

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 [GD04/12 Standard for Safety Risk Assessment on the Strategic Road Network if this is applicable to your contract](#)

Part A: Designer's Hazard Checklist

Project Title:	A38 Tideford BD	Kier Highways Job No.:	5701240
Project Description:	To undertake a series of surveys to obtain additional information to aid a comprehensive drainage design.		
Design Discipline:	Drainage		
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.	'Workers'
Population 2 – People in a contractual relationship with the client.	
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			✓	Nearest residential buildings are <3m away from site and are at ground level and 1 story above ground level.
1.2	Previous/existing land/ structures		✓		Works will not affect existing structures.
1.3	Roadways			✓	Surveys are to be carried out on the A38, within the village which has a 40mph limit, outside the village the limit is 50mph. Works will take place under lane closures.
1.4	Railways	✓			
1.5	Watercourse			✓	Some survey works will be near to watercourses therefore safe methods to be established and implemented that are appropriate to the tasks by the contractor.
1.6	Ground conditions:				
	• Contamination		✓		Contamination from road pollutants only.
	• Groundwater		✓		Pumps to be made available to pump out the surplus water during works, if required.
	• Instability	✓			
	• Mineral / mine workings	✓			
1.7	Access restrictions			✓	Temporary TM and/ or fencing to be provided by Contractor (if required)
1.8	Adjacent properties			✓	Nearest residential buildings are <3m away from site locations and are at ground level and 1 storey above ground level.
1.9	Concurrent site activities			✓	A number of surveys will be carried out with multiple contractors
1.10	Interface with the public			✓	Works will take place at night.
1.11	Occupied premises			✓	Refer to 1.8.
1.12	Structural instability	✓			
1.13	Fragile materials	✓			
1.14	Hazardous materials		✓		
1.15	Land use		✓		

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
1.16	Traffic			✓	Traffic management may be required during the surveys. Traffic management to be used where necessary.
1.17	Asbestos			✓	Asbestos Survey in search of asbestos.
2.	Existing Services				
2.1	Underground				
	• Electrical			✓	Possible underground electrical cables present.
	• Gas			✓	Possible gas main present.
	• Water			✓	SWW Apparatus present.
	• Telecommunications			✓	BT, Virgin Media apparatus are present.
	• Street lighting cables			✓	Street lighting cables present.
2.2	Overhead Services				
	• Electrical			✓	Low voltage cables present within survey works areas.
	• Telecommunications		✓		BT cables present
	• Others (insert as necessary)	✓			
3.	Earthworks				
3.1	Deep excavations	✓			
3.2	Slope / ground stability	✓			
3.3	Groundwater / watercourses	✓			
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				
4.1	Adjacent buildings/structures	✓			
4.2	Deep excavations	✓			
4.3	Plant movements	✓			
4.4	Interface with services	✓			

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
4.5	Contamination (ground / water)	✓			
4.6	Groundwater	✓			
4.7	Confined spaces	✓			
4.8	Piling:	✓			
	• Noise	✓			
	• Vibration	✓			
	• Contamination	✓			
	• 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	✓			
5.2	Groundwater	✓			
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)	✓			
6.	Drainage Works				
6.1	Excavations	✓			
6.2	Groundwater		✓		
6.3	Ground conditions		✓		No ground condition issues expected.
6.4	Confined spaces	✓			
6.5	Leptospirosis / Weil's disease			✓	Surveys of drainage assets exposes operatives to risk of Leptospirosis. This is a serious and sometimes fatal infection that is transmitted to humans

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
					by contact with urine from infected rats. The drainage water may be contaminated with the rats' urine.
6.6	Existing services (asbestos pipes?)		✓		Refer to section 2.
6.7	Manual handling	✓			
6.8	Lifting operations	✓			
6.9	Maintenance		✓		
6.10	Sewage		✓		
6.11	Traffic			✓	The A38 is a busy trunk road (50mph), within the village of Tideford it has a 40mph limit. Works will take place overnight under lane closures.
6.12	Contamination (ground / water)		✓		
6.13	Hepatitis B / Tetanus		✓		
6.14	Arisings	✓			
6.15	Dust	✓			
6.16	Noise	✓			
7.	Highways				
7.1	Traffic management			✓	Works will be carried out overnight under lane closures where required. Traffic management to be set out in accordance with TSM Chapter 8 and operatives to be briefed on dangers. See Hazard Elimination Ref 1 & 4.
7.2	Adjacent traffic			✓	Working practices to be in accordance with appropriate guidance.
7.3	Construction materials		✓		TSCS, HRA, DBM, Cement and concrete.
7.4	Structural works	✓			
7.5	Adjacent structures	✓			
7.6	Noise			✓	Survey works are within close proximity to residential and commercial properties
7.7	Vibration	✓			
7.8	Coal TAR in pavement	✓			
7.9	Night Works			✓	Lighting to be provided by contractors or sub-contractors.

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
8.	Steelwork Construction				
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				
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)	✓			
10.	Masonry Construction				
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				
11.1	Materials	✓			

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
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				
12.1	Lifting operations	✓			
12.2	Manual handling	✓			
12.3	Maintenance / cleaning	✓			
12.4	Others (insert as necessary)	✓			
13.	Glazing				
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 (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)	✓			
15.	Railway Activities				
15.1	Train movements	✓			
15.2	Overhead lines	✓			
15.3	Electrified track	✓			

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
15.4	Underground services	✓			
15.5	Adjacent structures	✓			
15.6	Ground stability	✓			
15.7	Contamination	✓			
15.8	Others (insert as necessary)	✓			
16.	Demolition of Existing Structures				
16.1	Services	✓			
16.2	Adjacent / adjoining structures	✓			
16.3	Materials:	✓			
	Hazardous i.e. asbestos in permanent shuttering, waterproofing to bridge decks, joints etc.	✓			
	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				
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.				
18.1	Access	✓			
18.2	Safety equipment	✓			
18.3	Testing / inspection	✓			

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				
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	✓			

Project Title:	A38 Tideford BD		Kier Highways Job No.:	5701240
Project Description:	To complete the collection of samples for testing for the presence of ACM's			
Design Discipline:	Drainage	Prepared By:	██████	Checked By: ██████

Reviewed and approved by:

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** **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: **
1.1 1.8 1.10 1.11	Existing buildings	Nearest residential buildings are <3m away from site and are at ground level and 1 story above ground level.	1,3	Early engagement with residents. Noise mitigation to be taken into account.	Risk reduced, hazard still remains.	Appropriate signage and barriers to be used to segregate work area and maintain access to occupied properties	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: **
1.17	Asbestos	Pipes with the potential to contain asbestos have been identified for sampling.	1	Contractor shall comply with all the necessary regulations and safe practice as well as issue the correct PPE and ensure its proper use.	Risk reduced; hazard still remains.	No Additional Comments	Principal contractor
1.7 1.3 1.16	Roadways Traffic	Working adjacent to live traffic Risk associated with unauthorised access by errant vehicles, general public ignoring advanced warning signs.	1,2	Traffic management shall be employed in accordance with Chapter 8. Works will be carried out under overnight lane closures. Establishment/removal of traffic management only when traffic flows are acceptable.	Risk reduced; hazard still remains.	No Additional Comments	Principal contractor
1.9 2.1	Underground Services	Pavement coring has the potential to reach some underground apparatus.	1	Use of current C2 STATS drawings and CAT and Genny investigations to be used before any drilling can commence.	Risk remains but reduced Contractor to provide safe method of working.	No Additional Comments	Principal contractor
6.5	Leptospirosis/Weil's Disease	Risk of contracting Leptospirosis/Weil's Disease	1	Safe system of work to be employed and briefed to all operatives. All PPE required to be used at all times. Method statements for operations involved to be provided in advance of works.	Risk is reduced but still present. Welfare facilities to be provided on site.	No Additional Comments	Principal contractor
1.3 1.5	Working at height Working adjacent to and above live carriageway and water course (canal, river).	Falling from Height, leading to serious injuries or death. -Debris, dust, material falling onto the carriageway, railway line with overhead electrifying cables, watercourse below. - Leptospirosis/Weil's disease -Works are at a high risk of a flooding event and are also within close proximity to various watercourses.	1, 2	Temporary protective measures and safety screen shall be in place. Liaise with the Environment Agency to get information on possible flood events. Remove pigeon faeces by damping down. Wear appropriate PPE	Risk remains but reduced Contractor to provide safe method of working.	No Additional Comments	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: **
		Contact with pigeon faeces may irritate the bronchial passages					
1.7 7.2	Adjacent traffic	Traffic outside lane closures; risk of accident, injury and possibly death to workforce and general public.	1, 2	Traffic management measures to be employed to segregate workforce from adjacent traffic. Toolbox talks to be given to ensure that safe systems of work are in place and followed on site.	Risk reduced. Hazard remains.	No Additional Comments	Principal contractor
1.7 1.9 7.1 7.2 6.11	Traffic management Adjacent traffic	Installation, maintenance and removal of traffic management for nighttime lane closures. Risk of accident and injury to general public. Potential restricted access for emergency vehicles	1, 2	Traffic management (TM) shall be employed in accordance with Traffic Signs Manual Chapter 8. Establishment/removal of TM by trained personnel with appropriate PPE only when traffic flows are low. Works will be carried out under overnight lane closure. Emergency vehicles to be marshalled through the works.	Risk is reduced but still significant.	No Additional Comments	Principal contractor
1.9 7.9	Night works	Works to be carried out at night; increased risk of slips, trips and falls. Scheme location has street lighting present.	1, 2	Safe systems of work to be employed. Contractor to use temporary lighting throughout the whole duration of the works.	Risk is reduced to acceptable levels.	No Additional Comments	Principal contractor
7.6	Noise	Potential to disturb the sleep of members of the public and create possible confrontation.	1,2, 3	Early engagement with residents. Noise mitigation to be taken into account.	Risk reduced; hazard still remains.	Noisy works to be undertaken before 11pm where possible	Principal contractor
2.2	Working in the vicinity of overhead cables	Contacting the overhead services resulting in death or serious injury. Plant hitting the services may result serious injury or death	1	Best Practice Measures must be in place to ensure that any risk is mitigated whilst undertaking works	Risk remains but reduced.	GS6 to be followed where applicable	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: **
				by using the correct plant, equipment and method statement.	Contractor to provide safe method of working.		

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