EXECUTIVE SUMMARY

We welcome the opportunity to submit a proposal for Tender 5532/12/2021. This document is our response to Lot 1 Requirements contained within that Tender. It is accompanied by Annex 2, CVs and Declarations 1-5 which have been uploaded separately.

We have a thorough understanding of the conformance and performance testing requirements outlined in the ITT and have established a consortium that brings together three industry leading and complementary organisations with the specialist skills, knowledge and experience required to deliver these.

Engage Consulting Limited (Engage) will be the lead partner and, as such, we will be the principal interface with BEIS and fully accountable for the project. Our sub-contractors are Nederlands Meet Institute (NMi) and SMS PLC (SMS). The consortium will have a robust operational and commercial framework in place to ensure that it operates effectively as a single, efficient delivery unit.

Engage will manage the overall delivery and will take responsibility for the technical solution. Our long standing associate, [redacted], will undertake a key SME role. We have extensive experience of managing similar projects in a multi-stakeholder environment as well as extensive industry subject matter expertise.

NMi will take responsibility for the Scheme Design, Development and Test Assurance. They are specialists in test design and assurance, and hold a multitude of relevant accreditations that support the authority of their test reports and certificates worldwide.

SMS will take responsibility for the Test Environment Design, Build and Execution. They have an extensive track record in testing smart meters and appliances and the project will utilise their existing large-scale DCC WAN connected testing facility in Bolton.

We will manage the project using a proven delivery framework which includes robust governance as well as an effective quality assurance, testing assurance and risk management regime. Our testing approach and facilities are both scalable and responsive, so that we can accommodate and manage the uncertainties in the testing volumes and timings. We will engage constructively with BEIS as appropriate and will not lose sight of the overall project goals. We will also ensure that we engage proactively and effectively with product developers as they are key to success.

The commercials we have proposed and the resourcing that underpins them are designed to provide BEIS with exceptional value for money whilst ensuring the successful delivery of all of the obligations and project goals.

Finally, we are wholly supportive of the “Tackle Workforce Inequality” policy outcome applicable for this contract. Our consortium very much welcomes the opportunity to further deliver upon our existing commitments to diversity and inclusion and to continue with our zero tolerance policy of modern slavery.

01: UNDERSTANDING THE REQUIREMENTS

CONTEXT

To deliver the stability and capacity required to meet the UK’s energy needs now, and in the future, we will need innovative solutions to cope with increasing demand as we transition to Electric Vehicles (EVs) and from natural gas to alternate heating systems such as electric heat pumps.

In one of several policies announced by the government to accelerate the UK’s ambition to be Net Zero for Carbon by 2050, the Ten-point Plan for a Green Industrial Revolution[1] was published in 2021. The plan set out the areas in which a combination of public and private

[1] https://www.gov.uk/government/publications/the-ten-point-plan-for-a-green-industrial-revolution

sector investment will be used to make the UK a global leader in green technologies. The tenth point in this plan launched the £1 billion Net Zero Innovation Portfolio (NZIP)[2] which was itself split into ten priority areas for investment aligned with the Ten-Point Plan.

One priority area is Energy Storage and Flexibility innovation. To address these challenges, a series of projects will be designed to accelerate the smart technology required to not only maintain the stability of the national grid and distribution networks, which are increasingly reliant on renewable power generation, but to also generate flexibility to shift demand away from current peaks to make it manageable.

One of the key innovations required to achieve flexibility is Demand Side Response (DSR). This technology utilises the growth of Energy Smart Appliances (ESAs) such as EV Chargers, Heating, Ventilation and Air Conditioning Systems (HVACs), batteries and internet connected white goods as a source of flexibility. For small business and domestic properties DSR has had limited appeal, but with the smart meter roll out achieving critical mass, EVs becoming widespread and the mass switch over of heating systems to heat pumps beginning, the amount of potential in both energy and revenue is rising exponentially.

To fully unlock this potential, it is important to ensure that sensible protections are in place for consumers and the energy industry alike. This will ensure that critical national infrastructure is protected from unsustainable peak demands or security risks and make investing in new innovative technology as appealing and low risk to consumers as possible – essential outcomes if Net Zero targets are to be achieved.

With these protections in mind, the voluntary Publicly Available Standards (PAS) 1878[3] and 1879[4] were recently developed by the British Standards Institute (BSI) with direction from BEIS. The PAS were designed with the objective of meeting the four core principles of the BEIS "Transitioning to a Net Zero Energy System - Smart Systems and Flexibility" Plan 2021[5], namely achieving interoperability, data privacy, grid stability and cyber security across the DSR system. A key objective of this contract is to prove the PAS approach.

PAS 1878 sets out a basic architecture for ESAs used in domestic and small business DSR services with minimum requirements for functionality, communications, security, and privacy. The intention of this standard is to ensure ESAs are interoperable with DSRSPs and a competitive service market can exist. PAS 1878 also provides for the consumer to be in control of their ESA's demand to be able to set their own requirements and override DSR events should they wish to.

Alongside this, PAS 1879 sets out the minimum requirements for a DSRSP's functionality, information flow, security, and communications, and is meant to be used in conjunction with PAS 1878. It also sets out the consumer relationship management services the DSRSP should provide to enrolled consumers and cements the four principles for consumer DSR - interoperability, data privacy, grid stability and cyber security, with detail on the minimum expectation of how these should be met by DSRSPs and ESA manufacturers.

For smart metering based DSR, the Smart Energy Code (SEC)[6] sets out the specification for Auxiliary Proportional Controllers (APC) and Standalone Auxiliary Proportional Controller (SAPC) in Section F of the Electricity Smart Metering Equipment Technical Specification V5.1 (SMETS) and the SAPC Technical Specification V5.0 (SAPCTS). The APC/SAPC can

[2] https://www.gov.uk/government/collections/net-zero-innovation-portfolio
[3] https://www.bsigroup.com/en-GB/about-bsi/uk-national-standards-body/about-standards/Innovation/energy-smart-appliances-programme/pas-1878/
[4] https://www.bsigroup.com/en-GB/about-bsi/uk-national-standards-body/about-standards/Innovation/energy-smart-appliances-programme/pas-1879/
[5] https://www.gov.uk/government/publications/transitioning-to-a-net-zero-energy-system-smart-systems-and-flexibility-plan-2021
[6] https://smartenergycodecompany.co.uk/the-smart-energy-code-2/

control both the binary and proportional load of up to five connected ESAs via power profiles transmitted via the Data and Communications Company (DCC).

LOT 1 REQUIREMENTS

We have a thorough understanding of the requirements and have established a consortium that brings together three industry leading and complementary organisations with the specialist skills, knowledge and experience required to deliver these. A detailed explanation of our consortium and its expertise can be found in the Roles and Responsibilities section later in this proposal.

In delivery of this contract, we will be designing a conformance and performance testing scheme for ESAs based on PAS 1878, assuring conformance testing results for SAPCs submitted and designing a performance testing scheme for both PAS 1878, 1879 and SAPC. A detailed implementation plan for testing is required along with setting up including executing the tests and reporting on the outcomes. The testing will cover the ESA's compliance with PAS 1878 and provision of Routine and Responsive DSR. This includes communication of all information over Interface A and Interface B with no smart meter interaction. Here, the ESA connects via the CEM to the DSRSP. It should facilitate:

- registration and deregistration events;
- communication of Flexibility Offers and DSR Events; and
- confirmation of the calculated or measured Flexibility delivered once the event completes.

ESAs should be able to connect to their manufacturer securely and receive firmware updates as necessary. ESAs should, as per PAS 1878 annex D, connect to the DCC via 3 routes:

- Route 1: utilising the existing secure DCC networks to share Tariff information via the SMHAN via Zigbee and Interface M;
- Route 2: the DSRSP retrieving the tariff information via DCC; and
- Route 3: where applicable, use of APC or SAPC via the SMWAN/SMHAN to control the load on at least one ESA.

A fourth route is specified (Route 4), whereby the CEM manages Load Control over the internet without any communications being passed via the DCC. This fourth Route can be used in conjunction with the other 3 Routes noted above.

DSRSP platforms that are presented for conformance and performance testing will be assessed against PAS 1879 and its specifications for Interface A. How the DSRSP operates with Transmission or Distribution System Operator (TSO / DSO) will be out of scope.

Conformance testing will be undertaken in line with the requirements and principles of the ISO/IEC 17025:2017 standard applicable to laboratory testing and calibration.

Our testing facility is a large scale, existing smart meter UK testing facility in Bolton. The facility has significant optionality and space with the capability to include all ESA types, generation, and demand side replication. This site will be used to undertake conformance and performance testing of all ESAs as well as DSRSP commands in PAS 1879 and Routes 1-4 of PAS 1878 annex D. We note that conformance testing of DSR products including the SAPC are out of scope, but subject to a project review of the conformance testing results and an assessment of evidence provided of the conformance for SAPC to the GB smart metering specifications and regulations.

All of the above requirements will be robustly project managed, complemented by an ISO9001 compliant Quality Management System and an effective engagement strategy. This will ensure quality product creation, effective governance and efficient delivery and interactions with product developers, within the delivery team and with BEIS.

02: PROJECT TEAM – SKILLS, EXPERTISE, AND FACILITIES

PROPOSED PROJECT TEAM

Roles and Responsibilities

To fulfil the requirements of this contract, we will be operating as a consortium. Our consortium will consist of three industry leading organisations that will be partnering using a sub-contractor framework.

Across the consortium we have a wide range of skills and experience which combine to form a strong delivery team with integrated technical workstreams that have capacity, expert knowledge and skills resilience. This is supported by Director level delivery and quality commitment, in a structure which allows for robust project control and governance, balanced with the need for flexibility to manage any testing volume and timing uncertainties.

Engage will be the lead partner in the consortium, contractually accountable for the project and sub-contractors performance and the principal interface with BEIS. We will manage the overall delivery and will take responsibility for the technical solution. Our long standing associate, [redacted], will undertake a key SME role. We have extensive experience of managing similar projects in a multi-stakeholder environment as well as extensive industry subject matter expertise. We will be sub-contracting Scheme Design, Development and Test Assurance to NMi and sub-contracting Test Environment Design, Build and Execution to SMS. The consortium will have a robust operational and commercial framework in place to ensure that it operates effectively as a single, efficient delivery unit.

Founded in 2000, Engage is an energy consultancy that operates within the UK and Ireland. We specialise in the Energy Market Arrangements and provide independent, trusted, advisory and project services to both the electricity and gas sectors. We are subject matter experts in the rules and regulations, market operation and settlement, and the commercial arrangements. Our services include designing and implementing market arrangement related changes that will enable new and innovate technology based products and services help deliver net zero.

NMi became a private company in 1989, and are known for their knowledge, accreditations, correctness, and worldwide acceptance of test reports and certificates. The quality of their test reports, knowledge of standards and regulations and their client focus and innovative approach have given NMi an excellent global reputation. NMi is therefore well placed to design each testing scheme and provide management control and assurance over test execution for this contract.

Established in 1995, SMS provides end-to-end services offering smart metering, data & energy management, and utility infrastructure solutions. All of the services they offer are geared towards supporting the decarbonisation of the UK's energy network, and the establishment of a smarter, greener and more sustainable grid that works better for suppliers and consumers. SMS has a proven track record in testing smart meters and appliances at their DCC WAN integrated test centre based in Bolton. Testing will be undertaken at this facility where SMS will be responsible for building the test environment to support the scheme design, including stubbed emulated systems and providing operational control of test execution.

It is this depth and breadth of experience, along with significant optionality within the existing UK test facilities that gives us the optimum mix of expertise to successfully deliver this contract.

The organogram below details how we will organise ourselves within the project. The consortium is split into three distinct project workstreams, that will be working collaboratively together to deliver the project requirements. Please see the Proposed Delivery Plan section for a detailed explanation of these.

Aligned to our project approach, we have defined roles and responsibilities in each of the workstreams:

Project Governance and Quality Management	
Senior Project Manager	▸ Responsible for contract management, all aspects of project delivery, governance and change control. ▸ Developing and implementing detailed plans, leading and facilitating cross workstream working. ▸ Developing and agreeing budgets, controlling forecasts and actuals.
Project Coordinator	▸ Responsible for the management of information flowing between workstreams and other stakeholders. ▸ Collecting data, managing logs, forecasts and plans and preparing formal project reporting. ▸ Supporting and facilitating project meetings, maintaining requirement traceability and document management.
Quality Assurer	▸ Responsible for independently reviewing and quality assuring deliverables. ▸ Setting up the Quality Management System (QMS). ▸ Agreeing acceptance criteria, ensuring product reviews are undertaken and approved against the criteria agreed. ▸ Identifying and raising any risks that might impact quality. ▸ Identifying and recommending improvements to service quality.
QA Director	▸ Accountable for ensuring the service meets the project's quality standards and delivery requirements. ▸ Ensuring the project QMS remains fit for purpose. ▸ Final escalation point for concerns and issues if required.

Technical Liaison Lead	▸ Responsible for overseeing the entire technical solution, driving it through to completion ▸ Setting the engagement strategy. ▸ Orchestration and resolution of technical issues in consultation with experts across workstreams. ▸ Engagement and liaison with BEIS and product developers to translate and communicate the technical approach.
Technical PAS SME	▸ [redacted], responsible for providing expert PAS knowledge, advisory and educational support to the overall project. ▸ Supporting implementation of the PAS, ensuring there is an understanding of its intent reflected in the testing schemes. ▸ Supporting the quality assurance of deliverables.

Scheme Design, Development and Test Assurance	
Technical Lead	▸ NMi Lead, providing oversight and technical review. ▸ Reviewing testing outputs. ▸ Providing technical approvals and recommendations. ▸ Subject matter expertise input. ▸ Technical and quality assurance. ▸ Stakeholder liaison.
Test Scheme Development Lead	▸ Leading development of conformance & performance schemes ▸ Development of test specifications, plans and processes. ▸ Oversight and control of test execution and technical change control. ▸ Monitoring the conformance of test outputs and results, and ultimate test output approval. ▸ Implementing lab controls, test governance, test assurance processes, monitoring processes and test tooling. ▸ Provision of test output review and commentary. ▸ Technical and quality assurance of testing and outputs.
Test Quality Assurance Lead	▸ Supporting development, focusing on quality assurance. ▸ Assurance of test specifications, plans and processes. ▸ Assurance of test execution and technical change control. ▸ Monitoring the conformance of test outputs and results, and ultimate test output approval. ▸ Implementing test assurance, processes, monitoring processes and test tooling. ▸ Quality assurance of testing and outputs.

Approval Experts in Security, IT Systems, Test Systems Systems Certification/Technical QA Specialist	▸ Contributing subject matter expertise to scheme development. ▸ Inputting into the test scheme methodologies. ▸ Inputting into the development test specifications, plans and processes. ▸ Monitoring the conformance of test outputs and results, ultimate test output approval in subject areas. ▸ Contributing to the implementation of lab controls, test governance, test assurance processes, monitoring processes and test tooling. ▸ Provision of test output review and commentary in relevant subject areas.

Test Environment Design, Build & Execution	
Technical Lead	▸ SMS Lead, with technical oversight of Test Environment Design & Execution. ▸ Understanding of PAS conformance requirements for ESAs, CEMs and DSRSPs. ▸ Technical input to development of PAS conformance test design, environment design and setup, test "stub" implementation, and performance test planning and execution.
SMETS 2 / Smart Home Specialist	▸ Oversight of test environment design, with focus on SMETS. ▸ Ownership of SAPC configuration and testing process for SMETS DSR demonstration activity. ▸ Input to PAS compliance requirements for the performance test phase.
Technology Development Lead	▸ Management of the DSRSP software development team. ▸ Leading the development of DSRSP platform stub design and implementation. ▸ Provision of expert knowledge and experience of energy smart appliance technology into the testing scheme designs.
Test Lab Manager	▸ Project control for onsite activities within the test environment set up and operation. ▸ Line Manager responsibility for the Workstream Manager.
Workstream Manager	▸ Management of test execution activity and team and the test environment set up. ▸ Project reporting. ▸ Coordinating and safe keeping of DSR products installed and communicating with product developers for operational technical support.
Senior Software Developer	▸ Leading the development of DSRSP stub design, testing and implementation.
Embedded Systems Specialist	▸ Technical translation of PAS requirements. ▸ Working with the Senior Software Developer to design and implement the DSRSP stub, with focus on "hardware" CEMs.

Electrician	▸ Hands-on electrical installation during set-up phase. ▸ Installing and commissioning of ESAs during test activity. ▸ Troubleshooting of electrical issues.
Joiner	▸ Fitting and manual labour during lab set-up phase.
Test Engineer 1, 2, 3	▸ Supporting the electrician during ESA performance test installation. ▸ Planning and execution of performance tests. ▸ Logging and reporting of results to Workstream Manager. ▸ Involvement in product developer discussions, retesting results, and reconfiguration of test set-ups to achieve successful test outcomes.

The roles and responsibilities have been developed into the following resource plan. This resourcing profile has the right balance of knowledge and experience and provides resilience both in terms of capacity and skills.

Our resourcing approach is built upon the principle that we can flex resource and time allocation within the budget to respond to testing volume and timing uncertainties. The project will be robustly controlled, with an ability to quickly forecast and quantify the impact of change to make informed decisions and recommendations.

We have a broad range of skills and experience within our consortium, with access to an array of resource and capability. However should a need arise to fill a resource/skill gap, we will recruit or train and mentor employees as required so that the quality of all deliverables continues to meet the very high standards we set ourselves.

Expertise and Experience

We have extensive experience delivering similar projects to this one. Some examples are as follows. In each instance, more details can be provided upon request.

<u>Project Management Services – Engage Consulting</u>

EMR Settlement Limited (EMRS) is a wholly owned subsidiary of ELEXON and is the EMR Settlement Services Provider for the Contracts for Difference and the Capacity Market schemes. Engage provided project management services to EMRS. Engage's Project Manager translated complex scheme regulations into viable software development projects

and effectively managed a portfolio of change within a multifaceted stakeholder environment involving BEIS, Ofgem, National Grid, LCCC and ELEXON's third party suppliers. This included defining the delivery profile for restarting the Capacity Market following a legal challenge which temporarily suspended the scheme.

A key lesson learned during provision of this service involved managing challenges around effectively translating regulations into system changes and testing scenarios without losing the intent of the regulation itself or under estimating the impacts to complex calculations these changes required. The latter being important because implementation timings were often linked to laying regulations before Parliament. This was effectively managed by implementing new governance arrangements providing a structured process to understand, translate, assess and feedback system and testing scenario impacts to stakeholders so compliance could be confirmed and a realistic delivery profile agreed.

Alt HAN Test Lab – SMS PLC

SMS partnered with Alt HAN Co to provide a bespoke SMETS2 Test Environment that replicated the environments that typical Alt HAN sites will expect to have to support to extend the SMHAN. This enabled SMETS2 integration testing to be done in emulating over 30 "flats" that are out of range of typical SMETS2 HAN. SMS was able to easily extend the capability of its existing SMETS2 Test Lab by building two new test environments within its facility to support testing requirements.

During the project one of the key lessons learnt was how to overcome the challenge of replicating the Alt HAN environment. Distance is required between the Comms Hub, GSME and PPMID to successfully replicate an Alt HAN scenario and stop the GSME and IHD connecting to the standard HAN. The scale of testing coverage across meter types and Comms Hub variants increased the complexity of the task. SMS were able to replicate this using both distance and shielding approach with their expertise and the space available at the facility. The same facility will be used for this project.

Electric Vehicle Charger Conformity Assessment - NMi

Ensuring that electric vehicle (EV) chargers are appropriately accurate and meet the needs of users and suppliers is a challenge as technological approaches are new and no EU regulation currently exists. Germany had decided to implement national legislation to regulate EV chargers and charging systems. In response, NMi considered requirements, converted these into conformity and performance assessment criteria and implemented the requisite test plans. NMi gained ISO/IEC 17065 accreditation for the service and, as a consequence, has been designated by the German Authorities as the Notified Body for certifying EV chargers and charging systems.

From a lesson learnt perspective, baselining requirements was a project delivery issue as German government policy was evolving. The lesson from this was experience was to ensure baselined requirements were confirmed from the start and that any change proposal is subject to impact assessment (with impact built into subsequent planning).

PROPOSED TESTING FACILITIES

Accreditations

NMi is a UKCA Approved Conformity Assessment Body for Measuring Instruments[7]. In addition, the consortium holds numerous accreditations and certifications, recognising the high standards we operate to. Those of specific relevance to this contract are as follows:

- Investors in People accreditation – Ensuring we effectively lead, support and develop the people on our delivery team.
- ISO27001 and Cyber Essentials certification – Ensuring secure management of the project.
- ISO9001 and ISO14001 certification – Ensuring the project operates to recognised quality and environmental system management standards.
- ISO45001 certification – Ensuring we operate to internationally recognised health and safety standards.
- ISO50001 certification – Ensuring effective energy efficiency, use and consumption management and the environmental impact of the test lab is reduced.
- ISO/IEC 17020:2012 accreditation (Netherlands and UKAS) - Ensuring the technical competence, reliability and integrity of Conformity Assessment Bodies.
- ISO/IEC 17021-1:2015 accreditation (Netherland and UKAS) - Ensuring the competence, consistency and impartiality of bodies providing audit and certification of all types of management systems.
- ISO/IEC 17025:2017 Laboratory Accreditation (Netherlands) - Ensuring the competence, and consistent operations of testing and calibration laboratories.

03 – PROJECT APPROACH AND DELIVERY

PROPOSED DELIVERY

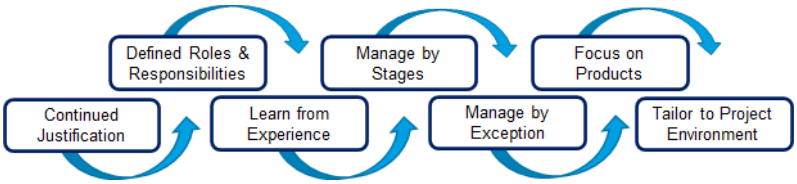
Planned Approach

Our proposed testing approach is agile and flexible, undertaken by industry experts with a proven track record in delivering industry change, conformance, and innovation schemes and providing testing assurance and execution services. We will operate fairly and work in a collaborative, transparent flexible manner, delivering on time, to cost and a high quality. We

[7] www.ukas.com

will ensure that product developers, who are key to the success of this project, find it easy to interact with us, with a clear engagement strategy defined during project mobilisation.

The project delivery will be robustly managed, following PRINCE2 principles which will be tailored appropriately to the requirements of this project:



The project will be controlled using our Governance Model. During project mobilisation, the Project Management Office will be set up. This will include establishing the ways of working, setting up the infrastructure and processes needed, implementing the tools and creating the products we will use to control the project. These products are as follows:

PROJECT	PRODUCTS
Mobilisation	▸ Project Initiation Document (PID) ▸ Project Delivery Plan including Social Value commitments ▸ Quality Management System ▸ Governance Approach ▸ Engagement Strategy including Stakeholder map ▸ Meeting Terms of Reference ▸ Risks, Assumptions, Issues, Dependencies and Challenges (RAID) Log ▸ Lessons Learnt Log
Directing the Project	▸ Weekly Reports ▸ Project Board Packs ▸ Exception Reports
Managing Delivery	▸ Product Description Documents (PDD) ▸ Product Acceptance Criteria ▸ Product Catalogue ▸ Work Packages ▸ Stage Gate Report ▸ Change Request Form, Log, Assessment Spreadsheet and Response Form ▸ Knowledge Dissemination Packs as required for events
Closure	▸ Project Closure Report

Testing is planned in two phases using one stage gate as per BEIS ITT Section 2.4 Table 4. The following list confirms the formal deliverables of the project:

PHASE	DELIVERABLES
Phase 1	▸ (R1a) Conformance Testing Scheme Specification ▸ (R1b) Performance Testing Scheme Specification ▸ (R1c) Lot 1 Detailed Implementation Plan (DIP) ▸ (R2a) Lot 1 Test Environment Set Up Plan (Internal)

Phase 2	▸ (R2a) Lot 1 Test Environment Complete ▸ (R2b) Conformance Test Summary Report ▸ (R2c) Products using SAPC Project Review (x2) ▸ (R2d) Performance Test Summary Report

The demand side response products being presented for testing will be developed within other projects outside the scope of this contract. Those products will be provided to this project to install and operate for the purpose of testing. During our mobilisation phase an engagement strategy to manage communications between these product development projects and our technical workstreams will be developed by the Technical Liaison Lead. This role will be responsible for ensuring product developers find it easy to interact with us and equally provide the right level of technical support to this project. Each ESA will be presented for testing with an associated CEM. Each project is also expected to have a DSRSP Platform - the combination of each of these elements make up the DSR System under test.

As per the ITT, we expect the following volumes into each of the testing schemes:

TESTING SCHEME	DSR PRODUCT VOLUMES
Conformance Testing	▸ **5 Projects** ▸ 2 > 4 ESAs types from each project ▸ 10 > 20 ESA devices with associated CEMs to be tested ▸ 5 DSRSP Platforms to be tested
SAPC Project Review	▸ **2 Projects using SAPC** ▸ 2 > 4 ESAs types from each project ▸ 4 > 8 ESA devices with associated CEMs to be tested ▸ 2 DSRSP Platforms to be tested
Performance Testing	▸ **7 Projects (Total)** ▸ 2 > 4 ESAs types from each project ▸ 14 > 28 ESA devices with associated CEMs to be tested ▸ 7 DSRSP Platforms to be tested

Proposed Delivery Plan

The proposed delivery plan has been designed to meet the project objectives and goals. The plan has been built to cater for the higher volumes provided in table 5 of the ITT. This should then provide the flexibility required in planning to mitigate two areas of uncertainty:

- The dependency on DSR product developers, engagement with them and delivery timelines.
- The volume of DSR products and mix of ESA types being presented for testing.

Delivery will comprise of three distinct workstreams running through the project life cycle.

- **Project Governance and Quality Assurance**
  - Robust project governance and controls to ensure delivery is on time, risks are effectively managed, and deliverables meet quality standards.
  - Project management interface into the overall Flexibility Innovation Programme to ensure seamless integration.
  - Technical liaison & engagement interface feeding into the two technical workstreams and external product developers, providing oversight and leadership in the design and delivery of the overall technical solution.
  - Contract management as contracted party to BEIS and for consortium performance management.

- Interface with Lot 2 should that be provided by another service provider.

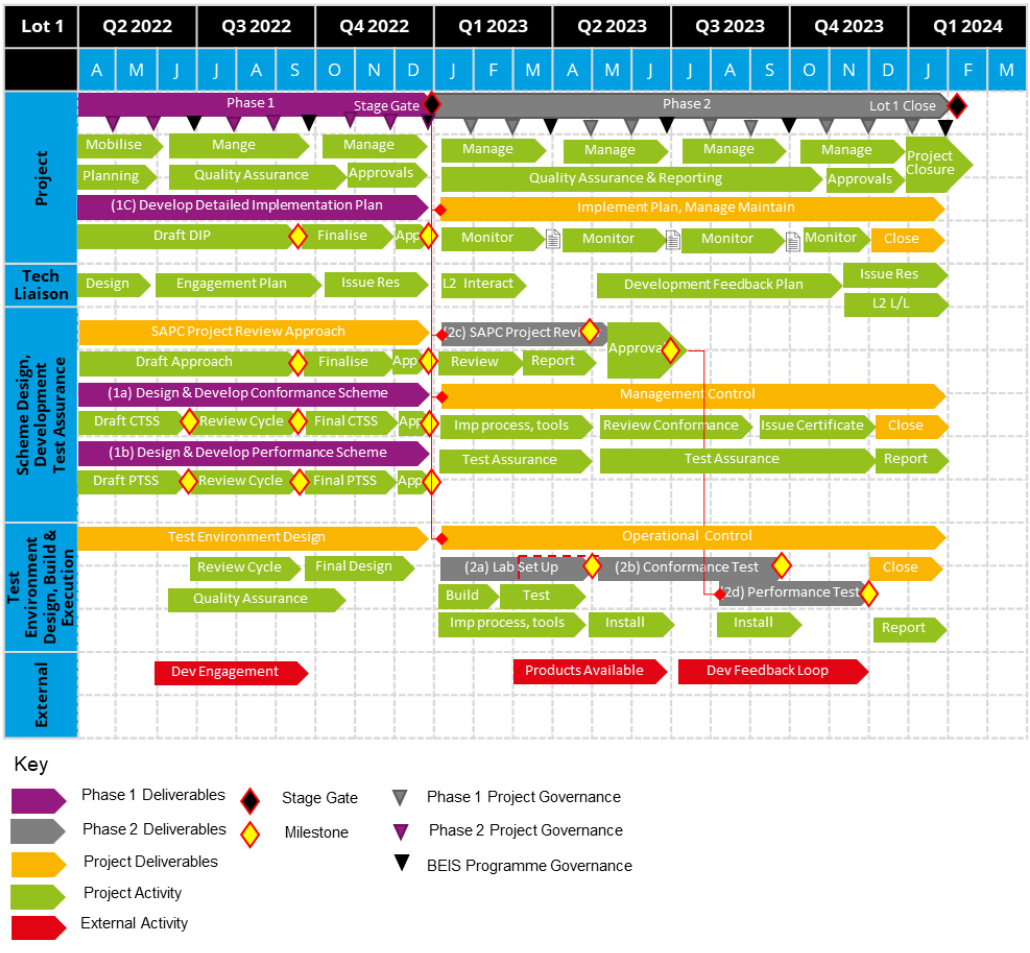
Scheme Design, Development and Test Assurance

- Leading the design and development of the testing schemes in phase 1.
- Working with the Technical Liaison Lead to ensure both project and DSR product developers views are considered.
- Working closely with the Test Environment workstream to ensure the test environment and test execution approach support the testing schemes.
- Providing the management control and assurance during the test execution in phase 2, ensuring robust control over test execution.
- Monitoring and reviewing the conformance of test output.

Test Environment Design, Build and Execution

- Supporting test environment design in phase 1.
- Working with the Technical Liaison Lead to ensure the environment can support the scheme and business requirements.
- Working with product developers to coordinate the safe keeping of DSR products provided and install these for testing.
- Set up of the test environment, development of test stubs, Open ADR testing capability, test tools and processes, installation of DSR equipment and systems.
- Providing the operational control in phase 2 test execution, working closely with the Scheme Design workstream.

As illustrated in the plan below we have highlighted where there is uncertainty about the start of Conformance testing in Phase 2 due to dependencies external to this project. We have highlighted the earliest and latest dates we can start testing to meet the requirements. We will be flexible to accommodate the differing maturity of DSR products coming through for testing at different times and our test approach and detailed implementation plan for testing will allow for this uncertainty.



The criteria for passing through the stage gate is based on the approval of all the project deliverables detailed above, to enable moving into phase 2. We have assumed a reasonable review period for project deliverables which requires BEIS' input and approval at an appropriate time. A key feature of the plan is the engagement with BEIS and DSR product developers in the scheme design in phase 1. This engagement is critical to building trusted collaborative relationships through into test execution allowing for learning and design improvements in the test approach, creating a positive experience for the testing participant and ensuring we collectively meet the stated project objectives and goals. We will use our engagement model detailed in the Engagement Model section as the basis of our approach with both BEIS and DSR product developers, safeguarding buy in for the intended approach and promoting considered feedback in the process.

Methodology

We propose the following test approach to support the testing schemes that will be developed in phase 1. For the avoidance of doubt, the following statements detail the scope of system under test:

In scope:

- DSR types as covered in PAS 1878 and 1879:
  - Routine – the management of ESA consumption/production/storage according to external signals such as electricity tariffs; and
  - Responsive – TSO or DSO requested events managed by DSRSPs
- The ESA system architecture for DSR-based activities, including communication links and object functionalities. Specifically, the interfaces between the CEM and the ESA and between the CEM and the DSRSP are in scope.
- For DSR systems utilising the GB smart metering system technical framework, the connections between the SAPC, ESA, DCC and DCC User are in scope.

Out of scope:

PAS 1878 does not cover the deployment and functional configuration of the wider DSR environment, so communication between DSRSP and TSO/DSOs is out of scope.

Testing Definitions

We have developed the following definitions to ensure a common understanding of the testing requirements set out in the ITT.

Conformance Testing	Providing evidence that the ESA/CEM and DSRSP platforms individually conform to PAS 1878 and PAS 1879 by testing them as discrete parts of the overall system, emulating parts of the system necessary to undertake the test. Test scenarios will be based on use cases within PAS 1878 and include operation with, and without, connecting to the smart metering systems as stated in Annex D of PAS 1878 - utilising both ESME(APC) functionality and DCC via WAN. The tests will include Routine and Responsive operation of the ESAs.
Performance Testing	Providing evidence the DSR System performs as expected in its intended operation as an end-to-end test, using real devices and systems within scope. Test scenarios will reflect the programme use cases provided in Annex 6 of the ITT and will include operation with and without connecting to the smart metering systems as stated in Annex D of PAS 1878 - utilising the ESME(APC), SAPC and DCC via WAN. The tests will include Routine and Responsive operation of the ESAs.

Interoperability Testing	Providing evidence the DSRSP platform, CEM(s) and ESA(s) can perform as expected in connecting and communicating seamlessly with each other within a DSR System as a demonstration group and that CEM(s) and ESA(s) can be interchanged with other DSRSP platforms from other demonstration groups and continue to be interoperable.

Test Approach

[redacted]

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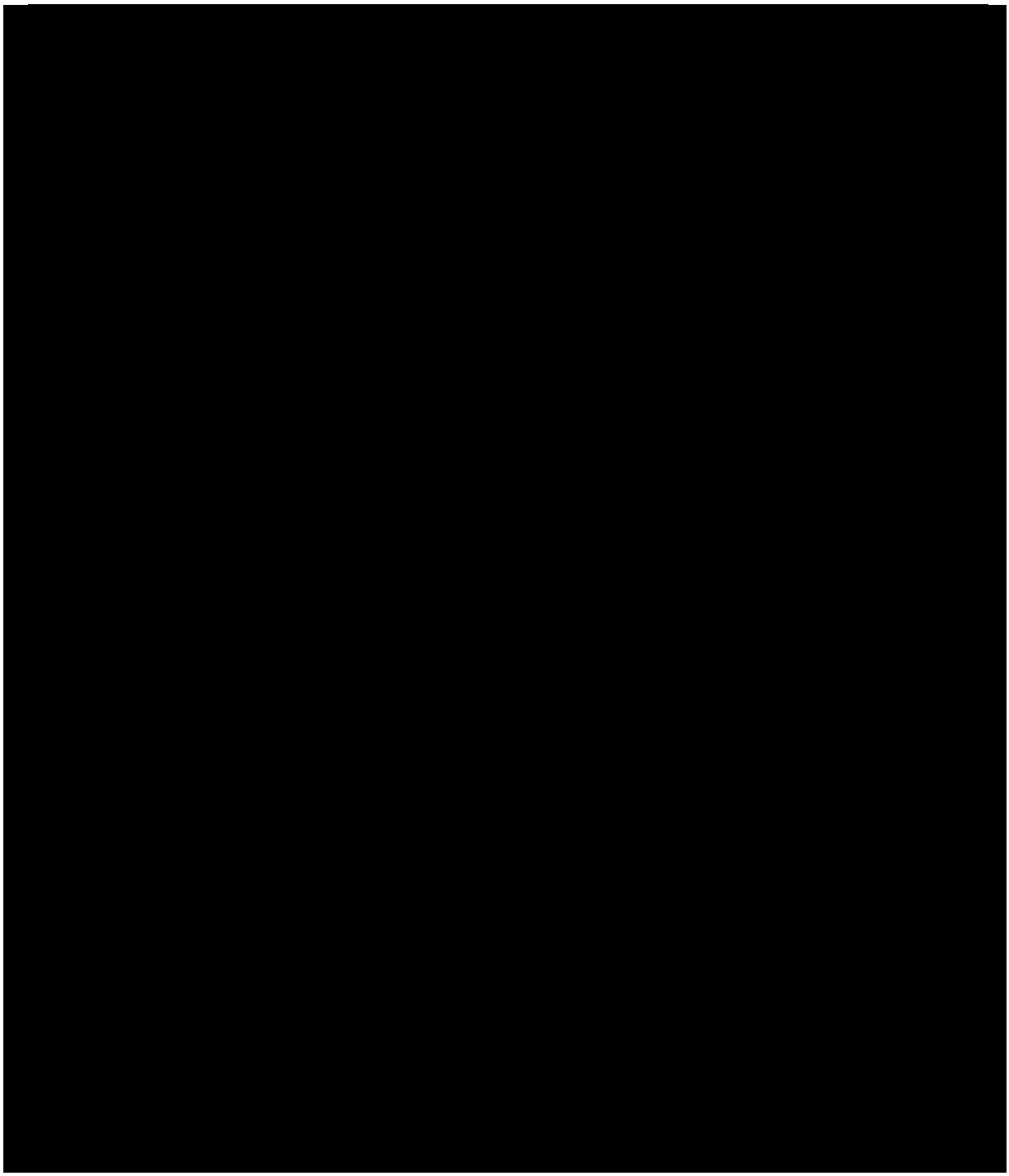

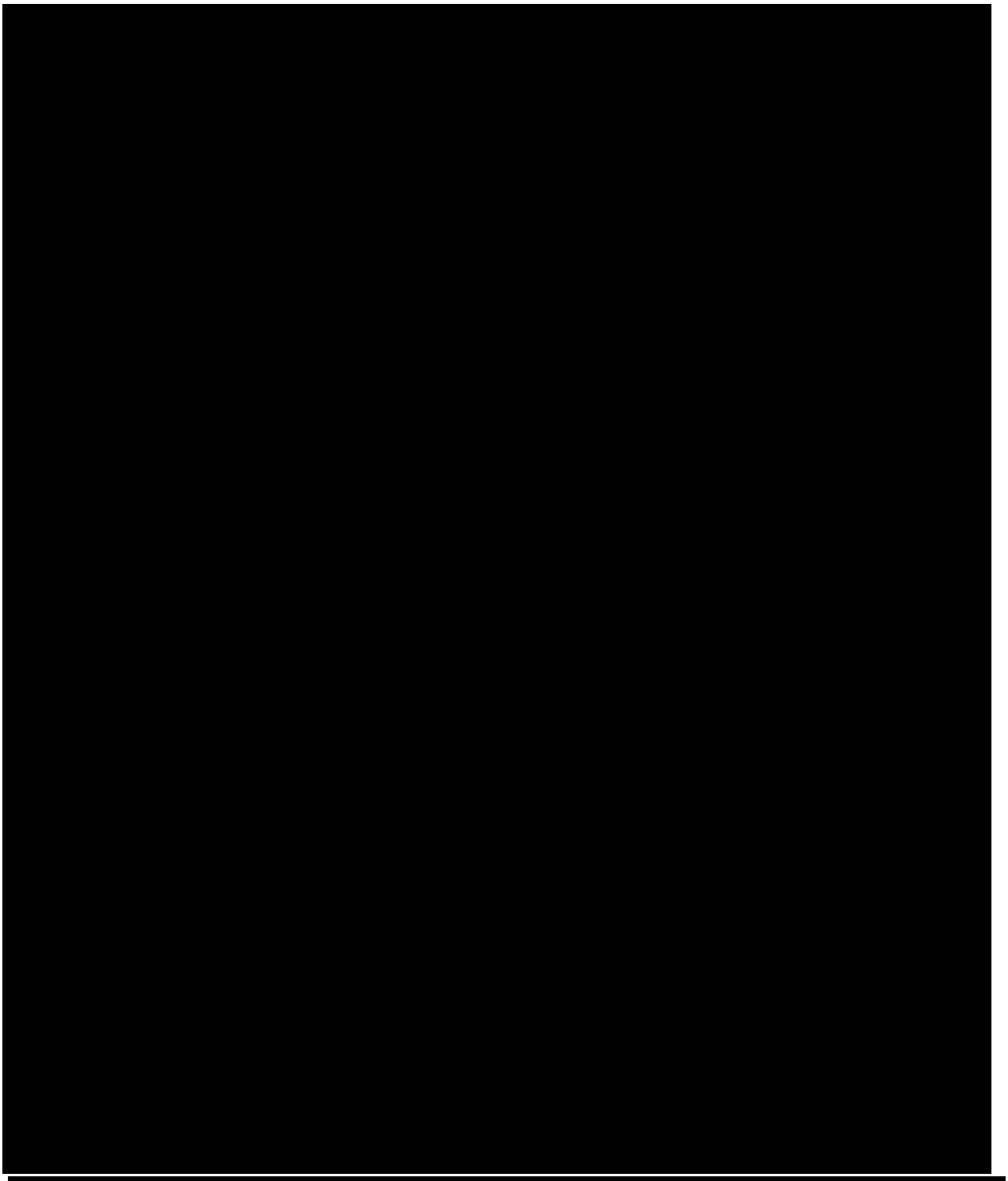

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Governance Model

We will have a project kick off workshop with BEIS shortly after the contract start date for the respective teams to meet one another and establish our operating model. This would also be used as an opportunity for us to walkthrough our high-level solution and reconfirm requirements, as noted in 2.11 Working Arrangements.

Our proposed governance model is shown below and we have included the key governance meetings that BEIS have specified. This provides an integrated and robust approach to the ongoing quality of the service and consortium management, with regular checkpoints to identify issues, agree actions and escalate if and where necessary. Alongside the day to day management of the project, it will ensure the project is delivered on time, to cost and a high quality.

GOVERNANCE	ATTENDEES	PURPOSE	
Weekly Checkpoint Meeting	**Senior Project Manager, Project Coordinator,Technical Liasion Lead & Technical Leads** Quality Assurer and SMEs as required	To discuss progress against plan, including social value, risks and issues, assess change requests and confirm actions for the week ahead	Project Led Meetings
Monthly Project Board	**QA Director, Senior Project Manager & Technical Liaison Lead** Technical Leads as required	To discuss progress against plan and budget, seek decisions or escalation support where necessary and obtain approvals eg change requests*	
Monthly Consortium Meeting	**Senior Project Manager, Technical Liaison Lead & Technical Leads**	To review consortium performance and ensure effective management of the sub-contractor framework	
Stakeholder Engagement Meeting (as required)	**Technical Liaison Lead & Product Developers** BEIS, Technical Leads and Senior Project Manager as required	To review product developer testing readiness, coordinate testing arrangements, review issues and obtain feedback	
Weekly Project Status Meeting	**BEIS Representatives, Senior Project Manager, Project Coordinator & Technical Liaison Lead**	To review the activity tracker (provided 1 work day before the meeting), discuss risk and issues, KPI performance and approve/reject change request assessments	BEIS Led Meetings
Quarterly (or end of each phase) Project Review Meeting	**BEIS Representatives & Senior Project Manager** Technical Liaison Lead as required	To review the project progress report (provided 2 work days before the meeting), and discuss progress against requirements and expected outputs	
Ad Hoc Stakeholder meetings (2-4 over the contract lifetime)	**BEIS Representatives & relevant Consortium personnel as appropriate**	To showcase outputs to internal stakeholders	
Flexibility Innovation Programme showcase conferences (estimated 2 events)	**BEIS Representatives & relevant Consortium personnel as appropriate**	To showcase project and disseminate knowledge	
Flexibility Innovation Programme support (reporting and evaluation)	**External Contractor commissioned by BEIS & relevant Consortium personnel as appropriate**	To participate in and facilitate an evaluation of Flexibility Innovation Programme	

*In some instances approvals will not be able to wait for the next meeting to occur. In these circumstances, approval will be obtained via an ad hoc Project Board meeting.

We note that regular engagement will be undertaken virtually with the occasional requirement to attend face-to-face meetings. There is also a requirement to support NZIP KPI reporting on 4 KPIs at various intervals during the project and for three years after project closure. We appreciate that we may work with organisations that are appointed by BEIS to deliver related and anticipated sub-programmes and projects.

We will use MS Teams as our primary means of communication and project document management and can attend meetings in person as necessary. We have successfully used a similar governance framework in other services. It is a model that can be easily adapted and scaled, to ensure a collaborative working arrangement that effectively delivers the requirements specified. The MS Teams platform has appropriate security controls and we will manage this in line with our accreditation to ISO27001 and Cyber Essentials certification.

All meetings will have clear Terms of Reference and concise agendas, so attendees are clear on the scope of the meeting and the outcomes required. Any actions and decisions are recorded, issued and managed by the Project Coordinator.

Although we are bidding for both Lots 1 and 2, should we only be appointed for this Lot, we will also ensure appropriate handover activities are built into the delivery plan. We will identify and initiate contact with the appropriate individuals responsible for the other Lot and establish an appropriate engagement schedule to ensure a seamless handover. We will agree entry/exit criteria with the other contracted party and BEIS and ensure there is transparency and collaboration in the handover of contracted products to prevent any adverse impact on quality, cost or time.

Change Control

We will have a documented change control process that allows for the coordinated, controlled assessment and management of any change to the service, its scope and its products. We envisage changes will come in via two routes – requested by BEIS and requested by the Project. Changes will be reviewed via the weekly checkpoint meetings and approved via the monthly Project Board and weekly project status meetings respectively. As part of this process we will use the following products:

- **Change Request (CR) Form** – This summarises the change being requested so this can be entered on the Change Control Log for assessment. As a minimum this will contain a description of the change and implementation date required, a date the assessment is required by and the business reason for the change.
- **Change Control Log** – This log contains details of any CRs, summarising information from the Change Request and Response Forms and any resultant decisions for e.g. closed, approved etc.
- **Change Assessment Spreadsheet** – This contains the standard assessment criteria by which all CRs need to be assessed against.
- **CR Form** – This summarises the assessment outcome, the resultant impacts and a decision recommendation. This will be reviewed and approved or rejected at the forums noted above and the decision will be noted on the Change Control Log.

In addition, any documentation utilised as part of the project will also come under document change control. This will include:

- An agreed and repeatable format for all project documents
- An agreed review and approval process
- A clearly defined approach to manage version control
- A detailed and easily assessable document library
- An agreed process for the retention and disposal of any documentation

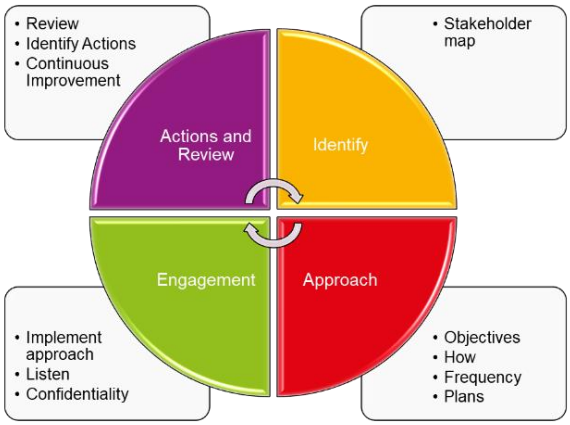
Engagement Principles

We will adopt and implement the following engagement principles to ensure an effective, collaborative working arrangement. Namely we will:

- Conduct ourselves in a professional manner.
- Build quality into all that we do.
- Ensure that appropriate governance and reporting structures are in place for effective service management.
- Be customer centric, be open and work collaboratively.
- Be flexible and seek to accommodate any reasonable requests.
- Share our knowledge and skills.
- Operate based on trust and transparency.
- Share any key risks and issues so that we can manage these effectively.
- Respectfully understand each other's position.
- Look for ways to improve together.

Engagement Model

All stakeholders will be engaged through our governance model, with regular contact, updates and reporting in place. This engagement will be mainly virtual and we will be adaptable to attend face to face meetings where requested. Stakeholder engagement will follow the Engagement Model below.



1. **Identify** – We will identify all stakeholders and prioritise these in a Stakeholder Map, with appropriate contact details included. Any engagement with product developers or other projects that are crucial to testing, will be the responsibility of the Technical Liaison Lead in the first instance and defined within the Engagement strategy during mobilisation of the project. Engagement with product developers will acknowledge the critical role they will play in the success of this project.
2. **Approach** – We will document our approach and be clear on our objectives through the life cycle of engagement. This will include details of when and how we will communicate with clear lines of communication into and out of the delivery team.
3. **Engagement** – We will develop what we want to communicate and implement this in line with our engagement plan, ensuring that we listen to feedback and treat this confidentially. Where we are reaching out to product development projects we will establish ways of working, meeting schedules, contacts and any escalation routes. This will ensure parties we interact with know what to expect from us and vice versa. As part of this engagement we will work with BEIS to sign collaboration agreements as needed.
4. **Actions and Review** – Actions will be developed where needed and used positively to aid continuous improvement. Where testing issues are found, these will be communicated via the Issue Management Approach noted earlier.

Quality Assurance

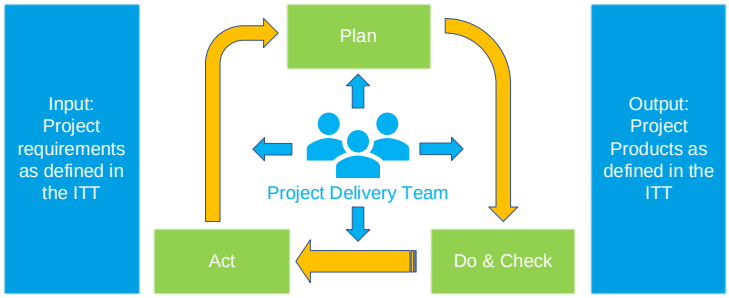
The Consortium is ISO9001 qualified and we will operate a QMS that is in line with this. Our framework will ensure that there is:

- Clarity in the scope of work and what is required.
- Consistent client and stakeholder expectations.
- A clear delivery governance structure.
- A delivery team with the appropriate set of knowledge, skills and experience, with resilience built in.
- A robust quality assurance and quality control regime.

Our Quality Assurer will establish our Quality Management System during the mobilisation phase of the project. Our Quality Assurance activities are embedded into our delivery plan, whilst remaining independent from the day to day management of the project itself to ensure quality is not compromised.

To ensure the products that need to be delivered are to the right standard, we will implement dedicated review cycles for each product. Notably all documents will go through at least one internal review cycle and final quality approval will be given by the Quality Assurer in consultation with the product owner before submission to BEIS, even if this is a draft product. Any feedback will be incorporated followed by a final QA before requesting BEIS' approval. Once approved, all documents will then be subject to change control and versioning rules will apply.

Quality Assurance will follow the ISO9001 process of do, check and act, tailored to the requirements of this project:



Plan - During project mobilisation the right tools and infrastructure will be implemented, the QMS and robust governance established and project management products created or refined and finalised as appropriate (for example the delivery and resource plan).

Repeatable processes are built into delivery and use of standard documentation ensures quality management remains consistently applied throughout the lifecycle of the project. We will also assure attendance at, and report production for, the BEIS meetings as noted in 2.11 of the ITT.

Do & Check – Contractual and project performance is monitored and managed with regular reporting of progress via the relevant governance forums. Any changes to the scope of the project are subject to assessment and the change control process.

Product developers are proactively engaged to ensure effective management of the testing volume and timing uncertainties this project entails.

Product creation of the contracted requirements allows for regular, planned checkpoints and reviews, as well as formal quality checks before a product is approved for delivery to BEIS. Once a product is approved this is baselined and version controlled.

Act - When risks or issues are identified during the project, these are proactively managed and mitigating actions undertaken. Issues identified during testing will be actioned and recorded as part of the overall Testing Assurance and Issue Management processes.

Feedback is also sought and captured on a lessons learnt log and any improvements arising are implemented as soon as is reasonably practical, and reflected in the delivery plan if required.

RAID, CHALLENGES, MITIGATIONS AND ESCALATIONS

The Senior Project Manager will have overall accountability for any challenges, risks, assumptions, issues or dependencies (RAID) related to the project, ensuring these are recorded on the RAID log by the Project Coordinator and, more importantly, managed by their respective owners with sufficient mitigations implemented where necessary. The log will be a key discussion point at weekly project status and checkpoint meetings with new items or items with changes in status presented for discussion and review. This will also be discussed at the monthly Project Board, managed by exception.

Assumptions and Dependencies

The key assumptions and dependencies upon which our proposal (and pricing) is based are detailed below.

NO.	ASSUMPTIONS
1.	**Product Developer Support** - The product developers from each of the projects will provide DSR products, operational and technical support, and materials to the project.
2.	**Testing Results** - It is assumed that testing results will be commercially sensitive and therefore summarised from a reporting purpose (i.e., raw results will not be shared).
3.	**Working Arrangements** - It is assumed a hybrid model of virtual, face to face meetings and onsite working will be required, virtual working being the primary way of working where appropriate.
4.	**Test Cycles** – We have planned for 2 test cycles per test run or replication in our test approach. Additional test cycles will be subject to change control.
5.	**SAPC Conformance** to GB Specification - SAPC used during performance testing of ESAs will already be compliant with CPA, GBCS and SMETS.
6.	**BEIS** – It is assumed BEIS has the ultimate authority. We would expect BEIS to support issues resolution in circumstances where disagreements emerge with product development projects that cannot be resolved within the delivery project environment.

NO.	DEPENDENCIES
1.	Clear **communication and transparency** of the wider programme plan and any changes implemented during the contract lifetime.
2.	Responsive and timely **engagement from product development projects** when engaged for updates on progress and to quickly identify any interdependencies.
3.	Product developers undertaking (and providing some evidence of) **sufficient product testing** before presenting DSR products to the scheme for conformance testing.

4.	**Production ESME (APC capable)** devices being available to support testing. Production meaning conforming with GB Specification and supporting regulation, mainly CPA.

Risk Management

Each risk identified will be prioritised against Probability and Materiality (impact). The most appropriate means of managing each risk will be identified to avoid, reduce, transfer or accept the risk. The key risks that we have identified to date are detailed below, along with our proposed mitigation strategy.

NO.	RISK	MITIGATION
1.	Risk to timescales, product availability, the timing of those products being of appropriate maturity and available for testing.	Engage with product developers as soon as possible. Collaborate to understand maturity of their products with reasonable flexing of plans to accommodate.
2.	Risk of dispute impacting the plan - there will be differing interpretations of PAS, we will need a process to support resolving differences and to avoid a risk of a stale mate situation	Work with BEIS and product developers to resolve differences and improve the PAS. Establish escalation and dispute resolution processes during project mobilisation which can be enacted as a last resort where agreement cannot be reached.
3.	Risk of misaligned priorities with the Lot 2 service provider (if we are unsuccessful in winning Lot 2) - the need for information may distract from core responsibility.	Robust co-operation agreement mutually agreed between both parties to align plans and priorities.

We note that BEIS has noted a number of challenges they already foresee with delivery. We will seek to mitigate these initially through the steps outlined below. During the lifetime of the project, we will capture any new challenges that may arise and identify suitable mitigations.

NO.	CHALLENGE	MITIGATION
1.	Collaboration between organisations, both within and across projects	As part of mobilising the project, we will establish an engagement strategy that ensures we are easy to deal with and is clear on communication lines and expectations – both in terms of what organisations can expect from us and what we expect of them. Clear Roles and Responsibilities will also be in place. This combined with regular governance meetings with clear agendas and outputs will ensure effective collaboration.

NO.	CHALLENGE	MITIGATION
2.	Interfaces between the contractor(s) and the suppliers of devices (product developers) to be tested	The Technical Liaison Lead will be responsible for the interfaces between the project delivery team and the product developers. An Issue Management Approach will be in place to specifically manage feedback related to testing and there will be clearly defined escalation and dispute resolution processes in place should these be necessary.
3.	Co-ordinating timelines of multiple projects	Our Engagement Strategy allows for early engagement with product developers so coordination of the multiple projects can be effectively managed. We will expect to work closely with BEIS to be kept informed of in-flight projects that are eligible for the testing phases so this strategy can be enacted. Our delivery plan is deliberately structured to achieve a balance between robust governance and a flexible approach to testing to account for volume and timing uncertainties that will likely occur with product developer testing readiness.
4.	Be agile and maintain flexibility in resources and delivery approach to enable anticipated phase timescales to be amended with business needs and to incorporate all related projects that are not part of those described in the Specification of Requirements, but which feed into Phases 2 and 3.	Our delivery team has been designed with a flexible resourcing profile that enables us to deploy resources in an agile way, responding to changes in timelines and testing volumes caused by third party/external impacts. Our existing and ready to use testing facility allows us to respond and adapt rapidly to different products becoming available for test. This approach is accounted for in our delivery plan.

Relevant Experience

The mitigations noted above to the challenges identified by BEIS take into account lessons learnt from previous projects. For example:

Engage supported a field trials for a technology solution. There was a need to co-ordinate the activity of two major energy Suppliers, two competing technology vendors, multiple meter manufacturers and a service provider to prepare for several possible trial's scenarios. There was duplication in responsibilities and a risk of competing demands on stakeholder's time and disjointed messages. This was overcome through having clear roles and responsibilities and named relationship owners who managed the communication across the programme with the key stakeholders

SMS collaborated with a major supplier on industry wide testing for SMETS2 ESME interoperability with a particular ESME manufacturer. Upon hearing of customer complaints related to metering consumption being off when the meter was within close proximity to a home storage solution, SMS used their SMETS2 test lab to test every ESME in the market and identify those combinations at risk, working sensitively and collaboratively with all parties to identify the issue, re-assure industry and consumers of its scale and take appropriate action.

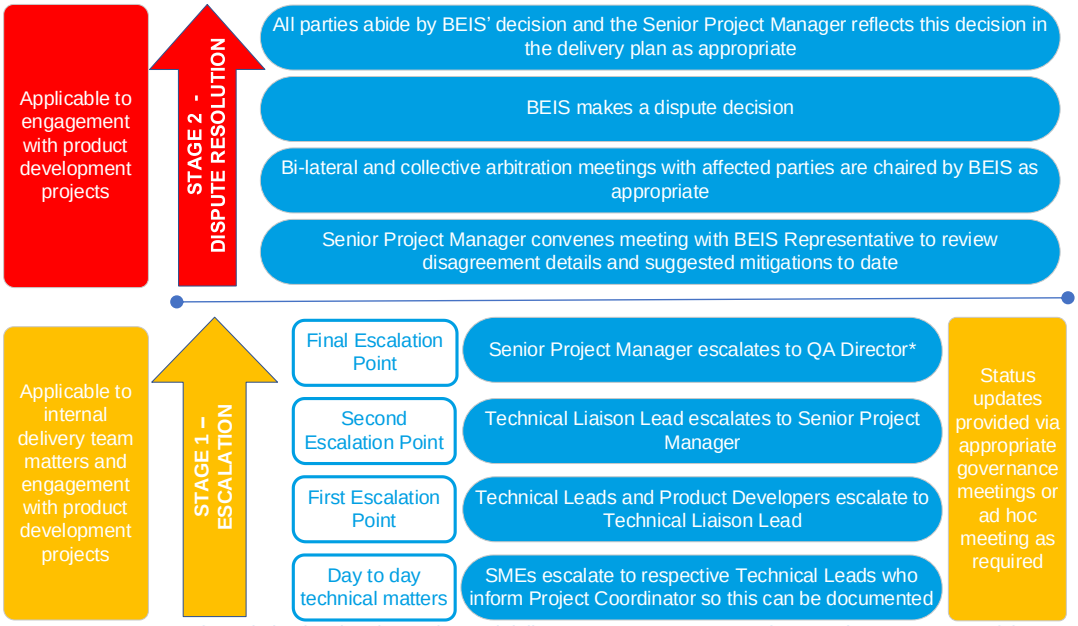
Critical Third-Party Dependencies

Third parties that are contracted to the consortium that are critical to this project are detailed below. These are existing mature commercial relationships, where service provision performance is already proven. We will manage any performance issues via the commercial contracts already in place.

- We have a dependency on the ESG Group uSmart DCC adaptor for testing of DSR services as per Appendix D of PAS 1878. SMS will manage this through their commercial arrangement with ESG to ensure the product is ready for our requirements.
- We have a dependency on Smart DCC to maintain services of their UIT A testing environment for testing of DSR services as per Appendix D of PAS 1878. We will utilise existing relationships with Smart DCC to ensure any planned outages or changes are built into our planning assumptions.

Escalation Process and Dispute Resolution

We recognise that with a project of this nature, in rare circumstances, disagreements across stakeholder groups may occur. For example, a product developer may disagree with a testing result and this cannot be resolved via normal day-to-day management of the project or the Issue Management Approach articulated earlier on in this proposal. In these instances, we will use a two-stage process to support an effective and quick resolution. It is noted that the second stage of this process, dispute resolution, will need to be agreed and refined with BEIS should we be successfully appointed.



*If escalation is related to an internal delivery team matter, as part of Engage's management of the consortium as Lead Partner, the QA Director will be empowered to make decisions across the consortium irrespective of which partner it relates to.

It is expected that in the majority of cases concerns and issues will be resolved before they reach the final escalation point in Stage 1.

Conflict of Interest

We have detailed any perceived or real Conflict of Interest (COI) separately in Declaration 3: We believe any perceived or real COI is easily mitigated to a level that would be acceptable to BEIS and would be happy to discuss anything noted in more detail as required.

We also understand that there may be as yet unforeseen conflicts that will emerge during the lifetime of the service. This may be with any member of the consortium. Where this may occur, we will adopt the following approach:

- Any real or perceived conflict will be raised to the relevant Workstream Lead within our consortium and the Senior Project Manager as soon as a party is aware.
- An assessment will be undertaken within 1 working day of the concern being raised to qualify the risk and identify potential mitigation.
- As soon as it has been identified, the appropriate contact within BEIS will be made aware of any real or perceived conflict and a meeting scheduled with that contact to discuss the assessment outcome.
- Where, in BEIS' view there is a conflict either real or perceived the Senior Project Manager will ensure mitigating actions are implemented by the appropriate party to control or mitigate the conflict to the satisfaction of BEIS.
- The mitigating actions and controls will be made visible through the relevant governance meetings.

04 - COST

Pricing

[redacted]

Scenario Comparison	
Lot 1 Total Price (exc VAT)	£2,608,655

[redacted]

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Sub-Contract Management

As lead contractor, Engage will contract directly with BEIS in alignment with the Terms and Conditions specified. This will include the agreed requirements, deliverables and outputs expected of the successful bidder. Where applicable, all Terms and Conditions set out between Engage and BEIS will flow down to the subcontracted parties NMi and SMS. The

contractual framework we establish will underpin the project governance set out earlier in this proposal and ensure Engage is fully accountable to BEIS for all deliverables.

Each sub-contractor will have specific requirements and deliverables established and aligned with the criteria set out within this ITT for Lot 1. These requirements and deliverables will be defined within a schedule to the contract that will exist between Engage and the sub-contractors, ensuring each member of the consortium has clear responsibilities and accountabilities. As lead contractor, Engage will manage the delivery of the sub-contractors within the consortium with no expectation or responsibility placed upon BEIS.

KPI and Service Credits

We acknowledge the KPIs and associated Service Credits set out within the ITT. As with the Terms and Conditions, where applicable, the responsibility for reporting and meeting KPI requirements will flow down to the sub-contractors. Engage will retain overarching accountability for the KPI requirements and associated Service Credits, ensuring BEIS has direct and single entity ownership of this critical performance mechanism.

We will also have internal project KPIs using a combination of existing reporting and performance management mechanisms to ensure the delivery of all consortium members. Reporting and measurement criteria will be reviewed and agreed with BEIS to ensure all KPIs can be tracked in line with the timescales set out within the ITT.

Payment Milestones

Annex 2 provides the relevant prices and we acknowledge the ITT requirement for a payment milestone approach.

Accordingly, for Phase 1 we have assumed that:

- Payments for deliverables will align with the production milestones provided in our project plan above and highlighted below:
  - **Milestone 1 (June 2022)** – Draft output for 1a *(Design and development of conformance testing scheme)* and 1b *(Design of lab performance testing scheme)*
  - **Milestone 2 (September 2022)** – Revision output for 1a, 1b and 1c *(Detailed implementation plan)*
  - **Milestone 3 (December 2022)** – Final output for 1a, 1b and 1c
- Payment for project governance will be monthly.

For Phase 2 we have assumed:

- The overall payment for testing will be determined from the total testing volumes and this will be apportioned to derive a monthly fee in a manner to be agreed with BEIS.
- Payment for project governance will monthly.

We are open to agreeing a T&M structure if this is preferred for any of the above components.

Engage has an established robust process for project cost management. This will ensure all monthly costs are in line with the schedules agreed and are subject to validation by BEIS as part of the invoicing process.

05 – SOCIAL VALUE

CONTEXT

We are wholly supportive of the themes outlined in the Social Value Model, including Theme 4 “Equal Opportunity” and its associated “Tackle Workforce Inequality” policy outcome which is specifically being sought through the letting of this contract.

We recognise that the energy and utility sector is critical to the UK economy, providing services to over 66 million people and employing almost 2% of all UK employees. It is

playing a pivotal role in delivering the government's net zero targets but faces many challenges with developing skills and attracting a workforce as diverse as the people it provides services for. Statistics published by the Energy & Utilities Skills Partnership[8] highlight just how much workforce diversity and inclusion levels for the sector continue to be below the UK averages for gender, BAME, disability and employment of younger people:

	Energy & Utility sector	UK average
Female	17%	47%
Ethnic minority	5%	12%
Disabled	12%	15%
Aged over 55	20%	20%
Aged under 24	24%	12%

We note that the three criteria for "Tackle Workplace Inequality" aim to work towards addressing this imbalance, whilst ensuring this doesn't give rise to modern slavery in doing so, by:

1. Identifying and tackling inequality in employment, skills and pay in the contract workforce.
2. Supporting in-work progression to help people, including those from disadvantaged or minority groups, to move into higher paid work by developing new skills relevant to the contract.
3. Identifying and managing the risks of modern slavery in the delivery of the contract, including in the supply chain.

Along with our partners, we very much welcome the opportunity this contract would provide for us to further deliver upon our commitments to diversity and inclusion – and to continue with our zero tolerance policy of modern slavery.

Existing Ways of Working

Engage has always been an equal opportunities employer and proudly embraces diversity and inclusion. Our corporate policies, culture and salary structure all reflect this. We seek and value individuals' contributions regardless of their age, gender, ethnicity, disability, sexuality, social background, religion or belief.

We operate a flexible working policy which recognises and supports individual's unique work/life challenges. Our recruitment processes include steps to ensure that there is no unconscious bias in identification and selection. This includes emphasising the flexible working culture we have to ensure that under-represented individuals know their unique circumstances will be accounted for and supported, as well as gender representative selection panels. We also take steps to ensure that our website and marketing material represent the positive aspects of diversity and inclusion.

We are proud to be a founding partner, ongoing sponsor and participant of the Women's Utility Network, which was established to give women the skills and confidence they need to build lasting, fulfilling careers in the utility sector. We are also a long standing sponsor and participant of the Young Energy Professionals, which recognises the importance of attracting young people from diverse backgrounds into the sector.

We hold Investors in People silver accreditation, which affirms our commitments to diversity and inclusion and the practical steps we undertake to delivery upon these. SMS are also Investors in People accredited. Across all partners, we actively consider all requests and tools to optimise the employee's work environment and activities to reflect their needs, capabilities, gender, culture and beliefs. This will also apply on this contract.

[8] Workforce Renewal & Skills Strategy 2020 - 2025 - Energy & Utility Skills (euskills.co.uk)

We have a zero tolerance approach to modern slavery. We are committed to acting ethically and with integrity in all our business dealings and relationships and to implementing and enforcing effective systems and controls to ensure modern slavery is not taking place anywhere in our own business or in any of our supply chain. Likewise, our partners take a zero tolerance approach to modern slavery. SMS is the only partner that meets the definition of a relevant commercial organisation as defined by section 54 in the Modern Slavery Act 2015. As such, their Modern Slavery Act Statement is included in Declaration 4.

DELIVERING SOCIAL VALUE THROUGH THIS CONTRACT

Method Statement

Our methodology is premised on treating progression of diversity and inclusivity, along with zero tolerance of modern slavery, as mandatory requirements within the project. These requirements will be managed in the same way as other mandatory project requirements, including with the same level of vigour and scrutiny.

Accordingly, the Senior Project Manager will have day to day responsibility for ensuring the social value requirements are delivered and the Quality Director will be accountable for this.

We will build on the foundation we already have in place and the existing ways of working that we have described. The delivery team we have put forward includes a mix of people from under-represented demographics, including in senior roles. For example, within the project governance and quality management workstream, 50% of the workstream resources are women, with the same ratio for the senior roles within that workstream.

We will build upon this by actively seeking to give opportunity to the under-represented demographics if additional posts need filling over the course of the contract. This will include recruiting, training and mentoring as required so that the quality of all deliverables continues to meet the very high standards we set ourselves.

We will also seek to give opportunity to those from disadvantaged backgrounds, by offering a number of work experience placements to students from local community state schools enabling them to work alongside team members – and allowing them to gain skills and experience, improve their confidence and strengthen their CVs and prospects.

Our zero tolerance of modern slavery will continue and we will proactively ensure that remains the case, including undertaking appropriate scrutiny of our respective supply chains.

Our partner contractual arrangements will ensure that the entire consortium is aligned to deliver our diversity and inclusion commitments - and has a zero tolerance policy of modern slavery, alongside proactive steps to ensure this is enforced.

Timed Action Plans

The broader in-depth planning that we will conduct during the mobilisation phase will include the detailed actions required across the duration of the project to deliver upon these social value commitments. Specific actions we have identified to date are included below, alongside the anticipated timings, and success metrics that we will monitor and report against[9].

[9] An example of where NMi has held an Awareness Day before can be found here: https://nmi.nl/creating-awareness-girlsday-2019/

Commitment	Actions to achieve this	Timings	Success Metric	Alignment to Award Criteria
1. Inclusive and Accessible Recruitment	1a. Role adverts undergo an independent review by the Women's Utility Network (WUN) to ensure no unconscious bias (covering gender, ethnicity, disability and sexual orientation) exists in their wording.	Workstream Manager - Role advert approved by end April 2022 Test Engineers - Role advert approved by end August 2022	1a. Approval from WUN of Role advert before publication.	Identify and take measures to tackle inequality in employment, skills and pay in the contract workforce including: Inclusive and accessible recruitment practices and retention-focussed activities Using structured interviews for recruitment Promotions and jobs at all levels open to flexible working from day one for all workers
	1b. Roles are widely advertised in forums that maximise the opportunity of them being seen by under-represented candidates for eg advertised on the WUN website.	Workstream Manager - Recruitment completed June 2022 Test Engineers - Recruitment completed by November 2022	1b. Evidence provided of the forums that the role has been advertised on. 1b. Applications received from a diverse background.	
2. Build skills for people traditionally under-represented in the Energy and Utilities Sector through this contract	2. Identify schools in local communities relative to the contract workforce (eg inner city London, Bolton) and organise work experience placements on this contract for students.	Annually	One placement per annum for the duration of the contract (if only successful in one Lot). Two placements per annum for the duration of the contract (if successfully appointed to deliver both Lots)	Demonstrate an understanding of the issues affecting inequality in employment, skills and pay in the market, industry or sector relevant to the contract, and in the tenderer's own organisation and those of its key sub-contractors.
3. Make the Sector, and technology related roles within it, more attractive to under-represented people through this contract	3. Hold Awareness Days to promote the type of skills and work being undertaken on this contract	Annually	One Awareness day per annum for the duration of the contract (if only successful in one Lot). Two Awareness days per annum for the duration of the contract (if successfully appointed to deliver both Lots)	

Metrics and Reporting

Delivery against these social value commitments will be managed, with equal footing, alongside the management of and reporting against all project requirements. This includes reporting against delivery progress and milestones, as well as the management of any associated risks and issues. It will involve the Project Coordinator gathering data in relation to delivery of our social value commitments and including this in the relevant reporting to the Senior Project Manager and the Project Board. It will also include implementation of a remedial action plan in the event that this is required.

Continuous Improvement

We will include in our planning steps that obtain and share feedback – and act upon this. This will include feedback in relation to recruitment, training, mentoring and support, and work experience. The feedback will be provided to action owners so that processes, and the contribution they make to diversity and inclusion, can be improved.