W&W Region's Readiness for ISO55001 Alignment
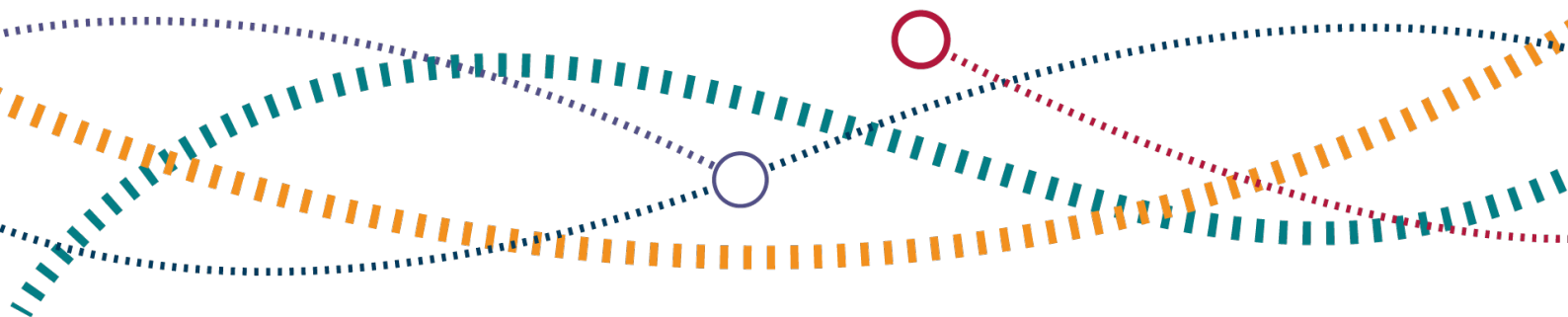
Targeted Assurance Review

23 June 2021

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Acronyms and Abbreviations

CP6 - Control Period 6

ORR – Office of Rail and Road

DEAM – Director of Engineering and Asset Management

IAM – Institute of Asset Management

AMS – Asset Management System

TAR – Targeted Assurance Review

Definitions

Descriptor	Detail
ISO 55001	ISO 55000 is a series of International Standards for Asset Management. ISO55001 defines the requirements for management system for asset management. Therefore, in in this report the international standard is referred to generally as ISO 55001.
Control Period	Control Periods are the 5-year timespans into which Network Rail, works for financial and other planning purposes.
Putting Passengers First	*Putting Passengers First* (PPF) was a Network Rail internal business restructuring programme which ran from September 2018 – December 2020. It saw the creation of five devolved regional business units within Network Rail to increase route capabilities locally as well as to improve relationships with customers and stakeholders.
Asset Management System	The management system for assets is termed as Asset Management System. It provides a framework to establish asset management policies, objectives, processes and governance, and facilitates an organisation's achievement of its strategic goals.
Asset Management Capability	The extent to which an organisation has developed its people, processes, technology, leadership and culture in Asset Management to enable the effective and efficient development and delivery of asset management plans and objectives, and their continual improvement.

1. Executive Summary

In our CP6 determination we stated that as a minimum, each Network Rail route is required to demonstrate to our satisfaction that it is operating in accordance with the requirements of ISO 55000 (Asset Management Standard) by the end of March 2021.

Following Network Rail's reorganisation with devolution and regional responsibility at the front of its new operating model, the ownership of alignment to ISO 55001 now lies with within the five devolved regions.

We wanted to seek assurance on Network Rail's devolved regions' commitment regarding asset management improvement and its readiness to demonstrate alignment to ISO 55001. We therefore carried out targeted assurance reviews (TARs) on this subject in each region and this report summarises the status of the Wales and Western region.

This assurance review finds that Wales & Western region is still largely in the 'developing stage' of its asset management capability improvement journey, and therefore was not able to demonstrate to our satisfaction that they were working in accordance with ISO 55001 by end of March 2021.

Network Rail was first advised of the requirement in our draft determination published in June 2018. It is therefore of concern that this milestone was missed.

Wales & Western region's recently undertaken gap analysis shows that the region meets the required standard in only 7 of the 27 elements of ISO 55001. The maturity scores on majority of the remaining elements were indicated that it is in the developing stage. The significant weaknesses were in the areas of planning, performance evaluation and support elements of resources, communication and information requirements.

The region has now planned to improve its maturity to achieve compliance with ISO 55001 by 2021. If Wales & Western successfully implements the plan it has developed, then we feel that this new date in achievable, albeit a year later than should have been the case.

To this end, we make the following recommendations to the Wales & Western region:

- Continues its commitment to the delivery of the improvement plan by the target milestone dates, and to provide an update to ORR in October/November 2021; and

- Demonstrate that it has met the requirements necessary to achieve certification to ISO 55001 by the end of March 2022 at the latest.

2. Introduction

2.1 Purpose

This review was to determine if Network Rail's regions had met the PR18 determination requirement to demonstrate that it is operating in accordance with the requirements of ISO 55000 (Asset Management) by the end of March 2021[1]

This report provides the findings of the TAR carried out in the Wales & Western region.

2.2 Background

Maintaining and renewing the network in the short-, medium- and long-term to meet reasonably foreseeable future demand for railway services is one of Network Rail's key obligations, as set out in its network licence, in accordance with best practice and in a timely, efficient and economical manner.

At the beginning of CP6, the local ownership of alignment to ISO 55001 and commitments rested within each of Network Rail's eight route strategic plans, reflecting the organisation structure as it was prior to PPF.

In the first phase of Network Rail's devolution journey, five new regional organisations were established in June 2019, which took on more accountabilities including the ISO 55001 alignment.

Though the final determination required the routes to demonstrate the attainment of requirements by March 2021, the routes and regions set varying target dates in their strategic plans.

Wales & Western (W&W) region is one of the Network Rail's five regional operating units and it covers the geographical area of what was previously the Wales route and Western route.

The Wales route, in its Route Strategic Plan for Control Period 6 (version 3.0) dated March 2019, stated to deliver an improved asset management system and demonstrate compliance to ISO 55001 through certification by the end of the CP6.

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[1] Clause 2.90 https://www.orr.gov.uk/sites/default/files/om/pr18-final-determination-review-of-network-rails-proposed-costs.pdf

The Western route stated in its Route Strategic Plan to undertake a gap analysis of the route against the requirements of ISO 55000 and complete subsequent actions to achieve compliance by end of 2021.

However, following the regional re-structure of Network Rail to regions, the W&W region has stated that it intends to achieve alignment to the ISO 55001 standard followed by full compliance by the end of CP6.

Irrespective of a region's chosen approach and own set target, ORR expected the region to demonstrate its achievement of the final determination requirement.

2.3 Scope

The objective of the review was to understand the organisation's progress on asset management capability improvement and its current level of alignment with the ISO 55001 requirement, the gaps between the current state and its desired level, planned improvement initiatives and the timescale for its implementation.

To complement the need to improve asset management capabilities, an effective Asset Management System (AMS) needs to be embedded to provide a framework for asset management in an aligned and integrated way. This review focused on the fundamentals for effective implementation of AMS by seeking an understanding of the following:

- Leadership Commitment
- Current State/Gap Assessment
- Improvement action plan
- Steering & Governance

This review does not formally assess the asset management maturity or validate the alignment to ISO 55001[2], rather it sought to gain insights on the key elements of the AMS that will underpin the region's asset management approach.

2.4 Review Approach

ISO 55001 defines the requirements for a 'management system for asset management", therefore implementing ISO 55001 means applying a management system approach for managing the assets.

The building blocks of the AMS and the sequence in which it can be established or improved is shown in the figure below. This review sought to verify whether the region has

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[2] Network Rail is required to demonstrate that it is working in accordance with ISO55001. This can be undertaken by either a rigorous self-assessment or by use of an accredited organisation / body.

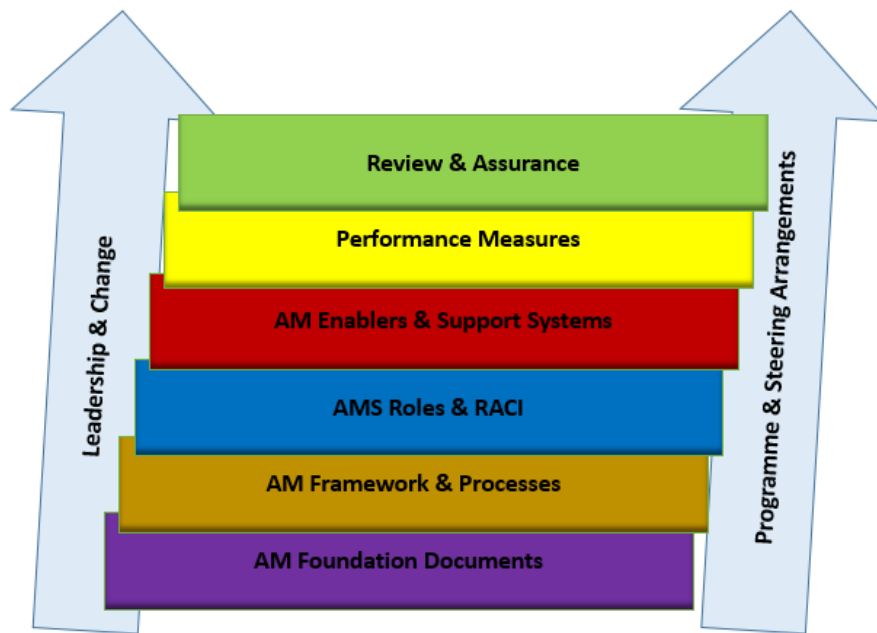established the building blocks of the AMS and has defined and implemented the required elements of ISO 55001.

Figure 2.1   Typical building blocks of Asset Management System

The review requested the region to provide a recent gap assessment against ISO 55001, which it used to understand the level of maturity in each element of the ISO55001 asset management system.

In setting out to demonstrate the determination requirement, the region have chosen to demonstrate that its asset management is in alignment with ISO 55001. Whilst the term 'alignment' can be multi-interpretative; for the context of this assurance review, we used the following guiding criteria[3] to consider the region has attained the final determination requirement: as a minimum, a majority of the elements should be at asset management maturity level 3 (level of compliance with ISO 55001) and no scores below 2.5 (in planning stage). For elements with scores between 2.5 and 3 (in implementation stage), there should be a credible timebound improvement plan.

The W&W team responsible for the asset management improvement programme was engaged throughout this review. We sought understanding of the current position and the plans for improvement in each of the fundamental elements. Based on the information provided, the key findings of the review are set out in the following section.

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[3] Our criteria is aligned to IAM endorsed assessors schedule of requirements for certification decision.

3. Findings

3.1 Review findings

Leadership Commitment:

The DEAM is the accountable person for the ISO 55001 alignment objective and will be the executive owner of the asset management system. The HASP is the responsible person for the ISO 55001 alignment programme.

In the CP6 route strategic plan published in March 2019, the Western route had committed to align its asset management capability to ISO 55001 by April 2021, whereas the Wales route had committed to achieve this by 2024.

Following the PPF re-organisation, the W&W region strategic plan that replaced the Route Strategic Plan, stated that it will achieve alignment within CP6 with a clear path towards level 4 maturity (beyond compliance) by end of CP6 and will seek certification by 2024.

The DEAM has allocated programme leads for the Asset Management improvement in both the routes.

The ISO 55001 alignment is included within DEAM senior leader objectives and cascaded to the teams in the DEAM organisation.

The DEAM has initiated a campaign plan and newsletter to create awareness on the region's asset management initiatives.

These actions indicate the commitment of the new leadership team to improve its asset management capability and achieve alignment to ISO 55001.

Gap Assessment:

A recent asset management gap assessment was undertaken in Dec 2020 by self-assessment. The assessment was carried out in each route separately and the regional scores were arrived at by adopting some level of extrapolation and judgement by functional leads (SMEs).

A tailored online questionnaire created in Microsoft Forms was used for the assessment. The questions were based on the Institute of Asset Management's (IAM) SAM+ tool, with language adapted for the context of railway organisation. The same methodology was used across both routes.

The maturity scores at regional level on 27 sub-clauses of the ISO 55001 are shown in the radar plot below.
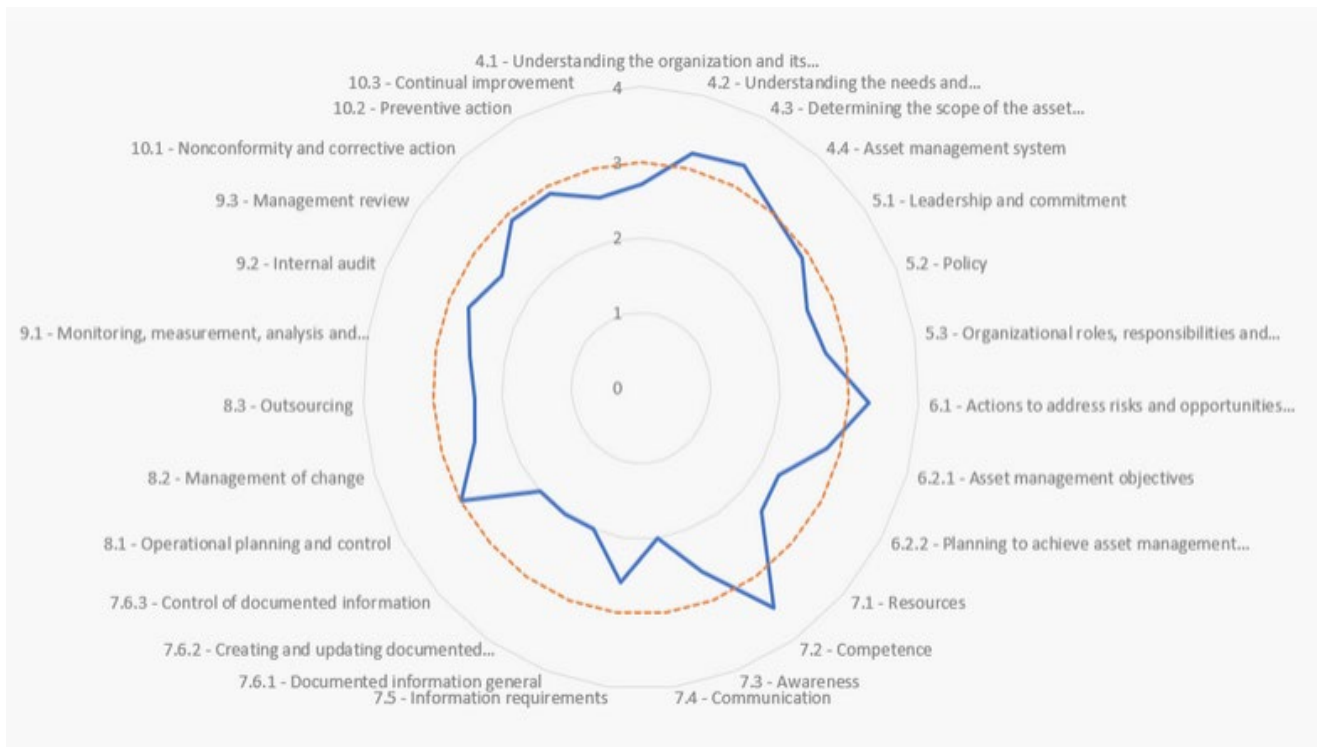

Figure 3.1   Radar chart showing gap assessment results

From the above diagram, it can be observed that the W&W region was only meeting the required standard in 7 of the 27 assessed areas. With the majority of the maturity scores ranging between 2 and 3, indicating that asset management elements are still largely at developing stages.

The route level scores and the combined regional level scores are given in the table below. The clauses that have a score below 2.8 have been targeted for improvement to achieve compliance to ISO 55001.

Clause	Wales (Wales route & Regional scores)	Western (Western Route & Regional scores)	Regional Scores (Wales & Western & Regional scores)
4.1 - Understanding the organization and its context	2.7	2.7	2.7
4.2 - Understanding the needs and expectations of stakeholders	3.2	2.4	3.2
4.3 - Determining the scope of the asset management system	3.3	3.0	3.3
4.4 - Asset management system	3.0	2.8	3.0
5.1 - Leadership and commitment	2.8	2.8	2.9
5.2 - Policy	2.4	2.6	2.6
5.3 - Organizational roles, responsibilities and authorities	2.6	2.6	2.7
6.1 - Actions to address risks and opportunities for the asset management system	3.3	3.0	3.3
6.2.1 - Asset management objectives	2.9	2.6	2.8
6.2.2 - Planning to achieve asset management objectives	2.0	2.5	2.3
7.1 – Resources	2.4	2.4	2.4
7.2 – Competence	3.3	3.5	3.5
7.3 – Awareness	2.6	2.7	2.6
7.4 – Communication	2.0	2.0	2.0
7.5 - Information requirements	1.0	2.6	2.6
7.6.1 - Documented information general	2.0	2.0	2.0
7.6.2 - Creating and updating documented information	2.0	2.0	2.0
7.6.3 - Control of documented information	2.0	2.0	2.0
8.1 - Operational planning and control	3.2	3.0	3.0
8.2 - Management of change	2.0	3.0	2.5
8.3 - Outsourcing	2.6	2.6	2.4
9.1 - Monitoring, measurement, analysis and evaluation	2.5	2.8	2.5
9.2 - Internal audit	2.7	2.9	2.7
9.3 - Management review	2.4	2.4	2.5
10.1 - Nonconformity and corrective action	2.8	3.0	2.9
10.2 - Preventive action	3.0	2.9	2.9
10.3 - Continual improvement	2.6	2.5	2.6

Figure 3.2   Maturity scores at route and regional level

Improvement Plan:

The region has a road map for asset management improvement with a 5-phase delivery plan – Understand, Mapping, Plan, Deliver and Govern. The region is now in the 'Deliver' phase.

Following the gap assessment that was undertaken in the mapping phase, an improvement action plan to drive asset management improvements through the planning and delivery phase has been developed.

The areas identified for improvement were broken down into 64 actions at regional level; 27 actions for Wales route and 23 actions for Western route. Within each action there are a number of tasks. A status summary of actions is given below:

	Actions			
	Total Actions	Not Yet Started	In Progress	Closed
Regional	64	22	41	1
Wales	27	7	19	1
Western	23	22	1	0

We found that each action in the plan has been assigned workstream leads and prioritised delivery milestones.

The timescale for delivery ranges until the end of March 2022, with a substantial number of actions to be delivered between March 2021 and Nov 2021.

Steering and Governance:

The Route Asset System and Integration Managers (RASIM) are leading the ISO 55001 implementation programme and are responsible for the development of the improvement action plans through to delivery of the new capabilities.

A periodic meeting chaired by the Head of Engineering and Asset Strategy and Planning (HEASP) steers the programme.

The delivery of the improvement action plan is monitored by the Programme Review forum.

There is an action to set up an ISO 55001 working group to provide a forum for cross-functional regional engagement and decisions on issues of alignment with ISO 55001. This working group is planned to be included as part of the existing tactical route-based forum.

A peer level knowledge transfer forum exists with two other Network rail regions.

Key elements of the Asset Management System:

The review also sought to understand the building blocks of an asset management system on upon which the improvements can be driven.

Foundation Documents: The core documents/elements in an Asset Management system are the Asset Management Policy, Strategic Asset Management Plan (SAMP) and

Asset Management Plans. The existence of these artefacts is a specific and definitive requirement of ISO 55001.

Asset Management Policy: *The principles by which the organisation intends to manage its assets are set out in the Asset Management Policy.*

Currently the region adopts the National Asset Management policy which was produced in 2018 in view of the CP6 planning.

There is no regional ownership of the adopted asset management policy. The region has an intent to either create a supplementary regional asset management policy or have regional ownership of the national AM policy.

Strategic Asset Management Plans: *Strategic Asset Management Plan (SAMP) or Asset Management Strategy is documented information that typically specifies what the organisation aspires to achieve, how and when. The requirements expected from a SAMP may be contained in different organisational strategies, plans and documents.*

The majority of the "what" elements – what the region intends to achieve from asset management activities and by when, are included in the Region Strategic Plan.
It covers the organisation context, regional objectives & targets, strategic initiatives and timescales for implementation.   It also covers some "how" elements such as stakeholder analysis, delivery strategy and references to existing supporting strategies.

However, there is no reference to documented approaches for key asset management functions - asset management planning, decision-making framework and risk management.

The region has created an Asset Management app that will serve as an Asset Management System guide and will be used for communication, creating awareness and assign process accountabilities (RACI).

There is an intention to produce a separate Regional Asset Management Strategy to provide reference to the various guiding strategies and set out medium-term (up to 2 Control Periods) asset strategies.

Plans: *Asset Management plans are documented information that specify the asset lifecycle needs, financial strategies (capex, opex), resources (information, supply chain etc), timescales along a planning horizon and risks.*

The Route Asset Management Plans are currently under development. These plans will have a planning horizon of 7 years and will be refreshed every year at RF4.

The scope of the plan is expected to include the route specific asset management objectives and performance targets, renewals and maintenance volume and expenditure forecast and asset intervention strategies.

The intent is for the plan to be a 'live document' that can be accessed through the asset management app.

Framework and Processes – Asset management system is a documented, process-centric approach to how an organisation will manage its asset to achieve its strategic objectives.   ISO 55001 requires organisations to plan, define, implement and control the processes needed for the asset management system.

The W&W region's Asset Management System framework diagram has not been updated post-regional devolution, to illustrate the alignment to key documents and functions within the scope of the W&W region's asset management system.

The region has not yet mapped the process architecture for the asset management system, so there is no visibility on the overall functional and enabling processes required for the asset management system, the existing processes and the gaps.

As part of Network Rail's nation-wide roll-out of the Governance, Risk, Assurance and Improvement (GRAI) framework, 16 core business process areas have been identified for the organisational governance and assurance. Some of these core processes may overlap within the scope of the AM system.

We expect the region to identify and map all the key processes required for the asset management system, including the existing and desired ones, and define the process steps and controls, process accountabilities in a RACI structure.

The region has stated that it is depending on the Technical Authority (Asset Management) to define the business processes.

Roles & RACI:

Following the transformation to the regional operating model, the W&W region has set out the key business areas and its interface, organisation structure and accountabilities for the entire organisation.

The engineering and asset management structure under the DEAM will manage policy, strategy, assurance and provide technical leadership.

Key roles in strategic and tactical asset management are defined, specifically for planning and asset-related decisions.

It is not clear if the roles and responsibilities for all key components of the Asset Management System has been identified and defined. For example, roles for Information Management.

Information: A vital element of effective asset management is decision-making that is evidence-based and data-driven, hence sufficient, fit for purpose information is required to be maintained.

The region has improvement actions planned to address the weakness in Information management capability. It has planned to develop an Information and Technology Strategy, as a stand-alone project separate from the ISO 55001 alignment action plan.

We expect this strategy to set out the roadmap of how the region would identify the information requirements of the internal and external stakeholders and what data is needed to be collected now and in the future to support decision-making and assurance.

The region has planned for a workshop with data/analytical team to map the data requirements to the business processes.

There is a proposed action to establish a data management framework/process. We expect this will provide assurance that data standards are being maintained – and data collected - to the required standard.

Competence & Awareness:

The region is in the process of creating competency profiles that outline the specific competencies and target proficiency levels required to be successful within a role.

The region is undertaking an exercise with the national asset management team to adopt the national Asset Management Competence Framework (AMCF).

A number of initiatives have been taken to improve asset management awareness in the region, including an awareness session prior to the gap assessment, e-learning and formal training has been offered to many people across the region.

Measurement and Improvement: This section seeks to ensure appropriate processes, tools and indicators are in place to enable the monitoring and measurement of the asset condition/performance, delivery of the plans, achievement of objectives and effectiveness/improvement of the asset management system.

Monitoring:

We expect the region to have a mix of lag and lead indicators to monitor the asset health and effectiveness of the asset management system. There is a relevant action in the improvement plan to address this requirement. The region informed us that it has already developed a number of leading indicators that are being tracked both within the reliability governance board and periodic business reviews.

Audit & Assurance:

The improvement plan has an action to arrange regular audit of the management system's alignment to ISO 55001 through peer review and lessons learnt from other regions.

However, the region has not established its approach to carry out the internal audits of the asset management system to verify the conformity with the requirements of the process and to evaluate the effectiveness of the asset management system to identify areas for corrective, preventive and improvement actions.

Management Review:

There is a good management review arrangement in place, covering performance, delivery, risks, audits etc. The scope of the management review needs to ensure that it covers all aspects of the asset management system, and there are actions planned regarding this in the improvement plan.

4. Conclusion and Recommendations

4.1 Conclusion

This assurance review finds that Wales & Western region is still largely in the 'developing stage' of its asset management capability improvement journey, and therefore was not able to demonstrate compliance with ISO 55001 by end of March 2021.

Network Rail was first advised of the requirement to demonstrate that they were working in accordance with ISO55000 by March 2021 in our draft determination punished in June 2018. In essence Network Rail had just under three years notice. It is therefore of concern that this milestone was missed.

The gap analysis undertaken by the region at route level and extrapolated to regional level, shows that the maturity scores on a majority of ISO 55001 elements are between 2 and 3, a score of 3 denoting the minimum maturity level for compliance with ISO 55001. The region meets the required standard in only 7 of the 27 elements of ISO 55001.

The Wales & Western region is aware of the areas where improvement is required and improvement actions are being progressed.

Our assessment of the asset management system, based on the information shared by the region, revealed that core elements of the asset management system still need further development to meet the key requirements of ISO55001.

Two aspects that bind the asset management system together are Leadership & Change Management. Our review found that leadership and governance arrangements are now in place to address the elements of direction, oversight, and control to guide the development and operation of the Asset Management System.

Throughout the journey a level of Project Management will be required to make sure it all happens in a logical, efficient and effective order. The steering arrangements and road map for maturity were all clearly evident and satisfactory.

On the basis of this assurance review, we conclude that the Wales & Western region has not met the determination requirement and needs further progress us to consider that its

asset management complies with ISO 55001. However, it now has an action plan to improve its maturity to achieve compliance by 2022.

4.2 Recommendations

Based on the findings and conclusion, the following recommendations are offered to the DEAM of the W&W region.

Improvement Plan Delivery:

The region is required to continue its commitment to the delivery of the improvement plan by the target milestone dates.

The region should provide an update to ORR on the implementation plan in November 2021.

Improving Maturity:

The region is required to demonstrate that it has met the requirements necessary to achieve certification to ISO 55001 by end of March 2022, by either self-assessment or independent assessor.