



OPERATION AND MANAGEMENT OF THE TOXIC ORGANIC MICRO POLLUTANTS (TOMPs) NETWORK (2021-2026)

Contract Reference: 62347

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SECTION 3: SPECIFICATION OF REQUIREMENTS

The following additional abbreviations and acronyms are used in this Specification of Requirements and will be taken to have the following meaning throughout.

TERM	MEANING
“AQ”	means Air Quality
“AURN”	Automatic Urban and Rural Network
“Asset Register”	means a list of the fixed assets owned by an organisation containing pertinent details about each fixed asset to track their value and physical location.
“CEN”	Means Comité Européen de Normalisation
“CLRTAP”	means the Convention on Long-range Transboundary Air Pollution
“COSHH”	means the Control of Substances Hazardous to Health
“DA”	means the Devolved Administrators
“DEFRA”	means the Secretary of State for the Department of Environment, Food and Rural Affairs
“DQO”	means the Data Quality Objectives
“EC”	means the European Commission
“EMEP”	means monitoring and evaluation of Long-Range Air Pollution in Europe
“Equipment”	means for the purposes of this Specification of Requirements ‘equipment’ refers to monitoring instruments, modified Andersen GPS-1 sampler, freezer or other associated equipment required for monitoring purposes.
“ESU”	means the Equipment Support Units
“EU”	means the European Union
“GFF”	means Glass Fibre Filter
“LSO”	means the Local Site Operators
“NAEI”	means National Atmospheric Emissions Inventory
“Nominated Officer”	means the officer nominated by the Authority as the contract manager for this contract
“PUFF”	means Poly Urethane Filters
“QA / QC”	means the Quality Assurance / Quality Control Services
“Regulations”	means the Public Contracts Regulations 2015 (as amended)
“TOMPS”	Means Toxic Organic Micro Pollutants
“UK”	means the United Kingdom
“UK AIR”	means the UK Air Information Resource (http://uk-air.defra.gov.uk)
“UKAS”	means the United Kingdom Accreditation Service
“UNECE”	Means the United Nations Economic Commission for Europe

1) Introduction

- 1.1 The Environment Agency on behalf of the Department for Environment, Food and Rural Affairs (Defra) and Devolved Administrations is seeking to procure a service provider to provide data on the ambient levels of Persistent Organic Pollutants (POPs) and the Quality Assurance and Quality Control (QA/QC) for the TOMPs Monitoring Network from 1st October 2021 until at least 30th September 2024 with the possibility of two individual one year extensions which are not guaranteed.
- 1.2 This is a three (3) year contract with an option to extend the contract for a further 24 months in one year increments.

2) Policy Context

- 2.1 Persistent Organic Pollutants (POPs) are found in trace quantities in all areas of the environment. They accumulate in humans, wildlife and plants and have differing degrees of toxicity. POPs do not readily break down in the environment and can have half-lives in the order of years, although they may be transformed both physically and chemically over long periods.
- 2.2 Interest in these pollutants has resulted in the conception of international agreements that aim to reduce releases of POPs into the environment. These include the 1998 United Nations Economic Commission for Europe (UNECE) Protocol on Persistent Organic Pollutants made under the Convention on Long-Range Transboundary Air Pollution (CLRTAP), and the 2001 Stockholm Convention on Persistent Organic Pollutants. The EU's obligations under these instruments are implemented through Regulation (EC) No 850/2004 on Persistent Organic Pollutants. The UNECE Protocol on POPs has the aim of reducing and preventing long range transboundary air pollution from POPs. As such Parties are obliged to take measures to reduce or eliminate any discharges, emissions and losses of POPs into the environment. This is achieved through the restriction or elimination of POPs production and use, in addition to reducing POPs emissions from unintentional production activities.
- 2.3 Following EU exit on the 1st January 2021 the UK will no longer be bound by future EU law, however for continuity our existing body of EU law will be saved as Retained EU law.
- 2.4 The Stockholm Convention on POPs requires that Parties take measures to reduce POPs emissions, by prohibiting or restricting the production and use of listed POPs, and by identifying unintentional sources of their production with a view to eliminating their release into the environment. In addition, the Stockholm Convention further requires that Parties facilitate and encourage research and monitoring of POPs, to provide information on their sources, releases, transport levels, trends and effects in humans and environment.
- 2.5 UK is a signatory to both the Stockholm Convention on POPs and UNECE Protocol on POPs. Information on past and predicted POPs emissions and concentrations of POPs in the environment is used to determine if measures taken to control POPs releases into the environment are successful. Information on emissions of POPs is included in the UK's National Atmospheric Emissions Inventory (NAEI). The NAEI is based on activity estimates and emission factors from all UK emission sources, both

industrial and non-industrial, for the whole of the UK. This may be found at: www.naei.org.uk

- 2.6 The TOMPs Network is responsible for contributing to the monitoring of UK air quality by providing measurement of the air concentrations of POPs at rural and urban locations in the UK. Monitoring work complements emission inventory work, whilst also providing information on the sources of POP releases into the environment. The UK Government has been supporting the TOMPs monitoring programme on emissions to air since 1991 in order to inform policy development and to evaluate the effectiveness of measures aimed at reducing the releases of POPs into the environment. Monitoring data is used to inform negotiation of international instruments to control POPs, such as consideration of restrictions on POPs already covered by the UNECE Protocol on POPs and Stockholm Convention on POPs, as well as the consideration of new candidate POPs for inclusion. This work complements Defra's Air Quality Clean Air Strategy which aims to improve air quality and reduce human exposure to all air pollutants including POPs.
- 2.7 The Authority, on behalf of the UK (the Department of Environment Food and Rural Affairs (Defra) within England, and the Northern Ireland Executive, Scottish Government and the Welsh Government, collectively known as the Devolved Administrations) continues to take part in international negotiations on new POPs. It is intended that the TOMPs air monitoring programme may also provide additional information on new POPs, their behaviour in the environment and provide a greater understanding regarding their movement in different environmental media.

3) Overview of requirements

- 3.1. The purpose of the Toxic Organic Micro Pollutants (TOMPs) Network is to provide information on the ambient levels of Persistent Organic Pollutants (POPs) in the UK through monitoring at six sites (see Annex 1), to inform policy development on environmental and human exposure to POPs, and to provide information on the sources of POPs in the atmosphere. Two new sites are also planned to be incorporated into the network in the first year of the contract one in Northern Ireland and one in Cardiff in locations which are under investigation (See Annex 1). Operations at High Muffles are also proposed to be scaled back within year one of the contract. Details of how far operations will be scaled back will be decided in advance of the commissioning of the new Cardiff site. Any price implications will be agreed with the Authorities Project Officer and implemented through the change control process.
- 3.2. The Contractor will manage and operate the Authority's TOMPs Network, and analyse and report on ambient levels of selected POPs in the UK. The scope of services to be provided includes but is not limited to:
- Collection of samples and sampling data from six (7) designated monitoring points across the UK including two new sites one in Cardiff and one in Northern Ireland are planned to be installed in year 1 (Excluding High Muffles which is being scaled back);
 - monitoring of airborne concentrations of selected POPs;
 - production of sampling, and analysis methodologies, and risk assessments;

- undertaking regular maintenance and calibration of sampling equipment so that accurate data is reported;
- provision of all consumables associated with the provision of the Service;
- all aspects of data management including but not limited to:
 - data manipulation;
 - data quality assurance (QA) & quality control (QC) (QA/QC);
 - data validation/verification; and
 - data submission in a format compatible with the Authority's requirements.
- interpretation of data (e.g. comparison of data against trends).

4) Current TOMP's Network Operation and site management

- 4.1. A list of current monitoring sites, their locations, and current site operators can be found in Annex 1. Originally the TOMP's Network consisted of six sites, three at urban locations (London, Manchester and Middlesbrough), and three at rural locations (Hazelrigg in Lancashire, High Muffles in Yorkshire, and Stoke Ferry in East Anglia). The Stoke Ferry and Middlesbrough sites have since been discontinued (during 2007 and 2008 respectively) and replaced with two new sites in Auchencorth Moss (Mid Lothian) and Weybourne (East Anglia). These sites allow comparisons to be made between two urban sites, two rural sites and two coastal sites (east and west).
- 4.2. Three (3) of the sites (Auchencorth Moss, High Muffles and Weybourne) are co-located on the Automatic Urban and Rural Network (AURN¹) sites and as such the overall site management is via the AURN network and any applicable leases/licences are covered by that network operator. No electricity costs are paid by the TOMP's Network for any of the sites and no licences or leases apply to the remaining three sites (London, Manchester and Hazelrigg), unless a need arises.
- 4.3. Two new sites are also planned to be incorporated into the network in the first year of the contract one in Northern Ireland and one in Cardiff in locations which are yet to be finalised. Operations at High Muffles are also proposed to be scaled back within year one of the contract.
- 4.4. The Authority will provide to the Contractor the field equipment to undertake sampling. Details of the equipment provided by the Authority are listed in Annex 2 along with two new Analitica instruments and peripherals for the Cardiff and Northern Ireland sites which are yet to be purchased.

¹ Details of which can be found: <https://uk-air.defra.gov.uk/networks/network-info?view=aurn>

- 4.5. Analitica HighVolume air samplers (<http://www.amsanalitica.com>) are used to take weekly samples every two weeks. This means that the sampler is programmed to be inactive for a week and then collect 1000m³ of air over the following seven days before the module is exchanged. These samples are then bulked into quarterly samples for analysis and reporting. As a result, these sites have provided an invaluable insight into the long-term trend of persistent organic pollutants (POPs) in UK air.
- 4.6. Air flow in the High Volume sampler is controlled and maintained through a flow control system equipped with Venturi tubes and a brushless blower. These can be controlled electronically, which enables samples to be collected within a designated set of parameters e.g. time, volume to be sampled.
- 4.7. Air is drawn in using a motor, and passes through a glass fibre filter (GFF) (in a support screen) which captures material predominantly in the particle phase. Two polyurethane filters (PUFs), (inside a glass cartridge), then capture material in the vapour phase. The filters are contained within the sampling module of the sampler.
- 4.8. The time during which the sampler operates is recorded by the electronic control unit/data logger. The temperature minimum and maximum values are also recorded continuously during the sampling period. The sampling flow rate is controlled using a Venturi electronic flow control system (ISO-5167) and is pre-programmed at the start of the sampling period. Sampling data is continuously logged and regularly backed up via a USB port. Maintenance checks including flow rate calibration are routinely conducted, and preventative maintenance carried out when necessary.
- 4.9. Currently samples are collected every two (2) weeks continuously throughout the year. This comprises of one inactive week and one actively sampling. Following each two (2) week sampling period, the PUFs and GFFs are removed from site and stored in a freezer, until the samples are extracted. The samples collected every two (2) weeks are combined to yield bulked quarterly samples for analysis (plus field and laboratory blanks), at each site. Quarter's end at the end of March (Q1), June (Q2), September (Q3) and December (Q4) in each year.
- 4.10. Currently sample extraction and analysis commence at the end of a two (2) quarter period, for example, at the end of June for Q1 and Q2 and at the end of December for Q3 and Q4. Fifty percent (50%) of the sample is currently used for analysis of PCDD/Fs, PCBs, PBDEs and HCBDD and the remaining fifty percent (50%) of the sample is archived. Appropriate standards are used when determining the concentration of the analytes present within the samples.
- 4.11. Currently seven (7) indicator PCB congeners, ten (11) BDE congeners (including decaBDE), four (4) co-planar PCB congeners, ten (10) furan congeners and seven (7) dioxin congeners and 3 HBCDD congeners are measured in each sample (see Annex 3). Samples are analysed using gas chromatography mass spectrometry (GC-MS), with high resolution mass spectrometry (HS-MS) for the PCDD/Fs. HBCDD isomers are analysed using ultra-performance liquid chromatography time-of-flight

mass spectrometry (UPLC-TOFMS). PCDD/Fs are reported for the London and Manchester sites only, although retrospective analysis for other sites is possible if required.

- 4.12. For PCDD/Fs detection limits for each 2,3,7,8-substituted PCDD/F congener should be no higher than 0.05 pg TEQ/m³, so that, typically, individual 2,3,7,8-substituted congeners are detected at concentrations three (3) to eight (8) times higher than their associated detection limits.
- 4.13. For PCB congeners key indicators are reported which include PCB 28, 52, 101, 118, 138, 153 and 180 in all samples (International Council for the Exploration of the Sea, ICES). Co-planar PCB congeners that have been assigned World Health Organisation Toxic Equivalence Factors (i.e. PCB 77, 81, 126 and 169) are included in the Manchester and London samples. For PBDEs, congeners 28, 47, 66, 99, 100, 119, 138, 153, 154, 183 along with decaBDE (BDE 209) are reported at each site.
- 4.14. The raw data are reported as the average concentration (pg/m³ or fgTEQ/m³) of each substance measured, for each quarter and are to be published on the UK Air Website <https://uk-air.defra.gov.uk/data/tomps-data>. The data is also reported to Europe to contribute to the Stockholm Convention Global Monitoring Network <http://www.pops-gmp.org/index.php?pg=gmp-data-warehouse>. For the reporting of trend data, the concentration of measured dioxins and furans are summed for the year, for PCBs, seven (7) PCB congeners (the International Council for the Exploration of the Sea (ICES) set- PCB congeners 28, 52, 101, 118, 138, 153, and 180) are summed.

5. Work Package 1: Management of Service

- 5.1. The Contractor will manage and operate the TOMPs Network, and analyse and report on the data collected for a period of three years with an option to extend the contract for a further 24 months in one year increments. The Contractor will be responsible for the sampling and analysis of data from 1st October 2021 (the Service Commencement Date).
- 5.2. The Contractor will be required to provide support at the end of this Contract (or until a revised end date if the Contract is extended) should a new Service provider be identified by the Authority, in accordance with an agreed Exit Plan, similar to the template in Appendix E. This support should involve that which would be reasonably required to effectively handover the services to a new contractor or the Authority. Note that if this Contract is extended, the date of the handover may be moved to incorporate a revised end date. For purposes of evaluation, the price of this handover is to be inputted once in Appendix D: Pricing Schedule, in the final contract period.

Deliverable 1a: Handover support to be provided at the end of the Contract if required. An Exit Plan to be produced within 6 months of the commencement the contract.

- 5.3. The Contractor will be required to make provisions of LSOs (Local Site Operators) to all six (6) live monitoring sites. The Contractor must ensure that any appointed LSO has the appropriate expertise and will be responsible for the operation, routine maintenance and security of all the monitoring sites.

Deliverable 1b: Make provision for LSOs (Local Site Operators) to all six (6) live monitoring sites ahead of contract start date and for new sites within 3 months of the installation of the sites.

- 5.4. The Contractor is to provide updated methodologies (e.g SOPs) to the Authority for their records prior to the Service within the 1st month of the contact and should include:
- Details of Network operation and management (including the use of LSOs) to undertake the collection of samples and management of each site, if applicable). The Contractor is responsible for the provision of LSOs to all monitoring sites. The Contractor must ensure that any appointed LSO has the appropriate expertise and will be responsible for the operation, routine maintenance, fabric (defined as the housing, integrity, services, internal environment and amenities of and access to the site), and security of all the monitoring sites;
 - Details of how the GFF and PUFs are prepared, transported to monitoring sites, installed and removed from samplers, stored following collection, and how samples will be extracted and analysed;
 - Details of the processes required for the repair and replacement of equipment, e.g. the annual replacement of the brushless motors, informing the Authority of any remedial action to be taken;
 - QA/QC measures that, at all times, maximises the provision of quality data, which should include, but not limited to: discussion of approaches used to minimise sample contamination during sampling and analysis, approaches to maximise data capture rates (aiming for a capture rate of at least 90%); processes that ensure the maintenance and calibration of equipment; the use of standards for the measurement of POP concentrations within samples, and provision of field and laboratory blanks; and
 - Approaches used to ensure the provision of validated data.

Deliverable 1c: Evidence that methodologies have been updated and finalised covering overall network management, sampling methodologies, equipment maintenance and calibration, quality control and data validation. These methodologies to then be implemented to manage the delivery of the Service which conform to project standards, and meet the project's expectations as outlined for each QA/QC plan. These should be updated within 6 months of contract commencement to the Agency's Responsible Officer or with 3 months of new method development been finalised.

- 5.5. It is emphasised that the Contractor must ensure data are sampled and analysed to a standard acceptable to EMEP (the UNECE Co-operative programme on monitoring and evaluation of Long-Range Air Pollution in Europe), and CEN (Comité Européen de Normalisation) as the data are made widely available to the environmental science community. However, we are looking for innovative ideas to cut costs whilst maintaining the ability of the UK to show that it is meeting its requirements to control and reduce POPs.

6. Work Package 2: Operation of the Monitoring Network

Deliverable 2a: All sampling has been undertaken in accordance with the approved methodologies and using suitably qualified LSOs.

Deliverable 2b: All laboratory analysis has been undertaken in accordance with the approved methodologies.

Deliverable 2c: All data analysis has been undertaken in accordance with the approved methodologies.

- 6.1. All consumables used within the Network are to be provided by the Contractor and any risks associated with their purchase should be flagged in quarterly reporting.
- 6.2. The Contractor will be responsible for the operation, calibration and servicing of all monitoring equipment, and for data quality assurance and control, in accordance with the manufacturer guidance where available, or best practice where no guidance is given. Calibration, ad hoc and routine maintenance records will be maintained, including details and actions taken to resolve equipment failures. The Contractor shall provide a summary of all maintenance activities within the quarterly performance reports.

Deliverable 2d: All issues with instrumentation and Equipment requiring investigation by the Contractor to be detailed in quarterly reports. This should include description of the issue, the reasons for the visit, the response time, actions taken and resolution. Any mitigation for the long term should be proposed. Data capture statistics should be reported in the quarterly reports and ratified statistics provided in annual reports. Justification of data capture less than 90% is required.

- 6.3. The Contractor will submit to the Authority, details of independent audit of the services annually in relation to:
- Laboratory procedures;
 - Field operations; and
 - Quality Assurance

7. Work Package 3: Reporting for the TOMP's Network

- 7.1. A summary of the reporting deliverables for the TOMP's Network can be found in Table 1. Both annual and quarterly reports should meet the requirements of the template in Appendix K.
- 7.2. Invoices will be paid quarterly, and will be accompanied by a quarterly report. Quarterly reports will include performance against KPI 1, a short summary of any highlights during the previous quarter, a RAG (red/amber/green) rating for any ad hoc tasks (detailed in section 4 below), and data capture/quality, details of any operational problems that threaten data capture or data quality, together with suggested remedial action that has been taken or is proposed, including issues such as re-siting, where appropriate. Any other related risks or issues should be flagged, as well as any changes to the asset register.
- 7.3. Invoices will quote the correct PO, contract number, the Authority Contact, and qualitative description of the work being done. Associated report should be clearly and explicitly linked to invoices to help financial tracking.
- 7.4. The Contractor will liaise as necessary with the Authority's Project Officer on the status of the Network between quarterly reports.

Deliverable 3a: Quarterly reports provided to the Authority alongside invoicing. Invoices will not be paid without this report with all payments clearly linked to activity.

- 7.5. Ratified Data from all of the TOMP's sites should be made available to the Authority and other interested parties, on a biannual basis as a minimum by e-mail. This requirement should be reflected in any subcontracts for sample analysis.
- 7.6. This data will then be transferred to be the UK Air Website contractors. The provision of the data to the UK Air website contractor should be carried out no later than four (4) months after the end of the biannual sampling period.

Deliverable 3b: To deliver all data to the timescales as detailed in table 1. Confirmation of all timescales met should be provided by email to the Authority in order for the Authority to be informed of progress.

- 7.7. The Contractor will provide the Authority with the first annual report draft version in electronic form no later than 1st September 2022, and annually thereafter. An annual report from the Network shall include, at a minimum of that contract year: a background to the work conducted, all the data collected that year; methodologies used; data and trend interpretation and evaluation; how the work informs on the effectiveness of control measures used to regulate POPs releases into the

environment, and whether sources that contribute to POPs releases can be identified. The Authority will comment on these reports within three (3) weeks of receipt, and the Contractor will incorporate any comments from the Authority within four (4) weeks. The number of annual reports provided is dependent on the duration of the Contract (i.e. whether the option to extend the Contract is taken up by the Authority), and will require consultation and approval by the Authority's Project Officer.

<p>Deliverable 3c: Annual reports provided to the Authority to the timescales outlined in Table 1 and by the 1st September each contract year.</p>
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Table 1: Key deliverables and timescales

Deliverables/outputs	Frequency	Timescales	Circulate to
Sample Analysis	Annually	Samples will be analysed June each year	N/A
Ratified data	Annually	data ratified and uploaded by 31 July each year	Contractor for UK Air Website and European Data Repository and EA Project Officer (EA PO)
Quarterly report	Quarterly	Reports to be delivered no later than five (5) working days after the end of the quarter	EA PO
Invoices	Quarterly	Invoices to be provided every three (3) months and submitted no later than five (5) working days after the end of the quarter.	EA PO
Progress Meetings	Six (6) monthly	Six (6) months from Contract Commencement Date	EA PO, and Devolved Administrations
Annual reports	Once a year	Draft report must be delivered by 1st September each year (reflecting the data from previous calendar year). Following comments from the Authority the final version must be delivered by 30th September each year or within 3 weeks of comments being received.	EA PO, Defra and Devolved Administrations

8. Work Package 4: Network Contract Management

- 8.1. The Authority's Project Officer will be the point of contact on a day to day basis for all matters concerning this Contract and shall be primarily responsible for providing the Contractor with all instructions, approvals and for accepting all deliverables under the scope of work and for dealing with the Contractor's claims for payment.
- 8.2. The Contractor appoints a named person as the Contractor's representative who shall be responsible for the overall quality and timeliness of the services to be provided.
- 8.3. All work carried out under the Contract must comply with best practice and relevant Agency guidance where agreed. The Contractor must ensure that all relevant health and safety legislation is complied with and evidence of this where requested by the Authority. This should include but not be limited to fire and electrical safety, COSHH, manual handling and lone working. Staff undertaking the work must have received appropriate training to avoid significant hazards to staff or the general public. Contractors must ensure that all equipment used is suitably tested.

Deliverable 4a: Ensure all health and safety legislation, training and certification is kept up to date – summaries should be provided in regular reporting. Health and Safety assessments should be maintained through the health and safety database.

- 8.4. The Contractor will provide to the Authority and maintain annually, a project risk register, methodology for site work, risk assessments for staff working on site, near miss and accident reports, training records for staff and subcontractors as appropriate for site work and any supporting documentation related to risk mitigation activities such as health and safety procedures, staff lists, ISO certifications, fire and electrical safety, COSHH, manual handling, lone working and QA/QC procedures. The risk register should be updated and submitted to the Authority within one month of commencement of the contract and updated as appropriate and at the very least annually. The Contractor should follow the Health and Safety database guidance document in Appendix F.

Deliverable 4b: Delivery of an updated health and safety risk register one (1) month after Service Commencement in the first instance then as and when updates are made and provide updates at least annually. Where applicable, a short reference should be made in quarterly progress report to the risk register either to confirm additional risks have been identified (and to reference the risk register) or confirm that no new risks have been identified, this will be used as verification that the risk register has been reviewed.

- 8.5. The Authority's equipment that currently relates to this Contract is listed in Annex 2. It is the Contractor's responsibility to ensure that they hold an accurate and up-to-date equipment register for the duration of the Contract. The Contractor must notify the Authority of any additional equipment purchased.

Deliverable 4c: To update (and keep updated) a full asset register. To be submitted to the Authority, in the first instance, one (1) month after Service Commencement and annually thereafter or when any changes are made to the register.

- 8.6. During the course of the contract the Contractor and the Agency will review a gap analysis and a way of working to align with Appendix J our Air Quality Operational Instruction. It is intended that this review will take place with 12 months and pricing adjustment aligned as required.
- 8.7. The Contractor has the responsibility for Mains testing records from affiliate site owners, and highlighting to the Environment Agency when these cannot be obtained. The Contractor shall keep their own records to insure these tests records are up-to date. The Health and Safety database currently lists all those that are expired.
- 8.8. The contractor will be required to arrange PAT testing for Environment Agency assets. The Environment Agency has a managed PAT testing regime to deliver testing in two separate forms. 'Office based equipment' and separately 'field' equipment. The TOMPs contract does not fit entirely within either of these definitions. The Operational Instruction LIT14111 is included within this contract to demonstrate the Environment Agency's methodology in maintaining these PAT items and to indicate what the minimum technical requirements are for the contractor to achieve in relation to overseeing the work being undertaken.

Appendix L – PAT Testing of Office Based Electrical Equipment – Quick Guide
LIT 14111 (QG 69_17)

- 8.9. The Contractor will attend a kick-off meeting at the start of the contract and then regular contract management meetings at six (6) monthly intervals with the Authority's Project Officer and other interested parties. The Authority's Project Officer may arrange more frequent contract management meetings if it is considered necessary.

Deliverable 4d: Attendance of the Kick-off meeting and to provide a write up of the key issues and actions.

- 8.10. The Contractor is expected to produce and maintain a project risk assessment to identify and minimise risks to the delivery of the project as a whole and Health and safety risks on the network.

The Project Management Risk Assessment must cover the following risks themes:

- Threats to integrity of IT and communication systems;
- Threats to sub-contractor failures with limited supply markets;
- Threats to equipment failures;
- Staff changes / resilience;
- Commercial conflicts of Contractor and Sub-Contract and management of these;
- Sub-contractor selection process risks;
- Pinch points during holiday periods;
- Health and safety risks from site operations / new installations, co-locations contractors / members of the public;
- Environmental risks from site operations;
- Reputational risk management to the Environment Agency from network wide failures;
- Financial risks to the Contractor.

A template project risk assessment is provided in Appendix G to be produced in detail by the Contractor. Additionally the Contractor is expected to use a RASCI Matrix (Responsible, Accountable, Supportive, Consulted, and Informed), to manage any complex project to ensure relevant stakeholders across the TOMP are appropriately consulted.

- 8.11. The Contractor will develop any required Business Continuity Plan (example provided in Appendix M) to ensure that the core services delivered in this contract can continue to be delivered in the event of an emergency or major and /or prolonged interruption to function, once highlighted in the Project Management Risk Assessment.

Deliverable 4d: Review if a new project risk arises and update the Project Risk Assessment at least annually (1st October each calendar year). Update as required within five (5) working days (or risk identification) to minimise risk of project delivery failures. Business Continuity Plans to be developed and maintained as appropriate to manage relevant project risks.

- 8.12. The Contractor may be required to provide ad hoc advice to the Authority and the Devolved Administrations, as required on issues related to the TOMP's Network. Funding will be allocated on an as required and agreed basis using Contract change notes.
- 8.13. The Contractor shall attend any relevant conferences and meetings, including international meetings held under the UNECE Protocol on POPs, by agreement with the Authority's project officer and submit a report to the Authority. This will be covered under ad hoc days as necessary.
- 8.14. For avoidance of doubt, this ad hoc budget is a maximum budget and the Authority will only pay for tasks completed and so may not use the full ad hoc budget allocation throughout the Contract duration. When scheduling and approving ad hoc work the Authority will pay the hourly/day rate for the appropriate staff member(s), as provided in the Contractors Pricing Schedule, in accordance with the applicable time required for the task(s).

Deliverable 4e: Attendance at meetings (to be agreed with the Authority in advance) to represent the Authority (where required) and to provide the Authority with detailed summaries of outputs, discussions and key issues. In addition to this any ad hoc tasks as agreed between the Authority and the Contractor.

- 8.15. The Calibration, ad hoc and routine maintenance records will be maintained, including details and actions taken to resolve equipment failures in accordance with the approved methodologies drafted to meet deliverable 1c and 2a.
- 8.16. The Intellectual property rights to any new techniques, analytical methods, databases, software codes to handle and validate data and similar tools of the trade developed during this contract to allow the efficient operation of the service will be retained by the Authority.
- 8.17. In addition to the requirements above the Contractor is to keep accounts and records of all quotations and invoices received from Subcontractors, suppliers, utilities, local authorities, etc.
- 8.18. The Environment Agency is looking at ways it can baseline the environmental impact of its contracted work and monitor any improvements made. To this end, if funding allows, we are requesting the Contractor collects annual sustainability data in:

Appendix H - Sustainability Reporting Requirements

The Contractor will be required to suggest proposals and innovation to assist the Environment Agency meeting its sustainability targets, in quarterly reports. Sustainability data relating to the environmental impact of this contract will (subject to funding agreement) be provided on an annual basis, for each contract year period, with the first submission by the 30th June 2023, for the period 1st January 2022 – 31st December 2022. This will include, as a minimum everything

that is included in the spreadsheet reporting template Appendix H. The Contractor should also return the EA standard contract questionnaire in Appendix I prior to the commencement of services.

9. Programme of Work and Milestones

- 9.1. Contractor to update the contracts work programme to meet the objectives, requirements and timetable outlined in this contract specification. The contractor should include a time schedule for the work that identifies the main stages, tasks and key milestones – these will then be used to monitor progress.

10. Innovation and Continuous Improvement

- 10.1. The Contractor may wish to provide alternative methods to the current methodology for sampling and analysis which would result in cost saving opportunities yet maintain the UK's ability to demonstrate its compliance with the Stockholm Convention whilst ensuring that the Authority's Objectives of this Contract are met during the contract term. This should be done via a contract change note and a proposal to the Responsible Project Officer.
- 10.2. The contractor may also include propositions (and justification) for the inclusion of additional POPs to ensure the UK is compliant with the most recent revisions of the Stockholm Convention.
- 10.3. Throughout the duration of the Contract the Authority will expect the Contractor to review their existing Service delivery, in order to identify opportunities for continuous improvement of the efficiency and effectiveness of the Service. This review should be included in Quarterly reports. This will include, but not be limited to, the Contractor identifying measures to reduce costs of the Service provision. If during these reviews the Contractor proposes measures which if implemented would result in a reduced price of the Contract to the Authority, the Authority would consider sharing a percentage of any savings with the Contractor (for example 10% of total value of savings). This would be administered by formally varying the Contract to reflect the reduction in costs.

SECTION 4: PERFORMANCE MANAGEMENT FRAMEWORK

The below table sets out the KPIs which will be used throughout the duration of the Contract.

Metric	KPI	What is required to make this measurable	KPI Measurement	KPI Rating		
Contract Management	KPI 1 – Health and Safety Service credit 2	Ensure that all LSOs are aware of their contractual obligation to upload risk assessments to the H&S Database and flag any site specific risks or H&S incidents. Contractor to inform all affected team members (e.g. LSOs) within 1 working hour the content of any High risk issue which has been automatically cascaded by the H&S Database.	Information relating to any new safety incidents or near misses to be provided in quarterly reports. Any H&S incident occurs as a result of non conformance to the Contractors H&S response in Schedule 10 (the Contractor's Solution). H&S certificates remain up to date and valid.	H&S certificate is not valid, or non conformance identified to H&S provisions in Schedule 10, brought to the attention of the Authority.	NA	Meets Expectations – Quarterly reports accurately reflect any H&S incidents which may have occurred in the previous quarter and all issues are evidenced to have been cascaded to LSOs within the timeframe.

Metric	KPI	What is required to make this measurable	KPI Measurement	KPI Rating		
Contract Management	KPI 2 – Annual Risk Assessment and Asset Register Service credit 2	Provide annual risk assessment (including staff availability risks) and updated asset register end of October each year. Contractor to maintain and flag risks and mitigation action where required. Risk Assessment should be reviewed quarterly and any changes highlighted in the quarterly report.	Risk assessment and asset registers are sent to the contractor by end of October each year.	Risk Assessment delivered after end of October Risks identified in quarterly reports not reflected in an updated risk register. Asset register delivered after end of April. New assets identified in quarterly reports not reflected in an updated asset register.	NA	Meets expectations – Risk Assessment delivered on time and risks identified in quarterly reports are reflected in the updated risk register. Asset Register delivered on time and new assets identified in quarterly reports are reflected in the updated assets register.
Delivery	KPI 3 – Quarterly and Annual reports Service credit 1	Draft quarterly and annual reports to be provided by the deadline in agreed in Table 1.	Final reports to be submitted by Table 1 deadline and within three (3) weeks of receiving the Authority's comments, if later.	Report is not provided on time and or draft report requires significant comment revision after being reviewed by the Authority.	NA	Meets expectations – Annual report delivered on time and to a quality that requires minimal comment from the Authority

Metric	KPI	What is required to make this measurable	KPI Measurement	KPI Rating		
Delivery	KPI 4 – Data provision Service credit 3	Data analysed and sent for upload to UK Air as agreed in Table 1	Confirmation in quarterly and annual reports that data has been provided to Authority's contractor each six (6) months	Does not meet expectations – Data is not provided within dates specified in this table and no agreement on an extension has been made or data is not provided within the extended timescale agreed with the Authority.		Meets expectations – Data is reported to DDU with dates specified in this table
Quality	KPI 5 – Robust QA Procedures Service credit 3	Robust QAQC procedures are in place (including undertaking inter-laboratory process and analysis comparisons) and are documented and followed by the project team, including any Sub-Contractors (where appropriate). There are no issues with quality that have to be escalated to Contractors senior management	These issues are all highlighted in quarterly invoice linked reports.	QAQC measures have been escalated to the Contractor's Senior Management and or Authority		Meets expectations – There are no issues relating to QAQC identified by the Contractor or escalated to the Authority

1. The Contractor shall detail performance against KPI's in the Quarterly Reports and the Annual Report.
2. KPI's shall be monitored on a regular basis and shall form part of the contract performance review. Performance of KPI's will be reported quarterly and annually.
3. The first quarter shall not be formally assessed. It shall be used to develop the quarterly report template and agree the format and content to be included in the report.
4. Any performance issues highlighted in these reports will be addressed by the Contractor, who shall be required to provide an improvement plan ("Remediation Plan") to address all issues highlighted within a week of the Authority request.
5. Performance failure by the Contractor may result in administrative costs to the Authority. Where failure attributable to the Contractor is identified in the Performance Management report and relates to the KPI's then the service credit regime shall apply.
6. Key Performance Indicators (KPIs) are essential in order to align Contractor's performance with the requirements of the Authority and to do so in a fair and practical way. KPIs have to be realistic and achievable; they also have to be met otherwise indicating that the service is failing to deliver. Without the use of service credits in such a situation, this service failure places strain on the relationship as delivery falls short of agreed levels. As a result, the only recourse would be to terminate and seek alternative supply.
7. The use of a strong service credit regime accompanied by a proactive approach to correcting failures and addressing their cause improves the relationship and enables a partnership rather than a confrontational style of working. Its focus is on managing and improving service. It is NOT about taking cost out of the service to the Authority.

Service Credits

The use of Service Credits is governed by the following principles:

- Service Credits sit within the wider service management approach being pursued by the Contractor and the Authority. The use of Service Credits does not prejudice the Authority's rights under appropriate clauses of the contract in the event of inadequate performance by the Contractor.
- The Service Credit regime would be instigated on each occasion where there is a service failure (i.e. where a KPI is identified as having a 'Red status'). This would also give rise to a remediation plan.
- The Authority has full and complete discretion on whether to claim all, part or none of a Service Credit to which it is due.
- Service Credits claimed will be applied to the subsequent invoice as a credit note.

- The full, agreed Service Credit regime shall operate from the initial delivery date until the end of the Contract Period.

Service credits will be applied as follows:

- **Service Credit 1: KPI 3**

Unless there is written clearance by the Authority, a score of “red” will result in a reduction in value of the subsequent invoice sent to the Authority that the score was awarded. The applicable deductions, resulting from performances in “red” in the KPI table, are:

- [10%] of the total value for deliverable 3a in that period defined in the Payment Schedule caused by a quarterly report delay
- [20%] of the total value for deliverable 3c in that period defined in the Payment Schedule caused by an annual report delay.

- **Service Credit 2: KPI 1, KPI 2**

Unless there is written clearance by the Authority, any “red” scores will result in a reduction in value of the subsequent invoice sent to the Authority that the score was awarded. The applicable deductions, resulting from performances in “red” in the KPI table, are

- [10%] of the total value for deliverable 4a in that period defined in the Payment Schedule for a failure in KPI 1; and
- [15%] of the total value for deliverable 4b in that period defined in the Payment Schedule for a failure in KPI 2.

- **Service Credit 3: KPI 4 and KPI 5**

Unless there is written clearance by the Authority any “red” scores will result in a reduction in value of the subsequent invoice sent to the Authority that the score was awarded. The applicable deductions, resulting from performances in “red” in the KPI table are:

- A “red” score shall result in a [25%] reduction of the yearly total of deliverable 3b for KPI 4, and deliverable 1c KPI 5 for that period defined in the Payment Schedule.

Annex 1 – List of current sites and operators

UK Air ID	Site	Latitude	Longitude	Site Type	When established	Current Local Site Operators at time of ITT publication
UKA00532	London	51°29'43.91"N	0° 7' 35.09"W	urban	1991	Lancaster University
UKA00185	Manchester	53° 28' 50.88"N	2° 15' 7.13"W	urban	1991	Lancaster University
UKA00507	Hazelrigg	54° 0' 49.13"N	2° 46' 31.43"W	semi-rural	1992	Lancaster University
UKA00169	High Muffles (North Yorkshire)	54° 20' 3.96"N	0° 48' 31.68"W	rural	1999	Lancaster University
UKA00451	Auchencorth Moss	55° 47' 32.58"N	3° 14' 35.43"W	rural	2008	Centre for Ecology and Hydrology
UKA00433	Weybourne	52° 57' 1.76"N	1° 7' 19.26"E	rural	2008	University of East Anglia
New Sites (TBC)						
UKA00452	Cardiff Lakeside	51° 30' 44.66"N	-3° 10' 9.61"	Urban	2021	TBA
UKA00570	Kilmakee Leisure Centre	54° 32' 37.55"N	6° 0' 30.00"W	urban	2021	TBA

Annex 2 – Asset Register



AssetRegister_TOM
Ps_FEB 21 V2 - PEND

Annex 3 – PCBs, PCDD/Fs and BDEs presently analysed and their current Detection Limits.



TOMPs tech specs -
analyte LODs.docx

APPENDIX A

AUTHORITY'S CONDITIONS OF CONTRACT

The Authorities Conditions of Contract that are applicable to this contract are available on the Authority's Bravo e-tendering website.

Template for Agency's T&C's to be finalised –



Appendix A -
62347_Conditions o

APPENDIX B

TRAVEL AND SUBSISTENCE

All Travel and Subsistence should be in line with the Authority's Travel and Subsistence Policy. Claims should always be supported by valid receipts for audit purposes and must not exceed any of the stated rates below. Should the stated rate be exceeded, Defra reserve the right to reimburse only up to the stated rate.

Accommodation B&B rates: London = £140, Bristol = £100, Warrington = £90, Reading = £85, Aberdeen, Birmingham, Belfast, Cardiff, Coventry, Edinburgh, Glasgow, Harlow, Leeds, Manchester, Middlesbrough, Newcastle, Oxford, Portsmouth, Sheffield & York = £75, All other destinations = £70.

Subsistence should be based around journey time duration, not meals as follows:

5<10 hours journey time = £5. Plus an additional allowance of up to £10 may be paid where a qualifying journey lasts beyond 20:00.

10<15 hours journey time = £10. Plus an additional allowance of up to £10 may be paid where a qualifying journey lasts beyond 20:00.

15 hours or more journey time = £25 in total. No additional allowance should be applied. Any additional snacks and drinks between meals will need to be included within the above allowances.

'Journey time' means the time that the employee is absent from their normal place of work or home for a continuous period.

The journey time thresholds increase as the time spent away increases up to a maximum of 24 hours.

For periods in excess of 24 hours, a new period begins and the hourly thresholds are reset.

Only one meal allowance in per 24 hours is allowed, up to a total of £25

APPENDIX C

COMMERCIALLY SENSITIVE INFORMATION

(If applicable, Tenderer to reproduce a similar table to that example below and then upload to Bravo)

TENDERER'S COMMERCIALLY SENSITIVE INFORMATION	POTENTIAL IMPLICATION OF DISCLOSURE	DURATION OF COMMERCIALLY SENSITIVE INFORMATION

APPENDIX D

PRICING SCHEDULE



Appendix D Pricing
Schedule 2021-26 - f

APPENDIX E

EXIT PLAN TEMPLATE



Appendix E - Exit
plan and template.docx

APPENDIX F

HEALTH AND SAFETY GUIDANCE



Appendix F - AQ
Health and Safety Gui

APPENDIX G

PROJECT RISK ASSESSMENT –TEMPLATE



Appendix G -
Example Project Risk

APPENDIX H

SUSTAINABILITY REPORTING TEMPLATE



Appendix H -
Sustainability Reportir

APPENDIX I

STANDARD CONTRACT QUESTIONNAIRE



Appendix I - EA
standard contract que

APPENDIX J

ASSET INSTRUCTION



Appendix J - Air
Quality Operational In

APPENDIX K

REPORTING FORMAT



Appendix K - EA
Reporting Structure_fc

APPENDIX L

PAT TESTING OI



Appendix L - PAT
Testing of office base

APPENDIX M

EXAMPLE BUSINESS CONTINUITY AND CONTINGENCY PLAN



Appendix M -
Example Business Cc