



Public Health  
England

# **User Requirement Specification**

**190079 – Incinerator Lighting Upgrade**

|   |   |                 |        |             |
|---|---|-----------------|--------|-------------|
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# About Public Health England

PHE work with national and local government, industry and the NHS to protect and improve the nation's health and support healthier choices. We address inequalities by focusing on removing barriers to good health.

PHE were established on 1 April 2013 to bring together public health specialists from more than 70 organisations into a single public health service.

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## Glossary (including Acronyms)

|            |   |
|------------|---|
| BSRIA      | Building Services Research and Information Association  |
| CAD        | Computed aided design   |
| CDM        | The Construction (Design and Management) Regulations  |
| Contractor | The successful Tenderer who having been successful with their compliant bid has a valid contract with PHE to undertake the works. The Contractors responsibility remains in respect of all or any appointed sub-contractors. ( <i>see also Tenderer</i> ).            |
| COSHH      | The Control of Substances Hazardous to Health Regulations 2002, (as amended). The contractor should take note of the Approved Code of Practice and Guidance (L5) as published by the HSE and pay special regard to Schedule 3.  |
| HSE        | The Health and Safety Executive   |
| MAXIMO     | Engineering asset management software solution used by PHE  |
| MEP        | Mechanical, Electrical and Plumbing   |
| PHE        | Public Health England   |
| PMC        | Principal Maintenance Contractor (currently EMCOR)  |
| Tenderer   | The entity preparing to submit a compliant bid in relation to the associated Invitation to Tender for the project. The Tenderer should ensure they have allowed for all activities identified as the responsibility of the Contractor. ( <i>see also Contractor</i> ) |
| URS        | User Requirement Specification  |

# INTRODUCTION

1. This document is the User Requirement Specification (URS) for the installation of new incinerator hall lighting. It sets out the PHE user requirements that must be complied with in delivering the project. It should be read in conjunction with the PHE standard specifications.
2. The current lighting is at the end of its economic life and not fit for purpose. There is a need to upgrade the current lighting system with a solution that better fits the environment. The lighting system needs to provide lux levels and lighting spread as task lighting for working at the higher levels of the incinerator, the light fittings need to be easily cleaned and maintained due to the hot and dusty conditions. Therefore, mechanical methods to access the lighting system shall be included in the designed solution.
3. The new lighting system would produce the required task lighting for working at the higher levels of the incinerator, reducing any hazards to persons working within this area. The system would also allow proper cleaning and maintenance that will ensure that the lighting system remains suitable for use for the full duration of its design life.
4. In broad terms, the scope of this project is to, supply, delivery, construction, installation, testing, verification, documentation and handover of a new incinerator lighting system.

## Regulatory and Legislative Compliance Requirements

5. All works shall comply with regulatory, legislative and PHE requirements related to the provision of upgrading the lighting of the facilities, their use, design, operation, construction and management which shall include but not be limited to the following:
  - This URS document and all PHE specifications and documents referred to within it;
  - British Standard Specifications and Codes of Practice;
  - The latest issues of the CIBSE Guides to Current Practice and Commissioning Codes;
  - BSRIA standards and guidance
  - Manufacturers Stipulations and recommendations for installation and testing;
  - Acts of Parliament;
  - COSHH;
  - Current Health and Safety legislation including the latest Construction Design and Management Regulations
  - IEE regulations 18th Edition (BS7671)
  - HSE HSG 264 2010 – Asbestos: A Survey Guide
  - Current Building Regulations;
  - Standard PHE specifications.

## Statement of Condition

6. The current lighting is not fit for purpose and provides insufficient lighting for those working in the area 24/7. This increases the risk of personal injury to those working within the incinerator building due to inappropriate and low lighting levels.
7. Prior to removal of the existing lighting system the contractor shall investigate the areas impacted by these works for any hazardous conditions and substances e.g. asbestos, hot surfaces, dust and working at height.
8. Should hazardous conditions and substances be identified the contractor shall ensure removal and disposal of these materials in an appropriate manner as required by Regulation.
9. When working in Building 06 due care and attention must be exercised to the use and location of plant, services and utilities so as not to affect the continued operation of the building.

## EXISTING FACILITY DESCRIPTION

### Incinerator Lighting Upgrade

10. The Incinerator facility located within room 06/5 of Building 06 houses the primary incinerator for the PHE Porton site.
11. The main area for the Incinerator Hall is surrounded on 2 of the internal sides by single storey offices. All of these offices access directly into and from the Incinerator Hall with only a small number having secondary access / egress.
12. There are currently No.9 LED lamps positioned in the roof space of the Incinerator Hall, these are in various states of repair and have not proved effective in their use. These lamps are difficult to repair and maintain as access to them was not considered, the use of complex lifting equipment is needed during repair and maintenance operations.
13. The Incinerator Hall is accessed via a large industrial type door.
14. Adjacent to the Incinerator Hall are various offices, workshops and other industrial areas, all will remain in place and be kept in working order during the undertaking of these works.

## PROJECT DESCRIPTION

### Sustainability

15. The contractor is to utilise the principles of an Environmental Management System that complies with the requirements of BS EN ISO 14001 (2015). Where the system encompasses various elements of environmental sustainability including; measures to ensure continued improvement in environmental performance; promoting good health protection practice; the sustainable procurement of goods and services and the introduction of targets to reduce the contractors carbon footprint.



## Design

16. Following the award of the works, the successful tenderer shall carry out installation as specified by issued design then to be reviewed by PHE team to ensure that good design practice has been achieved.
17. The awarded contractor shall follow a set design presented by “connected lighting”.
18. The designer must adhere to the outputs of the PHE Engineering Change Control process under the management of PHE.
19. The designer is responsible for confirming that the completed product has been provided in line with PHE requirements, the design basis and the design intent. The documented confirmation of conformance shall be provided with the O&M manuals after the project.
20. All intellectual property for designs provided by the contractor is not to be restricted and PHE reserves the right to their access always. All designs provided by PHE are the property of the PHE and may not be used without written consent.

## General

21. The PHE intent for the new incinerator lighting system is to provide lighting of sufficient luminance and spread to allow the operations within the Incinerator Hall to occur efficiently and safely. The new lighting system shall be provided with a mechanical system that allows access for lamp maintenance and cleaning. This shall be as described within this URS and its associated documents.
22. The existing plant, services, furniture, finishes, fixtures and fittings made redundant by the new installation shall be removed and disposed of correctly and replaced with new in accordance with this URS and its associated documentation (Unless alternative agreed in writing).
23. The new incinerator lighting system shall provide a suitable installation in accordance with this URS and its associated documentation. The new systems shall be placed within the existing roof space of the Incinerator Hall and the mechanical maintenance system shall not restrict the use and operators of the existing plant and equipment within the Incinerator Hall. The contractor shall provide all the necessary plant, equipment, materials and labour as required.
24. The contractor must fully consider the space plan, adjacencies & functional requirements and circulation space within the design basis and developing design.
25. The Contractor shall act as both the Principal Designer and the Principal Contractor under the latest CDM regulations.
26. The planned key project contract dates;
  - Contract Award: 18<sup>th</sup> Decemeber 2020
  - Works Complete: 26<sup>th</sup> February 2021

## Survey

27. The contractor must make themselves aware of any potential conditions that may impact health and safety or the developing design and undertake all necessary surveys to ensure these conditions are dealt with appropriately.

## CONSTRUCTION

### Protection

28. The contractor shall ensure they fully protect PHE property, equipment, plant, services and people from their works and their work-related activities.

### Access

29. General vehicle access to the area of Building 06 shall be via the main gate of the PHE Porton site as indicated on the plan shown in Appendix D.
30. The contractor will be provided a location for site accommodation and parking within the car parking areas. Sufficient notice must be given by the contractor to PHE should there be any planned impact to the operation of the main site entrance, access routes and the area adjacent the Incinerator Hall. The contractor must only occupy the area designated for their use and keep this area in good condition, clean and tidy. Site requirements for noise, dust and light must be adhered to at all times.
31. It is essential that access to Building 06 and all other areas of the PHE Porton site be kept available at all times. The contractor is responsible for the provision of the management and all labour, plant and materials for the protection of the PHE facilities while in the performance of the contracted works.

### Enabling works

32. The contractor is expected to keep all working areas and access routes clean and tidy at all times with waste, dust and debris cleared up as they go as opposed to end of day. All protection, signage and the like is expected to be maintained in correct order and reasonable condition for the duration of the project.
33. All necessary safety precautions shall be applied by the contractor to protect the operational nature of PHE Porton.

### Removal of redundant materials

34. The contractor shall remove all redundant plant, equipment and MEP services. If necessary, this extends to architectural components such as partitioning and furniture, fixings, fixtures and fittings as required.

## Construction Waste

35. Redundant plant, equipment services, materials, including waste produced by the project, shall be safely removed from the workplace and site by the contractor.
36. The contractors undertaking works shall provide to PHE copies of all relevant waste carrier's licences and full copies of permits from waste facilities. Waste disposal documentation shall be available for PHE's inspection.

## Dust and Fumes

37. It is not acceptable for dust and fumes, however innocuous, from construction and installation activities to enter PHE working areas.

## Making Good

38. Any disturbances to the existing fabric of the adjacent facilities and infrastructure as a direct or indirect result of the works shall be made good.

## Penetrations

39. Penetrations passing through the boundary fabric for electrical services should be minimised, ideally only one, using a design that ensures compliance with standards and Regulations.

## Incinerator Lighting Upgrade

40. The contractor is to follow design, provide and install an incinerator lighting system meeting the requirements of the URS. Due consideration shall be given to the lighting efficiency and the use of LED lamps.
41. The contractor is to follow design, provide and install a mechanical system to allow the incinerator lighting system to be cleaned and maintained in line with the contractors design intent. The contractor shall ensure that the PHE operations are not impacted by this system when stored and not in use.
42. Provide and install all associated cables, containment, pipework, fittings and brackets etc.
43. Provide all necessary builders work required to complete the works.
44. The project shall ensure that the contractor selected has the ability to assist with the design function ensuring it will provide a complete service for the incinerator lighting system and the associated infrastructure, utilities and builders work.

## UTILITIES

### Wiring, Power and Data

45. Distribution of electrical services for the new incinerator lighting system shall be installed in suitable containment that produces no hazards for those working within the areas under consideration.
46. The electrical supply shall be supplied from the existing distribution systems. However, the existing distribution system will need to be surveyed to ensure that it is operational and conforms to current standards and Regulations.
47. Where any existing electrical fittings, fixtures and cabling are deemed not for reuse these are to be removed and disposed of in an appropriate manner.

### Power Requirements

48. The contractor shall provide electrical power as required by the contractors design for the operation of equipment installed as part of the new incinerator lighting system, this shall include any small power systems deemed required for operational or maintenance requirements.
49. Consideration of circuit layout to maximise flexibility of loading circuits is to be considered.

### Lighting

50. Adequate lighting should be provided and checked by the contractor allowing the servicing and maintenance operations to occur as specified by issued design.

## TESTING & COMMISSIONING

### Testing and Commissioning

51. The contractor shall commission the new incinerator lighting system including all controls, plant, equipment and services installed. The credentials, qualifications and experience of the proposed commissioning staff or commissioning contractor must be identified to PHE for review and comment prior to their appointment.
52. The new incinerator lighting system will not be considered ready for handover without the full suite of commissioning information and certification.

### Documentation

53. The documentation required to be produced by the project at the various stages during the project are scheduled in the Appendices.

## Health & Safety File including Operation and Maintenance Manuals

54. The project shall produce and supply a Health & Safety file including operation and maintenance (O&M) manuals for these works.

## Preferred Equipment Suppliers (or equivalent)

55. All equipment to be installed must be approved by PHE.

## APPENDICES

### Appendix A: Documentation Schedule

56. The following table lists the documents required to be submitted to PHE by the Contractor. This list is not exhaustive, other documentation shall be required as part of the project execution and general project administration requirements.

| <b>Incinerator Lighting Upgrade - Documentation Schedule</b>    |                     |                            |                             |                            |
|---|---------------------|----------------------------|-----------------------------|----------------------------|
| <b>Document</b>   | <b>Tender Stage</b> | <b>Before Construction</b> | <b>Before Commissioning</b> | <b>Final Documentation</b> |
| Health and Safety Policy  | Yes                 |                            |                             |                            |
| Design proposal review  | Yes                 |                            |                             |                            |
| Tender compliance matrix  | Yes                 |                            |                             |                            |
| Activity Schedule   | Yes                 |                            |                             |                            |
| Project programme   | Yes                 |                            |                             |                            |
| List of intended sub-contractors                                | Yes                 | Yes                        |                             |                            |
| References  | Yes                 |                            |                             |                            |
| Construction Phase Health and Safety plan                       |                     | Yes                        |                             |                            |
| Installation drawings   |                     | Yes                        |                             |                            |
| Material Safety Data Sheets                                     |                     | Yes                        |                             |                            |
| Design calculations   |                     | Yes                        |                             |                            |
| Detailed design specification                                   |                     | Yes                        |                             |                            |
| Detailed design and general arrangement drawings and schematics |                     | Yes                        |                             |                            |
| Control wiring diagrams   |                     | Yes                        |                             |                            |
| Electrical wiring diagrams                                      |                     | Yes                        |                             |                            |
| Commissioning plan  |                     | Yes                        | Yes                         |                            |

| <b>Incinerator Lighting Upgrade - Documentation Schedule</b> |                     |                            |                             |                            |
|--|---------------------|----------------------------|-----------------------------|----------------------------|
| <b>Document</b>  | <b>Tender Stage</b> | <b>Before Construction</b> | <b>Before Commissioning</b> | <b>Final Documentation</b> |
| Commissioning Method Statements and Risk Assessments         |                     |                            | Yes                         |                            |
| Commissioning programme                                      |                     | Yes                        |                             |                            |
| Test sheets  |                     |                            | Yes                         |                            |
| Commissioning report   |                     |                            |                             | Yes                        |
| Maintenance instructions                                     |                     |                            |                             | Yes                        |
| Preventative Maintenance schedules                           |                     |                            |                             | Yes                        |
| Component data, literature and instructions                  |                     |                            |                             | Yes                        |
| Manufacturers data literature and instructions               |                     |                            |                             | Yes                        |
| As Built Drawings  |                     |                            |                             | Yes                        |
| Material certificates  |                     | Yes                        |                             | Yes                        |
| Spare parts list   |                     |                            |                             | Yes                        |

## Appendix B: Schedule of Drawings & Sketches

57. The documents listed below are provided as an attachment to this URS. They are indicative and for information only. The Contractor should assure himself of its validity prior to the provision of any solution or proposal.

- Sketch of Working Areas

58. The above named sketches may be found in Appendix D of this document

## Appendix C: Witnessed Acceptance Testing

59. It must be demonstrated during witness testing that all the functions of the electrical and mechanical systems that have been chosen to be witnessed perform in line with the design basis and PHE requirements.

# Appendix D: Site Sketches

## Sketch of Working Areas







