Ministry of Defence

JSP 816 Element 8: Infrastructure Design, Build and Maintenance

Element 8: Infrastructure Design, Build and Maintenance

Contents

Amendment record

1. This chapter has been reviewed by the Directorate of Climate Change and Environment together with relevant subject matter experts and key environmental stakeholders. Any suggestions for amendments should be sent to: SPOCCE-EP@mod.gov.uk

Version No	Date	Text Affected	Authority
1.0	Feb 22	Published in final	Dir CCE
2.0	Dec 23	Final version	CCE
2.1	Dec 24	Annual revision and combined element and assurance framework	CCE

Terms and definitions

2. General environmental protection terms and definitions are provided in the Master Glossary of Environmental Terms and Definitions.

Must and should

3. Where this chapter says must, this means that the action is a compulsory requirement.

4. Where this chapter says should, this means that the action is not a compulsory requirement but is considered best practice to comply with the policy.

Scope

5. This policy applies to all those employed by Defence (military or civilian) as well as those working on behalf of Defence (for example, contractors). It applies to all Defence activities carried out in any location (UK or overseas).

Introduction

6. This element provides the guidance and best practice that should be followed when considering Environmental Management Systems in relation to Infrastructure Design, Build and Maintenance. It should be read in conjunction with the Infrastructure Operating Model guidance and JSP 850: Infrastructure and Estate Policy, Standards and Guidance.

Purpose and expectations

7. This element focuses on the steps that the Defence Organisation has put in place to incorporate environmental considerations into the planning, building, maintenance and disposal of Defence infrastructure. It builds on the broader approach outlined in JSP 850. It should be read and understood by those seeking to clarify their responsibilities at unit or establishment level in managing environmental policy risks generated through the lifecycle of Defence infrastructure.

E8.1 The Defence Organisation has mechanisms in place to identify and assess environmental risks, impacts and requirements associated with infrastructure throughout its entire lifecycle; from Concept, Assessment, Design, Manufacture and Construction, Use, Maintenance, and Disposal.

E8.2 The Defence Organisation has mechanisms in place to ensure environmental risks and impacts associated with infrastructure are adequately controlled and mitigated, through its entire lifecycle and including through elevation to the SRO, Head of Establishment, or competent person.

E8.3 The Defence Organisation has mechanisms in place to ensure infrastructure is compliant with environmental statute and Defence environmental regulation throughout its lifecycle. Where necessary, an exemption / waiver / concession is in place where compliance is not achievable.

E8.4 The Defence Organisation has processes in place to ensure infrastructure is maintained and operated, within its intended use to avoid environmental damage. Mechanisms are in place to communicate these processes to the workforce that operate and maintain the infrastructure.

E8.5 The Defence Organisation has mechanisms in place to ensure physical changes or operation outside the original defined design intent to infrastructure, (including major software changes), materials and associated specifications are evaluated, the risks and impacts assessed, approved, and documented.

E8.6 The Defence Organisation has mechanisms to accurately identify and manage the environmental risks and dependencies in their infrastructure supply chain.

E8.7 Lessons learned from previous infrastructure design, acquisition, build, operation, modification, maintenance and disposal activities are shared effectively across the Defence organisation.

Infrastructure Asset Management (IAM)

8. Defence infrastructure and estate policy requires that any activities relating to its through life management and operation are conducted appropriately and to a clear set of guidelines and rules. In this context, this relates to the management of the whole lifecycle of the estate and its physical assets from strategic planning, acquisition or construction through its operation and maintenance to end of life, disposal, or demolition.

9. The framework for the operation of the Defence estate is set out in the Infrastructure Operating Model (IOM), the Infrastructure Control Framework (illustrated in Figure 1) and in JSP 850.

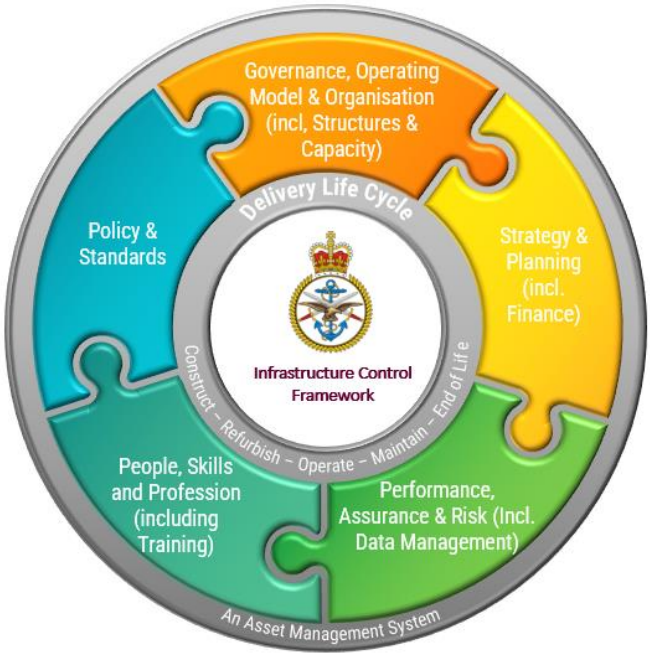


Figure 1: Infrastructure control framework

Key principles

10. Defence Organisations should ensure that environmental risks and dependencies within their organisations, infrastructure assets and their supply chain are effectively managed in accordance with the Infrastructure Operating Model (IOM) to support Defence capabilities, outputs, and communities efficiently and effectively. The key principles of the IOM should be applied throughout the whole lifecycle of the infrastructure; for environmental protection this should include:

a. management of infrastructure as a strategic asset through a structured approach with clear line of sight from Defence's overall infrastructure strategy through to operation, management, and delivery activities at unit level.

b. a clear and communicated minimum set of common parameters and processes which individuals and organisations are to comply with to ensure the efficient and effective operation of the Defence estate.

c. clarity and separation of roles with organisations operating across defined interfaces.

d. clarity of individual accountability and responsibility reinforced through appropriate mechanisms for holding to account and performance reporting.

e. clarity of delegation of Infrastructure funding and liabilities with financial decision making placed with those who understand what is required and can prioritise expenditure to best effect.

f. clarity of organisational and individual competence where staff develop and maintain the skills, knowledge, experience, and behaviours (SKEB) required to be effective to deliver their assigned roles.

g. clear and appropriate management information where decisions are taken based on accurate, robust, and assured data and analysis.

h. clear behavioural expectations where organisational and individual ways of working are consistent with pan-Defence behavioural principles and support effective and efficient delivery of 'best for Defence' outputs.

Compliance with legislation

11. Whether in the design, build or maintenance of the Defence Estate, stakeholders are required to comply with the direction of all relevant legal requirements governing any activities being undertaken on the Estate. These may include Defence Infrastructure Fire Standards, Town Planning legislation, Building Regulations, and other Health and Safety legislation. Where Derogations, Exemptions and Disapplications (DEDs) exist, the provisions of this policy and the accompanying guidance in Part 2 of JSP 850 should ensure that the delivery of infrastructure on the estate does not fall short of the standards expected by legislation and Government advice.

12. Any conflict or concerns in relation to policy or legislation which might prevent compliance should be raised with the functional owner DCDS (Mil Cap), or other such responsible authority, for resolution and guidance on how to proceed.

13. Where environmental legislation, international treaties and protocols include specific provisions for the application or non-application to Defence or national security, JSP 850 should be read in conjunction with JSP 418, to determine how such provisions should be interpreted and applied.

Strategy and planning

14. Environmental Protection should be embedded into infrastructure and assets, at the earliest possible stage of the Whole Life Asset Management (WLAM) life cycle; therefore, it is during the initial design stages where there is the greatest opportunity to ensure that infrastructure is environmentally safe. Environmental impacts to be managed in constructing, operating, and maintaining the infrastructure, as well as those caused by the auxiliary facilities should be evaluated and risk assessed considering all the options available. In most cases, this will include identification of appropriate standards and improvements to the design to reduce detrimental environmental impact.

Lifecycle delivery

Acquisition/Construction

15. During infrastructure or asset construction, key decisions related to design amendments, change in materials, or change in design will impact the environmental risks in future operation and maintenance. A change management process should be followed, to re-assess risks and evaluate the impact of the proposed changes. During construction (and throughout the WLAM lifecycle), it is essential that organisations and individuals enact their roles and work across interfaces within a capability framework, which is covered more in the IOM. The main activities undertaken by Defence organisations sit within the Capability Framework which are depicted in Figure 1.

16. The MOD delivers new infrastructure assets through the procurement of construction services or the procurement of the asset itself, including the refurbishment and extension of existing MOD infrastructure assets. All such new build, buildings, refurbishment and extensions should adhere to the agreed Building Performance Standards (BPS) (formerly JSP 315). Where no specific BPS is provided, procurement and design should reflect the generic guidance from the BPS, and clearance should be obtained from the BPS team on how to proceed.

17. The approach to capital investment for new infrastructure should consider the whole lifecycle of assets in terms of meeting MOD policy, for example the carbon impact at build, during operation and at end of life. The BPS should provide evidence to support investment decisions and demonstrate compliance with the relevant performance specifications. It should also record how environmental factors have been considered.

18. Throughout the lifecycle of an infrastructure asset there should be an ongoing requirement to ensure that an appropriate EMS is incorporated into the management of the asset. JSP 850 provides an overview and highlights some of the key environmental assessment tools and approaches to do this.

Operating and maintaining infrastructure assets

19. During the in-service phase of the WLAM life cycle the appropriate and compliant use and maintenance of infrastructure should be included in the relevant risk assessments and aligned with the environmental case. Environmental impacts and corresponding risks of maintenance activities should also be risk assessed including not only the requirement for effective maintenance to ensure continued environmentally sound operation but also the impacts and risks of conducting maintenance activities themselves, hazardous substances, emissions, habitat damage and so on. Where infrastructure is authorised to be used outside its normal operating envelope, relevant environmental risk assessments should be updated to reflect the new situation.

20. For infrastructure assets that are in the in-service phase of the WLAM life cycle, Defence organisations infrastructure teams should capture all required maintenance work planned for their assets as a programme of work (PoW) in their Annual Delivery Plan (e.g. Command Infrastructure Delivery Plan (CIDP)). Defence organisations should work with their delivery agents to develop business cases and seek necessary approval and funding for their required maintenance arrangements based upon a priority order with environmental related requirements given high priority.

21. Infrastructure planning activities will identify the need to support previously agreed operational capabilities in a way that extends the life of a facility, mitigates infrastructure risks, or delivers an improvement that delivers infrastructure efficiencies. These requirements should all be captured in Annual Delivery Plan (e.g. CIDPs).

22. All minor repairs and maintenance on infrastructure assets should be included in the Future Defence Infrastructure Services (FDIS) contract, which covers all sites and establishments on the UK Defence estate, except those with long-term contracts already in place (such as current PFIs). FDIS is the delivery programme for Facilities Management (FM), Accommodation Management and Training Management on the UK Defence estate. This includes all Hard FM services required to maintain and support operational outputs and capability.

Monitoring and reporting

23. Infrastructure environmental issues should be raised at all levels within the Infrastructure Enterprise and included and prioritised within work plans and schedules. There should be a clear rule set and escalation process with communication routes to and from all levels within the Infrastructure Enterprise and the IOM. For example, site level infrastructure environmental issues should be raised and addressed at the relevant site level Infrastructure Community Monthly Meeting (ICMM), with a clear escalation route right up to the Infrastructure Joint Committee (IJC) for serious environmental issues where they have a wider Defence impact. Raising environmental concerns is set out in Element 11 and reporting environmental occurrences is set out in Element 10.

24. Defence organisations should document (with the help of all stakeholders concerned) and communicate across the Defence organisation, and wider Defence where necessary, any lessons learned from previous infrastructure design, acquisition, manufacture, operation, modification, and maintenance activities, where they may prevent recurrence of any environmental issues.

25. All environmental concerns on the Defence estate and any required actions must be communicated to the relevant stakeholders (for example users or maintainers) in a timely manner as identified in the Defence organisation’s communications plan. Procedures must be in place to notify users and potential users of infrastructure that is determined to be defective or inappropriate for specific uses.

26. Continual and coherent performance management and assurance is critical to ensuring Defence infrastructure is delivered and maintained to meet user requirements within policy, standards, and funding constraints. Defence organisations should monitor performance against the agreed PoW captured in their CIDPs and focus on maintaining a compliant estate against the cost and time of programme delivery.

27. A culture of continual improvement, collaboration and communication throughout the IOM and whole life management activities is required to ensure all organisations learn from experience, to improve their approaches to environmental protection, in an efficient and effective way.

Environmental considerations in reviewing infrastructure performance

28. Continuous and coherent performance management and assurance is critical to ensuring Defence infrastructure is delivered and maintained to meet user requirements within policy, standards, and funding constraints. Integral to this approach is the need to

incorporate environmental reporting standards and KPIs.

29. Environmental reporting produced in support of infrastructure performance, should be coherent with CIDPs which themselves provide the targets against which delivery is managed. In developing and agreeing financial and non-financial quantifiable targets and metrics, Customer and Delivery Agents should ensure that all required outputs are covered, and that Delivery Agents can provide necessary reports to show this.

30. Environmental performance reporting and KPIs should also reflect that the Department has a responsibility to manage and develop its infrastructure in a responsible and sustainable manner. Infrastructure developed should ensure it meets user requirements in an affordable manner, whilst remaining compliant with strategic direction and statutory obligations, policy, and infrastructure standards. JSP 850 outlines the division of responsibility between Head Office and the Defence Infrastructure Organisation, which has multiple roles within Safety.

31. The Defence Infrastructure Organisation (DIO):

a. is the Estate Steward and lead authority across Defence for the management of Defence Infrastructure (often referred to as the 'Infrastructure expert').

b. is the 'delivery agent' through which most of the Defence Infrastructure activity is coordinated.

c. also provides Head Office with assurance on estate condition and policy/standards compliance through an annual Estate Stewardship Report.

32. Establishments should seek to ensure that they understand and are able to support DIO's requirements for stewardship of the Defence estate and the associated reporting that enables assessment on how progressed DIO is in its objectives.

Disposing of infrastructure assets

33. Through infrastructure planning, customers will identify and raise appropriate requirements for disposal of estate assets no longer required and termination of related contracts. Requirements are captured in Annual Delivery Plan (e.g. CIDPs). Following infrastructure subject matter experts (SME) checks of wider alignment of any other proposals for estate use, Defence organisations and the DIO will programme the disposal activity, including any studies or other enabling work as per the guidance set out in JSP 850.

Infrastructure risk and review

34. The Infrastructure Operation Model (IOM) provides a framework for organisations to identify and manage infrastructure risks (in accordance with JSP 892), so they can deliver Defence capabilities and outputs. Defence organisations that manage or operate on the Defence estate must have their own internal risk management processes in place which are in accordance with the IOM and JSP 892. Risk assessment is covered in more detail in Element 4.

35. Risk management must be conducted and be in accordance with the provisions of JSP 892 to ensure a consistent and evidenced approach. Risk management practices will be subject to review by the Infrastructure Function Owner. Any significant risks identified should not be considered solely or in isolation.

36. Infrastructure is an integral part of the Defence Performance, Risk and Assurance Framework and the Quarterly Programme and Risk Reviews (QPRR). Head office measures all Defence organisations infrastructure performance against annual objectives set in the Defence Plan and associated Command Plans, and against the medium / long term plans and targets set out in the Strategy for Defence Infrastructure (SDI), Strategic Infrastructure Deliver Direction (SIDD) and the associated medium / long term TLB Infrastructure Management Plans (TIMPs).

37. In delivering and performance managing Defence Infrastructure, customers, with the support of infrastructure SMEs and delivery agents, are responsible for identifying and managing risks that could impact on outputs, capability and reputation, escalating to Head Office where Enterprise level impacts are identified.

Roles and Responsibilities

38. Accountability, roles and responsibilities for managing the environment across the whole scope, activities and lifecycle of the Defence Estate are articulated in the IOM. Those with clear environmental responsibilities for Defence establishments such as the Head of Establishment (HoE) must be formally appointed into such roles and once appointed they should be able to demonstrate that they have accepted that role. Further detail on HoE responsibilities are covered in Annex D to JSP 815 and JSP 850.

Element summary

39. Defence Organisation leaders should ensure that their organisation:

a. takes steps to identify and assess environmental risks, impacts and requirements and respond to them through mitigating actions.

b. addresses any environmental risks in a formal and structure manner, to aid Defence in its objective of protecting the environment from harm.

c. understands, considers, and reduces environmental harm throughout the whole Infrastructure lifecycle.

d. clearly sets out roles and responsibilities within the organisation to respond effectively.

e. has mechanisms in place to identify and assess environmental risks and requirements associated with infrastructure throughout its entire lifecycle.

f. has mechanisms to ensure risks associated with infrastructure are adequately controlled and mitigated through its entire lifecycle and where necessary elevated to the appropriate management level.

g. has mechanisms to ensure infrastructure is compliant with statute or a disapplication or derogation throughout its lifecycle and where necessary an exemption is in place where compliance is not achievable.

h. has processes in place to ensure infrastructure is maintained and operated within defined design intent. Mechanisms are in place to communicate these processes to the workforce that operate and maintain the infrastructure.

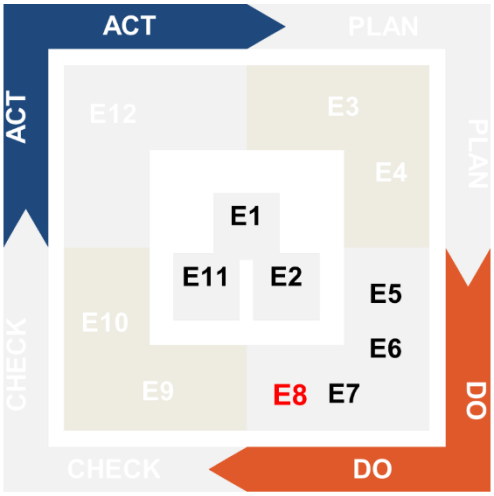
i. has mechanisms in place to ensure physical changes to infrastructure are evaluated, risk assessed, approved, and documented.

j. has mechanisms to accurately identify and manage the environmental risks and dependencies in its infrastructure supply chain.

k. learns lessons from previous infrastructure design, acquisition, build, operation, modification, and maintenance activities and they are shared effectively across the Defence organisation.

Plan-Do-Check-Act (PDCA) Cycle

40. This diagram is designed to illustrate where this, and all the elements of JSP 816, fit into the PDCA cycle.



Element assurance framework

41. The focus of this element requires that the organisation has put in place frameworks and controls to incorporate Environmental requirements into the lifecycle of infrastructure.

42. The expectations and performance statements for this element are set out in the following pages.

Expectations and performance statements

Element 8: Infrastructure Design, Build and Maintenance

The expectations in this element are:

E8.1 The Defence Organisation has mechanisms in place to identify and assess Environmental risks, impacts and requirements associated with infrastructure throughout its entire lifecycle; from Concept, Assessment, Design, Manufacture and Construction, Use, Maintenance, and Disposal.

E8.2 The Defence Organisation has mechanisms in place to ensure environmental risks and impacts associated with infrastructure are adequately controlled and mitigated through its entire lifecycle and including through elevation to the SRO, Head of Establishment, or competent person.

E8.3 The Defence Organisation has mechanisms in place to ensure infrastructure is compliant with environmental statute and Defence environmental regulation throughout its lifecycle. Where necessary, an exemption / waiver / concession is in place where compliance is not achievable.

E8.4 The Defence Organisation has processes in place to ensure infrastructure is maintained and operated within its intended use to avoid environmental harm. Mechanisms are in place to communicate these processes to the workforce that operate and maintain the infrastructure.

E8.5 The Defence Organisation has mechanisms in place to ensure physical changes or operation outside the original defined design intent to infrastructure, (including major software changes), materials and associated specifications are evaluated, the risks and impacts assessed, approved, and documented.

E8.6 The Defence Organisation has mechanisms to accurately identify and manage the Environmental risks and dependencies in their infrastructure supply chain.

E8.7 Lessons learned from previous infrastructure design, acquisition, build, operation, modification, maintenance and disposal activities are shared effectively across the Defence Organisation.

Documents often associated with this element:

- 10-year infrastructure management plan
- Agenda and minutes of the Equipment and Support steering group meetings
- Annual Budget Cycle (ABC) planning (for inclusion of Environmental requirements such as routine calibration
- Command Infrastructure Delivery Plan (CIDP)
- Command / Corporate plan
- Contract management and supply chain management plans
- Corrective action plans arising from assurance, equipment design and infrastructure design
- Defence Organisation business plans
- Defence Organisation Operating Model
- Defence Organisation EMS
- Exemplar Environmental case reports
- Establishment Management Plans
- Project plans including Royal Institute of British
- Architects (RIBA) stages

Expectation 8.1 The Defence Organisation has mechanisms in place to identify and assess Environmental risks, impacts and requirements associated with infrastructure throughout its entire lifecycle, from Concept, Assessment, Design, Manufacture and Construction, Use, Maintenance, and Disposal.

Unsatisfactory	Limited	Moderate	Substantial
• The Defence Organisation does not have a mechanism in place to identify and assess infrastructure Environmental risks, impacts and requirements.	• The Defence Organisation has a mechanism to identify and assess Environmental risks, impacts and requirements associated with infrastructure, however it does not take account of the full infrastructure lifecycle or is not consistently implemented.	• The Defence Organisation has a mechanism to identify and assess Environmental risks, impacts and requirements throughout the entire infrastructure lifecycle. • The mechanism is consistently implemented. • Infrastructure risk assessments include specific consideration of as-built use and any change of use.	• Risks, impacts and requirements are formally identified and re-assessed on a continual basis throughout the infrastructure lifecycle (including change of use and / or retrofitting), and lessons learned are shared and applied across the Defence Organisation.

Expectation 8.2 The Defence Organisation has mechanisms in place to ensure environmental risks and impacts associated with infrastructure are adequately controlled and mitigated through its entire lifecycle and including through elevation to the SRO, Head of Establishment, or competent person.

Unsatisfactory	Limited	Moderate	Substantial
• Where Infrastructure Environmental risks and impacts are identified there are no mechanisms in place to control and mitigate those risks.	• The Defence Organisation has a mechanism to control and mitigate infrastructure Environmental risks and impacts however it does not take account of the full infrastructure lifecycle. • Risks are infrequently elevated to the appropriate SRO, Head of Establishment, and competent person however this is not consistently undertaken across the Defence Organisation.	• The Defence Organisation has a mechanism to control and mitigate infrastructure Environmental risks and impacts, throughout the entire lifecycle. • Risks are consistently elevated to the appropriate, SRO, Head of Establishment, and competent person across the Defence Organisation. When elevated the SRO, Head of Establishment or competent person acts on elevated risks, however responses are sometimes insufficient.	• Processes and controls to manage Environmental risks are regularly updated, following identification of new risks and re-assessment of existing risks, lessons learned are applied. • SRO, Head of Establishment, and competent persons act on risks elevated and ensure risks are controlled and mitigated.

Expectation 8.3 The Defence Organisation has mechanisms in place to ensure infrastructure is compliant with environmental statute and Defence environmental regulation throughout its lifecycle. Where necessary, a derogation, exemption or disapplication / waiver / concession is in place where compliance is not achievable.

Unsatisfactory	Limited	Moderate	Substantial
• The Defence Organisation does not have mechanisms in place to ensure infrastructure is compliant with statute. • The Defence Organisation does not have mechanisms in place to ensure that any requirements for legislative DEDs are identified, recorded, and implemented at the earliest possible stage. • Exemptions / waivers / concessions are not routinely in place where statutory and regulatory compliance is unachievable.	• The Defence Organisation has mechanisms in place to ensure infrastructure is compliant with statute and Defence regulation, but these are but these are not reviewed when there is a change of use proposed or realised. • The Defence Organisation has some mechanisms in place to ensure legislative DEDs are identified. However, these are not implemented at the earliest stage, or monitored for expiration and change during the infrastructure lifecycle. • Exemptions / waivers / concessions are put in place where statutory and regulatory compliance is not achievable, but this only occurs late in the lifecycle.	• The Defence Organisation has mechanisms in place to ensure infrastructure is compliant with statute and Defence regulation and these are reviewed throughout the infrastructure lifecycle. • Legislative DEDs are identified, recorded, and implemented at the earliest possible stage. There is some monitoring in place to identify expiration and change during the infrastructure lifecycle. • Exemptions / waivers / concessions from compliance with statute and Defence regulations are well understood, recorded, and monitored centrally. All exemptions / waivers / concessions are requested early in the lifecycle.	• The Defence Organisation actively monitors changes in statute, Defence regulation, technology, social, environmental, and political influences, and applicability to retrofitted infrastructure to remain compliant with changing requirements. • Where required, infrastructure is upgraded, refurbished, retrofitted and / or decommissioned to remain compliant with requirements. • Well-established mechanisms are in place to identify, record and implement derogations and disapplication's at the earliest possible stage. These are actively monitored for expiration and change during the infrastructure lifecycle. • Exemptions / waivers / concessions are approved for defined periods early in the lifecycle and compliance with statute and Defence regulation is reviewed prior to the expiry date.

Expectation 8.4 The Defence Organisation has processes in place to ensure infrastructure is maintained and operated within defined design intent to avoid environmental harm. Mechanisms are in place to communicate these processes to the workforce that operate and maintain the infrastructure.

Unsatisfactory	Limited	Moderate	Substantial
• The Defence Organisation has no processes in place to maintain and operate infrastructure within defined design limits and operating specifications. • Design limits are not defined or communicated to those who interface with the infrastructure.	• The Defence Organisation has a largely reactive approach to maintenance. Where planned maintenance is in place there is no consistent prioritisation process and delays are evident. • Intended use limits are defined, but not well communicated on a timely basis to those who interface with infrastructure.	• The Defence Organisation has successfully implemented an effective preventative maintenance regime which includes a prioritisation process. • Environmental critical infrastructure is identified and is subject to specific procedures and protocols and this is communicated. • Risks which impact effectiveness of Environmental critical infrastructure controls are elevated promptly, and the continued use of the infrastructure is avoided where possible. • Intended use and operating limits are clearly defined and communicated to those who interface with infrastructure. This includes where changes are made to the intended use or operating limits of infrastructure out of its initial intended use. Where operating limits are exceeded, these are monitored, with documented action taken to maintain operating capability.	• There is evidence of an effective and predictive maintenance regime across the Organisation. • Intended use and operating limits are regularly reassessed so that infrastructure is maintained and operated within those intended use and operating limits. Those who interface with infrastructure are actively consulted during risk reviews and findings are communicated to them.

Expectation 8.5 The Defence Organisation has mechanisms in place to ensure physical changes or operation outside the original defined design intent to infrastructure, (including major software changes), materials and associated specifications are evaluated, the risks and impacts assessed, approved, and documented.

Unsatisfactory	Limited	Moderate	Substantial
• Physical changes to infrastructure are not formally evaluated, risk and impacts assessed and documented.	• The Defence Organisation has mechanisms in place to ensure physical changes to infrastructure are evaluated. However, a suitable and sufficient risk and impact assessment is not consistently performed, and controls are not formally documented or communicated.	• The Defence Organisation has mechanisms in place to ensure the majority of physical changes to infrastructure are evaluated, risk and impact assessed and documented with some gaps present. • Environmental controls are formally approved by an appropriately competent person before being communicated across the Defence Organisation.	• Physical changes to infrastructure are anticipated based on ongoing risk and impact assessments of the Defence Organisation's infrastructure portfolio. • Changes are evaluated and risk and impact assessed regularly. Input is encouraged from stakeholders who maintain, use, and are affected by the operation of this infrastructure.

Expectation 8.6 The Defence Organisation has mechanisms to accurately identify and manage the Environmental risks and dependencies in their infrastructure supply chain.

Unsatisfactory	Limited	Moderate	Substantial
• There is no consideration for infrastructure Environmental risk management throughout the Organisation's supply chain.	• Infrastructure Environmental risk management is reliant upon the supply chain providing details of environmental risks. • Risk ownership is not well defined with respect to dependencies between organisations and the supply chain.	• Infrastructure Environmental risks are shared openly between organisations and their supply chains. • Risk ownership is understood and dependencies between organisations documented.	• Infrastructure Environmental risks are shared between organisations, and these are recorded, regularly monitored, and collaboratively mitigated and managed. • Risk ownership is well understood and dependencies between organisations documented. Where dependencies are present these are proactively managed and deconflicted.

Expectation 8.7 Lessons learned from previous infrastructure design, acquisition, build, operation, modification, maintenance, and disposal activities are shared effectively across the Defence Organisation.

Unsatisfactory	Limited	Moderate	Substantial
• Infrastructure information is not held centrally for the whole Defence Organisation to access. • Lessons learned from previous infrastructure design, acquisition, build, operation, modification, maintenance, and disposal activities are not formally documented. • Procedures are not in place to notify potential users of infrastructure determined to be defective or inappropriate for specific uses. • There is no evidence that lessons learned have occurrence or recurrence of Environmental impacts.	• Infrastructure information is maintained centrally, however not effectively communicated across the Defence Organisation. • Lessons learned from previous infrastructure design, acquisition, build, operation, modification, maintenance, and disposal activities are documented but are not effectively communicated across the Defence Organisation. • Procedures are in place but are not consistently used to notify potential users of infrastructure determined to be defective or inappropriate for specific uses. • There is some evidence that lessons learned have occurrence or recurrence of Environmental impacts.	• Infrastructure information is maintained centrally and is communicated across the Defence Organisation. • Lessons learned from previous infrastructure design, acquisition, build, operation, modification, maintenance, and disposal activities are documented and communicated across the Defence Organisation. • Procedures are in place and are used to notify potential users that infrastructure has been determined to be defective or inappropriate for specific uses. • There is good evidence that lessons learned have occurrence or recurrence of Environmental impacts.	• Infrastructure information is maintained centrally and is proactively communicated across the Defence Organisation. • Lessons learned from previous infrastructure design, acquisition, build, operation, modification, maintenance, and disposal activities are documented and are proactively communicated across the Defence Organisation and wider Defence. • Procedures are in place and consistently used to notify potential users of infrastructure determined to be defective or inappropriate for specific uses. • There is widespread evidence that lessons learned have occurrence or recurrence of Environmental impacts.