

**General Note:**

During the design stages of a project, designers are required to maintain a “**Hazard Elimination Checklist**” (part B of this document). The ‘checklist’ records the various significant (high risk) hazards identified by the designer(s) and, where 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 checklist will also be used to record the residual risks of which the designer(s) are aware.

The checklist 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 Principal Designer. Reference must also be made to GG104 Requirements for safety risk assessment.

**Part A: Designer's Hazard Checklist**

<b>Project Title:</b>	M4 J19 & M32 J1 & J3 Lighting Replacement	<b>Kier Highways Job No.:</b>	HE570129A
<b>Project Description:</b>	Ground Penetrating Radar(GPR) Survey to map utilities and buried services within the carriageway verges and vegetation clearance		
<b>Design Discipline:</b>	Street Lighting		
<b>Project Type as determined by GG104 (if applicable)</b>	A	<b>Prepared By:</b>	██████████

**Notes:**

1. This section of the document includes a list of potential hazards pertaining to a wide range of situations which may occur across Kier Highways’ activities. *Where particular categories do not ordinarily affect the scheme, **Part A should be edited/sections deleted 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.
5. Consideration must be given to all populations that may be affected as follows -

<b>Population 1</b> – People directly employed by the Client and who work on the site e.g. Traffic Officers.	<b>‘Workers’</b>
<b>Population 2</b> – People in a contractual relationship with the client.	
<b>Population 3</b> – Other parties, including road users, the police and emergency services and non-motorised ‘Users’ such as equestrians, cyclists and pedestrians, as well as those others not in a contractual relationship with the client, such as privately contracted vehicle recovery and vehicle repair providers.	<b>‘Users’</b>
<b>Population 4</b> – Third parties includes any person or persons who could be affected by the works, but who are neither using it, nor working on it, i.e. living or working adjacent to the site.	<b>‘Other Parties’</b>



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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	
<b>1.</b>	<b>Existing Environment</b>				
1.1	Existing buildings		X		Local Residents at M32 J3
1.2	Previous/existing land/ structures		X		Adjacent overbridges & retaining wall
1.3	Roadways			X	Working adjacent to carriageway – TM required
1.4	Railways		X		Railway Overbridge
1.5	Water course		X		
1.6	Ground conditions:	X			
	• Contamination				
	• Ground water				
	• Instability				
	• Mineral / mine workings				
1.7	Access restrictions	X			
1.8	Adjacent properties			X	Residents adjacent to sites, Noise consideration
1.9	Concurrent site activities	X			
1.10	Interface with the public			X	Residents adjacent to sites, Noise consideration
1.11	Occupied premises		X		Building adjacent to M32 J3
1.12	Structural instability	X			
1.13	Fragile materials	X			
1.14	Hazardous materials	X			
1.15	Land use	X			
1.16	Traffic			X	Working adjacent to carriageway – TM required
1.17	Others (insert as necessary)				
<b>2.</b>	<b>Existing Services</b>				
2.1	Underground				
	• Electrical		X		Located during works
	• Gas		X		Located during works
	• Water (Asbestos pipes?)		X		Located during works
	• Telecommunications		X		Located during works
	• Others (Motorway comms)		X		Located during works

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
2.2	Overhead Services				
	<ul style="list-style-type: none"> <li>Electrical</li> </ul>		X		Highlighted as CDM risks on drawing. Unaffected by works
	<ul style="list-style-type: none"> <li>Telecommunications</li> </ul>		X		Highlighted as CDM risks on drawing. Unaffected by works
	<ul style="list-style-type: none"> <li>Others (insert as necessary)</li> </ul>				
3.	<b>Earthworks</b>	X			
4.	<b>Foundations</b>	X			
5.	<b>Services Installation</b>	X			
6.	<b>Drainage Works</b>	X			
7.	<b>Highways</b>				
7.1	Traffic management			X	TM to Chapter 8
7.2	Adjacent traffic			X	Adjacent to live carriageway
7.3	Construction materials		X		Replacement chamber construction
7.4	Structural works	X			
7.5	Adjacent structures		X		Adjacent overbridges
7.6	Noise		X		Full PPE for vegetation clearance
7.7	Vibration	X			
7.8	Coal TAR in pavement	X			
7.9	Others (insert as necessary)				
8.	<b>Steelwork Construction</b>	X			
9.	<b>Concrete Construction</b>	X			
10.	<b>Masonry Construction</b>	X			
11.	<b>Timber Construction</b>	X			
12.	<b>Cladding</b>	X			

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
13.	<b>Glazing</b>	X			
14.	<b>Mechanical/Electrical Systems</b>				
14.1	Access	X			
14.2	Existing services (asbestos?)				
14.3	Manual handling		X		Suitable mechanical handling for access covers
14.4	Materials / substances	X			
14.5	Confined spaces	X			
14.6	Pressure systems	X			
14.7	Testing operations	X			
14.8	Fixings				
14.9	Working at height			X	Approved / Competent
14.10	Maintenance		X		To be covered by RAMS
14.11	Others (insert as necessary)				
15.	<b>Railway Activities</b>				
15.1	Train movements	X			
15.2	Overhead lines	X			
15.3	Electrified track	X			
15.4	Underground services		X		Unaffected by works
15.5	Adjacent structures		X		Stapleton Rd Railway Overbridge
15.6	Ground stability	X			
15.7	Contamination	X			
15.8	Others (insert as necessary)				
16.	<b>Demolition of Existing Structures</b>	X			
17.	<b>Future Demolition / decommissioning of new structure/installation</b>	X			
18.	<b>Maintenance and Operation of Facility / Structure etc.</b>	X			
19.	<b>Use of the structure as a workplace</b>	X			

**Part B: Hazard Elimination Checklist**

<b>Project Title:</b>	M4 J19 & M32 J1 & J3 Lighting Replacement	<b>Kier Highways Job No.:</b>	HE570129A
<b>Project Description:</b>	Ground Penetrating Radar(GPR) Survey to map utilities and buried services within the carriageway verges and vegetation clearance		
<b>Design Discipline:</b>	Street Lighting	<b>Prepared By:</b>	██████████
		<b>Checked By:</b>	

**Note: If GG104 applies to your contract, the checklist must be approved by an appropriate person: For a Type A project the Scheme PD must approve, for a Type B projects the Senior Manager must approve and for a Type C project the Kier Highways Service Director must approve.**

Reviewed and approved by:

<b>Name</b>	██████████
<b>Signature</b>	██████████
<b>Position</b>	██████████

\* **Persons at Risk:** (1) Workers (2) Users (3) Other parties

\*\* **Action by:**  
 Principal Designer – Include within the H&S file  
 Designer – include in the pre-construction information  
 Principal Contractor – manage risk during the construction phase  
 Other designer – take into consideration when preparing their designs  
 Client – pass information to designers / Principal designer

Ref.	Activity	Hazard	Persons at Risk *	Design Measures taken, or being taken to eliminate or reduce the hazard	Information on the Residual Risk	Principal Designer Review	Action Req'd by: **
1	Working adjacent to live traffic	Workforce struck by vehicle	All	Appropriate traffic management to chapter 8 be used	Severity remains the same however likelihood reduced	No further comment.	PC
2	Noise from works	Danger of exceeding acceptable noise levels, damage to hearing, inability to hear warnings	(1)	Hazard cannot be designed out, due to type of works but noise limits and actions required included in Specification. CWF Contractor to ensure proper monitoring of noise levels throughout the works.	CWF Contractor to ensure that operatives are informed and trained. Monitoring of noise levels on site. PPE is the last resort.	No further comment.	PC



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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	Principal Designer Review	Action Req'd by: **
3	Concurrent surveys taking place on site	Injury workforce by working in close proximity to other activities	1	Principal contractor and contractors to review and coordinate programmes, tool box talks to inform workers of measures required	Risk reduced	No further comment.	PC
4	Working in vicinity of retaining wall.	Falls from height	(1)	Works in immediate proximity to these areas is necessary to deliver the scheme as no alternate locations are possible.	The retaining wall have suitable parapets and barrier protection.	No further comment.	PC
5	Pedestrian movements through site	Potential for conflict between pedestrians and construction activities.	(1), (2), (3)	Hazard cannot be designed out, Due to carriageway width/area/site constraints. CWF Contractor to ensure proper provision of access on footpath for all NMU and public users. Safety Zones for Pedestrians to be enforced.	Provision of adequate and secure pedestrian route(s) will remove the risk.	No further comment.	PC