

Date: 16/10/18	Project Name & Number: 18026						
	INITIAL RISK				RESIDUAL RISK		
HAZARD	LIKELIHOOD (L)	SEVERITY (S)	RISK (LxS)	DESIGN CONTROL MEASURES	LIKELIHOOD (L)	SEVERITY (S)	RISK (LxS)
Existing Services							
Interruption of Live Systems during construction.	1	5	5	All electrical supplies installed will be made live during the testing phase of the works and the contractor should consider other trades during this phase.	1	5	5
Live electricity (working on)	2	5	10	There is to be no live working to electrical circuits. Circuits must be isolated, proved isolated by testing and identified as isolated prior to carrying out any works.	1	5	5
Interruption of Gas, Water, Electricity and telecomm etc.	1	3	3	The contractor shall take every care not to damage/interrupt any existing services. The contractor should ensure that all personnel are fully aware of the configuration of the system they are working on and any other system they are likely to come into contact with.	1	3	3
Construction / Access issues							
Personal injury due to access to roof	2	2	4	The contractor will need to assess the suitability of the roof structure for suitable access routes. The contractor shall take every care to avoid the risk of slipping on surface water for installation staff. Where temporary platforms are required the contractor shall ensure that they meet with all necessary regulations and installed by suitably trained competent personnel.	2	2	4
Damage or personal injury from lifting equipment	2	2	4	The contractor is to ensure that adequate lifting equipment is used for all ceiling mounted or high level equipment. The contractor is to employ the services of a suitable lifting company to carry out all movement of equipment into the plant area via cranes to avoid damage to the lifted equipment, the building or personnel on the site or surrounding it.	1	2	2
Access to electrical chamber causing loss of power or personal injury	1	5	5	Care is to be taken when working the electrical chamber. The contractor is to ensure that all personnel fully understand the configuration of the switchgear. This is particularly necessary after systems become live.	1	5	5
Safe working conditions, low light levels	2	2	4	Contractor to provide temporary internal and site lighting to all floors to ensure that all services equipment locations are adequately lit.	1	2	2
Installation of high level services causing personal injury	2	3	6	The contractor shall assess all working at height and allow for adequate temporary platforms. The contractor shall ensure that all safety precautions are taken, when working at height to avoid injury.	1	3	3
Unsafe Plant room / services riser installation.	2	3	6	Openings in risers and gantry areas. Ensure that all holes are provided with temporary hand rails or timber covers (small holes only).	1	3	3
Comms room Fit-out	4	1	4	Contractor to ensure adequate structural fire protected flooring/ceiling are in place for the installation of the mechanical and electrical engineering services.	1	4	4
Unsafe Access for plant delivery	1	3	3	The contractor shall make themselves aware of the surrounding environment for any required crane lifts for delivery of plant.	1	3	3
Commissioning							
Live status of systems during construction causing personal injury.	1	5	5	Contractor to highlight live systems using warning signage.	1	4	4
Pre-start testing of elements causing personal injury.	1	5	5	Contractor to define in commissioning method statement and program. Any specialist contractors to be present as required.	1	4	4
Temporary protection of weak links not adequate (i.e. Coils/heater/cooler batteries.)	1	3	3	The contractor is to ensure that all weak links are protected after installation until hand over. Any defects will require rectification by the contractor at time of hand over	1	3	3
Other H&S Issues							

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Unstable services in construction and use (especially at high level)	1	5	5	Contractor's design responsibility for secondary steelwork supports.	1	4	4
Welding Operations causing personal injury	1	3	3	Welding to be carried out behind protective screens, in well-ventilated area. Avoid welding in enclosed spaces or where welding operation will present a fire hazard. Store welding gas bottles in secure area when not in use. Avoid stockpiling of bottles on site. Site Safety officer to review procedures.	1	3	3
Chemical cleaning and sterilization of water distribution systems not being adequately completed.	1	4	4	Ensure cleaning and sterilization is carried out by a competent specialist. Ensure all traces of chemicals are completely flushed out of storage tanks and pipework at conclusion of cleaning and sterilization process (risk of damage to copper pipework from prolonged exposure to chlorine). This applies in particular to the drain down of the heating system to facilitate the installation of new control valves.	1	3	3
Maintenance							
Inadequate arrangement for electrical isolation during maintenance	1	5	5	All electrical equipment to include local means of individual isolation	1	4	4
Arrangements for Replacement items to plant areas using unsuitable lifting/access arrangements.	1	3	3	Ensure adequate lifting/access provisions can be made for replacing items installed as part of this contract.	1	3	3
Materials							
Fire risks during construction and occupation	2	3	6	Fire rated risers and fire barriers penetrated during construction process.	1	3	3

RISK ASSESSMENT METHODOLOGY

Likelihood (L) Categories

Category	Definition
1	Almost Impossible
2	Very unlikely
3	Unlikely
4	Likely
5	Almost Certain

Severity Categories

Category	Definitions
1	Minor Injury
2	Lost time injury
3	Long Term Absence
4	Major Permanent Incapacity
5	Fatality

Category	Definitions
1-3 Low	Acceptable level of risk. Risk is controlled as far as reasonably practicable. Existing Controls to be continuously monitored.
4-6 Medium	Control Measures should be implemented to reduce risk further to As Low As is Reasonably Practicable. (ALARP)
8-25 High	Unacceptable level of risk. Hazard MUST be avoided or control measures must be implemented to reduce the level of Risk significantly.

		Severity						
		1	2	3	4	5	Risk= Likelihood x Severity	
Likelihood	1	1	2	3	4	5	1-3 Tolerable	
	2	2	4	6	8	10		
	3	3	6	9	12	15		4-6 Apply Judgement
	4	4	8	12	16	20	8-25 Reduce Risk	
	5	5	10	15	20	25		