ORR Review of Railway Licence Holders' Environmental Arrangements 2023/4

Final Report

19 April 2024

Delivering a better world

Quality information

Prepared by	Checked by	Verified by	Approved by
Kim Crowhurst Sustainability Consultant	Suzie Brooks Principal Consultant	Amanda Wharton Technical Director	Sally Vivian Carbon and Advisory Director

Revision History

Revision	Revision date	Details	Authorised	Name	Position
01	16.02.2024	Initial issue.	Yes	Sally Vivian	Carbon and Advisory Director
02	06.03.2024	Second issue following ORR review.	Yes	Sally Vivian	Carbon and Advisory Director
03	15.03.2024	Final issue submitted to ORR.	Yes	Sally Vivian	Carbon and Advisory Director
04	22.03.2024	Minor amendments prior to ORR acceptance.	Yes	Sally Vivian	Carbon and Advisory Director
05	19.04.2024	Minor amendments as requested and agreed with ORR.	Yes	Sally Vivian	Carbon and Advisory Director

Distribution List

# Hard copies	PDF required	Association/Company name
N/A	1	Office of Rail and Road (ORR)

Prepared for:

Office of Rail and Road (ORR)
25 Cabot Square
London
E14 4QZ

Prepared by:

AECOM Limited
Aldgate Tower
2 Leman Street
London E1 8FA
United Kingdom
aecom.com

Table of Contents

Table of Contents 4
Figures 5
Tables 5
Glossary 6
Executive summary 8
Introduction 12
ORR's role in licensing 12
Objectives and scope of the environmental arrangements review 14
Who this report is for 14
How to use this document 14
How this document was produced 14
Methodology 16
Overview 16
Assumptions and limitations of the review 16
"Environmental Matters" licence condition and ORR guidance review (Stage 1) 17
Quality review of environmental arrangements (Stage 2) 19
Identifying best practice and opportunities for improvement (Stage 3) 22
Outcomes from Stage 1: "Environmental Matters" licence and guidance review 23
Stage 1a: Evidence of licence holders' EAs meeting "Environmental Matters" licence condition requirements 23
Stage 1b: Alignment with ORR's guidance on environmental arrangements 26
Outcomes from Stage 2: Quality review 34
Governance 36
Strategy 38
Risk management 40
Metrics and targets 42
Outcome of engagement activities 43
Outcomes from Stage 3: Identifying best practice and opportunities for improvement 46
Findings of the Specialist Technical Panel review 46
Summary of recommendations for licence holders 47
Summary of wider industry recommendations 48
Summary of recommendations to ORR 48
Appendix A – Licence holders 49
Appendix B – Questions used to assess guidance alignment 53
Appendix C – Quality matrix descriptors 54
Appendix D – Recommended key actions and opportunities to promote best practice 56

Figures

Figure ES 1 — Environmental and sustainability topics featuring in reviewed licence holders' EAs 9
Figure ES 2 — Quality ratings of representative sample of 30 licence holders' EAs by category 10

Figure 1 — Number of licence holders evidencing four assessed elements of "Environmental Matters" licence condition 23
Figure 2 — Evidence of assessed elements of "Environmental Matters" licence condition in EAs by operator type 25
Figure 3 — Average percentage alignment of each component of environmental arrangements with ORR guidance by licence type 27
Figure 4 — Box plot showing percentage range of licence holder EAs' alignment with ORR guidance by business size 28
Figure 5 — Box plot showing percentage range of licence holder EAs' alignment with ORR guidance by operator type 28
Figure 6 — Licence holders with certified environmental management system (i.e., ISO 14001:2015) 29
Figure 7 — Licence holders with certified energy management system (i.e. ISO 50001:2018) 30
Figure 8 — Environmental and sustainability topics featuring in reviewed licence holders' EAs 31
Figure 9 — Proportion of licence holders with GHG reduction commitments 32
Figure 10 — Proportion of licence holders with science-based targets commitment 32
Figure 11 — Overview of 30 selected licence holders' EAs percentage quality scores 35
Figure 12 — Percentage quality scores for governance sub-categories for representative sample of 30 licence holders' EAs 37
Figure 13 — Percentage quality scores for strategy sub-categories for representative sample of 30 licence holders' EAs 38
Figure 14 — Percentage quality scores for risk management sub-categories for representative sample of 30 licence holders' EAs 41
Figure 15 — Percentage quality scores for metrics and targets sub-categories for representative sample of 30 licence holders' EAs 42

Tables

Table 1 — ORR strategic objectives 12
Table 2 — ORR licence and SNRP types containing "Environmental Matters" conditions 13
Table 3 — ORR operator types 13
Table 4 — Summary of how "Environmental Matters" licence condition requirements were assessed 17
Table 5 — List of "Environmental Matters" licence condition adherence questions 17
Table 6 — Illustrative excerpt of the "Environmental Matters" licence condition review form 18
Table 7 — Quality matrix research questions (governance) 19
Table 8 — Quality matrix research questions (strategy) 20
Table 9 — Quality matrix research questions (risk management) 20
Table 10 — Quality matrix research questions (metrics and targets) 20
Table 11 — Overarching quality matrix ratings 21
Table 12 — Number and percentage of licence holders evidencing assessed elements of "Environmental Matters" licence condition requirements by operator type 24
Table 13 — Average quality score by business size for 30 selected licence holders' EAs 36
Table 14 — Average quality score by operator type for 30 selected licence holders' EAs 36

Glossary

Term	Descriptions
BNG (Biodiversity net gain)	An approach to development. BNG makes sure that habitats for wildlife are left in a measurably better state than they were before the development.
Box plot: Maximum	The highest score, excluding outliers.
Box plot: Mean	The average value.
Box plot: Median	Marks the mid-point of the data. For example, half the values are greater than or equal to this value, and half are less.
Box plot: Minimum	The lowest score, excluding outliers.
Box plot: Interquartile range	The range between the 25th and 75th percentile. It indicates the range in which the middle 50% of all data lies.
Box plot: Outlier	These are values outside the expected variation.
BS EN ISO 9001:2015	International standard for quality management systems.
BS EN ISO 14001:2015	International standard for environmental management systems.
BS EN ISO 50001:2018	International standard for energy management systems.
BS EN ISO 45001:2018	International standard for occupational health and safety management systems.
Circular economy	A model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing, and recycling existing materials and products as long as possible.
EAs (Environmental Arrangements)	Terminology used in the ORR "Environmental Matters" licence condition to encompass the requirements for a railway licence holder to have in place a written policy designed to protect the environment from the effect of licensed activities, together with operational objectives and management arrangements to give effect to that policy.
EMS (Environmental Management System)	The system by which a company controls the activities, products and processes that cause or could cause environmental impacts and in doing so minimises the environmental impacts of its operations.
Environmental policy	Outlines an organisations commitment to reduce its impact on the environment.
FOCs (Freight Operating Companies)	Run freight trains on the national railway network in Great Britain.
Greenhouse Gas (GHG)	Greenhouse gases present in the Earth's atmosphere that trap heat. The GHG inventory covers seven direct GHGs under the Kyoto Protocol: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF_6) and nitrogen trifluoride (NF_3).
ISO (International Organisation for Standardisation) standards	A set of internationally recognised standards with the aim of providing common standards to deliver the quality, safety, and efficiency of products, services, and systems.
KPI (Key Performance Indicator)	A quantifiable metric used to measure an organisation's performance against targets and objectives.
SBTi (science-based target initiatives)	Defines and promotes best practice in GHG emissions reductions, net-zero targets and verifications in line with climate science.

Term	Descriptions
Management arrangements	Arrangements for the strategic management between parties.
Materiality assessments	A formal exercise to allow for better comprehension and prioritisation of environmental, social and governance issues.
Nature-based solutions	The sustainable management and use of natural features and processes to tackle socio-environmental issues. These issues include for example climate change, water security, food security, preservation of biodiversity, and disaster risk reduction.
Net zero	A state in which the greenhouse gases going into the atmosphere are balanced by removal out of the atmosphere.
Operational objectives	Specific measurable targets that a business sets for its operations.
RSSB (Rail Safety and Standards Board)	An independent safety, standards, and research body for Great Britain's rail network, working across Britain's evolving railway to improve safety, efficiency, and sustainability.
SBT (science-based targets)	Provide companies with a clearly defined pathway for companies to reduce GHG emissions, in line with Paris Agreement goals.
TOCs (Train Operating Companies)	Run passenger services, leasing and managing stations from Network Rail. TOCs are the consumer face of the rail industry.
Value chain	A concept describing the full chain of a business's activities in creating a product or service - from initial receipt of materials through its delivery to market.

Executive summary

The Office of Road and Rail (ORR) has statutory duties to contribute to the achievement of sustainable development and have regard to the effect on the environment of activities connected with the provision of railway services.

As such all active licensed railway operations are required under "Environmental Matters" obligations (usually licence condition 10) to:

> *"Establish a written policy designed to protect the environment from the effect of licensed activities, together with operational objectives and management arrangements to give effect to that policy (together "the environmental arrangements")".*

The licence holder is required to act with regard to the environmental arrangements (EAs), review them periodically and share these with ORR. Following consultation, ORR published the supporting *"Guidance on Environmental Arrangements for Railway Licence Holders"* in September 2022. Licence holders must "take due account of" ORR's guidance in establishing, reviewing and operating their EAs.

The objective of this review was to provide ORR with a thorough review of active licence holders' EAs against the "Environmental Matters" obligations and ORR guidance, as well as a quality review of the maturity of EAs for a subset of licence holders.

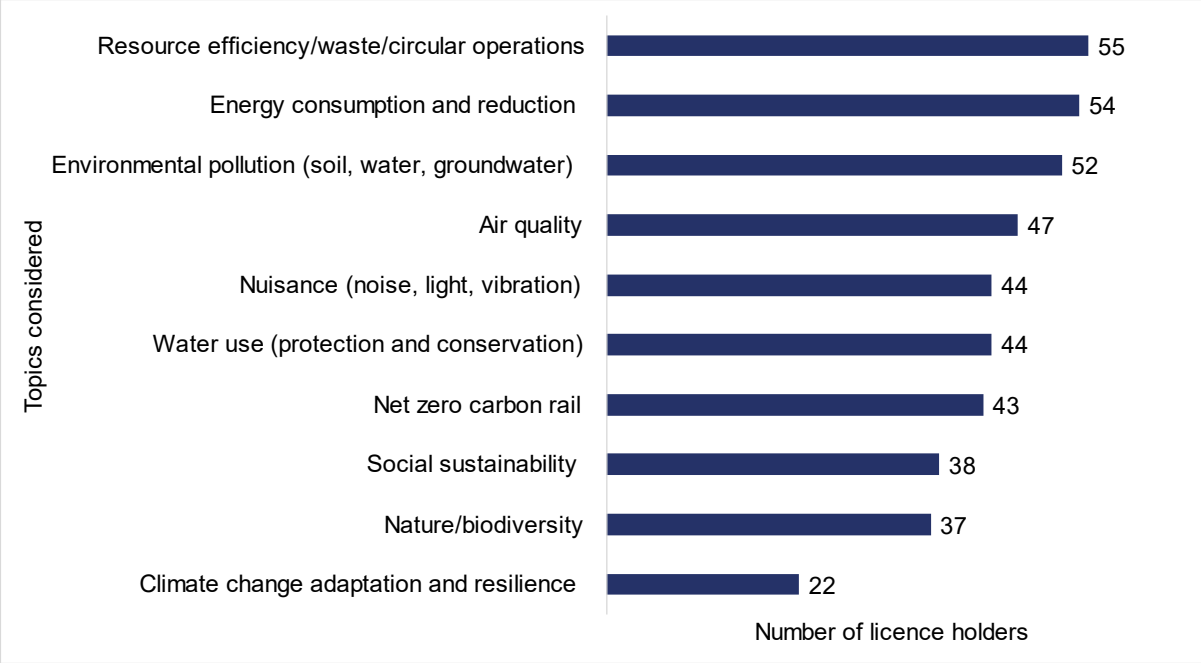
The review draws out best practices, common barriers, and opportunities for improvement to support industry wide learning. The findings are supported by feedback from a panel of AECOM technical specialists, who were consulted with the aim of providing specialist knowledge covering a range of relevant topics and a wider industry perspective.

Headline findings

- With regards to meeting licence requirements, of the 60 licence holders' EAs assessed:
  - 60 provided an environmental policy;
  - 58 provided evidence of operational objectives;
  - 57 provided evidence of having management arrangements; and
  - 50 demonstrated that EAs were reviewed periodically.
- **Evidence of meeting all four of the above licence requirements was achieved by 48 licence holders, with 12 missing one or more elements.**
- Assessment of alignment with ORR's guidance, which is also a requirement of the "Environmental Matters" licence conditions, was undertaken separately to the assessment of meeting licence requirements.
- **Across all licence holders, environmental policies were found to be more likely to align with ORR's guidance than the associated operational objectives or management arrangements.** This is on the basis that environmental policies commonly contained commitments in accordance with ORR's guidance, but there was less evidence available to confirm whether licence holders had assessed applicable legal requirements or government policy objectives to develop objectives and targets for their significant environmental impacts, to give effect to those policies.
- Whilst some of the barriers identified are specific to the sustainability topic, feedback from the five licence holder interviews **identified resource capacity as a common constraint associated with developing and maintaining operational objectives and management arrangements.**

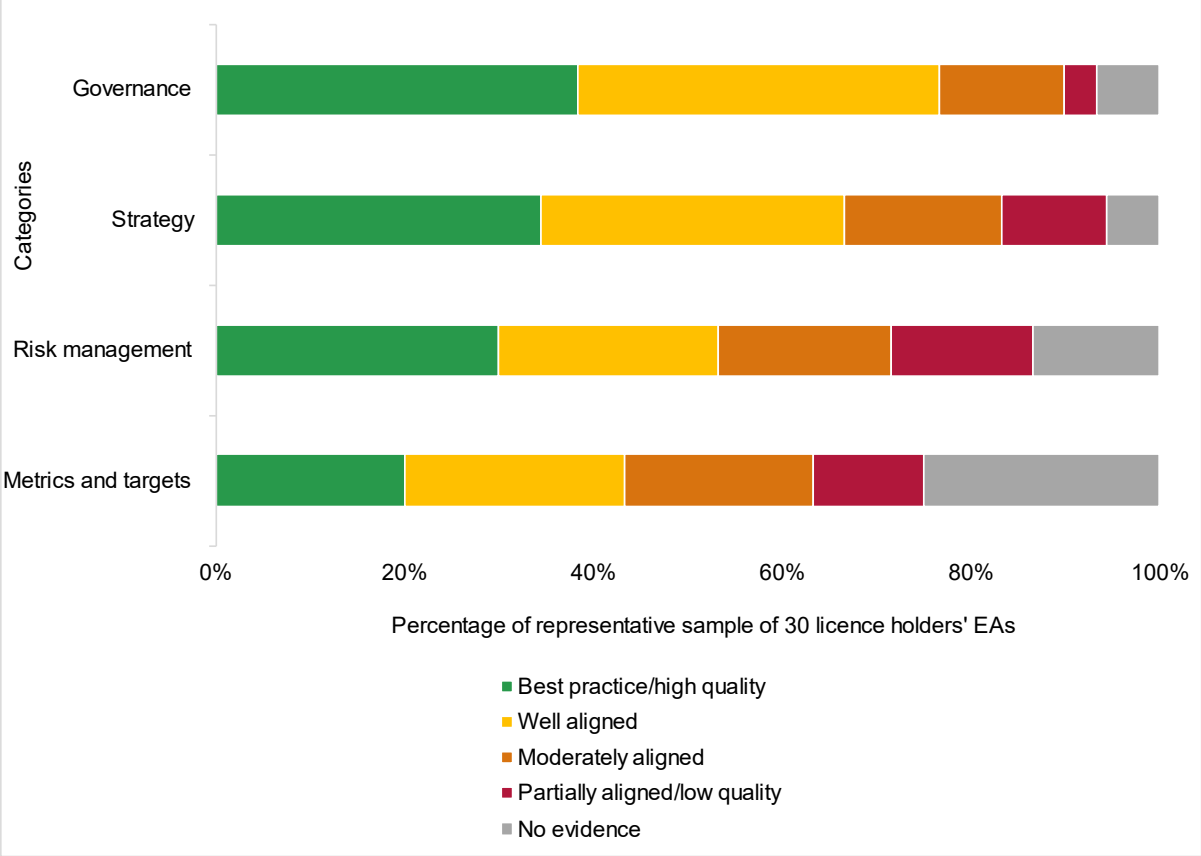
- Opportunities for improvement were identified in line with the range of environmental and sustainability topics considered within EAs (refer to Figure ES 1). Gaps were identified in addressing:
  - Nature and biodiversity;
  - Social sustainability; and
  - Climate change adaptation and resilience.

Figure ES 1 — Environmental and sustainability topics featuring in reviewed licence holders' EAs



- **Greenhouse gas (GHG) emissions reduction commitments were not always supported by actions or decarbonisation plans**. Relatively few,15, licence holders demonstrated commitments to science-based emissions reductions targets, and even fewer, five, had validated their targets via the Science Based Targets initiative (SBTi).
- The quality review of a representative sample of 30 licence holders' EAs showed that the majority were well aligned or demonstrated best practice in line with the **governance** and **strategy** criteria (see Figure ES 2). At the time of the review, evidence was less consistently available for the **risk management** criteria, for example processes for identifying, assessing, and managing environmental risks were not always clear. Evidence of **metrics and targets** set to measure performance and enable continuous improvement across environmental issues also varied between licence holders' EAs.

Figure ES 2 — Quality ratings of representative sample of 30 licence holders' EAs by category



Recommendations for licence holders have been made based on the findings of the review. The recommendations aim to support licence holders to identify environmental and sustainability objectives and fulfil the environmental obligations through their EAs.

Recommendations for licence holders

Licence holders' environmental policies were well aligned with ORR guidance. However, in accordance with ORR's guidance, additional action is required to fully deliver specific, measurable, achievable, relevant and time-bound (SMART) operational objectives and robust management arrangements, to give effect to environment policies. In line with wider industry best practice and based on the requirements of BS EN ISO14001:2015 environmental management systems and BS EN ISO 50001:2018 energy management systems, this can be achieved through the following approach and actions:

- **Establish board level oversight of environmental and sustainability issues.** Senior level commitment is required to support driving requirements, with allocation of resources in place to lead specific environmental issues or topics across organisations, such as carbon. Additionally, that appropriate responsibilities and accountabilities are communicated at board level and supported by appropriate actions.
- **Implement an environmental or sustainability strategy that supports business goals.** A sustainability strategy benefits from including overall objectives and targets as well as interim targets and milestones. For example, achieving net zero by a defined deadline, with interim reduction targets. Identifying longer term strategic environmental and sustainability objectives can also assist to reduce short term funding cycles from limiting future investment.
- **Focus on the actions that have the greatest impact for the licence holder, such as traction emissions reductions.** Whilst government has a decisive role to play in decarbonising traction, licence holders' environmental strategies should also demonstrate alignment with government policy and identify opportunities. For example,

where relevant and within the control of the licence holder, this may include multi-mode fleets (including bi-modes, battery, hydrogen, and sustainable fuels) that enable trains to run sustainably on both electrified and non-electrified lines.

- **Implement integrated management systems to assist to in managing risks, supporting compliance and driving continuous improvement.** An EMS creates a framework to help the organisation identify environmental impacts, and then manage activities to continually improve their environmental performance. When this is combined with other complimentary management systems, such as health and safety, energy and/or quality, processes can be streamlined to improve efficiency and facilitate decision-making and organisational learning.
- **Work with industry to establish consistent metrics and targets for significant and priority sustainability issues, and report on progress regularly.** Reporting regularly on environmental performance will provide an understanding of current performance, and whether the organisation is complying with applicable legislation. It should help to identify where there are opportunities for improvement. Where staff are involved in reporting this will help to increase awareness of environmental issues. Reporting demonstrates the organisation's commitment to improving environmental performance to staff and other stakeholders.
- **Collaborate with industry and wider stakeholders, to enable systemic change and establish a clear understanding of expectation and responsibility**. Licence holders can leverage existing industry initiatives to inform their EAs and align with environmental and sustainability best practices. For example, the Rail Delivery Group is collaborating with industry to develop and roll out an idling limit, which recognises technical and operational requirements for running the railway on a day-to-day basis.

As part of this review, AECOM also identified recommendations for wider industry and ORR to consider, to improve monitoring of licence holders' alignment with EAs. These are set out in full in the *Outcomes from Stage 3: identifying best practice and opportunities for improvement* section of this report.

Introduction

ORR is committed to supporting the sustainable development and environmental policy objectives of the UK and devolved governments. Table 1 presents ORR's strategic objectives. ORR also has statutory duties under the Railways Act 1993 to contribute to the achievement of sustainable development and have regard to the effect on the environment of the activities connected with the provision of railway services. ORR must have regard to these duties, amongst others, when exercising its functions.

Table 1 — ORR strategic objectives

Strategic objective	Description
A safer railway	Enforce the law and ensure that the industry delivers continuous improvement in the health and safety of passengers, the workforce and public, by achieving excellence in health and safety culture, management, and risk control.
Better rail customer service	Improve the rail passenger experience in the consumer areas for which ORR have regulatory responsibility and take prompt and effective action to improve the service that passengers receive where it is required.
Value for money from the railway	Support the delivery of an efficient, high-performing rail service that provides value for money for passengers, freight customers, governments, and taxpayers.
Better highways	National Highways operates the strategic road network, managing motorways and major roads in England. ORR's role is to monitor and hold National Highways to account for its performance and delivery, so that its customers enjoy predictable journeys on England's roads.

ORR's role in licensing

ORR is the independent regulator for Great Britain's railways. It regulates activities, funding requirements, regulated access to the railway network, licences the operators of railway assets and publishes rail statistics.

There are currently 66 active licence holders across seven licence types. These licence types are described in Table 2.

The "Environmental Matters" obligations, usually under licence or Statement of National Regulatory Provisions (SNRP) condition 10, have been in place since the present system of railway licensing was introduced in 1994. Despite slight differences in wording, in all cases the "Environmental Matters" conditions require the licence holder to:

> *"Establish a written policy designed to protect the environment from the effect of licensed activities, together with operational objectives and management arrangements to give effect to that policy (together "the environmental arrangements")".*

The licence holder is required to establish its environmental arrangements (EAs) within six months of the licence coming into effect, to act in accordance with them, review them periodically and share them with ORR. This applies to passenger and freight train operators holding railway undertaking licences; and the operators of networks, passenger and non-passenger trains, stations, and light maintenance depots, holding licences issued under the Railways Act 1993.

ORR is also responsible for granting exemptions from the requirement to hold a licence. In some cases, a licence holder may be licensed for some activities, but carry out other

activities under an exemption. The "Environmental Matters" licence condition only applies to the activities the operator is licensed to carry out and does not apply to activities carried out under an exemption, or which do not require a railway licence. For this reason, the review has focused on environmental arrangements relating directly or indirectly to the licensed activity.

Table 2 — ORR licence and SNRP types containing "Environmental Matters" conditions

Licence type	Description
Passenger licence (Railways Act)	Authorises a person to be the operator of a train being used on a network for the purpose of carrying passengers by railway. ORR usually grants Railways Act licences to non-mainline train operators, for example: passenger services on local and regional stand-alone infrastructure.
Passenger SNRP	For a company holding a railway undertaking passenger licence, the SNRP outlines the regulatory provisions that a railway company must adhere with to operate passenger services in Great Britain. Its purpose is to make sure railway passengers receive appropriate, accurate, and timely information to plan and make their journeys with a reasonable degree of assurance, including when there is disruption.
Freight SNRP	For a company holding a railway undertaking freight licence, the SNRP outlines the regulatory provisions that a railway company must adhere with to operate freight services in Great Britain. The SNRP holds freight operators to obligations of safety, security, and environmental protection.
Non-passenger licence	Authorises a person to be the operator of other trains being used on a network (i.e. freight, rail maintenance and renewal companies).
Station licence	Authorises a person to operate one or more specified stations.
Light maintenance depot licence	Authorises a person to operate one or more specified light maintenance depots.
Network licence	Authorises a person to be the operator of a network and trains being used on that network for any purpose comprised in the operation of the network.

Source: ORR (2023) Licensing guidance

Most licence holders hold more than one licence, which should be considered when interpreting results of this review by licence type. To support the analysis of results, for illustrative purposes AECOM have also used a categorisation of railway operators, used for operational purposes within ORR, which reflects the operator type (i.e. the main focus of an operator's business, even if one operator may conduct a variety of licenced activities). Unlike licence types, companies may only appear in one category rather than multiple (refer to Table 3).

Table 3 — ORR operator types

Operator type	Description
Train Operating Companies (TOCs)	Companies operating regular scheduled passenger services on the mainline network, or companies managing stations on the mainline network.

Operator type	Description
Freight Operating Companies (FOCs)	Companies that use the rail network to move goods.
Charter	Companies operating charter services on the mainline network.
Yellow plant	Companies operating track inspection and maintenance equipment (not including Network Rail).
Entities in charge of maintenance (ECM)	Companies (entities) in charge of maintenance of rolling stock.
Other	Network Rail, plus duty holders in all other categories, including: • Licence holders operating on HS1; • Tram and light rail; and • Heritage railways.

Objectives and scope of the environmental arrangements review

The objectives of the review were to assess licence holders' EAs with regards to:

- Evidence of the elements of the "Environmental Matters" licence condition included in this review. A summary of licence requirements and how they were assessed is provided in the methodology section;
- Alignment with ORR's "Guidance on Environmental Arrangements for Railway Licence Holders", published in September 2022; and
- For a representative subset of licence holders, quality of the EAs based on four criteria: **governance, strategy, risk management** and **metrics and targets**.

The review draws out best practices, common barriers, and opportunities for improvement to support industry wide learning. The findings are supported by feedback from a panel of AECOM technical specialists, who were consulted with the aim of providing specialist knowledge covering a range of relevant topics and a wider industry perspective.

Who this report is for

This report provides ORR with an overview of EAs for 60 active licence holders and a quality review of a representative sample of 30 licence holders' EAs. The outcomes of this review are also intended to support ORR licence holders to identify environmental and sustainability objectives and fulfil their environmental obligations via their EAs.

How to use this document

The report provides an overview of the methodology and criteria used to assess licence holders' EAs, followed by the findings of EAs adherence with licence conditions, the extent to which licence holders' EAs align with ORR's guidance and the scope and ambition of EAs, supported by best practice case studies and identified opportunities for improvement.

How this document was produced

This report was produced by AECOM on behalf of ORR between October 2023 and March 2024. The report is structured as follows:

- **Methodology:** Outlines the methodology, assumptions, and limitations on which the review of licence holders' EAs was assessed;
- **"Environmental Matters" licence conditions and ORR's guidance review:** Results from the desk-based study of licence holders' EAs (Stage 1a and 1b);
- **Quality review:** Results from the desk-based quality review of EAs, and outcomes of interviews with licence holders (Stage 2); and
- **Best practices and opportunities for improvement:** Outcomes of AECOM's technical specialist panel review, as well as recommendations for ORR and licence holders (Stage 3).

Methodology

Overview

To meet the objectives and scope of the review, and to provide ORR with a comprehensive picture of licence holders' EAs, the review was completed via the following stages:

Stage 1: "Environmental Matters" licence condition and ORR guidance review;

Stage 2: Quality review of selected environmental arrangements; and

Stage 3: Identifying best practice and opportunities for improvement.

The delivery process and associated outputs are explained throughout this methodology section.

Assumptions and limitations of the review

The review was based on the following assumptions and limitations:

- Licence holders are required under the "Environmental Matters" licence condition to send ORR a copy of their EAs.
- Preparing for this review, ORR wrote to licence holders in July 2023, requesting copies of current EAs.
- AECOM relied on EAs provided in response to the July 2023 request (and subsequent follow-up communications), or information made publicly available via the licence holders website up to 31 January 2024.
- There were 66 active licence holders at the commencement of this study, of which 60 were assessed. Six licence holders were excluded from the assessment as:
  - Two were within the six-month grace period of commencing their licence, and were not required to provide EAs;
  - Three provided EAs after the deadline for the review; and
  - One licence holder did not provide any environmental arrangements.
- A representative sample of 30 licence holders were selected for a further quality review of EAs.
- Additionally, interviews were held with a targeted cross-section of five licence holders between Thursday 25th January and Monday 6th February 2024.
- The EAs, provided in confidence to AECOM, represent information correct as of the date provided to ORR (i.e. August to October 2023 unless stated otherwise).
- The review did not comprise an assessment of licence holders' actual environmental impacts or regulatory compliance beyond the "Environmental Matters" licence condition.
- As the owner, operator and infrastructure manager of Great Britain's main railway network, Network Rail is a significant licence holder with a significant environmental impact, given the scale of its estate and activities. ORR advised that it is already closely engaged with Network Rail on its approach to environmental issues. Network Rail's compliance with "Environmental Matters" condition requirements and alignment with ORR's guidance were assessed, but AECOM did not spend more time and resources on Network Rail than on other licence holders.

"Environmental Matters" licence condition and ORR guidance review (Stage 1)

1a) Adherence with the "Environmental Matters" licence conditions

A systematic desk-based review was carried out to assess the 60 licence holders' adherence with selected "Environmental Matters" licence condition requirements (Stage 1a). A summary of licence requirements and how they were assessed is provided in Table 4.

Table 4 — Summary of how "Environmental Matters" licence condition requirements were assessed

Summary of licence requirement	How was it assessed?
Establish EAs, including: i) Environment policy ii) Operational objectives iii) Management arrangements	Assessed in **Stage 1a** (evidence of assessed "Environmental Matters" conditions)
Take due account of ORR guidance	Assessed in **Stage 1b** (Alignment with ORR's guidance on environmental arrangements)
Have EAs effective within six months of licence coming into force	*Not assessed retrospectively. However, licence holders within first six months of activity were excluded from the review*
Be reviewed by the licence holder periodically, and otherwise as appropriate	Assessed in **Stage 1a**
Upon establishment and any material modification of EAs, promptly send EAs to ORR	*Not directly assessed, however, the review was based primarily on EAs sent to ORR*
Act with regard to the policy and operational objectives, and use reasonable endeavours to operate the management arrangements effectively	*Not assessed – out of scope*

Licence condition adherence was based on the following five questions as set out in Table 5 to assess evidence of with these licence requirements.

Table 5 — List of "Environmental Matters" licence condition adherence questions

Questions	Response
1. Does the licence holder have a written policy in place, which dictates how it will protect the environment from the effect of its licenced activities?	Y/N
2. Do the EAs identify operational objectives?	Y/N
3. Do the EAs identify management arrangements?	Y/N
4. Is there evidence of the periodic review of EA?	Y/N
5. Latest date of EA update	Date

Responses were categorised as "Yes" or "No" and a date provided in response to the fifth question. "No" represented that no evidence was identified.

Findings were documented in a colour coded Excel based form. This highlighted common trends and identified where licence holders had not submitted material required by the "Environmental Matters" condition. A sample is illustrated in Table 6.

Table 6 — Illustrative excerpt of the "Environmental Matters" licence condition review form

Does the licence holder have a written policy in place, which dictates how it will protect the environment from the effect of its licensed activities?	Do the EAs identify operational objectives?	Do the EAs identify management arrangements?	Is there evidence of the periodic review of EA?	Latest date of EA update
Yes	Yes	Yes	Yes	01/09/23
Yes	Yes	Yes	Yes	01/09/23
Yes	No	Yes	Yes	12/07/23

For context the following licence holder information was also recorded:

- Operator name;
- Licence type(s) (refer to Table 2);
- Duty holder category (refer to Table 3);
- Business Size: Small (0 to 49 employees), Medium (50 to 249 employees), Large (250 or more employees);
- Years in operation;
- Geography (country and region of operation); and
- Licence commencement date.

1b) Alignment with ORR's "Guidance on Environmental Arrangements for Railway Licence Holders"

After the initial desk-based review, a more in-depth review of how each licence holders' EAs align with ORR's guidance was undertaken (Stage 1b).

AECOM worked collaboratively with ORR to develop a standardised protocol that included 25 questions capturing ORR's guidance expectations and recommendations, as well as identifying whether EAs included consideration of 10 environmental and broader sustainability topics which would be applicable to licence holders' activities, based on existing legislative requirements and government policy objectives.

The questions are provided in Appendix B. They range from those that considered the ambition of the guidance more broadly such as whether the licence holder had environmental management systems in place, to directly responding to the wording in the guidance covering environmental policy, operational objectives, and management arrangements.

The standardised protocol enabled a consistent and robust assessment of each of the licence holders' EAs. Responses were categorised as: "Yes", "No" and "Partial/Unclear". Again, these were coloured coded to highlight trends, and a "No" response represented no evidence having been identified.

Quality review of environmental arrangements (Stage 2)

Sample selection

A representative sample of 30 licence holders (50% of licence holders whose EAs were available to be assessed) were selected for further review. Licence holders were initially selected based on alignment to ORR's guidance – the 15 most closely aligned, 10 "moderately" aligned and five least aligned.

Additional criteria such as licence type, business size, geography and years of operation were also considered to produce a representative and inclusive sample (i.e. all licence types and geographic regions were represented).

Development of the quality matrix

A quality matrix was developed to provide a rapid and visual comparison of the maturity of EAs between licence holders, reflecting how well-developed the EAs were, and considering further their alignment to ORR's guidance.

The process for developing the quality matrix involved the following steps:

- **Step 1: Determining the criteria for review:** Categories and associated sub-categories for reviewing the quality of EAs were selected. The selected categories were **governance, strategy, risk management** and **metrics and targets**. The categories, sub-categories and supporting research questions are presented in Table 7, Table 8, Table 9, and Table 10 respectively.
- **Step 2: Identifying research questions:** These categories and sub-categories were supported by research questions, building on those questions from the review of alignment with ORR's guidance (Appendix C). The research questions are also presented in Table 7, Table 8, Table 9, and Table 10.
- **Step 3: Establishing the overarching quality rating descriptors:** To maintain consistency in the development of the quality matrix, quality ratings were assigned, with an overarching quality descriptor for a "typical licence holder". Table 11 presents the quality ratings, from "best practice" to "no evidence" and associated score, colour coding and quality description.
- **Step 4: Developing quality matrix descriptors for each category:** Descriptors were then developed across the matrix for each score in response to the research questions for each sub-category, based on the likely evidence for a "typical" licence. The quality matrix descriptors are provided in Appendix C.

Table 7 — Quality matrix research questions (governance)

Sub-category	Research questions
Board oversight	Is there mention of a corporate responsibility/sustainability/ environmental board? A specialist sustainability focus group within the company? Are director(s) responsible? Is there any information about the board's oversight of environmental-related risks and opportunities?
Management	How are "Environmental Matters" integrated into all decision-making processes? Is there an EMS in place? Is it accredited i.e. to ISO 14001:2015?

Table 8 — Quality matrix research questions (strategy)

Sub-category	Research questions
Policy and legislation	Does the licence holder have a policy (or equivalent) commitment to action on environmental issues? Have they related their impacts with governmental policy objectives and legislative requirements? i.e. rail decarbonisation and net zero by 2050.
Operational objectives	Is environmental performance integrated into business objectives and strategy? Has the licence holder identified their most significant environmental impacts? Have they delivered specific initiatives/best practices to improve environmental outcomes?
Training and initiatives	What staff training do they have in place? Have they included innovation and collaboration in their operational objectives? What cross industry environmental initiatives are they involved with? Are they working with their supply chain on environmental issues?

Table 9 — Quality matrix research questions (risk management)

Sub-category	Research questions
Adherence	Is the licence holder meeting current legal requirements? Have they prepared for future changes to legal requirements? i.e. Biodiversity Net Gain (BNG). Describe how processes for identifying, assessing, and managing environmental risks are integrated into the organisation's overall risk management.
Collaboration	What liaison arrangements are in place with environmental regulators, other industry bodies and other stakeholders? What activities are they undertaking to mitigate or prevent adverse effects of rail operations? (e.g. through collaboration with regulators/ stakeholders).

Table 10 — Quality matrix research questions (metrics and targets)

Sub-category	Research questions
Metrics	Are metrics and Key Performance Indicators (KPIs) being used and measured? How are licence holders measuring success against environmental targets? Does the licence holder enable continual improvement across all identified environmental issues?
Targets	Have environmental targets been set to mitigate the most significant environmental impacts for example: net zero, air quality, BNG, zero waste? Is there public commitment/external assurance of targets? i.e. have they adopted SBTi for GHG emissions reductions? Does the level of ambition meet or exceed government policy/standard industry targets?

Table 11 presents the overarching quality ratings that assessed alignment with ORR's guidance as well as the maturity of licence holders' EAs. The overarching quality descriptors were used to develop further descriptors for each sub-category (see Appendix C).

Table 11 — Overarching quality matrix ratings

Quality	Colour	Score	Description
No evidence		x	No evidence of alignment with ORR's guidance found in the documents provided by the licence holder.
Partially aligned/low quality		1	Licence holder is beginning to recognise ORRs requirements and is starting to put plain in place to achieve this. Licence holder is starting to develop an understanding of environmental commitments, policies, and arrangements.
Moderately aligned		2	Licence holder recognises ORRs requirements and has plans in place to achieve this. Licence holder has a good understanding of environmental commitments, policies and arrangements, but are not yet demonstrating best practice.
Well aligned		3	Licence holder meets ORR's expectations for environmental commitments, policies and arrangements. The licence holder demonstrates pockets of best practice and has a solid reputation. Licence holder engages widely and shares best practice with industry. Licence holder demonstrates ambition within its environmental arrangements and is taking action to achieve this.
Best practice/ high quality		4	Licence holder exceeds ORR's expectations for environmental commitments, policies and arrangements. The licence holder is motivated to go above and beyond and regularly delivers best practice. Licence holder is highly ambitious within its environmental arrangements and is taking targeted action to achieve these ambitions. The organisation could act as a role model or incentive to other licence holders, widely share best practice and is recognised as an industry leader.

Populating the quality matrix

For the 30 selected licence holders, the quality matrix was populated via a systematic desk-based review, based on the evidence provided by the licence holders as well as information that was publicly available via the licence holder's website. As well as assigning a quality score for each sub-category for each licence holder assessed, the quality matrix included a section summarising the evidence reviewed. Ultimately, the quality matrix determines the robustness of the selected licence holders' EAs and gives an assessment of the environmental and sustainability commitments they contained.

Structured interviews with selected licence holders

Five licence holders were selected for interview, to obtain a detailed understanding of their approach to developing their EAs. The interviews were held between Thursday 25th January and Monday 6th February 2024.

The five licence holders were included in the list of 30 licence holders selected for the quality review, and were selected based on their high level of alignment with ORR's guidance in Stage 1b and breadth of evidence. The interviewees were selected to give a range of licence types, locations, and business types, and owning groups (including freight, passenger, and infrastructure management).

The interviews sought to establish an overview and context of the licence holders' EAs, discuss identified best practices, as well as licence holders' feedback on any identified common barriers.

Identifying best practice and opportunities for improvement (Stage 3)

Review of findings with AECOM's Specialist Technical Panel

Findings of Stage 1 and 2 activities were presented to an AECOM Specialist Technical Panel. The AECOM project team sought feedback on the identified best practices, common barriers, and opportunities for improvement. Inputs from the panel enabled a wider industry view, to inform and support the assessment of the findings of the review.

The Specialist Technical Panel included a rail industry specialist and technical specialist's with rail experience from the following disciplines:

- Energy consumption and carbon emissions;
- Environmental and energy management systems;
- Air quality, diesel pollution and reduction;
- Biodiversity Net Gain and nature-based solutions;
- Water, hydrology, and hydrogeology;
- Waste, circular economy and resource use; and
- Noise.

Development of findings and recommendations

The outputs of Stage 1, 2 and 3 resulted in a series of findings that are presented in the report below.

Stage 1 and 2 findings provide ORR with an account of the assessment of licence holders' EAs against licence requirements and alignment with ORR's guidance expectations. The quality review findings illustrate the maturity of environmental and sustainability commitments contained within EAs. Examples of best practices are identified throughout, as well as challenges raised during the licence holders' interviews.

Stage 3 findings consider wider industry expectations and initiatives, which inform the recommended approach for licence holders in developing their EAs. The findings of the Specialist Technical Panel are captured in a matrix that includes key actions and opportunities for improvement to motivate licence holders to adopt best practices and improve environmental performance.

The findings also resulted in a number of recommendations to ORR to improve monitoring of adherence to the "Environmental Matters" licence condition requirements, as well as wider industry to address to address two key barriers for licence holders in achieving best environmental practices or alignment with the EAs guidance.

Outcomes from Stage 1: "Environmental Matters" licence and guidance review

Stage 1a: Evidence of licence holders' EAs meeting "Environmental Matters" licence condition requirements

The majority of licence holders provided evidence of meeting the components of the EAs, as required by the "Environmental Matters" licence requirement i.e.:

- A written policy designed to protect the environment from the effect of licenced activities;
- Operational objectives; and
- Management arrangements to give effect to that policy.

In addition, the majority of EAs demonstrated evidence of regular review, another "Environmental Matters" licence requirement.

Together, these are referenced as the "assessed elements" of the licence condition. A summary of licence requirements and how they were assessed is provided in Table 4 in the methodology section.

With regards to meeting licence requirements, 60 licence holders' EAs included an environmental policy, 58 provided evidence of operational objectives, 57 provided evidence of having management arrangements, and 50 demonstrated that EAs were reviewed periodically (see Figure 1). As previously stated, 60 licence holders' EAs were assessed as two were within the 6-month grace period for providing EAs, three provided EAs after the deadline for the review and one did not provide EAs.

Figure 1 — Number of licence holders evidencing four assessed elements of "Environmental Matters" licence condition

Of the 60 licence holders' EAs assessed, 48 licence holders provided evidence of all four assessed elements of the environmental arrangements, with 12 failing to evidence one or more assessed elements. Figure 2 summarises the extent to which licence holders' EAs evidenced "Environmental Matters" licence requirements by operator type.

Table 12 presents the number and percentage of licence holders evidencing assessed elements of "Environmental Matters" licence condition requirements by operator type.

Passenger train operators (TOCs) comprised the largest group of licence holders at 26, of which 20 evidenced (77%) the four assessed elements of the licence condition. Five TOCs EAs demonstrated some, but not all of the assessed elements: two did not contain evidence of operational objectives, two did not contain evidence of management arrangements and it was not clear whether the EAs were being reviewed periodically for four licence holders. One TOC licence holder was within the 6-month grace period for providing EAs.

Out of the 12 FOCs, eight (67%) licence holders' EAs evidenced the four assessed elements of the licence condition. Three FOC EAs evidenced some, but not all of the assessed elements: for these three it was not clear whether the EAs were being reviewed periodically. One FOC licence holder did not provide EAs for review at the time it was completed.

Of the four charter companies, three evidenced the four assessed elements and one provided evidence of having an environmental policy, which was last reviewed in February 2020.

Five yellow plant operators demonstrated all four assessed elements. One was not assessed as the EAs were provided after the deadline for the review.

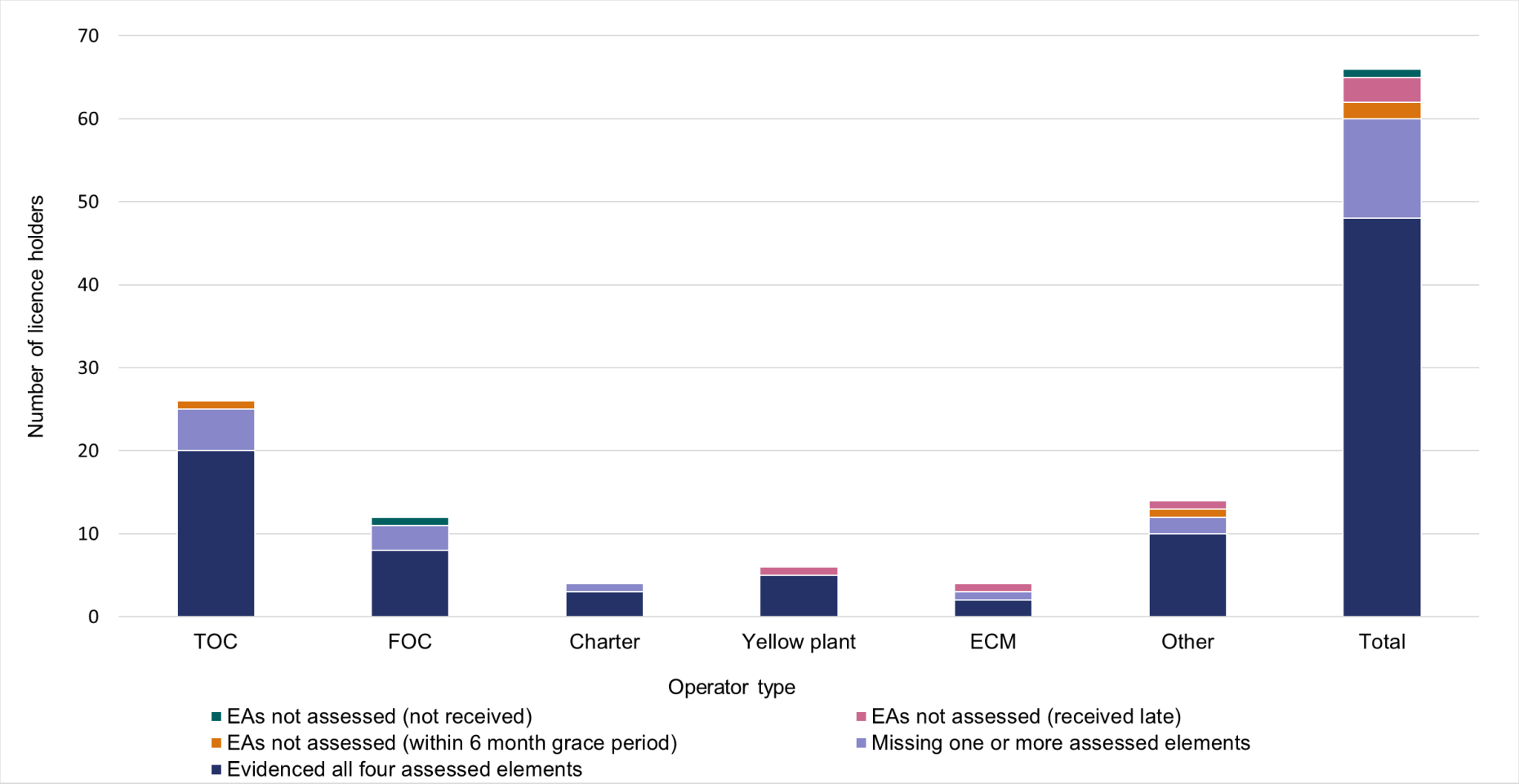
Out of the four ECM, two demonstrated all four assessed elements and one was lacking one or more element. One was also not assessed as the EAs were provided after the time of the review.

Of 14 licence holders in the "other" category, 10 (71%) evidenced all four assessed elements, and 2 (14%) were missing one or more element. One licence holder was within the 6-month grace period for providing EAs. One was not assessed due to the EAs being provided after the time of the review.

Table 12 — Number and percentage of licence holders evidencing assessed elements of "Environmental Matters" licence condition requirements by operator type

Operator type	Evidenced all four assessed elements	Missing one or more assessed elements	EAs not assessed (within 6-month grace period)	EAs not assessed (received late)	EAs not assessed (not received)	Total
TOC	20 (77%)	5 (19%)	1 (4%)	0 (0%)	0 (0%)	**26 (100%)**
FOC	8 (67%)	3 (25%)	0 (0%)	0 (0%)	1 (8%)	**12 (100%)**
Charter	3 (75%)	1 (25%)	0 (0%)	0 (0%)	0 (0%)	**4 (100%)**
Yellow plant	5 (83%)	0 (0%)	0 (0%)	1 (17%)	0 (0%)	**6 (100%)**
ECM	2 (50%)	1 (25%)	0 (0%)	1 (25%)	0 (0%)	**4 (100%)**
Other	10 (71%)	2 (14%)	1 (7%)	1 (7%)	0 (0%)	**14 (100%)**
Total	**48 (73%)**	**12 (18%)**	**2 (3%)**	**3 (5%)**	**1 (2%)**	**66 (100%)**

Figure 2 — Evidence of assessed elements of "Environmental Matters" licence condition in EAs by operator type



Stage 1b: Alignment with ORR's guidance on environmental arrangements

As noted previously, licence holders must "take due account of any relevant guidance issued by ORR". Across all licence types, based on the evidence reviewed, the licence holders' environmental policies were found to be more likely to be aligned with ORR's guidance than the associated operational objectives or management arrangements. Additional action will be required to deliver SMART operational objectives and robust management arrangements to fully implement environment policies where this was found (see Figure 3).

The range of overall alignment with the EAs guidance is presented by business size in Figure 4 and by operator type in Figure 5 for the 60 assessed licence holders' EAs. These figures identify which groups are more aligned to ORR's guidance and suggest which groups ORR may wish to focus on to improve environmental performance. Larger operators generally have a higher level of alignment. Therefore, ORR may wish to focus on the larger operator outliers who are currently less aligned, due to these operators having the potential to have more significant environmental impacts, but also the resources available to enable improvements to EAs.

Additional focus on medium sized and smaller operators could also be considered, who may experience greater challenges in relation to resources and levels of awareness. Where appropriate, it would also be beneficial to draw on examples of good practice from similar licence holder organisation types.

Figure 3 — Average percentage alignment of each component of environmental arrangements with ORR guidance by licence type

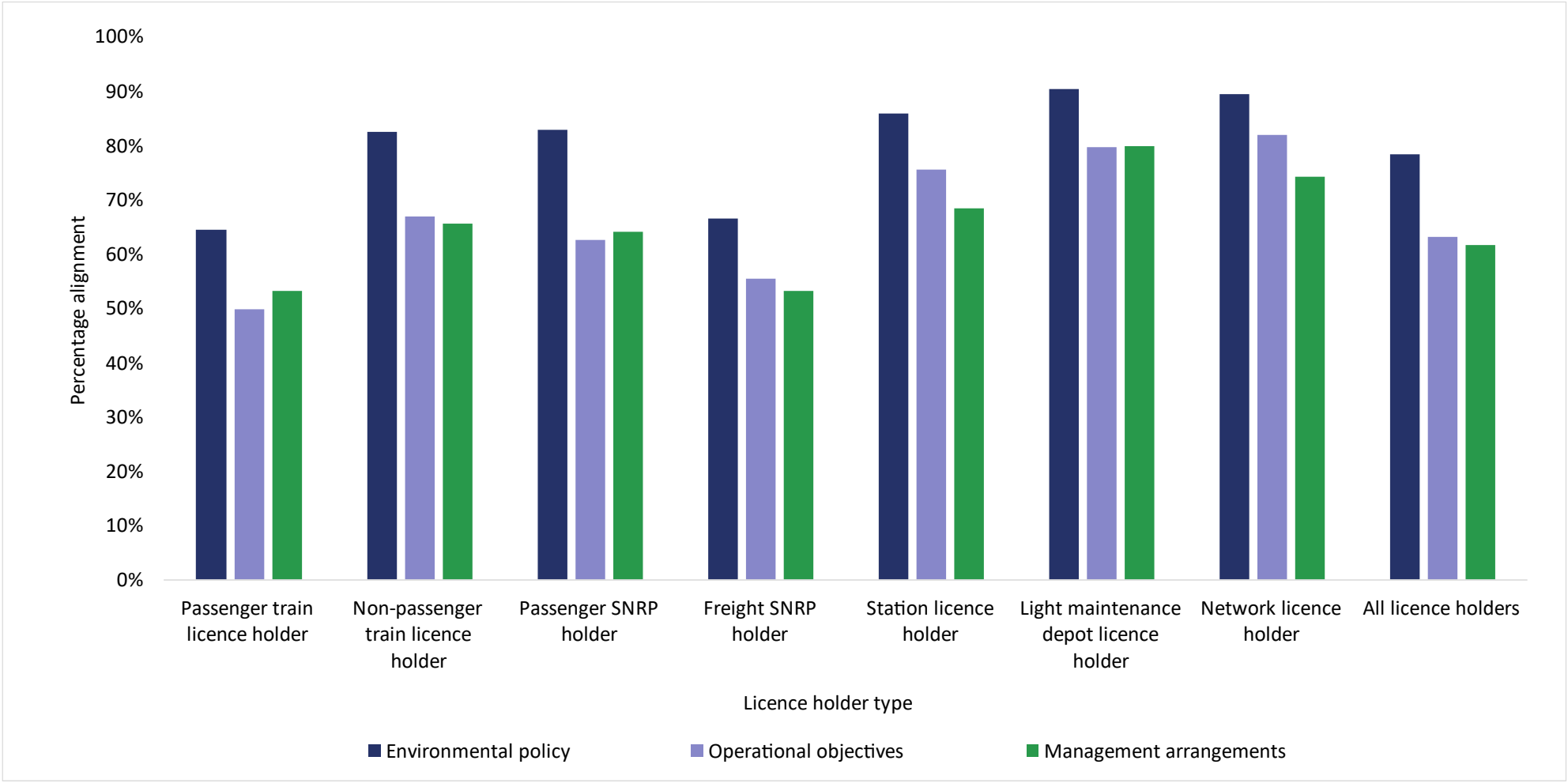


Figure 4 — Box plot showing percentage range of licence holder EAs' alignment with ORR guidance by business size

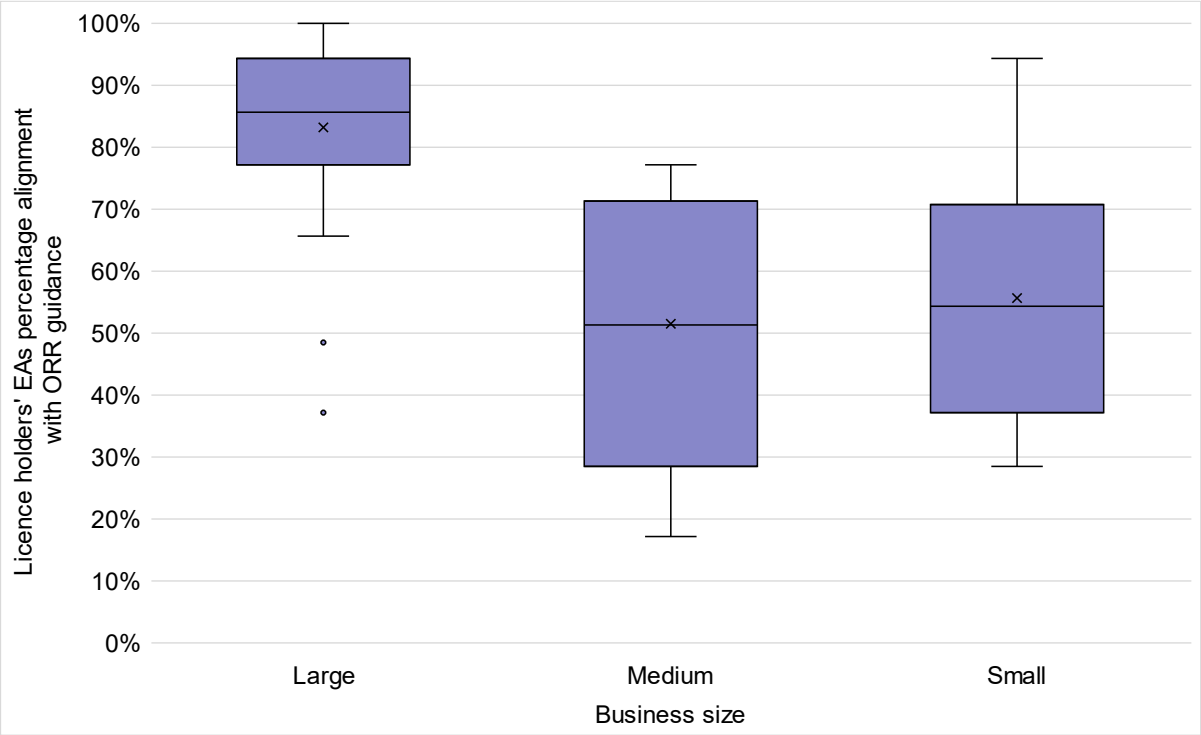
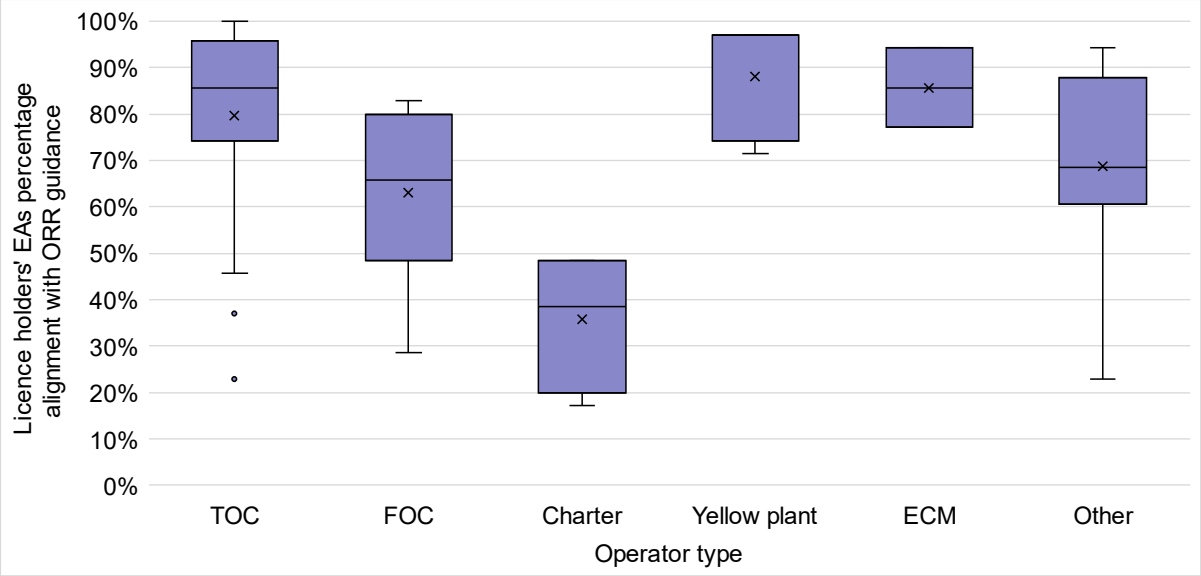
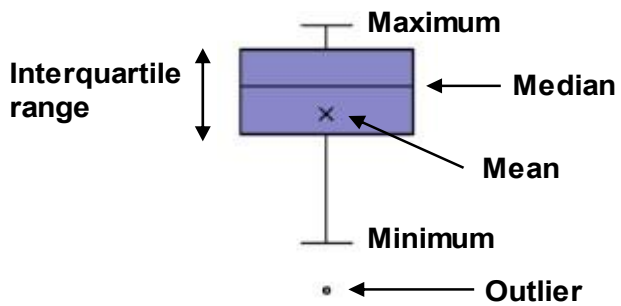


Figure 5 — Box plot showing percentage range of licence holder EAs' alignment with ORR guidance by operator type



Box plot key:



As identified in the methodology section, AECOM considered that having a certified EMS evidenced alignment with a number of ORR's guidance recommendations. This includes requiring an environmental policy to be linked to specific and demonstrable activities, committing to continually improve environmental performance and specifying responsibilities for managing commitments.

Of all 66 active licence holders, 53% were identified as having a BS EN ISO 14001:2015 certified EMS, and 24% of licence holders had a BS EN ISO 50001:2018 certified energy management system (Figure 6 and Figure 7). Documentation provided by a number of licence holders stated they had an EMS aligned with relevant standards. Where it was not clearly stated that the EMS was independently certified, the alignment was categorised as "partial/unclear".

Figure 6 — Licence holders with certified environmental management system (i.e., ISO 14001:2015)

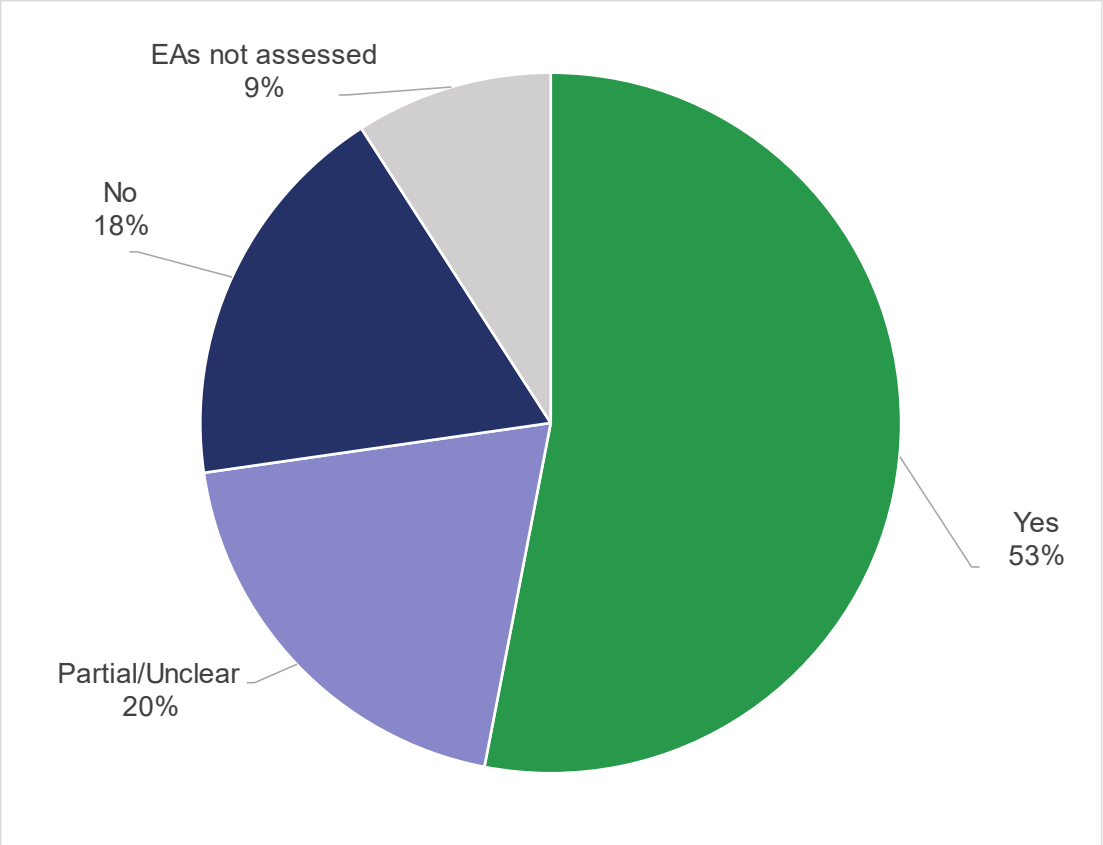
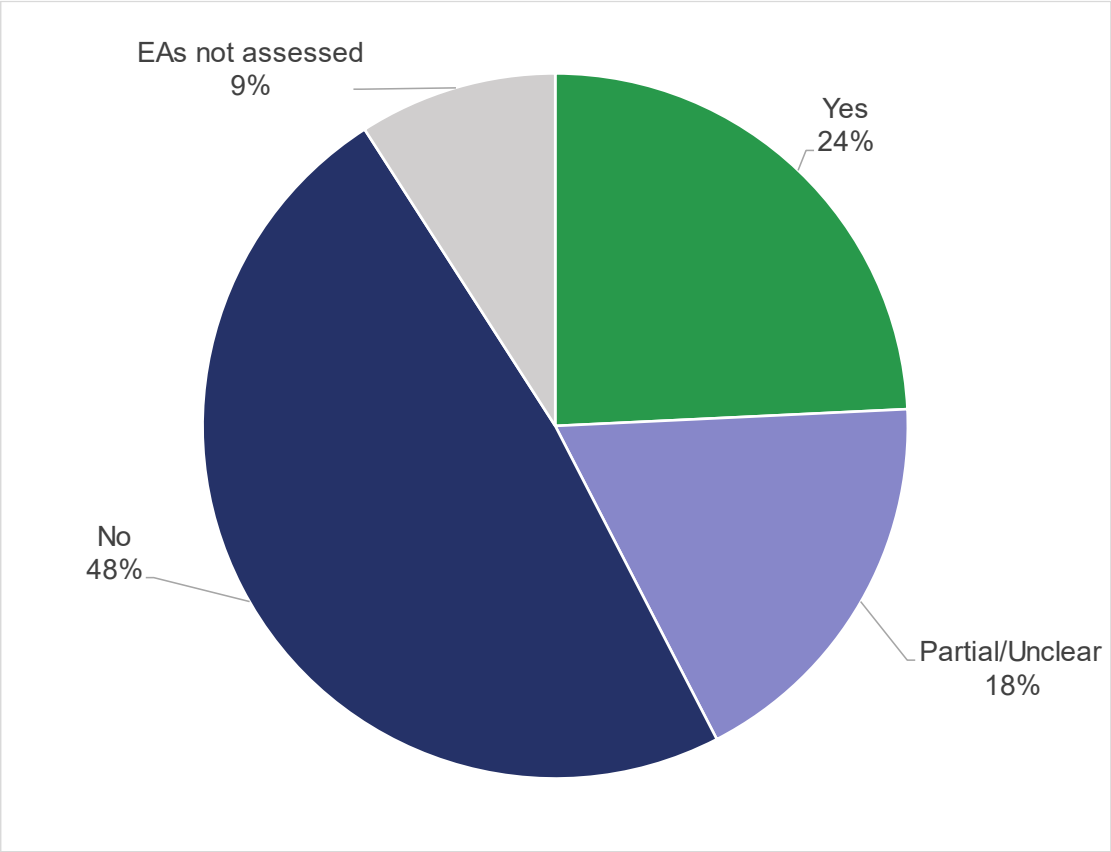


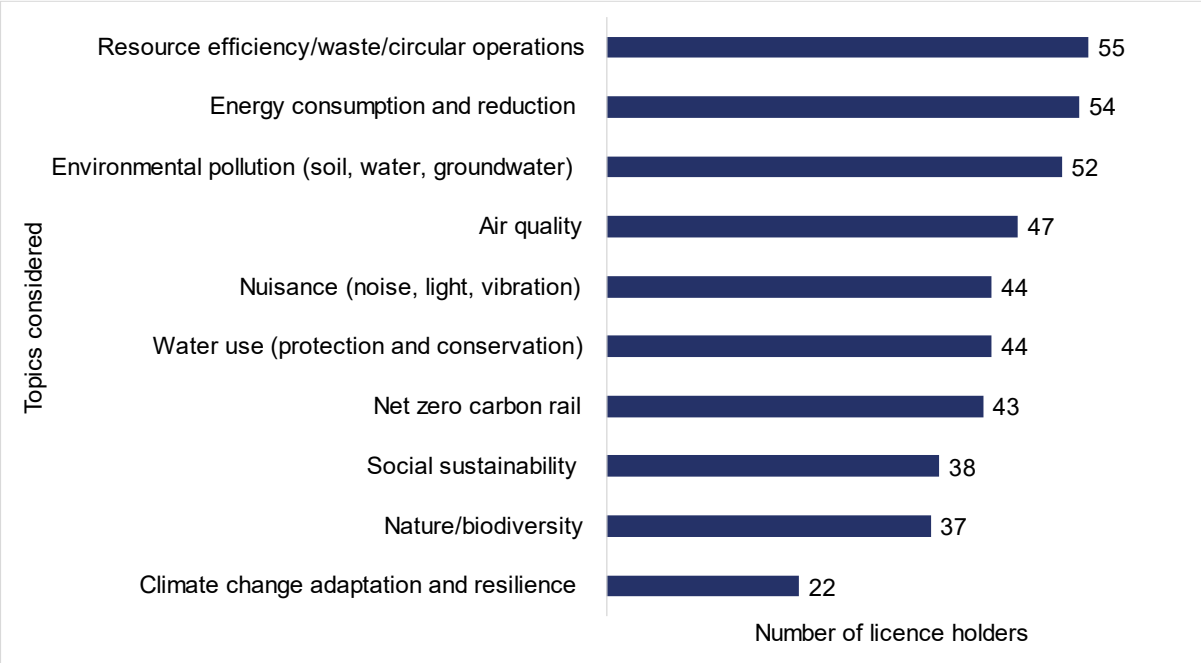
Figure 7 — Licence holders with certified energy management system (i.e. ISO 50001:2018)



Evidence of environmental and sustainability topics considered within the EAs is presented in Figure 8. The resource efficiency/waste/circular operations topic was the most frequently referenced or considered in licence holders' EAs. However, although licence holders' EAs considered issues related to waste management and circular operations, it should be noted that AECOM found less evidence of licence holders' EAs considering sustainable procurement or circular design.

Gaps were identified in addressing issues of social sustainability, nature and biodiversity and climate change adaptation and resilience, as these topics were less frequently referenced or considered in licence holders' EAs. Climate change adaptation and resilience was the least likely to be considered in the assessed licence holders' EAs. However, it is noted that this is within ORR's guidance as a topic licence holders' "may choose to reflect" in their EAs, rather than a firm recommendation. ORR recognise that licence holders may address adaptation and resilience outside of their EAs.

Figure 8 — Environmental and sustainability topics featuring in reviewed licence holders' EAs



The review assessed whether licence holders had considered issues of net zero carbon rail in their EAs. The findings were:

- "Yes" for 43 out of 66 (65%) licence holders;
- "Partial/Unclear" for 12 licence holders; and
- "No" for the remaining five.

The review included evidence of Scope 1, 2 and 3 GHG emissions. Out of all 66 active licence holders 31 (47%) clearly demonstrated evidence of reviewing Scope 1 and 2 emissions, and 24 (36%) clearly demonstrated evidence of reviewing Scope 3 emissions. Whilst net zero carbon had been identified in 43 (65%) of licence holders' EAs, it was not always clear whether this was an early commitment or an established programme with defined transition plans.

With regards to carbon reduction commitments, the findings showed that 35 out of 66 (53%) of licence holders have set GHG reductions targets (refer to Figure 9). Five out of 66 (8%) of licence holders had Science-Based Targets (SBTs) targets verified by SBTi (refer to Figure 10) and 15 licence holders (23%) committed to setting SBTs in line with Department for Transport (DfT) requirements. The SBTi is emerging as a best practice framework for net zero target setting and verification in line with Paris Agreement objectives of limiting global warming to 1.5°C. Setting SBT involves the following five-step process:

1. Committing, via a letter submission establishing an intent to set a SBT.
2. Developing emissions reduction target in line with the SBTi's criteria.
3. Submitting the target to SBTi for validation.
4. Communicating, announcing the target and informing stakeholders.
5. Disclosing progress made towards the target annually.

Figure 9 — Proportion of licence holders with GHG reduction commitments

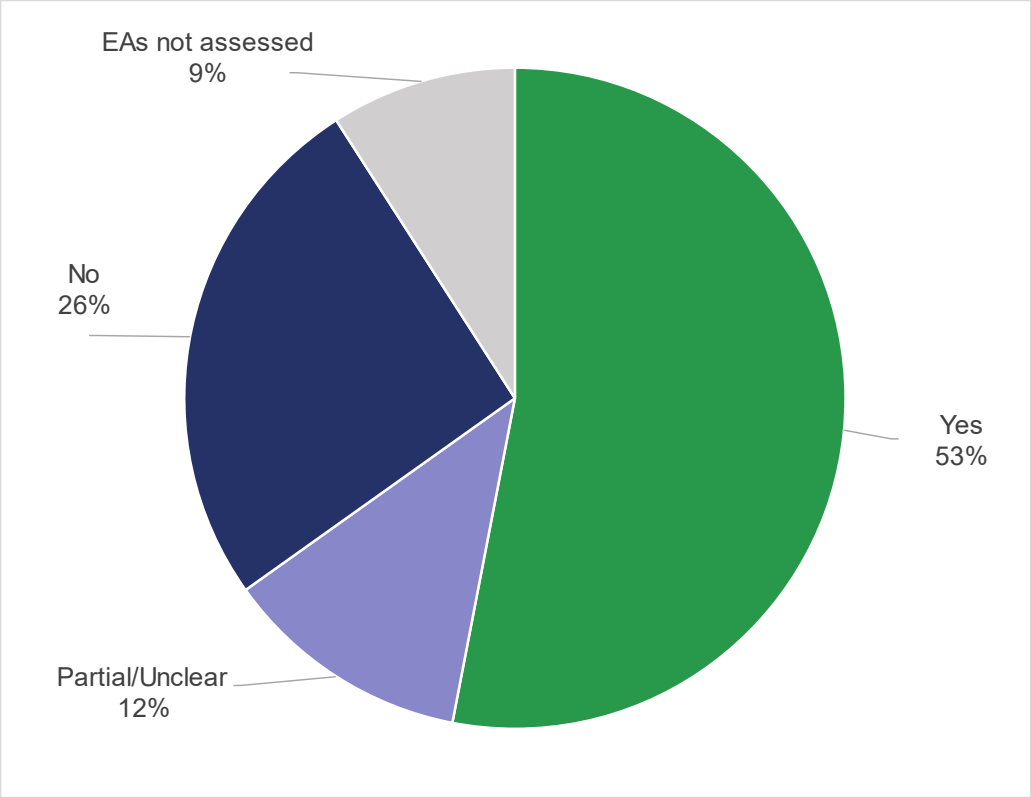
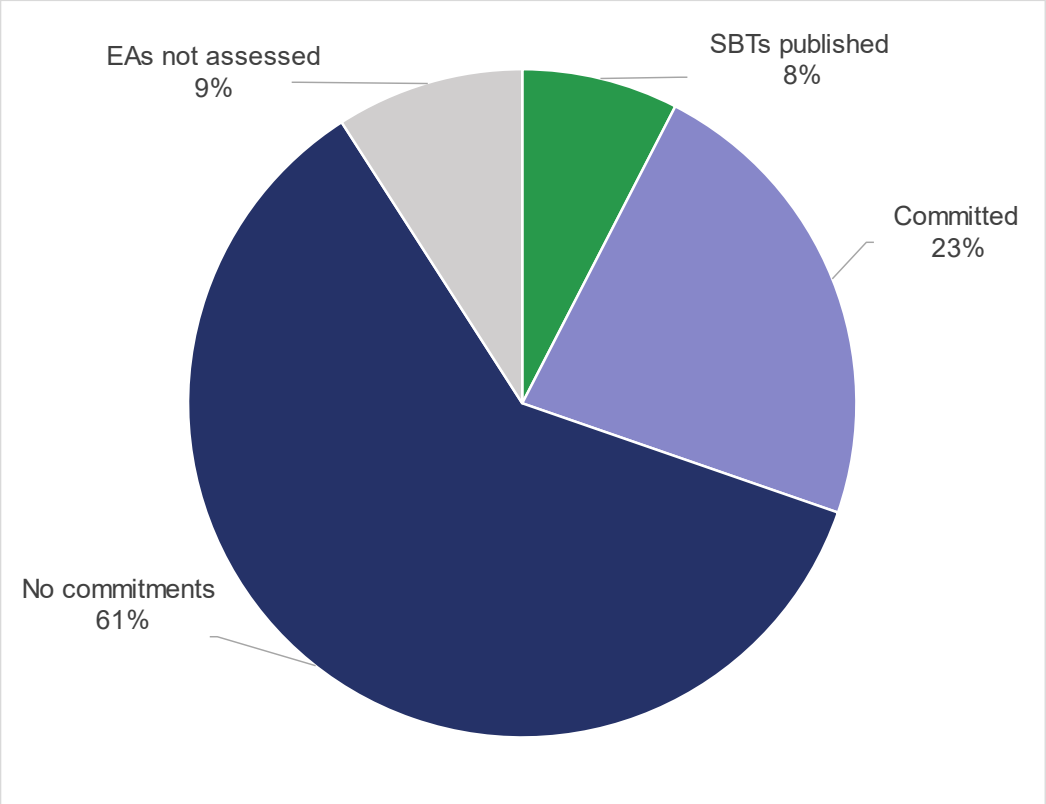


Figure 10 — Proportion of licence holders with science-based targets commitment



Across the three different elements of the EAs requirements, at the time of the assessment, common reasons for non-alignment with ORR's guidance on EAs included:

- **The Environmental policy**
  - 35% of licence holders' policies are not available via the licence holder organisation's website; and
  - 14% of licence holders' policies are not linked to specific and demonstrable activities or targets.
- **Operational objectives**
  - 17% of licence holders' objectives are not clearly demonstrating whether the licence holder has considered how to contribute to governments' environmental policy objectives; and
  - 11% of licence holders' objectives are not clearly demonstrating how the licence holder was considering the environmental impact of their suppliers.
- **Management arrangements**
  - 30% of licence holders' management arrangements are not identifying how the licence holder addresses environmental issues that impact passengers or the public; and
  - 14% of licence holders' management arrangements did not clearly identify how the licence holder makes sure environmental issues are properly considered or integrated into decision-making processes.

Alignment with the guidance also varied for different environmental and sustainability topics. Where implemented, environment (ISO 14001:2015) and energy management systems (ISO 15001:2018) require a continuous improvement cycle. Therefore, there is a requirement to drive improvements for specific environmental topics and allocate appropriate resources and roles and responsibilities as well as reporting to board level to make sure action is taken.

Feedback from the Specialist Technical Panel and licence holders' interviews identified that further scrutiny from ORR would be beneficial to encourage continual improvement and clarify requirements.

Outcomes from Stage 2: Quality review

A representative sample of 30 licence holders was selected for further review to assess the quality of the organisation's EAs. The quality review was based on evidence of the EAs alignment with defined criteria across four categories: **governance, strategy, risk management** and **metrics and targets.**

An overview of the outcomes of the quality review is presented in Figure 11. Overall, a majority of licence holders' EAs were well aligned or demonstrated best practice with regards to **governance** and **strategy** criteria.

Evidence was less consistently available with respect to **risk management** criteria, for example processes for identifying, assessing, and managing environmental risks were not always clear. Evidence of **metrics and targets** set to measure performance and enable continuous improvement across environmental issues also varied between licence holders' EAs.

As with alignment with ORR's EAs guidance, organisation size was found to be a significant influence on the overall quality of the EAs (see Table 13). Medium and smaller organisations scored particularly low against the **risk management** and **metrics and targets** criteria. For example, for **risk management**, licence holders may have committed to complying with legal requirements via their environmental policy, but there was no further evidence to support that they had reviewed legal requirements applicable to the organisation. Similarly, for **metrics and targets**, licence holders may have committed to set targets and monitor performance against KPIs, however, there was no evidence of these having been set and implemented.

Figure 11 — Overview of 30 selected licence holders' EAs percentage quality scores

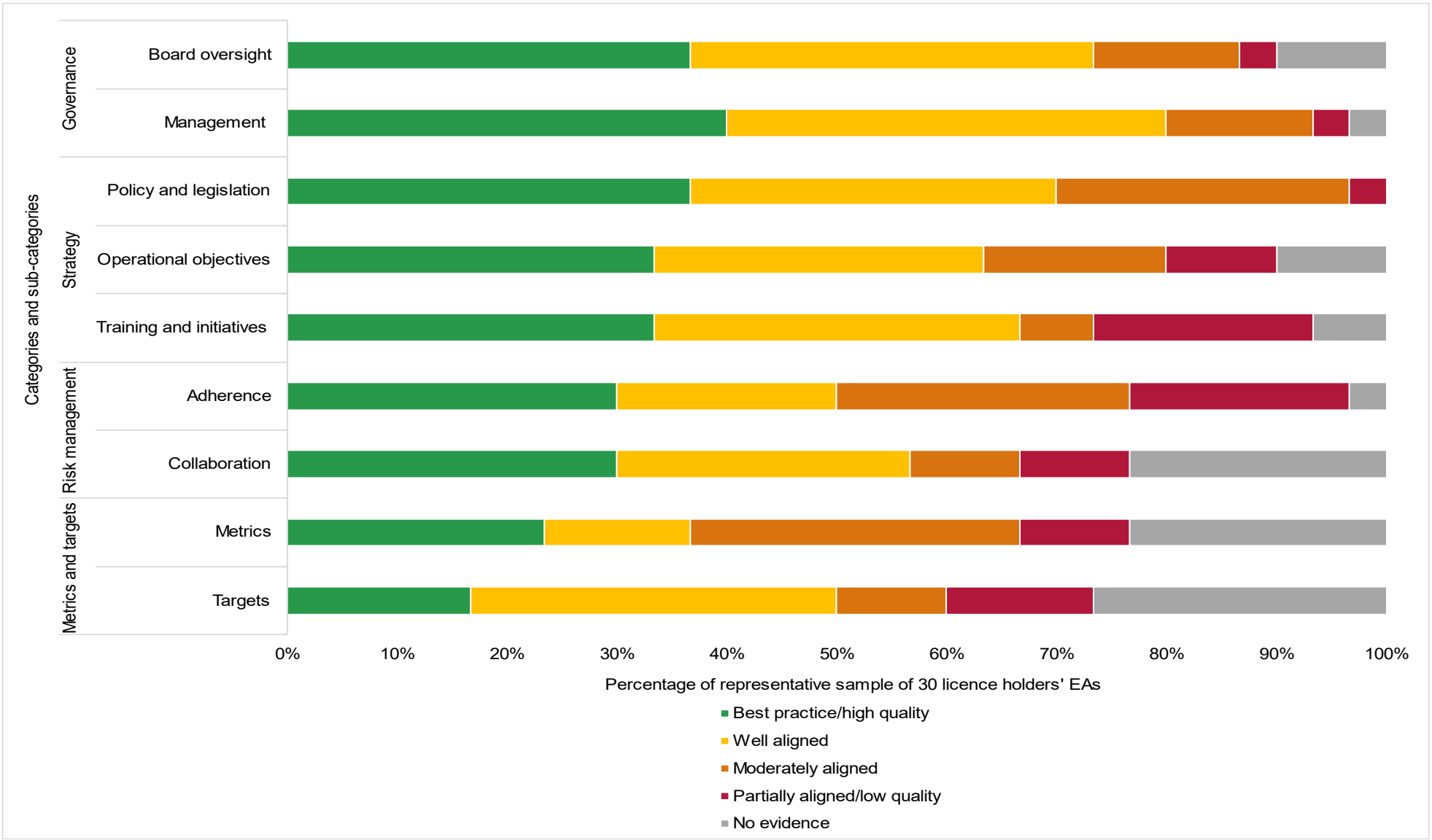


Table 13 — Average quality score by business size for 30 selected licence holders' EAs

Business size	Number of licence holders in sample	Governance	Strategy	Risk management	Metrics and targets
Large	18	3	4	3	3
Medium	10	2	2	1	1
Small	2	2	2	1	1

The average results are presented by operator type in Table 14. This shows that yellow plant and ECM operators scored highly for **governance** criteria. Charter operators did not score highly across any of the quality categories.

Table 14 — Average quality score by operator type for 30 selected licence holders' EAs

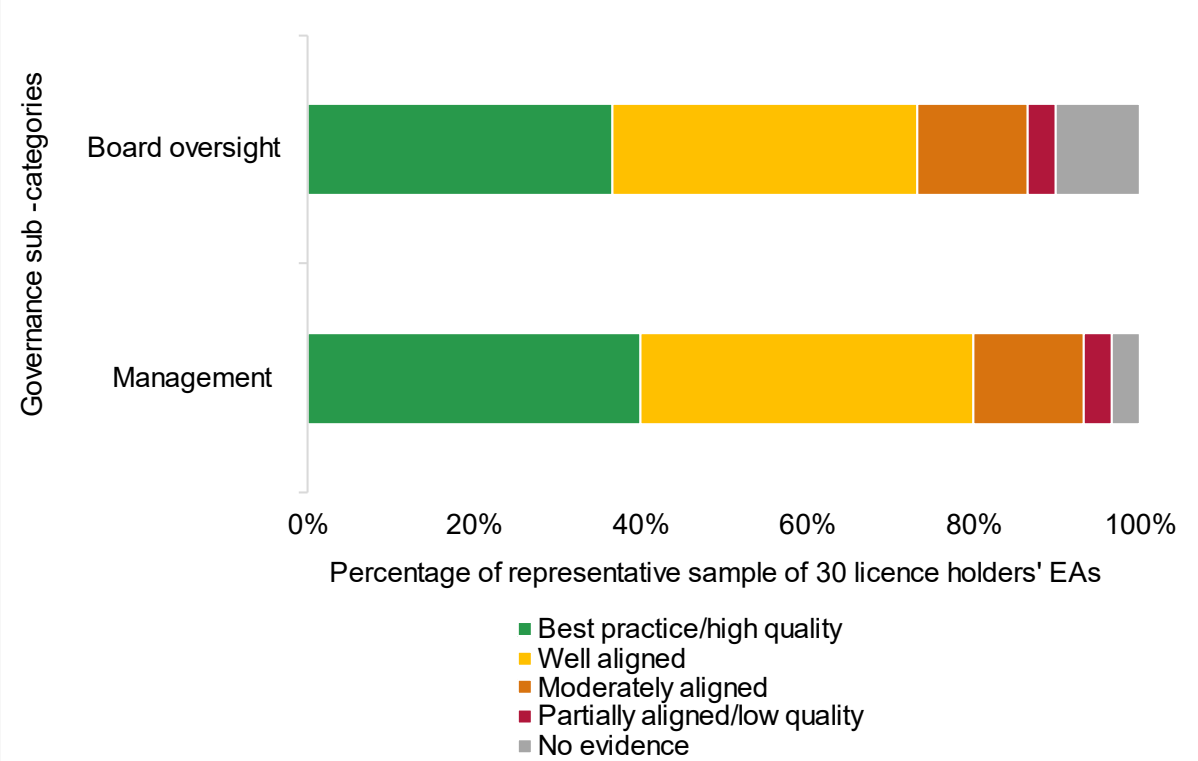
Operator type	Number of licence holders in sample	Governance	Strategy	Risk management	Metrics and targets
TOC	12	3	3	3	2
FOC	5	3	3	2	2
Charter	3	1	1	1	0
Yellow plant	3	4	4	4	2
ECM	2	4	4	3	3
Other	5	3	3	3	2

For Table 13 and Table 14, a quality score of "x" (i.e. no evidence) was counted towards the average using a score of 0. If there was no evidence to support the quality matrix research questions within the licence holders' EAs provided to ORR nor made available via the organisation's website, then it was assumed that no relevant action was being taken by the licence holder.

Governance

Board oversight and **management** criteria were reviewed to assess the quality and maturity of **governance** of the representative sample of 30 licence holders' EAs. Findings established that 77% of the representative sample of 30 licence holders' EAs were considered to be "well aligned" and demonstrating best practice. Figure 12 illustrates that 11 or 37% of the 30 licence holders' EAs demonstrated best practice or "high quality" with **board oversight** criteria, an equal number were well aligned with **board oversight** criteria. **Management** criteria had the greatest number of licence holders, 12 or 40% demonstrating best practice or "high quality", again an equal number were well aligned with **management** criteria.

Figure 12 — Percentage quality scores for governance sub-categories for representative sample of 30 licence holders' EAs



The 30 assessed licence holders' EAs were considered to align with the quality matrix criteria for **governance** where there was evidence of board or director level oversight of environmental-related risks and opportunities. Best practice was represented by evidence of environmental issues or specialist sustainability focus/working groups reporting to the board regularly. Larger organisations were found to be more likely to evidence **board oversight** or have specialist working groups in place. This is likely to be a result of corporate reporting requirements, greater awareness, and additional financial resources to support these activities.

Good practice case study: First Trenitalia West Coast Rail Ltd (trading as Avanti West Coast)

Avanti has produced a Sustainability Report since 2020, which is signed off at Managing Director level. The report sets out initiatives and results in line with the "Our Responsible Business Plan", 10-year ambition to 2031.

The environmental policy details how Avanti is currently tackling environmental-related risks with examples and opportunities. Avanti has two main ways of integrating "Environmental Matters" into decision making: (1) EMS quarterly leadership group (2) Annual Business Plan Process.

Undertaking sustainability reporting aligned with appropriate ESG frameworks, demonstrated that **"Environmental Matters" were fully integrated into decision-making processes.** This was therefore considered best practice for management of EAs.

Best practice for **management** criteria was also demonstrated by evidence of a **certified integrated management system**, which combined all relevant aspects of the organisation's commitments, systems, and processes – and was certified to an appropriate standard. These included: environment BS EN ISO 14001:2015, energy (BS EN ISO 50001:2018), Health and Safety (BS EN ISO 45001:2018) or quality (BS EN ISO 9001:2015).

It is recognised that ISO 14001 and ISO 50001 certification is a compliance requirement for passenger operators under contract to DfT National Rail Contracts (NRCs). Partial alignment to the guidance requirements was demonstrated by the management of risks through use of

environmental registers, or where the management of environmental and sustainability issues was found to be limited to a component of health and safety meetings.

Good practice case study: NYMR PLC

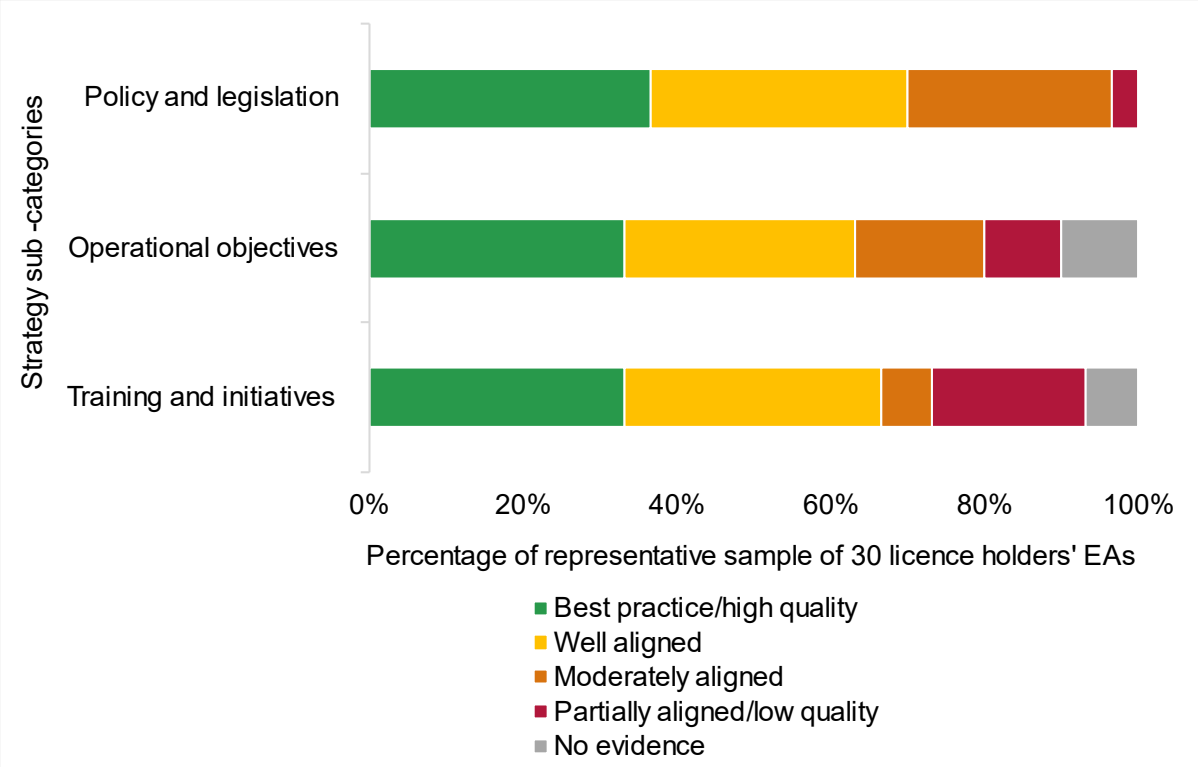
The NYMR PLC 2023 Annual Sustainability and Environment report was produced by its newly formed Environment Sustainability Board Support Group. The report identifies environmental, social, and economic actions and objectives. Going forwards there is an intention to align with the United Nations Sustainable Development Goals.

Strategy

On average, 67% of the representative sample of 30 licence holders' EAs were found to be "well aligned" or demonstrating best practice with respect to the quality matrix criteria across **strategy** requirements.

Figure 13, shows that all 30 assessed licence holders' EAs included a **policy commitment (or equivalent), to action on environmental issues.** This included committing to comply with applicable environmental legislation, and to continually improve environmental performance. Several environmental policies also incorporated specific targets, such as GHG reductions commitments.

Figure 13 — Percentage quality scores for strategy sub-categories for representative sample of 30 licence holders' EAs



Of the 30 licence holders assessed, 17 were found to have published their policy online. The quality rating was affected by the level to which the policy **demonstrated how the organisation's environmental impacts align with government policy objectives and legal requirements**, and also **incorporated a range of environmental topics**.

For the "operational objectives" sub-category, best practice was found to be represented by evidence that the licence holder has **identified the most significant environmental impacts, through systematic/materiality assessments and engagement with wider stakeholders**. Best practice was also demonstrated by licence holders' EAs having objectives in place to mitigate their environmental impacts across the breadth of their activities, from supply chain to operations.

Evidence demonstrating the organisation's review of environmental impacts and prioritising of mitigation measures, was found to be frequently supported by specific research and strategy reports, such as decarbonisation roadmaps, supplier engagement strategies and biodiversity reports.

Based on the information available at the time of the review, 16 of the full 60 licence holders' EAs clearly demonstrated consideration of all ten environmental and sustainability topics, which were included as part of this review.

Good practice case study: Transport for Wales Rail Ltd

The TfW Sustainable Development Plan 2022-2027 is aligned to the goals set out in the Wales Transport Strategy and the National Transport Delivery Plan and is supported by several strategies (i.e. Biodiversity Action Plan, Communications and Engagement Strategy, Climate Adaptation and Resilience Strategy).

TfW has published its Sustainable Development and Environmental Policy online. The objectives defined in this policy detail its support for Welsh Government in meeting Wales decarbonisation goals, such as Public Sector Net Zero 2030 targets as well as agreed voluntary standards.

For training and initiatives sub-category, evidence of best practice included **regular staff training on environmental topics**. Additional evidence included internal sustainability campaigns, training guidance and clearly established minimum requirements for competence. Challenges included delivering environmental training and awareness, and making sure staff are available to attend where there is a high priority on maintaining service.

Good practice case study: London Underground Ltd (LUL)

LUL is a subsidiary of Transport for London (TfL). Environmental arrangements held by TfL are applicable to LUL.

TfL's policy commits to environmental training. TfL has developed a one-day carbon literacy course for employees, which is fully accredited by the Carbon Literacy Project. As part of the course, employees make two pledges to reduce carbon. TfL carried out sustainability training for the executive committee and senior leaders.

TfL has considered supply chain impacts via their analysis of Scope 3 emissions and has detailed actions and targets for monitoring this. As a Supply Chain Sustainability School Partner Organisation, TfL co-funds, among other workstreams, the "Fairness Inclusion and Respect Programme" with other transport clients to drive inclusion and best practice in supply chains.

Several of the 30 licence holders' EAs demonstrated evidence of **working with supply chain organisations to collaborate on environmental initiatives** to mitigate impacts across carbon, air quality, biodiversity, and social value. This was demonstrated through industry working groups, collaboration with universities, supplier and contractor surveys and wider stakeholder and community engagement. Supply chain collaboration is becoming increasingly important for robust Scope 3 emissions measurements and reductions, vital in moving the industry towards net zero carbon. Best practice for managing Scope 3 emissions included **understanding what science-based targets (SBTs) have been set in the value chain** and moving from spend-based data to actual emissions tracking to increase accuracy.

Good practice case study: DB Cargo (UK) Ltd

DB Cargo has established a "freight belongs on rail" campaign. The aim of the campaign is to encourage more businesses to choose rail freight over road haulage for their transport needs, thus helping the UK Government to achieve its goal of net zero carbon emissions by 2050. DB Cargo is calling on the UK Government to set in legislation an achievable and deliverable target for modal shift (the switching of transportation from road to rail) thus driving greater innovation, collaboration, and accountability.

Good practice case study: Transport UK East Anglia Limited (trading as Greater Anglia)

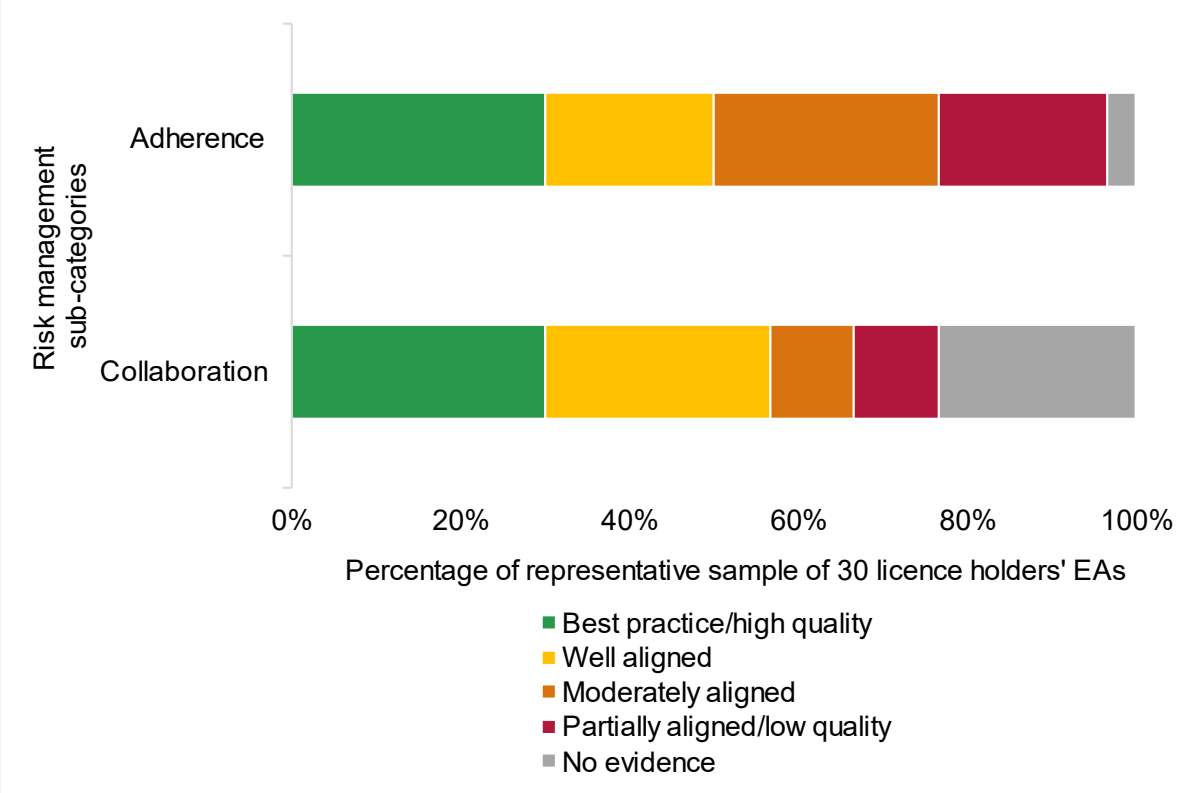
Greater Anglia is part of a nature recovery alliance, committed to restoring 20% of the region back to nature by 2050. The business has pledged areas of rail station land to help with the region's wildlife.

Risk management

Figure 14 presents percentage quality scores for **risk management** sub-categories for the representative sample of 30 licence holders' EAs. The assessment of licence holders' **risk management** included reviewing how processes for identifying, assessing, and managing environmental risks are integrated into the organisation. This incorporated consideration of how the licence holder intended to meet current legal requirements and whether the licence holder had prepared for future changes to legal requirements. This process could include gathering evidence of specific risks assessments undertaken for certain environmental topics.

Across the 30 licence holders' EAs, **certain environmental topics such as air quality and waste management were found to have been considered more consistently**. Findings also indicated that licence holders' EAs which scored highly against adherence criteria had undertaken **issue-specific risk assessments, such as air quality, climate risk or natural capital**. Lower scoring licence holders were found to show no evidence of consideration of future legislation or assessing specific environmental topics.

Figure 14 — Percentage quality scores for risk management sub-categories for representative sample of 30 licence holders' EAs



Good practice case study: Balfour Beatty Rail Infrastructure Services Ltd

Balfour Beatty Rail Ltd has conducted a materiality assessment survey to identify the sustainability topics that mattered to stakeholders. The licence holder used the assessment of a wide range of topics to discuss the development of the strategy that focuses on three key areas: environment, materials, and communities.

Good practice case study: TransPennine Trains Ltd (trading as TransPennine Express)

TransPennine Trains Ltd (TPT) is committed to reviewing compliance obligations and objectives through their integrated environmental and energy management systems, certified to BS EN ISO 14001 and ISO 50001. TPT has published an asset management policy that involves working with stakeholders to maximise performance of the whole system and takes a whole life approach to assets and supporting customers to travel by train. The TPT Sustainability Report demonstrates analysis of economic and political risks associated with responsible sourcing, and materials and waste management.

Criteria for assessing the quality of collaboration included the liaison arrangements with environmental regulators, other industry bodies and stakeholders, and the activities undertaken to mitigate or prevent adverse effects of rail operations (i.e. through collaboration with regulators/stakeholders).

Based on the evidence reviewed, 21 of the selected 30 licence holders, were found to demonstrate **regular collaboration with stakeholders across the rail industry** and were found to have best practice examples of taking action to mitigate adverse effects of climate change.

Good practice case study: ScotRail Trains Ltd

The ScotRail sustainability team works with the procurement team to deliver its sustainable procurement policy objectives and embed sustainability objectives across the supply chain.

ScotRail annually invests in biodiversity enhancement of its estate through an ongoing partnership with The Conservation Volunteers (TCV) and also engages with partners including Scottish Badgers, Scottish Wildlife Trust, and the Royal Society for the Protection of Birds (RSPB). ScotRail received awards for their contribution to biodiversity.

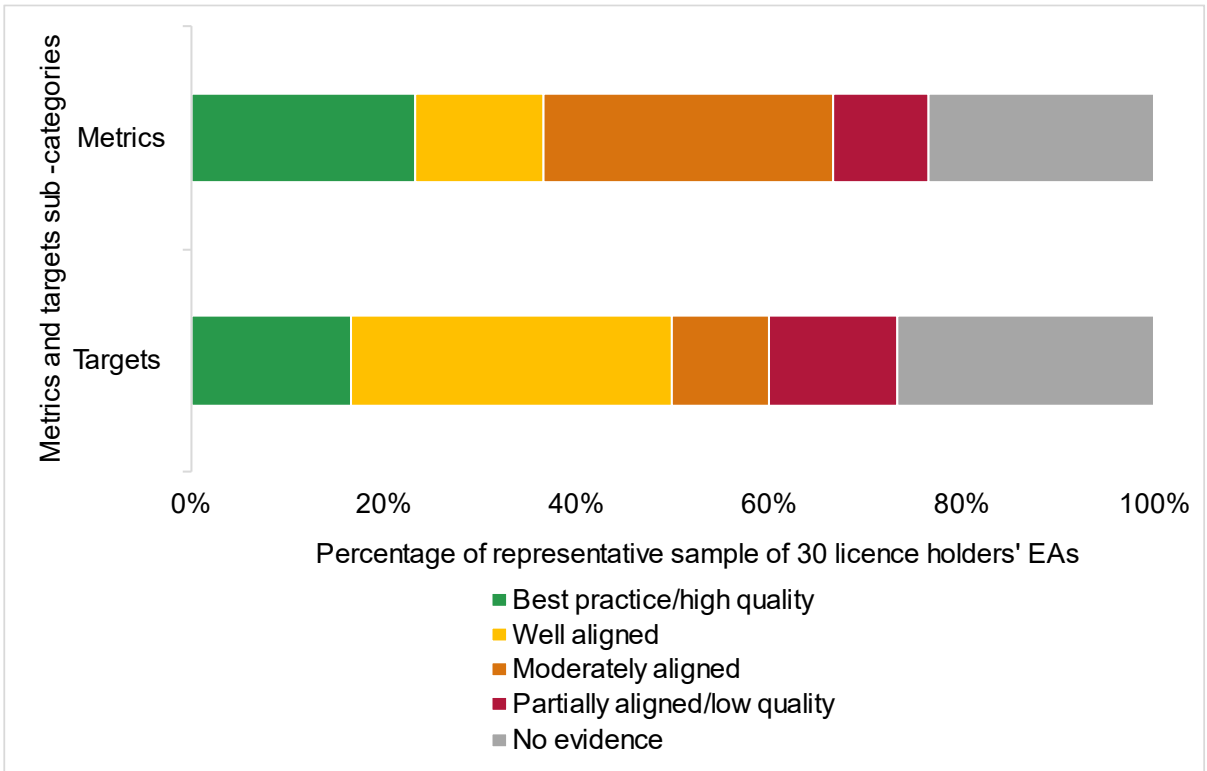
Good practice case study: Transport UK East Midlands Ltd (trading as East Midlands Railway)

East Midlands Railway published a Clean Air Report in 2022 and collaborates with RSSB to reduce impacts on air quality. East Midlands Railway have formed a clean air partnership with Camden, as the only operator still bringing diesel trains into London St Pancras. East Midlands Railway also collaborate with rolling stock companies, trialling technology for emissions reduction on the regional diesel fleet.

Metrics and targets

Figure 15 presents percentage quality scores for **metrics and targets** sub-categories for the representative sample of 30 licence holders' EAs. A high level of alignment with the **metrics and targets** criteria was considered to be demonstrated by evidence of the use of regularly reviewed and reported KPIs that focused on significant environmental and sustainability issues. This would indicate that the organisation is taking **targeted action and seeking continual improvement on priority environmental issues**.

Figure 15 — Percentage quality scores for metrics and targets sub-categories for representative sample of 30 licence holders' EAs



Good practice case study: Seilwaith Amey Cymru / Amey Infrastructure Wales Ltd (AIW)

AIW operates, manages, and maintains the Core Valley Lines assets on behalf of TfW. The AIW Environmental Management Plan 2023/24 includes a list of KPIs for waste, ethical resources, carbon, climate resilience, renewable, construction, plastic, communication. The KPIs are broken down by subject, obligation, KPI, responsibility and reporting platform.

Good practice case study: TransPennine Trains Ltd (trading as TransPennine Express)

TransPennine Trains Ltd (TPT) publishes a "Customer report" via its website, which provides an update on environmental KPIs on a quarterly basis including waste disposal, non-traction energy, traction energy, water use and carbon emissions (Scope 1 and 2). The TPT Sustainability Report identifies metrics for each of the four flagship goals, with associated KPIs. Each KPI has a baseline value or year, and reporting details the progress over the past three years with percentage change.

Best practice included at least annual reporting on KPIs and identifying the obligation, metric and assigned responsibility within the organisation.

Target criteria best practice included evidence of **ambitious environmental targets which have been published and validated** (e.g. by the SBTi for GHG reduction commitments). Ambitious targets were also considered to meet or exceed existing government or industry targets (e.g. net zero carbon by 2050 or sooner). As detailed in the findings on alignment with ORR's guidance in section *Stage 1b: Alignment with ORR's guidance*, many licence holders have set GHG emissions reduction targets. Best practice was demonstrated by licence holders with evidence of decarbonisation plans and measuring against reduction targets.

Topics such as air quality would benefit from industry-specific baseline data and targets being implemented. The RSSB Air Quality Strategic Framework and associated air quality improvement plans are working to address this, on behalf of DfT. It is understood that a number of licence holders are involved with this through the RSSB Stations Air Quality Monitoring Network (AQMN), and this has supported the delivery of air quality improvement plans.

Good practice case study: Alstom Engineering and Services Ltd

Alstom UK&I is committed to achieving net zero emissions by 2050 and has a publicly available carbon reduction plan (dated 31st March 2023), which sets out Scope 1, 2 and 3 emissions reductions targets and initiatives. Alstom has had its near-term science-based emissions reduction targets validated by the SBTi as consistent with levels required to meet the goals of the Paris Agreement.

Outcome of engagement activities

AECOM held interviews with the following licence holders:

- First Trenitalia West Coast Rail Ltd (trading as Avanti West Coast) – TOC operating in England, Scotland and Wales;
- Transport UK East Midlands Ltd (trading as EMR East Midlands Railway) – TOC operating in England;
- ScotRail Trains Ltd – TOC operating in Scotland;
- Seilwaith Amey Cymru / Amey Infrastructure Wales Ltd – Network operator of the Core Valley Lines in Wales; and

- GB Railfreight Ltd – FOC operating across Great Britain.

The five licence holders were selected based on their high level of alignment with ORR's guidance in Stage 1b as outlined in the methodology section.

During the interviews, AECOM sought to gain an overview and context of the licence holders' EAs to validate the outcomes of the quality review, as well the status of specific best practices identified. The interviews also sought to gain feedback from the licence holder on the EAs expectations, challenges, and barriers.

The interviews highlighted the level of effort, collaboration and initiatives being undertaken in challenging markets. Highlights of the interview findings are presented below.

Good practice examples:

- **ScotRail Trains Ltd - Governance**: ScotRail has a joint Sustainability Strategy as a key member of Scotland's Railway with Network Rail Scotland. Its Sustainability Programme Board that reviews actions taken in response to the joint priority areas of climate, net zero, biodiversity, environmental management and social value. ScotRail's Executive hold a Safety Health and Environment (SHE) meeting every four weeks to discuss environmental sustainability performance on a wide set of metrics.
- **Liaison with different government departments and funders**: Of the licence holders interviewed, those in Wales and Scotland liaised with the relevant government departments more frequently, increasing opportunities to align with environmental and sustainability policy objectives.
- **First Trenitalia West Coast Rail Ltd (trading as Avanti West Coast) - TOC collaboration**: Avanti and other TOCs, which are members of First Group, organise workshops to discuss environmental issues and solutions such as electrification and diesel reduction. Combined purchasing power is also used to set requirements and help drive improvements through their supply chain.
- **First Trenitalia West Coast Rail Ltd (trading as Avanti West Coast) - Training**: Avanti hosted a 12-month sustainable behaviour campaign which included e-learning, producing posters, and sharing videos focusing on their four pillars: planet, customers, people, and communities. However, service delivery is a priority and, therefore, this can affect staff availability for environmental training initiatives.
- **Seilwaith Amey Cymru / Amey Infrastructure Wales Ltd - Climate risk management**: AIW has reportedly aligned values and drivers with TfW's Sustainable Development Plan. Climate resilience is a key driver for TfW, and it has developed a Climate Change Risk Assessment Framework, as referenced in the TfW Climate Adaptation and Resilience Plan. This is currently being adopted and integrated into AIW's organisation.
- **Transport UK East Midlands Ltd (trading as EMR East Midlands Railway) - Biodiversity**: EMR has collaborated with Derbyshire Wildlife Trust to carry out a biodiversity desktop baselining exercise. This has led to the generation of site-specific biodiversity plans for each location within their portfolio. The next steps include targeted ecological surveys, which will support more detailed biodiversity management plans.
- **GB Railfreight Ltd - Initiatives**: GB Railfreight has trialled the following environmental initiatives:
  - Sustainable fuels – a multidisciplinary working group has been set up to discuss sustainable fuel supplies with suppliers.
  - Idling – to support the policy to reduce idling time, habit change is required. GB Railfreight has an ongoing project to improve site facilities to encourage operators to turn off their engines and leave train cabs.

Common challenges:

- **Streamlining guidance and requirements**: Interviewees welcomed focus on environmental issues and identified that streamlining of the requirements and reporting across the rail industry would drive efficiencies (i.e. across ORR, DfT and RSSB). This also applied to reporting across environmental topics and the alignment of contractual requirements relevant to licence holders, for example, DfT NRC.
- **Review of industry requirements:** Interviewee feedback suggested that a review of wider industry environmental and sustainability requirements would support monitoring adherence with licence conditions and enable increased understanding of the different expectations, drivers or barriers placed on licence holders (e.g. Department for Transport National Rail Contracts, Network Rail's Environmental Sustainability Policy and Strategy, and Greening Government Commitments).
- **Short term funding**: For TOCs under DfT NRCs, initiatives are required to be submitted through an Annual Business Plan Process for funding and approval. This means that focus is placed on immediate or shorter-term challenges and outcomes that can help to secure further funding, rather than allowing greater focus on long-term or multi-year goals, such as the longer-term goal of net zero, or how sites will be managed and monitored for biodiversity in the long term.
- **Focus on passenger rail**: Generally environmental and sustainability working groups within the rail industry have placed more focus on the passenger industry and less on the freight industry. Therefore, not all areas of industry are fully represented across all forums.
- **Climate change risk**: Initial climate risk assessments undertaken by the licence holders interviewed have suggested that climate change is impacting railway asset infrastructure more than the rolling stock itself (e.g. through increased flood events).

Outcomes from Stage 3: Identifying best practice and opportunities for improvement

This section presents feedback from the Specialist Technical Panel review, to provide an overview of wider industry environmental and sustainability requirements on licence holders, as well as environmental and sustainability initiatives and best practice relevant to all licence holders.

Recommendations and key actions to support best practice are provided in tables, across the quality categories and separated by environmental topic. Several recommendations reference specific licence holder groups or sectors.

Findings of the Specialist Technical Panel review

The Specialist Technical Panel review noted that there are several existing mechanisms that require licence holders' organisations to consider and mitigate environmental and sustainability impacts. These include:

- **Environmental/accessibility legislation and regulation** (applicable to licence holders dependent on operating region);
- **Corporate requirements:** Including Taskforce on Climate-related Financial Disclosures (TCFD), which would apply to most TOC/FOC owning groups (but not to smaller parties, which will have fewer pressures and were found to be less aligned to ORR guidance);
- **Contractual requirements**: Contractual environmental and sustainability requirements are a key driver for passenger operators who are under contract to the DfT (all NRCs). These operators, which provide the majority of passenger services in England and cross border intercity services across Great Britain, are contractually required to:
    - Have SBTs and a roadmap to net zero carbon by 2050;
    - Send zero waste to landfill;
    - Report a standardised environmental dataset;
    - Cooperate with industry air quality monitoring and consider ways to reduce emissions from rolling stock; and
    - Be certified to BS EN ISO 14001 and 50001.

Different franchising and concessioning bodies (e.g. Transport Scotland or TfL) may have different contractual requirements with their operators. It should be noted that open access operators and charter operators, all of whom have a licence issued by ORR, do not operate under the DfT NRCs.

- **Environmental policies**: There are number of environmental policies applicable to railway licence holders including:
    - DfT Rail Environment Policy Statement (2021): The statement covers activity relating to traction decarbonisation, air quality, decarbonising the rail estate, waste, litter and graffiti, social value, integrated travel and modal shift, land use, railway noise and water.
    - Lineside policy on biodiversity on rail estate to deliver no net loss by 2024 and net gain by 2040, which followed from the Varley review and DfT response;
    - Network Rail's Environmental Sustainability Strategy; and

  - Greening Government Commitments: which apply to publicly owned entities, including Network Rail and operators of last resort (OLR).

- **Environmental and sustainability initiatives:** The RSSB Sustainable Rail Blueprint is a key central industry initiative and resource, comprising a set of tools including:
  - Infrastructure carbon calculator;
  - Social value calculator;
  - Accessibility maturity model;
  - Air quality mapping tool; and
  - Sustainable Development Self-Assessment Framework.

RSSB is progressing an industry-wide sustainability data framework to analyse progress against sustainability goals, this is set out in the Sustainable Rail Blueprint. RSSB also organises rail industry initiatives such as the Decarbonisation Taskforce, Air Quality Steering Group and Sustainable Rail Executive.

Other initiatives identified include Network Rail's Sustainable Land Use Strategic Framework and the Green Travel Pledge being led by the Rail Delivery Group to create a recognised industry benchmark for carbon emissions.

Summary of recommendations for licence holders

In general, for licence holders to demonstrate **best practice** they should make sure they:

1. **Establish board level oversight:** Senior level commitment is important to drive requirements, demonstrate high level leadership and allocate appropriate resources.
2. **Implement an environmental or sustainability strategy which supports business goals:** A sustainability strategy should consider overall objectives and targets as well as interim targets and milestones, for example achieving net zero by a given deadline, with interim percentage reduction targets. Identifying longer term strategic environmental and sustainability objectives can reduce short term funding cycles from limiting investment horizons.
3. **Focus on actions which would have the greatest impact for the licence holder, such as traction emissions reductions**. As identified in the RSSB Sustainable Rail Blueprint, zero emissions traction will support net zero operations, improved air quality and reduced noise amongst other benefits. Whilst government has a decisive role to play in decarbonising traction, licence holders' environmental strategies should demonstrate alignment with government policy and identify opportunities. For example, where relevant and within the control of the licence holder, this may include multi-mode fleets (including bi-modes, battery, hydrogen, and sustainable fuels) that enable trains to run sustainably on both electrified and non-electrified lines.
4. **Implement integrated management systems to manage risks and support compliance.** An environmental management system creates a framework to help the organisation identify environmental impacts, and then manage activities to continually improve their environmental performance. When this is combined with other complimentary management systems, such as health and safety, energy and/or quality, processes can be streamlined to improve efficiency and facilitate decision-making and organisational learning.
5. **Work with industry to establish metrics and targets for significant and priority sustainability issues and report on progress regularly (i.e. monthly/quarterly/ annually).** Reporting regularly on environmental performance will provide an understanding of current performance, and whether the organisation is complying with applicable legislation. It should help to identify where there are opportunities for improvement. Where staff are involved in reporting this will help to increase awareness

of environmental issues. And reporting demonstrates the organisation's commitment to improving environmental performance to staff and other stakeholders.

6. **Collaborate with industry and wider stakeholders, to enable systemic change and establish a clear understanding of expectation and responsibility.** Licence holders can benefit from increasing collaboration to leverage existing industry initiatives to help inform their EAs and support sharing further environmental sustainability best practices. For example, the Rail Delivery Group is collaborating with industry to develop an idling limit which recognises technical and operational requirements for running the railway on a day-to-day basis. With regards to climate resilience, further collaboration between TOCs, FOCs and network operators would support the collective effort to mitigate the impacts of climate change and share best practice within the rail industry.

To promote adoption and embed best practice across licence holders' EAs, the results of this review and feedback from the AECOM Specialist Technical Panel, have been combined to produce a matrix of key actions and opportunities provided in Appendix D. The key actions and opportunities are organised by environmental and sustainability topic, across **governance, strategy, risk management, metrics and targets** categories.

Summary of wider industry recommendations

Findings identified the wider industry requirement to consider the different barriers and constraints to licence holders to achieving best environmental practices or alignment with the EAs guidance. Therefore, it is recommended to:

1. **Improve the inclusivity of environmental and sustainability working groups.** Currently there is a perceived focus on passenger rail, therefore consideration should also be given to areas relating to freight and other operators (including through representative bodies if necessary, where smaller organisations face challenges in resourcing this).
2. **Strengthen collaboration between TOCs, FOCs and network operators to enable focus on addressing climate change impacts** for railway infrastructure and rolling stock which will vary and will require a collective effort to address.

Summary of recommendations to ORR

In order to support licence holders and improve monitoring of adherence to the "Environmental Matters" licence condition requirements, ORR may wish to:

1. **Continue working with industry stakeholders (DfT, RSSB) on the Sustainable Rail Data Framework.** The RSSB Sustainable Rail Blueprint identifies the need for an industry-wide framework for sustainability data to support the analysis, performance, and progress against sustainability goals, inform next steps and to assist guiding investment. This work may help to address industry perceptions about the need for streamlined requirements.
2. **Focus on the few larger licence holder organisations whose EAs were considered to be less aligned with ORR's guidance or scored lower in the quality review.** Simply, larger organisations, of any licence type, would be expected to have more significant environmental impacts based on the scale of their operations. They may also be expected to have sufficient resource and awareness to develop EAs of high quality. ORR should therefore reasonably challenge where larger licence holder organisations EAs were not ranked highly.
3. **Raise awareness and understanding of the licence requirements, particularly amongst smaller operators.** Where relevant, encourage the sharing of best practice to draw on good practice from similar licence types/business size.

Appendix A – Licence holders

Licence holder	Trading name	Passenger train licence holder	Non-passenger train licence holder	Passenger SNRP holder	Freight SNRP holder	Station licence holder	Light maintenance depot licence holder	Network licence holder	Operator type
ABM Technical Solutions Ltd	ABM	N/A	N/A	N/A	N/A	Yes	N/A	N/A	Other
Alstom Engineering and Services Limited	Alstom	N/A	N/A	N/A	N/A	N/A	Yes	N/A	ECM
Arriva Rail London Ltd	London Overground	N/A	Yes	Yes	-	Yes	Yes	N/A	Other
Babcock Rail Ltd	Babcock Rail	N/A	Yes	N/A	N/A	N/A	N/A	Yes	TOC
Balfour Beatty Rail Infrastructure Services Ltd	Balfour Beatty Rail Infrastructure Services	N/A	N/A	N/A	N/A	N/A	N/A	Yes	Yellow plant
Balfour Beatty Rail Ltd	Balfour Beatty Rail	N/A	Yes	N/A	N/A	N/A	N/A	Yes	Yellow plant
CAF Rail Traincare Ltd	CAF	N/A	N/A	N/A	N/A	N/A	Yes	N/A	ECM
Caledonian Sleeper Limited	Caledonian Sleeper	N/A	N/A	Yes	Yes	N/A	N/A	N/A	TOC
Colas Rail Ltd	Colas Rail	N/A	Yes	N/A	Yes	N/A	N/A	Yes	FOC
DB Cargo (UK) Ltd	DB Cargo (UK)	N/A	Yes	N/A	Yes	N/A	N/A	Yes	FOC
DB Cargo International Ltd	DB Cargo	N/A	Yes	N/A	Yes	N/A	N/A	Yes	FOC
Devon and Cornwall Railways Ltd	Devon and Cornwall Rail	N/A	N/A	N/A	Yes	N/A	N/A	N/A	FOC
Direct Rail Services Ltd	Direct Rail Services	N/A	Yes	Yes	Yes	N/A	Yes	Yes	FOC
East Coast Trains Ltd	Lumo	N/A	N/A	Yes	N/A	N/A	N/A	N/A	TOC
Eurostar International Ltd	Eurostar	N/A	N/A	Yes	N/A	N/A	Yes	N/A	Other
First Greater Western Ltd	Great Western Railway (GWR)	N/A	Yes	Yes	N/A	Yes	Yes	N/A	TOC

Licence holder	Trading name	Passenger train licence holder	Non-passenger train licence holder	Passenger SNRP holder	Freight SNRP holder	Station licence holder	Light maintenance depot licence holder	Network licence holder	Operator type
First MTR South Western Trains Ltd	South Western Railway	N/A	N/A	Yes	N/A	Yes	Yes	Yes	TOC
First Trenitalia West Coast Rail Ltd	Avanti West Coast	N/A	N/A	Yes	N/A	Yes	N/A	N/A	TOC
Freightliner Heavy Haul Ltd	Freightliner Heavy Haul	N/A	Yes	N/A	Yes	N/A	N/A	Yes	FOC
Freightliner Ltd	Freightliner	N/A	Yes	N/A	Yes	N/A	N/A	Yes	FOC
GB Railfreight Ltd	GB Railfreight	N/A	Yes	Yes	Yes	N/A	N/A	Yes	FOC
Glasgow Prestwick International Airport Ltd	Glasgow Prestwick International Airport	N/A	N/A	N/A	N/A	Yes	N/A	N/A	TOC
Govia Thameslink Railway Ltd	Govia Thameslink Railway	N/A	Yes	Yes	N/A	Yes	Yes	N/A	TOC
Grand Central Railway Company Ltd	Grand Central	N/A	Yes	Yes	N/A	N/A	N/A	N/A	TOC
Great Central Railway (Nottingham) Ltd	Great Central Railway (Nottingham)	N/A	N/A	N/A	N/A	N/A	N/A	Yes	Other
Hanson & Hall, Rail Services Solution Ltd	Hanson & Hall	N/A	Yes	Yes	N/A	N/A	N/A	N/A	FOC
Harsco Rail Ltd	Harsco Rail	N/A	Yes	N/A	N/A	N/A	N/A	N/A	Yellow plant
Heathrow Express Operating Co Ltd	Heathrow Express	N/A	N/A	Yes	N/A	N/A	N/A	N/A	TOC
Hitachi Rail Ltd	Hitachi Rail	N/A	N/A	N/A	N/A	N/A	Yes	N/A	ECM
Hull Trains Company Ltd	Hull Trains	N/A	N/A	Yes	N/A	N/A	N/A	N/A	TOC
Locomotive Services (TOC) Ltd	Locomotive Services Limited	N/A	N/A	Yes	N/A	N/A	N/A	N/A	Charter
London and North Western Railway Company Ltd	Arriva Traincare	N/A	N/A	N/A	N/A	N/A	Yes	N/A	ECM

Licence holder	Trading name	Passenger train licence holder	Non-passenger train licence holder	Passenger SNRP holder	Freight SNRP holder	Station licence holder	Light maintenance depot licence holder	Network licence holder	Operator type
London North Eastern Railway Ltd	London North Eastern Railway (LNER)	N/A	N/A	Yes	N/A	Yes	Yes	N/A	TOC
London Southend Airport Company Ltd	London Southend Airport Company	N/A	N/A	N/A	N/A	Yes	N/A	N/A	TOC
London Underground Ltd	London Underground	Yes	N/A	N/A	N/A	Yes	N/A	Yes	Other
Loram UK Ltd	Loram UK	N/A	Yes	N/A	N/A	N/A	N/A	N/A	Yellow plant
Merseyrail Electrics 2002 Ltd	Merseyrail	Yes	Yes	N/A	N/A	Yes	Yes	N/A	TOC
MTR Corporation (Crossrail) Ltd	Elizabeth Line	N/A	N/A	Yes	N/A	Yes	N/A	N/A	Other
Network Rail Infrastructure Ltd	Network Rail	N/A	N/A	N/A	N/A	Yes	N/A	Yes	Other
Northern Trains Ltd	Northern	N/A	Yes	Yes	N/A	Yes	Yes	N/A	TOC
NYMR PLC	North Yorkshire Moors Railway	Yes	N/A	N/A	N/A	N/A	N/A	N/A	Other
Pre Metro Operations Ltd	Pre Metro Operations	Yes	N/A	N/A	N/A	N/A	Yes	N/A	Other
Rail Express Systems Ltd (charter)	Rail Express Systems	N/A	Yes	Yes	Yes	N/A	N/A	Yes	Other
Rail Operations (UK) Ltd	Rail Operations Group (ROG)	N/A	Yes	Yes	N/A	N/A	N/A	N/A	FOC
RailAdventure UK Ltd	RailAdventure	N/A	Yes	Yes	N/A	N/A	N/A	N/A	Charter
ScotRail Trains Ltd	ScotRail	N/A	N/A	Yes	N/A	Yes	Yes	N/A	TOC
SE Trains Ltd	Southeastern	N/A	Yes	Yes	N/A	Yes	Yes	N/A	TOC
Seilwaith Amey Cymru / Amey Infrastructure Wales Ltd	Seilwaith Amey Cymru / Amey Infrastructure Wales (AIW)	N/A	N/A	N/A	N/A	N/A	N/A	Yes	Other

Licence holder	Trading name	Passenger train licence holder	Non-passenger train licence holder	Passenger SNRP holder	Freight SNRP holder	Station licence holder	Light maintenance depot licence holder	Network licence holder	Operator type
South Yorkshire Supertram Ltd	Stagecoach Supertram	Yes	N/A	N/A	N/A	Yes	N/A	N/A	Other
Swietelsky Construction Company Ltd	Swietelsky	N/A	Yes	N/A	N/A	N/A	N/A	N/A	Yellow plant
The Chiltern Railway Company Ltd	Chiltern Railways	N/A	N/A	Yes	N/A	Yes	Yes	N/A	TOC
TransPennine Trains Ltd	TransPennine Express	N/A	Yes	Yes	N/A	Yes	Yes	N/A	TOC
Transport for Greater Manchester	Transport for Greater Manchester	N/A	N/A	N/A	N/A	Yes	N/A	N/A	TOC
Transport for Wales Rail Ltd	Transport for Wales	N/A	N/A	Yes	N/A	Yes	Yes	N/A	TOC
Transport UK East Anglia Limited	Greater Anglia	N/A	N/A	Yes	N/A	Yes	Yes	N/A	TOC
Transport UK East Midlands Ltd	East Midlands Railway (EMR)	N/A	N/A	Yes	N/A	Yes	Yes	N/A	TOC
Trenitalia c2c Ltd	c2c	N/A	N/A	Yes	N/A	Yes	Yes	N/A	TOC
Tyne and Wear Passenger Transport Executive	Nexus	Yes	N/A	N/A	N/A	Yes	N/A	Yes	Other
Varamis Ltd	Varamis	N/A	N/A	N/A	Yes	N/A	N/A	N/A	FOC
Victa Railfreight Ltd	Victa Railfreight	N/A	Yes	N/A	N/A	N/A	N/A	N/A	FOC
Vintage Trains Ltd	Vintage Trains	N/A	Yes	Yes	N/A	N/A	N/A	N/A	Charter
Volkerrail Ltd	VolkerRail	N/A	Yes	N/A	N/A	N/A	N/A	N/A	Yellow plant
West Coast Railway Company Ltd	West Coast Railways	N/A	N/A	Yes	Yes	N/A	N/A	N/A	Charter
West Coast Traincare Ltd	West Coast Traincare	N/A	N/A	N/A	N/A	N/A	Yes	N/A	Other
West Midlands Trains Ltd	West Midlands Trains	N/A	N/A	Yes	N/A	Yes	Yes	N/A	TOC
XC Trains Ltd	CrossCountry	N/A	Yes	Yes	N/A	N/A	N/A	N/A	TOC

Appendix B – Questions used to assess guidance alignment

Guidance category	Guidance alignment questions
Across Environmental Arrangement	Have the EAs been reviewed/updated in light of ORR guidance? (Since 21st September 2022) Does the licence holder have a BS EN ISO 14001:2015 accredited environmental management system (EMS)? Does the licence holder have an accredited Energy Management System (i.e. BS EN ISO 50001:2018) Do the EAs set out to continually improve environmental performance in light of new technology and best practice? *(Automatically yes if certified EMS in place)* Do the EAs cover/address the following key environmental topics: • Energy consumption and reduction • Environmental pollution (soil, water, groundwater) • Net zero carbon rail • Nuisance (noise, light, vibration) • Air quality • Water use (protection and conservation) • Resource efficiency/waste/circular operations • Nature/biodiversity • Climate change adaptation and resilience • Social sustainability
Environmental Policy	Is the environmental policy publicly available via a website? If not publicly available, is the policy available on request? Does the environmental policy set out a commitment to comply with relevant legislation? (*Automatically yes if certified EMS in place*) Does the environmental policy set out to do business in a way that prevents, mitigates, or remedies adverse effects? (*Automatically yes if certified EMS in place*) Is the environmental policy linked to specific and demonstrable activities, which are documented publicly and accessibly? (*Automatically yes if certified EMS in place*) Is the environmental policy signed-off by a named director accountable for the policy's delivery? (*Automatically yes if certified EMS in place*)
Operational Objectives	Do the operational objectives cover meeting current applicable legal requirements? (*Automatically yes if certified EMS in place*) Do the operational objectives anticipate future changes to legal requirements, to support compliance by the time they come into effect? Has the licence holder identified and linked objectives and targets to the most significant environmental impacts? (*Automatically yes if certified EMS in place*) Do the operational objectives include training, staff briefings or communications generally on environmental issues? (*Automatically yes if certified EMS in place*) Has the licence holder considered how to contribute to governments' environmental policy objectives, e.g. re decarbonisation and achieving Net Zero? Has the licence holder considered the environmental impacts of their suppliers? Is there evidence of review of the licence holders GHG emissions (Scope 1, 2)? Is there evidence of review of supplier GHG emissions (Scope 3)? Has the licence holder committed to emissions reductions targets i.e. SBTi or equivalent?
Management Arrangements	Do the management arrangements specify which director is responsible for environmental issues and how they, and other staff, are made aware of their responsibilities and the governance arrangements for managing these commitments? (*Automatically yes if certified EMS in place*) Do the management arrangements identify how the licence holder monitors and reports environmental performance and progress against objectives? (*Automatically yes if certified EMS in place*) Do the management arrangements identify how the licence holder ensures environmental issues are properly considered/integrated into all decision-making processes? Do the management arrangements include liaison with environmental regulators, other industry bodies and other stakeholders? Do the management arrangements identify how the licence holder addresses environmental issues that impact passengers or the public?

Appendix C – Quality matrix descriptors

		Quality matrix score				
Category	**Sub-category**	**x**	**1**	**2**	**3**	**4**
Governance	**Board Oversight**	No mention of a Corporate Social Responsibility (CSR)/sustainability/environmental board, or oversight of environmental-related risks and opportunities.	Licence holder is forming a CSR/sustainability/environmental board, to have oversight of environmental-related risks and opportunities.	Licence holder has a CSR/sustainability/environmental board.	Licence holder has a CSR/sustainability/environmental board. The licence holder demonstrates how the board has oversight of environmental-related risks and opportunities.	Licence holder has a long-standing CSR/sustainability/environmental board. This board meets regularly to discuss and tackle environmental-related risks and opportunities.
Governance	**Management**	No mention or evidence of environmental management arrangements or system.	Licence holder is starting to integrate "Environmental Matters" into decision-making, but has no evidence of supporting management systems.	Licence holder is starting to integrate "Environmental Matters" into decision-making and currently developing appropriate systems, such as an EMS, to support this.	Licence holder has integrated "Environmental Matters" into decision-making and has an established EMS in place. There is evidence of internal audits and external assurance.	"Environmental Matters" are fully integrated into the decision-making process and are of high priority and being proactively managed. There is a well-established EMS in place that is certified to ISO 14001 or equivalent. The licence holder undertakes sustainability reporting and there is evidence of alignment with ESG frameworks.
Strategy	**Policy and legislation**	Licence holder has no environmental commitments or policies in place.	Licence holder is developing a policy (or equivalent) commitment to action on environmental issues.	Licence holder has a policy (or equivalent) commitment to action on environmental issues, but it is not available publicly, or there is no mention of national policy and legislation.	Licence holder has a public policy (or equivalent) with a commitment to action on environmental issues.	Licence holder has a public policy (or equivalent) commitment to action on environmental issues and clearly demonstrate how their impacts align with government policy objectives and legislative requirements.
Strategy	**Operational objectives**	No Environmental Arrangement or demonstration of how environmental performance is integrated into how they operate.	Licence holder is starting to identify environmental impacts but have not integrated mitigation measures into their business objectives and strategy.	Licence holder have identified their environmental impacts and have started to integrate mitigation measures into their business objectives and strategy.	Licence holder have identified their environmental impacts and integrated mitigation measures into their business objectives and strategy.	Licence holder has identified their environmental impacts in order of significance, through systematic/materiality assessments and engagement with wider stakeholders. They have objectives in place to mitigate these across the breadth of their operation.
Strategy	**Training and Initiatives**	No mention of staff training or involvement in environmental initiatives.	Licence holder is starting to implement staff training in environmental topics, get involved with environmental initiatives and/or work with their supply chain on environmental issues.	Licence holder has staff training in environmental topics, are often involved with environmental initiatives and work with their supply chain on environmental issues.	Licence holder has regular staff training on environmental topics in place which is leading to the development of environmental initiatives. They are working with their supply chain on environmental issues/reduce their scope 3 footprint.	Licence holder has regular staff training on environmental topics in place and are actively working with their supply chain on environmental issues/reducing their Scope 3 footprint.

Category	Sub-category	Quality matrix score x	1	2	3	4
Risk management	**Adherence**	No mention of adherence with any legal requirements.	Licence holder is committed to complying with legal requirements via their environmental policy, but there is no further evidence to support that they have reviewed current legal requirements applicable to the organisation.	Licence holder is clearly aware of and committed to complying with all current legal requirements.	Licence holder is evidently committed to meeting all current legal requirements and is working towards potential future legal requirements (e.g. BNG). Operational objectives specify processes for identifying, assessing, and managing environmental risks, with evidence of specific risks assessments for certain environmental aspects i.e. air quality, climate resilience, natural capital.	Licence holder is evidently committed to meeting all current legal requirements, and potential future legal requirements are being specifically addressed (e.g. BNG). Licence holder is an industry leader in this area. Operational objectives specify how processes for identifying, assessing, and managing environmental risks are integrated into the organisation's overall risk management, with evidence of specific risks assessments for all significant environmental aspects i.e. air quality, climate resilience, natural capital.
Risk management	**Collaboration**	No mention of any collaboration with environmental regulators, other industry bodies and other stakeholders. No climate change mitigation or adaptation is taking place.	Licence holder has collaborated with either an environmental regulator, another industry body or other stakeholder once. They understand the potential adverse impacts of the climate on rail operations, but have not taken action.	Licence holder is liaising with regulators, industry bodies and stakeholders and starting to initiate collaboration and mitigation of adverse climate effects.	Licence holder has collaborated with environmental regulators, other industry bodies and other stakeholders on more than one occasion. They are acting to mitigate the adverse effects of climate change on rail operations.	Licence holder regularly collaborates with environmental regulators, other industry bodies and other stakeholders across the rail industry. They are a best practice example of taking action to mitigate the adverse effects of climate change.
Metrics and targets	**Metrics**	No mention of metrics or KPIs.	Licence holder has plans to set metrics and KPIs to measure environmental performance or is currently developing them.	Licence holder has set KPIs, but there is little/no evidence of measuring against them.	Licence holder has set KPIs which they measure themselves against on a regular basis.	Licence holder has excellent metrics and KPIs that could be used as a best-practice example. Annual reporting available via website that shows progress against KPIs.
Metrics and targets	**Targets**	No mention of science-based, or environmental targets.	Licence holder has plans to set science-based targets or environmental targets in the near future.	Licence holder has set science-based targets, or environmental targets or both, but there are some gaps or currently no evidence of progress towards these targets.	Licence holder has good, clear science-based targets and environmental targets with evidence of progress towards these targets.	Licence holder has ambitious environmental targets which could be used as a best-practice example. Targets are published and verified e.g. science-based targets.

Appendix D – Recommended key actions and opportunities to promote best practice

Environmental topics considered	Examples of specific industry initiatives	Governance	Strategy	Risk management	Metrics and targets
Environmental and Energy Management Systems	None identified.	**Key actions:** • Conduct management reviews in the spirit of the standards. • Compare the outputs of the systems to ESG targets. (Not always aligned.) • Avoid reliance on people of designated responsibility. Board level ownership is also required. • Seek learnings from similar industries who are over performing.	**Key actions:** • Work with common bodies to share common problems, particularly for government funded agencies. Such as being clear about what can be achieved with allocated staff and capital resources.	None identified.	**Key actions:** • Set targets or goals which are achievable based on existing resources (staff and capital budgets).
Noise and vibration	None identified.	**Opportunity:** • Risks and opportunities can be understood in terms of the financial, reputational, legal, and operational impact. Understanding what these are allows integration into the decision-making process.	**Opportunity:** • To drive a culture change in the licence holders' organisation in understanding the noise and vibration impact of activities and seeking mitigation. • Collaboration between ORR, Network Rail, RSSB and operating companies with a clear understanding of expectation and responsibility.	**Key actions:** **Construction** • Follows NR standard NR/L2/ENV/121 Managing Environmental and Social Impact of Noise and Vibration. Risks mitigated by liaison with affected residents and Section 61 application with the Local Authority detailing application of best practice. **Operation** • Noise reduced through improvements to track, train wheel brakes, public address systems, typically during infrastructure upgrades or complaint driven.	**Opportunity:** • Noise complaints are part of a wider Network Rail KPI, but there is a need to understand what constitutes unacceptable operational noise and vibration, including the impact on health. **Key actions:** • Explore additional environmental noise mapping data. • Procurement standards and specifications for new rolling stock currently follow Technical Specifications for Interoperability (TSI) requirements and similar or better should be set in the future.
Air quality and diesel pollution reduction	RSSB has established a national air quality monitoring network for railway stations in England and Wales, with linkages to stations in Scotland, which is currently establishing baseline conditions.	**Barrier:** • DfT requirements to meet Business Plan Commitments only apply to TOCs and not other licence holders at this time. This currently excludes emissions from freight and maintenance operations and requires the voluntary engagement of station operators that are not also a TOC. **Opportunity:** • A similar requirement for all licence holders to engage in the process of air quality improvement, would resolve current gaps and tensions within the process.	**Opportunity:** • The RSSB's CLEAR group provides focus to GB railways initiatives on air quality improvement required under DfT Rail Environment Policy Statement (REPS) 2021. • Scotland's Railways Air Quality Working Group has co-ordinated air quality improvement at stations through cross industry collaboration.	**Key actions:** • Follows NR standard NR/L2/ENV/124 Managing Diesel Engine Exhaust Emissions (DEEE) within Stations and Depots, details a risk assessment process for stations and depots, primarily based on requirements for workplace exposure to air pollutants. • It is applicable to all duty holders involved in the operational management of Network Rail managed stations and depos but may be adopted by train and freight operating companies. • Currently there are high level recommendations for TOCs published in the RSSB Good Practice Guide Developing Air Quality Improvement Plans that would also be relevant to other licence holders.	**Opportunity:** • The development of air quality targets for all parts of the network the public can access, is ongoing (was due 2023). DfT currently to confirm timing for stakeholder engagement or finalisation of targets. **Key actions:** • In the absence of rail specific targets, achieving the national air quality objective for hourly nitrogen dioxide concentrations, should be used as the metric most likely to flag issues of poor air quality.

Environmental topics considered	Examples of specific industry initiatives	Governance	Strategy	Risk management	Metrics and targets
Water use (protection and conservation)	Network Rail Sustainability Strategy (2020) – Water Roadmap.	**Key action**: • Adoption of United Nations Sustainability Goals by the business. **Opportunity:** • Review applicability on International Standards, such as the Alliance for Water Stewardship[1] and/or CEO Mandate[2].	**Opportunity:** • Licence holders should engage with relevant organisations Environment Agency (for environmental permits, water efficiency) and Water Companies (for water supply and foul water) to increase understanding of potential benefits of managing water in their operations. • Nature based solutions may also bring wider benefits.	**Key actions:** • Assess flood risk and drainage (e.g. historically affected locations). • Reduce the impact of wastewater, flood risk management and pollution prevention. • Development of schemes to overcome flooding and drainage issues. • Continue to seek water efficiency and environmental gains.	**Opportunity:** • There are International/British standards around water reuse[4] and water quality[5]. Also examples of Water Management Plans can be provided by AECOM. • Some examples of target setting (assume metering in place) are the reduction in water use e.g. toilet flushing or train washing.
Resource efficiency/waste/ circular operations	International perspective on railway circular practices.	**Opportunity:** • Review circular economy aspects of Network Rail Sustainability Strategy.	**Opportunity:** • All operators should review and internalise and operationalise the requirements in the following two strategies as applicable to their activities and their resource use profiles: "Materials" aspects of Rail Environment Policy Statement. Sustainable Rail Blueprint (p24, "Zero Waste").	**Key actions:** • Conduct resource efficiency workshops (Network Rail: to be completed at Governance for Railway Investment Projects (GRIP) Stage 4 (Single Option Development), Project Acceleration in a Controlled Environment (PACE) Phase 2 (Development and Selection) and updated at GRIP Stage 5 (Detailed Design) and Stage 6 (Construction Test and Commission), PACE Phase 2/3 (Project Design/Project Delivery).	**Opportunity:** • Consider RSSB Zero Waste Metrics Phase I (2022-SUS-026) – requires log-in.
Nature/ biodiversity	Network Rails Biodiversity Action Plan.	**Key actions:** • Government policy states that "planning decisions should minimise impacts on and provide net gain for biodiversity". As of 12th February 2024, BNG is mandatory under Schedule 7A of the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2021). This requires all relevant developments to achieve a minimum 10% net gain in biodiversity units relative to the Site's baseline biodiversity value. • Mandatory BNG for Development Consent Orders (DCO's) by November 2025.	**Key actions:** • Engage with adjacent landowners to improve connectivity. • Make sure partners (e.g., TransPennine Route Upgrade alliance) are producing manageable outputs and recommendations. **Opportunity:** • Network Rail has developed a register of available land (on route view), where land which currently has no other use can be requested – this request goes out to the business, with a set number of days to respond – if approved this land can be used for net gain.	**Issue identified:** • There is a risk that commitments for biodiversity gain – including maintenance (i.e. non-development) has the potential to out-strip land availability.	• The Statutory Biodiversity Metric. • The Small Sites Metric User Guide (from April 2024).

Environmental topics considered	Examples of specific industry initiatives	Governance	Strategy	Risk management	Metrics and targets
Energy consumption and carbon emissions	RSSB's Sustainable Rail Blueprint.	**Adoption of PAS 2080:2023 - Carbon management in infrastructure and built environment:** • Adoption of PAS 2080 across entire value chain. Mandating certification of value chain by certain year. A lot of what is contained within PAS 2080 unlocks all of the elements shared under Net Zero Carbon Rail.	**Strategic planning:** • Understanding current carbon emissions, moving beyond compliance to decarbonise effectively, and using data-driven strategies that take a holistic approach to sustainability. This includes embedding sustainability into all decision-making processes and reducing the carbon impact through responsible resource use, reuse, and repurposing. • Transforming organisations to deliver net zero requires a reset that places climate action at the heart of the organisation's vision, making it a part of everyone's job.	**Risk identification and assessment:** • Regular Risk Reviews with the boards should make sure risk management is an integral part of the strategic review process, with regular assessments of external and internal risks. This includes ESG risks, which are increasingly important for sustainable development. **Scenario planning:** • Engage in scenario planning to understand potential future risks and opportunities. This helps in preparing for various outcomes and ensures that the organisation can respond flexibly and swiftly.	**SMART targets**: • Set SMART targets for sustainability and performance. These targets should be aligned with the organisation's strategic objectives and relevant international standards. • Firstly, there should be a requirement to report carbon both scopes of organisations, as well as whole life carbon (WLC) for assets from supply chain to ORR.
Energy consumption and carbon emissions	PAS 2080 certification of National Highways.	**Carbon lead:** • Making sure individuals are appointed to manage carbon across organisations and appropriate responsibilities and accountabilities are communicated across the board level to make sure action is taken.	**Integrating ESG considerations:** • ESG Oversight: Assign clear responsibility for ESG issues within the board, potentially through a dedicated committee. This makes sure ESG risks and opportunities are given adequate attention and integrated into overall business strategy.	**Embedding risk management into corporate culture:** • Promote a culture where risk management is seen as everyone's responsibility, not just the board or senior management. • Encourage open discussions about risks and failures to learn from them and improve resilience.	**Performance indicators:** • Develop a set of KPIs to measure progress towards these targets. These should cover a range of areas, including environmental impact, social contribution, governance practices, and financial performance.
Energy consumption and carbon emissions	HS2 Net Zero Carbon Plan.	**Long-term orientation:** • Sustainability and Long-Term Value Creation: Align the organisation's strategy with long-term sustainability goals. This involves balancing short-term gains with the need to make sure long-term value creation for all stakeholders.	**Stakeholder engagement:** • Maintain an active dialogue with stakeholders to understand their perspectives on risks and opportunities. This can include investors, customers, employees, and the wider community. Stakeholder feedback can provide valuable insights for strategic decision-making.	**Scenario analysis:** • Use scenario analysis to understand how different future conditions could impact the organisation. This can help in preparing for risks related to climate change, technological advancements, and regulatory changes.	**Reporting and transparency:** • Implement comprehensive reporting practices to communicate progress on these metrics and targets to stakeholders. • This could involve adopting established reporting frameworks such as the PAS 2080 or considering others such as Global Reporting Initiative (GRI) or the Task Force on Climate-related Financial Disclosures (TCFD).
Energy consumption and carbon emissions	Considerate Constructors Scheme Best Practice Hub.	None identified.	**Transparency and communication:** • Enhance transparency and communication with stakeholders regarding how the organisation addresses risks and leverages opportunities. This builds trust and can contribute to a positive reputation.	**Continuous monitoring:** • Establish systems for the continuous monitoring of risks. This includes setting up early warning indicators for critical risks and regularly reviewing and updating the risk management approach as conditions change.	**Sustainability reporting:** • Adopt comprehensive sustainability reporting standards to provide transparency about the organisation's ESG performance. This can help in identifying areas for improvement and in communicating the organisation's commitment to sustainability to stakeholders.
Energy consumption and carbon emissions	Institution of Civil Engineers (ICE) carbon champions.	None identified.	• **Incorporating technology and data analytics:** Leverage Technology: Utilise technology and data analytics to gather insights and monitor risks in real time. This can support more informed decision-making and help identify trends and opportunities early.	None identified.	None identified.

Environmental topics considered	Examples of specific industry initiatives	Governance	Strategy	Risk management	Metrics and targets
Energy consumption and carbon emissions	RSSB's ongoing engagement.	None identified.	**Training and development:** • (i.e. Board education): Invest in continuous education for board members on emerging risks, ESG issues, and governance trends. • This makes sure the board has the knowledge and skills to make informed decisions. Make sure this is fed through the value chain including Suppliers.	None identified.	None identified.