

**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>	<b>M4 J19 &amp; M32 J1 &amp; J3 Lighting Replacement – Core Survey with Test Pits</b>	<b>Kier Highways Job No.:</b>	<b>HE570129A</b>
<b>Project Description:</b>	<b>150mm Diameter cores, trial pits and DCP testing within carriageway and footway</b>		
<b>Design Discipline:</b>	<b>Street Lighting</b>		
<b>Project Type as determined by GG104 (if applicable)</b>	<b>A</b>	<b>Prepared By:</b>	<b>[REDACTED]</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>



Authorised By: Head of SHE	Page 1 of 6	SHEMS-FOR-HIG-094
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As part of our systems review, this document is valid until: April 2020		



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 & M4 J19
1.2	Previous/existing land/ structures		X		Adjacent overbridges, retaining walls and culverts
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	Working on public highway
1.11	Occupied premises		X		Buildings 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		Locate prior to coring
	• Gas		X		Locate prior to coring
	• Water (Asbestos pipes?)		X		Locate prior to coring
	• Telecommunications		X		Locate prior to coring
	• Others (Motorway comms)		X		Locate prior to coring

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				
	• Electrical		X		Unaffected by works
	• Telecommunications		X		Unaffected by works
	• Others (insert as necessary)				
<b>3.</b>	<b>Earthworks</b>				
3.1	Deep excavations		X		Deep excavations not anticipated. Excavation to be assessed by competent persons
3.2	Slope / ground stability		X		Slope / ground stability to be assessed by competent person
3.3	Ground water / water courses		X		Ground water not anticipated
3.4	Plant movements	X			
3.5	Interface with services (refer 2)			X	Multiple services in works area. Excavations to be hand dug with insulated tools
3.6	Contamination (ground / water) (refer 1.6)	X			
3.7	Adjacent structures (refer 1.8)		X		Depth of excavations considered to not impact upon adjacent structures, to be assessed by competent person
3.8	Others (insert as necessary)	X			
<b>4.</b>	<b>Foundations</b>	X			
<b>5.</b>	<b>Services Installation</b>	X			
<b>6.</b>	<b>Drainage Works</b>	X			
<b>7.</b>	<b>Highways</b>				
7.1	Traffic management			X	TM to Chapter 8
7.2	Adjacent traffic			X	Adjacent to live carriageway

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
7.3	Construction materials		X		Backfill
7.4	Structural works	X			
7.5	Adjacent structures		X		Adjacent overbridges, retaining walls and culverts
7.6	Noise		X		On site testing
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			
13.	<b>Glazing</b>	X			
14.	<b>Mechanical/Electrical Systems</b>	X			
15.	<b>Railway Activities</b>	X			
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			



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.	Principle Contractor & Contractors
4	Excavation trial pits	Collapse	1	Excavation to be assessed by competent person and supports to be used as required	Risk reduced	No further comment.	Principal Contractor
5	Drilling / Excavating trial pits	Service Strike	1, 2, 3	Locate services prior to drilling	Risk reduced	No further comment.	Principal Contractor
6	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.	Principal Contractor
7	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.	Principal Contractor