6 Environmental assessment

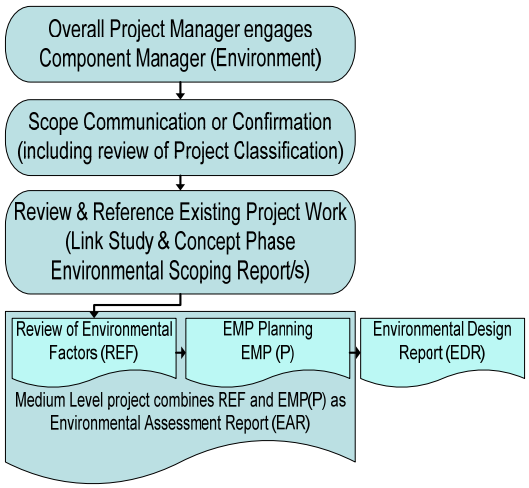
The Environmental Assessment (EA) process is applicable to provide environmental input to projects from the preliminary and detailed design stage through to input to the environmental management plan for construction (EMP(C)).

Environmental Assessment is commenced in the Concept phase for High level projects and in the Development phase for Medium level departmental works projects (refer Table 1.6.1) to decide the most reasonable and practicable environmental management for any potential impacts.

The environmental assessment process is based on the risks and external approval triggers identified in the ESR (Chapter 5).

The environmental assessment process is depicted below.

Figure 6 - Environmental assessment process



The information contained in this Chapter 6 Environmental Assessment is primarily worded to guide the CM(E) through the environmental assessment process during the Development phase. However the EA process is applicable to High Level projects in the Concept phase also (refer Table 1.6.1).

In the event that the environmental component of works is outsourced by the department (to an external service provider under contract), the CM(E) may apply the principles described below in the management and review of the return product.

Templates for this process are provided in the departmental EMS.

6.1 The environmental assessment process

The EA process is the key input to the overall project Development phase, and feeds environmental advice and management planning into the projects preliminary and detailed design.

The EA process involves the detailed investigation of the existing project area conditions, identifying the potential impacts, recommending possible mitigation strategies, communicating any project design requirements, and reviewing their implementation. The EA process is implemented through 3 report stages:

- Review of Environmental Factors (REF) (refer Section 6.2.3)
- Environmental Management Plan (Planning) (EMP(P)) (refer Section 6.2.4)
- Environmental Design Report (EDR) (refer Section 6.4.2)

This manual recommends that the REF and EMP(P) report stages are incorporated into a single Environmental Assessment Report (EAR) for Medium Level projects, and issued as 2 separate documents for High Level projects (refer Table 1.6.1).

The EDR is issued as a separate report document for both Medium and High Level projects.

The departmental EMS contains templates and guidance to complete the EA process for High Level and Medium Level projects.

If the EA process is deemed to be relevant to a Low Level project by the CM(E), then the EAR template and guidance is applied.

If the CM(E) determines the environmental response requires less detailed assessment than a Medium Level EAR, the Scoping process and ESR template may be applied in place of the EAR.

In the event that an ESR was not produced in the pre project or Concept phase, and this Environmental Assessment process is the first environmental component input to the project, the ESR exercise from Chapter 5 of this manual may need to be completed at this stage dependent on project requirements or resource and time constraints.

The PM typically integrates the findings and recommendations of the EA process into the relevant stage of the Design Development Report.

The EA process can be an on-going process that is repeated or updated at key stages of the project lifecycle. This is particularly true with the introduction of new information to the project such as scope, design or legislation changes, or if the project is resumed after a significant delay since the original environmental assessment exercise was performed.

6.2 Completing the environmental assessment report (ear)

The process for completing the EAR is depicted in Figure 6.

The completion of an EAR as described in this section applies to both Medium Level and High Level projects, although High Level projects are recommended to issue the major reporting stages described below in separate reports, rather than a single EAR format. The EA process for Medium Level and High Level projects is the same regardless of the report being issued in a combined single document or in separate reports.

The departmental EMS sets out the required EA documentation and tasks that the CM(E) must complete in order to effectively address the PM requirements, and also meet departmental requirements.

6.2.1 Environmental assessment initiation

The PM engages the services of a CM(E) to provide specialist environmental input to the overall project.

The CM(E) may be engaged to perform the work internally, or to manage and review the work of an external consultant.

The PM will consult with the CM(E) to ensure that their expert understanding of environmental matters can be used to guide delivery of quality return product.

The EA process is initiated when the CM(E) is engaged to the overall project.

It is the responsibility of the CM(E) to manage and deliver the EAR.

6.2.2 Scoping confirmation or commencement

Due to the potential for elapsed time between project stages, or the likelihood of new information entering the project, the scope of the environmental component needs to be confirmed with the PM.

Communicating the details of the project scope includes detailing what is included in scope of the project, and also what is considered out-of-scope.

The primary functions of this scope confirmation or commencement stage is to:

- identify design changes since the Concept phase ESR
- identify legislation changes since the Concept phase ESR
- reassess areas for environmental changes (for example, weed and pest data), where applicable.

It is the responsibility of the PM to provide project details and request for service.

The CM(E) confirms the in scope and out of scope information with the PM. Project scope must be confirmed and recorded in written form.

The scale of this scope confirmation exercise is determined on a case-by-case basis, with the potential for repeating the Scoping process (Chapter 5) where the CM(E) considers it necessary.

6.2.3 Review of environmental factors (REF)

The primary functions of the REF are to:

- investigate the existing project site area conditions
- identify environmental impacts of the project proposal
- assess the risk level associated with the environmental impacts.

The issues identified in the ESR along with any new issues, need to be considered and addressed when compiling the REF. As a minimum, they key environmental factors listed in Chapter 5.2.4 must be included.

The REF is incorporated as part of an EAR document for Medium Level projects, and issued as a separate document for High Level projects.

The CM(E) references any Environmental Scoping Report(s) produced in the Link Study and / or Concept phase of the project lifecycle in this REF exercise.

The environmental risk level decision of the environmental factor and its impact is reported in the REF. The potential impact of environmental factors identified in the REF is given a rating level (in terms of High, Medium, or Low impact), based on the likelihood and consequence of the impact. The departmental EMS contains guidance for making this risk level determination.

6.2.3.1 Project approval triggers - REF

Under various state and federal legislation, there are a number of activities that require environmental approval and / or permit to proceed. A crucial function of the REF is to identify where project works are likely to trigger these external assessment processes.

The CM(E) identifies potential approval triggers based on project activities and project location.

Where project works trigger an external approval process, the role of the CM(E) in the environmental assessment process is to identify the impacts that the trigger will have on the project works.

Relevant legislation and external approval project triggers, and their expected timing requirements, must be identified and documented in the REF stage of the EAR.

Where an external authorities' approval process is triggered by project works, the following factors must be considered:

- Effect that external approval permits will have on works (including delay of obtaining permit, impact on project design, and so on).
- Whether external approvals can be minimised or avoided (through altered design or work practices).
- Timing of approval acquisition and associated project works (for example, vegetation clearing).
- Cost to the project (fees and potential lost time costs), including offset negotiations.

This manual does not attempt to summarise or replicate legislative requirements current at the time of publishing this manual. Instead, this manual references the use of the Environmental Legislation Register (ELR) (refer Section 4.1 of this manual).

Project Approval Triggers are also discussed in Section 5.2.6 of this manual.

6.2.3.2 Environmental authority exemptions and existing approvals

The department has numerous exemptions and existing approvals for carrying out works, particularly for emergency works. The Environmental Legislation Register is the department's primary reference source of information about environmental legislation and policy, including information regarding departmental exemptions.

6.2.4 Environmental management plan (planning) – EMP(P)

The primary functions of the Environmental Management Plan (Planning) (EMP(P)) are to:

- identify and recommend measures to manage the environmental factors identified in the REF
- provide environmental input to the project design
- initiate communication between the CM(E) and the project design component.
- assist in managing the construction phase and contract documentation

For each of the environmental factors identified, the EMP(P) must also provide recommendations for management measures required to be implemented (including design recommendations, reporting, monitoring and auditing, and legislative requirements).

The timing for the recommended management measure(s) in relation to the project stage is also specified, along with assigning the responsibility for the implementation.

The EMP(P) is incorporated as part of an EAR document for Medium Level projects, and issued as a separate document for High Level projects.

The EMP(P) addresses all issues raised in the REF. For each issue addressed in the EMP(P) , the following is considered and included:

- Detail control measures, procedures and/or activities for that issue including any required preconstruction and post construction activities.
- Detail procedures, frequency and timing for monitoring.
- Define required staff qualifications where applicable.
- Define triggers for undertaking an action and, where possible, the timing of each action.
- Define who is responsible for ensuring control measures are undertaken, the verification of such actions, storage of records and a reporting process (including reporting to Authorities where necessary).

- Define maintenance intervention levels (e.g. for removal of sediment, etc from permanent sedimentation basins, gross pollutant traps etc).

It is the responsibility of the PM to fully integrate the requirements of the EMP(P) into the preliminary design.

If the design component of the project is outsourced to an external service provider (design contract), the requirements of the EMP(P) form the basis of the brief to engage the service.

Recommendations for management measures may be made at the discretion and informed opinion of the CM(E), without input from other component areas or the PM.

6.3 Detailed cost estimates

The environmental impacts, management recommendations and mitigation strategies identified in the REF and EMP(P) allow the project environmental costs to be estimated in detail.

Cost estimates are provided in terms of both Administrative and Project Work Items. Section 5.2.8 of this manual contains further description of project cost estimating.

The CM(E) provides cost estimate information for all items identified in the EA Process.

It is the responsibility of the PM to consider the environmental component cost estimate information into the overall project cost.

It is the responsibility of the PM to ascertain the actual cost estimate (monetary figure) of Project Work Items of the environmental component project, based on communication with, and information provided by, the CM(E).

The cost estimate at this project phase considers the risk associated with all environmental factors, and the mitigation strategies required in addressing them to project finalisation. The cost estimate includes environmental approval costs with a greater degree of certainty than possible during preparation of the ESR.

If multiple options for project design are still under consideration, the project costs based on environmental factors are compared and evaluated in the options analysis recommendation.

6.4 Preliminary design

The CM(E) has input to the preliminary design of the project through the EA process. Environmental management recommendations from the EAR that require a project design solution are implemented at the preliminary design stage.

It is the responsibility of the PM to implement the EAR findings and recommendations into the project preliminary design.

The PM will submit the preliminary design plans to the CM(E) for review and comment.

It is the responsibility of the PM to notify the CM(E) of scope and design changes.

6.4.1 Review preliminary design

The primary function of the review of the preliminary design is to ensure that the environmental factors, mitigation strategies, management measures, and agreed design outcomes contained in the EAR have been successfully incorporated into the project design.

It is the role of the CM(E) to review the project preliminary design to ensure the environmental management recommendations from the EAR have been incorporated into the preliminary design.

The CM(E) must ensure that the preliminary design review includes that the project scope and design has not changed since submission of the EAR.

Significant project changes that occur in between the completion of the EA process and the review of the preliminary design can result in serious negative consequence to the project.

It is the responsibility of the CM(E) to report back to the PM any instance identified of a project change likely to impact the environmental component. In such an instance, the CM(E) requests a revision of the documentation relevant to the project change.

It is the responsibility of the PM to respond and request the service of the CM(E) to revise and resubmit any documentation relevant to the project change.

The departmental EMS provides guidance for the PM to notify the CM(E) of changes to the project including project scope change.

6.4.2 Environmental design report (EDR) for preliminary design

The primary functions of the EDR stage following the Preliminary Design are to:

- confirm integration of EMP(P) recommendations to the project design
- promote communication between the CM(E) and the project design component
- enable project design component and PM response to CM(E) recommendations
- provide input to the project detailed design.

The EDR for Preliminary Design must refer to and address the relevant aspects from the EMP(P). The EMP(P) assigns responsibility for the management action, and the EDR for Preliminary Design must engage the relevant assigned party to provide response to their management action.

Recommendations for management measures in the EMP(P) may be made at the discretion and informed opinion of the CM(E), without input from other component areas or the PM. The EDR stage for Preliminary Design requires however that the CM(E) and the relevant members of the project team have subsequent communication to the reasonableness or practicability of the environmental management recommendation.

Communication between the CM(E) and the relevant project team members is a requirement of this manual prior to the finalisation of the EDR for the Preliminary Design.

It is the responsibility of the CM(E) to initiate and complete the relevant components of the EDR for the Preliminary Design.

Once initiated by the CM(E), the EDR for Preliminary Design must be distributed to the relevant project team members for their input and response. The distribution of the EDR for Preliminary Design may be done through the PM, or directly between team members depending on the project¬ specific communication matrix.

It is the responsibility of the relevant project team members to review the EDR for Preliminary Design and provide response.

The EDR for Preliminary Design can not be finalised until all relevant project team members have completed the EDR for Preliminary Design, or the PM and CM(E) agree that the project can proceed to the detailed design stage.

Alternative management response solutions may be negotiated during this communication process and the EDR for Preliminary Design contains provision to document the agreed design response.

The PM is responsible for implementing the outcomes of the EDR for Preliminary Design to the project design.

6.5 Detailed design

The CM(E) has input to the Detailed Design of the project through the EA process. Environmental management recommendations from the EDR for Preliminary Design that require a project design solution are implemented at the Detailed Design stage.

It is the responsibility of the PM to implement the findings and recommendations from the EDR for Preliminary Design into the project Detailed Design.

The PM will submit the Detailed Design plans to the CM(E) for review and comment.

It is the responsibility of the PM to notify the CM(E) of scope and design changes.

6.5.1 Review detailed design

The primary function of the review of the Detailed Design is to reconfirm that the environmental factors, mitigation strategies, management measures, and agreed design outcomes contained in the EAR have been successfully incorporated into the project Detailed Design. Also that Preliminary Design review findings have been successfully incorporated into the project detailed design.

The CM(E) must ensure that the Detailed Design review includes that the project scope and design has not changed since submission of the EAR and EDR for Preliminary Design review findings.

It is the responsibility of the CM(E) to report back to the PM any instance identified of a project change likely to impact the environmental component. In such an instance, the CM(E) requests a revision of the documentation relevant to the project change.

It is the responsibility of the PM to respond and request the service of the CM(E) to revise and resubmit any documentation relevant to the project change.

6.5.2 Environmental design report (EDR) for detailed design

The primary functions of the EDR for Detailed Design are the same as for the EDR for Preliminary Design (refer Section 6.4.2), with the added function to:

- integrate EMP(P) recommendations to the tender documentation, including input to design drawings and application of Specifications, Technical Standards and Annexures (refer Section 6.5.3).

It is the responsibility of the CM(E) to initiate and complete the relevant components of the EDR for Detailed Design.

Once initiated by the CM(E), the EDR for Detailed Design must be distributed to the relevant project team members for their input and response. The distribution of the EDR for Detailed Design may be done through the PM, or directly between team members depending on the project¬ specific communication matrix.

It is the responsibility of the relevant project team members to review the EDR for Detailed Design and provide response.

The EDR for Detailed Design can not be finalised until all relevant project team members have completed the EDR for Detailed Design, or the PM and CM(E) agree that the project can proceed.

The EA process can be an on-going process that is repeated or updated at key stages of the project lifecycle. This is particularly true with the introduction of new information to the project such as scope, design or legislation changes, or if the project is resumed after a significant delay since the original environmental assessment exercise was performed.

Once the planning process and Detailed Design is complete, the tendering process and formulation of the contract documentation for the project can commence.

6.5.3 Input to tender documentation

To achieve successful environmental management outcomes it is crucial that environmental management and design requirements are addressed in tender documentation as this is what the construction contractor will refer to and abide by in the projects implementation phase.

The tender documentation is clarified and agreed upon before the contract is awarded, ultimately governing the project outcomes. Therefore transferring the Environmental Assessment issues into the tender documentation and binding contractual requirements is crucial to ensuring environmental outcomes are achieved.

The PM is responsible for issuing and controlling tender documentation for the project. To ensure environmental considerations are implemented the PM must liaise with the CM(E) for input and review of environmental conditions in the tender documentation.

The CM(E) provides environmental management recommendations for inclusion in the tender.

The PM is responsible to respond to the environmental recommendations.

It is the responsibility of the CM(E) to ensure that environmental conditions are communicated to the PM so that the necessary environmental requirements are entered into the tender documents.

6.5.3.1 Input to the EMP(C) through Specification Annexures

The Environmental Management Plan (Construction) (EMP(C)) is the primary document for the contractor to implement the environmental factors identified in the Environmental Assessment process.

It is therefore crucial that the identified environmental factors for the project are included in the project contract documentation so that they are implemented through the EMP(C).

The department provides Specifications (MRS) and Technical Standards (MRTS) to be used in all contracts. The contract types that use both MRS and MRTS documents include Road Construction Contract (RCC), Roadworks Performance Contract (RPC) and Minor Works Contract (MW).

MRTS documents alone are used on Alliance Contracts (AC), Design and Construct Contract (D&C), Early Contractor Involvement (ECI) and Relational Incentive Contract (RIC) contracts.

Several of these Specifications and Technical Standards apply to environmental management requirements for activities relating to the contract (including MRS51 and MRTS51). These environmental management requirements must be addressed within the EMP(C).

Site and project specific input to the EMP(C) by the CM(E) is achieved through the use of the departmental Specification Annexures (including the MRTS51.1 and MRTS04.1 Annexures).

It is the responsibility of the CM(E) to provide input to the contract through the use of Specification Annexure(s). The findings of the EA process are considered by the CM(E) when completing the Specification Annexure(s).

It is the responsibility of the PM to include any Specification Annexures to the tender documentation.

Section 7.2.2 of this manual also describes the process of providing input to the EMP(C).

6.5.3.2 Erosion and sediment control (ESC) plan

A requirement of the MRTS51 is for the department (the Principal) to prepare a design for temporary erosion and sediment control measures.

The CM(E) is responsible for providing temporary erosion and sediment control input to the project.

6.6 Development of scheme prototype

The end product of the EA process is to integrate all environmental assessment and management requirements from the planning (Concept) and design (Development) phases into the project tender and contract documents.

The department's Preconstruction Processes Manual requires that the Scheme Prototype is assembled by the PM prior to commencing the tendering process. The Scheme Prototype must include all environmental assessment and management requirements, including Conditions of Tendering, Conditions of Contract, Supplementary Conditions of Contract, Standard Specifications, Supplementary Specifications, drawings and schedules.

It is the responsibility of the CM(E) to ensure the EDR for the detailed design has captured all relevant environmental assessment and management requirements to be included in the project construction (Implementation) phase.

It is the responsibility of the PM to include all environmental assessment and management requirements from the EDR into the Scheme Prototype.

6.7 Tendering process

The tendering process is managed by the PM and can occur at various stages of the project lifecycle depending on the selected project delivery system.

The PM may engage the CM(E) for input to the tendering process, particularly for High Level or high risk projects.

The CM(E) provides advice and recommends input of environmental factors, management measures and design controls identified in the Scoping and / or Environmental Assessment stages.

It is the role of the PM to include the environmental advice and recommendations into the tendering process and contract documentation.

The outcome of the tendering process is that the detailed design of the project is offered to a contractor for construction in the project Implementation phase.

The tender review process is also discussed in Section 7.2.6.

6.8 Project contracts

Departmental infrastructure projects are conceptualised and designed either by internal department staff, or externally by an expert service provider working under contract.

The implementation and construction of the infrastructure project will be undertaken by a qualified construction company that the department engages as a Contractor working under contract.

The department engages and manages Contractors through guidance provided in departmental technical publications and manuals, including those listed in Table 6.8-A below.

The department's Main Roads Project Delivery System, Volume 1 describes the various project contract options.

It is important to note that the content and references listed in Table 6.8-A below were accurate at the time of publishing this manual but are subject and likely to change over time. Furthermore, entire contract types may be added or removed from the below list. The TMR website contains the most up to date departmental contract information and is to be consulted for accurate referencing and adherence to departmental contract provisions

Table 6.8-A - Environmental input to various departmental contracts

Departmental Contract Types		**How environment is factored in to each contract type.**
Vol 1	**Road Construction Contract (RCC)**	Clause 10.2 of the Supplementary Conditions of Contract requires an EMP The department's *User Guides for the General Conditions of Contract and the Supplementary Conditions of Contract* also states that as a minimum the Contract Plan must also include an Environmental Management Plan. ****project to use MRTS51 (and Annexure) to prepare EMP(C)**
Vol 2	**Roadworks Performance Contract (RPC)**	Clause 7.1 Supplementary Conditions of Contract requires an EMP Clause 30.2.2(b) General Conditions of Contract requires an EMP ****project to use MRTS51 (and Annexure) to prepare EMP(C)**
Vol 3	**Minor Works Contract (MW & MWPC)** **(for Programmed Maintenance and other Minor Works)**	Clause B5.1 Supplementary Conditions of Contract "*The Contractor shall implement and maintain measures to preserve and protect the natural environment on and adjacent to the Site*". Section 5.3 of the MW manual "*Details relating to management of any environmental hazards*" are included in the requirements for Quality. ****project may use MRTS51 (and Annexure) to prepare EMP(C)**

Departmental Contract Types		How environment is factored in to each contract type.
	Road Maintenance Performance Contract (RMPC) **(for Routine Maintenance)**	RMPC Vol 1 (Sole invitee) – Section 3.4 of the manual requires preparation of EMP(M) in accordance with the requirements set out under Clause 10.5 of General Conditions of Contract Road Maintenance Performance Contract. RMPC Vol 1 (Sole invitee) – Section 3.4 of the manual the EMP(M) shall address issues raised in the "Statement of Environmental Effects". ****project to use Clause 10.5 of RMPC General Conditions of Contract to prepare EMP(C) AND Statement of Environmental Effects.** ****project to also use the department's Environmental Processes Manual to prepare the Statement of Environmental Effects.**
		Vol 2 (Open tender) – Clause 3.4 of the manual requires preparation of EMP(M) in accordance with (superseded) Road Project Environmental Processes Manual 2004. ****project to use MRTS51 (and Annexure) to prepare EMP(C)**
Vol 4	**Design and Construct Contract (D&C)**	Requirement for an EMP(C) is not included in the General Conditions of Contract however the Generic Project Brief (template) will require it. Clause 26.1(e) of General Conditions of Contract states that the Contractor's 'Environmental Representative' shall be familiar with the requirements of the Environmental Protection and Biodiversity Conservation Act 1999. Where the Environmental Representative does not have the qualifications and experience to deal with all environmental issues associated with the Contract, the Environmental Representative shall be given authority and responsibility to consult appropriate specialist advice, at the Contractor's cost. ****project may use MRTS51 (and Annexure) to prepare EMP(C)**
Vol 5	**Alliance Contract (AC)**	Can create own (project-specific) environmental specifications as long as they are in accordance with legislative requirements. Departmental MRS and MRTS may be used as guidance for environmental input. Clause 6.2 of the Project Alliance Agreement requires an EMP(C). ****project to use MRTS51 (and Annexure) to prepare EMP(C)**
Vol 6	**Early Contract Involvement (ECI)**	Stage 0 – Clause 1.1.2 experts (Environmental Officer) should be engaged in Project Management Plan development after Business Case approved.

Departmental Contract Types		How environment is factored in to each contract type.
		Stage 1 – Clause 4.3.2 Principal to provide environmental documents prior to Stage 1 commencement. Stage 1 – Clause 4.4.2 EMP should be included in Contract Plan. Clause 9.3(a)(iv) of General Conditions of Contract states that the Contractor is not entitled to payment if the Contractor's Environmental Management Plan and the Contractor has not complied with the environmental requirements of the Brief. ****project to use MRTS51 (and Annexure) to prepare EMP(C)**
		Stage 2 – s1.1.2 Construction Team (Designer) may require support from an environmental expert.
Vol 7	**Relational Incentive Contract (RIC)**	Environment is not specifically included in contract. RoadTek (and other 'Relational' contractors engaged to a RIC contract) are legally required to manage their environmental responsibilities. Where warranted by the project manager, the environment may be listed in the contract as a "Key Result Area". ****project may use MRTS51 (and Annexure) to prepare EMP(C)**
Vol 8	**Performance Incentive Cost Reimbursable (PICR) Works Contract**	Clause 14.1 requires EMP to form part of Contract Plan (where required by Item 10 of Annexure A). ****project to use MRTS51 (and Annexure) to prepare EMP(C)**
	Consultants for Engineering Projects - Manual	Clause 6.1 of Supplementary Conditions of Contract - project to use AS/NZ ISO 14001:2004 Environmental Mgmt Systems Clause 5.2 of Supplementary Conditions of Offer – EMP(P), EDR, & environmental management approach and methods required from Consultant. Clause 6 of Annexure B to Supplementary Conditions of Contract – Consultant must develop and implement systems & procedures for environmental management. ****Consultant is to consider whether the project is to use MRTS51 (and Annexure) and the Contractor is to prepare EMP(C) or other controls.**
	Contract Administration Manual (only applies to RCC but associated CAS checklists and forms may be used where other contract types require a review of the EMP(C))	The EMP(Construction) is reviewed against MRTS51 requirements using CAS Checklist CAC003M. EMP(C) Implementation audit carried out using CAS Checklist CAC004M. Audit of contractor performance carried out using CAS Form CAF008M. Superintendent to issue non-conformance report if required using CAS Form CAF038M. Where required, the Post Implementation Review may feed into: CAF012M (Post Construction Report) CAF032M (Post Construction Conference), and maybe CAF009M (Maintenance Report)

6.9 Project data entry into departmental GIS systems

The ESR and EA process identify where environmental factors require further investigation, including where environmental factors may need detailed survey or data collection.

The information gathered is relevant to the project outcomes however it can serve the dual function to help determine the department's performance as a transport infrastructure and system manager.

Environmental data that has been entered into spatial systems such as GIS mapping can be assessed at a broader scope than project level, and can be assessed in conjunction with other spatial data sets, to draw wider conclusions about the environment surrounding department controlled land and infrastructure.

It is therefore an important element to department infrastructure projects that data collected during environmental investigations is not confined to project use, but is also entered into the departmental GIS systems and information databases.

The RCEA is the department's primary tool for capturing and presenting environmental data in a GIS format. The RCEA contains information on the road corridor.

To ensure data integrity, the RCEA tool and associated data collection forms must be used by projects to collect electronic environmental data in the road corridor.

The departmental EMS contains policy and guidelines for electronic environmental data collection and management.

Data entry into departmental GIS systems must occur in accordance with appropriate policy, guidelines and tools.

The CM(E) is responsible for entering environmental information, including project related environmental survey data, into department GIS spatial systems through the centrally managed database of electronic environmental datasets.

If data collection for a project is outsourced to a contractor, the contract documentation must include a procedure and requirement for environmental data collection to be entered into departmental GIS systems.

Section 5.2.4 of this manual discusses the database of electronic environmental datasets in more detail.

Data entry into departmental GIS systems occurs irrespective of whether project environmental assessment is performed internally by department staff, or outsourced to an external expert service provider under a contract.