# NWC Region's Readiness for ISO55001 Alignment
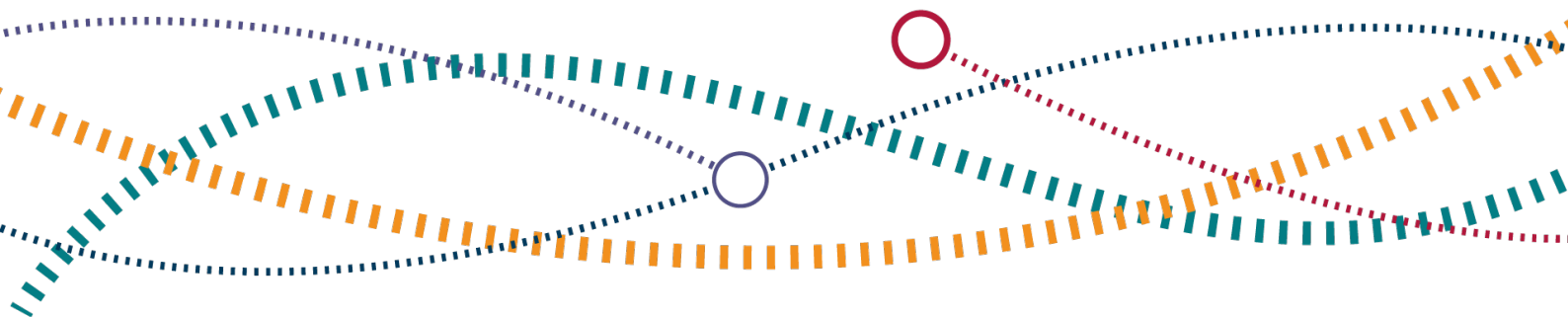
## Targeted Assurance Review

23 June 2021

# Contents

# 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 *Putting People First* (PPF) reorganisation with devolution and regional responsibility at the front of its new operating model, the ownership of alignment to ISO 55001 now lies with 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 North West & Central (NW&C) region.

NW&C region has demonstrated through an independent assessment that its asset management approach is in alignment to the ISO 55001 standard. However, it needs some further improvements to attain full compliance to the standard which are being progressed with plans in place.

This assurance review finds that NW&C's current maturity level meets our criteria to consider that the region has attained the final determination requirement, but it should deliver the planned improvement actions it has committed to.

NW&C region's recently commissioned gap analysis shows that the maturity scores on the majority of ISO 55001 elements were closer to the maturity level for compliance, indicating significant implementation of asset management elements to date. There were few weaknesses in the areas of risk management, information requirements, roles and responsibilities and performance evaluation.

The region has now planned to address the weaknesses and drive further asset management improvements to achieve full alignment to ISO 55001.

To this end, we recommend that the NW&C 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

- Demonstrates that it has improved its maturity in all elements of the ISO 55001 standard to comply with the requirements for certification 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 North West & Central 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.

North West and Central (NWC) is one of the Network Rail's five regional operating units and it covers the geographical area of what was previously the LNW route.

The LNW 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

However, following the re-structure of Network Rail to regions, NW&C region informed ORR that it intended to achieve alignment by March 2021 rather than full compliance through certification.

Irrespective of a region's chosen approach and own set target, ORR expected the regions to satisfy the final determination requirement by demonstrating the compliance level necessary to achieve equivalence of certification to ISO 55001.

## 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) need 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 understanding each 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 established the building blocks of the AMS and has defined and implemented the required elements of ISO 55001.

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[2] Network Rail is required to demonstrate that they are working in accordance with ISO55001. This can be undertaken by either a rigorous self-assessment or by use of an accredited organisation.
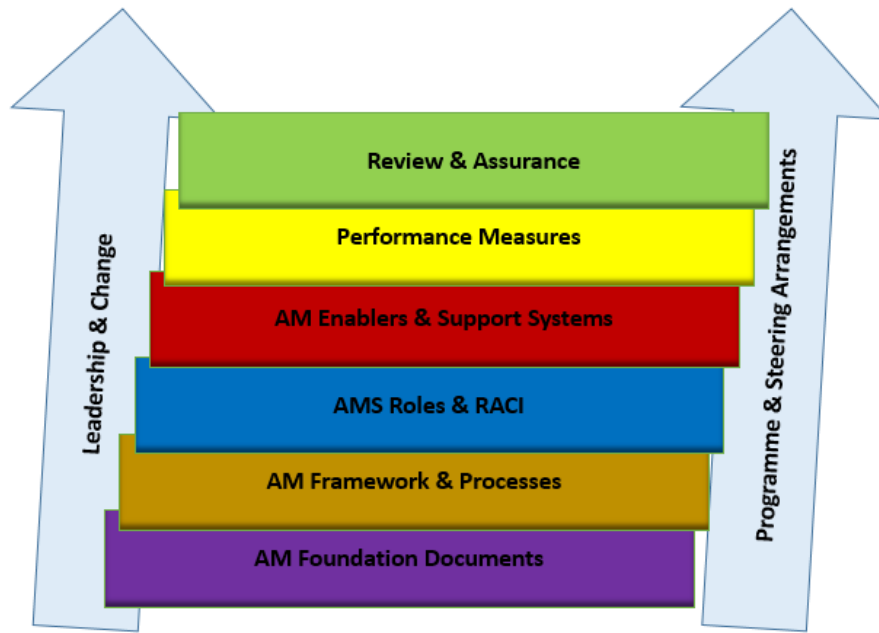
**Figure 2.1    Typical building blocks of Asset Management System**

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 has 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 NWC 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 provided 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 Director of Engineering & Asset Management (DEAM) is the accountable person for the ISO 55001 alignment objective and will be executive owner of the asset management system.

In the CP6 LNW route strategic plan published in March 2019, LNW route had committed to seek certification to ISO 55001.

Following the PPF re-organisation, the NW&C region strategic plan that replaced the original route strategic plan, did not restate its intention to achieve ISO 550001 compliance.

However, the DEAM has re-affirmed the region's objective to align its asset management approach to ISO55001 and formally notified ORR of its intention in Dec 2020.

The DEAM has created new roles that are pivotal to achieve engineering and asset management excellence and has allocated a programme lead for Asset Management Improvement.

The DEAM has also initiated a performance improvement programme known as the Ten Point Plan (TPP), aimed to achieve excellence in engineering and asset management, which in turn would complement the organisation on its journey to achieve full alignment to ISO 55001.

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 an independent assessor. The Institute of Asset Management (IAM)'s SAM+ tool was used for the assessment, and it involved a series of structured interviews with subject matter leads within the region.

The independent assessor scored NW&C with an overall average asset management maturity score of 2.8, where a score of 3 in each element denotes the minimum maturity level for compliance with ISO 55001.

The maturity scores of the NW&C Region on 27 sub-clauses of the ISO 55001 are shown on the radar plot below.
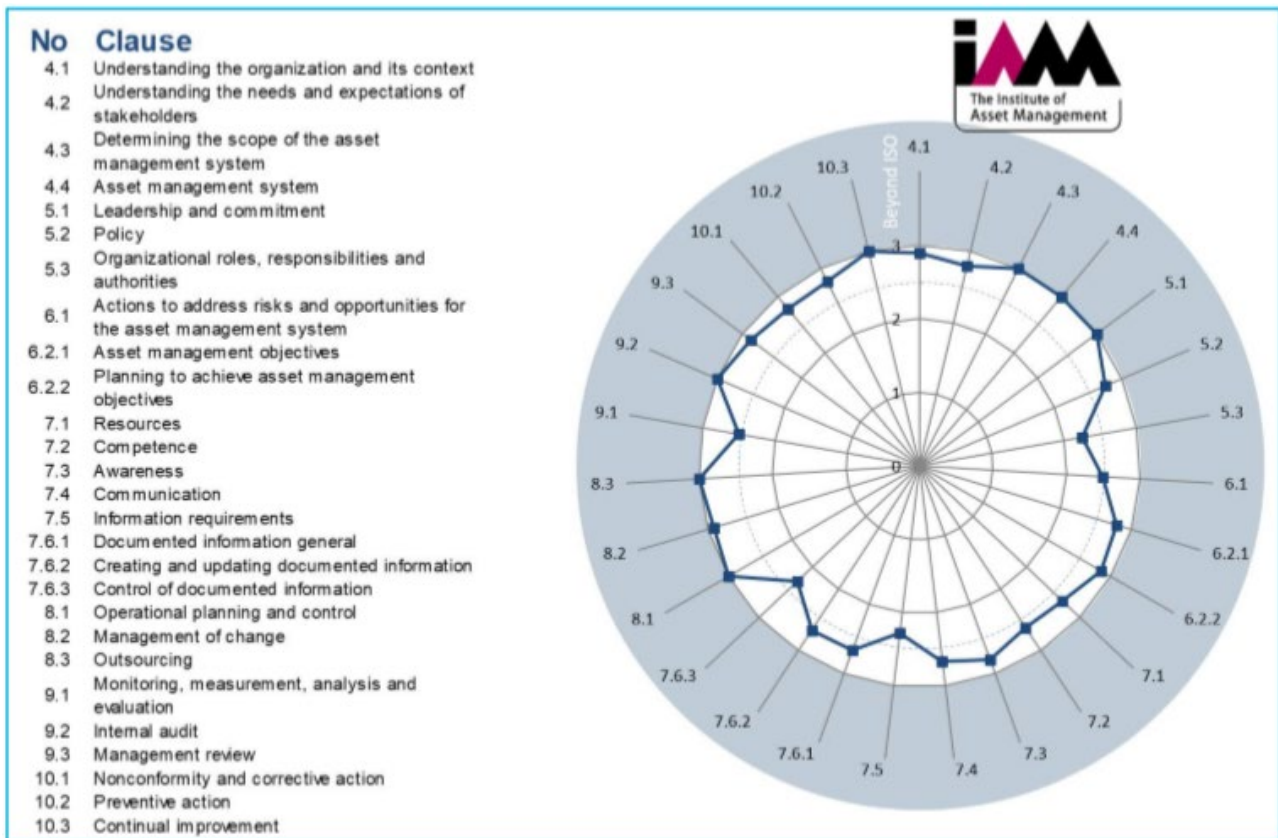


| No | Clause |
|---|---|
| 4.1 | Understanding the organization and its context |
| 4.2 | Understanding the needs and expectations of stakeholders |
| 4.3 | Determining the scope of the asset management system |
| 4.4 | Asset management system |
| 5.1 | Leadership and commitment |
| 5.2 | Policy |
| 5.3 | Organizational roles, responsibilities and authorities |
| 6.1 | Actions to address risks and opportunities for the asset management system |
| 6.2.1 | Asset management objectives |
| 6.2.2 | Planning to achieve asset management objectives |
| 7.1 | Resources |
| 7.2 | Competence |
| 7.3 | Awareness |
| 7.4 | Communication |
| 7.5 | Information requirements |
| 7.6.1 | Documented information general |
| 7.6.2 | Creating and updating documented information |
| 7.6.3 | Control of documented information |
| 8.1 | Operational planning and control |
| 8.2 | Management of change |
| 8.3 | Outsourcing |
| 9.1 | Monitoring, measurement, analysis and evaluation |
| 9.2 | Internal audit |
| 9.3 | Management review |
| 10.1 | Nonconformity and corrective action |
| 10.2 | Preventive action |
| 10.3 | Continual improvement |

**Figure 3.1        Radar chart showing gap assessment results**

From the above diagram, it can be observed that majority of the maturity scores are above 2.5, indicating significant implementation of asset management elements to date.

The gap assessment report concludes that NW&C's asset management approach is aligned to ISO 55001. However, it also identified areas of improvement required to achieve full alignment and compliance with ISO 55001.

## Improvement Plan:

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

Following the gap assessment that was undertaken in the mapping phase, a high-level improvement action plan to drive further asset management improvements through planning and delivery phase has been developed by the region.

The thirteen recommended actions from the gap assessment are shown in the table below.

| ISO 55001 Clause | Recommended Actions | Priority | Sequence of Implementation |
|---|---|---|---|
| 8.1: Operational Planning & Control | Review impact of possible reduced funding scenarios | High | 1 |
| 6.1: Actions to Address Risks & Opportunities for the Asset Management System | Establish mature and fully populated Enterprise Risk Registers (ERRs) ensuring that they are used to inform the decision-making process | High | 2 |
| 5.3: Organisational Roles, Responsibilities and Authorities | Communicate responsibility and accountabilities under the new structure through engagement sessions, using comprehensive RACI Matrix (combine with Communication Plan) | High | 3 |
| 7.4: Communication | Develop overarching Communication Plan for Asset Management (combine with RACI Matrix) | High | 3 |
| 7.2: Competence | Review Competence arrangements and determine where formal qualifications can be specified to demonstrate compliance | Medium | 4 |
| 7.2: Competence | Communicate Asset Management Competencies to target audience (middle & junior management) | Medium | 5 |
| 7.1: Resources | Review Resource Planning arrangements to identify potential pinch points | Medium | 6 |
| 7.3: Awareness | Implement awareness programme amongst Maintenance teams to communicate the benefits of Asset Management | Medium | 7 |
| 7.5: Information Requirements | Examine the end to end process from collection, storage and the manipulation of data with a view to making the process more efficient to better inform the decision-making process (collect once use many times principle) | Medium | 8 |
| 7.6.3: Control of Documented Information | Develop process to aggregate data and develop Management Dashboards to better inform decision making process | Medium | 8 |
| 8.3: Monitoring, Measurement, Analysis & Evaluation | Develop a suite of KPIs that monitor both the performance of the Asset Management System (leading) and the Assets themselves (lagging) | Medium | 8 |
| 6.2.2: Planning to Achieve Asset Management Objectives | Investigate the benefits of a Route Asset Management Plan and implement if applicable | Medium | 9 |
| 5.2: Policy | Map and communicate the relationship and purpose of key documents (Policy, Strategy & Plans) | Low | 10 |

The improvement action plan has been developed by breaking down the thirteen improvement actions into the component activities and mapped against the Ten Point Plan (TPP) to create 32 tasks in the implementation plan. There are some tasks in the

implementation plan that are not part of the TPP and that will be delivered as a standalone project.

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

The timescale for delivery ranges from June 2021 to March 2022, with majority of the tasks due to complete before end of 2021.

## Steering and Governance:

Dedicated resources are allocated in the form of an Asset Management Office to work specifically on the Improvement Plan for its duration (estimate circa 12 to 18 months).

The Programme Lead for asset management improvement is responsible for the development of the improvement plans through to delivery of the new capabilities.

A programme board meets periodically and provides steering of the programme. It has representation from across the region.

The majority of asset management improvement actions are woven in to the TPP and will be delivered by the DEAM team. The delivery of these actions will be monitored by the TPP programme board.

## Key elements of the Asset Management System:

Our 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 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.

NW&C has no regional ownership of the adopted asset management policy.  Further, there is currently no intention to create a supplementary regional asset management policy.

***Strategic Asset Management Plans (SAMP):***  *SAMP, also known as an 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 split amongst different 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 includes the organisation context, regional objectives and targets, strategic initiatives and timescales for implementation.   It also covers few "how" elements such as stakeholder analysis, delivery strategy and reference to prevalent supporting strategies.

As part the PPF transformation programme, Functional Handbooks and Operating Manuals are still being produced which document the management system (structure, roles & responsibilities, process areas) and define the way of working and operating principles in the region.

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

NW&C region intends to develop Route Asset Management Plans for each route and has a workstream to deliver this by June 2021.   These plans will have planning horizon of 5-8 years.

***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.*

NW&C 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 NW&C region's asset management system.

The region has not yet mapped the process architecture for its 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 asset management 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 to define the process steps and controls, process accountabilities in a RACI structure (responsibility assignment matrix).

The region stated that it is dependent on Network Rails Technical Authority (Asset Management) to define the business processes as part of the IMS programme.  Once the centre provides a business process template, the region will discover the process steps relevant to the regional organisation.

### Roles & RACI:

The new regional operating model documented in the NW&C organisation handbook sets 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 regional leadership roles and accountabilities are defined.

It is not clear if the roles and responsibilities for all key process areas of the AMS has been identified and defined. For example, RACI 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 gap assessment identified weaknesses in the region's information management capability.  The improvement plan has an action to define the Asset Information Management system, which is expected to provide a set of interrelated processes and systems for managing the asset information.

NW&C region does not have an information strategy to set out the roadmap for information requirements of internal and external stakeholders, and what data is needed to be collected both now and in the future to support decision-making and assurance.

The region informed us that there is separate workstream to develop the information and technology strategy which would address the above requirement.

*Competence & Awareness:*

NW&C intends to adopt the national Asset Management Competence Framework (AMCF), and it is working with the Technical Authority (for Asset Management) in reviewing the framework.

The region has run a pilot scheme involving 53 people from the DEAM organisation to test the approach, assessment and routes to competence. Once the pilot scheme is complete, it intends to refine the process before looking for wider engagement and rollout 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:**

The current asset performance KPIs tend to be lagging and to identify events that have already happened. The region is aware of the need to have a suite of measures with a mix of lag and lead indicators to monitor the asset health and effectiveness of the asset management system.

The improvement plan has three workstreams to establish leading indicators for assets, KPIs and monitoring measures for Asset Management (activity) and Asset Management System (framework).

**Audit & Assurance:**

The region has planned to address the weaknesses in this area by establishing a regional risk-based assurance framework and develop a governance approach to audit actions.

**Management Review:**

There are robust governance arrangements in the new operating model. This has a number of forums under the following themes:

- Business performance governance forums at route and regional level, which feed up to the CEO and Board Review meetings at Network level.
- Risk Governance forums.
- Finance Governance forums – for controlling workbank changes.
- Stakeholder Governance forums – to understand stakeholder needs.
- Business Planning forums for asset investment planning, aligning plans to strategies and targets and recommending efficiency.

# 4. Conclusion and Recommendations

## 4.1 Conclusion

This assurance review finds that the North West & Central Region can demonstrate significant asset management implementation to date for alignment with ISO 55001. ORR considers that the region has the intention to extend implementation to remaining areas.

The gap analysis undertaken by an independent assessor has observed that NW&C's asset management approach is aligned to ISO 55001, yet it needs further improvement to attain full alignment and compliance to the Standard.

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

NW&C is aware of the areas where improvement is required and improvement actions are being progressed.

The two key aspects that bind the asset management system together are leadership & change management. Our review found that leadership and governance is in place to address the elements of direction, oversight, and control to guide the development and operation of 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 North West & Central region has met the determination requirement, but it still needs to deliver the planned improvements that it has committed to.

## 4.2 Recommendations

Based on the findings and conclusion, the following recommendations are offered to the DEAM of the NW&C 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 actions in October/November 2021.  If the region prefers to provide regular updates to ORR, quarterly meetings can be arranged.

**Improving Maturity**:

The region is required to demonstrate that it has improved its maturity in all elements of the ISO 55001 standard to fully comply with the requirements for certification by the end of March 2022, by either self-assessment or independent assessor.