Supply Chain Safety Hub Update

PDWG Thursday 9th May 2024

Highways Safety Hub

Safety Moment Challenging the "As Is" & Designing out Risk

Amey

Highways Safety Hub

M65 Partial Column removal scheme

Scope – Partial removal 300+ lighting column above access door, ensuring integrity of circuit

- Temp measures to achieve savings whilst junction scheme is considered due to end-of-life asset, asset led?
- Phased approach introducing additional risk 'both during and future works'
- Increased future TTM, roadworker exposure and increased cost
- 300 horizontal cuts of vertical columns
- Cut columns and make-shift water proofing

Future works instruction – redundant columns going

forward?

1

2

Overview

- **Last meeting:** 2nd May 2024

- **MSK Research Proposal:** Steve Perkins presented a proposal to undertake an industry research project - Musculoskeletal Risk Profiling. Seeking supplier investment – total project value £160k (NH proposing to fund half).

- **SCSLG Community Update:** Positive feedback from members. A request for a Significant Risk Strategy template.

- **M25 Weekend Closure:** Case Study

- **RtB 42 Working on hard shoulders and roadside verges:** Operational focus and feedback – lateral safety zone (IPV, sweeping, Gully Cleansing).

- **Raising the Bar April Updates** - RTB9 – Utility Avoidance (published)

- **Next meeting:** Discussion: Above & Below Ground Services themed workshop

- **New CPF & Guidance**: Collating feedback

- **Communication:** "better links between SCSLG, Significant Risk Working Groups and the Hub…"

Raising the Bar 9 – Utility Avoidance Protection of Surface Laid Cables April 2024 Update

Protection and Maintenance of Temporary Surface Laid Cables

Marking Overhead Utilities

Goal posts that span traffic routes and provide a phy
vehicles that may impact with overhead structures a
used in accordance with Health and Safety Executive

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- Dedicated route, with consideration given to reducing the risk of damage, including work activities, vandalism or theft
- Minimise requirement for relocations or changes to the cable rou
- Clear arrangements for access for maintenance/24hr service out
- Identifying and protecting joints and connection points
- Location of National Highways/Private land boundaries, e.g. way
- Nature of the site – topography, ease of unauthorised public acc vegetation and habitats
- Duration of temporary cable and any planned changes to route
- Removal of cable and all associated infrastructure immediately o works completion.

If the planning activity identifies the location for safety critical cables must

Specific arrangements are identified in TSP0420 for the protection NRTS bypass cables, including the responsibility on the project to:

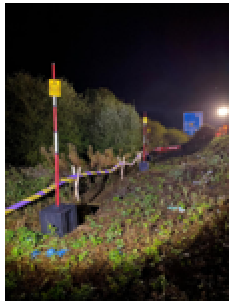
- Install, maintain and remove upon completion temporary bypas cable ducting.
- Provide a safe means of access to and alongside the route of th temporary bypass cable.
- Clear the route of vegetation and other obstructions including t in the vicinity of the duct start and finish points.
- Install mechanical duct plugs or other proprietary duct sealing system that can easily be removed (excluding expanding foam) within each open end of the ducts, i.e. where there are joints a at the ends of the route and shall also seal the cable entry port the chambers where the bypass enters if applicable.
- Manage the route during its life, ensuring that it is not endange by other works by other contractors or is at risk through theft o vandalism.
- Notify the Service Provider immediately in the event of any thre or actual damage to the bypass cable and provide whatever assistance is required by the Service Provider to repair or rectif such faults.

Further consideration for the protection of safety critical cables and infrastructure should include:

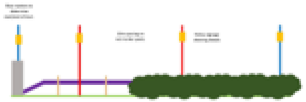
- Fenced or barrier area around cross-carriageway duct exit and entry points
- Suitably sealed ducting to prevent access by rodents at joints/ends
- Collared joints to prevent access at points along length of duct (secured with tie wraps to prevent joints separating)
- High visibility weed suppressant matting at cross-carriageway ducts
- Identification markers to show cable route above vegetation growth
- Vegetation management plan (i.e. swathe cutting / use of growth retardant herbicide along routes and at identified assets/locations)
- proactive communication of the bypass routes with stakeholders

All temporary cables, ducting and infrastructure must be removed when the temporary service is no longer required and should be agreed as part of the handover process.

Marking Temporary Safety Critical Cables



To aid identification throughout the life of the temporary cable, in addition to maintaining clear access to the cable, the installation of hazard markers is recommended. The hazard markers should be placed at the start and finish of the safety critical cable and at regular points along the route to provide an enhanced visual identifier.



To aid identification in the event of a service outage, hazard board may be used to include identification of cable/service and contact details.

Dealing with Legacy Services

Visual inspections should be made prior to any vegetation clearance, grass cutting or other activities to identify any unmarked hidden services. Where areas are completely overgrown, follow a safe method for clearance by clearing 1m wide swathes at regular intervals throughout the proposed site clearance area. Cut swathed areas downwards in 300mm intervals with a visual check for services and difficult underfoot conditions such as rabbit holes etc. before progressing with works.

Where unanticipated surface laid cables are located, action will be required to identify the cable and whether it is live (and the service it carries), it is redudant but potentially live (e.g pot-ended electrical cable) or construction waste (not active).

Arrangements for temporary or permanent protection, i.e. ducting, raising, or removal should be agreed and recorded on drawings, GIS, registers etc. to ensure information is properly documented.

Where a hazard exists that cannot be removed, the use of hazard markers to provide a visual identification of the cable route should be considered; a board can be used to identify the hazard and provide information to any personnel attending the site.

Unexpected surface laid cables and identified hazards should be formally raised with National Highways, to agree permanent removal/rectification to eliminate the hazard for future works.

Highways Safety Hub

Raising the Bar 9 – Utility Avoidance April 2024

Working Group Members:

- Katie Gray (Ringway)
- Luke Kendall (gva)
- Andy Bates (McCann)
- Clive Leadbetter (McCann)
- Maureen Gargan (Telent)
- Liz Braithwaite (Skanska)
- Paul O'Neil (National Highways)

Special Contributions by:

- Dave Riley (Amey)
- Paul Brown (WSP)

Highways Safety Hub

Raising the Bar 9 – Utility Avoidance April 2024

The April 24 update to RtB9 focused on preventing damage to surface laid safety critical cables.

By preventing damage, we prevent the loss of these services and avoid disruption on the network.

We eliminate the need for a post incident response, typically involving:

- Immediate post incident attendees
- Operative(s) attending to assess damage
- TM Crew putting out a closure for access
- Contractor attending to install/repair/replace infrastructure
- Engineering team attending to repair fault
- TM Crew lifting closure

Every additional visit to site puts people at risk of being killed or seriously injured.

Highways Safety Hub

Raising the Bar 9 – Utility Avoidance April 2024

Marking Overhead Utilities

Goal posts that span traffic routes and provide a physical barrier to vehicles that may impact with overhead structures and utilities must be used in accordance with Health and Safety Executive publication GS6

As an additional control, and where practicable, sets of goal posts, together with blue coloured road cones and combination safety signage, must be placed at the end of construction areas. Refer to Raising the bar 7 for further details relating to overhead protection measures.

This will serve to provide driver/operators with an addition visual message "reminder" of the need to ensure that boom/body/accessories are stowed correctly prior to leaving the construction area. However, height restrictors should be used on any plant that could come into contact with overhead utilities if unrestricted. Refer to Raising the bar 1 and 7 for further details relating to mobile plant and equipment.

Gates/barriers/exclusion zones/other measures (e.g. audible warnings and physical limiters in cabs for drivers as hazards are approached) to physically prevent uncontrolled access to areas where overhead cables are present.

Protection and Maintenance of Temporary Surface Laid Cables

Incidents involving damage to temporary surface laid cables can lead to the loss of safety critical services. Temporary cables, including NRTS bypass, CCTV, ANPR and Average Speed Camera cables have frequently been damaged during maintenance activities such as grass cutting and vegetation clearance. Damage to temporary cables also commonly occurs from rodent activity, vandalism, and theft. These cables carry **safety critical services**, and they must be protected to prevent the loss of these services and to avoid disruption to the network.

In accordance with the principles of prevention hierarchy set out by this Raising the Bar, the first consideration should always be elimination and during the design and planning stages of works, the use of wireless technologies must be considered and adopted unless there is a specific, significant reason why wireless is not suitable or reasonably practicable.

Where temporary safety critical cables are necessary, a maintenance plan is required to identify the responsibilities for the ongoing maintenance of the infrastructure and the associated cabling covering the whole life of the cable, i.e. a formal handover when the responsibility is transferred.

The maintenance plan should be developed by the Principal Contractor in collaboration with the Principal Designer and key stakeholders, including regional teams. Plans should be updated to reflect significant changes, HPNMs or cable damage incident investigation reviews.

The route for safety critical cables must be planned to reduce the risk of vandalism, damage or theft and to prevent access to rodents. As defined by the maintenance plan, the responsible organisation (the project) must give due consideration to minimising risks to the cables through their planning activities, including:

We aimed to avoid the situations and circumstances that have commonly resulted in damage and disruption to services:

- Work Activities – vegetation clearance
- Vandalism – theft or damage by 3rd party
- RTC – errant vehicles
- Rodents – prevent access to ducting along whole length of route

Considering the whole life of the cable.

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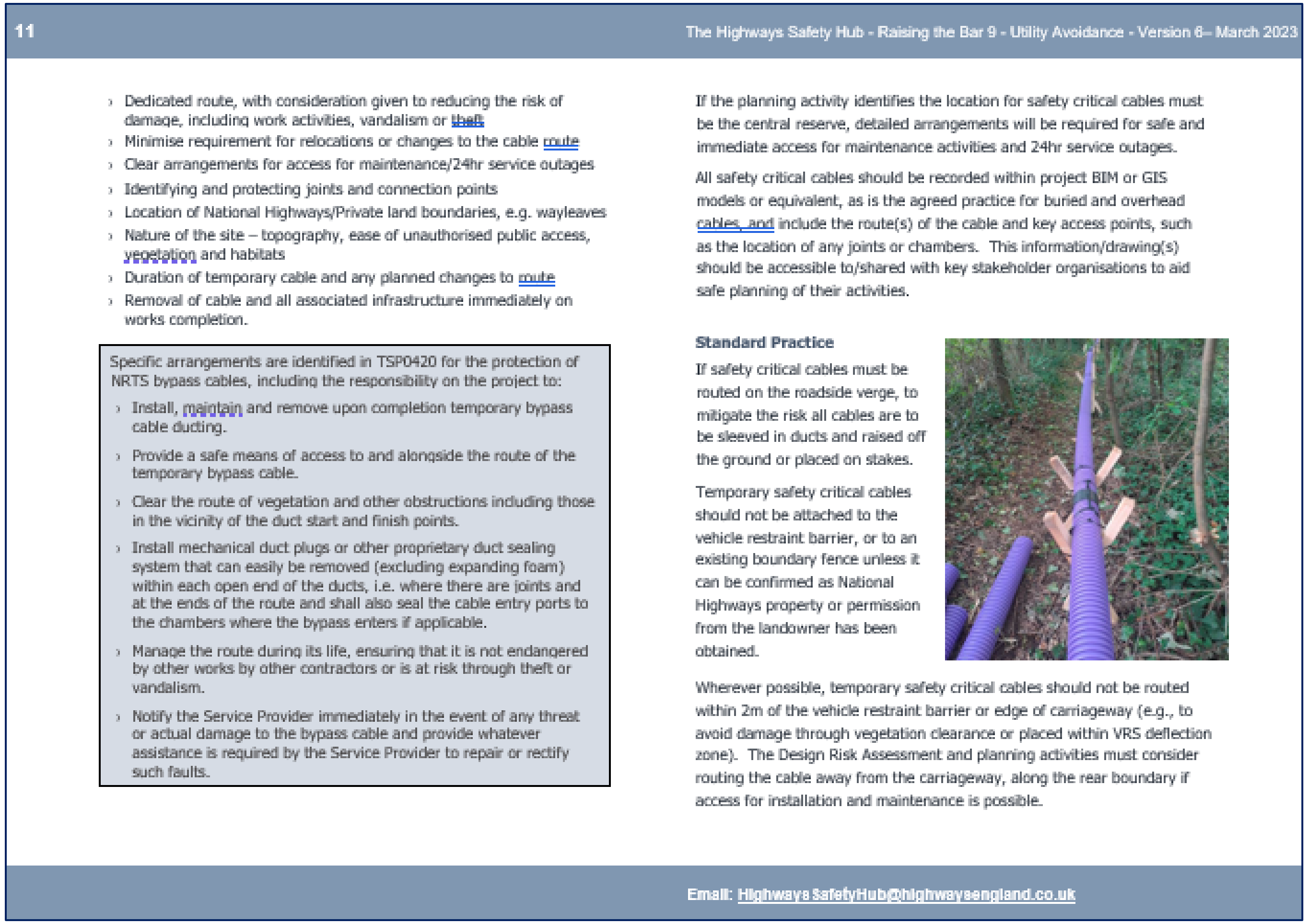
Raising the Bar 9 – Utility Avoidance April 2024



- Dedicated route, with consideration given to reducing the risk of damage, including work activities, vandalism or theft
- Minimise requirement for relocations or changes to the cable route
- Clear arrangements for access for maintenance/24hr service outages
- Identifying and protecting joints and connection points
- Location of National Highways/Private land boundaries, e.g. wayleaves
- Nature of the site – topography, ease of unauthorised public access, vegetation and habitats
- Duration of temporary cable and any planned changes to route
- Removal of cable and all associated infrastructure immediately on works completion.

Specific arrangements are identified in TSP0420 for the protection of NRTS bypass cables, including the responsibility on the project to:

- Install, maintain and remove upon completion temporary bypass cable ducting.
- Provide a safe means of access to and alongside the route of the temporary bypass cable.
- Clear the route of vegetation and other obstructions including those in the vicinity of the duct start and finish points.
- Install mechanical duct plugs or other proprietary duct sealing system that can easily be removed (excluding expanding foam) within each open end of the ducts, i.e. where there are joints and at the ends of the route and shall also seal the cable entry ports to the chambers where the bypass enters if applicable.
- Manage the route during its life, ensuring that it is not endangered by other works by other contractors or is at risk through theft or vandalism.
- Notify the Service Provider immediately in the event of any threat or actual damage to the bypass cable and provide whatever assistance is required by the Service Provider to repair or rectify such faults.

If the planning activity identifies the location for safety critical cables must be the central reserve, detailed arrangements will be required for safe and immediate access for maintenance activities and 24hr service outages.

All safety critical cables should be recorded within project BIM or GIS models or equivalent, as is the agreed practice for buried and overhead cables, and include the route(s) of the cable and key access points, such as the location of any joints or chambers. This information/drawing(s) should be accessible to/shared with key stakeholder organisations to aid safe planning of their activities.

Standard Practice

If safety critical cables must be routed on the roadside verge, to mitigate the risk all cables are to be sleeved in ducts and raised off the ground or placed on stakes.

Temporary safety critical cables should not be attached to the vehicle restraint barrier, or to an existing boundary fence unless it can be confirmed as National Highways property or permission from the landowner has been obtained.

Wherever possible, temporary safety critical cables should not be routed within 2m of the vehicle restraint barrier or edge of carriageway (e.g., to avoid damage through vegetation clearance or placed within VRS deflection zone). The Design Risk Assessment and planning activities must consider routing the cable away from the carriageway, along the rear boundary if access for installation and maintenance is possible.

And to eliminate the hazard through:

- Design – remove the cable from locations where we have commonly seen damage
  - Dedicated cable route
  - Protected within ducting
  - Raised off the ground
  - Not within 2m of carriageway
  - Not within VRS deflection zone
  - Not attached to VRS
- Planning – engagement with key stakeholders and defined responsibilities for the whole life of the cable, and critically its removal once works are complete (maintenance plan)

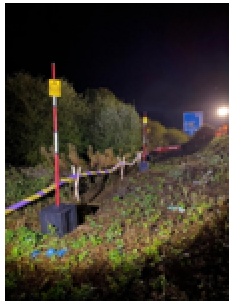
Raising the Bar 9 – Utility Avoidance April 2024

Further consideration for the protection of safety critical cables and infrastructure should include:

- Fenced or barrier area around cross-carriageway duct exit and entry points
- Suitably sealed ducting to prevent access by rodents at joints/ends
- Collared joints to prevent access at points along length of duct (secured with tie wraps to prevent joints separating)
- High visibility weed suppressant matting at cross-carriageway ducts
- Identification markers to show cable route above vegetation growth
- Vegetation management plan (i.e. swathe cutting / use of growth retardant herbicide along routes and at identified assets/locations)
- proactive communication of the bypass routes with stakeholders

All temporary cables, ducting and infrastructure must be removed when the temporary service is no longer required and should be agreed as part of the handover process.

Marking Temporary Safety Critical Cables



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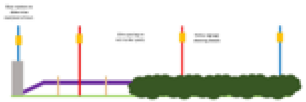

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Dealing with Legacy Services

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Where unanticipated surface laid cables are located, action will be required to identify the cable and whether it is live (and the service it carries), it is redundant but potentially live (e.g pot-ended electrical cable) or construction waste (not active).

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Where a hazard exists that cannot be removed, the use of hazard markers to provide a visual identification of the cable route should be considered; a board can be used to identify the hazard and provide information to any personnel attending the site.

Unexpected surface laid cables and identified hazards should be formally raised with National Highways, to agree permanent removal/rectification to eliminate the hazard for future works.

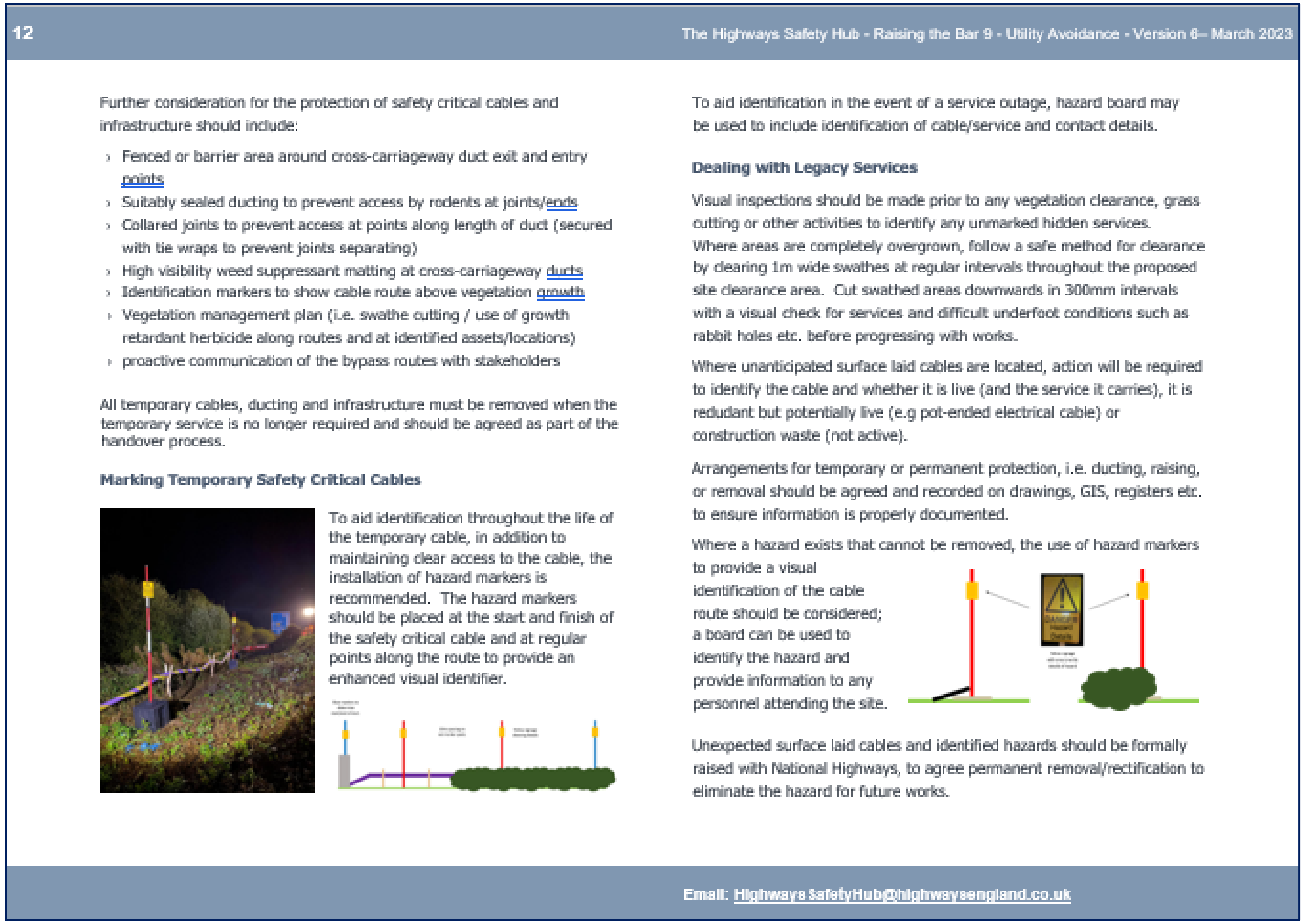
Email: HighwaysSafetyHub@highwaysengland.co.uk

And in making things more visible:

- Fenced or barriered / high visibility weed matting at cross carriageway entry/exit points
- Growth retardant herbicides along route
- Hazard Markers – at start and finish points as well as along the route
- Short term identification of hidden hazards
- Unexpected surface laid cables or identified hazards must be identified and agree permanent removed/rectification to remove the hazard.

Highways Safety Hub

Raising the Bar 9 – Utility Avoidance April 2024



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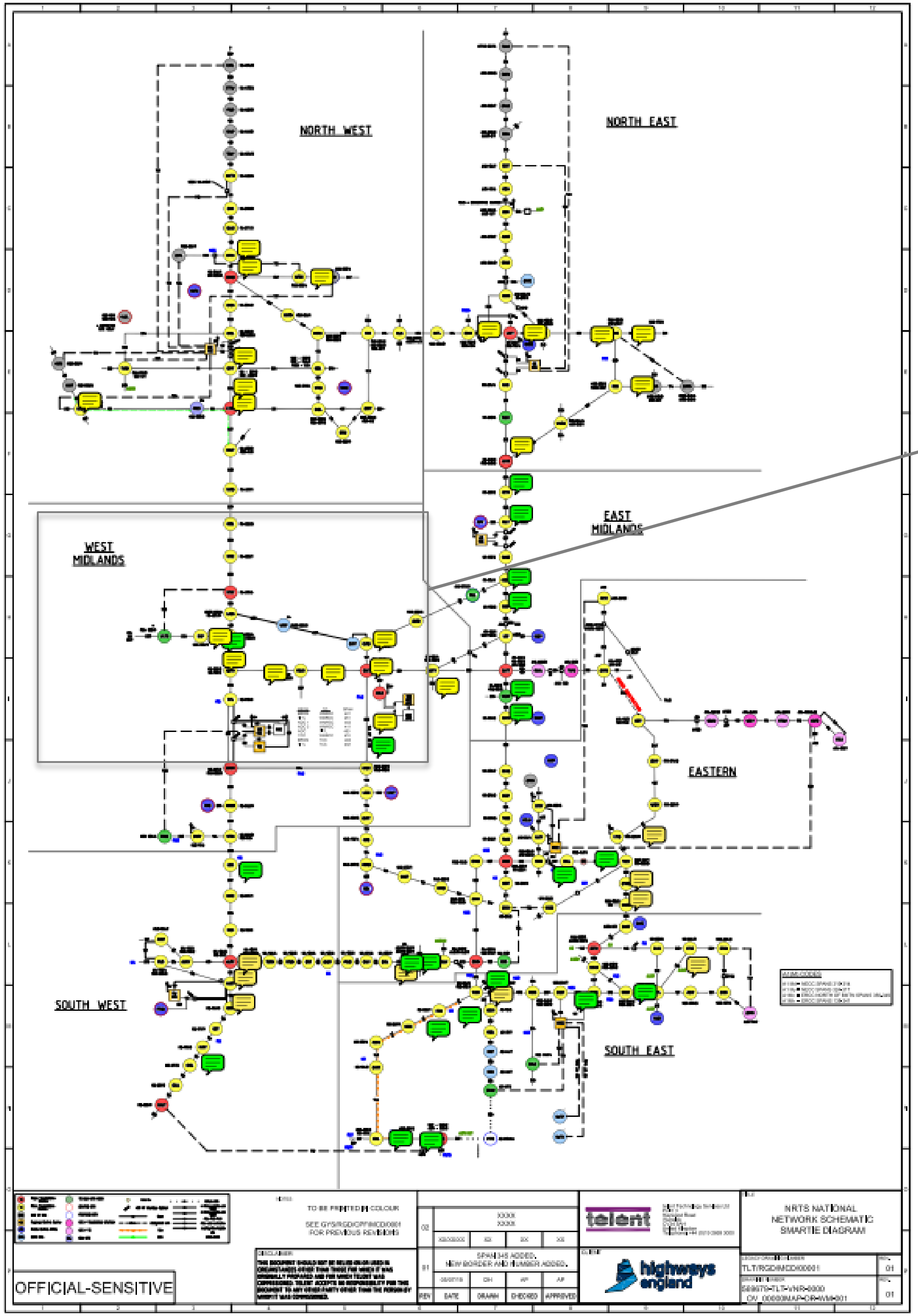
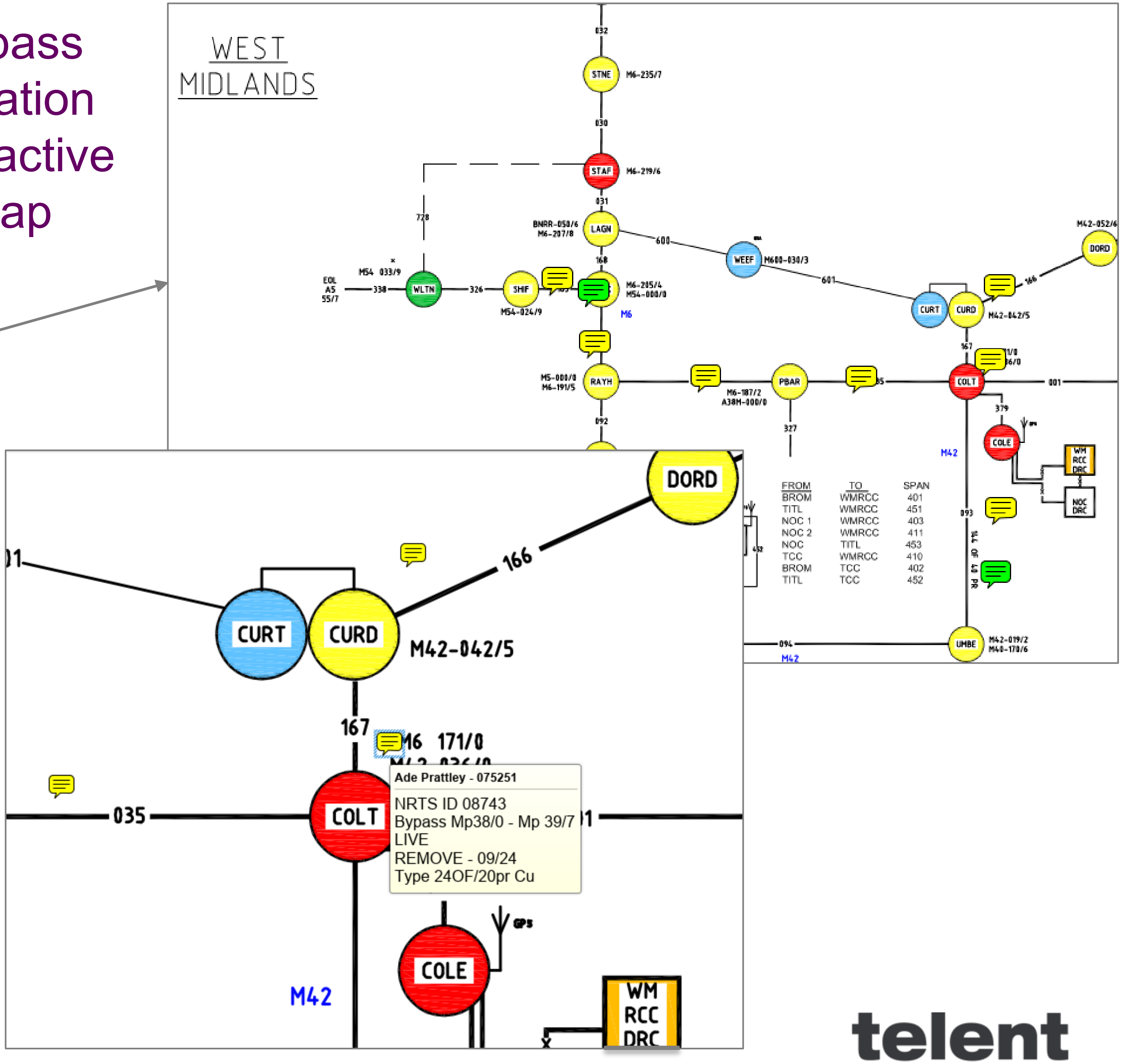
talent with technology

What Happens Next….

- New Raising the Bar – Protection of Temporary Surface Laid Cables and Identification of Hazards in the Roadside Verge for October 2024.
- Review and update of Raising the Bar 9 for current best practice on avoiding buried and overhead utilities?
- Safety Hub Working Groups – volunteers needed!
- Can we use technology or adopt engineered controls to further reduce risk?
- Engagement with Principal Designers Working Group for discussion, sharing of innovation/best practice in design and integration into RtB26 – Safety by Design
- National Highways to develop process for transfer of information on location/duration of bypass cables between Client and internal/external stakeholders (PCI/CPP Information)
- National Highways to identify and review ongoing maintenance of bypass cables from Scheme to Region

Bypass Location Interactive Map





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SCSLG Comm Update - Poll

SUPPLY CHAIN SAFETY
LEADERSHIP GROUP

Are you aware of the Safety Hub group?

Multiple Choice Poll | 53 votes | 53 participants

Yes - 47 votes — 89%

No - 6 votes — 11%

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SUPPLY CHAIN SAFETY LEADERSHIP GROUP

Are you an active member of the Safety Hub?

Multiple Choice Poll · 56 votes · 56 participants

Yes - National Highways Major Projects	11 votes	20%
Yes - National Highways Operations Directorate	0 votes	0%
Yes - National Highways Design Community	0 votes	0%
Yes - Supply Chain Major Projects	18 votes	32%
Yes - Supply Chain Operations Directorate	10 votes	18%
Yes - Supply Chain Design Community	4 votes	7%
No	11 votes	20%
No - interested in becoming a member	9 votes	16%

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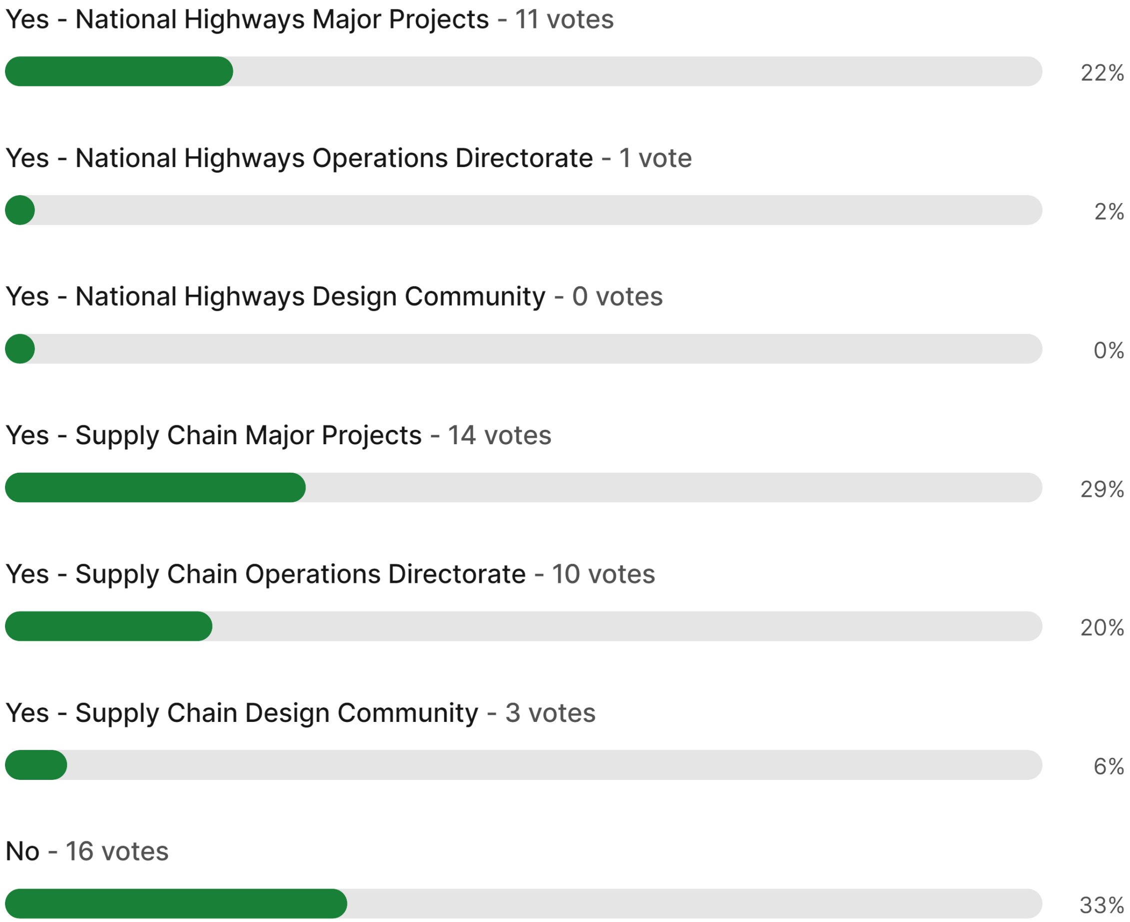
SUPPLY CHAIN SAFETY LEADERSHIP GROUP

As a Hub member, are you actively involved in a significant risk working group?

Multiple Choice Poll 49 votes 49 participants



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In the past 12 months, have you been involved in

Multiple Choice Poll · 57 votes · 57 participants

a task and finish group to review a common Intent and/or Raising the Bar documents? - 25 votes — 44%

developing safety campaign material? - 13 votes — 23%

a weekly Wednesday hub call to shared incidents/HPNM and lessons learnt? - 14 votes — 25%

contributed to news articles for the monthly hub newsletter? - 10 votes — 18%

assurance activities within your own organisation to check on the implementation of Common Intent and Raising the Bar documents? - 27 votes — 47%

None of the above - 15 votes — 26%

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SUPPLY CHAIN SAFETY LEADERSHIP GROUP

What one thing would you suggest to help provide closer links between the SCSLG, Significant Risk Working Groups and the Safety Hub?

Open text poll 38 responses 37 participants

Anonymous
Better communication, greater awareness of work in progress and collaboration between groups

Anonymous
Focus solely on implementation of output from SCSLG

Anonymous
We need to look at a structure in the process when the hub the hub are aligned to make proposals changes to R&R

Anonymous
Seems to be good links already due to overlapping membership

Anonymous
Key areas of focus

Anonymous
Involve Tier 2 and Tier 3 more. Communicate and liaise with them. Get them involved. They have great ideas and will support and raise awareness

Anonymous
Increased communication. Potential WhatsApp groups?

Anonymous
Link with HS2 and NR.

Anonymous
Regular Invitation of hub members to SCSLG meetings.

Anonymous
More working in parallel to see if ideas are workable and do they need bottom to top input

Anonymous
More working in parallel to see if ideas are workable and do they need bottom to top input

Anonymous
Ensure that work if groups are endorsed and adopted by NH area construction managers etc

Anonymous
More communication

Anonymous
I would like to be more involved

Anonymous
Linkedin ?

Anonymous
More communication

Anonymous
Maybe have a section in your meetings to bring in working group's activities

Anonymous
communication

Anonymous
More comms. I'm in a working group but didn't realise the link to the hub.

Anonymous
Communication

Anonymous
Awareness helps to develop involvement. this session being one of them

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SUPPLY CHAIN SAFETY LEADERSHIP GROUP

Finally, what is the one H&S challenge you are facing in our industry now, that this community can help overcome?

Open text poll 44 responses 41 participants

Anonymous
Off the shelf technology adoption at low cost.

Anonymous
How do we actually change? Keep having the same issues.

Anonymous
musculoskeletal

Anonymous
Noise and dust

Anonymous
Greater use of AI

Anonymous
More consideration to future maintenance

Anonymous
competencies & behaviours

Anonymous
Cost versus SAFETY

Anonymous
People using highways passport

Anonymous
Culture and behaviour of both Customers and roadworkers.

Anonymous
Culture and behaviour of both Customers and roadworkers.

Anonymous
Skilled workforce

Anonymous
Standard compliance across the industry

Anonymous
Maintenance

Anonymous
A raising the bar document on fixed wire electrical inspections would be useful. Construction specific.

Anonymous
Social changes and behaviours impacting our workforce - influence of members of the public

Anonymous
Temporary Works awareness

Anonymous
Eliminating risk from the outset by spending more time looking at impact of designs on safety of the workforce

Anonymous
setting people to work safely

Anonymous
Roadworker abuse

Anonymous
Road user perception

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"better links…"

- Significant Risk Working Groups – Named Hub representative
- Hub Newsletter articles – message from SCSLG, WG updates…
- Steering group meeting to clarify roles between SCSLG, WG, Hub…
- Communications WG – Hub website and social media, SCSLG involvement…?
- Above & Below Ground Services WG – Proposal Hub to form scope & membership