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nec®4

Professional Service Contract

Contract Data Forms

June 2017
(with amendments January 2019)

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Contract Execution

This agreement is made between the *Client*, the *Consultant* and the Named Suppliers.

Terms in this agreement have the meanings given to them in the contract between the Environment Agency and WSP UK Limited for the Digitising Engineering Standards (Implementation) project (the *service*).

The Consultant offers to Provide the Services in accordance with these conditions of contract for an amount to be determined in accordance with these conditions of contract.

The Consultant was appointed to the framework and executed the framework agreement (with reference number RM6165).

Contract Execution

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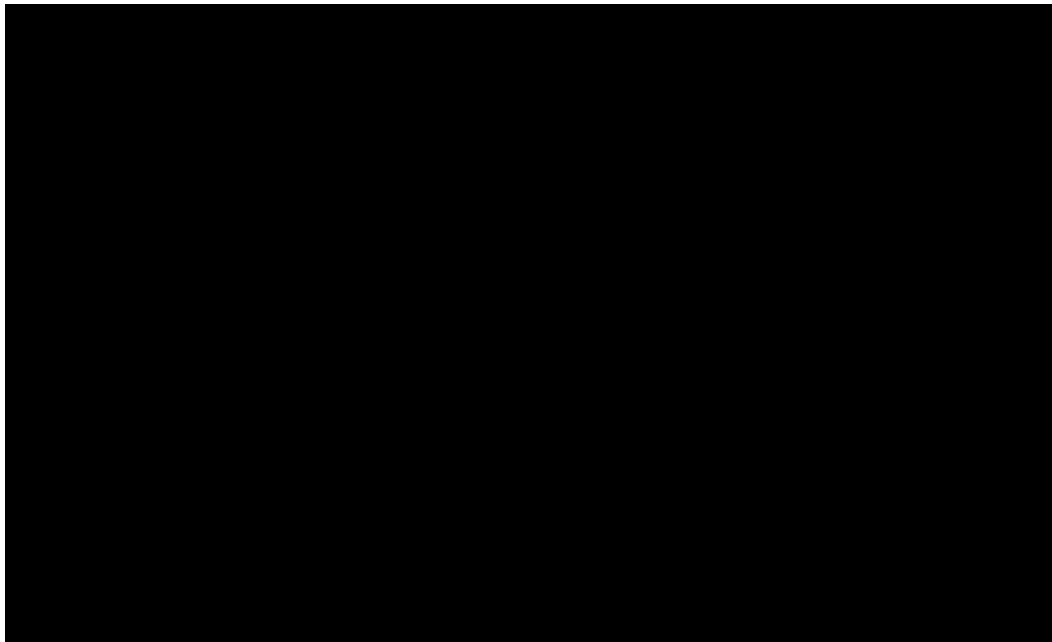
Contract Data

PART ONE – *CLIENT*

Completion of the data in full, according to the Options chosen, is essential to create a complete contract.

1 General

The *conditions of contract* are the core clauses and the clauses for the following main Option, the Option for resolving and avoiding disputes and secondary Options of the NEC4 Professional Service Contract June 2017 (with amendments January 2019)

Main Option	E	Option for resolving and avoiding disputes	W2

Secondary Options

> X2, X9, X10, X11, X18, Y(UK)2, Y(UK) 3, Z1, Z2, Z3, Z6, Z7, Z8, Z9, Z12, Z125, Z130, Z131

The *service* is

> To deliver the objectives of the Digitising Engineering Standards project including activities that are not limited to project and information management, implementation tasks, embedding activities, change management activities and training outputs.
> Required for a period of 15 months but the parties can agree to extend for a period up to 12 months through single or multiple extensions.

The *Client* is

Name
> Environment Agency

Address for communications

Address for electronic communication

The *Service Manager* is

Name

Address for communications

Address for electronic communicatio

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The Scope is in

This page has been amended in 2019

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The *language of the contract* is	English

The *law of the contract* is the law of → England and Wales, subject to the jurisdiction of the courts of England and Wales

The *period for reply* is → 2 weeks | except that

- The *period for reply* for → n/a | is | n/a
- The *period for reply* for → n/a | is | n/a

The *period for retention* is | 6 | year(s) following Completion or earlier termination

The following matters will be included in the Early Warning Register

Early warning meetings are to be held at intervals no longer than → 2 weeks

2 The *Consultant's* main responsibilities

If the *Client* has identified work which is set to meet a stated *condition* by a *key date*

The *key dates* and *conditions* to be met are

condition to be met	*key date*
(1)	
(2)	
(3)	

If Option A is used

The *Consultant* prepares forecasts of the total *expenses* at intervals no longer than → 4 weeks

If Option C or E is used

The *Consultant* prepares forecasts of the total Defined Cost plus Fee and *expenses* at intervals no longer than → 4 weeks

3 Time

The *starting date* is → ██████████

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The *Client* provides access to the following persons, places and things

	access	
(1)	Client systems and data	████████
(2)		
(3)		

The *Consultant* submits revised programmes at intervals no longer than | 4 weeks |

| If the *Client* has decided the *completion date* for the whole of the *service* | The *completion date* for the whole of the *service* is | ████████ |

| If no programme is identified in part two of the Contract Data | The period after the Contract Date within which the *Consultant* is to submit a first programme for acceptance is | 2 weeks |

4 Quality management

	The period after the Contract Date within which the *Consultant* is to submit a quality policy statement and quality plan is	4 weeks, if not previously provided by the *Consultant*
	The period between Completion of the whole of the *service* and the *defects date* is	26 weeks

5 Payment

	The *currency of the contract* is the	£ sterling
	The *assessment interval* is	Monthly

| If the *Client* states any *expenses* | The *expenses* stated by the *Client* are | |

item	amount

The *interest rate* is | 2 | % per annum (not less than 2) above the

| Base | rate of the | Bank of England | bank |

| If the period in which payments are made is not three weeks and Y(UK)2 is not used | The period within which payments are made is | 1 Month |

| If Option C or E is used and the *Client* states any locations | The locations for which the *Consultant* provides a charge for the cost of support people and office overhead are | All UK offices |

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~~If Option C is used~~ ~~The *Consultant's share percentages* and the *share ranges* are~~

share range ~~*Consultant's share percentage*~~

~~less than~~	~~80~~	%	~~0 – below this threshold any further savings are allocated 100% to the Client~~	%	
~~from~~	~~80~~ % to ~~120~~ %		~~50~~	%	
~~from~~	~~–~~ % to ~~–~~ %		~~–~~	%	
~~greater than~~	~~120~~	%	~~0~~	%	

If Option C or E is used ██████████ ~~blished~~ in   Financial Times

6 Compensation events

If there are additional   These are additional compensation events

> Not applicable

8 Liabilities and insurance

If there are additional *Client's* liabilities

These are additional *Client's* liabilities

(1) Not applicable

(2)

(3)

The minimum amount of cover and the periods for which the *Consultant* maintains insurance are

EVENT	MINIMUM AMOUNT OF COVER	PERIOD FOLLOWING COMPLETION OF THE WHOLE OF THE *SERVICE* OR TERMINATION
The *Consultant's* failure to use the skill and care normally used by professionals providing services similar to the *service*	£1 million in respect of each claim, without limit to the number of claims	6 years following Completion of the whole works or earlier termination
Loss of or damage to property and liability for bodily injury to or death of a person (not an employee of the *Consultant*) arising from or in connection with the *Consultant* Providing the Service	Whichever is greater of £5 million or the amount required by law in respect of each event, without limit to the number of events	12 months
Death of or bodily injury to employees of the *Consultant* arising out of and in the course of their employment in connection with the contract	Whichever is greater of £5 million or the amount required by law in respect of each event, without limit to the number of events	For the period required by law

The *Consultant* provides these additional insurances

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(1) Insurance against	n/a
Minimum amount of cover is	n/a
The deductibles are	n/a
(2) Insurance against	n/a
Minimum amount of cover is	n/a
The deductibles are	n/a
(3) Insurance against	n/a
Minimum amount of cover is	n/a
The deductibles are	n/a

The *Consultant's* total liability to the *Client* for all matters arising under or in connection with the contract, other than the excluded matters is limited to

£1 million

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Resolving and avoiding disputes

	The *tribunal* is	Litigation in the courts

If the *tribunal* is arbitration   The *arbitration procedure* is   'to be confirmed'

The place where arbitration
is to be held is   'to be confirmed'

The person or organisation who will choose an arbitrator if the Parties cannot agree a
choice or if the *arbitration procedure* does not state who selects an arbitrator is

The *Senior Representatives* of the *Client* are

Name (1)

Address for communications

Address for electronic communica

Name (2)

Address for communications

Address for electronic communicatio

The *Adjudicator* is

Name	'to be confirmed'
Address for communications	'to be confirmed'
Address for electronic communications	'to be confirmed'
The *Adjudicator nominating body* is	Institution of Civil Engineers

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X2: Changes in the law

| If Option X2 is used | The *law of the project* is | The law of England and Wales, subject to the jurisdiction of the courts of England and Wales |

X5: Sectional Completion

If Option X5 is used ~~The *completion date* for each section of the *service* is~~

~~section~~	~~description~~	~~completion date~~
~~(1)~~	–	–
~~(2)~~	–	–
~~(3)~~	–	–
~~(4)~~	–	–

X7: Delay damages

~~If Option X7 is used without Option X5~~ ~~Delay damages for Completion of the whole of the *service* are~~ – ~~per day~~

~~If Option X7 is used with Option X5~~ ~~Delay damages for each *section* of the *service* are~~

~~section~~	~~description~~	~~amount per day~~
~~(1)~~	–	–
~~(2)~~	–	–
~~(3)~~	–	–
~~(4)~~	–	–

~~The delay damages for the remainder of the *service* are~~ –

X8: Undertakings to Others

~~If Option X8 is used~~ ~~The *undertakings to Others* are provided to~~

| – |
| – |

X9: Transfer of Intellectual Property Rights

X10: Information modelling

If Option X10 is used

If no *information execution plan* is identified in part two of the Contract Data | The period after the Contract Date within which the *Consultant* is to submit a first Information Execution Plan for acceptance is | 2 weeks

X11: Termination by the Client

X13: Performance bond

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If Option X13 is used	The amount of the performance bond is	–

X18: Limitation of liability

If Option X18 is used	The *Consultant's* liability to the *Client* for indirect or consequential loss is limited to	£1 million
	The *Consultant's* liability to the *Client* for Defects that are not found until after the *defects date* is limited to	£1 million

The *end of liability date* is | 6 | years after the Completion of the whole of the *service*

X20: Key Performance Indicators (not used with Option X12)

If Option X20 is used	The *incentive schedule* for Key Performance Indicators is in	–
	A report of performance against each Key Performance Indicator is provided at intervals of	– months

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~~Y(UK)1: Project Bank Account~~

~~Charges made and interest the paid by the *project bank*~~ ~~The *Consultant* **is / is not** to pay any charges made and to be paid any interest paid by the~~ ~~*project bank* (Delete as applicable)~~

Y(UK)2: The Housing Grants, Construction and Regeneration Act 1996

If Option Y(UK)2 is used and the final date for payment is not fourteen days after the date on which payment becomes due

The period for payment is | 14 | days after the date on which payment becomes due

Y(UK)3: The Contracts (Rights of Third Parties) Act 1999

If Option Y(UK)3 is used

term	beneficiary
No term under this contract	No beneficiary under this contract

If Y(UK)3 is used with Y(UK)1 the following entry is added to the table for Y(UK)3

term	beneficiary
The provisions of Options Y(UK)1	Named Suppliers

~~Y(UK)1: Project Bank Account~~

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Z: *Additional conditions of contract*

If Option Z is used   The *additional conditions of contract* are

Z1 Disputes:
Option W2 subclause W2.1(4) is deleted. The Parties agree that adjudication under Clause option W2 should only commence if the dispute resolution procedure has been exhausted and that the dispute resolution procedure in the Scope, takes precedence over Option W2.

Z2 Prevention
The text of clause 18 Prevention is deleted.
Delete the text of clause 60.1(12) and replace with:
The service is affected by any of the following events
• War, civil war, rebellion, revolution, insurrection, military or usurped power;
• Strikes, riots and civil commotion not confined to the employees of the *Consultant* and sub consultants,
• Ionising radiation or radioactive contamination from nuclear fuel or nuclear waste resulting from the combustion of nuclear fuel,
• Radioactive, toxic, explosive or other hazardous properties of an explosive nuclear device,
• Natural disaster,
• Fire and explosion,
• Impact by aircraft or other aerial device or thing dropped from them.

Z3 Disallowed Costs
In second bullet of 11.2 (18) add:
(including compensation events with the Subcontractor, i.e. payment for work that should not have been undertaken).
Add the following additional bullets after 'and the cost of ' :
• Mistakes or delays caused by the *Consultant's* failure to follow standards in Scopes/quality plans.
• Reorganisation of the *Consultant's* project team.
• Additional costs or delays incurred due to *Consultant's* failure to comply with published and known guidance or document formats.
• Exceeding the Scope without prior instruction that leads to abortive cost
• Re-working of documents due to inadequate QA prior to submission, i.e. grammatical, factual arithmetical or design errors.
• Production or preparation of self-promotional material.
• Excessive charges for project management time on a commission for secondments or full time appointments (greater than 5% of commission value)
• Any hours exceeding 8 per day unless with prior written agreement of the *Service Manager*
• Any hours for travel beyond the location of the nearest consultant office to the project unless previously agreed with the Service Manager
• Attendance of additional individuals to meetings/ workshops etc who have not been previously invited by the *Service Manager*
• Costs associated with the attendance at additional meetings after programmed Completion, if delay is due to *Consultant* performance.
• Costs associated with rectifications that are due to *Consultant* error or omission.
• Costs associated with the identification of opportunities to improve our processes and procedures for project delivery through the *Consultant's* involvement
• Was incurred due to a breach of safety requirements, or due additional work to comply with safety requirements

Z6 The Schedule of Cost Components
The rates and costs in this contract shall be compliant with CCS CPS framework (RM6165) (including Schedule 11 *Framework Prices*).

Z7 Linked contracts
Issues requiring redesign or rework on this contract due to a fault or error of the *Consultant* under this contract or a previous contract will neither be an allowable cost under this contract or any subsequent contract, nor will it be a Compensation event under this contract or any subsequent contract under this project or programme.

Z8 Requirement for Invoice
Insert the following sentence at the end of clause 51.1:
The Party to which payment is due submits an invoice to the other Party for the amount to be paid within one week of the Service Manager's certificate.
Delete existing clause 51.2 and insert the following:
51.2 Each certified payment is made by the later of
• one week after the paying Party receives an invoice from the other Party and
• three weeks after the assessment date, or, if a different period is stated in the Contract Data, within the period stated.
If a certified payment is late, or if a payment is late because the *Service Manager* has not issued a certificate which should be issued, interest is paid on the late payment. Interest is assessed from the date by which the late payment should have been made until the date when the late payment is made, and is included in the first assessment after the late payment is made.

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Z9 Conflict of Interest

The Consultant immediately notifies the *Client* of any circumstances giving rise to or potentially giving rise to conflicts of interest relating to the *Consultant* (including without limitation its reputation and standing) and/or the *Client* of which it is aware or which it anticipates may justify the Client taking action to protect its interests. Should the Parties be unable to remove the conflict of interest to the satisfaction of the *Client,* the *Client*, in its sole discretion, may terminate this Contract.

Z12 Waiver

No waiver shall be effective unless it is expressly stated to be a waiver and communicated to the other Party by the *Service Manager* in writing in accordance with the Contract, and with express reference to Clause Z12. The failure of either party to insist upon strict performance of the Contract, or any failure or delay in exercising any right or remedy shall not constitute a waiver or diminution of the obligations established by the Contract.

Z125 Limitation of Liability

Under clause 87.1; after the fourth bullet point; insert the additional bullet points:

 • loss of or damage to the Client's property, to the sum that the Consultant is required to insure under the contract in respect of such loss or damage,

 • death of or bodily injury to employees of the Consultant arising out of and in the course of their employment in connection with the contract, to the sum that the Consultant is required to insure under the contract in respect of such death or bodily injury.

Z 130 Rate adjustment

Z130.1 The Defined Cost for People Rates shall be increased by the same proportion and on the same date as the appropriate *Framework Prices.*

Z130.2 (Option C ONLY) The Prices are adjusted for the outstanding portion of the Prices for the amendment to rates in Z130.1.

Z 131 Change to the Schedule of Cost Components

Add clause 11.2(19) The People Rates are the *people rates* unless later changed in accordance with the contract and provided that at all times and under any circumstance howsoever arising the People Rates do not exceed the equivalent and directly comparable Framework Price as set out in Crown Commercial Services (CCS) Construction Professional Services Framework RM6165.

In the Schedule of Cost Components delete the section titled **People** and replace with:

People

1 The following components of the cost of people.

11 Amounts calculated by multiplying each of the People Rates by the total time appropriate to that rate properly spent on work on the contract.

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PART TWO –

Completion of the data in full, according to the Options chosen, is essential to create a complete contract.
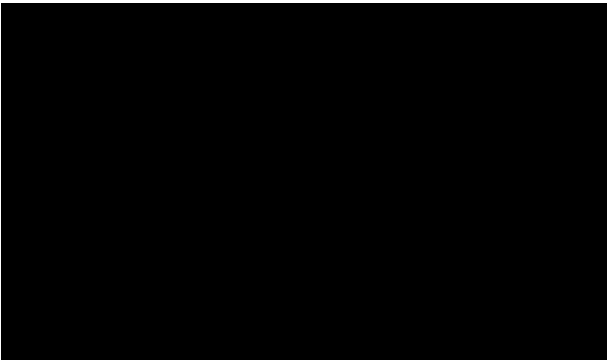
1 General

The *Consultant* is

Name

WSP UK Limited

Address for communications

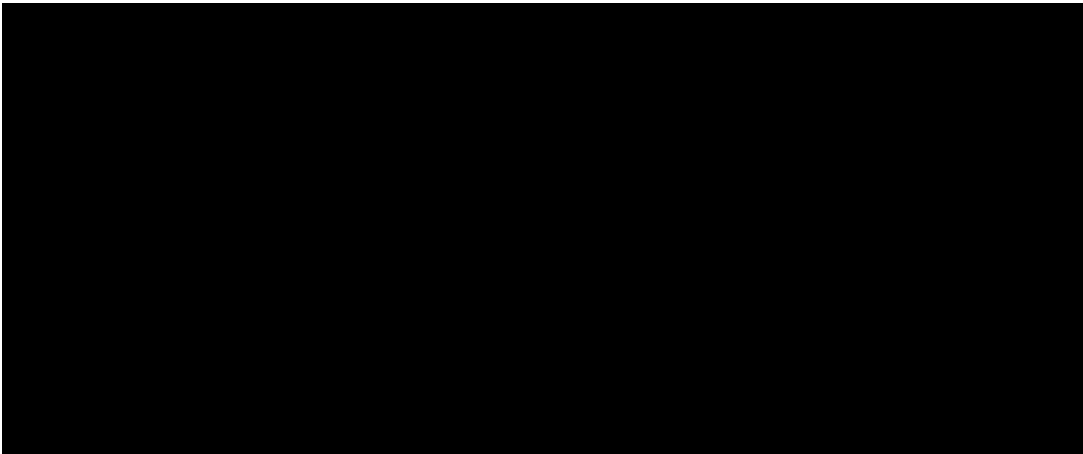Address for electronic communicatio

The *fee percentage* is

The *key persons* are

name   service

The following matters will be included in the Early Warning Register

PART TWO –

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2 The *Consultant's* main responsibilities

If the *Consultant* is to provide Scope	The Scope provided by the *Consultant* is in	

5 Payment

If the *Consultant* states *expenses*

The *expenses* stated by the *Consultant* are any

item	amount

If Option A or C is used   The *activity schedule* is

If Option E is used   The forecast of the prices is ■■■■■

Resolving and avoiding disputes

The *Senior Representatives* of the *Consultant* are

Name (1) ■■■■■

Address for communications\\\\\\\\ ■■■■■

Address for electronic communications ■■■■■

Name (2) ■■■■■

Address for communications ■■■■■

Address for electronic communications ■■■■■

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X10: Information modelling

If Option X10 is used

If an *information execution plan* is to be identified in the Contract Data

The *information execution plan* identified in the Contract Data is

Y(UK)1: Project Bank Account

If Option Y(UK)1 is used

The *project bank* is

named suppliers are

Data for the Schedule of Cost Components (used only with Options C or E)

The *overhead percentages* for the cost of support people and office overhead are

location	overhead percentage	
		%
		%
		%

Data for the Short Schedule of Cost Components (used only with Option A)

The *people rates* are

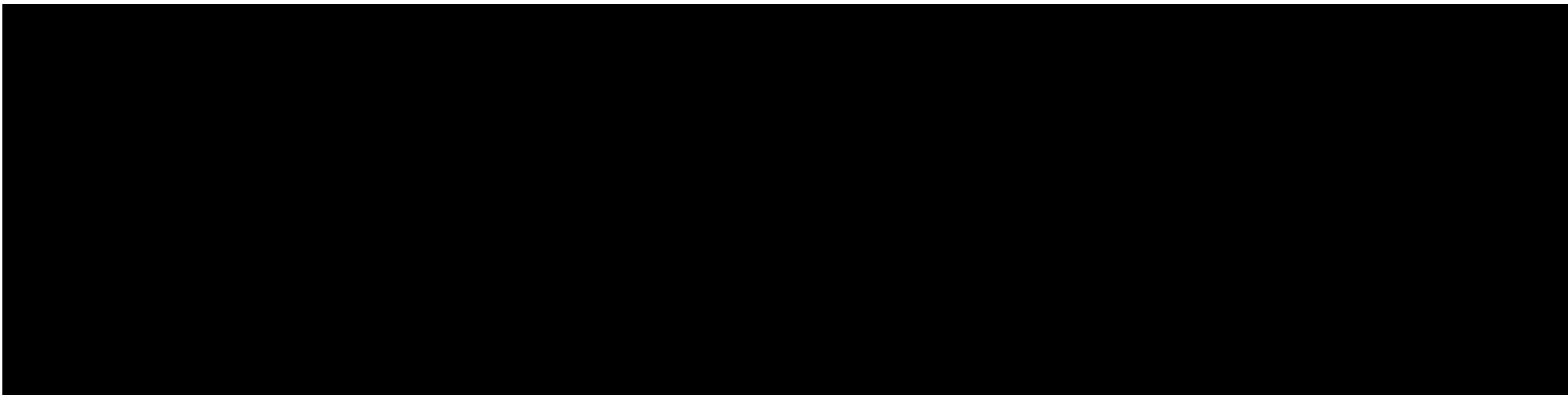| category of person	unit	rate

Data for the Schedule of Cost Components (used only with Options C and E)

The *people rates* are

category of person	unit	rate

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Contract: Contract Data| 18

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Environment Agency
NEC4 professional services contract (PSC)
Scope

Project / contract Information

Project name	Digitising Engineering Standards (Implementation Consultant)
Project 1B1S reference	ENVFCPAM00276B00C
Contract reference	C25682
Date	22nd November 2024
Version number	P01.3.2
Author	███████████

Revision history

Revision date	Summary of changes	Version number
	Comments Addressed	P01.2
19th July 2024	Scope Revised	P01.3
31st July 2024	Comments Incorporated	P01.3.1
22nd November 2024	Scope Revised	P01.3.2

This Scope should be read in conjunction with the version of the Minimum Technical Requirements and Exchange Information Requirements current at the Contract Date. In the event of conflict, this Scope shall prevail. The *service* is to be compliant with the following version of the Minimum Technical Requirements and Exchange Information Requirements:

Document	Document Title	Version No	Issue date
LIT 13258	Minimum Technical Requirements	V 13.0	11/06/2024
LIT 17641	Exchange Information Requirements	V 3.0	01/12/2022

SCOPE REVISION
Version Number P01.3.2 has revised the approach to introduce a *Consultant* Technical Assurer to the project to:
- collaborate with the *Consultant* on the standards and rules to be applied, then assure and approve the output.
- Provide test data and to test and assure the rules and attributes and process before approving and reporting on the outcome.

The FME authoring work has been removed from the scope and will be provided by 1Spatial.
The Scope for the *Consultant* Technical Assurer work will accompany this Scope as the management of, collaboration with and co-working with the *Consultant* Technical Assurer is within the *Consultant*'s Scope.
Version P01.3.2 includes other amendments and clarifications and the changes since P01.3.1 may be compared using MS Word's "Compare (Legal Blackline)" function.

Description of the *Services*

Details of the *Services* are:

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1   Introduction

In March 2016 the Government released its new construction strategy with a focus on embedding and increasing the use of digital technology, including Building Information Modelling (BIM) Level 2. Central to this strategy is the enablement and drive of a whole life approach to cost and carbon reduction across the construction, operation and maintenance of public sector buildings and infrastructure.

Alongside this, within its Asset Management Strategy, the Environment Agency has stated its vision for its role as a construction client to be recognised as a leading Asset Management organisation.

The *Client* has created a Creating Asset Management Capacity (CAMC) programme. The CAMC programme is central to modernising Asset Management practices and helping the *Client* to be more effective and efficient. It comprises several projects bringing about improved ways of working facilitated by new and improved IT and data management solutions. Part of this is an initiative called Digital Asset Data and Information (DADI). DADI is a subsequent phase of BIM Implementation with a wider whole-life remit to implement a consistent approach to Environment Agency asset management across the whole lifecycle. DADI comprises a programme of work with the following vision and projects:

'Removing the mundane' to enable us to focus on delivering a world class digital service.

For the Environment Agency and its partners to have information they can trust and rely on, even when it is produced by someone else, to make sound business decisions quicker and faster. Enabling Environment Agency staff and partners to be productive anytime, anywhere, from any device using the most appropriate technology. *To use smart technology in a coherentway and build our capability to prepare ourselves for more digital working in the future."*

A number of the above projects have been developed to a draft outline status business case to enable and support the identification of the appropriate order, outline budget needs, inter- dependencies within DADI and with other CAMC projects, and change initiatives within the business. This Scope sets out the *Client's* requirements for the implementation stage (EA4) of the Digitising Engineering
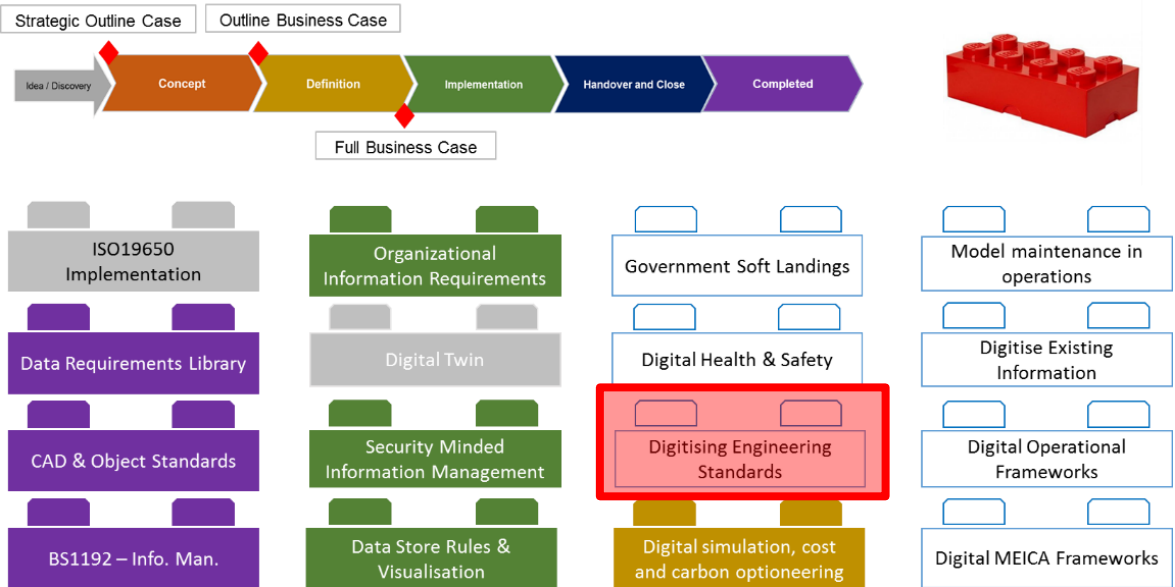

Figure 1 Projects within Digital Asset Data and Information Initiatives programme

Standards project.

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2   Objectives of the Digitising Engineering Standards project

The *Client* currently struggles to verify that the design of new or modified assets meets the required design standards. These standards may be internal Environment Agency standards, or external national or international standards.

The aim of this project is to build on the capability being introduced through the [AIMS: Datastore, Rules and Visualisation (DRV)](#) service to automatically check the design of new or modified assets against applicable standards. The automation process being implemented by DRV will allow verification of design submissions to the *Client*. The focus will initially be on assets on the [AIMS: Data Requirements Library (DRL),](#) which can be found at the following location: https://environment.data.gov.uk/asset-management/drl-app/revision/current/categories .

There is no clear alignment of standards against asset types, and in some instances, there aremultiple standards that apply to the same asset type. A "Standard" within this project is defined as any guidance document that relates to the design of a specific item. This can include, but is not limited to, British Standards, EuroCodes, CIRIA guides, and *Client* guidance documents such as the Fluvial Design Guide. For example, the design of an embankment can be delivered in accordance with British Standards, EuroCodes, the International Levee Handbook and/or the *Client's* Fluvial Design Guide. There are variations in interpretation across all these documents and there is no defined order of precedence.

Currently, asset design is considered by the *Client* to be unverified and there is the potential for the design of new assets to be incomplete or incompatible with current standards. Without the ability to verify compliance with those standards, the *Client* is not able to confirm that asset designs meet necessary specifications, and thus is unable to make informed decisions with regards to asset management, operations, maintenance, operational events and incidents.

The objectives for this implementation stage of the project are therefore to:

1. Identify, review and condense relevant technical standards for the top ten most commonly used asset types.
2. For each asset type and its associated standard(s) identified in (1), define objective pass/fail rules for integration into the DRV service that can be assessed using geometric data and other parameters held in asset design models.
3. Update the DRL for each asset type to ensure that the attributes required for a rule to function are supplied at the appropriate project stage.
4. Update all applicable Smart Object Library (SOL) objects to provide the attributes or parameters required for a rule to function.
5. Update the geoCOBie information exchange template to enable to delivery of design information to the DRV service.
6. Provide dashboarding and reporting tools to visualise and report design compliance and Benefits Realisation.
7. Embed the digital design assurance system into capital programme delivery with Stakeholder Communications and Engagement and Training media.

The ten asset types to be covered by this implementation stage of the Digitising Engineering Standards project are as follows:

- Channel: Complex Culvert (CC)
- Channel: Simple Culvert (CS)
- Defence: Embankment (DE)
- Defence: Flood Gate (DF)
- Defence: Wall (DW)
- MEICA: Pump Assembly (MP) (Note there are six types of pump)
- Structure: Control Gate (SG)
- Structure: Debris Screen (SR)
- Structure: Outfall (SU)
- Structure: Security Screen (SY)

Successful implementation of the Digitising Engineering Standards project will therefore enable the *Client* to define the minimum design standards for an individual asset type in a rule-based format and, as a result, digitally assure design information against those standards.

An Outline Business Case has been developed, and the *Client* is now able to proceed to the Full Business Case leading to the implementation stage of the project (to which this scope of services relates).

3   Activities required

To deliver the objectives of the Digitising Engineering Standards project, t the *Consultant* is to provide the following services:

3.1   Project and information management

- The *Consultant* shall plan the activities required to deliver this scope when they will be done and by whom.
- The *Consultant* shall identify the risks involved as part of the project planning and work with the *Client* to manage these risks throughout the implementation stage.
- The *Consultant* will undertake the appropriate planning and management activities that will ensure the Services are undertaken, reviewed, and assured to the right standard.
- The *Consultant* shall ensure a project plan is prepared, maintained and shared with the *Client*.
- The *Consultant* will ensure progress is tracked and that deliverables are delivered within the required timescales, managing and motivating the team of people involved to do so.
- The *Consultant* will co-ordinate all the activity required to be undertaken to deliver the objectives and outcomes of this *service*.
- The *Consultant* will monitor, report and take action where required to deliver on time and to the contract budget.
- The *Consultant* will manage the delivery of the project to meet the expected outcomes.
- The *Consultant* will manage reporting and communication as per Section 6.

3.2   Implementation tasks

- The *Consultant* shall lead and manage all activities required to identify, review and condense the relevant technical standards for the top ten most commonly used asset types. For each asset type the *Consultant* shall prepare a schedule of rules, clearly defining the specific rules and identifying the relevant standard and clause to which it applies. The schedule of rules shall also define the input attributes / parameters required for the rule to function.
- The *Consultant* will initially engage with the *Client's* Technical Authority to establish the *Client's* primary parameters currently applied in manual review of designs for the ten selected asset types.
- The *Consultant* will then conduct their own review and gap analysis to propose the standards and guidance that should be applied in achieving best practice: the critical attributes that are questioned, the right or wrong answers, presented in a matrix listing for each asset type the standards and guidance that should be applied, the critical design attributes that must be met to ensure fitness for purpose and compliance, the metric, non-metric and concessionable tolerances that should be applied.
- The *Consultant* will collaborate with the *Consultant* Technical Assurer, and gain input on what additional or alternative standards should be applied in the design of each of the ten asset types, and additional design criteria that should be checked in order to ensure compliance.
- From the results the *Consultant* will define the consensus and rationalise the outlying responses on what standards are to be digitised, presenting in a matrix of formal and informal standards for all ten asset types,
- The *Consultant will* re-engage the Technical Authority and submit the rationalised matrix as a proposal for the Technical Authority to confirm / add to / modify as necessary to define

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a list of formal and informal standards to be digitised and achieve Technical Authority approval of the proposed standards, with the *Consultant* engaging NEIP (National Engineering Innovation Panel) and the *Client*'s Chief Engineer as and when required by the Technical Authority within this process.

- The *Consultant* will provide User Stories for *Client* Approval and then create a fully functioning Power BI Dashboard providing and using data on his own data platform for demonstration purposes. The *Consultant* is to generate example data based on each asset type and it's rules to run this demonstration.

- The *Consultant* and the *Consultant* Technical Assurer will engage the Delivery Partners via the Digital Community of Practice and present the agreed matrix of standards, inviting comment by exception, that is for Delivery Partners to voice any concerns or raise any omissions. The *Consultant* will engage the Digital Community of Practice as many times as necessary to provide opportunity for comment on all asset types.

- The *Consultant* will demonstrate the functions of the Power BI Dashboard to the Digital Community of Practice and invite comment, before submitting to the *Client*'s Technical Lead for approval.

- The *Consultant* will provide the PBIX files, approved User Stories and data references for the approved dashboard and collaborate with the *Client*'s Technical Lead and digital team to achieve adaption of the Power BI Dashboard to the *Client*'s data platform.

- The *Consultant* will provide a Dashboard Specification Document which includes the following:
  - **Purpose and Objectives**: Briefly outline the dashboard's intended purpose, including key metrics or business outcomes it's designed to support.
  - **Target Audience**: Describe the end users and stakeholders, including their level of data literacy and any specific needs or preferences.
  - **Data Sources**: Detail all data sources used, including database names, tables, queries, and any APIs or data streams. Include instructions for accessing each source, any necessary credentials, or permissions.
  - **Technical Documentation**
    - **Data Model**: Describe the relationships and structure within the data model, including primary tables, relationships, and any hierarchy or filtering logic.
    - **DAX Calculations and Measures**: Document all key measures and calculations, including their purpose, formulas, and any potential performance considerations.
    - **Power Query Transformations**: If data transformations were done in Power Query, include detailed steps or scripts with explanations of what each transformation does and why.
    - **Parameter Usage**: Note any parameters used for filtering, such as date ranges, geography, or user-specific settings, and how they are applied.
  - **Design and User Interface (UI) Guidelines**
    - **Layout and Structure**: Provide an overview of the dashboard layout, including key sections, navigation, and purpose of each visual element.
    - **Colour and Theme Standards**: Specify colour schemes, fonts, and other visual standards, especially if these align with corporate branding or accessibility standards.
    - **Interactions and Filters**: Describe how different visuals interact (e.g., cross-filtering, slicers) and any user experience considerations.
  - **Testing and Validation Criteria**
    - **Performance Testing**: Outline benchmarks or expectations for performance, such as load times or responsiveness on various devices.
    - **Accuracy Checks**: Provide validation steps or reference values to ensure data accuracy and consistency (e.g., against known report values or external data).
  - **Handover Guide**
    - **Setup Instructions**: Explain how to open, load, and refresh the PBIX file, including any required dependencies or settings.

- ▪ **Known Issues and Limitations**: Document any known limitations, potential issues, or areas where future development may need attention.
- ▪ **Next Steps for Development**: List any recommendations or high-priority areas for further development, such as additional visuals, new data sources, or advanced analytics.

- The *Consultant* will engage with the *Client*'s Supplier, 1Spatial, to propose and agree the optimal format for presenting the digital rules and DRL attributes on an MS Excel spreadsheet. An example of how the rules may be communicated to 1Spatial is shown in Appendix 2 as a basis for this optimisation.

- The *Consultant* shall create the rules and attributes for the critical design criteria in the approved list, phasing the work by asset type over the duration of the project , defining pass or fail criteria and tolerance limits for criteria that may be concessionable by human intervention if within those limits. The Rules and Attributes are to be presented as shown in the example in Appendix 2

- If the rule is 'concessionable', the concession criteria and concessional tolerance will be included in the rules and the rules will be checked as part of the geoCOBie processing using the existing IC (Information Concession) concession approach triggered by notes in the IR (Information Report) report via the rule definition.

- The *Consultant* is to define and manage the implementation of the Concession process, by agreement with the Technical Authority, explaining the utilisation of the existing process for geoCOBie upload, automated checking for compliance, pass or fail report, application for, and granting of, concession, repeat upload and repeat automated checking. The *Consultant* will propose and obtain agreement from the Technical Authority on concession delegation levels, for example the concessions that may be granted by *Client's* Project Management or those that need to be escalated to the Technical Authority.

- Any non-metric rules that cannot be digitised but remain critical attributes for compliance are to be added to asset-specific manual checklists for designers, prepared by the *Consultant*.

- The *Consultant* will create a digital rule to check if the manual checklist is required, successfully completed and submitted.

- The Consultant will arrange workshops with the Technical Authority for final review and approval of the digital rules for each asset, in a sequence phased over the duration of the project to finalise one or two Asset Types at a time.

- The *Consultant* will engage with 1Spatial to manage their authoring of the rules and DRL attributes in 1Integrate and deployment of those rules in "Sand": the *Client*'s data repository sand box environment, resolving their queries and issues to successful conclusion.

- The *Consultant* development of the design rules using existing and extended DRL asset and element attributes and shall be presented as Excel formulae in the rule definition sheet. This must be suitable for:
  - ○ 1Spatial to add to the EA DADI Rules Catalogue for assurance as part of the existing geoCOBie verification process including early Delivery Partner testing via the S0 status submissions,
  - ○ Incorporation into Delivery Partner design and construction process and design development tools they elect to use - eg Autodesk Revit, Inventor, and AutoCAD etc., to support innovation by Delivery Partners in efficiently automating their own validation and compliance workflows.

- The *Consultant* shall review the DRL and detail the updates needed to define the data attributes required for a rule to function and confirm at what project stage these should be supplied. The *Consultant* shall engage with the *Client*'s DRL and DRV management to achieve deployment of the required updates.

- The *Consultant* shall review the existing SOL objects and identify where updates are required to provide the data attributes or parameters that will form the critical inputs to the DRV rules. The *Consultant* shall provide details of the required changes to the Smart Objects and then liaise with the existing SOL service provider to request and manage the delivery of the required updates.

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- The *Consultant* shall provide details of the required changes to the geoCOBie information exchange and liaise with Asite to complete required updates to the geoCOBie information exchange template, such that it aligns with the required updates to the DRL.
- The *Consultant* shall liaise with the DADI team and project board and develop and deliver the Power BI dashboards required by the *Client* to visualise and report on design compliance and Benefits Realisation.
- The *Consultant* shall review the Employers Exchange Information Requirements (EIR) and detail updates or additions to the EIR, engaging with the *Client*'s Framework Managers and Commercial teams to ensure that requirements relating to digital design verification are captured.
- The *Consultant* shall prepare a Technical Note for each asset type, summarising the individual rules, standards and attributes, including updates made to the DRL, SOL and EIR.
- The *Client*'s Technical Lead will manage the deployment of the rules, attributes and dashboards into the *Client*'s Production area.
- The *Consultant* will confirm that the proposals do not compromise the ability of Delivery Partners to carry out their designs within the required Minimum Technical Standards and without the Client attracting design responsibility.

3.3 Embedding activities

- The *Consultant* shall identify upcoming projects amongst the *Client's* delivery partners that could be used as pilot projects for using the digital design assurance system. The *Consultant* shall undertake targeted and appropriate communication to engage the delivery partners and ensure they are aware and capable to deliver to the requirements.
- Once identified, the *Consultant* shall work with two pilot projects to test the digital design assurance system, before preparing a case study to demonstrate its use on live projects.
- The *Consultant* shall prepare and deliver two identical webinar sessions to showcase the outputs of the pilot projects to encourage embedding and alignment to the new digital standards. The target audience includes the project management community, senior users, asset performance teams and internal staff, as well as delivery partners and other stakeholders the *Consultant* may identify.
- The *Consultant* will provide a story board and script narrative for a Learning Module and collaborate with the Client's Learning and Development team along with their training materials provider.
- The *Consultant* shall manage the handover of any products and training materials required for the ongoing use and maintenance of the digital design assurance system.
- The Consultant will arrange and maintain a 1 hour drop-in every two weeks for a period of 6 months after the project goes live for those engaged to ask questions.

3.4 Change management activities

- The *Consultant* shall propose and prepare a change management plan and methodology to undertake change management activities to ensure the *Client's* business and supply chain adapt and plan for the need to supply the additional asset data needed for the design assurance system. The activities to be included as a plan as a minimum are those which will achieve the following:
  - o Motivate change with relevant stakeholders.
  - o Develop a plan to address resistance and manage the transition smoothly.
  - o Leadership Buy-In: Secure commitment from the appropriate Environment Agency Leadership Teams to champion and model the new approach.
  - o Clear communication: Develop and implement a communication plan that includes an outline of the purpose, benefits and expectations that is targeted and relevant to each of the persona groups involved.
  - o Integration into Processes: Embed the new approach into standard operating procedures.
  - o Monitoring and Evaluation: Set and agree measurable objectives that enables the project team to track and monitor embedding.

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- o Create a vision for what the change is to deliver.
- o Develop support for the change to be implemented.
- o Identify, deliver and manage activities associated with the transition for change required.
- o Deliver and embed the required change, sustaining momentum in business as usual.
- The *Constant* shall host and create workshops with the *Client* users and supply chain staff to understand current ways of working (as-is).
- The *Consultant* shall manage the production of effective training/instruction material to handover, and ensure any updated systems or processes are fully embraced and embedded across the *Client*'s organisation and its supply chain.

3.5   Training Outputs

3.5.1 First Training Output:

Target Audience: *Client* Senior Users, Project Managers, Asset Performance teams

Training material output: A SCORM course (Shareable Content Object Reference Model) and accompanying user guide explaining how Digitising of Engineering Standards is used to assure the design of new assets. The *Consultant* will obtain approval of the content from the *Client*'s Learning and Development Team and the Project Executive via feedback sessions and iterations if required.

Learning Outcomes:

- Target audience will understand how to monitor new or modified asset designs against compliance with technical standards and how they will receive and read automated check reports. The target audience will learn how to monitor Benefit Realisation using the dashboards to view reports on the application of the process and the benefits. The audience will understand that the process of applying the rules is integrated within the AIMS:DRV and geoCOBie workflows and associated training modules.
- Target audience will understand the process for managing any concessions or departures from standards that may be required in relation to the individual project / site constraints.

3.5.2 Second Training Output:

Target Audience: Delivery Partners / Supply Chain

Training material output: A SCORM course (Shareable Content Object Reference Model) and accompanying user guide explaining how the Delivery Partners should deliver the digital asset data required for the design assurance system, and the process for assuring designs using the DRV system. The *Consultant* will obtain approval of the content from the *Client*'s Learning and Development Team and the Project Executive via feedback sessions and iterations if required.

Learning Outcomes:

- Target audience will understand the process for assuring designs using the Digitised Engineering Standards and how they can supply the correct information to enable the automated system to run. The audience will understand that the process of applying the rules is integrated within the AIMS:DRV and geoCOBie workflows and associated training modules.
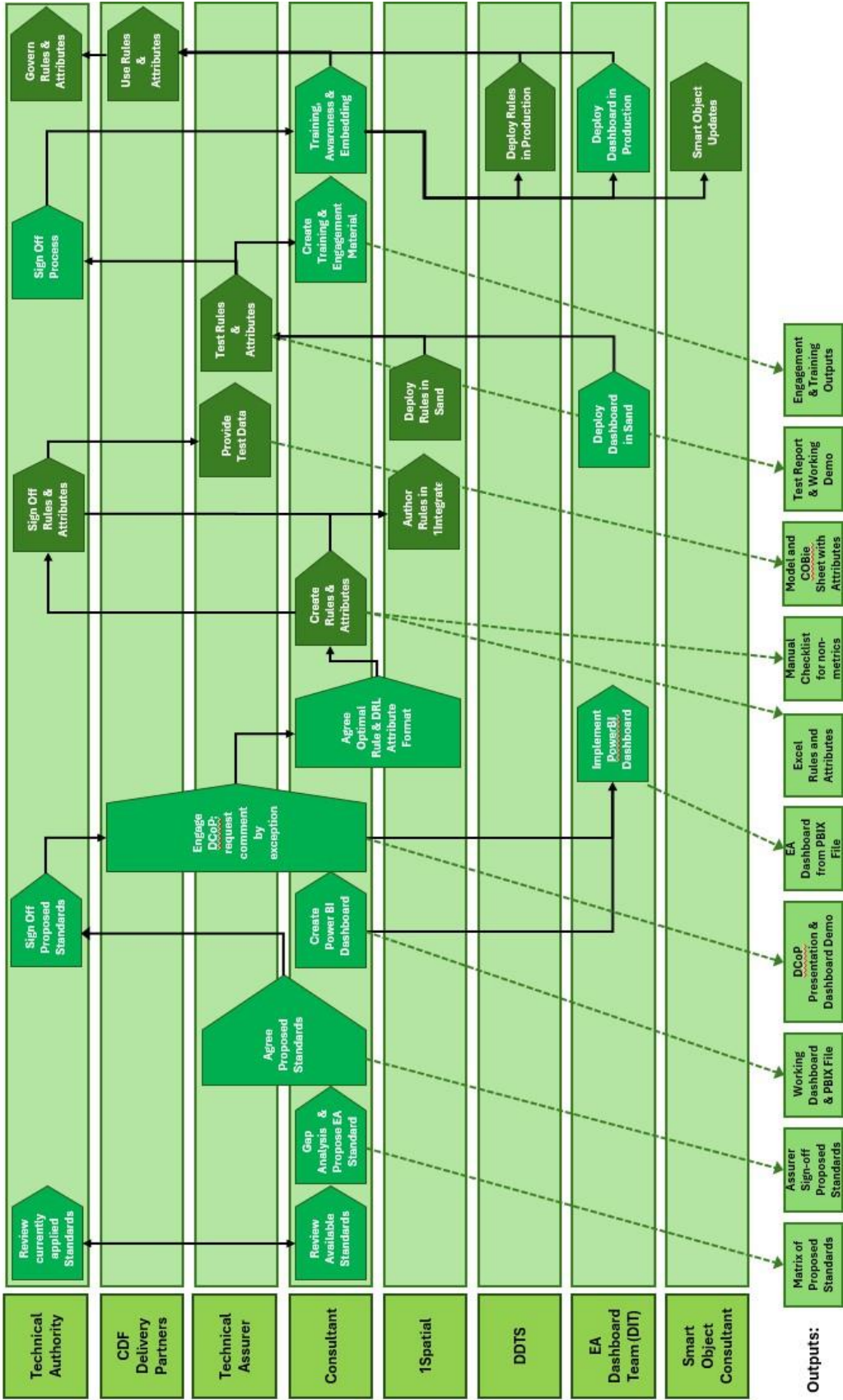
3.6 Workflow and RACI

The anticipated Workflow and RACI (responsible, accountable, consulted and informed) below is for guidance only and does not limit responsibility, accountability, activity or outputs:

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3.6.1 Workflow

DADI Digitising Engineering Standards – Workflow

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3.6.2 RACI : R=Responsible A=Accountable C=Consulted I=Informed

Project Board	Smart Object Consultant	EA Technical Lead	EA Dashboard Team (DIT)	DDTS	1Spatial	Consultant	Technical Assurer	CDF Delivery Partners	Technical Authority	
I		C				RA			C	Propose matrix of suitable Standards
I		C				R	A			Agree Matrix of proposed Standards
I		C				R	C		A	Review and Approve Matrix of Standards
A		C				R	C		I	Create Power BI Dashboard
C		C				RA	C	C	I	Engage & update DCoP on Standards & Dashboard
I		C			A	R				Agree Optimal Rule & Attribute Format
I		A	R			C				Implement Dashboard for EA use
I		C				R	C	I	A	Create Rules & Attributes
I		C				R	C	I	A	Create Manual Checklists (non-metrics)
I		C			R	A				Author Rules in 1Integrate
I		A				C	R			Provide Test Model and COBie Sheet
I		A			R	C				Deploy Rules & Attributes in Sand
I		A	R			C				Deploy Dashboard in Sand
I		C				C	RA			Test Rules & Attributes, and Dashboard
C		C				C	RA			Produce Test Report & Recommendation
R		C				C	C	I	A	Approve Rules, Attributes & Process
A		C				R		I	I	Create Training & Engagement Materials
I		A		R		I		I		Deploy Rules & Attributes in Production
I		A	R			I		I		Deploy Dashboards in Production
A		C				R		CI		Training, Awareness and Embedding
I		A				R		I	C	EIR, DRL, DRV updates
I	RA	C				R		I	I	Smart Object Library updates
						R		R	A	Application and use of Rules and Attributes

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4   Constraints on how the *Consultant* provides the *Services*

The *Client* does not envisage that procurement of new systems will be required. Instead, configuration of updates to its existing systems, including but not limited to the DRL, SOL and DRV.

5   Specifications or standards to be used

The standards and specifications listed in Table 1 are relevant to the delivery of this project. This does not represent the list of technical engineering standards to be digitised under the *services*.

Table 1: Reference documentation to be used in the implementation of the Digitised Engineering Standards

Document	
UK BIM Framework	✓
BS 6100 – Dictionary for civil engineering terms	✓
Data requirements library (DRL)	✓
AIMS: Datastore, Rules and Visualisation (DRV)	✓
BS EN ISO 19650	✓

6   Reporting requirements

The following reporting activities shall be undertaken in addition to all other deliverables referenced in the Scope:

- The *Consultant* should update the programme within two weeks of contract award. The programme shall be provided in Microsoft Project and PDF formats to include as a minimum a Gantt chart with task name, duration, start, finish, predecessors, resource names and associated costs. The Project Template will be agreed with the *Client* to ensure consistency with the *Client*'s standard work breakdown structure.
- The *Consultant* shall provide 1 x Brief summary weekly written report update on programme including completed tasks, communication undertaken, stakeholder engagement, financial until contract completion. This is expected to be no longer than a page and is to be uploaded to Asite.
- The *Consultant* shall participate in 1 x 2-hour Bi-Weekly DADI Programme call and 1 x 1-hour Weekly DADI Programme call as appropriate to project progress.
- The *Consultant* shall arrange monthly Project Board Meetings and provide 1 x Monthly report to the project board on progress. Prepare associated material and send out 48 hours ahead of a Project Board. Preparation of slides providing a summary of schedule, financial update, stakeholder engagement, risks, issues and communication activities and any associated feedback from that engagement and communication (PowerPoint and PDF) and update report (Word and PDF) to be supplied to the project team 5 working days before the board for review.
- The *Consultant* shall lead the development and implementation of a communication plan including the development of communication material that supports the engagement in the identification of users in the project. Lead, identify, prepare and engage with stakeholders including but not limited to:
  - Digital Community of Practice (monthly) - with expectation to provide updates on progress, including any engagement with the delivery partners. Presentation to be prepared.
  - Technical Authority, *Consultant* Technical Assurer and CDF Delivery Partners in the agreement of the standards and rules to be applied to the Asset Types.
  - National Engineering Innovation Panel at all stages of development. (Meeting once every 3 months).
  - Framework Managers (ongoing engagement).
  - Senior Teams (ongoing engagement).

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- o   Asset Performance Teams (ongoing engagement).
- o   Progamme Board (every 6 weeks)
- o   Project Board (every month)
- o   CDF Delivery Partners on training, adoption and embedding.
- The *Consultant* shall provide and develop a project plan, RAIDO (Risks, Assumptions, Issues Dependencies and Opportunities) lessons learnt, guardrails, cost forecast and invoicing profile. To be completed and delivered to the Client within 2 weeks of award in a format to be agreed with the *Client*.
- The *Consultant* shall provide monthly updates to the project plan, RAIDO, Guardrails, Highlights Report, costs to date, forecast cost, invoicing profile, communication and stakeholder engagement plans.
- The *Consultant* shall continually identify ongoing / regular engagement with projects with associated dependencies and inter-dependencies relating to digitising engineering standards to ensure embedment of the changes.
- The *Consultant* shall participate and contribute to monthly DADI programme meetings. This includes the preparation of material to provide updates 48 hours prior to the meeting to the DADI project support officer.
- The *Consultant* shall present the *Client* with all project information required of the *Services* to the Exchange Common Data Environment (Asite).

7   Resource requirements

Specific skillsets are required to complete the project and any prospective team should include the following as a minimum:

Table 2: Resource requirements to complete project

Discipline	Capability/responsibility	Qualifications/Experience
Project Management	Pro-actively manage the delivery of the *services* and responsible for meeting these requirements.	Project and Change management experience preferably in the development of technical standards. PRINCE2 or equivalent qualifications. Desirable change management qualifications/experience. Supplier management. Desirable – Relevant change management experience and/ or qualifications. Desirable - Digital/ Change Project management
Project Coordination and Change Management	Responsible for ensuring the technical requirements are delivered and the requirements are embedded as part of Business As Usual.	Technical understanding, strong digital and data background preferably within ISO19650. Change management track record and experience. Desirable – experience relevant to the Client. Understanding of Multi-dimensional Modelling desirable
Stakeholder Relationship Manager	Manage stakeholder relationships.	3+ years prior experience in stakeholder management. Preparation of communication for a technical subject with a mixed audience that includes non-technical staff.

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Engineering and Digital Data Lead	Involved in ensuring the solution synergises well with CDM compliance.	Knowledge of capital project delivery within the Environment Agency programme, including the technical design of FCERM assets to appropriate standards. Flood Defence Knowledge: Solid working knowledge of UK flood defence engineering standards and regulations, such as those from the Environment Agency and CIRIA. Engineering Rules Definition: Experience in developing engineering rules, criteria, and specifications for flood defence assets, ensuring alignment with regulatory standards and industry best practices. Design Assessment Skills: Proficiency in assessing engineering designs for flood defence systems and structures, identifying any potential issues or improvements. Asset Management: Understanding of asset types and functions within flood defence systems, with experience in defining operational and maintenance criteria for asset resilience and sustainability. Testing Protocols: Familiarity with testing protocols and quality assurance processes for evaluating design efficacy and robustness under various flood scenarios. Analytical & Problem-Solving Skills: Strong analytical skills to develop and apply rules that support engineering assessments, risk reduction, and cost-effectiveness..
Power BI Dashboard Lead	Create fully functional Power BI Dashboards for the purposes of reporting process compliance and statistical analysis and the measurement of Benefits Realisation	Knowledge and experience demonstrable through example of working dashboards of a similar nature. Technical Expertise: Proficient in Power BI, DAX, Power Query, and M Language for complex data modelling and analysis. Experience with Data Sources: Skilled in integrating various data sources, such as SQL databases, Excel, APIs, and cloud data platforms (e.g., Azure, AWS). Dashboard & Visualisation Skills: Demonstrated ability to create clear, insightful, and interactive dashboards, reports, and visualisations tailored to end-user needs. Data Modelling & ETL: Strong knowledge of ETL processes, data

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		warehousing, and data modelling best practices. Business Acumen: Proven experience in translating business requirements into actionable insights, ideally in a relevant industry. Problem-Solving Skills: Excellent troubleshooting skills to ensure accuracy and consistency in data reporting. Relevant Certifications: Microsoft Power BI certification (e.g., DA-100 or PL-300) is desirable.

8   Services and systems access provided by the *Client*

Table 3 Documentation that the *Client* will provide access to upon request

Document	
Access to and use of Asite	✓
Data Requirements Library	✓
AIMS: Datastore, Rules and Visualisation	✓
Smart Object Library	✓

Dispute resolution process

To raise a Dispute:

i. the decision giving rise to the Dispute must have been communicated under the contract in accordance with clause 13 of the PSC*:*

ii. the party who disputes the decision raises its dissatisfaction with the decision within 28 days of the decision being communicated and communicates this dissatisfaction in accordance with clause 13 of the PSC, otherwise the decision is deemed undisputed/ accepted; and

iii. the issue becomes a formal Dispute and is addressed in accordance with Option W2 of the PSC.

The Dispute is initially raised to the *Client's* Assurance Representative by the *Consultant's* Project Manager, or *Client's* Project Executive, within 28 days of the decision being communicated. The *Consultant's* Project Manager and *Client* Project Executive each provide a written submission in support of their case within one week of the Dispute being raised. The *Client's* Assurance Representative determines the contractual decision on the basis of the written evidence submitted to them, and the terms of the CCS RM 6165 Framework and Call-off contract and communicates their decision and reasons to both parties in accordance with the Call-off contract within two weeks of receipt of the written evidence.

If either party remains dissatisfied with the decision the Dispute is escalated to the *Client*'s Framework Manager by the *Consultant's* Framework Manager or the *Client's* Project Executive within two weeks of the *Client* Assurance Representative's decision being communicated. The *Consultant's* Framework Manager and *Client's* Project Executive provide a written submission in support of their case within one week of the escalation. The *Client's* Framework Manager determines the contractual decision on the basis of the written evidence submitted to them, and the terms of the CCS RM6165 Framework and Call-off contract, and communicates their decision and reasons to both parties in accordance with the Call-off contract within two weeks of receipt of the written evidence.

If either party remains dissatisfied with the decision, the Dispute is escalated to the *Client's* Commercial Programme Director, by the *Consultant's* Programme Director or the *Client's* Project

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Executive, within two weeks of the *Client* Framework Manager's decision being communicated. The *Consultant's* Programme Director and the *Client's* Project Executive provide a written submission in support of their case within one week of the escalation .The *Client's* Programme Director determines the contractual decision on the basis of the written evidence submitted to them, and the terms of the CCS RM 6165 Framework and Call-off contract , and communicates their decision and reasons to both parties in accordance with the Call-off contract within two weeks of receipt of the written evidence.

If either party remains dissatisfied with the decision the Dispute may be referred to adjudication.

During Dispute proceedings all parties have a duty to continue their performance under this Framework.

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Appendix 1 – BIM Protocol

The *Consultant* shall adhere to the Environment Agency's Exchange Information Requirements (EIR) framework level minimum technical requirements.

All *Client* issued information referenced within the Information Delivery Plan (IDP) requires verifying by the *Consultant* unless it is referenced elsewhere within the Scope.

https://www.asite.com/login-home

The *Consultant* shall register for an Asite Account and request access to the project workspace to view the IDP.

Appendix 2 – Example Rules and Attributes Spreadsheet

See attachment ENVFCPAM00276B00C-JAC-SR-XX-SC-Z-0001-A2-C02-B1300-EA2-LOD2-Provisional digital rules for a Debris Screen (SR)