

Inch Cape Offshore Limited

Document Type: Scope of Works

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ECoW Scope of Works (Partial Discharge)

Pursuant to Section 36 Consent Condition 27 and Marine Licence (Offshore Transmission Works)

Condition 3.2.2.12

For the approval of the Scottish Ministers

<u>Revision</u>	<u>Date</u>	<u>Status</u>
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1 Inch Cape Offshore Limited Offshore Ecological Clerk of Works (pre-construction) Scope of Works

1.1 Introduction

- 1 Condition 27 of the Section 36 (S36) Consent and Condition 3.2.2.12 of the Offshore Transmission Works (OfTW) Marine Licence granted to Inch Cape Offshore Ltd (ICOL) require the appointment of an Ecological Clerk of Works (ECoW) prior to the Commencement of the Works and in time to review and approve the final draft version of the first plan or programme submitted under the S36 Consent/ Marine Licence to the Licensing Authority for approval and retention of the role during construction, post-construction, and up to the final commissioning of the Wind Farm and OfTW.
- 2 ICOL is seeking to appoint an Offshore ECoW to deliver the 'prior to commencement' (or pre-construction) responsibilities of the ECoW as set out in the S36 Consent and Marine Licence conditions. ICOL expects that the scope of the ECoW role will expand as the Wind Farm and OfTW progress towards construction. As such, ICOL is currently seeking a partial discharge of Condition 27 of the S36 Consent and Condition 3.2.2.12 of the OfTW Marine Licence. It is intended that ICOL will then, at an appropriate time, seek to define the scope of the ECoW role during the construction and later phases of the Wind Farm and OfTW in order to fully discharge the respective conditions.
- 3 GoBe Consultants Ltd are currently acting as 'Consent Advisor' to ICOL and it is proposed that GoBe Consultants Ltd will fulfil the pre-construction ECoW role, working closely with the ICOL Environment and Consents Team. Redacted , senior consultant at GoBe Consultants Ltd, is the lead ECoW for the pre-construction phase. Any change to the lead ECoW will be made in agreement with Marine Scotland Licensing and Operations Team (MS-LOT). Appendix A includes Redacted CV and also CVs of members of the team at GoBe Consultants Ltd who will assist in the role of pre-construction ECoW.
- 4 Set out below is a proposed scope of works for the delivery of the ECoW role during the pre-construction phase of the Wind Farm and OfTW.

2 Terms of Reference

2.1 ICOL Terms of Reference

5 The role and responsibilities of the ECoW are detailed in the following documents, which have been reviewed in the preparation of this scope of works:

- S36 Consent, Condition 27;
- Marine Licence (OfTW), Condition 3.2.2.12; and
- Marine Scotland guidance on the ECoW role.

6 It is envisaged that during the pre-construction phase of the Wind Farm and OfTW, the ECoW will be responsible for the following elements of the relevant S36 Consent and Marine Licence conditions:

'a. Quality assurance of final draft version of all plans and programmes required under this consent [licence];

b. Provide advice to the Company [Licensee] on compliance with consent [licence] conditions, including the conditions relating to the CMS, the EMP, the PEMP, the PS (if required), the CaP and the VMP;

c. Monitor compliance with the CMS, the EMP, the PEMP, the PS (if required), the CaP and the VMP;'

7 During the construction and later phases of the Wind Farm and OfTW, the ECoW scope will expand to meet the additional requirements of the conditions, which are as follows:

'd. Provide reports on point c) above to the Scottish Ministers [Licensing Authority] at timescales to be determined by the Scottish Ministers [Licensing Authority]; and

e. Inducting site personnel on site / works [Site / the Works] environmental policy and procedures.'

3 Scope of Works

3.1 Introduction

8 The following provides a breakdown of the Scope of Works for the partial discharge of S36 Consent Condition 27 and Marine Licence (OfTW), Condition 3.2.2.12.

3.2 Preparation of Consent Plans

9 Where relevant, the ECoW will input to the preparation of Consent Plans. This may involve advising Consent Plan authors in relation to compliance requirements, or drafting those elements of Consent Plans that refer to the role and responsibilities of the ECoW.

3.3 Quality Assurance of Consent Plans

10 The ECoW is required to provide quality assurance (QA) of final draft versions of all plans and programmes required under the S36 Consent and Marine Licences. The ECoW will review all ICOL Consent Plans to ensure that they are compliant with the requirements of S36 Consent and Marine Licences.

11 The ECoW will provide QA of any updated versions of Consent Plans.

3.4 Compliance Review of Associated Documents

12 The ECoW will review a number of documents to ensure compliance with the ICOL Consent Plans listed in S36 Consent Condition 27 and OfTW Marine Licence condition 3.2.2.12, and with other conditions as appropriate. It is expected that such documents will include ICOL and contractor documents, such as method statements, risk assessments and management plans and procedures, and ICOL Invitations to Tender and tender responses.

3.5 ECoW-specific Stakeholder Engagement

13 The ECoW, where specific ECoW representation is required, will attend meetings held between the ICOL Environment and Consents Team and the MS-LOT to discuss compliance issues. It is expected these will include:

- ICOL Wind Farm and OfTW update meetings;
- Meetings to discuss and agree ICOL's approach to Consent Plan preparation and condition discharge; and
- Meetings to discuss environmental issues should any arise.

14 The ECoW will attend meetings of the Forth and Tay Regional Advisory Group (FTRAG) and other key stakeholder meetings, where specific ECoW representation is required or expected by the relevant stakeholders.

15 The ECoW will attend, at the request of ICOL, such other stakeholder meetings as may be relevant to the discharge of the S36 Consent and Marine Licence conditions in the discussion

of specific Consent Plans or otherwise (for example this might include meetings with bodies such as the Northern Lighthouse Board, the Maritime and Coastguard Agency or the Civil Aviation Authority regarding the Lighting and Marking Plan).

- 16 The ECoW will, as required, engage with other offshore wind farm project ECoWs to enable sharing of information on good practice and lessons learnt.

3.6 Provision of Ad-Hoc Advice

- 17 The ECoW will provide support and advice on such other matters as may arise in the management of consent compliance through the pre-construction phase. The ECoW will provide support to the ICOL Environment and Consents Team in ensuring other consent conditions within the S36 Consent and Marine Licences are discharged as required by the drafting of documents and letters to MS-LOT and the provision, where necessary, of supporting information.

Appendix A: GoBe Consultants Ltd CVs

NATIONALITY:

BRITISH

PERSONAL PROFILE

Reda has over 8 years' experience in marine environmental consultancy. Reda has provided consenting support to four of the five offshore wind farm developers to have achieved project consent in Scottish waters. Reda completed a 6-month secondment to ICOL during Environmental Statement preparation and prior to that she was seconded for a year to EDPR UK during the consenting of three offshore wind farm projects in the Moray Firth Round 3 Zone (1,500 MW), which subsequently were the first Round 3 projects in the UK to gain approval.

She has acted as Offshore EIA Project Manager for the first two proposed offshore wind farm projects within the Round 3 Firth of Forth Zone (1,000 MW), having provided consultancy support to Seagreen Wind Energy Ltd for over two years. She is currently providing consents compliance advice to BOWL. Sarah authored a series of Cumulative Effects Discussion Documents produced by the Forth and Tay Offshore Wind Developers Group and The Crown Estate.

Reda has coordinated the provision of consenting advice to Aquamarine Power in relation to their proposed wave energy project sites, and inputted to the ScottishPower Renewables Environmental Statement for the Sound of Islay Tidal Array. Reda has experience in undertaking and managing ecological survey programmes, having led a 5-year marine monitoring programme for Natural Resources Wales and been involved in the intertidal survey of a suite of designated sites on the east coast of Scotland as part of a Scottish Natural Heritage project.

Prior to working in consultancy, Reda was employed by the Environment Agency and has worked in marine conservation and environmental education with the Hebridean Whale and Dolphin Trust.

EDUCATIONAL AND PROFESSIONAL STATUS

Pg Cert Environmental Management (3 modules), Chartered Institution of Water and Environmental Management	2006-2008
MSc Tropical Coastal Management (Distinction), University of Newcastle upon Tyne	2003-2004
BA Geography (First Class Honours), University of Nottingham	2000-2003
Chartered Marine Scientist and Member of IMarEST Associate Member of IEMA	

EMPLOYMENT

May 2015 - present	GoBe Consultants Ltd	Senior Consultant
July 2011-May 2015	RPS Energy	Senior Consultant
March 2005 – June 2011	Royal Haskoning (Glasgow)	Senior Environmental Consultant
Sept 2004 – March 2006	Environment Agency (Newcastle)	Environment Officer
2003	Hebridean Whale and Dolphin Trust (Isle of Mull)	Assistant Sightings Officer

SELECTED PROJECT EXPERIENCE

Inch Cape Offshore Wind Farm **Client:** Inch Cape Offshore Limited Project Manager
2015 - Date

Providing advice and technical input in managing the post-consent compliance process. Assisting in the development of monitoring strategies and consent plans.

Beatrice Offshore Wind Farm	Client: SSE	Project Manager
<i>2015 – Date</i>		
Supporting BOWL in managing the post-consent compliance process, developing consent plans and acting as ECoW. Involves technical direction of the GoBe team, stakeholder engagement and internal liaison with the BOWL team.		
Neart na Gaoithe Offshore Wind Farm	Client: Mainstream	Project Manager
<i>2015 – Date</i>		
Providing advice and technical input in managing the post-consent compliance process. Assisting in the development of monitoring strategies and consent plans.		
Inch Cape Offshore Wind Farm	Client: Inch Cape Offshore Limited	Senior Consultant (secondment)
<i>2013</i>		
6-month secondment with ICOL's offshore wind farm consenting team, providing support through EIA and ES preparation for the Inch Cape Offshore Wind Farm in Scottish Territorial Waters. Ownership of several marine EIA themes, including fish and commercial fisheries. Ongoing provision of post-consent compliance support.		
Moray Firth R3 Offshore Wind Farms	Client: EDPR UK	Senior Consultant (secondment)
<i>2012-2013</i>		
12-month secondment with EDPR UK's offshore wind farm consenting team, providing support through EIA and ES preparation, including consultation with statutory bodies and stakeholders, for three offshore wind farm projects and associated transmission works in the Moray Firth Round 3 Zone. Further input to modified EIA to support consent application for amended offshore and onshore transmission cable route.		
Wave Energy Project Due Diligence	Client: Scottish Enterprise	Senior Consultant
<i>2013</i>		
Input to due diligence of proposed wave energy project in Scottish waters, focusing on consenting risk and in particular scrutinizing the proposed approach to assessment of impacts on marine mammals and birds.		
Tidal Energy Sites Feasibility Assessment	Client: OpenHydro	Project Manager
<i>2012</i>		
Production of site feasibility reports and management of constraints mapping and ranking exercises for tidal energy arrays at several potential locations in UK waters.		
Ormonde Offshore Wind Farm	Client: Vattenfall	Project Manager
<i>2012</i>		
Supporting Vattenfall in their ongoing post-construction environmental monitoring programme at Ormonde.		
Falklands Seismic Surveys	Client: Noble Energy	Project Manager
<i>2012</i>		
Undertaking two EIAs in support of applications to undertake seismic survey off the Falkland Islands.		
Inner Sound Tidal Energy Project	Client: MeyGen	Senior Consultant
<i>2011</i>		
Co-ordination of marine mammal input to EIA for the now-consented project, including analysis of baseline survey data and baseline reporting, and development of impact assessment methods, including encounter risk modelling.		
Gunfleet Sands 3 Offshore Wind Farm	Client: DONG	Senior Consultant
<i>2011</i>		
Input to / review of Environmental Statement Addendum.		

Round 3 Firth of Forth Zone *Client:* Seagreen EIA Manager
2008-2011

Offshore EIA manager for the first two proposed wind farm projects within the Round 3 Zone (capacity 1GW). Managed the EIA programme and co-ordinated scoping, baseline data collection, consultation with statutory bodies and stakeholders and EIA reporting.

Pentland Firth and Orkney Waters – Wave and Tidal Development – Cumulative Effects Assessment *Client:* The Crown Estate Senior Consultant
2010-2011

Investigating the potential cumulative effects of development of multiple wave and tidal energy sites. Potential effects scoped and presented in a Discussion Document released to selected stakeholders.

Lewis Wave Array *Client:* Aquamarine Power Project Manager
2010-2011

Managing the Scoping and EIA processes for a wave energy site off the west coast of Lewis. Responsibilities included preparation of the Scoping Report, consultation and coordination of EIA surveys.

Round 3 Zone Bids *Client:* SSE & Fluor Senior Consultant
2008-2011

Leading constraints mapping exercises investigating potential development sites in Round 3 zones in Scotland and England. Development of EIA programmes and consenting and stakeholder management strategies to be included in client bids to The Crown Estate Secondment to Fluor offices.

Offshore Wind Farms East Coast Scotland – Cumulative Effects *Client:* Forth and Tay Offshore Wind Developers Group Project Manager
2009-2011

Investigating the potential cumulative effects of development of multiple offshore wind farm sites off the Firths of Forth and Tay on behalf of the developer group and The Crown Estate. Potential effects and assessment methodologies identified. Authored a series of FTOWDG Discussion Documents. Consultation with regulators and stakeholders undertaken to inform process.

Extensions to Round 1 and Round 2 Offshore Wind Farms *Client:* ScottishPower Renewables Project Manager
2009

Coordinated the production of environmental constraints studies investigating the potential for expansion of six existing Round 1 and 2 offshore wind farms. Potential development options (area and GW capacity) presented for each site.

Rhu Marina Redevelopment *Client:* The Crown Estate Project Manager
2007

Management of bird and benthic surveys and production of environmental reports in support of applications to expand Rhu Marina.

Port of Cairnryan Redevelopment *Client:* P&O & Stena Line Project Manager
2006-2011

Developed mitigation strategy and produced Environmental Action Plan for port expansion project in Loch Ryan. Produced consultation material and assisted in preparation for Public Local Inquiry. Developed and managed post-construction marine environmental monitoring programme investigating the status of a native oyster bed. Managed environmental consent/licence applications and associated consultation with statutory bodies and key stakeholders. Managed Environmental Clerk of Works team.

North Sea Decommissioning *Client:* Shell Project Manager
2006-2011

Managed the production of a feasibility study investigating decommissioning and remediation alternatives for 3 gravity-based structures in the North Sea.

Bo'ness Harbour Regeneration *Client:* ING Real Estate Project Manager
2006-2011

Environmental studies to support dredging and redevelopment of Bo'ness Harbour, including production of Best Practicable Environmental Option report examining options for the disposal of highly contaminated harbour sediments

North Ford Causeway Improvement Scheme *Client:* Western Isles Council Project Manager
2006-2007

Produced Environmental Appraisal for causeway improvement scheme. Conducted and reported on Phase I intertidal survey.

Drop Video Survey of Welsh SACs *Client:* Natural Resources Wales Project Manager
2007-2011

Biotope mapping and monitoring of the 'favourable conservation status' of Natura marine sites around the Welsh coastline using drop-down video survey techniques. Managed five-year programme.

Mapping of east coast Sites of Special Scientific Interest *Client:* Scottish Natural Heritage Consultant
2008

Member of a field team responsible for gathering data to support the mapping of habitats in SSSIs on the east coast of Scotland.

PUBLICATIONS AND REPORTS

Authored article in Real Power magazine. Issue 38, Autumn 2014. Offshore Wind Farm Consents Compliance.

Presentation at RenewableUK 2010, Glasgow, entitled 'Developer Collaboration in Scottish Waters – Addressing Cumulative Effects'.

Presentation at Our Wee Planet 2009 event in East Lothian, Scotland, entitled 'Offshore Wind Energy in Scotland; Challenges and Opportunities'.

Poster presentations at the 2007 and 2008 Countryside Council for Wales Environmental Monitoring Workshop, entitled 'Across-Wales Drop Down and Towed Video Survey Monitoring Programme'.

PERSONAL PROFILE

Redacted has over 25 years' experience working in the marine environment undertaking environmental surveys and assessments in relation to a wide variety of coastal and offshore development sectors such as aggregate dredging, coastal outfalls, subsea cables, port development, maintenance and capital dredging and most recently offshore wind farms and other marine renewables. Knowledge of relevant legislation has been key to this role including most recently the Planning Act, but also the Energy Act, Habitats Directive, EIA Directive, UWWTD, Bathing waters Directive, Electricity Works Act, TWA, TCPA etc.

Originally trained as a marine ecologist and taxonomist, Reda has developed his ecological skills for the purposes of Environmental Impact Assessment involving both project management of large development projects through to the key consent application stage and technical input into the EIA principally in the fields of marine ecology, fish ecology and commercial fisheries. Reda has completed numerous environmental statements for the marine aggregate dredging sector, for port and capital dredging projects and for coastal outfalls. Reda has project managed the preparation of environmental statements for Round 1, Round 2, Extensions and Round 3 offshore wind farms, as well as contributing technical assessments to these ESs in relation to specific specialist subject areas. Reda has also completed feasibility studies for a number of potential renewable energy developments off the English and Scottish coasts. Reda has provided expert witness services on matters related to marine and fish ecology at a number of hearings (most recently for the Triton Knoll OWF and Burbo Bank Extension OWF).

Through his involvement in this EIA role, Reda has also developed his capabilities in assessing development risk associated with the EIA and consenting processes, providing site specific and strategic advice to marine developers with regard to key pieces of legislation in the marine environment and their possible implications for the development process. Reda has also developed his role in project management and auditing providing services to major clients, in advising and assisting in the project development and regulatory compliance process.

EDUCATIONAL AND PROFESSIONAL STATUS

BSc (Hons) Biology, University of Portsmouth

1987 - 1990

EMPLOYMENT

2009 - present	GoBe Consultants Ltd.	Director
2004 – 2009	OES Ltd.	Managing Director
1997 – 2004	Emu Ltd.	Principal Consultant
1992 – 1997	Southern Science Ltd.	Marine Environmental Scientist
June - October 1991	Marine Environmental Technical Services	Taxonomist

SELECTED PROJECT EXPERIENCE

Beatrice OWF *Client:* SSE Project Director

2015 - ongoing

Project director for managing all aspects of the post-consent compliance process (offshore); includes overall QA/QC and authorship of consent plans and management of the project teams as well as stakeholder engagement and liaison with the Client team.

Neart na Gaoithe *Client:* Mainstream Project Director

2015 - ongoing

Project director, providing advice and technical input in the management of the post-consent compliance process.

Inch Cape Offshore Wind Farm <i>2015 - ongoing</i>	Client:	Inch Cape Offshore Limited	Project Director
Project director, managing the post-consent compliance process and liaison with both the Client (internal) teams and external stakeholders.			
Burbo Bank Extension <i>2013 - ongoing</i>	Client:	DONG Energy	Planning and Strategic adviser
Advising on the examination phase of the planning phase including preparation of SoCGs, stakeholder negotiation, expert witnessing at hearings and strategic advice			
Walney Extension <i>2013</i>	Client:	DONG Energy	Project Director
Strategic planning advice and review of the draft ES plus drafting of ES chapters			
Dogger Bank <i>2013</i>	Client:	Forewind	Project Director
Preparation of the consultation report for Teesside projects and strategic advice on the Creyke Beck projects			
Galloper Wind Farm Project <i>2011 - 2012</i>	Client:	SSE & RWE	Project Director
Review and audit of preliminary environmental information and the draft ES for the Galloper OWF and ongoing strategic consents advice through the examination phase.			
Gunfleet Sands Wind Farms 1 & 2 <i>2009 - ongoing</i>	Client:	DONG Energy	Project Director
FEPA compliance reporting for Gunfleet Sands 1 & 2.			
Gwynt y Môr OWF Operations Pontoon Development <i>2010 - ongoing</i>	Client:	RWE	Consent Manager
Pontoon development in the Dee Estuary for OWF port facility – management and strategy of consent application and stakeholder liaison			
Kentish Flats Extension Project <i>2010</i>	Client:	Vattenfall	Client Consents Manager
Site search and Crown Estate bid process for Kentish Flats Extension; subsequent project management and consents strategy for the ES and stakeholder liaison.			
Triton Knoll Met Mast Consenting <i>2010 - ongoing</i>	Client:	RWE	Consent Manager
Preparation and application for a marine licence for construction of a met mast, input to met mast tender evaluation and supplier selection, and consent compliance management			
Triton Knoll Offshore Wind Farm <i>2009 - ongoing</i>	Client:	RWE	Consents Adviser
Providing advice and strategy on the Planning Act process, project managing EIA consultants and contractors, ES review and audit, stakeholder liaison etc. in the pre-application stage and subsequently through the examination process.			
Aberdeen Bay OWF <i>2009 - ongoing</i>	Client:	Vattenfall/AOWFL	Strategic Consents Advisor
Strategic consents advisor to the Aberdeen Bay offshore wind farm project providing advice and strategy on consenting and key environment issues together with key stakeholder liaison.			
Gwynt y Môr Wind Farm <i>2005 - 2010</i>	Client:	RWE	Consent and Environmental Manager
Involved the management of contributing consultants, review of scoping, key consultation with public, statutory and non-statutory bodies, the review of technical reports and the production of the ES and NTS.			

Kentish Flats Wind Farm <i>2004 - 2010</i>	Client: Vattenfall	Compliance Manager
Representing project owners Vattenfall on the Thames estuary developers Group and ensuring project licence compliance in terms of environmental monitoring, licence condition fulfilment etc.		
Various <i>1997 - 2004</i>	Client: Various	Project Manager
Marine Aggregate Dredging Application Environmental Statements: Completion of 11 separate environmental statements to support individual applications for marine aggregates dredging under the Government View procedures.		
Triton Knoll OWF Site Evaluation <i>2004</i>	Client: RWE	Consents Adviser
Audit and advisory role on the initial environmental assessment and scoping process for three Round 2 offshore wind farm sites in the Greater Wash and East Irish Sea Strategic Areas. Included a review of the contributing technical works, scoping responses and assessment of key issues for development.		
Facilitating Planning for Renewable Energy in Wales <i>2003</i>	Client: Welsh Assembly Government	Marine Adviser
Principal offshore renewable energy advisor for the project 'Facilitating Planning for Renewable Energy in Wales: Meeting the Target' produced by ARUP for the Welsh Assembly Government's which ultimately led to the development of the TAN8 guidance note.		
Lynn & Inner Dowsing Offshore Wind Farms - 2002	Client: AMEC and RES	Technical Contributor
Contribution to the ES for these two Round 1 developments, specifically relating to marine ecology.		
Kentish Flats Wind Farm <i>2002</i>	Client: Vattenfall	Project Manager
Completion of the scoping and environmental statement for one of the first UK offshore wind farms, located in the Thames Estuary. Included project management, quality control, consultation with statutory bodies, project PR and promotion, technical input and design of mitigation, management and monitoring programs.		

PERSONAL PROFILE

Reda is a consultant with over 5 years' experience working closely with marine industry. With a background in marine science Reda worked as a statutory advisor to the UK Government on nature conservation issues in respect of planning and consenting of offshore operations and developments in the renewables, oil and gas and marine aggregates sectors. He was responsible for the provision of advice to various UK regulators at a project specific level for various aggregate extraction licence areas, Triton Knoll Offshore Wind Farm, the Hornsea and Dogger Bank Round 3 zones and various oil and gas developments in the North Sea and West of Shetland. As part of this role Reda sat on a number of project specific steering groups including the Hornsea strategic advisory group, and strategic level groups including the Marine Management Organisations marine aggregates Regulators Advisory Group, Oil Spill Dispersant Advisory Group and the Marine Aggregate Level Sustainability Fund steering group. He co-ordinated and chaired the UK statutory nature conservation bodies Marine Industries Working Group and also provided advice on the various marine protected areas projects across the UK.

Reda gained project specific experience in the private sector providing consenting advice to Inch Cape, authoring various technical reports on fish ecology and contributing to various ES chapters. He also co-ordinated and authored the ES chapters for benthic ecology relating to the West of Islay Tidal project and provided advice or technical reporting services on Blyth Offshore Wind Farm, Humber Estuary Offshore Wind Farm and Codling Bank Offshore Wind Park in Ireland. He delivered offshore monitoring reports for benthic and fish assemblages at Robin Rigg offshore wind farm and Gunfleet Sands Offshore Wind Farms in line with the relevant licence conditions and managed Natural Powers offshore benthic and fish survey work.

Reda has participated in various survey programmes undertaking sampling of benthic communities, habitats and fish assemblages around the UK. In addition to sampling at various renewable energy sites Reda carried out benthic sampling around Oil and Gas platforms in the North Sea, at east coast SAC's and around the Irish Sea and the Isle of Man in relation to fishery impacts resulting from scallop fleets.

Currently Reda delivers post-consent compliance services to Beatrice Offshore Wind Farm in the Moray Firth and Neart na Gaoithe Offshore Wind Farm in the Firth of Forth. Working closely with clients Fraser has co-authored a number of approved consent plans and facilitated consultation with key stakeholders to discharge various licence conditions. In addition Reda provides Ecological Clerk of Works (ECoW) services and continues to work with key contractors on both projects to ensure compliance with the relevant licences and approved consent plans

EDUCATIONAL AND PROFESSIONAL STATUS

MSc Marine Environmental Protection, University of Bangor	2009
BSc (Hons) Aquatic Bioscience, University of Glasgow	2006

EMPLOYMENT

2015 – present	GoBe Consultants Ltd.	Environmental Consultant
2015	Eco-Fish Consultants Ltd.	Senior Aquatic/Marine Scientist
2012 – 2014	Natural Power Ltd.	Marine Ecologist
2010 – 2012	Joint Nature Conservation Committee	Offshore Industries Advisor
2009	University of Bangor/ Hartley Anderson Ltd.	Offshore Surveyor
2008	Jacobs Engineering	Field Ecologist
2007	Loch Lomond and the Trossach National Park	Countryside Ranger

SELECTED PROJECT EXPERIENCE

Neart na Gaoithe Offshore Wind Farm **Client:** Mainstream Renewable Power Environmental Consultant

Provide post-consent compliance support to Neart na Gaoithe Offshore Wind Farm Ltd. Manage consultation responses. Produce various consent plans to discharge Section 36 Consent and Marine Licence conditions. Liaise with stakeholders and MS-LOT as required. Provide offshore Ecological Clerk of Work services.

Beatrice Offshore Wind Farm **Client:** Scottish and Southern Energy Environmental Consultant

Provide post-consent compliance support to Beatrice Offshore Wind Farm Ltd. Produce consent plans to discharge Section 36 Consent and Marine Licence conditions. Liaise with the BOWL team, stakeholders and manage consultation of consent plans. Manage consent plan delivery programme and assist with the submission and approval of consent plans to MS-LOT. Provide offshore Ecological Clerk of Work services including review of contractor method statements and plans.

Inch Cape Offshore Wind Farm **Client:** Inch Cape Offshore Limited Marine Ecologist

Provide EIA and HRA support. Review and contribute to benthic ecology, fish and fisheries and HRA ES chapters. Produce supporting technical reports covering herring and diadromous fish species.

West Islay Tidal Energy Project **Client:** DP Energy Marine Ecologist

Design and manage offshore characterisation survey for benthic habitats and assemblages. Biotope Mapping. Produce a technical report and ES chapters for benthic ecology for the tidal site and cable route.

Gunfleet Sands Offshore Wind Farm **Client:** Dong Energy Marine Ecologist

2012 – ongoing

Manage offshore surveys for monitoring benthic habitats following installation of Gunfleet Sands Demonstration Project (third phase). Conduct multivariate analysis of benthic community data and produce final monitoring report. Manage report consultation and submission to the MMO.

Gunfleet Sands Offshore Wind Farm **Client:** Dong Energy Marine Ecologist

2011 – 2011

Produce technical report on herring ecology to support ES.

Blyth Offshore Demonstration Project **Client:** NAREC Marine Ecologist

2011 – 2011

Produce technical report on herring ecology to support ES.

Robin Rigg Offshore Wind Farm **Client:** Various Team member

2001 – 2009

Analyse all benthic community and fish assemblage data collected since commencement of monitoring programme. Produce final monitoring report and co-ordinate the compilation of all receptor chapters. Present findings to Marine Scotland and submit final report.

Codling Bank Offshore Wind Farm **Client:** Fred Olsen Renewables Marine Ecologist

Undertake a gap analysis of consented Codling Bank Wind Farm to determine suitability of assessment under present consenting regime. Develop and agree process to update original ES and design surveys to inform Codling Bank Offshore Wind Farm II.

JOINT NATURE CONSERVATION COMMITTEE

Triton Knoll Offshore Wind Farm **Client:** RWE UK Ltd. Offshore Industries Advisor

2003 – 2004

Provision of statutory advice on nature conservation issues in the context of the relevant planning and nature conservation legislation to the developer and Planning Inspectorate as required.

Hornsea Round 3 Zone **Client:** Mainstream Renewable Power Offshore Industries Advisor
Provision of statutory advice on nature conservation issues in the context of the relevant planning and nature conservation legislation to the developer and Planning Inspectorate as required.

Oil and Gas **Client:** Various Offshore Industries Advisor
Provision of statutory advice on nature conservation issues in the context of the relevant planning and nature conservation legislation to the Department of Energy and Climate Change

Marine Aggregate Extraction **Client:** Various Offshore Industries Advisor
Provision of statutory advice on nature conservation issues in the context of the relevant planning and nature conservation legislation to the developer and the Marine Management Organisation as required. Review aggregate extraction licences and supporting environmental information to facilitate transfer of FEPA licences to the new Marine Licence system following the introduction of the Marine and Coastal Access Act 2009. Review and advise on regional environmental assessments and regional environmental characterisation reports. Represent JNCC on the Marine Management Organisations Regulators Advisory Group and the Marine Aggregate Levy Sustainability Fund steering group.

PUBLICATIONS AND REPORTS

Hinz H., Murray L.G., Malcolm F.R., Kaiser M.J. (2011) The environmental impacts of three different queen scallop (*Aequipecten opercularis*) fishing gears. *Marine Environmental Research*, 73: 85 - 95.

Malcolm, F. R., Lye, G. and Lewis, M. (2012) Population sizes of seabirds breeding in Scottish SPAs. Report to Marine Scotland, Report Number: 1002062 (Work Package H)

ADDITIONAL TRAINING

- Marine Mammal Observer Training (JNCC approved), Carolyn Barton, May 2010
 - National Training Course on Oil Pollution, Contingency and Response, Marine and Coastguard Agency, November 2010
 - UK DECC Level 3 Onshore Emergency Responder, Oil Spill Response Ltd. March 2011
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PERSONAL PROFILE

Reda is an experienced marine ecologist and consultant who has a strong background providing authoritative scientific advice on the impacts of major industrial and construction developments in the marine environment. Reda has managed Ecological Impact Assessments and has delivered a significant amount of technical chapters and co-ordinated a team of environmental consultants on a number of projects for industries including aggregates, port and harbour development and energy provision. Redac has also provided technical and marine policy advice to government departments and agencies such as Cefas, Natural England and the JNCC.

Her experience includes the project management of post-consent compliance assistance for Rampion Offshore Windfarm, key involvement in the ecological impact assessments associated with 20 EIAs for marine aggregates licence renewals, the provision of expert advice to East Anglia Offshore Wind Ltd on mitigating construction impacts on Annex I habitats, leading the post-construction monitoring of benthic resources at Thanet Offshore Wind Farm and acting as an advisor to Tidal Lagoon Power during the preparation of the Terms of Reference for the benthic monitoring strategy for the Swansea Bay Tidal Lagoon.

Redac also has specialist skills in survey design, multivariate statistical analysis of and interpretation of marine ecological data, habitat mapping, report writing and environmental impact assessment. Redac holds extensive ecological survey experience in scientific benthic grab sampling, underwater video and imagery, epibenthic trawling and intertidal habitat monitoring. Beyond this Redac has a strong understanding of marine ecology, the legislation that regulates the environmental impacts of developments and how the impacts of different activities can be manifested.

Redac has a fundamental understanding of Geographic Information Systems (GIS), having acted as the GIS technician on the Marine Aggregate Levy Sustainability Fund (MALSF) funded Regional Environmental Characterisation (REC) reports and leading a number of large scale intertidal habitat mapping projects as part of the government’s designation of Marine Protected Areas (MPAs) throughout the UK.

EDUCATIONAL AND PROFESSIONAL STATUS

MSc Environmental Consultancy (with Distinction), University of Plymouth	2010
BSc Marine Biology (Hons) (2:1), University of Wales, Swansea	2008

EMPLOYMENT

May 2015 – present	GoBe Consultants Ltd.	Marine Consultant
2010 – May 2015	Marine Ecological Surveys Limited	Principal Marine Ecology Consultant & Survey Manager
2008 – 2009	Wild Aid	Shark Researcher
2007 – 2008	Gower Coast Adventures	Nature Guide
2005 – 2006	Master Divers	Dive Master & Dive Videographer

SELECTED PROJECT EXPERIENCE

Rampion Offshore Wind Farm **Client:** E.ON Marine Consultant
2015-present

Providing strategic support on post-consent compliance actions associated with the discharge of DCO and DML Requirements / Conditions. This work has included the production of management tools, programmes, and documents to support the discharge of Marine Licence conditions. Ongoing work includes liaising with the Rampion Offshore Wind Farm Consents Manager and producing consent compliance documentation for approval.

West of Duddon Sands Cable Remedial Works **Client:** Dong Energy Marine Consultant
2015 - present

Provision of marine licence strategy support for proposed cable protection remedial works on the export cable.

Feasibility Assessment for Mulroy Bay **Client:** Tocado Marine Consultant
2015 - 2016

Provision of a technical report to identify the potential environmental constraints and consent implications of installing an array of up to four prototype tidal turbines at up to three potential sites in Mulroy Bay, Ireland, for the production and supply of renewable energy to the Irish National Grid.

Galloper Offshore Wind Farm **Client:** RWE Marine Consultant
2015-present

Providing strategic support on post-consent compliance actions associated with the discharge of DCO and DML requirements / conditions. This work has included the production of documents to support the discharge of Marine Licence conditions, including the Scour Protection Management Plan and the Construction Method Statement. Ongoing work includes liaising with the Galloper engineering teams and producing consent compliance documentation for approval.

Race Bank Offshore Wind Farm **Client:** Dong Energy Marine Consultant
2015-present

Technical review of Eastern Inshore Fisheries and Conservation Authority (EIFCA) Wash cockle data in order to provide an overview of natural variability across the Wash with respect to individual cockle beds and visual presentation of the time-series data. This dataset and corresponding statistical analyses will be used as a baseline for future monitoring associated with the offshore wind farm.

Tidal Lagoon Swansea Bay **Client:** Tidal Lagoon Power Principal Marine Ecological Consultant
2015

The preparation of the Terms of Reference for the benthic monitoring programme; including benthic monitoring strategy together with all relevant methodologies for future impact monitoring of the Swansea Bay Tidal Lagoon on the subtidal benthic resources found across the area of interest.

Torr Head Tidal Energy Array Environmental Characterisation **Client:** Open Hydro Principal Marine Ecological Consultant
2014

Development and provision of subtidal and intertidal characterisation studies at the Torr Head Tidal Energy Agreement for Lease (AfL) area. Predictive habitat modelling and micro-siting of sampling stations to develop a comprehensive sampling strategy. Acquisition of high quality video and still images to characterise the substrata and fauna, and an assessment of habitats and species of conservation interest.

The Potential Impacts of Fishing Gear on Protected Features **Client:** North Norfolk Fisheries Local Action Group Principal Marine Ecological Consultant
2014

Preparation of a technical report for the North Norfolk Flag on the potential impacts of fishing gear on protected features on the North Norfolk Coast. Desk based review of the extent of current fishing activities in the region and their potential interactions with the features of the Marine Protected Areas located within the North Norfolk FLAG area.

The Potential for Aquaculture in Welsh Waters Report 2015	Client: Welsh Government	Principal Marine Ecological Consultant
<p>Technical contribution to the assessment of the potential for aquaculture in Welsh waters using a spatial model to identify coastal and marine areas suitable for future marine aquaculture developments, to inform the development of the National Marine Plan and to feed into the Aquaculture Multi-Annual National Plan for the European Marine and Fisheries Fund (EMFF).</p>		
Aggregate Industries Regional Seabed Monitoring Programme. 2014-2015	Client: BMAPA	Survey Manager
<p>Environmental survey manager for the regional seabed monitoring programmes for the Humber, Outer Thames and Anglian regions.</p>		
Stour and Orwell Estuaries rMCZ 2013	Client: Natural England	Principal Marine Ecological Consultant
<p>The lead surveyor, report writer and GIS consultant for the large scale intertidal habitat mapping project of the Stour and Orwell Estuaries rMCZ as part of the government's designation of Marine Protected Areas (MPAs) throughout the UK.</p>		
Thanet Coast rMCZ 2013	Client: Natural England	Principal Marine Ecological Consultant
<p>The lead surveyor, report writer and GIS consultant for the large scale intertidal habitat mapping project of the Thanet Coast rMCZ as part of the government's designation of Marine Protected Areas (MPAs) throughout the UK.</p>		
Aggregate License Area 401/2 2014	Client: Hanson Marine Aggregates	Principal Marine Ecological Consultant
<p>Project Management of the benthic monitoring and characterisation study of Aggregate Licence Area 401/2 (Anglian region). This study involved the survey design, acquisition of primary data, statistical analysis of ecological data, the review of marine conservation and the production of a benthic characterisation and monitoring report with associated GIS.</p>		
Thanet Offshore Wind Farm 2013	Client: Vattenfall UK	Marine Ecology Project Manager
<p>Project management of the post-construction marine ecological suite of studies, including: Annex 1 habitat, assessment of scour, benthic ecology and monopile colonisation. The role involved client and Statutory Nature Body liaison, sub-contractor management, the design and execution of ecological surveys, the habitat modelling of benthic resources and Annex 1 habitat and the production of technical reports.</p>		
Aggregate Licence Area 366-70 2012	Client: RMA	Marine Ecological Consultant
<p>Design and provision of benthic monitoring surveys at aggregate licence Area 366-70. Multivariate statistical analysis of benthic faunal and particle size distribution data, analysis of historic impacts, regional biotope descriptions and client and regulatory liaison.</p>		
Aggregate Licence Area 460 2012	Client: RMA	Marine Ecological Consultant
London Gateway Port Project 2011-2015	Client: DP World	Principal Marine Ecological Consultant
<p>Responsible for conducting assessments of benthic and epibenthic fauna, including commercially important species and the role played in provision of ecosystem services. Through the completion of ecological surveys technical reports made significant contribution to furthering the understanding of the environmental impacts of this highly complex development. Provided advice of proposals for mitigation of likely impacts on marine biota and responsible for monitoring the managed re-alignment site as part of the mitigation and compensation programme.</p>		

PERSONAL PROFILE

Redact is a marine consultant with a background in marine environmental management and ecology. Redact has practical experience of field work survey techniques and statistical analysis using R. Recent work involved reviewing the procedures that were used to assess and mitigate the effects of construction, dredging and disposal activities associated with developments at the Invergordon Service Base and Nigg Energy Park in the Cromarty Firth, Scotland. In particular this focused on the impacts of construction activities on marine mammals and the management of new developments under recent legislation that has increased the requirement for developers to consider these impacts. The project also involved liaising with multiple stakeholder groups and identifying how current research and monitoring data could be used to adapt future assessment and mitigation procedures.

Currently Redact delivers post-consent compliance services to Beatrice Offshore Wind Farm Ltd. in the Moray Firth. Working closely with clients and various stakeholders Redact has co-authored a number of consent plans in order to discharge some of the Section 36 and Marine Licence conditions.

EDUCATIONAL AND PROFESSIONAL STATUS

MSc Marine Environmental Management (with Distinction), University of York 2014-15

BSc (Hons) Biological sciences with Environmental Resources (First class), University of Warwick 2011-14

EMPLOYMENT / EXPERIENCE

Dec 2015 - present	GoBe Consultants Ltd.	Consultant
Oct-Nov 2015	University of Aberdeen	Dolphin photo ID grader
July-Sept 2015	University of Aberdeen	Work Placement
Oct 2013 – Jan 2014	Warwick Castle	Customer Service Assistant
Oct 2012 -	Warwick University	Group Leader for Operation Wallacea
Aug – Sept 2014	FRONTIER, Costa Rica	Conservation volunteer
Jun-July 2013	Operation Wallacea, Honduras	Scientific Research Assistant
Jun – July 2012	Operation Wallacea, Peru	Scientific Research Assistant
Dec 2012	Undergraduate Research Scholarship Scheme Exchange Programme in Australia	

SELECTED PROJECT EXPERIENCE

Beatrice Offshore Wind Farm *Client:* Scottish Southern Energy Consultant
2015 - Present

Providing post-consent compliance support to Beatrice Offshore Wind Ltd. Liased with the BOWL team to produce various consent plans to discharge the Marine Licence and Section 36 Consent conditions. Assisting with submission and approval of consent plans to MS-LOT.

NATIONALITY: BRITISH

PERSONAL PROFILE

Red is a Technical Director with over twelve years' experience in marine and coastal projects and a track record in offshore wind dating back to the earliest projects in the UK. He specialises in consenting projects under The Planning Act, EIA management and sub-contractor management. He has delivered numerous high profile impact assessments, scoping studies and feasibility reports for developments throughout the UKCS. He has recently acted as Examination Manager for the Hornsea Project One offshore wind farm application for SMart Wind. Prior to this Redacted acted as the offshore consent manager for the Galloper Wind Farm project through examination phase and was EIA manager during the pre-application phase. He previously acted as EIA manager for the first two Round 3 offshore wind farm projects within the Dogger Bank Zone, as well as manager for the cable route selection and Scoping Report work packages for the next suite of projects from this Zone. He has also advised and acted on numerous other offshore wind farm projects including Walney Extension, Atlantic Array, Triton Knoll, East Anglia One, Seagreen, Kentish Flats Extension, Dudgeon, Scarweather Sands and Lincs. Peter represented SMart Wind at industry level on the steering groups of ORJIP and the Vattenfall Harbour Porpoise study (DEPONS). He is also an ongoing member of RenewablesUK's Consents and Licencing Group (CLG) and steering group member of DECC's Coping Strategy.

EDUCATIONAL AND PROFESSIONAL STATUS

MSc Environmental Biology, University of Wales	2001
BSc (Hons) Marine Biology, University of Wales	2000
Chartered Marine Scientist – Member of IMarEST (CMarSci MIMarEST)	

EMPLOYMENT

2012 - present	GoBe Consultants Ltd.	Technical Director
2006 – 2012	Royal Haskoning	Senior Environmental Scientist
2002 - 2006	Metoc Plc	Environmental Consultant
2002 – 2002	Independent Consultant	

SELECTED PROJECT EXPERIENCE

Hornsea Project TWO	Client: SMW/DONG Energy	Examination Coordinator (secondment)
Coordination of all activities carried out during the examination of the Project. Member of the Core Team providing technical and strategic advice on key matters and review of all documentation. Technical advice and input into written and oral submissions.		
Walney Extension	Client: DONG Energy	Project Director for post consent compliance support
Oversight of the post consent compliance work associated with the discharge of all Conditions under the deemed Marine Licences of the Project's DCO.		
Race Bank	Client: DONG Energy	Project Director for post consent compliance support
Management of input into pre-commencement monitoring plans including benthic, geophysical, noise, marine mammals, cockles and intertidal.		

Company Assets	Client: Confidential	Review of consent for company's offshore assets for forthcoming Natura 2000 designations
Technical risk assessment of risk to consents as a result of impending designations.		
East Anglia ONE	Client: ScottishPower Renewables	Consent management for site investigation works
Management of consents and approvals for Site Investigation works (offshore and intertidal).		
Hornsea Project ONE	Client: DONG Energy	Project Manager for post consent compliance support
Oversight of the post consent compliance work associated with the discharge of all Conditions under the deemed Marine Licences of the Project's DCO.		
Hornsea Project ONE 2012 – June 2014	Client: SMart Wind	Environment Manager & Examination Manager
Examination Phase: Examination Manager, responsible for the coordination of all matters relating to the examination of the Hornsea Project One application. Role includes Examination strategy, stakeholder liaison / negotiations, coordination of the SMart Wind examination team (internal and third party) and its relevant examination submissions, hearing coordination and planning, interface with legal advisors and liaison with The Planning Inspectorate.		
Pre-application Phase: Offshore Environment Manager for pre-application phase for matters relating to marine mammals, ornithology and HRA. Role included management of sub-contractors, review and sign off of pre-application material, consent strategy and stakeholder liaison.		
Industry: SMart Wind representative at industry level on ORJIP, the Vattenfall Harbour Porpoise study (DEPONS) and RenewablesUK's Consents and Licencing Group (CLG).		
The Dogger Bank Round 3 Wind Farm	Client: Forewind	Bid Support & EIA Project Manager
2008 – 2012		
Responsible for cable route site selection (for up to 4GW of projects at two broad locations), lead scoping author (offshore) for up to 4GW of projects, ITT preparation, interviewing potential sub-contractors, liaison with EIA – ZAP, cumulative impact planning at project and zone level and environmental support (offshore) for consent application for the first 3GW of projects (Creyke Beck) from the Round 3 Zone. Cable route site selection and Scoping for a further 6GW of projects (Teesside). Responsibilities prior to zone award included Forewind bid support comprising approach to consent acquisition, programme planning, zone development strategy and defining the ZAP process.		
Galloper Wind Farm Project	Client: SSE & RWE	Offshore consent manager (2012 onwards) & EIA Manager (2009-2011)
2012 – ongoing		
Responsible for the management of post application matters (offshore) for GWFL, including Statements of Common Ground, management and coordination of subcontractors, liaison with stakeholders, development of post consent strategies and preparation of evidence base and positions for examination phase.		
2009 – 2011		
Responsible for the delivery of the environmental consents (namely EIA and Scoping Report) for the Round 2.5 project. Additional responsibilities included guidance for EIA strategy under The Planning Act, management of EIA team, review of sub-contractor technical reports, EIA chapter review, stakeholder consultations and negotiation, project planning, sub-contractor management, ITT preparation, survey specification, financial and resource management.		

NATIONALITY:

BRITISH

PERSONAL PROFILE

Re is an environmental consultant with background in marine biology and a strong track record in data base development, data management and with GIS capability. Re has practical experience of field work and statistical analysis of data, ecosystem modelling and seabed video and trawl analysis using GIS as well as having experience of sedimentary and taxonomic analyses. Re has studied the impacts of a variety of activities on the marine environment including the ecosystem impacts of fisheries at different intensities.

EDUCATIONAL AND PROFESSIONAL STATUS

MSci (Hons) Marine Biology (2:1 Upper Class), University of Southampton

2009-2013

EMPLOYMENT

Jan 2016 - Present

Consultant

GoBe Consultants Ltd.

2014 – 2015

Data Collector and Analyst

Stark Software International

2013 – 2014

Quality Control Associate

Fisher Clinical Services

2012 (summer)

Laboratory Assistant

EMU Ltd (Now FugroEMU)

2011 (summer)

Laboratory Assistant

Nautica Environmental
Associates LLC**SELECTED PROJECT EXPERIENCE****Hornsea Project Two OWF****Client:** SMart Wind

Consultant / GIS

2016 - ongoing

Technical input into documentation for HRA production. GIS data analysis and management.

West of Duddon Sands OWF**Client:** DONG Energy

GIS Consultant

2016 - ongoing

GIS data analysis and GIS mapping services and management.

Walney Extension OWF**Client:** DONG Energy

Consultant

2016 - ongoing

Production of post-consent compliance documentation and environmental monitoring plans for approval. Input into addressing additional marine licencing requirements and variations to existing consents. GIS data analysis and management.

Triton Knoll OFW**Client:** RWE

GIS Consultant

2016 - ongoing

GIS data analysis and GIS mapping services and management.

Hastings Shingle Bank Dredging**Client:** RMA

Consultant

Site*2016*

Production of technical reports to support marine licencing variations and in response to submissions from SCNB's.

PUBLICATIONS AND REPORTS

New, P., A. Brown, A. Oliphant, P. Burchell, A. Smith and S. Thatje (2014). The effects of temperature and pressure acclimation on the temperature and pressure tolerance of the shallow-water shrimp *Palaemonetes varians*. *Marine Biology* 161:697-709.

NATIONALITY:

BRITISH

PERSONAL PROFILE

Following graduation from University in 1996, Redacted started her career in marine survey before moving into marine consultancy. She has participated in and project managed numerous projects, ranging from coastal and estuarine sites to projects beyond 12nm. Redacted has considerable experience in marine mammal assessments, EIA/Habitats Regulations, ports and harbour projects, consents to discharge, recommendations for and drafting of monitoring and mitigation measures and assessment of marine aggregate dredging licence applications. Recent experience has included significant involvement with several offshore renewable projects, including wind, wave, tidal stream and tidal range with a particular focus on writing and reviewing technical reports and PEI/ESs as well as providing technical advice and report writing at various stages of project development ranging from site selection (including assessments of potential consenting risk), scoping, EPS licence application, Evidence Plans, various documents required prior to and post submission, EIA, HRA and Public Inquiry.

EDUCATIONAL AND PROFESSIONAL STATUS

BSc (Hons) Oceanography with Marine Biology, University of Southampton	1993 - 1996
Associate member of the Institute of Environmental Management and Assessment (AIEMA)	

EMPLOYMENT

2011 – present	GoBe Consultants	Senior Consultant
2006 - 2011	RPS	Senior Consultant
2002 - 2006	ABPmer	Consultant
1998 - 2002	Emu Limited	Consultant
1997	Hebridean Whale & Dolphin Trust	Volunteer
1996 - 1997	Southern Science	Marine Scientist

SELECTED PROJECT EXPERIENCE

Harbour porpoise dSAC review of risks	Client: Dong Energy	Senior Consultant
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2016

Undertaking a risk review of all the clients OWF assets in UK waters in light of the pSAC consultation - to provide advice on which projects may be affected and to what extent.

Harbour Porpoise HRA	Client: Dong Energy	Senior Consultant
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2016

Preparation of initial high level HRA (prior to the availability for draft pSAC consultation material) followed by drafting the site level HRA following commencement of the consultation period.

DONG Assets	Client: Dong Energy	Senior Consultant
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2015-ongoing

HRA screening risk analysis for all DONG assets in light of the impending marine mammal SAC designation process.

HOW02	Client: DONG Energy	Senior Consultant
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2015-ongoing

HRA for the Southern North Sea harbour porpoise pSAC. Role includes the technical authorship of the HRA and liaison with industry, SNCBs and regulator on outputs.

Walney Extension <i>2015-ongoing</i>	Client	DONG Energy	Senior Consultant
No LSE and exemption reports for site investigation works proposed for the Walney Extension project including HDD works, UXO works, geotechnical and geophysical campaigns.			
East Anglia ONE <i>2015-ongoing</i>	Client	DONG Energy	Senior Consultant
No LSE and exemption reports for site investigation works proposed for the East Anglia project including HDD works, UXO works, geotechnical and geophysical campaigns.			
North Owers Marine Aggregate Licence Application <i>2012-2014</i>	Client:	CEMEX and Lafarge Tarmac Marine	Senior Consultant
Contribution to the scoping stage and the Environmental Statement, including nature conservation (the site is within a MCZ), marine mammals, ornithology, NTS, archaeology, physical processes and cumulative & in-combination.			
Triton Knoll Offshore Wind Farm and Electrical Infrastructure <i>2011-2014</i>	Client:	TKOWFL	Senior Consultant
Input at various stages of the project, including to the EIA and HRA for the offshore wind farm including on EPS followed by drafting of the first draft Evidence Plan for the cable infrastructure from a HRA and EIA perspective. Drafting the Nature Conservation chapters of the PEI for the Electrical Infrastructure.			
Navitus Bay Offshore Wind Farm <i>2014</i>	Client:	Navitus Bay Development Ltd	Senior Consultant
Technical review of ES chapters and drafting of the NTS.			
Offshore Wind Farm, non UK <i>2014</i>	Client:	Confidential	Senior Consultant
Technical contribution to the assessment of constraints during site selection.			
Atlantic Array Offshore Wind Farm <i>2011-2013</i>	Client:	RWE npower renewables	Senior Consultant
Support and technical input at various stages of the project, including proof reading numerous reports/ES chapters, drafting risk analysis documents and review of, drafting and contribution to dossiers and relevant representations.			
Proposed offshore wind farm in Northern Ireland <i>2013</i>	Client:	First Flight Wind	Senior Consultant
Drafting the biological chapter for the Scoping Report.			
Burbo Bank Extension <i>2013</i>	Client:	DONG	Senior Consultant
Input to dossiers and relevant representation information for ornithology, SLVIA and salmon.			
Walney Extension <i>2013</i>	Client:	DONG	Senior Consultant
Technical input to the NTS and proof reading of various topics.			
Hornsea Offshore Wind Farm <i>2012-2013</i>	Client:	Smartwind	Senior Consultant
Technical input to and proof reading of various documents, particularly on HRA and marine mammal issues.			
The Crown Estate <i>2011-2012</i>	Client:		Senior Consultant
Technical input to work investigating the potential for an offshore integrated grid network.			

Confidential Project <i>2011-2012</i>	Client: Confidential	Senior Consultant
Technical input to an Initial Feasibility Assessment of port facilities for construction, operation and maintenance of an Offshore Wind Farm.		
Gwynt y Mor offshore Wind Farm - Port of Mostyn Pontoon <i>2011</i>	Client: RWE	Senior Consultant
Technical input to the ES and review of further chapters prepared for the proposed pontoon at the Port of Mostyn.		
Humber Renewals Marine Aggregate Dredging Area 127 <i>2011</i>	Client:	Senior Consultant
Drafting technical input in support of the application to renew the existing licence for marine aggregate dredging at Area 127.		
Gunfleet Sands Offshore Wind Farm Post Construction <i>2011</i>	Client: DONG	Senior Consultant
Technical input to the reporting on the Year 1 post construction monitoring undertaken.		
Galloper Offshore Wind Farm <i>2011</i>	Client: RWE	Senior Consultant
Technical input to several offshore chapters for the ES.		
Round 2 Offshore Wind Farm Planned Piling of Turbines <i>2010</i>	Client: Confidential	Senior Consultant
Support to the application of an EPS licence for proposed piling at an offshore wind farm.		
Round 3 Offshore Wind Farm Planned Seismic Survey <i>2010</i>	Client: Confidential	Senior Consultant
Assessment of the potential impact from a planned seismic survey on harbour porpoise in the North Sea, including an assessment of the potential for deliberate disturbance/injury.		
Round 2 Offshore Wind Farm <i>2010</i>	Client: Confidential	Senior Consultant
Assessment of the potential impact from a planned change in construction methodology on harbour seal populations. Including some piling activity.		

NATIONALITY:

BRITISH

PERSONAL PROFILE

Reda is a senior marine consultant with significant experience in the offshore wind industry, having been involved in the application of a number of offshore wind farms that have received consent under The Planning Act. Reda has also played an important role in the examination process for two offshore wind farm projects and has valuable experience of providing advice and management of consent compliance during the post consent development phase.

Reda is currently acting as offshore post consent compliance for East Anglia ONE offshore wind farm for Scottish Power Renewables and previously acted as Offshore Development Manager for Rhiannon Offshore Wind Farm. Reda has also advised and acted on numerous other offshore wind farm projects including Hornsea Project One, Atlantic Array, Triton Knoll, Galloper, and Kentish Flats Extension.

Through her varied experience Reda has developed a speciality in providing technical support and project management for marine development EIA and consents for major marine infrastructure projects during the pre-application phase, examination phase and post consent phase.

EDUCATIONAL AND PROFESSIONAL STATUS

MSc Environmental Consultancy, University of Plymouth	2010
BSc (MSci) Aquatic Bioscience, University of Glasgow	2006

EMPLOYMENT

February 2012 - present	GoBe Consultants Ltd.	Senior Consultant
August 2010 – February 2012	Royal Haskoning	Environmental Scientist
March – April 2010	Natural England & Environment Agency	Assistant Advisor (Work Placement)
2006 – 2009	National Marine Aquarium	Biologist

SELECTED PROJECT EXPERIENCE

East Anglia ONE Offshore Wind Farm	Client: Scottish Power Renewables	Offshore Consent Compliance Manager
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2014 - present

Providing strategic support on post-consent compliance actions associated with the discharge of DCO and DML Requirements / Conditions. This work has included the production of management tools, programmes, and documents to support the discharge of Marine Licence conditions. Ongoing work includes liaising with the EA ONE engineering teams and producing consent compliance documentation for approval as well as developing the environmental monitoring framework for approval and addressing a number of additional marine licensing requirements and variations to existing consents.

Triton Knoll Electrical System	Client: RWE	Senior Consultant
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2014/2015

Providing support in the preparation and review of the Preliminary Environmental Information report for consultation purposes. Technical support during preparation of final Application Documentation.

Rhiannon Offshore Wind Farm	Client: Celtic Array	Offshore Development Manager
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2013/2014

Responsible for ensuring a thorough offshore consenting process leading to the submission of an Environmental Statement for the offshore works. Role includes: coordinating the delivery of the offshore Environmental Statement, providing strategic guidance and support to the project team, coordination of all consent applications including DCO and Marine Licence, liaising with key offshore stakeholders.

Hornsea Project One Offshore Wind Farm <i>2013 - present</i>	Client: SMart Wind Limited / DONG	Senior Consultant
Providing support to the client during the examination phase as 'topic lead' on a number of offshore topics including commercial fisheries, benthic ecology, nature conservation and related HRA topics. The role included: managing sub-consultants, stakeholders management (liaison & negotiation), developing Statements of Common Grounds and clarification notes, managing, drafting and reviewing written responses to the Planning Inspectorate. Post consent: strategic post consent compliance support.		
Dogger Bank Teesside A & B <i>2013/2014</i>	Client: Forewind	Project Manager
Responsible for managing, developing and producing the Consultation Report.		
First Flight Wind Offshore Wind Farm, Northern Ireland <i>2013</i>	Client: First Flight Wind Limited	Project Manager
Managing and co-ordinating the offshore aspects of the EIA scoping report including drafting and reviewing chapters.		
Burbo Bank Extension Offshore Wind Farm <i>2013</i>	Client: DONG	Environmental Consultant
Providing post application and examination phase support, including the development of Statements of Common Ground, information dossiers and clarification notes.		
Atlantic Array Offshore Wind Farm <i>2012/2013</i>	Client: RWE	Environmental Consultant
Providing offshore consents advice during the post Section 42 consultation process and providing support to the EIA management team in preparing for the final consent application. Responsible for managing, developing and producing the Consultation Report.		
Walney Extension Offshore Wind Farm <i>2013</i>	Client: DONG	Environmental Consultant
Responsible for drafting EIA Process chapter of the Environmental Statement		
Triton Knoll Offshore Wind Farm Met Mast <i>2012</i>	Client: RWE	Environmental Consultant
Compliance management for the Triton Knoll Offshore Wind Farm Met Mast consent. Providing support and advice for all matters associated with Marine Licence consent requirements and where necessary liaising with Statutory Advisers.		
Trion Knoll Offshore Wind Farm <i>2012</i>	Client: RWE	Environmental Consultant
Providing support in the preparation and review of the submissions requested by the Planning Inspectorate during the post-application examination phase.		
Galloper Wind Farm Project <i>2012-Present</i>	Client: SSE & RWE	Senior Consultant
Assisting with the preparation of the Preliminary Environmental Report, Environmental Statement and HRA. Examination support and continuing ad hoc support during post examination project developments including site investigation requirements. Post consent: drafting of pre-construction monitoring plans required by the deemed Marine Licence including negotiation of monitoring approaches with the MMO and advisers and the drafting of other pre-commencement documentation.		
The Dogger Bank Round 3 <i>2011-2012</i>	Client: Forewind	Environmental Scientist & EIA Project Co-ordinator
Responsible for financial management of project, supporting project manager and input into technical Environmental Statement Chapters and Scoping Documents.		

Firth of Forth Offshore Wind Farm *Client:* Seagreen Wind Energy Environmental Scientist
2011

Providing input into technical Environmental Statement chapters.

Kentish Flats Extension Project *Client:* Vattenfall Environmental Scientist
2010-2011

Assisting with writing sections of the Draft Environmental Statement, produced the Preliminary Environmental Information report and worked on the Environmental Statement following receipt of consultation responses.

Harbour Development, Poole *Client:* Poole Harbour Commissioners Graduate Environmental Scientist
2011

Provided input to a Scoping Study for a proposed harbour development.

RNLI Lifeboat Station Mumbles *Client:* Opus Engineering Graduate Environmental Scientist
2011

Provided input to a Scoping Study for a proposed harbour development.

Flood Alleviation Schemes *Client:* Environment Agency Graduate Environmental Scientist
2010

Drafting and review of Environmental Statement

CURRICULUM VITAE

Redacted
SENIOR MARINE CONSULTANT



NATIONALITY:

BRITISH

PERSONAL PROFILE

Red is a senior marine consultant with ten years' experience in marine and coastal. He specialises in marine ecology assessment, EIA management (with a focus on marine renewables and aggregate extraction), offshore wind farm consents process under The Planning Act and survey design and management.

Red has a strong background in the management and co-ordination of EIA and has been responsible for the delivery of technical chapters and management of a wider team of environmental consultants on a number of projects, including aggregate application areas, offshore wind farm projects and disposal site applications for several of the offshore wind farm projects. His day to day responsibilities include client liaison, sub-contractor management, design and provision of technical support for marine ecological surveys, review of technical reports and development of specialist survey and habitat modelling methodologies.

Red has considerable experience of the examination phase for major infrastructure projects under the Planning Act, most notable acting as an expert witness at the issue specific hearing on matters relating to aquatic ecology for the ABLE Marine Energy Park. In addition to this expert witness role, Red was responsible for undertaking negotiations with relevant stakeholders, drafting statements of common ground, conducting site characterisation of the capital dredge site and Humber disposal sites, development of the compensation site monitoring and management documentation, review of technical reports and client liaison. Sean has also provided technical advice in the examination phase for East Anglia Offshore Wind, Galloper Wind Farm and Triton Knoll Offshore Wind Farm, and continues to be involved in a number of additional offshore wind farms currently in the planning process.

EDUCATIONAL AND PROFESSIONAL STATUS

MSc Environmental Technology, Imperial College London	2005
BSc Marine Biology, University of Plymouth	2004

EMPLOYMENT

August 2012 - present	GoBe Consultants Ltd.	Senior Marine Consultant
2011 – August 2012	Environmental Resources Management	Senior Marine Consultant
2010 - 2011	Entec	Marine Consultant
2009 – 2010	University of Plymouth	Researcher
2005 - 2009	Defra	Marine Ecologist

SELECTED PROJECT EXPERIENCE

Walney Extension <i>2015-present</i>	Client: DONG Energy	Offshore Consent Compliance Manager
Providing strategic support on post-consent compliance actions associated with the discharge of DCO and DML Requirements / Conditions. This work has included the production of management tools, programmes, and documents to support the discharge of Marine Licence conditions. Ongoing work includes liaising with the Walney Extension package managers and engineering teams, producing consent compliance documentation and environmental monitoring plans for approval, and addressing a number of additional marine licensing requirements and variations to existing consents.		

Hornsea Project ONE <i>2015-present</i>	Client: DONG Energy	Senior Consultant
Ongoing work includes liaising with the P1 package managers and engineering teams, producing environmental monitoring plans for approval.		

Race Bank <i>2015-present</i>	Client: DONG Energy	Senior Consultant
Ongoing work includes liaising with the Race Bank package managers and producing environmental monitoring and mitigation plans for approval		
Triton Knoll Electrical System 2013 - ongoing	Client: RWE	Offshore EIA Manager
Management of the offshore EIA, subcontractor management, stakeholder liaison, technical review of draft material, survey design and management, scoping reporting, consent compliance advice, DCO and dML drafting.		
Various Aggregates Licence areas	Client: ERM/Marinespace	Senior Marine Consultant
Providing technical reviews of benthic characterisation reports, development of site characterisation methodologies, authoring of technical ES chapters and supporting documentation. Technical support for Area 501 Outer Thames, 396/435 Inner Owers, 296/494 East Anglia.		
Galloper Offshore Windfarm 2013	Client: RWE	Offshore Post-Consent Compliance
DCO compliance guidance, provision of Environmental Management, Monitoring and Mitigation Plan documentation, liaison with regulators, design of benthic monitoring plan, fish ecology monitoring plan, review of ornithological plan, provision of tenders on behalf of client, ad hoc support to client including conservation reviews, project risk review, programming updates.		
North Owers Aggregate Application Areas <i>2012-Ongoing</i>	Client: CEMEX/TARMAC	Project Manager
Project management of aggregate licence application and EIA. Client liaison, sub-contractor management. Design and provision of technical support for benthic ecological surveys, review of technical reports, drafting of technical chapters. Development of specialist benthic survey and habitat modelling methodologies. Development of Marine Conservation Zone assessment methodology, liaison with Statutory Nature Conservation Bodies. Provision of commercial fisheries technical baseline.		
Burbo Bank Extension Offshore Windfarm 2013	Client: DONG	Senior Marine Consultant
Provision of compliant Water Framework Directive Assessment including technical review of benthic, fish and shellfish, and physical processes chapters.		
Hornsea Phase 2 Offshore Windfarm 2013	Client: SMart wind	Senior Marine Consultant
Technical support to project team, reviewing benthic and intertidal, fish and shellfish, and commercial fisheries reports and ES chapters. Technical support for associated disposal licences. Provision of compliant Water Framework Directive Assessment, liaison with regulators.		
Hornsea Phase 1 Offshore Windfarm <i>2012-2013</i>	Client: Smart wind	Senior Marine Consultant
Provision of compliant Water Framework Directive Assessment including technical review of benthic, fish and shellfish, and HRA chapters, liaison with regulators. Technical support for associated disposal licences.		
Triton Knoll Offshore Windfarm Export cable <i>2013-ongoing</i>	Client: TKOWFL	Offshore Consent Manager
Offshore consent manager for the Triton Knoll export cable EIA, liaising with technical specialists on behalf of the clients, liaising with the overall EIA consultants, and technical review of inputs to the scoping report.		
Gwynt Y Mor Offshore Windfarm <i>2012-2013</i>	Client: RWE	Senior Marine Consultant
Provision of fish ecology expertise and analysis of noise monitoring data and subsequent assessment of modelled noise impact modelling and monitored impacts on key fish spawning grounds.		

Atlantic Array Offshore Windfarm *Client:* RWE Senior Marine Consultant
2012-2013

Disposal licence assessment and application for disposal of construction related material

Triton Knoll Offshore Windfarm *Client:* TKOWFL Senior Marine Consultant
2012

Conducting constraints analysis for export cable route choice. Feasibility analysis of Physical, Biological and Human constraints associated with the routing of an export cable from the offshore windfarm site to the landfall site.

ABLE Marine Energy Park *Client:* ABLE Senior Marine Consultant
2012-2013

Expert witness, aquatic ecology. Attending the specific issues hearing as part of the Planning Inspectorate Process to answer questions relating to the fish and benthic ecology assessment. Conducting site characterisation of the Humber disposal sites, review of technical reports, client liaison, and statutory nature conservation body liaison. Development of technical target setting reports, review of characterisation reports.

Spanish Point Oil Exploration Site Characterisation *Client:* Chrysoar Senior Marine Consultant
2012

Design and provision of technical support for benthic ecological survey in deepwater West of Ireland/North Atlantic, review of technical reports, scoping report, development of specialist benthic survey and habitat modelling methodologies.

Nobel Banks Aggregate Licence *Client:* Llanelli Sand Dredging Ltd Senior Marine Consultant
2012

Design and provision of technical support for benthic ecological surveys, review of technical reports, and development of specialist benthic survey and habitat modelling methodologies as part of the 5 year monitoring process.

Dogger Bank Offshore Windfarm *Client:* Forewind Senior Marine Consultant
2012

Conducting technical reviews of the benthic and fisheries baseline reports.

Humber Aggregates Licence Application *Client:* Tarmac Project Manager
2012

Project management of aggregate licence application. Client liaison, sub-contractor management. Design and provision of technical support for benthic ecological surveys, review of technical reports. Development of specialist benthic survey and habitat modelling methodologies.

East Anglian Aggregates Licence Application *Client:* Tarmac Project Manager
2012

Project management of aggregate licence application. Client liaison, sub-contractor management. Design and provision of technical support for benthic ecological surveys, review of technical reports. Development of specialist benthic survey and habitat modelling methodologies.

Corporate Social Responsibility Project Appraisal *Client:* Petrofac Project Manager
2012

Conducting a desk based review and subsequent in country review of CSR strategy and programme in Tunisia. Technical review of marine related elements of the plan and management of the overall project.

East Anglia Offshore Wind Farm *Client:* Vattenfall Senior Marine Consultant
2011-2013

Conducting technical reviews of the benthic and fisheries baseline reports. Providing guidance on the structure and content of the subsequent Zonal Environmental Appraisal, Preliminary Environmental Information Report and EIA. Client liaison and management of sub-contractors for the commercial fisheries, natural fish and benthic ecology elements of the assessment. Technical support for associated disposal licences. Attendance at specific issues hearings, post-application responses and guidance.

Marine Aggregate Regional Environmental Assessment **Client:** Humber Aggregate Dredging Association Senior Marine Consultant

2011

Strategic assessment of the environmental impacts of marine aggregate extraction in the Humber region. Conducting technical reviews of the benthic and fisheries baseline reports, analysis of historic impacts, regional biotope descriptions, client liaison and regulatory body liaison. Providing guidance on the structure and content of the subsequent MAREA report, management of sub-contractors for the commercial fisheries, natural fish and benthic ecology elements of the assessment.

Area 501 Licence Application **Client:** Westminster Gravels Ltd. Project Manager

2011

Project management of aggregate licence application. Client liaison, sub-contractor management. Design and provision of technical support for benthic ecological and fish surveys, review of technical reports. Development of specialist benthic survey and habitat modelling methodologies. Authoring of benthic ecology ES chapter.

Trans Adriatic Pipeline **Client:** Statoil Senior Marine Consultant

2011

Overseeing sub-contractors during environmental survey. Client liaison and organisation of video survey of species of interest. Technical support for interim environmental reports, conducting offshore biological and physical impact assessment.

Robin Rigg Offshore Wind Farm **Client:** Natural Power Associate Marine Environmental Consultant

2011

Conducting intertidal surveys for the monitoring phase of the wind farm. Specifically monitoring the intertidal worm *Sabellaria alveolata* and the impact of changes in sediment regime. Conducting fish and benthic surveys, summary analysis and providing seasonal monitoring reports.

Narec Offshore Wind Farm Development Site **Client:** Natural Power Associate Marine Environmental Consultant

2011

Data analysis and report writing for the ongoing pre-construction fishery surveys and benthic surveys for the monitoring phase of the wind farm to provide client updates. Writing of the contaminated sediments, benthic ecology and fisheries chapters for the ES.

Lamlash Bay Marine Protected Area **Client:** Scottish Natural Heritage Marine Ecologist

2010

Conducting the surveys for the MPA baseline and methodological development for the ongoing MPA monitoring. This required involvement in the full life cycle of the project from survey design, ecological survey using remote sampling and SCUBA survey, to construction of the GIS of all data, photographic and videographic evidence and reviewing of the final report (SNH Report 619:

http://www.snh.org.uk/pdfs/publications/commissioned_reports/619.pdf).

PRIMaRE Wavehub Pre-Construction Monitoring **Client:** University of Plymouth/PRIMaRE Field Ecologist

2010

Biological survey of the Wavehub development site using drop down video and benthic box dredges. Field ecologist as part of an academic research team investigating the impacts of the Wavehub wave energy development site at Hayle, Cornwall.

Funded Research Trip, New Brunswick/Nova Scotia **Client:** University of Plymouth Researcher

2010

Investigating coastal community perceptions of the marine environment and the interactions with wind and tidal renewable energy. The use of novel photography based methodologies to explore public perceptions of the marine environment. Conducting interviews and pilot studies with coastal community members, First Nations and municipal government.

Lyme Bay Statutory Closed Area Monitoring **Client:** Defra Marine Ecologist

2003 - 2010

Field ecologist conducting the benthic surveys for the Lyme Bay No Take Zone and subsequent statutory closed area monitoring, using SCUBA and drop down video surveys.

Marine Macrofauna Genus Trait Handbook **Client:** MarLIN Associate Researcher

2009

Initially conducting a contract researching the reproductive strategies of 60 benthic species for the Marine Macrofauna Genus Trait Handbook, and within the BIOTIC database. Following this conducted the Defra led risk assessment for the invasive oyster *Crassostrea gigas*, as part of a contract for Non Native Species Directorate.

PROFESSIONAL DEVELOPMENT

- HSE Part IV diver
- Recreational Dive Master
- RYA Powerboat Level 2
- RYA Sea Survival
- HSE First Aid At Work
- Oxygen Administration
- Various ESRI GIS Courses