CEH Lancaster Fume Cupboard Ductwork

Pre- Construction Information Pack

August 2015

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Issue Number: 01

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DOCUMENT AUTHORISATION SHEET

Client:	Roger Merritt – CEH Lancaster (Facilities Operations Manager)
Document Title	Pre-construction Information Pack
	PREPARED BY:
Name:	Nigel Parfitt
Position:	Building & Services Manager
Date:	August 2015

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1 INTRODUCTION

This Health and Safety Information Pack has been prepared in accordance with the Construction (Design and Management) Regulations 2015. It is a document which will eventually be developed into the Construction Phase (Health and Safety) Plan by the contractor appointed as the Principal Contractor for the project, but initially it will be used to collate and summarise the information provided by the Client for use by the designers. All those involved with the design phase have a statutory duty to comply with it and to provide the Principal Designer with any information they have which is required to keep the plan up to date.

It is the intention of the Client that the project be designed and constructed in such a way that the risks to the health and safety of all persons engaged in its construction, future use, cleaning and maintenance are eliminated or reduced to an acceptable level.

This Information Pack is to provide information only and does not form part of the Contract. The full scope of the Works, the duration of the contract and the obligations of the Contractor, shall be ascertained by reference to the Contract documents read as a whole.

2 IDENTIFICATION OF ROLES

Please refer to section 9.4 for contact details.

2.1 Client

Centre for Ecology & Hydrology is the 'Client' as defined under the Construction (Design and Management) Regulations 2015.

2.2 Principal Designer

The Principal designer is Nigel Parfitt – Building & Services Manager (Centre for Ecology & Hydrology)

2.3 Principal Contractor

The Principal Contractor is to be appointed.

The duties of the Principal Contractor are set out in Construction (Design and Management) Regulations 2015. [Note that this includes preparation of the Construction Phase (Health and Safety) Plan, **prior** to the commencement of works on site].

2.4 Contractor

The Principal Contractor shall be responsible for the implementation of all safety management measures necessary for the execution of the work, and for the management of all Contractors on the site. All Contractors shall comply with the Construction Phase (Health and Safety) Plan, and with all relevant legislation, regulations or codes of practice.

2.5 Designer

Under the CDM Regulations, a Designer is anybody who either prepares a design or arranges for a person under his/her control to prepare a design. Whilst designers have been appointed, a contractor may also be a designer under this definition, and therefore the regulations will apply to them in the same way as it does to the architect, engineer, etc.

3 DESCRIPTION OF PROJECT

The detail below is provided to assist the contractor but should be treated as preliminary information and not categorical.

3.1 Introduction and Background

The **Centre for Ecology & Hydrology** is the UK's Centre of Excellence for integrated research in terrestrial and freshwater ecosystems and their interaction with the atmosphere.

As part of the **Natural Environment Research Council**, it provides National Capability based on innovative, independent and interdisciplinary science and long-term environmental monitoring, forming an integral part of NERC's vision and strategy.

Working in partnership with the research community, policy-makers, industry and society, it delivers world-class solutions to the most complex environmental challenges facing humankind.

3.2 Nature and Scope of the Work to be carried out

This contract comprises:

This project is to replace the roof exposed fume cupboard ductwork from the risers to the fans and the return ductwork to the stacks. The client also requires the routes of the ductwork to the stacks re-designed by the contractor to minimise the amount of ductwork on the roof. The work includes 4 no Microbiological Safety Cabinets and 14 no Fume Cupboards. It is estimated that there will be approximately 320 lm of new 400m dia. insulated ductwork and 100 lm of surplus ductwork. The design includes 2no new stack locations and supports to the centre of the roof. The fans are to remain in their current locations and to be serviced as part of the works in accordance with SFG20. The contractor to replace the roof facing plywood panels to the 4 no existing stacks.
As this is an operational site the works are to be undertaken in phases to minimise the downtime of the fume cupboards etc.

3.3 Location of Project and Extent of Site

CEH Lancaster is located within the Lancaster University Campus. All the adjacent buildings are University buildings including Labs, offices, library and halls of residence. Access to the site is through the main University entrance off the A6 approximately 2 miles south of Lancaster City Centre.

The address is Centre for Ecology and Hydrology, Lancaster Environment Centre, Library Avenue, Bailrigg, Lancaster, LA1 4AP

Image 1.

General Arial view of University showing CEH Lancaster.

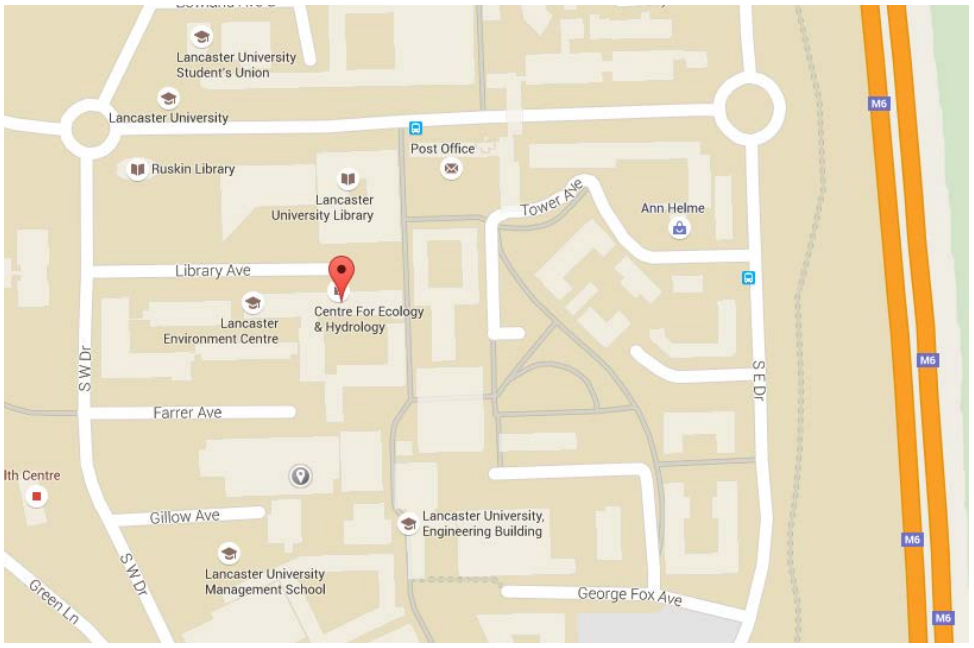

Image 2.
University Map showing CEH Lancaster.

Image 3.
Typical access point to roof (note not CEH fume ducts in picture)

Image 4.
Existing plant and equipment

Image 5.
General Roof view showing AHUs and Condenser Units

1.1 Existing Environment, Surrounding Land and its Use

The existing environment of the site, surrounding land and its use may have an impact on the safety of workers on the site, or on others in the area surrounding the site.

1.1.1 *Adjacent premises*

The following list shows typical types of premises and their use around this site. This information must be considered when control measures are formulated for works, i.e. will the residents cause a hazard? Is a particular group of residents more at risk due to the construction works than others? Control measures required must be recorded in the method statements or safe systems of work documentation:

- Other Construction Works
- Research establishments
- University buildings
- Offices
- Student Accommodation
- Car parking

1.1.2 *Existing structures*

The main building where the works are planned are held as an operational asset and occupied by CEH as owner of the leasehold interests. The building was purpose built and completed in 2004. It comprises of a three storey office and laboratory block adjacent to a central shared glazed atrium and a refurbished block of a pre-existing university building for the purposes of CEH. Each floor is divided by a central corridor with cellular offices, labs and specialist areas off either side. The building has a flat roof and accommodates fume cupboard extracts, HVAC and associated service ducting. There is no designated plant room within the building.

1.1.3 *Existing materials stored on site that may present a hazard*

The site is a mixture of normal office accommodation, associated staff welfare accommodation and meeting/ Reception spaces. Externally, the site is provided with hard and soft surfaces, including a mixture of paving and tarmac roads for vehicle access. There are scientific laboratories, stores and workshops on site, used to prepare and manage site related scientific research. Laboratories and storage areas do have chemicals and materials stored within them consistent with ecology and hydrology experimentation.. Gas, compressed air and the equipment required to use them are also held on site along with chiller and cold storage facilities and associated F-Gas.

1.1.4 *Ground Conditions / Contamination*

The site is an existing Research Centre; the majority of the grounds surrounding the building are laid out for both vehicle and pedestrian access with mature landscaping filling the areas in-between and own by the University
Generally, the ground conditions will need to be established locally by the contractor prior to starting the works should access for cranage be required. Agreement with employer needed at least four week prior to commencement of works so arrangements can be made with adjoining landowner.

1.1.5 *Existing Utilities*

The term ‘utility’ means all underground services such as electricity, gas, water, storm water drain, foul sewer and telecommunication services. Buried utilities are widespread. It shall be assumed that they are present unless and until proven otherwise.

Prior to commencing works on site it shall be the responsibility of the Principal Contractor to satisfy himself that all utilities on site have been located, identified and marked, and disconnected or diverted as required, **prior** to commencing work in the particular area in question.

3.5 **Project Program, Timescales and Phasing**

- Proposed lead-in time (weeks): 4 weeks
- Envisaged Commencement Date: 12.10.15
- Envisaged Completion Date: 30.10.15
- Initial Notification to the HSE: N/A

The above timescale is as envisaged prior to tender but may be subject to change prior to the award of the contract. The Principal Contractor shall confirm that the Works and associated phasing can be achieved within their actual programmed timescale, without prejudice to health and safety aspects of the contract.

3.5.1 *Phasing of Works*

Although this project is not part of a larger scheme, phasing may be required on agreement with employer for construction, procurement or client operational reasons.

3.6 **Site Access, Compound, and Storage**

3.6.1 *Site Compound*

The locations of the site compound, area for materials storage and welfare facilities shall be arranged by the Principal Contractor with client and detailed in the Construction Phase (Health and Safety) Plan. The final location any area proposed will need to be confirmed by the client at the pre-start meeting.

3.6.2 *Site access*

The Principal Contractor shall determine details of safe access and egress, avoiding risk to others. Also refer to section 7 Traffic Management.

3.6.3 *Storage and Distribution of Materials*

Materials, plant and equipment shall be stored with due regard to the risks posed to pedestrians, vehicle traffic and site personnel. Where the risk of interference is high, local compounds shall be constructed to provide a secure enclosure.

Only the minimum quantity of hazardous substances will be permitted to be stored on site in properly constructed and labelled containment so as to reduce potential environmental impacts and possible harm. Appropriate methods of containment for accidental leakage shall be implemented Materials and waste storage areas shall be detailed in the traffic management plan.

3.6.4 *Temporary Services / Welfare Facilities*

The Principal Contractor shall agree with client and maintain appropriate welfare facilities. Details shall be provided in the Construction Phase (Health and Safety) Plan.

4 Interfaces

The Principal Contractor shall, both prior to and during the work activities, identify any issues where other parties may interface with the work activity. Co-operative measures will be introduced to ensure that such interfaces do not impose risk.

The following interfaces have been identified:

Reference No.	Description	Comment
Local Authority	Lancaster City Council	
Water Authority	United Utilities	Via client
Gas Authority	Transco	Via client
Electrical Supply Authority	Lancaster University	Via client
Communications Authority	TBC	Via client
Fire Authority	Lancashire Fire and Rescue	
Adjacent sites	Lancaster University	Via client

Please refer to section 9.4 for contact details.

5 Existing Drawings & Reports

Number	Title	Originated from	Rev/Date
0207 (57) M709	Roof Level HVAC	AXIMA	10.10.03

6 RESTRICTIONS AFFECTING THE PROJECT

There are many restrictions that may affect the Works on this project, some of which may only exist during particular stages of the work. The Contractors shall identify all restrictions and the details of methods of work required to avoid conflict with them shall be recorded in the Construction Phase (Health and Safety) Plan. The successful Principle Contractor will need to liaise closely with the client to ensure that all restrictions are included and accounted for.

6.1 Potential Restrictions

The following is a non-exhaustive list of potential restrictions that may occur. Particular restrictions relevant to the Works shall be identified during the risk assessment process.

6.1.1 Hours of work – 07.30 to 17.00 weekdays, Out of Hours working is possible by prior arrangement. Conferences or generally noisy operations: These will need to be controlled during normal working hours.
6.1.2 Maintenance of vehicular (including emergency services) routings and pedestrian access;
6.1.3 Programme restrictions
6.1.4 Environmental issues
6.1.5 Hot works permits will be required.

6.2 Identified Restrictions

The following restrictions have been identified, and apply to this contract:

6.2.1 *Restrictions on Access*

There is currently access restrictions to the font of the building due to construction works by Lancaster University. Crane access for ductwork and equipment will need to be carefully planned at pre-construction stage with client and programme designed accordingly.

Image 4. View looking towards the main entrance into the site.

The site is accessed through the main University entrance off the A6 approximately 2 miles south of Lancaster City Centre. Traffic into the site will need to be controlled in line with the local site guidance as listed in the traffic safety and management requirements see section 7 herein.

6.2.2 *Restrictions on the Work Site*

Prior to commencing works on site it shall be the responsibility of the Principal Contractor to satisfy himself that all utilities on site have been located, identified, disconnected, and diverted as required, **prior** to commencing work in the area. For further details, refer to section 3.4.5 above.

Please see services details as provided by the client and included within the tender documentation works package.

6.2.3 *Restrictions on Working Hours*

Normal working hours will be as set out in the contract documents, as noted above they are 07.30 – 17.00.

Works shall comply with the conditions and restrictions contained within the directions issued from time to time with any additional restrictions contained within the contract document.

6.2.4 *Environmental impacts*

The Contractor shall use his best endeavours to reduce potentially adverse environmental impacts so far as reasonably practicable. Actions to achieve this shall include:

- Minimising noise, dust and vibration from work activities
- Minimising waste and re-using materials where practicable
- Segregation and controlled disposal of special waste
- Appropriate standards of behaviour by on-site personnel
- Other environmental impacts that are identified throughout the works shall be assessed by the contractor for adequacy of controls as they arise

6.2.5 *Noise / Dust / Vibration*

The Contractor shall ensure noise/dust/vibrations are kept to a minimum. The Principal Contractor shall determine methods and processes of monitoring and control. This shall be detailed in the Construction Phase (Health and Safety) Plan.

Noise emissions on site shall comply with BS 5228 Noise Control on Construction Sites. The Principal Contractor is to ensure that overall noise levels are maintained at an acceptable level, particularly during night time working in residential areas.

7 TRAFFIC MANAGEMENT

Although the final locations for unloading, layout and storage areas, traffic routes etc have not been fully confirmed at this stage, the site is provided with suitable hard standing areas and turning space to accommodate contractors vehicles whilst the works are being undertaken. The final locations will be confirmed and clearly shown in the construction phase plan.

7.1 A traffic management plan to ensure safe movements and interactions between vehicles and pedestrians, both on and adjacent to the site shall be complied with by the contractor. It shall cover all expected work activities, delivery and storage areas, and it shall be expanded and / or amended to cover new or altered activities as they arise.

7.2 The Principal Contractor shall produce a simple traffic management plan required for this work in accordance with the contract document for inclusion in the Construction Phase (Health and Safety) Plan.

7.3 The traffic management plan shall also provide for the requirement that the entrances and roads are kept clean and clear of obstructions, and prevent the spillage or deposit of clay, rubble or other debris on the entrance and other roads throughout the contract period.

8 SITE WIDE ELEMENTS

The following health and safety issues relate to the site wide elements for which control measures are required by the Principal Contractor.

8.1 Site Welfare Facilities

The Principal Contractor shall ensure in accordance with the CDM Regulations. These shall be maintained and upgraded as necessary throughout the duration of the contract.

8.2 Co-ordination of Traffic/Pedestrians

The Principal Contractor shall ensure that pedestrians and traffic are segregated so far as reasonably practicable on the site. There will be a need to co-ordinate with the client's site management

8.3 Site Access/Egress Points

The Principal Contractor is responsible for controlling access and egress to the site in liaison with the client.

8.4 Removal of debris/rubble etc

The Principal Contractor shall arrange for regular removal of rubbish to authorised tips.

8.5 Emergency Vehicle Access

Access will be required at all times.

8.6 Storage Area

The Principal Contractor shall arrange for safe storage of all materials on the site.

8.7 Delivery and positioning of plant, equipment, and materials

The Principal Contractor is responsible for planning and organising.

8.8 Identification and removal of any hazardous material

Known hazards are described in this document, but other hazards may arise during the works. The Principal Contractor shall assume that all unknown materials discovered are potentially hazardous, and seek advice before continuing. The Principal Contractor is responsible for arranging the safe removal and disposal of all such materials i.e. Asbestos.

9 COMMUNICATION

Ongoing communication between all parties is a key element to maintaining safety. Any information that is relevant to other parties should be shared. If in doubt, tell all other parties.

The Principal Contractor shall arrange meetings at regular intervals (as appropriate to the stage of the works) to discuss issues that affect safety. Any (major) design changes should be discussed at these meetings.

9.1 Concerns

Current concerns in relation to health, safety or welfare shall be communicated directly between the contractors and the Principal Contractor/Site Safety Manager. Ongoing concerns will be communicated through the site meetings.

9.2 Audit of Processes

The Principal Contractor will undertake planned site safety inspections to supplement those undertaken by the Contractors personnel. The frequency and timing of inspections will be determined by the level and nature of work activity.

Inspections shall include a sample audit of standards of safety management processes undertaken by the Principal Contractor in compliance with this plan. The Principal Designer/Client shall be provided with reports from these audits.

9.3 Site Inspections

The Principal Contractor is responsible for conducting site inspections to ensure that safe working practices are maintained. Records shall be kept and copies forwarded to the Principal Designer/Client.

An agreed schedule of inspections shall be included in the Construction Phase (Health and Safety) Plan.

9.4 Contact List

See front of document

9.5 Additional Project Contacts

Role	Contact Person	Position	Contact Details
Health and Safety Executive	TBC	TBC	Basingstoke Office Priestley House Priestley Road Basingstoke RG24 9NW Fax: 01256 404100

9.6 Records

When requested, the Principal Contractor shall provide, or make available for inspection any information regarding health, safety or welfare on the project. Such information may include:

- Accident/incident statistics and normalizing data
- Accident/incident reports
- Site safety reports
- Method statements
- Details on the implementation of the Construction Phase (Health and Safety) Plan
- HSE communications

9.7 Display of Notices

The following recommendations for notices to be displayed prominently in the site offices:

- Notification to the HSE – F10 (rev) form (mandatory to display if applicable to works)
- The major accident / emergency plan
- Emergency procedures and contact numbers

- The site rules
- Hazard warning signs
- Access restriction signs/pedestrian and traffic routing

9.8 **Re-design Work, New Design Work**

The Principal Contractor shall inform the Principal Designer of any proposed re-design or new elements of design required, **before** that particular work package commences.

10 HEALTH & SAFETY FILES

10.1 **Existing Health & Safety File**

A Health and Safety file is available on site; the Client will provide details to the successful Principle Contractor.

10.2 **Developed Health and Safety File for this Project**

Throughout the life of the project, all contractors are responsible for ensuring that all their relevant information for the Health and Safety File is prepared and handed over to the Principal Contractor for onward transmission for inclusion in the Health and Safety File. Similarly the Principal Contractor shall forward any relevant information he possesses for inclusion in the Health and Safety File.

Information contained in the file needs to include that which will assist persons carrying out construction work on the structure at any time after completion of the current project and could include:

- Drawings, calculations and plans used and produced throughout the demolition and construction process along with the design criteria
- General details of the construction methods and materials used
- Details of the structure's equipment and maintenance facilities
- Maintenance procedures and requirements for the structure
- Details of the location and nature of utilities/services and their maintenance/isolation, including emergency and fire-fighting systems, equipment, routes, procedures etc.
- Details of hazardous substances and safety data sheets

All information shall be provided both in hard copy and electronically (e.g. CD ROM or DVD). Initial "red line" drawings will be accepted provided these are legible, and will be replaced by CAD drawings within a reasonable timescale. Drawings at A3 size are preferable and must be legible.

Electronic format must utilise common packages such as Microsoft Word and Excel (but not Access). Drawings and other scanned documents shall be in pdf format and in AutoCAD format (e.g. DWG).

11 EMERGENCY ARRANGEMENTS

11.1 First Aid

A first aid box must be provided in the main site office, and at all mobile sites.

The Principal Contractor will be responsible for ensuring that the contents are replaced as necessary. The name of the First Aiders and the location of the first aid box are to be posted in the mess room/canteen.

11.1.1 *First Aid, Fire Fighting and Emergency Arrangements*

The Principal Contractor shall assess the site to determine the first aid and firefighting requirements.

11.2 Emergency Assistance

The following are suggestions for telephone numbers and action plans to be displayed on the site notice board.

- Emergency telephone numbers
- Major accident - emergency plan
- Major fire/explosion – emergency plan
- On discovering a fire – Please familiarize with CEH Fire action document

11.3 Reporting of Accidents and Dangerous Occurrences

Accident reporting arrangements between the Principal Contractor, the HSE and Client are to be developed and included in the Construction Phase (Health and Safety) Plan.

All accidents **MUST** be reported to the Principal Contractor for inclusion in the accident book. Any RIDDOR (Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995) reportable accidents/dangerous occurrences will be investigated and a report submitted to the Health and Safety Executive by the Principal Contractor, as required.

The Contractor shall ensure that all current legislation with particular reference to the Health & Safety at Work etc. Act 1974 is implemented in spirit as well as the letter of the law.

12 Specific Site Rules

Establish and display clear rules and procedures for all visitors to the site. The principal contractor will be required to provide detailed site rules within the Construction Phase (Health and Safety) Plan in addition to those specified by the client, based on his own judgement of the project. These should include:

- Training & Site induction
- Accident reporting
- Personal protective equipment
- Permits to Work

12.1 Client Site Rules

The following rules will be incorporated by the Principal Contractor into the Construction Phase (Health and Safety) Plan (a copy of which shall be kept on site at all times):

- Tools, materials etc. are not to be left unattended
- All waste must be stored in covered skips. No waste is to be burned on the site
- The playing of radios, personal CD players etc. will not be permitted
- Smoking will only be allowed in designated areas
- There will be no horse play
- Safety helmets and safety boots will be worn at all times

Note: Site specific fire actions and emergency procedures, permits to work etc will be confirmed during the pre-start meeting and contractor's induction

13 THE DESIGN

The design includes unavoidable alterations to the existing building structure, i.e. forming holes for pipe work and fixings, removal of redundant materials and equipment.

13.1 Construction and Hazardous Materials

13.1.1 *Substances Hazardous to Health – during construction*

The Principal Contractor shall continually monitor the project and ensure that substances hazardous to health are identified, along with the appropriate control measures.

Material safety data sheets shall be obtained for all substances hazardous to health in use as part of this project. All Contractors shall ensure the method of work, storage and disposal of this material is compatible with the requirements stated in the data sheet, and industrial best practice. A method statement shall be prepared, used and kept for the materials/substances in use.

13.1.2 *Substances Hazardous to Health – during use of building or future maintenance / construction work*

The Principal Contractor shall ensure that material safety data sheets are obtained for all substances hazardous to health, which are to be installed, or are discovered in the structure as part of this project, for inclusion in the Health and Safety File.

13.1.3 *Potential Substances and Materials that may be present*

The following list is a non-exhaustive list of substances and materials that may be present:

- Contaminated water
- Fume Cupboards
- Close proximity of other services

13.1.4 *Table of Substances and Materials identified at this stage*

Material / Substance	Use / Location	Alternatives considered.
Client to provide schedule of all chemicals used in the fume cupboards and associated CoSSH sheets	**Fume Ductwork**	**N/A**

Please also refer to section above.

13.2 **Construction Risk Management**

It is the policy of the client to attach the greatest importance to health and safety of all persons employed on the project, and directly affected by the works. The project will be constructed, so far as is reasonably practicable, in such a way that the risk to health and safety of all persons engaged in, or affected by its construction, use, maintenance and demolition are eliminated or reduced to an acceptable level under current health and safety legislation and good practice.

Method statements must be developed by the Principal Contractor and Contractors to manage and control hazards identified, see section 13.4 for those identified to date. The Principal Contractor and contractors must carry out additional risk assessments and develop method statements as necessary throughout the duration of the project. The resultant method statements or safe systems of work should be documented. The method statement provided must:

- Inform of the task and the associated risks
- Inform of what precautions are to be taken when faced with those risks
- Inform of who will provide those precautions
- Inform of the necessary plant, materials and equipment that must be utilised

It is important that unplanned situations or activities that have not been previously assessed, but that may give rise to risk, are assessed before work is started.

13.3 **Construction Risks - Summary**

The following is a summary of the type of risk activity associated with this project.

- Handling large pre-fabricated elements
- Wiring electrical/controls circuits/connections to services or supplies

- Working in an occupied site area in continuing use by the client.
- Presence of potentially unknown services.
- Working at Height
- Restricted Access and Egress

The following health and safety issues have not yet been resolved and control measures are required from the Principal contractor/Contractor.

13.3.1 *Working existing supplies/services and utility services equipment*

13.3.2 *Interface with the client's operational access*

13.3.3 *Objects/materials falling/working at height*

13.3.4 *Handling or carnage of prefabricated items/equipment etc*

13.4 **Significant Design Assumptions**

Existing structural stability is assumed.

14 ATTACHMENTS

None