Nuclear Waste Services

Prior Information Notice (PIN)

under

Title: Site Characterisation Delivery Partner

OFFICIAL - COMMERCIAL IN CONFIDENCE

PIN Purpose	Notification of Market Engagement
Contracting Authority	Nuclear Waste Services Building 329 Thomson Avenue Harwell Campus Didcot Oxfordshire OX11 0GD United Kingdom
Meeting Registration	If you have not previously engaged with NWS on this opportunity but would like to register an interest and engage in a 1:1 meeting please provide 2 available dates for the weeks commencing 29th March and 6th April and a preference of which office to meet at Harwell (Didcot) or Hinton House (Warrington), please note that due to timings we may not be able to offer your first choice of date or location.
	f you would like to respond this market engagement opportunity, please use the Atamis messaging services. Please respond by 15th March 2024, 5pm.

NB: THIS IS NOT A CALL FOR COMPETITION

Nuclear Waste Services

BACKGROUND

In April 2023, the Contracting Authority published Prior Information Notice (PIN) titled “The Site Characterisation Delivery Partner Services and Works” (please refer to Appendix 1). The PIN was issued to the whole Site Characterisation market with a view of organising and executing individual supplier meetings with organisations who have the capability and future capacity to lead or be a major part of the NWS Site Characterisation Delivery Partner (SCDP) scope. The suppliers that registered their interest, were invited to the market engagement meetings held in Nuclear Waste Services office on Harwell Campus in Didcot. The aim of the meetings was to gain a more in depth understanding of the market sector and site characterisation services and works, share NWS vision with the supply chain and discuss all matters and gain feedback and suggestions on how the NWS can make SCDP a more successful procurement and long-term relationship. In order to ensure that suppliers are briefed on NWS current thinking, the Market Engagement – Briefing Document (please refer to Appendix 2) was shared that provided suppliers with sufficient information to allow them to prepare a detailed response to 11 topics for discussion and develop their list of issues for discussion. During the meeting, the presentation was delivered by NWS introducing the GDF Programme and sharing valid at that time principles of Site Characterisation Commercial Strategy. For the copy of presentation, please refer to Appendix 3. Following the market engagement, NWS captured and discussed the feedback received from the supply chain and revisited their initial commercial approach.

PIN INTENTION

The intent for this Prior Information Notice (PIN) is to notify supply chain of another upcoming market engagement relating to Site Characterisation Delivery Partner (SCDP) contract opportunity. Prior to the meetings, NWS would like to provide more detail on the contracting principles. Please refer to the document titled "SCDP Contracting and Competition Principles Document" which is appended to this notice as Appendix 4. This document will form the basis for discussion at the face-to-face meetings. Please refer to 'Meeting Registration' above.

COMMUNICATION

This PIN can be viewed on Atamis at this link:

https://one-nda.force.com/s/Welcome

You will be required to register on Atamis, and once registration is complete you can search for this PIN using the Atamis search box and using the title as a reference.

Or use the “Find a Tender” service located at

https://www.find-tender.service.gov.uk/Search

Nuclear Waste Services

APPENDIX 1 - Prior Information Notice (PIN) - SCDP Services and Works

Prior Information Notice
This notice is for prior information only

1 Section I: Contracting authority

1.1 Name and addresses

Radioactive Waste Management trading as Nuclear Waste Services
Building 329
Thomson Avenue
Harwell Campus
Didcot
Oxfordshire
OX11 0GD
United Kingdom

E-mail: gdfenquiries@nda.gov.uk

NUTS: UK UNITED KINGDOM

Internet address(es)
Main address: https://www.gov.uk/government/organisations/radioactive-waste-management

1.2 Information about joint procurement

Not applicable

1.3 Communication

This Prior Information Notice contains all essential information relating to further market engagement that Radioactive Waste Management trading as Nuclear Waste Services (and referred to as NWS GDF from this point forwards) intend to perform with respect to “Site Characterisation Services and Works” relating to NWS GDF scope for the Tranche 3 programme of works, commencing in 2026.

NWS GDF will hold market engagement between April 2023 and October 2023 with a view to gaining a more in depth understanding of the site characterisation services and works market sectors, with a particular emphasis on the “Site Characterisation Delivery Partner(s)” scope, which is outlined in more detail in section 2.1 of this document.

Meetings will be held at Harwell in Oxford, and delegates are not limited in terms of attendance, although it is essential to have the right mix of individuals that can cover the scope and understanding of the market. A combination of senior technical, commercial and programme representatives are recommended.

This PIN can be viewed on Atamis at this link :
https://one-nda.force.com/s/welcome

You will be required to register on Atamis, and once registration is complete you can search for this PIN using the Atamis search box and using the title as a reference.

Alternatively you can search for this PIN via the UK Governments “Contracts Finder” service at https://www.contractsfinder.service.gov.uk/Search

Or use the “Find a Tender” service located at
https://www.find-tender.service.gov.uk/Search

1.4 Type of the contracting authority

Not applicable at this stage

1.5 Main activity

Not applicable at this stage

2 Section II: Object

2.1 Scope of the market engagement

Title

Site Characterisation Delivery Partner(s) Scope of Services and Works

The scope of the Site Characterisation market engagement

This PIN has been issued to the whole Site Characterisation market with a view to organising and executing individual supplier meetings with organisations who have the capability and future capacity to lead or be a major part of the NWS Site Characterisation Delivery Partner (SCDP) scope as set out below.

The purpose of the meetings will be to discuss and understand the following:

- NWS GDF to present their current thoughts on the strategic approach to the market for the full scope of characterisation activities, scope packaging strategy, the options/flexibility within that strategy, the contractual strategy (alliancing) and the pricing / incentivisation philosophy
- Gain feedback on how the supply chain views this strategy (a pros and cons discussion)
- Suppliers to provide thoughts on any alternative supply chain strategies that may enhance the current strategy from NWS GDF
- Learn about the current market dynamics across SCDP scope, in particular capability and capacity in the market to deliver these services and works plus the timescales from placement of orders to delivery for the key services, equipment and works
- NWS GDF wish to gain a deeper understanding of how the market may form relationships with a view to expressing interest in the upcoming procurement activity for SCDP
- Explore the supply chains appetite to absorb scope into their supply chain at tier 2/3 etc and be responsible for that supply chains delivery performance
- Explore the key issues for NWS to consider ahead of issuing a tender to the market for these services and works.

The SCDP scope is likely to be delivered with partners with a local, national and international reach to deliver the full scope surrounding the site characterisation projects across the various communities engaged on the GDF programme.

It should be noted that the SCDP will be expected to work in a collaborative alliance with other Partners in the design and engineering, applied science research and project integration scope.

The current strategic thinking is to develop one collaborative alliance which consists of two lots and the NWS Client team also forming part of the alliance:

Lot 1 – Architect Engineer; including Applied Science Research, Project Integration and Site Evaluation services
Lot 2 – Site Characterisation Services and Works

Main CPV codes

71313000: Environmental engineering consultancy services
713220001: Engineering design services for the construction of Civil Engineering works
71351000: Geological, Geophysical and other prospecting services
713320004: Geotechnical Engineering Services
452624225: Subsea Drilling work
763000006: Drilling Services
763200002: Offshore Drilling Services
763400008: Core Drilling

Type of contract

Professional services, equipment supply, site works

Brief description of the NWS GDF Programme

The development of a Geological Disposal Facility (GDF) is essential for the final disposal of radioactive waste. It is a critical part of the Nuclear Decommissioning Authority's (NDA) overall mission to decommission and clean up the UK's nuclear legacy.

Selecting a suitable site to host a GDF is a complex process that involves detailed technical studies, site investigation and community engagement that is anticipated to take up to 20 years to complete. This pre-construction part of the programme has been structured into tranches as follows:

Tranche 1 (complete):
This tranche ran from 2014 to 2018 and delivered the policy frameworks required to initiate the siting process.

Tranche 2:
This tranche is currently in progress and is expected to run until 2027. The GDF Programme is engaging with potential host communities, and four Community Partnerships have been formed to date. At the end of this tranche, each site will have been evaluated and that information will have been used to decide which sites to take forward for full characterisation (including deep borehole investigations). This decision will be ratified by Secretary of State ESNZ.

Tranche 3:
This tranche will span at least 15 years and will deliver the "GDF design development" and "characterisation of the site(s)" technical scope of the Tranche 3 activities which enables the GDF Programme outcome – final disposal of Higher Activity Waste. This tranche focuses on meeting three key requirements:

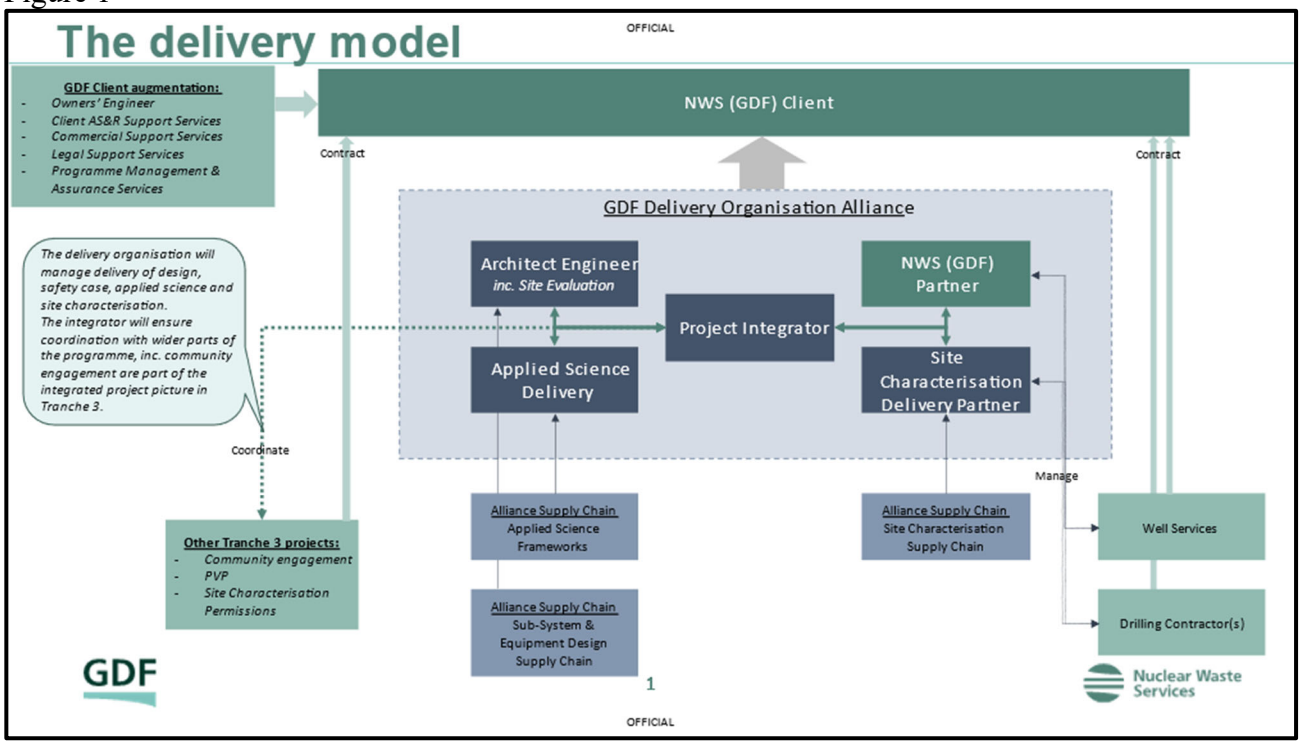
1. A willing community as proven by a positive test of public support (ToPS)
2. A suitable, feasible and acceptable site, ready for construction, complete with required permits, consents, designs and de-risking activity and considering different site geologies
3. A competent client organisation and supply chain, capable of designing and constructing the GDF

All of the communities that have expressed interest and set up Community Partnerships have set out a preference for the GDF to be located in the inshore environment. Whilst there will be surface facilities onshore and some parts of the Site Characterisation project will be onshore, the majority of the characterisation activities will be undertaken in the inshore environment in a range of water depths from 5 to 50m depth.

Brief description of the Site Characterisation supply chain strategy and scope

The T3 scope will be delivered using the organisational delivery model outlined in Figure 1

Figure 1



NWS GDF Client Role
Within the GDF Client role, the site characterisation project will be led by the NWS GDF Site Characterisation Sponsor and Senior Project Manager supported by a number of SMEs who will fulfil the Intelligent Customer role of NWS by checking that the specification, execution and outputs from the work support the desired requirements and outcomes of the GDF Programme.

Architect Engineer, Site Characterisation, Applied Science and Project Integrator Partners
The Architect Engineer and Site Characterisation Partners cover the "GDF design development" and "characterisation of the site(s)" technical scope of the Tranche 3 activities. Although the two projects have different delivery objectives, there is a close strategic relationship between them with the Site Characterisation activities providing the data and information that underpins the design and safety case work undertaken by the Architect Engineer.

Site Characterisation scope will be planned, managed and delivered through the supply chain, through potentially multiple suppliers for undertaking drilling services, integrated well services, and all other works and services which could be contracted through a Site Characterisation Delivery Partner organisation.

Through an extensive optioneering process NWS GDF have concluded that forming a strategic alliance between the Architect Engineer, Applied Science Research, Project Integrator and Site Characterisation Delivery Partners will provide the optimum supply chain construct to enable successful delivery of the tranche three aims, objectives and milestones.

The Site Characterisation work will need to be closely integrated with the parallel design and safety case work within the Tranche 3 scope of the GDF Programme. The GDF Design Alliance will ensure that all alliance Partners will be jointly incentivised to deliver for the good of the GDF Programme

outcomes, rather than for individual interests. The SCDP will be incentivised with other alliance partners to jointly agree information requirements and deliverables including delivery of "Site Descriptive Models". SCDP will also be individually incentivised to plan and deliver the Site Characterisation activities safely, efficiently and sustainably to quality, cost and budget.

SCDP Responsibilities
The SCDP will be responsible for the planning, specification, procurement, supervision, reporting and integration of all site characterisation activities.

The SCDP will manage and coordinate all activities associated with the site characterisation programme on behalf of GDF Client, with a range of services and works sub-contracted via the SCDP. Some services may be contracted by GDF Client directly, depending on factors including value for money, risks and timescales of when the service provisions are required, but in these instances these will still be managed for an on behalf of GDF Client by the SCDP. The range of services and works to be delivered by the SCDP includes but are not limited to the following:

- Programme and contract mgt, principal contractor and principal designer, as appropriate
- Drilling management consultancy services
- Core management, sampling and logging of cores,
- Topography, bathymetry, passive seismic, geological, hydrology and the like
- Laboratory analysis (Water/Rock) porewater, groundwater, geotechnical, isotope, chemical
- Sea bed surveys
- Airborne geophysics
- Engineering FEED design of Topside
- Well pad design and construction civils
- Offices, laydown areas and core storage facility
- Procurement and commercial management of the following contract packages:
    - Hydrotesting
    - In situ stress
    - Multilevel monitoring system installation and commissioning
    - Geophysical well logging
    - Top side EPIC (engineering, procurement, installation and commissioning)
    - Interpretation & modelling, site descriptive model development
    - Shallow ground investigations
    - Marine and land seismic surveys
    - Data management services
    - Purchase of casings
    - Purchase of liner hangers and wellheads
    - Purchase of multi-level completion (engineering and procurement)
    - Purchase/hire of coring string

The current NWS GDF strategy for the whole SC scope is that NWS GDF will directly contract with three organisations to deliver the whole of the scope:

1. The Site Characterisation Delivery Partner (as a Partner within the GDF Design Alliance)
2. Drilling Services contractors and;
3. Integrated Well Services

The SCDP will procure and contract manage all other contract packages within the whole of the scope. During the procurement of the SCDP there will be a discussion with the SCDP to agree whether these contract packages are best delivered by the SCDP or NWS on a value for money assessment.

The SCDP will be responsible for managing and integrating both the NWS contracted services and SCDP services into an integrated delivery programme.

NWS does not have evidence from current market engagement that any one organisation has the capacity, capability and experience to deliver the Site Characterisation Delivery Partner role alone and will need to develop a consortium of partners, SMEs and supply chain to deliver the project. The shape of such a consortium may vary depending upon the lead group(s) and their ability to deliver best in class expertise from in house or supply chain partners.

In addition the scale and quality objectives of the project are without precedence in the UK since the Nirex work of the 1990s with the only comparable projects being those undertaken by other overseas Waste Management Organisations. Setting exacting standards and focusing on detail and quality is a requirement of the SCDP, along with an ability to integrate and deliver the programme in an efficient manner. This will require drawing upon expertise from the Oil and Gas, Mining, renewables and Infrastructure sectors.

It is anticipated that Site Characterisation activities are likely to be undertaken at two locations in parallel, with boreholes being drilled sequentially at each site. The extent and location of the investigations has yet to be determined by the Site Evaluation process but currently communities have come forward in Allerdale, Mid Copeland, South Copeland and Theddlethorpe. The number of boreholes and duration of the investigations will be developed in response to the geological complexity of the sites but is anticipated to be between 7 and 20 years in duration, commencing with the appointment of the SCDP in 2027 with the start of site activities in 2029.

NWS GDF are at a stage where they will, through 2023, be preparing Technical Specifications and contract documentation as part of an ITT for the Site Characterisation Delivery Partner to be issued in 2024. NWS GDF are inviting interested organisations who have the capacity, capability and experience of undertaking works of this scale and complexity to engage with NWS GDF in discussing the project and helping NWS GDF to shape the ITT.

Estimated Total Value and Duration

The total value of the Site Characterisation Project is reflective of undertaking scientific investigation works in two communities within the inshore environment. At this stage the number of boreholes to be drilled and the drilling durations are not finalised, as is the extent of further geophysical and other investigations, but for planning purposes it is anticipated that the total value of Site Characterisation activities to be of the order of £1.4Bn.

Information about lots

This PIN has been designed for early market engagement with the intention of taking supply chain feedback into the formation of the NWS GDF future strategy, and the proposed two lot strategy as outlined in this PIN

- **Lot 1** – Architect Engineer; including Applied Science Research, Project Integration and Site Evaluation services
- **Lot 2** – Site Characterisation Services and Works

2.2 Description

Title

Site Characterisation Delivery Partner(s) Scope of Services and Works

Additional CPV Codes

45220000: Engineering Works and Construction Works
71220000: Architectural design services
71300000: Engineering services
71310000: Consultative engineering and construction services
71311000: Civil engineering consultancy services
71311200: Transport systems consultancy services
71311300: Infrastructure works consultancy services
71312000: Structural engineering consultancy services
71322000: Engineering design services for the construction of civil engineering works
71323000: Engineering design services for industrial process and production
71336000: Engineering Support Services
71340000: Integrated engineering services
71530000: Construction consultancy services
71541000: Construction project management services
71621000: Technical analysis or consultancy services
72224000: Project management consultancy services
79415200 8 – Design Consultancy Services
79421000 1 – Project management services other than construction work
79421100 2 – Project supervision services other than for construction work
79421200 3 – Project design services other than for construction work

ENVIRONMENTAL CPV CODES
71313400: Environmental Impact Assessment for Construction
71313420: Environmental standards for construction
71313430: Environmental indicators analysis for construction
71313440: Environmental Impact Assessment (EIA) services for construction
71313450: Environmental monitoring for construction
90700000: Environmental services
90710000: Environmental management
90711000: Environmental impact assessment other than for construction
90711200: Environmental standards other than for construction
90711300: Environmental indicators analysis other than for construction
90711400: Environmental Impact Assessment (EIA) services other than for construction
90711500: Environmental monitoring other than for construction
90712000: Environmental planning
90721000: Environmental protection
90721000: Environmental safety services

GEOLOGICAL / GEOPHYSICAL CPV CODES
71332000: Geotechnical engineering services
71351100: Core preparation and analysis services
71351200: Geological and geophysical consultancy services
71351210: Geophysical consultancy services
71351220: Geological consultancy services
71351300: Micropaleontological analysis services
71351400: Petrophysical interpretation services
71351500: Ground investigation services
71351900: Geology, oceanography and hydrology services
71351910: Geology services

71351911: Photogeology services
71351912: Stratigraphic geology services
71351913: Geological exploration services

DRILLING CPV CODES
71331000: Drilling mud engineering services
76300000: Drilling services
76310000: Drilling services incidental to gas extraction
76320000: Offshore drilling services
76330000: Turbine drilling services
76331000: Coiled turbine drilling services
76340000: Core drilling
76430000: Well drilling and production services
76431000: Well drilling services
76431100: Well drilling control services
76431200: Well drilling pick-up services
76431300: Well drilling laydown services
76431400: Rathole well drilling services
76431500: Well drilling supervision services
76431600: Well drilling rig monitor services
45222110: Waste disposal site construction work
45120000: Test drilling and boring work

Place of performance

- The chosen sites as determined at the end of the tranche two programme after the down-selection process has been completed and agreed with central government.
- A co-located site with all alliance members (location to be decided)
- NWS GDF Head Offices – Currently located on Harwell Campus, Didcot, Oxfordshire

Description of the procurement

Not applicable – this PIN is for market engagement only – for information, the proposed alliance procurement process will be “competitive dialogue”

Estimated date of publication of contract notice:

Not applicable

3 Section IV: Procedure

3.1 Description

Information about Government Procurement Agreement (GPA)
The future alliance procurement is covered by the Government Procurement Agreement: Yes

4 Section VI: Complementary information

4.1 Additional information

a. This Prior Information Notice is not a call for competition. It is to signal an intention to commence market engagement with interested organisations within the site characterisation delivery market, and to alert the market to the potential forthcoming tender exercises. NWS GDF intends to hold market engagement sessions from June 2023 to August 2023 with industry experts and suppliers who are interested in potentially bidding for the resulting commercial agreement(s).

b. If you wish to participate in the market engagement please register your interest via the URL here on Atamis:

   https://one-nda.force.com/s/welcome

c. Please note: “DO NOT” register interest through any other route.

d. For more information on the GDF programme please visit “What is a GDF?” https://www.gov.uk/guidance/why-underground

4.2 Date of dispatch of this notice

6th April 2023

Nuclear Waste Services

APPENDIX 2 - SCDP Market Engagement - Briefing Document

Special

Site Characterisation Delivery Partner

Market Engagement – Briefing Document

Contents

Abbreviations and Definitions

Acronym	Description
ACA (FAC -1)	ACA Alliancing Contract (FAC-1)
Assessment	The gathering of baseline data and considering the potential effects of implementing a GDF in a given area or site.
ACWP	Actual Cost of Work Performed
BEIS	Business Energy and Industrial Strategy
CAG	Commercial Assurance Group
CAM	Contract Administration Manual
Consultant	Supplier(s) of services under this Contract
Comparative Evaluation	Valuation of the similarities and differences between two or more sites
CE	Compensation Event
CM	Contract Management
Community Partnership	The partnership between the members of the community, at least one Relevant Principle Local Authority and NWS GDF
CTS	Contract Technical Specification
DCO	Development Consent Order
DMA	Delivery Model Assessment
DMC	Drilling Management Consultant (part of the SC scope)
D&SC	Design and Safety Case
D&SS	Design and Site Suitability
DS	Drilling Services (part of the SC scope)
ECA(P)	Enhanced Commercial Assurance (panel)
EP	Environmental Permit
Evaluation	Describes how NWS GDF will structure their analysis of an area or site around the Siting Factors and Evaluation Considerations.
Evaluation Considerations	The Evaluation Considerations that underpin each of the six Siting Factors that are used to guide the evaluations and discussions with communities
Evaporite	Evaporite deposits are rocks composed mostly of minerals produced by evaporation of saline solutions.
EWN	Early Warning Notification
FIDIC sb	The FIDIC silver book
Futures program	NWSs organisational transformation and development program which aims to transform NWS GDF for safe and effective delivery
FWE	First Waste Emplacement Date
GDF	Geological Disposal Facility
GI	Ground Investigations
GDF Safety Case	A structured argument, supported by evidence, intended to justify that the GDF facility and all its systems and structures are acceptably safe
HAW	High Active Waste
HSR	Higher Strength Rock
HT	Hydrogeological Testing (part of the SC scope)
HTB	How To Buy (which suppliers do we buy the services from)
IAB	Infrastructure Advisory Board
IWS	Integrated Well Services (part of the SC scope)
I&MS	Interpretation and Modelling Services (part of the SC scope)
IMS	Integrated Management System
IC	Intelligent Client
IPA	Infrastructure and Projects Authority
ITT	Invitation to Tender
Intelligent Client	As defined by the Office of Nuclear Regulation

Layer (1, 2 and 3)	Refers to the 3 layers of performance oversight and management that NWS GDF will deploy onto the SCDP to monitor performance
Level (1 and 2)	Refers to the 2 stages of milestones in the contract that allow to be paid against the incentive mechanism
LFE	Learning from Experience
LOGIC	Well Services Forms of Contract
LSSR	Lower Strength Sedimentary Rock
MEAT	Most Economically Advantageous Tender
MP	Major Permissions
MVB	Make versus Buy (do we build internal capability to deliver the service or buy from our supply chain) – linked to HTB
NEC4	New Engineering Contract 4 (Suite of Contracts)
NSIP	Nationally Significant Infrastructure Project
NWS GDF	Nuclear Waste Services (the Client)
OBC	Outline Business Case
PBA	Project Bank Account
PCR	Public Contract Regulations
Phase 1	1st round of boreholes sufficient to feed the Site Descriptive Model v2.2
Potential Host	The Potential Host Community is the community within a geographical area that could potentially host a GDF
PPN	Procurement Policy Notes – Government regulatory requirements to incorporate into our Procurements
PVR	Project Validation Review
SCDP	Site Characterisation Delivery Partner
SDM	Site Descriptive Model - A model of a potential GDF site taking into consideration the geology (biosphere / geosphere) and other data
Site Characterisation (SC)	Detailed surface and subsurface investigations and activities at a site to determine the geological conditions at the site or to evaluate candidate disposal sites
Site Evaluation	How NWS GDF will structure our analysis of an area or site around the Siting Factors and Evaluation Considerations.
Siting Factor	ix Siting Factors set out broad topic areas that NWS GDF need to consider in the siting process to assess and evaluate areas and sites
SME_1	Small Medium Enterprise
SME_2	Subject Matter Expert
SoS	Secretary of State
SRM	Supplier Relationship Management
Suitable Site	A sites that is technically suitable and has a local community that gives explicit support to proceed with development.
T3SPBC	Tranche 3 Sub Program Business Case
TAP	Treasury Approval Point
Test of Public support (TOPS)	A mechanism to establish whether residents of the Potential Host Community support development of a GDF within their community.
Tier (1, 2 3 etc)	Refers to the different levels of the supply chain, Tier 1 being suppliers with contracts direct to NWS GDF, Tier 2 are sub-contracts to the Tier 1 supply chain and so on
TOM	Target Operating Model. Structured understanding of resources required internal and external of NWS GDF
Tranche 3	NWS GDF project phase starting in 2026 that will ultimately lead the project to be “Construction-Ready, with Community Consent”
TUPE	Transfer of Undertaking of Employment Legislation

Working Group	Working Group is formed early in the GDF siting process to gather community information and provide information to the community about geological disposal before a Community Partnership is formed.

1 Background

1.1 What is Site Characterisation?

Site Characterisation is the process by which NWS GDF will assess the geological suitability of a site to host a GDF. It comprises the development of geoscientific understanding through a series of studies, surveys, and surface-based non-intrusive and intrusive investigations.

Non-intrusive investigations comprise geophysical surveys undertaken during the siting process and further-more focussed surveys carried out during the Site Characterisation phase.

Intrusive investigations comprise the drilling and testing of boreholes which provide access to the potential host rock, overlying and underlying geological layers, enabling in situ-testing and the collection of rock and groundwater samples for laboratory analysis.

The scope of the Site Characterisation activities will be developed to address the project Requirements and described in a Site Characterisation Plan (SCP) which will detail the number, location and design of boreholes and surveys to be undertaken as part of the investigation. This document will be approved by the Environment Agency as part of the permissioning process prior to any works being undertaken

The data-derived information and models will support the development of a comprehensive understanding of sites which will be presented in the form of a Site Descriptive Model. The SDM will inform the selection of a site for construction of the GDF, subject to a willing community and relevant approvals.

Site characterisation activities for a GDF are of a scale and complexity for which there is little precedent. It involves a high degree of technical complexity to be delivered under significant stakeholder and regulatory scrutiny. As a result these investigations will be costly and time consuming. It is therefore important to have a robust understanding of subsurface conditions prior to launching final site selection and underground investigations / construction activities to reduce the risk of cost and programme overruns with a loss of confidence in the programme.

Over the last 10+ years a significant amount of work has been done by NWS GDF, supported by its supply chain, to understand technical methods and approaches, project requirements and develop various cost and schedule estimates for a range of generic site characterisation scenarios. Site-specific information requirements, based upon the work of NAGRA and UK Nirex provide a robust summary of the types of data gathering and interpretation considered necessary to complete the site characterisation phase.

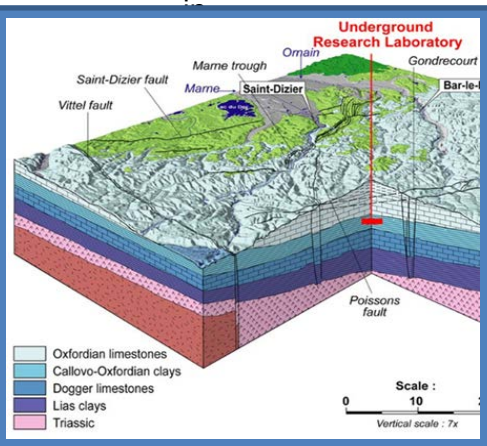
These estimates have shown that the type and amount of work required to investigate and assess a potential GDF site can vary considerably depending on its host rock type, location (inshore/onshore), geological characteristics and complexity.

NWS GDF's preparations for the site characterisation phase has included commissioning the supply chain to undertake:

- Detailed review of existing site characterisation scenarios and cost and schedule estimates based upon historical data.
- Basis of design work for boreholes
- Borehole sealing designs and field trials
- Development of Site Characterisation Plans

These activities have highlighted areas of further work that will be required including

- Core Management and sampling
- Hydrotesting and Geochemical Sampling Basis of Design



Professional Services

- Leadership , Technical and Proje

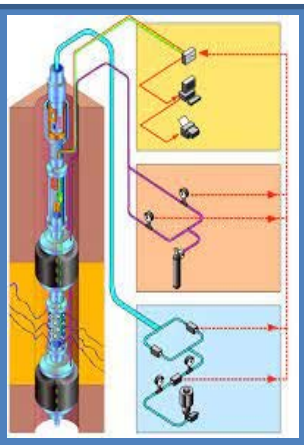
Management, Safety Leadership

- Requirements Setting
- Specification & procurement
- Contract Management
- Site Supervision
- Interpretation & modelling
- Site Descriptive Models
- Data management
- Quality control

Borehole Drilling and well services

Drilling rig, dill pipe, casing, personnel & associated services to operate and deliver high quality core and borehole

In Borehole, Logging Testing And Sampling, providing the in situ scientific information on rock, hydrogeological and geochemical properties .



Other services including:

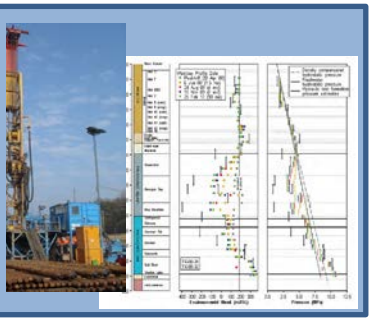
- Marine and land

Geophysical surveys

- Ground investigatior

(surface facilities & associated development)

- Topside infrastructure
- Long term monitoring
- Laboratory testing
- Data Management
- Data reporting
- Interpretation & modelling



Pictorial representation of Site Characterisation Scope

The detailed Site Characterisation services are explained later in this document.

1.2 The Site Descriptive Model (SDM)

The Site Descriptive Model (SDM) is our understanding of the sub-surface geosphere conditions of a site as it is 'now' and how it got there (geological history). It is underpinned and informed by a knowledge base comprising of a series of discipline specific databases, methodologies and information and integrated multi-disciplinary interpretation.

The geoscientific knowledge base for a site will be developed iteratively throughout the siting process through data gathering activities as part of site characterisation and research, focused on the evolving needs of the GDF Programme. The integration of this data and information into the SDM is managed

through a strictly controlled versioning process. These versions will be a key information source at defined points in the GDF Programme.

There will be 3 core versions (SDM versions 0, 1 & 2) with potential interim versions such as version 0.1. Between each iteration of the SDM there will be a gap analysis and prioritisation of information needs which will help define the next iteration. Versions 0 and 1 and their iterations will be undertaken and delivered during Tranche 2.

2 Site Characterisation "Detailed" Scope for Tranche 3

Site Characterisation project activities have already commenced as part of the approval for Tranche 2, consisting of initial non-intrusive geophysical investigations such as seismic surveys, the purchase of legacy seismic data, reprocessing of data and interpretation

However, the majority of site characterisation activities are required to allow for development of a detailed GDF Design and Safety Case will take place in Tranche 3. The activities that will be performed under site characterisation have been assessed through a Delivery Model Assessment to inform the optimum supply chain strategy. This process concluded that NWS should act as an intelligent customer and should appoint a Site Characterisation Deliver Partner (SCDP) to Programme manage, technically direct, design, procure, supervise, analyze, interpret, and report on all Site Characterisation activities.

2.1 Key Site Characterisation Scope of Services and Works

The works to be undertaken by the Site Characterisation Delivery Partner include, but are not limited to:

- **Programme, Technical and Safety Leadership –** the Site Characterisation Project is a major programme of work to be undertaken over a long period of time, to exacting standards in hostile environments. Ensuring the safety of all personnel, developing an appropriate project culture, achieving the highest technical standards, delivering efficiently and to schedule will require exceptional leadership and organization

- **Supply Chain Management -** In order to deliver the full scope, there will be a requirement to procure a large percentage pf sub-contractors and services from both major and SME organisations. This will require strong commercial, cultural and technical management of a wide range of suppliers and alignment with the project expectations with regard to safety, culture and technical standards

- **Development of Site Characterisation Requirements** – developing the site investigation requirements based upon existing and evolving requirements as determined by system, safety case, engineering requirements

- **Site Characterisation Planning** – developing the detailed plans, designs and specifications for implementing site characterisation based upon the requirements and available tools and methods. This will be an evolution of work started in Tranche 2, where the Site Characterisation Plans will be developed.

- **Procurement of Services** – developing detailed specifications and managing the procurement of all services and materials required to deliver the Site Characterisation Plan

- **Establishing a Site Presence** – setting up a site characterisation office, storage & welfare facilities, and construction of infrastructure required for both onshore and offshore activities

- **Desk Studies** – carrying out further analysis of pre-existing information to support NWS GDF's geoscientific understanding of the area. This will be an evolution of work started in Tranche 2; however further desk-studies may be possible with a further refining of the areas of focus or if new data and information is available.

- **Non-Intrusive Surveys** – investigations include a range of potential activities from site walkovers, geological and hydrological mapping at the surface, to airborne geophysical surveys and non-seismic geophysical investigations, gravity, magnetic or resistivity surveys.

- **Ultra-High Resolution Seismic Surveys** – further seismic reflection surveys will provide additional information on the geological environment. These surveys would supplement any seismic reflection surveys carried out in Tranche 2. It would provide more focused and more detailed information over a more refined area within the inshore, onshore and transition zone areas along the GDF footprint, access tunnel routes and surface facilities

- **Shallow Ground Investigations (<150m deep)** – these investigations provide information on the near-surface environment. Primarily these investigations are required to aid the design of the surface facilities and the GDF accessways. However, some shallow ground investigations may also be required in the area of the subsurface facility to support other site investigation activities and post-closure safety assessments.

- **Deep Borehole Drilling and Testing (>150m deep)** – these investigations are required to investigate the geological environment at depth. They will be required for both the subsurface part of the facility and to provide information on accessways (where the surface and subsurface part of the facility are separated by a significant distance). Deep borehole investigations provide samples of rock and groundwater from depth and allow investigations to take place within the borehole to measure the properties of the surrounding geological, hydrogeological and geochemical environment. The undertaking of hydrogeological testing in low permeability environments is not a standard practice. These investigations could occur fully onshore or in an inshore marine environment (where boreholes may be drilled from a platform at sea, or in certain cases, from land via a deviated drilling process). Included within the scope of this work package is any pre-drilling works required before the drill rig can mobilise, drilling hardware such as casing and drill pipe, mobilisation of a drilling contractor, drilling and testing of deep boreholes and all the associated drilling services that are required to successfully drill a deep borehole and extract good quality core samples consistently

- **Core Management** – a fundamental part of the programme will the collecting of high quality cores of the sub surface strata, These cores will be recovered, cleaned, logged, scanned, sampled, sub sampled and preserved immediately upon recovery. Samples will then be further analysed, logged, and tested as part of an extensive programme of laboratory testing Development and implementation of a core management programme in accordance with detailed procedures, is a critical part of the works

- **Laboratory Analysis** – The recovered samples of rock and groundwater will be analysed on site and in off-site laboratories in accordance with detailed procedures developed by the SCDP. This work will include standard water and geotechnical analysis but also highly specialist work, including porewater squeezing and other non-standard specialist analysis which are a critical part of the site characterisation programme and underpin the understanding of the site evolution

- **Long-term Monitoring** – some investigations will gather data over a long period to demonstrate the baseline conditions and show whether the geological environment changes over time. These include long-term monitoring investigations that occur within boreholes, and investigations that monitor from the surface. Long-term monitoring in boreholes includes the installation of equipment in the borehole to measure changing groundwater pressures, temperature and potentially geochemistry and the ongoing maintenance of this equipment and

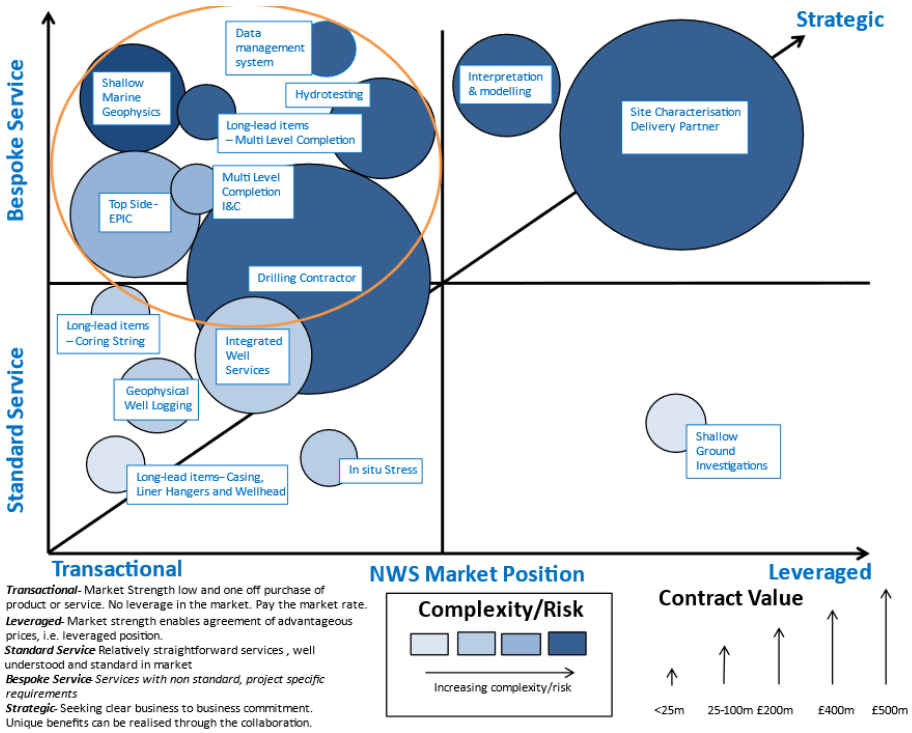
provision to collect and interpret the data. Long-term monitoring at the surface includes deployment of equipment at the surface that measures for example, seismicity, subsidence and uplift and near surface groundwater properties

- **Data Management** – the Site Characterisation Programme will generate significant amounts of data which will need to be stored and accessible within a Data Management System. The design and operation of an efficient system is a key requirement of the project

- **Interpretation and Modelling** – the site characterisation programme set out above generate a significant amount of data which requires interpretation into useful information that can be used to develop engineering designs and carry out safety assessments. This work will require the highest level of geoscientific expertise that can interpret the data. It will include modelling of some datasets and the integration of all data in Site Descriptive Models (SDMs). The SDM represents NWS GDF's best understanding of the subsurface based on the available data and will be the basis for the GDF design and safety case.

- **Operations Management** – to successfully carry out the above activities the SCDP will require a significant capability in Operations Management of works of a similar nature in order to provide the relevant operational expertise to scope, specify, procure, and manage (on a day-to-day basis) the supply chain responsible for delivering site characterisation activities.

A high-level review of the scope of works to be undertaken as part of the Site Characterisation project was developed into a Boston matrix which indicates the level of service, Standard to Bespoke and the nature of the relationship, Transactional or Strategic. As indicated below the SCDP is considered to be a Strategic and Bespoke Service.



2.2 Out Of Scope Services and Works

The services below are primarily related to the Applied Science and Research scope, but with strong connectivity to Site Characterisation.

- **Experimental Analysis of rock or groundwater samples** - understanding of radionuclide or gas transport and how it may evolve during the lifespan of the GDF.

- **Modelling of the future natural or perturbed evolution of the geoscientific conditions at the sites**.

- **Collection and interpretation of non-geoscientific data** - support environmental baseline definition and Environmental Impact Assessments (EIAs) for both the boreholes and the GDF.

- **Engineering, design and forward modelling of the GDF site**

- **Environmental & Nuclear Safety Case production**

- **Tranche 2 preliminary seismic studies** - these surveys will be carried out as a forerunner of the main workstream and will commence in Tranche 2. They will support Site Evaluation process and the selection of sites to enter further investigation in Tranche 3.

- **Major Permissions** - incorporating the required Development Consent Orders (DCOs) and Environmental Permits (EPs) that will provide the regulatory approval allowing for borehole drilling runs throughout site characterisation activities

- **Underground Rock Facility** – this is subject to further investigation, subject to need this will either be covered by the second Site Characterisation Business case.

- **Sanction for Additional round of boreholes beyond Tranche 3 SDM v2.2** - this will be subject to a second Site Characterisation Business Case if required.

- **Post-closure sealing of boreholes** - at both sites will happen after SDM v2.2. and will be subject to a second Site Characterisation Business Case.

- **Additional Ground Investigations** - will be required to support the design of other associated infrastructure, such as additional rail or road or additional construction activities.

3 Strategic Sourcing Approach for Site Characterisation

3.1 The Over-Arching SC Contracting Strategy

For planning purposes NWS undertook an initial review of the major elements of the site characterisation programme and how they may be delivered. The table below provides an indicative breakdown of the potential direct contracts to NWS and the potential subcontracts to the SCDP based upon a model where NWS holds the minimum direct contracts, primarily those which need to be procured at an early stage in the programme.

Contract	Description	Proc. Route	Contract Length	Contract Award Date
NWS GDF Contract 1	Site Characterisation Delivery Partner	CD	10+10	June 26
NWS GDF Contract 2	Integrated Well Services	Restricted	10	Jan 28
NWS GDF Contract 3	Drilling Services – Inshore	CPN	10	June 26
NWS GDF Contract 4	Drilling Services - Onshore	CPN	5	June 26
Sub-contract 1	Casing	SCDP	SCDP	Jan 28
Sub-contract 2	Liner Hangers and Wellhead	SCDP	SCDP	Jan 28
Sub-contract 3	Multi-Level Completion	SCDP	SCDP	July 28
Sub-contract 4	Coring String	SCDP	SCDP	Jan 28
Sub-contract 5	Hydrotesting	SCDP	SCDP	Jan 28
Sub-contract 6	In Situ Stress	SCDP	SCDP	Jan 28
Sub-contract 7	Multi-Level Monitoring Systems I&C	SCDP	SCDP	July 29
Sub-contract 8	Geophysical Well Logging	SCDP	SCDP	Nov 27
Sub-contract 9	Top Side EPIC	SCDP	SCDP	Jan 28
Sub-contract 10	Interpretation & Modelling Services	SCDP	SCDP	July 28
Sub-contract 11	Shallow Ground Investigations	SCDP	SCDP	Oct 28
Sub-contract 12	Seismic Services – Marine	SCDP	SCDP	Feb 28
Sub-contract 13	Seismic Services – Land	SCDP	SCDP	Feb 28
Sub-contract 14	Data Management Services	SCDP	SCDP	Feb 28

The Table above sets out the key 4 contracts that will potentially be held by NWS and the scope of the SCDP which is the pivotal contract to support the delivery of the Site Characterisation Programme. Although as noted the IWS may also be included as part of the SCDP supply.

These are as follows:

- Site Characterisation Delivery Partner (SCDP)
- Drilling Services – inshore
- Drilling Services – onshore (If required)
- Integrated Well Services (IWS) – could potentially be undertaken as part of SCDP scope

Subject to discussion and further market engagement it is possible that the IWS contract could become part of the SCDP Sub-contract scope and/or parts of the SCDP sub-contract scope could be better let as direct contracts by NWS, on the basis of value for money, this is clearly a key area for discussion.

The role of SCDP is fundamental to the success of the SC Project. The SCDP will provide the core role of project management, contract management, technical design, technical specification, supervision and reporting for the whole of the Site Characterisation project on behalf of NWS including their own Sub-contracts and NWS direct contracts

A key part of their role will be to lead the procurement and contract management of the services and works identified within the scope. For all of these procurements NWS will have close involvement with

the technical specification, contractor selection, and assuring compliance with all necessary requirements and obligations but it will be a requirement that the SCDP has staff with appropriate procurement experience comparable to NWS to procure these services for the GDF project.

The graphic below further expands on the role of the SCDP and the division between in house capability/sub contracted services and Mjor Contrct Packages

Within SCDP scope are a wide range of core professional services which will require the lead organisation within SCDP to bring together a consortium of organisations. In addition, there will be a range of major and minor sub-contracted services. Many are more standard services which are best selected and managed by the SCDP with limited input from NWS.

The roles of the SCDP have been divided below into Core Services and Contracted Services some of which may be provided by the SCDP using internal resources or contracted out by them.

Core Services

- Drilling Management Services
- Core management, Sampling and Logging,
- Topography, Bathymetry, Passive seismic, Geological, Hydrology and other surveys
- Laboratory Analysis (Water/Rock) Porewater, Groundwater, Geotechnical, Isotope Chemical
- Sea Bed Surveys and Airborne Geophysics
- Engineering FEED design of Topside and Well Pad design and Construction Civils
- Offices, Laydown areas and Core Storage Facility
- Programme and Contract Management, Principal Contractor and Principal Designer, potentially including the following Contract Packages:

Major Subcontracted Services

- Hydrotesting
- In Situ Stress
- Multilevel Monitoring System Installation and commissioning
- Geophysical Well Logging
- Top Side EPIC (Engineering, Procurement, Installation and Commissioning)
- Interpretation & Modelling, Data Management, Site Descriptive Model
- Shallow Ground Investigations
- Marine and Land Seismic Surveys
- Data management Services
- Casing
- Liner Hangers and Wellhead
- Multi-Level Completion Engineering and Procurement)
- Coring String

In House or Minor Subcontracted Services

- Topography Surveys,
- Bathymetry Surveys,
- Passive Seismic Surveys
- Geological Surveys
- Seabed Surveys
- Hydrology and other surveys
- Airborne Geophysics
- Engineering FEED design of Topside
- Well Pad design and Construction Civils
- Offices, Laydown areas and Core Storage Facility

We would expect the SCDP to present an integrated team able to provide the full range of core services against which they will be incentivised.

We anticipate that different consortium will develop their own solution based upon their core skills and competencies. The laboratory analysis works are an important element which will require technical involvement with NWS but will be undertaken by a wide range of smaller commercial and research laboratories which the SCDP is better placed to manage on NWS behalf.

3.2 Routes to Market

3.2.1 Introduction

For all the Site Characterisation services and works during T3 there are a total of 18 procurements (if NWS do both onshore and in-shore borehole drilling activities). However not all procurements are

required at the same time and will be phased over period 2026 to 2028. These contracts will be placed by a combination of NWS and the SCDP consortium as described previously.

The SCDP will support NWS in four phased groups of procurement with different routes to market for those services.

Group 1 (Drilling Contractor)

- Inshore Drilling Contractor
- Onshore Drilling Contractor (if required)

Group 2 (Drilling Services)

- Integrated Well Services (Mud, mud logging, cementing, waste, fishing)
- Hydrotesting
- In Situ Stress Testing
- Multi-level Monitoring System Installation and commissioning
- Geophysical Well Logging
- Top Side EPIC (Engineering, Procurement, Installation and Commissioning

Group 3 (Drilling Materials)

- Casing
- Liner Hangers and Wellhead
- Multi-Level Completion Engineering and Procurement
- Coring String

Group 4 (Other services)

- Interpretation & Modelling, Data Management, Site Descriptive Model
- Shallow Ground Investigations
- Marine and Land Seismic Surveys
- Data Management Services

3.2.2 NWS GDF Contract 1 - SCDP – Competitive Dialogue

We propose to procure these services through Competitive Dialogue. This route has been selected based upon market engagement and knowledge of the market. We have not identified one organisation that can provide the full range of services in the manner we require.

The lead organisation for these services may be different types of organisations who will provide alternative approaches to the delivery of the contract. They will have to develop a complex supply chain in order to bring together a range of skills and experience required to deliver the best technical solutions in all areas.

The Competitive Dialogue approach provides us with the best opportunity to ensure we meet these objectives and also through our interactions test the behaviours of the organisation and individuals and confirm our ability to work with them as our key partner.

3.2.3 NWS GDF Contract 2 – Integrated Well Services - Restricted

We propose to procure the services using a restricted approach. Whilst we can specify our entire requirements and do not require negotiations, this approach will allow us to pre-qualify the tenderers on the basis of their financial standing and technical capability in order to narrow the field and the number of submissions.

3.2.4 NWS GDF Contract 3&4 – Drilling Services (Inshore / Onshore) – Competitive Procedure with Negotiation

We propose to procure the services using a competitive with negotiation procedure. Whilst we can define our requirements and these services are relatively standard there are alternative approaches that may be adopted by the supply chain which will impact on technical delivery, flexibility and risk. We would wish to have the flexibility and opportunity to award the contract based upon the initial tenders submitted or negotiate aspects of the tender.

3.2.5 Competitive Dialogue Strategy (SCDP Only)

Prior to evaluation of tenders, NWS GDF will enter CD with the SCDP potential supply chain to embark on dialogue on a number of key topics. The potential key topics have yet to be finalised but will include some of the topics from the list below.

Potential SCDP Dialogue Topics

Dialogue Topic	Reasoning
Governance model, Delegated Authorities & Board	To understand the markets views and to use their experience to develop a market acceptable governance model that aligns to the NWS Intelligent Client organisation to be included within the final tender stage of the CD process
Building a project culture	NWS GDF will need to dialogue this topic to understand how the potential supply chains intend to develop and sustain a positive culture and set of behaviours during the tenure of the contract as this is central to success (note NWS GDF have conducted due diligence in this area too and a culture alignment report is available upon request)
Incentivisation, pricing strategies and forms of contract	To debate the proposed incentive model, discuss how the Level 1 / Level 2 milestone achievements will work with margin gain and to understand how the varying forms of contract will work together and complement one another. In addition NWS GDF will discuss and debate the process by which milestones will be agreed across the two lots between SC and AE/PI for the start of the contract and the process for agreeing new milestones and updating the programme to reflect the changes
Risk Allocation and Project / Supplier Insurances	NWS GDF need to understand the risk appetite in the market across the full range of risks attributable to the SDCP supply chain, and what insurances are available to cover said risks. Only dialogue will enable us to get formal submissions from the market on this topic
Procurement of the Tier 2 Supply Chains	To gauge appetite and capability for SCDP supply chains to procure, contract with and manage a significant part of the SC supply chain, as per the strategy
Technical Management and Integration	SCDP scope covers a number of associated and specialist technical areas. NWS must discuss and test the solutions presented by different Consortium who may approach the project in different ways to deliver the outcomes. Each

Technical Solution Challenges – West Coast	different Consortia would bring a different perspective and experience to the role. Geology on east and west coasts are different and may require different technical solutions to the drilling and testing of the boreholes. Similarly the environmental and geographical conditions in terms of water depth, weather and proximity to ports is different and may require different types of drilling rigs and support vessels. The geophysical surveys will also require different solutions due to the water depths and the integration of land, transition and marine surveys. All these topics require significant dialogue and submissions for assessment
Technical Solution Challenges – East Coast	
Project Bank Accounts	NWS GDF wish to test the acceptance and physical processes required to set up a Project Bank Account, especially as traditionally there is partner who owns the PBA and distributes revenue to other partners
GDF Co-Location of Offices Strategy(ies) and Wider SC Supply Chain	NWS GDF will require a significant sized supply chain to be located close to or within the same offices as NWS in order to build a fully functioning integrated project team. There is no decided strategy in the project on this topic currently and hence would need to be dialogued with the market to get their views, opinions and ideas
Digital strategy, Systems Integration and Cyber Security	NWS GDF's strategy on these topics will need to be developed with our chosen supply chains, as they are the experts in understanding the best systems to utilise to control their scope. As we will have multiple suppliers coming together understanding the challenges around integrating all these systems is critical, hence the need to dialogue on this topic

By exploring these topics in dialogue, both NWS and the SCDP will have the ability to mature the technical and commercial solutions in the final tender documentation making sure it's aligned with the views and thoughts from the market. We may choose to amalgamate topics in order to keep the different topics and potential supply chain submissions in the CD phase to a maximum of 5, potentially lower. The CD process is envisaged to take 6 to 9 months in total.

3.3 What Will Be Evaluated (Tender Evaluation Process and Criteria)

SE out below are NWS initial thoughts on what will be envaulted and the criteria and weightings that will be placed on these criteria. This list is very much a "for discussion" agenda and not the final proposal.

The Proposed Pre-qualification Criteria

- Pass / Fail (Capabilities alignment, minimum turnover, staff levels, H&S performance, ISO stds, Cyber Essentials)
- GDF Functional Requirements assessment
- HSSEQ
- Carbon Net Zero
- Financial Viability Risk Assessment of all proposed suppliers
- Modern Slavery
- Other relevant PPN requirements
- Technical Competence and capability

The Proposed Tender Evaluation Criteria – Final Proposal

The evaluation scoring for the Consortium is shown below:

- Technical
- Social Value
- Commercial

Technical:

- **Management**
  The Client requires the Consultant/Team (including any subcontractors) to have in place and maintain an appropriate management structure that will ensure the evolving assignment is fully met over the life of the contract.

- **Minimum Technical Expertise**
  For the potential Consultant to demonstrate experience of similar work by the individual(s) put forward to deliver the work expanding on previous examples/case studies

- **Assignment Specific**
  The Client requires the Consultant/team to demonstrate a detailed understanding of the technical aspects of the project and provide opportunities for improvement and added value to the delivery of the assignment and output(s) as set out in the Provision of Optimisation Services CTS Section. Drawing on previous case studies, present illustrated examples of similar projects and explain how you will approach and add value at the strategic and tactical level

- **Availability**
  The Client requires the Consultant/Team (including any subcontractors) to be available as required to provide support.

- **Relationship Potential**
  The Client requires the Consultant to demonstrate their ability to build strong lasting relationships across the supply chain and wider GDF programme, collaborative capabilities, positive cultural dynamics etc,

Social Value:

- Tackling Economic Equality – Create New Business, New Jobs and New Skills
- Wellbeing and Inclusion
- Sustainability, Fighting Climate Change – Effective Stewardship of the environment

Commercial:

- Open Book Salary Based Multiplier Rate Card (Blended rates if consortia bidding)
- Incentivisation Margin for Level 2 and Level 1 Milestones, sub-contract mark-up

In terms of the strategy for tendering prices, the tenderers will be requested to supply the following priced elements in the Table below as part of the procurement process:

Pricing Elements for the SCDP Invitation to Tender

Pricing Element	Explanation
Rates Table	Priced rates based on salary multipliers for staff and agency workers across 4 main office locations (supplier site based, supplier office based, client office based and home working) *(Note: rate tables comes in increments of £5k salary bands)*
SCDP Borehole Site Organisation	Priced rates (as per the rates table) against a proposed SCDP organisational roles operating at 2 borehole sites (technical and managerial diversity) (seniority of roles differentials)
Central managerial Organisation	Priced rates (as per the rates table) against a proposed SCDP central managerial organisational which manages the 2 borehole sites (technical and managerial diversity) (seniority of roles differentials)
Margin contribution against Defined Costs	% margin gain against their monthly defined costs
Margin contribution against L2 milestones	% margin gain against SCDP specific milestones on the GDF programme
Margin contribution against L1 milestones	% margin gain against programme milestones on the GDF programme
Uplift % on sub-contracts	General uplift to cover SCDP costs of managing a sub-supplier

3.3.1 **Pricing, Payment Mechanisms and Options**

3.3.1.1 **Introduction**

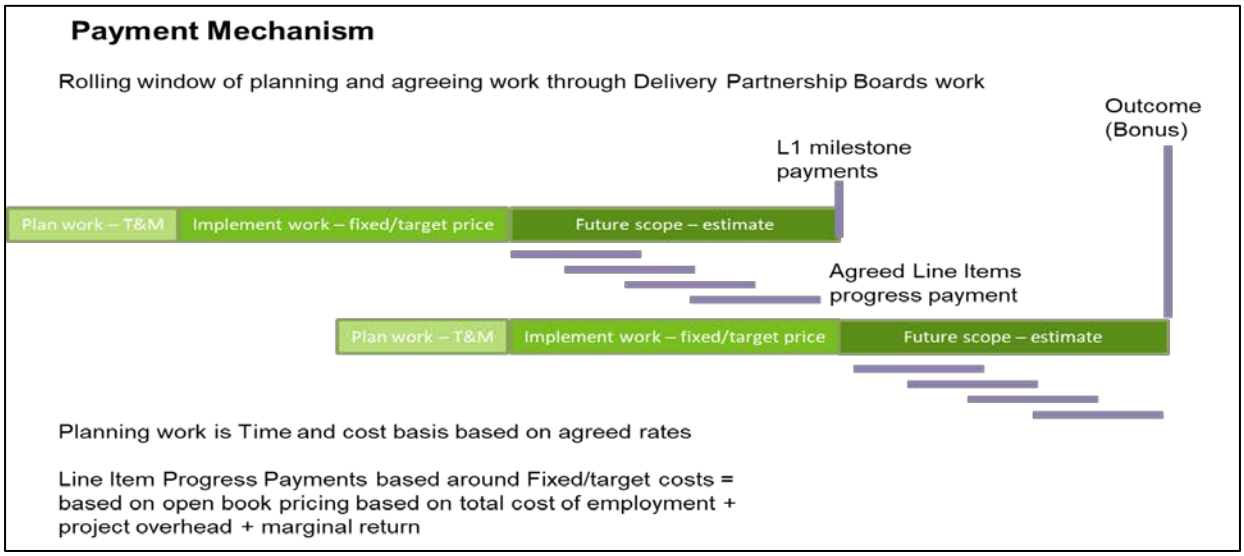
The Tranche 3 scope as cited earlier currently carries a variety of uncertainties and is subject to significant change as the programme engages multiple communities with different geologies during Tranche 3

It is proposed that a rolling window of planning work is established. The work is agreed and priced with the NWS. This allows for flexibility but also control of outputs. A tiered bonus scheme will be paid based on successful progress against milestones and outcomes.

The Figure below represents a potential work planning model that NWS may deploy for the Site Characterisation Delivery Partner to establish and deliver known scope whilst preparing for delivery of future scope. These time windows could be annually or 2-year cycles (probably not more due to the uncertain nature of the scope surrounding the GDF scope in T3).

The SCDP activities are a combination of professional services and on-site works and NWS GDF will use the NEC4 Suite of Contracts to manage all works through the SCDP

Work Planning Model

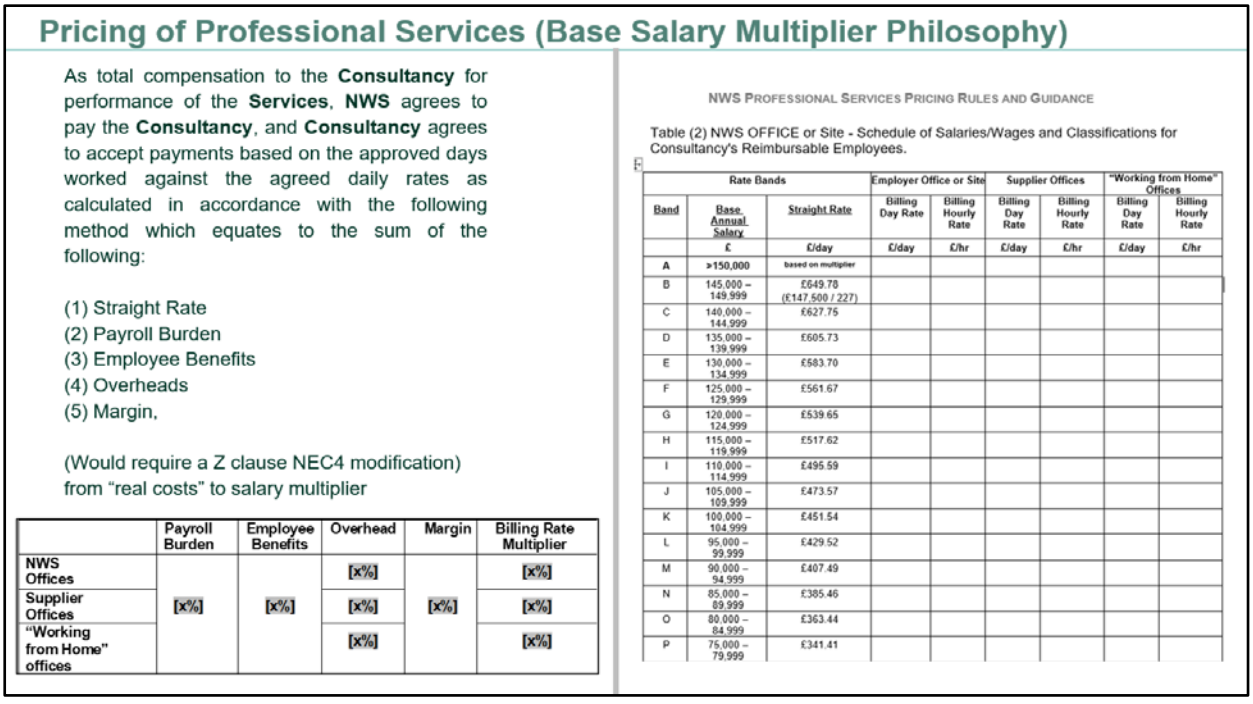


The contracting methodology will be flexible under the contract and NWS GDF will be able to update the scope as and when the "client requirements" in the contract change, subject to agreement to prices and delivery timescales.

NWS propose to develop a salary based multiplier approach to pay for professional services as it is the simplest way to link a persons rated value to their real life salary, This is standard industry practice (within the nuclear and infrastructure markets) Therefore for professional services a salary based multiplier is proposed which is a simpler model to administer for NWS (see Figure below for the basic concept)

Typical cost elements to build up the rate-based multiplier are outlined below:

Salary Based Multiplier Structure



Pricing of Professional Services (Base Salary Multiplier Philosophy)

As total compensation to the **Consultancy** for performance of the **Services**, **NWS** agrees to pay the **Consultancy**, and **Consultancy** agrees to accept payments based on the approved days worked against the agreed daily rates as calculated in accordance with the following method which equates to the sum of the following:

(1) Straight Rate
(2) Payroll Burden
(3) Employee Benefits
(4) Overheads
(5) Margin,

(Would require a Z clause NEC4 modification) from "real costs" to salary multiplier

	Payroll Burden	Employee Benefits	Overhead	Margin	Billing Rate Multiplier
NWS Offices	[x%]	[x%]	[x%]	[x%]	[x%]
Supplier Offices			[x%]		[x%]
"Working from Home" offices			[x%]		[x%]

NWS PROFESSIONAL SERVICES PRICING RULES AND GUIDANCE

Table (2) NWS OFFICE or Site - Schedule of Salaries/Wages and Classifications for Consultancy's Reimbursable Employees.

Rate Bands			Employer Office or Site		Supplier Offices		"Working from Home" Offices	
Band	Base Annual Salary	Straight Rate	Billing Day Rate	Billing Hourly Rate	Billing Day Rate	Billing Hourly Rate	Billing Day Rate	Billing Hourly Rate
	£	£/day	£/day	£/hr	£/day	£/hr	£/day	£/hr
A	>150,000	based on multiplier						
B	145,000 – 149,999	£649.78 (£147,500 / 227)						
C	140,000 – 144,999	£627.75						
D	135,000 – 139,999	£605.73						
E	130,000 – 134,999	£583.70						
F	125,000 – 129,999	£561.67						
G	120,000 – 124,999	£539.65						
H	115,000 – 119,999	£517.62						
I	110,000 – 114,999	£495.59						
J	105,000 – 109,999	£473.57						
K	100,000 – 104,999	£451.54						
L	95,000 – 99,999	£429.52						
M	90,000 – 94,999	£407.49						
N	85,000 – 89,999	£385.46						
O	80,000 – 84,999	£363.44						
P	75,000 – 79,999	£341.41						

Salary Based Multiplier Cost Table

Pricing Structure for "Resources"
1.0 Payroll Costs
2.0. Payroll Burden
3.0 Employee Benefits
4.0 Overhead
5.0 Profit
6.0 Reimbursable Expenses
7.0 Non-Recoverable Items

For "Works" contracts the SCDP will utilise the NEC4 "schedule of cost components" structure to price for works under the NEC 4 ALC pricing structure.

It is recognised that the scope of the SCDP will include organisations and works that are outside of the nuclear and infrastructure markets. How the above principles are aligned with other markets will need consideration.

3.3.2 Proposed P2P approach

NWS GDF's current intention for the SCDP is to use a Project Bank Account (PBA) (Secondary Option Y(UK)1 in NEC4) for payments and associated supply chain organisations (tier 2 and tier 3 sub-contractors).

The PBA could be set up with "Dual Authority" (i.e., the Client and Lead Contractor instruct payments to the supply chain) or "Single Authority" (just the Lead Contractor) approach. This will be discussed further during market engagement in 2023.

3.3.3 Sub-Contracting Flow Down Obligations

One of the key requirements of the Site Characterisation Delivery Partner scope is to work with NWS GDF to understand our Tier 2 service requirements and thereto support and develop the technical specifications for those services, following which they will prepare and manage the tenders, award and contract manage these service requirements for services and works that are within their contracted scope of works. Whether the works are directly contracted to NWS or the SCDP in the final model, responsibility for all procurement activities will be the SCDP.

NWS GDF will maintain oversight of the process and have ultimate approval of each of the sub-contract awards via a "sub-contract approval process", which will be developed ahead of the CD process starting and follow-on tenders being issued to the market, thereby maintaining a level of control over the sub-contracting flow-down and bringing assurance that our specific requirements are flowing through into the lower supply chain.

In terms of the practicalities around how this will be executed, NWS GDF will prepare "requirements" that will be mandated to be flowed down into sub-contracts (these will be outlined in the main contract between NWS GDF and the SCDP) and supplementary to this NWS GDF will develop "Guidance Notes for Sub-contracts", and the intent of this guidance note is highlighted below;

GDF will prepare several precedent subcontract documents to be used in conjunction with its precedent suite of main contracts for the delivery of various works packages in respect of the GDF Project. We see the investment in developing precedent subcontract documents as being beneficial to all parties, as it will:

a) Save Contractor's time and money by providing a solid starting point for engagement with their supply chains.

b) Minimise risk of gaps in risk allocation inadvertently developing through the supply chain;

c) Facilitate approval of supply chain appointments on SCDP's sub-supply chain;

d) Reassure the UK Regulators that we have adequate controls within GDF's sub-contracts to ensure compliance with all relevant UK regulations (rights of access, veto over award of suppliers in with nuclear safety significance etc.);

e) Provides guidance to the main contractors on how to perform effective sub-contract supply chain surveillance to ensure sub-contractors deliver right first time, on time, safely and to the specified GDF requirements (Typical areas of surveillance include safety culture,

f) quality assurance, contract management, performance and process/ systems plus more);

These precedent subcontracts will be a "baseline" pack of documents, which represent a full flow down of each of the main template contract forms.

Please note that the precedent subcontract documents are intended to be a **useful starting point** for Contractors; it is not the intention of GDF to dictate the commercial terms on which Contractors engage their supply chain.

Each of the template subcontract "packs" will comprise of three documents:

- the Subcontract Agreement;
- the Subcontract Particulars/Contract Data;
- the Subcontract flow down Conditions;

3.3.4 Site Characterisation Insurance

3.3.4.1 Types of Insurance

The SCDP (and their supply chain) will be required to pick up all mandatory UK insurances to cover their scope of works and services. Below is a list of potential insurances that the SC supply chain will need to hold:

1. **Construction 'all-risks' (CAR) insurance**

   Providing indemnity against the cost of reinstatement of physical loss of or damage to the works, temporary works and materials.

2. **Third party liability insurance**

   Covering legal liability in respect of death or injury to third parties or damage to property arising out of the construction, testing and commissioning of the works.

3. **Marine cargo insurance**

   Covering the risk of loss of physical damage to plant and materials in transit.

4. **Public Liability insurance**

   Covers the cost of claims made by members of the public for incidents that occur in connection with a business's activities.

5. **Environmental Liability Insurance (ELI)**

   Covers the cost of restoring damage caused by environmental accidents, such as pollution of land, water, air, and biodiversity damage.

6. **Professional Indemnity**

Covers costs against claims for loss / damage made by clients or third parties as a result of the impact of negligent services a business provided or negligent advice a business offered.

7. Drilling Operations Insurance

This insurance can cover the following typical offshore and onshore risks;

- Offshore physical damage for platforms, sub-sea & pipelines
- Operators extra expense (Control of Well insurance) – onshore and offshore
- Business interruption, loss of production Income
- Hull & machinery, loss of hire
- Land rigs & associated drilling equipment

8. Materials and Transport Insurance – Land

- Protects goods and materials during transit.

The NWS GDF Insurance Lead will be responsible for making sure that all insurances remain current and valid. This involves notifying any changes of circumstances or values which may affect cover and maintaining relationships with insurers.

Suppliers also have obligations to ensure that cover remains valid. Separate insurance administration manuals describe the responsibilities for the NWS GDF Insurance Lead and Suppliers will be developed during 2023 ahead of the tender being issued to the market.

Decisions on the levels of insurance that will be required across this range of insurance types are yet to be discussed and decided, and this topic may well become part of the competitive dialogue process, so we can understand which risks are insurable and how much it will cost the supply chain, as these costs will be passed on to NWS GDF through the tender offer. NWS GDF will have to make decisions as to which party is better placed to hold the risk and hence the insurances as we don't want to overpay and we have to protect the public purse.

3.3.5 Site Characterisation Services and Works Delivery Risks

The Site Characterisation programme includes within it a wide scope of works, some of which are aligned and common to the broader infrastructure industry and some of which are aligned with the Oil and Gas and Mining industries. It will be necessary to ensure that the contractual risks are understood and are aligned appropriately to the work that is being undertaken and the industry precedence and common practices which the contractors are used to working with, such that they are able to understand, manage and control the risks allocated to them, and obtain insurance at a reasonable cost.

The site characterisation works will be undertaken by Contractors from the infrastructure, Oil and Gas and Mining Industries where works are undertaken on a day rate basis and contractual terms and risk allocations are different. From our market engagement it is evident that our programme of works is large and attractive to those Contractors who already work in the infrastructure and nuclear industries.

In the table below we set out an initial risk allocation of 24 of the most common risks against five Headings of NWS owned, SCDP, Drilling and Service Contractors, Geophysical Contractors and Near surface and Civil Contractors.

Clearly these risks are areas for further discussion with the supply chain and within NWS to work through in detail the long list of risks and ensure they are understood and allocated to those best able

to manage them and insure against. However, the table below represents a sound starting point that we believe will be accepted by the supply chain

Site Characterisation Major Risks Allocation Chart

Risk Area	NWS	SCDP	Drilling / Drilling Services Contractor	Geophysical Contractor	Near Surface Engineering and Site Investigation	Notes
Profession Standard Reasonable Skill and Care		X	X	X	X	Standard Requiremnet for all Professional Services and Contrctors
Death or injury of employees		X	X	X	X	Standard Practice
Loss or damage to client property		X	X	X	X	Standard Practice
Claims from third parties	X				X	To be disagregated and allocated apprpriately
Loss or damage to works, plant, materials and equipment		X	X	X	X	Standard Practice
Weather	X					Some weather down time may be incorporated into the day rates with NWS compensating above that.
Protestor Activity Delays	X					Resides with NWS
Security	X		X	X	X	Contractors have responsibility to secure their works but NWS may provided an overarching capability.
and other licensed users	X					NWS Resposnibility
Permissions (DCO, MMO, EA)	X					NWS Responsibility
Utilities Identification	X				X	NWS in marine environment but Contrctor onshore
Unexploded Ordnance	X					NWS to carry out UXO serveys
Archaeology and Wrecks	X					NWS to carry out Archaelogy and wreck surveys
Fishing Industry Disruption	X					NWS to put in place Fishing Cooperation Scheme
Pollution			X	X	X	Contractors for own equipment and activities
Above Ground Risks			X	X	X	Contractor responsible for foreseeable issues
Below Ground Risks	X					Client Always owns ground risk, subject to contractor meeting reasonable skill and care requiremnets
Consequential losses	X					All Contractors will require Waivers
Currency Fluctuation	X					Most drilling and service costs priceed in Dollars, may be able to incorpoarte some fluctuation within Contrct
Fuel Prices	X					May be able to hedge
Inflation	X					Incorporate a base assumption in prices, mechanism to be put in place for above
Equipment Maintenace / Down Time			X	X	X	IADC Drilling Contract has a capped repair rate, typically max 4 hours per daym 24 hours per month
Core Quality		X				Incentivisation Scheme to be put in place
Quality of Data		X				Incentivisation Scheme to be put in place

3.3.6 **Co-location strategy & General Infrastructure requirements**

NWS GDF recognises the need to co-locate the supply chain and client organisation as the GDF programme starts Tranche 3. However GDF also recognises the hybrid working arrangements that have become relatively standard practice post COVID-19 pandemic and hence there will need to be a balance struck between the desire for co-locating supply chains with NWS GDF staff and the need to continue with hybrid working.

The over-arching co-location strategy for the programme is still in development and forms part of the wider T3 strategy of developing the Target Operating Model for T3.

When the programme moves into field operations there will need to have land based facilities in support of both the drilling and survey operations in the inshore area and land based operations which form part of the SC scope.

Land based facilities will include:

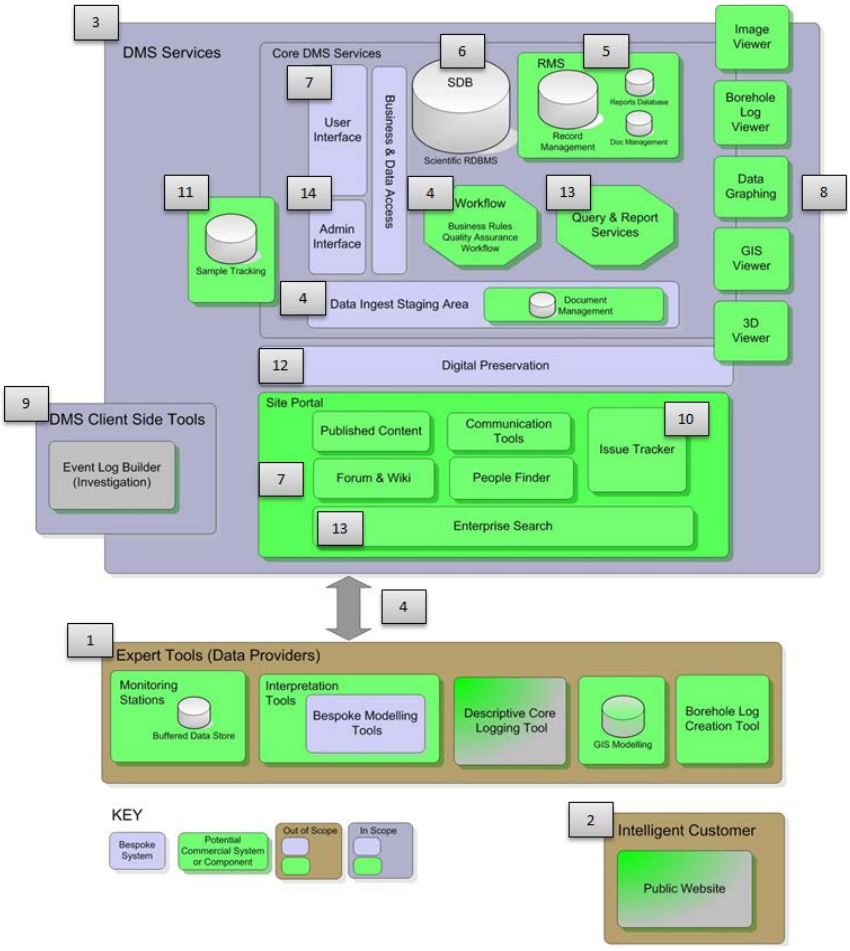
- Site Offices for site-based Contractor and NWS staff at both sites. Preferably these will be based within the Community Partnership area
- Core Store and Testing Facilities at a reasonable distance from the site offices to maintain the borehole core in optimum condition and provide suitable access to the Core Field Team during the investigations
- Lay Down Areas for Materials located at a port to be used to support the drilling operations in the inshore area

It is proposed that these facilities are best procured as part of the Delivery Partner contract as they will have the larger numbers of site-based staff and would have to ensure that the facilities are suitable for their operations. However the site offices and core store are enduring facilities, at least for the successful site, which will be required beyond the period of the contract. They should therefore be contracted in the name of NWS GDF or transferred to NWS GDF under a legal agreement at the end of the contract or earlier in the event that the contractor fails to perform and the contract is terminated.

Since it will not be known which site will be successful it is proposed that semi-permanent stores are used during the investigations at both sites and a decision made once investigations are complete for the long term storage of core on site or transferred to the BGS facility in Keyworth.

3.3.7 **Digital Strategy & Embedding Digital Technologies**

Data management is a fundamental requirement of Site Characterisation to enable the safe storage, management, viewing and processing of data. Over the last 10 years the Site Characterisation team have developed a digital strategy which has defined requirements. An illustration of the overall strategy is shown in Figure 21.



Outline Digital Strategy

The systems summarised above are likely to incorporate digital tools.

There are likely to be a number of digital tools that will be used by the supply chain to undertake the data acquisition, processing, modelling and interpretation including sample trackers, 3D visualisation tools and geological, hydrogeological and hydrogeochemical modelling software.

Although the majority of these tools will be used by the supply chain, NWS will require access to these tools and versions of software that allow them to visualise the data and check that the modelling and interpretation has been correctly undertaken.

Digital tools and software will also be needed to share the Data and the Site Descriptive Model with the end users within the Design and Safety teams in a meaningful and accessible way.

The system is necessarily modular and is being developed on a needs basis as part of the NWS Common Data Environment (CDE) that allows the hosting and interoperable functioning of all these tools and system. To date the GIS elements and the storage and management of seismic data (DUG) elements have been bought and commissioned.

One of the contracts identified within the Site Characterisation project is the implementation of the remaining elements and the maintenance of the systems during the course of the works. The final scope will need refinement based upon the progress on the NWS CDE and the phasing of the works. Whilst provision has been made for this to be a standalone contract, during Contractor Engagement the potential SCDP organisations have expressed interest in this being part of the SCDP scope, this has merit but will be dependent on the actual experience and capability of the Individual company and a value for money review.

3.3.8 **Social Value, Sustainability, Environmental, SME Initiatives**

GDF is committed to maximising social value within the communities that GDF are working in partnership with through the delivery of wider social, economic and environmental benefits. Also, GDF would like to see a wider legacy programme of education and awareness around Science Technology Engineering and Mathematics (STEM) themes leading to geology and seismic surveying to further underpin the construction of the GDF and to bring more assurance to the communities of the placement of the facility.

It is noted that Social Value will be mandated as a minimum 10% of a contracting authorities evaluation criterion, therefore this procurement embeds this principal at the outset.

GDF has recently appointed a social value lead for GDF. Their role is to engage with communities and NWS GDF internally to assist in building focused social value initiatives into our procurements. This role will be involved in the implementation and tracking of social value benefits through the duration of the services.

It is anticipated at the time of calling off works, engagement will have taken place with the community through GDF's social value champion. This will be to inform specific social value outputs/outcomes that could be designed into the service.

At the time of writing this strategy the key social value themes that are being investigated as potentials to include within the social value contractual targets are as follows;

- STEM in schools and colleges
- Local work experience and employment
- Apprentices
- Use of local services, accommodation, transport and fishing trawlers
- Use of local small consultants for associated design work
- Local contractors to undertake some "minor works" aspects
- Investing time in local environmental projects and improvements to the environment
- Funding of community projects potentially such as paths green areas and shelters
- Looking for environmental benefits and zero waste opportunities for the delivery of the works
- Developing environmental improvements as a part of the works
- Building / maintenance of "core stores", lay down areas and associated local support services

NWS GDF in the development of an appropriate social value strategy for T3 will additionally use the following documents for support and guidance;

- The social value act 2012
- The social value procurement policy note (PPN 06/20)
- Social value model

- Apprenticeships (PPN14/15)
- Sustainability (incl. Government Buying Standards, Greening Government Commitments)
- Carbon Net Zero initiatives
- Small, Medium Enterprises (SME development)
- Social Value
- Modern Slavery
- Supply Chain Visibility
- UK Steel Charter
- Prompt Payment

3.3.9 **Cyber Essentials & Infosec**

The contract classification will be OFFICIAL or OFFICIAL SENSITIVE (excluding SNI). This needs further debate internally once the scope is further matured in 2023.

Suppliers are required to ensure that any IT Network, part of an IT network, or IT equipment used for OFFICIAL and/or OFFICIAL SENSITIVE information under the contract (including any used by Sub-Contractors) is operated and maintained in accordance with the technical requirements prescribed under the Government's Cyber Essentials Scheme. The level of verification required against the contract will be a minimum of Cyber Essentials Plus.

Suppliers and any sub-contractors may not be excluded at the tender stage if they do not have Cyber Essentials Plus accreditation providing the organisation is able to obtain accreditation within a period to be agreed with NWS GDF. Subject to the supplier or any sub-contractor not obtaining Cyber Essentials Plus accreditation (or its equivalent) within the agreed timescale to the satisfaction of NWS GDF, then NWS GDF reserves the right to either not enter into or to terminate the contract.

Once the contract has been awarded NWS GDF will maintain a right to audit the supplier's and any sub-contractor's premises to assure that security standards are maintained. NWS GDF will maintain the right to either not enter into or terminate the contract if Cyber Essentials Plus Certification is not maintained on an annual basis.

Note that this will be a topic for dialogue as there will be multiple parties within the SCDP, and it will need to be discussed how the different entities can comply with the infosec and physical security requirements required for our project.

Nuclear Waste Services

APPENDIX 3 - SCDP Market Engagement - NWS Presentation

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NWS Site Characterisation Project Market Engagement - Site Characterisation Delivery Partner

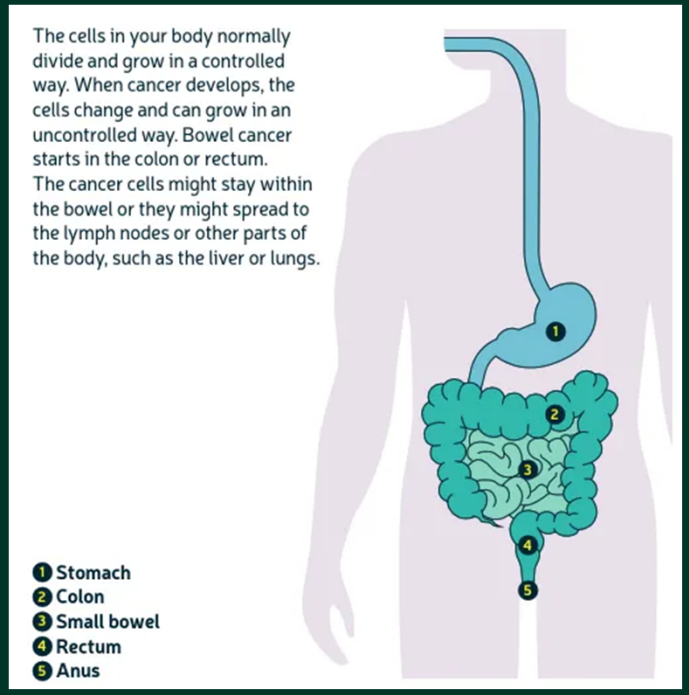
Safety share – Bowel Cancer Awareness

Symptoms:

1. Blood in stools
2. Change in bowel habit
3. Weight loss
4. Fatigue
5. Pain or lump in stomach

Screening:

- NHS screening automatically sent to anyone aged 60-74 (lowering to 50)



Nuclear Waste Services

Agenda

The proposed Agenda is:

1. Welcome and introductions	Andy Batstone	15 minutes
2. Safety Share	Supplier	5 minutes
3. Briefing by NWS	Chris Eldred	20 minutes
4. Presentation by Supplier on their Organisation	Supplier	20 minutes
5. Leading the discussion on the Defined topics	Supplier	210 minutes
6. AOB, Summary and wrap up	Andy Batstone	30 minutes

Close

GDF

Nuclear Waste Services

1. Introduction and Context

The UK GDF – A complex system of systems

Surface Facilities

Marine Facilities (Perm/Temp)

Low Heat (ILW) Disposal Vaults

Central Facilities

High Heat (HLW) Disposal Tunnels

Drift(s)

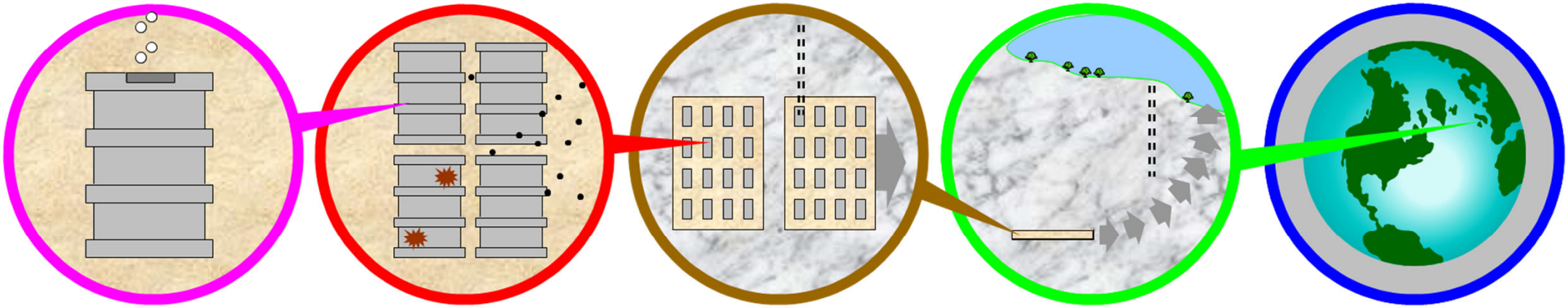
Shafts

Accessways & Systems

Scale: 1 km

Surface Facilities

Multi-barrier system – engineering & rock working together



100s years:
Containment

1000s years:
Breakdown of the package

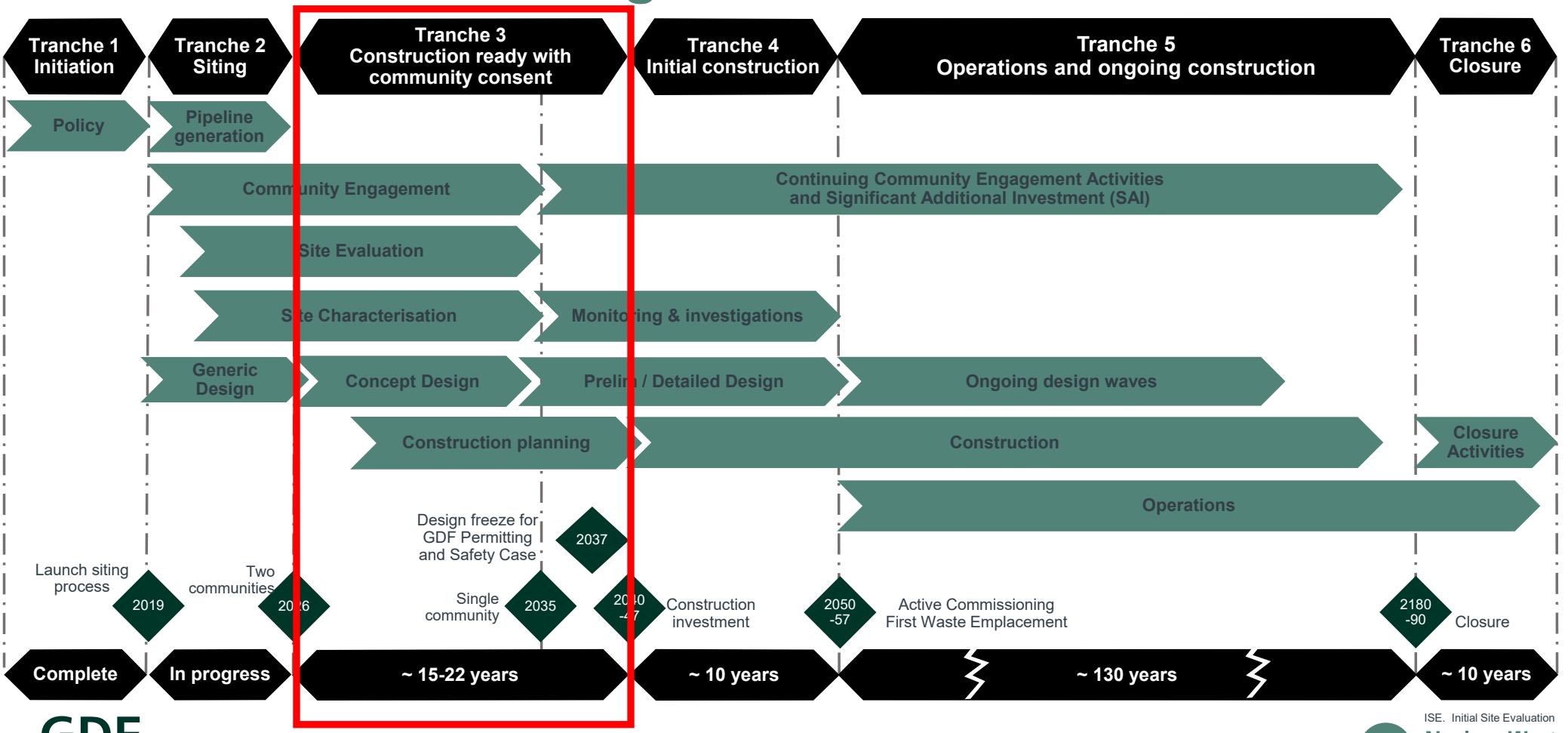
10,000s years:
Role of buffer & backfill

100,000s years:
Rock as a barrier

~1 million years:
Isolation from environmental change e.g. glaciations

The geology is a fundamental part of the long term safety case

GDF Schedule – The Big Picture



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ISE. Initial Site Evaluation

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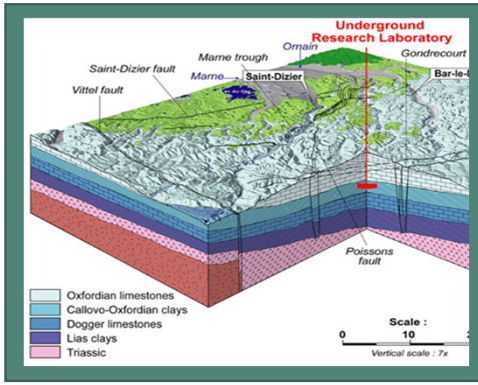
Key
Green – GDF Client and directly contracted supply chain
Grey – SCDP Directly contracted supply chain

The Delivery Model

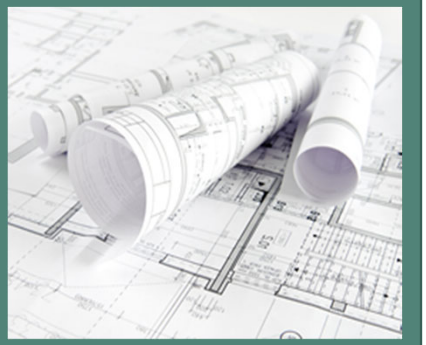
All Field Operations and Contractors managed by SCDP

Site Characterisation Scope



Professional Services

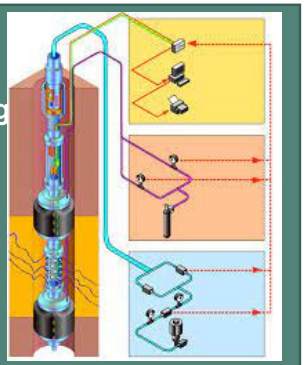
- Leadership , Technical and Project Management, Safety Leadership
- Requirements Setting
- Specification & procurement
- Contract Management
- Site Supervision
- Interpretation & modelling
- Site Descriptive Models
- Data management
- Quality control



Borehole Drilling and well services

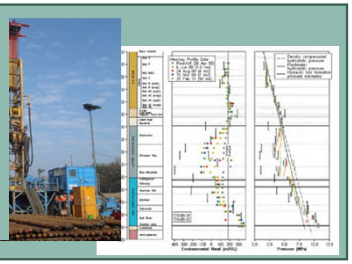
Drilling rig, dill pipe, casing personnel & associated services to operate and deliver high quality core and borehole

In Borehole, Logging Testing And Sampling, providing the in situ scientific information on rock, hydrogeological and geochemical properties .



Other services including:

- Marine and land Geophysical surveys
- Ground investigations (surface facilities & associated development)
- Topside infrastructure
- Long term monitoring
- Laboratory testing
- Data Management
- Data reporting
- Interpretation & modelling



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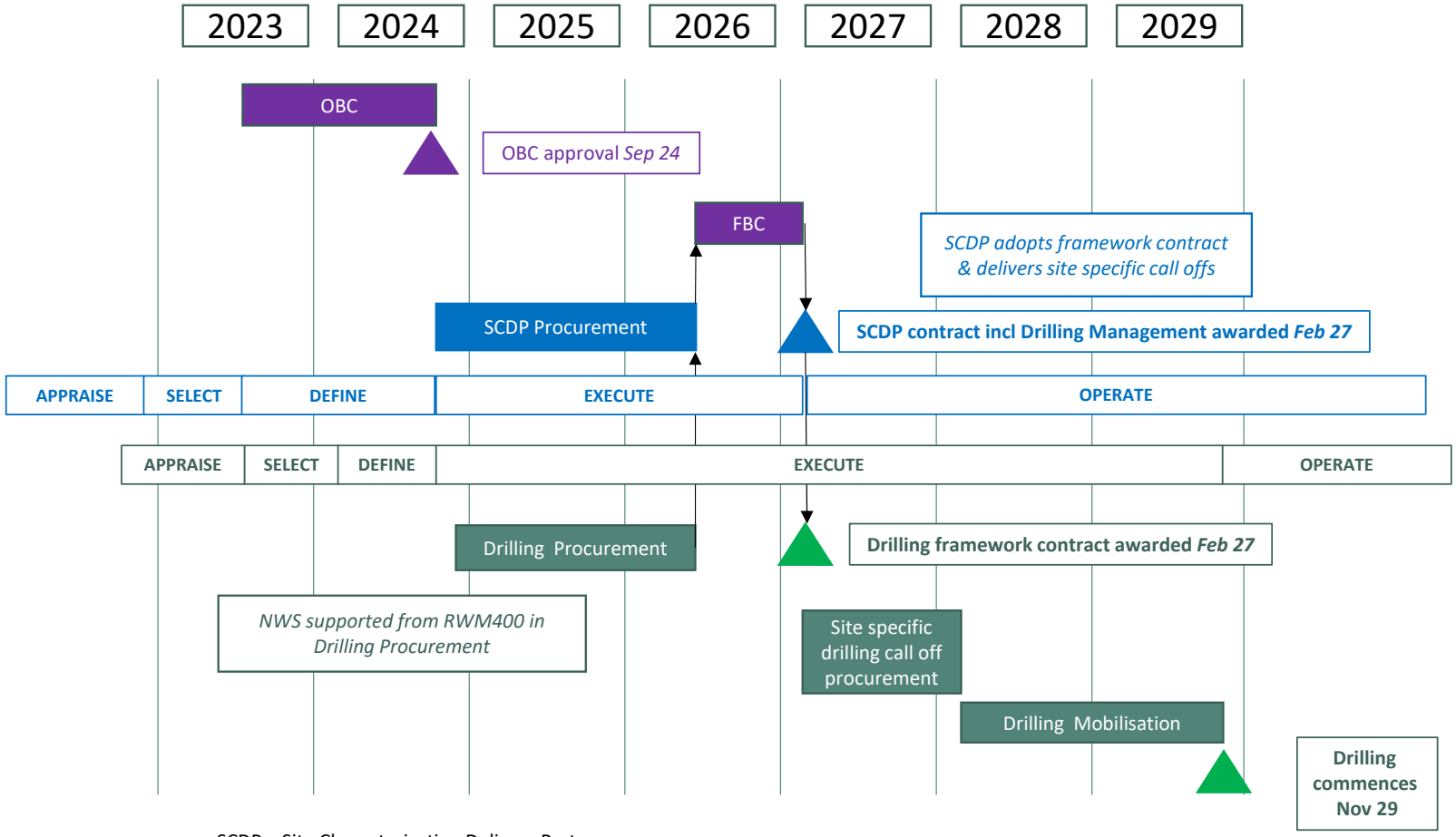
Outline Procurement Schedule



SCDP = Site Characterisation Delivery Partner
DMC = Drilling Management Consultant
OBC = Outine Business Case
FBC = Final Business Case

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Site Characterisation Commercial Strategy

NWS Site Characterisation – The Challenge

- This is a science project and a major infrastructure project
- At the same time it will be the hardest and most rewarding project we may ever work on
- NWS will appoint a Site Characterisation Delivery Partner (**SCDP**) who will work with NWS to agree requirements and design, procure and implement the Site Characterisation Plan (**SCP)** which will deliver the Site Descriptive Model (**SDM)**
- We will be under intense scrutiny from NWS,NDA and Government, communities, regulators and opponents
- We have to justify everything we do and adopt a no compromise approach to the quality of our work

NWS Site Characterisation – The Challenge

- Our **requirements do not sit squarely within any one sector**, it requires a unique combination of Oil and Gas, Mining, Infrastructure & Renewables and scientific sector expertise.
- Such extensive Wireline Coring and in situ testing is **very unusual in the marine oil and gas sector**
- We are **targeting low permeability rocks** with a far greater level of information requirements than any other sector
- The 200-1,000m **depth range is unusual**, deeper than standard engineering/scientific boreholes and shallower than that for oil and gas
- The shallow inshore **water depths also present a challenge** for the oil and gas rigs normally used further offshore
- None of these challenges are insurmountable but they will **require unique combinations** of techniques and approaches
- There is **little expertise within the UK industry of a comparable scientific characterisation programme** as Nirex was a long time ago and other WMO's have all struggled to get this right first time.
- We are not known in the sector where we will be drawing much of the resources

NWS Site Characterisation – The Challenge

In order to meet its obligations as an intelligent client organisation undertaking drilling operations, NWS

- Needs to develop its knowledge and competence,
- Raise its profile in the drilling and exploration market
- Develop its understanding of the regulatory environment which will apply to these works
- Understand the project risks and develop a risk management strategy and insurance requirements.
- Educate itself, the NDA, DESNZ and Cabinet Office in order to give confidence that we can deliver the programme of works.

A fundamental part of achieving this is to partner with a suitably qualified and experienced SCDP who is capable of delivering the proposed works

Site Characterisation Commercial Strategy

- The Site Characterisation scope of work is pretty well defined, understood and underpinned by experience from other International Waste Management Organisations and previous work by Nirex at Longlands Farm
- The Contract Packaging to deliver the scope are well defined and understood by a mature market, although our scientific requirements are in many areas very different to the Oil and Gas sector
- There is currently uncertainty as to which sites and how many sites NWS will be undertaking Site Characterisation at and the amount of investigation which will be required, this impacts the volume of the work, duration and costs only. It does not change the Contracting Strategy

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Site Characterisation Commercial Strategy

The NWS preferred Contracting Strategy is to let two NWS Contracts to deliver the total Scope of Services:

1. Site Characterisation Delivery Partner (SCDP)
2. Drilling Contractor (inshore and potentially onshore? Up to 3 separate contractors?)

A wide range of Services will be delivered by the SCDP through

- internal SCDP resources,
- potentially +/-14 major Contracts (Service Companies and Contractors)
- a wide range of minor sub contractors

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Finalising Our Commercial Strategy

As presented above, our preferred approach is to consolidate the NWS contracts as much as possible into the two main contracts.

Through this engagement we will test our approach and inform our views on whether this is an acceptable contracting strategy to both NWS and the SCDP which provides:

- Demonstrable Value for Money
- Appropriate risk management
- Access to the best technical expertise
- The optimum procurement approach

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Site Characterisation Contracting Structure

NWS Contracted Services

- Site Characterisation Delivery Partner (SCDP)
- Inshore Drilling Contractor(s)
- Onshore Drilling Contractor (If Required)

SCDP

- Drilling Management Services
- Core management, Sampling and Logging,
- Topography, Bathymetry, Passive seismic, Geological, Hydrology and other surveys
- Laboratory Analysis (Water and Rock) Porewater, Groundwater, Geotechnical, Isotope and Chemical
- Sea Bed Surveys and Airborne Geophysics
- Engineering FEED design of Topside and Well Pad design and Construction Civils
- Offices, Laydown areas and Core Storage Facility
- Programme and Contract Management, Principal Contractor and Principal Designer, potentially including the following Contract Packages:
  - ❖Hydrotesting
  - ❖In Situ Stress
  - ❖Integrated Well Services (Mud, mud logging, cementing, waste, fishing)
  - ❖Multilevel Monitoring System Installation and commissioning
  - ❖Geophysical Well Logging
  - ❖Top Side EPIC (Engineering, Procurement, Installation and Commissioning)
  - ❖Interpretation & Modelling, Data Management, Site Descriptive Model
  - ❖Shallow Ground Investigations
  - ❖Marine and Land Seismic Surveys
  - ❖Data management Services
  - ❖Casing
  - ❖Liner Hangers and Wellhead
  - ❖Multi Level Completion Engineering and Procurement)
  - ❖Coring String

Forms of Contract used in Oil and Gas Sector

- The site characterisation works will be undertaken by Contractors from the infrastructure, Oil and Gas (O&G) and Mining Industries
- In O&G sector works are normally undertaken on a day rate basis under Logic, IADC and supplier specific forms of contract, which outside of Reasonable Skill and Care obligations, allocate much of the risk, such as weather, down hole and ground risk etc, on a "regardless of fault" basis, with indemnity being owed by the Client on the principal of "**mutual hold harm**"
- Contractors from the O&G and Mining sector, including the Drilling, Drilling Services Contractors and seismic survey contractors are global Contractors who **do not see us as a large or necessarily attractive client** and have no experience of working with Public Sector, NEC and aligned risk allocation.
- There is an ongoing action for NWS Commercial to work with Legal, Risk and insurance teams to solidify approach and look to embed NEC best practice into a LOGIC based Contract. (as we did for Seismic Surveys)

LOGIC

part of

OEUK

GDF

Delivering Social Value through the SCDP

The supply chain we engage with and the way in which we work will define the impact and success of our commitment to delivering social value. In terms of specific social value strategies SCDP could deliver are outlined below:

- STEM in schools and colleges
- Local work experience and employment
- Apprenticeship'
- Use of local services, accommodation, transport and fishing trawlers
- Use of local small consultants for associated design work
- Local contractors to undertake some works aspects
- Investing time in local environmental projects and improvements to the environment
- Funding of community projects potentially such as paths green areas and shelters
- Looking for environmental benefits and zero waste opportunities for the delivery of the works
- Developing environmental improvements as a part of the works
- Building / maintenance of "core stores", lay down areas and associated local support services

GDF

Nuclear Waste Services

Public Sector Value For Money – Top 10 Factors

	Value for Money Factors to be embedded in Procurement and Delivery
1	Ensure strong safety culture
2	Focus on Whole Life Value
3	Alignment of Commercial Objectives to improve Outcomes
4	Appropriate Risk Ownership
5	Variable approach to pricing aligned with certainty of scope and risk
6	Ensure Culture of Continuous Improvement
7	Early Supplier Involvement and Strategic Supplier Strategy
8	Tender Evaluation Criteria include best mix of relevant expertise, quality performance, sustainability, risk, social value and cost
9	Effective Contract Management
10	Efficient decision making

Areas for Discussion

1. Market Dynamics, Capacity and Capability to deliver the works
2. Gaps and threats to project delivery, Technical Challenges and Resourcing
3. Working as part of an Alliance, or in partnership, threats and Opportunities
4. Overall structure of SC delivery, NWS prime and SCDP core capability and supply chain
5. Contract packaging strategy, volume of contracts
6. Aligning NEC Contract with supply chain standard contracting practice
7. Contract / Delivery risk management, lead in times and critical path issues ownership and mitigation strategies
8. The competitive dialogue public sector procurement process strategy - risks and benefits
9. Co-location of the SCDP supply chain and critical SC suppliers
10. Digital strategy and embedding digital technologies
11. Social value, sustainability, environmental and SME initiative

Nuclear Waste Services

APPENDIX 4 - SCDP Contracting and Competition Principles Document

SCDP Contracting and Competition Principles Document

Table of Abbreviations

Abbreviation	Meaning
CCS	Crown Commercial Service
DMA	Delivery Model Assessment
ECC	Engineering and Construction Contract
EPC	Engineering, Procurement, and Construction
GDF	Geological Disposal Facility
ITT	Invitation to Tender
KPIs	Key Performance Indicators
LADD	Liquidated and Ascertained Damages for Delay
M&O	Maintenance & Operation
NDA	Nuclear Decommissioning Authority
NEC4	New Engineering Contract 4
NWS	Nuclear Waste Services
PCG	Parent Company Guarantee
PIN	Prior Information Notice
PSC	Professional Services Contract
SCDP	Site Characterisation Delivery Partner
SFI	Self-Funded Incentive
SSJ	Single Supplier Justification
SQ	Supplier Questionnaire
UPCG	Ultimate Parent Company Guarantee

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Contracting and Competition Principles – Example for an EPC Contract

Introduction

The principles below form the basis of how Nuclear Waste Services (NWS) proposes to procure and engage the Site Characterisation Delivery Partner (SCDP) for the GDF Project.

The purpose of this approved paper is to provide a clear and stable basis for developing the detail of the SCDP Procurement Strategy. The approved principles will also be shared with the supply chain as part of a programme of market engagement to underpin the SCDP Procurement Strategy.

Topic Area	Issue	Principle
Contract Terms	Form of Contract	Bespoke Framework based upon NEC4, primarily PSC but with elements of ECC.
	Style of Contract	A Single Supplier Framework Agreement for the programme of work (namely the Site Characterisation of two potential communities) to provide a flexible contractual vehicle to agree and instruct scope, post award. It will also (subject to NWS approval) provide the flexibility to utilise other NWS, NDA, CCS Framework Agreements (under the control of the SCDP Contractor) in the execution of the project. The Framework Agreement will contain of the Contract Terms that apply to all work packages and an obligation for the SCDP to coordinate and integrate all works executed by it. Individual Task Orders will cover the scope of work to be delivered and specify the method of reimbursement. The Framework Agreement will include an obligation that the SCDP must accept Task Orders issued by NWS which are within the scope of the overall programme of work.
	Control Estimate and Schedule	Each Task Order shall have its own Cost and Schedule which will be priced by the SCDP upon request using all of the 3 pricing mechanisms (Priced Activity Schedule; Target Cost Incentive or Cost Reimbursable).
	Nuclear Liability	Standard NDA flow-down conditions will apply.
	Insurances & Indemnities	The Contractor will be required to provide the following insurances: • Employer Liability Insurance (statutory minimum) • PI Insurance • Public and Product Liability Insurance • Motor Vehicle Insurance
	Plant Performance and Functionality	NWS will retain overall responsibility for the following: • Design risk for all work undertaken prior the value transition point • Supply chain performance risk

Topic Area	Issue	Principle
		The Drilling Contractor will retain overall responsibility for the following: • Installation error • Plant functionality • Latent defects on installed items of plant and equipment • Standard of workmanship based on flow down of 'good industry practice' provisions in M&O Contract • Breach of legislation
	Limit of Liability	The Framework Agreement will contain a provision that limits both NWS and the Contractor's liability. Limits of Liability shall be on an individual Task Order basis, the limits shall be set at 5 x the Task Order value with the following exclusions: • Fraud of Wilful Default; • Death or Personal Injury caused by negligence, • Loss or damage to third party property, • Delay damages should they be included within a Task Order; Any amounts recoverable from the SCDP's insurance taken out and maintained in accordance with the requirements of the Framework and/or Task Order.
	Exclusion of Consequential Loss	Mutual exclusion of Consequential Loss will be included in the Form of Agreement as will standard NWS flow-downs regarding recoverable NWS losses.
	Liquidated and Ascertained Damages for Delay (LADD)	Where appropriate NWS can include, LADDs where these will be applied will be clearly marked out in the Task Order including the value, unit of measure of delay (day, week, month) and any caps.
	Key Contractor Staff	Ensuring that staff proposed for key roles at the tender stage are available for the commencement of the work is a requirement. In addition to standard flow down conditions: • NWS will identify key Contractor staff roles at tender stage. • Key Contractor staff will be required to commit to and work on the project for a minimum of 12 months before any changes of personnel will be considered. • The Contractor will be required to prepare and maintain a continuity plan which assures adequate succession arrangements are always in place for key Contractor staff roles. • Post award (and specifically other than where an individual leaves the company or requests removal from the project on compassionate grounds), the Contractor will be required to provide NWS with at least 6 months notice of their intention to remove key staff from the project.

Topic Area	Issue	Principle
		Where a change of key staff is proposed the Contractor will be required to provide NWS with a candidate with equal or greater experience and qualifications and that is acceptable to NWS. Additionally, there will be a minimum 3 month transition period (continuous) where both the key individual and their replacement will be required to work together on the project on a full time basis. During this 3 month period the Contractor will bear the full cost of the replacement candidate.
	Defects Date	The Defects Date for all purchase orders will be the same and will all complete 52 weeks after the completion of the Task Order.
	Parent Company Guarantee (PCG)	Where required a Parent or Ultimate Parent Company Guarantee will be provided. The requirement for this shall be based on the financial strength of the Contractor at award stage and shall be monitored throughout the life of the Framework, should the score fall below the threshold a PCG or UPCG can be requested at any time.
	Performance Bond	NWS can include the right to a Performance Bond for a particular Task Order, this will be clearly stated in the request for pricing.
	Payment Terms	Standard NWS Payment Terms to apply - payment applications submitted at monthly intervals with payment being paid within the following month.
	Delivery Model Assessment (DMA) / Make or Buy	The tender document will set out the core scope to be delivered by the SCDP. For those works outside of the core scope that are to be procured by the SCDP either as a sub contract to the SCDP or a direct contract to NWS, the SCDP shall complete a DMA which shall be assessed by NWS. SCDP will provide a recommendation to determine the best route to market for any given activity, this shall include any activities that the SCDP may consider they could self deliver or where the SCDP plans to subcontract to the supply chain. The following arrangements will apply: • Scope awarded to Contractor affiliates on a sole source basis through the DMA will be defined as ‘Make’ or ‘Self Performed’ and will only attract Direct Fee (i.e. no separate sub-contractor fee will be allowed on the value of scope performed) • Where the DMA has recommended a Buy this will be done in compliance with Public Contracts Regulations Where the DMA has recommended a Buy, an understanding of the market will need to be evidenced, which will then determine the number of quotes or tenders needed. This could include Single Supplier Justification (SSJ) or a maximum of three tenders.
	Method of Reimbursement	The Framework will have the ability to use all of the pricing mechanisms below: • Lump Sum against Activity Schedule • Lump Sum against a Bill of Quantities • Target Cost Incentive Mechanism

Topic Area	Issue	Principle
		• Cost Reimbursable The pricing mechanism will be detailed on the Task Order. The following reimbursement principles are proposed: • Rates based on actual salary (auditable) • Rate enhancement for working away / offshore actual pay (auditable) • Normal Overhead percentage for all other on costs working at own premises • Reduced Overhead percentage for all on costs working at NWS premises • Profit Percentage • Self-Funded Incentive Percentage • Sub-contractor mark-up Percentage
		• In order to preserve the full intent of the right of audit and reconciliation, the Contractor will be required to ensure that all roles identified by NWS at tender stage can be fulfilled through either directly employed staff or agency supplied workers. The use of sub-contractors to fulfil the roles will be prohibited save only for exceptional situations post award where, subject to NWS approval, it can be demonstrated that the sub-contract arrangements will maintain the audit and reconciliation arrangements outlined above. • A protocol which sets out how the mutual requirements for a full and transparent audit together with the protection of confidential data will be assured, will need to be accepted at tender stage.
	Self-Funded Incentive Model	This Framework shall operate on a Self-Funded Incentive (SFI) model, the intent will be to maintain performance throughout delivery. A minimum percentage of all costs will be proposed in the ITT with bidders adding their own voluntary contribution at bid stage, the final percentage will be incorporated into the Framework Agreement and shall be applied to all Task as below: X% of all costs shall be put into the SFI Pot and shall be payable against the following: • 50% against completion of Milestones set within the Task • 25% against annual KPI performance measure • 25% against successful delivery of the Social Value objectives committed to within the Tender or set for the year prior to the anniversary date. Any monies lost due to non-delivery or KPI/Social Value performance may be set aside to be earned through delivery of Golden Milestone Outcomes which shall be agreed.

Topic Area	Issue	Principle
	KPIs	KPIs will be implemented at both Framework level and at Task level, these will be used to monitor performance including behaviour (collaboration culture and safety), delivery (quality and VfM), Social Value and others. Task based KPI's shall be monitored, measured and reported on every month, Framework KPI's shall be monitored, measured and reported on every quarter. Task based KPI's shall impact Framework KPI's. Failure to submit KPI by agreed date will result in all KPI measurements being scored at the lowest value. • KPI performance is a key part of the SFI
	Task Orders	The final Task Order issued under the Framework Agreement must be awarded within *20* years of Contract award.
	Completion Date	The Framework Agreement will be limited to the maximum term plus the sanctioned options. Task Orders can survive the Framework Agreement up to a maximum of 5 years.
	Long Lead Plant & Equipment Procured by NWS	The Framework Agreement will support both the novation and free issue of long lead plant and equipment procured by NWS. The final decision should rest with NWS. However, the declared preference will be for novation.
	Termination	The grounds for Termination will be Default & Convenience (NWS standard conditions to apply) Remedies for default will be based on standard NWS conditions In the event of Termination For Convenience loss of profit will be excluded. To the extent possible NWS will seek to pre-determine Termination For Convenience compensation through the competitive tendering process. The SCDP Contractor to have the obligation to novate all Tier 3 contracts to NWS on NWS's request following either Termination For Convenience or Default.
	Site	The Contractor will not to have exclusive control of the Site. However, the Contractor will be responsible for coordinating all of their works on the Site and for managing the interfaces between their works and those of any other parties working on the Site.
	Collateral Warranties	Collateral Warranties maybe requested within individual Task Orders / Call Offs

Topic Area	Issue	Principle
Procurement Strategy	Dispute Resolution Rules	Dispute resolution rules will be in accordance with standard NWS flow downs
	Key NWS Obligations	Key NWS obligations will include: • Performance against engineering / design schedule • Access and egress to the site (within the overall NWS boundary) • Coordination and control of project level interfaces / constraints • Performance of contracts procured as part of advance works for long lead plant and equipment (subject to novation) • Definition of start point and end point for the contract • Provision of office accommodation within the selected communities for the Contractor to utilise for SCDP related work.The timely letting of Work Package Purchase Orders NB. Measures should be agreed with the Project Board to provide an objective means of assessing NWS readiness (prior to contract award) to perform these obligations.
	Key SCDP Contractor Obligations	Key SCDP Contractor obligations will include: • Safety Leadership • Overall programme, technical and procurement delivery, including but not limited to preparation of Site Characterisation requirements, designs, specifications, procurement documents, Contract management, technical management and coordination of all contractors. • Integration of all Task/System/Equipment Interfaces • Supply chain procurement and management • Resource management & coordination • Completion of all design • Inactive commissioning • Integration with other contractors as identified and or procured by NWS • Preparation of all plans, permits and documentation required to deliver the works • Provision of digital and quality management systems • Undertaking data processing and interpretations • Preparation of Site Descriptive models

Topic Area	Issue	Principle
	Consortium or JV formation	All members of a JV or Consortium will be jointly and severally liable for the performance of the Contract and any/all liabilities thereby arising.
	Procurement Procedure under Public Contracts Regulations	The Restricted Procedure will be used to select and appoint the SCDP Contractor. There will be a form of interview within the process at this stage we are developing the detailed process and evaluation criteria for this format, it is likely to take the form of a presentation of the bid made by the actual named delivery team with questions from a panel. Other options have been assessed and discounted on the following basis: • The Open Procedure offers initial schedule benefit. However, the cost reimbursable form of contract will potentially create high level of interest and the short term gain could easily be more than offset in the evaluation phase if the number of bids is unconstrained. By contrast the Restricted Procedure allows NWS to use a prequalification process to control the quality and number of bidders invited to tender. • The nature of the project does not align with the intent of the Dialogue Procedure.
	Market Engagement	Further Market Engagement and Expression of Interest will be conducted with the supply chain Prior to the publication of the Call for Competition PIN. The stated purpose of the Further Market Engagement and Expression of Interest will be to test the procurement and contracting principles set out in this paper. It will not in anyway preclude other parties from participating in the competition nor will it offer any advantage to one party over another. The Further Market Engagement will be in the form of an industry event held following publication of the RFI/PIN to further publicise the SCDP procurement process competition. The Expression of Interest and industry event will be used to gauge the general level of interest in the competition. A Call for Competition PIN will be published following the approval of the Procurement Outline Business Case and conclusion of Further Market Engagement and Expression of Interest to provide advance notice of NWS's intent to approach the market, this is currently scheduled for March 2025.
	Supplier Questionnaire (SQ)	The Supplier Questionnaire (SQ) process will be used to down-select to a maximum of 5 bidders (minimum permitted under the Public Procurement Regulations) through a combination of threshold and ranking criteria. The Selection Criteria will be developed in detail in the SCDP Procurement Strategy and will be subject to governance approval. A key principle will be to use threshold criteria to eliminate potential participants that do not have the capability or the necessary experience to deliver large complex projects of a similar nature to the SCDP requirement. In addition, the SQ process will assess experience and track record in respect of managing and satisfying socio-economic obligations.

Topic Area	Issue	Principle

	Contract Award Criteria	Contract Award Criteria will be the Most Economically Advantageous Tender. NWS will not have a fully defined Scope of Work to take to market at tender stage, however, tasks have been identified that need to be undertaken in the first eighteen (18) months post tender award. Tenders will include binding offers of cost and schedule for these identified tasks. The Most Economically Advantageous Tender will be determined through a combination of threshold and ranking criteria that are expected to focus on the following areas:
		• Quality of the proposed Leadership / Delivery Team to provide overall leadership and demonstrate technical competence
		• Quality of their management plans and proposals for delivery – specifically including but not limited to:
		  ○ Alignment of their delivery vision to that of NWS
		  ○ Alignment of SCDP values with those of NWS
		  ○ Driving schedule performance of the project
		  ○ DMA /Make v Buy strategy & associated procurement plans
		  ○ Procurement, Contract Management, Performance Management of the supply chain
		  ○ Social Value
		• Rates, Overhead & Fee (* refer to detailed notes below)
		• Task Costs
		• Self-Funded Incentive (SFI) total % offered.
		Detailed Contract Award Criteria will be developed in detail in the SCDP Procurement Strategy and will be subject to governance approval.
		The relative weighting of quality versus cost will be confirmed in the SCDP Procurement Strategy and will be subject to governance approval. However, the rough order of magnitude weighting shall be:
		• 60% Technical
		• 10% Social Value
		• 30% Commercial

The following suppliers shall not be engaged on an exclusive basis and shall be availble for all bidders

- The British Geological Survey
- NAGRA