



UKAEA

UK Fusion Suppliers Forum

3rd Suppliers Forum 2020

Agenda

10.00am: Introduction (Paula Barham, Head of Procurement)

10:10am: National Fusion Technology Platform (NFTP; James Phillpott, Strategic Procurement Manager)

10:20am: Remote Applications in Challenging Environments (RACE; James Phillpott, Strategic Procurement Manager)

10:30am: The Spherical Tokamak for Energy Production (STEP; Sarah Palmer, Strategic Procurement Manager)

10:40am: Fusion Foundations and UKAEA General (Anthony Stratton, Strategic Procurement Manager)

10:50am: Mega Amp Spherical Tokamak-Upgrade and Joint European Torus (MAST-U & JET; Anthony Stratton, Strategic Procurement Manager)

11.00am: Oxfordshire Advanced Skills (OAS; Paul Smith, Regional Manager at The MTC)

11:10am: Close (Paula Barham, Head of Procurement)

11:20am: End of Event

Introduction

Updates at UKAEA

- In September, we published our first company-wide **Procurement Pipeline**. Our December edition is now available, as we review and update this document quarterly. The purpose of this is to provide long-term visibility of upcoming procurement opportunities and allow the supply chain to make informed decisions to potentially tender for this work.
- We have published our first issue of the **Supply Chain Newsletter** in November which will continue to be published quarterly. This aims to update suppliers on supply chain activity, news, and events at UKAEA.
- We will soon be issuing questionnaires for our **2nd COVID-19 Dashboard** to gain understanding of the impact of COVID-19 on the supply chain and identify areas that may need interventions. The results of our previous dashboard can be found on our **Procurement Page**.
- We have undertaken **Upskilling our CPMs**. We have focused on contract management training on CPMs and procurement staff by introducing new training resources which are being developed and distributed.

Introduction

Updates at UKAEA

- This year we published our **Modern Slavery Statement**. We acknowledge that modern slavery and human trafficking still exist within current business and supply chains. At UKAEA, we are committed to eradicate these practices and value ethical treatment to all involved within our supply chain. We are beginning investigation into our supply chain.
- **Social Value** is of great value to us at UKAEA. We encourage our diverse supply chain to be innovative and we will seek ways to enable economic growth that create and maintain jobs in UK industry. Working together, we will develop fusion energy as a low carbon energy source for tomorrow's power stations.
- We are currently conducting a **Supplier Relationship Management Pilot**. We recognise the importance of and value open, transparent relationships with our suppliers and are keen to focus on improving such relationships.

EU Transition

You can find out what actions you may need to take by using the checker tool at gov.uk/transition and keep up to date with regular [business readiness bulletins](#) too.

With the end of the transition period now only 22 days away, it is very important that your business is ready for our new relationship with the EU.

The way that opportunities to supply the UK Public Sector are advertised is about to change. From 23:00 on 31 December 2020, we will publish information on public sector contract opportunities in the UK on the new [Find a Tender Service](#) (FTS). UKAEA will continue to advertise opportunities within our EU Supply portal which will automatically link to FTS.

1. FTS is free to use and replaces the role of Tenders Electronic Daily, the Official Journal of the EU (OJEU/TED) for procurements in the UK.
2. FTS will work alongside existing procurement portals such as [Contracts Finder](#), [MOD Defence Contracts Online](#), [Public Contracts Scotland](#), [Sell2Wales](#) and [eTendersNI](#) which can be used to access a wide range of opportunities to supply the public sector.
3. Existing Contracts Finder account holders will be able to use the same login credentials for Find a Tender. You can [register now](#) in preparation for its launch on 31 December.

Digital 1-2-1s

- Due to start taking place between the **middle-to-end of January 2021**.
- You will be emailed a Microsoft Form that needs to be filled out to request a 10-minute 1-2-1 slot.
- In this form, you can select which programme areas from today are of interest to you.
- Please note: these sessions will be booked on a first-come first-serve basis.
- Based on demand, we may consider offering more time slots.

Save the Date

- Our **4th Suppliers Forum** is proposed to take place on **March 18th 2021**.
- This will be an **Executive Overview**.
- To ensure that you don't miss any of our events or supply chain activity, please register at <https://ukaeevents.com/>.



NFTP Procurement Pipeline

James Phillpott (NFTP Strategic Procurement Manager)

Procurement for National Fusion Technology Platform (NFTP)

NFTP consists of two major projects

- H3AT (Hydrogen-3 Advanced Technology)
- FTF (Fusion Technology Facilities)

The following slides will provide information on.....

- The packages of work to be tendered for FTF and H3AT
- The expected tender package release dates for FTF and H3AT

H3AT Package 1 - Preliminary Design

- The preliminary design of the following subsystems will be tendered through UKAEA Engineering Design Services (EDS) framework
 - Storage and Distribution (SDS)
 - Torus Vacuum Simulation (TVS)
 - Hydrogen Purification System (HPS)
 - Atmospheric Detritiation System (ADS)
 - Analytical System (ANS)
 - Radiological Gas Monitoring System (RGM)
 - Water Detritiation System (WDS)
- Tender issue date December 2020

H3AT Package 2 - D&B ISS

- Development design and build of Isotropic Separation System (ISS).
- Package to be competed via Find a Tender.
- Tender issue date March 2021.
- Band D > = £1m to <£5m.

H3AT Package 3 - Long Lead Standard Equipment

- The following are the standard long lead items UKAEA will procure in multiple tenders.
 - Heat exchangers
 - Heaters
 - Pressure and vacuum vessels
- Packages completed via Find a Tender or Contracts Finder.
- Initial tender packages to be released in April 2021.

H3AT Package 4 - Long Lead Development Items

- Items which have a long lead time and require significant development or adaptation.
- The following are the long lead development items UKAEA will procure in multiple tenders.
 - Pumps
 - Permeators
 - Molecular sieves
 - Recombiners
 - Electrolysers
 - Laser Raman analysers
- Packages completed via Find a Tender or Contracts Finder.
- Initial tender packages to be released in April 2021.

H3AT Package 5 - Skid Manufacture

- Manufacturing design and manufacture of the following sub systems
 - Storage and Distribution (SDS)
 - Torus Vacuum Simulation (TVS)
 - Hydrogen Purification System (HPS)
 - Atmospheric Detritiation System (ADS)
 - Analytical System (ANS)
 - Radiological Gas Monitoring System (RGM)
 - Water Detritiation System (WDS)
- Package to be competed via Find a Tender.
- Tender issue date February 2022.
- Band C > = £500k to <£1m.

H3AT Package 6 - COTS Framework

- UKAEA will establish a call off framework for COTS items to ensure commonality and economies of scale throughout the Tritium Loop.
- The following will be purchase through the framework
 - Valves
 - In-line strainers
 - Instruments
 - Pumps
 - Vessels
- Package to be competed via Find a Tender.
- Tender issue date April 2021.
- Band C > = £500k to <£1m.

FTF Requirements

The following are the only current requirements for FTF

- Design and build for magnetic fields materials testing rig – Tender due out in August 2021 via Find a Tender.
- Band C \geq £500k to $<$ £1m.

- Design and build of a high temperature vacuum furnace. – Tender due out in January 2022 via Find a Tender.
- Band B \geq £100k to $<$ £500k.



RACE Procurement Pipeline

RACE Procurement Pipeline

There are 78 RACE procurement opportunities. Please see our newly published procurement pipeline for more details.

The following are a snap shot of some of the opportunities available within the RACE delivery areas.

European Spallation Source (ESS)

- Robert Franklin is the Assistant Procurement Manager responsible for procurements outstanding for the European Spallation Source Project.
- Total of 17 opportunities currently on the pipeline with tenders commencing between Jan 2021 – Dec 2021
- Procurements taking place over the next few months:
 - Radiological Safety Systems (Software System)
 - Est Band B \geq £100k to $<$ £500k
 - To be advertised on Find a Tender – January 2021
 - Fabricated Assemblies
 - Est Band B \geq £100k to $<$ £500k
 - To be advertised on Find a Tender – January 2021

ITER Robotic Test Facility (IRTF)

- Total of 8 opportunities currently on the pipeline with tenders commencing between Feb 2021 – Jan 2022
- Procurements taking place over the next few months:
 - ITER Tower System
 - Est Band D \geq £1m to $<$ £5m
 - To be advertised on Find a Tender – February 2021
 - Flange Bolt Tensioning
 - Est Band B \geq £100k to $<$ £500k
 - To be advertised on Find a Tender – January 2021

Long Ops

- Total of 28 opportunities currently on the pipeline with tenders commencing between Feb 2021 – Nov 2022
- Procurements taking place over the next few months:
 - Haptic simulation software
 - Est Band B \geq £100k to $<$ £500k
 - To be advertised on Contracts Finder – February 2021
 - R&D Studies for Robustness of Sensing & Perception
 - Est Band B \geq £100k to $<$ £500k
 - To be advertised on Find a Tender – April 2021

Capability Funding

- Total of 9 opportunities currently on the pipeline with tenders commencing in Q1 2021
- Procurements taking place over the next few months:
 - VR Rendering Server
 - Est Band A £50k to £100k
 - To be advertised on Contracts Finder – January 2021
 - Robot performance Evaluation platform
 - Est Band A £50k to £100k
 - To be advertised on Contracts Finder – April 2021



UKAEA

STEP

**Sarah Palmer (STEP Strategic Procurement
Manager)**

STEP – Spherical Tokamak for Energy Production

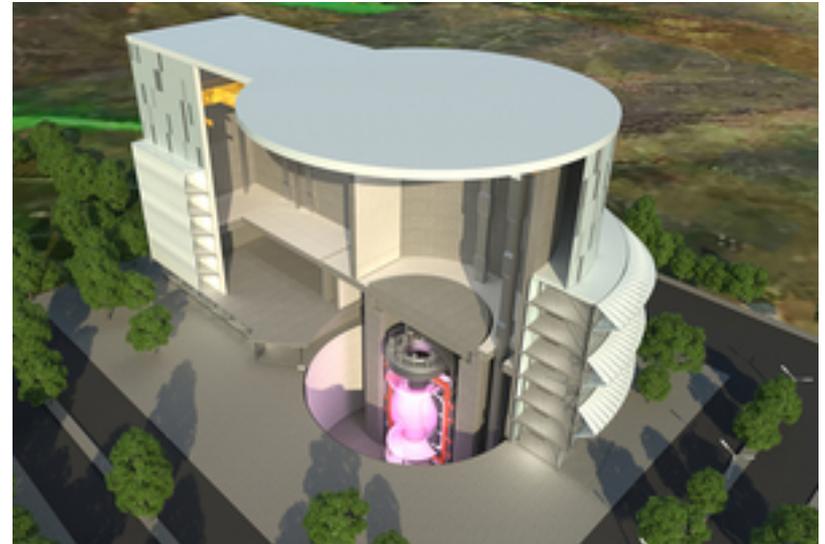
The government recently reaffirmed its commitment to UKAEA's STEP Programme in the Ten Point Plan for a Green Industrial Revolution.

The aim of STEP is to:

- Build a prototype fusion power plant in the UK.
- Commercialise fusion energy technology.
- Enable low carbon and continuous power generation.

The goal is:

- To do this by 2040



Introducing the STEP Procurement Team

Sarah Palmer
Strategic Procurement Manager
sarah.palmer@ukaea.uk

Vincent
Procurement Manager
vincent.tsang@ukaea.uk

Robert Boston
Procurement Manager
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Ioanna Bampatsia
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Rukhsar Samnani
Graduate Procurement
Officer
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Daniel Brown
Procurement Apprentice
daniel.brown@ukaea.uk

The team will continue to grow in accordance with funding

STEP

The STEP programme is currently on a journey to transition away from small, ad-hoc packages of work towards more strategic, long term relationships with the supply chain.

Tactical
Procurement



Strategic
Procurement



We have listened to the feedback from the supply chain regarding small work packages and the associated viability issues of this approach long term.

We have initiated a plan to start the development of a pipeline of long term, high value contracts.



As a result, the number of opportunities to participate in tenders within the open market will reduce, but the opportunities available will be of much higher value and for much longer terms.



Some opportunities will be UK AEA wide.

Single Supplier
Agreements /
Frameworks

Multi Supplier
Agreements /
Frameworks

Single Lot
Frameworks

Multi Lot
Frameworks

Dynamic
Purchasing
Systems

New entries to the STEP procurement pipeline:

Delivery Area	Procurement/Contract: <u>Title</u>	Contract Type	Procurement Route	Value Band	RFQ Issue Forecast	Procurement Officer
A - Commercial	Technical guidance on site selection, including on strategic and technical assessment	Services	Call-Off Crown Commercial Service	Band D >=£1m to <£5m	Dec-2020	Sarah Palmer
A - Commercial	Consultancy advice on STEP commercialisation options and strategy	Services	Call-Off Crown Commercial Service	Band D >=£1m to <£5m	Dec-2020	Vincent Tsang
B1.1 PAIV	Systems Engineering Management in Integration and Whole Plan Design	Services	OJEU - Open	Band D >=£1m to <£5m	Q1 2021	Robert Boston
B1.1 PAIV	Safety, Security and Environment Support Services	Services	OJEU - Open	Band C >=£500k to <£1m	Q1 2021	Robert Boston
B1.1 PAIV	Nuclear Engineering Design Codes and Standards	Services	OJEU - Open	Band C >=£500k to <£1m	Q1 2021	Robert Boston
B1.3 Containment	Magnet design, design validation testing including conductor selection	Services	OJEU - Open	Band D >=£1m to <£5m	Q1 2021	Sarah Palmer
B1.4 IVC	Centre Column Shielding	Services	OJEU - Open	Band B >=£100k to <£500k	Q2 2021	Vincent Tsang
B1.4 IVC	Exhaust Divertor Target Design	Services	OJEU - Open	Band B >=£100k to <£500k	Q2 2021	Vincent Tsang
B1.4 IVC	Insitu Monitoring / Repair	Services	OJEU - Open	Band B >=£100k to <£500k	Q2 2021	Vincent Tsang

New entries to the STEP procurement pipeline continued:

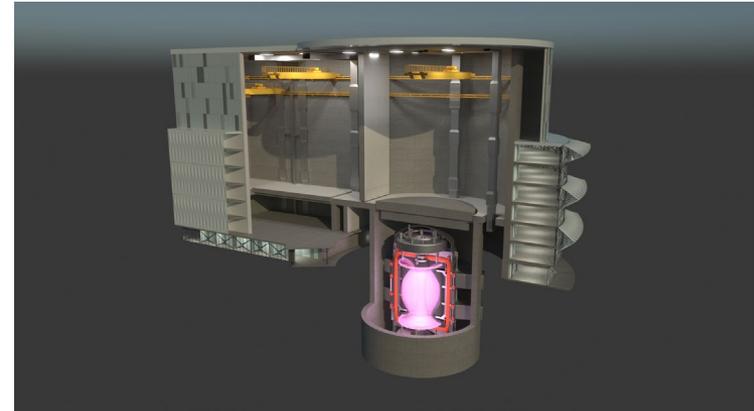
Delivery Area	Procurement/Contract Title	Contract Type	Procurement Route	Value Band	RFQ Issue Forecast	Procurement Officer
B1.4 IVC	Blankets Support Services	Services	OJEU - Open	Band B >=£100k to <£500k	Q1 2021	Vincent Tsang
B1.4 IVC	Tritium Extraction Part 2	Services	OJEU - Open	Band B >=£100k to <£500k	Q2 2021	Vincent Tsang
B1.4 IVC	Molten, Salt and Lithium Corrosion Rig	Supplies	OJEU - Open	Band C >=£500k to <£1m	Q3 2021	Vincent Tsang
B1.5 Fuel Cycle	Design of experiments for technology validation by industry and universities	Services	OJEU - Open	Band B >=£100k to <£500k	Q2 2021	Vincent Tsang
B1.5 Fuel Cycle	Tritium Delivery Support Framework	Services	OJEU - Open	Band B >=£100k to <£500k	Q4 2021	Vincent Tsang
B2.1 R&D	Research and Development Support Services	Services	OJEU - Open	Band C >=£500k to <£1m	Q2 2021	Sarah Palmer
B2.2 Enabling	Innovation Seedcorns and Game Changer Challenges	Services	OJEU - Open	Band C >=£500k to <£1m	Q2 2021	Sarah Palmer
B2.2 Enabling	Rigs and Facilities	Services	OJEU - Open	Band C >=£500k to <£1m	Q2 2021	Sarah Palmer
Other	Gyrotrons	Supplies	OJEU - Open	Band D >=£1m to <£5m	Q4 2020 - Q1 2021	Robert Boston

2 Significant focus on developing agreements with the supply chain to enable us to access the required capabilities and skill sets to support the progression of the STEP programme

Confinement Systems (Magnets)

We are currently in the planning and preparation stages for a framework that enables collaboration with the supply chain to support the Confinement Systems team. The anticipated scope currently includes the below, but is subject to change:

- Conceptual design and analysis work packages to address specific tasks or wider design challenges which involving major magnet sub component definition
- Detailed analysis of superconducting or cooled resistive magnet concept designs including physics, mechanical and electrical engineering, cryogenics, magnet quench prediction and control, instrumentation design
- Physical validation of concept principles by testing of key critical technologies
- Design and manufacture of physical validation test articles
- Test rig design to support physical validation testing
- Conductor modelling and specification
- Design challenge work packages with a wider question that could involve more fundamental applied research to solve the challenge in addition to design, analysis and test



STEP Siting Our call for nominations to host STEP, the UK's prototype fusion energy plant was published last week!

We are calling on local communities across the country to put forward proposals via our siting portal

Interested in hosting STEP in your community?

UKAEA will make a recommendation to the Secretary of State for Business, Energy and Industrial Strategy (BEIS) on the most suitable possible locations for STEP. This recommendation will be defined through an assessment process, based on a set of key criteria, details of which can be found in the document on this page.

Broadly this assessment will be based on three key things:

- ✓ Technical and operational suitability
- ✓ Alignment with STEP's socio-economic and community benefit principles
- ✓ Support for the commercial progress of the project



<https://ccfe.ukaea.uk/step-begins-the-search-for-a-home/>



UKAEA

Fusion Foundations & UKAEA General

Anthony Stratton (Strategic Procurement Manager)

Anthony Stratton - Strategic Procurement Manager

Fusion Foundations/UKAEA General

- Corporate support, HR, L&D, legal, pensions
- Facilities (soft services) & IT
- Campus development, building and Hard FM

MAST-U/JET

- MAST- U Enhancements
- JET

Caroline Gow

Procurement Business Partner for Corporate Support (HR, L&D, Legal, Pensions)

LEADERSHIP TRAINING PROGRAMME - OJEU Restricted
Band B > £100K < £500K SQ/ITT – launched Dec 4th

RECRUITMENT ADVERTISING SERVICES – OJEU/Find a Tender Open
Band - > £100K < £500K – March 2021

Please contact via : procurement@ukaea.uk

Guy Wells

Facilities and IT

Project one: Voice Over Internet Protocol

Tender to be issued in January 2021 for contract start in June 2021

Crown Commercial Services Framework RM3808 Lot 10: Unified communications

Project two: Product Lifecycle Management (PLM)

The procurement is expected to go live in late 2020 to early 2021 and will be via OJEU/Find a Tender and Contracts Finder.

Project three: Data Storage (500TB)

Tender is expected to go live in late 2020 to early 2021.

CCS Framework RM6068 – Lot 1: Hardware & Software & Associated Services

Please contact via : procurement@ukaea.uk

Emma Davies

Construction

Fusion Foundations Programme

STEP Rig Hall

OAS Phase 3

Culham Campus Development

Buildings & Facilities Management

Please contact via : procurement@ukaea.uk

Fusion Foundation Programme



STEP Rig Hall

Provision of a new building forming part of the Spherical Tokamak for Energy Production (STEP) programme

£5-10M

Early Engagement – Early 2021

ITT Q2 2021

CCS CWAS Framework Lot 2.2

Culham Campus Development

MUGA
£50-100K
ITT DEC20/JAN21

Temporary Car
Park
£100- 500K
ITT DEC20/JAN21

Cold Test Storage
Facility
£500k - £1M
ITT FEB 2021



Building Maintenance and Refurbishment
Framework - £5-10M ITT MAY 2021



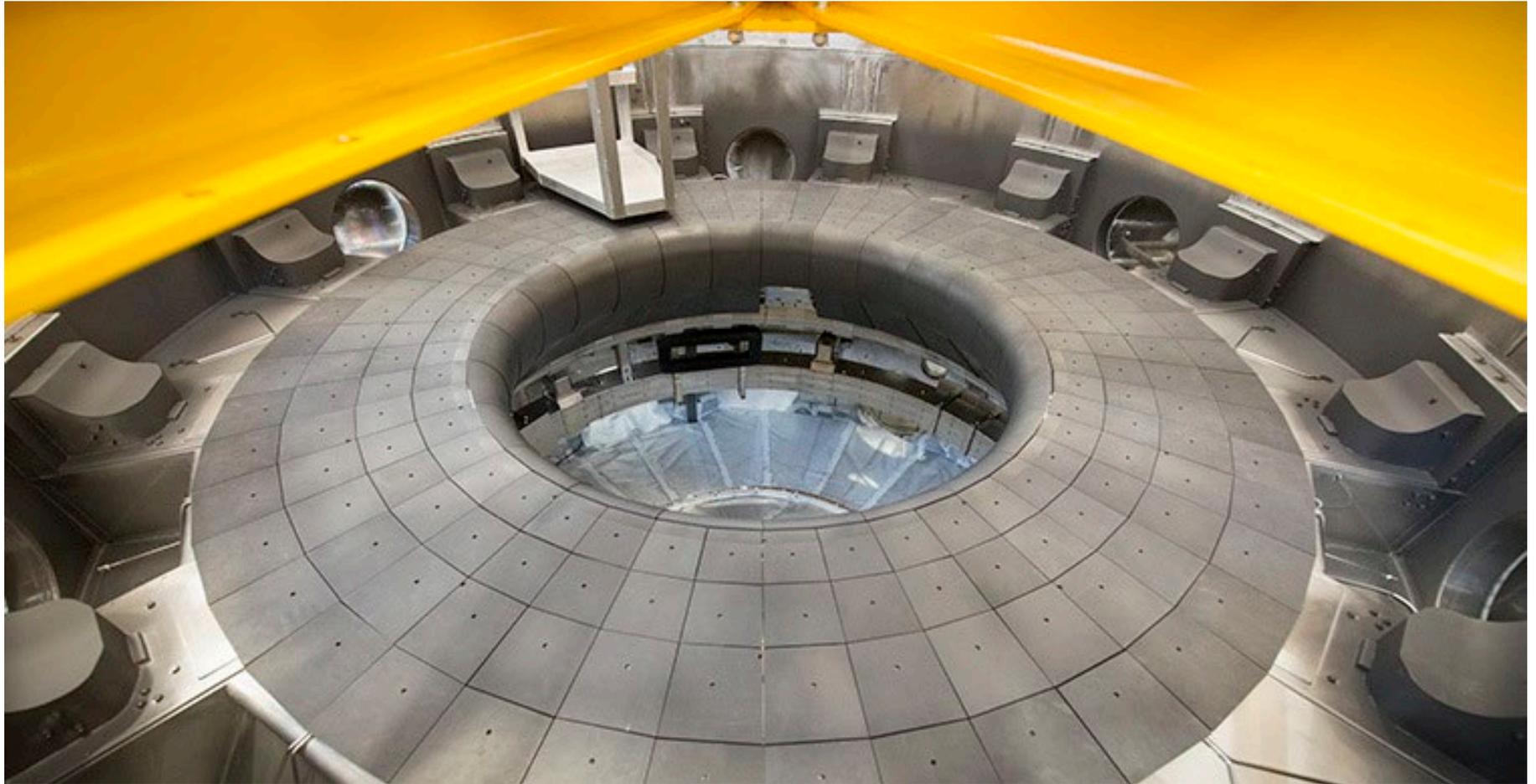
D3 Roof Renewal - £100-500k ITT FEB 2021



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MAST-U and JET

Mast-U Vacuum Vessel Tiles



MAST- U ENHANCEMENTS/JET

Ben Grainger is the Procurement Manager responsible for the procurements of the majority of the equipment outstanding for the MAST Upgrade Enhancements Project and JET.

Three of the more significant procurements that will be taken to market early next year are:

MAST-U

- The manufacturing design and manufacture of the cryogenic transfer lines required to link the new Cryoplant to the new Double Beam Box.

Estimated ITT late January 2021, value £200k - £300k

- The manufacturing design and manufacture of the in-Vessel protection system for the Double Beam Box

Estimated ITT February 2021, value estimate being prepared



MAST- U ENHANCEMENTS/JET

JET

- The supply and Installation of a laser-based fuel deposit measurement diagnostic for the JET24 Programme

The estimated cost is between £200-300k and estimated ITT issue date 21/12/2020

Please contact via : procurement@ukaea.uk



UK Atomic
Energy
Authority

“ OAS is raising the standard and quality of engineering apprenticeships to deliver workready, high-end apprentices who will be able to support the growth of local businesses.”

Chief Operating Officer at UK Atomic Energy Authority

CORPORATE SOCIAL RESPONSIBILITY AT OAS

Our commitment to CSR at OAS

At OAS, we're here to support the ***economic, social and cultural success*** of the ***Oxfordshire, Thames Valley and Berkshire communities*** that we serve.

As the ***leading provider of hi-tech engineering apprenticeships and training*** in the area, we have a responsibility to ***align our aims to the needs of the local area***. We take this responsibility very seriously.

Our focus is on developing the ***next generation of manufacturing engineers*** to support the ***future skills needs of businesses of all sizes*** in the locality.

Our commitment to CSR at OAS



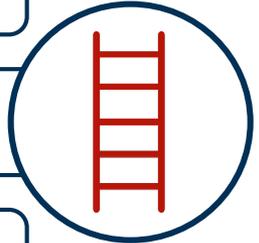
Working with young people

Supporting the local community



Encouraging business growth and entrepreneurship

Providing progression for employees



Staff wellbeing

Commitment to work in partnership with engineering businesses



Environmental impact



Introducing our apprentices



Thank you

Close

Thank you for attending our 3rd Suppliers Forum.

Please save questions specific for the **Digital 1-2-1s** in January or use the Procurement Team Contacts on the **Procurement Pipeline Document**.

At UKAEA, we pride ourselves on being transparent and open with our supply chain and want to ensure information we share is visible and useful to you. We would really appreciate any feedback you may have on our activities.

If you have any feedback to share from today's event, please fill out our **Feedback Form**.

Additionally, if you have any feedback on our Supply Chain Newsletter, please fill out our **Newsletter Feedback Form**.

If you have any other feedback on our Procurement Pipeline, or how we communicate and engage with the supply chain, please contact us using either of the email addresses below:

supplychain@ukaea.uk

procurement@ukaea.uk

Thank you again, and we hope to see you in March 2021 for our 4th Suppliers Forum.

Useful Links

UKAEA

[Procurement Pipeline Document](#)

[Procurement Page](#)

[Supply Chain Newsletter \(November\)](#)

[Modern Slavery Statement](#)

[Social Value](#)

[COVID-19 Dashboard Results \(August\)](#)

[Finding STEP a Home](#)

Tendering

[EU Supply – Key Portal](#)

[Contracts Finder](#)

[Find a Tender Service](#)

[EU Transition Checker Tool](#)

[Business Readiness Bulletins](#)

Feedback/Forms

[Digital 1-2-1 Preference Form](#)

[3rd Suppliers Forum Feedback Form](#)

[Newsletter Feedback Form](#)

OAS

<https://www.oas.ukaea.uk/>

Contacts

General Supply Chain Engagement Queries - [Supply Chain - supplychain@ukaea.uk](mailto:supplychain@ukaea.uk)

General Procurement Queries - [Procurement - procurement@ukaea.uk](mailto:procurement@ukaea.uk)

OAS (Paul Smith) - Paul.Smith2@the-mtc.org

Please see specific Procurement Officer contacts in the [Procurement Pipeline](#)