Department for Environment Food & Rural Affairs

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Appendix 2 – Call-Off Procedure:

for The Research, Development and Evidence Framework 1

Tender Reference: RDE602 Thermal Transport of Air Pollution from Regulated Industries (TAPRI) project

Date: 13/08/2024

1.0 Request for Proposal

1.1 The following document is to be used as a Call-Off template to be sent to all Contractors on a sub-lot by the Project Manager of the Contracting Authority for completion and return in accordance with the Call-Off procedures detailed in the Form of Agreement.

Research, Development and Evidence Framework **REQUEST FOR PROPOSAL**				
Project title:	RDE602 Thermal Transport of Air Pollution from Regulated Industries (TAPRI) project			
Call off Reference:	**RDE602**			
Atamis project ref (if applicable):	**C25126**			
Cost Centre Code **(for admin purposes only)**	[redacted]			
Date:	8th July 2024			
Contracting Authority (Defra and its arms-length bodies etc)	Environment Agency			
Project Manager:	[redacted]	**Phone number:**	[redacted]	
Authorized by:	[redacted]	**Email:**	[redacted]	
Commercial Contact (if applicable):	[redacted]			
Project Start Date	19th August 2024			
Project Completion Date	28th February 2025			
For any projects over the direct award threshold, full competition is required (i.e. all contractors on the	**Direct Award**		**Mini-comp**	X

Sub-Lot are invited to quote).				
Call off from Sub-Lot number	Lot 3.3			
Proposal return date:	26th July 2024			

Evaluation criteria:		
Contractors: Failure to meet any minimum score threshold stated will result in the bid being removed from the process with no further evaluation regardless of other quality or price scores.		
Quality	**Weighting**	**70%**
Price	**Weighting**	**30%**
Quality Sub-Criteria Weightings: (Indicative only)		
E01- Approach & Methodology ***A minimum score of 50 will apply to be able to move onto the commercial evaluation***	The response gives confidence that the tenderer has a detailed understanding of the project, the technical challenges that need to be addressed and the capabilities required to deliver the project. The response identifies clear solutions for delivering the project, including technical and project management expertise. The response should include an explanation of how further methods will be identified and developed during the lifetime of the project. The response clearly demonstrates an understanding of the end-users need for this research and how the outputs that it will generate will meet these needs. Suitable methods to ensure end-user take up are proposed. Proposal describes a detailed methodology on how the overall project and each individual task will be carried out, including the approach, design, analytical strategy, and outputs. The proposal must not exceed 6 sides of A4 plus the costs proposal in section 4. Attachments must not be included unless requested except for CVs, a	**40%**

	programme diagram and full cost schedule if you consider these would support your proposal.	
E02 - Proposed Staff (inc Pen Portraits) and Contractor's experience/accreditations. ***A minimum score of 50 will apply to be able to move onto the commercial evaluation***	Details of the proposed project team and team structure for the delivery of this project, including sub-contractors. CVs for all staff and a table showing the staff days expected to be spent on the project per task, which should match the staff days in the cost proposal. The proposed team should include a senior project manager with a demonstrable track record of delivering air quality research. The project team reflects the breath of skills required to deliver this commission successfully, including team members with extensive knowledge and experience of: - Air Quality Monitoring and Boundary Layer Meteorology - Dispersion modelling - Statistical methods - Geographical Information Systems (GIS) - Combining, managing, interrogating and working with large and complex environmental datasets - Critical methodology evaluation skills / experimental design And familiarity with climate change projections. CVs for all staff should be submitted to support the response and include a table showing the staff days expected to be spent on the project per task, this table should match the staff days in the cost proposal. The proposal must not exceed 6 sides of A4 plus the Costs Proposal in Section 4. Attachments must not be included unless requested except for CVs, a programme diagram and full cost schedule if you consider these would support your proposal.	**30%**

E03 - Project Management (including project plan)	Proposed project management arrangements including day to day working for the project, the proposed timetable for the project, risk log and mitigation actions and a Gantt chart presenting milestones, deliverables, timelines and inter-dependencies. The response includes a logical and workable project programme for delivery which identifies all the key project milestones and outputs and allows sufficient time for appropriate product review and assurance. The response should demonstrate how the project could be delivered as efficiently as possible to enable the Environment Agency to be able to use outputs as quickly as possible and seize opportunities/quick wins as they are identified throughout the project. A Gantt chart depicting a realistic but efficient programme should be included in the response. The proposal recognises the need for an end-user engagement and a communication plan which will be managed over the life of the project. The proposal must not exceed 6 sides of A4 plus the Costs Proposal in Section 4. Attachments must not be included unless requested except for CVs, a programme diagram and full cost schedule if you consider these would support your proposal.	**10%**
E04 - Risk:	Provided project risk register identifies relevant risks to project delivery and proposes mitigation measures that will address these in an adequate way. Response gives confidence that thought has been put into mitigating programme delivery risks, recognising tight timeline and potential large volume of case studies and published studies that may be identified through this review. All main project risks are identified, and suitable mitigating actions developed. A suitable risk management process is suggested which will be live over the lifetime of the project. The proposal must not exceed 6 sides of A4 plus the Costs Proposal in Section 4. Attachments must	**10%**

	not be included unless requested except for CVs, a programme diagram and full cost schedule if you consider these would support your proposal.	
E05 - Sustainability – Mandatory	The Authority has set itself challenging commitments and targets to improve the environmental economic and social impacts of its estate management, operation, and procurement. These support the Government's green commitments. The policies are included in the Authority's sustainable procurement policy statement published at: https://www.gov.uk/government/publications/defra-s-sustainable-procurement-policy-statement Within this context, please briefly explain your approach to delivering the services and how you intend to reduce negative sustainability impacts. Please discuss the methods that you will employ to demonstrate and monitor the effectiveness of your organisation's approach for this requirement. The proposal must not exceed 6 sides of A4 plus the Costs Proposal in Section 4. Attachments must not be included unless requested except for CVs, a programme diagram and full cost schedule if you consider these would support your proposal.	**10%**

Specification
1. Description of work required – overall purpose & scope (including reporting requirements)
1. Background to Requirement This commissioned work is part of a research project the Environment Agency (EA) is undertaking to assess the impacts of thermal air flows on the movement of air pollutants. At present, our air quality assessments do not always consider how variations in air temperature near the ground can cause thermal air flows that incorporate and transport air pollutants. This can happen in areas of changing land cover (e.g. forestation, reversion to wetlands, urban sprawl), complex terrain, at the coast, or in peri-urban settings, potentially causing unanticipated impacts on people e.g. in residential areas. Many of the sites we regulate are in such areas, and recent experience with high-profile thermal air flow situations confirms we need research to be ready for such challenges. Many new industries, including net zero clusters, will be situated in areas potentially affected by thermal air flows, so this research is essential to prepare the EA to meet challenges to our assessment of air pollution. We envisage that the work will involve 5 key components, starting in September 2024 and

ending in February 2025. Four components will be conducted consecutively as follows:

1) Defining characteristics and scoping metrics of thermal flow types
2) Identifying and analysis of data for 'pilot' areas
3) Exploring modelling options for 'pilot' areas
4) Validation and generalisation

The fifth component, concurrent to the other 4, will focus on collating methods, results, outcomes, impacts and recommendations for future work in a written format.

2 Specification

2.1 Component 1: Defining characteristics and scoping metrics of thermal flow types

The first component involves working with the EA scientific team to define thermal flow types and their characteristics (for example, under what conditions does "cold air drainage" occur?), and to scope metrics for the different thermal flow types that might be used to predict their occurrence and characteristics. The EA scientific team will have reviewed literature, and consulted with others, to identify tools, parameters and data to best evaluate thermal flow scenarios which can be applied in this work.

2.2. Component 2: Identifying and analysis of data for 'pilot' areas

'Pilot areas' will be identified, based on the outcomes of EA-led work and the outcomes from component 1. Meteorological, land use and topographical data will be identified for these 'pilot' areas and be statistically analysed to better understand thermal flow frequency (spatial and temporal), intensity, duration and patterns. The analysis will use the metrics from Component 1.

2.3. Component 3: Exploring modelling options for 'pilot' areas

Modelling options will then be explored to predict the air quality impacts of thermal flows in the 'pilot' areas. The options will include statistical modelling (e.g. based on the analyses in component 2) and deterministic or numerical modelling (e.g. based on mathematical simulation of dispersion processes), and will use the metrics identified in Components 1 and 2. This may involve; i) conducting sensitivity analyses to assess the range of conditions under which thermal flows are significant and which parameters are the best predictors of such flows; ii) comparing results from modelling with and without accounting for thermal flows, to assess the significance of thermal flow impacts that may not be included in current regulatory modelling; iii) using dispersion models to predict how thermal flows can be anticipated and assessed for risks and to evaluate how their air pollution impacts may be avoided, forewarned, and managed. This would include the development of heuristics that could be used as early indicators that a particular situation might be impacted by thermal winds which could feed into simple scoping methods to infer potential risks of thermal flows near or from EA regulated sites,and so warrant more detailed analysis.

2.4. Component 4: Validation and generalisation

To investigate how the methods and results from 'pilot' areas can be applied more widely (e.g. nationally). Also, to consider how thermal flows and their pollutant impacts may vary under future scenarios, including the effects of changes in land use and climate.

2.5. Component 5: Collating methods, results, outcomes, impacts and recommendations for future work in a written format

Components 1-4 will require collation of methods and results in a written format, which will include; (i) a summary of the characteristics of thermal flows including their frequencies and risks; (ii) a comparison between air pollution analyses that include and exclude thermal flows; (iii) commentary on the importance and impact (or otherwise) of considering thermal flows in air quality assessments for regulatory purposes; (iv) commentary on potential future variations in thermal flow impacts due to changes in land-use and climate; (v) options for future work, including potential resource requirements.

3. Timescales and deliverables

During the work, the contractor will organise regular virtual progress meetings with the EA research team (the frequency of these meetings will be agreed with the EA research team).

All deliverables are to be submitted in draft, and following the EA reporting template, to the EA for review and comment, prior to approval. A slide pack summarising findings will also be provided.

Note these deliverables depend on the results and outcomes of work packages preceding this work, and will be fully scoped, with deliverables and timescales finalised in August 2024.

Com-ponent No.	Deliverable	Responsible party	Format/ Compatibility Requirements	Date of completion/ end
Project management				
1	Agenda/delivery of project start up meeting	EA team	MS teams meeting invite, agenda and supporting docs	W/C 19th August 2024
2	Agendas for/organisation of future progress report meetings	Contractors	MS teams meeting invite, agenda and supporting docs	Within 5 working days before the meeting
3	Record on minutes and actions for all meetings	Contractors	Word document	Within 2 working days after the meeting
Scientific project deliverables				
1	A description of different thermal flow types and their characteristics and a list of thermal flow metrics and scenarios	Contractor with input from the EA	To be discussed with the EA, but likely to be a MS Word document	31st October 2024
2	Statistics summarising frequency, intensity, duration and pattern of thermal flow characteristics	Contractor with steering from the EA	To be discussed with EA, but data files, statistical analysis files, methods and results in an accessible and interoperable format (e.g. MS excel file, GIS shape files)	31st of December 2024
3	Pilot scale dispersion modelling considering a range of conditions and scenarios where thermal	Contractor with steering from the EA	To be discussed with the EA. could comprise: .csv files, shapefiles etc. and	31st January 2025

	flows are significant. Statistical analysis comparing model results with/without inclusion of thermal flows. Suggestions for possible indicators/heuristics flagging risk of significant thermal wind occurrence		tools/code for interrogating and extracting the data, with metadata (e.g. a word document).	
4	Validation of the dispersion modelling for "pilot" areas. Commentaries on (a) how the results may be generalised to other areas, (b) potential impacts of changes in land-use and climate.	Contractor with steering from the EA	To be discussed with the EA. Could comprise: .csv files, shapefiles etc. and the tools/code for interrogating and extracting the data, with metadata (e.g. a word document).	14th February 2025
5	A written report and slide deck.	Contractor with guidance from the EA.	A word document, using the EA Chief Scientist Group report template (to be provided by the EA) and a PowerPoint slide deck	28th February 2025

2. Required skills / experience from the contractor and staff. Include any essential qualifications or accreditations required to undertake the work.

The Contractor shall only use people in delivery of the work who are suitably experienced. We recognise the specialist nature of the skills required and we encourage due consideration to the best way of providing the necessary expertise. We would accept proposals from well-balanced consortiums.

Familiarity with the area of research

Demonstrate an understanding of the how thermal air flows may incorporate air pollutants and move it in unexpected ways, previous modelling approaches and case studies, and how thermal flows may change in the future.

Technical expertise

• The ability to combine, manage, interrogate and work with large and complex environmental datasets.
• Experience with statistical methods, dispersion modelling, meteorological analysis; using GIS
• Critical methodology evaluation skills / experimental design
• Familiarity with climate change projections

Ability to work collaboratively, share knowledge and communicate

- Excellent report writing and presentation skills (written and verbal)
- Proven track record in academic publications.
- Innovative and creative approach to visualisation
- Project design and management

3. Proposed program of work and payment table (Detailing specific tasks, key milestones, deliverables & completion date where appropriate)

Task no.	Task and deliverable	Completion date	Payment schedule
1	Start-up meeting	W/C 19/08/2024	To be agreed at Contract Award/ inception
2	List of priority thermal flow scenarios and metrics	31/10/2024	
3	Statistical analysis of thermal flow characteristics	31/12/2024	
4	Pilot scale dispersion modeling, calibration and comparison of with/without thermal flow inclusion complete	31/01/2025	
5	Validation of the dispersion modelling for priority areas with consideration of impacts on future land-use and climate changes	14/02/2025	
6	Final written report	28/02/2025	
7	Final set of slides	28/02/2025	

4. Risk

Note: *This section is to be used to detail any risks or key elements relevant to the project i.e. Programme deliverable dates, workshops or external requirements, data, consultees, stakeholders etc that could impact the success of the project if they are not managed.*

Risk Detail	Date Identified	Owner	Remedial Action	Resolution Date
Supplier Failure	09/05/2024	[redacted]	Due diligence review of suppliers	16th August 2024
Risk of challenge	09/05/2024	[redacted]	Ensure Mini Competition procurement route is in line with required policy	16th August 2024
Star Chamber approval delay	09/05/2024	[redacted]		
Requirement costs more than has been budgeted for	09/05/2024	[redacted]	Regular meetings and communication to ensure that there are no problems with costs, or that there will be any unexpected costs	16th August 2024
Challenging deadlines	13/06/2024	[redacted]	Contractors should propose a realistic programme and seek opportunities to fast track delivery where possible whilst	16th August 2024

			maintaining quality of outputs	
Availability of data	13/06/2024	[redacted]	The EA hold valuable data, which can be combined with freely available data (e.g. met data). The EA are also establishing links with external partners as part of this project. The contractors should allow time for some potential rerunning of analysis in case of late changes due to last-minute intel or practical constraints.	16th August 2024
Availability of staff	13/06/2024	[redacted]	The EA have a team of people with oversight of this project, providing multiple staff members with knowledge of the project and a level of resilience if one of these individuals become unavailable due to unforeseen circumstances. The supplier should provide their proposed mitigation for any unforeseen issues with their key staff members' availability. All data/information relating to this project will be kept in shared areas to maximise resilience and business continuity.	

5. Health and Safety Requirements

Note*: Only include if high risk activities being undertaken e.g. working at height, near or over water). Do not request RAMS or similar risk assessments are returned with submissions. These should only be requested at contract award.*

N/A

6. Further Sustainability Considerations

N/A

2.0 Proposal

2.1 The following document is to be used as a Call-Off template to be sent to all Contractors on a sub-lot for completion and return in accordance with the Call-Off procedures detailed in the Form of Agreement.

Research, Development and Evidence Framework 2 **PROPOSAL**
To be completed by the Contractor
Contractor's Name: Air Quality Consultants Ltd **Call off Reference: RDE602** **Sub-Lot Number: 3.3** **Date: 25th July 2024**
Note: Your proposal must not exceed 6 sides of A4 plus the Costs Proposal in Section 4 (unless otherwise indicated in project client's specification above). Attachments must not be included unless requested except for a programme diagram and full cost schedule if you consider these would support your proposal. **Do not make or append Caveats and Assumptions in your proposal – any points of uncertainty must be raised as a clarification point prior to submitting the proposal. Where assumptions are to be made, these will be stated by the Authority's Project Manager.**
1. Approach & Methodology
[redacted]
2. Proposed Staff who will do the work and briefly state previous relevant qualification/experience. Contractors experience of undertaking similar projects and accreditations (if requested).
[redacted]

3. Project Management (inc Project plan). A project plan may be provided as an attachment with your reply (delete if not required)

[redacted]

4. Risk

Note: *This section is to be used to detail any risks relevant to the project i.e. Programme deliverable dates, data, consultees etc.*

[redacted]

Health & Safety (only complete if requested in defined evaluation criteria)

[redacted]

6. Sustainability (only complete if requested in defined evaluation criteria)

[redacted]

7. Cost Proposal

Please use day rates, including any applicable discounts, as agreed under the framework contract. A full cost schedule may be attached to support the costs summarised below.

[redacted]

By signing this form Air Quality Consultants Ltd agree to provide the services stated above for the cost set out in your Cost Proposal and in accordance with the Research, Development & Evidence Framework 1Conditions of Contract.

Contractor Project Manager:	[redacted]	
Signature:		
Date:		

3.0 Order Form

3.1 The following document is to be completed by the Contracting Authority and sent to the Contractor for counter signature to form a Call-Off contract.

Research, Development and Evidence Framework 2 **ORDER FORM**
To be completed by Contracting Authority Project Manager and sent to Contractor for countersignature. PLEASE INCLUDE ENTIRE DOCUMENT
Project title: Thermal Transport of Air Pollution from Regulated Industries (TAPRI) project **Call off Reference: RDE602** **Atamis project ref (if applicable): C25126** **Date: 13th August 2024**

THE Contracting Authority: Environment Agency
Horizon House
Deanery Road
Bristol
BS1 5AH

THE CONTRACTOR: Air Quality Consultants Ltd
23 Coldharbour Road
Bristol
BS6 7JT

APPLICABLE FRAMEWORK CONTRACT

This Order Form is for the provision of the Call-Off Deliverables and dated [Insert date of issue]. It's issued under the Research Development & Evidence Framework Agreement reference 30210 for the provision of Thermal Transport of Air Pollution from Regulated Industries (TAPRI) project.

CALL-OFF SUB-LOT: 3.3

CALL-OFF INCORPORATED TERMS The following documents are incorporated into this Call-Off Contract. Where numbers are missing we are not using those schedules. If the documents conflict, the following order of precedence applies:

1. Defra Framework Terms and Conditions;
2. Request for Proposal;

3. Proposal;

No other Supplier terms are part of the Call-Off Contract. That includes any terms written on the back of, added to this Order Form, or presented at the time of delivery.

CALL-OFF CONTRACT START DATE: 19th August 2024

CALL-OFF CONTRACT EXPIRY DATE: 28th February 2025

CALL-OFF PERIOD: 6 Months

For and on behalf of the Supplier:	For and on behalf of the Buyer:
[redacted]	