

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 - OVERHEAD ELECTRICITY CABLES  
HS-02 - GAS PIPELINE  
HS-03 - OVERBRIDGE  
HS-04 - WATERCOURSE  
HS-05 - UNDERBRIDGE  
HS-06 - TRAFFIC LOOPS

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  - FOR DRAINAGE SERVICES INFORMATION REFER TO DRAWING NO. HE570131D-KIER-HRR-M5\_207.5\_217.5-DE-CH-500-01 TO 11. NO GUARANTEE IS GIVEN TO ITS ACCURACY.
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HE570131D-KIER-HRR-M5\_207.5\_217.5\_CR\_A-VTO-CH-0001  
HE570131D-KIER-HRR-M5\_207.5\_217.5\_CR\_A-VPS-CH-0001  
HE570131D-KIER-HRR-M5\_207.5\_217.5\_CR\_A-VUT-CH-0001  
HE570131D-KIER-HRR-M5\_207.5\_217.5\_CR\_A-VOS-CH-0001  
HE570131D-KIER-VAB-M5\_207.5\_217.5\_CR\_A-SU-CH-0001

KEY	
ELECTRICITY OVERHEAD	— EOH+ — EOH+ —
ELECTRICITY UNDERGROUND	— E — E —
SEWERS	— F — F —
TELECOM	— T — T —
MOTORWAY COMMS	— MC — MC —
MARKER NODES	●
TRAFFIC LOOPS	□
DSTCB	— DSTCB —
SSTCB	— SSTCB —
SSOBB	— SSOBB —
GA/74	— GA/74 —
CSB	— CSB —

- CHANGE IN VRS TYPE
- SURVEY AREA (TOPOGRAPHICAL, DUCT, DRAINAGE AND ASBESTOS REFRUBISHMENT SURVEY)
  - MANHOLE
  - CATCHPIT
  - TRIAL HOLE SURVEY SOIL SAMPLING
  - TRIAL HOLE SURVEY (STRUCTURES) & SOIL SAMPLING & DCP
  - TRIAL HOLE SURVEY (STRUCTURES)
  - SOIL SAMPLING

C2	SURVEY SCOPE REDUCTION	GR	MRO	29/06/2021
P1	FIRST ISSUE	SC	SR	28/01/2021
REV	DETAILS	CHKD	APPD	DATE

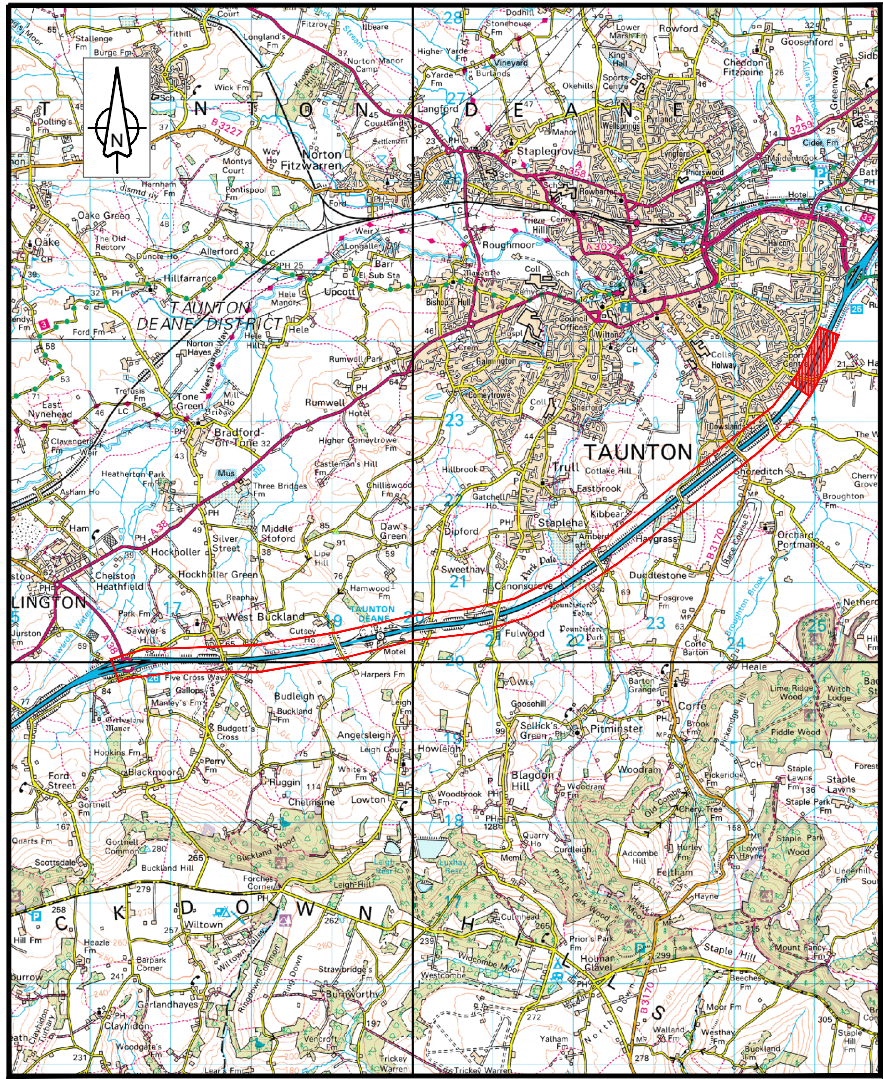
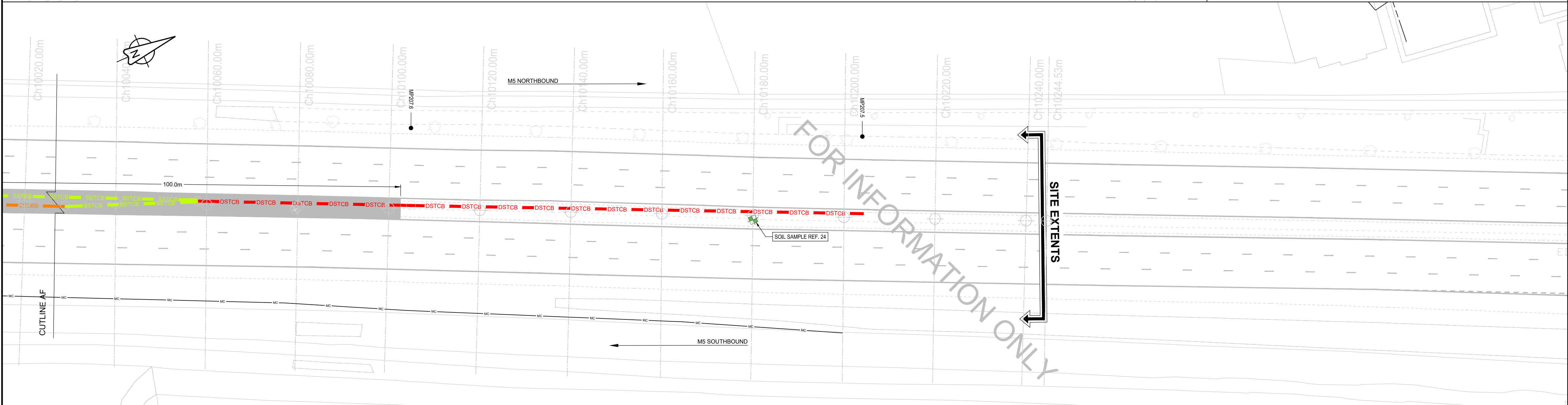
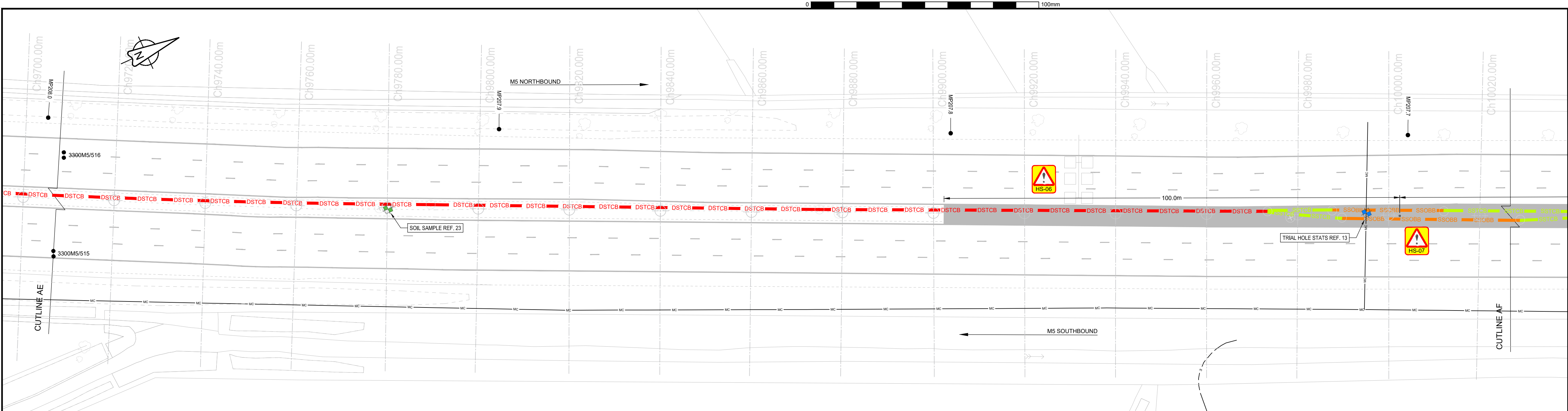


SCHEME NAME	570131D VRS GATEWAY 1A STUDY 2020-2021 SCHEME 607 M5 J25 TO J26 MP 207.5-217.5 CENTRAL RESERVATION SURVEYS (SHEET 10 OF 11)
DRAWING TITLE	

DRAWN : SB	SCALE : 1:500	DRAWING STATUS
DESIGN : SB	DIMENSIONS : m	WORK IN PROGRESS
CHKD : SC	ORIG DWG SIZE : A1	PRELIMINARY DRAWING
APPD : SR	COPYRIGHT © KIER	EXTERNAL ISSUE
DATE : 28/01/2021		AS-BUILT
SUITABILITY : A	FOR CONSTRUCTION	

DRAWING NUMBER	PROJECT	ORIGINATOR	VOLUME	SCHEME REFERENCE No.
HE570131	-	KIER	- HRR	HE570131
M5_207.5_217.5 - DE - CH -	010010	LOCATION	TYPE	REVISION
		NUMBER		C 2






LOCATION PLAN  
NTS










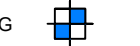

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HS-06 - TRAFFIC LOOPS  
HS-07 - M51 SIGN

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HE570131D-KIER-HRR-M5\_207.5\_217.5\_CR\_A-VTO-CH-0001  
HE570131D-KIER-HRR-M5\_207.5\_217.5\_CR\_A-VPS-CH-0001  
HE570131D-KIER-HRR-M5\_207.5\_217.5\_CR\_A-VIT-CH-0001  
HE570131D-KIER-HRR-M5\_207.5\_217.5\_CR\_A-VDS-CH-0001  
HE570131D-KIER-VAB-M5\_207.5\_217.5\_CR\_A-SU-CH-0001

KEY	
MOTORWAY COMMS	MC
MARKER NODES	•
TRAFFIC LOOPS	
DSTCB	
SSTCB	
SSOBB	
GA/74	
CSB	
CHANGE IN VRS TYPE	
SURVEY AREA (TOPOGRAPHICAL, DUCT, DRAINAGE AND ASBESTOS REPAIR/RENEWAL SURVEY)	
MANHOLE	
CATCHPIT	
TRIAL HOLE SURVEY SOIL SAMPLING	
SOIL SAMPLING	

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C2	SURVEY SCOPE REDUCTION	GR	MRO	29/06/2021
P1	FIRST ISSUE	SC	SR	28/01/2021
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PROJECT	ORIGINATOR	VOLUME		HE570131	
HE570131	KIER	HRR			
M5_207.5_217.5 - DE - CH -		010011		REVISION	
LOCATION	TYPE	ROLE	NUMBER		
				C 2	



CLIENT

AGENT

SCHEME NAME

570131D VRS GATEWAY 1A STUDY 2020-2021  
SCHEME 607 M5 J25 TO J26 MP 207.5-217.5

DRAWING TITLE

CENTRAL RESERVATION SURVEYS  
(SHEET 11 OF 11)

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SUITABILITY: A	FOR CONSTRUCTION	



**Kier Highways Project No: 570131D**  
**Client Reference No: 570131D**  
**Priority VRS VM Development Batch 1**  
**A30 Carminow Cross-Helland MP 95/210 - 96/115**  
**Pre-Construction Information**

Are Works to be carried out under the Commission / Contract Health and Safety Plan?	Yes	No
		X
Is the Scheme notifiable under the CDM Regulations 2015?		
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

<b>Project type as categorised by GG104 (if applicable to contract / delete in not required)</b>	<b>A, B or C</b>
* 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.

		Date
Prepared by: Designer		28/06/2021
Reviewed by; Design Team Lead		28/06/2021
Accepted by: Scheme PD		28/06/2021

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



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Author: Highways CDM Team	Date: October 2019	Version: 1.0
As part of our system review, this document is valid until April 2021		



Site Specific Hazards Identified in Design		
<p><b><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></b></p> <p><b>Note – Consideration to be given to all ‘populations’ affected, Workers, Users, Other Parties.</b></p>		
Activity	Residual Hazard	Comments
Trial Hole 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	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.
All activities	Covid 19	Government guidelines on social / physical distancing to be incorporated into RAMS

1 Project Description					
<b>Scope of Works</b>					
<p>This PCI is specifically prepared for the proposed survey works within the central reserve.</p> <p>The survey works will include;</p> <ul style="list-style-type: none"> <li>- Topographical Survey</li> <li>- Drainage surveys including, manholes surveys and CCTV surveys of pipework.</li> <li>- Trial Pits including soil sampling &amp; DCP</li> <li>- An asbestos management / refurbishment survey.</li> </ul> <p>Refer to survey drawings; HE570131D-KIER-VGN-A30_MP_95-97_CR-DR-CH-010002.</p> <p>This scheme extents;</p> <ul style="list-style-type: none"> <li>- A30 MP 95.140 – MP 96.115 CH00m – CH980m</li> </ul>					
<b>Location</b>					
<p>This scheme is located on the A30 east of Bodmin in Cornwall. 60m westbound of Carminow Cross A38/2.90 6425 over bridge and 50m westbound of Higher Margate Accom A30/364.80 9637 over bridge (MP 95/210 to 96/115) The length of this scheme is 980m.</p>					
Site Address		A30 MP 95/140 – 96/115 (Bodmin, Cornwall)			
<b>Site Photographs</b>					
N/A					
<b>OSGR, MP or</b>		From	208922.450, 65609.316	To	208742.889, 66561.427
<b>Str Key / Name</b>		Str Key	Structure Name		
Carminow Cross over bridge - Structure No. A38/2.90 Structure Key: 6425					
<b>Traffic Management</b>					
<p><b>Traffic Management arrangements:</b></p> <p><b>Traffic Flows:</b></p> <p>2019 (WebTris) AADT EB 5060/1 = 18,986 (10.5%)</p> <p>2019 (WebTris) AADT WB 5061/1 = 18,225 (9.9%)</p> <p><b>Speed Limits:</b> The existing speed limit within the scheme extents is National Speed Limit for dual carriageways (70mph).</p> <p><b>Cycle / bus Routes:</b> There are no bus or cycle routes through the works area.</p> <p><b>Traffic Management:</b> Works will be undertaken with a night time part carriageway/road closures.</p> <p><b>Emergency access:</b> Access will be required by emergency services through Traffic Management at all times.</p> <p>Traffic Management will be subject to risk assessment by HE contractors.</p>					
Anticipated Working Hours, subject to Traffic Counts				TBC	
<b>Mobilisation Period</b>					
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?		✓	
Site Welfare	✓		Site Welfare provisions to be provided by contractor.
Security / Segregation		✓	The Principal Contractor shall provide adequate security to the site.
Are there any other projects taking place in the vicinity?		✓	Not at the 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 conspicuity 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 services and 1 no overbridges within the works area. Contractor to check C2 returns with apparatus present on site are present and correct, contractor to agree safe systems of work following consultation with all statutory undertakers and asset owners
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	✓		Carminow Cross over bridge - Structure No. A38/2.90 Structure Key: 6425
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. One lane will remain serviceable throughout the works duration for emergency services at all times. Nearest A&E hospital: Royal Cornwall Hospital, Treliske, Truro TR1 3LQ



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 can 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?		✓	None
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		✓	None are anticipated – All works will be carried out within carriageway and central reservation area.
Are there any unstable structures?		✓	None
Are there any areas classed (existing or designed) classed as confined spaces?	✓		Drainage surveys will be taking place.
Are there any smoking restrictions?	✓		No smoking is allowed on site. Designated smoking areas to be confirmed during site inductions.
Any environmental constraints identified?		✓	None.

## Materials and Substances with Health and/or Safety Hazards

### 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.

### 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 resurfacing works potential risk of Weil's disease. The Contractor is to ensure sufficient welfare facilities are in place at all times. All appropriate PPE must be worn at all times.

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.



4. Existing Services Refer to STATS plans listed in Appendix C				
Statutory Undertaker	Not Present	Over head	Under ground	Comments
<b>Electricity</b>				
400/132kV [pylons]	x			C2 Returns and drawings listed in Appendix C
66kV	x			
33kV	x			
11kV		x	x	
240/415Volts			x	
<b>Water (Foul and Potable)</b>				
Public Foul	x			C2 Returns and drawings listed in Appendix C
Pressurised Foul	x			
Public Combined Gravity	x			
Pressurised Combined	x			
Culverted Watercourse	x			
Water Main			x	
Aqueduct	x			
<b>Communications</b>				
Communications			x	C2 Returns and drawings listed in Appendix C
<b>British Telecom</b>				
British Telecom		x		C2 Returns and drawings listed in Appendix C
<b>National Grid</b>				
National Grid		x		C2 Returns and drawings listed in Appendix C
<b>Transco</b>				
LP Mains	x			
MP Mains	x			
IP Mains	x			
LHP Mains	x			
NHP Mains	x			
<b>Government Pipelines</b>				
Government Pipelines	x			
<b>Fisher German Pipelines</b>				
Fisher German Pipelines	x			
<b>Energis</b>				
Energis	x			
<b>Motorway Communication</b>				
Motorway Comms	x			
<b>Street Lighting</b>				
Street lighting	x			
<b>Highway Drainage</b>				
			x	C2 Returns and drawings listed in Appendix C
<b>Other</b>				

**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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Refer to drawing no. HE570131D-KIER-VGN-A30\_MP\_95-97\_CR-DR-CH-010002

## Appendix B - Construction Drawings

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

Reference	Rev	Title
HE570131D-KIER-VGN-A30_MP_95-97_CR-DR-CH-010002	C2	CENTRAL RESERVATION SURVEYS

## 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
208/8/B6/621/C	C	CARMINOW CROSS A38 BRIDGE – COLUMNS CONCRETE	DEVON CC
208/8/B6/623/C	C	CARMINOW CROSS A38 BRIDGE – COLUMNS ROW C REINFORCEMENT	DEVON CC
208/8/B6/602/B	B	CARMINOW CROSS A38 BRIDGE – GENERAL ARRANGEMENT	DEVON CC

## Appendix D - Statutory Undertaker Drawings

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

Reference	Rev	Title	Company
HE570131D-KIER-GEN-A30_MP_95-97_CR-DR-CH-010001	C2	STATUTORY UNDERTAKERS PLANT	All stats combined
20210819-TOPO1250_A30-0598	-	C2 STATS Service Locations	PROVE-IT / Kier
20210819-TOPO1250_A30-0599	-	C2 STATS Service Locations	PROVE-IT / Kier
20210819-TOPO1250_A30-0600	-	C2 STATS Service Locations	PROVE-IT / Kier
20210819-TOPO1250_A30-0601	-	C2 STATS Service Locations	PROVE-IT / Kier
20210819-TOPO1250_A30-0602	-	C2 STATS Service Locations	PROVE-IT / Kier
20210819-TOPO1250_A30-0604	-	C2 STATS Service Locations	PROVE-IT / Kier

**Appendix E – Overhead cables**

See GS6 Measurements and Essential Safety Data and Appendix B and D for locations of overhead services.

**Appendix F - List of Structures**

Structure	Type	Location Ref	Str key	OSGR
Carminow Cross	Overbridge	A38/2.90	6425	208922,65663
Higher Margate	Overbridge	A30/364.80	9637	208721,66606

**Appendix G - Asbestos Action Plans**

ANNEX NO 3 - GENERIC ASBESTOS ACTION PLAN (AAP)



**General Note:**

During the design stages of a project, designers are required to maintain a “**Hazard Elimination Checklist**” (part B of this document). The ‘checklist’ records the various significant (high risk) hazards identified by the designer(s) and, where they have been able, details of how they have been eliminated.

It is recognised that not every hazard can be ‘designed out’ and therefore the checklist will also be used to record the residual risks of which the designer(s) are aware.

The checklist provides an audit trail of the design process and may also be used as evidence in the event that a designer is required to defend his or her actions in any HSE investigation.

Copies of parts A and B should be passed to all members of the project team, especially the Principal Designer.

Reference must also be made to GG104 Requirements for safety risk assessment.

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

<b>Project Title:</b>	<b>570131D Priority VRS VM Development Batch 1 –A30 Carminow Cross-Helland MP 95/210 - 96/115</b>	<b>Kier Highways Job No.:</b>	<b>570131D</b>
<b>Project Description:</b>	<p>This DHIRRS is specifically prepared for the proposed survey works within the central reserve. The survey works will include;</p> <ul style="list-style-type: none"> <li>- Topographical Survey</li> <li>- Drainage surveys including, manholes surveys and CCTV surveys of pipework.</li> <li>- Trial Pits including soil sampling &amp; DCP</li> <li>- An asbestos management / refurbishment survey</li> </ul> <p>Refer to survey drawings; HE570131D-KIER-VGN-A30_MP_95-97_CR-DR-CH-010002.</p> <p>This scheme extents; A30 MP 95.140 – MP 96.115 CH00m – CH980m</p>		
<b>Design Discipline:</b>	<b>Highways – Renewal of Roads</b>		
<b>Project Type as determined by GG104 (if applicable)</b>	<b>A, B or C</b>	<b>Prepared By:</b>	<b>[REDACTED]</b>

**Notes:**

1. This section of the document includes a list of potential hazards pertaining to a wide range of situations which may occur across Kier Highways' activities. *Where particular categories do not ordinarily affect the scheme, **Part A should be edited/sections deleted to more accurately reflect the work carried out.***
2. An individual item or a whole section (by ticking the heading) can be noted as not applicable showing you have considered the hazard area and judged it to be not applicable.
3. The list of potential hazards is not exhaustive, and all sections can be added to, or additional sections added, as required. Reference to the Approved Code of Practice may be helpful.
4. All items considered by the designer as having a potential high risk must be addressed on the 'Hazard Elimination Management Schedule'. Low risk activities can also be included if considered appropriate.
5. Consideration must be given to all populations that may be affected as follows -

<b>Population 1</b> – People directly employed by the Client and who work on the site e.g. Traffic Officers.	<b>'Workers'</b>
<b>Population 2</b> – People in a contractual relationship with the client.	
<b>Population 3</b> – Other parties, including road users, the police and emergency services and non-motorised 'Users' such as equestrians, cyclists and pedestrians, as well as those others not in a contractual relationship with the client, such as privately contracted vehicle recovery and vehicle repair providers.	<b>'Users'</b>

**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'**

FOR INFORMATION ONLY

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	✓			
1.2	Previous/existing land/ structures			✓	Location of overbridge are highlighted on the construction drawings. Refer to Appendix C in PCI for details.
1.3	Roadways		✓		Working on live dualcarriageway road. Trunk road traffic to be managed by compliant Chapter 8 TM
1.4	Railways	✓			
1.5	Water course	✓			
1.6	Ground conditions:	✓			
	• Contamination				
	• Ground water				
	• Instability				
	• Mineral / mine workings				
1.7	Access restrictions		✓		Working on live dualcarriageway road. Trunk road traffic to be managed by compliant Chapter 8 TM
1.8	Adjacent properties	✓			
1.9	Concurrent site activities		✓		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		✓		Possibility of private vehicles entering the works area. Provide dedicated Chapter 8 compliant access/egress points.
1.11	Occupied premises	✓			
1.12	Structural instability	✓			
1.13	Fragile materials	✓			
1.14	Hazardous materials		✓		Construction materials to be used in accordance with method statements, Risk Assessments & COSHH assessments
1.15	Land use	✓			
1.16	Traffic		✓		Working on live dualcarriageway road. Trunk road traffic to be

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
1.17	Asbestos	✓			managed by compliant Chapter 8 TM It is not anticipated that asbestos will be encountered as part of the trail hole and topographical survey works, however an asbestos management / refurbishment survey is being undertaken as part of the survey works as part of the design.
2.	Existing Services				Refer to Statutory Undertakers Plans and Appendix E for more details.
2.1	Underground				
	• Electrical		✓		LV & 11KV
	• Gas	✓			
	• Water (Asbestos pipes?)		✓		SSW
	• Telecommunications		✓		VM
	• Others (insert as necessary)				
2.2	Overhead Services				Overhead cables are located within the scheme extents. Information included within the PCI. O/H's also shown on the scheme plans.
	• Electrical		✓		11KV apparatus have been identified within the scheme boundaries. Contractor to check C2's (if older than 6 months reapply) and walk site clearly marking areas containing overhead cables. Contractor to follow guidance within GS6
	• Telecommunications		✓		BT apparatus have been identified within the scheme boundaries. Contractor to check C2's (if older than 6 months reapply) and walk site clearly marking areas containing overhead cables. Contractor to



Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
					follow guidance within GS6
	• Others (insert as necessary)				
<b>3.</b>	<b>Earthworks</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>				
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)	✓			
<b>5.</b>	<b>Services Installation</b>	✓			
5.1	Excavations				
5.2	Ground water				

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
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.	<b>Drainage Works</b>				
6.1	Excavations	✓			
6.2	Ground water	✓			
6.3	Ground conditions	✓			
6.4	Confined spaces		✓		Drainage survey works will be taking place including manhole and pipework CCTV surveys.
6.5	Leptospirosis / Weils disease		✓		Drainage survey works will be taking place including manhole and pipework CCTV surveys. Contractor to 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 A30 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.

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
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	Others (insert as necessary)	✓			
7.	<b>Highways</b>				
7.1	Traffic management		✓		All works to be undertaken by applying lane closures. TM will be installed in accordance with TSM Chapter 8
7.2	Adjacent traffic		✓		TM will be installed in accordance with TSM Chapter 8
7.3	Construction materials		✓		Construction materials to be used in accordance with Method Statements, Risk Assessments, Tool box talks and COSHH guidelines
7.4	Structural works		✓		Measurements to be taken
7.5	Adjacent structures	✓			
7.6	Noise		✓		Noise to be kept to a minimum, idling machinery and vehicles to be kept to a minimum or switched off when not in use. Operatives should receive training to effectively employ techniques to reduce noise. Unnecessary noise should be avoided when carrying out manual operations and when operating plant and equipment. Assessment required of impact on adjacent properties.
7.7	Vibration		✓		Vibrating equipment to be used only by trained and competent personnel. Equipment to only be used for the minimum amount of time necessary. Operator to ensure all LOLER and PPE HSE regulations are complied with whilst operating said

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
					equipment. Equipment to be visually checked prior to each use and maintenance records checked
7.8	Coal TAR in pavement		✓		Operatives to test each location prior to core with PAK Marker spray. If spray turns brown/yellowish colour indicates to operatives PAH compounds down to a level of 150ppm are present. Operatives should then carry out a dynamic risk assessment regarding PPE required as well as location and potential for contamination via leaching arising that may be a by product of the core taking operation.
7.9	Others (insert as necessary)	✓			
8.	<b>Steelwork Construction</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)				
9.	<b>Concrete Construction</b>	✓			
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				



Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
9.10	Joints (scabbling should not be undertaken)				
9.11	Others (insert as necessary)				
<b>10.</b>	<b>Masonry Construction</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>	✓			
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>	✓			
12.1	Lifting operations				
12.2	Manual handling				
12.3	Maintenance / cleaning				
12.4	Others (insert as necessary)				
<b>13.</b>	<b>Glazing</b>	✓			
13.1	Manual handling				
13.2	Lifting operations				
13.3	Cleaning / maintenance				
13.4	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	
<b>14.</b>	<b>Mechanical/Electrical Systems</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>	✓			
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>	✓			
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				

Potential Hazards Arising From:		Risk (without designer's elimination / management measures)			Comments
Ref:		Not Applicable	Low- NO Action Required	High – Action NEEDED	
16.9	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>	✓			
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>	✓			
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>	✓			
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**

<b>Project Title:</b>	570131D Priority VRS VM Development Batch 1 –A30 Carminow Cross-Helland MP 95/210 - 96/115		<b>Kier Highways Job No.:</b>	570131D
<b>Project Description:</b>	<p>This DHIRRS is specifically prepared for the proposed survey works within the central reserve. The survey works will include;</p> <ul style="list-style-type: none"> <li>- Topographical Survey</li> <li>- Drainage surveys including, manholes surveys and CCTV surveys of pipework.</li> <li>- Trial Pits including soil sampling &amp; DCP</li> <li>- An asbestos management / refurbishment survey</li> </ul> <p>Refer to survey drawings; HE570131D-KIER-VGN-A30_MP_95-97_CR-DR-CH-010002.</p> <p>This scheme extents; A30 MP 95.140 – MP 96.115 CH00m – CH980m</p>			
<b>Design Discipline:</b>	Highways – Renewal of Roads	<b>Prepared By:</b>		

**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:

<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, 1.16 7.1, 7.2	Site access. Access restrictions Traffic. Traffic management. Adjacent traffic	Collisions between site traffic and road users, vehicular and non-vehicular. Unauthorised access	1,2	Site access must be strictly through designated access and egress points from the main carriageway marked by green cones. Footways to be stopped up and diversion routes clearly marked. Traffic management to be assessed daily for compliance with TSM Chapter 8 regulations	Risk remains reduced to lowest possible. Principal contractor to check TM daily for compliance to TSM Chapter 8 and ensure it is suitable and sufficient	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	Services	Service strike causing injury, death, burns, explosions	1, 2, 3	Location of underground services within the extents of the works to be identified and protected in accordance with HSG47 and GS6 Contractor to use Statutory Undertakers information in addition to CAT scanning. Contractor to indicate Overhead apparatus with blue cones	Risk remains – details to be provided in PCIP. Principal contractor to employ safe system of work when encountering utility service apparatus	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	Leptospirosis / Weils Disease	Workers exposed to Leptospirosis / 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	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: **
					construction drawings and design information pack		
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.	PC