Office for Rail and Road and Network Rail

#20502: Review of Occupational Health Data

Final Report

1 | 8 February 2022

Job number 282492-00

ARUP

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Contents

1 Executive Summary

1.1 Purpose

Occupational Health Data was last independently reviewed in April 2013 for system reliability and data accuracy as part of a wider review of safety data. Table 1 below shows the summary of the confidence grades achieved:

Table 1: Confidence grading from 2013 review

Measure	ORR benchmark grade	Confidence grading
Noise	B3	D6
HAVs	B2	D6
Exposure to lead	B3	Not graded
Exposure to asbestos	B3	Not graded
Musculoskeletal referrals	B2	B2
Stress related absence	B2	B2

Of the six Occupational Health KPIs that were assessed, two met ORR's target rating ('Musculoskeletal referrals' and 'stress-related absence'), two were below the ORR's target rating ('Hand Arm Vibration Syndrome (HAVS)' and' 'Noise exposure') and two were not graded due to data capture systems not being in place ('Exposure to lead' and 'exposure to asbestos').

Network Rail has had time to implement the recommendations and make improvements to the data capture systems, therefore, it is deemed an appropriate time to re-assess all the KPIs reviewed in 2013 where they exist, and to assess any new Occupational Health KPIs produced by Network Rail.

This study is focussed on the audit of the system reliability and data accuracy of the reporting of Occupational Health KPIs as reported in the 2019/2020 Annual Returns and the reporting of statutory occupational disease data into RSSB's Safety Management Intelligence System (SMIS) under the Reporting of Injuries, Diseases and Dangerous Occurrence Regulations (RIDDOR) 2013.

1.2 Overview

1.2.1 Occupational Health KPIs

Our review of the Occupational Health KPIs was based on evidence collated through documentation review (where available), data analysis and discussions with the following teams:

- Network Rail Human Resources Shared Services (HRSS): Two separate teams were engaged within NR HRSS, they are:
    - NR HRSS Medical Surveillance Team
    - NR HRSS Absence Reporting Team

- Occupational Health Service Provider
- Network Rail SHE Analysis & Safety Reporting Team
- Network Rail Claims Team

Business processes and procedures

Initial referrals for employees are determined by HRSS Medical Surveillance team. This is passed on to OH service provider for processing and returned to the SHE analysis and safety reporting team for verification and publication in the Annual Return tables. One of the indices on KPI Table 09: Occupational Health and Wellbeing Strategic Dashboard is generated from the HRSS Absence Reporting team and passed on to the Safety Reporting team for publishing in the Annual Return.

KPI Table 16: Employer liability is generated from the Claims team and is passed on directly to the Safety Reporting team for publishing in the Annual Return tables.

Even though the information for KPI tables 9-15 comes from different sources, it is all collected by HRSS and sent to the occupational health service provider through one channel.

The OH service provider have internal processes of delivering health surveillance programme and health, safety, and wellbeing clinical procedures in accordance with their contractual requirements with Network Rail. They identify those at risk based on referrals received from Network Rail and they have no access to other employees that have not been referred and therefore are not a part of the health surveillance programme. There is documentation for the end-to-end customer experience when they get referred and what to expect throughout the process.

Every period end (4 weeks), OH service provider sends an email to the safety reporting team with two encrypted excel files – a front-end summary excel file and a detailed back-end data excel file. This is reviewed to ensure there are no anomalies with the reports received from the previous periods. A validation check is then performed on the back-end data to ensure that the information provided matches the front-end summary sheet.

Network Rail do not audit the OH service provider formally as they only verify the data received from them and not the systems and processes by which the data is produced. However, there are joint clinical quality board meetings, monthly contract review meetings, and quarterly strategy board meetings where information sent by the OH service provider is queried.

Analysis Overview

The analysis and validation of the numbers and percentages reported in the Annual Return tables used the source files provided by the Network Rail SHE, Claims, HR teams and information from the OH service provider. A validation activity was undertaken through re-calculating the numbers and percentages in the tables using

the source files; and assumptions were clarified by the respective teams, where required.

Most numbers and percentages reported in KPI tables 9-16 were validated and met an accuracy of 100% during the inverse calculations. There were discrepancies with some of the figures reported to ORR where numbers in the Annual Return tables were accurately validated against the numbers provided to the Network Rail SHE team, however, some numbers from the data used in 2019/2020 were not traceable.

Network Rail and the OH service provider have been able to justify some of the discrepancies, some of which are due to quality assurance checks ahead of reporting in the Annual Return. There were a few numbers reported which were incorrectly added due to human error in inputting the data to the Annual Return tables.

ORR specifies the KPI data categories to be reported in the Annual Return. The definition of each KPI is determined by Network Rail and this may not meet the expectations of ORR, resulting in a misalignment in the data reported through the Annual Return tables.

1.2.2 Safety Management Intelligence System – SMIS

Business processes and procedures

The ORR RIDDOR guidance document details the diseases or conditions that must be reported if a diagnosis is received in relation to a person at work. The process for capturing statutory occupational disease data originates from the OH service provider.

The OH service provider are responsible for advising the safety reporting team as diseases or conditions occur and are reported. This happens on an ad-hoc basis throughout the year. Notifications are sent to the safety reporting team via email, when the RIDDOR is identified by the OH service provider. The safety reporting team review the data and enter them into SMIS, which triggers notification to ORR. The process to report the RIDDOR from point of consultation with the OH service provider through to SMIS entry occurs within 10 days.

From stakeholders' engagement with SHE team, it was stated that other reportable diseases and conditions will come via the same process through the OH service provider and follows the same process described above. However, no documentation was provided to evidence this.

Analysis Overview

The data assurance exercise undertaken revealed most of the back-end data was consistent with the data in the Annual Return. Some datasets were not traceable due to the data retention processes.

The current processes are entirely focused on HAVS and there are no specific instructions for the other reportable diseases. Examples of other reportable diseases

are occupational dermatitis, and there was a review of the report received by ORR which revealed a single case of Carpal Tunnel Syndrome. Network Rail confirmed they consider Carpel Tunnel Syndrome as a form of HAVS.

There was a discrepancy with the number of cases used in the SMIS reporting for the number reported of new or worsening occupational health conditions. Two values were incorrectly inputted due to human error and was reconciled post-update to the Annual Return tables for 2019/2020.

1.3 Key findings

Our key findings from this review are summarised below:

- It was observed that the title of KPI Table 9 did not reflect the description of the indices within the table. ORR requires NR to decide what to report as part of this KPI.
- There are high level documents including process maps and procedures to follow in the identification of initial referrals for medicals by HRSS.
- The SHE Analysis and safety reporting team also have process maps and some documentation in place for some of the indices within the KPI tables.
- There is a lack of overarching documentation for all processes and procedures used in the production of Occupational Health data.
- There are high-level definitions for some of the indices within the KPI tables. It was observed that these definitions are the same as the last time this review was carried out in 2013.
- There are some definitions which were unclear or lacking in pre-existing documentation. It was observed that there were discrepancies between the documentations provided and what was reported in the Annual Return tables.
- There was a lack of comprehensive definitions for the indices for Occupational Health in the year under review. An updated version for definitions was provided for the current year 2020/2021.
- For KPIs tables 9 – 15, it was observed that there is a robust procedure for capturing employees referred to the OH service provider either by the competencies they hold or by their job description.
- For KPI table 16, there is no defined process to produce the data, including the approach to the storage, manipulation, and presentation of the data.
- It was observed that some of the data must be sourced from different systems and manually manipulated. This can easily lead to errors during the extraction and manipulation stage.
- For some of the KPIs, there is no documentation for the calculation of the indices, our analyst had to back calculate to derive the data in the Annual Return. The Network Rail team were very helpful in providing the guidance needed during this process.

- Throughout the validation stage, it was observed there were several missing gaps in the KPI tables where numbers and percentages should have been reported by Network Rail as required by the ORR. The blank fields had insufficient or no backing data to provide the indices.
- There is a lack of a robust quality checking methodology before data is published in the Annual Return.
- There is a lack of resilience within the claims team in Network Rail. The review team observed there was only one employee that manages the data for the KPI table 16.
- It was observed that out of the six reportable disease or conditions detailed in the RIDDOR guidance, only the Hand-arm vibration syndrome (HAVS) has a detailed procedure for reporting in SMIS and it is the only reportable disease that features in the Annual Return.

Table 2 below shows a summary of the confidence gradings for all the KPIs. Tables 3 and 4 shows the system reliability and accuracy grading systems

Table 2: Confidence grading

KPI Table/SMIS	Index	System Reliability Grading	Accuracy Grading
9	a) Safety critical workers assessed as 'fit for role' (%)	B	X
	b) Compliance with health surveillance programmes (%)	B	1*
	c) Diagnosis of new and/or worsening occupational health conditions,	B	2
	d) Average days lost to employee absence	C	1*
10	a) At Risk Workers who have completed Respirable Crystalline Silica (RCS) Health Surveillance	B	1*
	b) Percentage of scheduled health surveillance checks completed (respiratory health surveillance compliance rate)	C	X
	c) Number and type of work-related health conditions diagnosed	B	X
	d) Screened Employees Fit to Work	B	X
11	Exposure to lead	B	1*
12	Number of records and surveillance for exposure to asbestos	B	1*
13	a) Audiometry Screenings and Diagnoses	B	1*
	b) New cases of hearing loss diagnosed – All Categories	D	X

KPI Table/SMIS	Index	System Reliability Grading	Accuracy Grading
	c) % of scheduled audiometry checks that have been completed	C	X
14	Hand Arm Vibration Syndrome (HAVS) screenings and diagnoses	A	1*
15	a) Psychological referrals (all categories)	B	1*
	b) Musculoskeletal referrals (all categories)	B	1*
	c) Musculoskeletal Referrals to OH by cause – Not work related	B	5
16	Employer liability	D	X
SMIS		B	1*

Table 3: System reliability grading system

System reliability band	Description
A	Sound textual records, procedures, investigations, or analysis properly documented and recognised as the best method of assessment.
B	As A but with minor shortcomings. Examples include old assessment, some missing documentation, some reliance on unconfirmed reports, some use of extrapolation.
C	Extrapolation from limited sample for which Grade A or B data is available.
D	Unconfirmed verbal reports, cursory inspections, or analysis.

Notes:

1. System reliability is a measure of the overall reliability, quality, robustness, and integrity of the system that produces the data.

2. Some examples of the potential shortcomings include old assessment, missing documentation, insufficient internal verification, and undocumented reliance on third-party data.

Table 4: Accuracy grading system

Accuracy Band	Description
1*	Data used to calculate the measure is accurate to within 0.1%
1	Data used to calculate the measure is accurate to within 1%
2	Data used to calculate the measure is accurate to within 5%
3	Data used to calculate the measure is accurate to within 10%
4	Data used to calculate the measure is accurate to within 25%
5	Data used to calculate the measure is accurate to within 50%

6	Data used to calculate the measure is inaccurate by more than 50%
X	Data accuracy cannot be measured

Notes:

1. Accuracy is a measure of the closeness of the data used in the system to the true values.

2. Accuracy is defined at the 95% confidence level - i.e., the true value of 95% of the data points will be in the accuracy bands defined above.

1.4 Opportunities

Following our review, the opportunities in table 5 were discussed and recommendations were agreed in a tripartite meeting between the ORR, Network Rail, and the Independent Reporter team.

Table 5: Opportunities

Opportunity Theme	Opportunities to Network Rail
Defining all the indices for the KPI tables	Review and update the title and definition of the indices in KPI Table 9.
	Update the definitions of the KPIs to include the definitions of all the indices within the tables. Current definitions are high – level and do not cover all the indices within the tables. NR and ORR to jointly agree these definitions to ensure accurate reporting.
Revision and update of existing process documents	Review and update the 'Annual Return Submission Processes & Data Sources' document that shows how all the KPI data are produced from the source to the point when it is reported in the Annual Return.
	Consider merging all the process documentations (e.g., 'Annual Return Submission Processes & Data Sources', the health data process map and ORR Occupational Health Reporting)
	Update the current calculation documentation to include all the indices in the Annual Return table.
	Agreement between NR and the OH service provider on the processes and data that is required to correctly report all indices in alignment with their definitions.
Quality assurance process	Consider the introduction of an assurance process for the OH service provider to ensure robustness of their systems and processes.
	Table 16 - Introduce a formal and standardised record keeping process.
	Develop a system to improve data quality procedures throughout the data lifecycle. It was noted that there are current discussions between NR IT and the OH service provider to develop a system that eliminates the use of spreadsheets and encrypted mail for data transfer.
	Implement a more robust quality checking procedure before entries are recorded in the Annual Return tables and in the process maps.
Resilience in resources	Table 16 - Introduction of resilience within the claims teams that process the data.
SMIS Documentation	SMIS - Produce documents for the capture of other reportable diseases/conditions.

1.5 Recommendations

The process to undertake this review has by necessity been a collaborative exercise between the review team and the various teams from Network Rail and the OH service provider. The teams were very open about the processes and systems they had used in the reporting of the KPIs. That openness has allowed the review team to identify certain areas where it is believed there would be benefits to Network Rail in modifying their practices.

As a result of the review that has been undertaken and the follow up analysis of the reported data, the following recommendations have been developed and agreed from the review.

Table 6: Recommendations

Reference Number	Recommendation Theme	Recommendation	Benefits	Evidence of Implementation	Location in Text	Owner
SOW20502-1	Definitions	Review and update the title and definition of the indices in KPI Table 9.	Eliminate misinterpretations between indices reported and table description as ORR require NR to decide what to report in this KPI.	Updated title and definition for 'compliance with health surveillance programmes (%)' and 'diagnosis of new and/or worsening occupational health conditions' indices within table 9 to include HAVs.	3.2.3.1	NR
		- Update the definitions of the KPIs to include the definitions of all the indices within the tables. - NR and ORR to jointly review and agree these definitions to ensure accurate reporting. - NR should identify which indices cannot be reported and explain the reasons rather than having no data in the annual returns.	Current definitions are high – level and do not cover all the indices within the tables. Update will provide better clarity on the title and definition of the data reported.	- Definitions updated in "Annual Return" document. - Agreed template of KPIs that can be reported	3.2.3	NR and ORR

Reference Number	Recommendation Theme	Recommendation	Benefits	Evidence of Implementation	Location in Text	Owner
SOW20502-2	Process documentations	Review and update the 'Annual Return Submission Processes & Data Sources' document.	A documented record that shows how all the data for the KPIs are generated and processed before publishing in the Annual Return will ensure consistency in approach. This includes referencing all the NR medical standards that are used in developing the data.	Production of updated process documentation.	3.2, 3.3	NR and OH service provider
		Merging all the existing process documentations	A single documented record that shows one source of truth and eliminates multiple documentations			NR
		Update the current calculation documentation to include all the indices in the Annual Return table.	Allows the calculations to be traceable and ensures repeatability of the process for producing the data.			NR
		Agreement between NR and OH service provider on the processes and data that is required to correctly report all indices in alignment with their definitions.	Provision of the right information to correctly report the indices.			NR and OH service provider

Reference Number	Recommendation Theme	Recommendation	Benefits	Evidence of Implementation	Location in Text	Owner
SOW20502-3	Quality assurance process	Consider the introduction of an assurance process for the OH service provider to ensure robustness of their systems and processes.	Confirmation that the OH service provider systems are fit for purpose and are achieving the required results.	Reviewed/revised contract documents	3.3	NR and OH service provider
		Table 16 - Introduce a formal and standardised record keeping process.	This will ensure the previous records produced are not deleted and can be audited.	Records keeping included in process documentation	3.3.1.8	NR
		Develop a more secure data exchange, file sharing and storage approach. It was noted that there are current discussions between NR IT and OH service provider to develop a more secure data exchange and file sharing approach.	Improved accessibility and security that eliminates the use of spreadsheets and encrypted mail for data transfer.	Secure data exchange, file sharing storage approach	N/A	NR
		Implement a more robust quality checking procedure before entries are recorded in the Annual Return tables and in the process maps.	Eliminate human error in inputting values.	Included in process maps and documentation	3.3	NR
SOW20502-4	Resilience in resources	Table 16 - Introduction of resilience within the claims teams that process the data.	This will ensure continuity of the process if any employee becomes unavailable.	Additional capability to eliminate 'single point of failure'	3.2.3.8	NR
SOW20502-5	SMIS Documentation	SMIS - Produce documents for the capture of other reportable diseases/conditions.	This will provide confirmation that other reportable diseases are being monitored, and any issues raised are documented.	Documentation of other reportable diseases	4.2	NR

1.6 Acknowledgements

The Independent Reporter Team would like to thank both ORR and Network Rail staff for their assistance with this study.

2 Introduction

2.1 Background

Arup, in its role as Independent Reporter, supported by Winder Phillips Associates (WPA) were appointed by the Office of Rail and Road (ORR) and Network Rail (NR) to undertake an audit of the system reliability and data accuracy of the reporting of Occupational Health KPIs as reported within Network Rail's Annual Return in 2019/2020. These are:

- KPI Table 09: Occupational Health and Wellbeing Strategic Dashboard
- KPI Table 10: At Risk Workers who have completed Respirable Crystalline Silica (RCS) Health Surveillance
- KPI Table 11: Exposure to lead
- KPI Table 12: Number of records and surveillance for exposure to asbestos
- KPI Table 13: Audiometry screenings and diagnoses
- KPI Table 14: Hand Arm Vibration Syndrome (HAVS) screenings and diagnoses
- KPI Table 15: Referrals to Occupational Health
- KPI Table 16: Employer liability

Additionally, Network Rail is required to report statutory occupational disease data into RSSB's SMIS under RIDDOR 2013. ORR have previously identified discrepancies between the diagnoses reported through SMIS and the numbers reported via Network Rail's Annual Return.

The scope of this assessment was defined in the Statement of Work (SoW) #20502 and as clarified by the ORR over the course of the assessment as described in this report. A copy of the SoW is included in Appendix A below.

The KPI definitions are included in Appendix B.

2.2 Mandate Aims and Requirements

The objectives of this review were to:

- Review and comment on the processes and procedures by which Network Rail captures data and targets workplace intervention.
- Review all relevant documentation and systems and comment on their fitness for purpose.
- Review and comment on the reliability, quality, consistency, completeness, and accuracy of reported data.
- Present a confidence grading (see Appendix C) for both the system reliability and data accuracy for each KPI (i.e., Table) under review based on the end of year dataset (2019/2020) and make recommendations, if appropriate.

- Assess the processes and procedures by which Network Rail reports statutory occupational disease data into SMIS, including cross referencing the numbers of incidents imputed by Network Rail against the number of reports ORR receives via SMIS.
- Review all relevant documentation and systems and comment on the processes and procedures by which Network Rail reports statutory occupational disease data into SMIS.
- Review and comment on the reliability, quality, consistency, completeness, and accuracy of reported data within SMIS.
- Present a confidence grading on both the system reliability and data accuracy of occupational diseases reported by Network Rail within SMIS for 2019/2020.
- Make recommendations that set out a clear roadmap as to what improvements Network Rail would need to make to achieve higher gradings.

In terms of the scope of this audit, the following were confirmed in the inception meeting:

- the project team will review 2019/2020 data instead of the 2018/2019 mentioned in the statement of works. This will provide a complete data set with minimal impact from the COVID-19 pandemic.
- No meeting will be held with the regions or routes as they are not directly involved in the process.

2.3 Our Approach

The approach that we adopted for this study was designed to provide an assessment of NR's reporting processes, procedures, and governance, alongside an audit of the underlying data to review accuracy of reported results. Our approach is summarised in Figure 1.

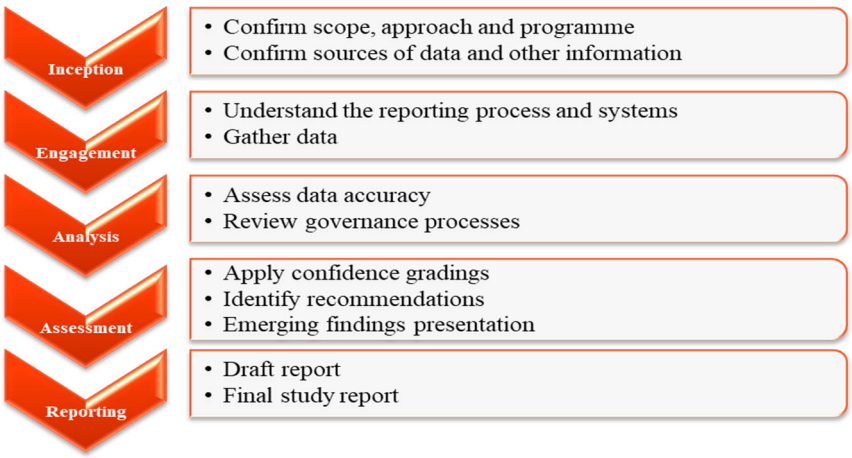


Figure 1: Summary of Review Approach

During the engagement phase, we held meetings with representatives from NR as summarised in the table below.

Table 7: Meetings held during the review

Date	Who	Purpose
19 August 2021	NR / ORR	Project inception meeting
25 August 2021	NR	Follow on meeting
02 September 2021	ORR	ORR expectation meeting
10 September 2021	SHE Team	Review KPI and SMIS reporting Process
13 September 2021	Claims Team	Review of the process of reporting KPI – Table 16
14 September 2021	OH service provider	Review KPI and SMIS reporting Process
20 September 2021	Claim Team	Review of the process of reporting KPI – Table 16. Follow on meeting
15 October 2021	NR	Review of HRSS medical surveillance reporting process
22 October 2021	Claims Team	Clarifications on the data received for analysis for KPI – Table 16
02 November 2021	SHE Team	Clarifications on the data received for analysis for KPIs and SMIS
11 November 2021	NR / ORR	Emerging findings meeting
9 December 2021	NR / ORR / Reporter team	Tripartite meeting to review report
January 2022	NR / ORR / Reporter team	Tripartite meeting for agreeing recommendations

Following the initial engagement meetings, the Reporter Team were supplied with data and information from which to undertake our review. A full list of files supplied is included in Appendix D.

2.4 Report Structure

Section 2 (this section) provides the background and summarises the aims and requirements of the mandate.

Section 3 outlines the observations and key findings from the review of the KPIs. This has been structured to answer the questions posed in the Mandate as outlined in Section 2.2, both in terms of system reliability and data accuracy. This section concludes with confidence gradings summary for the KPIs.

Section 4 outlines the observations and key findings from the review of SMIS process and data and is structured identically.

Proposed recommendations from this study are provided in Section 5.

2.5 Glossary of Terms

The table below provides a description of the standard rail industry acronyms and abbreviations that are used in this report.

Table 8: Glossary of Terms

Abbreviation	Description
CLAW	Control of Lead at Work
HAVS	Hand Arm Vibration Syndrome
HR	Human Resources
HRSS	Human Resources Shared Services
HS2	High Speed 2
HSE	Health and Safety Executive
KPI	Key Performance Indicator
NNLW	Notifiable Non-Licenced Work
NR	Network Rail
OH	Occupational Health
ORR	Office of Rail and Road
RCS	Respirable Crystalline Silica
RIDDOR	Reporting of Injuries, Diseases and Dangerous Occurrences Regulations.
SHE	Safety, Health and Environment
SMIS	Safety Management Intelligence System
WPA	Winder Phillips Associates

3 Findings from Occupational Health Stakeholders' Evidence Assessment

3.1 Overview

This section summarises the findings from our review of the process, governance and data accuracy related to the KPIs. A description of the metric is provided, followed by sections outlining our findings and observations related to each of the four questions in the mandate as stated in section 2.2.

The confidence grading is provided in section 1.3 based on the findings of our review.

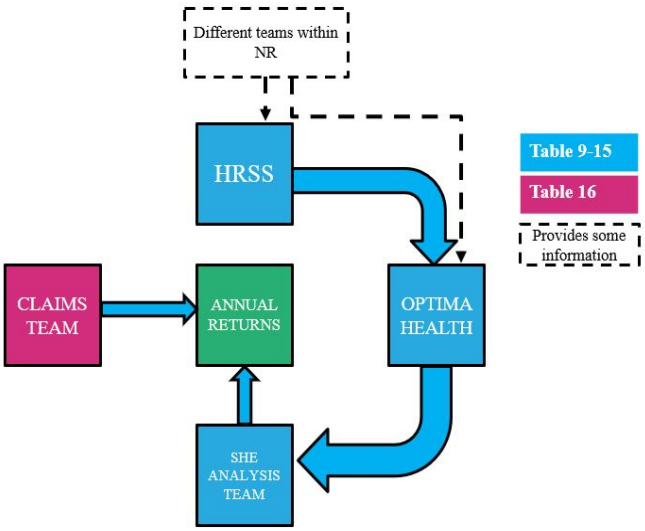
3.2 KPIs Processes and Procedures

3.2.1 KPIs Definitions

The Annual Return KPI tables have different indices within them and only a high - level definition existed for some of them in the year under review. NR provided documentation from the 2020/2021 Annual Return that has a more robust definition with the indices categorised under their applicable KPI tables. However, not all the indices have been clearly defined.

3.2.2 Processes and procedures for capturing data and targeting workplace intervention

The process for producing the data for the indices in Tables 9 – 16 in the Annual Return is shown in the diagram below:



For KPI Tables 9 – 15, the flow of data and information is as follows

HRSS: Information comes from two different teams within HRSS. Initial referrals for employee entry into the Health, Safety and Wellbeing medical program is

generated from the HR medical surveillance team and are identified via the following mechanisms:

- Competency Specification Report – A competency specification medical report is downloaded from Oracle and processed to determine employees whose medicals expires within a 3-month window and will require a medical.
- HAVS Compliance Report: Using reporting responsibility in Oracle, 'small Plant Competence Holder' report is downloaded and processed to identify HAVS levels for all employees in the programme.
- Health Surveillance Programme: Regional occupational health managers identify employees included in this programme and sends to HRSS.
- Performance Management Referral: E.g., sicknesses and absences. This originates from line managers and is sent to HRSS. From discussion, we learnt that performance management referrals do not affect the data significantly, but some employees undergo medicals after referrals if their absence triggers a referral and this must be completed before they can return to work.

These referrals are then sent to the OH service provider for the medical process.

As part of KPI table 9, the 'Average days lost to employee absence' metric is generated from the HR employee absence team unto a general HR dashboard that the safety reporting team has direct access to. This enables them to obtain the data for the Annual Return.

OH service provider: Initial referrals are sent to the OH service provider from HRSS via a bulk upload. Depending on the source of the referral, employees will be enrolled into the three-year medical program. In addition to this, all employees identified as being at risk are subject to a separate health surveillance programme.

From an operational perspective, after the bulk upload is received into PriorConsole (OH service provider management system), it then goes through a work in progress workflow. This workflow considers the date provided in the bulk upload to arrange appointment for employees to complete medicals.

After this process is completed, data is sent to the SHE analysis and reporting team as described below.

SHE analysis and reporting team: Every 4 weeks (period end), the OH service provider provides the period end data to the SHE Analysis team. The data is received via email with encrypted excel files attachments. There are 2 elements to the files sent as described below:

- A front-end summary sheet that gives the top line figures that forms the KPIs. This is used to check that all the reported numbers are correct with no anomalies from the previous report.
- Back-end data which is an accompanying report with the detailed breakdown of the data in the front-end data. The back-end data is split into multiple tables for each of the KPIs reported.

For the health surveillance programme, a weekly dashboard is received, and the data received in the fourth week will be a compilation of the report for the period end. This will be used for validation exercise at year end and subsequently for the Annual Return.

At the end of the year, the full data is received which includes the data from every period. A verification/validation exercise is carried out to check that this matches the data received in each period and the data is transferred into the Annual Return. There is no manipulation of the data received.

The data collected is stored in an internal secure path and is only available to the safety reporting team and this is archived every three years.

For Table 16, the flow of data and information is as follows:

Claims team: The claims team is responsible for producing the data that is used to report KPI Table 16. Claims cases are handled by insurers and 3rd party claim handlers. There are different insurers for different time periods and on expiration of contracts, live claims remain with the insurers till they are settled.

Data is therefore generated from various sources directly to the SHE Analysis and Safety Reporting Team which gets published in the Annual Return.

Provided claims handlers open and close claim files correctly and data entry is accurate, then the data provided for the Annual Return will also be accurate. The study team were not provided with any procedures on how claims were opened, closed, or reopened.

During the engagement session, the study team learnt that the closing process is subject to judgement as most employees that start a claim do not respond to agree if their claim has been denied and can therefore be closed. There are several factors that can affect the closing of claims, e.g., if a claim is declined and the employee that started it does not respond to agree with the decision.

3.2.2.1 Conclusion

Network Rail has the processes and procedures for capturing data for some of the KPIs. Our review identified some inconsistencies in the way the data is reported to the SHE team for publication in the Annual Return.

We also identified some miscommunications in the data reported to Network Rail by the OH service provider. This has affected the accuracy and consistency of some of the data reported in the Annual Return.

Sections 3.2.3 and 3.2.4 below elaborates on these points.

3.2.3 Relevant documentation and systems

This section describes the details of our review of the documentation and comments on their fitness for purpose

3.2.3.1 KPI Table 9

This is the 'Occupational Health and Wellbeing Strategic Dashboard', and it has the following indices in it:

- Safety critical workers assessed as 'fit for role' (%)
- Compliance with health surveillance programmes (%)
- Diagnosis of new and/or worsening occupational health conditions
- Average days lost to employee absence
- Hand Arm Vibration Syndrome (HAVS) compliance Tier 2 and 3 (%)
- Hand Arm Vibration Syndrome (HAVS) compliance Tier 2 (%)
- Hand Arm Vibration Syndrome (HAVS) compliance Tier 3 (%)
- Hand Arm Vibration Syndrome (HAVS) compliance Tier 4 (%)

ORR expects NR to specify the Occupational Health of their choice to report in this KPI.

Of all the indices in Table 9, the first 4 had definitions in the year under review. It was noted that the definition of 'compliance with health surveillance programmes' is not consistent with what was reported in the Annual Return as this was related to only HAVS.

ORR mentioned they have queried this in previous years for NR to review the title of table 9 and the definition of the indices to reflect that only HAVs is being reported. There were updated definitions in the Annual Return data tables for 2020/2021 but this does not cover all the indices within the table or sufficiently address the fact that the indices measured are only related to HAVs.

There is a reporting procedural note that describes a high-level process for all the indices in Table 9. This is the 'ORR Occupational Health Reporting' document and it covers the high-level flow of information from source to the Annual Return.

There is a detailed process map and documentation available for the producing the competency specification report (BSHA013PM Competence Specific Medical Bookings (Y) and BSHA013 - Competence Specific Medical Bookings completed) and HAVS Compliance Report (BSHA008 - HAVS Compliance Report Complete and BSHA008PM HAVS compliance report medicals (Y)).

The written documentation provided describes in detail the procedures to generate the initial referrals. The data information is held within NR's Oracle system and data is extracted, manipulated, and sent to the OH service provider. These documents describe how the 'Safety critical workers' are determined and there is a medical standard (NR_L2_OHS_00124) that defines the minimum medical fitness requirements for individuals working on Network Rail managed infrastructure. However, these standards are not referenced in the process documentations for the reporting of the KPI.

For the 'Average days lost to employee absence', generated by the HR employee absence team, there is a process map of how the is reported but there is no written

documentation that shows the process for the extraction of the absence data. The data is extracted from two payroll systems; Impromptu and Oracle used by NR. These are two robust systems that enable data to be extracted, manipulated, and reported for all employees.

The 'Hand Arm Vibration Syndrome (HAVS) compliance Tier 2 and 3 (%), Tier 2 (%), Tier 3 (%) and Tier (4%)' is related to the data collected for 'compliance with health surveillance programmes.

Confidence Grading:

The following confidence grading was applied to the following indices based on the outcome of our review:

KPI Table	Index	System Reliability Grading
9	a) Safety critical workers assessed as 'fit for role' (%)	B
	b) Compliance with health surveillance programmes (%)	B
	c) Diagnosis of new and/or worsening occupational health conditions,	B
	d) Average days lost to employee absence	C

Recommendations:

- Agreement between NR and the OH service provider on the process and data that is required to correctly report the agreed indices in alignment to their definitions (9a). See opportunity SOW20502-2.
- Define all the indices in KPI Table 9. See opportunity SOW20502-1.
- Revision of the 'ORR Occupational Health Reporting' document to reflect the discrepancies between the document and what is reported in the Annual Return (9a). See opportunity SOW20502-2.
- Consider merging all process documentation to produce a single document that details one source of truth of how the data is produced from the source through to when it is reported in the Annual Return. See opportunity SOW20502-2.

3.2.3.2 KPI Table 10

This relates to the 'At-Risk Workers who have completed Respirable Crystalline Silica Health Surveillance' KPI, and it has the following indices in it:

- At Risk Employees subject to health surveillance for respirable crystalline silica
- Percentage of scheduled health surveillance checks completed (respiratory health surveillance compliance rate)
- Number and type of work-related health conditions diagnosed
- Screened Employees Fit to Work

There are no definitions for all the indices within this table for the year under review. However, the 2020/2021 Annual Return table had definition for 'At Risk Employees subject to health surveillance for respirable crystalline silica'.

During the stakeholders' engagement, the SHE Analysis team stated that the 'At Risk Employees subject to health surveillance for respirable crystalline silica' data comes from HR competency specific report. There is a process for this and documentation (BSHA013PM Competence Specific Medical Bookings (Y) and BSHA013 - Competence Specific Medical Bookings completed).

Network Rail have a medical standard (NR_SP_OHS_00157) that describes the process of health surveillance for current and prospective employees, who, by nature of their role, could potentially be exposed to a hazardous substance in the form of an airborne contaminant in the course of their work. However, this standard is not referenced in the process documentations for the reporting of the KPI.

We did not get the competency specific report sent by HRSS to the OH service provider. the OH service provider performs medicals on the referred employees and sends the data back to SHE team. There is a process map for this procedure (Health Data Process Maps).

There is high-level process documentation (Annual Return Submission Processes & Data Sources) for the other indices within table 10. This made it difficult to determine how they were reported in detail.

In our engagement session with the OH service provider, they explained that they provide the data of employees that missed medicals to NR. This data can be used to determine the 'Percentage of scheduled health surveillance checks completed (respiratory health surveillance compliance rate)' as this index was not reported in the Annual Return.

Confidence Grading:

KPI Table	Index	System Reliability Grading
10	a) At Risk Workers who have completed Respirable Crystalline Silica (RCS) Health Surveillance	B
	b) Percentage of scheduled health surveillance checks completed (respiratory health surveillance compliance rate)	C
	c) Number and type of work-related health conditions diagnosed	B
	d) Screened Employees Fit to Work	B

Recommendations:

- Agreement between NR and the OH service provider on the process and data that is required to correctly report the agreed indices in alignment to their definitions (10b). See recommendations SOW20502-2.
- Define all the indices in KPI Table 10. See recommendation SOW20502-1.

- Consider merging all process documentation to produce a single document that details one source of truth of how the data is produced from the source through to when it is reported in the Annual Return. See recommendation SOW20502-2.

3.2.3.3 KPI Table 11

This relates to the 'Exposure to lead' KPI, and it has the following indices:

- Number of workers subject to biological monitoring for lead exposure under CLAW
- Employees whose blood lead levels have exceeded the Action Level under CLAW
- Employees whose blood lead levels have exceeded the Suspension Level under CLAW

There are no definitions for all the indices within this table for the year under review. However, the 2020/2021 Annual Return table had definitions.

During the stakeholders' engagement, the SHE Analysis team stated that initial referral data comes from HR competency specific report and others may come directly via line managers. There is a process and documentation (BSHA013PM Competence Specific Medical Bookings (Y) and BSHA013 - Competence Specific Medical Bookings completed) for this. the OH service provider performs clinicals on the referred employees and sends the data back to SHE team.

There is a high-level process documentation (Annual Return Submission Processes & Data Sources) for the indices within table 11. This explains the data sources and the process by which the data is reported in the Annual Return

There is a process map for this procedure (Health Data Process Maps).

Confidence Grading:

KPI Table	Index	System Reliability Grading
11	Exposure to lead	B

Recommendations:

- Revision and update of the 'Annual Return Submission Processes & Data Sources' document that shows how the data is produced from the source till when it is reported in the Annual Return. See recommendation SOW20502-2.
- Consider merging all process documentation to produce a single document that details one source of truth of how the data is produced from the source through to when it is reported in the Annual Return. See recommendation SOW20502-2.

3.2.3.4 KPI Table 12

This is the 'Number of records and surveillance for exposure to asbestos' KPI, and it has the following indices:

- Total number of workers who have reported accidental/incidental exposure to asbestos
- Number of workers under medical surveillance for Notifiable Non-Licenced Work (NNLW) under the Control of Asbestos Regulations 2012

There are no definitions for all the indices within this table for the year under review. However, the 2020/2021 Annual Return table had definitions.

Network Rail have a medical standard (NR_SP_OHS_00157) that describes the process of health surveillance for current and prospective employees, who, by nature of their role, could potentially be exposed to a hazardous substance in the form of an airborne contaminant in the course of their work. However, this standard is not referenced in the process documentations for the reporting of the KPI.

There is a high-level process documentation (Annual Return Submission Processes & Data Sources) for the indices within Table 12. There is no documentation that describes how employees reports exposure to asbestos however the SHE Analysis team explained that inadvertent exposure to asbestos is reported via the OH service provider's exposure telephone line by employees and/or line manager. NR is made aware of this via OH report returned from the OH service provider.

Confidence Grading:

KPI Table	Index	System Reliability Grading
12	Exposure to Asbestos	B

Recommendations:

- Revision and update of the 'Annual Return Submission Processes & Data Sources' document to include the process on how employees report accidental/incidental exposure to asbestos. See recommendation SOW20502-2.
- Consider merging all process documentation to produce a single document that details one source of truth of how the data is produced from the source through to when it is reported in the Annual Return. See recommendation SOW20502-2.

3.2.3.5 KPI Table 13

This relates to the 'Audiometry Screenings and Diagnoses' KPI, and it has the following indices:

- At risk employees under health surveillance for noise exposure
- Employees screened for audiometry
- % of scheduled audiometry checks that have been completed

- Screened employees diagnosed – This is sub-categorised into HSE Category 1 acceptable, HSE Category 2 mild impairment, HSE Category 3 poor hearing, HSE Category 4 rapid hearing loss
- New cases of hearing loss diagnosed - This is sub-categorised into HSE Category 1 acceptable, HSE Category 2 mild impairment, HSE Category 3 poor hearing, HSE Category 4 rapid hearing loss

There is a general definition for 'scheduled audiometry checks' in the year under review. Initial referral data comes from HR competency specific report. There is a process and documentation (BSHA013PM Competence Specific Medical Bookings (Y) and BSHA013 - Competence Specific Medical Bookings completed) for this. The OH service provider performs clinicals on the referred employees and sends the data back to SHE team. There is a process map for this procedure (Health Data Process Maps).

In our engagement session with the OH service provider, they explained that they provide the data of employees that missed clinicals to NR. This data can be used to determine the '% of scheduled audiometry checks that have been completed' as this index was not reported in the Annual Return.

Network Rail have 3 medical standards (NR_L2_OHS_00122, NR_L2_OHS_00123 and NR_L2_OHS_00124) that describes pre-employment/pre-placement screening undertaken on all prospective and current employees, who, by the nature of their employment, maybe regularly exposed to noise above the upper exposure action values. However, these standards are not referenced in the process documentations for the reporting of the KPI.

There is no process or documentation available for the identification of 'New cases of hearing loss diagnosed'. This implies the reported data was generalised as against the requirement of this index.

Confidence Grading:

KPI Table	Index	System Reliability Grading
13	a) Audiometry Screenings and Diagnoses	B
	b) New cases of hearing loss diagnosed – All Categories	D
	c) % of scheduled audiometry checks that have been completed	C

Recommendations:

- Revision and update of the 'Annual Return Submission Processes & Data Sources' document to include how the identification of 'New cases of hearing loss diagnosed' is determined. See recommendation SOW20502-2.
- Agreement between NR and the OH service provider on the process and data required to correctly report the agreed indices in alignment to their definitions (13b, 13c). See recommendations SOW20502-2.

- Consider merging all process documentation to produce a single document that details one source of truth of how the data is produced from the source through to when it is reported in the Annual Return. See recommendation SOW20502-2.

3.2.3.6 KPI Table 14

This relates to the 'Hand Arm Vibration Syndrome (HAVS) Screenings and Diagnoses' KPI, and it has the following indices:

- At risk employees under HAVS health surveillance
- Percentage of scheduled Health Surveillance checks completed
- Percentage of screened employees assessed as fit to work
- Percentage of screened employees diagnosed with early stages of HAVS
- Percentage of screened employees diagnosed with late stages of HAVS
- Number of new cases of HAVS
- Number of diagnoses where significant worsening of HAVS reported

There is a general definition for 'Hand Arm Vibration Syndrome (HAVS)' in the year under review. Initial referral data to identify 'At Risk' employees come from HR HAVs compliance report. There is a process and documentation (BSHA008PM HAVS compliance report medicals (Y) and BSHA008 - HAVS Compliance Report Completed) for this. The OH service provider performs clinicals on the referred employees and sends the data back to SHE team. There is a process map for this procedure (Health Data Process Maps).

Network Rail have medical standards (NR_SP_OHS_00113 and NR_L2_OHS_00113) that describes the process of health surveillance for employees and prospective employees whose health could be at risk due to exposure to HAVS. However, these standards are not referenced in the process documentations for the reporting of the KPI.

Network Rail stated that the OH service provider provides a weekly dashboard which confirms the percentage of compliance to all scheduled Health Surveillance as well as provide missed clinical appointments. This confirms compliance based on identified employees and their engagement with the programme.

Confidence Grading:

KPI Table	Index	System Reliability Grading
14	Hand Arm Vibration Syndrome (HAVS) screenings and diagnoses	A

Recommendations:

- Agreement between NR and the OH service provider on the process and data that is to be provided to correctly report the agreed indices in alignment to their definitions. See recommendation SOW20502-2.

- Consider merging all process documentation to produce a single document that details one source of truth of how the data is produced from the source through to when it is reported in the Annual Return. See recommendation SOW20502-2.

3.2.3.7 KPI Table 15

This is the 'Referrals to Occupational Health (OH)' KPI, and it has the following indices:

- Psychological Referrals to OH by Condition – this is sub-categorised into Stress, Anxiety, Depression and other
- Psychological Referrals to OH by Cause – This is sub-categorised into Occupational in nature, occupational element, and non-occupational in nature
- Musculoskeletal Referrals to OH by Injury – This is sub-categorised into Upper limb, lower limb, back and other
- Musculoskeletal Referrals to OH by cause - This is sub-categorised into Occupational in nature, occupational element, and non-occupational in nature

There is no definition for 'Referrals to Occupational Health (OH)' for the year under review. However, the 2020/2021 Annual Return table had the definitions for it.

Initial referral data comes from line managers (performance and attendance management referral) to the OH service provider via telephone or through the OH service provider's online referral portal system. There is no process map or documentation to the steps for making a referral. The OH service provider performs clinical procedure and return data to the SHE team.

There is a process map (Health Data Process Maps) for the validation of the data when received from the OH service provider before it is reported in the Annual Return.

Confidence Grading:

KPI Table	Index	System Reliability Grading
15	Psychological referrals (all categories)	B
	Musculoskeletal referrals (all categories)	B
	Musculoskeletal Referrals to OH by cause – Not work related	B

Recommendations:

- Revision and update of the 'Annual Return Submission Processes & Data Sources' document to include the process for reporting psychological and musculoskeletal referrals. See recommendation SOW20502-2.

- Consider merging all process documentation to produce a single document that details one source of truth of how the data is produced from the source through to when it is reported in the Annual Return. See recommendation SOW20502-2.

3.2.3.8 KPI Table 16

This relates to the 'Employer liability claims' KPI and it has the following indices:

- Opened
- Opened during the year
- Closed during the year

There is a definition for this KPI in the Annual Return.

This data is generated from the claims team. There are no process maps or documentation available for the reporting of this data. All the information used in the review of this KPI was based on the interview session with the claims team.

Claims are generally handled by insurers and 3rd party claim handlers that are contracted for a fixed period. On expiration of their contracts, opened claims remain with the suppliers until they are settled and closed. Based on this process, the claims data come from different sources as the procedures of claims handing changes very often within Network Rail.

RiskConsole is the system used in the management of the claims data. The insurers and 3rd party claim handlers have access to RiskConsole and enter their data in it directly.

Data is manually extracted from RiskConsole and manipulated to fit into the current structure and agreed requirement for the financial year's Annual Return. Provided the suppliers enter the data correctly and claims are opened and closed correctly the data provided for analysis will be accurate. NR undertakes regular audits on suppliers to ensure the quality of data provided.

There is a lack of resilience within the claims team in Network Rail. The review team observed there was only one employee that manages the data for the KPI table 16.

Confidence Grading:

KPI Table	Index	System Reliability Grading
16	Employer Liability	D

Recommendations:

- NR to create process documentation for reporting employer's liability data. This will form part of the overarching document for all the processes. See recommendation SOW20502-2.

3.3 KPI Data Analysis

3.3.1 Reliability, quality, consistency, completeness, and accuracy of reported data

3.3.1.1 KPI Table 9

This is the 'Occupational Health and Wellbeing Strategic Dashboard', and it has the following indices in it:

- Safety critical workers assessed as 'fit for role' (%)
- Compliance with health surveillance programmes (%)
- Diagnosis of new and/or worsening occupational health conditions
- Average days lost to employee absence
- Hand Arm Vibration Syndrome (HAVS) compliance Tier 2 and 3 (%)
- Hand Arm Vibration Syndrome (HAVS) compliance Tier 2 (%)
- Hand Arm Vibration Syndrome (HAVS) compliance Tier 3 (%)
- Hand Arm Vibration Syndrome (HAVS) compliance Tier 4 (%)

The description for the "Safety critical workers assessed as 'fit for role' (%)" is stated in the ORR Occupational Health Reporting Document as:

> *"**Index 1***
> *Currently we do not receive the "Safety critical workers assessed as 'fit for role' (%)" data on a periodic basis so the totals are reported as 0.0%".*

This fitness for work which is used in index 1 for "Safety critical workers assessed as 'fit for role' (%)" is defined in the Annual Return as:

> *"'Fitness to work' is assessed through competency specific medical assessments and health surveillance programmes to identify health conditions that may indicate an individual is unable to discharge their duties safely, sufficiently or that the specific task may exacerbate a health condition if continued. 'Fitness to work' includes those deemed 'fit to work with restrictions' but not employees deemed 'temporarily unfit' or 'unfit'. Data is sourced from our external occupational health service provider. For fitness for work, a higher number indicates better performance".*

However, there is a contradiction in how this percentage is calculated as the ORR Occupational Health Reporting Document describes the percentage of 0.0% to be reported, whereas the percentage reported in the Annual Return of 99.7% is the same as the "Percentage of screened employees assessed as fit to work" in Table 14 which is for HAVS only. The OH service provider confirmed the data used to calculate both percentages are the same. The data is not categorised into "fit for role", therefore, cannot be reflected in the "Safety critical workers assessed as 'fit for role' (%)" index.

The review of the source data showed the numbers of new and worsening conditions, and the at-risk employees under health surveillance did not fully match

the number of cases recorded in Table 9. Network Rail reported the numbers of new and worsening conditions as 61 in table 9, however, this number was reconciled post-reporting and internally the team agreed the number to be reported is 59 instead of 61. The validation process during the review reconciled 58 cases.

The percentage calculated during validation was slightly different due to the inclusion of HS2 data in the Tier 2 and Tier 3 compliance. The OH service provider have confirmed there was an error in the number of employees reported under HS2 in the Tier 2/3 compliance where 119 cases were included in the backing calculations. The correct number of cases should have been 125 cases for HS2 in the Tier 2/3 compliance. This resulted in the overall percentage reported for "Hand Arm Vibration Syndrome (HAVS) compliance Tier 2 and 3 (%)" as 95.78%, where the correct index should be 95.84%. This difference is still within the 0.1% of accuracy, thus, is awarded an accuracy grading of 1*.

Network Rail provided the formulae used for the calculations for which were used to check against in the data validation process:

- Average days lost to employee absence
- Hand Arm Vibration Syndrome (HAVS) compliance Tier 2 and 3 (%)
- Hand Arm Vibration Syndrome (HAVS) compliance Tier 2 (%)
- Hand Arm Vibration Syndrome (HAVS) compliance Tier 3 (%)

Formulae were not provided for the calculations of:

- Safety critical workers assessed as 'fit for role' (%)
- Compliance with health surveillance programmes (%)
- Diagnosis of new and/or worsening occupational health conditions
- Hand Arm Vibration Syndrome (HAVS) compliance Tier 4 (%)

Confidence Grading:

KPI Table	Index	Accuracy Grading
9	a) Safety critical workers assessed as 'fit for role' (%)	X
	b) Compliance with health surveillance programmes (%)	1*
	c) Diagnosis of new and/or worsening occupational health conditions	2
	d) Average days lost to employee absence	1*

Recommendations:

- Agree and implement a more robust quality assurance procedure prior to reporting to the Annual Return tables, ensuring the numbers and percentages have been reviewed following an independent check. See recommendation SOW20502-3.

- Agreement between NR and the OH service provider on the process and data that is required to correctly report the agreed indices in alignment to their definitions. (9a). See recommendation SOW20502-2.

3.3.1.2 KPI Table 10

This is the 'At-Risk Workers who have completed Respirable Crystalline Silica Health Surveillance' KPI, and it has the following indices in it:

- At Risk Employees subject to health surveillance for respirable crystalline silica
- Percentage of scheduled health surveillance checks completed (respiratory health surveillance compliance rate)
- Number and type of work-related health conditions diagnosed
- Screened Employees Fit to Work

The number of respirable crystalline silica included all respiratory cases in the source data and matched the total cases reported in the Annual Return table 10 and was the only index validated, resulting in 100% accuracy.

There were 3 other indices in table 10 which were difficult to validate due to insufficient data to complete the analysis. Throughout the validation stage, it was observed there were missing gaps in the table 10 where numbers and percentages should have been reported by Network Rail as required by the ORR. The blank fields had insufficient or no backing data to provide the indices.

The metric for "Percentage of scheduled health surveillance checks completed (respiratory health surveillance compliance rate)" was not reported in 2019/2020 Annual Return data, thus there was a gap in reporting. The information provided for validation, required further clarification for which employees had health surveillance checks completed. The column provided in the data source indicated a form of completion which was the "Date cleared" column, however, there was little clarity on this column's definition to be used as the completion date. As a result, this index was given an accuracy rating of X.

For the index "number and type of work-related health conditions diagnosed" regarding Respirable Crystalline Silica, it is difficult to identify if the diagnosis is work related based on the source data. Unlike the source data for the musculoskeletal and psychological health referrals, there was insufficient information such as a column determining the "Work related factors", "Primarily work related" or "Not work related".

The final index reported in table 10 was 100% of screened employees classified as fit to work, however, it was difficult to fully validate with the data provided. All cases reported in the source data are classed as "date cleared" within the period for 19/20, but there is no column to identify if the employees are fit to work unlike the HAVS_I-N1 sheet in the backing data. The HAVS_I-N1 sheet has a column indicating fitness for work with the options "Fit", "Fit with Restrictions" and "Unfit".

Formulae were not provided for any of the indices reported in Table 10:

- At Risk Employees subject to health surveillance for respirable crystalline silica
- Percentage of scheduled health surveillance checks completed (respiratory health surveillance compliance rate)
- Number and type of work-related health conditions diagnosed
- Screened Employees Fit to Work

Confidence Grading:

KPI Table	Index	Accuracy Grading
10	a) At Risk Workers who have completed Respirable Crystalline Silica (RCS) Health Surveillance	1*
	b) Percentage of scheduled health surveillance checks completed (respiratory health surveillance compliance rate)	X
	c) Number and type of work-related health conditions diagnosed	X
	d) Screened Employees Fit to Work	X

Recommendations:

- Ensure there is consistency in how the data is saved and reported across the different illnesses and diseases. For example, implement a column on fitness across data on all illnesses as well as HAVS (10d). See recommendations SOW20502-2 and SOW20502-3.
- Agreement between NR and the OH service provider on the process and data that is required to correctly report the agreed indices in alignment to their definitions (10b, 10c, 10d). See recommendation SOW20502-2.

3.3.1.3 KPI Table 11

This is the 'Exposure to lead' KPI, and it has the following indices:

- Number of workers subject to biological monitoring for lead exposures under CLAW
- Employees whose blood lead levels have exceeded the Action Level under CLAW
- Employees whose blood lead levels have exceeded the Suspension Level under CLAW

There were zero cases reported for lead in the source data which was also reflected in the Annual Returns table 11. As the source data matched the results in the table, this met an accuracy of 100%.

Formulae were not provided for any of the indices reported in table 11:

- Number of workers subject to biological monitoring for lead exposures under CLAW
- Employees whose blood lead levels have exceeded the Action Level under CLAW
- Employees whose blood lead levels have exceeded the Suspension Level under CLAW

Confidence Grading:

KPI Table	Index	Accuracy Grading
11	Exposure to lead	1*

3.3.1.4 KPI Table 12

This is the 'Number of records and surveillance for exposure to asbestos' KPI, and it has the following indices:

- Total number of workers who have reported accidental/incidental exposure to asbestos
- Number of workers under medical surveillance for Notifiable Non-Licenced Work (NNLW) under the Control of Asbestos Regulations 2012

All entries in the Annual Returns table 12 for Asbestos related cases and those under medical surveillance match against the source data, meeting an accuracy of 100%.

Formulae were not provided for any of the indices reported in Table 11:

- Total number of workers who have reported accidental/incidental exposure to asbestos
- Number of workers under medical surveillance for Notifiable Non-Licenced Work (NNLW) under the Control of Asbestos Regulations 2012

Confidence Grading:

KPI Table	Index	Accuracy Grading
12	Exposure to Asbestos	1*

3.3.1.5 KPI Table 13

This is the 'Audiometry Screenings and Diagnoses' KPI, and it has the following indices:

- At risk employees under health surveillance for noise exposure
- Employees screened for audiometry
- % of scheduled audiometry checks that have been completed

- Screened employees diagnosed – This is sub-categorised into HSE Category 1 acceptable, HSE Category 2 mild impairment, HSE Category 3 poor hearing, HSE Category 4 rapid hearing loss
- New cases of hearing loss diagnosed - This is sub-categorised into HSE Category 1 acceptable, HSE Category 2 mild impairment, HSE Category 3 poor hearing, HSE Category 4 rapid hearing loss

The source data for the audiometry cases under health surveillance, total number of employees screened including hearing loss levels 1 to 4 all matched against the numbers recorded in the Annual Returns table 13. The percentages in the table also matched the percentages re-calculated from the source data for all 4 levels of hearing loss.

There was uncertainty in how the new cases of hearing loss were determined as the source data did not provide enough information in distinguishing a new case from a pre-existing. The OH service provider have confirmed during their process they have classed existing cases in the source data as new cases, thus all the backing data and calculations for hearing loss levels 2-4 are the same. However, as Table 13 states "New cases of hearing loss diagnosed", the numbers and percentages should in theory reflect actual new cases, rather than use the data for existing cases as new cases. As a result, a separate accuracy grading is assigned to "New cases of hearing loss diagnosed" of grade X as the data used for reporting was from existing cases.

The new cases are missing the hearing loss level 1, thus the totals and overall percentages for new or existing cases will differ. Percentages for new cases include hearing levels 2-4, thus do not match the existing hearing level percentages which consider all hearing levels 1-4.

Throughout the validation stage, it was observed there were missing gaps in table 13 where numbers and percentages should have been reported by Network Rail as required by the ORR. The blank fields had insufficient or no backing data to provide the indices.

Formulae were provided for all indices entered in Table 13 by Network Rail. These formulae were used to confirm any assumptions made during the validation process and provided a key component in re-calculating the reported numbers.

Confidence Grading:

KPI	Index	Accuracy Grading
13	a) Audiometry Screenings and Diagnoses	1*
	b) New cases of hearing loss diagnosed – All Categories	X
	c) % of scheduled audiometry checks that have been completed	X

Recommendations:

- Agreement between NR and the OH service provider on the process and data that is required to correctly report the agreed indices in alignment to their definitions. (13b, 13c). See recommendations SOW20502-2.

3.3.1.6 KPI Table 14

This is the 'Hand Arm Vibration Syndrome (HAVS) Screenings and Diagnoses' KPI, and it has the following indices:

- At risk employees under HAVS health surveillance
- Percentage of scheduled Health Surveillance checks completed
- Percentage of screened employees assessed as fit to work
- Percentage of screened employees diagnosed with early stages of HAVS
- Percentage of screened employees diagnosed with late stages of HAVS
- Number of new cases of HAVS
- Number of diagnoses where significant worsening of HAVS reported

The percentage of screened employees diagnosed with early and late stages of HAVS were calculated from the source data and matched the percentages recorded in table 14. Overall, all entries in Table 14 could be validated against the source data provided. However, there was a discrepancy within the source data regarding the number of cases listed against the HS2 route category for Tier 3 compliance. The OH service provider confirmed there was an error in reporting the HS2 cases for Tier 3 compliance, as a result, the percentage entered in Table 14 for "Hand Arm Vibration Syndrome (HAVS) compliance Tier 2 and 3 (%)" should read 95.84% rather than the reported value of 95.78%.

Network Rail provided the formulae used for the calculations for which were used to check against in the data validation process:

- Percentage of screened employees assessed as fit to work
- Percentage of screened employees diagnosed with early stages of HAVS
- Percentage of screened employees diagnosed with late stages of HAVS

Formulae were not provided for the calculations of:

- At risk employees under HAVS health surveillance
- Percentage of scheduled Health Surveillance checks completed
- Number of new cases of HAVS
- Number of diagnoses where significant worsening of HAVS reported

Confidence Grading:

KPI Table	Index	Accuracy Grading

14	Hand Arm Vibration Syndrome (HAVS) screenings and diagnoses	1*

Recommendations:

- Implement a more robust checking procedure of the backing data to eliminate minor errors. See recommendation SOW20502-3.

3.3.1.7 KPI Table 15

This is the 'Referrals to Occupational Health (OH)' KPI, and it has the following indices:

- Psychological Referrals to OH by Condition – this is sub-categorised into Stress, Anxiety, Depression and other
- Psychological Referrals to OH by Cause – This is sub-categorised into Occupational in nature, occupational element, and non-occupational in nature
- Musculoskeletal Referrals to OH by Injury – This is sub-categorised into Upper limb, lower limb, back and other
- Musculoskeletal Referrals to OH by cause - This is sub-categorised into Occupational in nature, occupational element, and non-occupational in nature

All values recorded in the Annual Returns Table 15 for musculoskeletal referrals by cause and injury, and the psychological referrals by cause and condition are validated using the source data. However, the category "Musculoskeletal Referrals to OH by cause, for cases "Not work related" referrals, does not match the percentage recorded in Table 15 where the index is reported to be 24.9%, and it should be 74.9%. Network Rail have confirmed this is due to an error during the assurance process. As a result, the "Musculoskeletal Referrals to OH by cause – Not work related" index has been assigned a separate grade of 5 as it is within 50% of accuracy.

Formulae were provided for all indices entered in Table 15 by Network Rail. These formulae were used to confirm any assumptions made during the validation process and provided a key component in re-calculating the reported numbers. The formula for "Musculoskeletal Referrals to OH by cause" for cases "Not work related" referrals, provided extra confirmation during the validation of this percentage as this was incorrectly reported in Table 15.

Confidence Grading:

KPI Table	Index	Accuracy Grading
15	Psychological referrals (all categories)	1*
	Musculoskeletal Referrals to OH by cause – Not work related	5
	Musculoskeletal referrals (all other categories)	1*

Recommendations:

- Implement a more robust quality assurance procedure ahead of reporting numbers and percentages to the Annual Return table. See recommendation SOW20502-3.

3.3.1.8 KPI table 16

This is the 'Employer liability claims' KPI and it has the following indices:

- Opened
- Opened during the year
- Closed during the year

The claims team provided source data generated from the RiskConsole database during the audit period and were not data files saved during the 2019/2020 year. The number of open, opened, and closed claims stated in the Network Rail Annual Returns table 16 were referenced against the numbers which the claims team provided. However, the numbers could not be traceable to where the data originally came from.

The average percentage of accuracy of all the source files provided during the audit period is 32.8%. The understanding of "open" vs "opened" required more clarity within the data, as all claims were denoted as "open" only. Network Rail confirmed "opened" cases are those opened during the year. However, the source data provided to conduct the validation contained the same cases for both open and opened. This contributed towards the inability to validate the numbers in the Annual Returns table with the original source data.

There were no formulae provided for the validation of the indices reported in table 16. Most steps taken to re-calculate the indices reported were largely focused on the data outputs from the database used to aggregate the numbers for open, opened, and closed cases.

Confidence Grading:

KPI Table	Index	Accuracy Grading
16	a) Employer Liability	X

Recommendations:

- Ensure all data used in the calculations and formation of numbers in the Annual Return table are traceable and auditable. Develop an archiving process to retain the data used to prepare reportable numbers. See recommendation SOW20502-2.
- Introduction of resilience within the team that process the data See recommendations SOW20502-4.

3.4 Confidence grading

In the application of the confidence grading, tables 11, 12, 14, and 16 were assigned a single grade for the whole table where all indices have returned 100% of accuracy and documented processes. The remaining tables 9, 10, 13, and 15 were assigned separate grades for the indices that were either positively or negatively skewing the accuracy of whole table.

4 SMIS

4.1 Overview

As an employer, the RIDDOR guidance (ORR, September 2016) mandates Network Rail to notify, report and record events of injury, death, disease, or dangerous occurrence. This section reviewed the processes and procedures by which Network Rail reports statutory occupational disease into SMIS including cross-referencing the number of incidents inputted against the number of reports ORR receives through SMIS.

The following diseases or conditions must be reported if a diagnosis is received in relation to a person at work:

- Carpal Tunnel Syndrome - where the person's work involves regular use of percussive or vibrating tools
- Cramps in the hand or forearm - where the person's work involves prolonged periods of repetitive movement of the fingers, hand, or arm
- Occupational dermatitis - where the person's work involves significant or regular exposure to a known skin sensitizer or irritant
- Hand-arm vibration syndrome ("HAVS") - where the person's work involves regular use of percussive or vibrating tools, or the holding of materials which are subject to percussive processes, or processes causing vibration
- Occupational asthma - where the person's work involves significant or regular exposure to a known respiratory sensitizer
- Tendonitis or tenosynovitis in the hand or forearm - where the person's work is physically demanding and involves frequent, repetitive movements

4.2 Processes and procedures

4.2.1 Relevant documentation and systems and reporting statutory occupational disease data into SMIS

Of all the reportable diseases or conditions related to a person at work, only HAVS had the relevant documentations and a process map of how the data is managed.

Initial referral and targeting of potential workers that might be at-risk of HAVS originates from the HRSS medical reporting team. The relevant documentations that describe this process in detail are BSHA008PM HAVS compliance report medicals (Y) and BSHA008 - HAVS Compliance Report Complete.

This data is passed on to the OH service provider for their clinical process and the SHE team is notified for cases to be reported in SMIS on a weekly basis. The SHE team have a process map (Health Data Process Maps) for how this data is managed. Additionally, the regulator (ORR) receives a regular HAVS RIDDOR report (every 2-3 days) from RSSB.

The study team noted that there are no other documentation or processes used to capture and report the other reportable occupational diseases.

4.3 Data Analysis

4.3.1 Reliability, quality, consistency, completeness, and accuracy of reported data within SMIS

The data provided to ORR from RSSB on SMIS cases were 59, whereas the number of cases reported in the Annual Return table was 61. Network Rail confirmed this number should have been 58 as a result of a post-reconciliation exercise. The validation exercise involved a comparison of data reported in the Annual Return table, the data sent to ORR from RSSB and the post-reconciled number of cases.

4.3.2 Opportunities

It will be beneficial for Network Rail to produce documentations on the processes for all other reportable diseases even though it was noted that only HAVS is reported.

Following the processes and data validation checks, the opportunities of improvement echo previous suggestions to implement a more robust quality assurance checks before reporting in the Annual Return. This improvement will ensure the numbers reported have had further checks thus minimising the possibilities of errors during reporting.

Another opportunity highlighted during the audit was to report on other reportable diseases. The existing process in SMIS only reports on HAVS cases, and any other cases are also reported as HAVS which limits a greater understanding on the other reportable diseases and illnesses.

4.4 Confidence grading

The following confidence grading has been applied to the SMIS process:

Index	Confidence Grading
SMIS	B1*

Recommendations:

- Produce process documents for the capture of other reportable diseases/conditions. See recommendation SOW20502-5.

Appendix A

Independent Reporter
Framework Statement of Works
#20502 – Review of
Occupational Health Data

Independent Reporter Framework

Statement of Works

1.0 COMMISSION INFORMATION	
Project Name:	Review of Occupational Health Data
Bravo Sourcing Request Number:	#20502
Network Rail Contact:	Matthew Blackwell
Network Rail Department:	Planning & Regulation
SoW Number:	0009
Network Rail PO Number:	[insert NR PO# when available]
Commission Value:	[insert the SoW value after this has been agreed with the supplier]
Supplier Name:	[insert the name of the selected supplier after appointment]
Main Supplier Contact:	[name and email address of the main supplier contact]

This Statement of Work (SoW) is the contractual vehicle for defining, authorising and commissioning a piece of work to be undertaken under the Independent Reporter Framework. The SOW has six sections:

1 *Commission Information*
2 *Commission Overview*
3 *Scope of Services and Deliverables*
4 *Knowledge Transfer*
5 *Resource & Commercial Details*
6 *Invoicing*

This SoW is entered into under and in accordance with the terms of the Independent Reporter Framework dated 1 February 2020 between Network Rail, the Office of Rail and Road, and the Supplier and includes and incorporates any special Terms and Conditions and any other amendments captured in this SoW.

Any dispute surrounding this SoW will be resolved in accordance with the Terms and Conditions outlined in the Framework Agreement.

Ownership and use of any Intellectual Property Rights shall be in accordance with the Framework Agreement Terms and Conditions.

Change control procedures are to be applied as set out in the Terms and Conditions of the Framework Agreement.

2.0 COMMISSION OVERVIEW	
2.1 Background	Occupational Health data was last reviewed in April 2013 for system reliability and data accuracy as part of a wider review of safety data. Of the six Occupation Health KPIs that were assessed, two met ORR's target rating ('Musculoskeletal referrals' and 'stress-related absence'), two were below the ORR's target rating ('Hand Arm Vibration Syndrome (HAVS)' and' 'Noise exposure') and two were not rated due to data capture systems not being in place ('Exposure to lead' and 'exposure to asbestos'). Network Rail has had time to implement the recommendations and make improvements to the data capture systems. Over recent years, Network Rail has undergone significant changes, including appointing a new Occupational Health provider, and carrying out an internal data improvement project. Any changes arising from these changes should now be embedded within Network Rail's procedures and processes, therefore it is deemed an appropriate time to re-assess all of the KPIs reviewed in 2013 where they exist, and to assess any new Occupational Health KPIs produced by Network Rail. Furthermore, Network Rail is also required to report statutory occupational disease data into RSSB's Safety Management Intelligence System (SMIS) under the Reporting of Injuries, Diseases and Dangerous Occurrence Regulations 2013 (RIDDOR) . ORR have previously identified discrepancies between the diagnoses reported through SMIS and the numbers reported via Network Rail's Annual Return. Therefore, we would like to assess the process by which Network Rail reports these incidents into SMIS. COVID-19 has impacted on the process for identifying Occupational Health cases this year, as face-to-face appointments have not been possible. Any temporary process in place during COVID-19 will not be in scope for the review itself. However, this may impact on the volume of cases reported compared with previous years.
2.2 Business Objectives and Priorities	The health and wellbeing of the rail workforce is central to the success of the whole industry. During CP5, there was a step change in driving the health agenda across the mainline, led by the Health and Wellbeing Policy Group (HWPG) with active participation from across the industry. Whilst the industry in a far better place on health than it was at the beginning of CP5, there is still some way to go to achieve genuine parity between the management of health and of safety, and to achieve the industry's Healthier Rail Vision where a career in rail delivers better health than in other industries. Consequently, Occupational Health compliance remains a key focus for ORR. ORR needs to have confidence that Network Rail has access to reliable and accurate data to manage issues, and that this is reported within Network Rail's Annual Return to allow for an assessment of progress in this area.

	Occupational Health Diagnoses reportable under RIDDOR are a legal requirement. These reports assist in benchmarking rail against other industries and, as the enforcing safety authority, ORR needs to be assured that Network Rail is meeting its legal obligation in this regard, by reporting complete, accurate data into SMIS.

3 .0 SCOPE OF SERVICE AND DELIVERABLES	
3.1 Key requirements	The reporter should assess the system reliability and data accuracy of the following KPIs that were reported within Network Rail's Annual Return. The reporter should assess each of these KPIs at the network-wide level: • Table 09: Occupational Health and Wellbeing Strategic Dashboard • Table 10: At Risk Workers who have completed Respirable Crystalline Silica (RCS) Health Surveillance • Table 11: Exposure to lead • Table 12: Number of records and surveillance for exposure to asbestos • Table 13: Audiometry screenings and diagnoses • Table 14: Hand Arm Vibration Syndrome (HAVS) screenings and diagnoses • Table 15: Referrals to Occupational Health • Table 16: Employer liability The reporter should review each of these KPIs in terms of: • Review and comment on the processes and procedures by which Network Rail captures data and targets workplace intervention; • Review all relevant documentation and systems and comment on their fitness for purpose; • Review and comment on the reliability, quality, consistency, completeness and accuracy of reported data; and • Present a confidence grading for both the system reliability and data accuracy for each KPI (i.e. Table) under review based on the end of year dataset (2020-21), due to be reported in Network Rail's 2021 Annual Return; and make recommendations if appropriate. The reporter should also assess the processes and procedures by which Network Rail reports statutory occupational disease data into SMIS, including cross-referencing the number of incidents inputted by Network Rail against the number of reports ORR receives via SMIS. • Review all relevant documentation and systems and comment on the processes and procedures by which Network Rail reports statutory occupational disease data into SMIS; • Review and comment on the reliability, quality, consistency, completeness and accuracy of reported data within SMIS; and • Present a confidence grading on both the system reliability and data accuracy of occupational diseases reported by Network Rail within SMIS for 2018-19;

- And, if appropriate, make recommendations that set out a clear roadmap as to what improvements Network Rail would need to make to achieve higher gradings.

3.2 Key deliverables

The required deliverables are:

- a confidence grading on both the system reliability and data accuracy for each of the metrics in line with the grading system below

System reliability grading system

System reliability band	Description
A	Sound textual records, procedures, investigations or analysis properly documented and recognised as the best method of assessment.
B	As A but with minor shortcomings. Examples include old assessment, some missing documentation, some reliance on unconfirmed reports, some use of extrapolation.
C	Extrapolation from limited sample for which Grade A or B data is available.
D	Unconfirmed verbal reports, cursory inspections or analysis.

1. System reliability is a measure of the overall reliability, quality, robustness and integrity of the system that produces the data.
2. Some examples of the potential shortcomings include old assessment, missing documentation, insufficient internal verification and undocumented reliance on third-party data.

Accuracy grading system

Accuracy Band	Description
1*	Data used to calculate the measure is accurate to within 0.1%
1	Data used to calculate the measure is accurate to within 1%
2	Data used to calculate the measure is accurate to within 5%
3	Data used to calculate the measure is accurate to within 10%
4	Data used to calculate the measure is accurate to within 25%
5	Data used to calculate the measure is accurate to within 50%
6	Data used to calculate the measure is inaccurate by more than 50%
X	Data accuracy cannot be measured

1. Accuracy is a measure of the closeness of the data used in the system to the true values.
2. Accuracy is defined at the 95% confidence level - i.e. the true value of 95% of the data points will be in the accuracy bands defined above.

- a presentation of draft findings to be discussed at a meeting with Network Rail and ORR
- a draft report (for comment by ORR and Network Rail) covering the issues set out in the scope section above, to be provided by the end of May 2021; and

a final report in late June 2021 that addresses comments provided by ORR and Network Rail on the draft report.

3.3 Proposed approach	[Demonstrate and detail the proposed approach for the project, covering all areas of the projects scope and clearly state the requirement(s)]
3.4 Schedule & timings	Contract Start Date: 14/06/2021* Contract End Date: 06/08/2021* *These are indicative dates and will be agreed once the contract has been awarded and the PO has been approved. [Insert details pertaining to the commission's intended start and end date, as well as a commission schedule e.g., a Gantt chart with tasks and attributive start/end dates]
3.5 Relationship applicable for performing the duties under this statement of works contract	Data Controller and Data Processor. The only processing that the Supplier is authorised to do is listed as in Appendix 1 and may not be determined by the Supplier.

4.0 KNOWLEDGE TRANSFER	
4.1 Knowledge Transfer	[Explain and detail how knowledge transfer is to be enabled throughout the commission and how the final output will be delivered and presented to Network Rail and ORR.] *[Insert at contract award stage]*

5.0 RESOURCE & COMMERCIAL DETAILS	
5.1 Supplier Resource	[Key personnel which will be engaged in the commission, along with their responsibilities. Details should include sub-contractors, if sub-contractors are being utilised for the delivery of this contract commission] *[Insert at contract award stage]* In the event of "key personnel" becoming unavailable the supplier agrees to provide a replacement of equal standard and status within 48 hours of notice.
5.2 Pricing Schedule	**This contract is based on a FIXED PRICE contract commission** *[Insert price schedule and cost breakdown at contract award stage]*

	All prices detailed are exclusive of VAT which will be charged at the prevailing rate.
5.3 Payment Milestones	n/a This contract is being let on a fixed price contract, payable on completion.
5.4 Place of work	Due to the current COVID-19 situation most of Reporter's work will be conducted from their own office or remotely.
5.5 Expenses	For the purpose of this contract, business travel expenses to any of Network Rail's offices [if this becomes necessary] may be claimed in accordance with Network Rail's Business Travel and Expenses policy.
5.6 Contract Variations	Variations to this Statement of Work contract may be permitted in accordance with Clause 88 of the Utilities Contract Regulations (modification of contracts during their term). All variations to this Statement of Work contract must be agreed in writing under a restated statement of works document, duly signed by all parties

6.0 INVOICING	
6.1 Invoice Details	Network Rail operates a strict "NO PO – NO PAYMENT" policy. Invoices are to be raised on completion of the contract or in accordance with the milestone payments [where applicable] set out in this SOW. Invoices should contain the following information as a minimum: • Purchase Order number • SOW number as detailed in Section 1.0 • Project Title and description Business expenses should be invoiced as a separate line and supported with receipts, as described in terms and conditions of the framework agreement and the Network Rail Business Expenses Policy. Please be aware that failure to provide the information above may potentially cause a delay in processing the invoice. Our preference wherever possible, is for invoices to be submitted via EDI. Alternatively, invoices may be submitted By email - invoices@networkrail.co.uk By post – Network Rail Accounts Payable, PO Box 4145, Manchester M60 7WZ

This Statement of Work will be executed as per the Terms and Conditions agreed in the Independent Reporter Services Framework Agreement.

[supplier name to be completed at contract award]

Signed:……..

Name (CAPS):……..

Position:……..

Date:……

NETWORK RAIL

Signed:……..

Name (CAPS):……..

Position:……..

Date:……

[This SOW does not require further contract signatures from the ORR]

ANNEX 1 – Protection of Personal Data

Where Data Controller and Data Processor applies

The Supplier shall only process personal data as detailed below:

Description	Details
Data Protection Officers	**Network Rail**: Fiona McConachie, The Quadrant, Elder Gate, Milton Keynes, Buckinghamshire, MK9 1EN **Supplier**: TBC at contract award stage
Subject matter of the processing	The processing is needed to ensure that the Processor can effectively deliver the services under the framework contract.
Duration of the processing	The duration of processing refers to the duration of the contract, as specified in the call-off contract
Nature and purposes of the processing	The nature of the processing means any operation such as collection, recording, organisation, structuring, storage, adaptation or alteration, retrieval, consultation, use, disclosure by transmission, dissemination or otherwise making available, alignment or combination, restriction, erasure or destruction of data (whether or not by automated means). The purpose might include (but not limited to): statutory obligation, arranging Stakeholder meetings, data research and analysis and compliance with Network Rail's Business Travel and Expenses policy.
Type of Personal Data being Processed	This may include (but is not limited to): name, address, job title, location, email address, telephone number, images, cost centre number biometric data.
Categories of Data Subject	Examples include (but is not limited to): staff (including sub-contractors, volunteers, agents), customers/ clients, suppliers, students, apprentices, members of the public, users of a particular website.
Plan for return and destruction of the data once the processing is complete UNLESS requirement under union or member state law to preserve that type of data	On completion of the processing (interpreted as being contract expiry) the supplier shall cease to use the personal data and shall arrange for it's prompt and safe return to Network Rail, or destruction if instructed by Network Rail, of all Personal Data.

Appendix B

KPI Tables – Definition

Annual Return Definitions 2019/2020

RIDDOR	Reporting of Injuries, Diseases and Dangerous Occurences Regulations. RIDDOR 2013 came into force on 1 October 2013. The regulations require deaths, certain injuries, specific diseases and specific dangerous occurences, which arise out of or in connection with work to be reported to the relevant authority. Network Rail reports these events to ORR. RIDDOR 2013 introduced the new category of 'specified injuries' and no longer included the category of 'major injuries'. Injuries that were previously included in 'major injuries' are now included in orhter categories. The 'specified injuries' and 'major injuries' categories cannot be directly compared as they refer to different injury types. For RIDDOR events, a lower number indicates better performance
Fitness for work	'Fitness to work' is assessed through competency specific medical assessments and health surveillance programmes to identify health conditions that may indicate an individual is unable to discharge their duties safely, sufficiently or that the specific task may exacerbate a health condition if continued. 'Fitness to work' includes those deemed 'fit to work with restrictions' but not employees deemed 'temporarily unfit' or 'unfit'. Data is sourced from our external occupational health service provider. For fitness for work, a higher number indicates better performance
Compliance with health surveillance programmes	Health surveillance refers to a programme of health assessments (either questionnaire or face-to-face assessment) that are designed to identify the potential signs of an occupational-related health condition at an early stage. Compliance refers to the proportion of individuals who take part in the annual surveillance programme compared to the number identified as required to take part. Data for this is sourced from a combination of our external occupational health service provider and from our internal Human Resources Shared Services function. A higher rate of compliance indicates better performance.
New and / or worsening occupational health conditions	The number of new and/or worsening HAVS diagnoses. This data set currently excludes diagnoses of other occupational health conditions arising from wider health surveillance programmes reported on in the Annual Return such as noise//audiometry and respirable crystalline silicia. Data for this is sourced from our external occupational health service provider. A lower figure indicates better performance.
Average days lost to employee absence	The average number of day's absence per employee. Data is sourced from Human Resources Shared Services. The comparable baseline is the average number of days absent per employee per year within public sector organisations 2015/16 CIPD absence report (6.9 days per employee per year). A lower number indicates better performance.
Hand Arm Vibration Syndrome (HAVS)	Hand Arm Vibration Syndrome (HAVS) can occur through use of hand-held power tools. HAVS is reported against the Stockholm scale for classification of HAVS using stage 0 to stage 4 identifying vascular and neurological components. A lower number of new or worsening cases of HAVS indicates better performance.
Employer Liability	Network Rail purchases employers' liability insurance as required by statute. The insurance provides cover for death, bodily injury or disease sustained by employees during the course of their employment in circumstances where Network Rail is legally liable. The change to our status with reclassification in September 2014 means the company now self-insures for this risk
Sick days per employee	Sickness absence is days lost (due to to both occupational related and non occupational) during the year.
New and worsening conditions	This is just specific to HAVS. HAVS is the only health surveilence where employees can be individually identified. Thus allowing us to monitor compliance.
Scheduled audiometry checks	The data provided excludes pre employment and periodic audiometry checks.

Annual Return 2021 - Definitions

Commentary in the Annual Report & Accounts is also designed to satisfy the Annual Return requirements as defined within our network licence. The Annual Report & Accounts is available on our website at: https://www.networkrail.co.uk/who-we-are/publications-and-resources/regulatory-and-licensing/annual-report-and-accounts/

Safety & Health

Tables 8, 9, 13	Fitness for work	'Fitness to work' is assessed through competency specific medical assessments and health surveillance programmes to identify health conditions that may indicate an individual is unable to discharge their duties safely, sufficiently or that the specific task may exacerbate a health condition if continued. 'Fitness to work' includes those deemed 'fit to work with restrictions' but not employees deemed 'temporarily unfit' or 'unfit'. Data is sourced from our external occupational health service provider. For fitness for work, a higher number indicates better performance
Table 8	Compliance with health surveillance programmes	Health surveillance refers to a programme of health assessments (either questionnaire or face-to-face assessment) that are designed to identify the potential signs of an occupational-related health condition at an early stage. Compliance refers to the proportion of individuals who take part in the annual surveillance programme compared to the number identified as required to take part. Data for this is sourced from a combination of our external occupational health service provider and from our internal Human Resources Shared Services function. A higher rate of compliance indicates better performance.
Table 8	New and / or worsening occupational health conditions	The number of new and/or worsening Hand Arm Vibration Syndrome (HAVS) diagnoses. This data set currently excludes diagnoses of other occupational health conditions arising from wider health surveillance programmes reported on in the Annual Return such as noise/audiometry and respirable crystalline silica. Data for this is sourced from our external occupational health service provider. A lower figure indicates better performance.
Table 8	Average days lost to employee absence	The average number of days absence per employee. Data is sourced from Human Resources Shared Services. The comparable baseline is the average number of days absent per employee per year within public sector organisations 2015/16 CIPD absence report (6.9 days per employee per year). A lower number indicates better performance.
Table 9	At Risk Workers who have completed Respirable Crystalline Silica Health Surveillance	Silica is a natural substance found in material such as stone, rock (ballast), sand, clay, and in products such as bricks, tiles and concrete. When these materials are worked on and or mechanically disturbed, fine dust known as Respirable Crystalline Silica (RCS) is released, which is hazardous when breathed in.
Table 10	Exposure to Lead	The Control of Lead at Work Regulations 2002 (CLAW) place a duty on employers to prevent, or where this is not reasonably practicable, to control employee exposure to lead. The occupational exposure limit for lead in air set out in the Regulations is 0.15 milligram per cubic metre (mg/m3), and blood lead suspension levels for males and females are respectively 60 and 30 micrograms per decilitre of blood (µg/dl).
Table 11	Number of records and surveillance for exposure to asbestos	The Control of Asbestos Regulations 2012 came into force on 6 April 2012, updating previous asbestos regulations to take account of the European Commission's view that the UK had not fully implemented the EU Directive on exposure to asbestos (Directive 2009/148/EC). The regulations introduced additional requirements for some types of non-licensed work with asbestos, including notification of work to the relevant enforcing authority; medical surveillance of all workers/self- employed workers doing notifiable non-licensed work with asbestos; and record keeping.
Table 12	Scheduled audiometry checks	The data provided excludes pre employment and periodic audiometry checks. The Health and Safety Executive categories hearing into four categories, ranging from 1 (acceptable hearing ability) to 4 (rapid hearing loss).
Table 13	Hand Arm Vibration Syndrome (HAVS)	Hand Arm Vibration Syndrome (HAVS) can occur through use of hand-held power tools. HAVS is reported against the Stockholm scale for classification of HAVS using stage 0 to stage 4 identifying vascular and neurological components. A lower number of new or worsening cases of HAVS indicates better performance.
Table 14	Referrals to Occupational Health	Line managers may refer an employee to Network Rail's occupational health service for a range of reasons, including those listed in the table. Referrals may also be made for other reasons, for example accidents, injuries or diseases, or in some situations relating to sickness absence.
Table 15	Employer Liability Claims	Network Rail purchases employers' liability insurance as required by statute. The insurance provides cover for death, bodily injury or disease sustained by employees during the course of their employment in circumstances where Network Rail is legally liable. The change to our status with reclassification in September 2014 means the company now self-insures for this risk
Table 16	Control Period 6 metrics on passenger performance: Public Performance Measure (PPM) Moving Annual Average (MAA)	PPM is the percentage of trains which have called at all their booked station stops and arriving on time at their final destination. 'On time' means within ten minutes of scheduled arrival of scheduled arrival time for long distance sector services, and within five minutes for 'Regional' London and South East (LSE) sector, and Scotland services. PPM is measured for all trains across the network, including trains that have been delayed by incidents caused by external factors (such as vandalism, extreme weather and suicides). A higher number indicates better performance.

Appendix C

Confidence Grading System

C1 System reliability grading system

Table 6: System reliability grading system

System reliability band	Description
A	Sound textual records, procedures, investigations, or analysis properly documented and recognised as the best method of assessment.
B	As A but with minor shortcomings. Examples include old assessment, some missing documentation, some reliance on unconfirmed reports, some use of extrapolation.
C	Extrapolation from limited sample for which Grade A or B data is available.
D	Unconfirmed verbal reports, cursory inspections, or analysis.

Notes:

1. System reliability is a measure of the overall reliability, quality, robustness, and integrity of the system that produces the data.

2. Some examples of the potential shortcomings include old assessment, missing documentation, insufficient internal verification, and undocumented reliance on third-party data.

C2 Accuracy Grading System

Table 7: Accuracy grading system

Accuracy Band	Description
1*	Data used to calculate the measure is accurate to within 0.1%
1	Data used to calculate the measure is accurate to within 1%
2	Data used to calculate the measure is accurate to within 5%
3	Data used to calculate the measure is accurate to within 10%
4	Data used to calculate the measure is accurate to within 25%
5	Data used to calculate the measure is accurate to within 50%
6	Data used to calculate the measure is inaccurate by more than 50%
X	Data accuracy cannot be measured

Notes:

1. Accuracy is a measure of the closeness of the data used in the system to the true values.

2. Accuracy is defined at the 95% confidence level – i.e., the true value of 95% of the data points will be in the accuracy bands defined above.

Appendix D

List of files supplied to the Reporter Team

D1 List of files supplied to the Reporter Team

Table 8: List of files supplied to the Reporter Team

File Name	Type	From
2021 Annual Return specification (FINAL)	Excel Workbook	ORR
20211006 – ORR proposal on the disaggregation of confidence gradings	Word Document	ORR
20210930 – NR OH records from SMIS.xlsx	Excel Workbook	ORR
Annual Return Data Tables 2020-21.xlsx	Excel Workbook	SHE Analysis Team (NR)
Health Data Process Maps.xlsx	Excel Workbook	SHE Analysis Team (NR)
ORR Occupational Health Reporting.pdf	PDF	SHE Analysis Team (NR)
Annual Return Submission Processes & Data Sources.xlsx	Excel Workbook	SHE Analysis Team (NR)
20191121 – CP6 data protocol issues log.xlsx	Excel Workbook	SHE Analysis Team (NR)
201920 ORR Annual Return Backing data.xlsx	Excel Workbook	SHE Analysis Team (NR)
201920 ORR Annual Return Backing data_Resupply.xlsx	Excel Workbook	SHE Analysis Team (NR)
2020 01 09 Network Rail Signed Off Data Protocol.xlsx	Excel Workbook	SHE Analysis Team (NR)
Annual Return 2019-20 Data Calculations_.xlsx	Excel Workbook	SHE Analysis Team (NR)
Copy of HAVS SMIS References 2019-20.xlsx	Excel Workbook	SHE Analysis Team (NR)
Final Dashboard 1st April.xlsx	Excel Workbook	SHE Analysis Team (NR)
HAVS Medical Report Employee list.xlsx	Excel Workbook	SHE Analysis Team (NR)
HAVS_SMIS_Report.xlsx	Excel Workbook	SHE Analysis Team (NR)
ORR Data Report Information.xlsx	Excel Workbook	SHE Analysis Team (NR)
P13_ORR_Report.xlsx	Excel Workbook	SHE Analysis Team (NR)
RE: Table 15 – Referrals for Psychological and Musculo-Skeletal Conditions.msg	Email	SHE Analysis Team (NR)
NR_L2_OHS_00113	PDF	SHE Analysis Team (NR)
NR_L2_OHS_00124	PDF	SHE Analysis Team (NR)
NR_L2_OHS_00123	PDF	SHE Analysis Team (NR)
NR_SP_OHS_00122	PDF	SHE Analysis Team (NR)
NR_SP_OHS_00114	PDF	SHE Analysis Team (NR)
NR_L2_OHS_157	PDF	SHE Analysis Team (NR)
Sickness Absence Data - 2019-20.xlsx	Excel Workbook	HRSS (NR)

File Name	Type	From
BSHA008 – HAVS Compliance Report Complete.docx	Word Document	HRSS (NR)
BSHA008PM HAVS compliance report medicals (Y).docx	Word Document	HRSS (NR)
BSHA013 – Competence Specific Medical Bookings completed.docx	Word Document	HRSS (NR)
BSHA013PM Competence Specific Medical Bookings (Y).docx	Word Document	HRSS (NR)
Closed Health claims for Arup 01.04.19 – 31.03.20.xlsx	Excel Workbook	Claims Team (NR)
Closed safety claims during 01.04.19 – 31.03.20.xlsx	Excel Workbook	Claims Team (NR)
Health claims open for ARUP for period 01.04.2016 – 31.03.20.xlsx	Excel Workbook	Claims Team (NR)
Health claims opened during 01.04.19 – 31.03.20.xlsx	Excel Workbook	Claims Team (NR)
Open Safety claims for ARUP for the period 01.04.16 – 31.03.20.xlsx	Excel Workbook	Claims Team (NR)
Safety claims open during 01.04.19 – 31.03.20.xlsx	Excel Workbook	Claims Team (NR)