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Designer's Hazard Checklist & Hazard Elimination and Management Schedule

General Note:

During the design stages of a project, designers are required to maintain a **"Hazard Elimination and Management Schedule"** (part B of this procedure). The 'schedule' records the various significant (high risk) hazards identified by the designer(s) and, were they have been able, details of how they have been eliminated.

It is recognised that not every hazard can be 'designed out' and therefore the schedule will also be used to record the residual risks of which the designer(s) are aware.

The Schedule provides an audit trail of the design process and may also be used as evidence in the event that a designer is required to defend his or her actions in any HSE investigation.

Copies of parts A and B should be passed to all members of the project team, especially the CDM Co-ordinator.

To facilitate the design process, further guidance can be found in the **Industry Guidance for Designers** document

Part A: Designer's Hazard Checklist

Project Title:	**Corby International Pool, Parkland Gateway, George St, Corby NN17 1QB** **Corby International Swimming Pool Mechanical & Electrical replacement works.**	**Job No.:**	**23700**
Design Discipline:	**M&E SERVICES**	**Prepared By:**	**Agnieszka Kaminiarz**

Notes:

1. This section of the procedure includes a list of potential hazards pertaining to a wide range of situations which may occur across Kier Workplaces Services activities. Where particular categories do not ordinarily affect an individual business unit, Part A may be edited to more accurately reflect the work carried out.
2. An individual item or a whole section (by ticking the heading) can be noted as not applicable showing you have considered the hazard area and judged it to be not applicable.
3. The list of potential hazards is not exhaustive, and all sections can be added to, or additional sections added, as required. Reference to the Approved Code of Practice may be helpful.
4. All items considered by the designer as having a potential high risk must be addressed on the 'Hazard Elimination Management Schedule'. Low risk activities can also be included if considered appropriate.

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Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
1.	**Existing Environment**				
1.1	Existing buildings		✓		
1.2	Previous/existing land/ structures	X			
1.3	Roadways	X			
1.4	Railways	X			
1.5	Water course	X			
1.6	Ground conditions:	X			
	• Contamination	X			
	• Ground water	X			
	• Instability	X			
	• Mineral / mine workings	X			
1.7	Access restrictions			✓	
1.8	Adjacent properties	X			
1.9	Concurrent site activities			✓	**This is to be confirmed**
1.10	Interface with the public			✓	
1.11	Occupied premises			✓	**There will be limited staff as the works are to take place over the summer recess**
1.12	Structural instability	X			
1.13	Fragile materials	X			
1.14	Hazardous materials	X			
1.15	Land use	X			
1.16	Traffic	X			
1.17	Others (insert as necessary)				
2.	***Existing Services***				
2.1	Underground				
	• Electrical	X			

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Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
	• Gas	X			
	• Water	X			
	• Telecommunications	X			
	• Others (insert as necessary)	X			
2.2	Overhead Services	X			
	• Electrical		X		
	• Telecommunications		x		
	• Others (insert as necessary)		X		
3.	**Earthworks**	X			
3.1	Deep excavations				
3.2	Slope / ground stability				
3.3	Ground water / water courses				
3.4	Plant movements				
3.5	Interface with services (refer 2)				
3.6	Contamination (ground / water) (refer 1.6)				
3.7	Adjacent structures (refer 1.8)				
3.8	Others (insert as necessary)				
4.	**Foundations**	X			
4.1	Adjacent buildings/structures				
4.2	Deep excavations				
4.3	Plant movements				
4.4	Interface with services				
4.5	Contamination (ground / water)				
4.6	Ground water				
4.7	Confined spaces				
4.8	Piling:				
	• Noise				
	• Vibration				
	• Contamination				

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Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
	• Plant				
4.9	Grouting:				
	• Drilling work				
	• Dust				
	• Pollution				
4.10	Stability of structure				
4.11	Others (insert as necessary)				
5.	**Services Installation**				
5.1	Excavations	X			
5.2	Ground water	X			
5.3	Ground conditions	X			
5.4	Existing services		✓		
5.5	Testing operations	X			
5.6	Lifting operations	X			
5.7	Adjacent structures / activities	X			
5.8	Maintenance	X			
5.9	Contamination	X			
5.10	Others (insert as necessary)	X			
6.	**Drainage Works**	X			
6.1	Excavations				
6.2	Ground water				
6.3	Ground conditions				
6.4	Confined spaces				
6.5	Leptospirosis / Weils disease				
6.6	Existing services				
6.7	Manual handling				
6.8	Lifting operations				
6.9	Maintenance				
6.10	Sewage				
6.11	Traffic				

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Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
6.12	Contamination (ground / water)				
6.13	Hepatitis B / Tetanus				
6.14	Others (insert as necessary)				
7.	**Highways**	X			
7.1	Traffic management				
7.2	Adjacent traffic				
7.3	Construction materials				
7.4	Structural works				
7.5	Adjacent structures				
7.6	Noise				
7.7	Vibration				
7.8	Dust				
7.9	Manual Handling				
7.10	Others (insert as necessary)				
8.	**Steelwork Construction**	X			
8.1	Working at height				
8.2	Lifting operations				
8.3	Temporary stability				
8.4	Connections				
8.5	Unusual sequence				
8.6	Materials, e.g. paints				
8.7	Consideration of future maintenance				
8.8	Others (insert as necessary)				
9.	**Concrete Construction**	X			
9.1	Working at height				
9.2	Plant restrictions				
9.3	Lifting operations				
9.4	Noise				
9.5	Vibration				

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Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
9.6	Temporary instability				
9.7	Pre/post tensioning				
9.8	Materials				
9.9	Maintenance				
9.10	Joints (scabbling should not be undertaken)				
9.11	Others (insert as necessary)				
10.	**Masonry Construction**	**X**			
10.1	Manual handling				
10.2	Lifting operations				
10.3	Materials				
10.4	Temporary stability				
10.5	Working at height				
10.6	Dust				
10.7	Durability				
10.8	Catastrophic collapse				
10.9	Others (insert as necessary)				
11.	**Timber Construction**	**X**			
11.1	Materials				
11.2	Working at height				
11.3	Temporary stability				
11.4	Lifting operations				
11.5	Manual handling				
11.6	Fire				
11.7	Dust				
11.8	Others (insert as necessary)				
12.	**Cladding**	**X**			
12.1	Lifting operations				
12.2	Manual handling				

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Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
12.3	Maintenance / cleaning				
12.4	Others (insert as necessary)				
13.	**Glazing**	X			
13.1	Manual handling				
13.2	Lifting operations				
13.3	Cleaning / maintenance				
13.4	Others (insert as necessary)				
14.	**Mechanical/Electrical Systems**				
14.1	Access		✓		
14.2	Existing services		✓		
14.3	Manual handling			✓	
14.4	Materials / substances		✓		
14.5	Confined spaces	X			
14.6	Pressure systems			✓	
14.7	Testing operations			✓	
14.8	Fixings			✓	
14.9	Working at height			✓	
14.10	Maintenance		X		
14.11	Others		X		
15.	**Railway Activities**	X			
15.1	Train movements				
15.2	Overhead lines				
15.3	Electrified track				
15.4	Underground services				
15.5	Adjacent structures				
15.6	Ground stability				
15.7	Contamination				
15.8	Others (insert as necessary)				

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Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
16.	**Demolition of Existing Structures**	**X**			
16.1	Services				
16.2	Adjacent / adjoining structures				
16.3	Materials:				
	• Hazardous i.e. asbestos				
	• fragile				
16.4	Working at height				
16.5	Temporary stability				
16.6	Pre/post tensioning				
16.7	Noise				
16.8	Vibration				
16.9	Dust				
16.10	Effect on usage of demolition materials				
16.11	Others (insert as necessary)				
17.	**Future Demolition / decommissioning of new structure/installation**	**X**			
17.1	Unusual sequence				
17.2	Pre/post tensioned element				
17.3	Materials				
17.4	Adjacent/adjoining structure				
17.5	Temporary stability				
17.6	Contamination during usage of demolition material.				
17.7	Others (insert as necessary)				
18.	**Maintenance and Operation of Facility / Structure etc**	**X**			
18.1	Access				
18.2	Safety equipment				
18.3	Testing / inspection				

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Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
18.4	Procedure				
18.5	Contamination during usage of demolition material.				
18.6	Others (insert as necessary)				
19.	**Use of the structure as a workplace**	**X**			
19.1	Does the proposed use of the structure / premises include the intention for it to be made available to any person as a place of work				
19.2	If yes; the design and materials used must take in to account the provisions of the Workplace (Health, Safety and Welfare) Regulations 1992				

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Part B: **Hazard Elimination and Management Schedule**

Project Title: **Corby International Pool, Parkland Gateway, George St, Corby NN17 1QB** **Job No.:** **23700**

Corby International Swimming Pool Mechanical & Electrical replacement works.

Design Discipline: **M&E SERVICES** **Prepared By:** **Agnieszka Kaminiarz** **Checked By:** **Ozlem Thomson**

* **Persons at Risk:** **(1) Construction workers,** **(2) Members of the Public** **(3) Maintenance workers**

** **Action by:**

CDM Co-ordinator	**– include in the Pre-Construction Information Pack**
Principal Contractor	**– manage risk during the construction phase**
Other designer	**– take into consideration when preparing their designs**
Client	**– pass information to designers / CDM Co-ordinator**

Ref.	Activity	Hazard	Persons at Risk *	Design Measures taken, or being taken to eliminate or reduce the hazard	Information on the Residual Risk	Date Issue Raised	Action Required by: **
1.7	Delivery of Materials	Risk of Collision	Construction and maintenance staff	Limit delivery times. Ensure existing one-way traffic system is adhered to.	None Applicable	12/11/19	Planning Supervisor Principal Contractor
1.9	Concurrent Site Activity	Risk of injury due to lack of co-ordination	Construction and maintenance staff	Principal Contractor to manage site and other trades in connection with flue installation	None applicable	12/11/19	Planning Supervisor Principal Contractor

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Ref.	Activity	Hazard	Persons at Risk *	Design Measures taken, or being taken to eliminate or reduce the hazard	Information on the Residual Risk	Date Issue Raised	Action Required by: **
1.10	Interface with public	Risk of injury due to unauthorised access	Construction and maintenance staff	Principal contractor to ensure the areas are closed to the public entrance and signage in place	None Applicable	12/11/19	Planning Supervisor Principal Contractor
1.11	Occupied Premises	Risk of injury to occupants	Construction and maintenance staff	Principal Contractor to manage site and other trades ensure due consideration to occupant	Principal Contractor to comply with the leisure centre safeguarding Policy.	12/11/19	Planning Supervisor Principal Contractor
14.2	Connection into existing electrical circuits.	Existing circuits may not meet current regulations and present a danger.	Electrical contractor	Test existing circuits to ensure safe before works commences.	Existing circuits due to be extended or modified to be tested prior to start of works.	12/11/19	Electrical contractor
14.3	Manual Handling	Injury, back strain	Construction and maintenance staff	All new plant specified has been sized to use modular equipment.	Minimal	12/11/19	Principal Contractor
14.6	Pressure Systems	Risk of injury	Construction and maintenance staff	Competent contractors to install and examine systems in accordance with regulations	Minimal	12/11/19	Principal Contractor
14.7	Testing - mechanical	Risk of unauthorised tampering during testing procedures	Construction and maintenance staff	None Suitable	Contractor to ensure adequate signage in place when testing. Test in small sections.	12/11/19	Principal Contractor
14.7	Testing / Work on electrical equipment and installation	Risk of unauthorised tampering during testing procedures, Electric Shock	Construction Workers, Maintenance workers,	Designed in accordance with BS 7671. 'Live' working prohibited. BS compliant materials specified. Only competent person to be employed to carry out electrical works.	Contractor to ensure adequate signage in place when testing. Test system in small sections. Competent contractor required for future testing	12/11/19	Principle Contractor / Client

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Ref.	Activity	Hazard	Persons at Risk *	Design Measures taken, or being taken to eliminate or reduce the hazard	Information on the Residual Risk	Date Issue Raised	Action Required by: **
14.8	Fixings for ductwork, Pipework	Exposure to dust, HAVS	Construction and maintenance staff	None Suitable	Ensure use of PPE	12/11/19	Principal Contractor
14.9	Working at Height	Falls from heights	Construction and maintenance staff	Use of suitable edge guarding during installation of roof top pipework. Use of towers internally- scaffolding for chimney	Minimal	12/11/19	Principal Contractor
14.9	Install electrical services including at ceiling level and above floor level.	Falling from height	Construction Workers, Maintenance workers,	Contractor to follow HSE Working at Heights requirement including Temporary barriers / edge protection required during installation works.	Working heights known.	12/11/19	Principle Contractor
14.10	Working Near to the swimming pool	Fall from heights/ falling into water/Electrocution	Construction Workers, Maintenance workers,	Contractor to follow HSE Working at Heights requirement including Temporary barriers / edge protection required during installation works.	Operatives clothing to be suitable/lightweight. Operatives to be working to lone working procedures to minimise risk. Contractor to ensure operatives can swim. Electrical tools and trailing leads to be low voltage,110V /suitable for a construction site. Management procedure to be utilised to minimise risk of electrical equipment falling into the swimming pool.	12/11/19	Principle Contractor