

# Principal Designer Working Group

Event No 34

Health and Safety File Digital Development  
Mark Lamport, Arcadis

25<sup>th</sup> January 2024

# Task and Finish Group – Action Summary

SUB-TASK NUMBER	SUB-TASK DESCRIPTION	SUB-TASK ACTION OWNER	CURRENT STATUS/CONCLUSION
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	Completed. Conclusion: no other NH groups are working on H&S File digitalisation.
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	Survey undertaken and results reported previously by Saskia Lear. Conclusion: responses indicated a broad variation with regard to progress on Health & Safety File digitalisation, some appearing to claim H&S Files are being provided in digital form.
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>	Mark Lamport (transferred from Andrew Finch)	Substantially completed. Conclusion: there appears to be significant misalignment and incompatibility between the way that H&S information is stored, managed and communicated during the pre-construction design and construction stages and the way that the end-users store, manage and communicate H&S information.
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	Completed. Conclusion: all of the H&S File information required by CDM2015 Appendix 4, and that which is additionally required by National Highways, is capable of being tagged to assets on a GIS platform.
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).	Mark Lamport	Work in progress.

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6	Identify any specific requirements of the National Highways Digital Delivery and Digital Roads documents which would be relevant to H&S File digitalisation.	Rob Butcher	Completed. Conclusion: the broad inference from these documents is that digital capability of common data environment enables HSF features such as Digital Twins and Handover, but there is no specific guidance or detail. The content is supportive of HSF digitalisation as part of the digital handover asset data process.
7	Produce Outputs and Deliverables	Mark Lamport	Work in progress – target date for completion: 29/2/2024.

# What a digital H&S File could look like

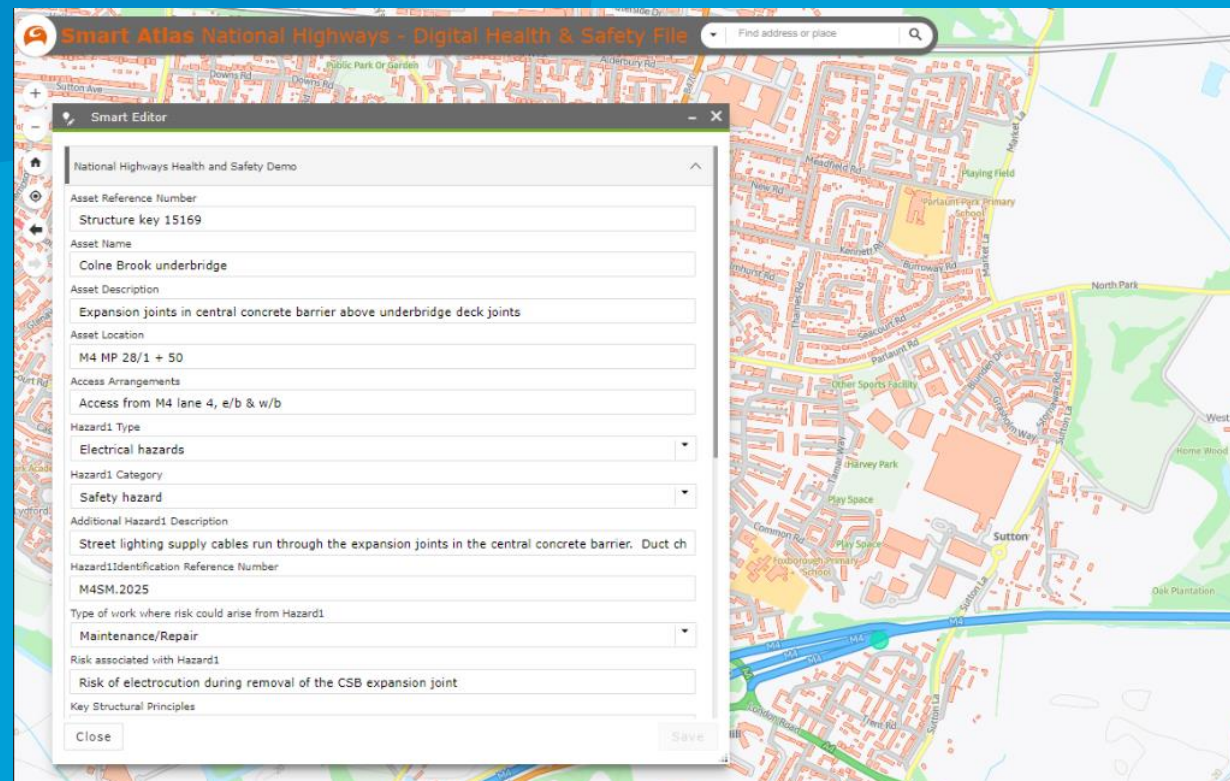
H&S File text

+

GIS-based data

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# Two types of hazard marker data

- Asset-specific H&S File information
  - for a structure, lighting column, feeder pillar, drainage chamber etc which may have one or more significant hazards associated with it
- Hazard-specific H&S File information
  - point hazards: eg mineshafts
  - linear hazards: eg water pipe, gas main, electricity cable
  - Areal hazards: eg areas of contaminated land, unstable ground

These require slightly different data schemas

# **GIS Presentation – Sophie Willett**

# Hazard marker data schema for Hazard-specific H&S File information (1)

DATA FIELD TITLE	DATA ENTRY TYPE
Hazard Location	M4 MP 62/6 + 75
Hazard Type/Descriptor	Underground services
Hazard Category	Safety hazard
Hazard Extent	Linear hazard
Additional Hazard Description and Details	MP, IP & HP gas mains, 16" & 24" cross transversely beneath the M4
Hazard Identification Reference Number	M4SM.0730

# Hazard marker data schema for Hazard-specific H&S File information (2)

Type of work where risk could arise from the hazard	Future construction/alteration
Associated risk	Risk of electrocution, fire and/or explosion
Additional information and any special requirements	Asset owner is SGN. Construction in the vicinity of the SGN mains is subject to the SGN PS6 approval process. Work must not commence in this area until formal PS6 approval has been received from SGN and all conditions have been complied with.
Links to reference documents	Link to services drawing



## Key Conclusions

- Proof of concept of H&S File digitalisation has been demonstrated
- Design organisations are already adopting and utilising GIS-based tools and platforms for storing and communicating health and safety information during the pre-construction and construction stages – so this is just an extension into the handover stage
- Buy-in needed from end-users (eg OD) for wider adoption
- The current mis-alignment between the design community and the end-user maintenance community appears to be the principal significant challenge to be overcome

# Next Steps

- Produce process map for management and communication of hazard and risk information from design through construction and handover into maintenance
- Finalise report to summarise T&F Group findings, conclusions and recommendations

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# Q&A