



Guideline for preparing an environmental management plan

November 2022

Version 2

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More information

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Document management plan

This document management plan outlines the update procedures and contact points for the document.

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Amendments and review strategy

All corrective action/improvement requests (CAIRs) suggesting changes should be sent to environment@nzta.govt.nz and will be acknowledged and responded to by the document owner as follows:

	Comments	Frequency
Amendments (minor revisions)	Updates incorporated as soon as possible or at least once a year.	As required
Review (major revisions)	Amendments fundamentally changing the content or structure of the document will be incorporated as soon as practicable. They may require coordinating with the review team timetable.	Three yearly or as required
Notification	All users that have registered their interest by email to environment@nzta.govt.nz will be advised by email of amendments and updates.	Immediately

There will be occasions, depending on the subject matter, when amendments will need to be worked through by the review team before the amendment is actioned. This may cause some variations to the above noted time frames.

Record of amendment

Amendment number	Description of change	Effective date	Updated by
2	A comprehensive revision of the previous 'Guideline for preparing an environmental and social management plan' incorporating new policy and processes.	November 2022	Fiona Davies

Contact us

Safe and Sustainable Standards team, email: environment@nzta.govt.nz

Abbreviations

AEE	Assessment of environmental effects
CSMP	Customer and stakeholder management plan
CS-VUE	The Waka Kotahi consent compliance management system
DOC	Department of Conservation
EMP	Environmental management plan including any sub-plans
HNZPT	Heritage New Zealand Pouhere Taonga
IPR	Independent peer review
KRA	Key result area
M&O	Maintenance and operation
MCM	Maintenance contract manager
MEP	Māori engagement plan
NOC	Network outcomes contract
PM	Project manager
RMA	Resource Management Act 1991
SQP	Suitably qualified professional

Definitions

Broader outcomes	Broader outcomes is a government wide initiative that seeks to achieve wider social, economic, cultural and environmental outcomes through the acquisition of goods, services and works
Environmental	Relating to the natural world of land, air, sea, freshwater, plants and animals, but also includes social (human interaction) and historic heritage (refer definition below) in the context of this guideline.
Environmental management plan	A management plan to manage Waka Kotahi activities related environmental risks for construction (capital works projects) and maintenance and operation activities (M&O contracts). Includes any sub-plan(s).
Environmental incident	An unplanned event (actual or potential) which results in adverse environmental impacts and may require an immediate response in order to minimise that impact, eg pollution (air, water or land), noise, ecological or archaeological disturbance and/or finds.
Environmental risk	Actual or potential threats (based on likelihood and consequence) of adverse environmental effects/impacts occurring from an activity.
Historic heritage	As defined in the Resource Management Act 1991. Includes archaeology, cultural and built heritage and sites of significance to Māori.
Independent peer reviewer	The same description as for suitably qualified professional (refer definition below) but must also be independent from the EMP and/or sub-plan author(s) and their organisation(s) and have no financial or other interest in the outcome of the review.
Mitigation	The process of preventing, avoiding, or minimising adverse effects/impacts by: <ul style="list-style-type: none"> • refraining from a particular action • limiting the degree of an action • repairing, rehabilitating or restoring the affected environment, or • providing substitute resources.
Sensitive site	Locations where sensitive receivers are located including but not limited to: watercourses, harbours/coasts, wetlands, significant natural areas, conservation land, areas identified as having biodiversity value (eg habitat for threatened or regionally uncommon species), cultural/archaeological sites, heritage landscapes, residential/school properties etc. Appendix B provides additional references to assist with identifying sensitive sites.
Statutory approval	Approvals/consents obtained from statutory authorities, for example, but not limited to: resource consent, designation, consent, outline plan of works, archaeological authority and wildlife authority permit.
Statutory authority or body	A body set up by law (statute) that is authorised to implement legislation on behalf of the government.
Suitably qualified professional	Means a person who has all of the following qualifications and experience: <ul style="list-style-type: none"> • a relevant tertiary degree or equivalent, • at least eight years of relevant experience, • membership or preferably chartered/certified status with a relevant professional body that includes a requirement to provide evidence of continuing professional development, • experience with at least three projects, plans and/or activities of a similar nature, scale and complexity. <p>In relation to the EMP, the suitably qualified professional (SQP) qualifications and experience should relate to EMP development and implementation.</p> <p>For sub-plans alternative SQPs with qualifications and experience relating to the specific technical discipline are acceptable, eg historic heritage, ecology or noise.</p> <p>In some circumstances exemptions to SQPs may be permitted, but this must be agreed with the Waka Kotahi project/contract manager prior to any works taking place.</p>

Zone of influence

The areas/resources that may be affected by the biophysical changes caused by the construction of the project/contract. The zone of influence may differ depending on the type of environmental risk and receiver.

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Introduction

Waka Kotahi NZ Transport Agency is responsible for managing the environmental effects of its activities under the Resource Management Act 1991 (RMA) and the Land Transport Management Act 2003 (LTMA). One of the various ways that Waka Kotahi sets out to achieve environmental responsibility (statutory and Waka Kotahi policy) is by requiring environmental management plans (EMPs) to be developed and implemented for all construction (capital works) and maintenance and operation (M&O) activities. An EMP can cover environmental topics such as (but not limited to) social values, historic heritage, air quality, noise and vibration, contaminated land, biodiversity values, resource efficiency and waste management, and hazardous substances.

This *Guideline for preparing an environmental management plan* sets out the minimum requirements for the preparation of an EMP and provides information to assist project and contract managers (along with their contractors and consultants) on the preparation of an EMP for construction (capital works projects) and M&O contracts (collectively referred to as 'projects' within this guideline). This guideline gives effect to Waka Kotahi environmental and sustainability standards, guidelines and specifications.

An EMP should be developed in accordance with this guideline and will form part of a suite of plans required under Waka Kotahi contracts. It may be supported by sub-plans such as pest plant management, noise and vibration, ecology, air quality, historic heritage, etc. Where an EMP or sub-plans are required by a government direction, designation, consent, archaeological authority or wildlife permit (statutory approvals), then these requirements should be incorporated or reflected within the EMP and management plan framework being developed for the project. Figure 1 shows the different inputs into the development of the EMP.

[Environment and sustainability standards, guidelines and specifications](#)



Figure 1: Inputs into the development of an environmental management plan

EMP development

Documents prepared during previous project phases, such as during the project design and the consenting phase of a project (including statutory authorities), should be referenced when preparing the EMP. This ensures continuity and provides direction for the continued management of environmental risks during all project stages.



Figure 2: An EMP should be developed using information from previous project phases

Competencies

The preparation of an EMP by a contractor should as a minimum be overseen and signed off by a suitably qualified professional (SQP). The SQP may differ for sub-plans depending on the area of technical discipline, for example archaeology, ecology or noise.

Exemptions to sign off by an SQPs may be permitted in some circumstances, but this must be agreed with the Waka Kotahi project/contract manager prior to any works taking place.

An independent peer review (IPR) of the EMP may also be needed depending on the scale and complexity of the project and should be initiated by the contractor before the EMP is submitted to Waka Kotahi. The requirement for when an EMP needs an IPR is specified within the *Z/19 Taumata Taiao – Environmental and Sustainability Standard* and *P47 Environmental, social and cultural management during construction* specification.

[Z/19 Taumata Taiao - Environmental and Sustainability Standard](#)

[P47 Environmental, social and cultural management during construction](#)

Review and approvals

EMPs must be submitted to the Waka Kotahi project or contract manager (and copied to the Waka Kotahi Safe and Sustainable Standards Team, environment@nzta.govt.nz) for approval prior to construction for capital projects (the timing of which is specified in contract documents) and four months after the contract start date for M&O works.

EMP review and approval by Waka Kotahi will entail checking that the requirements of this guideline and the project contract have been met. The Waka Kotahi project or contract manager may delegate responsibility for the EMP review, depending on the scale and nature of the project or contract. EMPs will be reviewed using the checklist included in Appendix A and the review will be undertaken by a SQP (environmental management or other relevant technical discipline). Where high residual environment risks are identified during the risk assessment process, then a plan to address these will need to be discussed with the Waka Kotahi project or contract manager.

Depending on the project phase, all procedures, plans and programmes that are cross referenced within the EMP must be finalised and made available for review as part of the EMP approval process.

In some circumstances a draft EMP may be submitted with a notice of requirement, outline plan of work or resource consent application in order to provide detail of the work scope, methodology and management procedures to support the application (for example, where a contractor is appointed, and work

commencement is imminent). In this case, the EMP must be submitted to Waka Kotahi for review along with the draft application documents.

It is acknowledged that the draft EMP, depending on project stage, may not have all the information required to fully meet the requirements of this guideline. The final EMP is to be resubmitted once a project has received approvals and before work has commenced for a capital project, and within four months of the contract start date for M&O works.

Revisions to the EMP are expected because an EMP is considered to be a living document that evolves over the lifetime of a project/programme. The EMP should be audited, reviewed and updated at least annually for effectiveness and continuous improvement. However, if there is a significant change that may impact the effectiveness of the EMP, for example statutory updates or a change in project scope, then the EMP should be reviewed and updated immediately. Project contracts will stipulate whether revisions to the EMP or sub-plans require a review by Waka Kotahi.

Engagement and consultation

Stakeholders and partners should be contacted during the development of the EMP to assist with its development, for example identifying environmental risks and the development of subsequent mitigation. For further information on *Waka Kotahi Public engagement guidelines* and other relevant documents are available in the section on engagement on the Waka Kotahi website.

[Engagement](#)

Project-specific protocols and relationship management responsibilities will be outlined in the project's customer and stakeholder management plan (CSMP) and the Māori engagement plan (MEP), and should be consulted with when developing and implementing the EMP.

Stakeholders/partners relevant to the development of both capital project and M&O EMPs might include:

- Māori (Waka Kotahi is committed to working with Māori as Treaty of Waitangi partners – refer to the Māori partnerships section of this guideline)
- district and regional councils and unitary authorities
- local community groups
- Department of Conservation (DOC) (refer to the memorandum of understanding between Waka Kotahi and DOC for further guidance on communications and expectations), and
- Heritage New Zealand Pouhere Taonga (HNZPT) (refer to the memorandum of understanding between Waka Kotahi and HNZPT for further guidance on communications and expectations).

[Waka Kotahi and HNZPT Memorandum of Understanding](#)

[Waka Kotahi and DOC Memorandum of Understanding](#)

Māori partnerships

Waka Kotahi upholds and respects the environmental value of kaitiakitanga and acknowledges that the environment is a taonga (treasure) that must be managed carefully. We also recognise that Māori have a responsibility and obligation of care over their communities and environments. As a result, provision is made for Māori perspectives, tikanga (customs) and kawa (protocols) in all of the work undertaken by Waka Kotahi.

Te Ara Kotahi, the Waka Kotahi Māori strategy, provides strategic direction on how to work with and respond to Māori as the Crown's treaty partner. Te Ara Kotahi outlines five strategic pou (pillars) that support te whakakitenga (the vision of the strategy). A key priority of the strategy is caring for the environment by supporting Māori to exercise their environmental kaitiaki responsibilities.

Māori perspective should be included within the development of the EMP. When developing the EMP the following should be considered:

- any relevant iwi management plans available for the area
- any memorandum of partnerships Waka Kotahi has in place with relevant iwi
- the project-specific MEP developed as part of the wider suite of contract management plans (the requirement for a MEP will be specified in the project contract)
- Te Ara Kotahi – Our Māori Strategy
- direct participation from relevant iwi representatives in line with Hononga ki te Iwi – Our Māori Engagement Framework
- cultural value assessments/reports
- whether a cultural monitor is appropriate for construction activities, and
- any broader outcomes/secondary benefits from procurement related to ‘Māori and tangata Whenua’ (one of our four target outcomes) that aligns with the EMP outcomes.

For further information contact Māori Partnerships Team: maoripartnershipteam@nzta.govt.nz

[Te Ara Kotahi](#)

[Hononga ki te Iwi](#)

[Broader outcomes](#)

Supporting information and document links

This guideline is supported by an **optional** EMP template. Waka Kotahi also has guidance documents and resources in the following environmental disciplines to support EMP development:

- air quality
- biodiversity
- climate change
- heritage
- noise and vibration
- resource efficiency
- stormwater, erosion and sediment control
- urban design and landscape.

These resources can be found on our website:

[Air quality](#)

[Biodiversity](#)

[Climate change](#)

[Heritage](#)

[Noise and vibration](#)

[Resource efficiency](#)

[Stormwater, erosion and sediment control](#)

[Urban design and landscape](#)

EMP outline

Tables 1 to 5 below set out the minimum requirements and outcomes/guidance for what should be included within an EMP.

Contractors' operational procedures or sub-plans can be utilised where appropriate to address requirements, but these must be cross referenced within the EMP.

An EMP template that follows this format is available from the link below. If a contractor's EMP template and operating procedures/plans follows a different format and layout, it can be used as long as the requirements outlined in this guideline are met and any statutory approvals are complied with. An EMP should include the checklist in Appendix A to demonstrate compliance.

Consult with Waka Kotahi to find a resolution if there is inconsistency between the requirements set out in this guideline and the specific conditions of statutory approvals.

[Environmental and social management plans](#)

Section 1.0 Introduction

Section 1.0 of the EMP should briefly outline the context of the environment in which the EMP operates within along with the overall management plan framework and roles and responsibilities relating to the implementation, operation and review of the EMP.

Table 1: Section 1.0 Introduction

Section	Minimum requirements	Desired outcome and guidance
1.1 Project description	<ul style="list-style-type: none"> Briefly describe the project/contract including the location, relevant councils, construction/M&O activities and environmental context/setting. 	<p>To provide information to allow the reader of the EMP and those implementing it to understand the project/contract activities and the environmental context that the plan operates within.</p> <p>To provide context as to how the EMP interacts in relation to other sub-plans and project plans.</p>
1.2 Receiving environment	<ul style="list-style-type: none"> A map showing the location of the network outcomes contract (NOC) should be included to show the project location/contract network, landmarks and any associated depots etc. 	
1.3 Management plan framework	<ul style="list-style-type: none"> Identify how the EMP (and any sub-plans) sits within the overall management plan framework that is required under Waka Kotahi contracts/policy and/or statutory approvals for the project/contract. 	<pre> graph TD EMP[Environmental Management Plan] --- QMP[Quality Management Plan] EMP --- CSMP[Cultural & Stakeholder Management Plan] EMP --- HSM[Health & Safety Management Plan] EMP --- OP[Other Plans] EMP --- SP1[Sub-plan 1] EMP --- SP2[Sub-plan 2] EMP --- SP3[Sub-plan 3] </pre>
1.4 Roles, responsibilities and contact details	<ul style="list-style-type: none"> Outline the roles and associated responsibilities related to the implementation, operation and review of the EMP. Contact details should also be provided. As per contract and statutory approval requirements, the following are often key roles that need to be included within the EMP: <ul style="list-style-type: none"> CS-VUE manager iwi liaison manager (if required) cultural monitor (if required) environmental champion(s) (M&O contracts). Ideally this role would be undertaken by site-based personnel, but could be shared between M&O staff to ensure all responsibilities are covered adequately. stakeholder and community engagement manager. 	<p>Ensure that all of the responsibilities and tasks described within the EMP, which are required to get good quality environmental outcomes (including monitoring, reporting, compliance with conditions of statutory approvals etc), are allocated to a specific role and that there is no uncertainty around responsibilities.</p>

Section 2.0: Environmental risks and opportunities

Section 2.0 of the EMP identifies the environmental risks/opportunities of the project or contract activities that will require management. It is anticipated that these will develop throughout the life of the project.

Table 2: Section 2.0 Risks and opportunities

Section	Minimum requirements	Desired outcome and guidance
2.1 Sensitive sites	<ul style="list-style-type: none"> Detail a work planning procedure and/or cross reference to a 'live' GIS map or register of locations that enables the identification of sensitive sites within the project zone of influence. The development of the sensitive site maps or register may continue for some time (from the start of a project/contract), so in the interim a procedure to support work planning (refer Section 3.1 of this EMP Outline) should be used. The EMP should detail both methods for identifying sensitive sites. 	<p>The location of sensitive sites (eg watercourses, wetlands, cultural/archaeological sites, heritage landscapes, critical habitat for threatened flora and fauna, residential/school properties) should be readily identified to inform the effects of the project activities (environmental risks) and subsequently the required mitigation. For some projects (eg capital projects), this may have already been done during the previous consenting phase of work.</p> <p>Where these have not been previously identified, resources to help inform the location of sensitive sites are included in Appendix B. This list of resources may be updated with region specific information and may form the basis of a work planning procedure.</p> <p>Where information gaps exist, further site investigations may be required to confirm and quantify sensitive sites and inform mitigation. In particular, this may apply to M&O contracts as recent technical assessments to support statutory approvals may not have been undertaken. Where further survey and/or assessment is required, Waka Kotahi guidelines should be followed and in some instances Waka Kotahi should be consulted (for example where a unexpected statutory approval is required or there is the potential for high environmental risk to occur to a sensitive site).</p>

2.2 Environmental risks and opportunities

- Identify the environmental risks related to project activities and locations and detail these in an environmental risk register. This may take the form of a 'live' register.
- The environmental risk register should comply with the [Risk Management Practice Guide \(Minimum Standard Z/44\)](#) and should as a minimum detail:
 - project activities and risk (including opportunities) descriptions
 - rate the level of environmental risk (based on likelihood and consequence)
 - mitigation measures to manage risks (cross referencing to the EMP sections, sub-plans or procedures as necessary)
 - reassess the risk after mitigation measures are in place and identify where any residual risks remain. A plan to address any high residual risks will need to be discussed with Waka Kotahi MCM or PM.
 - environmental opportunities.

Appropriately identifying environmental risks that relate to the project activities in relation to likelihood and consequence. Risks should be considered in the context of geographic location, sensitive sites (refer Section 2.1 of this EMP outline), Waka Kotahi policy and legislative/statutory compliance (refer Section 2.3 of this EMP outline). Some of these environmental risks/effects may already have been identified during the previous business case phases. Environmental risks should be appropriately planned for and managed either by linking to existing or new operational procedures and/or plans.

Contractors should use their own risk registers where they are available, but these should meet the minimum requirements set out within this guideline and also the [Risk Management Practice Guide \(Minimum Standard Z/44\)](#). A template risk register has been included as an appendix to the [EMP template](#) and would be maintained as a 'live' register to the EMP.

The risk register should also promote best practice through the identification of opportunities for environmental improvements. These should reflect organisational strategies and plans such as [Te Ara Kotahi – Our Māori Strategy](#), [Broader Outcomes Strategy](#) and [Toitū Te Taiao – Our Sustainability Action Plan](#). Examples might include ecological enhancement of an area associated with the project/contract that was previously degraded, consideration of retrofitting to reduce existing noise impacts or procurement of goods/services from local businesses.



2.3 Regulatory and consent requirements

- Provide a list of legislation, regulations and standards that are relevant to the project activities and that have been considered as part of this EMP.
- Provide a summary table of consent conditions that are relevant to the EMP, the activities and locations that they relate to and the corresponding operational procedures/sub-plans.

It is a Waka Kotahi requirement that CS-VUE is used as the platform for statutory approval compliance and it should also be used by projects to ensure timely consent monitoring and compliance actions are undertaken as required by statutory approval conditions.

In order to understand the extent of statutory approval requirements to inform the EMP development, a download and analysis of all existing consents and associated conditions (available from CS-VUE) along with a review of permitted activity standards is required prior to the start of a capital works project or within the first 4 months during the EMP development for M&O contracts. This information should be used to identify the need for any new consents as well as to inform Section 2.2 of this EMP outline, and subsequently sub-plans and operational procedures (Section 3.0 of this EMP outline) that may need to be developed or adapted (new or existing) to address any statutory approval requirements.

All consent conditions that are relevant to this EMP should be included in the summary table.



Section 3.0: Implementation and operation

Section 3.0 of the EMP should describe work planning and operating procedures, sub-plans and training which will be undertaken to mitigate environmental risks identified in Section 2.0 of the EMP.

Table 3: Section 3.0 Implementation and operation

Section	Minimum requirements	Desired outcome and guidance
3.1 Environment work planning (including emergency works)	<ul style="list-style-type: none"> A specific procedure should be detailed for environment work planning. This procedure should detail how the identification and management of environmental risk (alongside safety and quality risk) for all tasks/activities is identified, planned and documented. It should describe how environment controls are then disseminated to site teams etc. The procedure should also include a description as to how new statutory approvals will be identified and applied for if required, and also for identifying and managing emergency works under section 330 of the RMA. 	<p>To ensure that resources developed as part of this EMP are readily available, utilised and communicated to manage and mitigate environmental risk during the work planning and programming process.</p> <p>Resources reviewed for work planning should include the environmental risk register, sensitive sites, legislation, permitted activity standards/statutory authority requirements, asset management plan and associated mitigation. Consultation with stakeholders/partners may also be required.</p> <p>Identifying new statutory approvals or handling of emergency works (under section 330 of the RMA) should be an outcome of environment work planning.</p>
3.2 Operating procedures and sub-plans	<ul style="list-style-type: none"> Include or cross reference to contractors operating procedures (existing or new) and/or sub-plans to achieve statutory compliance (including permitted activity standards), manage environmental risk and deliver opportunities identified in Section 2.0 of this EMP outline. These should be appropriate to the scale of project activities. Stakeholders/partners and Waka Kotahi should be consulted as appropriate during the development of operating procedures and/or sub-plan. 	<p>To ensure that all environmental risks and opportunities identified are managed in accordance with Waka Kotahi policy, statutory requirements (including permitted activity standards), best practice and in line with the effects management hierarchy (avoid, minimise, mitigate).</p> <p>Contractors existing procedures/plans should be utilised wherever possible, but these should be reviewed and adapted/updated where needed to comply with Waka Kotahi standards, specifications and guidelines and to ensure they are appropriate for project activities, context (eg sensitive sites) and meet statutory approval requirements.</p> <p>All procedures/plans/programmes that are cross referenced within the EMP, must be available for review in entirety as part of the EMP approval process.</p>



3.3 Environmental incident response and reporting	<ul style="list-style-type: none"> • Include an environmental incident response, investigation and reporting procedure or cross reference to an existing one. It should describe internal and external reporting requirements (including timeframes), closing out of incident investigation actions (including preventative measures) as well as a description of how the EMP will be reviewed/updated as a result of incidents. 	<p>The procedure must ensure that all environmental incidents that cause or have the potential to cause material harm to the environment are adequately managed, investigated, reported and any actions identified closed out. Incidents must be recorded and reported to the appropriate statutory authorities and Waka Kotahi within set timeframes.</p> <p>The EMP must be updated to reflect the findings of any incident investigations to ensure that any newly identified risks and associated controls are addressed within the EMP.</p>
3.4 Communication, consultation and complaints management	<ul style="list-style-type: none"> • Include details of stakeholders, methods (including timeframes) and frequency of communication/consultation relevant to this EMP, eg notifying public of noisy work, council engagement or iwi liaison. • Detail how complaints will be received and managed, including contact information for public. 	<p>Affected stakeholders, public and residents must be identified and consulted with and kept informed in relation to environmental matters on the project/contract in a timely manner. The CSMP should be cross referenced to as necessary.</p> <p>Council communications should also be detailed including how they will be kept informed and updated on incidents/complaints, compliance and general communication.</p>
3.5 Training, induction and competencies	<ul style="list-style-type: none"> • Include details of how all staff, visitors and sub-contractors will be identified for relevant induction/training/education to help manage environmental risks. For staff/sub-contractors this should include a competency evaluation procedure. • A description should be provided of how training records are maintained. For M&O contracts, this should link to key result areas (KRAs) if appropriate. 	<p>To ensure appropriate environmental training is provided to personnel (including visitors and sub-contractors) performing tasks or on site with the potential to cause/prevent environmental impact(s) and that records are kept. Competencies should be evaluated and identified/linked to environmental monitoring outcomes, eg spill response training.</p> <p>Training might include induction, toolbox talks and pre-start meetings, spill training and any other environmental awareness information disseminated to staff/visitors.</p>

Section 4.0: Compliance/performance monitoring and reporting

Section 4.0 of the EMP should focus on describing compliance monitoring/inspections and reporting of environmental risks, associated mitigation, and the statutory approvals identified in Section 2.0 of the EMP, that are associated with the project/contract.

Table 4: Section 4.0 Compliance/performance monitoring and reporting

Section	Minimum requirements	Desired outcome and guidance
4.1 Monitoring	<ul style="list-style-type: none"> • Include details of a procedure and/or programme of site monitoring and inspections to confirm: <ul style="list-style-type: none"> – How activities and consents will be monitored to ensure coverage relating to environmental risk. – Compliance with all statutory approvals and conditions (refer Section 4.2 CS-VUE of EMP Outline). – Who will undertake monitoring and how often, this should include internal and external (eg Council compliance monitoring). – What will be monitored and how it will be recorded. – How findings are actioned, closed out and lessons learnt integrated. – How and when is monitoring reported internally, externally (including to Waka Kotahi). Statutory non-compliances identified must be reported to Waka Kotahi (within 24 hours). – Linkages to Waka Kotahi KRAs (M&O contracts only). – How monitoring will link to competencies, ie identifying training needs (refer Section 3.5). • Monitoring should be overseen/guided by a suitably qualified professional. Those undertaking monitoring should have received appropriate training. 	<p>Project activities, environmental risks and mitigation are managed in line with the EMP operating procedures/sub-plans and consents. This should include where environmental mitigation or improvements have been undertaken beyond that required by statutory approvals or KRAs.</p> <p>Monitoring and audit programmes should be planned to ensure coverage relating to environmental risk.</p> <p>Ensure that CS-VUE is being utilised to monitor and manage consent and concessions compliance. Reporting should include CS-VUE consent compliance status.</p> <p>Ensure that any issues identified during compliance monitoring are reported appropriately (internally and externally) and are prevented from reoccurrence in the future and integrated into lessons learnt processes.</p>
4.2 CS-VUE	<ul style="list-style-type: none"> • Describe how CS-VUE will be used to manage and monitor all consents and concessions. Include alert settings for CS-VUE. Describe how this information will be fed into works programming and the monitoring programme. 	
4.3 Reporting	<ul style="list-style-type: none"> • Include a summary of all project reporting requirements, including what is being reported, how often and to whom. Includes internal and external reporting. 	
4.4 Key result area (KRA) (M&O contracts only)	<ul style="list-style-type: none"> • Describe the process of how the M&O contract will address and record KRA/key performance indicators (KPIs)/measures. 	

Section 5.0: EMP audit and review

Section 5.0 of the EMP should present details of how the EMP will be audited and reviewed to ensure its effectiveness and continuous improvement.

Table 5: Section 5.0 EMP audit and review

Section	Minimum requirements	Desired outcome
5.1 EMP audits	<ul style="list-style-type: none"> • Include details of how audits (minimum annually) of the effectiveness of the EMP will be conducted, reported and integrated into lessons learnt processes. Where appropriate M&O contracts must link to key result areas (KRAs). • Include detail of how audits are reported internally and to Waka Kotahi. • Audits should be undertaken by a suitably qualified professional. • KRA audits for O&M contracts shall be completed by the Maintenance Contract Manager (MCM) or their delegate. 	<p>Ensure that the EMP and associated operating procedures and sub-plans are being appropriately implemented in practice and that they are effective at meeting the requirements of this guideline, statutory/permit requirements and managing the environmental risks and opportunities of Waka Kotahi projects/contracts.</p>
5.2 EMP review	<ul style="list-style-type: none"> • Include a procedure for how, when and by whom reviews and updates of the EMP should be made (minimum annually). Reviews should consider the following: <ul style="list-style-type: none"> – compliance with the designation and/or consent conditions, the EMP (including site specific plans) and material changes to these plans – any significant changes to construction activities or methods – key changes to roles and responsibilities within the project/contract team – changes in industry best practice standards – changes in legal or other requirements – results of inspections, monitoring and reporting procedures associated with the management of adverse effects during construction – lessons learnt from environmental incidents – comments or recommendations from regulator regarding the EMP and sub-plans – stakeholder and partner feedback – unresolved complaints and any response to complaints and remedial action taken to address the complaint. 	<p>Should allow for adaptive management and (minimum) annual review and update to the EMP.</p>

Appendix A: Minimum requirements checklist

This checklist is to be completed and attached to the EMP to identify to the reviewer that the minimum requirements have been completed.

EMP section #	EMP guidelines minimum requirement
	1.0 Introduction
	Section 1.1 Project description
	Section 1.2 Receiving environment
	Section 1.3 Management plan framework
	Section 1.4 Roles, responsibilities and contact details
	2.0 Environmental risks and opportunities
	Section 2.1 Sensitive sites
	Section 2.2 Environmental risks and opportunities
	Section 2.3 Regulatory and consent requirements
	3.0 Implementation and operation
	Section 3.1 Environment work planning
	Section 3.2 Operating procedures and sub-plans
	Section 3.3 Environmental incident response and reporting
	Section 3.4 Communication, consultation and complaints management
	Section 3.5 Training, induction and competencies
	4.0 Compliance monitoring and reporting
	Section 4.1 Monitoring
	Section 4.2 CS-VUE
	Section 4.3 Reporting
	Section 4.4 Key result area (M&O contracts only)
	5.0 EMP audit and review
	Section 5.1 EMP audits
	Section 5.2 EMP review

Appendix B: Sensitive sites checklist

Existing and new information should be referenced to pull together sensitive site locations and the management of environmental risk. This checklist can be used to provide guidance and resources to identify sensitive sites within the zone of influence of the project/contract.

For most capital works projects sensitive sites would have already been identified during the statutory approval phase of work through technical assessments. In some instances (for example M&O contracts) this will not have been completed and/or information gaps will exist. In this case desktop and site investigations will be required and [Waka Kotahi guidelines](#) should be followed. In some instances Waka Kotahi environment specialists should be consulted, for example where a statutory approval is required or where environmental risk is high.

Environmental topic	Sensitive site	Guidance and resources
Noise and vibration, air quality and contaminated land (public health)	Medical sites, rest homes, schools, childcare sites, residential properties, maraes, urupā, horticultural land, kiwifruit orchards, and other community facilities	<p>Consider the location of receivers at risk to exposure to pollution such as air, noise and vibration and contaminated land. In particular, sensitive receivers such as residential properties and schools. Receivers may also be sensitive due to social and cultural land use, such as parks, maraes and places of worship. In some instances, ecological receivers and horticultural land use may be sensitive to public health effects.</p> <p>Review Google Maps and relevant district and regional plans.</p>
Biodiversity	Public Conservation Areas (National Parks, Public Conservation Land, Marine Reserves/Sanctuary)	Refer to DOC maps
	Coastal marine area (Harbours, coasts and estuaries), wetlands, ground water, aquifers, lakes, rivers, streams and their margins	<p>Review:</p> <ul style="list-style-type: none"> relevant district and regional plans (and associated online GIS maps) topographical maps Landcare Research wetland maps and any other relevant conservation documents.
	Habitats or locations of significance for uncommon or threatened species of native fauna (including indigenous mobile fauna habitat)	<p>Biodiversity records can be found at:</p> <ul style="list-style-type: none"> DOC iNaturalist- https://www.inaturalist.org/ National Institute of Water and Atmospheric Research (NIWA) freshwater fish database New Zealand Bird Atlas eBird database <p>Consider mobile fauna includes bats, seabirds (Hutton's shearwaters, Westland petrels), and mobile species that use habitats seasonally such as North Island New Zealand dotterel.</p>
	Significant Natural Areas (SNAs)/Significant Ecological Areas (SEAs), indigenous vegetation including shrublands, grasslands and bush	<p>Review:</p> <ul style="list-style-type: none"> district and regional plans (and associated online GIS maps) any other relevant conservation documents Landcare Research vegetation maps
Landscape	Outstanding/significant natural features	<p>Examples include: outstanding Natural Features, landscapes and character, geological or geothermal/landscapes, geological or geothermal/landscapes, vegetation stands (natural, planted), protected trees, waterways (streams crossings, waterfalls lakes), and geomorphic features (tors, ridges, escapements, volcanic cones flow, geology).</p> <p>Review district and regional plans (and associated online GIS maps) any other relevant conservation documents.</p>

Environmental topic	Sensitive site	Guidance and resources
Historic heritage	Archaeological, cultural heritage and places of significance to Māori	<p>Include special characteristics, landmarks, historic bridges/culverts, buildings, traditional and special places, land use, waterways, myths and stories, artefacts and finds.</p> <p>Refer to:</p> <ul style="list-style-type: none"> • NZ Archaeology Association Google Earth Archaeology • Heritage NZ Pouhere Taonga New Zealand Heritage List/Rārangi Kōrero • council databases. <p>A Waka Kotahi GIS map is being developed.</p>