

**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 Standard for Safety Risk Assessment on the Strategic Road Network if this is applicable to your contract](#)

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

<b>Project Title:</b>	<b>A30 Fraddon to Goss Moor EB &amp; WB</b>	<b>Kier Job No.:</b>	<b>601961</b>
<b>Project Description:</b>	<b>Undertake a core sampling survey within the eastbound exit slip road of Highgate Hill Interchange junction.</b>		
<b>Design Discipline:</b>	<b>Pavement</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.*
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				
1.2	Previous/existing land/ structures				
1.3	Roadways			✓	<b>Trunk road traffic shall be managed by compliant Chapter 8 TM consisting of a full slip road closure and adjacent mainline lane 1 closure</b>
1.4	Railways				
1.5	Water course				
1.6	Ground conditions: <ul style="list-style-type: none"> <li>• Contamination</li> <li>• Ground water</li> <li>• Instability</li> <li>• Mineral / mine workings</li> </ul>				
1.7	Access restrictions				
1.8	Adjacent properties				
1.9	Concurrent site activities				
1.10	Interface with the public			✓	<b>Possibility of private vehicles entering the works area. Provide dedicated Chapter 8 compliant access/egress points.</b>
1.11	Occupied premises				
1.12	Structural instability				
1.13	Fragile materials				
1.14	Hazardous materials				
1.15	Land use				
1.16	Traffic				
1.17	Others (insert as necessary)				
<b>2.</b>	<b>Existing Services</b>				
2.1	Underground			✓	<b>Stats enquiries retrieved via Kier's 'Prove-It' database.</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	
	<ul style="list-style-type: none"> <li>Electrical</li> </ul>			✓	Stats enquiries retrieved via Kier's 'Prove-It' database.
	<ul style="list-style-type: none"> <li>Gas</li> </ul>				
	<ul style="list-style-type: none"> <li>Water (Asbestos pipes?)</li> </ul>				
	<ul style="list-style-type: none"> <li>Telecommunications</li> </ul>				
	<ul style="list-style-type: none"> <li>Others (insert as necessary)</li> </ul>				
2.2	Overhead Services				
	<ul style="list-style-type: none"> <li>Electrical</li> </ul>				
	<ul style="list-style-type: none"> <li>Telecommunications</li> </ul>				
	<ul style="list-style-type: none"> <li>Others (insert as necessary)</li> </ul>				
<b>3.</b>	<b>Earthworks</b>	<b>N/A</b>			
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)				
<b>4.</b>	<b>Foundations</b>	<b>N/A</b>			
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:				
	<ul style="list-style-type: none"> <li>Noise</li> </ul>				
	<ul style="list-style-type: none"> <li>Vibration</li> </ul>				
	<ul style="list-style-type: none"> <li>Contamination</li> </ul>				
	<ul style="list-style-type: none"> <li>Plant</li> </ul>				
4.9	Grouting:				



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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	
	• Drilling work				
	• Dust				
	• Pollution				
4.10	Stability of structure				
4.11	Others (insert as necessary)				
<b>5.</b>	<b>Services Installation</b>	<b>N/A</b>			
5.1	Excavations				
5.2	Ground water				
5.3	Ground conditions				
5.4	Existing services				
5.5	Testing operations				
5.6	Lifting operations				
5.7	Adjacent structures / activities				
5.8	Maintenance				
5.9	Contamination				
5.10	Others (insert as necessary)				
<b>6.</b>	<b>Drainage Works</b>	<b>N/A</b>			
6.1	Excavations				
6.2	Ground water				
6.3	Ground conditions				
6.4	Confined spaces				
6.5	Leptospirosis / Weils disease				
6.6	Existing services (asbestos pipes?)				
6.7	Manual handling				
6.8	Lifting operations				
6.9	Maintenance				
6.10	Sewage				
6.11	Traffic				
6.12	Contamination (ground / water)				
6.13	Hepatitis B / Tetanus				
6.14	Others (insert as necessary)				
<b>7.</b>	<b>Highways</b>				
7.1	Traffic management			✓	<b>Works to be undertaken within</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>Chapter 8 compliant mainline lane closure and full slip road closure</b>
7.2	Adjacent traffic			✓	<b>Traffic shall be controlled by a compliant Chapter 8 TM scheme supported by an appropriate TTRO.</b>
7.3	Construction materials				
7.4	Structural works				
7.5	Adjacent structures				
7.6	Noise			✓	<b>PC to adhere to current Regs/guidelines. Proximity to local residents and constraints on noisy activities shall be considered.</b>
7.7	Vibration			✓	<b>PC to adhere to current Regs/guidelines</b>
7.8	Coal TAR in pavement			✓	<b>Core samples to be tested on site for the possible presence of TBM (PAK test) Core samples are to be retained and stored for further testing if required.</b>
7.9	Others (insert as necessary)				
<b>8.</b>	<b>Steelwork Construction</b>	<b>N/A</b>			
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)				
<b>9.</b>	<b>Concrete Construction</b>	<b>N/A</b>			

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
9.1	Working at height				
9.2	Plant restrictions				
9.3	Lifting operations				
9.4	Noise				
9.5	Vibration				
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)				
<b>10.</b>	<b>Masonry Construction</b>	<b>N/A</b>			
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)				
<b>11.</b>	<b>Timber Construction</b>	<b>N/A</b>			
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)				
<b>12.</b>	<b>Cladding</b>	<b>N/A</b>			
12.1	Lifting operations				
12.2	Manual handling				



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Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
12.3	Maintenance / cleaning				
12.4	Others (insert as necessary)				
<b>13.</b>	<b>Glazing</b>	<b>N/A</b>			
13.1	Manual handling				
13.2	Lifting operations				
13.3	Cleaning / maintenance				
13.4	Others (insert as necessary)				
<b>14.</b>	<b>Mechanical/Electrical Systems</b>	<b>N/A</b>			
14.1	Access				
14.2	Existing services (asbestos?)				
14.3	Manual handling				
14.4	Materials / substances				
14.5	Confined spaces				
14.6	Pressure systems				
14.7	Testing operations				
14.8	Fixings				
14.9	Working at height				
14.10	Maintenance				
14.11	Others (insert as necessary)				
<b>15.</b>	<b>Railway Activities</b>	<b>N/A</b>			
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)				
<b>16.</b>	<b>Demolition of Existing Structures</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	
16.1	Services				
16.2	Adjacent / adjoining structures				
16.3	Materials: <ul style="list-style-type: none"> <li>Hazardous i.e. asbestos in permanent shuttering, waterproofing to bridge decks, joints etc.</li> <li>fragile</li> </ul>				
16.4	Working at height				
16.5	Temporary stability				
16.6	Pre/post tensioning				
16.7	Noise				
16.8	Vibration				
16.9	Dust			✓	The PC managing the core sampling works shall ensure that where possible the coring operation is suppressed to reduce dust.
16.10	Effect on usage of demolition materials				
16.11	Others (insert as necessary)				
17.	<b>Future Demolition / decommissioning of new structure/installation</b>	<b>N/A</b>			
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.	<b>Maintenance and Operation of Facility / Structure etc.</b>	<b>N/A</b>			
18.1	Access				
18.2	Safety equipment				
18.3	Testing / inspection				
18.4	Procedure				
18.5	Contamination during usage of demolition material.				
18.6	Others (insert as necessary)				
19.	<b>Use of the structure as a workplace</b>	<b>N/A</b>			

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
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 Checklist**

<b>Project Title:</b>	<b>A30 Fraddon to Goss Moor EB &amp; WB</b>	<b>Kier Highways Job No.:</b>	<b>601961</b>
<b>Project Description:</b>	<b>Undertake a core sampling survey within the eastbound exit slip road of Highgate Hill Interchange junction.</b>		
<b>Design Discipline:</b>	<b>Pavement</b>	<b>Prepared By:</b>	<b>Checked By:</b>

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: **
1.3 1.10 7.2	Roadways, Interface with the public & Adjacent traffic	Struck by adjacent plant/machinery/site traffic and non-site traffic	1/2/3	Provision of compliant Chapter 8 TM arrangements appropriate to the site conditions - Coordination through Highways England Pre-Start meeting. Public liaison with adjacent properties where required.	Control measures result in an acceptable level of risk.	No further comment	Principal Contractor
2.1	Services	Striking u/g services	1	Stats searches requested & stored. U/G & O/H Database checked, and info supplied with PCI and approximate positions indicated on	Controlled risk acceptable	No further comment	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	Principal Designer Review	Action Req'd by: **
				the scheme drawings. The PC shall be responsible for locating stats on site. The proposed coring shall be undertaken to retrieve samples from the full depth of the bituminous pavement which is anticipated to be up to a depth of 300mm.			
7.1	Traffic Management	Struck by adjacent traffic.	1/2/3	All TM to be designed and established in accordance with Chapter 8. Installation, maintenance and removal to be undertaken by trained operatives and in accordance with approved RAMS.	Controlled risk acceptable	No further comment	Principal Contractor
7.8	Construction material	Tar Bound Material (TBM)	1	Activities shall be controlled by the PC's RAMS. Included within the survey requirements is the testing of the core samples for possible presence of TBM. Cores to be retained and stored for further testing if required.	Controlled risk acceptable	No further comment	Principal Contractor
7.6	Noise	Potentially hazardous to health and an adverse effect upon the environment.	1/2/3	Activities shall be controlled by the PC. Ensure consideration is given to residential properties.	Minimised/controlled levels of exposure.	No further comment	Principal Contractor
7.7	Vibration	Extended use of vibration tools/plant leading to physical harm.	1	Activities shall be controlled by the PC. Ensure consideration is given to residential properties	Minimised/controlled levels of exposure.	No further comment	Principal Contractor
16.9	Dust	Dust causing an environmental nuisance and respiratory hazard to all parties who may come into contact.	1, 2 & 3	Activities shall be controlled by the PC Use suppressed plant and machinery where possible to prevent the spread of dust at source.	Controlled risk acceptable	No further comment	Principal Contractor