Request for Quotation

Gravimetric reference instrument (EN 12341) to measure PM2.5 mass concentration in ambient air

GRPM2.52024

23/10/2024

Request for Quotation

Reference gravimetric instrument (EN 12341) to measure PM2.5 mass concentration in ambient air.

You are invited to submit a quotation for the requirement described in the specification, Section 2.

Please confirm by email, receipt of these documents and whether you intend to submit a quote or not.

Your response should be returned to the following email address by:

Email: tania.stratford@environment-agency.gov.uk

Date: 06/11/2024

Time: 11:00hrs

Ensure you include the name of the quotation and ‘Final Submission’ in the subject field to make it clear that it is your response.

Contact Details and Timetable

Tania Stratford will be your contact for any questions linked to the content of the quote or the process. Please submit any clarification questions via email and note that, unless commercially sensitive, both the question and the response will be circulated to all tenderers.

|  |  |
| --- | --- |
| Action | Date |
| Date of issue of RFQ | 23-Oct-2024 |
| Deadline for clarifications questions | 28-Oct-2024 at 09:00 GMT |
| Deadline for receipt of Quotation | 06-Nov-2024 at 11:00 GMT |
| Intended date of Contract Award | 13-Nov-2024 |
| Intended Contract Start Date | 13-Nov-2024 |
| Intended Delivery Date  | Before 28-Feb-2025 |

Section 1: General Information

Glossary

Unless the context otherwise requires, the following words and expressions used within this Request for Quotation shall have the following meanings (to be interpreted in the singular or plural as the context requires):

|  |  |
| --- | --- |
|  |  |
| “Authority” | Means Environment Agency who is the Contracting Authority.  |
| “Contract” | means the contract to be entered into by the Authority and the successful supplier. |
| “Response” | means the information submitted by a supplier in response to the RFQ. |
| “RFQ” | means this Request for Quotation and all related documents published by the Authority and made available to suppliers. |

Conditions applying to the RFQ

You should examine your Response and related documents ensuring it is complete and in accordance with the stated instructions prior to submission.

Your Response must contain sufficient information to enable the Authority to evaluate it fairly and effectively. You should ensure that you have prepared your Response fully and accurately and that prices quoted are arithmetically correct for the units stated.

By submitting a Response, you, the supplier, are deemed to accept the terms and conditions provided in the RFQ. Confirmation of this is required in Annex 2.

Failure to comply with the instructions set out in the RFQ may result in the supplier’s exclusion from this quotation process.

Acceptance of Quotations

By issuing this RFQ the Authority does not bind itself to accept any quotation and reserves the right not to award a contract to any supplier who submits a quotation.

Costs

The Authority will not reimburse you for any costs and expenses which you incur preparing and submitting your quotation, even if the Authority amends or terminates the procurement process.

Self-Declaration and Mandatory Requirements

The RFQ includes a self-declaration response (Annex 1) which covers basic information about the supplier, as well as any grounds for exclusion. If you do not comply with them, your quotation will not be evaluated.

Any mandatory requirements will be set out in Section 2, Specification of Requirements and, if you do not comply with them, your quotation will not be evaluated.

Clarifications

Any request for clarification regarding the RFQ and supporting documentation must be submitted via email no later than the deadline for clarifications set out in the Timetable. The Authority shall be under no obligation to respond to queries raised after the clarification deadline.

The Authority will respond to all reasonable clarifications as soon as possible but cannot guarantee a minimum response time. The Authority will publish all clarifications and its responses to all suppliers via email unless deemed commercially sensitive.

If a supplier believes that a request for clarification is commercially sensitive, it should clearly state this when submitting the clarification request. However, if the Authority considers either that:

* the clarification and response are not commercially sensitive; and
* all suppliers may benefit from its disclosure,

then the Authority will notify the supplier (via email), and the supplier will have an opportunity to withdraw the request for clarification by sending a further message requesting the withdrawal of the clarification request. If not withdrawn by the supplier within 2 working days of the Authority’s notification, the Authority may publish the clarification request and its response to all suppliers and the Authority shall not be liable to the supplier for any consequences of such publication.

The Authority reserves the right to seek clarification of any aspect of a quotation and/or provide additional information during the evaluation phase to carry out a fair evaluation. Where the Authority seeks clarification on any aspect of the quotation, the supplier must respond within the timeframe requested by the Authority.

Amendments

The Authority may amend the RFQ at any time prior to the deadline for receipt. If it amends the RFQ the Authority will notify you via email.

Suppliers may modify their quotation prior to the deadline for Responses. No Responses may be modified after the deadline for Responses.

 Suppliers may withdraw their quotations at any time by submitting a notice via the email to the named contact.

Conditions of Contract

The Authority’s

* Standard Good and Services Terms & Conditions (used for purchases under £50k)

can be located on the [Environment Agency Website](https://www.gov.uk/government/organisations/environment-agency/about/procurement#conditions-of-contract) and will be applicable to any contract awarded as a result of this quotation process. The Authority will not accept any changes to these terms and conditions proposed by a supplier.

Suppliers should note that the quotation provided by the successful bidder will form part of the Contract.

Prices

Prices must be submitted in £ sterling, exclusive of VAT.

Disclosure

All Central Government Departments, their Executive Agencies and Non Departmental Public Bodies are subject to control and reporting within Government. In particular, they report to the Cabinet Office and HM Treasury for all expenditure. Further the Cabinet Office has a cross-Government role delivering overall Government policy on public procurement, including ensuring value for money and related aspects of good procurement practice. For these purposes, the Authority may disclose within Government any details contained in your quotation. The information will not be disclosed outside Government during the procurement.

In addition, the Authority is subject to the Freedom of Information Act 2000 and the Environmental Information Regulations 2004, which provide a public right of access to information held by public bodies. In accordance with these two statutes, the Authority may be required to disclose information contained in your quotation to any person who submits a request for information pursuant to those statutes.

Further to the Government’s transparency agenda, all UK Government organisations must advertise on Contract Finder in accordance with the following publication thresholds:

* Central Contracting Authority’s: £12,000
* Sub Central Contracting Authority’s and NHS Trusts: £30,000

For the purpose of this RFQ the Authority is classified as a Sub Central Contracting Authority with a publication threshold of £30,000 inclusive of VAT.

If this opportunity is advertised via Contracts Finder, we are obliged to publish details of the awarded contract including who has won the contract, the contract value, and indicate whether the winning supplier is a small and medium-sized enterprise (“SMEs”) or voluntary organisation or charity. A copy of the contract must also be published with confidential information redacted.

By submitting a Response, you consent to these terms as part of the procurement.

Disclaimers

Whilst the information in this RFQ and any supporting information referred to herein or provided to you by the Authority have been prepared in good faith the Authority does not warrant that this information is comprehensive or that it has been independently verified.

The Authority does not:

* make any representation or warranty (express or implied) as to the accuracy, reasonableness or completeness of the RFQ;
* accept any liability for the information contained in the RFQ or for the fairness, accuracy or completeness of that information; or
* accept any liability for any loss or damage (other than in respect of fraudulent misrepresentation or any other liability which cannot lawfully be excluded) arising as a result of reliance on such information or any subsequent communication.

Any supplier considering entering into contractual relationships with the Authority following receipt of the RFQ should make its own investigations and independent assessment of the Authority and its requirements for the goods and/or services and should seek its own professional financial and legal advice.

Information Security requirements

The Government Security Classification Policy (GSCP) sets out the administrative system used by HM Government (HMG) to protect information and data assets appropriately against prevalent threats through the use of ‘classification tiers’. HMG uses three classification tiers; OFFICIAL, SECRET and TOP SECRET. Each tier provides a set of recommended baseline behaviours and a set of protective controls, which are proportionate to the threat profile for that tier AND the potential impact of a compromise, accidental loss or incorrect disclosure of information held within that tier.

Tenderers and suppliers must ensure that appropriate protective security controls are in place to comply with the GSCP and manage the information shared and received as part of this tender exercise.

A full suite of guidance documents is available on GOV.UK, with specific guidance for tenderers and suppliers set out in [Guidance 1.6 - Contractors and Contracting Authorities.docx (publishing.service.gov.uk)](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1166155/Guidance_1.6_-_Contractors_and_Contracting_Authorities.pdf).

Use of Artificial Intelligence

The Authority expects suppliers to declare where they have used AI software in the creation of Tender responses or intend to use AI software in the performance of the contract. How any AI software was, or will be, used should be to be declared within the technical submission part of the tender. We may require you to answer specific question/s on this topic, particularly where the Authority expects that usage is highly likely or clearly relates to the contract requirements.

Suppliers must follow any guidelines or regulations related to AI use and declarations as indicated in the [PPN 2/24 Improving Transparency of AI use in Procurement](https://www.gov.uk/government/publications/ppn-0224-improving-transparency-of-ai-use-in-procurement/ppn-0224-improving-transparency-of-ai-use-in-procurement-html).

Any information, instructions, or data provided by the Authority to suppliers as part of this tender, the requirements, or contract should not be directly inserted into Generative AI software (such as Gemini, ChatGPT, or CoPilot) without prior permission, unless this information is clearly published in the public domain.

Use of any Authority confidential tender information for training AI software is prohibited. it is advised that Defra’s data or instructions, or anything marked as confidential should not be directly inserted into AIs. For example, putting Authority’s instruction email into Gemini, ChatGPT, or CoPilot is not recommended.

If you intend to use AI to provide goods or services to the Authority, then you are required to complete a declaration which is simply answering the question stated within the 'Information to be returned’. The answer to this question will not be used in scoring your quote.

Protection of Personal Data

In order to comply with the General Data Protection Regulations 2018 the supplier must agree to the following:

 You must only process any personal data in strict accordance with instructions from the Authority.

* You must ensure that all the personal data that we disclose to you or you collect on our behalf under this agreement are kept confidential.
* You must take reasonable steps to ensure the reliability of employees who have access to personal data.
* Only employees who may be required to assist in meeting the obligations under this agreement may have access to the personal data.
* Any disclosure of personal data must be made in confidence and extend only so far as that which is specifically necessary for the purposes of this agreement.
* You must ensure that there are appropriate security measures in place to safeguard against any unauthorised access or unlawful processing or accidental loss, destruction or damage or disclosure of the personal data.
* On termination of this agreement, for whatever reason, the personal data must be returned to us promptly and safely, together with all copies in your possession or control.

General Data Protection Regulations 2018

For the purposes of the Regulations the Authority is the data processor.

The personal information that we have asked you provide on individuals (data subjects) that will be working for you on this contract will be used in compiling the tender list and in assessing your offer. If you are unsuccessful the information will be held and destroyed within two years of the award of contracts. If you are awarded a contract it will be retained for the duration of the contract and destroyed within seven years of the contract’s expiry.

We may monitor the performance of the individuals during the execution of the contract, and the results of our monitoring, together with the information that you have provided, will be used in determining what work is allocated under the contract, and in any renewal of the contract or in the award of future contracts of a similar nature. The information will not be disclosed to anyone outside the Authority without the consent of the data subject, unless the Authority is required by law to make such disclosures.

Equality, Diversity & Inclusion (EDI)

The Client is striving to create a diverse and inclusive working environment where every individual has equality of opportunity to progress and to apply their unique insights to making the UK a great place for living. The Service Provider is expected to respect this commitment in all dealings with Environment Agency staff and service users.

Suppliers are expected to;

* support Defra group to achieve its Public Sector Equality Duty as defined by the Equality Act 2010, and to support delivery of [Defra group’s Equality & Diversity Strategy](https://www.gov.uk/government/publications/defra-group-equality-diversity-and-inclusion-strategy-2020-to-2024/defra-group-equality-diversity-and-inclusion-strategy-2020-to-2024).
* meet the standards set out in the [Government’s Supplier Code of Conduct](https://www.gov.uk/government/publications/supplier-code-of-conduct)
* work with Defra group to ensure equality, diversity and inclusion impacts are addressed (positive and negative) in the goods, services and works we procure, barriers are removed and opportunities realised.

Sustainable Procurement

Addressing global sustainability impacts and realising additional community benefits within commercial activity is core to Defra group’s approach, working with its supply chain is key to achieving sustainable outcomes. In addition to supporting Defra group to meet its outcomes we look to understand and reduce negative sustainability impacts associated with our commercial activity and realise benefits.

The Client encourages its suppliers to share these values, work to address negative impacts and realise opportunities, measure performance and success.

Suppliers are expected to have an understanding of the Sustainable Development Goals, the interconnections between them and the relevance to the Goods, Services and works procured on the Client’s behalf

Conflicts of Interest

The concept of a conflict of interest includes but is not limited to any situation where an Involved Person or Relevant Body has directly or indirectly, a financial, economic or other personal interest which might be perceived to compromise their impartiality and independence in the context of the procurement procedure and/or affect the integrity of the contract award.

We expect suppliers to mitigate appropriately against any real or perceived conflict of interest through their work with government. A supplier with a position of influence gained through a contract should not use that position to unfairly disadvantage any other supplier or reduce the potential for future competition

Where the supplier is aware of any circumstances giving rise to a conflict of interest or has any indication that a conflict of interest exists or may arise you should inform the Authority of this as soon as possible (whether before or after they have submitted a quotation). Tenderers should remain alert to the possibility of conflicts of interest arising at all stages of the procurement and should update the Authority if any new circumstances or information arises, or there are any changes to information already provided to the Authority. Failure to do so, and/or to properly manage any conflicts of interest may result in a quotation being rejected.

Provided that it has been carried out in an open, fair and transparent manner, routine pre-market engagement carried out by the Authority should not represent a conflict of interest for the supplier.

Section 2: The Invitation

Specification of Requirements

The Environment Agency seek to procure two gravimetric reference instruments which are intended to be used as part of the UK Particulate Matter (PM) Equivalence Programme where comparison of gravimetric and continuous PM instrument measurements is undertaken.

The instruments supplied shall meet the requirements detailed in Table 1

**Table 1: Requirements**

|  |  |
| --- | --- |
| Item number |  Requirement |
| 1 | The instrument meets the requirements of EN 12341:2023 and are either undergoing type testing or have a written plan to complete testing within the next two years.  |
| 2 | The instrument must operate at a flow-rate of 2.3 m3 hr-1 |
| 3 | The instrument must be capable of using 46.2 mm in diameter filters made of Emfab or a filter that performs identically to this material. |
| 4 | The instrument has a remote capability via an industrial 4G router for checking the flow rate, alarm notifications and to complete a re-start. The router should be secure so we can restrict any incoming internet traffic to specific IP addresses, and the customer has access to the IP address used to connect with it via a web portal or other solution. Data upgrades to the instrument and the router should be non-automatic to ensure an operator can choose when it is updated.  |
| 5 | The instrument will be supplied in a suitable IP54 (or better) weatherproof outdoor enclosure  |
| 6 | The instrument can store at least 15 filters and automatically changes to the next filter |
| 7 | The instrument inlet height must be 1.7m for the quotation and it must be possible to purchase different inlet heights in the range 1.5-4m.  |
| 8 | The instrument has sheath air cooling of the filter currently being sampled. |
| 9 | The instrument must operate with an instantaneous flow rate that shall not vary by more than 5.0 % of 2.3 m3 hr-1, and should a filter become clogged, sampling should be stopped if the flow rate drops and the option to restart immediately and automatically on a new filter shall be available. |
| 10 | The instrument shall be capable of recording 24 hour averages on a single filter of up to 120 μg m-3 for PM2.5 without becoming clogged.  |
| 11 | The instrument shall record at a minimum hourly average flow rate; sampling time; sample volume; average air temperature in filter section; average ambient temperature; average temperature of filter storage; and average ambient pressure. These parameters shall be available for remote download. |
| 12 | The instrument must come with a minimum warranty of 24 months from delivery |
| 13 | The supplier should be registered to ISO 9001:2015, where the certification body is accredited by either UKAS or an equivalent body from outside the UK, to ISO/IEC 17021, with the expectation that any quality assurance issues with any manufacturing can be correctly addressed. |
| 14 | The instrument must be configured for UK use at the point of sale and not require any changes to be made in this respect by the authority at the time of purchase. |
| 15 | The Supplier must review and meet relevant sections of the MEICA specifications set out in: Annex 5 – MEICA - Specification – General Annex 6 – MEICA - Documentation Annex 7 – MEICA – Low Voltage Electrical Equipment. |
| 16 | The instrument must be delivered with detailed service and maintenance procedures. This must include a detailed operational manual, a detailed service manual, and a service check ‘Planned Preventative Maintenance’ list. |
| 17 | There are existing trained engineers who are able to respond within 48hrs to locations within the UK that would enable an equipment support contract to be put in place after the purchase.  |
| 18 | Parts and consumables shall be supplied for a minimum of 10 years after purchase and for as long as possible afterwards.  |
| 19 | Instruments must be delivered no later than 28th Feb 2025 - to the Environment Agency equipment store located at *Kingfisher Business Park, London Road, Stroud, Gloucestershire, GL5 2BY.* |

Payment

The Authority will raise purchase orders to cover the cost of the services and will issue to the awarded supplier following contract award.

Prior to invoicing we expect to receive the delivery acceptance form in Annex 3. The Authority’s preference is for all invoices to be sent electronically, quoting a valid Purchase Order number.

It is anticipated that this contract will be awarded for a period of 4 months to end no later than 13/03/2025. Prices will remain fixed for the duration of the contract award period. We may at our sole discretion extend this contract to include related or further work. Any extension shall be agreed in writing in advance of any work commencing and may be subject to further competition.

Evaluation Methodology

We will award this contract in line with the most economically advantageous tender (MEAT) as set out in the following award criteria:

Technical – 60%

Commercial – 40%

Evaluation criteria

Evaluation weightings are 60% technical and 40% commercial, the winning tenderer will be the highest scoring combined score.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Award Criteria | Weighting (%) | Evaluation Topic & Weighting | Sub-Criteria | Weighted Question |
| Technical | 60% | Service / Product Proposal | Requirements | Q1 (60% of technical score available) |
| Data Capture | Q2 (15% of technical score available) |
| Service & Repair | Q3 (15% of technical score available) |
| Inlet Heights | Q4 (10% of technical score available) |
| Commercial | 40% | Costs |  | Q5 (100% of commercial score available) |

Technical (60%)

Technical evaluations will be based on responses to specific questions covering key criteria which are outlined below. Scores for questions will be based on the following:

|  |  |  |
| --- | --- | --- |
| Description | Score  | Definition |
| Very good  | 100 | Addresses all the Authority’s requirements with all the relevant supporting information set out in the RFQ. There are no weaknesses and therefore the tender response gives the Authority complete confidence that all the requirements will be met to a high standard.  |
| Good | 70 | Addresses all the Authority’s requirements with all the relevant supporting information set out in the RFQ. The response contains minor weaknesses and therefore the tender response gives the Authority confidence that all the requirements will be met to a good standard.  |
| Moderate | 50 | Addresses most of the requirements with most of the relevant supporting information set out in the RFQ. The response contains moderate weaknesses and therefore the tender response gives the Authority confidence that most of the requirements will be met to a suitable standard.  |
| Weak  | 20 | Substantially addresses the requirements but not all and provides supporting information that is of limited or no relevance or a methodology containing significant weaknesses and therefore raises concerns for the Authority that the requirements may not all be met. |
| Unacceptable | 0 | No response or provides a response that gives the Authority no confidence that the requirement will be met.  |

Technical evaluation is assessed using the evaluation topics and sub-criteria stated in the Evaluation Criteria section above. A third party network manager may be asked to undertake the evaluation according to government rules.

Separate submissions for each technical question should be provided and will be evaluated in isolation. Tenderers should provide answers that meet the criteria of each technical question.

|  |  |
| --- | --- |
| Requirements  | Detailed Evaluation Criteria |
| Q1. Please confirm that your instrument complies with each item in Specification Table 1.  | Your response should include as much evidence as possible to support your answers signposting to manuals if required. Please also provide all operational, installation and service manuals.  |
| Q2. Please provide evidence showing your instrument has been used in the field for over 12 months (such as for PM equivalence testing) and has achieved good operational data capture (over 90%).  | Your response should include as much evidence as possible to support your answers.  |
| Q3. Are there any organisations authorised and/or trained to service and maintain the instrumentation in line with manufactures recommendations and are they able to provide service level agreement to attend to an instrument fault within 48hrs to a UK location using low carbon transport. If so, please list the organisations you are aware of who could provide these services? And their experience so far in providing this support?The preference would be a UK based solution to support our sustainability ambitions.  | Your response should include evidence to support your answer including service reports or details of details of repairs that have been undertaken to the instrument.  |
| Q4. The required instrument heights are not yet certain. Can you explain the best value way to purchase a flexible inlet height for this purchase. Is it possible to retrospectively change the inlet height? | Your response should include as much evidence as possible to support your answers.  |

Commercial (40%)

The Contract is to be awarded as a fixed price including optional extras, which will be paid according to the completion of the deliverables stated in the Specification of Requirements.

Suppliers are required to submit a total cost to provide the deliverables stated in the Specification of Requirements. In addition to this the Commercial Response template must be completed in the delivery of this requirement.

Calculation Method

The method for calculating the weighted scores is as follows:

● Commercial

Score = (Lowest Quotation Price / Supplier’s Quotation Price ) x [40%] (Maximum available marks)

● Technical

Score = (Bidder’s Total Technical Score / Highest Technical Score) x [60%] (Maximum available marks)

The total score (weighted) (TWS) is then calculated by adding the total weighted commercial score (WC) to the total weighted technical score (WT): WC + WT = TWS.

Information to be returned

Please note, the following information requested must be provided. Incomplete tender submissions may be discounted.

Please complete and return the following information:

* completed Commercial Response template
* separate response submission for each technical question (in accordance with the response instructions)
* completed Mandatory Requirements (Annex 1)
* completed Acceptance of Terms and Conditions (Annex 2)

Award

Once the evaluation of the Response(s) is complete all suppliers will be notified of the outcome via email. The successful supplier will be issued the contract via a Purchase Order.

Annex 1 Mandatory Requirements

Part 1 Potential Supplier Information

Please answer the following self-declaration questions in full and include this Annex in your quotation response.

Part 1.1 Potential Supplier Information:

|  |  |  |
| --- | --- | --- |
| Question no. | Question | Response |
| 1.1(a) | Full name of the potential supplier submitting the information |  |
| 1.1(b)  | Registered office address (if applicable) |  |
| 1.1(c) | Company registration number (if applicable) |  |
| 1.1(d) | Charity registration number (if applicable) |  |
| 1.1(e) | Head office DUNS number (if applicable) |  |
| 1.1(f) | Registered VAT number  |  |
| 1.1(g) | Are you a Small, Medium or Micro Enterprise (SME)? | (Yes / No) |

Note: See EU definition of SME <https://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition_en>

Part 1.2 Contact details and declaration

By submitting a quotation to this RFQ I declare that to the best of my knowledge the answers submitted and information contained in this document are correct and accurate.

I declare that, upon request and without delay you will provide the certificates or documentary evidence referred to in this document.

I understand that the information will be used in the selection process to assess my organisation’s suitability to be invited to participate further in this procurement.

I understand that the authority may reject this submission in its entirety if there is a failure to answer all the relevant questions fully, or if false/misleading information or content is provided in any section.

I am aware of the consequences of serious misrepresentation.

|  |  |  |
| --- | --- | --- |
| Question no.  | Question | Response |
| 1.2(a) | Contact name |  |
| 1.2(b) | Name of organisation |  |
| 1.2(c) | Role in organisation |  |
| 1.2(d) | Phone number |  |
| 1.2(e) | E-mail address  |  |
| 1.2(f) | Postal address |  |
| 1.2(g) | Signature (electronic is acceptable) |  |
| 1.2(h) | Date |  |

Part 2 Exclusion Grounds

Part 2.1 Grounds for mandatory exclusion

|  |  |  |
| --- | --- | --- |
| Question no.  | Question | Response |
| 2.1(a) | Please indicate if, within the past five years you, your organisation or any other person who has powers of representation, decision or control in the organisation been convicted anywhere in the world of any of the offences within the summary below. |
|  | Participation in a criminal organisation.  | (Yes / No)If yes please provide details at 2.1 (b) |
|  | Corruption.  | ((Yes / No)If yes please provide details at 2.1 (b) |
|  | Fraud.  | (Yes / No)If yes please provide details at 2.1 (b) |
|  | Terrorist offences or offences linked to terrorist activities | (Yes / No)If yes please provide details at 2.1 (b) |
|  | Money laundering or terrorist financing | (Yes / No)If yes please provide details at 2.1 (b) |
|  | Child labour and other forms of trafficking in human beings | (Yes / No)If yes please provide details at 2.1 (b) |
| 2.1(b) | If you have answered yes to question 2.1(a), please provide further details.Date of conviction, specify which of the grounds listed the conviction was for, and the reasons for conviction.Identity of who has been convictedIf the relevant documentation is available electronically please provide the web address, issuing authority, precise reference of the documents. |  |
| 2.1 (c) | If you have answered Yes to any of the points above have measures been taken to demonstrate the reliability of the organisation despite the existence of a relevant ground for exclusion? (i.e. Self-Cleaning) | (Yes / No) |
| 2.1(d) | Has it been established, for your organisation by a judicial or administrative decision having final and binding effect in accordance with the legal provisions of any part of the United Kingdom or the legal provisions of the country in which the organisation is established (if outside the UK), that the organisation is in breach of obligations related to the payment of tax or social security contributions? | (Yes / No) |
| 2.1(e) | If you have answered yes to question 2.3(a), please provide further details. Please also confirm you have paid or have entered into a binding arrangement with a view to paying, the outstanding sum including where applicable any accrued interest and/or fines. |  |

Part 2.2 Grounds for discretionary exclusion

|  |  |  |
| --- | --- | --- |
| Question no.  | Question | Response |
| 2.2(a) | The detailed grounds for discretionary exclusion of an organisation are set out on this [webpage](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/551130/List_of_Mandatory_and_Discretionary_Exclusions.pdf), which should be referred to before completing these questions. Please indicate if, within the past three years, anywhere in the world any of the following situations have applied to you, your organisation or any other person who has powers of representation, decision or control in the organisation |
| 2.2(b) | Breach of environmental obligations?  | (Yes / No)If yes please provide details at 2.2 (f) |
| 2.2(c) | Breach of social obligations?  | (Yes / No)If yes please provide details at 2.2 (f) |
| 2.2(d) | Breach of labour law obligations?  | (Yes / No)If yes please provide details at 2.2 (f) |
| 2.2(e) | Shown significant or persistent deficiencies in the performance of a substantive requirement under a prior public contract, a prior contract with a contracting entity, or a prior concession contract, which led to early termination of that prior contract, damages or other comparable sanctions? | (Yes / No)If yes please provide details at 2.2 (f) |
| 2.2 (f) | If you have answered Yes to any of the above, explain what measures been taken to demonstrate the reliability of the organisation despite the existence of a relevant ground for exclusion? (Self Cleaning) |  |

Annex 2 Acceptance of Terms and Conditions

I/We accept in full the terms and conditions appended to this Request for Quote document.

Company \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Print Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Position \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Annex 3** **ENVIRONMENT AGENCY - AQ Contracts – Analyser Acceptance Form - Reference analysers – one off purchase.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Task** | Equipment Acceptance form - checklist | Frequency | Upon Delivery (one- off) |
| **Asset types** | Reference Instruments |
| **Doc ref** | AQ\_EQUIPMENT ACCEPTANCE DELIVERY – Reference only | Rev | 1 | Date |  |

**Asset Details**

|  |  |  |  |
| --- | --- | --- | --- |
| Network | AURN Equivalence  | Site Name | (tbc) |
| EA Asset number | To be allocated by EA once form received | Asset description (Analyser type)  | Eg PM instrument / Make / Model |
| PURCHASE Order |  |  |  |

**Purpose of form**

To obtain information that the instrument delivered are operational at point of delivery before entering short / medium / long term storage while sites are prepared for their acceptance. This form should be completed to ensure the contracts team have the evidence to invoice you that the equipment is operational.

For these two instruments we will accept evidence of functionality and operation prior to packing, as long as the delivery information that the actual goods have entered the EA store can be confirmed.

|  |
| --- |
| Item notes |
|  | Results |
| Item to be checked | Checks Required | Pass | Fail | Action taken |
| Instrument |
| 1. Item has been checked as functional and packaged securely.
 | Instrument is in good condition with no visible damage (photograph added) - Delivery note sent to AQINBOX team (AQmonitoringUK@environment-agency.gov.uk) and tania.stratford@environment-agency.gov.uk of asset id and photograph evidence of item  |  |  |  |
| 1. EA item label added

(see Annex 1) | EA item label added to asset to show ownership and EA ID / Serial number of instruments visibleAdd photo of serial number and of label attached. (see Annex 4 label) |  |  |  |
| 1. Confirm wiring class on plug
 | CLASS 1 / CLASS 2 / CLASS 3 (delete which ones are not appropriate) |  |  |  |
| 1. Ancillary Items
 | Are all ancillary cables and items for the sampling system being invoiced with the instrument and accounted for (includes connectors / inlets / tubing / comm’s packages)  |  |  |  |
| 1. Delivery information to EA storage address confirmed
 | Delivery note of goods to EA store confirmed. EA responsible for confirming this item has indeed been placed in our storage |  |  |  |
| Health & Safety Equipment and Signage |
| 1. External signage and warning present
 | Any H&S signage required as per UK health and safety law / manufacturers recommendations.  |  |  |  |
| Observations |
|  |
| Completed by: |  | Date |  |
| Role / Organisation | (can be completed by supplier with evidence) |  |  |

Annex 4 Label



This Equipment is Property of the Environment Agency –

Monitoring Contracts Team, Monitoring Survey

EA ASSET ID - EA/AURN/

Contact – AQmonitoringUK@environment-agency.gov.uk

Annex 5 MEICA Specification – Part 1 – General Requirements

Introduction

Purpose of the MEICA Specification

The MEICA Specification defines the technical requirements for Mechanical, Electrical, Instrumentation, Control and Automation (MEICA) plant and equipment.

This part provides general requirements applicable to all MEICA plant and equipment, additional requirements specific to equipment types can be found in the other parts of the MEICA Specification which are indexed below - [MEICA Specification (other parts)](#Documents).

The purpose of the MEICA Specification is to ensure that MEICA plant and equipment delivers its required function in a safe and legally compliant way, whilst meeting business objectives (for example carbon reduction, cost etc.) for an expected service life based on an expected level of intervention (maintenance, refurbishment, etc.), and with an acceptable level of risk (reliability, resilience etc.) for the application.

The MEICA Specification is, by the nature of a standard specification, general in nature and particular applications may need additional requirements, documented in the project scope or similar documents, to ensure the plant and equipment meets the business needs.

Where the MEICA Specification cannot be met you should seek advice from the relevant Supra-area MEICA team. Deviation from the MEICA Specification is permitted only if the alternative has been agreed, in advance of implementation, by the Environment Agency through the concession process, as described in [LIT 18692 – MEICA – Assurance - Concession process](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-13897).

Contents

[Introduction 25](#_Toc164938980)

[Purpose of the MEICA Specification 25](#_Toc164938981)

[Contents 25](#_Toc164938982)

[Applicability 26](#_Toc164938983)

[Innovation 26](#_Toc164938984)

[Clarification and feedback 27](#_Toc164938985)

[Changes in this version 27](#_Toc164938986)

[Definitions 27](#_Toc164938987)

[Underlying principles 28](#_Toc164938988)

[Statutory compliance 28](#_Toc164938989)

[Sustainability 29](#_Toc164938990)

[Equipment selection and design 30](#_Toc164938991)

[Implementation phase 32](#_Toc164938992)

[Technical submissions 32](#_Toc164938993)

[Ancillary requirements 33](#_Toc164938994)

[Disposal of redundant plant and equipment 33](#_Toc164938995)

[Related documents 34](#_Toc164938996)

[Operational instructions 34](#_Toc164938997)

[MEICA Specification (other parts) 34](#_Toc164938998)

[Design Guides 35](#_Toc164938999)

[Management standards 35](#_Toc164939000)

Applicability

This document applies to

* all Environment Agency staff, and
* all suppliers delivering work including, or associated with, MEICA plant and equipment that is, or will be, owned by the Environment Agency.

! Important The MEICA Specification is not retrospective unless otherwise stated. If a current MEICA installation complies with previous versions of the MEICA Specification, or the MEICA Specification was not applicable at the time the equipment was constructed or procured, then there is no requirement to meet the current version provided that it is legal, safe and continues to meet the required functionality. When existing installations receive refurbishment or other interventions consideration should be given to upgrading the installation either wholly, or in part, to the current specification where possible and justified.

Changes required by revised legislation, or due to identified non-compliance with legal or safety requirements must be implemented in accordance with the legislation to ensure installations remain legally compliant.

Innovation

Details of any solution that incorporates innovative design features to reduce the whole life carbon costs or enhance performance, but do not comply with a specification, shall be agreed in the first instance with the Environment Agency Supra-area MEICA team and a concession applied for. Innovation is identified in the concession process as a valid reason for a concession however, in that case, the process provides assurance of risk.

Clarification and feedback

Feedback on this document should be provided via the Content Cloud feedback button (found on the document details page).

Clarification regarding the content of this document can be obtained from: MEICA.Directorate@environment-agency.gov.uk .

Changes in this version

* Text has been reviewed and refined to provide greater clarity.
* Version changes and definitions sections added.
* Sections have been reordered to provide a more logical document structure.
* Section on statutory requirements has been enhanced to make it easier for non-MEICA specialist to understand the requirements.

Definitions

Where used within the MEICA Specification words shall have the following meaning:

Shall / shall not indicates a mandatory requirement.

Should / should not indicates a preferred requirement with justification of an alternative required.

Can / may indicates a permissive condition.

Complex, Asset, Element shall have the meanings ascribed to then in the Data Requirements Library (DRL) [DRL (data.gov.uk)](https://environment.data.gov.uk/asset-management/drl-app/revision/current/categories)

Where no meaning is defined above, words shall have the meaning ascribed to them in the Oxford Shorter English Dictionary.

Underlying principles

Statutory compliance

The design and construction of all MEICA plant and equipment must meet all applicable statutory requirements.

Refurbishment or modification of existing MEICA plant and equipment could also attract statutory requirements. The HSE, as the enforcing authority, have published guidance here: [Refurbished and modified machinery (hse.gov.uk)](https://www.hse.gov.uk/work-equipment-machinery/refurbished-modified-machinery.htm)

Particular attention is drawn to the following items:

1. Declaration of Conformity / UKCA and CE marking

Where required by statutory regulations all plant and equipment must be supplied with a Declaration of Conformity and marked as required by the regulations prior to it being placed into use.

This is likely to apply to any

* machinery (excluding machinery powered only by human or animal effort),
* lifting equipment and accessories (manual or powered operation),
* electrical and electronic equipment / installations and,
* pressure equipment.

This is not an exhaustive list, and the appropriate specialists should be consulted if in any doubt.

! Important The Environment Agency does not expect to assume the role of “manufacturer” under the Supply of Machinery (Safety) Regulations and therefore, to avoid any confusion regarding responsibility, any machinery (as defined by the regulations) shall be provided with a Declaration of Conformity covering the whole installation by the supplier, a sub-supplier or a third party acting on behalf of the supplier before the machinery is put into use.

1. Control system design

All control systems (manual or automated) for machinery must comply with the Supply of Machinery (Safety) Regulations (where applicable) and shall also meet all specified functional requirements to ensure plant and equipment operates to the required performance criteria at an acceptable level of risk.

The safety related aspects of control systems shall be compliant with either BS EN 62061 “Safety of machinery – Functional safety of safety-related control systems” or BS EN ISO 13849 “Safety of machinery – Safety-related parts of control systems”.

1. Flood risk

Although the legal liabilities related to flood risk are considered differently to other safety risks, for design purposes the risks associated with flooding shall be treated in the same way as other safety risks.

Sustainability

1. Efficiency and performance

Plant and equipment shall be designed to maximise efficiency and minimise carbon footprint over its lifetime. Consumption (or production) of energy over the operational life of an asset is a major factor in quantifying the efficiency of a solution. The design shall consider all contributing factors such as maintenance/servicing requirements and expected refurbishments over the expected service life.

1. Carbon

The design of new plant and equipment, or the refurbishment of existing plant and equipment, shall consider the carbon emissions generated by the plant and equipment itself, by activities related to the design, build, operation and maintenance of the plant and equipment during its service life and, during its disposal.

The following considerations shall be made when designing and installing new plant and equipment:

* Assess whole life carbon emissions to produce an optimal whole life low carbon design.
* Consider whether alternative materials are available that may improve the whole life carbon footprint whilst maintaining functional performance.
* Consider whether more carbon efficient manufacture methods are available (e.g. can the asset be built offsite? Can Design for Manufacture and Assembly (DfMA) methods be used?).
* Consider use of renewable energy technologies to be used as a power source.
* Ensure a sustainability risk assessment is conducted.
* Consult the PAS 2080 standard and use PAS 2080 verified suppliers where appropriate.

Equipment selection and design

1. Passive design

Passive design is the primary choice in our Asset Management Strategy and active solutions shall only be considered where a passive solution is not practical.

A passive design is expected to be more reliable than an active design, reducing the risks associated with asset failure.

Further information on passive design can be found in [LIT 13010 Passive design guidance.](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-17754)

1. Low operating (revenue) cost solutions

The selection of plant and equipment shall favour solutions with low operating and maintenance requirements whilst maintaining the required design life.

Where possible, the design should eliminate maintenance activities and, where this is not possible, the design should include measures to minimise the level of activity required.

For example, self-lubricating type bearings eliminates the need for lubrication so would be the preferred solution. However, where this is not practicable, measures such as automatic greasers would be preferable to routine lubrication tasks.

1. Plant and equipment selection

Plant and equipment selection shall suit the function and duty defined in the project requirements.

All plant and equipment supplied shall be

* of current manufacture and,
* expected to be supported by the manufacturer for the minimum design life.

Note: Obsolete equipment is not permitted.

The design, workmanship and general finish shall be of sound quality and in accordance with good engineering practice.

Plant and equipment shall be

* compliant with all applicable statutory requirements,
* robust,
* rated for the appropriate duty under prevailing operational site conditions, and shall include
* appropriate allowance for resilience to likely conditions outside the normal operating conditions (e.g. flood exceedance events, drought etc.),
* sufficient redundancy to ensure the required function is achieved at the expected level of reliability and,
* be in accordance with the “minimum design life” requirements stated in the relevant part of the MEICA specification (except if varied within the project specific requirements for a specific application).

The “minimum design life” is defined as the expected minimum time to the first complete replacement, given adequate maintenance and operation within the stated operating parameters, but not including any capital refurbishment activities. This may be specified in terms of a calendar duration or in terms of expected operating time.

Adequate maintenance is defined as

* inspection, adjustment, cleaning and lubrication of the plant,
* replacement of parts stated within the maintenance documentation as being wearing or consumable parts and thus requiring replacement at intervals during the life of the plant or equipment and,
* minor repairs being completed as required within a reasonable time.
1. Construction materials

Equipment and materials shall be selected to resist corrosion, wear, or seizure because of materials and substances which they might reasonably be expected to contact during operational service.

1. Plant layout

Plant and equipment shall be designed for safety, ease of operation and maintenance for the required duty.

Plant and equipment shall be designed and positioned to permit operational tasks, maintenance and, removal to take place without disturbing adjacent equipment.

The layout of plant and equipment shall allow the greater of either, a free space of one metre around all equipment or, adequate space to perform all operational and maintenance activities expected in a safe manner.

Plant layout shall be reviewed and accepted by the Environment Agency prior to construction commencing. The project team should consult the relevant Supra-area MEICA team when undertaking this review.

Implementation phase

Technical submissions

1. Access, lifting and maintainability (ALM) assessment

An ALM assessment shall be undertaken during the design phase for all MEICA plant and equipment installations. As a minimum the following shall be considered during the assessment

* safe positioning of plant and equipment,
* arrangements to access, and space require to maintain, plant and equipment,
* how lifting will be achieved for any foreseeable operations requiring it for installation, maintenance, and refurbishment activities and,
* location of services, power sockets, lighting etc. required for all expected tasks to ensure tasks can be conducted safely and efficiently.

The ALM shall be undertaken at the stage where general arrangement drawings (including information such as pipe and cable routing, lifting arrangements, hand railing, walkways / platforms, wash down facilities and lighting) are available for review.

1. Planned maintenance

Suppliers of plant and equipment shall provide details of maintenance required to provide reliable service and maintain the inherent level of reliability. This should be achieved by using a formal structured approach (for example failure mode effect analysis (FMEA) to evaluate potential failure modes and identify actions to prevent or mitigate.

Details of all planned maintenance (PPM) tasks required shall be submitted as part of the design and included within the Operation & Maintenance (O&M) manual.

These should include a schedule of tasks including:

* Suggested low carbon footprint maintenance techniques.
* Reliability based activities.
* Recommended frequencies.
* Recommended number, discipline and expertise level of personnel required to undertake each task.
1. Drawings, technical literature, and diagrams

All documentation associated with MEICA assets, elements and systems shall be provided in accordance with [MEICA-Specification-Documentation](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-5187)

1. Spares and consumables schedule

A schedule of recommended consumables and spares to support the equipment for a minimum of five years shall be included within the Operation & Maintenance (O&M) manual.

Ancillary requirements

1. Delivery and storage

Suitable protection against damage and ingress of moisture and any bespoke and/or fabricated supports and/or packing to protect or correctly orientate items during transportation and offloading shall be supplied with the equipment.

All equipment / crates etc. exceeding a weight of 25kg shall be clearly marked with its weight in kg. Handling requirements (e.g. this way up, keep dry etc.) shall be clearly marked using industry standard symbols.

Any spares supplied shall be clearly labelled and packaged suitable for long term storage. Any specific requirements shall be clearly indicated (e.g. keep out of sunlight).

1. Special tools

Special tools and test equipment, including setting tools, required for maintenance activities shall be provided with the plant and equipment. A special tool is any item that is plant or equipment specific and/or is unlikely to be easily or routinely available to those undertaking maintenance activities.

Disposal of redundant plant and equipment

1. Assessment

Any redundant equipment that is taken out of service shall be assessed for condition.

If equipment is assessed as not having reached the end of its useful life, or it is considered it may contain useful components or modules, it should be considered whether to retain the equipment for use elsewhere or for spares (this is particularly relevant for obsolete equipment where other examples are still in use). The Supra-area MEICA team can advise on this if required.

1. Disposal

Equipment to be disposed of should be recycled wherever possible. If recycling is not possible, it shall be disposed of in an environmentally acceptable manner in accordance with statutory requirements for waste disposal.

Related documents

Operational instructions

* [LIT 13010 Passive design guidance.](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-17754)

MEICA Specification (other parts)

* MEICA-Specification- [Materials and mechanical installations](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-5169)
* MEICA-Specification- [Painting and protection systems](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-5170)
* MEICA-Specification- [Hydraulic and pneumatic equipment](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-16019)
* MEICA-Specification- [Water control structures](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-5172)
* MEICA-Specification- [Valves and penstocks](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-16020)
* MEICA-Specification- [Gate and valve actuators](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-16021)
* MEICA-Specification- [Lifting equipment](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-16022)
* MEICA-Specification- [Powered weed rakes](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-5176)
* MEICA-Specification- [Pumps](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-16023)
* MEICA-Specification- [Kiosks and enclosures](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-5178)
* MEICA-Specification- [Electrical installations](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-5179)
* MEICA-Specification- [Switchboards](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-5195)
* MEICA-Specification- [Uninterruptible power systems](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-5180)
* MEICA-Specification- [Rechargeable batteries](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-5181)
* [MEICA-Specification-Engine generating sets](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-5182)
* MEICA-Specification- [Electric motors](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-5183)
* MEICA-Specification- [Pump starters](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-14961)
* [MEICA-Specification-Security systems (Security and Fire)](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-5184)
* MEICA-Specification- [Instrumentation](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-5185)
* MEICA-Specification- [Programmable logic controllers](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-5186)
* MEICA-Specification- [Documentation](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-5187)
* MEICA-Specification- [Electric vehicle charging points](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-5188)
* [MEICA-Specification-Pipelines](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-10156)
* [MEICA-Specification-Flood Gates](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-15707)
* [MEICA-Specification-Lightning and surge protection](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-12987)

Design Guides

* [MEICA-Design-Manual flood defence gate design guide](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-15705)

Management standards

* [MEICA-Management-Pipeline design and management](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-10155)
* [MEICA-Management-Managing and operating hydrometric cableways](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-15870)

Annex 6 MEICA – Specification – Documentation

What’s this document about?

This document sets out the MEICA specification to be followed by all Environment Agency staff and Suppliers for documentation, drawings, as built record information and operation and maintenance O&M manuals. Any variation to this standard must be applied for through the [concession process](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-13897).

This specification does not cover any special documentation requirements that is equipment, component or project specific.

! Users must read [MEICA – Specification - General](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-16038)  prior to using MEICA any Specifications

Who does this apply to?

This specification applies to:

1. Environment Agency Staff;
2. External Suppliers working on Environment Agency projects.

Contact for queries and feedback

MEICA.Directorate@environment-agency.gov.uk

Please give anonymous feedback for this document via email.

Contents

[What’s this document about? 35](#_Toc84339895)

[Who does this apply to? 35](#_Toc84339896)

[Contact for queries and feedback 35](#_Toc84339897)

[General requirements 37](#_Toc84339898)

[Existing site records 37](#_Toc84339899)

[Ownership 37](#_Toc84339900)

[Submission of documentation 38](#_Toc84339901)

[Submissions 38](#_Toc84339902)

[Supporting information 38](#_Toc84339903)

[Supporting calculations 38](#_Toc84339904)

[Document control 38](#_Toc84339905)

[Acceptance of documentation 39](#_Toc84339906)

[Bespoke equipment 39](#_Toc84339907)

[Content of submissions 39](#_Toc84339908)

[Final acceptance 39](#_Toc84339909)

[Operation and maintenance manuals 39](#_Toc84339910)

[General 39](#_Toc84339911)

[Issue of draft O&M manuals 39](#_Toc84339912)

[Issue of interim O&M manuals 40](#_Toc84339913)

[Issue of final O&M manuals 40](#_Toc84339914)

[O&M manual electronic format 40](#_Toc84339915)

[O&M manual paper format 41](#_Toc84339916)

[Section 0 41](#_Toc84339917)

[Section 1 42](#_Toc84339918)

[Section 2 42](#_Toc84339919)

[Section 3 42](#_Toc84339920)

[Errors and amendments 42](#_Toc84339921)

[Drawings 43](#_Toc84339922)

[General 43](#_Toc84339923)

[Drawing checking 43](#_Toc84339924)

[Drawing format 43](#_Toc84339925)

[Supporting calculations 43](#_Toc84339926)

[Working drawings 44](#_Toc84339927)

[Updating working drawings 44](#_Toc84339928)

[Site mark-ups 44](#_Toc84339929)

[As built drawings 44](#_Toc84339930)

[Take over 44](#_Toc84339931)

[Revisions during maintenance period 45](#_Toc84339932)

[As-built asset data 45](#_Toc84339933)

[General 45](#_Toc84339934)

[Equipment removed schedule 45](#_Toc84339935)

[Equipment installed schedule 45](#_Toc84339936)

[Related Documents 45](#_Toc84339937)

[BS EN series 45](#_Toc84339938)

[Standard specifications 45](#_Toc84339939)

**General**

General requirements

It is essential that the Environment Agency holds and maintains an accurate set of documentation and drawings for all its systems and equipment.

This specification gives the general requirements for MEICA documentation; it must be read in conjunction with the project specification and scope. This document does not cover any special project requirements that may be specified or other standard specifications.

The Contractor must produce and provide all project and site documentation - for review. The Contractor must produce or update documentation and drawings to enable the safe operation, maintenance and decommissioning of all equipment.

The Contractor shall comply with the [Environment Agency BIM policy](http://ams.ea.gov/ams_root/2015/501_550/516_15.doc) as set out in the contract scope document.

Existing site records

Existing site records that are issued to the Contractor for use or reference must be updated to reflect all changes made before returning to the Environment Agency in scaled PDF format. Modifications carried out to existing systems and equipment must be recorded by:

* amendment of existing drawings, or production of new drawings;
* updating site specific operation and maintenance (O&M) manuals

Ownership

The ownership and copyright of all reports, calculations, computer software, data or other documentation produced as part of a contract with the Environment Agency must be vested in the Environment Agency.

Submission of documentation

Submissions

The Contractor must submit drawings, calculations, samples, patterns, models and operating and maintenance manuals, in electronic format. Where there is a requirement for supplementary paper copies these will be specified in the project specification.

Supporting information

Drawings submitted for review must be supported by the Contractor’s design calculations, performance curves and other additional information deemed necessary to enable the Environment Agency to have a clear and precise understanding of the equipment, its operation and its layout.

The additional information may include, but not be limited to, standard literature or drawings of minor items of equipment; small-scale detail layouts of equipment sub-assemblies which due to scale are unclear in the general layout drawing; subcontractor’s detail drawings that give further information to enable the Environment Agency project team to be satisfied that the equipment complies with the Specification.

Supporting calculations

Calculations must be submitted to the Environment Agency to review and comment on. They must be in sufficient detail to enable the Environment Agency to check that the size, rating and design of the various items of Equipment comply with the Specification.

Document control

During the development of a project involving MEICA systems and equipment, the design and associated documentation and drawings are likely to evolve. Rigorous document control is therefore essential from the outset.

Drawings and documentation must be clearly marked with current revision and status. Current status must be recorded as defined in the BIM protocol.

Note: ‘as built’ status must only be applied to drawings once the Environment Agency has confirmed with the manufacturer/installer that they are an acceptable and accurate record of the work undertaken.

Acceptance of documentation

Bespoke equipment

The manufacture of any bespoke equipment shown on a drawing must not start until that drawing has been reviewed and accepted by the Environment Agency.

Content of submissions

The Contractor is responsible for the content of all submissions to the Environment Agency irrespective of the source or origin of information contained in such submissions. Acceptance by the Environment Agency of these submissions by the Contractor or of inspected equipment and tests must mean approval in principle in order to allow work to proceed. Approval by the Environment Agency does not imply that the drawing has been checked, particularly as far as dimensions are concerned. Such acceptance by the Environment Agency does not relieve the Contractor of their responsibilities under the Contract.

Final acceptance

Inspection and review of drawings will not include a dimensional check or check of electrical circuitry by the Environment Agency. In this respect, whether approval has been given or not, final acceptance of the Equipment will only be given once the Equipment has been installed and the commissioning satisfactorily completed.

Operation and maintenance manuals

General

The O&M manual must define the requirements and procedures for the effective operation, maintenance and decommissioning of the equipment. The operating and maintenance manual includes details of the construction works, maintenance history and instructions for its operation and maintenance. Any guarantees and warranties must include details of how to decommission the equipment. The Contractor must prepare the O&M manual in accordance with BS EN IEC/IEEE 82079-1 and the requirements of The Supply of Machinery (Safety) Regulations 2008 (as amended). The O&M manual must be submitted in electronic format. Further paper copies may be provided as required in the project specification.

Issue of draft O&M manuals

The Environment Agency must be provided with a draft PDF O&M manual for approval **not less** than two weeks before the Environment Agency is asked to attend the Factory Acceptance Test (FAT), or if FAT not witnessed the Site Acceptance Test (SAT), of any equipment (as discussed in LIT UNASSIGNED MEICA Project Delivery).

A further paper copy is to be provided by the Contractor at the factory test or site, as applicable, for use during testing and commissioning. Any changes and adjustments to the system, during testing and commissioning must be recorded on the paper copy.

The changes must be integrated into the final version by the Contractor. On completion of the amendments, the final versions will be sent to the Environment Agency.

Issue of interim O&M manuals

The O&M manual will evolve as the works progress. It is a requirement that site-specific and detailed written operating and maintenance instructions are provided to Environment Agency operating and maintenance staff when these operating and maintenance duties are handed to the Environment Agency. No form of beneficial usage can be claimed until this met.

Any interim O&M instructions must be reviewed by the Environment Agency. If this approach is used, interim O&M documentation must identify clearly the extent of the operation and maintenance works being handed to the Environment Agency and include details of who is responsible for other issues on the site that are not yet handed to the Environment Agency.

Issue of final O&M manuals

On completion of the works, the Contractor is to provide a PDF version of the complete O&M manual. In addition to a PDF version, each design drawing is to be provided in an electronic editable drawing file such as dwg.

The final version of the manual incorporating any additions and modifications must be completed within four weeks of the works being taken over. Three copies of the final version must be provided.

The Contractor must also provide paper copy O&M manuals if required in the project specification.

O&M manual electronic format

The O&M manual must be provided in PDF electronic format with each Section (shown in the table below) provided as a separate PDF file. Each Section must be indexed to the sub sections for easy reference. The manual should be formatted to include hyperlinks to section headers from the table of contents. The manual must be provided via the current Environment Agency document control system, as specified in the project Contract. Where a section file size becomes too large it may be split into parts.

The submission must also, include all drawings in electronic DWF/DWG (or other programme as specified in the project Contract) version stored in a dedicated ‘drawings’ folder. Programmable Logic Controller (PLC) programmes must also be included in a dedicated PLC folder.

The manual must be prepared specifically for the site, equipment and process operation. Every effort must be made to condense and focus the information. Any marketing information that is not relevant will be rejected. For detailed technical information on spare parts, only the information for that part must be included, generalised stock lists containing information on irrelevant parts will be rejected.

O&M manual paper format

Paper versions should only be supplied on request. They must be A4 size and in loose-leaf 4 ring binders. The binder must be marked clearly with the name of the installation and the number of the contract. The front cover must carry the Environment Agency and Contractor’s logos. Large manuals should be supplied in several volumes, with separate binders for each section as detailed in this document.

In the case of large manuals supplied in several volumes, each binder must carry this information, and must also identify the volume number.

 Section 0

* Issue History
* Confidentiality, Contractual and Legal Information
* Table of contents
* How to use guide
* Emergency information
* Description of the site and its purpose and operation
* Location plan and details of access
* Health and Safety requirements
* Details of all the equipment and equipment on site, including equipment that has not been supplied as part of the works
* Cross-references to existing drawings and existing operation, maintenance and service information relating to equipment on site that has not been supplied as part of the works
* System operating instructions for Environment Agency staff (may be cross-referenced to other sections of the O&M manuals)
* System maintenance instructions for Environment Agency staff (may be cross-referenced to other sections of the O&M manuals)
* Safe systems of work relevant to the operation and maintenance activities described in this section
* List of system-adjustable control parameters in the form of a table with columns allowing recording of future changes
* Index of the contents of other sections of the manual including a schedule of manuals, drawings, and other records.

Section 1

* A description of the site and the equipment covered by the manual, including a brief description of how the equipment described in the manual fits into the overall operation of the site
* Detailed description of the installed equipment, including overall performance data for the equipment
* Method of operation of the equipment and equipment including any original ‘as installed’ parameters and/or constraints
* As installed’ prints of all drawings produced
* Technical data sheets listing each component with its serial number, type number and the name of the supplier
* Exploded views of all items of equipment with each component cross-referenced to the technical data sheets
* ‘As Built’ digital photographs of the Works

Section 2

* Safety isolation procedures
* A description of all controls (both manual and automatic), including a copy of any functional design specification (FDS) and program coding for programmable logic controllers
* Pre-start and post-operation checklists
* Fault finding/troubleshooting guide
* Emergency procedures
* Copies of all as installed computer software for protection relays and PLCs

Section 3

* Guidance to relevant legislation
* Risk assessments
* Lubrication requirements, lubricant specification and intervals
* Detailed safety instructions including Control of Substances Hazardous to Health (COSHH) assessments, design information, risk assessments and method statements for operation and maintenance tasks
* Disposal information
* Design parameters and asset data including structural, electrical, hydraulic and pneumatic design calculations
* Maintenance task matrix detailing maintenance routines and intervals, together with safe methods of working
* Equipment schedules and asset register
* Recommended spares lists and part numbers.
* Manufacturers’ contact details
* Manufacturers’ literature
* All certification for the Works

Errors and amendments

If any errors are discovered in the final version of the manual, or if it is necessary to make any modifications to the equipment during the maintenance period, the manual must be amended accordingly. Where a paper copy of the O&M Manual has been specified, a replacement set of each of the pages and drawings concerned must be provided within two weeks of the modifications being completed.

Drawings

General

All drawings provided must print to standard sizes (A1 or smaller). Drawing symbols must be to the relevant British standard. Dimensions must be metric. The use of multiple A4 drawings will be rejected when in the opinion of the Environment Agency, a larger drawing would aid understanding.

Drawing checking

The Contractor must provide drawings in accordance with the subsequent clauses and must check each of their drawings and those of their subcontractors before submitting them to the Environment Agency. The Contractor must sign each drawing to certify that it has been checked. The Environment Agency will not examine any drawing which has not been certified. All drawings must be clearly and fully cross-referenced to the Specification and the Drawings as relevant.

Drawing format

As a minimum, all drawings submitted must carry the Contractor’s name and a title block with the Contract title, drawing title, Environment Agency’s name and a reference number forming part of a sequential numbering system for all drawings, plus safety, health and environment (SHE) boxes for significant residual risks associated with Construction, Operation & Maintenance, Cleaning and Demolition.

Where drawings are revised, the revision letter or number must be incorporated in the title block. Revisions must be clearly indicated on the drawing with the revision letter or number shown in an adjacent triangle.

All drawings must be prepared on a computer-aided design (CAD) system. The file type must be specified and files supplied electronically. The Contractor must produce drawings in accordance with the current issue of the Environment Agency BIM Protocol.

Supporting calculations

Electronic copies of all related design calculations must be provided with the drawings.

Working drawings

The Contractor must prepare working drawings that remain with the work and are amended and updated as modifications are made.

Working drawings will be provided for:

* General arrangement drawing or drawings of the layout of the equipment
* Drawings or diagrams showing the installation of the equipment, the required access for installation, the headroom and lifting facilities required, and the equipment loads (both static and dynamic)
* Piping and instrumentation diagrams (P&IDs)
* Single line diagrams and block cable diagrams
* Foundation drawings showing all fixing and holding down bolt details, details of pipes and other items to be built in, and all information necessary to enable the civil works design to proceed
* Duct and cabling layouts
* Schematics drawings and control circuit designs
* Electrical enclosure manufacture (when no standard enclosures are being made)

The location, level and description of all statutory services (i.e. gas, water, telecom, cable TV, electricity, etc.) encountered during the excavation works. These must also show all permanent and temporary diversions made during the Works.

Updating working drawings

The Contractor must ensure that electronic up-to-date working drawings are available on-site at the start of erection. These records must be kept up to date.

Site mark-ups

The Contractor must make two copies of all reviewed drawings available on-site at the start of erection. These must be marked up with any modifications made during erection, commissioning and testing. Both copies must be passed to the Environment Agency at the time of taking over.

As built drawings

Prior to commencing as-built record drawings, the Contractor must consult the Environment Agency to agree the drawing/file reference names for each drawing, to facilitate easy loading of the drawings into the Environment Agency’s BIM Protocol. All as-built record drawings must be submitted in an agreed format and must be completed in accordance with the Environment Agency’s BIM Protocol. Copies of all drawings must also be supplied in pdf format.

Take over

Within four weeks of the works being taken over, the Contractor must provide all as-built drawings, amended as necessary to show the equipment installed. Drawings must be numbered as directed by the Environment Agency using the BIM protocol.

Revisions during maintenance period

If it is necessary to make any modifications to equipment during the maintenance period, the relevant drawings must be amended accordingly. A replacement set of each of the drawings concerned must be provided.

As-built asset data

General

The Contractor must agree the requirements of recording the Environment Agency asset data for both removed and newly installed equipment.

Equipment removed schedule

The Contractor must supply a schedule of each item of equipment removed, including instruments, comprising a brief description, original supplier, supplier's reference, and Environment Agency asset reference.

Equipment installed schedule

The Contractor will be issued with a spreadsheet, which will be the latest version of the Environment Agency’s equipment sheet. The Contractor must populate this spreadsheet with details of each item of installed equipment. This must include all its sub-components such as gearboxes, valves, motors, starters, switchgear, instruments etc.

A fully populated spreadsheet must be provided at least 3 months prior to Takeover.

Related Documents

BS EN series

BS EN IEC/IEEE 82079-1 Preparation of information for use (instructions for use) of products. Principles and general requirements.

Standard specifications

All MEICA specifications are listed in:

* [MEICA - Specification - General](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-16038)

**ANNEX 7 – MEICA – MANAGEMENT – LOW VOLTAGE ELECTRICAL EQUIPMENT**

Contents

[Contents 46](#_Toc105676330)

[Introduction 47](#_Toc105676331)

[Scope 47](#_Toc105676332)

[Roles and responsibilities 48](#_Toc105676333)

[Users of equipment 48](#_Toc105676334)

[Asset Owner 48](#_Toc105676335)

[The Test Operative 48](#_Toc105676336)

[Maintenance and inspection 49](#_Toc105676337)

[User checks 49](#_Toc105676338)

[Equipment user check list 49](#_Toc105676339)

[Reporting faulty equipment 50](#_Toc105676340)

[Combined inspection and test 51](#_Toc105676341)

[Combined inspection and testing periodicities 51](#_Toc105676342)

[Labelling 51](#_Toc105676343)

[Purchasing and hiring electrical equipment 52](#_Toc105676344)

[New equipment 52](#_Toc105676345)

[Counterfeit equipment 53](#_Toc105676346)

[Declaration of conformity 54](#_Toc105676347)

[Electrical equipment classes 54](#_Toc105676348)

[Defective equipment 56](#_Toc105676349)

[Equipment records 56](#_Toc105676350)

[Related Documents 56](#_Toc105676351)

[Legislation 56](#_Toc105676352)

[Codes of Practice 56](#_Toc105676353)

[Appendix 1 58](#_Toc105676354)

[User checks and inspection intervals 58](#_Toc105676355)

Introduction

This document provides instruction for the maintenance, inspection, procurement, and safe use of Environment Agency supplied electrical equipment. It describes the basic visual electrical safety checks that must be completed before using the equipment and offers the recommended intervals between the more intrusive combined inspection and testing procedures.

Note: Environment Agency supplied electrical equipment is equipment which has been supplied for work, originally by a Government Purchasing Card, SOP procurement system or expenses claim.

Scope

The application of this document will ensure the safe continued operation of the following types of electrical equipment found in the electrical installations that staff will utilise whilst conducting their work activities.

This list is not exhaustive and is provided for example only:

* Mobile equipment, such as pumps, desk lights, kettles, and fan heaters.
* Stationary equipment, such as workshop equipment, IT racks, IT server bays and vending machines.
* Fixed equipment such as task-lighting, hand-dryers, boilers, alarm panels, projectors, and display screens.
* Hand-held equipment such as hairdryers, vacuum cleaners, and power tools.
* Built-in appliances or equipment, such as dishwashers, freezers, and refrigerators.
* IT equipment, such as desk-top computers, printers, laptop power supplies and monitors.
* Extension leads, RCD adaptors and electric vehicle charging leads.
* Electric heating equipment, such as immersion heaters and space heaters.
* Electrical installations in office furniture and similar.

The scope of electrical equipment as defined in this document relates to any equipment purchased, hired, and supplied by the Environment Agency to users of equipment.

It does not relate to equipment purchased and owned by any other person or third party.

Roles and responsibilities

This section describes the responsibilities of those who intend to use, maintain, inspect, procure, or hire electrical equipment.

Users of equipment

The user of equipment or “user” is the person who operates equipment. They must check the equipment before use. Users do not necessarily need to have any specific electrical skills, training, or experience to use proprietary electrical equipment. However, they must be aware of the simple checks for defects they must perform and be aware of the operating instructions and limitations before using the equipment.

Users must not operate faulty equipment, and any equipment identified as faulty must be removed from service and reported to their line manager or [Responsible Officer](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-11663).

Users are not permitted to repair or modify electrical equipment (replace fuses, re-wire plugs) without the appropriate authorisation - see [LIT 13133 – Code of Practice for Electrical Safety – Part 2](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-6037)

Asset Owner

The Asset Owner is the person or entity that owns the electrical equipment and for the purposes of this instruction this is split between the Line Manager and the Responsible Officer.

Line Manager: A line manager must ensure that electrical equipment assets that have been purchased, hired, or supplied for the sole use by their team members meet the requirements defined within this instruction.

Responsible Officer: This role has a wider scope to the electrical equipment managed by a line manager and includes:

All those with management responsibility for Environment Agency managed depots, operational assets, laboratories, fleet assets, plant, machinery and lifting and winching equipment and the electrical equipment contained within.

All those with management responsibility for service delivery activities carried out from or using such sites, assets or plant and machinery.

They must meet the requirements detailed in: [Responsible Officer](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-11663)

The Test Operative

The Test Operative is a person who inspects and tests electrical equipment on a frequent basis. The Test Operative must have the requisite level of training and experience to conduct formal visual inspections and the more in-depth electrical testing of the equipment that comprises the combined inspection and test as defined in the IET CoP In-service Inspection and Testing of Electrical Equipment (5th Edition) The Test Operative must demonstrate competence to at least Level 2 as defined in the HSE Guidance HSG107 Maintaining Portable Electrical Equipment. This definition is as follows:

A person with appropriate electrical skills uses a more sophisticated instrument that gives readings requiring interpretation. Such a person must be competent through technical knowledge or experience related to this type of work.

If the test operative is an Environment Agency employee, they must obtain authorisation from their [Supra-Area MEICA team](https://defra.sharepoint.com/%3Ax%3A/t/Team242/EZejbWFzFgxGhYqrS7NfywQBkzyIDMHZnIv4PveIsKT6BQ?e=Ie53h7) as defined within [LIT 13133 Code of Practice for Electrical Safety – Part 2](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-6037). For more information on the method of achieving Electrical equipment testing Level 2 competence refer to your [Supra-Area MEICA team](https://defra.sharepoint.com/%3Ax%3A/t/Team242/EZejbWFzFgxGhYqrS7NfywQBkzyIDMHZnIv4PveIsKT6BQ?e=Ie53h7).

Electrical Support

[Supra-Area MEICA teams and the Engineering Technical Authority](https://defra.sharepoint.com/%3Ax%3A/t/Team242/EZejbWFzFgxGhYqrS7NfywQBkzyIDMHZnIv4PveIsKT6BQ?e=Ie53h7) can provide technical support and advice to assist compliance with this instruction.

Maintenance and inspection

Regular inspection, and as applicable, testing of equipment, is an essential part of any preventative maintenance programme, which helps ensure equipment is safe, as well as functional and available.

User checks

You must ensure user checks are carried out at appropriate intervals before putting any item of electrical equipment into operation. The user checks comprise an external examination of the equipment for any signs of damage or overheating including the plug or connection point and the flexible cable. The environment in which the equipment is to be used must also be assessed to ensure that the equipment is suitable for use within that environment e.g., the presence of water.

Equipment user check list

* Are you aware of any fault with the equipment and whether it works properly?
* User checks must always be done with the equipment de-energised i.e., switched off and unplugged if safe to do so
* Check if a legible label pass or fail equipment label is attached to the equipment and it is in date
* You must not use equipment if it has a FAIL label attached. In this instance seek advice from your line manager/Responsible Officer.
* Inspect the equipment, cable, and plug or connection to include the following checks:
* The plug must not be loose in the socket-outlet and be able to be removed without difficulty
* The plug must be free from cracks or damage
* The plug and/or socket outlet must have no signs of overheating
* The flexible cable must be secured to the plug/outlet plate and appliance with no visible inner cores
* The plug must have no cardboard label on the bottom surrounding the pins
* The flex or cable must be in good condition with no signs of deformity, cuts, or abrasions.
* The flex or cable must not be under any unusual stress, tension or bent too tightly
* There must be no taped joints or connections in the flex or cable
* The flex or cable must not form a trip hazard or be run under carpet

Presentation on pre-user checks

A short presentation to introduce pre-user checks and what you should look before using electrical equipment is provided here: [LIT 60457 – pre-user checks for electrical equipment.](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-20754)

Reporting faulty equipment

If you suspect an item of electrical equipment is not safe to put into operation then it must be removed from service, or its use prevented. The faulty equipment must be reported immediately to your line manager/[Responsible Officer](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-11663).

Any damaged equipment must also be entered into [Airsweb](https://uk.airsweb.net/defragroup/#/Home/)

Combined inspection and test procedures

Commonly known as PAT (portable appliance testing), please refer to the IET Code of Practice for In-service Inspection and Testing of Electrical Equipment (5th Edition), for full details of the combined inspection and test procedures. The combined inspection and test must only be performed by the test operative. The combined inspection and test will typically include a formal visual inspection, electrical testing, functional checks, labelling, and record keeping.

Combined inspection and testing periodicities

The recommended periods between combined inspection and tests of electrical equipment needs to be established on a risk-based approach defined by certain factors. These include:

* The environment – what environmental factors will affect the equipment whilst in use? e.g., Office, workshop, external,
* The users – if the users are aware of pre-use checks and report damage in a timely manner,
* The equipment construction – the physical construction of the equipment and its classification (please see definitions below),
* The equipment type – is it hand-held or fixed for example,
* Frequency of use – how often is the equipment used,
* Type of installation method – generally relating to how the cabling and isolation serving the equipment is installed in relation to the equipment type,
* Previous records – if available will provide a history of the equipment’s condition and use in-service,
* Functional in-service life - certain equipment has a limited-service life which will usually be advised by the manufacturer

Appendix 1 provides details of the expected minimum frequency of inspection and testing for common types of electrical equipment used within the organisation.

Labelling

Electrical equipment that has been subjected to a combined inspection and test, must be labelled. The label, which is durable and suitable for its environment, must indicate if it has passed or failed the inspection.

You must not use electrical equipment if it has a ‘FAIL’ label.

If the equipment label indicates that the test and inspection date has expired, you may continue to use the equipment, subject to you:

* Ensuring it is not defective or damaged;
* continuing to carry out regular pre-user inspection checks;
* consulting with your local workplace and facilities management team to establish when the next planned testing session will take place, and;
* ensuring that the expired equipment is made available for inspection and testing.

A label does not need to be applied to new equipment as it will have a UKCA/CE mark and certificate of conformity as described below.

When you purchase new equipment, it will not have a label with the next inspection due date. Therefore, you must establish and record in your calendar the future inspection and test date for the equipment with your local FM team at the frequency defined in Appendix 1. For lease car electric vehicle charging leads you must contact [Fleet services](https://defra.sharepoint.com/sites/Community899)

For small plant and tools electrical equipment; badged vehicle electric vehicle charging leads you must follow the labelling requirements defined in [LIT 14111 - Inspection and testing of non-office based electrical equipment.](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-6045)

Purchasing and hiring electrical equipment

If you intend to procure or hire electrical equipment you must follow the instructions provided in [LIT 11292 – providing and managing work equipment](https://defra.sharepoint.com/%3Aw%3A/r/sites/def-contentcloud/ContentCloudLibrary/LIT%2011292%20-%20Providing%20and%20managing%20work%20equipment.docx?d=w55f806cd5dcc4b8d887a3ac6f1138b5f&csf=1&web=1&e=OAoctc)

New equipment

New equipment must only be procured from reputable retailers, it is not necessary to carry out an in-service inspection and test before the equipment is used, provided the requirements below are met.

You must ensure that a requisite CE (valid until December 31st, 2022) or the UK equivalent UKCA marking is displayed on the equipment with a declaration of conformity provided. The user must also ascertain that no transit damage has occurred, any product registration and guarantees are fulfilled, and that the equipment is entered on to the asset register.

If there is any doubt with the above, then the equipment must not be used, and a full combined inspection and test must be completed before it is put into service.

When new equipment has entered service, it must be tested and inspected at the intervals set out in Appendix 1. New equipment with a UKCA, CE and certificate of conformance does not require a test and inspection on its introduction to service date.

If the equipment is supplied with a pre-fitted plug to the necessary British Standard and exhibits either a CE mark or a UKCA mark it can be considered safe to put into service by connecting it to the corresponding British Standard socket.

Counterfeit equipment

Counterfeit equipment is an increasing problem, and it can be difficult to distinguish from genuine equipment as counterfeiters’ methods of deception improve.

Using reputable suppliers helps in reducing counterfeit equipment entering the workplace.

Users must also be aware of the correct identification of the known safety markings in use: This is a CE mark:



A genuine CE mark:

* Will have a noticeable space between the C and the E
* Will show the centre arm of the E shorter than the top and bottom arms
* Will be at least 5mm in height
* Will be in proportion to the version set out above
* Will be easily visible and legible

This is a UKCA mark:



A genuine UKCA mark:

* Will be in proportion to the version set out above
* Will be at least 5mm in height
* Will be easily visible and legible

The CE mark is currently used as the mandatory conformity mark for most proprietary electrical equipment sold within Europe and the UK and will remain relevant for equipment purchased prior to 1st January 2021. As of January 2022, electrical equipment sold for use in the UK may still display the CE mark, but the UKCA marking must be referenced on a label or product documentation provided with the equipment. After 1st January 2023 it will be mandatory for all relevant electrical equipment sold for UK use to permanently display the UKCA mark.

If you suspect that an item of equipment is counterfeit it must not be used and must be reported immediately to your Line Manager or [Responsible Officer](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-11663). The item must also be reported on [Airsweb](https://uk.airsweb.net/defragroup/#/Home/)

Declaration of conformity

A declaration of conformity (DoC) is a self-declaration procedure that may be required to accompany a product. In the document the manufacturer, or their authorised representative must:

* indicate that the product meets all the necessary requirements of the directives applicable to the specific product
* make sure it has the name and address of the manufacturer together with information about the product, for example brand and serial number
* The DoC must be signed by an individual working for the manufacturer or their authorised representative and indicate the employee’s function.

Electrical equipment classes

The classification of electrical equipment types will determine its combined inspection and testing frequency. For example, as detailed in Appendix 1, Environment Agency provided home-working equipment such as a monitor (generally class II) or a laptop (generally class III) will not require a combined inspection and test, regular pre-user checks must be carried out.

Below are the symbols you must look for on the equipment when determining its class.

If these symbols are not present on the Class II or Class III equipment, you must check the declaration of conformity, and ensure it states compliance with BS EN IEC 62368: Audio/video, information, and communication technology equipment (this replaced BS EN 60950 and BS EN 60065 in December 2020). This provides assurance the equipment is Class II or Class III compliant.

For example: Dell Latitude 5320 laptops, commonly used within the Environment Agency, may not display the Class II or Class III symbols. However, the [Certificate of Conformity](https://dl.dell.com/rdoc/dell%20latitude%205320%20p138g%20p138g001%20united%20kingdom%20-%20declaration%20of%20conformity%20en-us.pdf) provides assurance it meets the requirements of BS EN IEC 62368

More detail for equipment classes is provided in [Electrical Definitions](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-15282)

Class I Equipment

Protection against electric shock in Class I equipment relies on basic insulation and connection of exposed-conductive-parts to the circuit protective conductor in the fixed wiring installation.

Class I equipment may be identified by the following symbol:

Class II Equipment

Protection against electric shock in Class II equipment relies on basic insulation with additional safety precautions such as supplementary insulation. There is no reliance on a protective conductor.

Class II equipment can be identified by the following symbol:



Class II Equipment with Functional Earth (Class II FE)

Protection against electric shock in Class II FE equipment is the same as Class II equipment but a protective conductor is provided for functional purposes. This is common in IT and electronic equipment.

Class II FE equipment can be identified by the following symbol:



Class III Equipment

Protection against electric shock in Class III equipment relies on basic insulation, electrical separation and supplied via extra-low voltage.

Class III equipment can be identified by the following symbols:



Defective equipment

If an item of equipment is found to be defective, damaged or faulty in any way it must not be used, removed from service and reported to the line manager or the [Responsible Officer](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-11663) . The equipment must be assessed, repaired, inspected, and tested by a competent person before it is re-introduced to service or disposed of.

Equipment records

Records of maintenance and inspections must be kept by the Line Manager and Responsible Officer for all Environment Agency electrical equipment for which they have responsibility. This can be achieved by using an appropriate asset register and must include the following information:

* All equipment currently in service
* New equipment as it is put into service
* Dates of combined inspection and testing
* Maintenance records
* Repair records

Related Documents

Legislation

The following Regulations and Acts are relevant to this document:

* Health and Safety at Work etc. Act 1974 (HSWA)
* The Management of Health and Safety at Work Regulations 1999
* The Provision and Use of Work Equipment Regulations 1998 (PUWER)
* The Electricity at Work Regulations 1989 (EAWR)
* The Workplace (Health, Safety and Welfare) Regulations 1992
* The Electrical Equipment (Safety) Regulations 2016
* The Supply of Machinery (Safety) Regulations 2008
* The Supply of Goods and Services Act 1982
* The Plugs and Sockets etc. (Safety) Regulations 1994

Codes of Practice

The following Codes of Practice and Guidance are relevant to this document:

* In-service Inspection and Testing of Electrical Equipment (5th Edition)
* HSE Guidance HSG107 Maintaining Portable Electrical Equipment

Appendix 1

Introduction

The tables provided within this appendix provide the minimum test and inspection frequencies for electrical equipment, used for home-working and personal use (table 1), and electrical equipment permanently connected or based at Environment Agency locations (table 2).

Table 1 - User checks and inspection intervals for Environment Agency supplied home working and personal use equipment

|  |  |  |  |
| --- | --- | --- | --- |
| Equipment Description | User Checks | Combined Inspection and Test | Typical examples of equipment |
| Electric vehicle charging leads | Before each use | 12 months | Charging leads for electric vehicles only.Contact: [DGFS](https://defra.sharepoint.com/sites/Community899/SitePages/Home.aspx) |
| EA Laptop | Before each use | None  | No testing required |
| Laptop charger leads | Before each use | 12 months | Charging leads and power supply unit |
| EA computer monitor  | Before each use | None  | No testing required |
| EA computer monitor power leads | Before each use | 48 months | IEC leads – see Note 1 |
| EA printer | Before each use | None | No testing required |
| EA printer power leads | Before each use | 48 months | IEC leads – see Note 1 |
| Mobile phone chargers and tablet leads | Before each use | No testing required (Ref: Note 2) | Charging leads only |

If you are unsure of the test and inspection interval for electrical equipment not provided in Table 1, contact the [Technical Authority](https://defra.sharepoint.com/%3Ax%3A/t/Team242/EZejbWFzFgxGhYqrS7NfywQBkzyIDMHZnIv4PveIsKT6BQ?e=Z51Dmf) for advice.

Table 2 - Equipment permanently connected or based at Environment Agency locations.

|  |  |  |  |
| --- | --- | --- | --- |
| Equipment Description | User Checks | Combined Inspection and Test | Typical examples of equipment |
| Hand-held tools and equipment | Before each use | 6 monthsNote: if these tools are regularly used as part of a construction project, they must have a combined inspection and test at a minimum of every 3 months. | Electrically powered hand tools - drills, angle-grinders, jigsaws, extension leads, battery chargers for hand -tools, etc. |
| Offices/depots other equipment, including domestic/kitchen equipment | Before each use | 12 months | Kettles, desk lights, toasters, microwave ovens, refrigerators, fans, fan heaters, etc. |
| Badged electric vehicle charging leads | Before each use | 12 months | Charging leads for electric vehicles.Contact: [Inspection Service Provider](https://defra.sharepoint.com/sites/def-contentcloud/_layouts/15/DocIdRedir.aspx?ID=CONTENTCLOUD-190616497-6045) |
| Laptop charger leads | Before each use | 12 months | Charging leads only |
| Telemetry outstations | Six monthly | 36 months |  |
| IT equipment used at offices and depots | Before each use | 48 months | Monitors, computers, printers, photocopiers etc. |
| Equipment racks and bays | Planned maintenance | 48 months | IT racks, audio visual equipment racks, telecommunication racks. |
| Extension leads (Office) | Before each use | 12 months | Electrical Safety management for employees’ section guidance on extension leads. |
| Transportable vehicles (incident command vehicles, AQMU, welfare units) | Monthly | 12 months | All appliances contained within the units |
| Laboratories (Specialist equipment) | Before each use | 12 months | Spectrometers, stirrers, shakers |
| Aerators | Before each use | 12 months |  |
| Fixed equipment used within a workshop | Weekly | 24 months | Bench grinders, pillar drills, compressors, task lighting etc. |
| Fixed equipment – Operational Structure | Monthly | 24 months | Built appliances, vending machines, boilers, water heaters, hand driers etc. |
| Fixed equipment - Office | Weekly | 24 months | Built-in appliances, vending machines, boilers, water heaters, hand driers etc. |

Note 1 - This is for IEC leads connected to Environment Agency electrical equipment which is marked with Class II and Class III labels

! Important If you cannot see these labels, then you must assume it is class I equipment; and both the leads and the equipment must be formally inspected and tested at the periodicities defined in the appropriate category of Appendix 1

This is an image of an IEC lead with a BS 1363 plug top:



Note 2 - Only phone/tablet chargers which are supplied by the manufacturer with the equipment shall be used to charge the phone/tablet. Where these phone/tablets and leads are required to be replaced then it shall be done on a like-for-like basis and displayed with a CE or UKCA mark, with a certificate of conformity.