CELTICSEAPOWER

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The Subsea Soundscape (S3) Project Procurement: Schedule 1

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1 Introduction

Celtic Sea Power Limited (CSP) are a 100% subsidiary of Cornwall Council. CSP's purpose is to maximise the once-in-a-lifetime economic opportunity that the Celtic Sea Floating Offshore Wind (FLOW) initiative represents, with a potential GVA benefit as high as £1.96bn. The pipeline of floating offshore wind (FLOW) projects in the Celtic Sea is now one of the three largest in the world. The associated total investment, of over £100Bn, represents the single largest economic development opportunity in the Celtic Sea region for decades.

To help us deliver our purpose, Celtic Sea Power are leading procurement for the SubSea Soundscape project. Subsea Soundscape (S3) forms part of the Offshore Wind Evidence and Change programme, led by The Crown Estate in partnership with the Department for Energy Security and Net Zero and Department for Environment, Food & Rural Affairs. The Offshore Wind Evidence and Change programme is an ambitious strategic research and data-led programme. Its aim is to facilitate the sustainable and coordinated expansion of offshore wind to help meet the UK's commitments to low carbon energy transition whilst supporting clean, healthy, productive and biologically diverse seas. Project delivery is supported by the ORE Catapult and Exeter University.

2 Scope of Work

The Subsea Soundscape (S3) program pioneers a regional framework in the Celtic Sea to provide valuable insights into underwater noise conditions and marine mammal presence. By combining new and existing acoustic data, S3 will establish a marine mammal & noise evidence base, informing maritime spatial planning and consenting decisions for floating wind development.

S3 develops a comprehensive acoustic soundscape model using advanced techniques and machine learning algorithms to identify significant features and reduce future data collection complexity.

This Invitation to tender specifically focuses on the requirements for at-sea mooring units, to be delivered to a workshop in Pembrokeshire, which are equipped with state-of-the-art broadband acoustic recorders, pop-up acoustic retrieval systems and tag detection capabilities that will be deployed with CTD environmental sampling at service intervals to maximise data capture.

S3 outputs will; significantly enhance understanding of the environment; enable improved tools for environmental decision-making; improve cetacean population assessments and quantify development risks including underwater noise; enable efficient parallel rather than sequential development processes. This will provide a supporting foundation for the Regional Environmental characterisation approach utilised by Celtic Sea Power. The project works will allow us to; support accelerated FLOW deployment; mitigate environmental impacts; and offer significant regional economic benefits. S3 addresses environmental conservation and economic growth, offers a disruptive approach to marine ecosystem monitoring and supports UKs commitments to a cleaner future.

S3 will deploy up to 21 remote systems across the Celtic Sea, each consisting of an acoustic release, a fish tag detector, a hydrophone, and a cetacean click-train logger. Where feasible, preference will be given to integrated solutions that combine multiple components—such as

fish tag detection and acoustic release—into a single unit to enhance efficiency and deployment simplicity.

These systems will operate at depths ranging from ~60 to ~120 meters, monitoring the Celtic Sea for two years with service intervals at a maximum of every three months. In cases where servicing is not possible, systems and their respective components should be capable of continuous operation for up to six months. At each deployment, service, or retrieval, CTD measurements will be collected near the surface and at depth, depending on the system's placement. Communication with systems and acoustic releases will require a transponder and tracking receiver unit.

Bidders who demonstrate the ability to deliver fully integrated systems or offer structural improvements to streamline component integration will receive higher scores during evaluation. Additionally:

• **Power Supply:** Most devices feature various battery configurations and options for external power supply. Suppliers capable of integrating a suitable external power solution to extend deployment duration and facilitate efficient servicing will be awarded higher points.
• **Failsafe Acoustic Release:** Suppliers who can incorporate a timed electronic release mechanism—triggering release after a predetermined period (e.g., six months or one year) in the event of failure to locate or unintended relocation (e.g., due to trawl activity or malfunction)—will receive higher evaluation scores. Preference will be given to innovative, reliable solutions, that could include onboard mechanical or electrical timers.

This ITT is for the supply and delivery (to Pembrokeshire) of the specified equipment.

A. Hydrophone and integrated recorder (x 23)

Essential Requirements:

- Minimum sampling frequency of 192 kS/s, capable of maintaining a 50% duty cycle for at least 4 months.
- Memory: Includable SD cards - Removable/swappable in field conditions.
- Power Supply: Removable/swappable in field conditions.
- Software: Real-time re/deployment software operable in field conditions.
- Housing: Watertight/pressure-tight housing rated to 150 meters (maximum depth).
- Hydrophone integrated into recorder body, ensuring consistent angle positioning.
- Mounting brackets for attachment to underwater mooring or sub surface line.

Added Value:

- Ability to collect data at the specified rates for 6 months.
- Preferred rechargeable power system (batteries).
- Multiple Channels: Enable "low" frequency and "high" frequency sampling on differing duty cycles.
- Variable Gain functionality for enhanced adaptability.
- Dimensions and weight of the whole system to be easily handled by one person.

- Demonstrates system integration capability and/or structural improvements
- Lead Times: Short lead times for delivery of 23 units will be a high-scoring variable.

B. CTD (Conductivity, Temperature, Depth) Sensor (x 1)

Essential Requirements:

- Depth Rating: Operational to depths of up to 150 meters.
- Wi-Fi compatibility: Wireless data retrieval in field conditions.
- Components: Conductivity, Temperature, and Depth sensor.
- Protection during deployment and retrieval.
- Transit Case

Additional Value:

- Short lead times for delivery will be a high-scoring variable

C. Cetacean Click Train Recorder (x 21)

Essential Requirements:

- Functionality: Optimized for cetacean acoustic monitoring
- Manufacturers to provide compatible analysis software to ensure collected data can be processed.
- Depth Rating: Operational to a minimum depth of 150 meters.
- Battery Life: Capable of operating for a minimum of 6 months with at least a 50% duty cycle.

Added Value:

- Lead Times: Short lead times for delivery of 21 units will be a high-scoring variable.

D. Fish Tag Detector (x 21)

Essential Requirements:

- Capabilities: Able to detect 69 kHz acoustic tags.
- Depth Rating: Operational to a minimum depth of 150 meters.
- Battery Life: Minimum operational duration of 6 months.
- Power Management: Programmable power levels to optimize performance and extend battery life.

Added Value:

- Integration Preference: Suppliers who can offer an integrated fish tag detector and acoustic release system, where feasible, will be awarded higher scores for design efficiency and deployment simplicity.
- Lead Times: Short lead times for delivery of 21 units will be a high-scoring variable.

E. Acoustic Release Device (21x)

Essential Requirements:

- Depth Rating: Capable of functioning to depths of up to 150 meters.
- A line canister suitable to store a minimum of 200 m of recovery line suitable to lift the deployed equipment back to surface and vessel deck. Mooring weight is required to be approximately 120 kg plus another ~ 30 kg sensors = 150 kg actual dry weight (x 3 for safety factor = ~ 500 kg breaking strength for the recovery line)
- Additional Features: Must be compatible with a manual tracking receiver.

Added Value:

- Integrated failsafe mechanism / timed release
- Battery life: A minimum battery life of **6 months**, but preference for **9 months or more**.
- Lead Times: Short lead times for delivery of 21 units will be a high-scoring variable.

F. Manual Tracking Receiver and Transponder / smart hydrophone (1x/1x)

Essential Requirements:

- Functionality: Ideally equipped with GPS positioning for precise localization of acoustic release devices, detect health statistics, and monitor/decode transmitters, and will trigger the acoustic release system.

Added Value:

- Lead Times: Short lead times will be a high-scoring variable.

3 Contracting and budget

3.1 Contract

It is intended to engage the successful tenderer using CSP's supply of goods agreement. A template is appended to this ITT as appendix 2.

CSP cannot accept any material changes to the terms and conditions of contract post award [such as changes to liability provisions]. Any contract clarifications must be dealt with during the tender process and should be submitted before the deadline for clarifications as specified in the ITT.

3.2 Budget and Price

The maximum budget available (excluding VAT) for this project is £303,000. Any Tender Response including a Total Indicative Price in excess of this amount will be rejected.

3.3 Confidentiality

Confidential information will be dealt with in accordance with the ITT, including sections 6.22 to 6.28 and 6.41.

4 ITT Response Timeline

The timetable for responses to this ITT are set out below:

Activity	Date
Central Digital Platform Tender Notice and publication of ITT	28th February 2025
Deadline for submission of clarification questions	Noon on 24th March 2025
Tender Response Deadline	Noon on 31st March 2025
Notification of Contract award	7th April 2025
Standstill Period ends	18th April 2025
Contract signature	21st April 2025

Table 1 - ITT Timelines

4.1 ITT clarifications

Any clarification queries arising from this ITT which may have a bearing on the offer should be raised in accordance with the Timetable above. CSP will endeavour to answer queries submitted before midday on 24/03/2025 in a timely manner and would encourage bidders to request clarifications as they arise. Clarifications will dealt with in accordance with paragraphs [6.6 to 6.12 of the ITT], such that generally they will be anonymised and posted as a document on the Central Digital Platform.