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, 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 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

Project Title:	**M5 J25-24 NB MP 201.7 - 196.6 RS**	**Kier Highways Job No.:**	**570122D - 283**
Project Description:	**Undertake 150mm Cores, PAK/PAH Testing and Selective DCP Testing on M5 Northbound carriageway**		
Design Discipline:	**Highways**		
Project Type as determined by GG104 (if applicable)	**A**	**Prepared By:**	[redacted]

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 -

Population 1 – People directly employed by the Client and who work on the site e.g. Traffic Officers. **Population 2** – People in a contractual relationship with the client.	**'Workers'**
Population 3 – 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.	**'Users'**
Population 4 – 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.	**'Other Parties'**

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	**X**			
1.2	Previous/existing land/ structures			**X**	**No coring on, or 50m either side of structures within scheme extents**
1.3	Roadways			**X**	**Traffic management to TSM Chp to be used**
1.4	Railways	**X**			
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**		
1.9	Concurrent site activities	**X**			
1.10	Interface with the public	**X**			
1.11	Occupied premises	**X**			
1.12	Structural instability	**X**			
1.13	Fragile materials	**X**			
1.14	Hazardous materials			**X**	**Possibility of TBM in cores**
1.15	Land use	**X**			
1.16	Traffic			**X**	**Traffic management to TSM Chp 8 to be used**
1.17	Others (insert as necessary)				
2.	**Existing Services**				
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**
	• 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	11kV, 33kV & 132kV
	• Telecommunications	X			
	• Others (insert as necessary)				
3.	**Earthworks**	X			
4.	**Foundations**	X			
5.	**Services Installation**	X			
6.	**Drainage Works**	X			
7.	**Highways**				
7.1	Traffic management			X	TM to Chp 8 to be used
7.2	Adjacent traffic			X	TM to Chp 8 to be used
7.3	Construction materials			X	Bituminous material to be used
7.4	Structural works	X			
7.5	Adjacent structures			X	No coring on structures
7.6	Noise		X		
7.7	Vibration		X		
7.8	Coal TAR in pavement			X	Potential for TBM in cores
7.9	Others (insert as necessary)				
8.	**Steelwork Construction**	X			
9.	**Concrete Construction**	X			
10.	**Masonry Construction**	X			
11.	**Timber Construction**	X			
12.	**Cladding**	X			

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
13.	Glazing	X			
14.	Mechanical/Electrical Systems	X			
15.	Railway Activities	X			
16.	Demolition of Existing Structures	X			
17.	Future Demolition / decommissioning of new structure/installation	X			
18.	Maintenance and Operation of Facility / Structure etc.	X			
19.	Use of the structure as a workplace	X			

Part B: Hazard Elimination Checklist

Project Title:	**M5 J25-24 NB MP 201.7 - 196.6 RS**			**Kier Highways Job No.:**	**570122D - 283**
Project Description:	**Undertake 150mm Cores, PAK/PAH Testing and Selective DCP Testing on M5 Northbound carriageway**				
Design Discipline:	**Highways**	**Prepared By:**	[redacted]	**Checked By:**	[redacted]

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: [redacted]

* **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: **
1.2 & 7.5	Undertaking 150mm dia cores & DCP testing	Structure strike causing weaking of structure and potential failure	All	No cores to be undertaken on, or within 50m of structures (underbridges & culverts), confirm locations on site	Risk eliminated	No further comment.	Principal Contractor
1.3, 1.16, 7.1 & 7.2	Working adjacent to live traffic	Workforce struck by vehicle	1 & 2	Traffic management to Chapter 8 Undertake works at night where traffic flow is reduced	Risk reduced	No further comment.	Principal Contractor

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: **
1.14 & 7.8	Undertaking and handling cores, including undertaking PAK & PAH testing	Contact with TBM in cores	1	Wear appropriate PPE while handling cores Contractor to have RAMS in place for handling un tested cores Cores to be tested to confirm presence of TBM	Risk reduced	No further comment.	Principal Contractor
2.1	Undertaking 150mm dia cores & DCP testing	Underground service strike	All	Locate services prior to coring and locally adjust cores as required C2 returns included as part of PCI Pack. Refer to stats pack.	Risk reduced	No further comment.	Principal Contractor
2.2	Undertaking 150mm dia cores & DCP testing	Overhead service strike	All	Confirm cable heights and maintain safety zones in GS6. Locally adjust cores as required	Risk reduced	No further comment.	Principal Contractor
7.8	Infilling 150mm core locations	Handling bituminous materials	1	Wear appropriate PPE while handling bituminous materials. Contractor to have RAMS in place for handling bituminous materials.	Risk reduced	No further comment.	Principal Contractor
*01	All Activities	Covid 19	All	No design action possible. Contractor to adopt safe systems of work in line with latest Government guidance and the safe site operating procedures to ensure safety of staff on site	Risk reduced	No further comment.	Principal Contractor