

FRAMEWORK AGREEMENT SCHEDULE 4

ORDER FORM/ WORK PACKAGE ORDER

FROM

Authority	Secretary of State for Environment, Food and Rural Affairs
Address	
Contact Ref:	
Order Number	C17054
Order Date	6 th July 2023

TO

Contractor	University of Gloucestershire
For attention of:	
Address	

1. SERVICES REQUIREMENTS

1. Project aim

The aim of this project is to conduct a series of evidence reviews of the environmental impact of AES interventions since the introduction of ES in 2005. Evidence will be collated to inform the development of the new ELMS and the project will communicate findings in a range of formats to inform decision making. The project will review the literature systematically to provide a comprehensive assessment of the evidence base relating to the efficacy of AES options and agreements, covering evidence considering impacts at the local, landscape or national scale. The project will be framed around outcomes related to goals of the 25 Year Environment Plan (25 YEP) and where possible evidence will also be linked to themes related to the new CS Plus and SFI standards.

2. Project scope

The contract scope is to provide a review of the evidence for the efficacy of AES interventions, focussing on existing CS and ES (hereafter AES) options. Systematic literature searches will be undertaken for AES subject areas to identify studies providing evidence as to whether AES options have delivered their stated and incidental outcomes (initial direct results of activities)

and impacts (the environmental impact ultimately desired) (see section 4.1). This exercise will also include an assessment of the strength and quality of the evidence.

Whilst the literature searches will focus on defined subject areas related to AES option groups, it is required that the evidence is interpreted with regards to outcomes as broadly defined by 25 YEP goals and in relation to new CS Plus themes and SFI standards. As such, evidence synthesis will focus on outcomes aligned with 25 YEP goals but will also categorise evidence in relation to CS Plus themes and SFI standards (information on CS Plus themes and SFI standards, and their relationships with existing AES options will be provided).

The stated environmental outcomes for AES options will be extracted from publicly available information, but incidental outcomes that may also be delivered by options should be defined. For example, CS option BE3 'Managing Hedgerows' explicitly aims to increase the provision of flowers for insects, fruit for birds and to maintain landscape character, but it may also deliver outcomes in relation to carbon sequestration. As such, evidence for AES options delivering stated and incidental outcomes and impacts will be captured, characterised, and assessed.

The review should focus only on studies conducted in England and experimental studies which were used to develop specific AES options are not within scope. Though they provide evidence for the effects of interventions, these were undertaken as controlled experiments, ensuring that location, activities, outputs, and outcomes were optimised. Equally the review should not cover studies that have used theoretical models (e.g., scenario modelling) to predict impacts of AES. This review should only draw on evidence from studies where the outcomes and impacts of options were assessed in the 'real world'.

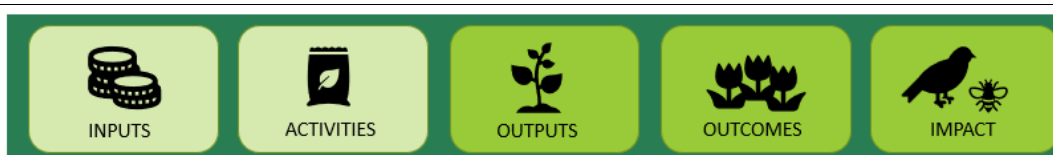
Table 4.1. shows the subject areas for which literature searches should be undertaken, each of which can include area options and capital items. The CS options and their ES option equivalents which are included under each subject area are provided in appendix 1.

Table 4.1. AES subject areas

AES Subject Area	Type
Arable	Area based options
Boundaries, (in-field) trees and orchards	Area based options and Capital Items
Coastal	Area based options
Grassland	Area based options
Historic Environment and Landscape	Area based options
Lowland Heathland	Area based options
Soil and Water	Area based options and Capital Items
Uplands	Area based options
Woodland and Scrub	Area based options and Capital Items
Wetlands	Area based options and Capital Items
Access, Engagement and Education	Capital Items and Educational Visits

4.1 The logic model

A logic model is a graphic representation of a theory of change for how a policy or intervention produces its intended results. Figure 4.1 is a broad logic model representing a theory of change as to how AES interventions are implemented and deliver results, which was developed under a pilot evidence review of AES interventions for arable systems (appendix 2).



Planned work

Intended results

Figure 4.1 Broad policy logic model outlining a theory of change for AES interventions

Definitions for each component of the logic model

Planned work

- a) **Resources/inputs** – The required financial, material and advice inputs for an action
- b) **Activities** – the interventions undertaken for an action, intended to bring about the results

Intended results

- c) **Outputs** - the initial direct result of AES option implementation e.g., quantification of option uptake on a land holding, such as no. of hectares on a holding under an option
- d) **Outcomes** – specific changes expected to result from activities e.g., an increase in cover of target species; reduced soil compaction; reduced runoff
- e) **Impact** – the ultimate desired environmental change expected to occur as the result of an action implementation e.g., larger populations of a (target) organism at a national-scale; reduced soil erosion; improved air quality; reduced nutrient levels in ground water

In summarising the results of studies identified in the evidence reviews this theory of change will be applied to identify whether the evidence provided by a study pertains to an outcome and / or an impact. Responses to this tender should provide clear proposals as to the approach that will be used to delineate between outcomes and impacts for AES options.

3. Project Objectives

The contract will comprise Five objectives:

- **Objective 1** – Collate information as to the stated and incidental outcomes and impacts for CS/ES options in each AES subject area, centred around themes based the 25 YEP goals and subcategories (Table 5.1).
- **Objective 2** – Undertake systematic literature search to identify literature to be reviewed for each subject matter
- **Objective 3** – The contract requires an interim output by 31st July 2023 (for reporting purposes) which summarises key evidence against the impact of agri-environment management under specific topics (outlined below)
- **Objective 4** – Undertake systematic evidence reviews for each AES subject area.
- **Objective 5** – Synthesise the evidence and communicate findings.

Objective 1 - Collate information as to the expected environmental outcomes for AES options

Table 5.1 Relevant 25 YEP goal themes and suggested outcome and impact categories falling under each theme

25 Year Environment Plan goals	Suggested outcome / impact sub-categories
Clean Air	
	Improving air quality
Clean and plentiful water	
	Improving water quality
Thriving plants and wildlife (Reversing the decline in biodiversity)	
	Birds
	Pollinators
	Other invertebrates
	Arable plants
	Other fauna (Repts, Herpts, Mammals)
	Priority Habitats (condition and extent)
A reduced risk of harm from environmental hazard	
	Natural flood management
	Coastal erosion risk mitigation
	Reducing soil erosion
Using resources from nature more sustainably and efficiently	
	Improved soil health
Enhanced beauty, heritage and engagement with the natural environment	
	Protecting and improving Landscape character
	Protecting the historic environment
	Improving engagement with the natural environment
	Improving access to the natural environment
Climate change mitigation and adaptation	
	Carbon sequestration / Net Zero
	Building the resilience of the environment to climate change

Appendix 1 provides a table of AES options organised by subject area. For arable options, details are also provided on the expected outcomes and impacts as defined for each option under the heading of 'How this option will benefit the environment' on the [countryside stewardship grants page](#). This information should be collated for all options listed in appendix 1 in a similar format. However, options may also deliver against other environmental outcomes not articulated in the option guidance, and the contractor should also identify these incidental outcomes and impacts for all options. Information will be provided by Defra to assist in

identifying incidental outcomes. The contractor should place all outcomes and impacts associated with a given option into a broad category as defined by 25 Year Environment Plan goals and classify these into more specific sub-categories under each theme. Table 5.1 provides a proposed approach for how outcomes can be classified. Responses to this tender should clearly outline any modifications or alternative approaches proposed in relation to this classification system. This exercise should deliver a compressive list of outcomes and impacts that could be delivered by each AES option contained in appendix 1.

Objective 2 – Design and undertake systematic literature searches to identify literature that will underpin each evidence review

The contract requires a series of evidence reviews for the impacts of AES interventions since the introduction of ES in 2005. A separate literature search and evidence review should be undertaken for each AES subject area listed in Table 4.1.

When deciding protocols, the project should consider published guidance on evidence reviews (appendix 3) and the approach used in the NE pilot arable project (appendix 2). Responses to this invitation to tender should propose precisely what approach will be taken to identifying, screening and evaluating literature, and highlight where methodologies would differ from the arable pilot example (appendix 2).

Contractors should review the pilot arable project (appendix 2) and note the size of the literature search for arable CS and ES options. We anticipate that around 600 studies requiring full review (see 4 below) will be returned across AES subject areas through literature searches, and quotes should be based on reviewing this number of studies.

It is envisioned there should be three steps to identifying the evidence base for each subject area:

Objective 2.1 Identify the potential evidence

A systematic literature search should be carried out using an appropriate search engine for each AES subject area. The review will cover the literature from contracts delivered under the Defra/Natural England Monitoring and Evaluation Programme ([available via Defra Science webpages](#)) and other externally available published literature (research articles and grey literature) on AES studies based in England. Please see appendix 2 section 2 for the methods used in the arable pilot review and an extract of papers identified from databases and searching Defra commissioned research (Extract 1).

Objective 2.2 Select the relevant evidence: title and abstract screening

Titles and abstracts should be checked to select relevant evidence. Evidence should be limited to England-based studies that explicitly refer to AES agreement/option interventions since 2005. Experimental studies conducted to inform the design of AES options should be excluded from the review, as the focus is on outcomes and impacts achieved through ‘real world’ application. See appendix 2 section 3 for the method used in the arable pilot review and an extract of literature assessed during title and abstract screening (appendix 2, extract 1).

Objective 2.3 Select the relevant evidence: full text eligibility

Following title and abstract screening, full text eligibility should be assessed against pre-determined inclusion/exclusion criteria. See appendix 1 section 3 for the method used in the arable pilot review and appendix 2, extract 2 for an extract of papers assessed during title and abstract screening. Tables 2 and 3 in appendix 2 show the inclusion/exclusion criteria used in the arable pilot project.

Objective 3 – Provide summarises of key evidence against the impact of agri-environment management – with delivery of interim report by 31st July 2023

This objective is intended to be delivered as a rapid evidence review, using an initial sift of evidence and collation of pertinent evidence, including quantification of impact where possible.

Work can be undertaken in parallel with that for objective 2 and objective 4.

It is intended to provide a general summary of published evidence across the six areas outlined below, and is not intended to be a systematic review, or include any critique of quality of studies - this will be delivered through objective 4.

The topics headings for which evidence should be collated are:

- Biodiversity has been restored, preserved and enhanced
- Water quality has improved
- Soil erosion has been prevented
- Soil management has improved
- GHG and ammonia emissions from agriculture has been reduced
- Carbon conservation and sequestration in agriculture and forestry has increased

The output will be in Word document format (suggested length around 15 pages) and will provide a bulleted list of key facts with references, categorised under the headings shown above.

Objective 4 – Systematically assess evidence quality and support for the efficacy of AES actions each subject area

All of the literature identified for each subject area should be assessed to identify the quality, strength and direction of the evidence provided for outcomes and / or impacts. This should broadly follow the steps outlined below; responses to this tender should detail how this work would be undertaken.

Objective 4.1 *The quality and findings of each study selected for inclusion in each evidence review should be assessed*

This exercise should at least:

- a) categorise the evidence type (e.g., observational, correlation, or qualitative study). Contractors may wish to consider the definitions of study design used in the arable review pilot (appendix 2, extract 3) and in other work e.g. the [Conservation Evidence](#) programme, see section 2. g. in the pdf provided in annex 3. This document also provides examples of approaches

- b) assess internal validity (i.e., identifying if potential sources of study bias have been minimised, what potential confounding variable there are such a temperature, weather).
- c) assess external validity (i.e., assessing wider applicability of the study, for example considering how representative the area or climate associated with the study is in relation to the option).
- d) categorise evidence type relating to AES options, subject area, outcomes, and impacts.
- e) a concise synthesis of the study methodology, results and conclusions in relation to an intervention – again, contractors may wish to consider the protocol adopted for the arable pilot review (appendix 2, extract 3) and other review projects, e.g. Conservation Evidence - section 5. a. of the pdf provided in appendix 3.
- f) use easy to understand categories to communicate quality of evidence based on relevance, strength of study design, level of response and extent to which findings with regards to outcomes and impacts are in line with expectations for the options.

The choice of categories and definitions for assessing evidence (see f above) will be discussed with the project steering group at the inception meeting to ensure policy relevance. This quality assessment should build on the approach used in the arable pilot project, previous NE evidence reviews and other approaches to evidence assessment and synthesis:

- Appendix 2 section 4 for the method used in the arable pilot review, an extract of papers assessed for quality (extract 3) and a key to definitions of criteria used to assess studies in Table 4 of appendix 2
- Appendix 4 contains a review of literature template used in previous NE projects, for example the upland evidence review ([NEER007](#)) for which the methodology is published here as separate document ([NEER001](#)).
- Appendix 3 contains several documents relating to previous NE evidence syntheses and protocol adopted for an evidence review undertaken by the Conservation Evidence project, which in particular details an approach to providing a succinct syntheses for individual studies and of results pertaining to specific outcomes (page 18 onwards).

A further two steps will summarise the evidence collected across subject areas in relation to outcomes and impacts:

Objective 4.2 Consolidation of findings by study

The information assessed during steps 2.1 – 2.3 and 4.1 should be summarised in an excel workbook or database, to provide a summary of the studies providing evidence for each AES option – outcome / impact combination. This will allow the end user to filter studies by factors of interest, such as all studies aligned with a given 25 YEP theme or specific CS Plus themes. Each row in this workbook / database table should correspond to one result from a single study. A study may have provided evidence for multiple outcomes and / or impacts for a given AES option and studies may cover more than one option, and as such each study may have many rows associate with it. A column for unique study identifiers should be included which links back to the workbook for objective 4.1. Further columns to include (at the least) should be AES subject area, CS option code, ES option code(s), the CS Plus theme with which the option is aligned, the CS Plus option name, the SFI standard to which the option is aligned, landcover type, outcome category, impact category, results for outcome, result for impact, measures of evidence quality and measures of evidence strength. Responses to this tender should explain clearly how evidence quality and strength would be measured.

Objective 4.3 Consolidation of findings by AES Option for use through an accessible web-based application

A final workbook / database table will be produced to provide a high-level summary of the evidence available for all option – outcome / impact combinations, as defined by the categories decided under objective 1. For each option – outcome / impact combination it should show how many studies have addressed this combination, the direction of the evidence (e.g., positive effects, no effect, negative effect, mixed results) and a measure of overall confidence given the available evidence. Responses to this tender should clearly explain how a measure of confidence would be derived. This should identify the AES subject area, the LNR theme and SFI Standard with which the AES option is aligned and provide the references of the studies making up the evidence base. Where there is no evidence against anticipated option – outcome / impact combinations (as identified in Objective 1), this should still be included.

It should also be considered how the level uncertainty associated with conclusions for each option – outcome / impact combinations is communicate, for example see paragraph 8 here: <https://www.ipcc.ch/site/assets/uploads/2018/02/ar4-uncertaintyguidancenote-1.pdf>.

A web-based application should be developed (for example an R Shiny App) that provides these high-level summaries through an accessible and intuitive interface, allowing the user to identify the key information associated with an area of interest. The application should allow users to move from the high-level summary described above to the more detailed information associated with the assessment of individual studies as captured in steps 4.1 and 4.2 above.

Objective 5 – Evidence synthesis and communication of findings

The evidence collated through objective two should be synthesised in a series of narrative summaries associated with the high level themes associated with 25 YEP goal adopted under objective one, including tables and charts and each with an associated infographic.

Objective 5.1 Evidence Synthesis

There should be a single final report for the whole project which will include an executive summary, an introduction, methods, a series of narrative summaries of the evidence, conclusions and key recommendations. Each of the 25 YEP themes (Table 5.1) will have its own narrative summary, including its constituent sub-categories, and should provide a critical appraisal based on the available evidence, highlighting biases in the evidence base, key evidence gaps and lessons learned. In addition, each 25 YEP theme should also have an associated high-level infographic providing a visual summary of its findings. The approach to the structuring of the narrative summaries will be decided in full at the project inception meeting. Responses to this tender should provide proposals of the approach that will be taken for these narrative summaries and to creation of infographics.

Objective 5.2 Communication

Effective communication and disseminations of projects findings to relevant NE staff, Defra staff and external stakeholders will be a crucial output for this project. Responses to this tender should give a clear explanation of how the supplier would disseminate learning and best practice as part of this contract, and how this will enable and encourage knowledge transfer (e.g., through learning workshops with staff, online publications, dissemination events).

4. Project Outputs

- 1) An interim report for Objective 3 delivered by 31st July 2023 at latest.
- 2) An interim project progress report to be delivered by 1st October 2023 at latest. The format for this will be agreed at the project inception meeting.
- 3) A database or workbook, including a README sheet / key defining the information contained in each column, will be provided which will contain several outputs:
 - i. A worksheet / worksheets / database table detailing all option – outcome / impact combinations, organised by AES subject area (objective 1).
 - ii. A worksheet / worksheets / database table capturing the studies screened by title and abstract for each evidence review, detailing all studies considered and the decision for inclusion or exclusion (objective 2.1 and 2.2; for example see appendix 2, extract 1).
 - iii. A worksheet / worksheets / database table detailing all studies considered for full text screening, detailing reasons for decisions to include or exclude (objective 2.3; for example, see appendix 2, extract 2).
 - iv. A worksheet / worksheets / database table detailing the assessments undertaken and a summary of all studies included in each AES subject area evidence review (objective 4.1; for example see appendix 2, extract 3).
 - v. A worksheet / worksheets / database table containing rows pertaining to all studies assessed, with each row relating to one result from each study (objective 4.2).
 - vi. A worksheet / worksheets / database table containing rows providing provide a high-level summary of the evidence available for all option – outcome / impact combinations (objective 4.3).
 - vii. A user friendly web-based tool for displaying a summary of the conclusions associated with each options – outcome / impact combination, and providing functionality to extract the more detailed information associated with each study providing evidence for these options – outcome / impact combination (objective 2.6). This will need to be open source so as it can be updated by NE to include new information as require, and will ultimately need to be hosted by NE (objective 4.3).
- 4) A final project report including:
 - i. An executive summary.
 - ii. An introduction and explanation of the policy relevance of this work (e.g., why is this an important policy area / how this links to key domestic or international reporting requirements / its utility to the developments of ELMS).
 - iii. Full details of the work undertaken, and methodologies used, including details specific to each subject area evidence review (e.g., search terms).
 - iv. A narrative based summary for each 25 YEP goal theme and its outcome sub-categories (Table 5.1), detailing findings relating to specific outcomes / impacts, biases in the evidence base, evidence gaps and any other information critical to understanding the evaluation.
 - v. Final conclusions and key recommendations
- 5) Infographics for each 25 YEP goal theme, providing a high-level summary of its findings.
- 6) A 2 page summary document (see appendix 2 for template).

- 7) A comprehensive communications and dissemination plan for internal and external stakeholders, including a Webinar for NE and Defra staff.

(1.2) Commencement Date: 6th July 2023

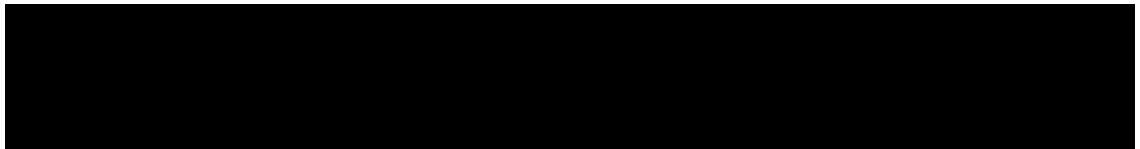
(1.3) Completion Date: 31st March 2024

(1.4) Project Milestones

See Annex 2: Tables of Milestones/Deliverables

2. PERFORMANCE OF THE SERVICES [AND DELIVERABLES]

(2.1) Key Personnel of the Contractor to be involved in the Supply of the Services



(2.2) Performance Standards

The successful contractor will appoint a project leader. The project leader will be responsible for the management and delivery of the project and will act as the liaison point with the Natural England project manager.

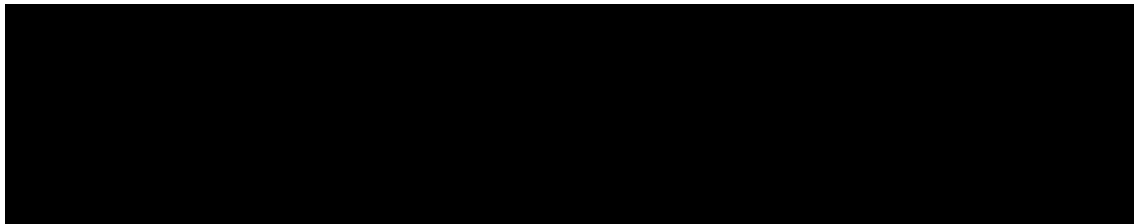
The project leader will be responsible for the management and delivery of the project and will act as the liaison point with the Natural England project manager. A project initiation meeting between NE and the Supplier will be required at the start of the project. This will focus on work plans, review protocols, timescales and project management.

This project will be overseen by a project steering group made up of staff from NE, and the wider Defra group and will meet 4 times throughout the course of the project. The successful bidder will be responsible for setting up these meetings. It is assumed these meetings will be virtual, for example MS Teams.

Secretariat and production of minutes from meetings is the responsibility of the Supplier, who will share meeting minutes with the project team, NE and the steering group, where applicable.

The successful bidder/project leader will once a month send a short (no more than 1 pg A4) progress update to the project officer as well as an MS Teams / phone call. The form of these updates will be agreed in the inception meeting. An update of progress will be required for the Steering Group Meeting, the format of which will be agreed at the inception meeting.

(2.3) Location(s) at which Services are to be provided:

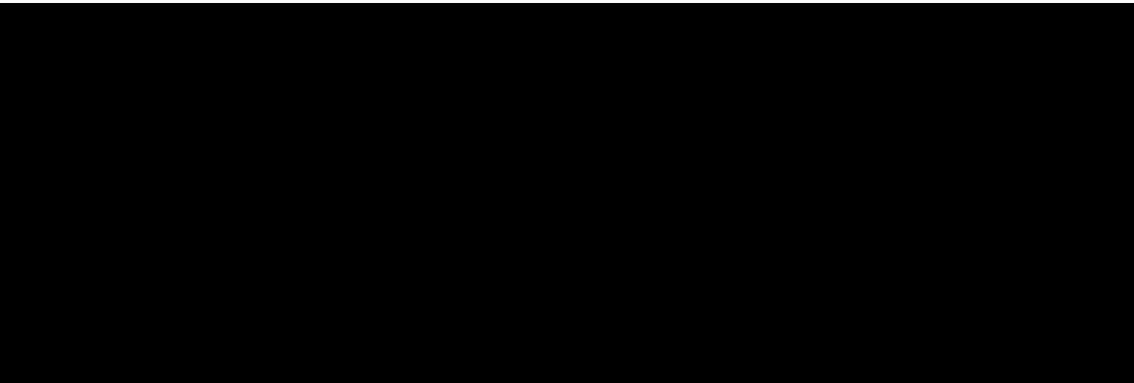


(2.4) Standards:

(2.5) Contract Monitoring Arrangements

For the avoidance of doubt the services required are being provided under Framework Agreement 22707

3. PRICE AND PAYMENTS



(3.2) Invoicing and Payment

The Supplier shall issue electronic invoices in arrears following completion of appropriate milestones as per Annex 2.

4. Invoicing Requirements

Invoices against project milestones should be submitted to the NE project officer by email. Invoices will need to include supporting evidence relating to spend incurred (e.g. brief summary of time input, travel and subsistence incurred etc.).

BY APPROVING THIS ORDER FORM THE CONTRACTOR AGREES to enter a legally binding contract with the Authority to provide to the Authority and natural England the Services specified in this Order Form, incorporating the rights and obligations in the Call-Off Contract that are set out in the Framework Agreement entered into by the Contractor and Defra on 29/06/2023.

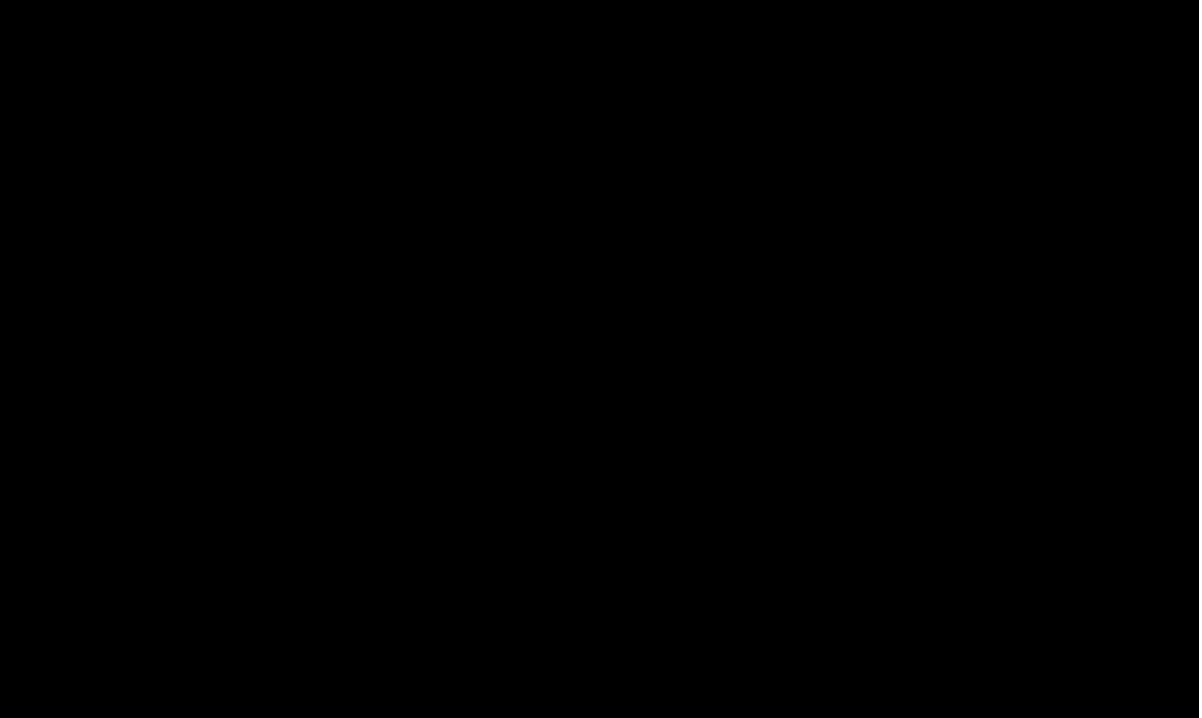
Electronic Signature

Acceptance of the award of this Contract will be made by electronic signature carried out in accordance with the 1999 EU Directive 99/93 (Community framework for electronic signatures) and the UK Electronic Communications Act 2000. Acceptance of the offer comprised in this Contract must be made within 7 days and the Agreement is formed on the date on which the Contractor communicates acceptance on the Customer's electronic contract management system ("Atamis"). No other form of acknowledgement will be accepted.

Signed for and on behalf of the Supplier



Signed for and on behalf of Defra Group Commercial



Annex 1: Pricing Schedule

No.	Item	Staff Grade	Day £ rate	No. of days	Financial year	Total price (ex. VAT) £
1						
2						
3						
4						
5						
6						
7						
12	Total exc VAT					

Annex 2:

Objective	Milestone / Deliverable	Indicative due date (based on contract award 16.06.2023)
NA		
1		
2		
2		
3		
NA		
4		
NA		
4/5		
NA		
5		
5		
5		
5		

Appendixes:

A full list of the Appendixes can be found attached to the full Specification document within Atamis.