

<b>Project:</b>	Extract system upgrade
<b>Project no:</b>	C-SW DUCTWORK
<b>Client</b>	Public Health England
	Chilton
	Didcot
	Oxfordshire ORQ
<b>Site visits</b>	Monday 5 <sup>th</sup> August 2019 11:00
<b>Project Competition</b>	September 2019

## Introduction

Public Health England (PHE) exists to protect and improve the nation's health and wellbeing and reduce health inequalities. It does this through advocacy, partnerships, world-class science, knowledge and intelligence, and the delivery of specialist public health services. PHE is an operationally autonomous executive agency of the Department of Health. This specification covers work to take place at Public Health England, Chilton, OX11 0RQ.

This project incorporates supply, delivery and installation of unplasticized polyvinyl chloride (uPVC) ductwork connecting to the main extraction system used for extracting fume cupboards in the laboratories throughout a building laboratory block. Approximately 25 metres of Upvc ductwork from of a main plenum extract system serving neighbouring laboratory areas has exceeded its lifespan. This ductwork system where the sections of ductwork located is to be further identified as 'Leg 1'

Bidders should provide an intended methodology with their submission, along with all details of equipment that are proposed for supply under this tender. A detailed programme of work to be carried out should accompany the tender considering Health, Safety and Environmental requirement.

Site visits will be held on an agreed date advised in the ITT. Contractors will be allocated a 4-hour slot to survey and measure the ductwork and will be limited to no more than 2 people. No further visits will be considered after the date indicated.

Whilst cost is an important factor, the technical solution and evidenced performance of the product will also be a significant factor in selection of suitable supplier as reflected in the Award Criteria weighting.

Work is proposed to be undertaken in Aug / Sept 2019 over a maximum 7-day period.

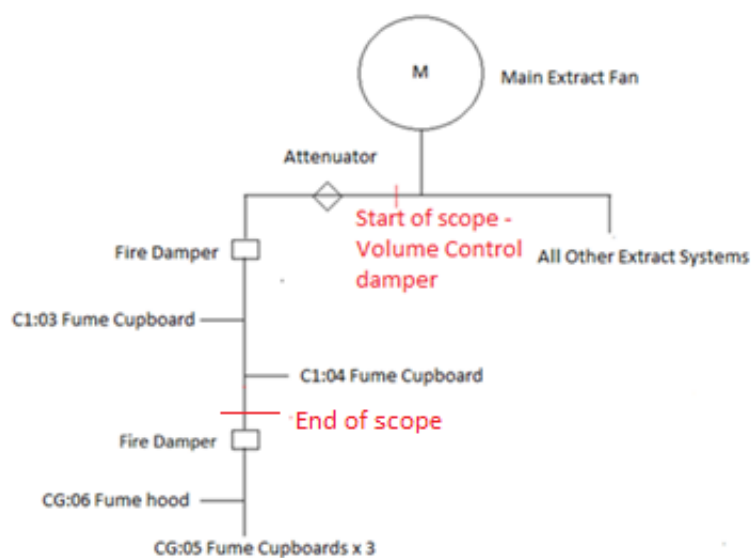
The work will be awarded to a single contractor however tender values shall be separated into the following parts:

1. Ductwork supply
2. Ductwork installation
3. Waste removal
4. Builders work

5. Asbestos R&D survey
6. Operations and maintenance manual

### Scope

Leg 1 branches from the main extract ductwork system situated in the second-floor plant room dropping vertically through a first-floor concrete slab and a mechanical fire damper, then horizontally routes above suspended ceilings and room dividing walls to supply two fume cupboards.



Recent monitoring of the system has proven fume cupboard vapour condenses in certain conditions at the base the First to Second floor vertical ductwork section. The bidder should consider improvement to this deficiency in the design in of the proposed ductwork to ensure that the exhaust of vapours is improved and the installation a drainage points whereby condensed fluid can safely be removed should it collect.

The existing ductwork extracts chemical and microbiological biohazard wastes, appropriate ductwork materials should be selected to provide resilience and longevity against:

- Ethanol
- Xylene
- Methyl iso-butyl ketone
- Hydrochloric acid
- Nitric acid
- Aqua Regia (mixture of hydrochloric and nitric acid)
- Ammonia
- Hydrofluoric acid

- Alcohol

Ductwork flanges that cannot be welded shall be sealed with an appropriate anti-corrosion high acid resistant sealant material of which the properties and product life expectancy should be evidenced within tenders.

The building is to remain in use during the works and the contractor must ensure that all existing areas are adequately protected, and no loss of services other than allowed within the project occurs during the works.

#### **Specification**

1. Allow for swab sampling and analysis of fume cupboards and ductwork access points to enable safe dismantlement.
2. Allow for dismantlement and removal of cited uPVC ductwork.
3. Allow for undertaking a Refurbishment & Demolition asbestos survey prior to the works to identify all asbestos within the rooms.
4. Allow for preparation of cited rooms for start of work, to include protection of work areas surfaces and any specified movement of goods and equipment from cited rooms to nearby storage areas.
5. Allow for supply and fit to replace all duct work with identical sized uPVC Duct work in the areas specified.
6. Allow for supply and fit of an acoustic attenuator to replace existing.
7. Allow for supply, fit and commissioning of two replacement stainless-steel mechanical fire dampers to replace existing.
8. Allow for a duct work drainage point in room C1:01 Lobby.
9. Allow for all ductwork associated items including: brackets, gaskets, fixings, volume control dampers, inspection branches.
10. Allow for removal and reinstallation of ceilings and lighting required for the installation access, replace any existing or resulting damaged ceiling grid and tiles to existing design.
11. Allow for operating and maintenance manual to include ductwork layout and specification CAD drawings which overlay PHE site building CAD.
12. Allow for all waste removal, transport and disposal.
13. Allow for re-commission and rebalance the ductwork system installed, including face velocity testing of fume cupboards.
14. Allow for compliant fire stopping around ductwork routes through walls and ceilings.
15. Allow to include for all the builders work associated with completing the works.

#### **System Isolation**

16. The project is to be carried out in a single uninterrupted phase to minimise disruption to building users
17. A 7 - day maximum period of continuous isolation period of Leg 1 and access to laboratories has been allowed for the project programme to minimise disruption of laboratories which will be affected by these works.

18. When disconnecting the start of scope from the main extract system the connecting side shall have sufficient airflow restriction via the volume control damper to simulate the extraction flow rates normally applied to this leg to allow the remaining system flow rates to remain compliant by the works.
19. Except for the duct work scope identified in this specification, all the other extraction and ventilation should remain in working order during weekdays 07:30 till 18:00. Weekend and out of hours full system shutdown can be arranged with onsite facilities department.
20. It is anticipated that the majority work shall be completed Mon – Fri 07:30am – 5:00pm. Carriage of new or removed ductwork through the building to the location of install shall be undertaken outside of normal working hours or at weekends.
21. The building is to remain in use during the works and the contractor must ensure that all existing areas are adequately protected, and no loss of building services beyond the areas of work occurs during the project.

### **Requirements**

22. Duct work installed must be demonstrated to comply with the appropriate HVCA specification DW154- HVAC Specification for Plastic Ductwork.
23. Flexible connection less than 300mm in length may be used to connect to fume cupboards spigots to nearby installed duct work in laboratories C1:03 & C1:04.
24. Refurbishment & Demolition asbestos survey and any further related works shall conform to HSG264 and UKAS Standards.
25. Fire Dampers installed must demonstrate compliance with DW 145: Guide to Good Practice for the Installation of Fire and Smoke Dampers, British standards BS EN 15650:2010 Ventilation for building (Fire dampers), BS EN 1366-2 The fire resistance test standard for fire dampers, BS EN 15650 (Fire Damper product standard for Ventilation for Buildings), BS EN 1751 (aerodynamically testing dampers). On completion of the installation works these dampers shall certified tested and must be in working order before the installation is signed off to ensure manufacturers guarantee
26. Swab analysis of ductwork to be removed shall be undertaken on behalf of the contractor by a UKAS accredited organization before dismantlement.
27. Small traces of radioactivity may be present in the ductwork. PHE are to provide expertise monitoring of the system and further approval before commencement of work.
28. It will be a condition of the contract when awarded, that the contractor shall transport and dispose of all wastes removed under this contract, strictly in accordance with the requirements of the current Environmental Protection Act, the Waste Management Regulations and the Duty of Care Code of Practice.
29. Full method statements and risk assessments will be required prior to commencement of work.

30. It will be a condition of the contract when awarded, that the contractor shall agree to and adhere to the PHE Contractors Rules.
31. A valid permit to work must be issued by site in advance of work being carried out and must be available for inspection on request during the works. Any hot work must be identified and agreed with PHE Facilities and be separately permitted.
32. Any bidder's omission of the stated specification will be considered as a non-compliant bid.

#### **Installation**

33. It will be a requirement to undertake this project with minimal contamination within the laboratories. Bidders should allow for sheet coverage of all worktops and relocation of any laboratory contents/equipment to nearby storage rooms.
34. It is acceptable for installers to use existing fixings to secure ductwork will shall reduce dust exposure to rooms.
35. Whilst undertaking any drilling a vacuum shall be used to minimize risk of laboratory contamination.
36. PHE will not accept the date of the practical completion or date of commissioning as the start date for the defects liability period

#### **Warranties**

37. The guarantee period should a minimum of 12 months unreserved on workmanship and all new equipment and materials supplied by the contractor. The equipment and installation will meet the Manufacturers criteria to give an underwritten guarantee of the installation in conjunction with the completed air testing.
38. The defects liability period of 12 months will commence on the date of the successful handover from the contractor to PHE
39. PHE will not accept the date of the practical completion or date of commissioning as the start date for the defects liability period

#### **Contract management requirements**

40. It is recommended that the contractor employs local builder and ceiling contractors with site familiarisation to ease the delivery of the project in such a short period:
  - Builder - Thames Valley Maintenance - <http://tvmoxford.co.uk/>
  - Ceiling contractor - Thames Ceilings Ltd - <http://www.thamesceilings.ltd.uk/>
41. Evidence should be given of previous design and installation projects of a similar nature. There may be a requirement to contact companies to verify this information.

42. Company structure charts and details of company size and qualifications of project-related personnel should be submitted. Any sub contracted work should be specified along with the details of the subcontractor's experience and credentials.
43. A detailed plan of how the work will be carried out should accompany the tender considering H&S and environmental issues.
44. All calculations should be carried out in accordance with the Chartered Institute of Building Services Engineers (CIBSE) guidelines.
45. A management plan as to how the work will be project managed should be provided and a timeline for completion. Any sub-contractors should be listed with the tasks they will be completing. Where sub-contractors are used, a guide should be given as to any availability issues and foreseeable scheduling problems which would affect the dates of completion.
46. A description of your risk management should accompany the tender to highlight risk areas and any associated plans you have in place to minimise such risks.
47. Any legal requirements for the system must be adhered to and documented on the tender.
48. Asbestos is present in the building. A copy of the site asbestos register is available from Facilities on request. The Contractor will need to take the appropriate measures in those areas.
49. Following appointment, the successful contractor is to undertake a full survey of the works to satisfy itself of all necessary requirements.
50. The Contractor is to provide all accommodation and services if required. Site welfare services facilities will be offered by PHE at nil cost. The Site and the Work areas are to be kept clean and free from rubbish always. Disposal from site, including skips will be the responsibility of the Contractor. Skips can be located within an allocated area
51. The Contractor will provide all protection necessary to keep laboratory equipment and existing finishes clean and free from damage and accessible where necessary, assuming preparation of area and movement of equipment will be provided by PHE.
52. The Contractor will take on Design responsibility for the works.
53. All equipment and materials not identified in this document as being provided by PHE must be provided by the contractor.
54. The defects liability period of 12 months will commence on the date of the successful handover from the contractor to PHE
55. PHE will not accept the date of the practical completion or date of commissioning as the start date for the defects liability period.

#### **Site Attendance**

56. The contractor is required to ensure that their employees have suitable work wear, are clean and tidy and shall conduct themselves in a polite and conscientious manner always. All contractor personnel attending site who have not done so previously will need to undertake a site induction with PHE.

- 57. All contractors attending site are required to comply with the PHE site rules and shall notify Facilities staff when leaving site for safety reasons.
- 58. There should be a designated site supervisor identified always
- 59. PHE will provide parking for a limited number of vehicles during working hours, subject to approval at the time of works.
- 60. Deliveries to the site must be scheduled directly to the contractor during normal working hours.
- 61. PHE will be able to provide onsite toilet facilities during normal working hours.
- 62. PHE can provide a limited amount of secure storage for equipment and materials on site. An outside area may be used for large items.

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