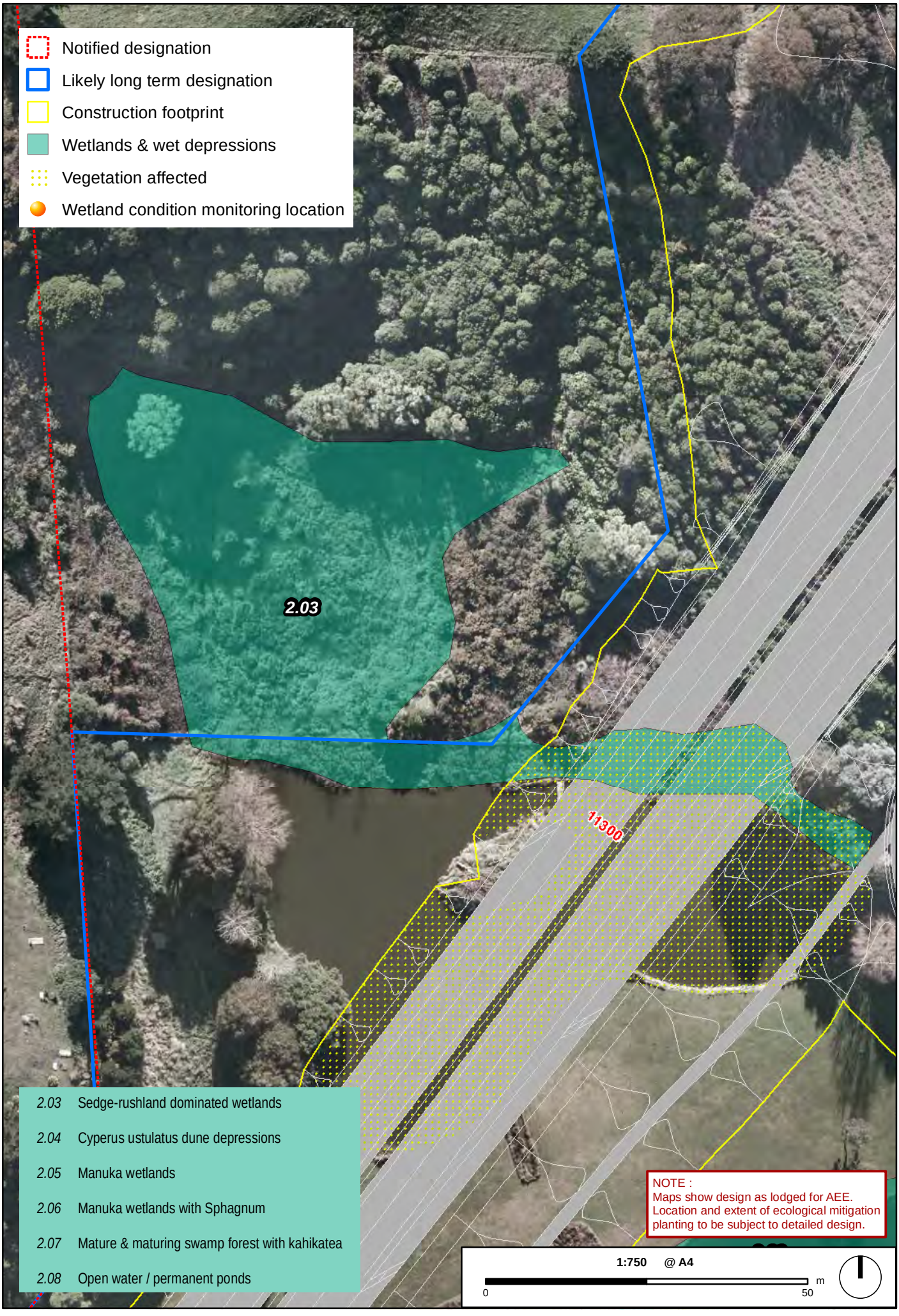


June 14, 2013 W09181B_WET_ValuedWetlands_A4mb.mxd

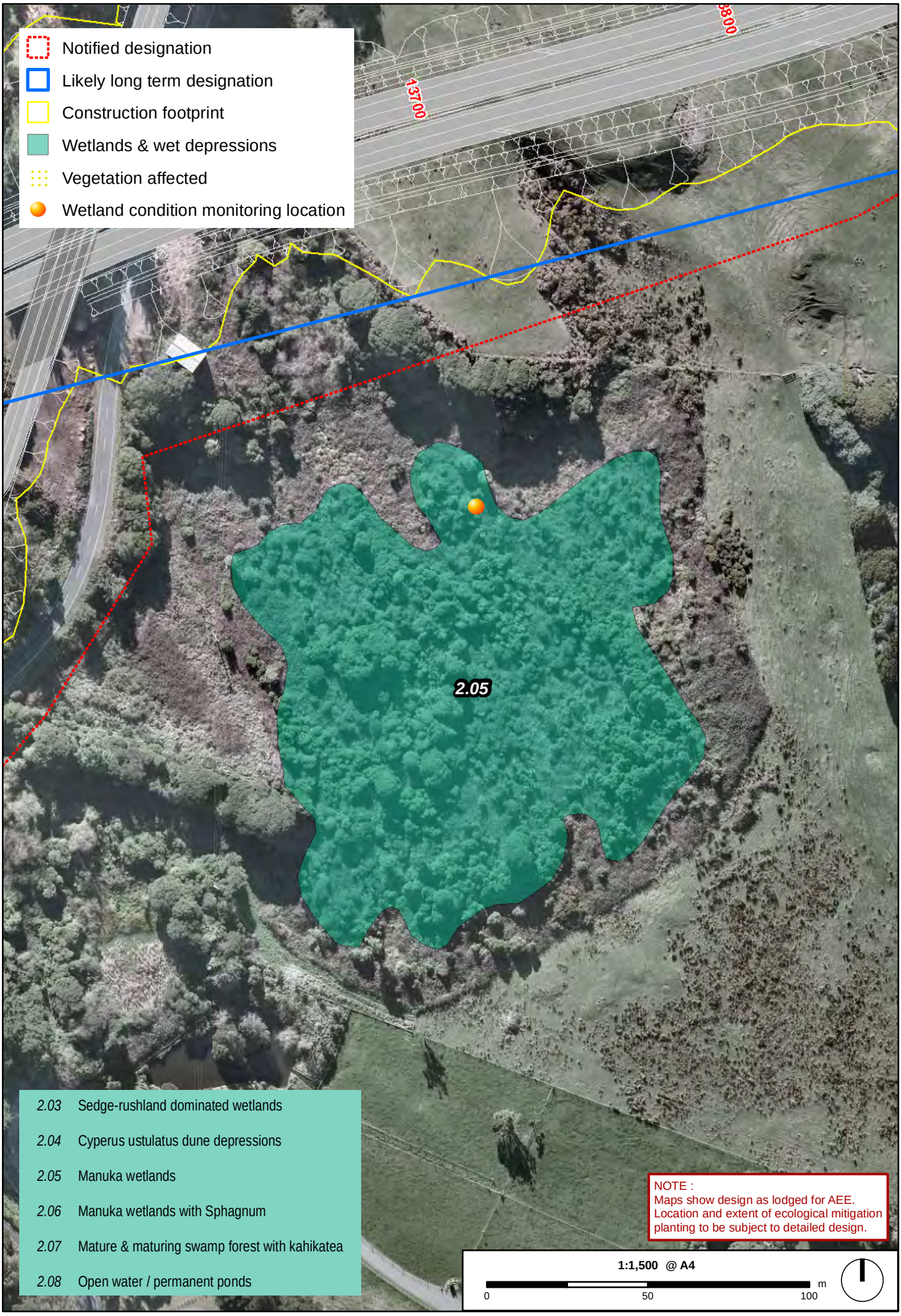
NZ TRANSPORT AGENCY WAKA KOTAHI

Mackays to Peka Peka

WETLAND VEGETATION

TUKU RAKAU WETLAND

6



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NZ TRANSPORT AGENCY WAKA KOTAHI

Mackays to Peka Peka

WETLAND VEGETATION

NGARARA WETLAND

7

7.8 Estuarine/marine habitat

7.8.1 Introduction

The *TR 5: Estuarine Habitat & Species: Description and Values*, describes the ecological values of the estuaries traversed by the Project Alignment. In summary, of the six stream mouths that will potentially receive discharges from earthworks associated with this project all but the Waikanae estuary are high energy environments directly exposed to wave action and so are unlikely to suffer from sediment deposition.

In contrast the Waikanae Estuary has areas of mud flat and saltmarsh which could be adversely affected by a large discharge. A range of consent conditions require monitoring of sediment discharges and adaptive management where effects are observed during and post-construction.

7.8.2 Consent conditions

There are five consent conditions that relate to the protection and management of estuarine/marine environments (G.27, G.34, G.38, G.40 & E.9). A number of these are the responsibility of other disciplines (e.g. E.9) but will require ecological input.

The consent conditions that relate specifically to estuarine/marine habitat and species are listed in full in Attachment 6.

7.8.3 Plan objectives

There are four key requirements for management of Waikanae Estuary:

- Sediment and erosion control will be developed and carried out in coordination with water and habitat quality monitoring by the Project Ecologist.
- Carry our 1 year of Baseline sampling prior to earthworks and establish trigger thresholds.
- Monitor through construction and for two years following construction.
- Respond to any exceedence of triggers.

7.8.4 Summary of baseline studies

The Waikanae River estuary is a tidal river mouth estuary. The low energy environment of the Waikanae Estuary has potential to accumulate sediment and associated contaminants.

The location of Waikanae Estuary can be seen on Map 22.

7.8.5 Protection requirements

Marine and estuarine protection comes from best practice Erosion and Sediment Control and this is addressed in Attachment 4 and also outlined in the freshwater section above.

7.8.6 Mechanisms for protection

i. Detailed Design

- Freshwater ecology involvement in development of the ESCP as it relates to sediment discharge, monitoring and adaptive management.
- Baseline sampling and development of triggers.

ii. Enabling Works

- Nil

iii. Construction

- Bi-annual sampling (winter and summer) of the Waikanae Estuary is required to monitor sediment levels through construction.
- Response to significant events if deemed appropriate.

iv. Post Construction

- Post construction monitoring will continue in the Waikanae Estuary for two years to confirm there have been no long term adverse effects.

7.8.7 Monitoring

- Attachment 6 details the construction and post-construction monitoring required. In summary, this comprises the following:
  - Bi-annual intertidal estuarine sampling based on the Estuarine Environmental Monitoring National Protocol will be undertaken within the Waikanae Estuary in the same locations as the baseline surveys during winter and summer thorough construction and for 2 years post-construction.
- This monitoring will be carried out by the Project Ecologist based on methods detailed in Attachment 6 and reports will be prepared accordingly.

7.8.8 Management

i. Management Triggers

- Attachment 6 details the triggers that if exceeded, will determine whether an effect has occurred in estuarine fauna. In summary this triggers is:
  - A 50% variation in either Permanova-type analysis or Shannon-Weiner diversity indices from the baseline data

ii. Process if Adverse Effects

In the event unanticipated adverse effects occur, a response may be required.

iii. Remedial options

- The potential options to remedy effects on estuarine fauna will be determined on a case-by-case basis depending on a range of factors. Options may include the following:

- Machine clearance or raking of any deposited sediments
- Temporarily opening up the Waikanae River to flush out any contaminants/sediment.

- The method used will be determined as part of required response.

iv. Additional Mitigation

- Nil

7.8.9 Linkages

There are two conditions specific to other activities that overlap with protection of the ecological values of estuarine/marine habitat. They are:

- An overlap between the EMP and the Erosion and Sediment Control Plan (ESCP) under conditions G.26A to G.28 and E.2 to E.11 as it relates to discharges to streams and the Coastal Marine Area;
- An overlap between the Construction Erosion and Sediment control plans (CESCPs) under Conditions E.1 to E.11 as they relate to events such as exceedances of water quality triggers in streams or impacts on wetlands or the estuarine/marine environment;

These require liaison and coordination through design and construction between the Project Ecologist and the Erosion and Sediment Management team.

7.8.10 Roles and responsibilities

In summary the responsibilities for estuarine/marine ecosystems are:

i. Design Manager (Roading and Structures)

- Liaison with Project Ecologist over development of development of the ESCP and associated monitoring,

ii. Environmental Manager

- Communication with Project Ecologist through staging of earthworks.

iii. Site Foreman

- Responsible for liaison with Project Ecologist during enabling works and construction phase for erosion and sediment control methods.
- Responsible for liaison with Project Ecologist during any exceedence of erosion and stormwater standards and associated reporting.

iv. Project Landscape Architects

- Nil

v. Project Ecologist

- Environmental Awareness Training of personnel responsible for supervising earthwork site staff in conjunction with the Environmental Manager.

- Carrying our ongoing construction and post-consultation monitoring of estuarine systems in the Waikanae Estuary.
- Developing in consultation with the Environmental Manager any adaptive management programmes in the event effects are greater than consent conditions allow.

May 08, 2013 W09181B_MAR_CoastalMarine_A4.mxd

NZ TRANSPORT AGENCY WAKA KOTAHI

Mackays to Peka Peka

COASTAL MARINE AREA & RIVER MOUTHS
Waikanae Estuary

1

7.9 Mitigation sites and the SSEMPs

7.9.1 Introduction

Mitigation requirements have been determined based on the known extent of vegetation loss and the loss of streams, wetlands, and habitat for lizards and fernbird. These mitigation quantities are described in resource consent conditions G.42 to G.42B.

In summary a total of 40.7 ha of planting is required for the purposes of landscape and ecological mitigation. This sum includes terrestrial revegetation, wetland development and restoration, stream restoration and the formation of enhanced waterway diversions.

This mitigation is to occur in six sites and for each site a Site Specific Ecological Mitigation Plan (SSEMP) is required.

7.9.2 Consent conditions

Consent conditions are divided between those that specify the quantum of mitigation that is required (**G.42** and **G.43**, see Section 3.5 of this report) and those that detail the contents of the SSEMPs for each mitigation site (**G.19**, **G.19A**, **G42C**, see Section 3.6).

The purpose of SSEMPs is to ensure details of the mitigation works are consistent with the EMP and will achieve the outcomes and standards required under condition **G.33B**.

Condition **G.42**, **G.42A**, and **G.42B** set out the quantum of mitigation that is required, the timing of that mitigation and notes that it should be as far as practicable like-for-like.

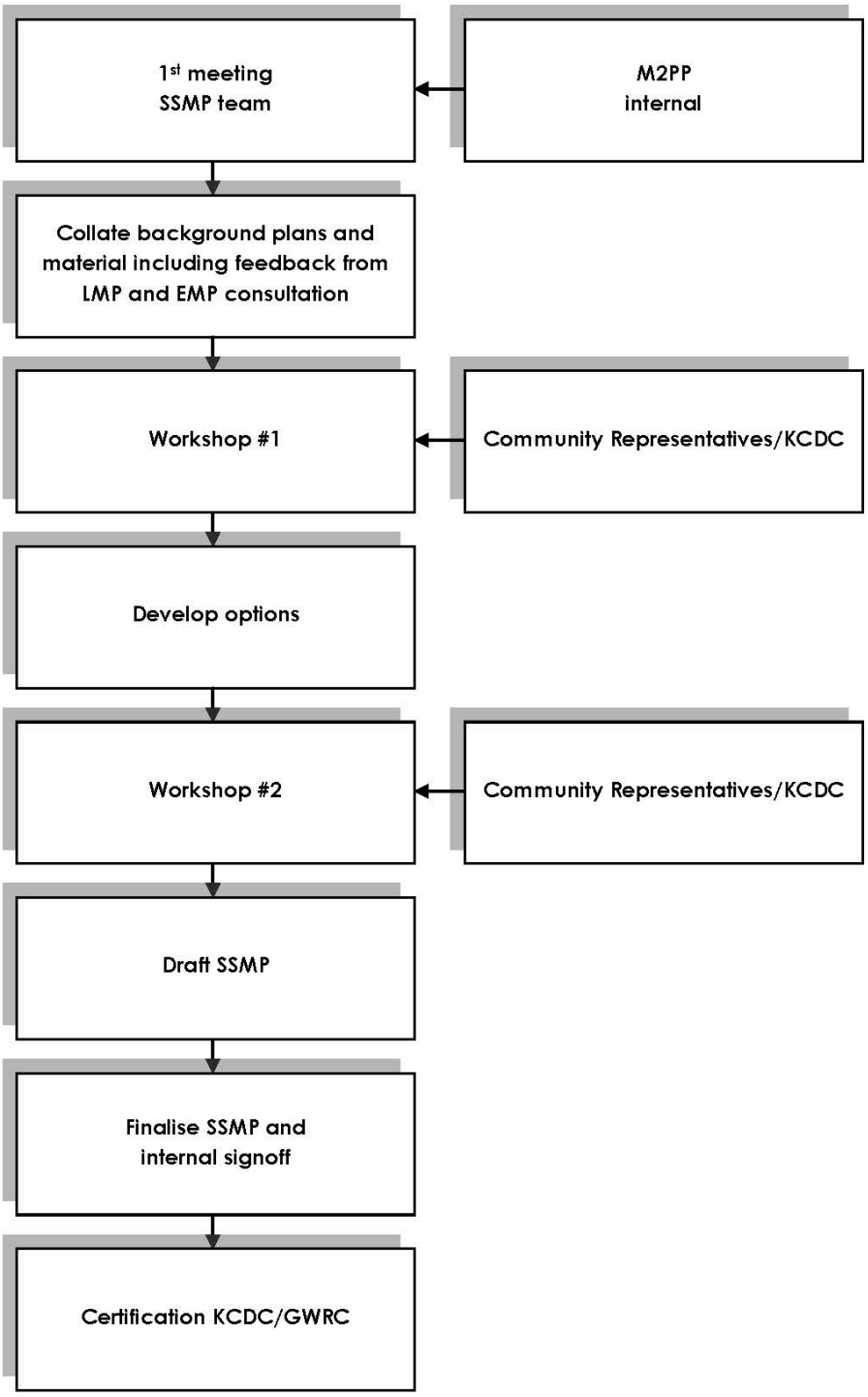
Condition **G.43** sets out the requirements for protection of these mitigation sites in the long term.

Condition **G.19** and **G19A** relate to preparation and certification of the SSEMPs and their consistency with the EMP.

Condition **G.42C** sets out the purpose of the SSEMP, identifies what each SSEMP must include, specifies which key stakeholders must be consulted with, and summarises reporting requirements.

The following flowchart outlines the Site Specific Management Plan (SSMP) process.

Site Specific Management Plans (SSMPs) Process



7.9.3 Plan objectives

The primary requirement for the ecological mitigation is:

- To achieve the levels of mitigation determined through the assessment of adverse effects for all habitats described in resource consent condition G.42 and associated conditions and detailed in the technical attachments.

In addition to the area and location specified in condition G.42 and G.43, various consents require consideration of habitat types or features including:

- Creation of lizard habitat features.
- Creation of fernbird habitat features in the Kakariki SSEMP.
- Creation of wetland habitat that is as close as possible like for like, including:
  - 4.1 ha sedge rushland;
  - 1.3 ha *Cyperus ustulatus* dune depressions;
  - 4.0 ha manuka wetlands; and
  - 0.2 ha manuka sphagnum wetlands.

7.9.4 Summary of mitigation sites

The ecological mitigation areas outlined in the SSEMP site maps have a range of mitigation requirements, including offset flood storage requirements to minimise flood risk and landscape and visual mitigation. However, as specified by the relevant consent conditions, all areas of ecological mitigation identified in the SSEMP maps will be designed by the Project Ecologist with input from the Project Landscape Architect to ensure these areas are constructed and maintained in a manner that results in these areas having the requisite ecological functioning, whilst fulfilling the other mitigation requirements.

The SSEMP site maps that outline the indicative areas of ecological mitigation to be undertaken in each SSEMP area; often these areas are part of a larger planted area that fulfil both landscape and visual mitigation and for offset flood storage. However, where this occurs the planting proposed for the SSEMP areas identified have priority over the Planting Plan Maps included in Attachment 8 of the LMP. These maps and the final locations of ecological and landscape and visual mitigation planting within each SSEMP site will be refined through the Site Specific Management Plans prepared for each area.

These mitigation and remedial works are to be carried out in six specific locations with each location requiring a separate Site Specific Ecological Mitigation Plan (SSEMP). The rationale for these ecological mitigation sites was that these areas provided the best opportunities to combine the ecological mitigation requirements for Project ecological effects (freshwater, terrestrial vegetation, wetlands, avi-fauna and herpetofauna), with a focus on integration with other mitigation works (e.g. flood storage requirements, landscape and visual requirements etc.).

The six ecological mitigation sites are located on NZTA land within the Project designation (with the exception of a length of the Kakariki Stream, which is located on NZTA land

outside the Designation). An additional ecological site (or SSEMP area) has been identified in the former Waikanae oxidation ponds on KCDC land. The former Waikanae oxidation pond site has been retained as a potential off-site mitigation area for two purposes:

- As an area to dispose of excess peat that cannot be used elsewhere within the Designation as part of landscaping and noise bund construction; or
- As an area for any other mitigation required to offset any additional wetland loss than has been consented (e.g. additional to the 1.8 ha of wetland loss consented).

The location and extent of the ecological mitigation sites are listed below and shown in the following plans Map 23 to Map 29.

Site Name	Chainage
SSEMP Site No 1 – Raumati Manuka **Description**: A large mitigation site that encompasses the Raumati Manuka Wetland and large flood offset storage areas. This site includes riparian, wetland, terrestrial and landscape and visual mitigation.	Between 3500 & 4300
SSEMP Site No 2 – Drain 7 **Description**: This large offset flood storage area comprises wetland and riparian ecological mitigation within an existing low-lying area south of the Wharemauku Stream. Interface with flood storage and landscape and visual mitigation planting.	Between 4900 & 5400
SSEMP Site No 3 – Otaihanga Wetlands **Description**: A large area of wetland, riparian and terrestrial mitigation (including landscape and visual mitigation) between Mazengarb Road and Otaihanga Road, that encompasses the Otaihanga Southern, Central and Northern Wetlands as well as areas of mahoe and kanuka forest.	Between 8400 & 9150
SSEMP Site No 4 – Muaupoko Stream Diversion **Description**: A small area of freshwater ecological mitigation being undertaken as part of the diversion and realignment of the Muaupoko Stream prior to its outlet to the Waikanae River. Mitigation to work in with existing Waikanae River riparian planting.	Between 10500 & 10600
SSEMP Site No 5 – Kakariki / Smithfield **Description**: A large area of terrestrial, wetland and riparian mitigation located predominantly within planted offset flood storage areas. This mitigation site is located within an ecological corridor between Nga Manu Nature Reserve and Te Harakeke/Kawakahia Wetland. This area includes large areas of landscape and visual mitigation)	Between 13600 & 14900
SSEMP Site No 6 – Hadfield / Paetawa B	Between 16800 &

Description: A large area of predominantly riparian mitigation as part of the stream diversions and culverting in the Paetawa and Hadfield/Kowhai Stream catchments. Includes small areas of terrestrial ecological and landscape and visual mitigation.	17700
SSEMP Site No 7 – Former Waikanae Oxidation Ponds (potential site) **Description**: This area was formerly part of the wider Te Harakeke/Kawakahia Wetland prior to the Waikanae Oxidation Ponds. This area has a Kāpiti Coast District Council approved landscape and ecological restoration plan. This site has been identified as a potential mitigation site for any additional ecological effects outside of the consented wetland loss.	Pharazyn Reserve

7.9.5 Protection requirements

Long-term protection of these ecological mitigation sites is specified in condition G.43. Aspects of land tenure are outside of the scope of this EMP. However, this condition also specifies long term management requirements which must include

i. Tree works

ii. Eco sourcing

iii. Weeds control

iv. Fencing

v. Pest management

vi. Biosecurity act

vii. Inspections and reporting.

Consistent with condition G.43, these requirements are to be identified in the SSEMP for each ecological mitigation site, including for that portion of the Kakariki Stream outside of the Designation.

7.9.6 Mechanisms for protection

The SSEMPs will detail the actual locations and specific methods for development of these ecological mitigation sites which will be further detailed in the Site Specific Management Plans (SSMPs) to ensure integration and minimise duplication.

i. Detailed Design

- Each of the ecological mitigation sites will have a SSEMP prepared, with the detail of implementation and monitoring for each aspect of the site contained within these SSEMP's (and/or as relevant the SSLMP's or SSMPs).

ii. Enabling Works

- Nil

iii. Construction

- Stream diversion formation and associated earthworks will be carried out under the supervision of the Project Ecologist.
- Wetland formation and associated earthworks will be carried out under the supervision of the Project Ecologist.
- All revegetation activity for the SSEMP areas will be the responsibility of the project landscape architect, with inputs from the Project Ecologist as required.

iv. Post Construction

- Monitoring is required of all SSEMP sites to confirm that the mitigation has achieved the objectives.

7.9.7 Monitoring

Monitoring will be undertaken within the SSEMP sites in accordance with the mitigation success monitoring requirements outlined in the relevant Attachments (wetland, indigenous vegetation, freshwater, avi-fauna and herpetofauna).

7.9.8 Adaptive management

i. Management Triggers

In the event mitigation does not meet the specific ecological requirements are set out in conditions and specified in the SSEMP, an adaptive management process will commence.

7.9.9 Linkages

The key documents, in addition to this EMP, are the SSEMPs as they relate to the 6 ecological mitigation areas, the LMP and a number of the SSLMPs (under conditions DC.53C to DC.58) which are required to map and describe all revegetation activities. The four generic conditions that relate to the SSEMP are:

- General Condition G.1 requires works to be in general accordance with the Application plan sets including Ecological Mitigation Sites (attached to the EMP);
- General Condition G.15 describes the application of management plans (including the EMP) and SSMPs (including the SSEMP);
- General Condition G.19A describes the purpose of the SSMPs including the SSEMP;
- An overlap with conditions relating to stream diversion and reclamation (WS.1A to WS.12);

7.9.10 Roles and responsibilities

In summary the responsibilities for ecological mitigation are:

i. Design Manager

- Responsible for input into design of new and enhanced wetlands, planted offset flood storage areas and stream diversions through detailed design.

ii. Environmental Manager

- Communication with the Project Ecologist through staging of earthworks for mitigation works.

iii. Site Foreman

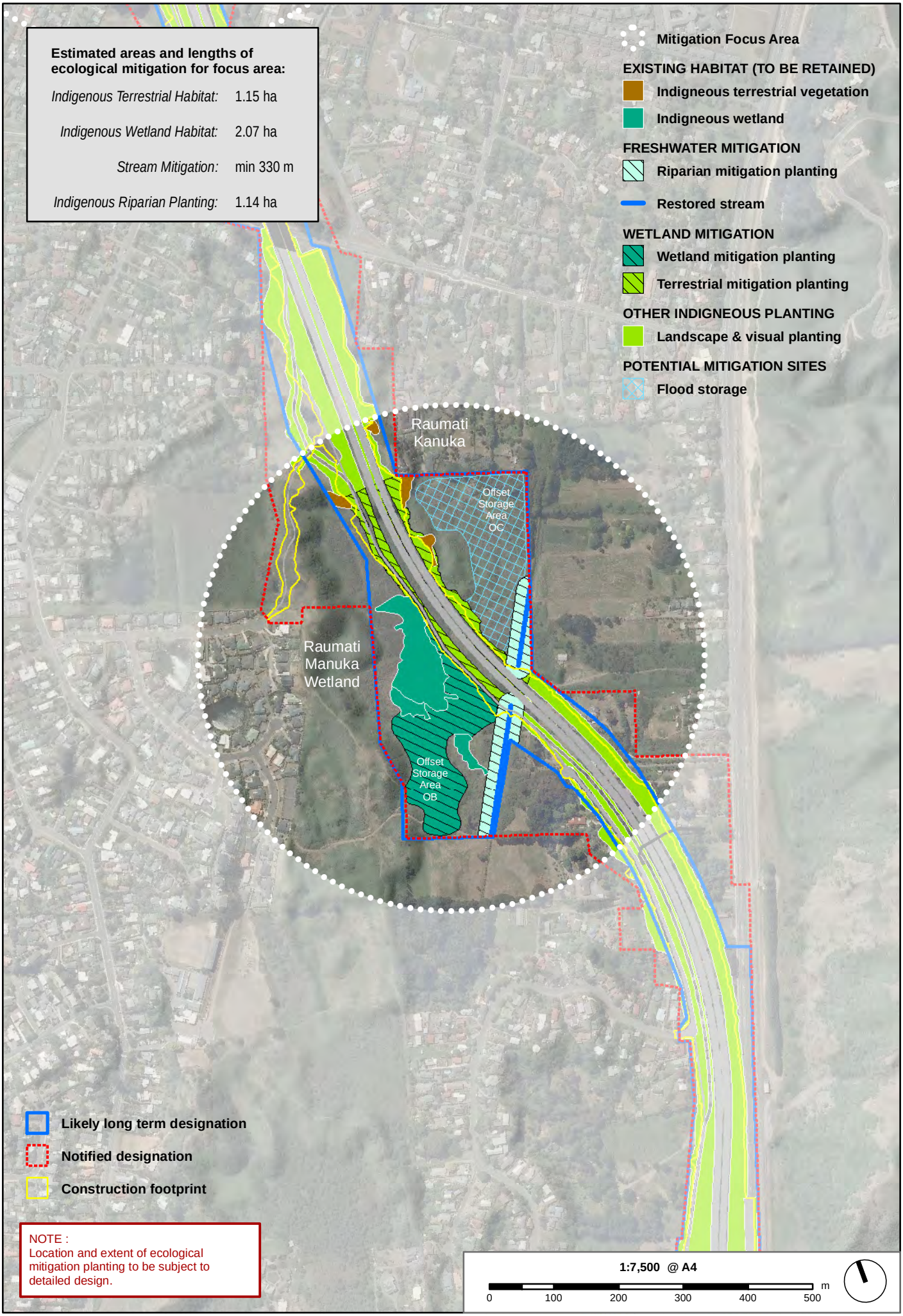
- Responsible for minimising disturbance to sites demarcated for ecological mitigation.
- Responsible for physical works associated with development of new and enhanced wetlands, planted offset flood storage areas and stream diversions.
- Responsible for salvaging areas of wetland vegetation within Project Footprint and transfer to ecological mitigation areas.

iv. Project Landscape Architect

- Liaison and coordination with the Project Ecologist during development of the SSLMPs and the SSEMPs.
- Responsible for the development of multiple ecological mitigation requirements into the SSEMPs and relevant SSLMPs.

v. Project Ecologist

- Liaising with design teams during detailed design, including inputs into SSEMPs and SSLMPs.
- Environmental Awareness Training of personnel responsible for supervising earthwork site staff in construction of ecological mitigation areas.
- Carrying our ongoing monitoring of ecological values in SSEMPs and SSLMPs where relevant.
- Developing in consultation with Environmental Manager and Project Landscape Architect any adaptive management programmes in the event mitigation does not reach required objectives.



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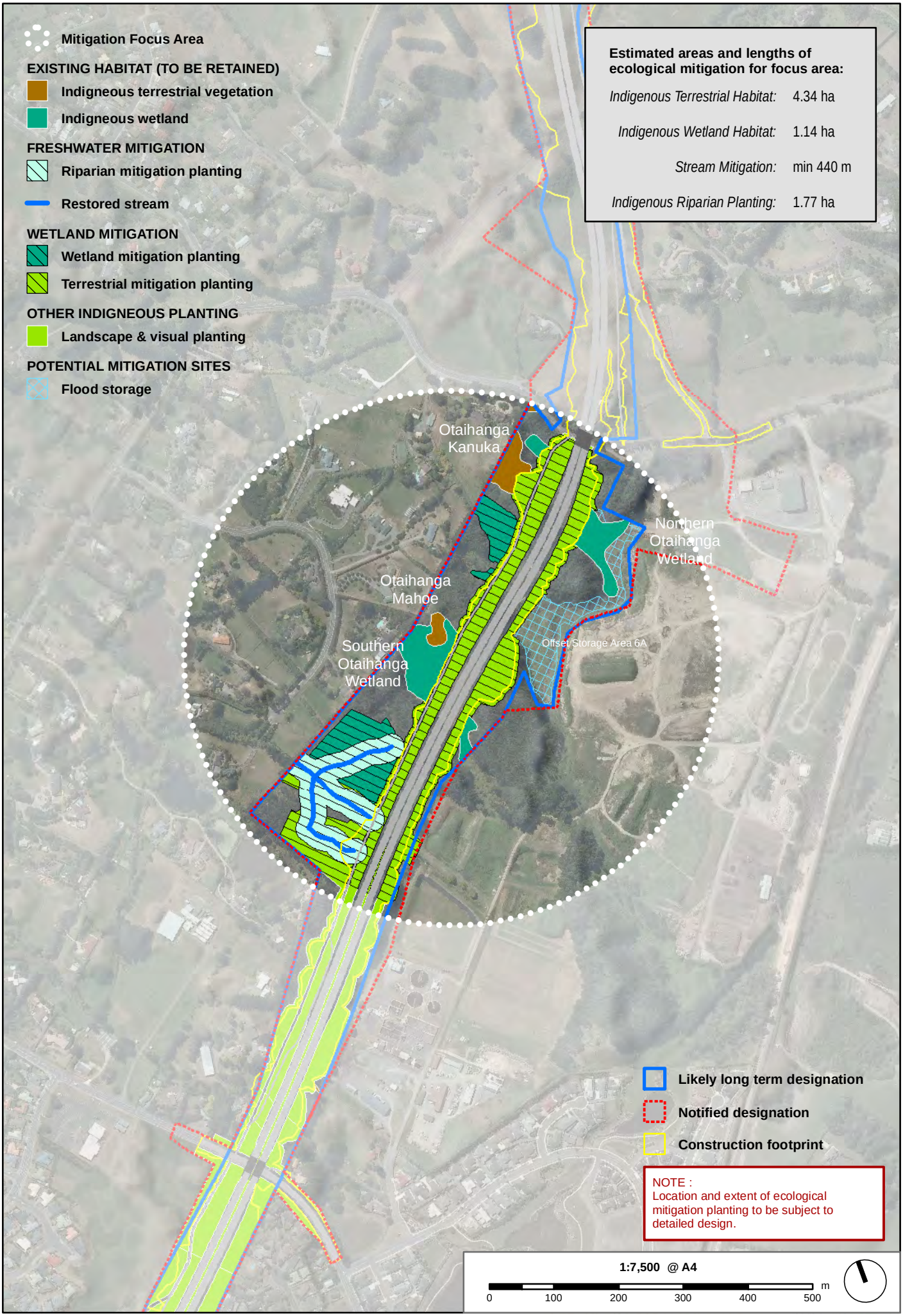
NZ TRANSPORT AGENCY WAKA KOTAHI

Mackays to Peka Peka

SSEMP SITES - GENERAL LOCATION PLAN

RAUMATI MANUKA

1



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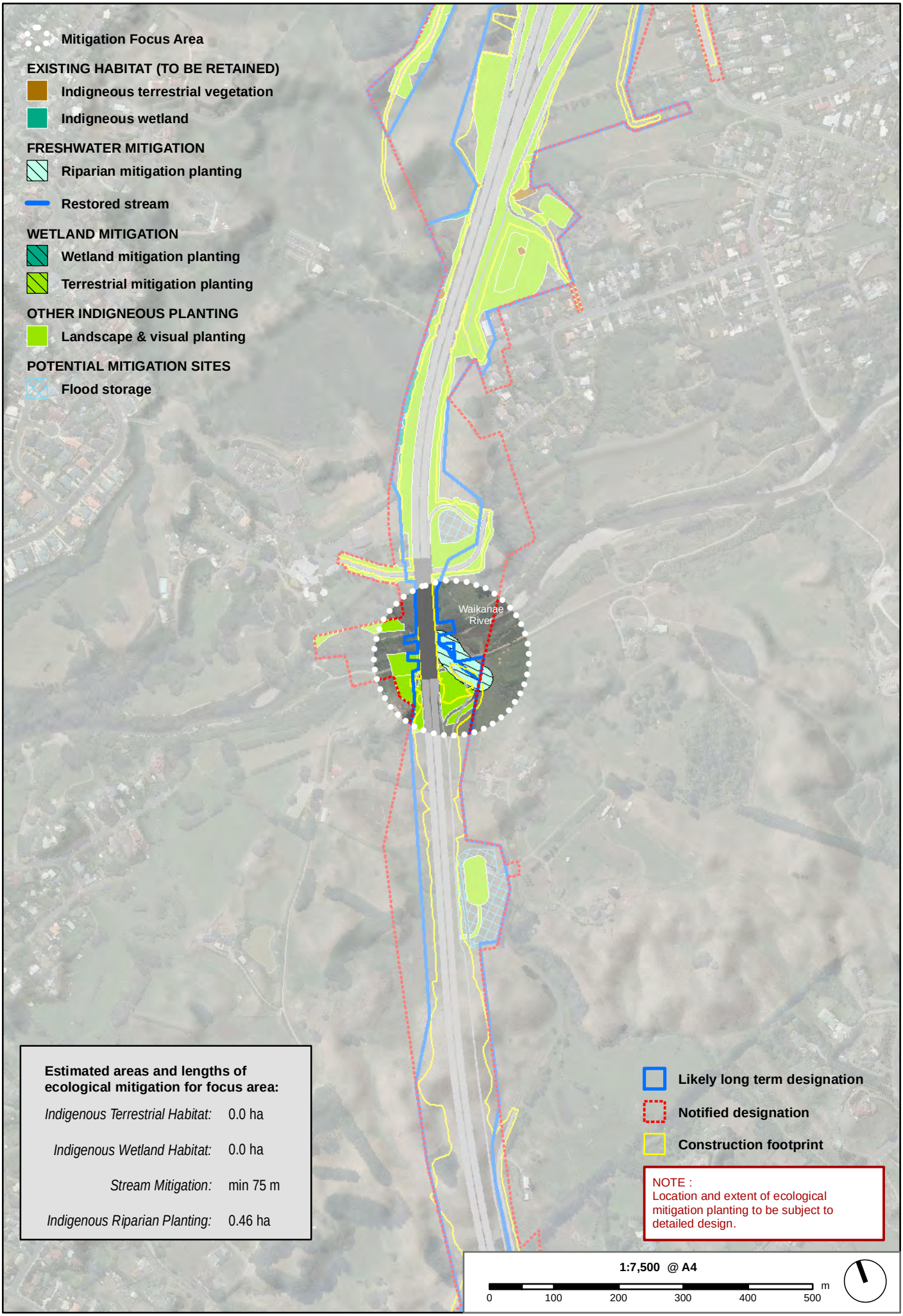
NZ TRANSPORT AGENCY WAKA KOTAHI

Mackays to Peka Peka

SSEMP SITES - GENERAL LOCATION PLAN

OTAIHANGA WETLANDS

2



Estimated areas and lengths of ecological mitigation for focus area:

Indigenous Terrestrial Habitat:	0.0 ha
Indigenous Wetland Habitat:	0.0 ha
Stream Mitigation:	min 75 m
Indigenous Riparian Planting:	0.46 ha

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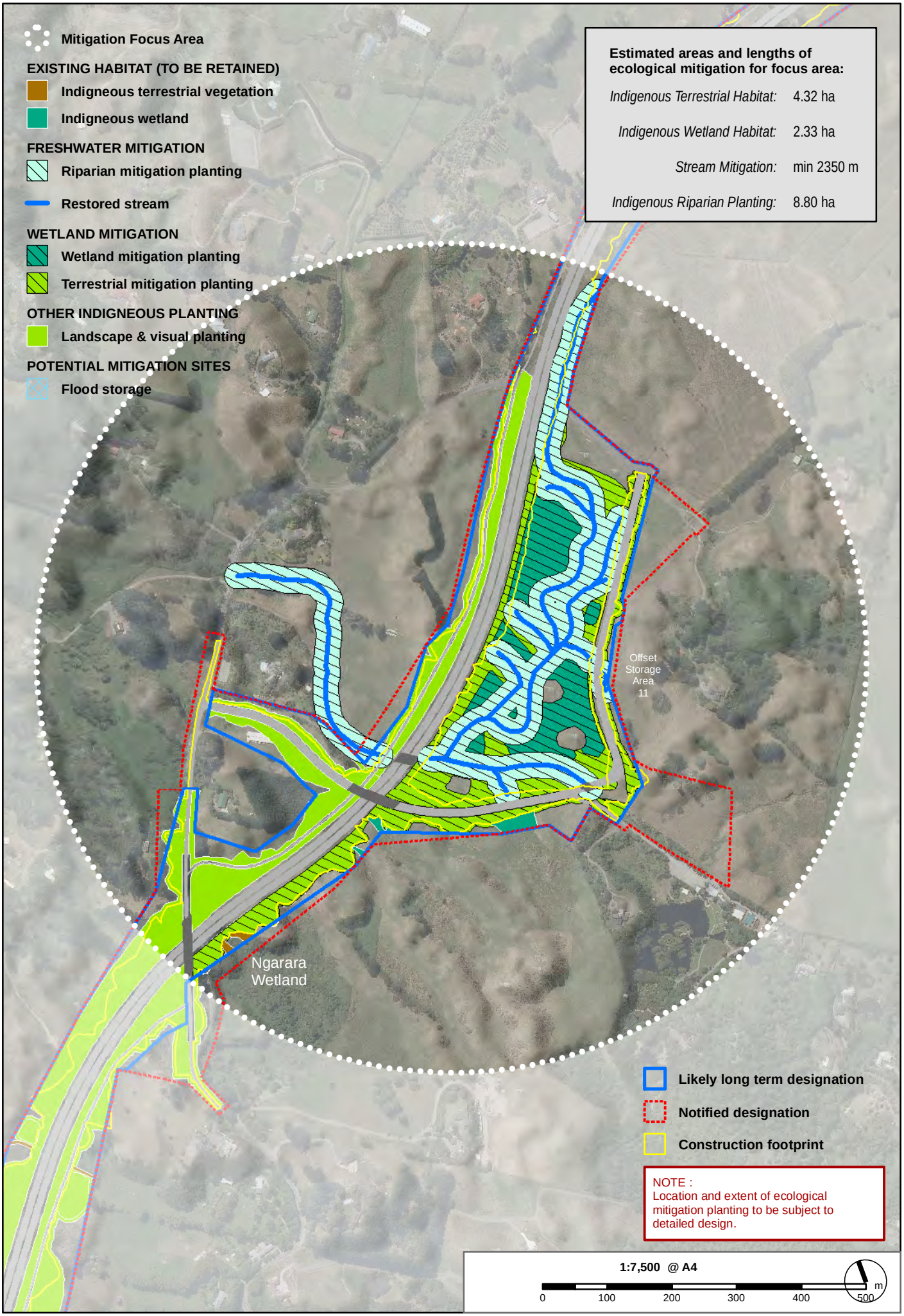
SSEMP SITES - GENERAL LOCATION PLAN

MUAUPOKO

3



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NZ TRANSPORT AGENCY WAKA KOTAHI

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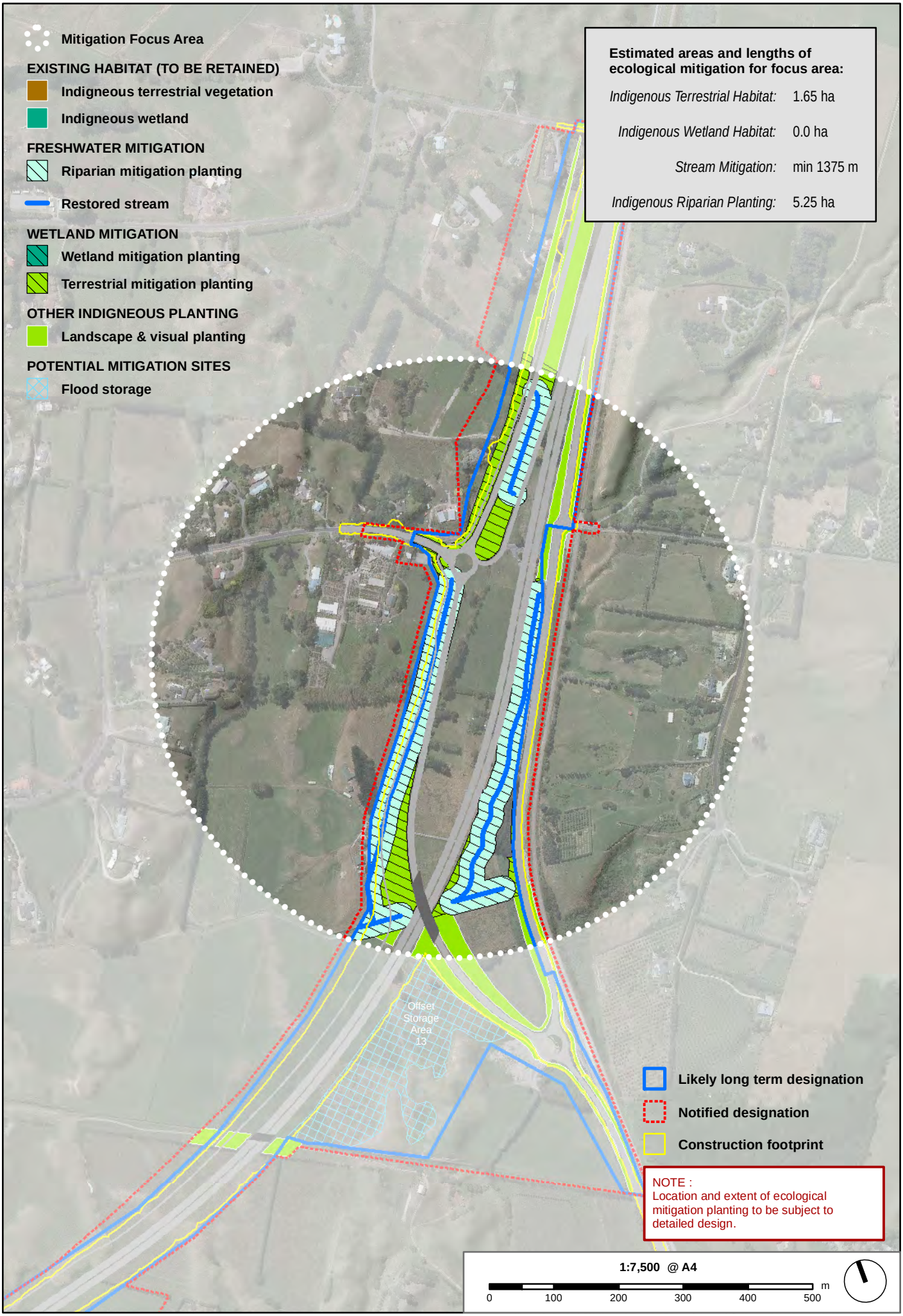
SSEMP SITES - GENERAL LOCATION PLAN

KAKARIKI / SMITHFIELD

4



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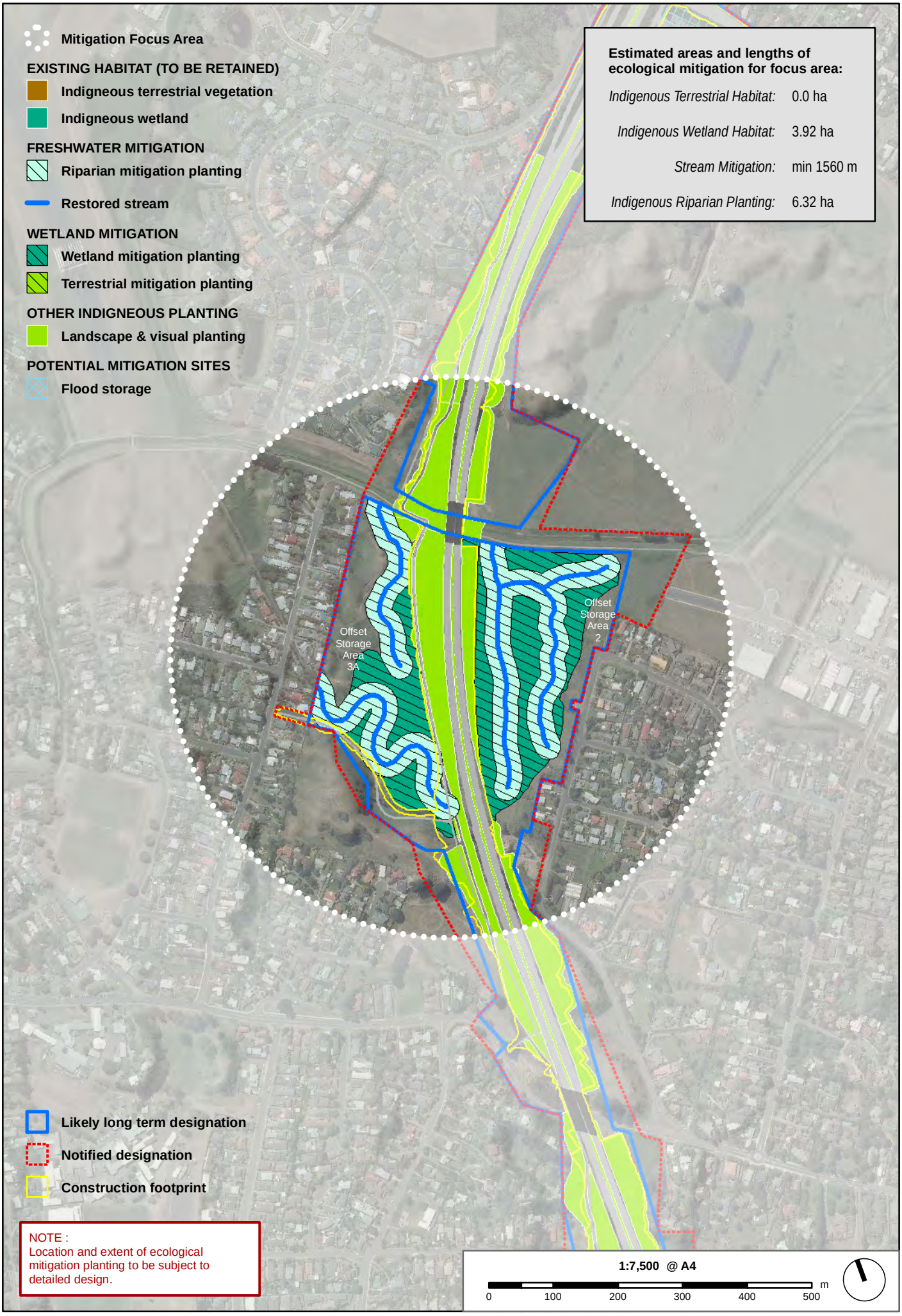
NZ TRANSPORT AGENCY WAKA KOTAHI

Mackays to Peka Peka

SSEMP SITES - GENERAL LOCATION PLAN

HADFIELD / PAETAWA B

5



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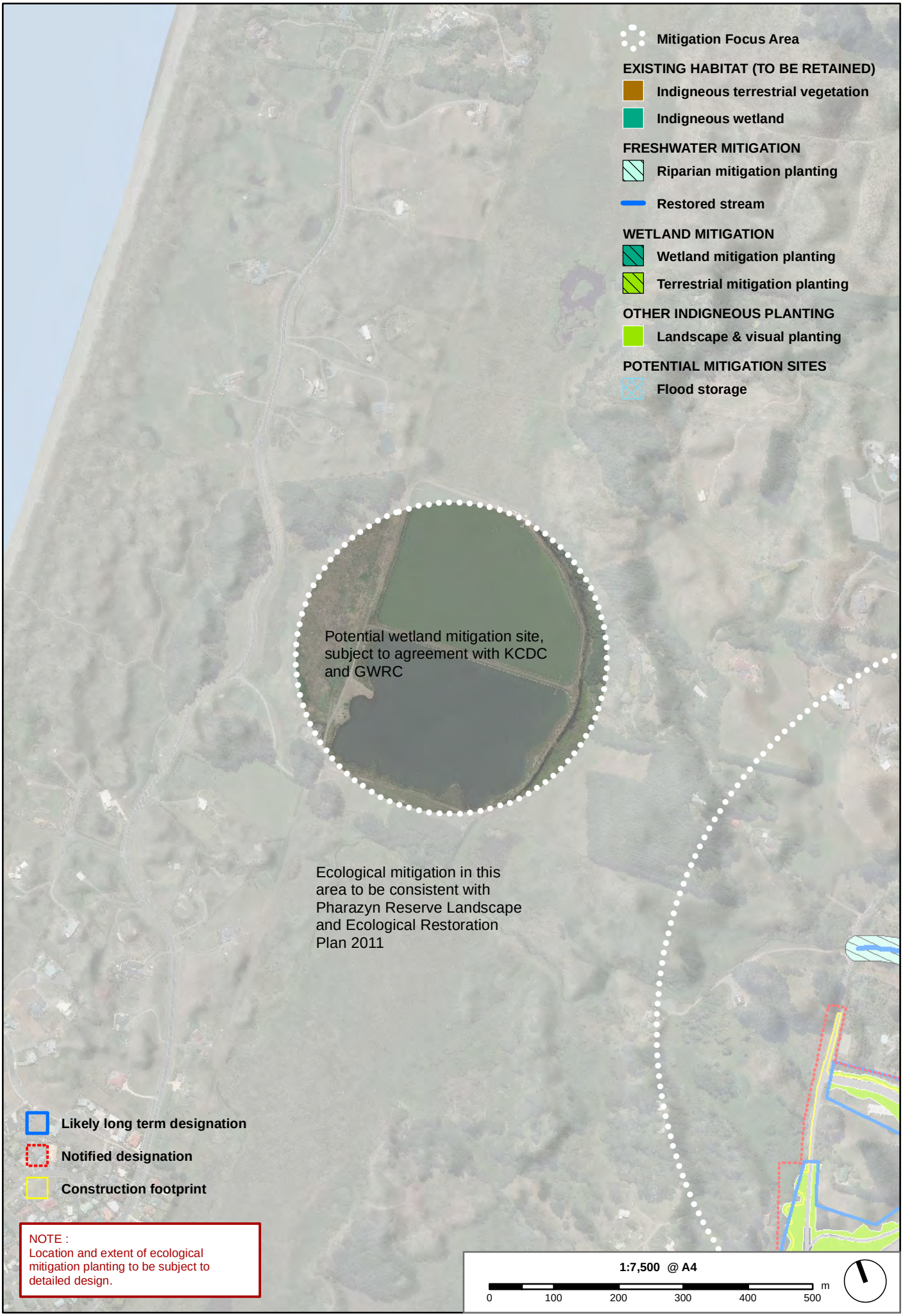
NZ TRANSPORT AGENCY WAKA KOTAHI

Mackays to Peka Peka

SSEMP SITES - GENERAL LOCATION PLAN

DRAIN 7

6



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NZ TRANSPORT AGENCY WAKA KOTAHI

Mackays to Peka Peka

SSEMP SITES - GENERAL LOCATION PLAN

FORMER WAIKANAE OXIDATION PONDS

7

7.9.11 Staging of SSEMP mitigation

The staging for implementation of the ecological mitigation and remedial works required are outlined in Figure 2. Any updates to this Figure will be undertaken through the SSEMP process.

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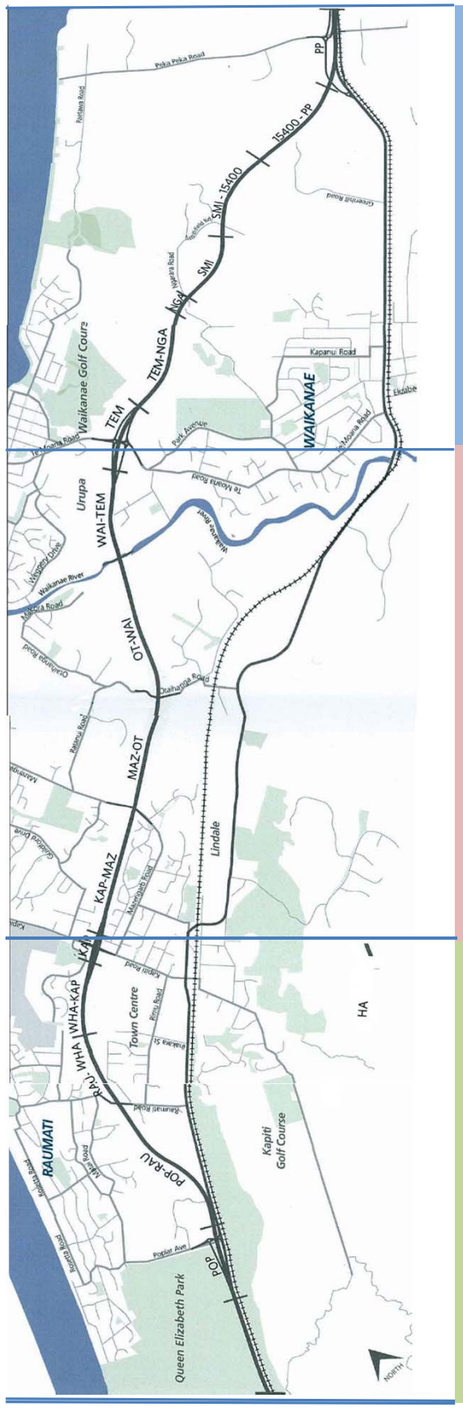
ECOLOGICAL MITIGATION PLANTING
INDICATIVE PROGRAMME

2015



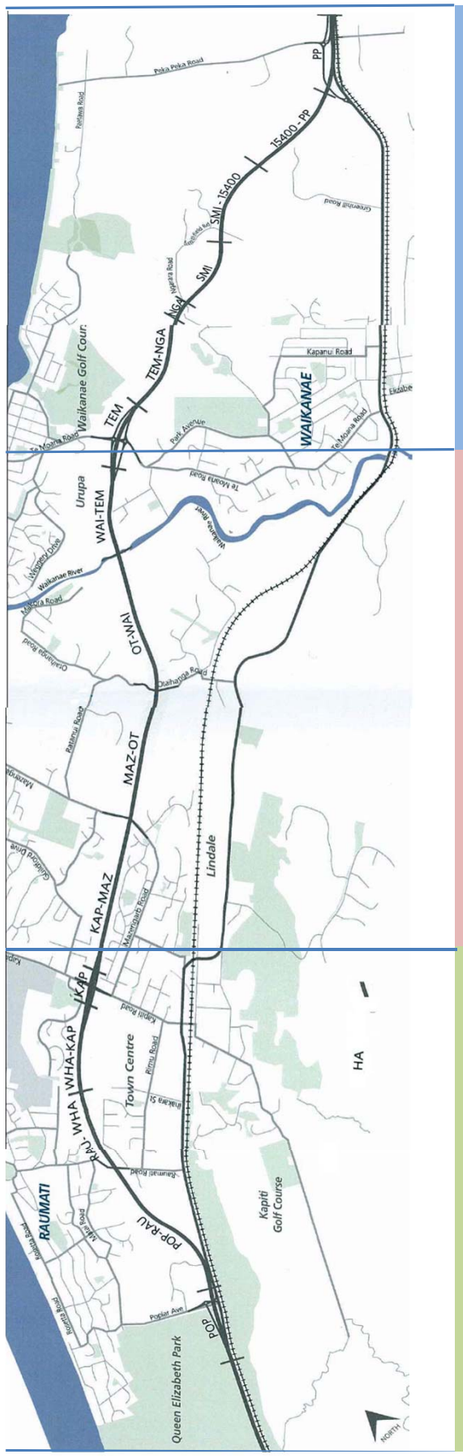
ZONE	SECTOR	SUB SECTOR	JANUARY – DECEMBER
NORTH	PP	SSEMP SITE 5 HADFIELD/PAETAWA B	Bulk earthworks complete
	SMI - NGA	SSEMP SITE 4 KAKARIKI/SMITHFIELD	Bulk earthworks complete
CENTRAL	WAI	SSEMP SITE 3 MUAUPOKO	Bulk earthworks Complete; Planting starts; Planting complete
	MAZ - OT	SSEMP SITE 2 OTAIHANGA WETLANDS	Bulk Earthworks complete; Planting starts; Planting complete
SOUTH	RAU - WHA	SSEMP SITE 6 DRAIN 7	Bulk Earthworks Complete; Planting starts; Planting complete
	POP - RAU	SSEMP SITE 1 RAUMATI MANUKA	

Version: June 2013

MacKays to Peka Peka
EXPRESSWAY ALLIANCE

ECOLOGICAL MITIGATION PLANTING
INDICATIVE PROGRAMME

2016



ZONE	SECTOR	SUB SECTOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
NORTH	PP	SSEMP SITE 5 HADFIELD/PAETAWA B				Planting starts		Planting ends						
	SMI - NGA	SSEMP SITE 4 KAKARIKI/SMITHFIELD				Planting starts			Planting complete					
CENTRAL	WAI	SSEMP SITE 3 MUAUPOKO												
	MAZ - OT	SSEMP SITE 2 OTAIHANGA WETLANDS												
SOUTH	RAU - WHA	SSEMP SITE 6 DRAIN 7												
	POP - RAU	SSEMP SITE 1 RAUMATI MANUKA				Bulk earthworks complete	Planting starts		Planting complete					

8 Response to indicators of significant effects

8.1 Adaptive management

Adaptive management requires monitoring, research and review. Once baseline monitoring has occurred, the assessment of monitoring results during and post-construction will lead to 'adapted' development and operation, either to anticipate potential problems identified by the monitoring, or to ensure any effects of the existing activity are reduced to acceptable levels. Review conditions provide flexibility to either expand or cut back activity should the monitoring suggest it is necessary.

Figure 3: Adaptive Management Flow Chart

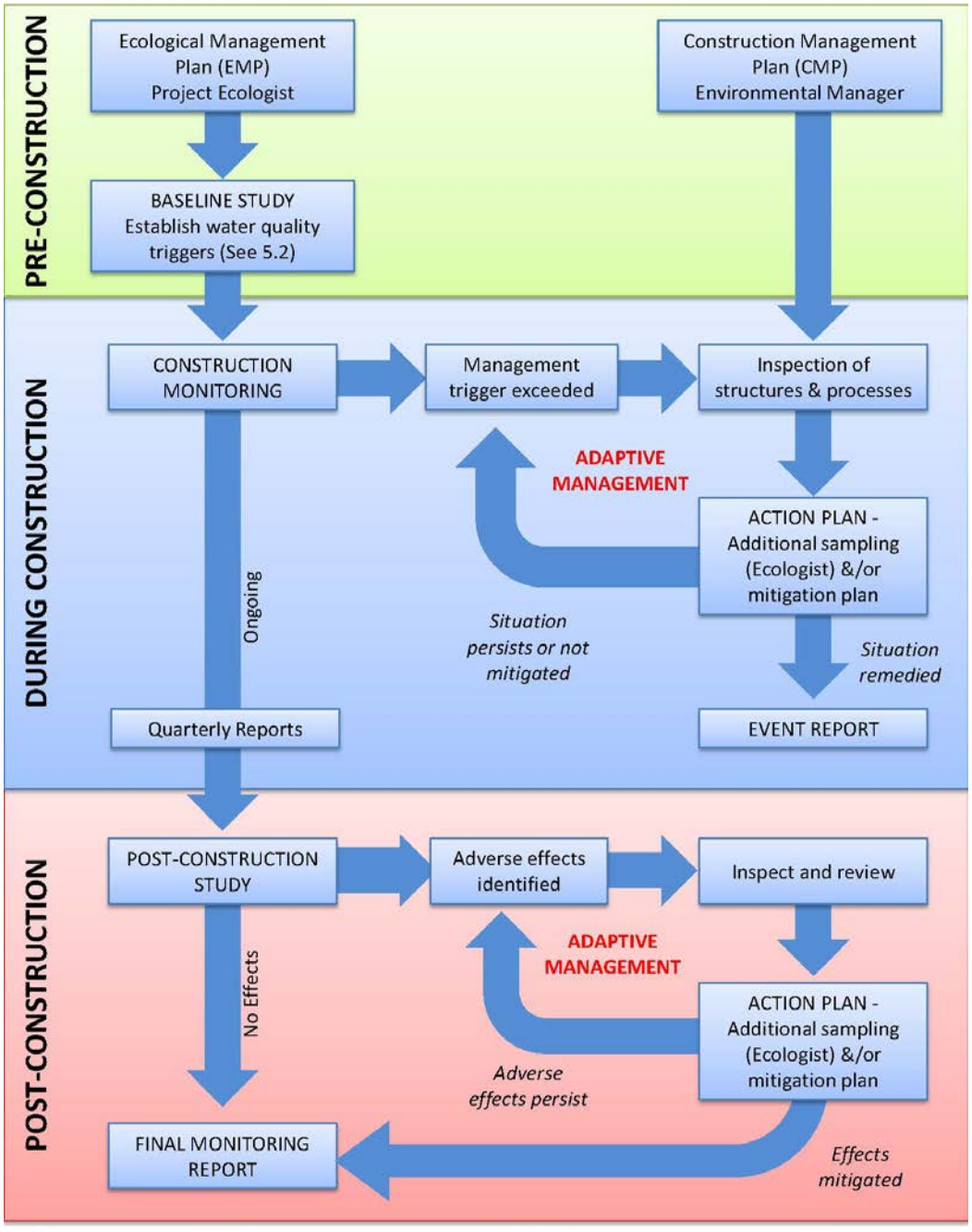


Figure 3 provides an indicative process for monitoring, management and reporting for ecological monitoring. A key component of the adaptive management approach is the establishment of pre-construction baseline conditions against which to measure change. Monitoring through construction provides continual feedback to the Alliance on the effectiveness of environmental management methods. Monitoring post-construction establishes processes for remediation and/or mitigation if effects could not be avoided.

8.2 Response to observed effects

In the event that adverse impacts on terrestrial, wetland, fernbird, in-stream or estuarine communities are detected by the monitoring programme, an adaptive management process will be triggered. An example of this process is shown in Figure 3.

The process aims to ensure a link between the baseline monitoring undertaken and the construction and post-construction monitoring proposed. Baseline studies (and, where appropriate, existing local studies – e.g. GWRC historical hydrological wetland monitoring information) will produce a trigger value. If the trigger value is exceeded it starts an adaptive management process that continues until the situation causing the trigger is remedied.

Should a link between the adverse effect and Project practices be established then alterations to the operational methods (including modifications to environmental devices such as stormwater control devices) will be investigated as a first order response. GWRC will be consulted on any proposed changes to the on-site practices in accordance with consent condition G.40. Further monitoring would then be used to assess the effectiveness of the alterations.

Factors to be assessed in the decision chain relating to the above include:

- The assessed likely cause(s) of the effect
- Whether the effect is ongoing
- The magnitude of the effect
- The sensitivity of the receiving environment
- The need for, and nature of, any remedial action.

If any remedial action is deemed to be necessary (by the Regional Council) then the Alliance shall be responsible for the appropriate rectification or mitigation of the adverse effects detected. The Regional Council will be consulted during this process.

However, should no such linkages be established between the Project work practices and the adverse environmental effects observed, then the Alliance shall not be liable for any remediation or mitigation works over and above those already required by the conditions of consent and the designation.

8.3 Additional mitigation

Resource consent conditions (including Condition G.34 k) require that in the event that additional indigenous vegetation or habitat loss or modification related to the Project occurs outside of the Project Footprint, including Project-related hydrological changes to wetlands, mitigation must be undertaken with calculations consistent with the Environmental Compensation Ratios outlined in Condition G.42 (outlined in the technical attachments 1, 4 and 5).

The Project Ecologist and Environmental Manager will be responsible for determining any additional indigenous vegetation or habitat loss or modification outside of the areas identified in technical attachments 1, 3, 4, 5 and 6 and any additional mitigation requirements (in consultation with the Manager of Wellington Regional Council and Kāpiti Coast District Council).

9 Reporting

There are numerous reporting requirements contained throughout the relevant consents, and these have been identified and are incorporated into the six technical attachments that follow.

10 Cultural

10.1 Cultural values and consent requirements

As outlined in the cultural impact assessments (Technical Report 11 and Technical Report 12), the indigenous flora and fauna and associated ecological systems of the Kāpiti Coast are considered to have high cultural importance to tangata whenua. Consistent with their role as kaitiaki (stewards or guardians), Te Āti Awa ki Whakarongotai and Takamore Trust (and Ngati Toa in respect of the southern end of the Expressway) have a specific role in ecological mitigation and monitoring as outlined in the following consent conditions:

- The EMP shall be finalised in consultation with Te Āti Awa ki Whakarongotai and Takamore Trust;
- The monitoring to be undertaken pre-construction, during construction and post-construction as required below in conditions G.38-G.40, including the role that Te Āti Awa ki Whakarongotai and Takamore Trust will have in observing monitoring; and
- Details of the involvement of Te Āti Awa ki Whakarongotai and Takamore Trust in observing the monitoring of culverts and fish passages during construction.

Based on these requirements Te Āti Awa ki Whakarongotai and Takamore Trust will be consulted in the development of the EMP and SSEMPs, including discussion and agreement on the role of iwi monitors with regard to observing monitoring activities.

10.2 Incorporation of cultural values in the EMP and SSEMPs

The EMP has been developed on the basis that the maintenance and protection of existing areas of ecological value and the restoration and enhancement of new areas as ecological mitigation outlined in the EMP and associated SSEMPs will also have commensurate cultural values to Te Āti Awa ki Whakarongotai and Takamore Trust.

Through protecting, enhancing and restoring indigenous ecosystems, the EMP and associated SSEMPs and SSLMPs will also enhance Maori cultural values through improving mahinga kai values and through establishing ecological linkages with sites of importance to Te Āti Awa ki Whakarongotai and Takamore Trust. For example, the large Kakariki/Smithfield mitigation area near Nga Manu Nature Reserve will have the following benefits for tangata whenua:

- Enhance downstream water quality through riparian planting and stormwater treatment of Expressway run-off for downstream mahinga kai areas (the Waimeha and Ngarara Streams and estuary);
- Provide habitat for indigenous fauna of particular importance to iwi – such as tuna, kokopu, inanga, kereru – consistent with the traditional habitats of these species.
- Provide habitat for indigenous flora of particular importance to iwi – such as ti kouka (cabbage tree), harakeke (flax), totara, kahikatea etc. – consistent with the traditional habitats of these species.

Through the development of the SSEMPs, consultation will be undertaken with representatives of Te Āti Awa ki Whakarongotai and Takamore Trust on the creation of these mitigation areas, including where practicable, consideration of connections to mahinga kai.

10.3 Environmental awareness training – cultural and ecological values

The environmental awareness training shall include a process and programme for training of new staff members joining the Project team, and for any staff moving to a new Site Specific Management Plan (SSMP) area within the Project in accordance with Condition G.11. This training should take into account any requirements for Te Āti Awa ki Whakarongotai and Takamore Trust to undertake cultural ceremonies in relation to mahinga kai values, waahi tapu and regulatory controls (i.e. rahui) prior to the commencement of Work within any of the SSEMP areas.

11 Complaints

Complaints will be managed through the process included in the Construction Environmental Management Plan (CEMP).

Any complaints received relating to ecology and landscape activities will be reported to the Project Ecologist for discussion on the appropriate response with the Environmental Manager.

12 Plan reviews

A management review of the EMP will be undertaken as required by the Project's Environmental Manager and Project Ecologist. The review will take into consideration:

- any significant changes to construction activities or methods;
- any significant change in the related sub-plans (such as the ESCP);
- key changes to roles and responsibilities within the Project;
- changes in industry best practice standards or recommended pollution controls;
- changes in legal or other requirements (social and environmental legal requirements, the NZTA objectives and relevant policies, plans, standards, specifications and guidelines);
- results of inspection and maintenance programmes, and logs of incidents, corrective actions, internal or external assessments; and
- any public complaints.

The EMP will be updated, with the necessary approval, throughout the course of the Project to reflect material changes associated with changes to construction technical or the natural environment. Approval from Greater Wellington Regional Council will be required for any relevant revisions of a material nature to the EMP.

Reasons for making changes to the EMP will be documented. A copy of the original EMP document and subsequent versions will be kept for the Project records, and marked as obsolete. Each new/updated version of the EMP documentation will be issued with a version number and date to eliminate obsolete EMP documentation being used.

13 References

Ecological Technical Report 1: Terrestrial Vegetation & Habitats (including wetlands), Technical Report 27, Volume 3 of the MacKays to Peka Peka AEE.

Ecological Technical Report 2: Herpetofauna, Technical Report 28, Volume 3 of the MacKays to Peka Peka AEE.

Ecological Technical Report 3: Avifauna Studies – Description and Values, Technical Report 29, Volume 3 of the MacKays to Peka Peka AEE.

Ecological Technical Report 4: Freshwater Habitat & Species Description and Values, Technical Report 30, Volume 3 of the MacKays to Peka Peka AEE.

Ecological Technical Report 5: Marine Habitat and Species – Description and Values, Technical Report 31, Volume 3 of the MacKays to Peka Peka AEE.

Attachments

Attachments

Attachment 1: Indigenous Vegetation and Habitat Monitoring and Management Plan

Attachment 2: Lizard Monitoring and Management Plan

Attachment 3: Avifauna Monitoring and Management Plan

Attachment 4: Stream and Aquatic Habitat Monitoring and Management Plan

Attachment 5: Wetlands Habitat Monitoring and Management Plan

Attachment 6: Estuarine / Marine Habitat Monitoring and Management Plan