

# Principal Designer Working Group

Event No 32

Health and Safety Files Digital Development  
Mark Lamport, Arcadis

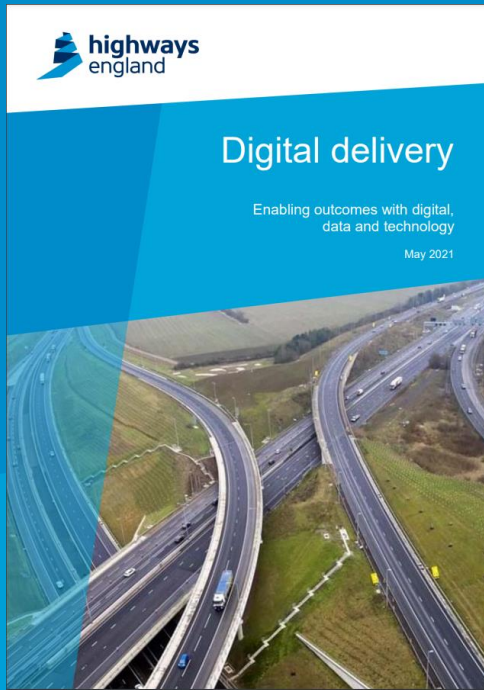
13<sup>th</sup> July 2023

# 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

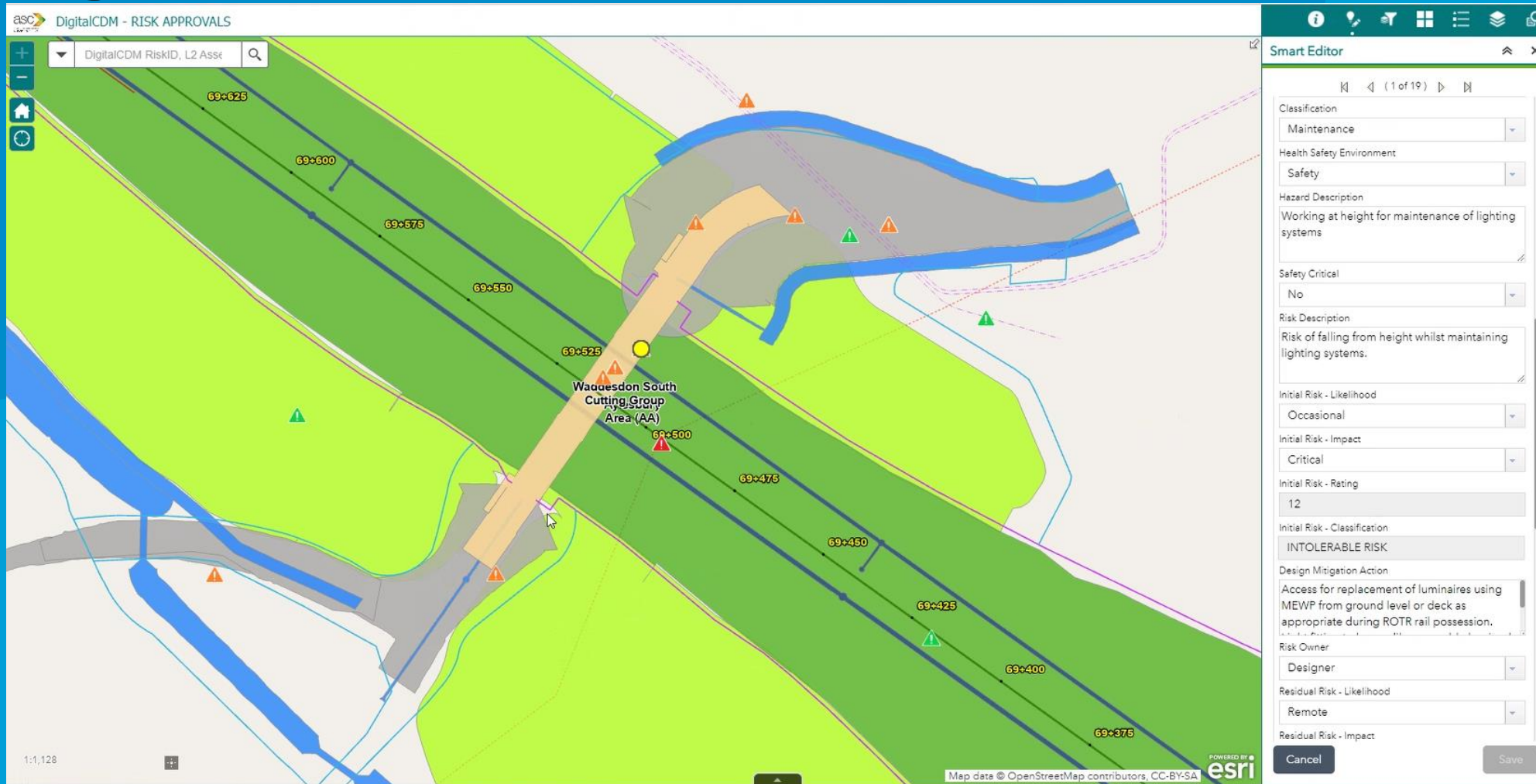
SUB-TASK NUMBER	SUB-TASK DESCRIPTION	SUB-TASK ACTION OWNER	SUPPORTED BY
1	Establish which other National Highways group(s) are working on H&S File digitalisation and liaise with them to avoid duplication.	Richard Wilson	Jason Glasson
2	Establish what progress consultant organisations who are members 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 –



The screenshot displays the DigitalCDM - RISK APPROVALS interface. The main map area shows a cutting group area (AA) with various risk markers (triangles) and a central yellow circle. The map is overlaid with a green and blue color scheme, representing different risk levels or environments. A blue river or stream flows through the area. The interface includes a search bar at the top left, a scale of 1:1,128 at the bottom left, and a map data attribution at the bottom right.

The Smart Editor panel on the right contains the following information:

- Classification: Maintenance
- Health Safety Environment: Safety
- Hazard Description: Working at height for maintenance of lighting systems
- Safety Critical: No
- Risk Description: Risk of falling from height whilst maintaining lighting systems.
- Initial Risk - Likelihood: Occasional
- Initial Risk - Impact: Critical
- Initial Risk - Rating: 12
- Initial Risk - Classification: INTOLERABLE RISK
- Design Mitigation Action: Access for replacement of luminaires using MEWP from ground level or deck as appropriate during ROTR rail possession.
- Risk Owner: Designer
- Residual Risk - Likelihood: Remote
- Residual Risk - Impact: (Not explicitly labeled in the image)

Buttons for 'Cancel' and 'Save' are visible at the bottom of the Smart Editor panel.

# 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	Maintenance Procedures	See items e) and f) above	
ditto	Demolition	Link to documents such as as-built drawings, construction sequence drawings etc	
ditto	Hazard and Risk Information	Covered in Items b) and d) above	
ditto	Statutory Requirements	Link to relevant electrical test sheets	Electrical test sheets for lighting and technology

# 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	

# Q&A