

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
					ensure sufficient welfare facilities are in place at all times. All appropriate PPE must be worn at all times.
6.6	Existing services (asbestos pipes?)	✓			
6.7	Manual handling	✓			
6.8	Lifting operations		✓		Drainage survey works will be taking place including manhole and pipework CCTV surveys.
6.9	Maintenance	✓			
6.10	Sewage	✓			
6.11	Traffic			✓	Live traffic present on M5 during TM setup / removal and during the works under traffic management with a restricted speed limit.
6.12	Contamination (ground / water)		✓		Contractor to ensure sufficient welfare facilities are in place at all times. All appropriate PPE must be worn at all times.
6.13	Hepatitis B / Tetanus		✓		Contractor to ensure sufficient welfare facilities are in place at all times. All appropriate PPE must be worn at all times.
6.14	Lighting			✓	Survey works are to be completed at night, leading to increased risk of slips, trips and falls. Contractor to ensure adequate lighting is provided for safety of operations.
7.	Highways				
7.1	Traffic management			✓	Temporary traffic management will be required to part close the M5 in both directions within the scheme extents and to prevent unauthorised access.
7.2	Adjacent traffic			✓	Live traffic present on M5 during TM setup / removal and during the works under traffic management with a restricted speed limit.

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		✓		Access to the site will be provided within the TM setup for all deliveries / waste removal. All materials to be installed and handled by competently trained operatives only. Refer to Control of Substances Hazardous to Health (COSHH) assessments.
7.4	Structural works	✓			
7.5	Adjacent structures			✓	Location of overbridges are highlighted on the construction drawings. Refer to Appendix C in PCI for details.
7.6	Noise		✓		All site operatives to be provided with suitable and sufficient PPE and appropriate control measures are to be adopted to minimise duration of exposure to upper noise limits.
7.7	Vibration		✓		Suitable control measures are to be adopted to avoid Hand Arm Vibration (HAV) or reduce the duration of exposure.
7.8	Coal TAR in pavement		✓		Pavement investigations including trial holes and cores will be undertaken across the scheme extents, which will be subject to PAK testing to determine whether TBM's are present.
7.9	Night work			✓	Works are to be completed at night leading to increased risks of slips, trips and falls. Task lighting to be provided by Contractors as appropriate.
8.	Steelwork Construction	✓			
8.1	Working at height				
8.2	Lifting operations				
8.3	Temporary stability				
8.4	Connections				
8.5	Unusual sequence				

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
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				
11.2	Working at height				
11.3	Temporary stability				
11.4	Lifting operations				
11.5	Manual handling				
11.6	Fire				
11.7	Dust				

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
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				
15.4	Underground services				
15.5	Adjacent structures				
15.6	Ground stability				
15.7	Contamination				
15.8	Others (insert as necessary)				

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
16.	Demolition of Existing Structures	✓			
16.1	Services				
16.2	Adjacent / adjoining structures				
16.3	Materials:				
	<ul style="list-style-type: none"> Hazardous i.e. asbestos in permanent shuttering, waterproofing to bridge decks, joints etc. 				
	<ul style="list-style-type: none"> 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				
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	✓			

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				

FOR INFORMATION ONLY

Part B: Hazard Elimination Checklist

Project Title:	570131D Priority VRS VM Development Batch 1 – 619 Site 16 – M5 J23-24 BD MP 195.1 – 196 VRS		Kier Highways Job No.:	1040304
Project Description:	<p>This DHIRRS is specifically prepared for the proposed survey works within the central reserve, including lane 3 in both directions of the M5 within the site extents. The survey works will include;</p> <ul style="list-style-type: none"> - Topographical Survey - Drainage surveys including manholes surveys and CCTV surveys of pipework. - Trial Holes - Pavement Cores - Asbestos refurbishment survey <p>Refer to survey drawings; HE570131D-KIER-VGN-M5_J24_CR-DR-CH-010001 to 010002</p> <p>This scheme stretches across the following chart sections;</p> <ul style="list-style-type: none"> - 3300M5/390 Ch45m – Ch518m (473m) - 3300M5/394 Ch0m – Ch546m - 3300M5/406 Ch0m – Ch580m 			
Design Discipline:	Highways – Renewal of Roads	Prepared By:		

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:

Name	
Signature	
Position	

* **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

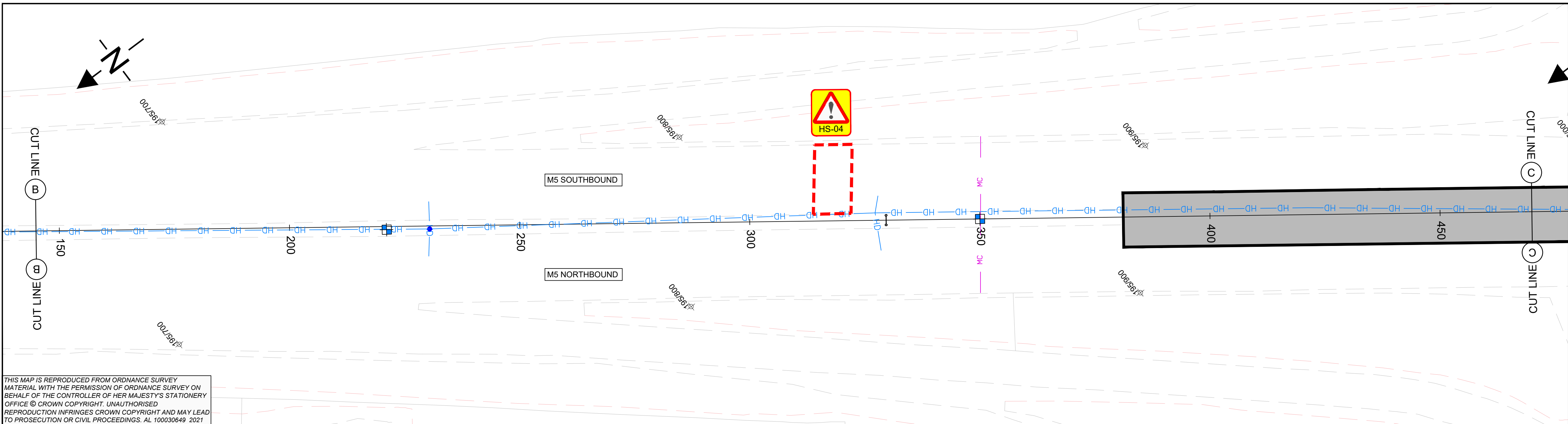
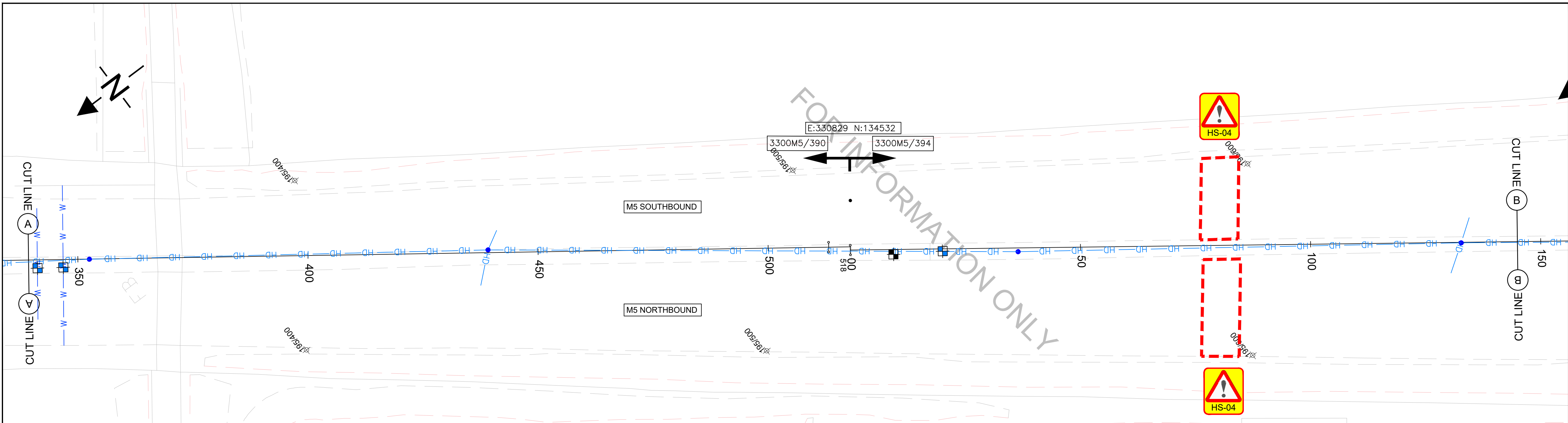
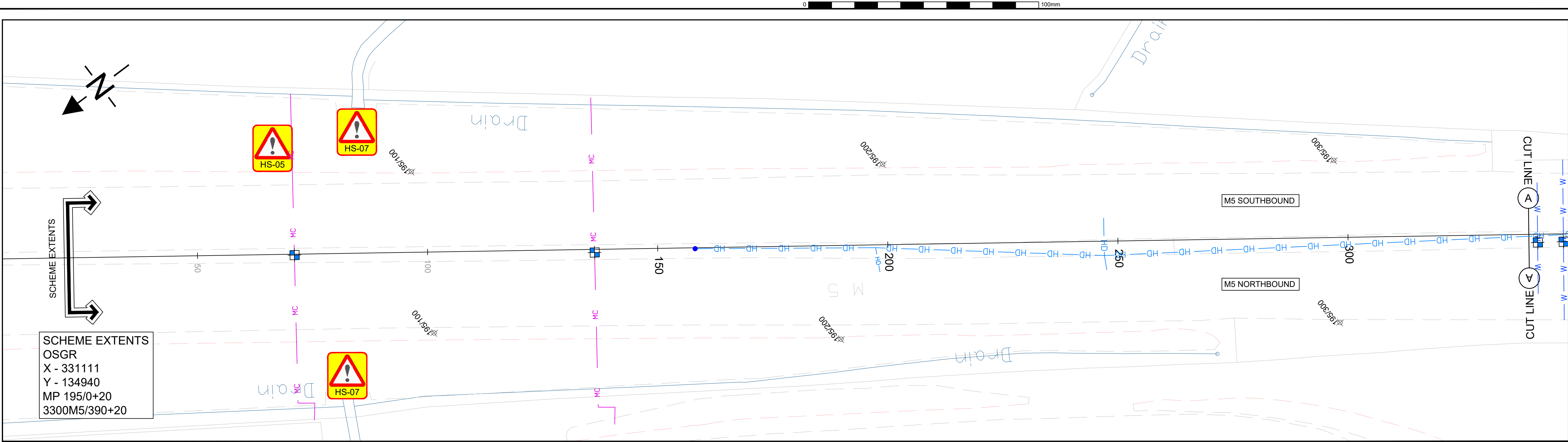
– pass information to designers / Principal designer

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 1.16 7.1 7.2	Roadways Traffic Traffic Management Adjacent Traffic	Working adjacent to live carriageway. Harm to operatives from public ignoring signage/TM.	1,2	Traffic management proposed to create a safety zone between work force and users. All work is to be undertaken using night time part route closures. TM design/set up is to ensure cone spacing prevents public access. An 'airlock' system should be in place to prevent unauthorised access.	The risk is reduced but still a residual risk remains and shall be conveyed to contractor(s) via the construction drawings and design information pack.	No further comment.	PC
1.2 7.5	Structures Adjacent Structures	Overbridges within works area. Height restrictions.	1	Location of overbridges are highlighted on the construction drawings. Refer to Appendix C in PCI for details. Contractor to obtain safe working heights prior to the start of the works.	The risk is reduced but still a residual risk remains and shall be conveyed to contractor(s) via the construction drawings and design information pack	No further comment.	PC
2.1 2.2	Existing services underground. Existing services overground.	Operatives/ plant/ equipment striking existing underground and overground services.	1	Refer to STATS information for further details. Work to be carried out in accordance with HSG 47. Note the presence of all Statutory Undertakers services and mark them on ground prior to the start of the works.	The risk is reduced but still a residual risk remains and shall be conveyed to contractor(s) via the construction drawings and design information pack	No further comment.	D/PC
1.17 1.19 7.9 6.14	Night-time working Plant Movement Night-work Lighting	Poor visibility increasing risk of slips, trips and falls. Collision of site vehicles and site staff in darkness hours.	1	Suitable task or temporary lighting to be provided at all stages of the scheme works. Suitable PPE is to be worn at all times, including appropriate footwear/clothing for the tasks being carried out.	The use of temporary lighting reduces the risk to an acceptable level. Banksman to be used for reversing vehicles where appropriate. All staff to wear appropriate PPE	No further comment.	PC

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: **
1.18	Asbestos	Exposure to ACMs	1	Previous AAP's show ACM's are presumed present in nearside verges within electrical boxes. However, asbestos materials are unlikely to be encountered as part of these works. A type 2 Asbestos management survey is due to be undertaken as part of these works. Suitable PPE is to be worn at all times.	A residual risk remains and shall be conveyed to contractor(s) via the construction drawings and design information pack	No further comment.	PC
1.9	Concurrent site activities	Interface between contractors during different survey works activities.	1	Principal contractor to ensure different survey activities do not take place in the same areas at the same time to reduce the likelihood of accidents to workers in the works areas.	A residual risk remains and shall be conveyed to contractor(s) via the construction drawings and design information pack	No further comment.	PC
6.5	Leptosirosis / Weils Disease	Workers exposed to Leptosirosis / Weils Disease during drainage survey works.	1	Suitable PPE is to be worn at all times.	A residual risk remains and shall be conveyed to contractor(s) via the construction drawings and design information pack	No further comment.	PC
6.4	Confined spaces	Working in confined spaces during drainage survey works.	1	Suitable PPE is to be worn at all times. Contractor to look into possibility of avoiding the need for workers to enter into confined spacing in order to carry out the survey works. However if the works in confined spaced cannot be avoided then a risk assessment shall be carried out to ensure a safe system of working.	A residual risk remains and shall be conveyed to contractor(s) via the construction drawings and design information pack	No further comment.	PC
N/A	All activities	Covid 19	All	Contractors RAMS to incorporate government guidance on social/physical distancing	Risk remains however likelihood reduced	No further comment.	Principal Contract or &

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: **
							Contractors


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


RESIDUAL DESIGN HAZARDS

THE FOLLOWING HAS BEEN COLLECTED FROM THE PRE-CONSTRUCTION INFORMATION AND HIGHLIGHTS KNOWN RESIDUAL HAZARDS.

KEY

 HS-# = HEALTH AND SAFETY RISK REFERENCE NUMBER

 E-# = ENVIRONMENT RISK REFERENCE NUMBER

HS-04 - TRAFFIC LOOPS

HS-05 - STATUTORY UNDERTAKERS (UNDERGROUND)

HS-07 - EXISTING CULVERT

NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS WITHIN THE SERIES.

2. CROSS CARRIAGEWAY INDICATIVE LOCATIONS OF STATUTORY UNDERTAKERS SERVICES HAVE BEEN PROVIDED ON THIS DRAWING FOR TRIAL HOLE SURVEY PURPOSES. FOR STATUTORY UNDERTAKERS SERVICES INFORMATION REFER TO DRAWING NO. HE570131D-KIER-HGN-M5_J24_CR-DR-CH-010004 TO 05. NO GUARANTEE IS GIVEN TO ITS ACCURACY.

3. MARKER POSTS ARE SHOWN FOR INDICATIVE PURPOSE ONLY. CHAINAGES SHOWN ON THIS DRAWING HAVE BEEN SET OUT AT LEAST EVERY 50m ALONG THE CHART SECTIONS INDICATED THROUGHOUT THE EXTENTS OF THE WORKS.


4. THE OVERHEAD CABLES HAVE BEEN IDENTIFIED ON THE SCHEME DRAWINGS. HOWEVER INFORMATION REGARDING SAFE WORKING HEIGHTS IN ACCORDANCE WITH GS6 HAS NOT BEEN INDICATED. PRIOR TO THE COMMENCEMENT OF WORKS ON SITE, OVERHEAD CABLE HEIGHTS TO BE CONFIRMED AND RECORDED BY WAY OF SIGNATURE AND DATE BY A TRAINED AND COMPETENT PERSON.


5. TRIAL HOLES LOCATED AT THE STRUCTURES ARE TO DETERMINE THE DEPTH OF BRIDGE PIER FOUNDATIONS AND OFFSET OF FOUNDATION EDGE FROM THE FACE OF THE BRIDGE PIER.


6. THE WIDTH OF THE TOPOGRAPHICAL SURVEY EXTENTS WILL BE FROM LANE 2/3 ROAD MARKING SOUTHBOUND TO LANE 2/3 ROAD MARKING NORTHBOUND UNLESS INDICATED OTHERWISE.


7. DRAINAGE CONNECTIVITY SURVEY IS FOR ALL DRAINAGE ASSETS IN A DRAINAGE SYSTEM, WHICH MAY ALSO INCLUDE DRAINAGE INFRASTRUCTURE OUTSIDE OF THE SURVEY AREA E.G. OUTFALLS.


KEY


 SURVEY AREA (TOPOGRAPHICAL, DRAINAGE & ASBESTOS REFINISHMENT SURVEY) (3,954m²)


 MANHOLE


 TRIAL HOLE SURVEY STATS & SOIL SAMPLING (11No.)


 TRIAL HOLE SURVEY (STRUCTURES) & SOIL SAMPLING (4No.)


 CORE (1No.)


 DCP TESTING REQUIRED AT SAMPLE (6No.)


 LOCATION OF MOTORWAY COMMS / LOOPS

 MC MOTORWAY COMMS

 HD HIGHWAY DRAIN

 W WATER MAIN

 BT BT UNDERGROUND CABLE


 11KV O/H 11KV OVERHEAD CABLE

C2	NO. OF TRIAL PITS & SCOPE OF SURVEY REDUCED.	LP	PPP	08/06/2021
C1	PUSH / PULL TESTING REMOVED. ISSUED FOR CONSTRUCTION.	LAH	SR	10/02/2021
P1	FOR INFORMATION	SR	SR	30/09/2020
REV	DETAILS	CHKD	APPD	DATE


DRAWN : ER	DRAWING STATUS
DESIGN : ER	WORK IN PROGRESS
CHKD : LP	PRELIMINARY DRAWING
APPD : PPP	EXTERNAL ISSUE
DATE : 08/06/2021	AS-BUILT

SUITABILITY : S2FOR INFORMATION

CLIENT



AGENT



SCHEME NAME

570131D PRIORITY VRS VM DEVELOPMENT BATCH 1

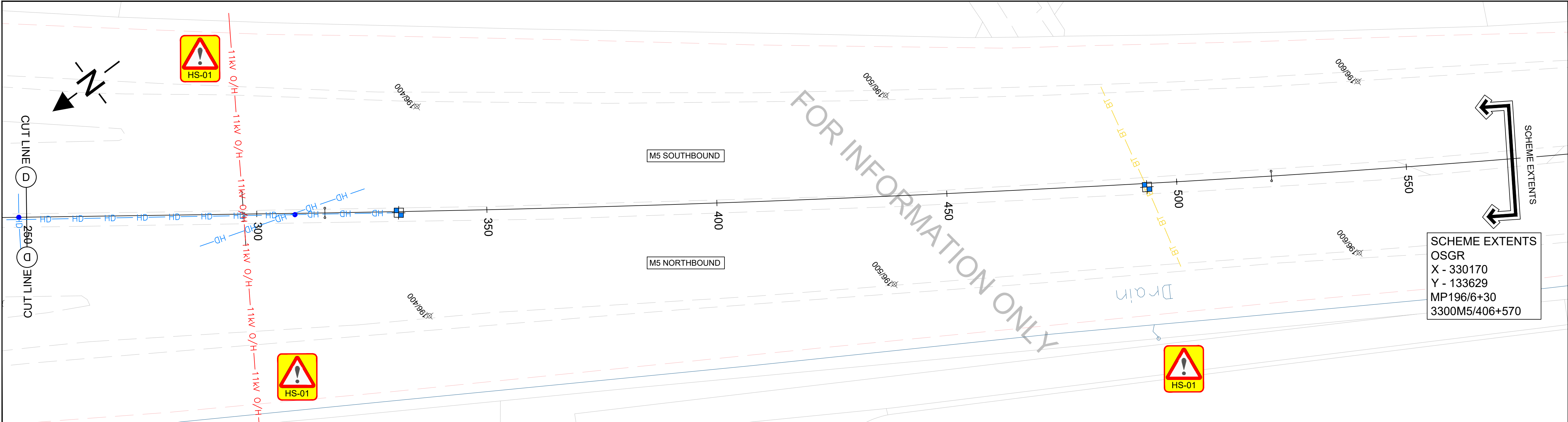
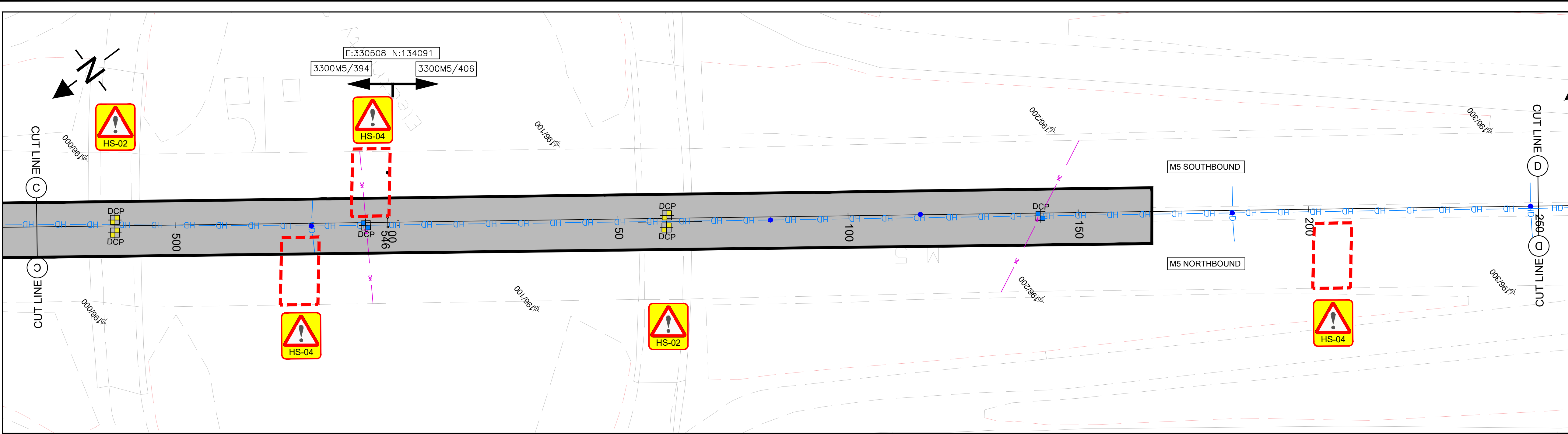
DRAWING TITLE

619 SITE 16 - M5 J23-J24 BD MP 195.1-196 CENTRAL RESERVATION SURVEYS SHEET 1 OF 2

ORIG DRAWING SIZE :	A1	DIMENSIONS :	m
COPYRIGHT © KIER		SCALE :	1:500

DRAWING NUMBER	PROJECT	ORIGINATOR	VOLUME	SCHEME REFERENCE No.
HE570131D -	KIER	-	VGN	1040304
M5_J24_CR	-	DR	-	010001
LOCATION	TYPE	ROLE	NUMBER	REVISION
				C 2

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RESIDUAL DESIGN HAZARDS

THE FOLLOWING HAS BEEN COLLECTED FROM THE PRE-CONSTRUCTION INFORMATION AND HIGHLIGHTS KNOWN RESIDUAL HAZARDS.

KEY

HS-#

= HEALTH AND SAFETY RISK REFERENCE NUMBER

E-#

= ENVIRONMENT RISK REFERENCE NUMBER

HS-01 - EXISTING OVERHEAD ELECTRICITY CABLES

HS-02 - EXISTING OVERHEAD STRUCTURES

HS-04 - TRAFFIC LOOPS

NOTES

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KEY

SURVEY AREA (TOPOGRAPHICAL, DRAINAGE & ASBESTOS REFRUBISHMENT SURVEY) (3,954m²)

MANHOLE

TRIAL HOLE SURVEY STATS & SOIL SAMPLING (11No.)

TRIAL HOLE SURVEY (STRUCTURES) & SOIL SAMPLING (4No.)

CORE (1No.)

DCP TESTING REQUIRED AT SAMPLE (6No.)

LOCATION OF MOTORWAY COMMS / LOOPS

MC MOTORWAY COMMS

HD HIGHWAY DRAIN

W WATER MAIN

BT BT UNDERGROUND CABLE

11kV O/H 11KV OVERHEAD CABLE

C2	NO. OF TRIAL PITS & SCOPE OF SURVEY REDUCED.	LP	PPP	08/06/2021
C1	PUSH / PULL TESTING REMOVED. ISSUED FOR CONSTRUCTION.	LAH	SR	10/02/2021
P1	FOR INFORMATION	SR	SR	30/09/2020
REV	DETAILS	CHKD	APPD	DATE
DRAWN : ER		DRAWING STATUS		
DESIGN : ER		WORK IN PROGRESS		
CHKD : LP		PRELIMINARY DRAWING		
APPD : PPP		EXTERNAL ISSUE		
DATE : 08/06/2021		AS-BUILT		
SUITABILITY : S2		FOR INFORMATION		

CLIENT

AGENT

SCHEME NAME

570131B PRIORITY VRS VM DEVELOPMENT BATCH 1

DRAWING TITLE

619 SITE 16 - M5 J23-24 BD MP 195.1-196 CENTRAL RESERVATION SURVEYS SHEET 2 OF 2

ORIG DRAWING SIZE : A1

DIMENSIONS : m

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SCALE : 1:500

DRAWING NUMBER

PROJECT | ORIGINATOR | VOLUME

HE570131D - KIER - VGN

M5_J24_CR - DR - CH - 010002

LOCATION | TYPE | ROLE | NUMBER

SCHEME REFERENCE No.

1040304

REVISION

C 2

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File ref - c:\users\michael.kowalyk\project north-manchester - 570131d priority vrs vm development batch 1\3. des\cad\01 - live drawing\619 site 16 - m5\j23+j24 bd mp 195.1-196 vrs\he570131d-kier-vgn-m5_j24_cr-dr-ch-010001 to 02.dwg Plotted 09.06.2021 by Michael.Kowalyk

Kier Highways Project No: 570131D
Client Reference No: 570131D
570131D Priority VRS VM Development Batch 1
Site 2 – M5 J18 T, Y & S Loop VRS
Pre-Construction Information

	Yes	No
Are Works to be carried out under the Commission / Contract Health and Safety Plan?		X
Is the Scheme notifiable under the CDM Regulations 2015?		X
1. Last longer than 30 working days and have more than 20 workers simultaneously at any point in the project;		X
2. Exceed 500 person days		X

Project type as categorised by GG104 (if applicable to contract / delete in not required)	A
* If applicable GG104 will determine the Kier Highways minimum Scheme Principal Designer (Scheme PD) level. Refer to SHEMS-FOR-HIG-S-055 for GG104 type categorisation and minimum Scheme PD level. Type A projects the Design Team Lead, Type B projects the Senior Manager, Type C projects the Service Director.	

This document has been produced in accordance with the recommendations and requirements of the Construction (Design and Management) Regulations 2015.

Prepared by: Designer	
Reviewed by; Design Team Lead	
Accepted by: Scheme PD	

'Reviewed by' & 'Accepted by' can be the same person for GG104 type A projects (where the Design Team Lead is the Scheme PD)



Authorised By: Head of SHE	Page 1 of 12	SHEMS-FOR-HIG-051
Author: Highways CDM Team	Version Date: October 2019	Version: 1.0
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Site Specific Hazards Identified in Design		
<p><i>ONLY include significant and unusual hazards that a competent contractor would need to know, could not reasonably foresee, or are likely to be difficult to manage effectively.</i></p> <p>Note – Consideration to be given to all ‘populations’ affected, Workers, Users, Other Parties.</p>		
Activity	Residual Hazard	Comments
Trial Hole / Core Survey Works	Conflict / risk of striking with STATS equipment. Working adjacent to live Services.	Indicative location of Statutory Undertakers Services (C2 Information) are shown on the Proposed Survey drawings for information only. No guarantee is given for its accuracy. Contractor should refer to Statutory Undertakers plans in the design information pack and undertake investigations prior to start of works to satisfy themselves of the location of services.
Traffic Management	Overhead Electric Cables	There are overhead electric cables present within the area of the works. Location of overhead services are shown on the statutory undertakers and survey drawings. Refer to Appendix E for more details.
Night time working	Poor illumination of work area. Reduced visibility of hazards and site operatives.	Adequate lighting for night time working to be provided by the contractor. Banksman should be present to ensure safe movement of plant within the works.
Drainage / manhole surveys	Working in confined spaces. Potential asbestos presence.	Suitable PPE is to be worn at all times. Contractor to look into possibility of avoiding the need for workers to enter into confined spacing in order to carry out the survey works. However if the works in confined spaced cannot be avoided then a risk assessment shall be carried out to ensure a safe system of working. Operatives should be mindful of the potential for asbestos to be present, and should keep disturbance of materials within the chambers to a minimum.
All activities	COVID 19	Government guidelines on social / physical distancing to be incorporated into RAMS

1 Project Description			
Scope of Works			
<p>This PCI is specifically prepared for the proposed survey works within the central reserve; Northbound and Southbound verges, between and on slip roads. The survey works will include;</p> <ul style="list-style-type: none"> - Topographical Survey - Drainage surveys including, manholes surveys and CCTV surveys of pipework. - Trial Pits - Cores - Asbestos management / refurbishment survey <p>Refer to survey drawings; HE570131D-KIER-HRR-M5_TYS_LOOP-DE-CH-010001 to 010003</p>			
Location			
<p>See Location Plan listed in current Document Issue Sheet or Appendix A. Drawing no. HE570131D-KIER-HRR-M5_TYS_LOOP-DE-CH-010001 to 010003.</p>			
Site Address	M5 J18 T, Y & S Loop		
Site Photographs			
N/A			
OSGR, MP or	From	352520.337, 178098.331	To 354054.942, 178893.695
Str Key / Name	Str Key	Structure Name	
13454		Gantry G141E	
13455		Gantry G142E	
13456		M5 Southbound Off	
13458		Kings Weston Lane East	
13461		Gantry G9E	
13463		Gantry G10E	
13464		Gantry 11e	
1756		Avonmouth Interchange	
17388		Gantry G24e	
17389		Gantry G17e	
26958		CCTV Mast 00041 48420 SB	
17390		Gantry G18e (A)	
17391		Gantry G18e (B)	
Traffic Management			
<p>Traffic Management arrangements:</p> <p>Traffic Flows:</p> <p>2019 (WebTris) AADT Y LOOP 5268/1 = 9628 (15.5%)</p> <p>2019 (WebTris) AADT S LOOP ON-SLIP 5270/1 = 9967 (22.0%)</p> <p>2019 (WebTris) AADT T LOOP 30360106 = 14642 (19.7%)</p> <p>Speed Limits: The existing speed limit within the scheme extents is National Speed Limit for Motorways (70mph).</p> <p>Cycle / bus Routes: There are no bus or cycle routes through the works area.</p> <p>Traffic Management: Slip closures required for Y loop M5 SB entry and S loop SB entry, Lane 1 and Lane 2 closures for S loop (incl. M5 SB exit slip) as required for verge surveys and Lane 2 closures in both directions for T loop central reserve surveys.</p>			

1 Project Description					
Emergency access: Access will be required by emergency services through Traffic Management at all times.					
Anticipated Working Hours, subject to Traffic Counts			22:00 – 05:00 hrs		
Mobilisation Period	TBC	Anticipated Start Date	TBC	Anticipated End Date	TBC

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3. Scheme Specific Requirements			
	Yes	No	Comments
A pre-start meeting will be mandatory			
Does an H&S file exist?		✓	Vehicle Restraint System information is available in the project file together with vehicle restraint system condition surveys
Site Welfare	✓		Contractor will supply
Security / Segregation	✓		Works are to be undertaken within Chapter 8 Compliant traffic management. TM closures, no plant/equipment to be left on site overnight
Are there any other projects taking place in the vicinity?		✓	Not at time of compiling this pack
Are there any restrictions on vehicle movements?	✓		All site vehicles (incl. delivery vehicles) must abide by the TM requirements and regulations 1. Enter and exit site from the dedicated points; 2. Comply with the designated site safety speed limits; All vehicles within Traffic Management shall comply with the complicity requirements of Chapter 8.
Are there any restrictions on deliveries, waste collection, or storage?	✓		No deliveries to take place unless Traffic Management is in place. No waste shall be stored on site. Waste Carriers Licence required
Are there any parking restrictions?	✓		All vehicles and plant within the works area shall be parked in a safe area clear of access and egress points. All vehicles and plant shall be removed from the carriageway prior to removal of traffic management. No Private vehicles are allowed on site
Height Restrictions	✓		There are overhead electric services and 3no overbridges within the works area. Refer to Appendix C for more details.
Overhead Cables	✓		The Principal Contractor shall measure and record the heights of any overhead power lines present before works commence. The legal minimum height of the overhead cable is 5.2m and 5.8m above roads in accordance with HSE Guidance Note GS6. The Principal Contractor shall develop appropriate method statement for undertaking works in the areas of any identified height restrictions.
Structures	✓		Contractor to consult affected structures listed in appendix C and check information supplied within package handover regarding height clearances required
Will fire precautions be required?	✓		Suitable fire precautions shall be in place and in accordance with the Contractors hot works permit.
Are emergency procedures and means of escape required?	✓		The Contractor shall ensure that emergency procedure plans are in place and all staff have been inducted. Nearest A & E hospital: Southmead Hospital, Southmead Rd, Bristol BS10 5NB. Tel No: 0117 950 5050

3. Scheme Specific Requirements			
	Yes	No	Comments
Are there any areas in or around the site classified as no-go areas?	√		No site personnel shall enter the safety zones or tapers within the extents of the traffic management unless trained and competent for installation/removal/maintenance of TM. Provision of minimum 20m Pedestrian worker Exclusion zone, behind and in front of Operating Road Sweeper to be in place. Sub-Contractor's Method Statements and Risk Statements shall contain suitable risk control to protect pedestrian workers and plant operators.
Are there any noise restrictions?	√		Guidance and the Code of practice for Noise and Vibration control and be found clearly outlined in PPG 24 and BS5228:2014. If contractor feels the scope of the works will fall outside of the guidance offered within these documents, he is advised to apply for a Section 61 prior to the commencement of works.
Are temporary works required?		√	N/A
Are there any vibration restrictions?	√		Contractor to ensure limits for human response to vibration and cosmetic damage comply with guidance as clearly defined in BS5228:2014 Part 2. Contractor to ensure risk assessments and tool box talks are delivered to all staff and fully understood prior to work commencing.
Are there any poor or hazardous ground conditions		√	N/A
Are there any unstable structures?		√	N/A
Are there any areas classed (existing or designed) classed as confined spaces?		√	N/A
Are there any smoking restrictions?	√		No smoking is allowed on site. Designated smoking areas to be confirmed during site inductions.
Any environmental constraints identified?		√	

Materials and Substances with Health and/or Safety Hazards

Asbestos

If Asbestos Containing Materials are found during construction, all works shall stop immediately and the area is to be isolated from the workforce. The Contractor must inform the Principal Contractor, who will then implement the necessary emergency response procedures in line with the Company policy. Under no circumstances will the Contractor attempt to remove any Asbestos Containing Materials without prior consent from the overseeing organisation.

Lead

Scope of Works are unlikely to encounter lead. Consider existing paint coatings to bridge beams

Tar based pavement/surfacing

Presence of tar is unknown in this location due to the lack of historic core data.

Leptospirosis/Weil's disease / Psittacosis

Contact with highway drainage during works presents potential risk of Weil's disease. The Contractor is to ensure sufficient welfare facilities are in place at all times. All appropriate PPE must always be worn.

Any instances of illness / sickness on site should be reported to the Site Manager/Principal Contractor Representative immediately and the persons affected should seek medical advice.

COVID-19 pandemic

The Contractor is to ensure they are protecting their workforce and minimising the risk of spread of infection. They must comply with the latest Government advice on working safely during coronavirus covid-19 which is currently available at <https://www.gov.uk/guidance/working-safely-during-coronavirus-covid-19/construction-and-other-outdoor-work>. Further guidance is given in the Construction Leadership Council's "Construction Sector – Site Operating Procedures". The latest version may be found at <http://cic.org.uk/important-documents.php>

The health and safety requirements of any construction activity must not be compromised. If an activity cannot be undertaken in line with social distancing being implemented, or by exception, safely, without risk and mitigating measures then it shall not take place.

4. Existing Services					Refer to STATS plans listed in Document Issue Sheet or Appendix A
Statutory Undertaker	Not Present	Over head	Under ground	Comments	
Electricity					
400/132kV [pylons]		√		See Enclosed C2 returns	
66kV	√			See Enclosed C2 returns	
33kV	√			See Enclosed C2 returns	
11kV			√	See Enclosed C2 returns	
240/415Volts			√	See Enclosed C2 returns	
Water (Foul and Potable)					
Public Foul			√	See Enclosed C2 returns	
Pressurised Foul			√	See Enclosed C2 returns	
Public Combined Gravity	√			See Enclosed C2 returns	
Pressurised Combined	√			See Enclosed C2 returns	
Culverted Watercourse			√	See Enclosed C2 returns	
Water Main	√			See Enclosed C2 returns	
Aqueduct	√			See Enclosed C2 returns	
Communications					
Communications			√	See Enclosed C2 returns	
British Telecom					
British Telecom			√	See Enclosed C2 returns	
National Grid					
National Grid	√			See Enclosed C2 returns	
Transco					
LP Mains	√			See Enclosed C2 returns	
MP Mains	√			See Enclosed C2 returns	
IP Mains	√			See Enclosed C2 returns	
LHP Mains	√			See Enclosed C2 returns	
NHP Mains	√			See Enclosed C2 returns	
Government Pipelines					
Government Pipelines			√	See Enclosed C2 returns	
Fisher German Pipelines					
Fisher German Pipelines	√			See Enclosed C2 returns	
Energis					
Energis	√			See Enclosed C2 returns	
Motorway Communication					
Motorway Comms			√	See Enclosed C2 returns	
Street Lighting					
Street lighting			√	See Enclosed C2 returns	
Highway Drainage					
			√	See Enclosed C2 returns	
Other					
Virgin Media	√			See Enclosed C2 returns	
Vodafone	√			See Enclosed C2 returns	
Gigaclear PLC	√			See Enclosed C2 returns	

5. Health and Safety file requirements

All information will be produced in an electronic format. The format of the electronic data issued is to be as follows: All documents and product data sheets are to be in PDF format, drawings are to be in PDF and AutoCAD DWG format.

The Principal Contractor shall collate all appropriate information as it becomes available, and this shall subsequently be collated in the File. The Principal Contractor is to implement an early procedure that advises contractors and materials suppliers of the detailed requirements for this record information. The health and safety file will be created and/or updated in accordance with the requirements of the IAN105/08.

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Author: Highways CDM Team	Version Date: October 2019	Version: 1.0
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See Document Issue Sheet for Location Plan

Appendix B - Construction Drawings

See Document Issue Sheet for list of current scheme drawings, alternately list below.

Reference	Rev	Title
HE570131D-KIER-HRR-M5_TYS_LOOP-DE-CH-0100-01	C2	Loop Surveys (Sheet 1 of 3)
HE570131D-KIER-HRR-M5_TYS_LOOP-DE-CH-0100-02	C2	Loop Surveys (Sheet 2 of 3)
HE570131D-KIER-HRR-M5_TYS_LOOP-DE-CH-0100-03	C2	Loop Surveys (Sheet 3 of 3)

Appendix C – Existing Records and As-Built Drawings

See Document Issue Sheet for list of existing records and as-built drawings, alternately list below.

Reference	Rev	Title	Company
Structures	-	Appendix E – Scheme 2 List of all structures throughout scheme extents	Kier Highways
Drainage	C2	HE570131D-KIER-HDG-M5_TYS_LOOP-DE-CH-0500-01	Kier Highways
Drainage	C2	HE570131D-KIER-HDG-M5_TYS_LOOP-DE-CH-0500-02	Kier Highways
Drainage	C2	HE570131D-KIER-HDG-M5_TYS_LOOP-DE-CH-0500-03	Kier Highways

Appendix D - Statutory Undertaker Drawings

See Document Issue Sheet for list of statutory undertaker drawings, alternately list below.

Reference	Rev	Title	Company
Stats	C2	HE570131D-KIER-GEN-M5_TYS_LOOP-DE-CH-0000-01	Various
Stats	C2	HE570131D-KIER-GEN-M5_TYS_LOOP-DE-CH-0000-02	Various
Stats	C2	HE570131D-KIER-GEN-M5_TYS_LOOP-DE-CH-0000-03	Various

Appendix E – Overhead cables

See GS6 Measurements and Essential Safety Data, or alternately list below.

If overheads cables are identified they should be clearly marked on the contract drawings.

Appendix F - List of Structures

Structure	Type	Location Ref	Str key	OSGR
Gantry G141E	Sign/Signal Gantry	140.30	13454	353960, 178830
Gantry G142E	Sign/Signal Gantry	140.30	13455	353980, 178810
M5 Southbound Off	Highway Underbridge	140.60	13456	353860, 178690
Kings Weston Lane Culvert	Small Span Structure	141.00	34464	353691, 178251
Kings Weston Lane East	Highway Overbridge	141.10	13458	353670, 178230
Gantry G9E	Sign/Signal Gantry	141.10	13461	353680, 178240
Gantry G10E	Sign/Signal Gantry	141.30	13463	353500, 178050
Gantry 11e	Sign/Signal Gantry	141.60	13464	353220, 177980
Avonmouth Interchange	Highway Underbridge	141.70	1756	352940, 178040
Gantry G24e	Sign/Signal Gantry	141.90	17388	352990, 178030
Avonmouth Interchange Culvert 'C'	Small Span Structure	142.00	15758	353092, 178021
Avonmouth Link Road Culvert	Small Span Structure	142.00	15757	353099, 177989
Gantry G17e	Sign/Signal Gantry	142.00	17389	352810, 178070
CCTV Mast 00041 48420 SB	CCTV Mast	142.10	26958	352750, 178055
Gantry G18e (A)	Sign/Signal Gantry	142.30	17390	352590, 178080
Gantry G18e (B)	Sign/Signal Gantry	142.30	17391	352620, 178100

Appendix G - Asbestos Action Plans

Refer to 019 AAP M5 J17 J19

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

Project Title:	M5 J18 T, Y & S Loop	Kier Highways Job No.:	570131D
Project Description:	<p>This DHIRRS is specifically prepared for the proposed survey works within the central reserve; Northbound and Southbound verges, between and on slip roads. The survey works will include;</p> <ul style="list-style-type: none"> - Topographical Survey - Drainage surveys including, manholes surveys and CCTV surveys of pipework. - Trial Pits - Cores - Asbestos management / refurbishment survey <p>Refer to survey drawings; HE570131D-KIER-HRR-M5_TYS_LOOP-DE-CH-010001 to 010003</p>		
Design Discipline:	Highways – Renewal of Roads		
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'**

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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	
1.	Existing Environment				
1.1	Existing buildings	X			
1.2	Previous/existing land/ structures			X	3 Existing highway structures throughout the scheme; Structure number 13456 – 'M5 Southbound Off', 1756 – 'Avonmouth Interchange' & 13458 – 'Kings Weston Lane East'
1.3	Roadways			X	Site access must be strictly through designated access and egress points from the main carriageway
1.4	Railways	X			
1.5	Water course			X	There are 2no culverted watercourses which flow beneath the M5 carriageway within the scheme extents. All working near water precautions must be taken.
1.6	Ground conditions:	X			
	• Contamination	X			
	• Ground water	X			
	• Instability	X			
	• Mineral / mine workings	X			
1.7	Access restrictions		X		Live traffic will be present on the M5 under traffic management with a restricted speed limit
1.8	Adjacent properties	X			There are no properties adjacent to the carriageway along the works area.
1.9	Concurrent site activities			X	There will be different types of survey works taking place throughout the duration of the works within the site extents.
1.10	Interface with the public			X	Live traffic will be present on the M5.
1.11	Occupied premises	X			
1.12	Structural instability	X			
1.13	Fragile materials	X			
1.14	Hazardous materials		X		Construction materials to be used in accordance with method statements, Risk Assessments & COSHH assessments
1.15	Land use	X			
1.16	Traffic			X	Works undertaken will require lane possessions to be applied for. TM will be installed in accordance with TSM Chapter 8.

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
1.17	Night Time Working			X	Works are to be completed at night leading to increased risks of slips, trips and falls.
2.	Existing Services				
2.1	Underground				
	• Electrical			X	Low voltage underground electric cables present within the works area. Refer to Statutory Undertakers Plans and Appendix E for more details.
	• Gas			X	Medium pressure apparatus present within the scheme. Contractor to ensure apparatus have been clearly located and have liaised with owner regarding any/all exclusion zones to be complied with.
	• Water (Asbestos pipes?)			X	There are water mains services which cross the carriageway and present within the works area.
	• Telecommunications			X	Apparatus have been identified within the scheme boundaries. Contractor to check C2's (if older than 6 months reapply) and ensure area is CAT and GENIE scanned prior to commencing coring. Contractor to following guidance within HSG 47
	• Loops			X	Motorway communications / loops are present within the works area.
2.2	Overhead Services				
	• Electrical		X		There are overhead electric cables present within the area of works and cross the site in 2 locations. Contractor is to obtain the safe working height prior to the start of the works. (Refer to Statutory undertakers records within the Survey Documentation)
	• Telecommunications	X			
	• Others (insert as necessary)	X			
3.	Earthworks	X			

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

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
5.8	Maintenance				
5.9	Contamination				
5.10	Others (insert as necessary)				
6.	Drainage Works	X			
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)				
7.	Highways				
7.1	Traffic management			X	Slip closures required for Y loop M5 SB entry and S loop SB entry, Lane 1 and Lane 2 closures for S loop (incl. M5 SB exit slip) as required for verge surveys and Lane 2 closures in both directions for T loop central reserve surveys.
7.2	Adjacent traffic		X		Live traffic present on M5 during TM setup / removal and during the works under traffic management with a restricted speed limit.
7.3	Construction materials		X		Access to the site will be provided within the TM setup for all deliveries / waste removal. All materials to be installed and handled by competently trained operatives only. Refer to Control of Substances Hazardous to Health (COSHH) assessments.
7.4	Structural works			X	Push and pull test to be carried out by competent person.

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
7.5	Adjacent structures			X	Location of overbridges are highlighted on the construction drawings. Refer to Appendix B in PCI for details.
7.6	Noise		X		All site operatives to be provided with suitable and sufficient PPE and appropriate control measures are to be adopted to minimise duration of exposure to upper noise limits.
7.7	Vibration		X		Suitable control measures are to be adopted to avoid Hand Arm Vibration (HAV) or reduce the duration of exposure.
7.8	Coal TAR in pavement		X		Pavement investigations including trial holes and cores will be undertaken across the scheme extents, which will be subject to PAK testing to determine whether TBM's are present.
7.9	Night work			X	Works are to be completed at night leading to increased risks of slips, trips and falls. Task lighting to be provided by Contractors as appropriate.
8.	Steelwork Construction	X			
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	X			
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				

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
9.8	Materials				
9.9	Maintenance				
9.10	Joints (scabbling should not be undertaken)				
9.11	Others (insert as necessary)				
10.	Masonry Construction	X			
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	X			
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)				
12.	Cladding	X			
12.1	Lifting operations				
12.2	Manual handling				
12.3	Maintenance / cleaning				
12.4	Others (insert as necessary)				
13.	Glazing	X			
13.1	Manual handling				
13.2	Lifting operations				
13.3	Cleaning / maintenance				

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
13.4	Others (insert as necessary)				
14.	Mechanical/Electrical Systems	X			
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	X			
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)				
16.	Demolition of Existing Structures	X			
16.1	Services				
16.2	Adjacent / adjoining structures				
16.3	Materials:				
	<ul style="list-style-type: none"> 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				

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
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	X			
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.	X			
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.	Use of the structure as a workplace	X			
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				

Part B: Hazard Elimination Checklist

Project Title:	570131D Priority VRS VM Development Batch 1 – M5 J18 T, Y & S Loop		Kier Highways Job No.:	570131D
Project Description:	<p>This DHIRRS is specifically prepared for the proposed survey works within the central reserve; Northbound and Southbound verges, between and on slip roads. The survey works will include;</p> <ul style="list-style-type: none"> - Topographical Survey - Drainage surveys including, manholes surveys and CCTV surveys of pipework. - Trial Pits - Cores - Asbestos management / refurbishment survey <p>Refer to survey drawings; HE570131D-KIER-HRR-M5_TYS_LOOP-DE-CH-010001 to 010003</p>			
Design Discipline:	Highways – Renewal of Roads	Prepared By:		

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:

Name	
Signature	
Position	

* **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 1.16 7.1 7.2	Roadways Traffic Traffic Management Adjacent Traffic	Working adjacent to live carriageway. Harm to operatives from public ignoring signage/TM.	1,2	Traffic management proposed to create a safety zone between work force and users. All work is to be undertaken using night time part route closures. TM design/set up is to ensure cone spacing prevents public access. An 'airlock' system should be in place to prevent unauthorised access.	The risk is reduced but still a residual risk remains and shall be conveyed to contractor(s) via the construction drawings and design information pack.	No further comment.	PC
1.2 7.5	Structures Adjacent Structures	Overbridges within works area. Height restrictions.	1	Location of overbridges are highlighted on the construction drawings. Refer to Appendix C in PCI for details. Contractor to obtain safe working heights prior to the start of the works.	The risk is reduced but still a residual risk remains and shall be conveyed to contractor(s) via the construction drawings and design information pack	No further comment.	PC
2.1 2.2	Existing services underground. Existing services overground.	Operatives/ plant/ equipment striking existing underground and overground services.	1	Refer to STATS information for further details. Work to be carried out in accordance with HSG 47. Note the presence of all Statutory Undertakers services and mark them on ground prior to the start of the works.	The risk is reduced but still a residual risk remains and shall be conveyed to contractor(s) via the construction drawings and design information pack	No further comment.	D/PC
1.17 1.19 7.9 6.14	Night-time working Plant Movement Night-work Lighting	Poor visibility increasing risk of slips, trips and falls. Collision of site vehicles and site staff in darkness hours.	1	Suitable task or temporary lighting to be provided at all stages of the scheme works. Suitable PPE is to be worn at all times, including appropriate footwear/clothing for the tasks being carried out.	The use of temporary lighting reduces the risk to an acceptable level. Banksman to be used for reversing vehicles where appropriate. All staff to wear appropriate PPE	No further comment.	PC
1.18	Asbestos	Exposure to ACMs	1	Previous AAP's show ACM's are presumed present in nearside verges within electrical boxes. However, asbestos materials are unlikely to be encountered as part	A residual risk remains and shall be conveyed to contractor(s) via the construction drawings and design information pack	No further comment.	PC