Contract

CEFAS25-121 Request for Quotation for Hyperspectral Sensor (VNIR 400–1000 nm)

CENTRE FOR ENVIRONMENT, FISHERIES AND AQUACULTURE SCIENCE

UK7: Contract details notice - Procurement Act 2023 - view information about notice types

Notice identifier: 2026/S 000-003787
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Scope

Reference

CEFAS25-121

Description

The continuous and escalating pressures from climate change, biodiversity loss, pollution, and the intensified utilisation of natural habitats are placing marine ecosystems under unprecedented strain. This ongoing degradation compromises the resilience of these systems, making them more vulnerable to acute shocks like marine heat waves and spills, as well as chronic stresses such as wind farm construction. The decline in ecosystem health not only threatens fisheries and other livelihoods but also hampers our capacity for carbon absorption. To effectively manage and mitigate these challenges, there is an ever-increasing demand for cost-effective and targeted environmental monitoring. Modern technologies, including drones, computer vision, and artificial intelligence (AI), are proving invaluable in enhancing monitoring capabilities while reducing the need for intensive human involvement.

However, traditional visible light surveys of benthic and coastal habitats offer limited insights into the identification of flora, fauna, and pollution. In response to these limitations, there is a growing adoption of hyperspectral imagery. This technology captures significant amounts of data beyond the visible light revealing new environmental detail, surpassing the capabilities of visible light or human monitoring.

Cefas requires a sensor to develop and extend its monitoring capability for coastal and benthic environments. Hyperspectral imaging is required to detect and characterise flora and fauna on land (seaweed on rocks, on beach), sea surface (plankton, algae) and underwater (benthic epifauna and flora). In addition, ideally the sensor would allow us to detect pollutants such as plastics that are characterized more in the Short-Wave Infrared (SWIR) range of spectrum. The sensor will support near?term pilot pipelines for: (a) benthic habitat surveys (via Cefas custom built housing) and (b) aerial shoreline surveys for plastic detection, while providing a flexible platform for future applications.

Scope of Requirements:

Technical Requirement

The Supplier will provide a complete hyperspectral infrared imaging solution suitable for both Remotely Piloted Aircraft (RPA) operation and laboratory use, including all necessary hardware, lenses, software and accessories required to acquire, calibrate, process and export orthorectified hyperspectral data cubes.

At a minimum, the proposed system will be capable of capturing data across the Very Near Infrared (VNIR) spectral range (400–1000 nm). Ideally, a drone-mountable solution would extend coverage to include VNIR, Near Infrared (NIR), and as much of the SWIR range as feasible—targeting a full spectral span of approximately 400–2700 nm.

Cefas understand that drone-compatible SWIR sensors may exceed the maximum available budget (£130,000 inc. VAT). Therefore, a hybrid approach of a drone-mounted VNIR sensor, complemented by a laboratory-based (non-flyable) SWIR system is an acceptable solution. Cefas is open to alternative configurations if the Supplier can propose a more suitable option that meets the technical requirements and stays within budget.

In addition, the Supplier will provide comprehensive training on implementing data processing pipelines for hyperspectral data collected from the sensor, as well as operational support for Cefas drone pilots. This support will include training sessions covering environmental conditions, target selection, and sensor configuration to ensure optimal data collection Clear documentation of all data collection and processing steps are essential.

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Supplier

- Pro-Lite Technology Ltd

Contract value

- £128,616 including VAT

Below the relevant threshold

Date signed

12 January 2026

Contract dates

- 13 January 2026 to 31 March 2026
- 2 months, 19 days

Main procurement category

Goods

CPV classifications

- 38300000 - Measuring instruments

Procedure

Procedure type

Below threshold - open competition

Supplier

Pro-Lite Technology Ltd

Innovation Centre, University Way

Cranfield

MK430BT

United Kingdom

Email: nick.barnett@pro-lite.co.uk

Region: UKH25 - Central Bedfordshire

Small or medium-sized enterprise (SME): No

Voluntary, community or social enterprise (VCSE): No

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Contracting authority

CENTRE FOR ENVIRONMENT, FISHERIES AND AQUACULTURE SCIENCE

- Public Procurement Organisation Number: PPGW-5299-JGTN

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Organisation type: Public authority - sub-central government