

**National Highways**  
**Principal Designer Working Group**  
**Meeting No.32**  
**Thursday, 13<sup>th</sup> July 23 – 9.15 am – 12.30 pm.**  
**Teams Call**

**Agenda**

<b>Name</b>	<b>Initials</b>	<b>Position</b>	<b>Organisation</b>
<i>Richard Wilson (Chair)</i>	<i>RW</i>	<i>H&amp;S Director C&amp;P</i>	<i>National Highways</i>
<i>Doug Potter (Secretary)</i>	<i>DP</i>	<i>TA HSW Lead - Principal Designer Manager</i>	<i>Arcadis</i>
<i>Tim Goddard</i>	<i>TG</i>	<i>Principal Designer Manager</i>	<i>Arcadis</i>
<i>Katie Harman</i>	<i>KH</i>	<i>SMP Safety Lead</i>	<i>National Highways</i>
<i>Pav Singh</i>	<i>PSi</i>	<i>Technical Director / Principal Designer Manager</i>	<i>Arcadis</i>
<i>Paul Dennis (part)</i>	<i>PD</i>	<i>A417 Project Manager</i>	<i>Arup</i>
<i>Tim Bowes</i>	<i>TB</i>	<i>Principal Designer Manager</i>	<i>Atkins</i>
<i>Saskia Lear</i>	<i>SL</i>	<i>Principal Designer Manager</i>	<i>Arup</i>
<i>Liz Brathwaite</i>	<i>LBr</i>	<i>Safety Hub Lead</i>	<i>Skanska</i>
<i>Charlotte Cook</i>	<i>CC</i>	<i>WHS Lead</i>	<i>Arcadis</i>
<i>Mark Lawton</i>	<i>MLo</i>	<i>Head of Engineering Surveying and GIS</i>	<i>Skanska</i>
<i>Tim Walker</i>	<i>TW</i>		<i>Galliford Try</i>
<i>Nick Boyle</i>	<i>NB</i>	<i>Technical Manager</i>	<i>Balfour Beatty</i>
<i>Robert Legg</i>	<i>RL</i>	<i>Highways Safety Co.</i>	<i>Motts</i>
<i>Nina Warminger</i>	<i>NW</i>	<i>H&amp;S Manager SWAD</i>	<i>National Highways</i>
<i>Mark Lamport</i>	<i>MLa</i>	<i>Technical Director / Principal Designer Manager</i>	<i>Arcadis</i>
<i>Paul Brown</i>	<i>PB</i>	<i>Technical Manager</i>	<i>WSP Group</i>
<i>Dave Olorenshaw</i>	<i>DO</i>	<i>Area Manager</i>	<i>Kier</i>
<i>Jim Gallagher</i>	<i>JG</i>	<i>Prin Struct. Advisor (SES)</i>	<i>National Highways</i>
<i>Stuart Dawes</i>	<i>SD</i>	<i>H&amp;S Manager A66</i>	<i>National Highways</i>
<i>Martin Partington</i>	<i>MP</i>	<i>Principal Engineering Man.</i>	<i>Jacobs</i>
<i>David Riley</i>	<i>DR</i>	<i>H&amp;S Business Partner</i>	<i>Amey</i>
<i>Liam Burns</i>	<i>LB</i>		<i>National Highways</i>
<i>Andrew Wedderburn</i>	<i>AW</i>	<i>Principal Designer</i>	<i>Pell Frischmann</i>
<i>John Pilkington</i>	<i>JP</i>		<i>WSP</i>
<i>Sophie Gwynne</i>	<i>SG</i>	<i>Graduate Highway Engineer</i>	<i>Arcadis</i>
<i>Noel Gibbin</i>	<i>NG</i>	<i>(CPS Head of Design)</i>	<i>Connect Plus</i>
<i>Jon Webster</i>	<i>JWe</i>	<i>Safety Lead</i>	<i>Kier</i>
<i>Samuel Hogan</i>	<i>SH</i>	<i>Principal Engineering Man.</i>	<i>Balfour Beatty</i>
<i>Robert Butcher</i>	<i>RB</i>	<i>Technical Director CDM</i>	<i>Jacobs</i>
<i>Lee Ward</i>	<i>LW</i>	<i>Principal Designer Manager</i>	<i>Arcadis</i>
<i>Roger Swainston</i>	<i>RS</i>	<i>PD / CDM Advisor</i>	<i>Jacobs</i>
<i>Helen Richardson</i>	<i>HR</i>	<i>NH Regional Lead</i>	<i>National Highways</i>
<i>Sulagna Ghosh</i>	<i>SG</i>	<i>Ass. H&amp;S Rep Leeds</i>	<i>WSP Group</i>

<i>Elizabeth Bennett</i>	<i>EB</i>	<i>Director</i>	<i>Safety in Design</i>
<i>Florus Georgios</i>	<i>FG</i>	<i>H&amp;S Lead</i>	<i>Skanska</i>
<i>Daniel Hassle</i>	<i>DH</i>	<i>H&amp;S Lead</i>	<i>Galliford Try</i>
<i>Graham King</i>	<i>GC</i>	<i>LTC H&amp;S Lead</i>	<i>National Highways</i>
<i>Nicolas Mitchell</i>	<i>NM</i>	<i>PD Advisor</i>	<i>RPS</i>
<i>Neil McKay</i>	<i>NMc</i>	<i>PD Lead</i>	<i>Aecom Highways</i>
<b>Guests:</b>			
<i>Kazi Hassan</i>	<i>MR</i>	<i>SES Drainage Team</i>	<i>National Highways</i>
<i>Andy Bailey</i>	<i>AB</i>	<i>Senior Drainage Engineer</i>	<i>National Highways</i>
<i>Joanna Goulding</i>	<i>JG</i>	<i>Head of Health &amp; Safety Risk, Standards and Assurance</i>	<i>National Highways</i>
<b>Apologies:</b>			
<i>Iain Reidy</i>	<i>IR</i>	<i>Risk Management</i>	<i>National Highways</i>
<i>Nicola Tweedie</i>	<i>NT</i>	<i>SA – Road User Safety</i>	<i>National Highways</i>
<i>Malcolm Shaw</i>	<i>MS</i>	<i>Principal Designer Manager</i>	<i>Arup</i>
<i>Darren Prowting</i>	<i>DPr</i>		
<i>Paul Boddy</i>	<i>PB</i>	<i>Director</i>	<i>Interserve</i>
<i>Stephanie Goldsmith</i>	<i>SG</i>	<i>Senior H&amp;S Advisor</i>	<i>Skanska Infrastr.</i>
<i>Katie Swanick</i>	<i>KS</i>	<i>Contracts Manager</i>	<i>Motts</i>
<i>Aimee Blay</i>	<i>AB</i>	<i>Design Manager</i>	<i>Galliford Try</i>
<i>Thomas Merry</i>	<i>TM</i>	<i>H&amp;S Lead Major Projects</i>	<i>National Highways</i>
<i>Ronan Finch</i>	<i>RF</i>	<i>Principal Designer</i>	<i>WSP</i>
<i>Shaun Pidcock</i>	<i>SP</i>	<i>Director LTC</i>	<i>National Highways</i>
<i>Chris Griffin</i>	<i>CG</i>	<i>Design Innovation Manager</i>	<i>National Highways</i>
<i>Phil Samms</i>	<i>PS</i>	<i>Engineering Man. (Area 3)</i>	<i>Kier</i>
<i>Kevin Morgan</i>	<i>KM</i>	<i>PD / CDM Advisor</i>	<i>Jacobs</i>
<i>Mark Riordan</i>	<i>MoR</i>	<i>Principal Engineering Man.</i>	<i>Amey</i>
<i>Paul Wilkins</i>	<i>PW</i>	<i>Ass. Tec. Director Structures</i>	<i>Arcadis</i>
<i>Dave Townsend</i>	<i>DT</i>	<i>H&amp;S Team Standards</i>	<i>National Highways</i>
<i>Jon Horrill</i>	<i>JH</i>	<i>Principal Designer / H &amp; S</i>	<i>WSP Group</i>
<i>John Migoski</i>	<i>JM</i>	<i>Technical Manager</i>	<i>Network Rail</i>
<i>Suryakant Patel</i>	<i>SP</i>	<i>Principal Designer Manager</i>	<i>Costain</i>
<i>Steve Ristow</i>	<i>SR</i>		<i>Transport for London</i>
<i>Sean Connon</i>	<i>SC</i>	<i>Principal Designer Manager</i>	<i>Costain</i>
<i>Ben Moulton</i>	<i>BM</i>	<i>Safety Lead</i>	<i>Balfour Beatty</i>
<i>David Lumb</i>	<i>DL</i>	<i>Health and Safety Business Partner – RIP North</i>	<i>National Highways</i>
<i>Cora Goodman</i>	<i>CG</i>	<i>H&amp;S Manager YNE</i>	<i>National Highways</i>
<i>Mark Bridges</i>	<i>MBr</i>	<i>Former H&amp;S Hub Lead</i>	<i>Galliford Try</i>
<i>Jordan Flint</i>	<i>JF</i>		<i>Kier</i>
<i>Lawrence Weller</i>	<i>LW</i>	<i>Safety Manager</i>	<i>TfL</i>
<i>James Washington</i>	<i>JWa</i>	<i>Safety Lead</i>	<i>Kier</i>
<i>Owaiz Khan</i>	<i>OK</i>	<i>Technical Manager</i>	<i>MGF</i>

Richard Horan	RH		Telent
Glen Matthews	GM		Kier
Robert Mullen	RM	Asset Information Group	National Highways
Marcus Anning	MA		National Highways
David Harris	DH		
Jason Glasson	JG	Asset Information Manager	National Highways
Tarandeep Atwal	TW	Associate Director	Arcadis
Rob Eagles	RE	Temp Works Designer	MGF
Charlotte Taylor	CT		Morgan Sindall
Russell Brookes	RB		National Highways
Greig Houghton	GH	Design HSE Lead	Jacobs
Terry Meadows	TM	Safety Lead	Kier
Paul Watson	PW		Amey
Steve Haviland	SH	Partnership Lead	Farrans
Richard Delaney	RD	Senior H&S Consultant	Capita
John Quarless	JQ	Safety Manager	Kier
Ken Harrison	KH	Principal Engineer	Amey Consulting
Craig Simmonds	CS	Managing Director	Macleod Simmonds
Elliot Galvin	EG		Mott Macdonald
Adrian Shawcross	AS	Rail Associate	Ramboll
Clare Brown	CB	Safety Lead	Link Connex (Bam Nuttall)
Darren Allen	DA		Telent
Dave Avery	DA	H&S Manager	Kier
Oliver McMann	OM		Atkins
Philip Farrar	PF	Highways Safety Hub Website	Galliford Try
Andrew Koutsouki	AK		Arup
Anthony Adu-Gyamfi	AAG		
Chris Gee	CGe	Head of Utility Diversions	National Highways
Stephen Pettifer	SP		Volker Fitzpatrick
Eleanor Brennan	EB		
Matthew Murrell	MM		
Tony Lewis	TL	P Designer Man. YNE	Costain
Beverley Mears	BM		National Highways
Abbey Featherstone	AF	Technical Lead	Connect+
Ian Nixon	IN	Sector SHE Director Transportation	Costain
Steve Willoughby	SW	Technical Director	Pell Frischmann
Stephen Larkin	SL		Aecom
Andy Robinson	AR		
Alexandra Kouts	AK		Arup
Tom Bolton	TB	Principal Designer Manager	Amey
Simon Hawley	SH		Rambol
Steve Bowen	SB	Technical Director	Stantec
Jim Castle	JC		LTC
Leah Shah	LS		

Alexandrine Bernard	AB		Rambol
Reuel Abrams	RA	Senior Project Manager	Arcadis
Patrick Brady	PB	Engineering Manager M25DBFO	Connect plus /BB
Kevin Stevens	KS	Safety Manager	FM Conway
Gordon Crick	GC	BIM for H&S	HSE
Keith Smith	KS	Group Chief Engineer	Chevron Group
Steve Yates	SY	PD / CDM Advisor	Jacobs
Simon Wilkinson	SWi	Technical Director	AECOM
Euan McRobie	ER	H&S Lead	Capita
Nicola Hodges	NH	Project Manager	Keltbray
Adrian Lewis	AL	RHS Manager (East Region)	National Highways
Tony Wallis	TW		Tetra Tech
Josh Hicks	JH		Mott Macdonald
Jonathon Giles	JG	Principal Designer Manager	Rambolt
Natalie Mansell	NM	Head of Safety – SR, H&LT	Atkins
Toria Thomas	TT	Principal Designer	Arup
Sam Allin	SA	CDM Manager	Jacobs
David Owens	DO	Digital Manager	WSP
Ali Chaudry	AC	Principal Designer	Galliford Try
Ghayan Briggs	GB		Jacobs

**1.0 Welcome (Richard Wilson)**

**1.1 • Health, Safety and Wellbeing Moment**

RW noted the sad news of a fatality last week (AWE) on a Balfour Beatty piling and concrete pumping activity – RW requested all designers to consider what more could they do as part of their design, and to influence the construction method and learn from the lessons we are hearing.

**• HSW Moment – Robert Legg (Mott Mac)**



The orthodox approach for deploying traffic management has significant impacts on the duration, working methods and ultimately health and safety of roadworkers.

Hs2 and National Highways have taken established practice from the railway industry to produce a programme of works that involved week long closures of a motorway to allow the Marston Box structure to be pushed into position across the motorway.

Outside of the extended duration closures, Hs2 construction work was carried out remotely from the motorway.

**Project**  
High Speed 2 (Hs2)

**Client**  
Balfour Beatty Vinci (BBV)  
Hs2

**Location**  
Birmingham, UK

**Expertise**  
Traffic modelling,  
consultations, highway  
and structural design.



### Drivers

Hs2 is the UK's largest civil infrastructure project in a generation, and has a high profile for the general public and utilises innovation in engineering solutions.

The Marston Box structure takes the Hs2 mainline over the M42 between junction 9 and 10, north east of Birmingham.

- **Pressures** – Tradition construction methods would have caused years of disruption to the M42.
- **Change** – Using box push methods, off-site construction was achieved, including staff and supply change working day shifts, and accessing works from the local road network.
- **Opportunities** – First time the working method had been used on the National Highways network. Greater efficiencies through eliminating need for traffic management.
- **Problems** – Works were carried in a very tight window once the motorway was closed, weather caused issues with the materials becoming saturated.
- **Challenges** – Giving National Highways confidence that the long durations closures could be managed through publicity and diversion routes.

### Opportunity

The Marston Box has demonstrated that structures can be constructed remotely reducing the impact on roadusers and improving working conditions for the workforce.

Having the construction site remote from the highspeed highway enabled the construction team to access and build the structure from all directions, through a permanent site layout and during daylight hours.

National Highways were concerned that a prolonged closures would pose unacceptable disruption to roadusers. Traffic modelling and a publicity drive assisted road users to plan their journeys to minimise disruption. The effectiveness can be measured by the low volume of complaints raised to National Highways over the closure period.

Similar box push methodologies are now proposed for other schemes across the National Highways network, testament to new found confidence in the working method.



**Solution**

Initially the box-push methodology was promoted by BBV through their experience in the railway sector. The health and safety benefits of working remotely to the highway for their staff is clear, with wellbeing being addressed through working in a lower stress environment and on a day shift pattern for the majority of the works.

We enabled the working method through consultations with National Highways that required our traffic modelling and communications skills. Our designer worked with the jacking contractor to ensure the box structure could withstand the temporary loading during the box push along with the permanent situation.

Our combined efforts gave each party the confidence to allow the works to go ahead, and over Christmas week 2022, the box structure was moved into its permanent position, with the motorway opened to traffic inside the timeframe allowed.

**Comments**

PS asked if visualisations were undertaken as part of box push? RL responded - there were some CGI visuals done - most are on the HS2 website for the public to view. [Marston Box Rail Bridge - HS2](#) A nice time lapse video of the actual box push is also available.

RB asked at what point in the design phase did the team start to develop towards a concrete box form of deck? The box push was proposed as a working method by the contractor pre-2018, with construction from late 2021 to Xmas 2022, so plenty of planning and consultations. The HS2 Act requires consents to be granted by the highway authority which is a useful critical review of the design proposals.

TW asked what were there any challenges to the concept of closing the M42 for such a lengthy duration - presumably this agreement must have been obtained at an early stage as it would have an influence on the design? RL indicated that NH were fully engaged in the discussions over the two seven-day closures. There was a considerable traffic modelling effort to show the extended periods over Xmas would cause acceptable levels of disruption. From traffic count surveys to closures going out was in excess of 24 months. Also, the project was fortunate that there was a relatively short diversion route. HS2 are now planning a second box push on the A46 in 2024/25 (TBC) with the box going under the highway, with lessons learnt from the M42 scheme being applied.

**Matters Arising (PDWG 31 – 29/03/23)**

1.2.1 A number of issues were raised during the NH Risk Team NSCRG update by Iain Reidy – these will be picked up by Jo Goulding within the Agenda item.

1.2.2 Common Induction Video – LB noted that there is currently a full review of the Common Induction, and it is proposed to include the Designers modules within. This will now cover all consultants visiting sites. Update at next meeting.

1.2.3 H&S File End User requirements – Mark Lamport to meet with Dave Olorenshaw to discuss OD requirements.

1.2.4 RW was to meet with Sarah Bull and Jason Glasson to discuss the NH H&S File Digitisation aspirations. This is still to take place and RW will report back.

1.2.5 NUAR presentation by Steven Thorpe - Responses

Comment	Owner	Action
<b>David Olorenshaw</b>		
Last time NUAR was presented here, it was stated that it would not be able to download or export the stats information. This makes the system unusable and poorer than existing well tried and tested systems which give instant downloads of data. Has that problem been addressed?	Stephen Thorp	Yes, this has been addressed and the export feature will be available.

LB

MLa/  
DO

RW

<b>David Olorenshaw</b>		
Will the data be available in 2D/3D?	Stephen Thorp	If data providers give us that level of detail, we will happily display it. Some asset owners have higher data quality and maturity than others so this may not be achievable in the short term for all data providers.
<b>Swainston, Roger</b>		
Along with 3D model compatibility, is asset information categorised with its PAS 128 Quality Level?	Stephen Thorp	If data providers wish this information to be displayed, we will happily display it.
<b>David Olorenshaw</b>		
I really like the notion of feedback to the Stats companies so they can update their records. Would like to see the asset owners audited to ensure they update their records.	Stephen Thorp	That is not within the current scope of NUAR however an excellent future asset owner led, initiative that NUAR will enable.
<b>Roger Swainston</b>		
If 500 x 500m is the limit, how do we extract data for much larger / longer highway or other infrastructure projects? Could give a similar security issue as COMAH site enquiries where multi-enquiries result in the enquirer being shut down as a risk.	Stephen Thorp	We will work with end users who have specific requirements on a case-by-case basis. The 500m2 is a capture all and any anomalies can be dealt with accordingly.
<b>David Olorenshaw</b>		
Marker posts are very inaccurate. Most phones can locate you pretty well.	Noted	Noted.
<b>David Olorenshaw</b>		
If you are working as part of Operations, you are dealing with stats over an entire region.	Stephen Thorp	Point noted

1.2.6 SCSLG – Health and Safety in Design – Significant Risk Exercise – RW will provide an update.

Additional items for consideration to potentially add:

1. Traffic Noise
2. Concreting
3. Production of offsite assembly
4. Tunnelling

A number of points were raised also within the Chat Room which have been passed back to Jonny Giles and Toria Thomas – these will be picked up at next meeting as JG and TT could not be present.

1.2.7 SMP Alliance – Handover Improvements – Dave Owens and Mark Lamport still to catch up here.

Number of points raised by Paul Brown and passed to Dave Owens.

1.2.8 Passport Scheme – Designer Module – RW to pick up within the agenda.

Chat Room - All issues covered.

JG/TT

MLa

**2.0 Presentations for Learning Opportunities**

**2.1 (9.40 – 9.55) NSCRG update – Jo Goulding (JoG) (National Highways) Matters Arising and current concerns.**

The last NSCRG meeting was a document review of the PCF Plan for Monitoring and Operations (PfMO), with this taking into account the use of retro fit Stop Vehicle Detection. In relation to Stop Vehicle Detection, a decision has been made to demonstrate monitoring and data sets with the use of the Ground Truthing work (James Gibson’s Team).

Discussion also covered the protection of Roadworkers from Incursions during works. What is the Clients role / Highway authority. National Highways are soon to be publishing some further guidance, currently looking at protective measures (X Net (Stinger type system) and RB50 (Bicycle rack type System) and where these have been used in emergency situation previously. To consider all user and further risks to be reviewed and consider the full implications. Currently reviewing the roles of duty holders and their respective responsibilities.

NSCRG Meeting mins can be made available from National Highways.

Paul B asked - Did NSCRG discuss whether or not the client, when determining what traffic management approach should be adopted, were making sufficient space available for constructing the works safely? Jo G responded – Client hasn’t determined anything, purely what is not appropriate to use. It is for the delivery partners to develop this accordingly.

Liz B – Noted the innovations detailed above relating to incursions are a discussion point at the Incursion Working Group next week. LB to feed back.

Liz B – Comment on Incursion group and JoG feedback – Request for meeting min to be provided by PDWG if possible. Richard W noted Nick Nandra as the point of contact for Incursion Working Group. Liz B noted all information coming out of the Incursion Working Group will be made available on the Safety Hub website.

Iain Reidy Q / Responses from previous meeting.  
Carriageway crossings – JoG to ask for update from Iain.

Tower Crane use adjacent to M42 (Public concerns) – Further update to be provided by National Highways, HS2 / NSCRG regarding ongoing discussions. JoG noted TM on HS2 is still being developed and NH are reviewing further to ensure considerations are in place to appease the general public’s perception.

M25 Mobile Traffic Management Technique Trial – No update at present, once available this will be issued by NH – Currently limited to roads with technology provision.

JoG – Noted that she is available should any members of the group wish to discuss any issues outside the meeting.

JoG

LB

JoG

JoG

JoG

**2.2 (9.55 – 10.15) A66 CDM Collaboration Arrangements – Dave Olorenshaw (DO) - Kier**





# A66 Northern Trans-Pennine



haw (External)

# A66 Northern Trans-Pennine

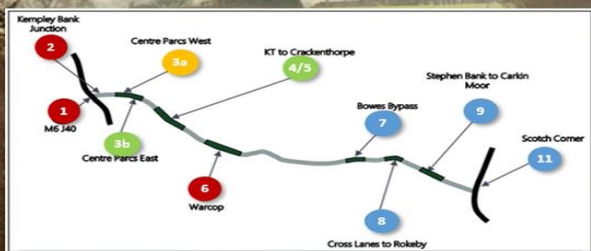


A number of sections of the A66 has been upgraded or bypassed since the 1970's. We now want to upgrade the remaining single carriageway sections to provide a safe and reliable journey between Penrith and Scotch Corner.

haw (External)

## A66 NTP

### Delivery as one through four Dips



DIP/Principal Contractor	Lead Designer	Schemes
Kier	Kier	1 2 6
Keltbray	Jacobs	3a
Balfour Beatty	Atkins	3b 4 5
Costain	Jacobs	7 8 9 11

haw (External)

## Delivery as one through four Dips

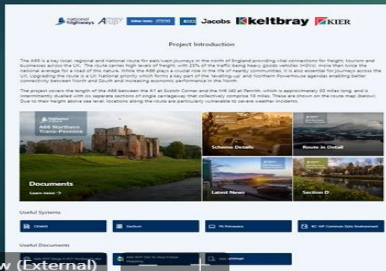


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## A66 PD Community



Purpose of this group is to achieve consistency of approach to CDM across the A66 project.



Documents > 01. Work In Progress > M. Health, Safety & Wellbeing > M20 CDM

Name	Modified	Modified By
CDM Plan	January 4	David Olorenshaw
DSAT	4 days ago	David Olorenshaw
Ground Investigation	4 days ago	David Olorenshaw
M201 CDM Community Meetings	December 12, 2022	Brian Begley
PMO CDM proposal	5 days ago	David Olorenshaw
TOCOP Transfer of control of Premises	6 days ago	David Olorenshaw

haw (External)

## A66 PD Community

Regular get togethers to discuss.

- Incidents or near misses – PD lessons learnt,
- Hot topics relating to design activities,
- Feedback from TA and PDWG,
- Review of safety alerts issued since previous meeting to establish if there are any learning points applicable to the design phase,
- Review of regulatory/design standards changes,

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# A66 NTP

## Parent / Child documents

To ensure PCF documents apply a common approach



Parent



Child

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# A66 NTP

## CDM Plans

Each Dip has produced a CDM plan with a common front end that describes how we work together.

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# A66 NTP

## Hazard assessment

Agreement to a 5 x 5 risk table.

Table 4-1 Risk Score Classification

Likelihood (L)	Severity (S)				
	1 Minor Harm	2 Moderate Harm	3 Serious harm	4 Major harm	5 Extreme Harm
1 Very unlikely	1	2	3	4	5
2 Unlikely	2	4	6	8	10
3 May happen	3	6	9	12	15
4 Likely	4	8	12	16	20
5 Almost certain	5	10	15	20	25

Table 4-2 Likelihood (L) and Severity (S) Definitions

Likelihood that harm will occur (L)		Potential severity of harm (S)	
1 Very unlikely	Highly improbable, not known to occur	1 Minor harm	Minor damage or loss, no injury
2 Unlikely	Less than 1 per 10 years	2 Moderate harm	Slight injury or illness, moderate damage or loss
3 May happen	Once every 5-10 years	3 Serious harm	Serious injury or illness, substantial damage or loss
4 Likely	Once every 1-4 years	4 Major harm	Fatal injury, major damage or loss
5 Almost certain	Once a year or more	5 Extreme harm	Multiple fatalities, extreme loss or damage

haw (External) - +

# A66 NTP

## Hazard/risk representation



Agreement to use yellow triangle and have developed a criteria for what is shown on drawings & models.

Hazards for inclusion on drawings		
Generally, include Medium & High-level risks		
Existing buildings	Hazard	Do not include as a hazard triangle on drawings
Water cut	Disconnection of existing services prior to demolition or alterations etc. hazardous contents.	Include as a hazard triangle on drawings
Access	Abandoned petrol storage tanks and similar.	Do not include as a hazard triangle on drawings
Previous	Underground services should generally be drawn and not called up as a hazard triangle or note.	
Hazards for inclusion on drawings		
Generally, include Medium & High-level risks		
Occupied properties	Live traffic	Do not include as a hazard triangle on drawings
Water cut	Asbestos	Not generally required.
Access	May be special considerations at specific locations (e.g. incidental unusual traffic).	
Interface	Yes (assumed or confirmed)	
Railways	Underground services	Hazard symbol for critical services.
Water cut	Overhead services	Services to be drawn
Contaminants	No	
Noise	Working at heights	Generally, no, but indicate where assumption is that edge protection will be required.
Ground	Unstable	Where unavoidable, there are requirements for ventilation etc.
Mineral	Site welding	Yes
Structural	Confined spaces	No
Fragile	Deep excavations	Generally, include on hazard register but not on drawing.
Hazardous	Manual handling	Include where it is anticipated that manual handling of unusual items in terms of size and shape is made necessary by the design.
Low level	Lifting operations	Generally, include on hazard register but not on drawing.
	Temporary stability	Generally, include on hazard register but not on drawing.
	Unusual sequence	Any specific construction sequence assumed as part of the design.
	Discontinuity/discontinuity sequence	Any specific sequence assumed as part of the design.
	Plant restrictions (e.g. on loading structures, on headroom)	Yes
	Construction activity within 6km of airfield	Generally, include on hazard register but not on drawing.

shaw (External)

# A66 NTP F10s



4 No F10s for permanent works,

4 No F10's for Ground Investigations with RSK as PC

# A66 NTP H&S files



2 Parent

4 Child

shaw (External)

<p>Nicholas M asked - Is there an aim to achieve a consistent design approach as well as health and safety/CDM matters? DO noted this is the point of the regular meetings to ensure a consistent approach. Aspiration is that all risk assessments completed by all parties follow the same format/risk and hazard assessment table? DO indicated the scheme has multiply maintainers upon completion – These are all being included within discussions during the development of the works, however individual areas may follow separate strategies.</p>	
<p>Pav S – Digitalisation of the HSF – DO noted these discussions are ongoing and are taking into consideration the various working groups.</p>	
<p>Doug P – Adoption of a risk matrix? Given inconsistencies found across other projects, what considerations have been taking when looking at the adoption of a standardised risk matrix across the scheme? DO noted the project will use a 5x5 matrix, however the exact format is yet to be agreed. DO to feedback.</p>	DO
<p>EB asked - Is there a standard list of "significant hazards" for fast road projects and does it differ for PC and contractors? DO noted this project does not have a standard list, however the group put together an aide memoir to use on the project. EB asked if it will be linked to SKTE standards? If answer is "No" might this be a useful document for all delivery partners?</p>	
<p>RW noted the 9 significant risk initiative, Major Projects has 6 and LTC have 14 (inc. tunnelling). RW felt would benefit from a level of coordination /combining. DP / Liz B to discuss offline with DO.</p>	DP /LB/ DO
<p>Mark Lawton asked - The noted the project is very long and is located in two different mapping grids related to GG951. He suspected that many surveys will be in OSGB36 however this is not good for design. What grid is being used to link everyone together? DO to ask within the project and provide a response to Mark L.</p>	DO
<p>Nick Boyle noted - A19 Wynyard has very recently won the digital award for handing into asset management, what lessons learnt can be drawn from this scheme? Nick B to arrange for a future presentation at PDWG.</p>	NB
<p>Paul Brown noted - Supply Chain Safety Leadership Group have linked significance to potential severity whereas the design community generally follows unusual, difficult to manage, critical design assumptions or not obvious, which gives a completely different set of significant hazards. Therefore, if we are putting together guidance, this point needs to be clarified. RW noted this is being carried out by Ian Spacey's group with designers. DP to take up with Jonny G and TT. Link to Significant Risk site.</p>	DP
<p><a href="https://www.highwayssafetyhub.com/significant-risk-sitemap.html">https://www.highwayssafetyhub.com/significant-risk-sitemap.html</a></p>	
<p>RW noted – Previously Highways Agency &amp; HSE produced various RAG lists, RW to locate these and circulate.</p>	RW
<p>Nick Boyle highlighted - BS5975 which he felt was more explicit than CDM Regs on what is expected from Designers, and he often quote it as good guidance: <i>8.3.1 Permanent works designers should address the buildability of the permanent works and identify, and make provision for, any temporary works and temporary conditions required by their design and their assumed method of construction which includes: -</i>  <ul style="list-style-type: none"> <li>•Communicating the intended construction process, giving particular attention to new or unfamiliar processes.</li> <li>•Consider the stability of existing structures and partially constructed/erected/ demolished structures and, where this is not immediately obvious, providing information to show how temporary stability could be achieved.</li> <li>•Identify where detailed structural design is to be carried out by others.</li> <li>•Ensure that the overall design takes account of temporary works which might be needed, no matter who is to develop those works.</li> <li>•Ensure that consideration has been given to the availability of sufficient space required to construct or maintain the structure.</li> </ul> </p>	
<p>Robert Butcher noted - in the same vein, the difficulty around what is significant and not significant, within the ICE guide: <i>"ICE Guidance for design risk management (DRM)" offers a useful comparison of what might be a "Routine" and "Non-Routine" activity with respect to capabilities available in the UK.</i></p>	
<p>This then leads to a reasonable view of what then might be more significant and less or more difficult to manage.</p>	
<p>RW noted – Consideration to be given to the CIRIA C755</p>	All

3.0 3.1 Safety Hub Update – Liz Brathwaite (LB) (Skanska)

### Vision

To eradicate any occurrences of fatal harm from “significant risks” throughout the complete lifecycle of all National Highways assets by 2030 and prevent occupational health life-changing harm by 2040, by elimination, substitution, isolation and/or engineering controls.

### SCSLG Update

- Technical Webinars on Significant Risk Thinking have been delivered
  - 1 – Why significant risk thinking? Setting the scene.
  - 2 – How to prepare a significant risk strategy.
  - 3 – How to risk profile. Covering completing risk profile exercise.
- New Leading Indicator on Significant Risk Thinking is now reported in National Highways monthly performance report.
- New SCSLG Linked In Page – please join and share content to get the message out there:
- [\(24\) Significant Risk Thinking from the Supply Chain Safety Leadership Group | Groups | LinkedIn](#)

### Significant Risk Thinking

Significant Risk Thinking from the Supply Chain Safety Leadership Group

(External)

#### Leading Indicator: Strategic Direction adopted & evidenced throughout the Supply Chain and National Highways

The Supply Chain Safety Leadership Group with our full support, are implementing a Significant Risk approach. This aims to eliminate the significant risks that cause life-changing harm to those working on the strategic road network. Significant risk profiling carried out across the supply chain has identified significant risks of which the top 9 will be focused upon first. This Leading Indicator is the fundamental building block and must be delivered and embedded to ensure success as we move forward with the 9 Significant Risks.

**In-month commentary:**

On the 15<sup>th</sup> March 23 the SCSLG launched their first Leading Indicator at the Engagement Council. A CEO/MD Webinar followed on the 22<sup>nd</sup> March ([Webinar Link](#)) and Technical Webinars module 1 ([Webinar Link](#)) and Module 2 ([webinar link](#)) have been completed with module 3 being completed throughout July.

In this second month of reporting, 60% an increase of 14% of suppliers to National Highways have engaged with the Significant Risk Education programme.

0%	Corporate Memory Triangle Not requiring a human intervention	
0%	Significant Risk Performance Monitoring (true operational performance)	
0%	Objective Set to De-risk the Profile (above line controls)	
0%	Significant Risk Prioritised	
11%	Initial Significant Risk Profile Completed **	➔ 0%
0%	Significant Risk Strategy Developed	
60%	Significant Risk Education *	➔ 14%

\* Significant Risk Education CEO/MD Engagement (99 out of 165 suppliers engaged)  
 \*\* Initial Significant Risk Profile Completed (19 out of 165 suppliers engaged)

(External)

RW noted – The significant Risks Technical Webinars are available on the Highways Safety Hub webpage.

All



## Safety Hub Update



**Incursions** video shared  
**Guest Speaker 1** Mark Frost from Carnell's re: benefits of SafetyCam for management of incursions, speed control through road works etc. linked to enforcement action by the Police  
**Guest Speaker 2** John Haslam from the ORR Task & Finish Group presented to the Safety Hub on the work undertaken to date to look at road risk, he has sent out a survey to Safety Hub members to help finalise the last piece of the group's work  
**Blue Star Awards** update from David Lumb on revised Blue Star submission process

z (External)



(External)



- [Toolkit \(highwaysafetyhub.com\)](https://highwaysafetyhub.com)
- 3 new case studies uploaded:
- Costain – automatic controlled plant crossing on the A30
- Skanska – use of intelliframe on TM signs
- Balfour Beatty/ Zueblin – hydraulic casing handling device for safer piling operations
- All case studies demonstrate elimination of risks through engineering controls, technology, different methods of working.
- **CHALLENGE** – are we getting enough design related blue stars submitted to share learning?

(External)

All

**ROADS ACADEMY VALUE HUB TITLE:** Eliminating the risk of vehicle incursions for our road workers

**SPONSORS:** Mel Clarke, Andy Stagg and James Haluch.

**DESIRED OUTCOMES & GOALS:**

- Everyone to go Home, Safe and Well when travelling on or working on the highway.
- A greater understanding by those using the highways, to the risks and dangers to roadworkers who are improving and maintaining these roads.
- **The planning and implementation of roadworks absolutely minimises the disruption to those living close by and using the highways.**
- **The design and solutions adopted for maintenance and improvements make consideration of how they will be maintained and replaced as a key requirement.**
- **Through improved use of automation, off-site manufacturing and maximising the activities in each closures, we demonstrate a paradigm shift in efficiency and effectiveness.**
- Connected and automated mobility accelerates the goal of a ‘naked highway’ – which has **minimal set of assets to be maintained.**
- The enhanced automation of vehicles will ensure the speed and lane discipline through roadworks is controlled.
- Mutual respect between those using the highways and those maintaining it.
- **A vision for what the future highway will be** – infographic for digital roads : [Highways England - Virtual Room](#)

External

It was quired if vehicle incursions were part of the Theory Driving Test? **Liz B to review and respond.**

A media campaign is being considered by the Incursion Working Group / Conversations ongoing over driver education and issues on driver incursions. **Liz B noted the police are following up the video shown.**

○ **RtB Minimum Requirements Check Sheets**

RW reiterated the contractual requirements of compliance with the RtB’s – All including designers should complete the RtB checklists where applicable. Designers should complete the gap analysis and extract the relevant information, especially those who have an on-site presence. Link to [RtB Checksheets - May 2023](#) Included here as part of the meeting minutes. ML noted that RtB Major Project Instruction 23 has been re-issued on the Supply Chain Hub and at present this was inaccessible. ML to forward the link to RW who will ensure this is reviewed.

- **Draft 5x5 Matrix - Latest Feedback** – No current feedback which is requested from **All**. It is required to drive consistency across the industry. Martin P is to attend a future Hub meeting to detail the requirement to PC’s and detail how Jacobs and Arcadis have adopted this approach and the current learning achieved to date. Pav S asked if the 5x5 matrix is planned to form part of the RtB guidance? PB indicated this was subject to agreement by the SCSLG and could potentially upon agreement, form part of RtB27. However, **in the interim it was agreed that wording would be updated within the RtB’s to highlight adoption of the 5x5 matrix as best practice at this time.**

- **Healthier Safer Design Working Group** – RW noted the group has increased the number of members and now have representatives in all SCSLG significant risks working groups. Further updates to be provided at the next meeting.

- **Road Worker Abuse / Road works incursions** – When incursions occur it was noted the importance of a safe location within the roadworks. Reference made to the earlier Tic Tok video and the ongoing considerations for road worker abuse. Doug P drew attention to the current work being undertaken by Birmingham Highways / Arcadis in highlighting road worker abuse ([https://www.birmingham.gov.uk/news/article/1344/expect\\_respect\\_-\\_birmingham\\_road\\_workers\\_share\\_their\\_stories\\_in\\_a\\_plea\\_to\\_end\\_the\\_abuse\\_they\\_face](https://www.birmingham.gov.uk/news/article/1344/expect_respect_-_birmingham_road_workers_share_their_stories_in_a_plea_to_end_the_abuse_they_face)). This will be presented at the Highways hub in August.

**Design for Maintenance** – Martin P highlighted that design or construction for maintenance remains a problematic issue, even for basic maintenance e.g., grass cutting, accessing technology units - recent incidents are raising questions as to whether the maintenance specifications are actually right - Do we need to do a 2m swathe cut everywhere? Why are we designing roads that need TM? One of the many reasons for this arising is the challenge to introduce a widened, or upgraded route, within the existing highway boundary caused by having to work within limited budgets. Value Engineering and cost challenge often leads to narrow verges, other design compromises and departures that result in a less than preferred cross section. This was recognised as an important area for further discussion. DP to take up with RW.

LB

All

RW

All  
MP

RW/  
PB

TT/JG

RW



**4.0 4.1 Whole Life Design Safety Shares – (M Partington (MP) – Jacobs)**

Safety shares have been now updated (24no.) on the Safety Hub with another 6 no. in the pipeline to be issued. DP flagged that this will be feeding into NH Major Projects Knowledge team (Martin Sherlock), with this team hopefully presenting at the next meeting. DP to arrange a meeting with RW & MS.

DP/RW

Presentation to be provided within the meeting minutes.

MP

Request made for Safety Share topics to be shared with the group and request for further participants to join the Working Group.

All

**4.2 Suicide Prevention Design Tool – (Doug P on behalf of Nicola Tweedie – NH)**

New Task Order (commencing September) to finalise a PCF product and standard guidance for March 2024 had just been issued. This would look to develop the Suicide Prevention Design Tool.

**4.3NH Passport** - RW re-iterated the importance for designers who are attending site more than once per calendar year are required to obtain the Highways Passport and undertake the Common induction which is currently subject to update.

**4.4 H&S File Digital Handover (Mark Lamport (MLa) – Arcadis)**

- **4.4.1 H&S File Digital Handover**




**Principal Designer Working Group**  
Event No 32

**Health and Safety Files Digital Development**  
Mark Lamport, Arcadis

13<sup>th</sup> July 2023



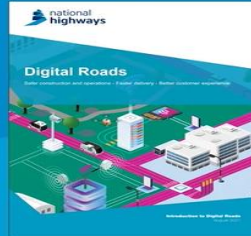
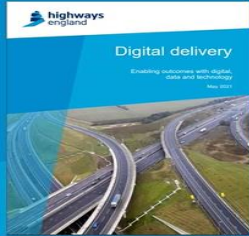

**Task and Finish Group Meetings**

- Task and Finish Group Kick-off Meeting held on 18/1/2022
- Meeting #2 held on 11/7/2022
- Meeting #3 held on 26/9/2022
- Meeting #4 held on 10/10/2022
- Meeting #5 held on 16/1/2023




**Task and Finish Group – Action Summary**

SUB-TASK NUMBER	SUB-TASK DESCRIPTION	SUB-TASK ACTION OWNER	SUPPORTED BY
1	Establish which other National Highways group(s) are working on H&S File digitalisation and liaise with them to avoid duplication.	Richard Wilson	Jason Glasson
2	Establish what progress consultant organisations who are members of PDWG have already made with respect to Health & Safety File digitalisation.	Saskia Lear	Representatives of PDWG consultant organisations
3	Establish end-user requirements – clients, operators, maintainers, designers (of future modifications and upgrades), decommissioners/demolishers. <ul style="list-style-type: none"> <li>• What information do they need from the H&amp;S File?</li> <li>• In what format?</li> <li>• On what platform?</li> </ul>	Andrew Finch	OD representatives (including David Olorenshaw and Nigel Yeatman)
4	Identify which of the National Highways H&S File content requirements set out in the H&S File PCF product guidance can be presented in digital form. Is this all or some of the content?	Tim Bowes	David Owens
5	Produce a draft process map – to help ensure consistent approach and format of data and risk tagging for point, linear and areal hazards (including shape, size and colour of hazard symbols [?triangles, polygons] and fields within the associated tagged data set).	David Owens	Tim Bowes, Pav Singh & Patrick McNulty
6	Identify any specific requirements of the National Highways Digital Delivery and Digital Roads documents which would be relevant to H&S File digitalisation.	Natalie Mansell	Rob Butcher
7	Produce Outputs and Deliverables	Not yet allocated (future action following completion of other sub-tasks 1 - 6)	



Broad inference from 2 main documents is that digital capability of common data environment enables HSF features such as Digital Twins and Handover. No specific guidance or detail. Supportive of end result of HSF digitalisation as part of the digital handover asset data

## Digital H&S File –



## Digital H&S File – CDM 2015 Requirements

CDM 2015, App 4	Requirement	Digital H&S File	Notes
a)	brief description of the work carried out	Include in a separate textual document (H&S File reference document) tagged to all assets.	Include location plan, scheme/asset description, details of CDM dutyholders. Photograph(s) of specific assets would need to be tagged to those assets.
b)	any hazards that have not been eliminated through the design and construction processes	Include as asset-tagged information on GIS or BIM base.	Significant residual hazards remaining at end of construction filtered from design HES or CDM hazards and constraints layer. Link relevant asbestos information in SAMP and AAP(s).
c)	key structural principles (eg bracing, sources of substantial stored energy)	Include as asset-tagged information on GIS or BIM base	

## Digital H&S File – CDM 2015 Requirements

CDM 2015, App 4	Requirement	Digital H&S File	Notes
d)	hazardous materials used (eg lead paints and special coatings)	Include as asset-tagged information on GIS or BIM base	Identify any materials used which could be hazardous if subject to heat, cutting or grinding.
e)	information regarding the removal or dismantling of installed plant and equipment	Include as asset-tagged information on GIS or BIM base	Include relevant information from the O&M Manual and MRS. Include details of isolation arrangements for electrical assets.
f)	health and safety information about equipment provided for cleaning or maintaining the structure	Include as asset-tagged information on GIS or BIM base	Include relevant information from the O&M Manual and MRS

## Digital H&S File – CDM 2015 Requirements

CDM 2015, App 4	Requirement	Digital H&S File	Notes
g)	the nature, location and markings of significant services,	Include as asset-tagged information on GIS or BIM base	These are generally linear assets. Need to include asset owner, type, size, pressure/voltage, depth/level etc
h)	information and as-built drawings of the building, its plant and equipment	Include schedule in H&S File reference document. For large projects as-built drawing schedule would be a discrete document within the asset handover data	Could tag asset-specific as-built drawings, specifications, reports, PCF products etc to individual assets.

## Digital H&S File – Other Requirements

Reference	Requirement	Digital H&S File	Notes
Not referenced	Access provision and constraints for inspection and maintenance	Include as asset-tagged information on GIS or BIM base	This could include details of drainage chambers beneath VRS, access constraints imposed by fencing and environmental barriers, access to critical structural elements etc.
NH H&S File PCF Product Guidance	Design Information	Could link key asset-specific design information	Contained in asset handover records
ditto	Construction methods	Include as asset-tagged information on GIS or BIM base	Identify any unusual construction methods
ditto	Materials	See item d) above	H&S-related data for materials

## Digital H&S File – Other Requirements

Reference	Requirement	Digital H&S File	Notes
NH H&S File PCF Product Guidance	Index of all drawings and other relevant information with relevance to H&S information held elsewhere	Covered in Item h) above	

**Mark Lawton** – Ask if anyone was aware of a GIS community within NH? He felt this was essential in the future and something he had discussed previously with National Highways (Thomas Coleman). RW and MLo are to take this forward (inc. Katie Harman) to meet with Dave Stone.

MLo/  
RW

DP asked what the current status of the NH BIM Working Group was? **This is to be taken up with Jason Glasson**

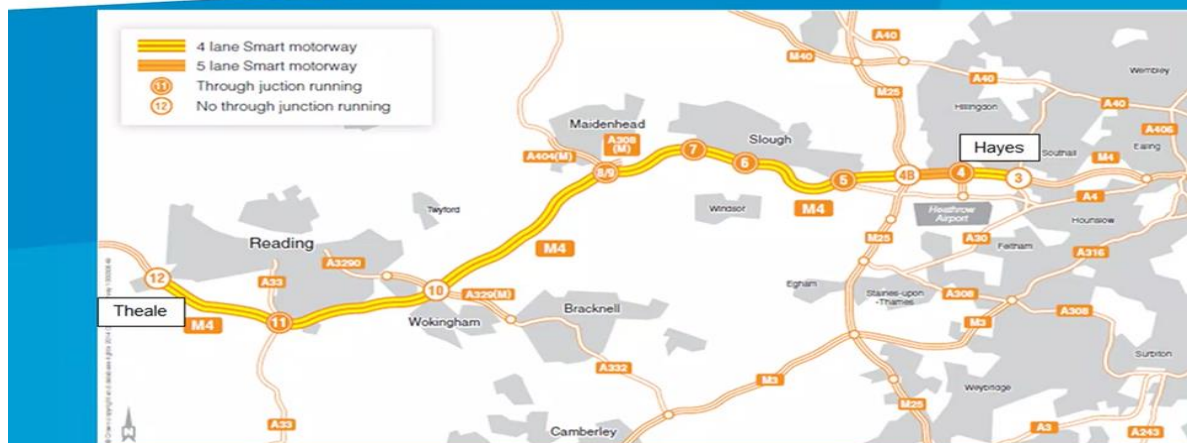
RW

### 4.4.2 M4 Handover feedback

## Principal Designer Working Group Event No 32

M4 Jn 3 – 12 SMP:- CDM, HSF & Handover Lessons Learnt  
Mark Lamport, Arcadis Jacobs JV

13<sup>th</sup> July 2023



## Lessons Learnt from M4 Jn 3 – 12 SMP – CDM General

- CDM roles (CDM Client, Designer, PD and PC) for statutory undertakers' diversion works need to be considered and agreed during the pre-construction stage. Co-ordination needed to ensure utility diversion works do not conflict with PW design – or other utility diversions.

## Lessons Learnt from M4 Jn 3 – 12 SMP – CDM General

Major Projects Instructions	
<b>Issuer:</b> <a href="#">The MP Information and Knowledge Management Team (I&amp;KM), MP Delivery Services (MPDS)</a>	<b>Author:</b> Jamie Easterbrook, RIP Statutory Undertaker Team
<b>Document Name:</b> Statutory Undertaker CDM Arrangements	<b>Reviewer:</b> Tom Merry, Head of Health and Safety, SES Health and Safety
<b>Owner:</b> Tom Merry, Head of Health and Safety, SES Health and Safety	<b>Authoriser:</b> Dean Sporn
<b>Audience:</b> NH and NH Supply Chain	
<b>Assigned MPI Number:</b> MPI-95-032023	<b>Issue Date:</b> 30/03/2023

## Lessons Learnt from M4 Jn 3 – 12 SMP – CDM General

- Importance of regular engagement with OD Teams regarding provisions in the design for inspection and maintenance e.g. changing risk profiles for existing assets, such as embankments with limited verge areas and steep slopes where customers may seek refuge.

## Lessons Learnt from M4 Jn 3 – 12 SMP: H&S File

- NH requirements for H&S Files are confusing, contradictory and have gaps. IAN 105/08 (which refers to CDM 2007) is still not withdrawn.
- Ensure that outline structure (and template) of the H&S File has been formally agreed, eg use of the H&S File template Health and Safety File Template and Guidance HSPT005.3 which is referred to in the H&S File PCF product guidance but is not mandated.
- Understand relevant content of the EIR.
- The H&S File template, Section 1.4.2: states “Unless otherwise stated in contract or instruction, that the Principal Contractor (PC) will prepare the Construction Phase Health and Safety file for final submission and it will be reviewed by the Principal Designer Lead Representative....” Is this what happens in practice and is it the appropriate approach?
- Confusion over asset handover folder structure and alignment with NH BC – 7 volume, 10 volume, 12 volume etc. Does it actually matter provided that the information is collated in a structured manner?

## Lessons Learnt from M4 Jn 3 – 12 SMP HES & As-Built Drgs

- Ensure that the Designer’s and Principal Contractor’s HES/Design Risk Management Schedule contains sufficient detail to identify each hazard location in 2D space.
- Principal Contractor’s HES needed to record hazards created by the construction process, eg temporary works left in place.
- SHE box standardisation.
- Standardisation of drawing notes regarding significant residual hazards and cross-references to the Designer’s HES and Principal Contractor’s HES.
- Standardisation of drawing notes regarding services.

## Lessons Learnt from M4 Jn 3 – 12 SMP - Handover

- Understand which versions of the NH Standards are being used for Handover eg IAN 182/GG182 (Handover), IAN184/GG184 (BIM) - make sure this is clearly documented in the Implementation of New Standards Report. Can the end user actually make use of the BIM model?
- Ensure that maintenance responsibilities for assets such as new side road structures and associated earthworks which are to be handed over to other parties, such as LAs, have been formally agreed (consider adoption of “Guidance - Definition of Asset Management Responsibilities: Bridges and Structures”, February 2022).
- PD is not a designated Consultee for the MRS – but should be?
- Allow for lengthy contractual Consultation periods, eg 28 days for DBFOs.
- Construction Handover Manager, Design Handover Manager and PCF Product Manager are key roles.

The image shows the cover of a guidance document. At the top left is the National Highways logo. To the right are logos for ADEPT (Automated Design, Engineering, Planning & Transport), the Department for Transport, and the UK Roads Liaison Group. The main title is 'Guidance Definition of Asset Management Responsibilities: Bridges and Structures'. Below this, it says 'Department for Transport/ADEPT/UKRLG/National Highways' and 'Date of issue: February 2022'. A smaller box below the main title is titled 'Managing Network Occupancy – Boundaries on Structures' and contains an 'Introduction' section. The introduction text reads: 'This document provides guidance for Local Highway Authorities and National Highways to assist the agreement of Operational and Maintenance Boundaries for bridges and other structures at points of interface between local roads and the Strategic Road Network. There is also some guidance on ownership adjacent to private property for retaining walls.'

The image shows the cover of a document titled 'Lessons Learnt from M4 Jn 3 – 12 SMP: Handover Documents'. It features the National Highways logo at the top left. The title is in large, bold, black text. Below the title is a list of three bullet points:

- Lack of NH guidance on structure and content of the O&M Manual and Design Strategy Record. Is the DSR *actually* a live document and subject to regular review with OD?
- Importance of ensuring that documents have the correct NH BC compliant metadata – incorrect or inadmissible codes (eg 3 digit volume codes) caused problems. The MIDP (and TIDPs) must be maintained correctly.
- H&S File programme is dependent on availability of information from other key supporting documents: Designer and PC Hazard Elimination Schedules, MRS, O&M Manuals, as-built drawings (including as-built services drawings).

Nina Warminger flagged that National Highways are reviewing the National Highways CDM suite of procedures and templates at the moment, she will review the H&S File Template to ensure clarity. Katie Harman asked that the H&S File template be shared so that she could pick up with Tom Merry to ensure clarity. Mark L to speak with KH and share the lessons learnt on the M4.

NW  
MLa

Pav S highlighted that - AOB - CITB have some funding opportunities that could be developed <https://www.citb.co.uk/levy-grants-and-funding/grants-and-funding/industry-impact-fund/>

Industry Impact Fund – CITB - The Industry Impact Fund is aimed at construction employers looking to make a positive difference to the construction industry by developing solutions to key challenges faced by the workforce.

Further useful links included:

AOB - CITB have highlighted the industry reports highlighting a change in workforce.

<https://www.citb.co.uk/about-citb/construction-industry-research-reports/construction-skills-network-csn/>  
<https://www.citb.co.uk/about-citb/construction-industry-research-reports/search-our-construction-industry-research-reports/migration-and-uk-construction-june-2023/>

CSN Industry Outlook - 2023-2027

The Construction Skills Network (CSN) provides insights into the UK construction economy and its labour market intelligence.

MLa was asked if the M4 had had any issues handing over assets back to the adjacent LA's – were there any issues with agreeing Commuted Sums? This is something that should be agreed between NH and the relevant LA. MLa to ask and feedback.

MLa

#### 4.5 Stats Management – (10 min) (Liam Burns- National Highways)

### Strategic Utilities – General Update

- Strategic engagement with 18 Utility Companies (Gas, water, elec, comms) – spectrum of engagement – sharing intel, programme, understanding where the level of spend is etc.
- c£800m spend in RIS2 based on C3/4 estimates
- “Account managers” / nominated leads appointed in some Utilities (see next slide)
- Gauging level of performance internally in NH and externally with the Utilities (incl. some Utilities performance reporting).
- Value for money driven conversations with Utilities (processes in place to eliminate the need for diversions/minimise impact etc.
- Supporting NH-Utility CDM guidance rollout
- Supporting various escalations on projects (Ops/MP/LTC)

Utility	Nominated Lead for NH works	Email
UK Power Networks	Mark Le Calvez	<a href="mailto:mark.lecalvez@ukpowernetworks.co.uk">mark.lecalvez@ukpowernetworks.co.uk</a>
Anglian Water	Elliott Harley	<a href="mailto:eHarley@anglianwater.co.uk">eHarley@anglianwater.co.uk</a>
Openreach	Michael Oldham	<a href="mailto:michael.oldham@openreach.co.uk">michael.oldham@openreach.co.uk</a>
Scottish and Southern Energy	Alisdair Marr	<a href="mailto:Alisdair.Marr@sse.com">Alisdair.Marr@sse.com</a>
United Utilities	Teresa Helm	<a href="mailto:Teresa.helm@uuplco.co.uk">Teresa.helm@uuplco.co.uk</a>
Severn Trent Water	Hugh Stothert	<a href="mailto:Hugh.Stothert@severntrent.co.uk">Hugh.Stothert@severntrent.co.uk</a>
Southern Gas Network	Dean Vandeppeer	<a href="mailto:dean.vandeppeer@sgn.co.uk">dean.vandeppeer@sgn.co.uk</a>

#### 4.6 Eliminating Risk from the Outset Update – (Paul Dennis - Arup)

### SPaTS2 Home Safe & Well – Eliminating Risk from the Outset

**What was the task?** The task looked at early-stage highway scheme development and focus on the eliminate element of the principles of prevention. Each deliverable should provide a tangible product that enables National Highways and the supply chain to eliminate risk collectively and systematically from the outset of every scheme.



Home Safe & Well - Eliminating Risk from the Outset

**What work was done?**

- **Work Package 2:** The outcome of this work package has provided a detailed review of National Highways current systems, processes and procedures that are in place for health and safety requirements at each PCF stage. Following this review, the next PCF Product update will include amendment of the Design Management section of the Stage 1 Supplier Quality Plan to include a *Safety by Design* plan which sets out how the Principal Designer is going to manage and monitor the design process and co-ordinate matters relating to health and safety during the pre-construction phase. ‘Safety by Design’ supports National Highways vision for Eliminating Risk From The Outset by allowing Designers to create new and innovative methods of road design and construction that eliminates risk to those constructing, maintaining or travelling on the network.
- **Work Package 3:** The outcome of this work package focused on a thorough review of Lessons Learned at Stage 1 paired with continued learning of lessons throughout Stages 2 to 6 and recommending increased usage of the Major Projects Knowledge Management Sharepoint platform.
- **Work Package 4:** The outcome of this work package was to amend the Pre Construction Design Report in the next PCF update to include a Design Strategy Record (DSR). The DSR acts as a signposting document, or direct record, of the design decisions that have been made, including those relating to health and safety. This is especially relevant where design decisions have been made to eliminate risk from the outset of projects.

**What were the benefits to National Highways?**

- Clear plan of how Principal Designers will manage and monitor the design process and co-ordinate matters relating to health and safety during projects.
- The ability to influence and implement meaningful changes on their schemes. It will ensure that all project teams are working towards delivering better HS&W outcomes earlier in the project lifecycle at lower cost and impact too.
- Ability to more accurately measure designer’s performance on highways schemes.
- Assists National Highways with assessment of compliance of H&S in design for Major Projects



	<p>Paul D – Shared <a href="#">MP Knowledge Management - Home (sharepoint.com)</a> noting this is a great place to view and share case studies / lessons learnt / knowledge. DP highlighted that Martin Sherlock of the Knowledge Team would be presenting at the next PDWG. DP is to set up a call between RW and MS.</p> <p>Paul Brown had reviewed the current information available on the PCF Supplier Quality Plan / safety by design guidance and highlighted that there is currently no provision to record the Clients management arrangements. <b>Paul D to review.</b></p> <p>Paul B felt it should point Designers to the scheme Pre-Construction Information (PCI) as a source of relevant information and a reference was needed to ensure Designers provide input into the PCI and H&amp;S File. Slide 13 of the SQP guidance provides a link to L144 (this document is obsolete and requires update ASAP). <b>Paul D to action.</b></p> <p style="text-align: center;"><b>4.7 Pre-Construction Phase Plan / Safety by Design Plan feedback – Paul Brown (WSP)</b></p> <p>Paul B has now reviewed the comments received from the group and has collated responses and developed an action/comments log. This will be made available on the PDWG web page on the Highways Safety Hub as a template.</p> <p>The issue was how would the suggested template be taken forward by NH. RW requested that Paul B discuss this further with Katie Harman as part of the PCF product update review she was currently undertaking.</p>	<p>DP</p> <p>PD</p> <p>PD</p> <p>PB</p> <p>PB/KH</p>
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<p>5.0</p>	<p><b>(12.05 – 12.25) Information and Discussion</b></p> <ul style="list-style-type: none"> <li>○ <b>Slot Drains – Kazi Hasan – Drainage Team Leader &amp; Principal Advisor (SES)</b></li> </ul> <div style="display: flex; justify-content: space-between;"> <div data-bbox="159 1008 654 1478" style="width: 45%;">  <p><b>Slot Drain Update</b></p> <p>Principal Designers Working Group</p> <p>13 July 2023</p> <p>© 2021 National Highways</p> </div> <div data-bbox="654 1008 1452 1478" style="width: 50%;">  </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div data-bbox="159 1478 446 2065" style="width: 25%;">  </div> <div data-bbox="446 1478 1452 2065" style="width: 75%;"> <p><b>Problem Statement</b></p> <ul style="list-style-type: none"> <li>• National Highways Major Projects and their supply chain are incentivised to reduce the capital cost of projects. There is significant pressure to deliver to the capital enhancement affordability envelope.</li> <li>• National Highways Operations and their supply chain are incentivised to reduce operational costs of running the network. There is significant operational funding pressure which has a flat profile.</li> <li>• Slot drains are cheaper to construct than other forms of drainage and can create a lower cross sectional area for a new road which brings additional savings. Therefore, they are the preferred drainage solution on major projects and have been used extensively on Smart Motorways as well as some other new schemes such as A14.</li> <li>• Slot drains are more costly and harder to maintain than V drains and therefore are not the preferred solution for Operations.</li> <li>• The DMRB Design Standards allow their use and provide guidance on their application but this can be widely interpreted.</li> <li>• In the absence of a clear direction, project teams and operational colleagues routinely get into a disagreement about whether slot drains are approved. This costs time and generates friction at a working level.</li> <li>• We need to agree clearer direction for all our teams so as to reduce the time lost during the disagreement, create greater clarity for the situations in which slot drains are an acceptable solution and help improve the working relationships.</li> </ul>  </div> </div>	
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## Decision

1. That slots drains are not the National Highways preferred solution and should not be used.
2. We will update the design requirements to remove the use of slot drains. Once updated the use of slot drains will only be agreed via a departure from standard request.
3. We will develop a Major Project Instruction to support the preferred solution and confirm that any proposal to use slot drains should be justified via a Departure which should include a Type B Safety Risk Assessment and Whole Life Cost assessment. The Type B Safety Risk Assessment will convene a Safety Control Review Group that must include representation from SES Technical Advisors and Operational colleagues. A generic safety risk assessment template will be produced to act as guidance.
4. Cost estimating for projects and scope baselines should not be based on Slot Drains unless a departure in place.
5. Where a project is in delivery and has agreed to the use of slot drains as part of the scope and that was approved PCF Stage 3 SGAR then slot drains will continue to be approved and used. [Evidence should be that slot drains are in the PCF Stage 3 approved scope book and approved estimate].
6. All other projects shall adhere to the approach described in 1, 2 and 3 above.



## Next Steps

1. Update DMRB design requirements to remove the use of slot drains. Process as a priority change, if necessary via an England National Application Annex.
2. Develop and issue a Major Project Instruction that reflects the above approach.

I



**Note comments captured within the Chat Room from Nick Boyle and Liz B.**

Kazi H

### 6.0 (12.15 – 12.30) AOB

RW noted that the Slot Drain presentation will be issued with the meeting mins and request people share this with colleagues. Where applicable please come back to SES with questions on this subject.

All

### 7.0 Next Meeting – 11<sup>th</sup> October 2023 – (WSP - Birmingham) – incl. Teams link.

- NH MP Knowledge Management Team – (Martin Sherlock)