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STEP Procurement Plan Schedule 2020/21			
Summary			
Sets out the currently known pipeline of procurements for the STEP Programme			
	Name and Role	Signature	Date
Author:	Rob Harries-Harris Interim Strategic Procurement Manager		11/06/2020
Reviewer:	John Golightly Acting Head of Programme Management	John Golightly	15/06/2020
Reviewer:	Tris Denton Head of Commercial & Programme Development	T T Denton	15/06/2020
Reviewer:	Paula Barham Head of Procurement	<i>Paula Barham</i>	15/06/2020
Approver	Chris Waldon Deputy Programme Director	Chris Waldon	17/06/2020

1 Introduction

Welcome to the latest version of the STEP Procurement Plan. Earlier this year, the UK government announced £220 millions of funding, launching STEP as a collaborative programme that combines the strengths of UKAEA with industry, universities and other organisations.

Since then the STEP Programme has been working hard to develop our detailed plans for using this funding. The Programme's principal objectives over the four years to the end of March 2024 are to:

- Create an investible concept design;
- Understand the potential reactor market and how the reactor will be built;
- Enable and inspire the UK's capability and capacity to deliver.

As a research and development programme, the nature of STEP is intrinsically fast-moving and ever-changing. This means our supply chain requirements will change as our detailed plans change in response to the research and development activities we carry out.

The key technical priorities of the programme over the next few years are as follows:

- 2020/21 Focus on a first integrated design for the STEP prototype reactor. Preparing for prototyping and testing.
- 2021/22 Optioneering on this design, exploring variations in approach. Initial prototype builds and testing, including test rig and test facility builds and use.
- 2022/23 Down-selection of design options, configuration optimisation through testing and simulations.
- 2023/24 Refine the design and work towards approval of funding for the detailed design phase.

Having completed our detailed planning for the current year, we know that our immediate technical priorities are on work that can mainly be completed internally. For future years, the balance will increasingly shift toward external, as opposed to internal, delivery.

2 The Latest Procurement Plan

Based on the STEP Programme's 2020/21 work plans, the latest version of the STEP procurement plan is now published herein. There are several significant changes to previous versions of the plan.

- This version focuses on the opportunities the programme has highest confidence it will present to the supply chain. That is, it contains 'probables' rather than 'possibles'.
- It does not:
 - look beyond the planning horizons for which internal approval has been gained. Detailed work plans for 2021-2024 will be developed during the course of 2020/21;
 - include procurements made via partnership collaborations; funds allocated to UKAEA-backed placement students not based within UKAEA; increases to pre-

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existing contracts necessitated by STEP work; or procurements valued at less than £25,000;

- include procurements for planned buildings at the Culham site (aggregate value band G >£25m to <£50m). These will be tendered competitively via a Public Sector framework in FY20/21. The detail of this will be subject to separate communications; or
- seek to identify contingencies for the additional opportunities that will emerge as workplans respond to research and development outcomes. It is highly likely that significant additional opportunities will occur during FY2020/21.

As our plans mature and evolve the STEP Programme will publish further details through regular updates to this procurement plan and the planning horizon will extend further into the future. The planned timings for the next updates are:

- October 2020
- January 2021
- April 2021

If you have any questions about this Procurement Plan, please contact one of the STEP Procurement Team directly. Each line of the plan shows the responsible team member and Appendix A of this report contains the contact details for each person. To the extent consistent with our legal obligations, we will be pleased to answer any queries you have.

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WBS Area	Description	Tender Process	Value Band	Contract Type	RFQ Issue	Tender Response Deadline	Contract Award Forecast	Contract Start Forecast	Procurement Officer	Suitable for SMEs?
A - Commercial	Legal counsel on siting arrangements, and associated consenting (likely to entail guidance on regulation)	Call-Off Crown Commercial Service	Band A <£100k	Services	29/06/2020	03/08/2020	17/08/2020	31/08/2020	Craig Egan	Yes
A - Commercial	Public engagement / consultation - consultancy support in delivering volunteer-host and community engagement on the siting of STEP	Contracts Finder - Open	Band A <£100k	Services	01/10/2020	01/11/2020	09/11/2020	23/11/2020	Craig Egan	Yes
A - Commercial	Technical guidance on site selection, including on strategic and technical assessment (following on from previous package awarded in Autumn 2019)	Call-Off Crown Commercial Service	Band A <£100k	Services	25/05/2020	03/06/2020	17/06/2020	24/06/2020	Craig Egan	Yes
A - Commercial	Consultancy advice on STEP commercialisation options and strategy	Contracts Finder - Open	Band B >=£100k to <£500k	Services	29/06/2020	03/08/2020	28/08/2020	14/09/2020	Craig Egan	Yes
A - Commercial	Consultancy support for stakeholder engagement	Contracts Finder - Open	Band A <£100k	Services	13/07/2020	10/08/2020	21/08/2020	07/09/2020	Craig Egan	Yes
B1.2 Plasma	GK simulations - STEP relevant	Call-Off UKAEA agreement	Band A <£100k	Services	01/06/2020	01/07/2020	01/07/2020	01/08/2020	Rob Boston	Yes
B1.2 Plasma	Pedestal transport - STEP relevant	Call-Off UKAEA agreement	Band A <£100k	Services	01/06/2020	01/07/2020	01/07/2020	01/08/2020	Rob Boston	Yes
B1.2 Plasma	Optimise SPR divertor	Call-Off UKAEA agreement	Band A <£100k	Services	01/07/2020	02/07/2020	01/08/2020	02/08/2020	Rob Boston	Yes
B1.2 Plasma	Multifluid transport codes	Call-Off UKAEA agreement	Band A <£100k	Services	01/07/2020	02/07/2020	01/08/2020	02/08/2020	Rob Boston	Yes
B1.2 Plasma	SPR Error field correction system	Call-Off UKAEA agreement	Band A <£100k	Services	01/08/2020	01/09/2020	15/09/2020	01/10/2020	Rob Boston	Yes

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WBS Area	Description	Tender Process	Value Band	Contract Type	RFQ Issue	Tender Response Deadline	Contract Award Forecast	Contract Start Forecast	Procurement Officer	Suitable for SMEs?
B1.2 Plasma	Impact of alfvén mode on confinement	Call-Off UKAEA agreement	Band A <£100k	Services	01/08/2020	01/09/2020	15/09/2020	01/10/2020	Rob Boston	Yes
B1.2 Plasma	EBW H&CD for MAST	Call-Off UKAEA agreement	Band A <£100k	Services	01/09/2020	01/10/2020	01/10/2020	01/10/2020	Rob Boston	Yes
B1.2 Plasma	Vertical position control	Call-Off UKAEA agreement	Band A <£100k	Services	01/09/2020	01/10/2020	01/10/2020	01/10/2020	Rob Boston	Yes
B1.3 Containment	Larger Magnet Manufacturing and Testing (NTS) Considerations Study	Contracts Finder - Open	Band A <£100k	Services	15/05/2020	15/06/2020	01/07/2020	08/07/2020	Umit Hannam	Yes
B1.3 Containment	UKAEA wide DPS Framework Tender for Superconductor Materials and related Services	OJEU - Restricted	Band C >=£500k to <£1m	Supply & Services	17/07/2020	17/08/2020	07/09/2020	21/09/2020	Umit Hannam	Yes
B1.3 Containment	Cryogenic Material Data Capture Tender	Contracts Finder - Open	Band B >=£100k to <£500k	Services	03/06/2020	03/07/2020	24/07/2020	31/07/2020	Umit Hannam	Yes
B1.3 Containment	Technology Status Report on Best Available Technologies and Current State-of-the art Manufacturing R&D for Pressure Vessels	Contracts Finder - Open	Band A <£100k	Services	02/07/2020	03/08/2020	19/08/2020	01/09/2020	Umit Hannam	Yes
B1.3 Containment	Report on ITER Vacuum Vessel manufacturing lessons learnt	Contracts Finder - Open	Band A <£100k	Services	16/07/2020	17/08/2020	03/09/2020	10/09/2020	Umit Hannam	Yes
B1.3 Containment	Supply of Cryocooler and associated equipment for an Irradiation Test Setup	Contracts Finder - Open	Band A <£100k	Supply	01/09/2020	01/10/2020	19/10/2020	26/10/2020	Umit Hannam	Yes
B1.4 IVC	Follow-on development of heat pipes	Call-Off UKAEA agreement	Band A <£100k	Services	01/09/2020	1/10/2020	15/10/2020	01/12/2020	Michael Williams	Yes

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WBS Area	Description	Tender Process	Value Band	Contract Type	RFQ Issue	Tender Response Deadline	Contract Award Forecast	Contract Start Forecast	Procurement Officer	Suitable for SMEs?
B1.4 IVC	Detailed design and supply of liquid metal and molten salt corrosion stirrer facility / testing	Call-Off UKAEA agreement	Band A <£100k	Services	01/09/2020	1/10/2020	15/10/2020	01/12/2020	Michael Williams	Yes
B1.4 IVC	Follow-on design development of 1 of the divertor design challenge ideas	Call-Off UKAEA agreement	Band A <£100k	Services	01/09/2020	1/10/2020	15/10/2020	01/12/2020	Michael Williams	Yes
B1.4 IVC	High temperature corrosion testing (static corrosion experiments at external facility)	Call-Off UKAEA agreement	Band A <£100k	Services	01/09/2020	1/10/2020	15/10/2020	01/12/2020	Michael Williams	Yes
B1.4 IVC	Follow-on design development of two of the blanket design challenge ideas	Call-Off UKAEA agreement	Band A <£100k	Services	01/09/2020	1/10/2020	15/10/2020	01/12/2020	Michael Williams	Yes
B1.4 IVC	In-situ monitoring and inspection technology assessment	Call-Off UKAEA agreement	Band A <£100k	Services	01/09/2020	1/10/2020	15/10/2020	01/12/2020	Michael Williams	Yes
B1.4 IVC	Tritium related assessments & modelling - various small packages to be delivered via EDS Framework	Call-Off UKAEA agreement	Band A <£100k	Services	n/a	n/a	n/a	n/a	Michael Williams	Yes
B1.4 IVC	Component Assessments, Modelling - various small packages to be delivered via EDS Framework	Call-Off UKAEA agreement	Band A <£100k	Services	n/a	n/a	n/a	n/a	Michael Williams	Yes
B1.4 IVC	Materials, Manufacturing Assessments - various small packages to be delivered via EDS Framework	Call-Off UKAEA agreement	Band A <£100k	Services	n/a	n/a	n/a	n/a	Michael Williams	Yes
B1.4 IVC	Encapsulated Fuel Study (incl mfg trials)	Contracts Finder - Open	Band A <£100k	Services	01/09/2020	01/09/2020	15/09/2020	01/10/2020	Michael Williams	Yes
B1.5 Fuel Cycle	Contract for generating physical property data for gas species relevant to fuel cycle modelling.	Contracts Finder - Open	Band A <£100k	Services	21/08/2020	18/09/2020	02/10/2020	12/10/2020	Vincent Tsang	Yes

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WBS Area	Description	Tender Process	Value Band	Contract Type	RFQ Issue	Tender Response Deadline	Contract Award Forecast	Contract Start Forecast	Procurement Officer	Suitable for SMEs?
B1.5 Fuel Cycle	Assessment of tools available for fuel cycle modelling leading to recommendation as to whether STEP should recreate existing capability or build on existing platform (commercial or open source).	Contracts Finder - Open	Band A <£100k	Services	28/08/2020	25/09/2020	09/10/2020	12/10/2020	Vincent Tsang	Yes
B1.5 Fuel Cycle	Identify alternative technologies to cryopanel, assess feasibility and develop concept design for high speed pumping from tokamak	Contracts Finder - Open	Band A <£100k	Services	18/09/2020	16/10/2020	28/10/2020	02/11/2020	Vincent Tsang	Yes
B1.5 Fuel Cycle	Development of tritium compatible scroll pump technology for use in experiments and assessment of scalability to fuel cycle throughputs	Contracts Finder - Open	Band A <£100k	Services	30/10/2020	27/11/2020	09/12/2020	14/12/2020	Vincent Tsang	Yes
B1.5 Fuel Cycle	Develop concept for efficient and low inventory freezing of hydrogen for pellet formation	Contracts Finder - Open	Band A <£100k	Services	21/08/2020	18/09/2020	02/10/2020	12/10/2020	Vincent Tsang	Yes
B1.5 Fuel Cycle	Design competition to identify novel materials for isotope separation: Propose materials, synthesise and supply for testing	Contracts Finder - Open	Band A <£100k	Services	13/11/2020	11/12/2020	23/12/2020	04/01/2021	Vincent Tsang	Yes
B1.5 Fuel Cycle	Design of experiments for technology validation by industry and universities (Multiple contracts, procurement strategy TBD)	OJEU - Open	Band B >=£100k to <£500k	Services	n/a	n/a	n/a	n/a	Vincent Tsang	Yes
B1.6 Infrastructure	Process chemistry technology assessment	Other	Band A <£100k	Services	01/03/2020	01/03/2020	15/06/2020	01/07/2020	Umit Hannam	Yes
B1.6 Infrastructure	Direct heat usage technology assessment	Call-Off UKAEA agreement	Band A <£100k	Services	22/06/2020	22/07/2020	12/08/2020	19/08/2020	Umit Hannam	Yes
B1.6 Infrastructure	Heat exchanger technology assessment	Call-Off UKAEA agreement	Band A <£100k	Services	22/06/2020	22/07/2020	12/08/2020	19/08/2020	Umit Hannam	Yes
B1.6 Infrastructure	SCO2 component level cycle technology assessment	Call-Off UKAEA agreement	Band A <£100k	Services	22/06/2020	22/07/2020	12/08/2020	19/08/2020	Umit Hannam	Yes

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WBS Area	Description	Tender Process	Value Band	Contract Type	RFQ Issue	Tender Response Deadline	Contract Award Forecast	Contract Start Forecast	Procurement Officer	Suitable for SMEs?
B1.6 Infrastructure	DC grid for fusion technology assessment	Call-Off UKAEA agreement	Band A <£100k	Services	22/06/2020	22/07/2020	12/08/2020	19/08/2020	Umit Hannam	Yes
B1.6 Infrastructure	AC grid for fusion technology assessment	Call-Off UKAEA agreement	Band A <£100k	Services	22/06/2020	22/07/2020	12/08/2020	19/08/2020	Umit Hannam	Yes
B1.6 Infrastructure	Cryo Plant Power Usage Model assessment	Contracts Finder - Open	Band A <£100k	Services	22/06/2020	22/07/2020	12/08/2020	19/08/2020	Umit Hannam	Yes
B1.7 Plant Lifecycle	Construction Standards, Regulations and Classification of Structures & Buildings	Call-Off UKAEA agreement	Band A <£100k	Services	01/06/2020	01/07/2020	01/07/2020	01/08/2020	Michael Williams	Yes
B1.7 Plant Lifecycle	Construction and Assembly Requirements Specification	Call-Off UKAEA agreement	Band A <£100k	Services	01/06/2020	01/07/2020	01/07/2020	01/08/2020	Michael Williams	Yes
B1.7 Plant Lifecycle	Construction Studies and Assessments	Call-Off UKAEA agreement	Band B >=£100k to <£500k	Services	01/07/2020	02/07/2020	01/08/2020	02/08/2020	Michael Williams	Yes
B1.7 Plant Lifecycle	Maintenance Strategy Report	Call-Off UKAEA agreement	Band B >=£100k to <£500k	Services	01/07/2020	02/07/2020	01/08/2020	02/08/2020	Michael Williams	Yes
B1.7 Plant Lifecycle	Plant Operational Efficiency & Availability Assessment (OEAA)	Call-Off UKAEA agreement	Band A <£100k	Services	01/08/2020	01/09/2020	15/09/2020	01/10/2020	Michael Williams	Yes
B1.7 Plant Lifecycle	Technology Justification & Status Report(s)	Call-Off UKAEA agreement	Band A <£100k	Services	01/08/2020	01/09/2020	15/09/2020	01/10/2020	Michael Williams	Yes
B1.7 Plant Lifecycle	Preferred Waste Handling and Decommissioning Strategy for STEP	Call-Off UKAEA agreement	Band B >=£100k to <£500k	Services	n/a	n/a	n/a	n/a	Michael Williams	Yes

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WBS Area	Description	Tender Process	Value Band	Contract Type	RFQ Issue	Tender Response Deadline	Contract Award Forecast	Contract Start Forecast	Procurement Officer	Suitable for SMEs?
B1.7 Plant Lifecycle	Prototype Integrated Waste Strategy for SPR	Call-Off UKAEA agreement	Band A <£100k	Services	n/a	n/a	n/a	n/a	Michael Williams	Yes
B1.7 Plant Lifecycle	Development of Improved Approaches to Waste Treatment (smelting test Rig)	Contracts Finder - Open	Band A <£100k	Services	n/a	n/a	n/a	n/a	Michael Williams	Yes
B1.7 Plant Lifecycle	Detritiation Capabilities for Waste Processing from STEP (detritiation test rig)	Contracts Finder - Open	Band A <£100k	Services	01/08/2020	01/09/2020	15/09/2020	01/10/2020	Michael Williams	Yes
B1.7 Plant Lifecycle	Development of Isotope Separation Technology (R&D)	Call-Off UKAEA agreement	Band A <£100k	Services	01/08/2020	01/09/2020	15/09/2020	01/10/2020	Michael Williams	Yes
C - Programme Management	Phases 2-4 of the Portfolio Office Contract	Other	Band C >=£500k to <£1m	Services	n/a	n/a	n/a	n/a	Rob Harries-Harris	n/a
C - Programme Management	Software to support Pillar C (New Risk management tool and licenses)	OJEU - Open	Band A <£100k	Services	15/07/2020	15/08/2020	21/08/2020	28/08/2020	Craig Egan	Yes
C - Programme Management	Risk Management Training	Call-Off UKAEA agreement	Band A <£100k	Services	15/07/2020	15/08/2020	21/08/2020	28/08/2020	Craig Egan	Yes
C - Programme Management	Recruitment Advertising & Candidate Placement	Call-Off UKAEA agreement	Band A <£100k	Services	01/09/2020	01/10/2020	08/10/2020	15/10/2020	Craig Egan	Yes
C - Programme Management	Training - MSP Foundation (and MoR courses) perhaps through existing Training agreement	Call-Off UKAEA agreement	Band A <£100k	Services	01/10/2020	01/11/2020	08/11/2020	15/11/2020	Craig Egan	Yes
C - Programme Management	Early Market Engagement for possible Specialist Design Services DPS	Other	N/A	Services	01/09/2020	01/10/2020	01/10/2020	01/10/2029	Umit Hannam	Yes

3 How to Use the Procurement Plan

This Procurement Plan shows the current pipeline of unawarded procurements over the period 1st April 2020 to 31st March 2021. The dates given are forecasts and therefore subject to change. Please see the copyright declarations and terms of use set out below.

3.1 Understanding the Headings

The information contained under each heading is as follows:

Heading	Explanation
WBS	The lead work delivery area for which the procurement is to be carried out is defined by reference to the STEP Work Breakdown Structure (see below for more details)
Description	A high-level description of the procurement
Tender Process	This is the proposed tender process
Value Band	See Value Bandings below
Contract Type	The proposed contract type
RFQ Issue Forecast	The date on which the procurement event is scheduled to start
Tender Response Deadline	The latest date for which tender responses are scheduled to be accepted
Contract Award Forecast	The date on which any contract award is scheduled to be notified
Contract Start Forecast	The date for which any contract is scheduled to be executed

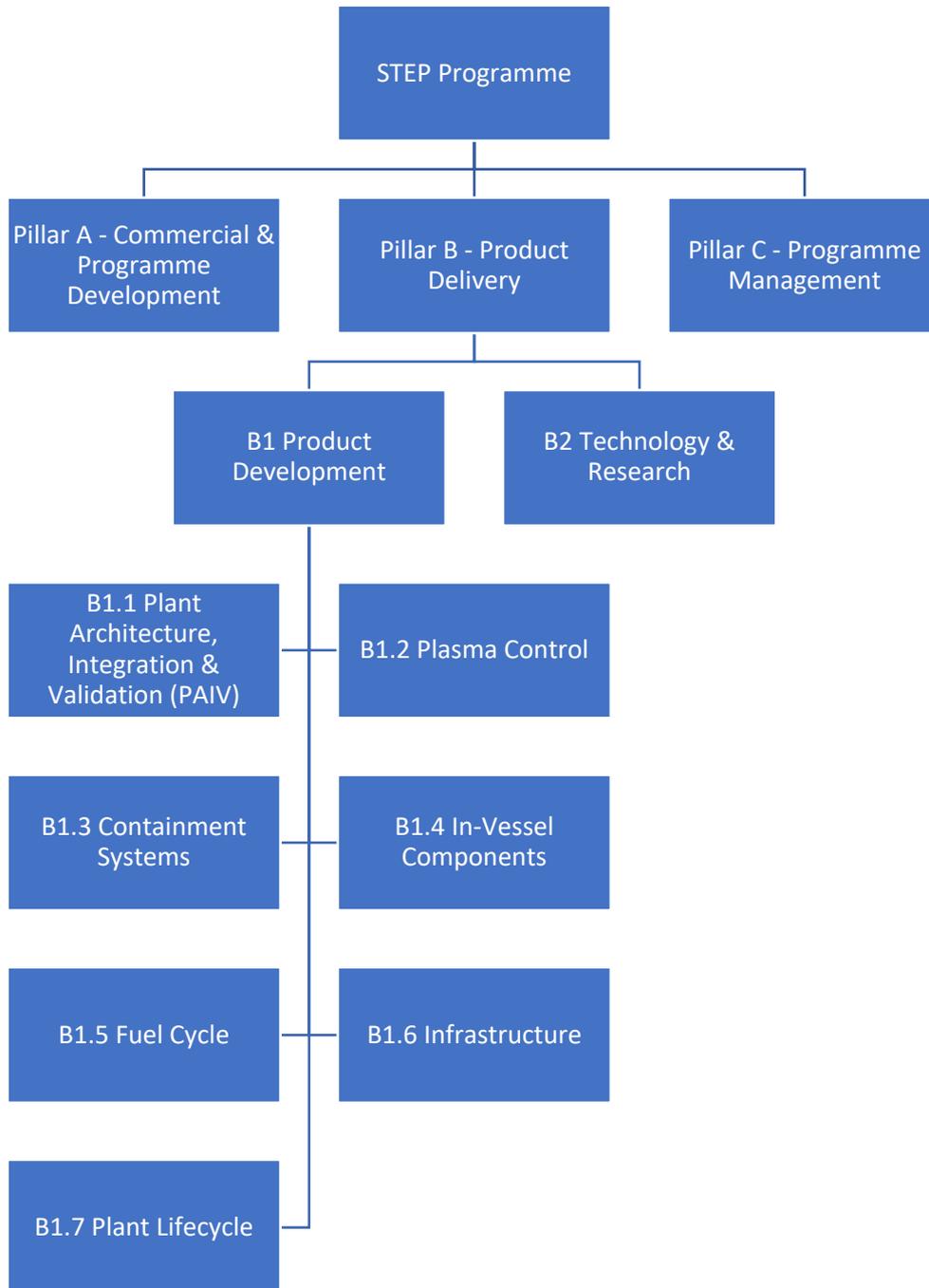
3.2 Value Bandings

The value bandings used by the STEP Programme are as follows:

Value Band	Range
A	<£100k
B	>£100k to <£500k
C	>£500k to <£1m
D	>£1m to <£5m
E	>£5m to <£10m
F	>£10m to <£25m
G	>£25m to <£50m
H	>£50m to <£100m
I	>£100m to <£250m
J	>£250m

3.3 Work Breakdown Structure

The diagram below shows an extract of the STEP Programme Work Breakdown Structure (WBS) to explain how the various work delivery areas are connected.



Pillar A delivers a United Kingdom site ready for a Fusion Power Station and a commercial path to the detailed design phase. It encompasses Regulation, Site Selection, Public Engagement, Commercial, Business Case, IP, and Costing activities.

Pillar B delivers the UKAEA-led Concept Design of a Fusion Power Station (including the science and technology to deliver the detailed design).

Pillar C provides the services needed to deliver Pillars A and B. These include Procurement, HR, Project Controls, Finance, Document Control, Assurance, Governance, and Quality.

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The information contained is based on current plans, as well as current understandings of the future design options for the STEP machine. As the STEP Programme progresses, points of optionality will be selected or removed and procurements may be deleted from or added to those listed.

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Appendix A STEP Procurement Team Contact Details

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Document Revision History

Issue	Date	Summary of Changes
A	18/5/2020	First draft.
B	11/6/2020	Minor update following finalisation of FY2020/21 budget.