

**National Highways
Principal Designer Working Group
Meeting No.29**

**Thursday, 13th October 2022 10.00 am – 14.30 pm.
(Arcadis Office, Birmingham)**

Attendees

Name	Initials	Position	Organisation
<i>Richard Wilson (Chair)</i>	<i>RW</i>	<i>H&S Director C&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>Nina Warminger</i>	<i>NW</i>	<i>H&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>Pav Singh</i>	<i>PSi</i>	<i>Technical Director / Principal Designer Manager</i>	<i>Arcadis</i>
<i>Tim Bowes</i>	<i>TB</i>	<i>Principal Designer Manager</i>	<i>Atkins</i>
<i>Malcolm Shaw</i>	<i>MS</i>	<i>Principal Designer Manager</i>	<i>Arup</i>
<i>Paul Brown</i>	<i>PB</i>	<i>Technical Manager</i>	<i>WSP Group</i>
<i>Nicola Tweedie</i>	<i>NT</i>	<i>SA – Road User Safety</i>	<i>National Highways</i>
<i>Tim Goddard</i>	<i>TG</i>	<i>Principal Designer Manager</i>	<i>Arcadis</i>
<i>Toria Thomas</i>	<i>TT</i>	<i>Principal Designer</i>	<i>Arup</i>
<i>Martin Partington</i>	<i>MP</i>	<i>Principal Engineering Man.</i>	<i>Jacobs</i>
<i>Ali Chaudry</i>	<i>AC</i>	<i>Principal Designer</i>	<i>Galliford Try</i>
<i>Sam Allin</i>	<i>SA</i>	<i>CDM Manager</i>	<i>LTC</i>
<i>Jonathon Giles</i>	<i>JG</i>	<i>Principal Designer Manager</i>	<i>Rambolt</i>
<i>Tony Lewis</i>	<i>TL</i>	<i>P Designer Man. YNE</i>	<i>Costain</i>
<i>Dave Olorenshaw</i>	<i>DO</i>	<i>Area Manager</i>	<i>Kier</i>
<i>Natalie Mansell</i>	<i>NM</i>	<i>Head of Safety – SR, H&LT</i>	<i>Atkins</i>
<i>Chris Griffin</i>	<i>CG</i>	<i>Design Innovation Manager</i>	<i>National Highways</i>
<i>Jim Gallagher</i>	<i>JG</i>	<i>Prin Struct. Advisor (SES)</i>	<i>National Highways</i>
<i>David Owens</i>	<i>DO</i>	<i>Digital Manager</i>	<i>WSP</i>
<i>Simon Wilkinson</i>	<i>SWi</i>	<i>Technical Director</i>	<i>AECOM</i>
<i>Tom Bolton</i>	<i>TB</i>	<i>Principal Designer Manager</i>	<i>Amey</i>
<i>Sulagna Ghosh</i>	<i>SG</i>	<i>Ass. H&S Rep Leeds</i>	<i>WSP Group</i>
<i>Robert Legg</i>	<i>RL</i>	<i>Highways Safety Co.</i>	<i>Motts</i>

<i>Andrew Wedderburn</i>	<i>AW</i>		<i>Pell Frischmann</i>
<i>John Pilkington</i>	<i>JP</i>		<i>WSP</i>
<i>Lee Ward</i>	<i>LW</i>	<i>Principal Designer Manager</i>	<i>Arcadis</i>
<i>Sophie Gwynne</i>	<i>SG</i>	<i>Graduate Highway Engineer</i>	<i>Arcadis</i>
<i>Charlotte Cook</i>	<i>CC</i>	<i>WHS Lead</i>	<i>Arcadis</i>
<i>Jim Castle</i>	<i>JC</i>		<i>LTC</i>
<i>Leah Shah</i>	<i>LS</i>		
<i>Mark Lawton</i>	<i>MLo</i>	<i>Head of Engineering Surveying and GIS</i>	<i>Skanska</i>
<i>Noel Gibbin</i>	<i>NG</i>	<i>(CPS Head of Design)</i>	<i>Connect Plus</i>
<i>Paul Dennis</i>	<i>PD</i>	<i>A417 Project Manager</i>	<i>Arup</i>
<i>Tim Walker</i>	<i>TW</i>		<i>Galliford Try</i>
<i>Steve Bowen</i>	<i>SB</i>	<i>Technical Director</i>	<i>Stantec</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>Euan McRobie</i>	<i>ER</i>	<i>H&S Lead</i>	<i>Capita</i>
<i>Tom Bolton</i>	<i>TB</i>		<i>Amey</i>
<i>Reuel Abrams</i>	<i>RA</i>	<i>Senior Project Manager</i>	<i>Arcadis</i>
<i>Patrick Brady</i>	<i>PB</i>	<i>Engineering Manager M25DBFO</i>	<i>Connect plus /BB</i>
<i>Michael Salvanos</i>	<i>MS</i>	<i>Principal Designer Manager</i>	<i>Pell Frischmann</i>
<i>Adrian Lewis</i>	<i>AL</i>	<i>RHS Manager (East Region)</i>	<i>National Highways</i>
Guests:			
<i>Kevin Stevens</i>	<i>KS</i>	<i>Safety Manager</i>	<i>FM Conway</i>
<i>Gordon Crick</i>	<i>GC</i>	<i>BIM for H&S</i>	<i>HSE</i>
<i>Iain Reidy</i>	<i>IR</i>	<i>Risk Management</i>	<i>National Highways</i>
<i>Tom Channell</i>	<i>TC</i>	<i>Digital Lead</i>	<i>Ramboll</i>
Apologies:			
<i>Paul Boddy</i>	<i>PB</i>	<i>Director</i>	<i>Interserve</i>
<i>Stephanie Goldsmith</i>	<i>SG</i>	<i>Senior H&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&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>Paul Claydon</i>	<i>PC</i>	<i>H&S Manager</i>	<i>WSP Group</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&S Team Standards</i>	<i>National Highways</i>
<i>Jon Horrill</i>	<i>JH</i>	<i>Principal Designer / H & 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>Steve Yates</i>	<i>SY</i>	<i>PD / CDM Advisor</i>	<i>Jacobs</i>
<i>Mark Bridges</i>	<i>MBr</i>	<i>Former H&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>
<i>Richard Horan</i>	<i>RH</i>		<i>Telnet</i>
<i>Glen Matthews</i>	<i>GM</i>		<i>Kier</i>
<i>Robert Mullen</i>	<i>RM</i>	<i>Asset Information Group</i>	<i>National Highways</i>
<i>Marcus Anning</i>	<i>MA</i>		<i>National Highways</i>
<i>Jim Tod</i>	<i>JT</i>	<i>Temp Works Designer</i>	<i>Tony Gee/Twf</i>
<i>Jason Glasson</i>	<i>JG</i>	<i>Asset Information Manager</i>	<i>National Highways</i>
<i>Tarandeep Atwal</i>	<i>TW</i>	<i>Associate Director</i>	<i>Arcadis</i>
<i>Rob Eagles</i>	<i>RE</i>	<i>Temp Works Designer</i>	<i>MGF</i>
<i>Charlotte Taylor</i>	<i>CT</i>		<i>Morgan Sindall</i>
<i>Jon Webster</i>	<i>JWe</i>	<i>Safety Lead</i>	<i>Kier</i>
<i>Russell Brookes</i>	<i>RB</i>		<i>National Highways</i>

<i>Greig Houghton</i>	<i>GH</i>	<i>Design HSE Lead</i>	<i>Jacobs</i>
<i>Terry Meadows</i>	<i>TM</i>	<i>Safety Lead</i>	<i>Kier</i>
<i>Paul Watson</i>	<i>PW</i>		<i>Amey</i>
<i>Steve Haviland</i>	<i>SH</i>	<i>Partnership Lead</i>	<i>Farrans</i>
<i>Richard Delaney</i>	<i>RD</i>	<i>Senior H&S Consultant</i>	<i>Capita</i>
<i>John Quarless</i>	<i>JQ</i>	<i>Safety Manager</i>	<i>Kier</i>
<i>Ken Harrison</i>	<i>KH</i>	<i>Principal Engineer</i>	<i>Amey Consulting</i>
<i>Samuel Hogan</i>	<i>SH</i>	<i>Principal Engineering Man.</i>	<i>Balfour Beatty</i>
<i>Craig Simmonds</i>	<i>CS</i>	<i>Managing Director</i>	<i>Macleod Simmonds</i>
<i>Elliot Galvin</i>	<i>EG</i>		<i>Mott Macdonald</i>
<i>Adrian Shawcross</i>	<i>AS</i>	<i>Rail Associate</i>	<i>Ramboll</i>
<i>Clare Brown</i>	<i>CB</i>	<i>Safety Lead</i>	<i>Link Connex (Bam Nuttall)</i>
<i>Darren Allen</i>	<i>DA</i>		<i>Tellent</i>
<i>Dave Avery</i>	<i>DA</i>	<i>H&S Manager</i>	<i>Kier</i>
<i>Oliver McMann</i>	<i>OM</i>		<i>Atkins</i>
<i>Liam Burns</i>	<i>LB</i>		<i>National Highways</i>
<i>Philip Farrar</i>	<i>PF</i>	<i>Highways Safety Hub Website</i>	<i>Galliford Try</i>
<i>Andrew Koutsouki</i>	<i>AK</i>		<i>Arup</i>
<i>Simon Hawley</i>	<i>SH</i>		<i>Rambol</i>
<i>Chris Gee</i>	<i>CGe</i>	<i>Head of Utility Diversions</i>	<i>National Highways</i>
<i>Nick Boyle</i>	<i>NB</i>	<i>Technical Manager</i>	<i>Balfour Beatty</i>
<i>Robert Butcher</i>	<i>RB</i>	<i>Technical Director CDM</i>	<i>Jacobs</i>
<i>Stephen Pettifer</i>	<i>SP</i>		<i>Volker Fitzpatrick</i>
<i>Tony Wallis</i>	<i>TW</i>		<i>Tetra Tech</i>
<i>Eleanor Brennan</i>	<i>EB</i>		
<i>Matthew Murrell</i>	<i>MM</i>		
<i>Josh Hicks</i>	<i>JH</i>		<i>Mott Macdonald</i>
<i>David Riley</i>	<i>DR</i>	<i>H&S Business Partner</i>	<i>Amey</i>
<i>Andrew Finch</i>	<i>AF</i>	<i>Director of Operations</i>	<i>Jacobs</i>
<i>Beverley Mears</i>	<i>BM</i>		<i>National Highways</i>
<i>Abbey Featherstone</i>	<i>AF</i>	<i>Technical Lead</i>	<i>Connect+</i>
<i>Katie Harman</i>	<i>KH</i>	<i>YNE Safety Lead</i>	<i>National Highways</i>

Elizabeth Bennett	EB	Director	Safety in Design
Ian Nixon	IN	Sector SHE Director Transportation	Costain
Roger Swainston	RS	PD / CDM Advisor	Jacobs
Helen Richardson	HR	NH Regional Lead	National Highways
Steve Willoughby	SW	Technical Director	Pell Frischmann
Stephen Larkin	SL		Aecom
Andy Robinson	AR		
Alexandra Kouts	AK		Arup

1.0 (11.00 – 11.05) Welcome (Richard Wilson) (Start delayed due to a Fire Alarm)

Wellbeing, Health and Safety Moment

- Health, Safety and Wellbeing - During the early stages of the meeting the fire alarm sounded and the building evacuated. The attendees at the meeting took this evacuation as a live safety moment and commented on issues raised.

2.0 Presentations for Learning Opportunities

2.1 Risk Management – Iain Reidy (National Highways)

- Key Topics – Iain outlined his role within Safety Engineering & Standards as part of the Home, Safe & Well directorate.



Principal Designer Working Group

- National Highways – Operational Risk Management
- Iain Reidy

Supporting Home Safe and Well

13th October 2022



Operational Risk Management

- Key Risk Management Topics – Good Practice (IR)
- 5x5 Risk Matrix (GG104 overview) (IR/DP/MP)
- Social Risk Assessments – e.g., TTM on the A63
- GG142 WCHAR Assessments - Construction

Harm Rating Tool (Sam Allin – LTC)

13th October 2022

Key Risk Management Topics

IR noted that his team owned GG104 and undertook the governance function – The team assisted in checking and challenging the decision-making design decision making / evidence-based decisions.

Current areas of concern are:

- Over providing of VRS / challenging designers on the provision of VRS
- Standard for concrete central reservations – Decisions should be evidence based / transparent.
- NSCRG – Pav S requested sharing of best practice coming out of NSCRG so that this could be shared with the industry to ensure consistency.
- Potential for NSCRG representatives to attend forum's such as PDWG. Suggestion from IR that PDWG contact NSCRG and highlight the subjects / issues and request NSCRG members to discuss specific topics. This goes for all forums / schemes and IR to ask members for consideration.
- Post Meeting – IR has confirmed that the Risk Team will attend future PDWG and has indicated that he will be happy to update on NSCRG issues and asked for feedback on member concerns that he will be happy to discuss.

IR

IR

ALL

5x5 Risk Matrix (overview)

national highways		Severity GG104	Minor harm, minor damage or loss, no fatalities	Moderate harm, slight injury or illness, no fatalities	Serious harm, serious injury or illness, no fatalities	Major Harm, fatal injury, major occupational injury	Extreme Harm, Multiple fatalities, catastrophic events
Very low / Unlikely harm will occur	Unlikely / Occurrence 1 per 10 years	1	1	2	3	4	5
Low / Harm may occur occasionally	Occasional / Occurrence 1 per 10 years	2	2	4	6	8	10
High / Likely that harm will occur, most activities	Likely / Occurrence 1 per year	3	3	6	9	12	15
Very High / Very likely harm will occur, certain	Certain / Occurrence 1 per month	4	4	8	12	16	20
		5	5	10	15	20	25

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GG104 Risk Matrix

Low 1-5: Ensure assumed control measures are maintained and reviewed as necessary.

Med 10-15: Additional control measures needed to reduce risk rating to a level which is equivalent to a test of "reasonably required" for the population concerned.

High 20-25: Activity not permitted. Hazard to be avoided or risk reduced to tolerable.

- DP set out the background to the development of the 5x5 matrix and the confusion / lack of consistency issues that had been identified across projects, with the use of multiple matrix variations and the base matrix potentially based on inappropriate populations.
- The GG104 matrix was more appropriate to a travelling public population and less so to a construction population.
- Jacobs had reviewed the Severity and Likelihood criteria and developed the matrix set out below.
- The suggestion was for the PDWG to adopt the revised matrix via the RtB / Common Intent process, through a potential update to RtB 26. (Jacobs (and Arcadis) are currently adopting the matrix nationally across RDP and SDF).
- MP indicated that it had also been tested within the Rail sector
- Proposal was to take this to the SCSLG / Hub and seek review / adoption to ensure consistency.
- Liz B indicated she would be happy to put this onto the Safety Hub agenda on 3rd Nov. DP to forward details to LB. Actioned.
- IR clarified that the matrix in GG104 is an example and not prescribed and therefore the proposed matrix could not be adopted via a GG104 update. NH do not wish to dictate to schemes what they should be doing.
- IR advised that NH are due to issue an update to the current GG104, however he was not aware of the date for this.

Liz B

IR



Suggested Construction and Maintenance based Risk Matrix

Risk matrix for all work, on-site or off-site	Project severity	Issue	Reason	Control	Control	Control	Control	Control
		Minor issues (e.g. minor damage to site equipment or materials) or minor issues (e.g. minor damage to site equipment or materials)	Minor issues (e.g. minor damage to site equipment or materials) or minor issues (e.g. minor damage to site equipment or materials)	Minor issues (e.g. minor damage to site equipment or materials) or minor issues (e.g. minor damage to site equipment or materials)	Minor issues (e.g. minor damage to site equipment or materials) or minor issues (e.g. minor damage to site equipment or materials)	Minor issues (e.g. minor damage to site equipment or materials) or minor issues (e.g. minor damage to site equipment or materials)	Minor issues (e.g. minor damage to site equipment or materials) or minor issues (e.g. minor damage to site equipment or materials)	Minor issues (e.g. minor damage to site equipment or materials) or minor issues (e.g. minor damage to site equipment or materials)
		Low (1)	Low (2)	Low (3)	Low (4)	High (1)	High (2)	High (3)
		Low (2)	Low (4)	Medium (1)	Medium (2)	High (1)	High (2)	High (3)
		Low (3)	Medium (1)	Medium (2)	High (1)	High (2)	High (3)	High (4)
		Low (4)	Medium (2)	High (1)	High (2)	High (3)	High (4)	High (5)
		Medium (1)	High (1)	High (2)	High (3)	High (4)	High (5)	High (6)

Social Risk Assessments e.g., TTM issues on the A63

- DP indicated that due to time constraints this item, which related to work which had been undertaken A63 in Hull in relation to social risk assessments, would be discussed offline with IR.
- RW mentioned a recent presentation in relation to Archaeology and related social issues – RW to share the presentation with PDWG.

IR

RW

GG142 WCHAR Assessments – suggest update to include Construction

- DP to take offline with IR

DP/IR

2.2 Harm Rating Tool (Sam Allin – LTC)



Health, Safety and Wellbeing Harm Assessment Tool

Sam Allin, HSW / CDM Client Assurance lead for Lower Thames Crossing
 Sam.allin@lowerthamescrossing.co.uk

- SA has requested schemes / regions to work with him (contact details available) in completing an assessment of the tool to gain learning and establish an understanding of the correct levels for harm ratings.
 - David Olorenshaw is happy to volunteer A417 project for a trial of tool. Currently at stage 5.
 - Martin P also interest in looking at the tool from a maintenance perspective.

SA/DO

SA/MP

National Highways Major Projects Implementation of Home Safe and Well Strategy

Dean Sporn, Director Regional Projects (South)
Delivery Partners Workstream Lead

Sub Work Streams

- Gap assessments – Culture
- Gap Assessments – Engineering Controls
- Charter
- Drumbeat
- Safety By Design
- Andrew Scatchard
- Emily Jones
- Edgar VilaPuca
- Esther Gordon-Smith
- Sam Allin

HSW Harm Assessment Tool:- PCF 0-3

Provide HSW information enabling SLT to make Informed decisions

- Data entered by 7 of the DMRB design disciplines and Utilities.
- 14 health safety and wellbeing risks in focus.
- Select the linear meterage with presence or absence of a feature with potential to cause harm for the worst case and average km length of a scheme.

Road Layout / Highway Design

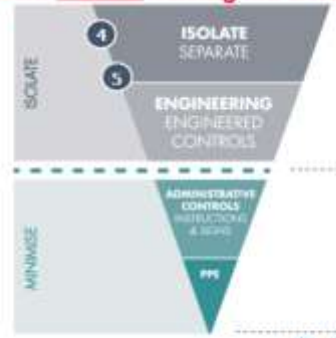


HSW Harm Assessment	Road Layout (Highways)	Pavement	Structures (Road restraints &)	Drainage	Geotechnics (Ground Engineer)
Occupational Physical Hazards (Noise vibration, Substances hazardous to health (includes Dust))	Lm /km with distance to semi-permanent welfare facility more than 200m				Qty /km of driven piles specified
Confined Spaces			Qty /km of bridges with a confined space	Qty /km of entry points into piped drainage	Qty /km of bridges and gullies with groundworks more than 12m deep and requiring entry during
Work at Height	Lm /km with retaining wall above alignment. Wing walls are excluded.		Qty /km of bridges without designed measures to delay or deter pothole	Qty /km of bridges with externally fixed drainage system.	
Underground Services	Lm /km of highway verge less than 15m from underground HP / IP Gas or HV utilities. Note: Each utility crossing a highway is to be treated as 30 /m.	Lm /km of pavement with LV cable less than 600mm from finished level.	Qty /km of bridges with services suspended or fixed to side.	Lm /km of piped drainage less than 15m from an underground HP / IP gas or HV utility.	Lm /km of piled ground retaining structures within 30m of HV or HP or MP Gas utilities. Note: Each utility crossing a highway is to be treated as 30
Overhead Services	Lm /km of highway verge less than 30m from overhead HV utilities. Note: Each HV utility crossing a highway is to be treated as		Qty /km of bridges within 30m of overhead HV utility.	Lm /km of piped drainage less than 30m from an overhead HV utility.	Lm /km of piled ground retaining structures less than 30m from overhead HV utilities. Note: Each HV utility crossing

HSW Harm Assessment Tool:- PCF 4-5

Application of Control Measures, including from SCSLG Raising the Bars

- Changes to inherent harm identified at PCF stage 3.
- Record the engineering controls, including digital technologies applied in preparation for construction.



DMRB Discipline: Road Layout		Highest / Average harm / risk rating	Preparation for Construction	Detailed Design for Construction	Inherent Harm Rating	Supporting Argument (Summary of extent of hazard / Engineering controls applied)
HSW Risk in Focus	Performance Measure		PCF Stage 5	PCF Stage 4	PCF Stage 3	
Health and Wellbeing	Lm /km with distance to semi-permanent welfare facility is more than 200m	Km length with highest risk rating	250 to 450m /km	250 to 450m /km	450 to 700m /km	Detailed design has provided 20 semi-permanent welfare facilities along the 5km scheme length. On 1000 to 2000 there is 500m where the distance to a semi-permanent welfare facility is more than 200m.
		Scheme averaged risk rating	<100m /km	<100m /km	250 to 450m /km	

3.0 Key Actions and matters arising from PDWG 28 – 21/07/22.	
(Note: picked up within the minutes only due to time constraints)	
3.1 Design Close Calls – PDWG to develop an agreed template and store on NH WSW website. DP to action	DP
3.2 NH Predictive Indicators and CDM related Utilities roles – MLa to pick in further discussions with Chris Gee	MLa
3.3 Management of Utilities on Construction sites (Report prepared by Neil Hawthorn). RW to discuss with NH with a view to presenting at future PDWG.	RW
3.4 A63 TTM/Ped Management Safety Shares – MP confirmed that this had been taken up by the Hub. DP to catch up with MP at next WLD Safety Shares Meeting.	DP/MP
3.5 SCSLG 2 Year Strategy update – Kevin Stevens provided an update during the meeting.	
3.6 Gantry Design Group within the SMP Alliance. No feedback from the group currently – PB to update as and when further details become available.	PB
3.7 RW to pass risk management issues back to Jo Goulding. Matters will be covered by Iain Reidy within the presentations.	
3.8 Incident and Trend Analysis – Note that Safety Shares and Case Studies are to be captured on the NH HSW Website and the Safety Hub website – 12 Safety Shares already uploaded. Access links to be made clearer.	MP/DP
3.9 Keeping Pace with Change Working Group – PS and Sam Allin to follow up with Tony Putsman and Gary Mees on the work being undertaken on LTC. – SA has arranged a meeting for 8/11 to review a LTC Case Study which looks at their CDM Strategy – this has been developed to align with the CONIAC CDM 20-20Vision – changing the culture report. SA to feedback at next meeting.	SA
3.10 Proposed Pre-Construction Phase Plan contents (inclusion of utilities data etc) – suggestion is that Paul Dennis liaise with Tom Merry and Katie Harman on this.	PD/TM
3.11 Passport Scheme – Designer module RW/NM to touch base. This had happened. NM to update later.	
3.12 ERO – number of actions identified - to be picked up later by Paul Dennis.	
3.13 Update of WHS PCF Products – DT to be approached for update at PDWG 30.	DP/DT
3.14 Andy Finch - BB Safety by Design & Engineering forums are really informative and he frequently shared relevant items – could Nick B provide for the NH HSW Web page?	Nick Boyle
Chat Room	
<ul style="list-style-type: none"> CDM 20-20 Sector Plans in place for Buildings and Rail – nothing currently for Highways – TM, RW and Sam Allin to review. 	RW/TM/SA
<ul style="list-style-type: none"> New NH Asset Management Approach – PB expressed concern as Handover and the requirement for the H&S File didn't appear in the document. RW to speak with the Asset Team. 	RW
<ul style="list-style-type: none"> Future presentation from NH Knowledge Share Team? – DP to approach for PDWG 31 in April 23. 	DP

4.0 SCSLG Update and Safety Hub Update

4.1 • Safety Hub Update (Chair - Liz Braithwaite - Skanska)



Safety Moment

Global Safety Stand Down Skanska USA Civils 22nd June 2022

A worker on the Green Tree Boulevard project was crushed by an excavator boom which struck the cab of the truck he was in.

Earthworks were under way to create the route for a new road. Trucks enter the work area off a public street into the cut area. The truck haul route is a one-way pattern. An excavator was being used to load tandem trailer units.

The trucks pull up next to the excavator to be loaded. On the day of the incident, the excavator operator had loaded three trucks at the same location prior to the incident occurring.

The excavator operator started work on the project January 31, 2022. He was trained and experienced.



The excavator was operating at height on earthworks. The excavator operator placed a bucket of material into the front trailer of the truck when he felt the excavator move.

The excavator was positioned too close to the edge, it slipped and the excavator bucket came into contact with the far side of the trailer. It is believed the operator raised the boom and curled the bucket back, subsequently grabbing the inside edge of the trailer with the teeth of the bucket. This lifted the truck, weighing 15 US ton and moved it approximately one meter towards the excavator. The excavator overturned and the boom crushed the area of the cab directly over the driver.



Could this happen here?

A14 – 16th June 2018 working at Borrow Pit 1

Excavator with loaded bucket rotated to load truck when the operator felt the rear of the excavator start to rise – the machine then slid approximately 2ms down the edge and overturned, the boom struck the ADT causing the skip to overturn. The boom caused damage to the front of the ADT and smashed the window – the ADT operator suffered minor leg lacerations.



home
safe
and well

highways
england

- Martin P shared learning in relation to Maintenance salt barns whereby equipment is kept at ground level with load shovels with full exclusion zones to remove the possibility of equipment working at height and the risk of overturning.
- Kevin S referenced a previous investigation into an incident he had been involved in and offered to share information / contacts with the group to ensure the learning from other industries is available.

KS

RtB 15 – Task Lighting

Current document is not required – it just reinforces current HSE guidance on lighting levels.

Proposal to write some new guidance relating specifically to lighting and the public highways interface which is not covered by the guidance e.g. light spillage which can cause distraction to drivers This guidance will also cover LED head torches and human factors relating to moving from a well lit area into a dark area.



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england

- Martin P offered to share investigation work Aone+ had completed on Task Lighting and the associated reports – MP to send to LB

MP

RtB 16 Working at Height and RtB

- RtB 16 Working at Height – to be put into the new template
- RtB 22 Fatigue – following previous discussions a draft RtB will be presented at the next meeting
- RtB 25 Loading Vehicles RtB 35 Loading Plant RtB 36 Lost Loads – being combined into one and to be presented at the next meeting
- RtB 39 Traffic Safety & Control at Roadworks - there is some resistance around raising the training requirements for TSCOs; a gap analysis is being undertaken currently between the version presented by Keith Smith and the one sent back in by the TMCA
- RtB XX – Working on Hard Shoulders & Verges – out for consultation, comments to Keith Smith



- Liz B to share draft RtB on Working on Hard Shoulders & Verges and requested feedback from PDWG by 18th November.
- Paul B queried if the RtB is being brought in where there should be a GG NH document instead for ALR? Perhaps GG115 should be updated accordingly? RW clarified that this would not be the case.
- Martin P highlighted the importance of requesting feedback from the maintenance community. Liz B agreed to issue to the maintenance community for consultation.

Liz B/All

Liz B

Campaigns

- Autumn / Winter working – clocks change 30th October
[WINTER 2021 \(highwayssafetyhub.com\)](#)
- Road Safety Week – 14th to 20th November
[Road Safety Week | Brake](#)



4.2

SCSLG Update – Significant Risks – (Kevin Stevens) FM Conway Actions Arising from SCSLG Risk Profiling



SCSLG Members



- Adam Green** CEO (Chair)
- David Shaw** HW Martin
- Glennan Blackmore** Highways Sector Director
- John Dowsett** CEO
- Jonathan Giles** Senior Managing Consultant
- Vicki Glover** HR Director
- Andy Gifford** Highways Director
- Catherine Brookes** Highway Sector Director
- Andrew Sharp** Managing Director
- Ian Spellacey** Client Director Strategic Highways
- Mitesh Solanki** Managing Director
- Simon Ellison** Highways Director
- Doug Mills** Divisional Director

- Nick Holt** Operation Director
- Toria Thomas** Global Safety in Design Director
- Ellie Hossack** Head of Delivery
- Stephen Knott** Account Director
- Tony Slater** Managing Director
- James Haluch** Managing Director
- Melanie Clarke** Health Safety & Wellbeing Director
- Dean Sporn** Director Regional Investment Programme South
- Alan Shephard** Regional Director
- Richard Wilson** HS&W Lead Commercial & Procurement
- Teresa Moss** HS&W Business Partner

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.

Future Focus and Approach

HIERARCHY OF CONTROL

- Eliminate** - We will remove or control hazard, remove tasks and risk reducing
- Substitute** - We will always seek to identify the least
- Isolate** - Where we can't eliminate the hazard we will isolate it out
- Engineering Controls** - Where we can't eliminate the hazard we will provide robust engineering controls
- Administrative Controls** - Reduce the time workers will be exposed to the risk source of production
- PPE** - Reduce the time workers will be exposed to the risk source of production

HIERARCHY OF INTERVENTION EFFECTIVENESS

- Personal-focused**
 - Working Method, Culture/Community, Motivation
 - Competence of Employee, Resources
- Team-focused**
 - Team Structure, Communication and Standard Specification
- System-focused**
 - Design/Process, Design/Control, Case Studies, Best Practices, Process/Working on Construction, Information
- Organizational**
 - Construction (Setting Induction) Contract Requirement (Loading, Unloading)
 - Digital Information, Incentive, Lead/Support, Auto Tracking/Control, Data Integration, AI

- We still kill and have health concerns
- **Health and Safety Performance** - needs to be sustainable with Leading Indicators as a measure of performance. We can decide what H+S performance looks like rather than what we do at the moment which is the absence of accidents

Risk Profiling Results SCSLG SUPPLY CHAIN SAFETY LEADERSHIP GROUP



PRIORITY GROUPS

IDENTIFYING THE RISKS

RISK PROFILE - A FIRST FOR INDUSTRY

Occupational Road Risk

People Plant Interface

Incursions + IPV Strikes

Working at Height

Temporary Works

Underground – Overground Services

Occupational Health – Noise – Dust – Manual Handling

Plant Turnover

Lifting Operation

What's been achieved since April?

- Phase 2 and 3 Risk Profiling now complete thanks to the Safety Hub
- Redesigned Common Intent and Raising the Bar Templates - Significant Risk Thinking and Simplification
- 6 Significant Risk Groups created and commenced;
 - H+S Performance (Leading Indicators) – Andrew Sharp
 - People Plant Interface – Simon Ellison
 - Healthier and Safer in Design and Delivery – Ian Spellacey
 - Occupational Road Risk – Nick Holt
 - Communications – Vicki Glover
 - Incursion and IPV – James Haluch
- Bow Tie Analysis now being conducted in all groups with help from Kier and Costain



Significant Risk Groups SCSLG SUPPLY CHAIN SAFETY LEADERSHIP GROUP

6 Significant Risk Groups commenced. Each Group is led by a SCSLG Member + members from Safety Hub and supporting organisations

Groups will be required to deliver:

- Vision + Leading Indicator with 2 year milestones
- Background information plus detailed risk analysis and frequency of exposure
- A review of transferable innovations
- The application of Reverse Triangle and Hierarchy of Intervention - going Above the Line
- The removal human error – what are the performance influencing factors (PIF's)
- Leading Indicators and HS performance weak signals
- Legacy and Embedment (Significant Risk Compliance)
- Communication of achievement

- KS indicated that a review of existing Common Intents and RtB's was underway.
 - Sam A indicated that creation of the Common Intent documents may cease.
 - Paul B queried that if the Common Intent documents are to be removed, will all the new RtBs have to be revamped as they are currently driven by the content of the Common Intents?

Post meeting Note - Meeting set up to understand how RtB's / Common Intents will be taken forward and how they will link with the Working Groups. RW to report back at PDWG 30.

RW

- Richard W reminded all that Health must remain an important part of our considerations and a Health document should now be developed and requested for volunteers to work on this subject. TT to progress development of the Health Working Group
 - It was noted that a health by design draft Common Intent document had already been produced
 - Liz B volunteered a hygienist from Skanska for the Health Working Group.
 - Richard W requested that a set of slides be produced to clarify what people are volunteering for as part of the Health Working Group – Sam A volunteered to produce.

All/TT

Liz B

Sam A

5.0 12.10 – 12.30) Digital Design Risk Management – Jonny Giles/Tim Channell - Rambol

Calendula

Reducing the risk of managing risks digitally.

Principal Designers Working Group
13/10/2022



In the growing digital space, comes the opportunity for design risks to be handled in different ways...



... compounded with lots of different people who rightly need to add and contribute to the documenting of design risks.

RAMBOLL

In an attempt to reduce these interfaces we combined two of them with our Calendula tool



RAMBOLL

10

Demonstration

What are the key benefits of Calendula?



01

Single Source
of Truth



02

Excel



03

At the design stage,
not just federation

Which projects are we currently using it for?



HS2 Projects
Various clients
including LMJV



M27 J10
Volkerfitzpatrick



**North Hykeham
Relief Road**
Balfour Beatty



A40
Balfour Beatty

Any transport projects where we digitally model risks uses Calendula by default

Where are we looking to develop it to next?

- Add more controls and features within the application itself
- Extend to Revit and other modelling platforms
- Joining with open source initiatives like SafetiBase
- Link with our global risk management solution - RamRisk.
- Build it into ADMM handover to NH, with objects related to risks linked within them.

R AUTODESK
REVIT

M MicroStation
CONNECT Edition

Safet*i*Base

RAMRISK

Improving Health & Safety- National Highways PD WG CDM, the PD Role and PIR's!

Gordon Crick, HSE

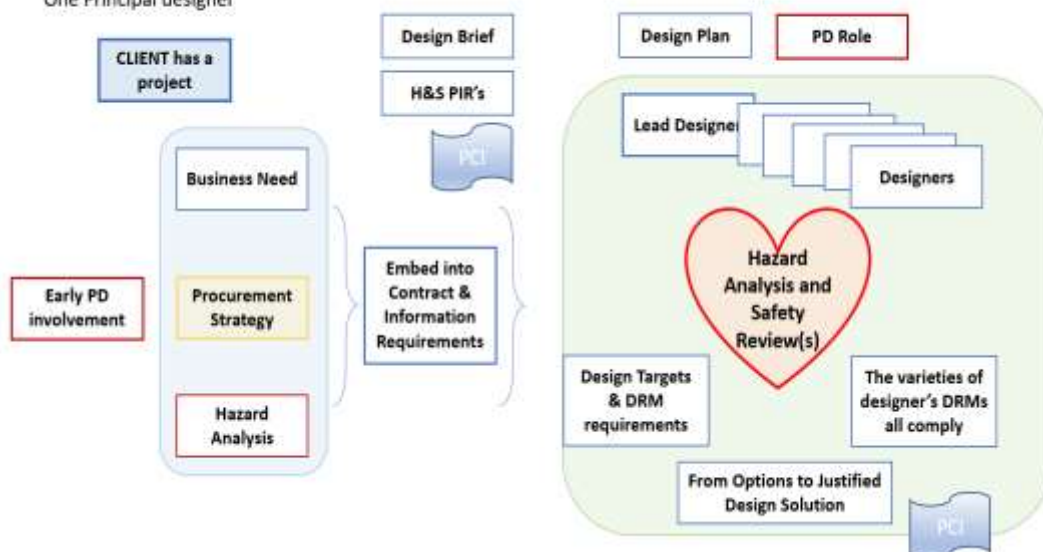
Construction division

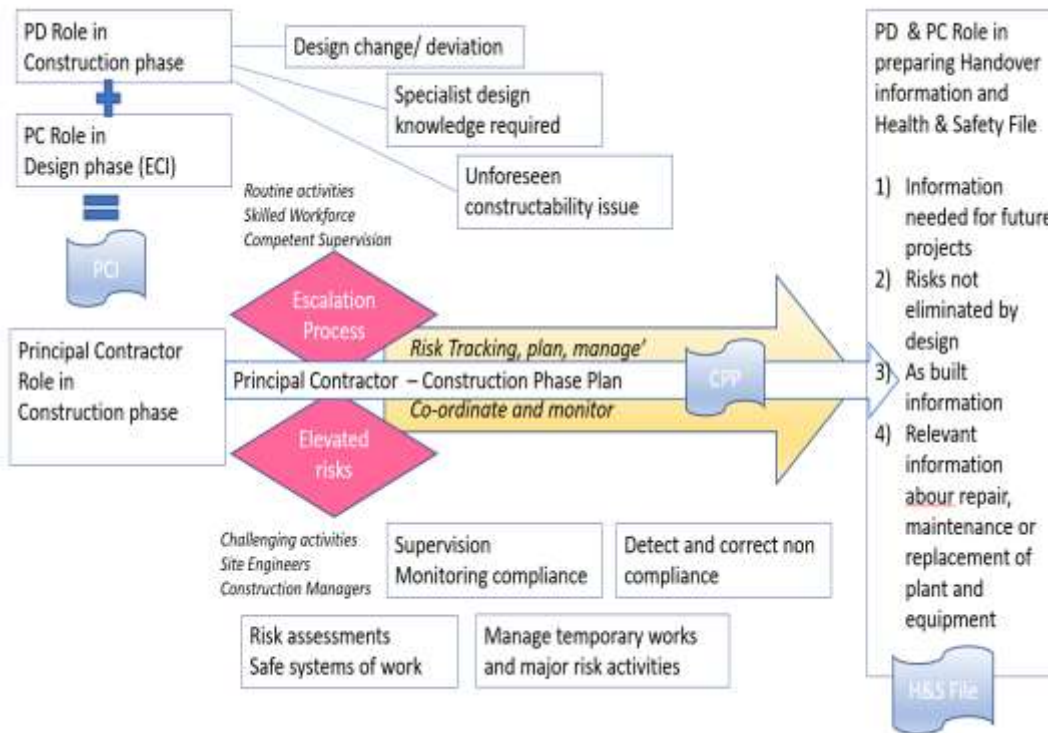
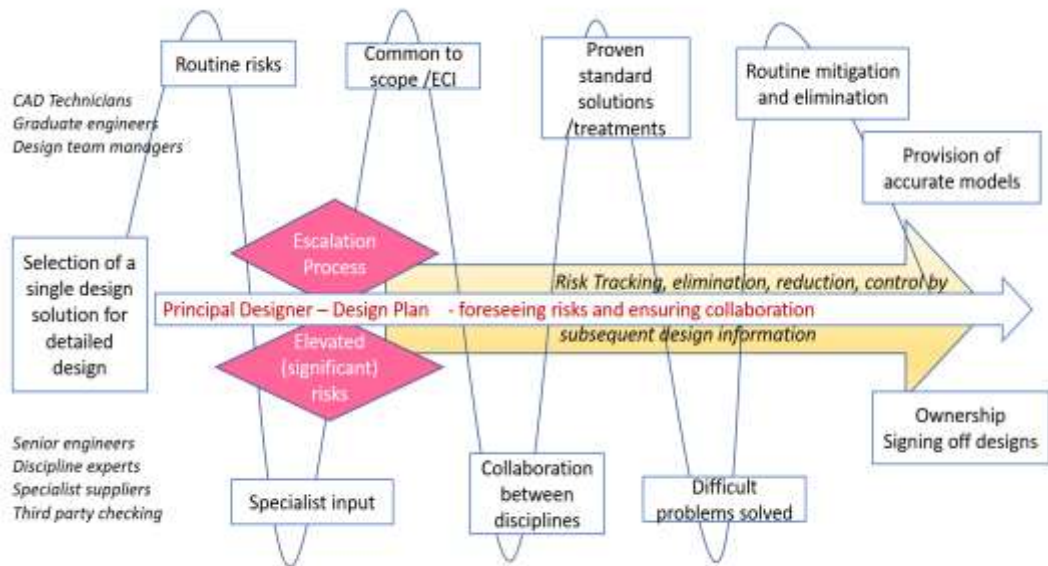
13th October

- Following general WHS discussion GC offered to provide noise and vibration advice in respect to potholing tasks / innovation – Martin P requested further information.
- GC indicated that following the recent HSE CDM survey on the role of the Principal Designer the following findings had been captured:
 - The PD role has introduced a more positive attitude to designer led Design Risk Management
 - On larger schemes it was clear that CDM is well embedded and has promoted improved adoption of design risk management
 - Areas for concern / negatives noted are:
 - Still a lack of clarity and understanding of the PD role
 - SKE for the PD – Often difficult to find the right person
 - Contract arrangements can work against the PD role
 - Commercial pressures / Failure of Clients to see benefit of design risk management (GC noted that anecdotally it has been found that a 10% increase in design spend leads to significant benefits and savings once in construction).
 - Authorisation and empowerment
 - Timing of appointment
 - Design and Build projects (PD role contractual arrangements)
 - Handover from PD to PD
 - Temporary Works
 - Design Risk Management is often not engaged earlier enough (Too late at detailed design)

GC

Many DRM Approaches
One Principal designer





- Richard W flagged the benefits of ECI on the recent National Highways GI framework, highlighting that the surveying of sites prior to works is leading to safer working practices and better designs being in place prior to commencement.
- Paul B recommended the inclusion of PD's involvement in Temporary Works be added to the above flow diagram.
 - GC indicated that the HSE are recommending Stage 0 Temp Works Schedules. This would allow designers to better understand and remove the need for Temporary Works through improved development of the permanent works proposals.
 - The importance of undertaking hazard analysis and safety reviews from Stage 0 onwards was also recognised.

GC/MLa

Note

Note

BIM 4 H&S Working Group Guidance for Clients



Available soon on UK BIM Framework Website

The Best Mix Approach

-using digital techniques, which integrate structured and unstructured information with geometrical models.
- Most effective mix of;
 - 3D & 4D Models
 - Coded standardised information
 - Free text narrative

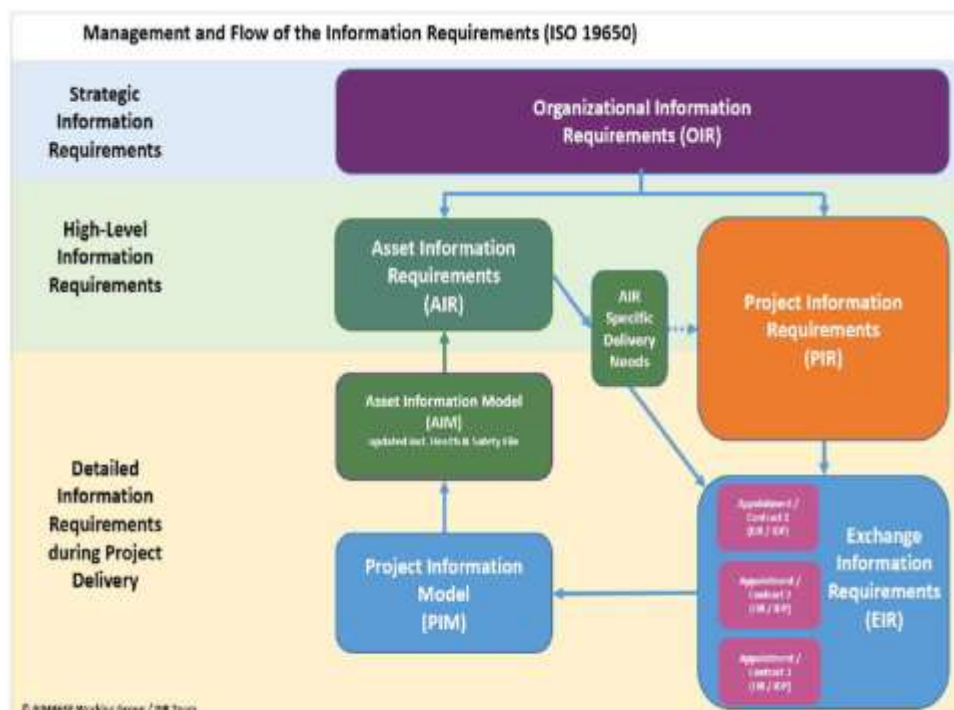
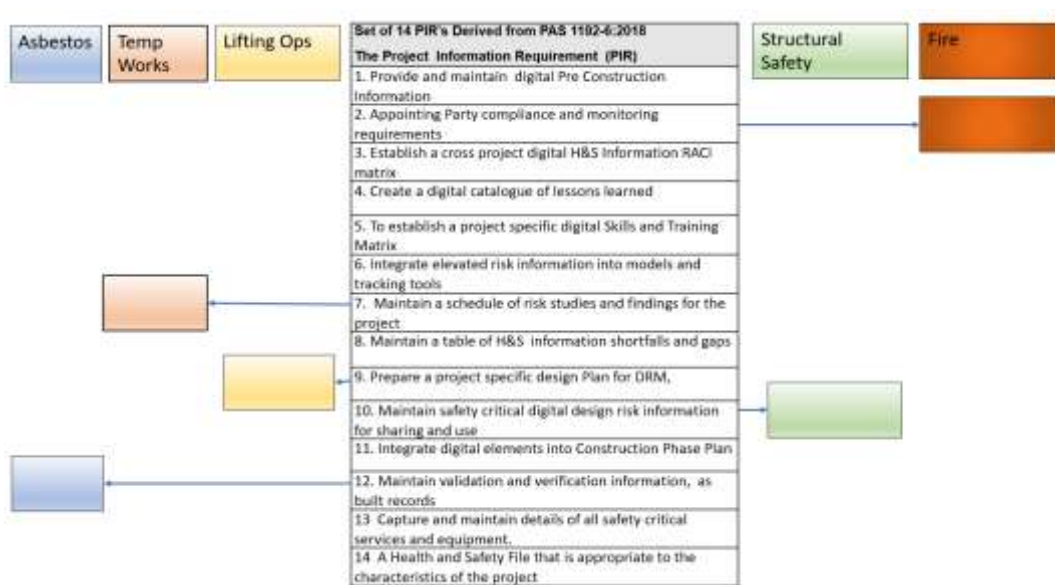
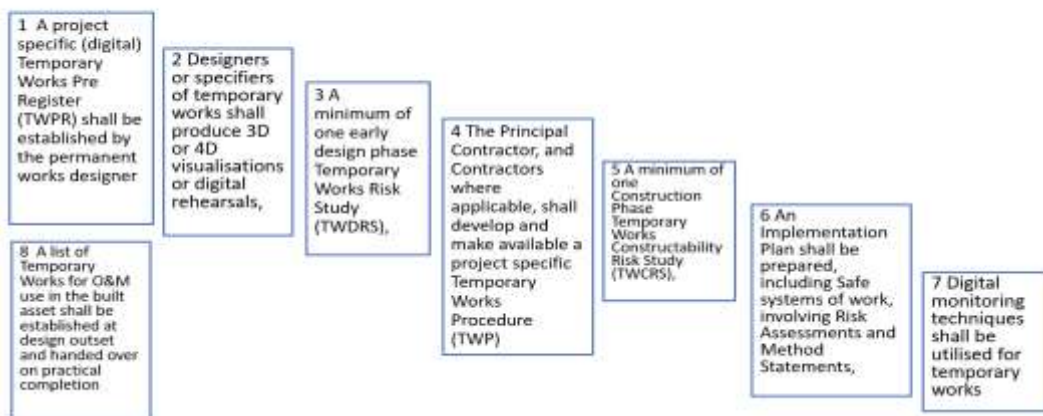


Figure 3: Management and Flow of the Information Requirements for a Construction Project



8 Temp Works PIR's



B.2 Information that will enable us to become an exemplar for health and safety

Note: the focus here is on putting in place "class leading" standards of Health and Safety information management to demonstrate that in this project, elevated risks (as defined in PAS 1192-6 Specification for collaborative sharing and use of structured health and safety information using BIM, ISO 2016) are managed using digital techniques, which integrate structured and unstructured information with geometrical models

B.2.1 Organizational information requirements (OIR)

•Policy: To be an exemplar organization for Health and Safety. Organization X aims to put into place "class leading" standards of Health and Safety information management in order to demonstrate that project risks are managed using digital techniques.

OIR The organization needs to maintain information systems that enable the identification and tracking of foreseeable elevated risks in design, installation and operation. This needs to be done at the earliest opportunity. Treatment and management of these risks shall be to an exemplary standard.

B.2.2 Asset information requirements (AIR)

Organization X has reviewed this OIR and has identified the following AIR as a result:

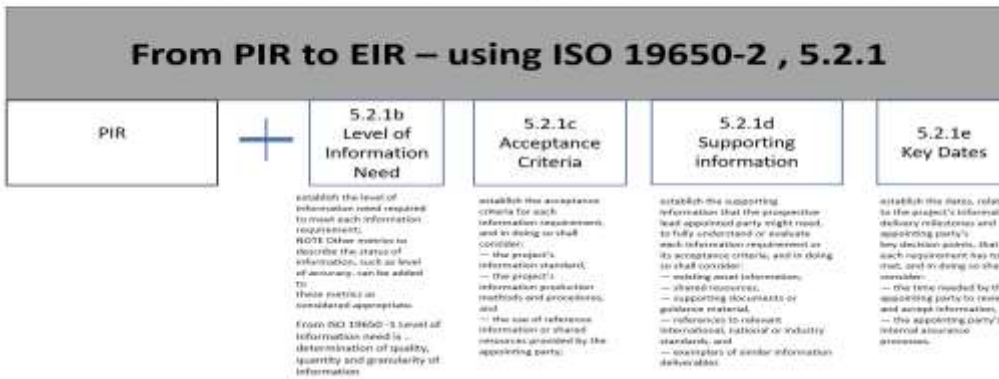
AIR To require the asset information model (AIM) to contain current elevated risk information complete with an audit trail, in a way that integrates structured and unstructured information with geometrical models. The information must include health and safety information that significantly affects the safe and healthy operation of the asset.

B.2.3 Project information requirements (PIR)

Organization X has reviewed its OIR and has identified the following PIR as a result:

PIR To require the project information model (PIM) to contain current elevated risk information complete with an audit trail, in a way that integrates structured and unstructured information with geometrical models. The PIM shall enable sharing and collaboration in risk management in order to optimise risk treatment in the project.

Delivery of IR's --Moving Detail from PIR to EIR



Information requirement (Delivery and Operational)	Level of information need	Acceptance criteria ^a	Supporting information	Key dates
To require the project information model (PIM) and the asset information model (AIM) to contain current elevated risk information complete with an audit trail, in a way that integrates structured and unstructured information with geometrical models. The information models shall enable sharing and collaboration in risk management in order to optimise risk treatment*	Risks to include attributes listed in PAS 1192-6 Annex A. The outputs shall allow filtering, analysis and proactive risk management through various metrics. Risks shall include those affecting cleaning, maintenance and use in the operational phase	All attributes for shared information and risk information to be included as set out in PAS 1192-6:2018 Annex A. Risk information to be capable of filtering by level of risk, by risk mitigation type and by risk owner, as a minimum. Terms used to be capable of sharing with an unambiguous, common meaning.	Documentation of any detailed risk analysis on which the EIR are to be based.	Digital elevated risk information to be exchanged at the initiation and completion of each appointment and as requested in between**

**Note that because it is likely that multiple appointments may be working with risk information then this EIR will appear multiple times (i.e. for each relevant appointment).
 ** Risk information may be required by the appointing party at any time during an appointment.
 Acceptance criteria- In addition to any requirements set out in the information standard and information production methods and procedures*

- GC has provided the BIM framework guidance documents, which are to be sent out with the minutes (see attached)
- Discover Safety – Pav will issue through to PDWG the stakeholder meeting appointment – Virtual Discovering Safety Event 1st Nov 2022 (attached)

Pav S

7.0 T&F Group Updates
7.1 H&S File Digital Development – (Mark Lamport – Arcadis)



Principal Designer Working Group

Event No 29

Health and Safety Files Digital Development

Mark Lamport, Arcadis

13th October 2022

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

Task and Finish Group Team

Mark Lamport – Arcadis (T&F Group Lead)
 Doug Potter – Arcadis
 Patrick McNulty – Arcadis (LTC)
 Pav Singh – Arcadis (LTC)
 Saskia Lear – Arup
 Natalie Mansell – Atkins
 Tim Bowes – Atkins
 Darren Allen – Jacobs
 Rob Butcher – Jacobs
 Andrew Finch – Jacobs
 Richard Wilson – National Highways, PDWG Chair and T&F Group Sponsor
 Jason Glasson – National Highways, Head of Asset Management
 Kevin Clague – National Highways, Asset Needs Manager – Operations NW
 Nigel Yeatman – National Highways, Operations Directorate – Areas 12 & 14
 David Owens – WSP

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 Glascoe
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"> • What information do they need from the H&S File? • In what format? • On what platform? 	Andrew Finch	OD representatives (including David Diorensheav 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 area 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)	

Sub Task Updates

- Sub-task 1 – Update provided by Richard W; it had been identified that there are 30 different operating platforms for HSF within National Highways. RW has a meeting planned with Mel Clarke and Leila Tatchi Head of Assets, to talk about better engagement and direction from leadership in NH digital world. RW will report back.
- Sub-task 2 – Update provided by Saskia Lear, on the web-based survey which had now been completed with 16 responses to date - a quarter had indicated no progress on digital

RW

HSF, half noting little progress and a quarter indicating good progress. Saskia will now be requesting further details within this section to improve the learning opportunity.

SL

- Request for the outstanding responses to be provided by PDWG members asap. Link here <https://forms.office.com/r/c17ehzUA7m>

All

Sub-task 3 – Andrew Finch to update at next meeting.

AF

Sub-task 4 – Update provided by Tim Bowes

H&S File Digitisation T&F Group

Sub-Task 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?

- Draft contents list compiled
- To be reviewed against Legislation and other requirements
- Sub-Task group workshop to be arranged to discuss and finalise outcome (end October / early November)
- Agreed deliverable to be issued to T&F Group

Sub-task 5 – Update provided by David Owens

**PDWG TF GROUP
HEALTH & SAFETY
FILE DIGITAL
DEVELOPMENT**

Sub-Task 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).

Sub-task Owner: David Owens
Supported by: Tim Bowes
Outputs: initial draft process map
Timescale: provide initial draft process map to Mark Lampert by Tuesday 13/9/2022

SPECIFYING FOR SUCCESS

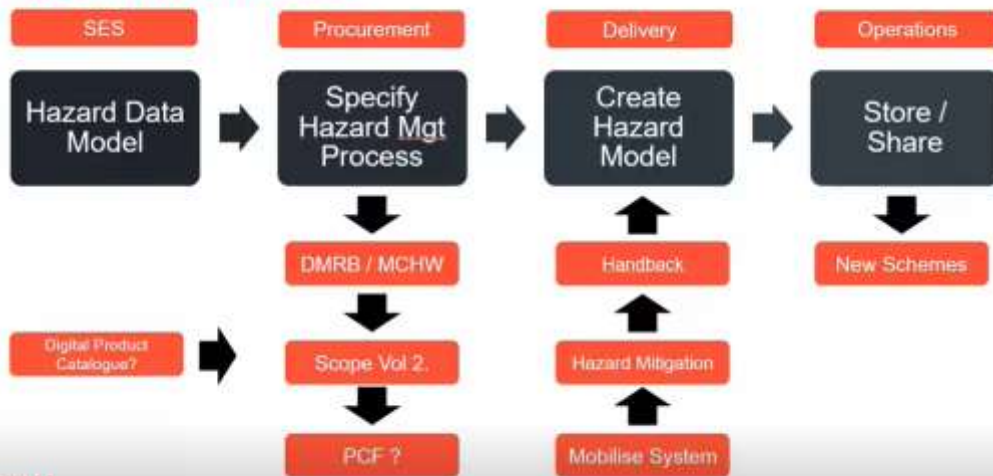
Project Delivery

- Contract (BSC) (or 4)**
Contains the process to quote and award work. Requirements are vague, low level of detail. Typically client sign post to more detailed specifications.
- Plan of Work (POW)**
What, Why, When, How set to the contract. Detail management parameters of the project (Stages, work, deliverables, approvals, consultation with stakeholders).
E.g. Project Controls.
- Specification (DMS / BSC17W)**
Methods of management systems, process and requirements. Client will either have an existing (MCHS), or will have a consultant create (NSI). Often a template will have been specified added. Quality criteria will be clear. Sign posts to BSC/DMS standards.

Standards

wsp

HAZARD DATA PROCESS



- Pav S requested that the databases be expanded to include both Hazards and Constraints. This was already part of the discussion. MLa to ensure include in group discussions.
- DP noted the future use of NUAR to capture Stats data. This has often not been captured by NH when supplied following TH etc. as it has been seen as third-party data. DO felt that such data should be captured through an MoU now built into the Contracts. DP questioned if this was happening in practice – further clarity required here. MLa to take back to the group through Nigel Yeatman and Jason Glasson. Clarity required on what was happening in practice.
- Agenda item to be included on next PDWG agenda.

MLa

MLa

DP

Sub-task 6 – No update at this meeting



Alignment with BIM 4 H&S Working Group

- Progress update on the H&S File Digitalisation Task and Finish Group presented to the BIM 4 H&S Working Group by Mark Lamport, Saskia Lear & Andrew Finch on 13/9/2022.

Q&A

7.2 Whole Life Design Safety Shares – (Martin Partington)

PDWG Task Group – Safety Shares

Summary on a page

Purpose of the Meeting - to review 3 incidents that had been drafted into a design safety share using the process already developed within other safety share meetings, with the aim to get them published onto the Supply Chain Hub website

Attendees

- Martin Partington (Jacobs) - Chair
- Doug Potter (Arcadis)
- Sophie Gwynne (Arcadis)

Attendees

- Jim Gallagher (National Highways)
- Sam Allin (Jacobs)
- Rob Butcher (Jacobs)

Apologies

Last meeting

- Finalised 3 safety shares (following 3 pages)
- Identified next 3 for the next meeting
- November's meeting to review list of shares in the pipeline

Outstanding issues


- Communication of published shares
 - Review access from the websites
 - How to find them
 - Communicate to wider audiences

Outcomes and Next Steps

- Next meeting on 25th Oct to review another 3 shares
- Then following meeting on 30th Nov to prioritise next steps

Ref Number	Share Title	Status
WLD.001	Manual Handling - Low Level Retaining Structures	Published
WLD.002	Impact with Moving Vehicle - Positioning of Assets	Published
WLD.003	Manual Handling - Revetment Finishes	Published
WLD.004	Temporary Narrow Lane Rerouting - Designing for Existing Infrastructure	Published
WLD.005	Working at Height - Maintenance of Technology	Published
WLD.006	Health and Wellbeing - Carpal Tunnel Syndrome in the Office/Site Environment	Published
WLD.007	Verge and Central Reserve Treatments - Avoiding Animals on the Network	Published
WLD.008	Collision/Impact - PVI by Falling Object	Published
WLD.009	Planning and Preparation for a Visit to Site	Finalised
WLD.010	Confined Space, Slips, Trips and Falls and Access into Chambers	Finalised
WLD.011	Working at Height - When is a Fence Not a Fence	Drafted
WLD.012	Bridge Strike - Material Delivery	Published
WLD.013	Strategic Road Network (SRN) Interaction - Use Carriageway Working	Finalised
WLD.014	Stress Management (Wellbeing Share)	Drafted
WLD.015	CDM Designer Duty - Failure to Provide Adequate Access	Identified
WLD.016	Retaining Wall Component - Other	Identified

Published Safety Shares - Location



Click PD Working Group

Click Lessons from Incidents

Scroll down to Design Lesson Learnt Safety Shares



Design Lesson Learnt Safety Shares

Finalised



MINIMISING RISKS WHEN VISITING SITE – PLANNING AND PREPARATION		WLD.009
Description of Event An Engineer went to site with no safety documentation in place. Upon arrival, they discovered the shift had been stood down that day.		
Population at Risk Visitors to site, project team including designers and surveyors	Potential Mitigation Measures Client <ul style="list-style-type: none"> Confirm site management arrangements for visits to site and site inductions are suitable. Design <ul style="list-style-type: none"> Conduct site visits virtually where possible. Provide information on procedure for visits to site. Provide instruction and training on procedure for visits to site. Prepare site induction and ensure all project team complete site induction. Construction <ul style="list-style-type: none"> Include site visit protocols within Construction Phase Plan. Inform project management team when site is open and site is closed. Prevent access to construction site by unauthorised persons. Visits to site by project team, including designers, must be planned in advance with written acceptance from site management team. Maintenance / Operations <ul style="list-style-type: none"> Raise safety observations. Site visitors are to check it is appropriate to visit prior to travelling. Travel safety action plans or similar to be in place at all stages of operations. 	
Hazardous Activity and Residual Risk Description <ul style="list-style-type: none"> Inadequate information, instruction, and training provided for site visitors. Inadequate supervision of site visitors. Breakdown in cooperation between site management and project team. Failure of site management team to report to project team change in circumstances on site. Worker visiting site unaware of site hazards and associated controls measures with an assessed residual risk of an almost certain likelihood of major harm. 	Potential consequences of this event <ul style="list-style-type: none"> A site visitor could have been exposed to multiple construction site hazards resulting in reportable injuries. Prosecution of client or inadequate arrangements for managing projects. Prosecution of principal contractor for lack of suitable site induction and failure to undertake general duties. 	
Safety Hub Alert Database <ul style="list-style-type: none"> No issues on current database as of August 2022. 	Further Guidance and Reading <ul style="list-style-type: none"> RBR 23 – Site Inductions RBR 26 – Safety by Design Safe's Story – A Safety Video 	

Finalised

CONFINED SPACE, SLIPS, TRIPS AND FALLS AND ACCESS INTO CHAMBERS		WLD.010
Description of Event Workers inside inspection chamber that has no safe means of access and no measure to prevent unauthorised entry into confined chamber.		
Population at Risk Construction Workers	Potential Mitigation Measures Design <ul style="list-style-type: none"> Design for external inspection and cleaning. Design a safe means of access to inspection chamber Design of inspection chamber's top board to include preinstalled access cover Ensure a digital geospatial means to control access to chamber Inset levels to be no greater than 1.2m below finished ground levels. Construction <ul style="list-style-type: none"> Put in place suitable control to prevent unauthorised access to inspection chamber. Ensure safe means of access and barriers to work site is provided. Ensure site hazards are eliminated, including loose material, before starting work. Adopt digital technologies to inform workers of existing site hazards. Provide warning signage around existing site hazards. Maintenance / Operations <ul style="list-style-type: none"> Consider external inspections and cleaning techniques. Maintenance records to include safe means of access. Identify all residual hazards associated and include within RAMS. 	
Hazardous Activity and Residual Risk Description <ul style="list-style-type: none"> Access to chamber is via an unstable steep slope of made ground with an assessed risk of likely of serious harm. Unauthorised entry into chamber designated as a confined space with an assessed risk of major harm. Working adjacent to loose material without adequate means of retention with an assessed risk of almost certain of minor harm. 	Potential consequences of this event <ul style="list-style-type: none"> Slips, trips, falls resulting in reportable injury. Loss of consciousness resulting in death. Struck by moving material resulting in minor impact and crushing injuries. 	
Safety Hub Alert Database <ul style="list-style-type: none"> Filtering by the text "confined space" in subject description has 1 alert with injury. 		Further Guidance and Reading <ul style="list-style-type: none"> RBR 14 – Slip, Trip, Fall RBR 28 – Safety by Design

Finalised

WORKING AREA – INSUFFICIENT WIDTH TO SAFELY UNDERTAKE WORKS		WLD.013
Description of Event Vehicle operating within barrier safety zone and soft verge edge due to insufficient working width.		
Population at Risk Construction Workers, Maintenance Workers and Road Users	Potential Mitigation Measures Design <ul style="list-style-type: none"> Confirm that there is sufficient working width available. If not, potential to request land for temporary works to facilitate additional working area. Allowance for barrier Safety Zones and edge protection must be considered at all times. Working at night could be considered, to allow increase in extents of lane closures, increasing available working width. Direct and indirect network impacts on safety will need to be factored in, in respect to setting up of the TTM, potential traffic congestion and site road impact. BM and other digital solutions to be used within the design process to check how the size of plant will operate safely within the area. Construction <ul style="list-style-type: none"> Potential provision of edge protection at crest of embankment to ward haulage drivers away from vulnerable edge. Identify appropriate working width constraints to the available carriageway and provide it. Use alternative plant, e.g. tracked dumpers. Maintenance / Operations <ul style="list-style-type: none"> Similar considerations to the above should be considered for maintenance works e.g. widening or drainage operations. Update existing maintenance traffic management plans. 	
Hazardous Activity and Residual Risk Description <ul style="list-style-type: none"> Vehicle driving close to barrier within working width. Vehicle operations with nearside wheels on soft ground (verge) has an assessed residual risk of a likely likelihood of major harm. Vehicle driving at top of slope with no edge protection. 	Potential consequences of this event <ul style="list-style-type: none"> Vehicle is at risk of overturning which could result in plant operative and/or ground workers in the vicinity being injured. VRS will not perform as expected in the event of a collision. There is high potential for serious injury due to plant operating within the barrier deflection Safety Zone. The residual risks require the working width requirements to be adhered to. 	
Safety Hub Alert Database <ul style="list-style-type: none"> Category vehicles with sub-category 2 overturning has 14 alerts including 1 with injury and 1 with a fatality. Sub-category 1 MOP vehicle, Lorry Loader cranes and x-Misc with sub-category 2 collision, competence and uncontrolled plant movements with a text filter for alerts containing "VRS" has 3 alerts. 	Further Guidance and Reading <ul style="list-style-type: none"> RBR 1 – Plant and Equipment RBR 2 – Plant/Person Interface 	

7.3	<p>Safe Gantry Access Design Working Group</p> <ul style="list-style-type: none"> No further updates at this time. <p>Use of the New NH PCF documents – (Paul B - SMA)</p> <p>PB post meeting discussions captured in the Chat Room</p>	
7.4	<p>Suicide Prevention Design Tool – (Nicola Tweedie – National Highways)</p> <ul style="list-style-type: none"> National Highways have commissioned Futran to continue the development of the Suicide Prevention Risk Management System. The purpose of the project is to develop a continued cycle of risk identification, management, and the evaluation of the effectiveness of interventions for suspected suicides and suicide attempts on the strategic road network. As part of this work, we will be looking to establish an advisory group to help us understand how the process should be embedded into the delivery and operation of our network and the fundamental needs of end users. NT will be approaching the group in the coming weeks for volunteers to support us in developing this process and associated material. If you would like further information, please contact suicide.prevention@nationalhighways.co.uk 	NT
7.5	<p>Passport Scheme – Designer Module (Natalie Mansell - Atkins)</p> <ul style="list-style-type: none"> DP noted there is a draft document currently under review, progress update to be provided at the next meeting 	NM/OM
7.6	<p>Eliminating Risk from the Outset — (Paul Dennis - Arup)</p>  <ul style="list-style-type: none"> PD updated on the Workshop undertaken in August with 42 in attendance and 127 comments provided on the technical notes presented at the workshop.  <ul style="list-style-type: none"> PD noted that Tom Merry (National Highways) will be the owner of this work package in reviewing this plan / process. Brenley Corner to be used as a trial. 	

WP3 – Learning from Design

Tangible output – Safety alert tile on HART homepage



- DP highlighted that access to HART is still limited to specific projects, and that there are still ongoing discussions regarding improving and widening access to the system for individuals across the wider highways sector – DP to continue discussions with NH.
- If all information for learning is captured on HART, this will limit availability to the wider community and internationally. The Safety Hub web page provides a more widely available platform. PD to consider how will this be addressed. HART functionality is not fully used.
- PD indicated that the aspiration was to publish outcomes from incident investigation and make this widely available (this would have to take into account GDPR issues).

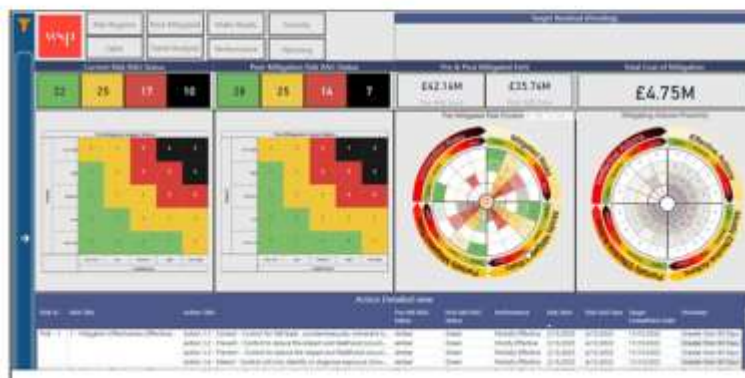
DP

PD

PD

WP4 – Measuring Design Performance

Tangible outputs – Review of Design Strategy Record / Hazard Review Log and Xactium HSW Harm and effectiveness of mitigation measures tool



- PD was made aware of the earlier 5x5 Risk Matrix discussion he is to reach out to Liz Braithwaite to jointly review the potential standardisation of the 5 x 5 Risk Matrix following discussions at the Safety Hub.
- DP requested that trend analysis be considered as a key output.

Liz / PD

PD

8.0 AOB

- Should the future be Teams meeting or hybrid? DP/MLa/RW to discuss offline

DP/RW

9.0 Date of Next Meeting – 19th January 2023 (PDWG 30) – Teams Meeting

Subsequent meeting to be – 20th April 2023 (PDWG 31) – Face to Face – Jacobs. Birmingham Office