**Call-Off Schedule 20 (Call-Off Specification)**

**Bid Pack**

**Attachment 3 – Statement of Requirements**

**Contract Reference:** CCCC25A02

Provision of JDR Economic Business Case

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# PURPOSE AND OVERVIEW OF THE REQUIREMENT

## United Kingdom Atomic Energy Authority (UKAEA) is seeking to engage with consultancy companies, as strategic partners in a collaborative effort to deliver an economic business case for the Joint European Torus (JET) decommissioning and repurposing (JDR) programme. JET is a former experimental fusion machine which contains small amounts of intermediate level waste (ILW) caused by the fusion fuel tritium (an isotope of hydrogen). The JDR programme has been designed to include innovative approaches to radioactive waste reduction. Wherever possible, non-radioactive items will be repurposed or recycled to provide maximum benefit to the UK and the wider fusion ecosystem.

## The JDR programme has been running since March 2023 when an outline business case was approved by DESNZ Project Investment Committee (PIC). JDR is following an alternative approach to decommissioning to maximise benefit by:

## Releasing key areas of site early so that new ventures contributing to advancing fusion can be located on Culham site.

## Harnessing skilled people from the now closed JET experiment to use their skills to build sustainable technologies in decommissioning (such as robotics)

## Removing the radioactive isotope tritium from JET waste by detritiation (heating of components) to downgrade waste from intermediate level waste (ILW) to low level waste (LLW)

## Re-using and repurposing as many systems from JET as possible within the fusion ecosystem to advance other experiments at lower cost

## Re-using JET legacy buildings to cut the cost of delivering new fusion experiments.

## Recycling and recovering metals such as copper where possible.

# BACKGROUND TO UKAEA

2.1 The United Kingdom Atomic Energy Authority (UKAEA) was formed in 1954 when the British Government set up a new body to oversee the nation’s nuclear research programme. UKAEA is a non-departmental public body (NDPB), under Department for Energy Security and Net Zero (DESNZ).

UKAEA research fusion energy and related technologies, with the aim of positioning the UK as a leader in sustainable nuclear energy. UKAEA’s mission is to lead the delivery of sustainable fusion energy and maximise the scientific and economic benefit. This is underpinned by five goals:

* Solve challenges of sustainable fusion energy - from design through to decommissioning - with world-leading science and engineering.
* Enable partners to design, deliver, and operate commercial fusion power plants.
* Drive UK economic growth and a thriving industry that exports fusion technology around the world.
* Create clusters that accelerate innovation in fusion and related technologies.
* Develop the talented, diverse people needed to deliver fusion energy.

# BACKGROUND TO THE REQUIREMENT

## 

3.1 The Joint European Torus (JET) experiment was commissioned on 25th June 1983 when the machine achieved its first experimental plasma. JET operated for over 40 years, breaking two world records for fusion energy generation and driving fusion science forward with many ground-breaking papers and experimental results. In December 2023 the machine ran its final plasma, in January 2024 the team switched focus from operating JET to shutting down the plant.

UKAEA have a liability to decommission the JET machine as the authority was the operating agent for the machine throughout its lifecycle. JET decommissioning is a statutory requirement, however UKAEA are aiming to decommission the machine in a way that delivers maximum benefit and releases useful data about tritium removal and contamination. UKAEA wish to harness the infrastructure at the old JET site – there is a 36Kv power line and active drain which can be used by new fusion experiments. The site has many knowledgeable people who worked on JET who can be redeployed to either JET decommissioning or other fusion focussed projects. The location of the land and transport links mean that Culham is well positioned to host a fusion cluster on the old JET site – the aim is to repurpose as many land areas and buildings as possible to advance the UK’s lead in fusion science.

The JDR programme will be approved in tranches. Tranche 1a ran from April 2023 – March 2025 and tranche 1b will run from April 2025 to March 2026.

# Definitions

|  |  |
| --- | --- |
| **Expression or Acronym** | **Definition** |
| UKAEA | The United Kingdom Atomic Energy Authority |
| JET | The Joint European Torus |
| JDR | Joint European Torus decommissioning and repurposing programme |
| ILW | Intermediate level waste |
| LLW | Low level waste |
| DESNZ | Department for Energy Security and Net Zero |
| PIC | Project Investment Committee |
| NDPB | Non-Departmental Public Body |
| HMG | His Majesty's Government |
| OBC | Original Business Case |
| FBC | Final Business Case |
| SRO | Senior Responsible Officer |
| PMO | Project Management Office |

# Scope OF The Requirement

5.1 The United Kingdom Atomic Energy Authority (UKAEA) is seeking to engage with consultancy companies to deliver an HMG Green Book compliant economic case for the final business case which will request funding for tranche 2 of the JDR programme running from April 2026 – March 2030.

The business case shall cover elements such as:

* Value for money assessments
* Qualitative impact assessments
* Local impact assessments
* Benefit realisation plans.

This work will require capturing both tangible and intangible economic benefits in the short, medium and long term, and will envelope social-economic and environmental-economic benefits. The work will assess different options within each of these areas and form an evidenced preferred approach.

# 5.2 Inputs

The strategic partner will use data from the JDR programme, including:

* Information on options down selection from a long list to short list
* Theory of change information from the OBC submitted in 2023.
* Cost information for shortlisted options
* Benefit information (register, benefits realisation plan, map, UKAEA benefits framework information)
* Options assumptions

# MANDATORY DELIVERABLES (SUPPLIER RESPONSIBILITIES)

## **Output**

The objectives, and thus deliverables, of what is required under this initial scope of work enquiry are as listed below:

* The strategic partner will work with the programme to do a thorough mapping of the economic benefits created through the programme activities, which should include but not limited to:
  + The potential impact of the programme on supply chain development. A tier 1/tier 2 contracting arrangement will be put in place as part of the FBC.
  + The predicted technology transfer and spin-off from detritiation and robotics activities and the bilateral impact with other industries/sectors
  + Waste reduction through detritiaiton activities, reuse of JET systems and repurposing (rather than demolition) of JET legacy buildings.
  + Combining regional and national economic and non-economic benefit analysis for research and development activities, cluster development through JDR land release and building re-use.
* All data and calculations that support the economic case must be supplied to JDR along with relevant methodology used.
* A write-up of the economic case that will feed into the Final Business Case (FBC) for each of the overarching areas must be completed. This must be compliant with Green Book guidelines.
* Addressing of any comments that may arise from UKAEA internal review after submission of the first draft. The draft will be reviewed by the UKAEA in house economist and senior management at UKAEA.
* Attendance at keyholder meetings (likely to be required at finance and economic keyholder meetings for an hour at each meeting) and time for subsequent re-work and comments from DESNZ to prepare the economic assessment for Project Investment Committee (PIC).

These write-ups should follow the green book economic case template; please refer to the accompanied Economic Case Template Annex A. Annex B shows a summary level benefits map of the programme so tenderers can follow how the goals of JDR align to benefits and strategic goals.

## **Outcome**

A detailed green book compliant economic case that aligns with the programme’s approach. This will serve to facilitate DESNZ approval at the Project Investment Committee.

## **ACCREDITATION REQUIRED**

Cyber Essentials, Professional Indemnity Insurance, Public Liability Insurance and Employers’ Liability Insurance.

1. **ORGANISATIONAL AND KEY PERSONNEL EXPERIENCE**

Organisational experience in delivering green book compliant business cases for government organisations is required. Potential Provider’s staff assigned to the Contract shall have the appropriate experience to deliver the Contract.

UKAEA would need to agree personnel working within the project team, based on qualifications and experience.

# LOCATION

The supplier will be able to work remotely, however will be expected to visit Culham, Oxfordshire to attend a kick off meeting on site or where there is demonstrable benefit of them doing so to attend workshops or meetings.

Key contract personnel from UKAEA:

* Programme director and executive director (SRO)
* JDR Programme PMO Lead (cost, schedule inputs)
* Executive Officer (business case lead)
* UKAEA Economist (UKAEA benefits lead)

# BUYER RESPONSIBILITIES

## UKAEA will provide any approvals to proceed during the contract, access to buildings, technology, equipment etc.

# KEY MILESTONES AND DELIVERABLES

The first draft of the final business case (FBC) for the JDR programme will be required at the start of August 2025 for internal review, with iterations expected through August and September until final submission to PIC in October. Therefore, we are intending for this work to formally commence in April 2025 to complete a first draft by August 2025. Over these 5 months, we will have gates for review of work and sprints to track and manage expectations. The tenderer will remain on contract until all DESNZ key holders are satisfied and the final business case is approved by PIC – this will be by November 2025 although an exact PIC date has not been given by DESNZ.

The Potential Provider should note the following key dates/milestones:

|  |  |  |
| --- | --- | --- |
| Milestone | Description and ‘Acceptance Criteria’ | Timeframe |
| JDR Programme |  |  |
| 1 | 1st draft (preliminary review) of the Economic Case | 1st August 2025 |
| 2 | 2nd Draft review of the Economic Case for submission | 1st September 2025 |
| 3 | Updates to the 2nd draft for final submission depending on external feedback. | 1st October 2025 |
| 4 | Completion of all DESNZ PIC keyholder comments\*. | 28th November 2025 |

\*Project Investment Committee (PIC) could be held at any time in October or November 2025, the consultant will need to remain on contract until the Final Business Case is approved.

## 

# SOCIAL VALUE CONTRIBUTION, Sustainability and Carbon NET ZERO

* 1. The successful Supplier is required to work towards initiatives that generate social value, demonstrate their support for sustainability and net zero objectives. This contribution should align with national and local sustainability goals and demonstrate a clear commitment to reducing environmental impact.
  2. The social value contribution should focus on one or more of the following themes:
* Workforce Diversity & Inclusion – Creating opportunities for underrepresented groups, including training and employment initiatives.
* Skills Development & Employment – Providing apprenticeships, upskilling programs, or career development support.
* Carbon Reduction & Net Zero – Implementing strategies to reduce carbon emissions, enhance energy efficiency, and support net-zero commitments.

# STAFF AND CUSTOMER SERVICE

## The Supplier shall provide a sufficient level of resource throughout the duration of the Contract in order to consistently deliver a quality service.

## The Supplier’s staff assigned to the Contract shall have the relevant qualifications and experience (as detailed in the Mandatory Requirements Section) to deliver the Contract to the required standard.

## The Supplier shall ensure that staff understand the Buyer’s vision and objectives and will provide excellent customer service to the Buyer throughout the duration of the Contract.

# CONTINUOUS IMPROVEMENT

## The Supplier will be expected to continually improve the way in which the required services are to be delivered throughout the Contract duration.

## The Supplier should present new ways of working to the Buyer during monthly Contract review meetings.

## Changes to the way in which the Services are to be delivered must be brought to the Buyer’s attention and agreed prior to any changes being implemented.

# SECURITY AND CONFIDENTIALITY REQUIREMENTS

The information and data shared with the successful Supplier is deemed commercially sensitive.

# PRICING MECHANISM

## Please refer to the Framework call off Order Form (Call-off Charges paragraph).

## All prices are excluding VAT

## All prices are inclusive of expenses, such as travel and subsistence.

# PAYMENT AND INVOICING

## 16.1 Payment Milestone

|  |  |  |  |
| --- | --- | --- | --- |
| Milestone | Description and ‘Acceptance Criteria’ | Timeframe | Payment |
| JDR Programme |  |  |  |
| 1 | 1st draft (preliminary review) of the Economic Case | 1st August 2025 | 50% |
| 2 | 2nd Draft review of the Economic Case for submission | 1st September 2025 | 25% |
| 3 | Updates to the 2nd draft for final submission depending on external feedback. | 1st October 2025 | 15% |
| 4 | Completion of all DESNZ PIC keyholder comments\*. | 28th November 2025 | 10% |

* 1. Payment can only be made following satisfactory delivery of pre-agreed certified products and deliverables.

## Before payment can be considered, each invoice must include a detailed elemental breakdown of work completed and the associated costs.

## Invoices should be submitted to the invoicing address which will be provided once call off contract is signed.

# CONTRACT MANAGEMENT AND KEY PERFORMANCE INDICATORS

UKAEA would expect to have fortnightly update meetings with the supplier depending on the phase and intensity of the work underway at that time. The regularity of the meetings is to be decided following contract award.

UKAEA will expect the supplier to use these meetings to formally update on progress/blockers and risks to delivery.

* 1. The Buyer will measure the quality of the Supplier’s delivery by:

|  |  |  |  |
| --- | --- | --- | --- |
| KPI/SLA | Service Area | KPI/SLA description | Target |
| 1 | Operational | On-time delivery rate | 95% on time delivery |
| 2 | Operational | Document accuracy | Less than 5% revisions |
| 3 | Operational | Resource utilisation | Effective use of 95% of resources |
| 4 | Operational | Adherence to budget | 100% compliance with budget |
| 5 | Client satisfaction | Client feedback/survey scores | Average rating > 4.5/5 |
| 6 | Engagement | Meeting attendance | 100% attendance |
| 7 | Engagement | Workshop effectiveness | Feedback score >4.5/5 |

## Attendance at contract review meetings shall be at the supplier’s own expense. Unless there is a further need to attend site identified by the supplier, then only the kick off meeting will be in person at UKAEA Culham Science Centre, Abingdon. It is anticipated that the kick off meeting will be 1 day as tours of the facility and key introductions will be included. The workshops and fortnightly meetings can all be held remotely.

# Annexes

A. Economic Case Template

B. Summary Level JDR Benefits Map