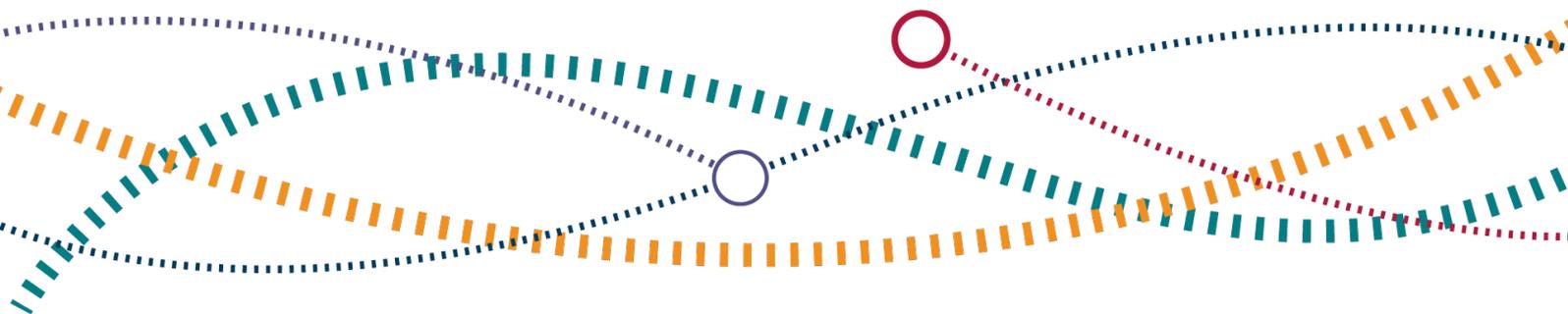




OLE Incident Response

Targeted Assurance Review

15 July 2021



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Acronyms and Abbreviations

BTET – Blocked to Electric Traction

CP6 - Control Period 6

DEAM – Director of Engineering and Asset Management

DU – Delivery Unit

OCR – Overhead Condition Renewals

OLE – Overhead Line Equipment

ORR – Office of Rail and Road

OTM – On-Track Machine

OTP – On-track Plant

QLM – Quarterly Liaison Meeting

RAM – Route Asset Manager

RPP – Railway Planning and Performance

RRAP – Road Rail Access Point

RRV – Road Rail Vehicle

RSD – Railway Safety Directorate

SM – Section Manager

STC – Single Track Cantilever

STE – Safety, Technical and Engineering

TME – Track Maintenance Engineer

TTC – Twin Track Cantilever

1. Executive Summary

1.1 Purpose

The routine assurance activities of the Office of Road and Rail showed that incidents related to Overhead Line Equipment (OLE) continue to significantly impact railway journey time and train performance. Therefore, a targeted assurance review (TAR) was conducted to assess Network Rail's capacity and processes for OLE incident recovery. This review aims to gain understating of Network Rail's resource capability for incident response and identify areas of improvement.

1.2 Background

A rapid recovery following a service affecting failure is crucial in maintaining overall network performance. Recent OLE incident records have shown that the severity of damage and delay minutes accrued is not always proportional. This raised concerns over the ability of Network Rail to respond effectively to OLE incidents with the resources available to them. This include technical staff, rail plant and support arrangements.

1.3 Findings

The review found that the level of response given to an incident is dependent on its severity. Internal resources are often used for incident response, but when an incident is severe and impacts significantly on train performance additional external expertise is required. Example of such incident include overhead line dewirement. This could be from a locally based capital works delivery team or the national Overhead Condition Renewals (OCR) team. When there is service level arrangement for external resource support, incident response is more efficient. Additional support in the event of an incident are more robust and formalised in some regions while there are others who source reactively.

Competency gaps are part of causes of inefficiency in incident recovery. Some recovery works such as dewirements are not regular; hence, some technical staff lose the skills for this task over time. The review found that in some regions, maintaining competence is compromised by a lack of availability of training facilities. Inaccurate incident reporting from train drivers and first respondent to incidents were also found to be contributory factors. It was also found that a lack of competent staff to safely work at height on the roof of a train damaged or entangled as a result of an OLE incident exacerbated recovery times.

Plant availability and suitability for Road Rail Access Points (RRAPs) impact incident recovery time. Network Rail allocated some rail vehicles which could not be used by some

of their maintenance delivery units (DU) because they were not suitable for the accesses available. Geismar Road Rail Vehicles (RRVs) were allocated to Delivery units which were unable to use them.

The lack of mechanical independence of headspan OLE structure, which are installed in some part of the network, was also identified as a reason for significant incident recovery time. Failure of the headspan OLE support results in full closure of all the lines it supports causing more disruptions than those structures with mechanical independence.

Inadequate attention to post-restoration works such as quality checks, was also found to cause repeated failures. There was also no evidence that showed as-built records being updated after major incidents which affected the original OLE setup.

1.4 Conclusions and Recommendations

The report concludes that the resources available to the DUs align with the normal workload of routine maintenance and inspection, but additional resource will be required to cope with significant incidents such as dewirement. Training and competency monitoring needs to be improved to achieve a more efficient incident response.

The TAR also concluded that reasonable steps are being taken by Network Rail to address issues relating to headspan. While it may not be cost effective to replace all existing headspan structures on the network or completely halt the installation of new ones, Network Rail have set out the requirements and conditions for the installation of headspan structures. They have also put in place a plan to upgrade existing headspans in areas where they raise safety concerns. This will be monitored by ORR through quarterly liaison meetings with Network Rail.

Below is a list of recommendations based on the findings of this TAR:

1. All Regions should have in place and provide visibility of a robust, formalised support plan for incident response.
2. Network Rail should formalise the OCR response across regions and the accountable regional engineers to ensure that all depots understand the response arrangements. This should also cover awareness, functions and availability of the OCR for support and training.
3. Network Rail should review the availability of training facilities taking into account not only the proximity to depots but the proximity to the farthest extremity of the area covered by each DU in terms of travel time.
4. Network Rail should conduct a review of the utilisation of the Geismar machines in order to ensure distribution is optimised.

5. Network Rail should provide a guidance for incident first respondents which may include an assessment checklist or recording template.
6. Network Rail should provide guidance on a post-incident action requirements, and a process to monitor and ensure the actions are carried out and closed.
7. DUs should conduct a suitability-assessment of their access points for incident response. This should include compatibility with the RRVs in their possession.
8. ORR should verify that there are processes in place to train and periodically update train drivers on OLE incident reporting.

1.5 Next Steps

Further details of deliverables are listed in the recommendation section of this report. Network Rail will be required to produce a time bound plan to close out the recommendations listed above. ORR will monitor progress at existing Quarterly Liaison Meetings and via e-mail correspondence to ensure the recommendations are addressed. Site visits will also be carried out as required. Progress and capability of the regions to address the recommendations will be re-assessed in early 2022. Unsatisfactory responses could lead to issues being placed on the regulatory escalator.

2. Introduction

2.1 Purpose

This Targeted Assurance Review (TAR) has been carried out in order to gain assurance that Network Rail has sufficient and effective capability to respond to Overhead Line Equipment (OLE) incidents. This is because OLE incidents make a significant contribution to overall train performance.

The review was intended to identify areas for improvement, lessons that should be learnt and good practices, ensuring these are shared across Network Rail.

2.2 Background

There has been a series of high profile incidents involving the OLE, sometimes exacerbated by unusually hot weather. Some of the incidents were not necessarily very serious from the point of view of the damage to the infrastructure. However, the disruption caused was extensive with hundreds of trains delayed and thousands of delay minutes being accrued. Based on data obtained for OLE incidents which ranked among the Top 50 railway incidents from Period 1 to 13 of 2019 to 2021, Figure 1.0 and Table 1.0 show details of delay minutes and train delays respectively.

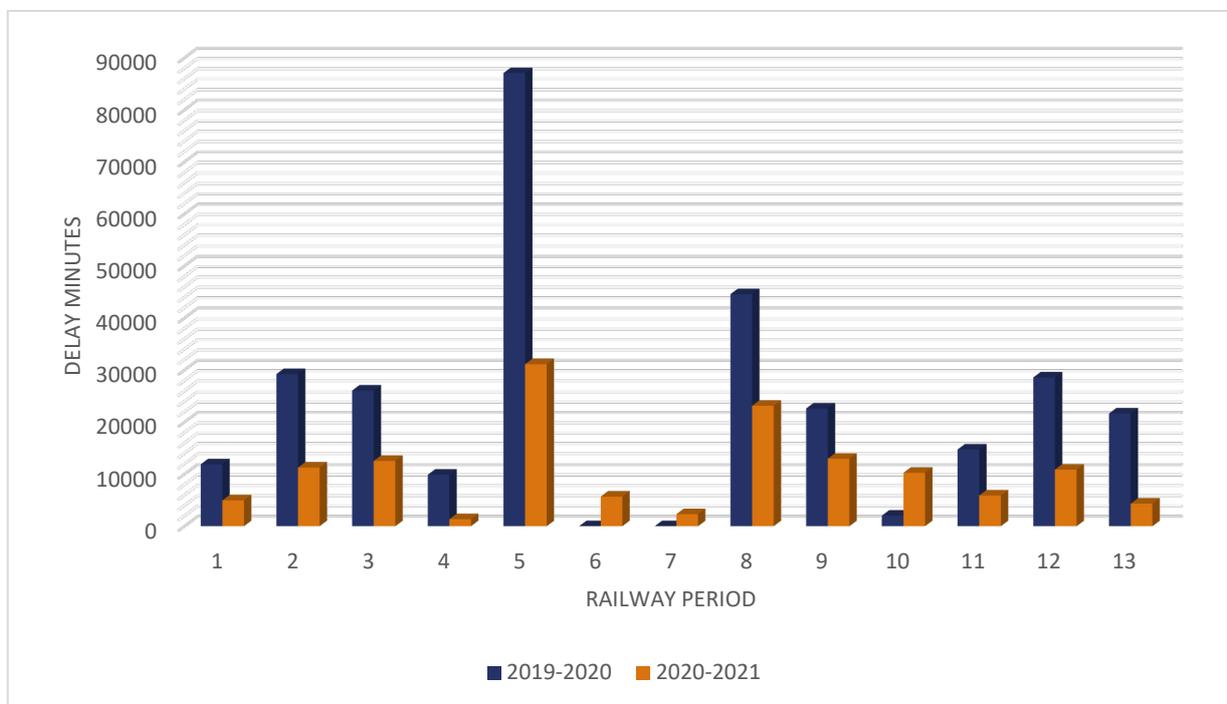


Figure 1.0 – Delay minutes due to OLE incidents within top 50 general railway incidents

OLE Incidents among Top 50 Incident per period						
Period	2019-2020			2020-2021		
<i>Railway Period</i>	<i>No. of Incidents</i>	<i>Trains Delayed</i>	<i>Delay Minutes</i>	<i>No. of Incidents</i>	<i>Trains Delayed</i>	<i>Delay Minutes</i>
Period 1	3	2159	11885	3	466	4959
Period 2	3	3901	29223	4	1499	11254
Period 3	6	3846	26050	6	1900	12536
Period 4	2	1387	9885	1	315	1336
Period 5	11	11154	87045	9	3393	31127
Period 6	0	0	0	1	689	5683
Period 7	0	0	0	1	319	2297
Period 8	3	6633	44569	5	2317	23132
Period 9	2	2934	22611	4	2156	12957
Period 10	1	362	2016	3	883	10245
Period 11	3	1923	14724	3	999	5892
Period 12	4	3925	28567	3	1463	10860
Period 13	1	3763	21654	3	765	4336

Table 1.0 – Train delays due to OLE incidents

Incident records from the unusually hot weather in 2019, show that the severity of damage and delay minutes accrued is not always proportional. Table 1.1 below, shows some significant incidents in 2019 and the accrued delay minutes. This raised concerns over the ability of Network Rail to respond effectively to OLE incidents with the resources available to them, which include staff, rail plant and support arrangements. A rapid recovery following a service affecting failure is crucial in maintaining overall network performance; this drove the requirement to carry out this review.

Incident Location and Summary	Delivery Unit	Delay Minutes
New England North Junction – OLE Dewirement	Peterborough	7,662
West Hampstead West Junction – OLE	Bedford	6,529
Soho Junction – OLE Dewirement	Sandwell &	5,321
Camden – OLE Dewirement	Euston	4,328
Curzon Street – Short circuit between the OLE and vehicle body due to OLE sag	Sandwell & Dudley	2,798
Gorton Station – Short circuit between the OLE and vehicle body due to OLE sag	Manchester	1,675
Penrith – Short circuit between the OLE and	Carlisle	1,597

Table 1.1 – Some significant incidents in summer 2019

In this paragraph clearly outline the history and justification behind the assurance review. Make sure the risks and issues (or both) that prompted the review clearly stands out, can be evidenced and is aligned with Purpose statement in paragraph 2.1.

2.3 Scope and Objectives

The scope of this review is to assess Network Rail's internal resources for OLE incident recovery. These include technical competence, plants, processes, procedures and support arrangements. The geographical scope was national but because it was not possible to include all the DUs in the country, five were sampled from multiple Network Rail regions.

The objectives of this TAR are:

- Compile evidence relating to the resources Network Rail has available to respond to OLE incidents.
- Conduct reviews of sample OLE incidents to understand Network Rails OLE incident recovery processes
- Identify areas for improvement and best practices
- Produce recommendations in order to bring about improvement where required
- Ensure recommendations are delivered and benefits realised

2.4 Methodical Approach

This assurance review was carried out using on-site and off-site meetings with stakeholders, interviews with selected DUs, and direct requests for information using specific question sets which are listed in Appendix A.

We initially engaged with Network Rail's Technical Authority, which includes the Chief Engineer, and Network Technical Heads for contact systems, and plants, in order to gain an overview of the company structure relating to OLE incident recovery. Following these meetings we agreed to conduct three case studies and meet with selected DUs in order to fully understand how Network Rail is organised and resourced to manage recovery from OLE incidents.

2.4.1 Meetings

- **Network Rail Central (STE):** At the start of the TAR, a meeting was held with the Network Rail Professional Head for Contact Systems and other technical staff, to formally notify Network Rail of the purpose of the TAR and explore their current views on resource. A meeting was also held with the Professional Head of Plant who gave a presentation covering the current Network Rail fleet of machinery utilised for OLE

incident recovery. (*Professional Heads are accountable for their discipline at a national level)

- **Delivery Units (DUs):** Five DUs; Ashford, Edinburgh, Bristol, Ipswich and York were selected to give a variety of geography and OLE design ranges. Interviews were conducted with the plant management team and the E&P maintenance team. .
- **Overhead Condition Renewals (OCR) Team:** A meeting was held with the Programme Engineering Manager of the OCR team to establish what the organisation is able to offer to Network Rail DUs with regards to resource and plant availability with a particular focus on incident response.

2.4.2 Case Studies

Three major incidents were considered for review. These were:

1. West Hampstead, Eastern Region: De-wirement London side of West Hampstead Thameslink station, causing multiple section tripping and lineside fires.
2. Camden, NW&C Region: The pantograph of a vehicle hooked over a low conductor at an overlap, pulling down the overhead line conductors.
3. Soho East Junction, NW&C Region: The pantograph of a vehicle hooked over a low conductor at an overlap, pulling down the overhead line conductors.

2.4.3 Request for Information (RFI)

Specific sets of questions were sent to the selected DUs. The question set is attached as Appendix A of this report. In summary, the RFI covered the following areas:

- The organisational structure of the DU
- Information on plant availability and management
- Information on plant operation and procurement
- Policies, strategies and capacity for incident response

3. Findings

This section of the report gives details of the findings from meetings, interviews, RFIs and specific case studies reviewed.

While some of the findings were localised to specific DUs, Routes or Regions, others were found to be commonplace across Network Rail.

3.1 Delivery Unit Resource and Access to Additional Resource

Network Rail has Maintenance Delivery Units (DUs) which are strategically located around the network. In areas with OLE, DUs have a team of OLE maintainers who respond to incidents as well as carry out routine maintenance and repairs. There are also locally based capital works delivery teams who are able to repair OLE. In addition there is a national Overhead Condition Renewals (OCR) team, which was formed following the curtailment of the West Coast route upgrade program. The OCR team inherited the plant, which has been updated since, and equipment from the project as well as skilled staff. Also following the completion of the Great Western Electrification project the OCR team have inherited the plant procured for that project including state of the art wiring trains and structure erection vehicles. The team responds to major OLE incidents as well as delivering work from the capital work bank, competing in tenders with contractors.

Depending on the severity of incidents, DUs either respond utilising only internal human and plant resource, or with support sourced through the Works Delivery organisation, the OCR, or local arrangement with suppliers.

Arrangements with the OCR organisation or local suppliers were found to be variable across the DUs. For example at Ashford DU there was a formalised support contract in place with the OCR organisation providing 24/7 on call support through route control and a guarantee of attendance on site within 4 hours. North West and Central Region reported that they intend to enter a formal service level agreement with the OCR organisation and Wales&Western stated that they intended to tender for a similar support package. However, in other cases, such as Doncaster, we found an absence of any formalised arrangements.

A company standard was provided detailing the process for calling on OCR resource for the North West and Central Region (London North Western at the time the standard was published) however it is now out of date. No equivalent standards were provided concerning other regions or routes.

During DU interviews provision of plant for routine maintenance was generally found to be well managed with collaborative arrangements existing between depots and organisations. For example, Doncaster DU can call upon the works delivery unit to provide additional resource, albeit organised on a 'good faith' and collaboration type basis rather than formal arrangement.

The availability and location of access points, especially Road Rail Access Points (RRAPs), was cited as a significant issue at all DUs; seriously hampering the ability of DUs to respond. Reference was made at multiple DUs to programs aimed at increasing the availability and improvement of access points, but little progress was reported to have been made. Specifically, it was reported that the Geismar RRVs are not well suited to some areas due mainly to lack of availability of large access points. This was found to be most detrimental in the Leeds area with 90% of RRAPs reported as being unusable with Geismar machines whereas Ipswich reported 20-30% to be affected by this issue. North West and Central also reported that this is an issue. In addition, issues were reported regarding functionality such as the inability to move the machine with the basket in any position other than stowed. This is not a fault with the machines however it did not meet end users requirements or expectations.

The availability of fitters at sites was reported as consistent and aligned to a cost vs. benefit justification with dedicated fitters and even back up machines being made available at critical work sites whereas fitters are available on call in routine circumstances. There was no evidence found of a move towards fitter / operator or fitter / technician being considered, however, this has been reported as a success with some types of On-Track Machines (OTM).

There were misconceptions identified relating to the capabilities of the OCR team. For example Doncaster DU were not aware that they can be called upon to provide RRVs and/or skilled staff as well as the better known wiring trains.

Examples were given (Liverpool – Manchester Electrification program) where project work had been awarded to a contractor rather than the OCR organisation, only for the contractor to have to call upon the OCR team towards the end of the project in order to meet the project program.

RRVs used for OLE maintenance and incident recovery throughout England and Wales is maintained by a contractor using their facilities. These facilities are not specifically tailored to maintaining the Network Rail fleet of specialist RRVs (such as the Geismar, Mercedes Unimog and Smart Rail Systems MEWPS) and are also used for other customers. Scotland however have taken a different approach having invested in a maintenance facility at Shettlestone specifically tailored for maintaining the Network Rail fleet of RRVs. This facility

is then used by the RRV maintainer contracted in the region. This was reported to have advantages such as the depot equipment being precisely fit for purpose and a lack of conflict with other customers of the RRV maintainer.

Network Rail Technical Authority explained that in the future it will be possible for Regions, Routes and even DUs to manage their own plant maintenance contracts and procure their own machines as individual Regions hold their own plant budgets and plant procurement is no longer centrally managed.

Two rolling stock related issues were reported being pantograph chains apparently causing a large proportion of incidents and not all train operating companies being willing to coast trains through sections with no power. It was reported that not being able to 'coast' trains through sections that are not energised can increase the impact of the incident dramatically.

3.2 Competence

The role of staff involved in initial incident response is to undertake a damage assessment, identify materials, tools and resources required for restoration, provide advice on type of repair (partial or full) and to forecast the time to repair and restore to normal operation.

Based on the case studies, information obtained from the first respondent is crucial for planning resource and site mobilisation. It also helps to inform stakeholders of any operational decisions that need to be made, such as alternative travel arrangements that are required to be put in place.

We found that inaccurate reporting of details of an incident, particularly incident location, contributed to restoration delays. For example, we found that the delay associated with the Soho case study was exacerbated by the location having been given using the signal post number as a location reference instead of OLE structure number. Not having the right location details, the team headed in the wrong direction before being redirected to the actual site of the incident. The competence of the first respondent therefore has a significant impact on the time taken to restore the infrastructure to normal operation. There is currently a competency gap, which if not addressed, will continue to increase cost and time to restore.

It was observed from incident records that some restoration works had to be revisited because they were not completed correctly. This was due to gaps in technical competence. Major incidents such as dewirements are not regular occurrences for DUs and there is a tendency for maintenance staff to forget how to use some tools or perform specific re-wirement tasks. This raises the need for continuous retraining and skills upgrade. Multiple depots reported that they struggle to maintain competence with regards to tasks that are not

routine maintenance. In particular Doncaster DU reported that due to access restrictions there can be long periods of time for which staff cannot carry out maintenance but must be available in case of an incident. This time cannot be used for training because they do not have access to a training facility within sufficiently easy reach such that they could respond to an incident, should it occur, within a reasonable timeframe. Therefore, when an unusual repair is required to be carried out there is a lack of familiarisation.

We found that the OCR team carries out more heavy work and has a high level of competence within their team. However, there was no evidence found of this competence pool being used to increase competence in DUs.

Where new OLE has been constructed in recent years, some staff have been retained, forming part of the maintenance organisation. They are therefore more familiar with construction tasks, and therefore major repairs, than staff who only have experience of maintenance.

3.3 OLE Support Structures

Variance of the wire support arrangement can be a major factor in determining the severity and impact of damage, and consequently the time to restore after an incident or failure. Examples of OLE support structure include headspans (see Figure 2.0 below), portals, Single track Cantilevers (STCs), and Twin Track Cantilevers (TTCs). These supports differ in track coverage, set up, cost and maintenance requirements. Dewirements in headspan areas can cause more delays, especially where they have been installed at busy locations on the network, because wires supported are not mechanically independent.



Figure 2.0 – Headspan arrangement

3.4 Post Restoration Actions and As-built Records Update

Whilst network restoration is prioritised, post restoration actions such as quality checks, tolerance checks, and in particular, update of as-built records, should be carried out at the earliest available opportunity. In the sample incidents reviewed as part of this TAR, there was no evidence provided to show if post-restoration actions were either carried out or closed.

3.5 Train Operating Company / Freight Operating Company Interface

Often, the first response to an OLE incident is to clear trapped trains. The management of first response was identified to be inconsistent with variations in fitter's provision and competence. For example, North West and Central Region reported some on-call train fitters lack the "working at height" competence and therefore are not able to cut free the train pantograph if it has become entangled with the OLE. Network Rail have now developed a national work instruction enabling Network Rail OLE staff to safely access train roofs and assist in the process of removing damaged OLE from the train and making the train safe for onward transit. This is expected to improve response and cut down delay minutes in dewirement incidents.

Information sharing on pantograph and OLE interface is an area that is currently being looked by Network Rail and the TOCs. This is in relation to OLE condition monitoring. ORR is helping to facilitate the formation of a group where TOCs and Network Rail key stakeholders can identify the barriers and develop a mechanism for data sharing. This group could also serve the purpose of identifying and resolving issues related to OLE/pantograph interface when responding to incidents.

4. Conclusion and Recommendations

4.1 Conclusion

4.1.1 Delivery Unit Resource and Access to Additional Resource

DU resource aligns well to the normal workload of routine maintenance and inspection, with availability of additional resource in the event of an incident being variable across Network Rail. Some Regions have robust arrangements in place with the OCR organisation, whereas some intend to put them in place by means of tendering a support contract with organisations, including the OCR, being invited to bid. Where robust arrangements are not currently in place, this leaves a risk that the response of the organisation could be compromised leading to avoidable delays. All Regions should have in place robust formalised arrangements for additional support that are briefed to all DU's in order to ensure the impact of OLE incidents is minimised as far as possible.

Geismar RRVs are allocated to some DUs where they cannot be well utilised due to RRAP constraints. The suitability of these machines needs to be analysed in line with availability of compatible access points and the machines re-allocated, or provision of RRAPs improved. Also where the Geismar machines are not suitable and the RRAPs cannot be improved funding must be allocated to procure more suitable machines.

The provision of fit for purpose plant maintenance facilities should be considered by all regions following consultation with Scotland regarding the benefits realised.

4.1.2 Competence

Technical staff who are likely to be first respondents at incidents should be adequately trained and their skills should be continuously monitored. This was not found to be the case currently. For consistency, a guidance document or check template should be provided detailing the information that must be captured.

Some DUs (with access to training spans) have competence management under control while others need to seek solutions in this area such as provision of additional facilities. Also at DUs struggling to maintain competence in incident restoration such as dewirement, periodic re-training should be arranged with the OCR or another OLE construction company.

4.1.3 OLE Support Structures

Due the limitations of Headspans, they should not be used on new electrification projects. However, there may be economic justifications to use them in low speed and low traffic areas such as depots. Network Rail's policy requirements for electrical power assets (NR/L1/ELP 27000), provides the requirements and conditions for installation of headspan structures.

For existing headspans in station and public areas where failures are of safety concerns, Network Rail plans to upgrade all support and registration equipment to achieve mechanical independence per electrical section by the end of March 2029. They have also set a target of 31st March 2024 to carry out a risk assessment of all the structures. This will be monitored by the ORR at QLMs.

4.1.4 Post Restoration Actions and As-built Records Update

Network Rail must provide a consistent process on how to record, monitor, close out and trace all post-restoration actions. In order to enable easy access and update, the digitalisation of as-built records for maintenance is necessary. For example, dropper schedule could be made available in a digital format accessible on and off site to the maintenance team. Guidance should be provided to new and ongoing projects on how best to handover as-built records in formats that will be easy to update and traceable.

4.1.5 Train Operating Company / Freight Operating Company Interface

Network Rail and TOCs need to work more collaboratively to improve incident response. This should focus on ensuring clarity of responsibilities, agreement on responsibilities that can be carried out on behalf of each other, and a way of maintaining staff competence for those activities where required such as driver training for incident reporting.

4.2 Recommendations

Recommendations ID	Category	Description	Action / Deliverable	Owner
1	Incident response resource	All Regions should have in place and provide visibility of a robust, formalised support plan for incident response. i.e. call off contract with supplier or service level agreement with OCR etc Agreements for resource sharing with nearby depots etc in the event of an incident are also to be detailed.	Each Region to provide details of incident response support plan including resource sharing arrangements, etc	RAM's
2	OCR	OCR to consider how best to raise awareness within DUs, routes and regions of its existence and function. OCR to engage with stakeholders as appropriate.	OCR capability presentation for circulation within Network Rail	OCR Program Manager / RAMs
3	Competence	Network Rail should review the availability of training facilities taking into account not only the proximity to depots but the proximity to the farthest extremity of the area covered by each DU in terms of travel time. This	Report detailing means to maintain competence including analysis of availability of training facilities for each region.	RAMs / DEAMs

Recommendations. ID	Category	Description	Action / Deliverable	Owner
		information can then be analysed to determine which DUs are and are not able to use time when there is no maintenance access to carry out training. Where it is not possible provision of additional facilities can be considered or measures implemented to address impacts on staff competence		
4	Geismar machines	Network Rail should conduct a review of the utilisation of the Geismar machines in order to ensure distribution is optimised. Where Geismar machines are found to be underutilised investigate the underlying causes and action solutions where appropriate such as re-allocation and provision of new fit for purpose plant, or improvement of RRAPs.	Report including analysis of distribution of Geismar machines including utilisation statistics and plan for optimisation of machine distribution	Rail Plant Support Engineers / Technical Authority
5	Incident response process	Network Rail should provide guidance for incident first respondent which may	Guidance for first respondent which may include assessment checklist or recording template	Regional E&P Engineer /

Recommendations. ID	Category	Description	Action / Deliverable	Owner
		<p>include assessment checklist or recording template.</p> <p>Provision of a digital checklist/template for first on-site technical respondent at an incident. This should be stored and used for training and to improve the checklist quality.</p>		Professional Head Contact systems
6	Incident response process	Provision of a post incident action requirements to monitor and ensure post incident actions are carried out and closed. This is aimed at driving a culture-change on post-restoration actions. This is also expected to be continuously reviewed for assurance and training purpose.	Guidance or process for post incident quality checks and action close out	Regional E&P Engineer / Professional Head Contact systems
7	Incident response process	DUs should conduct an assessment determining whether the availability and location of access points are suitable for responding to OLE incidents with particular focus on compatibility with the RRVs in their possession. Business	Each DU should produce a spreadsheet detailing their access points, proximity to depot and suitability for OLE incident response using machines available to them.	Route Electrification and Plant Engineer / Rail Plant

Recommendations. ID	Category	Description	Action / Deliverable	Owner
		cases including cross-discipline maintenance benefits and incident response benefits to be considered.		Support Engineer
8	Incident reporting	ORR should verify that there are processes in place to train and periodically update train drivers on OLE incident reporting.	Confirmation of inclusion of incident reporting, showing necessary details, in driver training.	ORR TOC Team / E&P Engineer

5. Appendix

Appendix A – DU Question Set

**Outline how you manage the response to incidents involving OLE assets.
Your response should address the following points:**

- 1. Describe the Delivery Unit organisational structure with relation to OLE activities?*
- 2. What Network Rail owned plant is available at the depot?*
- 3. Is there any permanently hired OLE plant at the depot or arrangements in place to hire OLE plant?*
- 4. What procedures are in place in the event of machine breakdown?*
- 5. In the event of an incident such as a dewirement what plant and staff would be deployed?*
- 6. How is the provision of plant managed?*
- 7. Are you consulted in the specification and procurement process?*
- 8. Do you believe there are any weaknesses in the equipment provided which impacts the delivery units' ability to respond to incidents?*
- 9. Has there ever been a need to call on resources from outside the delivery unit organisation?*
- 10. Do you have any arrangements in place to call upon resources from outside the delivery unit in terms of equipment or human resource?*
- 11. What arrangements are in place for maintenance, repairs and modifications to the plant and equipment at the depot?*
- 12. Are there any limitations regarding the work that the depot can carry out as a result of the plant the Delivery unit has available?*
- 13. How is machine operator competence managed at the depot?*

6. Next Steps

The report will be distributed within Network Rail; specifically, DEAMs, Maintenance Directors, Route Asset Managers and E&P Network Leads. Network Rail will be required to produce a time bound plan to address the recommendations in this report. ORR will monitor progress at existing Quarterly Liaison Meetings and via e-mail correspondence. Site visits will also be carried out as required. Progress and capability of the regions to address the recommendations will be re-assessed early 2022. Unsatisfactory responses could lead to issues being placed on the regulatory escalator.



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