

REF/0855



GEANEY ENGINEERING CONSULTANTS

PROFESSIONAL BUILDING SERVICES & ENERGY REDUCTION CONSULTANTS

DESIGN RISK ASSESSMENT

*St Michaels Theatre Roof Replacement
New Ross, Co. Wexford*

Roof Replacement Works Scheme

Mechanical & Electrical Design Risk Assessment

INTRODUCTION

Under the Safety, Health and Welfare at Work (Construction) Regulations 2013 to 2021, the duties of the designer extend to the following:

- Taking account of the Health & Safety Plan and Safety File,
- Providing in writing all relevant information necessary to the Project Supervisor for the Design Process (PSDP), so as the project supervisor can carry out his / her duties as per the regulations,
- Co-operating with other designers, the PSDP and the Project Supervisor for the Construction Stage (PSCS) to enable them to comply with the regulations,
- Providing all information known to the PSDP regarding particular risks to safety, health and welfare of persons at work,
- Identify any hazards that a design may present during the construction stage and subsequent maintenance and where possible eliminate,
- Providing information to the appropriate contractor if no project supervisor has been assigned,

DISCLAIMER

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Mechanical & Electrical Design Risk Assessment

PROJECT DESCRIPTION

The works comprise the replacement of the roof replacements installation at St Michaels Theatre together with all associated mechanical, electrical and builders works required to provide a complete operational installation.

Associated builders works include excavation, builders work opes and weather proofing coordination, making good and reinstatement, together with an allowance for the replacement of all lighting and smoke detection

General Construction Notes:

The Contractor shall specifically note that the Works will be undertaken within a live environment. All isolations, shutdowns and service interruptions shall be coordinated and agreed in advance. Prior to any disconnection, stripping-out or alteration works, all existing electrical circuits and services affected by the Works shall be traced, identified and verified by the Electrical Contractor.

The Contractor shall review all available Safety Files, service records and other relevant site information prior to commencement. Where an Asbestos Register is available, this shall be reviewed prior to carrying out any intrusive works. Any suspected asbestos-containing material encountered during the Works shall not be disturbed and shall be reported immediately.

Mechanical & Electrical Design Risk Assessment

RISK ASSESSMENT

A Design Risk Assessment has been completed. The risk ratings and action bands are defined as follows:

Likelihood

L	–	So unlikely that it can be assumed that it may never occur
M	–	Is unlikely but possible to occur during the life of the project
H	–	Is likely to occur during the life of the project

Severity

L	–	All other injuries or illnesses
M	–	3 day injury or illness
H	–	Death or major injury

Risk Rating

L	–	Minimal Risk
M	–	Low Risk
H	–	Immediate Risk

Action Required

L	–	Maintain Control Measures
M	–	Review & Improve Control Measures if necessary
H	–	Improve Control Measures Immediately

DESIGNER'S RISK ASSESSMENT

Designer: Geaney Engineering Consultants							Project: SAINT MICHAELS THEATRE ROOF REPLACEMENT NEW ROSS CO WEXFORD			
Project No. 0726							Date: 15.10.26			
Ref. No.	Activity / Element	Potential Hazards	Population at Risk	Risk Rating			Action at Design Stage	Action Taken		Possible Control Measures (Contractors)
				L	S	R		By	Date	
2.	Works within live Environment	Unauthorised access to excavations, plant and electrical works.	Pupils, Staff, Visitors, Contractors	M	H	H	Works arranged to minimise disruption to occupied areas			Segregate work areas. Provide barriers / signage. Maintain safe routes and coordinate works
3.	Intrusive works to existing building	Potential disturbance of asbestos-containing materials.	Contractors, l Staff / Pupils	L	H	H	Review available Safety File / Asbestos Register before intrusive works.			Do not disturb suspected ACMs. Stop work and report. Specialist survey / removal where required.
4.	Testing & commissioning	Electric shock, unexpected electrical surge	Mechanical & Electrical Contractors	L	H	H	Provide suitable isolation and controls for safe commissioning and maintenance.			Commission by competent personnel. Keep personnel clear of operating equipment.
5.	Working from Height	Unexpected fall or damage	Mechanical & Electrical Contractors	L	H	H	Provide suitable working from height			Commission by competent personnel. Controlled energisation. Keep personnel clear of operating equipment.
6.	Work within attic spaces, ceiling voids, at high level, on roofs, etc.	a) Risk of personnel fall.	Public, General Contractors, Clients and Employees	M	M	M	Inform design / construction teams by issue of this document.			Contractor to co-ordinate all works. Contractor to provide safety signage and barriers where required and immediate area to be restricted from general personnel circulation routes. Any work required at height must have the necessary safety precautions, such as safety harnesses, scaffolds, etc.

Key:

L = Likelihood (Low, Medium, High)

S = Severity (Low, Medium, High)

R = Risk (Likelihood & Severity)

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7		b) Risk of falling equipment, tools, etc..	Public, General Contractors, Clients and Employees	M	M	M	Inform design / construction teams by issue of this document.			Contractor to co-ordinate all works. Contractor to provide safety signage and barriers where required. Where project work at height is required, area to be appropriately restricted from personnel circulation routes.
		c) Working within confined space.	General Contractors	M	M	M	Identify as far as is reasonably practicable, any work required within a confined space. Minimise project work required within those confined spaces identified. Inform design / construction teams of possibility of confined spaces by issue of this document.			Contractor to co-ordinate all works. Contractor to provide safety signage and barriers where required. Review all project work to identify the possibility of confined space limitations, discuss potential risks and take measures to reduce risk to all personnel. If in doubt, ask.

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8	Installation of Electrical Services Main electrical board modification	a) Risk of Musculo-skeletal injuries. b) Risk of electric shock	Electrical Contractors, General Contractors	M M	M H	M H	Identify as far as is reasonably practicable, any equipment items / services runs which must be handled as part of the project work, which may be heavy, difficult to handle and/or must be installed in space restricted locations. Inform design / construction teams by issue of this document. Where possible, select new equipment that can be easily installed, thus minimising project work at height, in confined areas, etc. Installing main board wi in front			Allow for the appropriate mechanical handling equipment and personnel access equipment to be utilised where possible. Schedule access to the project work areas in advance and allow sufficient time / manpower to complete the works. Complete frequent "Toolbox Talks" with contract personnel during the course of the project work. Contractor to comply with all Safe Electric guidelines – legislation regards electrical services installations and maintain required separation distances at all time.

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9	Project work required to main low voltage switch panels, distribution boards, sub distribution boards,	a) Risk of electric shock, risk of burns	Electrical Contractors, General Contractors, Maintenance personnel.	L	H	H	Where possible, allow for adequate maintenance clearance / space. If not available communicate to project team and agree an alternative solution. Allow for minimum “throwback” distance in front of switchgear as detailed per regulations. No equipment to be obstructed by other mechanical / electrical / general equipment. Eliminate live working. Provide as much record information as possible to contract firms undertaking the works.			Ensure equipment is isolated prior to carrying out any project work. Test to confirm isolation. Apply appropriate safety measures, i.e. notices, restricted areas, etc. Operate a work permit policy. Use padlocks on switches, isolators etc. were deemed necessary.
10	Electrical Containment	a) Risk of contact with live electrical cables.	Electrical Contractors	L	H	M	General condition of containment to be noted and communicated to contract personnel. New cabling to use trays, be they new or existing. All cabling to comply with design guidelines and layouts.			Communicate risks to contract personnel. Hold frequent “Toolbox Talks” with contract personnel.

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11	Work associated with the installation of the new fire alarm elements.	a) System components located in inaccessible locations, at heights, etc.	General Contractors	L	M	M	Components of the fire alarm system to be in accessible locations. If working at heights, safety equipment to be used, with appropriate means of access,.			Use correct safety equipment. Use appropriate signage when working at heights. Use an appropriate means of height access, e.g. within the G.P. Hall.
		b) Risk of fire during fire alarm system downtime.	All	L	M	M	Inform design/ construction teams by issue of this document.			Procedure to be put in place in the event of a fire, e.g. assembly points, fire watchers for dangerous tasks, first aid locations, etc..
12	Location of Fire Alarm Sounders	a) Risk of Fire	Public, and Clients Employees	L	H	H	For final installation ensure sounder location takes into account acoustic properties of surrounding environment. Determine feasibility of installing combination fire alarm detector sounder units.			Carry out sound pressure readings to ensure compliance.
		b) Risk of fall from height	General Contractors	M	H	H	Inform design/ construction teams by issue of this document.			Suitable means of access to be provided to lighting protection equipment. Method statement and safety procedures to be in situ for the operation.

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13	Commissioning	a) Risk of electric shock.	Public, General Contractors, and Clients Employees	L	M	M	Inform design / construction teams by issue of this document			Contractor to carry out audit and to take responsibility to identify any electrical risks prior to carrying out any commissioning works. Method statement and safety procedures to be issued. Competent electrician to connect with qualified personnel in attendance.
		b) Rotating Machinery	General Contractors, and Clients Employees	L	M	M	Correct safety guards (if applicable) to be specified.			Make hazards known to construction teams.
		c) Risk of hot surfaces during commissioning activities.	General contractors	M	M	M	Specify equipment to have thermal insulation to protect against accidental burns from contact with hot surfaces. Allow for adequate labelling within the area.			Ensure that contract personnel are protected from hot surfaces. Ensure that appropriate safety equipment, such as lagging, has been installed correctly.
		d) Risk of pipe / plant fluid leaks during commissioning activities.	General contractors	M	M	M	Specify during commissioning that the system is checked for leaks. Review the use of a hydrostatic pressure test prior to equipment start up.			Ensure personnel within the vicinity and those working on the system are aware of the risks involved.

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14	Asbestos Roof Area	Asbestos related lung disease	General Contractors	H	H	M	Asbestos survey carried out in accordance with HAS 'Asbestos Containing Materials (ACMs) in Workplaces – Practical Guidelines on ACM Management and Abatement' Copy of the asbestos survey and asbestos register Contractors have access to the survey/ register / made aware of the presence of asbestos prior to commencing work.			Reporting arrangements in place if suspect materials are identified or existing asbestos materials are damaged. All removal works with asbestos materials carried out in accordance with DES guidance notes and relevant Construction and Asbestos Regulations.
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