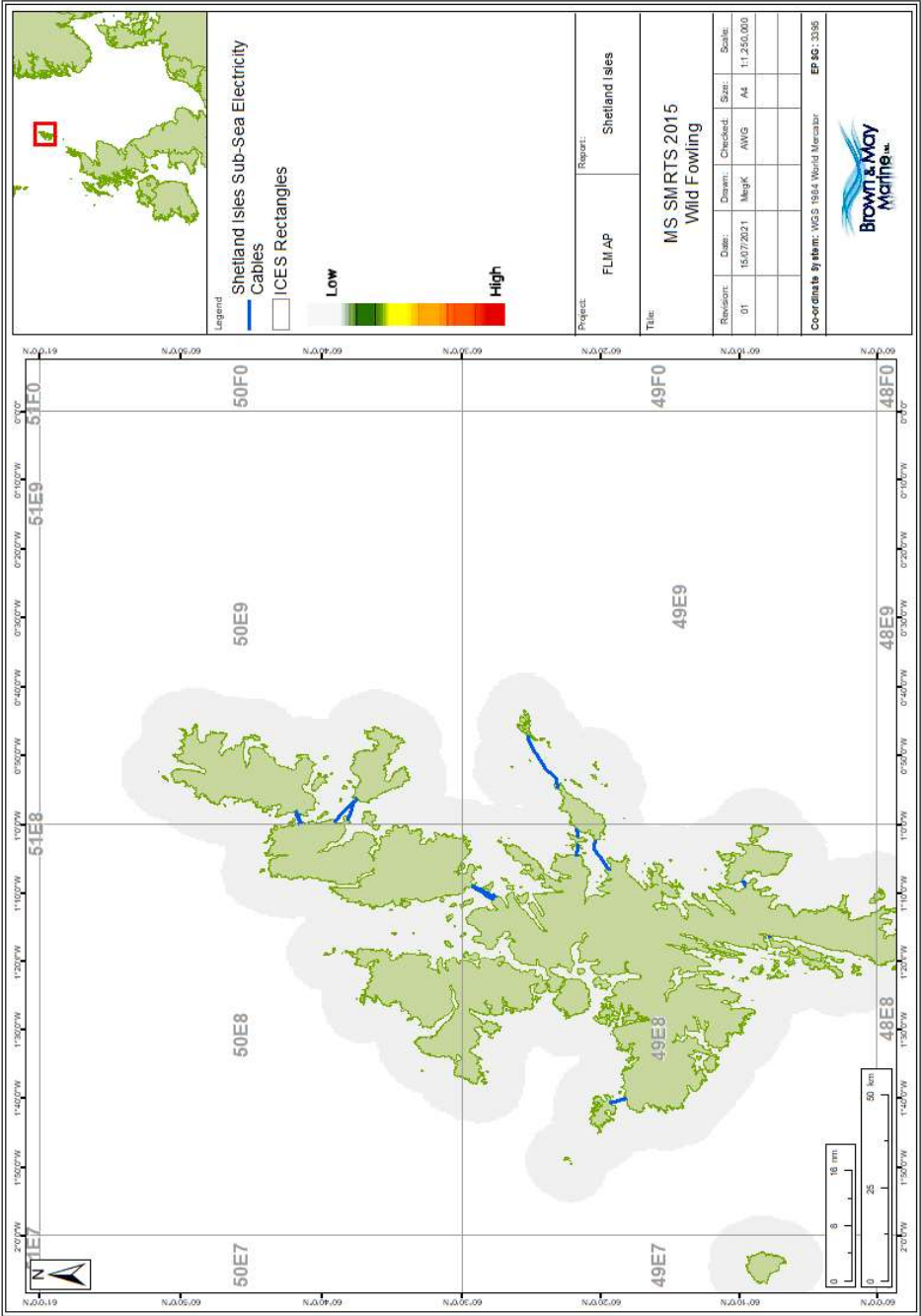


Figure 33 Wildfowling (Marine Scotland 2018)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

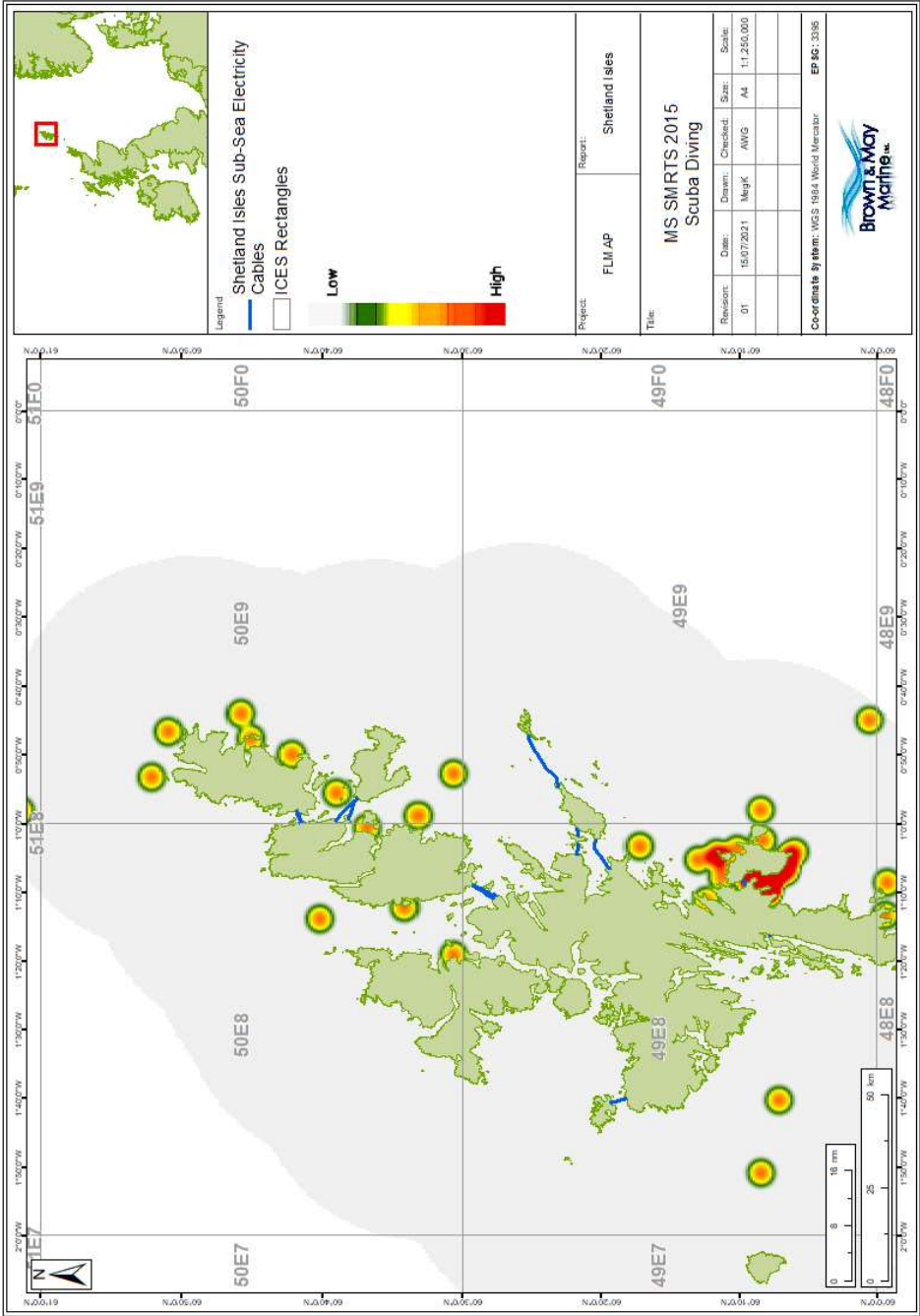


Figure 34 Scuba diving (Marine Scotland 2018)

	Fishing Liaison Mitigation Action Plan for Shetland			Applies to	
		Distribution	✓	Transmission	✗
Revision: 1.00	Internal Use	Issue Date:		Review Date:	

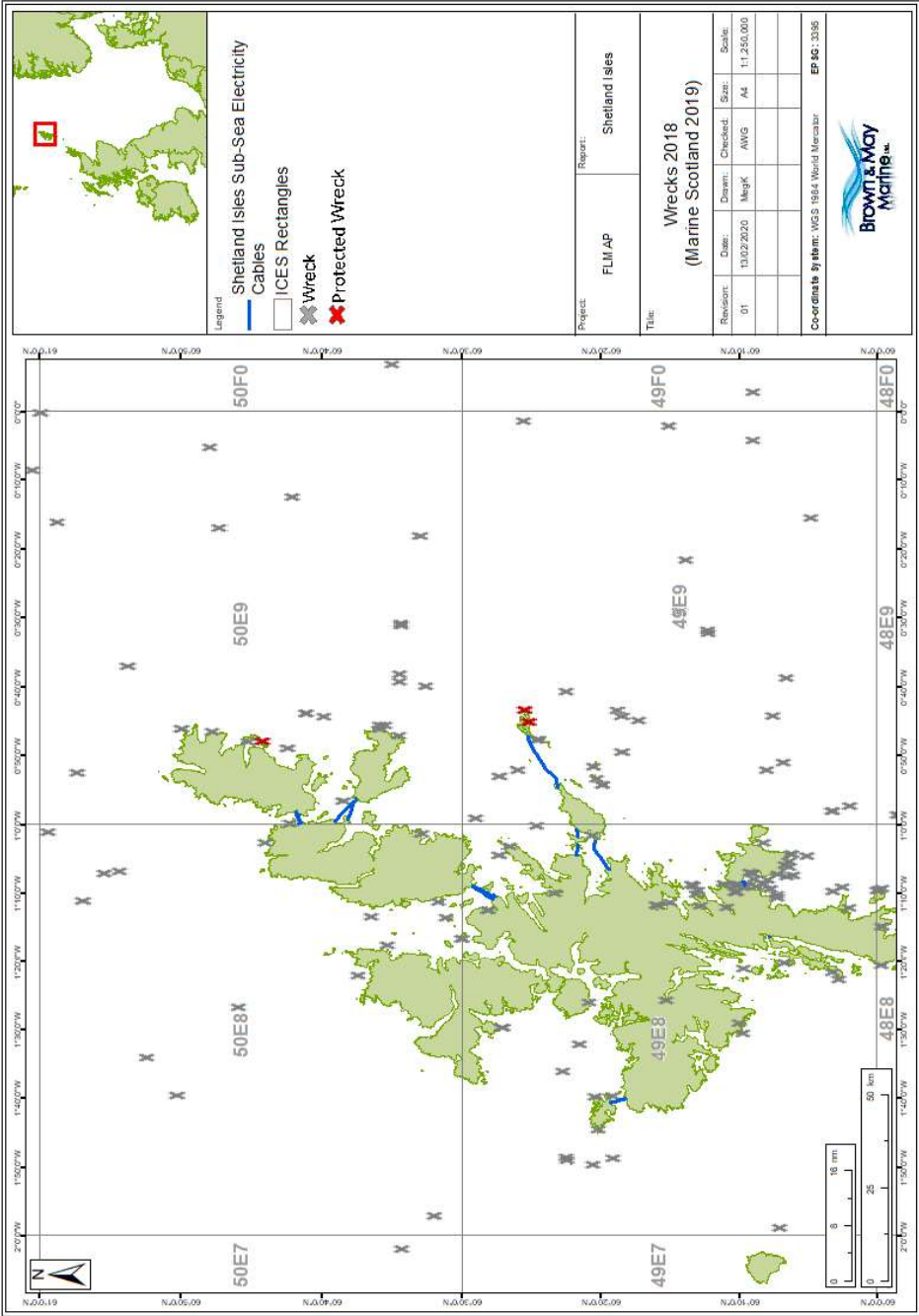


Figure 36 Known wreck sites (Marine Scotland 2019)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

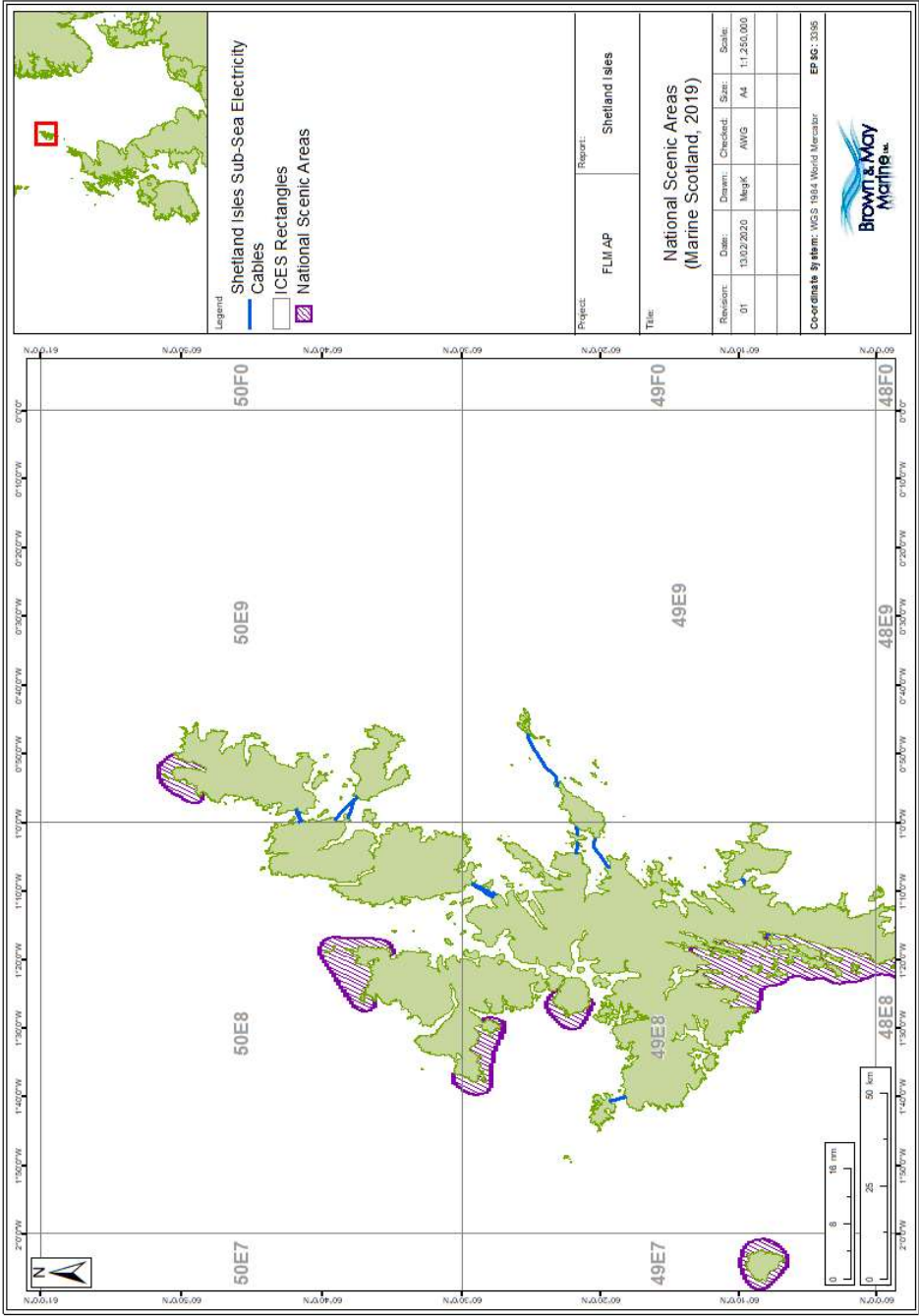


Figure 37 National Scenic Area coastal sites (Marine Scotland 2019)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

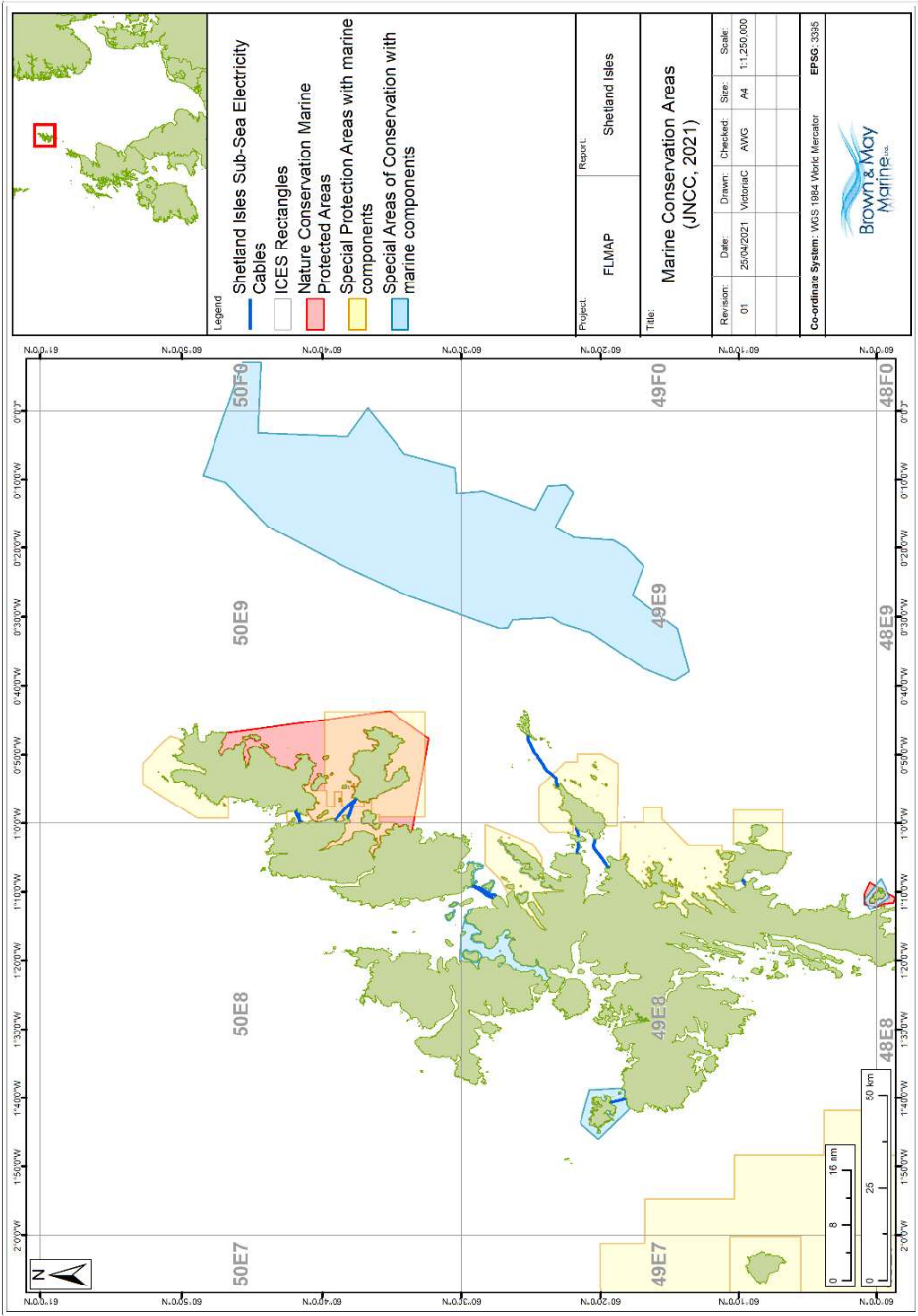


Figure 38 Marine Protected Areas and Special Areas of Conservation with Marine Components (JNCC 2021)

	Fishing Liaison Mitigation Action Plan for Shetland			Applies to	
		Distribution	✓	Transmission	✗
Revision: 1.00	Internal Use	Issue Date:		Review Date:	

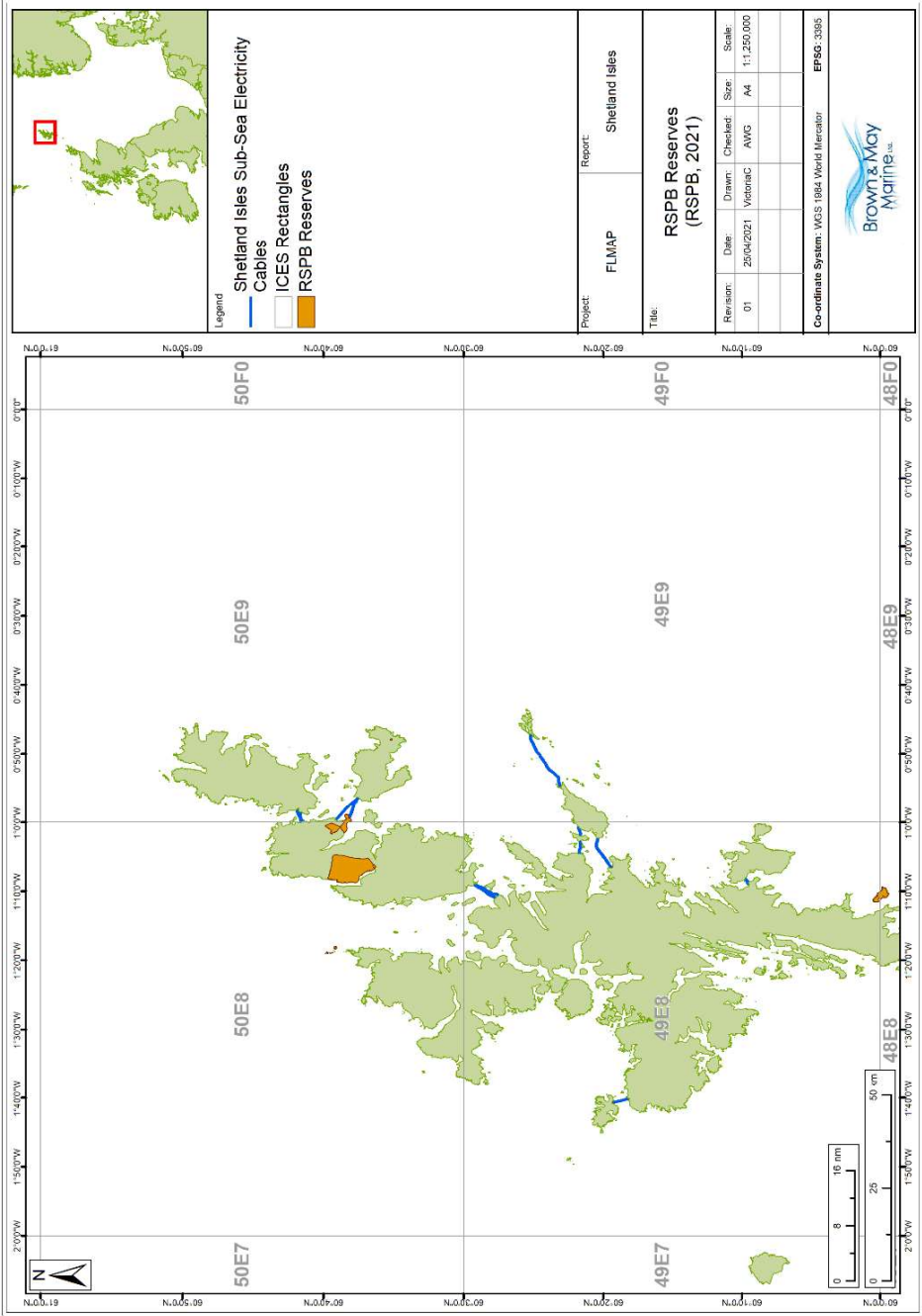


Figure 39 RSPB reserves (Royal Society for the Protection of Birds 2021)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

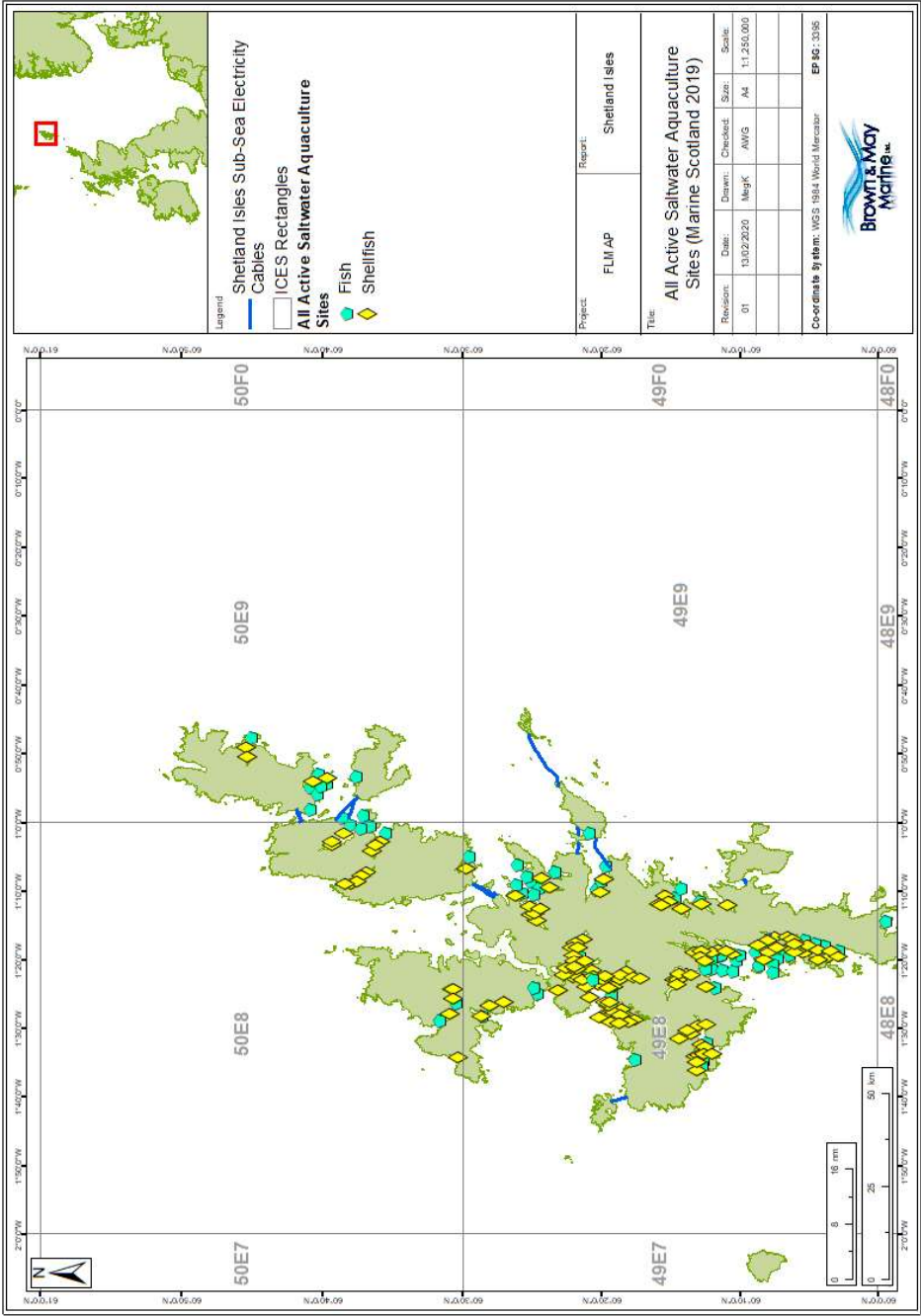


Figure 40 Active saltwater aquaculture sites (Marine Scotland 2021)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

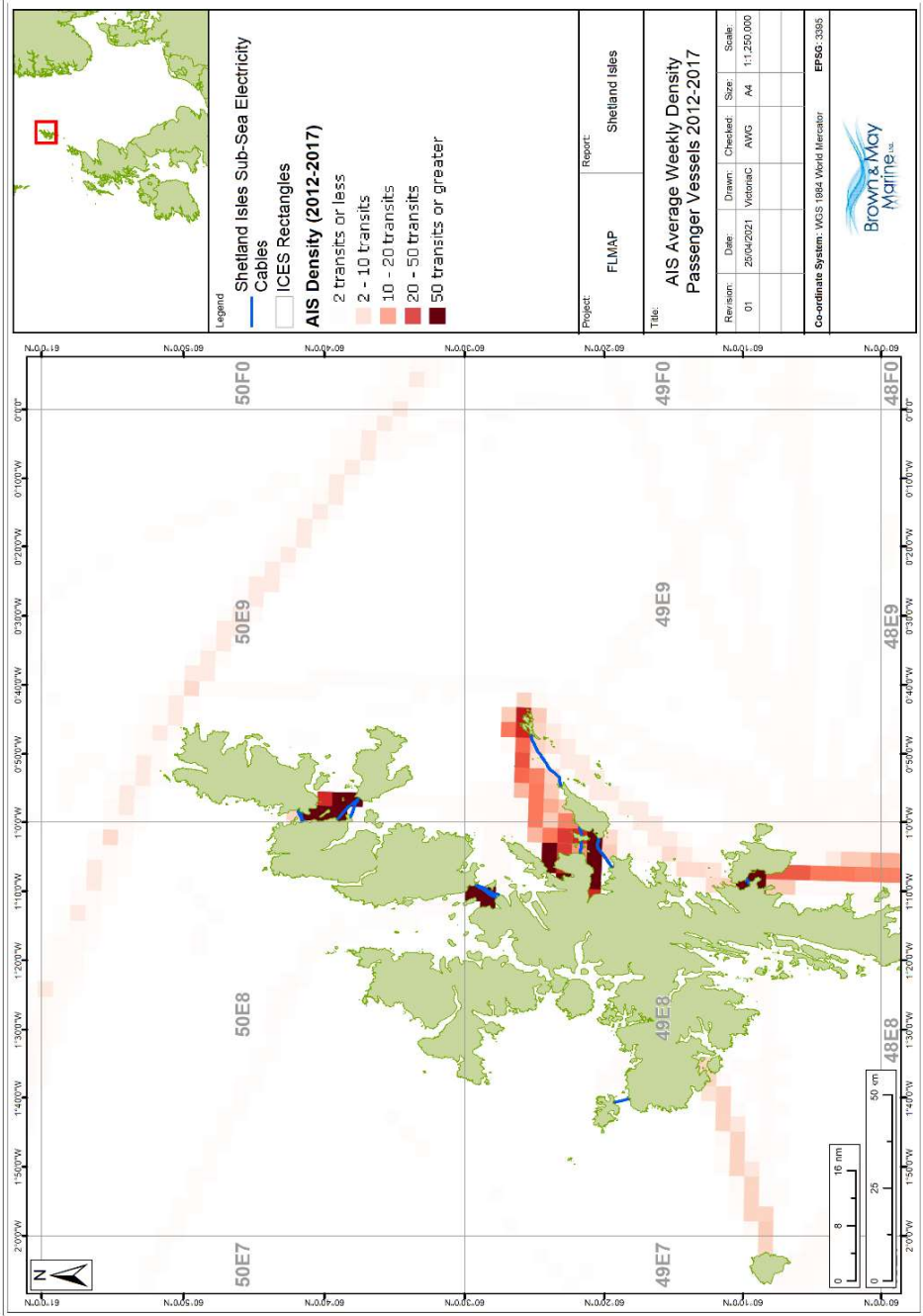


Figure 41 AIS passenger vessels – ferries 2012-2017 (Marine Scotland 2021)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
	Revision: 1.00	Internal Use	Distribution ✓	Transmission ✗
		Issue Date:	Review Date:	

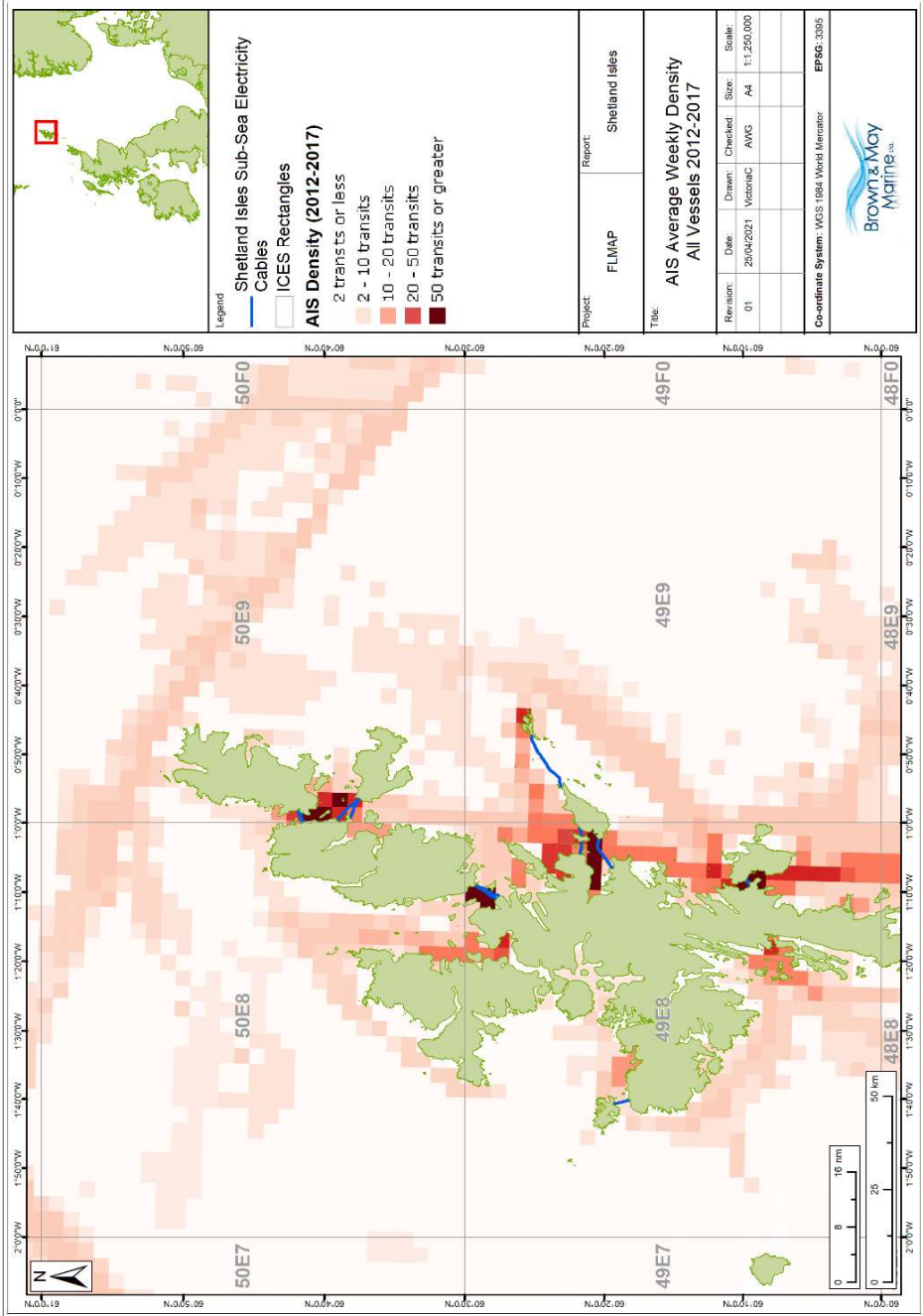


Figure 42 AIS all vessel types 2012-2017 (Marine Scotland 2021)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

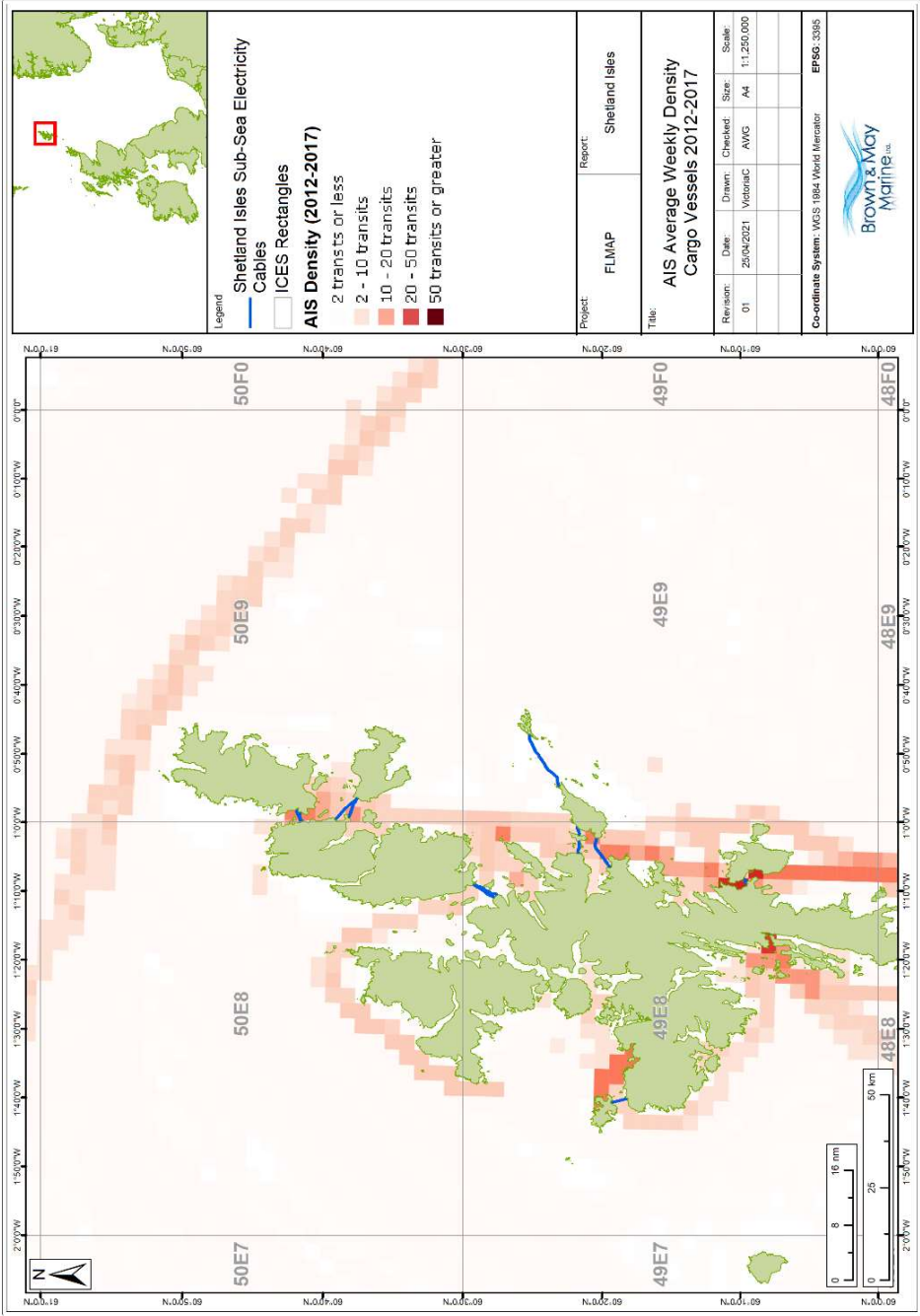


Figure 43 AIS cargo vessels 2012-2017 (Marine Scotland 2021)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
	Distribution	✓	Transmission	✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

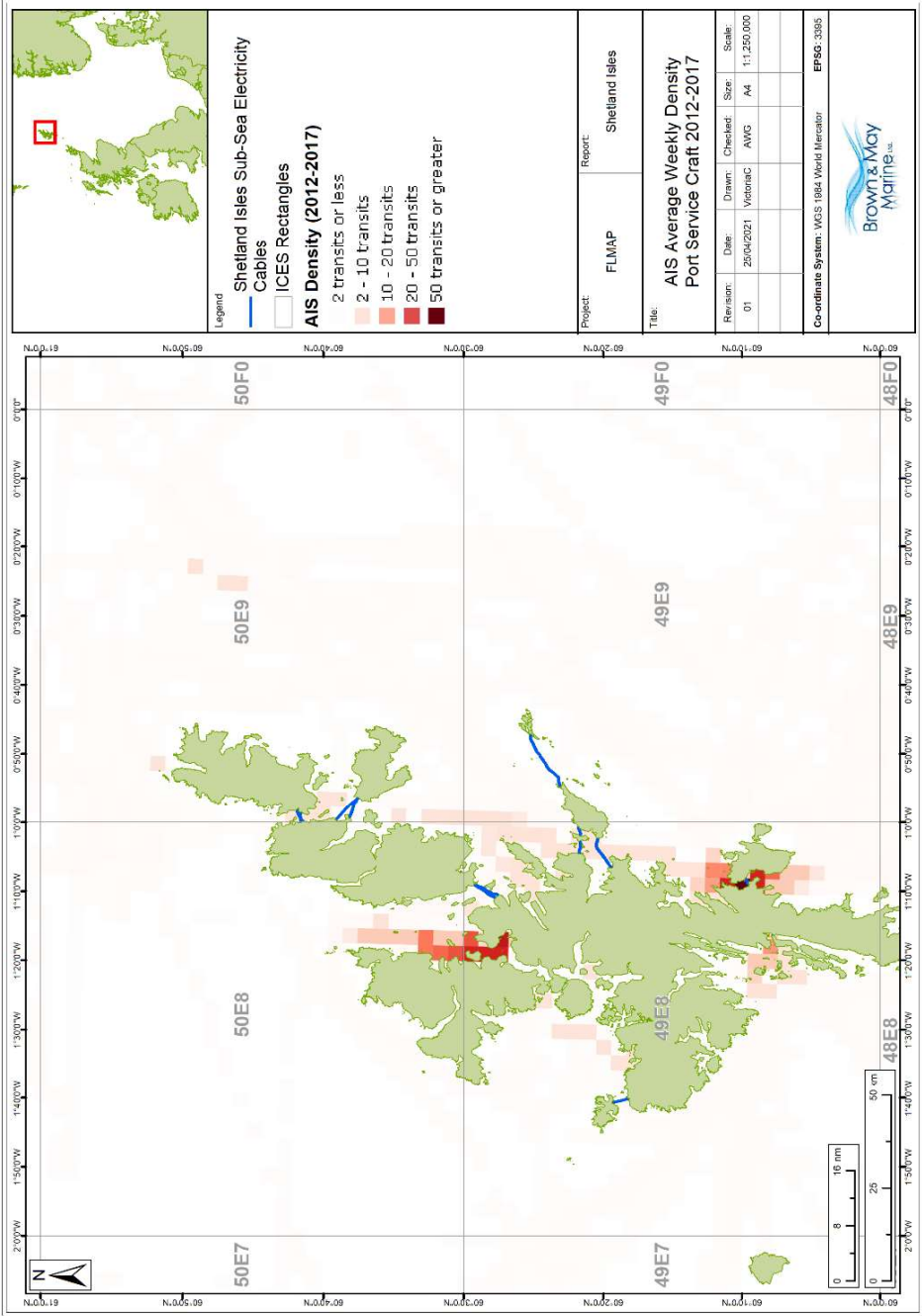


Figure 44 Port service craft 2012-2017 (Marine Scotland 2021)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

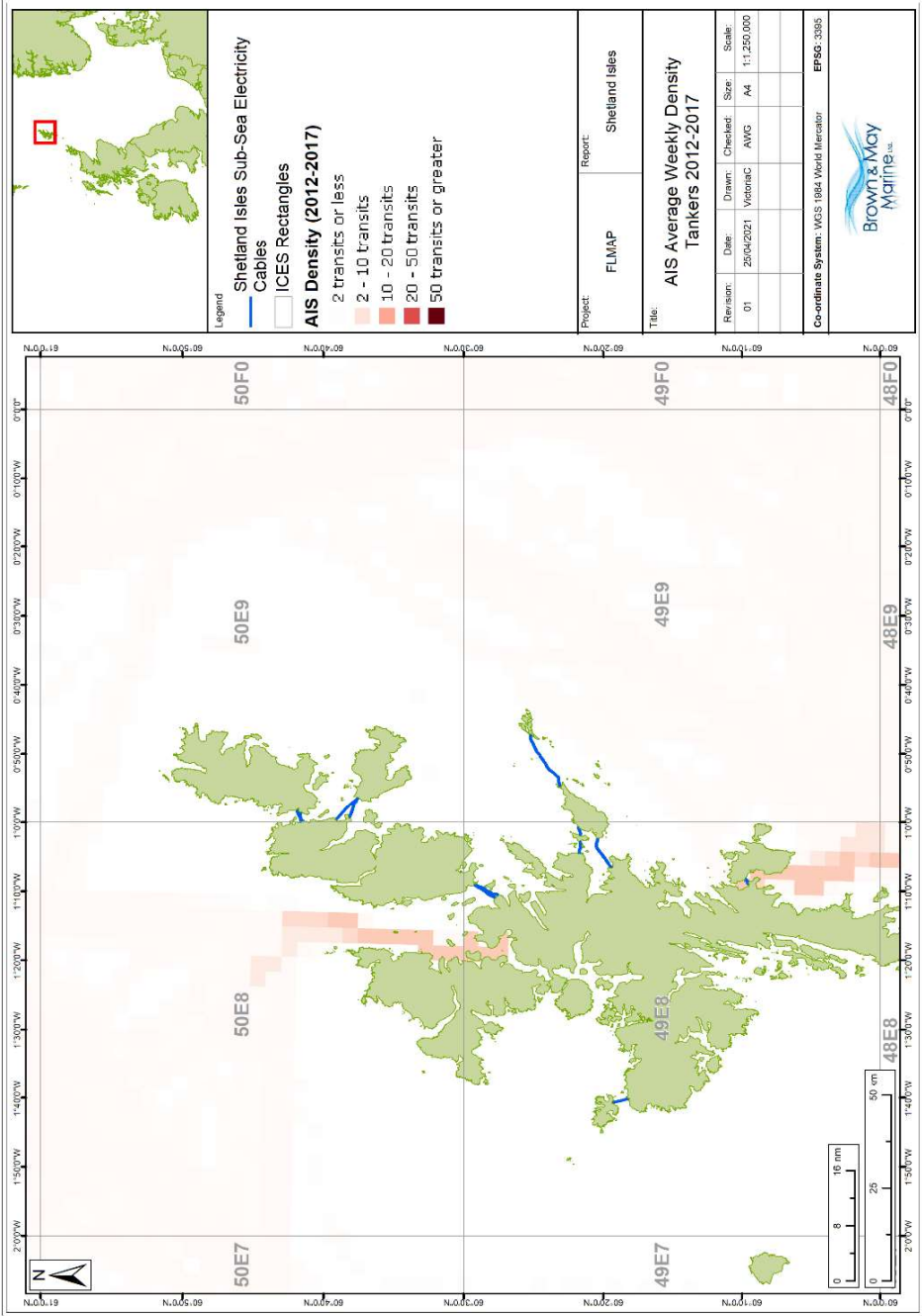


Figure 45 AIS tankers 2012-2017 (Marine Scotland 2021)

	Fishing Liaison Mitigation Action Plan for Shetland		Applies to	
			Distribution ✓	Transmission ✗
Revision: 1.00	Internal Use	Issue Date:	Review Date:	

Appendix E Cable-Specific Interactions

Table 34 Interactions for Cables Yell-Unst North and South

Activity	Interaction	Notes
MMO Surveillance sightings, 2016-2020	No	
MMO landings value (£) 2015-2019 by species, gear type and gear length	Yes	Average of £10,541,602 landings value per year, with demersal trawls/seines making up the great majority of these landings, followed by gears using hooks and pots and traps. Almost all of the vessels returning these landings are over 10m in length, with a very small remaining proportion 10m or under. The largest proportion of landings value comes from mackerel, followed by cod, hake and herring.
MMO VMS effort (hours) 2015-2019	Yes	Average fishing effort of 10-20 hours for mobile gear and <1 hour for dredging.
MMO VMS landings value (£) 2015-2019	Yes	Average of £10,000-£20,000 landings for mobile gear, and <£1,000 for dredging.
EMODnet AIS vessel density (fishing) 2019	Yes	Average of 5 hours of AIS activity per square km per month, though there is an area of 100+ hours directly above of the cables.
Bird and wildlife watching	Yes	Low levels of activity over the cables.
Visits to historic sites or to attractions	Yes	Very low levels of activity over the cables.
Power boating	Yes	Very low levels of activity over the cables.
Canoeing and kayaking	Yes	Very low levels of activity over the cables.
Long distance swimming	Yes	Very low levels of activity over the cables.
Motor cruising	Yes	Moderate levels of activity over the cables.
Sailing and cruising	Yes	Very low levels of activity over the cables.

Fishing Liaison Mitigation Action Plan for Shetland			Applies to	
			Distribution ✓	Transmission ✗
			Review Date:	
Revision: 1.00	Internal Use	Issue Date:		

Activity	Interaction	Notes
Chartered angling	Yes	Very low levels of activity over the cables.
Sea angling from shore	Yes	Very low levels of activity over the cables.
Coasteering	Yes	Very low levels of activity over the cables.
Wild fowling	Yes	Very low levels of activity over the cables.
Scuba diving	Yes	Very low levels of activity over the cables.
Rowing and sculling	No	
Marine archaeology	Possible	No wreck sites directly over the cables, but the nearest is 1.5km north.
Conservation designations	Yes	Bluemull and Colgrave Sounds SPA covers entirety of the cables.
Aquaculture sites	Possible	None directly over the cable, though there is a finfish site approximately 1.8km south of the cable, Wick of Belmont, operated by Cooke Aquaculture Scotland Ltd.
Ferry routes	Possible	None directly over the cables, though there is a ferry route Yell (Gutcher)-Unst (Belmont) operated by Shetland Council that runs parallel to the cable route approximately 1.6km south.
Local ports	Yes	Cullivoe (Yell) quay sits 400m north of the northern cable landfall, and is used primarily for fishing and leisure vessels.

Table 35 Interactions for Cables Yell-Fetlar 1 and 2

Activity	Interaction	Notes
MMO Surveillance sightings, 2016-2020	No	
MMO landings value (£) 2015-2019 by species, gear type and gear length	Yes	Average of £10,541,602 landings value per year, with demersal trawls/seines making up the great majority of these landings, followed by gears using hooks and pots and traps. Almost all of the vessels returning these landings are over 10m in length, with a very small remaining proportion 10m or under. The largest proportion of landings value comes from mackerel, followed by cod, hake and herring.

Fishing Liaison Mitigation Action Plan for Shetland			Applies to	
Revision: 1.00	Internal Use	Issue Date:	Distribution ✓	Transmission ✗
			Review Date:	

Activity	Interaction	Notes
MMO VMS effort (hours) 2015-2019	Yes	Average effort of <1 hour for mobile gear (except for Yell landfall, for which there are 10-20 hours). <1 hour effort for pots and dredges.
MMO VMS landings value (£) 2015-2019	Yes	Average of <£1,000 landings for mobile gear (except for Cable 1 Yell landfall, with an average of £10,000-£20,000 landings), dredging and pots and traps.
EMODnet AIS vessel density (fishing) 2019	Yes	Low levels of activity (up to 2 hours per square km per month).
Bird and wildlife watching	Yes	Low levels of activity over the cables.
Visits to historic sites or to attractions	Yes	Very low levels of activity over the cables.
Power boating	Yes	Very low levels of activity over the cables.
Canoeing and kayaking	Yes	Very low to low levels of activity over the cables.
Long distance swimming	Yes	Very low levels of activity over the cables.
Motor cruising	Yes	Low levels of activity over the cables.
Sailing and cruising	Yes	Low levels of activity over the cables.
Chartered angling	Yes	Very low levels of activity over the cables.
Sea angling from shore	Yes	Very low levels of activity over the cables, with an area of low activity at the Fetlar landfall of the cables.
Coasteering	Yes	Very low levels of activity over the cables.
Wild fowling	Yes	Very low levels of activity over the cables.
Scuba diving	Yes	Very low levels of activity directly over the cables, though there is a hotspot of activity adjacent to the north east of the route.
Rowing and sculling	No	

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Activity	Interaction	Notes
Marine archaeology	Possible	No wreck sites directly over the cables, but the nearest is 900m east.
Conservation designations	Yes	Fetlar to Haroldswick MPA – covers entirety of the cables. Fetlar SPA – covers majority of the cables. Bluemull and Colgrave Sounds SPA – covers entirety of the cables. RSPB Reserve Yell – covers Yell landfill of the cables.
Aquaculture sites	Yes	Sandwick finfish site is approximately 420m east of Cable 1, and Kirkabister finfish site is located approximately 1.2km west of Cable 2 (both operated by Cooke Aquaculture Scotland Ltd).
Ferry routes	Possible	None directly over the cables, though there is a ferry route Fetlar (Hamars Ness)-Yell (Gutcher) operated by Shetland Council that runs parallel to the cable route approximately 680m east of Cable 1. Another, Unst (Belmont)-Fetlar (Hamars Ness), also operated by Shetland Council, runs parallel to the route approximately 800m west of Cable 1. They both cross the mouth of the Holy Loch in which the cable is contained, so vessels accessing the cable may interact with these routes.
Local ports	Yes	The nearest ferry terminal is Oddsta (750m east), used for the 'Bluemull' car ferry service from Gutcher (Yell) and Belmont (Unst).

Table 36 Interactions for Cables Mossbank-Yell North and South

Activity	Interaction	Notes
MMO Surveillance sightings, 2016-2020	No	Within 10km there are two sightings of pelagic/demersal stern trawlers, and a single scallop dredger (French/Newhaven type).
MMO landings value (£) 2015-2019 by species, gear type and gear length	Yes	Average of £34,821,875 landings value per year, with demersal trawls/seines making up over half of these landings, followed by dredges and pots and traps. The majority of the vessels returning these landings are over 10m in length. The largest proportion of landings value comes from mackerel, followed by cod and scallops.
MMO VMS effort (hours) 2015-2019	Yes	Average effort of 1-5 hours for pots and traps.
MMO VMS landings value (£) 2015-2019	Yes	Average of £1,000-£3,000 landings for pots and traps.
EMODnet AIS vessel density (fishing) 2019	Yes	Very low levels of activity (<1 hour per square km per month) over the cables.

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Activity	Interaction	Notes
Bird and wildlife watching	Yes	Low levels of activity over the cables.
Visits to historic sites or to attractions	Yes	Very low levels of activity over the cables.
Power boating	Yes	Very low levels of activity over the cables.
Canoeing and kayaking	Yes	Very low levels of activity over the cables.
Long distance swimming	Yes	Very low levels of activity over the cables.
Motor cruising	Yes	Very low levels of activity over the cables.
Sailing and cruising	Yes	Very low levels of activity over the cables.
Chartered angling	No	
Sea angling from shore	Yes	Very low levels of activity over the cables.
Coasteering	Yes	Very low levels of activity over the cables.
Wild fowling	Yes	Very low levels of activity over the cables.
Scuba diving	Yes	Very low levels of activity over the cables.
Rowing and sculling	No	
Marine archaeology	Possible	No wreck sites directly over the cable, but the nearest is 1.6km west.
Conservation designations	Yes	Yell Sound Coast SAC – covers Yell landfall of the cables.
Aquaculture sites	No	
Ferry routes	Possible	None directly over the cable, though there is a ferry route, Toft-Yell (Ulsta), that runs parallel to the cable route approximately 670m east at its nearest point. This is operated by Shetland Council.

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Activity	Interaction	Notes
Local ports	Possible	The nearest port is Ulsta (Yell), which is used for commercial vessels and as a ferry terminal for the Toft-Yell (Ulsta) service.

Table 37 Interactions for Cable Whalsay-Out Skerries

Activity	Interaction	Notes
MMO Surveillance sightings, 2016-2020	No	Within 10km radius there are low levels of activity from demersal trawlers, unspecified trawlers, bottom seiners and scallop dredgers, as well as two Norwegian stern trawlers (pelagic/demersal), a French trawler.
MMO landings value (£) 2015-2019 by species, gear type and gear length	Yes	Average of £12,332,567 landings value per year, with almost all of these from demersal trawls/seines, and a small amount from dredges. Almost all of the vessels returning these landings are over 10m in length. The largest proportion of landings value (just over half) comes from mackerel, followed by herring.
MMO VMS effort (hours) 2015-2019	Yes	Moderate-high levels of fishing activity, with up to 100+ hours of dredging and mobile gear effort along cable.
MMO VMS landings value (£) 2015-2019	Yes	Up to £35,000 landings for dredging and mobile gear and <£1,000 for pots and traps.
EMODnet AIS vessel density (fishing) 2019	Yes	Low levels of activity (<2 hours per square km per month) over the cables.
Bird and wildlife watching	Yes	Low levels of activity over the cable.
Visits to historic sites or to attractions	Yes	Very low levels of activity over the cable.
Power boating	No	
Canoeing and kayaking	Yes	Very low levels of activity over the cable.
Long distance swimming	Yes	Very low levels of activity over the cable.
Motor cruising	Yes	Low levels of activity over the cable.
Sailing and cruising	Yes	Very low levels of activity over the cable.
Chartered angling	Yes	Very low levels of activity over the cable.

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Activity	Interaction	Notes
Sea angling from shore	Yes	Very low levels of activity over the cable.
Coastering	Yes	Very low levels of activity over the cable.
Wild fowling	Yes	Very low levels of activity over the cable.
Scuba diving	Yes	Very low levels of activity over the cable.
Rowing and sculling	No	
Marine archaeology	Possible	No wreck sites directly over the cable, but the nearest are 1.1km south at the Bruray landfill, and there are protected wrecks further east on the island of Bruray.
Conservation designations	Yes	East Mainland Coast, Shetland SPA – covers Whalsay landfill of the cable.
Aquaculture sites	No	
Ferry routes	Yes	The ferry route Out Skerries (Bruray)-Whalsay (Symbister), operated by Shetland Council, intersects the cables. Two further routes are located within 3km of the cable, Vidlin-Out Skerries (Bruray) and Lerwick (Esplanade)-Out Skerries (Bruray), also operated by Shetland Council.
Local ports	Possible	The nearest port is Bruray (Out Skerries) (4.6km east), used primarily by commercial, fishing and leisure vessels, and acts as the ferry terminal for the Out Skerries (Bruray)-Whalsay (Symbister) and Lerwick (Esplanade)-Out Skerries (Bruray) services.

Table 38 Interactions for Cable Shetland-West Linga

Activity	Interaction	Notes
MMO Surveillance sightings, 2016-2020	No	Within 10km radius there are low levels of activity from demersal trawlers, unspecified trawlers, a bottom seiner, scallop dredgers and potters/whelkers. There is a single Norwegian stern trawler (pelagic/demersal) sighted.
MMO landings value (£) 2015-2019 by species, gear type and gear length	Yes	Average of £34,821,875 landings value per year, with demersal trawls/seines making up over half of these landings, followed by dredges and pots and traps. The majority of the vessels returning these landings are over 10m in length. The largest proportion of landings value comes from mackerel, followed by cod and scallops.

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Activity	Interaction	Notes
MMO VMS effort (hours) 2015-2019	Yes	Average effort of 20-50 hours of dredging and mobile gear activity.
MMO VMS landings value (£) 2015-2019	Yes	Average of £6,000-£20,000 landings for dredging and mobile gear.
EMODnet AIS vessel density (fishing) 2019	Yes	Low levels of activity (<2 hours per square km per month) over the cables.
Bird and wildlife watching	Yes	Low levels of activity over the cable.
Visits to historic sites or to attractions	Yes	Very low levels of activity over the cable.
Power boating	Yes	Very low levels of activity over the cable.
Canoeing and kayaking	Yes	Low levels of activity over the cable.
Long distance swimming	Yes	Very low levels of activity over the cable.
Motor cruising	Yes	Very low to low levels of activity over the cable.
Sailing and cruising	Yes	Low levels of activity over the cable.
Chartered angling	Yes	Very low levels of activity over the cable.
Sea angling from shore	Yes	Very low levels of activity over the cable.
Coasteering	Yes	Very low levels of activity over the cable.
Wild fowling	Yes	Very low levels of activity over the cable.
Scuba diving	Yes	Very low levels of activity over the cable.
Rowing and sculling	No	

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Activity	Interaction	Notes
Marine archaeology	No	
Conservation designations	No	
Aquaculture sites	Possible	One finfish aquaculture farm, North Voe (run by Grieg Seafood Shetland Ltd), approximately 2.2km east of the cables.
Ferry routes	Possible	None directly over the cable, though there is a ferry route, Vidlin-Whalsay (Symbister), that runs parallel to the cable route approximately 2.1km north at its nearest point. This is operated by Shetland Council.
Local ports	Possible	The nearest port is Symbister (Whalsay), approximately 2.3km south of the cable, which is used by leisure, fishing and commercial vessels, and acts as the ferry terminal for the Laxo-Whalsay (Symbister), Vidlin-Whalsay (Symbister) and Out Skerries (Bruray)-Whalsay (Symbister) services.

Table 39 Interactions for Cable West Linga-Whalsay

Activity	Interaction	Notes
MMO Surveillance sightings, 2016-2020	Yes	Single sighting of a scallop dredger (French/Newhaven type). Within 10km radius there are low levels of activity from demersal trawlers, unspecified trawlers, a bottom seiner, scallop dredgers and potters/wheelers. There is a single Norwegian stern trawler (pelagic/demersal) sighted.
MMO landings value (£) 2015-2019 by species, gear type and gear length	Yes	Average of £34,821,875 landings value per year, with demersal trawls/seines making up over half of these landings, followed by dredges and pots and traps. The majority of the vessels returning these landings are over 10m in length. The largest proportion of landings value comes from mackerel, followed by cod and scallops.
MMO VMS effort (hours) 2015-2019	Yes	Average effort of 20-50 hours of dredging and mobile gear activity.
MMO VMS landings value (£) 2015-2019	Yes	Average of £10,000-£20,000 landings for dredging and mobile gear, and <£1,000 for pots and traps.
EMODnet AIS vessel density (fishing) 2019	Yes	Low levels of activity (2 hours per square km per month) over the cables.
Bird and wildlife watching	Yes	Low levels of activity over the cable.

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Activity	Interaction	Notes
Visits to historic sites or to attractions	Yes	Very low levels of activity over the cable.
Power boating	Yes	Very low levels of activity over the cable.
Canoeing and kayaking	Yes	Very low to low levels of activity over the cable.
Long distance swimming	Yes	Very low levels of activity over the cable.
Motor cruising	Yes	Low levels of activity over the cable.
Sailing and cruising	Yes	Very low levels of activity over the cable.
Chartered angling	Yes	Very low levels of activity over the cable.
Sea angling from shore	Yes	Very low levels of activity over the cable.
Coasteering	Yes	Very low levels of activity over the cable.
Wild fowling	Yes	Very low levels of activity over the cable.
Scuba diving	Yes	Very low levels of activity over the cable.
Rowing and sculling	No	
Marine archaeology	Possible	No wreck sites directly over the cable, but the nearest is 2km south.
Conservation designations	No	
Aquaculture sites	Possible	One finfish aquaculture farm, North Voe (run by Grieg Seafood Shetland Ltd), approximately 1.4km south of the cables.
Ferry routes	Yes	The ferry routes Vidlin-Whalsay (Symbister) and Out Skerries (Bruray)-Whalsay (Symbister) both intersect the cable route. These are both operated by Shetland Council.
Local ports	Possible	The nearest port is Symbister (Whalsay), approximately 2km south of the cable, which is used by leisure, fishing and commercial vessels, and acts as the ferry terminal for the Laxo-Whalsay (Symbister), Vidlin-Whalsay (Symbister) and Out Skerries (Bruray)-Whalsay (Symbister) services.

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Table 40 Interactions for Cable Shetland-Whalsay

Activity	Interaction	Notes
MMO Surveillance sightings, 2016-2020	No	Within 10km radius there are low levels of activity from unspecified trawlers, scallop dredgers a bottom seiner and demersal trawlers. There is also a single Norwegian stern trawler sighting.
MMO landings value (£) 2015-2019 by species, gear type and gear length	Yes	Average of £34,821,875 landings value per year, with demersal trawls/seines making up over half of these landings, followed by dredges and pots and traps. The majority of the vessels returning these landings are over 10m in length. The largest proportion of landings value comes from mackerel, followed by cod and scallops.
MMO VMS effort (hours) 2015-2019	Yes	Average effort of 1-50 hours of dredging and mobile gear activity.
MMO VMS landings value (£) 2015-2019	Yes	Average of £3,000-£6,000 landings for dredging and mobile gear.
EMODnet AIS vessel density (fishing) 2019	Yes	Up to 10 hours of AIS fishing activity per square km per month.
Bird and wildlife watching	Yes	Low levels of activity over the cable.
Visits to historic sites or to attractions	Yes	Very low levels of activity over the cable, with an area of low activity over the Whalsay cable landfall.
Power boating	Yes	Very low levels of activity over the cable.
Canoeing and kayaking	Yes	Low levels of activity over the cable.
Long distance swimming	Yes	Very low levels of activity over the cable.
Motor cruising	Yes	Low to moderate levels of activity over the cable.
Sailing and cruising	Yes	Very low to low levels of activity over the cable.
Chartered angling	Yes	Very low levels of activity over the cable.
Sea angling from shore	Yes	Very low levels of activity over the cable.
Coasteering	Yes	Very low levels of activity over the cable.
Wild fowling	Yes	Very low levels of activity over the cable.

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Activity	Interaction	Notes
Scuba diving	Yes	Very low levels of activity over the cable.
Rowing and sculling	No	
Marine archaeology	Possible	No wreck sites directly over the cable, but the nearest is 1km east.
Conservation designations	No	
Aquaculture sites	Yes	Bight of Bellister, Dury Voe finfish site (run by Scottish Sea Farms Ltd) is approximately 330m north of the cable, and the North Voe site (run by Greig Seafood Shetland Ltd) is located approximately 1.3km north of the cable at the Whalsay landfill. Another finfish aquaculture farm operated by Scottish Sea Farms within 3km of the cable is Swarta Skerry, Dury Voe. East of Little Ness shellfish aquaculture farm (operated by Blueshell Mussels Ltd) is located just under 2km northwest of the cable.
Ferry routes	Possible	None directly over the cable, though there is a ferry route Laxo-Whalsay (Symbister), operated by Shetland Council, that runs approximately 170m north of the cable at its closest point.
Local ports	Possible	The nearest port is Symbister (Whalsay), approximately 1.1km east of the cable at the Whalsay landfill, which is used by leisure, fishing and commercial vessels, and acts as the ferry terminal for the Laxo-Whalsay (Symbister), Vidlin-Whalsay (Symbister) and Out Skerries (Bruray)-Whalsay (Symbister) services.

Table 41 Interactions for Cable Lerwick-Bressay South

Activity	Interaction	Notes
MMO Surveillance sightings, 2016-2020	No	Within 10km radius there are low levels of activity from demersal trawlers, unspecified trawlers, a single hand gatherer/liner, scallop dredgers and potters/whelkers. Two German pelagic stern trawlers have been sighted approximately 10km south of the cable.
MMO landings value (£) 2015-2019 by species, gear type and gear length	Yes	Average of £34,821,875 landings value per year, with demersal trawls/seines making up over half of these landings, followed by dredges and pots and traps. The majority of the vessels returning these landings are over 10m in length. The largest proportion of landings value comes from mackerel, followed by cod and scallops.
MMO VMS effort (hours) 2015-2019	Yes	Average fishing effort for all gears between 5 and 20 hours, with higher effort close to the Lerwick landfill.

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Activity	Interaction	Notes
MMO VMS landings value (£) 2015-2019	Yes	Average of >£35,000 landings for mobile gear and <£1,000 for pots and traps.
EMODnet AIS vessel density (fishing) 2019	Yes	Very high levels (100+ hours per square km per month) of AIS fishing activity.
Bird and wildlife watching	Yes	Low levels of activity over the cable.
Visits to historic sites or to attractions	Yes	High levels of activity over the cable.
Power boating	No	
Canoeing and kayaking	Yes	High levels of activity over the cable.
Long distance swimming	Yes	Very low levels of activity over the cable.
Motor cruising	Yes	Low levels of activity over the cable.
Sailing and cruising	Yes	Low levels of activity over the cable.
Chartered angling	Yes	Very low levels of activity over the cable.
Sea angling from shore	Yes	Low levels of activity over the cable.
Coasteering	Yes	Moderate levels of activity over the cable.
Wild fowling	Yes	Very low levels of activity over the cable.
Scuba diving	Yes	High levels of activity over the cable.
Rowing and sculling	Yes	Very low levels of activity over the cable.
Marine archaeology	Yes	Possible interaction with wreck sites.
Conservation designations	No	
Aquaculture sites	No	

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Activity	Interaction	Notes
Ferry routes	Yes	The ferry routes Aberdeen-Lerwick (Holmsgarth) and Lerwick (Esplanade)-Out Skerries (Bruray) both intersect the cable routes. These are operated by Northlink Ferries and Shetland Council respectively. Additional routes, Lerwick-Bressay and Lerwick (Esplanade)-Fair Isle run approximately 440m south of the cable at the nearest point. These are both operated by Shetland Council.
Local ports	Yes	Lerwick Harbour, the principal port for Shetland, is located approximately 510m south of the cable route at its nearest point. It handles over 5000 vessels annually, from the commercial and fishing sectors as well as leisure vessels.

Table 42 Interactions for Cable Clift Sound

Activity	Interaction	Notes
MMO Surveillance sightings, 2016-2020	No	Within 10km there is a single demersal stern trawler sighting.
MMO landings value (£) 2015-2019 by species, gear type and gear length	Yes	Average of £34,821,875 landings value per year, with demersal trawls/seines making up over half of these landings, followed by dredges and pots and traps. The majority of the vessels returning these landings are over 10m in length. The largest proportion of landings value comes from mackerel, followed by cod and scallops.
MMO VMS effort (hours) 2015-2019	Yes	Average effort of 20-50 hours mobile gear activity, and <1 hour for dredging and potting and trapping.
MMO VMS landings value (£) 2015-2019	Yes	Average of >£35,000 landings for mobile gear, and <£1,000 for dredging and pots and traps.
EMODnet AIS vessel density (fishing) 2019	Yes	Very high levels (100+ hours per square km per month) of AIS fishing activity.
Bird and wildlife watching	Yes	Low levels of activity over the cable.

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Activity	Interaction	Notes
Visits to historic sites or to attractions	Yes	High levels of activity over the cable.
Power boating	Yes	Very low levels of activity over the cable.
Canoeing and kayaking	Yes	Low levels of activity over the cable.
Long distance swimming	Yes	Very low levels of activity over the cable.
Motor cruising	Yes	Low to moderate levels of activity over the cable.
Sailing and cruising	Yes	Very low levels of activity over the cable.
Chartered angling	No	
Sea angling from shore	Yes	Very low levels of activity over the cable.
Coasteering	Yes	Very low levels of activity over the cable.
Wild fowling	Yes	Very low levels of activity over the cable.
Scuba diving	Yes	Very low levels of activity over the cable.
Rowing and sculling	No	
Marine archaeology	No	
Conservation designations	Yes	Shetland NSA – covers entirety of the cable.
Aquaculture sites	Yes	The shellfish aquaculture site Booth (operated by Eastvoe Shellfish) is located approximately 770m south of the cable.
Ferry routes	Possible	None directly over the cable, though there is a ferry route Scalloway-Foula, operated by B K Marine, that departs approximately 500m north of the cable.
Local ports	Yes	Scalloway Harbour is located approximately 600m north of the cable, and handles general and reefer cargo. It is also an important fishing harbour.

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Table 43 Interactions for Cable Papa Stour Shetland

Activity	Interaction	Notes
MMO Surveillance sightings, 2016-2020	No	Within 10km radius there are low levels of activity from pelagic and demersal trawlers (one of which is a pair trawler), and a sighting of a bottom seiner.
MMO landings value (£) 2015-2019 by species, gear type and gear length	Yes	Average of £34,821,875 landings value per year, with demersal trawls/seines making up over half of these landings, followed by dredges and pots and traps. The majority of the vessels returning these landings are over 10m in length. The largest proportion of landings value comes from mackerel, followed by cod and scallops.
MMO VMS effort (hours) 2015-2019	Yes	Average of 1-5 hours effort for dredging, mobile gear and pots and traps.
MMO VMS landings value (£) 2015-2019	Yes	Average of £1,000-£3,000 landings for pots and traps. Average of <£1,000 for dredging, and mobile gear
EMODnet AIS vessel density (fishing) 2019	No	
Bird and wildlife watching	Yes	Low levels of activity over the cable.
Visits to historic sites or to attractions	Yes	Very low levels of activity over the cable.
Power boating	No	
Canoeing and kayaking	Yes	Moderate to high levels of activity over the cable.
Long distance swimming	Yes	Very low levels of activity over the cable.

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Activity	Interaction	Notes
Motor cruising	Yes	Very low levels of activity over the cable.
Sailing and cruising	Yes	Very low levels of activity over the cable.
Chartered angling	No	
Sea angling from shore	Yes	Low to moderate levels of activity over the cable, with moderate activity concentrated around the Shetland landfall of the cable.
Coasteering	Yes	Moderate levels of activity over the majority of the cable, though there is a hotspot of high activity off the Shetland landfall of the cable.
Wild fowling	Yes	Very low levels of activity over the cable.
Scuba diving	Yes	Very low levels of activity over the cable.
Rowing and sculling	No	
Marine archaeology	Possible	No wreck sites directly over the cable, but the nearest is 840m east.
Conservation designations	Yes	Papa Stour SAC – covers entirety of the cable.
Aquaculture sites	No	
Ferry routes	Possible	None directly over the cable, though there is a ferry route West Burrafirth-Papa Stour, operated by Shetland Council, that runs approximately 1.9km east of the cable at its closest point.
Local ports	Yes	Melby Slipway is located at the Mainland Shetland landfall of the cable. Housa Voe (Papa Stour) ferry terminal is located approximately 2km east of the cable, and is used both by fishing vessels and the West Burrafirth-Papa Stour ferry service.