



Hastings District Council
Whakatu Arterial Link
Construction Environmental Management Plan

June 2014

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Preface

This document has been prepared as a draft Construction Environmental Management Plan (CEMP) in support of the Assessment of Environmental Effects (AEE) for the Whakatu Arterial Link undertaken by Hastings District Council. This draft plan illustrates the way in which Hastings District Council proposes to address the requirements of the relevant Hawke's Bay Regional Council (HBRC) and Hastings District Council (HDC) resource consent and designation conditions pertaining to the construction of the project.

This CEMP will be finalised upon the granting of the resource consents and designation and following appointment of the Contractors. The Contractors will determine the construction methodology for the project on the basis of best practice.

The environmental performance standards and environmental controls specified in this draft CEMP, resource consent conditions and other management plans specified under the resource consents are the minimum requirements that the Contractors must comply with when undertaking construction activities on site. Confirmation will be required that the Contractors' management of the construction process is in accordance with the standards and controls specified within this management plan.

Note: All areas shown in hashed box will be completed prior to submission of the final CEMP for certification by HDC and HBRC.

1. Overview

1.1 Environmental Management Scope

The purpose of the CEMP is to set out the environmental management and monitoring measures to be put in place during construction of the Whakatu Arterial Link (WAL).

The CEMP sets out how the construction works will be managed to ensure that the works are undertaken in accordance with Hastings District Council requirements, the WAL Designation, Resource Consents, and relevant By-laws, Acts and Regulations.

The CEMP includes measures to manage effects on the environment during construction only, and does not include an ongoing management or monitoring measures except as it pertains to potential construction effects.

This CEMP will be reviewed and modified when:

- the designation and resource consents have been obtained;*
- the various Contractors have been selected and engaged; and*
- detailed design has been progressed to a stage that sufficient engineering and staffing details are available.*

The main areas that will be addressed are:

Earthworks, Stormwater, Erosion and Sediment Control, Construction Noise and Vibration, Ecological Management, Hazardous Substances and Spill Response Management, Soil Contamination, Traffic Management, Landscape and Archaeological Management.

This CEMP will provide HBRC and HDC and other stakeholders with assurance that on-site environmental management during construction of the project is being appropriately managed and implemented; and

Allow Hastings District Council to ensure that the appointed Contractors fulfil environmental obligations on its behalf.

1.2 Purpose of the CEMP

The purpose of the CEMP is to:

- Meet the requirements of the WAL designation and resource consent conditions;
- Ensure application of best practice environmental management;
- Ensure compliance with environmental legislation; and
- Properly manage environmental risks associated with the construction of the WAL.

The CEMP is set out in the following way:

- Section 1 – Provides an introduction and summary of the environmental management objectives.
- Section 2 – provides a brief description of the works and proposed construction methodologies.
- Section 3 – Provides the environmental policy statement.
- Section 4 – Describes the environmental issues and controls.
- Section 5 – Describes organisation, roles and responsibilities of key environmental personnel, including contact details.

- Section 5.3– Sets out the emergency response and incident management.
- Section 5.4 – Sets out the Project Environmental Requirements, including the designation and list of applicable resource consents.
- Section 6 – Describes the environmental monitoring, auditing and reporting procedures.
- Section 8 – Describes the environmental education and advocacy of all contractor and Hastings District Council staff.

1.3 Objectives

The Contractor(s) will also be required to set objectives with respect to undertaking the project works. The objectives are as follows:

- Comply with sections of the designation, resource consents and associated legislation applicable to the Contract Works and apply best practice environmental management;
- Actively encourage a culture of environmental awareness and commitments within the Project Team. Undertake regular training (including toolbox talks) and take advantage of all opportunities to improve environmental awareness; and
- Undertake the project in a manner to enhance both Hastings District Council’s and the Contractor’s reputation.

1.4 CEMP Development

The CEMP for the WAL is intended to be a living document that is updated and continually monitored over the course of the project. Making changes to the CEMP is an important aspect of improving a project’s environmental management.

CEMP reviews will be undertaken:

- Following any major environmental incidents;
- At the completion of the environmental audits; and
- At the end of the project (to allow for improvements in subsequent projects).

The review process will include looking at the environmental controls and procedures to make sure they are still applicable to the activities being carried out. Reasons for making changes to the CEMP will be documented and a copy of the original CEMP document and subsequent versions shall be kept for the project records.

Updated CEMPs will be re-submitted to HBRC and HDC.

1.5 CEMP Certification

Prior to construction commencing, a completed CEMP shall be submitted for certification to HDC and HBRC in accordance with the process outlined in the Proposed Conditions for the Whakatu Arterial Link (HDC 2014d).

2. Project Description

The WAL provides a strategic link between SH2 North and Pakowhai Road, Hastings. The WAL is a new two lane carriageway of approximately 3,500 metres in length with a total construction footprint width of between 30 metres and 80 metres (at intersection approaches). It generally follows the Karamu Stream for much of its length. The land traversed is predominately flat horticultural, agricultural and industrial land.

The WAL is fully described in the Whakatu Arterial Link Project Description (GHD 2014a).

2.1 Scope of Construction Works

The construction activities planned include:

- Enabling works
- Topsoil stripping and construction of a raised roadway embankment, including stockpiling for bulk materials and storage of petroleum products for operation of construction plant;
- Metalling and sealing of the carriageway;
- Construction of miscellaneous concrete features including kerb and channel at intersections including roundabouts and a railway level crossing;
- Construction of a temporary “dirty water” and permanent clean water roadway drainage system, including swales, pipes, detention ponds and outlet structures; and
- Construction of a 72 metre long prefabricated bridge spanning the Karamu Stream.

2.2 Sequence of Works

A construction programme will be developed before final submission of the CEMP. Construction of the WAL is expected to take 18 to 24 months with work undertaken on multiple sites simultaneously at any one time. The programme will show enabling works such as utilities diversions, property access roads and site establishment as the work being undertaken first, followed by construction of the bridge, link road and local road connections with associated structures and embankments. Landscaping and installation of roadside infrastructure, including lighting, barriers and signage, will complete the programmed works.

Actual dates for major work sections will be developed and will be provided with the Final CEMP.

2.3 Related Management Plans and Mitigation Drawings

This draft CEMP will be submitted to HBRC and HDC and forms part of a package of management plans for the WAL. The package is expected to include the following plans:

- Stormwater Management Plan;
- Erosion and Sediment Control Plan;
- Traffic Management Plan;
- Landscape Mitigation Drawings;
- Construction Noise and Vibration Management Plan;
- Dust Control Management Plan; and

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- Accidental Discovery Protocol.

The plans are to be submitted in accordance with the process outlined in the Proposed Conditions for the Whakatu Arterial Link (HDC 2014d).

The Contractor(s) will be required as part of the contractual arrangement with Hastings District Council to undertake all construction activities on site in accordance with the provisions of the relevant management plans.

2.4 Construction Method Statement

The following section provides an overview of the works methodology to be employed for the WAL.

The Construction Method Statement will be refined and finalised once the designation and consents have been obtained, the implementation and contracting strategy defined and endorsed by the Hastings District Council and the Contractor(s) selected. This will be undertaken within the scope of the designation and consent conditions which will be in place to manage the environmental effects of the construction activities. However, the following provides an example of what will be covered in the final CEMP (based on the construction section in the Project Description).

2.4.1 Enabling Works

Prior to the commencement of construction of the main alignment and associated intersections it is assumed that some early enabling works will be undertaken, namely:

- Utility Diversions and protection works (excavation with traffic management measures as appropriate);
- Reinstatement of impacted infrastructure on private land;
- Installing fence lines along the edge of the works;
- Site Clearance, removal of vegetation, fences, buildings and the like;
- Construction of temporary access routes to work sites and relevant affected properties;
- Construction of contractors' compound; and
- Construction of sediment settlement ponds and environmental controls.

There are several utilities that will need relocation, amendment or protection throughout the project. The necessary approvals and agreements to enable these works will be obtained at a future stage as the detailed project design is completed.

The utility works may require excavation in the existing ground and erection of overhead power lines and supports. It is expected that most sites will be accessed from existing roads and tracks although it is possible that the construction of temporary access routes may be necessary. As far as practical it is expected that as much of these works will be undertaken ahead of the main works.

The site clearance works will involve some excavation and soil removal to on site storage locations or disposal off site.

As part of the enabling works, particularly the construction of the contractor's compound and temporary access routes, it will be necessary to install sediment control measures such as sediment settlement ponds.

2.4.2 Earth Works

The 3.5 km long WAL is to be constructed on a fill embankment generally ranging from around ½ metres to 2 metres in height, although reaching over 3.5m on the approach to the stream bridge and being near to ground level at the road intersections.

A large quantity of the fill material coming from the Hawke's Bay Regional Council's planned flood plain protection works in the adjacent Karamu Stream is to be transported directly to the WAL construction works. This will minimise haulage distances and greatly reduce the impact of construction traffic on the surrounding roading network.

There will be a need to import additional fill material and likewise some excavated unsuitable material will need to be removed from site for disposal. This will generate a number of construction vehicle trips on the surrounding roading network. The contractor will need to plan, programme and manage the works to reduce, as far as reasonably practical, the number and intensity of HCV movements on the roading network associated with the earthworks.

2.4.3 Bridge Works

The major bridge components such as bridge beams will be prefabricated in a controlled environment at an off-site facility. Other components will be cast in-situ and it is expected that the contractors will use local ready mixed concrete providers.

The prefabricated components are likely to be delivered by road or rail to the site and lifted into place by cranes. The location of off-site manufacture location and mode of transport to the site will be a matter for the contractors to determine when tendering for the contract.

2.4.4 Pavement Construction

The proposed pavement design is a flexible construction consisting of a cement stabilised subgrade 200 to 250 mm thick, stabilised sub-base of 270 to 330 mm thickness and base course 210 to 220 mm thickness upon which the surfacing material will be laid.

The sub-base and base course granular materials will be imported to site by trucks and laid by a grader and roller compacted to the required levels. The sub-grade and sub-base will be stabilised by mixing with 2-4% cement by specialist plant. The chip seal and asphalt surfacing material will be delivered to site by trucks and laid by a paving machine.

It is likely that part of the road may be utilised as a haul route through the site after the sub-base material has been laid. This will allow the contractor to reach key sections of the works, such as the stream crossing from the road network.

2.4.5 Water Requirements for Construction

Water will be required for a number of construction activities, including:

- dust suppression;
- earthworks supply (moisture conditioning for engineered fill construction);
- ground improvements;
- concrete and aggregate production (placement and curing);
- irrigation for landscaping to establish a vegetation cover; and
- vehicle tyre wash to prevent tracking of sediment on roads.

Water will need to be sourced from existing sources such as the Kamaru Stream. Any water abstraction is subject to obtaining the necessary consent from the Regional Council. The

volume of water required will be reduced during periods of wet weather. This water needs to be readily available across the construction site.

2.4.6 Erosion and Sediment Control

Erosion and sediment control will be provided throughout the duration of the construction works and maintenance period to ensure protection of the downstream receiving environment from the adverse effects of sediment from the work area. A final Erosion and Sediment Control Plan (ESCP) will be required to be submitted by the contractors as part of the final CEMP. The requirements for this plan are contained in Erosion and Sediment Control Plan GHD 2014(j) accompanying this submission.

2.4.7 Roadside Furniture and Landscaping

Once the main construction activities have been completed it will be necessary to install roadside furniture including lighting, roadside barriers and signage. Landscaping of areas that have been disturbed but are not paved will be carried out and will need to be maintained while plants establish. Further detail can be found in Landscape and Visual Assessment Report (GHD 2014c).

The Principal Contractor is reminded that the preliminary methodology and programme does not remove or overwrite the contractual obligation of the Principal Contractor to programme and determine how the works will be constructed. The main purpose of the illustrative construction methodology and programme is to identify the environmental constraints and responsibilities that the Principal Contractor will need to plan, programme and manage while constructing the works in accordance with the contract documents, designation and resources consent conditions and obligations, other relevant legislation and this CEMP.

The Principal Contractor will be required to submit a methodology and programme to the Engineer to the Contract (and if required the consent authorities) for approval before construction commences. The programme should demonstrate how the requirements of the CEMP have been considered, planned and programmed.

The Engineer to the Contract will approve the programme in liaison with the Construction Environmental Manager ensuring environmental constraints and issues are addressed within the programme.

When the construction programme has been finalised it should be referenced to the CEMP, and if required the CEMP should be updated by the Construction Environmental Manager.

3. Environmental Policy Statement

The works will be undertaken in accordance with Hastings District Council's and each of the Contractors' environmental policy statements.

Environmental policy statements will be provided for each of the main contractors before submitting the final CEMP.

4. Project Construction Environmental Issues

Based on the understanding of the construction programme and the understanding of the local environment (from the AEE) the environmental issues are discussed and potential mitigation measures are outlined.

The following sections identify project related potential effects, the guidance for the management of the effects and the project issues that need to be considered in the management of the effects. Thereafter each section concludes with a reference to a management plan and sets out the expectations for the appointed Principal Contractor.

4.1 Dust Control

4.1.1 Potential Effects

The construction of the WAL will entail relatively large scale earthworks. Exposed earthworks can be a significant source of dust which can affect human health and plant life along the edge of the earthworks area and can be a nuisance to the surrounding public. Dust is also a particular concern for the adjacent orchards, pack house and fruit processing businesses in the vicinity of the processed works. Equipment and produce are likely to be adversely affected if dust is not effectively managed.

During wet weather conditions dust that has been deposited on the ground can runoff into water courses contributing to sediment loads unless sediment control measures are put in place.

Sediments deposited on sealed public roads can also result in a dust nuisance. Rainfall, water evaporation and wind speed are meteorological conditions having the greatest effect on dust mobilisation.

The following are potential sources of dust discharges associated with the construction phase of the WAL:

- dust from roads and access areas generated by trucks and other mobile machinery movements during dry and windy conditions;
- excavation and disturbance of dry material;
- loading and unloading of dusty materials to and from trucks; and
- stockpiling of materials, including material placement and removal.

4.1.2 Project-Specific Issues and Requirements

Good on-site management is the most effective way to control dust. Mitigation measures include:

- wind break fencing;
- dust suppression – through the use of water carts or water sprinkler systems during dry conditions;
- semi-permanent working areas and construction site access roads should be constructed with an appropriate base, kept metalled, and kept damp;

- minimising exposed surfaces by only exposing surfaces to be actively earthworked and by stabilising completed areas;
- excavated areas should be watered as necessary, and stabilised rapidly (e.g. through metalling, grassing or mulching);
- stockpile dampening and covering;
- minimising stockpile drop heights;
- using compactors and rollers to seal exposed surfaces;
- plant and vehicle maintenance and management;
- managing vehicle and tyre wash-down areas to avoid dust nuisance; and
- setting vehicle speed limits in localised areas if appropriate.

The mitigation measures to be adopted to control dust and other air contaminant discharges are dependent on the Principal Contractors method of working and programme. .

4.1.3 CEMP Expectations for the appointed Principal Contractor

A Dust Control Management Plan will be developed and included in the final CEMP. See the Proposed Conditions for the Whakatu Arterial Link (HDC 2014d).

4.2 Erosion and Sediment Control

4.2.1 Potential Effects

The scale of the WAL means that a relatively large area of land will be disturbed. Erosion and sediment control will need to be provided throughout the duration of the construction works and maintenance period to ensure protection of the downstream receiving environment from the adverse effects of sediment from the work area.

4.2.2 Project-Specific Issues and Requirements

Key issues which will require addressing include:

- conveyance of stormwater from the WAL, to ensure health and safety of road users ;
- separating clean from dirty water;
- protecting adjacent properties from surface flows;
- protecting water quality and aquatic ecosystems from site drainage during construction and associated earth disturbance activities;
- protecting the natural character and amenity values of the Karamu Stream; and
- minimising potential adverse effects from flooding and erosion of land and/or water courses from site drainage during construction and associated earth disturbance activities,

Key sediment control measures to be used will consist of sediment retention ponds, decanting earth bunds and rock dams. More detail regarding erosion and sediment control measures for the WAL is set out in the Erosion and Sediment Control Plan in Appendix 2 of Part D of the AEE.

4.2.3 CEMP Expectations for the appointed Principal Contractor

The guidance and expectations set out in the Erosion and Sediment Control Plan (GHD 2014h) within the AEE should be followed and where necessary reviewed and updated once a detailed construction programme and build methodology has been agreed with Hastings District Council by the Principal Contractor and the Construction Environmental Manager.

Erosion and sediment control should be provided by the Principal Contractor throughout the duration of the construction works and maintenance period to ensure protection of the downstream receiving environment from the adverse effects of sediment from the work area.

4.3 Construction Noise and Vibration Control

4.3.1 Potential Effects

The construction of the WAL will require the use of large mobile mechanical equipment and processes that are likely to generate elevated levels of noise. There are therefore likely to be some significant temporary noise effects during the construction phase of the WAL.

Construction noise is expected to be generated from the following activities:

- Works, including general earthworks, using heavy machinery e.g. excavators, compactors and rollers;
- Topsoil stripping using motor scrapers;
- Ground improvements utilising vibratory construction techniques and most piling activities using rollers/compactors and boring concrete piles;
- Bridge construction, including installation of precast structures; and
- Pavement construction where there is likely to be multiple items operating simultaneously.

4.3.2 Project-Specific Issues and Requirements

The noise and vibration mitigation measures will include:

- Ensuring all machinery is in good conditions upon its arrival at the site;
- The restriction in use of heavy machinery outside of specified working hours for enabling works, topsoil stripping, general earthworks, ground improvements, bridge construction and pavement construction;
- Construction superintendents will monitor machines to ensure they are not generating unnecessary noise, and will rectify unnecessary noise;
- Excavators and dump trucks will be fitted with appropriate exhaust silencers;
- When machinery and plant is not required to be running, it will be switched off and not left idling;
- Mobile plant will not be parked close to any residential boundaries to avoid noise generation during engine start-up and close down periods;
- Sensitive receivers will be advised of project progress and when particular activities are to be carried out that have the potential to affect them. They will be given advance notice of any required extension to normal work hours (e.g. major concrete pours, oversize

equipment delivery), work on or close to property boundaries and work starting in new areas;

- All noise complaints will be acknowledged, recorded and investigated. The complainant will be advised of the findings of the investigation and changes to minimise any reoccurrence;
- A construction worker education programme, including a section in the Project induction relating to noise generation and mitigation, will be used; and
- Monitoring regime in line with the conditions of consent, if required.

4.3.3 CEMP Expectations for the appointed Principal Contractor

A Construction Noise and Vibration Management Plan will be developed and included in the final CEMP. See the Proposed Conditions for the Whakatu Arterial Link (HDC 2014d).

4.4 Traffic Management

4.4.1 Potential Effects

Temporary traffic management for the construction of the WAL will be required. The potential effects identified include:

- The need to avoid disruption of State Highway 2 and the local roads as far as practicable and maintain existing flows and travel times;
- The desirability of minimising the number of construction vehicle trips (including for any bulk earthwork movements) and their effects on local roads and seek to avoid residential areas where practicable;
- The need to ensure adequate access to businesses and other properties whose access may be restricted by the construction works.
- The need to minimise the effects of construction vehicle parking on public roads;
- The importance of providing for effective communication and the gathering of feedback from key affected parties; and
- Providing a safe environment for the general public and construction staff during construction.

4.4.2 Project-Specific Issues and Requirements

Key traffic management measures to be used will consist of road closures, lane closures, temporary diversions and lowered speed limits. These are to be provided in accordance with Section 8 of the Traffic Control Devices. Work areas are to be adequately fenced off from public areas and vehicle restraint measures such as temporary guard railing provided where necessary.

More detail regarding these measures for the WAL is set out in the Traffic Management Plan GHD 2014(j) in Appendix 4 of Part D of the AEE.

4.4.3 CEMP Expectations for the appointed Principal Contractor

The guidance and expectations set out in the Traffic Management Plan (GHD 2014j) should be followed and where necessary reviewed and updated once a detailed construction programme and build methodology has been agreed with Hastings District Council by the Principal Contractor and the Construction Environmental Manager.

4.5 Landscape

4.5.1 Potential Effects

With regard to landscape the highest effects of the WAL are visual amenity effects due to the proximity of the WAL to existing dwellings at Napier Road and works encroaching on Pakowhai Country Park. The impact of WAL at these locations can be reduced to an acceptable level with suitable design.

During Construction grassing and planting of recently exposed earthworked areas will reduce the visual impact. Tree and shrub planting of the earthworks are to be carried out in optimal environmental conditions to maximise plant survival and establishment. This will ensure that as the banks are seeded and plants grow, the landscape and visual effects will progressively lessen.

The visual effects are to be addressed by the Landscape Management Plan.

4.5.2 Project-Specific Issues and Requirements

A detailed Landscape Mitigation Plan will be prepared by a suitably qualified landscape architect once the designation and consents have been approved. See the Proposed Conditions for the Whakatu Arterial Link (HDC 2014d).

4.5.3 CEMP Expectations for the appointed Principal Contractor

The guidance and expectations set out in the Landscape Mitigation Plan should be followed and where necessary reviewed and updated once a detailed construction programme and build methodology has been agreed with Hastings District Council by the Principal Contractor and the Construction Environmental Manager.

4.6 Ecological Management (Aquatic and Terrestrial)

4.6.1 Potential Effects

The area traversed by the WAL is a highly modified area. Water quality is currently compromised by farm and urban runoff and the riparian land is largely pasture grass, however there are a number of initiatives in the area that are improving this situation.

4.6.2 Project-Specific Issues and Requirements

Terrestrial ecology is limited due to the modified nature of the environment. The prevention of adverse impacts on water quality from the construction of the WAL is a critical concern.

4.6.3 CEMP Expectations for the appointed Principal Contractor

Suitable native tree and shrub species are to be planted as part of the Landscape Management Plan works to improve the ecology of the area. Riparian planting is required as part of the Proposed Conditions (HDC 2014d) and may form part of the Contractor's obligations.

The Landscape Management Plan is expected to lead to an improvement to the ecology of the area through the planting of native flora. The final Erosion and Sediment Control Plan and Stormwater Management Plan are critical to avoiding adverse effects on water quality and aquatic ecology.

4.7 Hazardous Substances and Spill Response Management

4.7.1 Potential Effects

The management of hazardous substances by a contractor is a key factor as unintentional discharges can have an effect on land and potentially water resources. It will be important that measures are in place to avoid unintentional discharges.

4.7.2 Project-Specific Issues and Requirements

A detailed Hazardous Substances and Spill Control Plan will be prepared by a suitably qualified person once the designation and consents have been approved.

The Hazardous Substances and Spill Control Plan should include details about the environmental performance standards, control measures and their implementation based on the Principal Contractor's policies and systems for the construction phase of the WAL. The Plan should also contain mitigation measures as well as Emergency Response and Spill Management procedures that are in line with Hawke's Bay Regional Councils generic Spill Management Plan (Appendix A)

4.7.3 CEMP Expectations for the appointed Principal Contractor

The guidance and expectations set out in the Hazardous Substances and Spill Control Plan should be followed and where necessary reviewed and updated once a detailed construction programme and build methodology has been agreed with Hastings District Council by the Principal Contractor and the Construction Environmental Manager.

4.8 Soil Contamination

4.8.1 Potential Effects

Soil contamination investigations have been undertaken along and adjacent to the proposed WAL alignment. The results of this investigation and site sampling conclude that the levels of metals arsenic, lead and copper were well below even the strictest NES land use requirements. The investigation recommended additional sampling of potential hot spot areas following confirmation of the designation and this will determine whether any remediation work and

consents are required under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (the NES).

4.8.2 Project-Specific Issues and Requirements

Any remediation requirements will be confirmed as part of further testing to confirm compliance with the NES. All topsoil be exported from the site should be tested to confirm its suitability for its intended use.

4.8.3 CEMP Expectations for the appointed Principal Contractor

The Contractor should demonstrate full compliance with the NES and any relevant Regional and District Plan requirements.

4.9 Archaeological Management

4.9.1 Potential Effects

An archaeological assessment has been undertaken along and adjacent to the proposed WAL alignment. The results of this assessment conclude that the works do not directly impact on any known or suspected archaeological sites. The construction activities have however the potential to expose unrecorded archaeological remains.

4.9.2 CEMP Expectations for the appointed Principal Contractor

The contractors, including all construction staff, must be aware of their obligations under the Historic Places Act 1993 and the final Accidental Discovery Protocol (HDC 2014e) with regard to the discovery of any archaeological site or remains during construction activities.

The guidance and expectations set out in the final Accidental Discovery Protocol must be followed.

5. CEMP Management Structure and Responsibility

Once offices are established on site, these details will be updated and provided to Hastings District Council and the Hawke's Bay Regional Council. Contact details and responsibilities of key staff during the construction project will be finalised once the contracts and the contractors' teams have been established.

5.1 Key Personnel

Table 1 outlines expected environmental anticipated management roles on site. Each contractor will likely have its own management structure and will need to provide a description of roles and responsibilities to Hastings District Council upon contract award.

Table 1: Management Roles and Responsibilities

Position	Name	Company	Responsibility
HDC Project Manager	TBC	HDC	Overall responsibility for the project
Engineer to the Contract	TBC	Consultant	<ul style="list-style-type: none"> - Overall responsibility for civil engineering/ construction activities. - Responsibility for implementation of the CEMP. - Administration of the contract to NZS 3910.
Principal Contractor Project Manager	TBC	Contractor	<ul style="list-style-type: none"> - Contractor representative with overall responsibility for the project construction. - Compliance and updating of the CEMP. - Successful delivery of the Project.
Resident Engineer	TBC	Consultant	<ul style="list-style-type: none"> - Support the Project Manager. - Successful delivery of the Project.
Construction Environmental Manager (CEM) (or equivalent).	TBC	Contractor	<ul style="list-style-type: none"> - Environmental induction and training of personnel including subcontractors and visitors. - Responding to incidents and providing feedback to interested or affected parties. - Environmental Reporting. - Maintaining CEMP. - Compliance with CEMP, aspect management plans and consent conditions. - Liaison with Regional and District Councils and other regulatory authorities.

CEMP Expectations for the appointed Principal Contractor

Table 1 should be reviewed and completed upon appointment of the Principal Contractor. An organisational chart should also be included in this CEMP by the Construction Environmental Manager. This organisation chart should show the relationships and connections for the positions identified in Table 1.

The defined roles and responsibilities and the chart do not remove or overwrite the legal duties, responsibilities and obligations of the Principal Contractor in accordance with the contract documents and legislation.

5.2 Environmental Training

To ensure that specific environmental issues and management requirements are effectively communicated, all employees working on-site will undergo general environmental awareness training and training in relation to the CEMP and their environmental management responsibilities. The training will ensure that all employees and subcontractors understand their obligations to exercise due diligence for environmental matters.

Environmental training will include:

- A site induction;
- Familiarisation with the requirements of this CEMP;
- Familiarisation with the requirements of the Accidental Discovery Protocol;
- Environmental emergency response training;
- Spill kit training;
- Familiarisation with site environmental controls; and/or
- Specific environmental training for relevant personnel (e.g. installing erosion and sediment controls, daily checks to maintain controls, cleaning up spills, sampling and monitoring).

Records of all training will be maintained and will include:

- Who was trained;
- When the person was trained;
- The name of the trainer; and
- A general description of the training content.

All environmental training records are to be held at the Project Construction Office. The Construction Environmental Manager will have responsibility for maintaining and updating these records.

5.2.1 CEMP Expectations for the appointed Principal Contractor

The Principal Contractor shall develop, implement and maintain training systems that meet the requirements of this CEMP. These training systems shall be discussed and if required submitted to the Hastings District Council for review and agreement prior to construction start.

5.3 Emergency Response

All reports or spills and other environmental emergencies, regardless of their origin are to be reported to the Construction Environmental Manager and the appropriate environmental agency, i.e. HBRC or HDC. An environmental emergency is any event that causes or has the potential to cause material harm to the environment. Refer to HBRC generic Spill Management Plan in Appendix A.

The Principal Contractor's established and proven Environmental Procedures for Fuel, Oil and Chemical Spills and Erosion and Sediment Control are applicable to the WAL.

Copies of each of the Contractor's procedures will be provided in the final CEMP. The procedures shall contain the following as a minimum:

- *Nominated contact person(s) for emergencies who will be available 24 hours a day, seven days a week, and who has the authority to stop or direct works;*
- *Names and contact details (including all-hours telephone numbers) for emergency response personnel;*
- *Response personnel responsibilities;*
- *Contact details for emergency services (ambulance, fire service, spill clean-up services);*
- *Location of on-site information on hazardous materials and spill containment materials;*
- *Steps to follow to minimise damage and control an emergency; and*
- *Instructions and contact details for notifying HDC and/or HBRC and, if necessary, nearby residents.*

5.4 Incident Management

All incidents on the project involving environmental non-compliance will be recorded and reported through the Principal Contractor's incident and non-conformance procedures. An environmental incident register will be held at the Site Office. Environmental incidents for the month are also discussed at the monthly Environmental Compliance meeting between Hastings District Council and the contractors.

Environmental incidents include, but are not restricted to:

- Spills; and
- HDC or HBRC consent non-compliances.

6. Environmental Monitoring, Auditing and Reporting

In order to ensure that legal requirements (including conditions of the designation and resource consents) and the CEMP are being complied with, ongoing evaluation of environmental performance is required. Monitoring will be undertaken prior to construction, during construction and after construction to check that the activity specific controls have been implemented and to identify any potential or actual problems and rectify them.

Environmental monitoring will include both scheduled (regular) monitoring and triggered (response) monitoring. The main focus of the monitoring will be field checks of the environmental controls or measures to reduce the risk of failure and thereby any adverse environmental effects.

Monitoring details will be completed in the final CEMP in line with the designation and consent conditions and the CEMP's environmental controls.

6.1 Daily Site Inspections

The environmental team will conduct inspections (including all subcontractor activities) and issues will be noted. These inspections are informal visual inspections in order to check compliance with the CEMP;

Inspections as required by environmental control procedures e.g. sediment control devices inspected daily to ensure that they are installed correctly, operating effectively and are properly maintained;

Checking of weather forecast and on-site weather conditions and any pre and post storm inspections as required;

6.2 Weekly Site Inspections

Formal site inspections are to be completed by the Construction Environmental Manager. Site specific checklists will be developed to check compliance with resource consent and designation conditions and this CEMP. Issues will be noted if they present significant environmental risks such as noisy works, works near waterways, sediment basin maintenance.

6.3 Monthly Site Inspections

The HDC's Project Manager, and HBRC's compliance staff will undertake a monthly site inspection, to confirm the environmental monitoring programmes and work procedures containing environmental controls are being implemented in accordance with the CEMP, Operational Work Programme and resource consent and designation conditions.

6.4 External Site Inspections

It is expected that the site will be inspected by HDC and/or HBRC compliance staff on a regular basis. As the works progress, exposed areas will decrease and the effectiveness of site management is confirmed it is expected that the frequency of these inspections will decrease. The results of the external inspections will be recorded, with any issues forwarded to the relevant parties for action.

6.5 Contractor Reporting and Meetings

A monthly Environmental Compliance Report will be prepared and submitted to Hastings District Council by each of the Contractors as part of their Project Monthly Progress Reports. The report will include, but not be limited to, a summary of environmental issues and actions during the month to ensure compliance with this CEMP including any details of any action item requests, feedback received, incidents, associated investigations and corrective actions, and environmental inductions and awareness training provided.

6.6 Auditing

Periodic external environmental audits will be undertaken during the life of the construction WAL. An up-to-date audit register will be kept on site.

6.7 Document Control and Records

Construction records will be maintained on the project to demonstrate compliance with specified requirements. A document Control Plan will be prepared and will define procedures for the identification, collection, filing, access, storage and maintenance of environmental records. Project files located at the site office will be maintained and controlled on a daily basis. Sub-contractor records will be monitored to record compliance

7. Project Environmental Requirements

This section of the CEMP will provide details of the designation and applicable resource consents.

Details for this will be completed in the final CEMP in line with the issue of the designation and resource consent conditions.

8. Environmental Education and Advocacy of all Contractor and Hastings District Council staff

This section of the CEMP will contain details of staff involved with the project who have environmental training and qualifications.

Details for this section will be completed in the final CEMP in line with the appointment of the contractor.

9. Basis of Report

This report: has been prepared by GHD for Hastings District Council and may only be used and relied on by Hastings District Council for the purpose agreed between GHD and the Hastings District Council as set out in Section 1 of this report.

GHD otherwise disclaims responsibility to any person other than Hastings District Council (and GHD's wider team of sub-consultants) arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

Appendices

Appendix A – HBRC Spill Management Plan



HAWKE'S BAY REGIONAL COUNCIL

SPILL MANAGEMENT PLAN



Prepared by Ian Lilburn

Hawke's Bay Regional Council

August 2011

SPILL MANAGEMENT PLAN

Resource Management The Resource Management Act (RMA) sets out how we should manage our environment. It is based on the idea of sustainable management of our resources – or in other words, protecting the quality of our soil, air and water from being damaged beyond repair. The RMA isn't about stopping any activity that effects the environment. It is about undertaking activities in a manner that will have minimal impact to the environment. *'Every person has a duty to avoid, remedy, or mitigate any adverse effect on the environment...'* Section 17 of the RMA.

For any significant incident that could effect the environment, the steps taken should be:

- Cease all work in that area immediately and secure the site.
- Containment and control actions are to be employed as soon as possible.
- Call the project manager and let them know what has happened.
- **Notify HBRC of incident 0800 108 838 (Pollution Hotline).**
- A site manager should visit and inspect the site immediately, overseeing containment and control actions.
- Management and/or HBRC will issue authority to recommence work.
- An incident report be completed and submitted to the Regional Council.

Site management key factors

- The site manager/overseer is familiar with the resource consent conditions and this plan
- A copy of the consent and this Spill Management Plan is held on site
- All those working at the site are aware of their obligations and know what to do in the event of an incident
- A spill cleanup kit be available on site
- Regular 'tool-box' meetings are recommended to discuss site progress, safety, and environmental matters

Hazards and Controls:

ACTIVITY	RISK	ENVIRONMENTAL EFFECT	CONTROLS
REFUELLING	<ul style="list-style-type: none"> - Spillage - Wash-off - Fire 	<ul style="list-style-type: none"> o Pollution of waterways, streams and storm-water systems o Soil Contamination o Ecological Damage (plant-life; wild-life) 	<p>Prevent spills:</p> <ul style="list-style-type: none"> ▪ Inspect machines for any leaking fluids prior to starting job. ▪ Use established refuelling points ▪ Locate fuel tanks away from waterways ▪ Bunding of fuel tanks ▪ No hot refuelling ▪ Fire Prevention Plan <p>Containment:</p> <ul style="list-style-type: none"> ▪ Dig hole, create a bund, or use container to contain spill ▪ Stop the spill or leak, if safe to do so ▪ Create a barrier to keep out of waterway and contain <p>Immediate Clean Up:</p> <ul style="list-style-type: none"> ▪ Sawdust or suitable absorbent to soak up excess ▪ Scrape off affected topsoil and dump spoil in approved dumping-site only ▪ Contact HBRC pollution hotline 0800 108 838

ACTIVITY	RISK	ENVIRONMENTAL EFFECT	CONTROLS
WORKING NEAR/IN RIVERS, STREAMS, and COASTAL AREAS	<ul style="list-style-type: none"> - Machinery failure - Leakage / Spillage - Bank and or bed damage - Wash-off 	<ul style="list-style-type: none"> o Pollution of waterways, streams and storm-water systems o Soil Contamination o Ecological Damage (plant-life; wild-life) 	<ul style="list-style-type: none"> ▪ Work to resource consent conditions (copy to be kept on site) ▪ Work to contract specifications ▪ Store plant, stores and equipment in approved storage areas only and away from water-courses ▪ Contact HBRC pollution hotline 0800 108 838 in the event of a spill that may or will escape to water. ▪ Have a spill kit on hand ▪ Be familiar with what to do in the event of a spill or leak
CHEMICAL USE	<ul style="list-style-type: none"> - Leakage / Spillage - Wash off - Poisonous fumes - Explosion / Fire 	<ul style="list-style-type: none"> o Short or Long-term contamination of waterways, land and air o Ecological poisoning o Population poisoning through ingestion / inhalation 	<ul style="list-style-type: none"> ▪ Abide by Material Safety Data Sheets (MSDS) for handling, storage and containment / clean-up information ▪ Emergency Plans ▪ Use effective and appropriate personal protective equipment (PPE) ▪ Contain and clean up, IF SAFE TO DO SO ▪ Contact HBRC pollution hotline 0800 108 838
DUMPING AND STORAGE OF MATERIAL, RUBBISH AND SPOIL	<ul style="list-style-type: none"> - Spillage - Wash-off - Fire - Rodent / Insect infestations - Blocked water-ways 	<ul style="list-style-type: none"> o Pollution of waterways, streams and storm-water systems o Soil Contamination o Ecological Damage (plant-life; wild-life) o Smell 	<ul style="list-style-type: none"> ▪ Work to resource consent conditions (copy to be kept on site) ▪ Containment to prevent spread / wash-off ▪ Restricted access ▪ Waste material sites planned and managed ▪ Planned cartage and dumping for specific waste / spoil (including soil or waste contaminated from fuel, oils, human & animal waste, excess concrete HSNO) ▪ Proper rubbish disposal (skip bin, 200L drum etc)

INFORMATION SHEET ON ENVIRONMENTAL MATTERS.

ACTIVITY	RISK	ENVIRONMENTAL EFFECT	CONTROLS
DUST	<ul style="list-style-type: none"> - Reduced visibility - Air irritation - Company Image 	<ul style="list-style-type: none"> o Personal –irritation, stress o Amenity/aesthetics o Crop damage 	<ul style="list-style-type: none"> ▪ Dampen down tracks and areas of loose spoil ▪ Management arrange for mailbox drop if necessary ▪ Restrict hours of work ▪ Restricted vehicle movement and speed ▪ Designated park-up areas ▪ Use effective and appropriate PPE
NOISE	<ul style="list-style-type: none"> - Excessive noise - Noise vibration - Company Image 	<ul style="list-style-type: none"> o Personal irritation and stress o Disruption to wild-life 	<ul style="list-style-type: none"> ▪ Restrict vehicle, plant and equipment revs ▪ Baffles and muffling ▪ Restrict hours of work ▪ Management arrange for mailbox drop if necessary ▪ Use effective and appropriate PPE
EARTH-WORKS	<ul style="list-style-type: none"> - Undermining - Destabilisation - Flooding - Silt runoff 	<ul style="list-style-type: none"> o Pollution of waterways, streams and storm-water systems o Soil Contamination o Ecological Damage (plant-life; wild-life) o Erosion o Silt Build-up / flooding 	<ul style="list-style-type: none"> ▪ Work to resource consent conditions ▪ Use erosion and sediment controls as per HBRC guidelines, and as per plans and project methodology ▪ Work to boundaries in contract specifications ▪ Water pumps – water diversion ▪ Control storm-water and surface water run-off ▪ Daily site checks ▪ Restricted access / Barriers ▪ Stabilise surfaces as soon as practical
SITES OF NATURAL, HISTORICAL, AND CULTURAL SIGNIFICANCE (e.g. birds, wetlands, old pa sites, tapu sites, bodily remains etc)	<ul style="list-style-type: none"> - Desecration of burial sites - Destruction of artefacts - Disruption of wild life breeding sites - Destruction of rare breeds of fauna and flora - Company Image 	<ul style="list-style-type: none"> o Ecological Impact (plant-life; wild-life) o Cultural offence o Loss of historical items 	<ul style="list-style-type: none"> ▪ Pre-work inspection - Site research ▪ Clearly identify and cordon off areas of significant interest ▪ If in doubt - cease work in immediate area and cordon the site off ▪ Don't move anything ▪ Restrict access - no visitors etc ▪ Wait for site to be cleared by relevant authorities before work starts ▪ Contract Manager to okay recommencement of work ▪ Contact HBRC pollution hotline 0800 108 838

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