

Pre-installation Information and Method Statement



Quotation No:	UKSD – 3631
Client/Project Name:	University of Derby
Site Name:	N/A
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Installation Start Date:	28/12/2016
Installation Finish Date:	28/12/2016

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Install Checklist

Work Area's

Prior to the commencement of the installation a work/storage area will need to be provided in order for the Destratification fans and tools to be prepared and stored. If the installation is scheduled to last more than one day then this should ideally want to be secured overnight.

A suitable cordon shall be set up around the area being worked on by our engineers this will then be moved in accordance with our safe system of work to keep unauthorised persons away from the work site.

The client is to take appropriate measures to advise the installation team of potential client site activity hazards and to implement necessary control measures to ensure the safety of our employees.

It is our policy that Airius personnel act in a professional and responsible manner, and that they keep the working area in a tidy and safe condition.

Clearing site

After the installation is complete it is the client's responsibility to arrange for the removal of packing materials and installation materials from site.

Our engineers will assist to clear site if suitable skips or rubbish receptacles are made available

The installation and surrounding areas will be left clean and swept by our installation engineers and electricians.

Welfare

Whilst on site our engineers will require access to.

- Toilet and canteen facility's
- 230V mains sockets will be requires for charging of battery tools and use of 110V transformers.



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Method Statement

Scope of Works

This method statement details the installation, test and commission of a number of Airius Destratification fans to be installed throughout the Site as detailed on the Airius drawing document. Once complete Airius engineers are to ensure the system is fully operational, remedial works may be necessary if any piece of field equipment is not operational consisting of fault finding. All equipment and cabling to be installed in accordance with the design specification, manufacturer's instructions and selection and erection methods detailed in IEE Guidance Note 1 BS 7671.

Access to the roof completed by

Complete Rope Access Solutions

0151 2079193

Ref CRAS0142

Sequence of Works

- An appropriate Permit must be obtained and signed prior to commencement of work.
- On initial arrival Airius employees must report to Reception/Security on premises with their driving licence, and to the Building/Estate Management Office in respect of the works being undertaken. All personnel working on this project must have read understood and signed this specific method statement, prior to commencing these works.
- Airius shall comply with all relevant statutory legislation, codes of practice and working rules governing the works to be undertaken
- Airius employees must be familiar with and follow site safety security regulations specified by the Client including the house rules and regulations.
- Airius will provide safe access, comply with all current legislation, and keep statutory inspection registers available for inspection by Health & Safety Executive Inspectors,
- Approaches to the work and surrounding areas must be kept clear of equipment and debris at all times



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- The work area is to be left in a clean and tidy condition at the end of each shift. All rubbish is to be removed from site.
- Airius will take all reasonable measures to prevent damage to adjacent property.
- Airius shall comply with appropriate electrical safety legislation. Safety procedures and permits to work must be agreed with Management before work commences. Any work to the electrical systems of the premises will be strictly governed by the Engineering Manager and will almost certainly involve precautions such as opening circuit breakers at the source of the supply, removing fuses, locking isolators and adding signage to indicate 'Caution: System Under Test' etc.
- Airius is to ensure that all employees make full use of Personal Protective Equipment as the circumstances demand.
- All equipment and cabling to be installed in accordance with the manufacturer's instructions and selection and erection methods detailed in IEE Guidance Note 1 BS 7671.
- A risk assessment will be carried out on all work equipment and plant provided by Airius to ensure it is suitable for its intended task and can be used without putting persons at risk (PUWER 98).
- If MEWPs are to be used for high level access the operative will be IPAF trained
- De-stratification Fan power supplies to be fed from Switch Fuse Spur fed from a local ring circuit or a new independent circuit will be used fed from the local Distribution board.
- Airius operatives are to pre-determine all tools, materials and equipment before work commences. The appointed site representative shall be kept fully informed of areas where Airius operatives are undertaking work. Work to be done methodically and efficiently. Caution will be exercised by the fully competent operative carrying out the work. If any doubts regarding safety arise then work must be halted immediately. Verification that apparatus is isolated with a suitable test instrument will precede all Airius installation work. If services have been interrupted by isolation, once power is re-instated confirmation will be made that all services are restored correctly.
- For new and additions to 230VAC power supplies follow initial testing and inspection, carried out in sequence as defined by 713-01-01 IEE Wiring Regulations BS 7671.



• When working within Distribution Boards there may be additional energised circuits. Should it be identified that these live conductors do not offer enough basic protection to prevent unintentional contact with exposed live parts then the relevant section isolator/switch or sub-distribution Board must also be de-energised. If this level of isolation is infeasible i.e. de-energising will introduce additional or increased hazards such as removing illumination for an area then Airius operatives will arrange with management for isolation to take place at a suitable time and date. In this situation the Airius operative will be technically competent and fully conversant with HSE requirements specified in HSE document HS(R)25; Memorandum of Guidance on the Electricity at Work Regulations, and Airius as the duty holder shall ensure safe work practices in accordance with Regulation 14 EAWR 89.

- Airius Europe shall install FP200 cabling in accordance with BS7671 (current version amendment 3)
- The work area shall be cordoned off in order to keep unauthorised persons away from the work area. The work is also to be completed outside of term time on the 28th December.
- The fan circuit shall be taken from the existing Distribution board on the first floor this shall be labelled to allow easy identification.
- FP200 shall be run in existing cable containment from current Distribution Board location to the lighting RSJ steelwork these shall be secured using metal cable ties.
- The fan circuit shall incorporate an isolation device in the form of a switch fuse spur and a speed controller.
- The Fan Circuit shall also include a Key Switch, which shall be accessible to members of staff
- Accesses to the roof shall be made using a hired in climbing team who shall access the roof and fix the fans and associated cabling.
- The FP200 shall be run along the desired steel roofing joists using the current cable tray.
- At each fan position a Click plug and socket shall be used for the power cable and the signal cable.
- Each fan will be hung on the steelwork using Gripe loop suspension wire looped around the steelwork so as not to drill fixings.



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- The fan will be set to the desired speed by the commissioning engineer this will be changeable by the customer to suit their needs.
- Each individual circuit shall be tested according to BS7671 before being commissioned and put into service. And a Minor Works Certificate issued.

<u>Task specific Method Statement</u>	<u>Job</u> <u>Process/Plant/Equipment/ Environment</u> <u>That Is A Potential Hazard</u>	<u>The Consequences Of The Hazard</u>	<u>Risk Control Measures To Minimise Hazard</u>
<p>1</p> <p>Assess the work area for potential hazards prior to commencement of work</p> <p>(Perform a risk assessment and list the hazards e.g. other contractors in the area, bad weather etc.)</p>	1.1 Ingress and egress is partially or completely blocked.	Unable to exit area in emergency in appropriate time. Possible fatality.	Ensure exit and entrance points are clear.
	1.2 Inadequate lighting.	Injury to person or damage to property. Possible fatality.	Ensure adequate lighting. Both emergency and operational. Increase light levels with task lighting.
	1.3 Trip and Overhead hazards.	Injury from minor abrasions to broken bones.	Ensure walkways and work area is clear of obstructions. Permanent trip and low hanging hazards (e.g. piping, cable trays etc.) to be identified. Use of correct PPE.
	1.4 Confined space, elevated position or hazardous environment.	Injury to person or damage to property. Possible	Confined space or hazardous environment permit required. All operatives using the high level access



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		fatality.	equipment will have the relevant IPAF cards.
	1.5 Switch Board/Sub Distribution Board.	Injury to person or damage to property. Back/muscle strain removing covers. Electrocution.	Ensure covers can be removed safely. Ensure two operatives are available for removal of covers. Ensure no exposed live parts.
	1.6 Noise hazards.	Hearing loss and inadequate communication leading to injury to person or damage to property.	Review tasks before commencing work in a noisy environment and ensure correct PPE is worn.
2 Identify the potential impacts that the work could have on others (Identify and list the possible impacts that performing the works could have on others (occupants, public) e.g. creating dust/noise/vibration/fumes etc.)	2.1 Unplanned power outage.	Business interruption.	Ensure correct task procedures are adhered to.
	2.2 Unauthorised entry of person to work area.	Injury to other person/members of public.	Control access to work area. Barrired off work area with tape or barriers. Work in progress signage.
	2.3 Raised work area.	Equipment dropping. Injury to other person/members of public.	Areas to be barrired off. Second operative to observe and prevent persons entering areas below raised work areas. Use of toeboards.
	2.4 Untidy work area.	Injury to other person/members of public.	Worker must keep work area tidy and clear of obstacles at all times. Toolbox talks on



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			good housekeeping.
<p>3</p> <p>Make the work area/equipment/ plant safe prior to commencement of works</p> <p>(I.e. isolations, barriers, obtain permit to work etc.)</p>	3.1 Ensure adequate access to Equipment.	Injury to person. Possible fatality from 'flashovers'.	Inaccessible areas where there is less than 0.9m to retreat or fall back are to be reported and reviewed with Supervisor before work can commence.
	3.2 Tools and instruments, ensure operatives have required equipment.	Injury to person from Hand Arm Vibration Syndrome HAVs, hearing damage, electrocution.	Ensure that tools are in good working condition. No power tools - Li-Ion battery only. Test equipment will have current calibration certificate in place. Good test probes and leads in accordance with HSE GS 38.
	3.3 Safely identify, isolate and lock off dedicated power supply to electrical equipment.	Injury to person. Injury from burns to electrocution. Possible fatality.	Ensure covers can be removed safely. Ensure no exposed live parts. Identify area for safe storage of equipment covers.
	3.4 Fit lock outs & danger tags.	Injury from burns to electrocution. Possible fatality.	Ensure warning notice are fitted to all required locations and power supplies are locked off. Check supplies are dead.
	3.5 Erect access equipment and step ladders.	Injury to person, possible fatality.	Ensure access equipment is in good working condition. Tags and relevant paperwork to be kept up to date.



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			Operative will hold relevant access equipment training certificate.
<p>4</p> <p>Perform Task</p> <p>(Identify and list the inherent hazards associated with performing this task e.g. use of power tools, manual handling, noise etc.)</p>	4.1 Mount equipment in pre-agreed position. Use suitable fixings as the surface demands.	Vibration and projectiles from drilling. Back/muscle strain.	Keep drilling to a minimum time. Prevent debris/dust from falling into adjacent equipment/area. Use correct PPE. Two personnel to mount equipment.
	4.2 Sharp edges, noise, projectiles during installation of cable tray, conduit, and channel systems.	Cuts, hearing & eye damage.	Keep drilling to a minimum time. Prevent debris/dust from falling into adjacent equipment/area. Use correct PPE. Set up work bench.
	4.3 Electricity during installation of 230VAC supply for equipment.	Electrocution.	No live work, schedule isolation to dedicated power supply. Check all cables are terminated - no showing conductors. IP2X level of protection.
	4.4 Final connections to electrical equipment.	Injury to person.	Care should be taken to terminate ALL cables to correct terminals. Ensure cables are not pinched once covers are replaced. Use correct cutting/stripping tools. Use correct PPE.
	4.5 Powering on equipment for the first time.	Injury to person or damage to property.	Adhere to correct commissioning procedures in powering up plant. Before energising ensure initial testing has been carried out in sequence as defined by



			713-01-01 IEE Wiring Regulations BS 7671.
<p>5</p> <p>Complete the Task</p> <p>(Identify and list the hazards that need to be addressed prior to completing/leaving the work area e.g. leaving tidy, taking away rubbish, removing locks/tags etc.)</p>	5.1 Remove all tools and equipment from the task area.	Injury to person or damage to property.	Tool inventory check. Visual inspection.
	5.2 Clean task area.	Injury to person or damage to property	Supervisor and operative to ensure area is clean.
	5.3 Remove locks and tags from switchgear.	Business interruption.	Supervisor and operative to check all switchboards.
	5.4 Reinstate all switchgear to original state.	Electrocution.	Notify all workers to remain clear of area. Reinstate all sources of energy that have been isolated, prove "live" using proven test equipment and insulating gloves.
	5.5 Clean and clear general site area.	Injury to person and damage to property	Supervisor and operative to ensure all rubbish is removed from site.
	5.6 Leave site.	N/A	N/A

