M2PP-121-D-PLNM-0004

Site Specific Management Plan 004 - [sector 410/420]
MacKays to Peka Peka Expressway

01 SEPTEMBER 2014 - CERTIFIED ISSUE - REV C

NZ TRANSPORT AGENCY
WAKA KOTAHI

MacKays to Peka Peka
Wellington Northern Corridor

SITE SPECIFIC MANAGEMENT PLAN - KAPITI MAZENGARB [SSMP 4 - SECTOR 410, 420]

For the purposes of the SSMP certification it is assumed that the consent conditions for the MacKays to Peka Peka Expressway, as determined by the Board of Inquiry under Section 149R of the Resource Management Act (1991) will be read in conjunction.

SSMP Exclusions or omissions:

- *If there are discrepancies between master plans and the detailed planting plans the detailed plans take precedence.*

1.0 SSMP REVISION HISTORY			
REVISION NO:	DATE:	STATUS:	ISSUED TO:
REV A	10.07.2014	Draft for review	KCDC
REV B	04.08.2014	Issue for certification	KCDC
REV C	01.09.2014	Certification issue	KCDC

2.0 SSMP CERTIFICATION DETAILS POSITION				
PREPARED BY M2PP ALLIANCE	NAME:	POSITION:	SIGNATURE:	DATE:
	Bron Faulkner	Landscape Architect		06.08.14
	Frazer Baggaley	Urban Design		07.08.14
	Matiu Park	Ecologist		04.08.14
	Steve Dunn	Landscape Architect		07.08.14
M2PP ALLIANCE APPROVAL	NAME:	POSITION:	SIGNATURE:	DATE:
	David Callan	Sector Manager		07.08.14
	Peter Bradshaw	Design Manager		07.08.14
	Dennis Hunt	Technical Director		07.08.14
	Malory Osmond	Consents/Compliance Manager		07.08.14
CERTIFICATION	NAME:	POSITION:	SIGNATURE:	DATE:
Reviewed by Julia Williams, Landscape, KCDC. Deyana Popova, Urban Design, KCDC	Andrew Guerin	KCDC		01.09.14

2.1 POST CERTIFICATION CHANGES								
DRAWING/PAGE TITLE:	DRAWING NUMBER:	DRAWINGS STATUS:	REVISION NO:	DESCRIPTION OF CHANGE:	ISSUED TO:	CERTIFIED BY:	DATE:
SHEET 2 - Master Plan	M2PP-121-D-DWG-8101	Revision/Update	D	Addition of note referencing foot bridge details can be found in Makarini Street Bridge Addendum to SSMP 4	KCDC		3-5-16
SHEET 11 - Noise Wall Locations	M2PP-121-D-DWG-8602	Revision/Update	D	Adjusted Noise Fence Alignment - Noise Wall Location plan takes precedence over masterplan barrier locations.	KCDC		3-5-16
SHEET 22 - CWB sign type summary	M2PP-121-D-DWG-8901	Revision/Update	D	Signs updated to include horse symbol- All CWB signs to be updated as per this sheet	KCDC		3-5-16
Kapiti to Mazengarb Planting Plan SHEET 1	M2PP-41R-D-DWG-8201	Revision/Update	2	Updated planting plan to include planting design adjacent to the footbridge abutments and ramp/path on the eastern embankment (Makarini Street). Removal of median planting	KCDC		3-5-16
Kapiti to Mazengarb Planting Plan SHEET 2	M2PP-41R-D-DWG-8202	Revision/Update	2	Updated planting plan to include planting design adjacent to the footbridge ramp/path on the eastern embankment (Makarini Street). Removal of median planting	KCDC		3-5-16
Kapiti to Mazengarb Planting Plan SHEET 3	M2PP-41R-D-DWG-8203	Revision/Update	2	Removal of median planting, Changes to planting around Chilton Drive	KCDC		3-5-16
SSMP 4 SHEET 23 - Type 1 CWB entrance detail	M2PP-121-D-DWG-8802	New Sheet added	A	CWB entrance structures- design change to precast units. To replace Type 1 on sheet 18	KCDC		3-5-16
Makarini Street Footbridge Addendum	-	New document	-	Detail of the footbridge and ramps that were finalised after SSMP 2 had been certified. Separate Document.	KCDC		26.10.15

SITE SPECIFIC MANAGEMENT PLAN KAPITI MAZENGARB [SSMP 4 – SECTORS 410, 420]
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The Makarini pedestrian bridge location has not been finalised, therefore no detail is included at this stage. Consultation on the footbridge and its design will be included at a later stage, and added to this SSMP

1. SSMP CERTIFICATION DETAILS		Signature	Date
PREPARED BY M2PP ALLIANCE:	Bron Faulkner (Landscape Architect)		6/8/14
	Frazer Baggaley (Urban Design)		07/08/14
	Matiu Park (Ecologist)		4/8/14
	Steve Dunn (Landscape Architect)		07/08/14
M2PP ALLIANCE APPROVAL	David Callan (Sector Manager)		07/08/14
	Peter Bradshaw (Design Manager)		07.08.14
	Dennis Hunt (Technical Director)		7 August 2014
	Malory Osmond (Consents Manager)		07/08/14
CERTIFICATION	**Andrew Guerin (KCDC)** **[Reviewed by Julia Williams, Landscape Architect and Deyana Popova, Urban Designer]**		1/9/2014

2. INTRODUCTION

A. PURPOSE

The consent conditions for the MacKays to Peka Peka Expressway, as determined by the Board of Inquiry under Section 149R of the Resource Management Act (1991), set out the matters to be covered in the Site Specific Management Plans (SSMP).

A total of 11 SSMPs will be prepared that address all the required sectors of the Expressway. The level of detail in the SSMP varies according to whether landscape, ecology or urban design aspects are being addressed and the nature of the environment the Expressway traverses at any particular point.

The purpose the SSMP is to assist the implementation of the applicable management plans by providing site specific detailed design and construction responses to address specific context and environmental conditions and circumstances of each applicable sector of the route and in accordance with the staging identified in the programme. Each SSMP must be consistent with, and be implemented in accordance with, the respective Management Plan and consent conditions.

This document (including the Appendices) incorporates three interrelated SSMPs, covering landscape, urban design and cycle, walking and bridleway (CWB). The intention of combining these SSMPs is to ensure integration between all disciplines, maximise the benefits of mitigation works within each sector and to reduce reporting and monitoring requirements. The consent conditions (DC.64) also require the preparation of a Network Integration Plan (NIP). This SSMP shall address the requirements of DC.64 a) and b) ii) as they relate to the details of the CWB.

SSMPs are to be prepared in consultation with various stakeholders including iwi, interest and residents' groups as directed by conditions. Appendix 2 describes the matters raised in consultation and the responses made.

The SSMPs have been prepared through an iterative process to allow discussion between the Alliance and certifiers. This has included further advancement of design in response to feedback on the preliminary issue. The aim will be to establish and agree as much of the landscape, ecology, urban design and CWB design through the initial 'confirmation of design' phase (refer to section D below) to give the best possible definition to the Project design elements as early as possible.

B. GENERAL PROJECT DESCRIPTION

REFER APPENDIX 1 SHEETS 1-7

This SSMP covers the area of the Expressway from north of the Kapiti Road interchange to the Mazengarb Road bridge. Makarini footbridge location and detail is not included at this stage; consultation and design to be included at a later stage. This SSMP addresses the following:

- Single span split bridge, 22.9m long and 27.1m wide crosses over Mazengarb Road.
- CWB on the west side of the Expressway joins to Kapiti Road, Mazengarb Road and Makarini Street (via the pedestrian overbridge).
- Modification of Mazengarb Road involves lowering the road by approximately 2.0-3.0m where it passes under the Expressway, and formation of cut and fill batters to the east of the new bridge.
- Modification of dunes and construction of earth noise mitigation bunds.
- Construction and planting of one stormwater wetland swale.
- Planted and rock lined stormwater swales.
- Concrete noise walls
- Concrete noise walls adjacent to the Expressway.
- Planted earth noise bund on eastern side between Mazengarb Road and Makarini Street Reserve.
- Timber noise fences for properties along Mazengarb Road.
- Planted Expressway median, all of the Sector to just south of the Mazengarb bridge.
- Mass planting the full width of the designation, including tree enrichment south of Mazengarb Road.
- Wire rope barrier along the median and sides of the Expressway, with 1.1m high concrete barriers on the bridge, which also provide noise mitigation.
- Pedestrian footbridge across the Expressway to be designed and consulted on separately.

C. SSMP EXISTING AREA DESCRIPTION

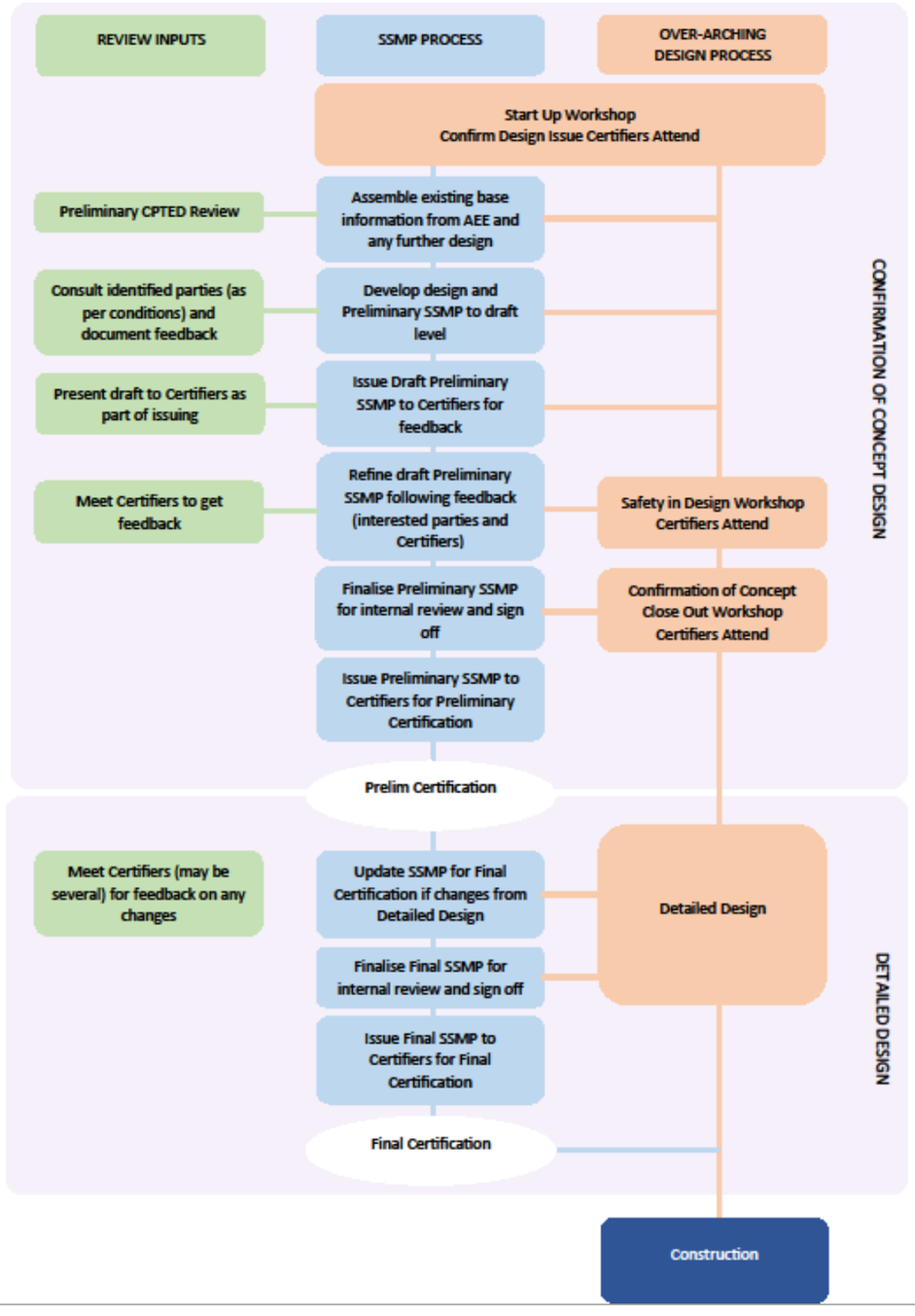
REFER APPENDIX 1 SHEETS 1-5 AND ULDF SECTION 3.10

- This stretch of the Expressway passes through a residential part of Paraparaumu.
- The existing road designation has resulted in the retention of a relatively narrow corridor of undeveloped duneland flanked by residential development. The residential community to the east (referred to as the Makarini community) extends between Mazengarb and Kapiti Roads. The west side of the Expressway is bounded by the MetLife Retirement Village villas and an area of undeveloped land at the northern end.
- The land either side of the Expressway designation has been leveled as part of past land development projects, leaving the remnant dunes in the designation generally higher than the surrounding land.
- The designation currently provides informal open space to the local community with the vegetation a mix of rank grass, blackberry, gorse and occasional exotic trees.
- There are no areas of identified ecological value within this SSMP area.

D. PROCESS

DIAGRAM 1 – SSMP DEVELOPMENT PROCESS

The process followed in preparing the SSMPS has followed is described in Diagram 1 below.



E. CONDITIONS OF CONSENT [SUMMARY]	**General** • Requirement to develop Site Specific Management Plans (SSMPs) for landscape and urban design purposes (DC.7) and CWB (DC.59A g). **Landscape** • Condition DC57(f) lists the matters to be provided and in summary includes: - Vegetation to be retained; - Vegetation protection measures; - Proposed Planting (including the stages) - Fernbird habitat created; - Maintenance standards; - Detailed specifications; - A maintenance regime; - Landscape treatment of any noise barriers; - Landscape treatment for pedestrian and cycle facilities. **Ecology** • No Requirement to develop a SSEMP in SSMP 4 (SSEMPs are to be prepared for each ecological mitigation area set out in Condition G42). **Urban Design** • Condition DC.59A e) requires SSUDPs to be prepared for locations where the Expressway interacts with local vehicular and non-vehicular pedestrian/cyclist movement. For SSMP4, the locations include: Mazengarb Road and Makarini Street footbridge • DC.59A f) lists the matters to be provided and in summary includes detailed design of for the benefit of pedestrians, cyclists and others: - Lighting; - Footpath and on-road cycle lane design (1.5m on road and 2.0m footpaths); - Safe crossing points for CWB; - Visual treatment of structures and landscape (retailing walls, noise mitigation structures and landforms); - Local property access; - Landscape treatment (LMP and SSMLPs); - Bridge piers and abutment design (location of piers, scale and materials); - Signage. • ConditionDC.59A g) requires preparation of a SSUDP for the Cycleway, Walkway and Bridle (CWB) path network and include: - Final alignment and form of CWB. - Provision for a 3.0m wide two-way path - Connections - Boardwalks; - Lighting, safety provisions for crossing of local roads - CPTED review. • In addition, SSMP 4 shall consider the following in relation to Condition DC 59A i): *vi) Makarini Street area pedestrian bridge:* *1. Location and design to use landforms to minimise need for structural ramps* *2. Location of connections to Te Roto Drive and Makarini Street.*

	vii) Mazengarb Road: *1. Design of retaining walls to reduce dominance and maintain openness of approach* Network Integration Plan Condition DC.64 a) in relation to the CWB; Condition DC.64 b) ii) in relation to lighting.
3. CONSULTATION	- The preparation of SSLMP, and SSUDP (under Conditions DC.57 e), DC.57A, and DC.59A j)) requires consultation with the following parties: - Te Āti Awa ki Whakarongotai; - Kapiti Coast District Council (KCDC). - Kāpiti Cycling Incorporated and the Implementation Group of the Kāpiti Coast District Council Advisory on Cycleways, Walkways and Bridleways in respect of the CWB and any cycle or pedestrian connections. - Two Landscape Focus Areas (DC 57A a) o *ii) Eastern side of the designation between Kāpiti Road and Mazengarb Road including Greenwood Place, Elder Grove, Cypress Grove, Spackman Crescent, Makarini Street, Palmer Court, St James Court and Chilton Drive;* o *iii) Western side of the designation between Kāpiti Road and Mazengarb Road including Cheltenham Drive and Lincoln Court; (Metlife care)*

4. URBAN DESIGN	CONDITIONS – URBAN DESIGN	RESPONSES – URBAN DESIGN
A. LIGHTING REFER APPENDIX 1 SHEET 18-20	DC.59 f) i) Lighting for the benefit of pedestrians and cyclists DC.64 a), b), ii)	The CWB will be lit by overhead lights. The light pole, luminaire detail and pole spacing will be finalised for the whole project as part of detailed design. Architectural lighting will be included to light the underside of the Mazengarb Bridge.
B. CWB REFER TO APPENDIX 1 SHEETS 1-4,6,7,16&17 ALSO REFER TO CPTED REVIEW COMMENTS SHEETS 5&6	DC.59A f) ii) and iii) and DC59A g), DC.59A i) xi) and DC.57 c) DC.64 a), b), ii). • Footpath and on road cycle lane on-road (2.0m and 1.5m) • Intersection of the CWB and Local Roads to be safe for crossing • Alignment of CWB • Provision for a 3.0 m wide two way path that is generally parallel with Expressway • Locations for connections (immediate and future) • Boardwalks • Lighting and safety provisions for local road crossings • CPTED review	CWB parallel to Expressway, comprising a formed 3.0 m wide chipseal and where practicable a grass verge of up to 1.0m wide for horse riders. The CWB is designed to provide access for maintenance vehicles, although this use will be very infrequent. The CWB is on the western side of the Expressway and joins to Mazengarb Road at its northern end. The CWB continues north of Mazengarb Road with the entry point almost directly opposite the CWB on the southern side. The crossing point meets the required sightline standards for a 60km design speed, although the posted speed is 50km . No additional signaling will be provided at the CWB crossing. Low gabion barriers at the intersection of the CWB and Mazengarb Road signal the imminent crossing point as users approach from the south and north, and marks the entry point for people on Mazengarb Road. The Gabions physically and visually narrow the CWB and provide a threshold that helps to slow cyclists. Planting will generally be kept at low heights adjacent to the CWB to maintain sightlines along the CWB. At isolated locations, as requested by immediate residential neighbours taller vegetation will be planted to provide visual screening. An initial CPTED review of the project identified the key design considerations: • No tall elements that could create 'outside rooms' or places to hide. • Clear sight lines at intersections. • Ensure clear views to the exits of CWB. • Remove tall vegetation from CWB intersections • Low planting adjacent to CWB (3-5m wide strip for the majority of the CWB) and at bridge abutments. • The 'tagability' of surface materials. A CPTED assessment of this SSMP has subsequently been completed and considers the design meets the CTPTED requirements. . The CPTED assessment of the design changes made to Mazengarb Road recommended that low stature plants should be planted close to the footpath (e.g a 5.0m wide strip) to maintain legibility and eliminate places for hiding and incivilities. Low planting should also be used at the bridge abutments. The assessment also considered the effects of the loss of activation of the 'left over' land at the end of Chilton Drive. *CPTED strategies to consider for re-activating the cul-de-sac might well include:* • *Creating a new house site whereby the noise fence would substantially form the new north boundary;* (The Consent Decision particularly excludes this option). • *Annexing some of the land to the adjoining existing properties;* • *Creation of a community micro-park;*

		• *Emphasis on street lighting;* *or combinations of the above* Feedback from consultation with the Chilton Drive residents who live next to the 'left over space' have a strong preference for a grassed area with trees such as cherry trees and also any vegetation that can be retained on the properties, from where the houses will be removed. These residents are also concerned that the planting does not create any security issues. Application of CPTED principles will ensure the area is safe.
C. RETAINING WALLS AND NOISE MITIGATION STRUCTURES REFER TO APPENDIX 1 SHEETS 10-15	DC.59A f) iv) Retaining wall structures, in terms of their scale, and materials and noise mitigation structures and landforms in terms of their fit in the landscape and visual treatment. See 'F Other Conditions' below regarding retaining walls at Mazengarb Road	There are five types of noise mitigation structure in this SSMP. • 1.1m concrete barriers on the bridge (1.1m TL 4 road barriers). • Planted earth noise bunds on the eastern side of the Expressway. • 2.0m high timber noise fences for residential properties adjoining Mazengarb Road • 2.5 and 2.0m high concrete noise walls are constructed as separate walls located 400mm back from the TL4 concrete barrier. The concrete noise walls comprise concrete panels fixed to H beam posts at approximately 3.0m centres. Design of the concrete noise walls has considered the aesthetics of both sides of the wall, (the Expressway and non-Expressway sides). Generally, planting will be established on the non-Expressway side of the noise walls, particularly the taller ones, to visually interrupt the mass of the walls for pedestrians and neighbours.
D. LOCAL PROPERTY ACCESS REFER TO APPENDIX 1 SHEET 4-5	DC.59A f) v) Local property access to provide for existing and future needs	The residential property on the north side of Mazengarb Road (#353, from where the house will be removed) will be purchased by NZTA for later disposal. New access will need to be identified for this property.
E. BRIDGE ABUTMENTS REFER TO APPENDIX 1 SHEET 8,9	DC.59A f) iv) Bridge piers and abutments design to address the location of piers and the treatment of abutments to address their scale and materials	The Mazengarb Road bridge is a single span split deck structure, supported by abutments at either end; there are no bridge piers. The abutments are inclined 70 degrees from a 1.0m high vertical toe wall. Wing walls integrate the abutments into the planted embankments. Together, the abutment face and wing walls create an approximately 54.0m long element to lead pedestrians through the under-bridge space. A light shaft from the gap between the bridge decks will also contribute to the visual amenity under the bridge. The bridge abutments and wing walls will be faced with precast exposed aggregate panels, which will extend 1.1m above the top of the retained fill; this will avoid the need for a safety handrail.
F. OTHER CONDITIONS	DC 59A i) :In addition, SSMP 4 shall consider the following *vi) Makarini Street area pedestrian bridge:* 2. *Location and design to use landforms to minimise need for structural ramps* 3. *Location of connections to Te Roto Drive and Makarini Street.* *vii) Mazengarb Road:* 4. *Design of retaining walls to reduce dominance and maintain openness of approach*	**Makarini Street Pedestrian Bridge;** The final location and design of the Makarini Street pedestrian overbridge is not included in the SSMP and will be added at a later stage. **Mazengarb Road** This condition is no longer relevant. Retaining walls were proposed for Mazengarb Road, east of the Expressway bridge as part of the AEE proposal. Subsequent to that a design change has been granted consent to replace the retaining walls with 1v:4h planted batter slopes.

5. LANDSCAPE	CONDITIONS – LANDSCAPE	RESPONSES – LANDSCAPE
A. DUNES AND DRYLAND VEGETATION REFER TO APPENDIX 1 Vegetation retention Plans M2PP-41R-D-DWG-8700-8703	Condition DC.57 f) specifies vegetation to be retained. Re-shaping of dune landforms disturbed by construction of the Expressway.	Trees to be retained are identified on the 'Vegetation to be Retained' plan. There are no identified valued areas of terrestrial indigenous vegetation within this SSMP. Dune landforms are addressed under the Landform section below.
B. STREAMS AND RIPARIAN WORKS	Condition G.42 b) requires specific lengths of stream mitigation.	*Note: no ecological mitigation works are proposed in this SSMP*
C. WETLANDS	Condition G.42 b) requires specific areas of wetland mitigation.	*There are no ecological mitigation requirements within this SSMP.* *Note: Wetland swale 5 functions as a stormwater treatment wetland and is not included as an area of ecological mitigation.*
D. SALVAGE	Condition G.34 m) sets out the salvage requirements for vegetation.	*There are no ecological mitigation requirements within this SSMP.*
E. VEGETATION TO BE RETAINED REFER TO APPENDIX 1 Vegetation retention Plans M2PP-41R-D-DWG-8700-8703	Conditions: DC.57 f) i) and DC.42C c) i)– identification of vegetation to be retained. Refer: Landscape Management Plan, sections 8.21 to 8.28 and Attachment 2: Principles, Methods and Procedures: Pre-construction..	Vegetation to be retained plans have been certified by KCDC). There is no existing vegetation to be retained within the earthworks footprint. The earthworks will occupy the full extent of the designation and the existing vegetation is mainly blackberry and gorse with a few exotic trees. *There are no identified valued areas of terrestrial indigenous vegetation within this SSMP.*
F. VEGETATION TO BE CLEARED	Conditions: DC.57 f) i) and DC.42C c) i) identification of vegetation to be removed. Refer: Landscape Management Plan, sections 8.21 to 8.28 and Attachment 2: Principles, Methods and Procedures: Pre-construction. Ecological Management Plan, sections 7.1 to 7.18.	Project Landscape Architect to provide briefing to Constructors prior to vegetation clearance and protection work commencing; briefing to identify any hold points during vegetation clearance process.
G. INDIGENOUS FAUNA	Conditions G.34 n) and the EMP (Appendix 3, section 7) - freshwater fish requirements for diversions and culverts in perennial and intermittent waterbodies (including drains).	*N/A* *There are no existing perennial or intermittent waterbodies within this SSMP area.* *There are no other requirements for rare or threatened fauna within SSMP 4.*
H. LANDFORMS	Condition DC.57 c) - SSLMPs shall be consistent with the Landscape Management Plan, ULDF (Technical Report 5), the Ecological Management Plan, the relevant Site Specific Urban Design Plan, and the Network Integration Plan as relevant.	While remnants of sand dunes remain in the Expressway designation, the earthworks footprint will occupy its full extent. What dunes that can remain will be modified and re-shaped as earth noise bunds. Any low points between dunes will be filled to provide a continuous noise bund on the east side of the Expressway. While shaping of the earth bunds to reflect some aspect of a natural dune form is desirable, the restrictions associated with lack of space within the designation and the height requirement for noise mitigation makes significant shaping unachievable. However, it is preferable to use earth noise bunds rather than noise walls through this residential area from an aesthetic point of view. Some dune rounding can be done to a small section of the cut batter on the west side at the northern end near Mazengarb Road. Organic material (i.e. the limited topsoil development on the dunes and in the interdunal hollows) shall be stripped and stockpiled separately for future use. Contract documentation and the Landscape Specifications (Appendix 4) provides details on topsoil stripping and storage. Where seasonal conditions prevail, hydroseeding of exposed sand areas will be carried out once re-shaping is completed. Alternative treatment to exposed sand areas where hydroseeding not feasible (eg organic mulch, straw / brush).

		All exposed sand areas shall be temporarily protected with straw or proprietary materials during re-shaping to limit erosion from wind and rain and also to minimise dust issues in adjoining properties.
I. WETLAND CREATION AND RESTORATION	Condition G. 41 c) ii)	*N/A There are no ecological mitigation requirements within this SSEMP.* *Note: Wetland swale 5 functions as a stormwater treatment wetland and is not included as an ecological offset wetland*.
J. STREAM CREATION AND RESTORATION	Condition G.42 and G.42C -.	*N/A There are no ecological mitigation requirements within this SSEMP.*
K. CULVERT INSTALLATION	N/A no culverts	*N/A – there are no permanent culverts in perennial or intermittent watercourses within this SSMP.*
L. MITIGATION PLANTING REFER TO APPENDIX 1 SHEETS 1-5 AND DETAILED PLANTING PLANS	Conditions G.42 and DC.57 f) - Landscape and ecological mitigation requirements -	*There are no ecological mitigation planting requirements in this SSMP*. There are four planting types within this SSMP required for landscape and visual mitigation as follows: ***Massed planting:*** Plant grades will be a mix of 0.5 and 1.0 litre grades planted at 1.0m centres. A 3.0m wide margin of low growing plants will form the edge of the massed planting adjacent to the CWB, and Mazengarb Road footpath to meet CPTED requirements and for maintenance. In areas subject to ***enrichment planting*** (which will occur in the following planting season after mass planting), plant grades shall be PB 18 or equivalent. Massed planting with tree enrichment occurs at the north end, adjoining Mazengarb Road. ***Stormwater wetland swale species mix***: Plant grades will be a mix of 0.5 and 1.0 litre (or equivalent) planted at 0.75m centres. ***Planted stormwater swale*** (along the eastern boundary) has a rock base and planted sides. Expressway ***median planting*** consists of a single species club rush Landscape success mitigation planting requirements and approvals are covered in Section V of this SSMP.
M. PLANTING METHODS AND SPECIFICATIONS REFER TO APPENDIX 4	DC 57 f) and G.42C c) - planting methods and specifications Refer: Landscape Management Plan, sections 8.41 – 8.59 and Attachment 2: Principles, Methods and Procedures: Pre-construction and Construction	Planting shall be undertaken during 3 month planting window only (beginning June until the end of August). Planting may be carried out during a 2- week shoulder period either side of this but it will depend on environmental conditions. No planting shall be undertaken outside the June-August planting window unless approved by Project Landscape Architect. Planting substrate shall be a minimum of 300mm deep, consolidated, and free from rilling and erosion before mulch placement. Organic mulch shall be placed over the area to be planted at least 2 weeks prior to planting to allow for settlement. *Note: organic mulch shall not be used within the areas of wetland and stormwater treatment that are subject to temporary or permanent inundation. For these areas, alternative plant protection techniques will be used (e.g. staking and proprietary matting mechanisms).* No planting shall be undertaken until site is approved by Project Landscape Architect and Project Ecologist to be free of aggressive pest plant species. Planting shall be delayed in

		areas where aggressive pest plants are detected until these are removed or sufficiently controlled. Plant supplier to confirm all plants are well hardened off prior to planting. Species composition shall be in accordance with species percentages. All indigenous plant set out and groupings to be random, but reflecting natural assemblages as directed by Project Landscape and Ecologist for the relevant mitigation requirements. Plant selection shall take into account engineering and service constraints. All planted areas shall be temporarily fenced to assist with plant protection. Enrichment planting shall be undertaken in year 2 as directed by the Project Ecologist and Project Landscape Architect – and in response to mitigation success requirements as set out in the EMP and LMP.
N. WEED CLEARANCE REFER TO APPENDIX 4	Conditions: DC.57 f) vii) B and Condition G.35 - weed control and clearance. Refer: Landscape Management Plan, sections 8.16 to 8.20 and Attachment 2: Principles, Methods and Procedures: Pre-construction and Construction. Ecological Management Plan sections 3.9 and 4	All invasive plants shall be controlled in planting areas prior to planting in accordance with the GWRC Regional Pest Management Strategy (2002-22) and as directed by the Project Landscape Architect and Project Ecologist in relation to ecological and landscape mitigation areas.
O. GROUND PREPARATION REFER TO APPENDIX 4	Condition DC.57 f) and G.42C c) Refer: Landscape Management Plan, sections 8.35 to 8.40 and Attachment 2: Principles, Methods and Procedures: Pre-construction and Construction. Ecological Management Plan sections 3.9 and 4 (Attachment 1)	All areas to be planted shall be sprayed with a certified and approved herbicide. All areas to be planted shall be free of actively growing grass, weeds, and any extraneous material removed. Any localised rilling or erosion of planted areas shall be remedied prior to placement of approved soil mix. Project Landscape Architect to approve all finished earthwork areas prior to placement of approved soil mix. Approved soil mix comprising salvaged peat, stripped topsoil, sand and compost shall be placed and lightly compacted to a minimum depth of 300mm over all areas to be planted.
P. MULCHING REFER TO APPENDIX 4	Condition DC.57 f) and G.42C c). Refer: Landscape Management Plan, sections 8.41 – 8.59 and Attachment 2: Principles, Methods and Procedures: Pre-construction and Construction. Ecological Management Plan sections 3.9 and 4 (Attachment 1)	100mm of organic mulch shall be placed lightly over all areas to be planted (with the exception of temporarily or permanently inundated areas as outlined above). Mulch shall be left for 2 weeks to settle prior to commencement of any planting.
Q. PLANT SUPPLY REFER TO APPENDIX 4	Condition DC.57 f) and G.42C c). Refer: Landscape Management Plan, sections 8.41 – 8.59 and Attachment 2: Principles, Methods and Procedures: Pre-construction and Construction. Ecological Management Plan sections 3.9 and 4 (Attachment 1)	All indigenous plants shall be sourced from Manawatu Ecological Region, with a focus on the Foxton Ecological District. All plants shall be hardened off prior to planting.
R. PLANTING PROGRAMME / STAGING	Condition DC.57 f) and G.42C c). Refer: Landscape Management Plan, sections 8.41 – 8.59 and Attachment 2: Principles, Methods and Procedures: Pre-construction and Construction. Ecological Management Plan sections 3.9 and 4 (Attachment 1)	Planting shall be staged according to completion of construction works. No planting shall be carried out in areas where there is a risk of damage from adjoining construction activities. Construction Manager shall confirm areas where construction is completed and area is ready for planting.

		Planting shall be completed only within June-August planting window unless otherwise approved by Project Landscape Architect. All areas to be planted shall be photographed and details recorded to form part of baseline information.
S. PLANT MAINTENANCE REFER TO APPENDIX 4	Condition DC.57 f) and G.42C c). Refer: Landscape Management Plan, sections 8.60 – 8.62 and Attachment 2: Principles, Methods and Procedures: Post-Construction. Ecological Management Plan sections 3.9 and 4 (Attachment 1)	All planted areas shall be photographed on completion of planting and details recorded to be included as part of baseline information. Terrestrial planting, both indigenous and exotic shall be maintained for 3 years. Planting shall be maintained according to the maintenance plan as set out in the Landscape specifications (Appendix 4). Monitoring reports on plant survival and establishment and the frequency and success of the maintenance regime shall be completed by the Project Landscape Architect (in consultation with the Project Ecologist in relation to riparian planting) as follows: • 1 month after planting completed and then • 3 months • 6 months • 12 months • 2 years; and • Twice yearly thereafter until the end of the maintenance period. Monitoring reports shall include dates of visits, condition of vegetation, condition of fencing, issues arising, actions required, together with photographs. Monitoring reports on completion shall be provided to KCDC Landscape Reviewer. Monitoring reports shall cease to be prepared for those areas where the performance standards have been met ahead of the maintenance period.
T. PEST PLANT MANAGEMENT REFER TO APPENDIX 4	DC.57 f), G.42C c) and G.43 d) – control of pest plants.	Weed surveys shall be carried out annually in spring to track the introduction of weeds and their spread and to recommend appropriate management in accordance with the GWRC Regional Pest Management Strategy (2002-22).
U. PEST ANIMAL MANAGEMENT REFER TO APPENDIX 4	DC.57 f), G.42C c) and G.43 d) – control of pest animals.	Pest monitoring shall be carried out annually in spring to track the introduction of browsing animal pests and their spread and to recommend appropriate management in accordance with the GWRC Regional Pest Management Strategy (2002-22).
V. PROTECTION REQUIREMENTS REFER TO APPENDIX 4	Condition DC.57 c) and G.43 d) – temporary and permanent protection.	Temporary fences shall be erected as part of the protection of valued vegetation to be retained. All areas of ecological and landscape mitigation planting within the operational designation shall be fenced following planting, maintained and protected in accordance with the consent conditions as outlined in the EMP and LMP.
W. LANDSCAPE AND ECOLOGICAL SUCCESS MONITORING – POST CONSTRUCTION	DC. 57 c) - monitoring and adaptive management requirements to confirm landscape and ecological mitigation success has been achieved are as follows (as outlined in the EMP and LMP): DC.53 c), DC.57 f) and G.42 c) - 3 year Defects Liability and Maintenance Period for all terrestrial planting and a 4 year Defects Liability and Maintenance Period for wetland and riparian planting.	*No ecological mitigation works are proposed in this SSMP* In relation to landscape mitigation planting, success measures are as follows: • 80% canopy closure at the time of Final Completion whereby a sustainable plant community has been established and where plants have grown to create a canopy that shades the ground and suppresses weed growth.

	DC. 57 c) - at the completion of planting, each area of ecological mitigation will be reviewed by the Project Ecologist in conjunction with the Project Landscape Architect and a report prepared on the parameters above.	• The total area of wetland, terrestrial and riparian planting as far as practicable reflects the indigenous habitat types lost and ecological functioning and is based on development of similar representative vegetation communities (G.42A). • Invasive terrestrial weed species successfully controlled.
X. ADAPTIVE MANAGEMENT – POST CONSTRUCTION	Condition G.40 – adaptive management and condition DC.57 c)	In the event that mitigation planting does not achieve the objectives within the consent timeframes, the Project Landscape Architect will prepare a report, including recommendations for remedial work or additional mitigation, and ongoing monitoring and reporting through the Adaptive Management process.

6. REFERENCES	
	• Ecological Management Plan (EMP), July 2013. • Landscape Management Plan (LMP), July 2013 • Urban and Landscape Design Framework, Technical Report 5, MacKays to Peka Peka Expressway • Assessment of Landscape and Visual Effects, including Appendices A and B, Technical Report 7 • Assessment of Ecological Impacts Report, including Technical Reports 27 – 31 (Terrestrial Vegetation and Habitats, Herpetofauna, Avifauna, Freshwater and Marine), • Assessment of Hydrology and Stormwater Effects, Technical Report 22.

M2PP-121-D-PLNM-0004

Appendix 1: DRAWING SET

Site Specific Management Plan 004 - [sector 410/420]
MacKays to Peka Peka Expressway

01 SEPTEMBER 2014 - CERTIFIED ISSUE - REV C

NZ TRANSPORT AGENCY
WAKA KOTAHI

MacKays to Peka Peka
Wellington Northern Corridor

Drawing Plotted:

SSMP#	SECTOR	NAME	NOTES
SSMP1	310/320	[RAUMATI SOUTH]	
SSMP2	330/340/350	[RAUMATI NORTH]	
SSMP3	360/370/380	[WHAREMAUKU BASIN]	
SSMP4	410/420	[KAPITI MAZENGARB]	
SSMP5&6	430/440/460	[OTAIHANGA NORTH&SOUTH]	
SSMP7	470	[WAIKANAE RIVER]	
SSMP8	480/510	[TE MOANA]	
SSMP9	520	[NGARARA]	
SSMP10	530/540/550/580	PEKA PEKA SOUTH	ISSUED IN TWO PARTS: -SSMP10-550 -SSMP10-580/540/530
SSMP11	560/570	[[PEKA PEKA NORTH]	

LEGEND

ROAD
SSMP BOUNDARY
SSMP SHEET (ROAD)
CURRENT SSMP SHEET (ROAD)
SSMP SHEET (BRIDGE)
CURRENT SSMP SHEET (BRIDGE)
PARCEL BOUNDARIES
CONSTRUCTION BOUNDARY

A1 REPRODUCTION SCALE
100 80 60 40 20 0mm

A3 REPRODUCTION SCALE
50 40 30 20 10 0mm

No.	Revision	By	Chk	Chk.V	Appd	Date
C	CERTIFIED ISSUE - REV C	VB			DC	21/07/14

Original Scale (A1) 1:25,000	Design	SD	21/07/14	Approved For Construction*
Reduced Scale (A3) 1:50,000	Drawn	VB	21/07/14	
	Dsg Verifier			
	Dwg Check			Date
	* Refer to Revision 1 for Original Signature			

NZ TRANSPORT AGENCY WAKA KOTAHI
MacKays to Peka Peka Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY RP 1012/0.00 TO 1023/5.00

Title: SSMP 4 [410-420] - SHEET 1 LOCATION PLAN

Drawing No: M2PP-121-D-DWG-8001

Rev. C

Document No.

DETAIL DESIGN (DET)

Drawing Plotted:

SECTOR 380
SECTOR 410

KAPITI - METLIFECARE
RETIREMENT VILLAGE

CWB 3.0M

REFER TO SSMP ADDENDUM FOR FOOTBRIDGE DETAIL

NORTH BOUND
SOUTH BOUND

TOP OF BUND NOT PLANTED

MAINTENANCE ACCESS

EARTH NOISE BUND

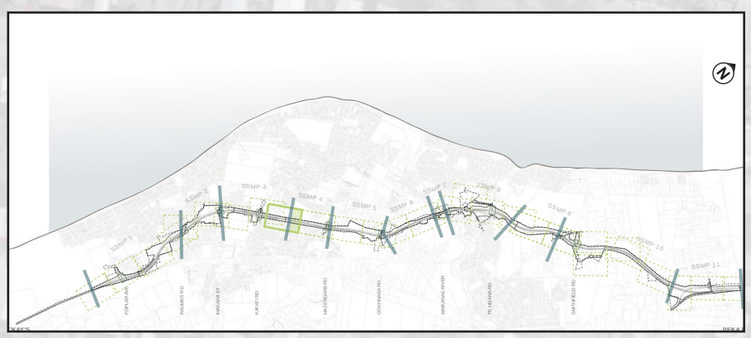
SPACKMAN CRES

MAKARINI ST

LINWOOD DRIVE RECREATIONAL RESERVE

KEY CPTED CONSIDERATIONS:

- NO TALL BARRIERS OR ELEMENTS THAT CREATE 'OUTSIDE ROOMS'/PLACES TO HIDE.
- CLEAR LINES OF SIGHT AT INTERSECTIONS.
- ENSURE CLEAR VIEWS TO THE EXITS OF CWB.
- REMOVE TALL VEGETATION FROM CWB INTERSECTIONS.
- THE 'TAGGABITLY' OF MATERIALS AND SURFACES.
- LOW PLANTING 5.0M WIDE FROM EDGE OF FOOTPATH ALONG MAZENGARB ROAD TO MAINTAIN LEGIBILITY AND ELIMINATE PLACES FOR HIDING.
- LOW PLANTING AT BRIDGE ABUTMENTS.



General
- Designation Boundary
- Wire Barrier
- W-Barrier
- Barrier Transition
- Concrete Traffic Barrier
- Culvert
- Swale
- Planted Swale
- Flood Storage Area
- Visualisation Viewpoint

Urban Design
- Concrete Bridge Barrier
- Concrete Noise Wall
- Culvert Headwall
- Retaining Wall
- Bridge Deck
- Bridge Abutment
- Bridge Piers
- 2.0M Timber Noise Fence

Landscape
- Individual Retained Trees
- Retained Vegetation
- Grass
- Massed Planting
- with Tree Enrichment
- Wetland / Riparian Planting
- Massed planting low
- Specimen Tree

Ecology
- Retained Valued Terrestrial Vegetation
- Retained Valued Wetland Vegetation
- Planted Indigenous Terrestrial Habitat
- Planted Indigenous Wetland Habitat
- Stream Mitigation / Riparian Habitat
- Existing Water Body
- Batter Slope Tadpole

CWB
- Loose Chip CWB
- Chip Seal CWB
- Concrete CWB
- Existing Access Track or CWB

A1 REPRODUCTION SCALE: 100 80 60 40 20 0mm

A3 REPRODUCTION SCALE: 50 40 30 20 10 0mm

No.	Revision	By	Chk	Chk.V	Appd	Date
C	CERTIFIED ISSUE - REV C	VB			DC	21/07/14

Original Scale (A1) 1:1000	Design	SD	21/07/14	Approved For Construction*
	Drawn	VB	21/07/14	
Reduced Scale (A3) 1:2000	Dsg Verifier			Date
	Dwg Check			
	* Refer to Revision 1 for Original Signature			

NZ TRANSPORT AGENCY WAKA KOTAHI

MacKays to Peka Peka
Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY
RP 1012/0.00 TO 1023/5.00

Title: SSMP 4 [410-420] - SHEET 2 MASTERPLAN

Drawing No: M2PP-121-D-DWG-8101

Rev. C

Document No.

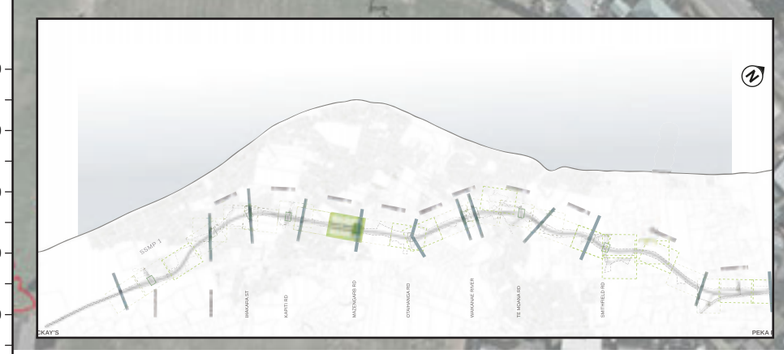
DETAIL DESIGN

Drawing Plotted:

CROWN HILL
SOVEREIGN WAY
THE MEADOWS NEW LIFE CHURCH
SECTOR 410
SECTOR 430
SECTOR 420
KAPITI - METLIFECARE
RETIREMENT VILLAGE
CHELTENHAM DRIVE
OXFORD ST
REF. 8301
REF. 8302
CS1
8501
CS2
8502
CWB 3.0M
PLANTED WETLAND SWALE
M2PP PROPOSED ALIGNMENT
NORTH BOUND
SOUTH BOUND
EARTH NOISE BUND
TOP OF BUND NOT PLANTED
PROVISION FOR MAINTENANCE ACCESS
PALMER CR
MAKARINI ST
ST JAMES CR
CHILTON DR
MAZENGARB ROAD

KEY CPTED CONSIDERATIONS:

- NO TALL BARRIERS OR ELEMENTS THAT CREATE 'OUTSIDE ROOMS'/PLACES TO HIDE.
- CLEAR LINES OF SIGHT AT INTERSECTIONS.
- ENSURE CLEAR VIEWS TO THE EXITS OF CWB.
- REMOVE TALL VEGETATION FROM CWB INTERSECTIONS.
- THE 'TAGGABITLY' OF MATERIALS AND SURFACES.
- LOW LEVEL ORIENTATION LIGHT AT MAZENGARB CROSSING POINT.
- LOW PLANTING 5.0M WIDE FROM EDGE OF FOOTPATH ALONG MAZENGARB ROAD TO MAINTAIN LEGIBILITY AND ELIMINATE PLACES FOR HIDING.
- LOW PLANTING AT BRIDGE ABUTMENTS.



General
- Designation Boundary
- Wire Barrier
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- Concrete Traffic Barrier
- Culvert
- Swale
- Planted Swale
- Flood Storage Area
- Visualisation Viewpoint

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- Concrete Noise Wall
- Culvert Headwall
- Retaining Wall
- Bridge Deck
- Bridge Abutment
- Bridge Piers
- 2.0M Timber Noise Fence

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- Individual Retained Trees
- Retained Vegetation
- Grass
- Massed Planting
- with Tree Enrichment
- Wetland / Riparian Planting
- Massed planting low
- Specimen Tree

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- Retained Valued Wetland Vegetation
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- Planted Indigenous Wetland Habitat
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- Existing Water Body
- Batter Slope Tadpole

CWB
- Loose Chip CWB
- Chip Seal CWB
- Concrete CWB
- Existing Access Track or CWB

A1 REPRODUCTION SCALE
100 80 60 40 20 0mm

A3 REPRODUCTION SCALE
50 40 30 20 10 0mm

DETAIL DESIGN (DET)

C	CERTIFIED ISSUE - REV C	VB			DC	21/07/14
No.	Revision	By	Chk	Chk.V	Appd	Date

Original Scale (A1) 1:1000	Design	SD	21/07/14	Approved For Construction*
	Drawn	VB	21/07/14	
Reduced Scale (A3) 1:2000	Dsg Verifier			Date
	Dwg Check			
	* Refer to Revision 1 for Original Signature			

NZ TRANSPORT AGENCY WAKA KOTAHI
MacKays to Peka Peka
Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY
RP 1012/0.00 TO 1023/5.00

Title: SSMP 4 [410-420] - SHEET 3 MASTERPLAN

Drawing No: M2PP-121-D-DWG-8102

Rev. C

Document No.

Drawing Plotted:

KEY CPTED CONSIDERATIONS:

- NO TALL BARRIERS OR ELEMENTS THAT CREATE 'OUTSIDE ROOMS'/PLACES TO HIDE.
- CLEAR LINES OF SIGHT AT INTERSECTIONS.
- ENSURE CLEAR VIEWS TO THE EXITS OF CWB.
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- LOW LEVEL ORIENTATION LIGHT AT MAZENGARB CROSSING POINT.
- LOW PLANTING 5.0M WIDE FROM EDGE OF FOOTPATH ALONG MAZENGARB ROAD TO MAINTAIN LEGIBILITY AND ELIMINATE PLACES FOR HIDING.
- LOW PLANTING AT BRIDGE ABUTMENTS.

MAZENGARB ROAD

345 MAZENGARB ROAD

CWB INTERSECTIONS - REFER TO DETAIL SHEETS 8801-8802

CWB 3.0M

CWB 3.0M

CS4 11

KAPITI BLUE UNDER BRIDGE

NORTH BOUND

SOUTH BOUND

MAINTENANCE ACCESS

SECURITY FENCE

PROVISION FOR MAINTENANCE ACCESS

CS3 8602

22 CHILTON DRIVE

A1 REPRODUCTION SCALE

100 80 60 40 20 0mm

A3 REPRODUCTION SCALE

50 40 30 20 10 0mm

General
- Designation Boundary
- Wire Barrier
- W-Barrier
- Barrier Transition
- Concrete Traffic Barrier
- Culvert
- Swale
- Planted Swale
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Urban Design
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- with Tree Enrichment
- Wetland / Riparian Planting
- Massed planting low
- Specimen Tree

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- Retained Valued Wetland Vegetation
- Planted Indigenous Terrestrial Habitat
- Planted Indigenous Wetland Habitat
- Stream Mitigation / Riparian Habitat
- Existing Water Body
- Batter Slope Tadpole

CWB
- Loose Chip CWB
- Chip Seal CWB
- Concrete CWB
- Existing Access Track or CWB

DETAIL DESIGN

No.	Revision	By	Chk	Chk.V	Appd	Date
C	CERTIFIED ISSUE - REV C	VB			DC	21/07/14

Original Scale (A1) 1:250 Reduced Scale (A3) 1:500	Design	SD	21/07/14
	Drawn	VB	21/07/14
	Dsg Verifier		
	Dwg Check		

Approved For Construction* Date

* Refer to Revision 1 for Original Signature

NZ TRANSPORT AGENCY WAKA KOTAHI

MacKays to Peka Peka Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY RP 1012/0.00 TO 1023/5.00

Title: SSMP 4 [410-420] - SHEET 4 BRIDGE MASTERPLAN

Drawing No: M2PP-121-D-DWG-8301

Rev. C

Document No.

Drawing Plotted:

CHILTON DRIVE PLANTING KEY

Vegetation High - small ornamental tree

- Prunus 'Shimidsu Sakura' (flowering cherry) and other varieties
- Sophora tetraptera (kowhai)
- Azara microphylla (vanilla tree)
- Leptospermum 'Copper Sheen'
- Pittosporum eugenioides (tarata)
- Melicope ternata (wharangi)

Vegetation Low- up to 1 metre high shrubs and groundcovers

- Phormium cookianum varieties (coloured flax
- Hebe
- Raphiolepis (Indian hawthorn)
- Coprosma 'Poor Knights' and other varieties
- Sophora 'Dragons gold'

Existing vegetation to be retained

Grass

General	Urban Design	Landscape	Ecology	CWB
Designation Boundary	Concrete Bridge Barrier	Individual Retained Trees	Retained Valued Terrestrial Vegetation	Loose Chip CWB
Wire Barrier	Concrete Noise Wall	Retained Vegetation	Retained Valued Wetland Vegetation	Chip Seal CWB
W-Barrier	Culvert Headwall	Grass	Planted Indigenous Terrestrial Habitat	Concrete CWB
Barrier Transition	Retaining Wall	Massed Planting	Planted Indigenous Wetland Habitat	Existing Access Track or CWB
Concrete Traffic Barrier	Bridge Deck	with Tree Enrichment	Stream Mitigation / Riparian Habitat	
Culvert	Bridge Abutment	Wetland / Riparian Planting	Existing Water Body	
Swale	Bridge Piers	Massed planting low	Batter Slope Tadpole	
Planted Swale	2.0M Timber Noise Fence	Specimen Tree		
Flood Storage Area				
Visualisation Viewpoint				

A1 REPRODUCTION SCALE 100 80 60 40 20 0mm

A3 REPRODUCTION SCALE 50 40 30 20 10 0mm

No.	Revision	By	Chk	Chk.V	Appd	Date
C	CERTIFIED ISSUE - REV C	VB			DC	21/07/14

Original Scale (A1) 1:250
Reduced Scale (A3) 1:500

Design	SD	21/07/14	Approved For Construction*
Drawn	VB	21/07/14	
Dsg Verifier			
Dwg Check			Date

* Refer to Revision 1 for Original Signature

NZ TRANSPORT AGENCY WAKA KOTAHI

MacKays to Peka Peka Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY RP 1012/0.00 TO 1023/5.00

Title: SSMP 4 [410-420] - SHEET 5 BRIDGE MASTERPLAN

Drawing No.: M2PP-121-D-DWG-8302

Rev.: C

Document No.

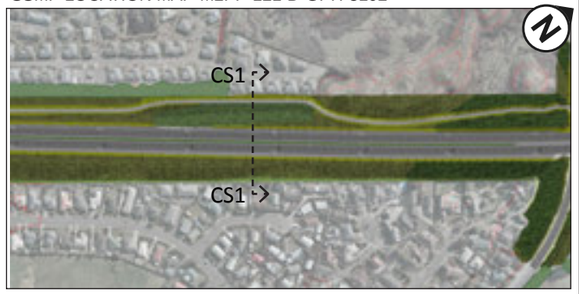
DETAIL DESIGN (DET)

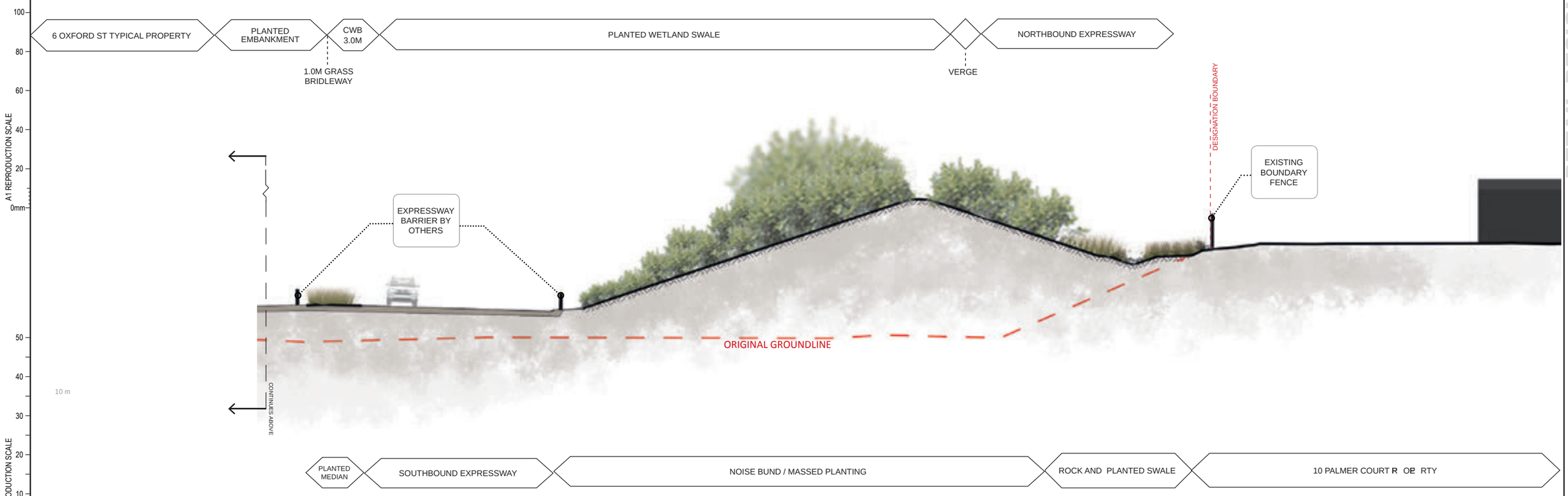
Drawing Plotted:

CS1 - CROSS SECTION THROUGH CH 7580

FACING NORTH - SCALE - 1:250@A3

SSMP LOCATION MAP-M2PP-121-D-GPH-8102





No.	Revision	By	Chk	Chk.V	Appd	Date
C	CERTIFIED ISSUE - REV C	VB			DC	21.07/14

Original Scale (A1) AS SHOWN	Design	SD	21/07/14	Approved For Construction*
	Drawn	VB	21/07/14	
Reduced Scale (A3) AS SHOWN	Dsg Verifier			
	Dwg Check			Date
	* Refer to Revision 1 for Original Signature			

NZ TRANSPORT AGENCY WAKA KOTAHI

MacKays to Peka Peka
Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY RP 1012/0.00 TO 1023/5.00

Title: SSMP 4[410-420] - SHEET 6 SECTION

Drawing No: M2PP-121-D-DWG-8501

Rev. C

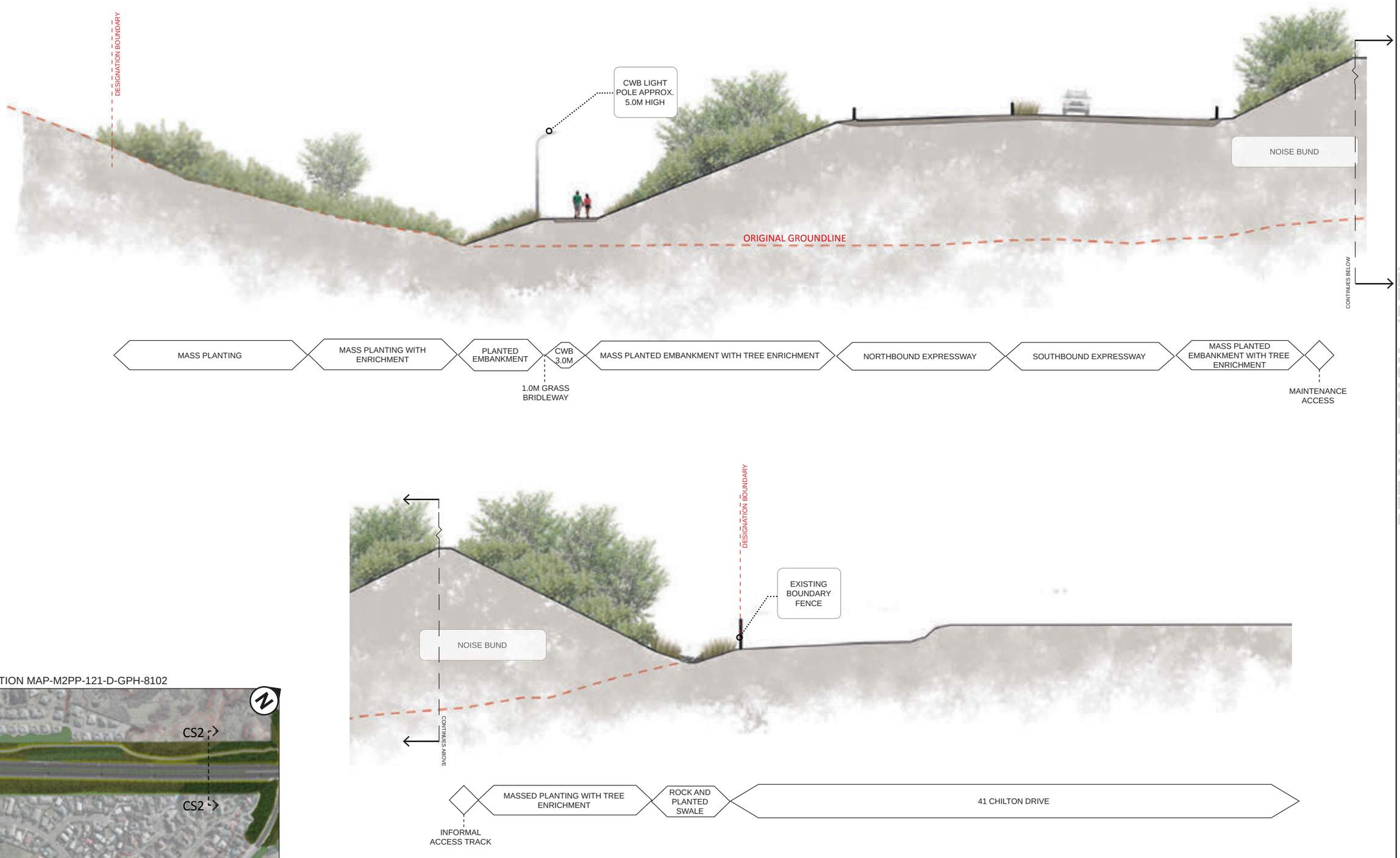
Document No.

DETAIL DESIGN (DET)

Drawing Plotted:

CS2 - CROSS SECTION THROUGH CH 7800

FACING NORTH - SCALE - 1:250@A3



A1 REPRODUCTION SCALE
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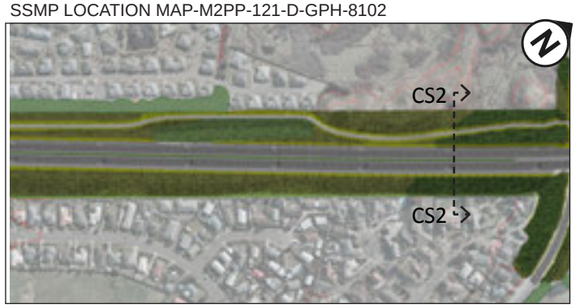
A3 REPRODUCTION SCALE
50 40 30 20 10 0mm

SSMP LOCATION MAP-M2PP-121-D-GPH-8102



No.	Revision	By	Chk	Chk.V	Appd	Date
C	CERTIFIED ISSUE - REV C	VB			DC	21.07/14

Original Scale (A1) AS SHOWN Reduced Scale (A3) AS SHOWN	Design	SD	21/07/14
	Drawn	VB	21/07/14
	Dsg Verifier		
	Dwg Check		

Approved For Construction* Date

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NZ TRANSPORT AGENCY WAKA KOTAHI

MacKays to Peka Peka Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY RP 1012/0.00 TO 1023/5.00

Title: SSMP 4[410-420] - SHEET 7 SECTION

Drawing No: M2PP-121-D-DWG-8502

Rev. C

Document No.

DETAIL DESIGN (DET)

Drawing Plotted:

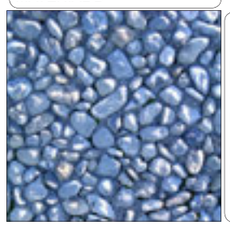
CS3 - CROSS SECTIONAL ELEVATION- MAZENGARB BRIDGE

FACING WEST SCALE - 1:200@A3

MATERIAL A

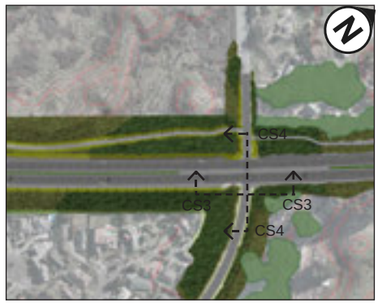
BRIDGE BARRIER: PRECAST CONCRETE WITH 2 COATS WHITE KIEM COATING & ANTI GRAFFITI PROTECTION- PENDING SAMPLE PANEL APPROVAL

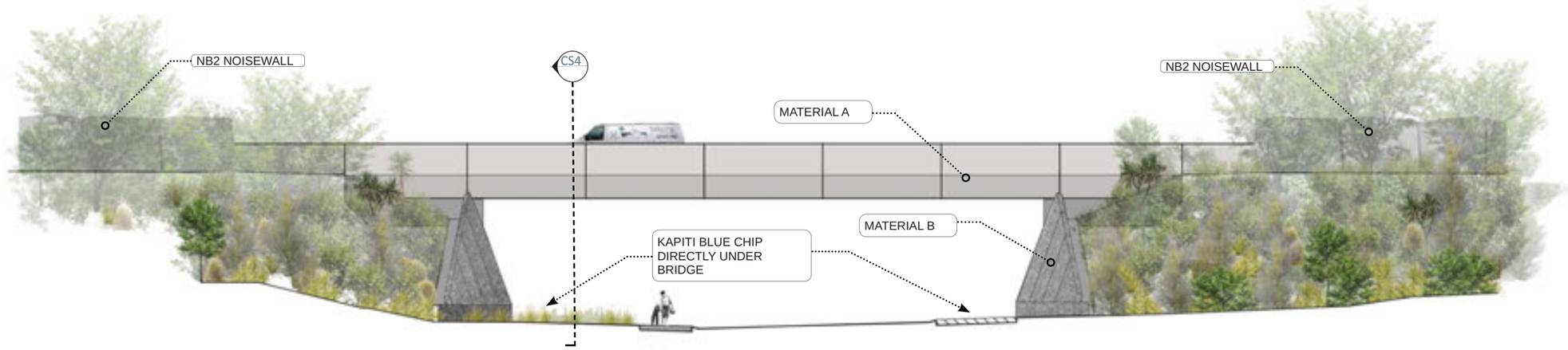
MATERIAL B



BRIDGE ABUTMENT: PRECAST CONCRETE PANEL WITH INLAID OTAKI PEB 40MM STONE AND MATT GRAFFITI PROTECTION- PENDING SAMPLE PANEL APPROVAL

SITE CONTEXT PLAN-M2PP-121-D-GPH-8301





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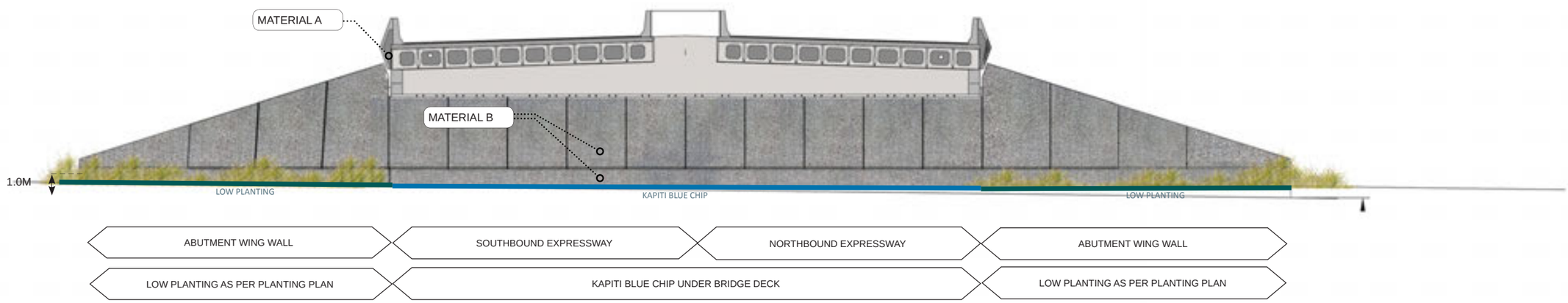
CS4-CROSS SECTIONAL ELEVATION-ABUTMENT

FACING SOUTH SCALE - 1:200@A3



A3 REPRODUCTION SCALE
50 40 30 20 10 0mm

No.	Revision	By	Chk	Chk.V	Appd	Date
C	CERTIFIED ISSUE - REV C	VB			DC	21.07/14

Original Scale (A1) AS SHOWN Reduced Scale (A3) AS SHOWN

Design	SD	21/07/14	Approved For Construction*
Drawn	VB	21/07/14	
Dsg Verifier			
Dwg Check			Date

* Refer to Revision 1 for Original Signature

NZ TRANSPORT AGENCY WAKA KOTAHI

MacKays to Peka Peka Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY RP 1012/0.00 TO 1023/5.00

Title: SSMP 4[410-420] - SHEET 8 BRIDGE ELEVATIONS

Drawing No: M2PP-121-D-DWG-8402

Rev. C

Document No.

DETAIL DESIGN (DET)

Drawing Plotted:

VISUALISATION CONTEXT

100
80
60
40
20
0mm

A1 REPRODUCTION SCALE

VISUALISATION - MAZENGARB ROAD BRIDGE (WEST SIDE OF BRIDGE LOOKING EAST FROM MAZENGARB ROAD

NOTE: GABIONS MARK LOCATION OF ACCESS TO CWB

50
40
30
20
10
0mm

A3 REPRODUCTION SCALE

No.	Revision	By	Chk	Chk.V	Appd	Date
C	CERTIFIED ISSUE - REV C	VB			DC	21.07/14

Original Scale (A1) A3 SHOWN	Design	SD	21/07/14	Approved For Construction*
Reduced Scale (A3) A3 SHOWN	Drawn	VB	21/07/14	
	Dsg Verifier			
	Dwg Check			Date
	* Refer to Revision 1 for Original Signature			

NZ TRANSPORT AGENCY WAKA KOTAHI

MacKays to Peka Peka
Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY
RP 1012/0.00 TO 1023/5.00

Title: SSMP 4[410-420] - SHEET 9 MAZENGARB ROAD

Drawing No: M2PP-121-D-DWG-8801

Rev. C

Document No.

DETAIL DESIGN (DET)

Drawing Plotted:

PLAN OF NOISE WALL AND GABION WALL LOCATIONS

- NB1- TL4, F-SHAPE BARRIER
- NB2A- 2.0M HIGH, CONCRETE NOISE BARRIER, BACKFILLED ON OUTSIDE TO 1M ABOVE CARRIAGEWAY LEVEL
- NB2-2.0M HIGH, CONCRETE NOISE BARRIER, BESIDE EXPRESSWAY
- NB2A- 2.0M HIGH, CONCRETE, NOISE BARRIER, BESIDE EXPRESSWAY BACKFILLED ON OUTSIDE TO 1.0M ABOVE CARRIAGEWAY LEVEL
- NB3- 2.5M HIGH CONCRETE NOISE BARRIER BESIDE EXPRESSWAY
- NB4- 3.0M HIGH CONCRETE NOISE BARRIER BESIDE EXPRESSWAY
- NB5- 2.0M HIGH CONCRETE NOISE BARRIER AWAY FROM EXPRESSWAY
- NB6- 3M HIGH CONCRETE NOISE BARRIER AWAY FROM EXPRESSWAY
- NB7- 2.0M HIGH TIMBER PROPERTY NOISE FENCE
- EARTH NOISE BUND (TOP) HEIGHT VARIES

SSMP 3 SECTOR 380

KAPITI - METLIFECARE RETIREMENT VILLAGE

NORTH BOUND

SOUTH BOUND

DESIGNATION LINE

SPACKMAN CRES

MAKARINI ST

LINWOOD DRIVE RECREATIONAL RESERVE

A1 REPRODUCTION SCALE
100 80 60 40 20 0mm

A3 REPRODUCTION SCALE
50 40 30 20 10 0mm

DETAIL DESIGN (DET)

No.	Revision	By	Chk	Chk'd	Appd	Date
C	CERTIFIED ISSUE - REV C	VB			DC	21/07/14

Original Scale (A1) 1:1000	Design	SD	21/07/14	Approved For Construction*
	Drawn	VB	21/07/14	
Reduced Scale (A3) 1:2000	Dwg Verifier			
	Dwg Check			Date
	* Refer to Revision 1 for Original Signature			

NZ TRANSPORT AGENCY WAKA KOTAHI

MacKays to Peka Peka
Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY RP 1012/0.00 TO 1023/5.00

Title: SSMP4 - SHEET 10 NOISE WALL LOCATIONS

Drawing No: M2PP-121-D-DWG-8601

Rev. C

Document No.

Drawing Plotted:

PLAN OF NOISE WALL AND GABION WALL LOCATIONS

- NB1- TL4, F-SHAPE BARRIER
- NB2A- 2.0M HIGH, CONCRETE NOISE BARRIER, BACKFILLED ON OUTSIDE TO 1M ABOVE CARRIAGEWAY LEVEL
- NB2-2.0M HIGH, CONCRETE NOISE BARRIER, BESIDE EXPRESSWAY
- NB2A- 2.0M HIGH, CONCRETE, NOISE BARRIER, BESIDE EXPRESSWAY BACKFILLED ON OUTSIDE TO 1.0M ABOVE CARRIAGEWAY LEVEL
- NB3- 2.5M HIGH CONCRETE NOISE BARRIER BESIDE EXPRESSWAY
- NB4- 3.0M HIGH CONCRETE NOISE BARRIER BESIDE EXPRESSWAY
- NB5- 2.0M HIGH CONCRETE NOISE BARRIER AWAY FROM EXPRESSWAY
- NB6- 3M HIGH CONCRETE NOISE BARRIER AWAY FROM EXPRESSWAY
- NB7- 2.0M HIGH TIMBER PROPERTY NOISE FENCE
- EARTH NOISE BUND (TOP) HEIGHT VARIES

CROWN HILL
SOVEREIGN WAY
THE MEADOWS NEW LIFE CHURCH
SSMP5 SECTOR 430
OXFORD CT
M2PP PROPOSED ALIGNMENT
NORTH BOUND
SOUTH BOUND
CHAIN LINK FENCE SECURITY FENCE
NOISE FENCE RETERNS TO EXISTING FENCELINE
MAZENGARB ROAD
PALMER CR
MAKARINI ST
ST JAMES CR
CHILTON DR
CHAIN LINK FENCE SECURITY FENCE

A1 REPRODUCTION SCALE: 100 80 60 40 20 0mm
A3 REPRODUCTION SCALE: 50 40 30 20 10 0mm

DETAIL DESIGN (DET)

No.	Revision	By	Chk	Chk.V	Appd	Date
D	NOISE FENCE ALIGNMENT ADJUSTED SLIGHTLY					14/04/16
C	CERTIFIED ISSUE - REV C	VB			DC	21/07/14

Original Scale (A1) 1:1000	Design	SD	21/07/14
	Drawn	VB	21/07/14
Reduced Scale (A3) 1:2000	Dsg Verifier		
	Dwg Check		

Approved For Construction* Date

* Refer to Revision 1 for Original Signature

NZ TRANSPORT AGENCY WAKA KOTAHI

MacKays to Peka Peka
Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY
RP 1012/0.00 TO 1023/5.00

Title: SSMP4 - SHEET 11
NOISE WALL LOCATIONS

Drawing No: M2PP-121-D-DWG-8602

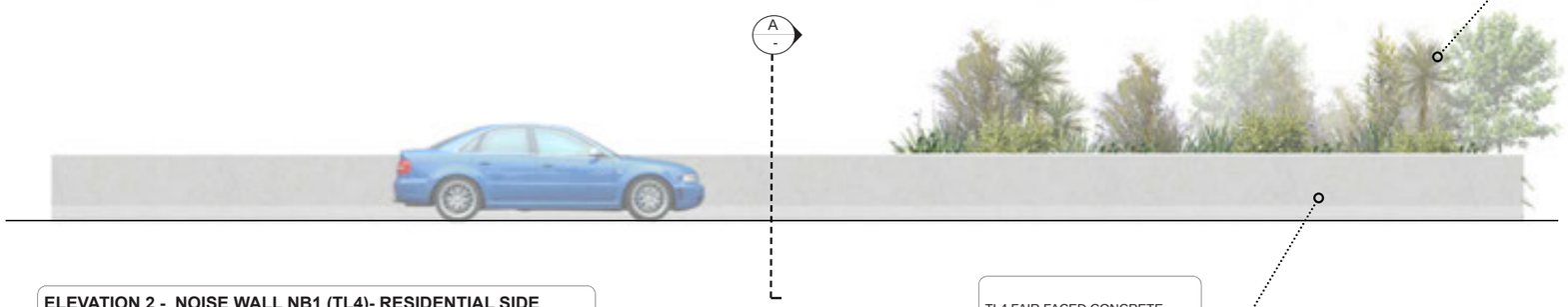
Rev. D

Document No.

DO NOT SCALE IF IN DOUBT ASK.

Drawing Plotted:

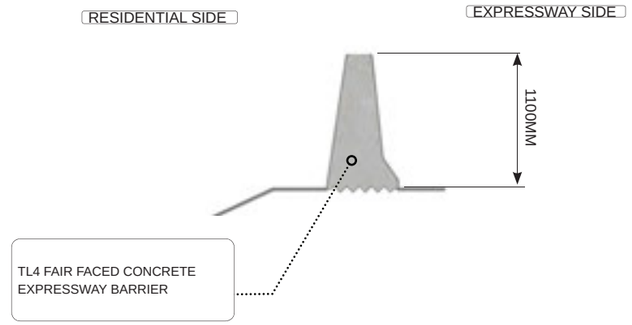
ELEVATION 1 - NOISE WALL NB1(TL4)- EXPRESSWAY SIDE



ELEVATION 2 - NOISE WALL NB1 (TL4)- RESIDENTIAL SIDE

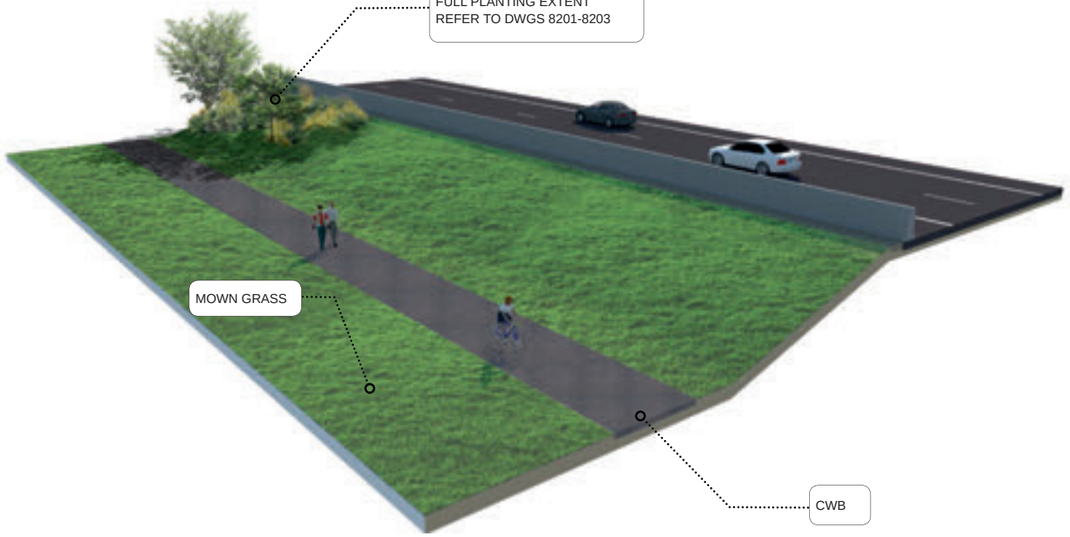
SECTION A - NOISE WALL NB1 (TL4)

SCALE - 1:25@A3



VISUALISATION EXPRESSWAY SIDE

VISUALISATION RESIDENTIAL SIDE



A1 REPRODUCTION SCALE
100
80
60
40
20
0mm

A3 REPRODUCTION SCALE
50
40
30
20
10
0mm

No.	Revision	By	Chk	Chk.V	Appd	Date
B	CERTIFIED ISSUE - REV C	VB			DC	21.07/14

Original Scale (A1) AS SHOWN Reduced Scale (A3) AS SHOWN	Design	SD	21/07/14	Approved For Construction*
	Drawn	VB	21/07/14	
	Dsg Verifier			
	Dwg Check			Date
	* Refer to Revision 1 for Original Signature			

NZ TRANSPORT AGENCY WAKA KOTAHI
MacKays to Peka Peka
Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY
RP 1012/0.00 TO 1023/5.00

Title: SHEET 12
NOISE WALL NB1

Drawing No: M2PP-121-D-DWG-8603

Rev. B

Document No.

DETAIL DESIGN (DET)

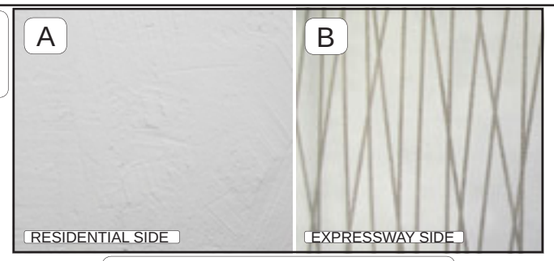
DO NOT SCALE IF IN DOUBT ASK.

Drawing Plotted:

RESIDENTIAL SIDE - MATERIAL TYPE A

EXPRESSWAY SIDE - MATERIAL TYPE B

FAIR FACED CONCRETE FINISH WITH MATT GRAFFITI GUARD

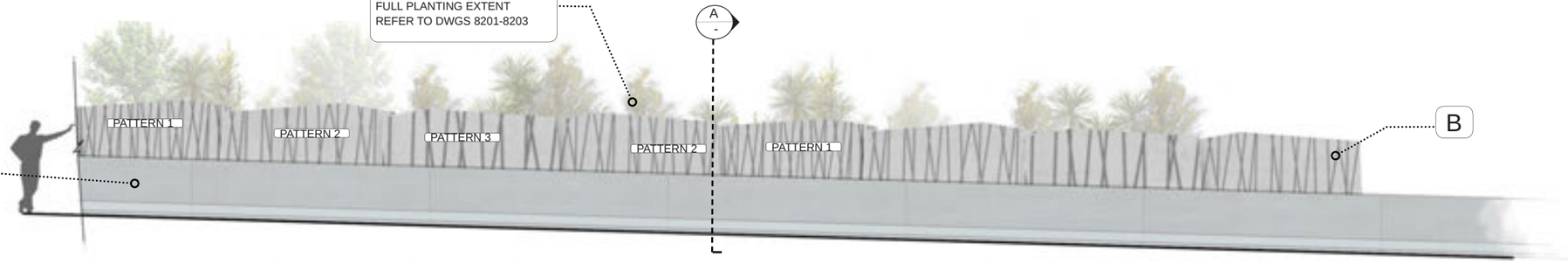


-FA R FACE CONCRE E WITH EXE SED CONCRETE PATTERN.
-CONCRETE PATTERN: RTEX GRAPHIC CONCRETE
-3 PATTERN SIZES:
- PATTERN 1: L
- PATTERN2: IUM
- PATTERN 3: LARGE

MATERIALITY/FINISHES/EXAMPLES

ELEVATION 1 - NOISE WALL NB2 - EXPRESSWAY SIDE

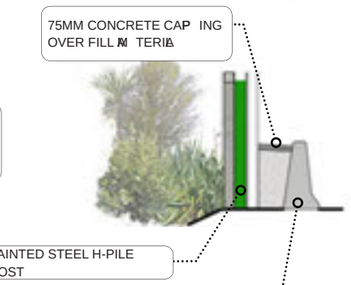
SCALE 1:100 @ A3



ELEVATION 2 - NOISE WALL NB2 - RESIDENTIAL SIDE

SCALE 1:100 @ A3

SECTION A - NOISE WALL NB2 - 2M



VISUALISATION-EXPRESSWAY SIDE

VISUALISATION-RESIDENTIAL SIDE

A1 REPRODUCTION SCALE
100 80 60 40 20 0mm

A3 REPRODUCTION SCALE
50 40 30 20 10 0mm

No.	Revision	By	Chk	Chk.V	Appd	Date
C	CERTIFIED ISSUE - REV C	VB			DC	21.07/14

Original Scale (A1) AS SHOWN Reduced Scale (A3) AS SHOWN	Design	SD	21/07/14	Approved For Construction* Date
	Drawn	VB	21/07/14	
	Dsg Verifier			
	Dwg Check			
* Refer to Revision 1 for Original Signature				

NZ TRANSPORT AGENCY WAKA KOTAHI

MacKays to Peka Peka
Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY RP 1012/0.00 TO 1023/5.00

Title: SHEET 13 **NOISE WALL NB2 - 2M**

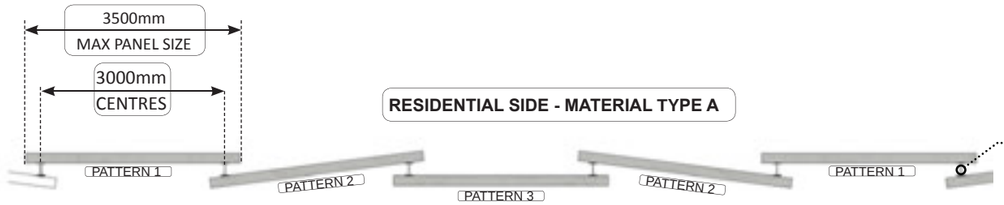
Drawing No: M2PP-121-D-DWG-8604

Rev. C

Document No.

DETAIL DESIGN (DET)

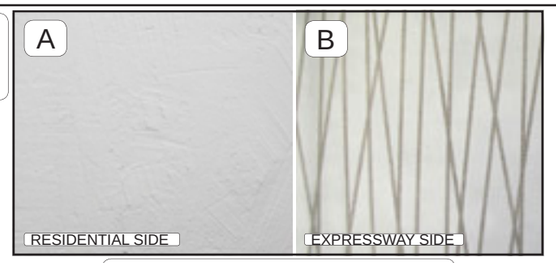
Drawing Plotted:



RESIDENTIAL SIDE - MATERIAL TYPE A

EXPRESSWAY SIDE - MATERIAL TYPE B

FAIR FACED CONCRETE FINISH WITH MATT GRAFFITI GUARD

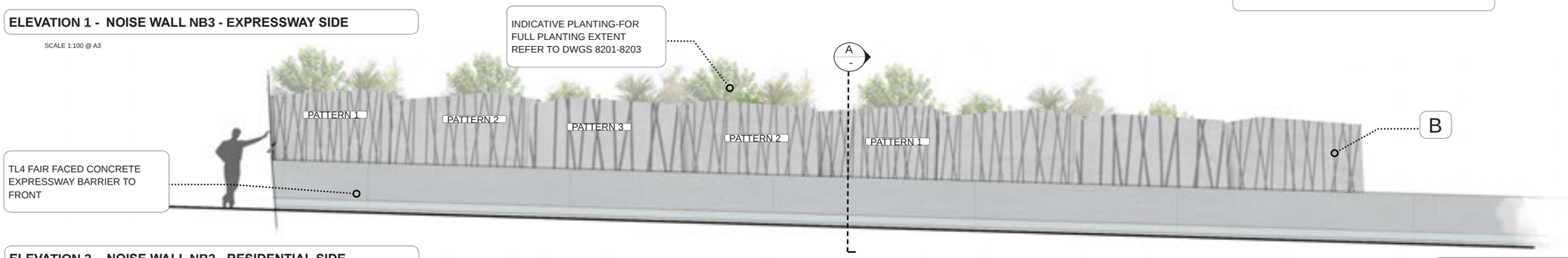


-FAIR FACED CONCRETE WITH ERODED CONCRETE PATTERN.
-CONCRETE PATTERN: VERTEX BY GRAPHIC CONCRETE
-3 PATTERN SIZES:
- PATTERN 1: SMALL
- PATTERN2: MEDIUM
- PATTERN 3: LARGE

MATERIALITY/FINISHES/EXAMPLES

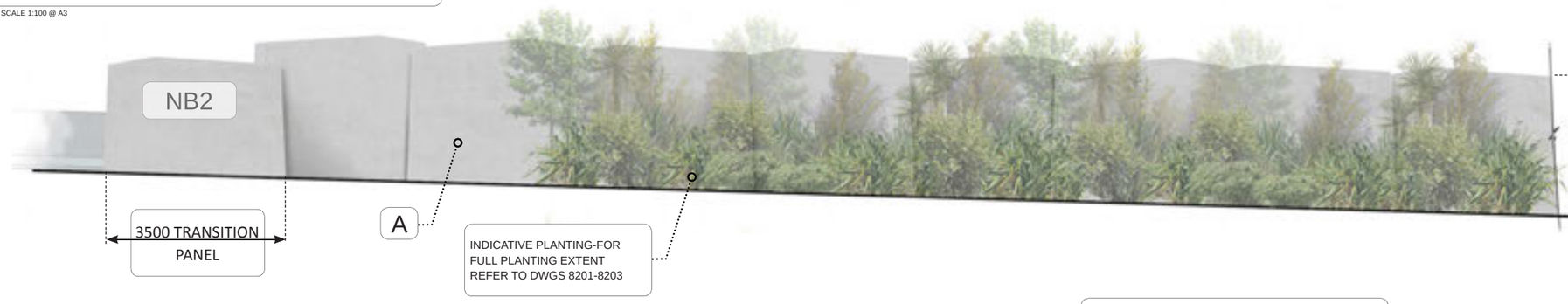
ELEVATION 1 - NOISE WALL NB3 - EXPRESSWAY SIDE

SCALE 1:100 @ A3

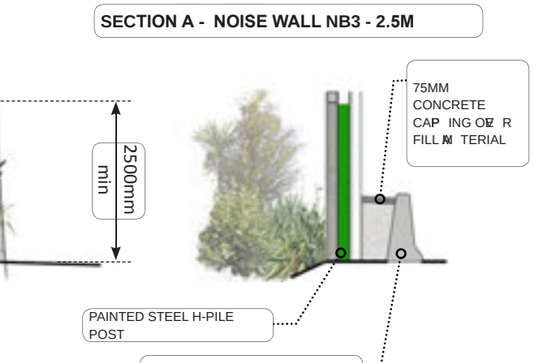


ELEVATION 2 - NOISE WALL NB3 - RESIDENTIAL SIDE

SCALE 1:100 @ A3



SECTION A - NOISE WALL NB3 - 2.5M



VISUALISATION-EXPRESSWAY SIDE

VISUALISATION-RESIDENTIAL SIDE

A1 REPRODUCTION SCALE
100
80
60
40
20
0mm

A3 REPRODUCTION SCALE
50
40
30
20
10
0mm

No.	Revision	By	Chk	Chk.V	Appd	Date
C	CERTIFIED ISSUE - REV C	VB			DC	21.07/14

Original Scale (A1) AS SHOWN Reduced Scale (A3) AS SHOWN	Design	SD	21/07/14	Approved For Construction*
	Drawn	VB	21/07/14	
	Dsg Verifier			
	Dwg Check			Date
	* Refer to Revision 1 for Original Signature			

NZ TRANSPORT AGENCY WAKA KOTAHI

MacKays to Peka Peka Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY RP 1012/0.00 TO 1023/5.00

Title: SHEET 14 **NOISE WALL NB3-2.5M HIGH**

Drawing No: M2PP-121-D-DWG-8605

Rev. C

Document No.

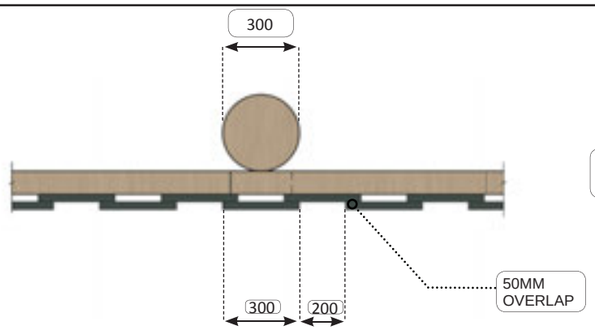
DETAIL DESIGN (DET)

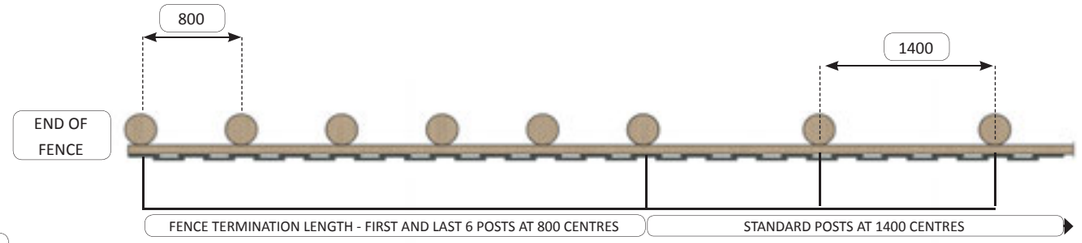
Drawing Plotted:

NB7 - DRIVEN POSTS

NB7 DRIVEN POSTS:

- DEPTH IN TO SAND 2000MM
- DEPTH INTO PEAT 3000MM
- POLES TO BE H5 TREATED
- FIRST AND LAST 6 POSTS FROM END OF FENCE TO BE AT 800MM CENTRES
- ALL POSTS IN BETWEEN TO BE AT 1400 CENTRES
- PALINGS 100MM IN TO GROUND

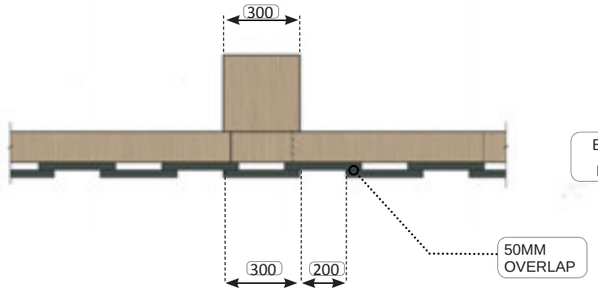


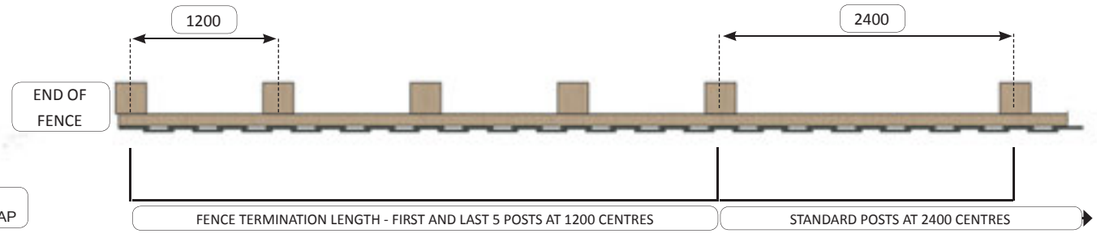


NB7 - BORED POSTS

NB7 BORED POSTS:

- DEPTH IN TO SAND 2000MM
- DEPTH INTO PEAT 3000MM
- POLES TO BE H5 TREATED
- FIRST AND LAST 5 POSTS FROM END OF FENCE TO BE AT1200MM CENTRES
- ALL POSTS IN BETWEEN TO BE AT 2400 CENTRES
- PALINGS 100MM IN TO GROUND

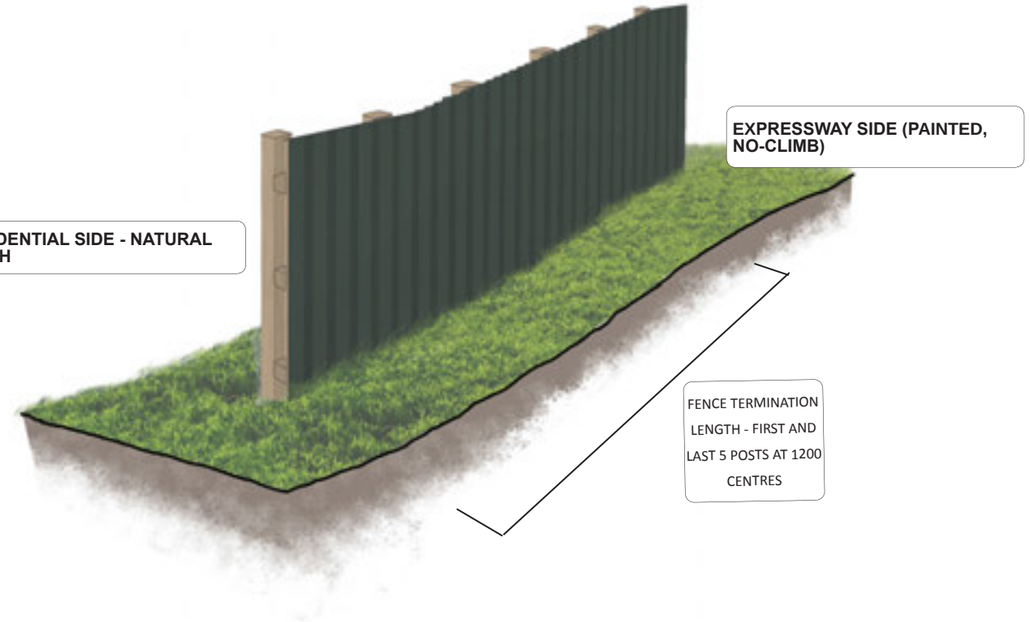




NB7 - TYPICAL ELEVATION - EXPRESSWAY SIDE

NOT TO SCALE

NB7 - TYPICAL PERSPECTIVE - EXPRESSWAY SIDE (BORED POSTS)



NB7 TIMBER NOISE FENCE:

- 2.0M HIGH
- OVERLAPPING TIMBER PALINGS
- NO-CLIMB SIDE FACING EXPRESSWAY
- NZTA APPROVED STAIN - DARK GREEN / GREY
- 30 YEAR DESIGN LIFE

COLOUR:

WOODSMAN WATERBORNE RESENE DATA SHEET D57A

No.	Revision	By	Chk	Chk.V	Appd	Date
C	CERTIFIED ISSUE - REV C	VB			DC	21.07/14

Original Scale (A1) AS SHOWN Reduced Scale (A3) AS SHOWN	Design	SD	21/07/14	Approved For Construction* Date
	Drawn	VB	21/07/14	
	Dsg Verifier			
	Dwg Check			
	* Refer to Revision 1 for Original Signature			

NZ TRANSPORT AGENCY WAKA KOTAHI

MacKays to Peka Peka Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY RP 1012/0.00 TO 1023/5.00

Title: SHEET 15 **NOISE WALL NB7-2.0M HIGH TIMBER PROPERTY BOUNDARY NOISE FENCE**

Drawing No: M2PP-121-D-DWG-8606

Rev. C

Document No.

DETAIL DESIGN (DET)

A1 REPRODUCTION SCALE 100 80 60 40 20 0mm

A3 REPRODUCTION SCALE 50 40 30 20 10 0mm

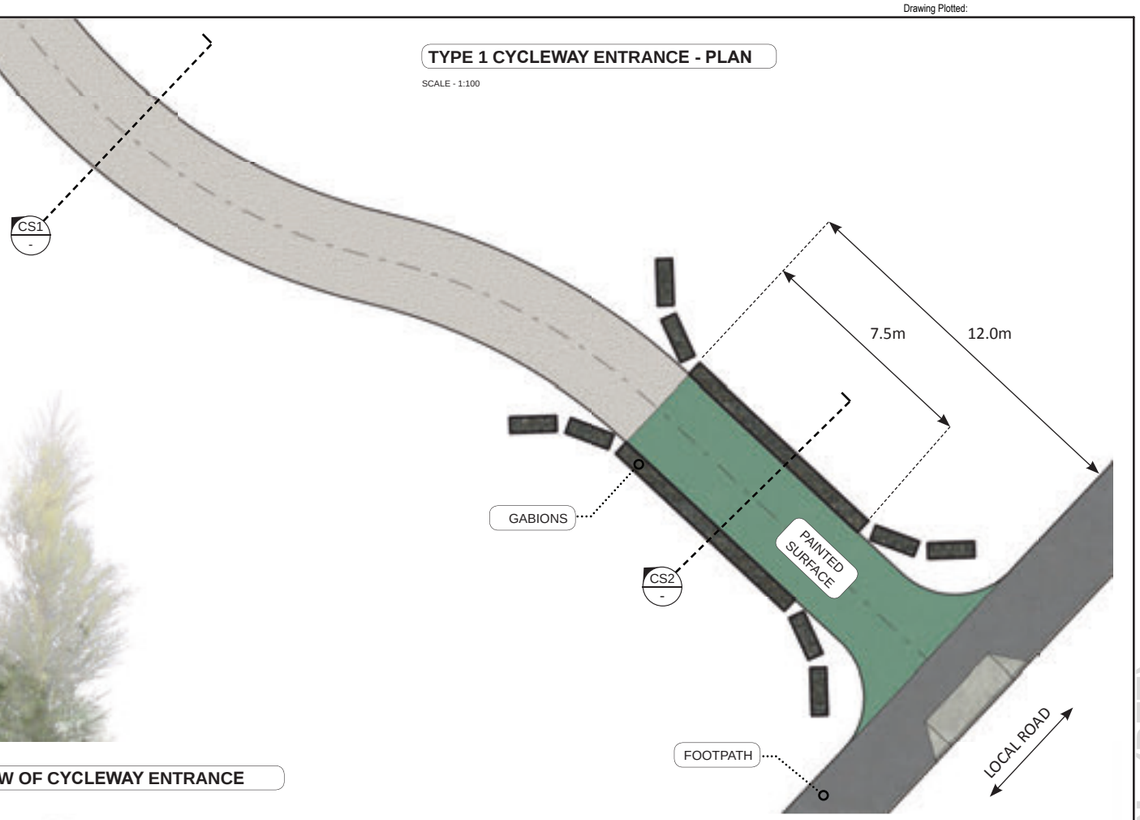
Drawing Plotted:

CS1 - TYPICAL CYCLEWAY SECTION

SCALE - 1:50

TYPE 1 CYCLEWAY ENTRANCE - PLAN

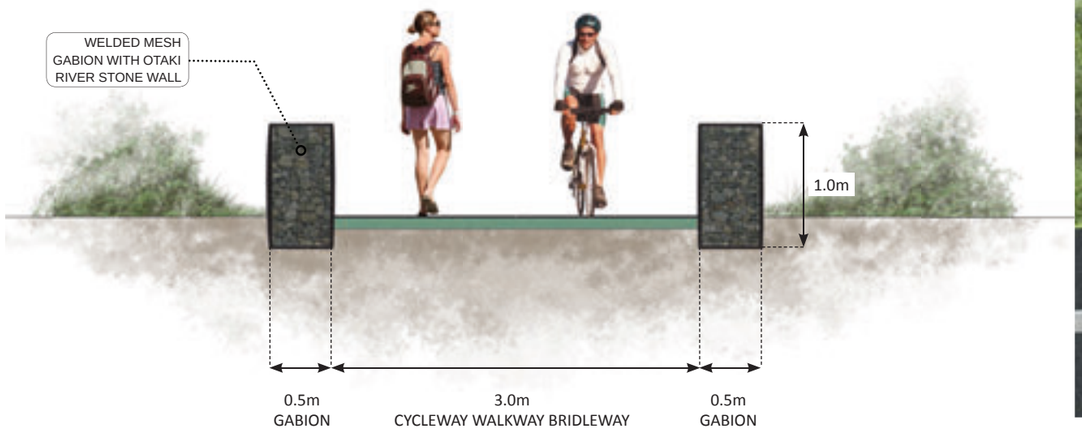
SCALE - 1:100



GROUND LEVEL VIEW OF CYCLEWAY ENTRANCE

CS2 - TYPE 1 CYCLEWAY ENTRANCE

SCALE - 1:50



A1 REPRODUCTION SCALE
100 80 60 40 20 0mm

A3 REPRODUCTION SCALE
50 40 30 20 10 0mm

No.	Revision	By	Chk	Chk.V	Appd	Date
C	CERTIFIED ISSUE - REV C	VB			DC	21.07/14

Original Scale (A1) AS SHOWN Reduced Scale (A3) AS SHOWN	Design	SD	21/07/14	Approved For Construction*
	Drawn	VB	21/07/14	
	Dsg Verifier			
	Dwg Check			Date
	* Refer to Revision 1 for Original Signature			

NZ TRANSPORT AGENCY WAKA KOTAHI

MacKays to Peka Peka
Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY RP 1012/0.00 TO 1023/5.00

Title: SHEET 16 **CWB INTERSECTIONS**

Drawing No: M2PP-121-D-DWG-8801

Rev. C

Document No.

DETAIL DESIGN

Drawing Plotted:

PLAN OF LIGHTING LOCATIONS

P-CYCLEWAY LIGHTING

D-ROAD LIGHTING

G-ROAD LIGHTING

U-UNDER BRIDGE LIGHTING

Z-ROAD LIGHTING

NOTE: INDICATIVE LIGHTING FROM TOC DESIGN - POLE HEIGHTS AND SPACING BY OTHERS

A1 REPRODUCTION SCALE
100 80 60 40 20 0mm

A3 REPRODUCTION SCALE
50 40 30 20 10 0mm

No.	Revision	By	Chk	Chk.V	Appd	Date
C	CERTIFIED ISSUE - REV C	VB			DC	21/07/14

Original Scale (A1) 1:250 Reduced Scale (A3) 1:500	Design	SD	21/07/14	Approved For Construction*
	Drawn	VB	21/07/14	
	Dsg Verifier			
	Dwg Check			Date
	* Refer to Revision 1 for Original Signature			

NZ TRANSPORT AGENCY WAKA KOTAHI

MacKays to Peka Peka Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY RP 1012/0.00 TO 1023/5.00

Title: SHEET 17 LIGHTING PLAN

Drawing No: M2PP-121-D-DWG-8701

Rev. C

DETAIL DESIGN

Document No.

Drawing Plotted:

PLAN OF LIGHTING LOCATIONS

P-CYCLEWAY LIGHTING

D-ROAD LIGHTING

G-ROAD LIGHTING

U-UNDER BRIDGE LIGHTING

Z-ROAD LIGHTING

NOTE: INDICATIVE LIGHTING FROM TOC DESIGN - POLE HEIGHTS AND SPACING BY OTHERS

A1 REPRODUCTION SCALE
100 80 60 40 20 0mm

A3 REPRODUCTION SCALE
50 40 30 20 10 0mm

DETAIL DESIGN (DET)

No.	Revision	By	Chk	Chk.V	Appd	Date
C	CERTIFIED ISSUE - REV C	VB			DC	21/07/14

Original Scale (A1) 1:250 Reduced Scale (A3) 1:500	Design	SD	21/07/14	Approved For Construction* Date
	Drawn	VB	21/07/14	
	Dsg Verifier			
	Dwg Check			
	* Refer to Revision 1 for Original Signature			

NZ TRANSPORT AGENCY WAKA KOTAHI

MacKays to Peka Peka
Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY RP 1012/0.00 TO 1023/5.00

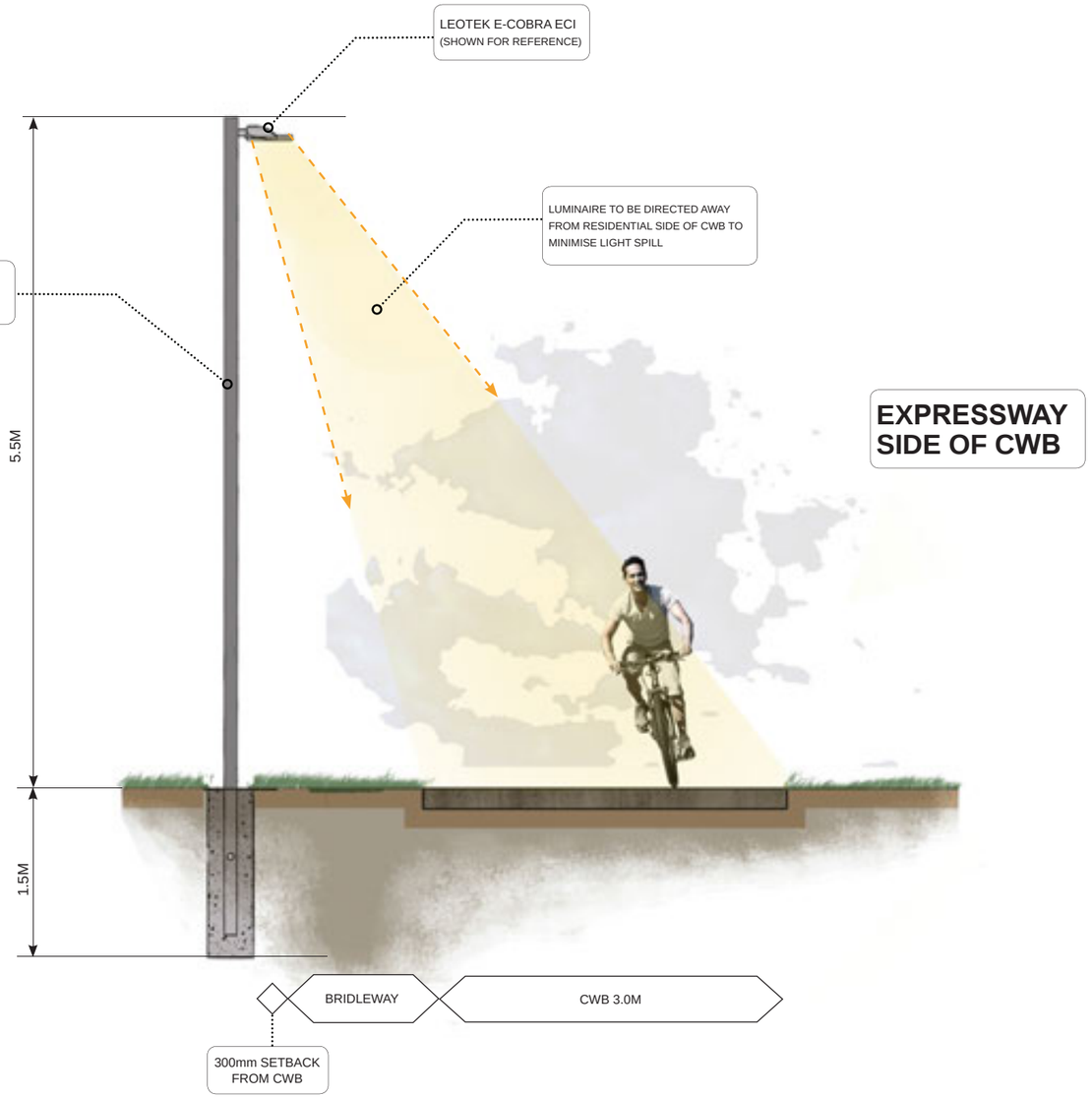
Title: SHEET 18 LIGHTING PLAN

Drawing No: M2PP-121-D-DWG-8702

Rev. C

Document No.

Drawing Plotted:



POLE HEIGHT	POLE SPACING	EXTRAPOLATED PROJECT QUANTITY
4.5M	26M	135
5.0M	28M	126
5.5M	30M	117
6.0M	31M	114
6.5M	32M	110

OPTIMUM POLE SPACING - COLUMN HEIGHT RATIO WITH SUGGESTED LUMINAIRE (LEOTEK E-COBRA ECI)

A1 REPRODUCTION SCALE
100 80 60 40 20 0mm

A3 REPRODUCTION SCALE
50 40 30 20 10 0mm

No.	Revision	By	Chk	Chk.V	Appd	Date
C	CERTIFIED ISSUE - REV C	VB			DC	21.07/14

Original Scale (A1) AS SHOWN Reduced Scale (A3) AS SHOWN

Design	SD	21/07/14	Approved For Construction*
Drawn	VB	21/07/14	
Dsg Verifier			
Dwg Check			Date

* Refer to Revision 1 for Original Signature

NZ TRANSPORT AGENCY WAKA KOTAHI

MacKays to Peka Peka
Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY
RP 1012/0.00 TO 1023/5.00

Title: SHEET 19 - **INDICATIVE LIGHT POLE CONFIGURATION**

Drawing No: M2PP-121-D-DWG-8703

Rev. C

Document No.

DETAIL DESIGN (DET)

Drawing Plotted:

A1 REPRODUCTION SCALE
100
80
60
40
20
0mm

A3 REPRODUCTION SCALE
50
40
30
20
10
0mm

LIGHTING VISUALISATION - MAZENBARG ROAD BRIDGE CROSSING (WEST SIDE OF EXPRESSWAY LOOKING EAST)

No.	Revision	By	Chk	Chk.V	Appd	Date
C	CERTIFIED ISSUE - REV C	VB			DC	21.07/14

Original Scale (A1) AS SHOWN Reduced Scale (A3) AS SHOWN	Design	SD	21/07/14	Approved For Construction* Date
	Drawn	VB	21/07/14	
	Dsg Verifier			
	Dwg Check			
	* Refer to Revision 1 for Original Signature			

NZ TRANSPORT AGENCY WAKA KOTAHI

MacKays to Peka Peka
Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY RP 1012/0.00 TO 1023/5.00

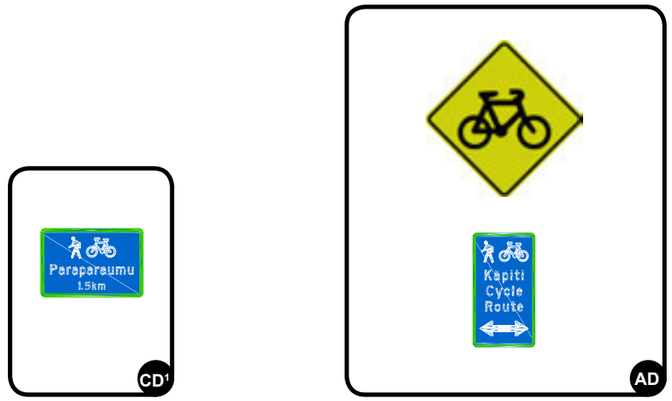
Title: SHEET 20 **INDICATIVE MAZENGARB BRIDGE LIGHTING**

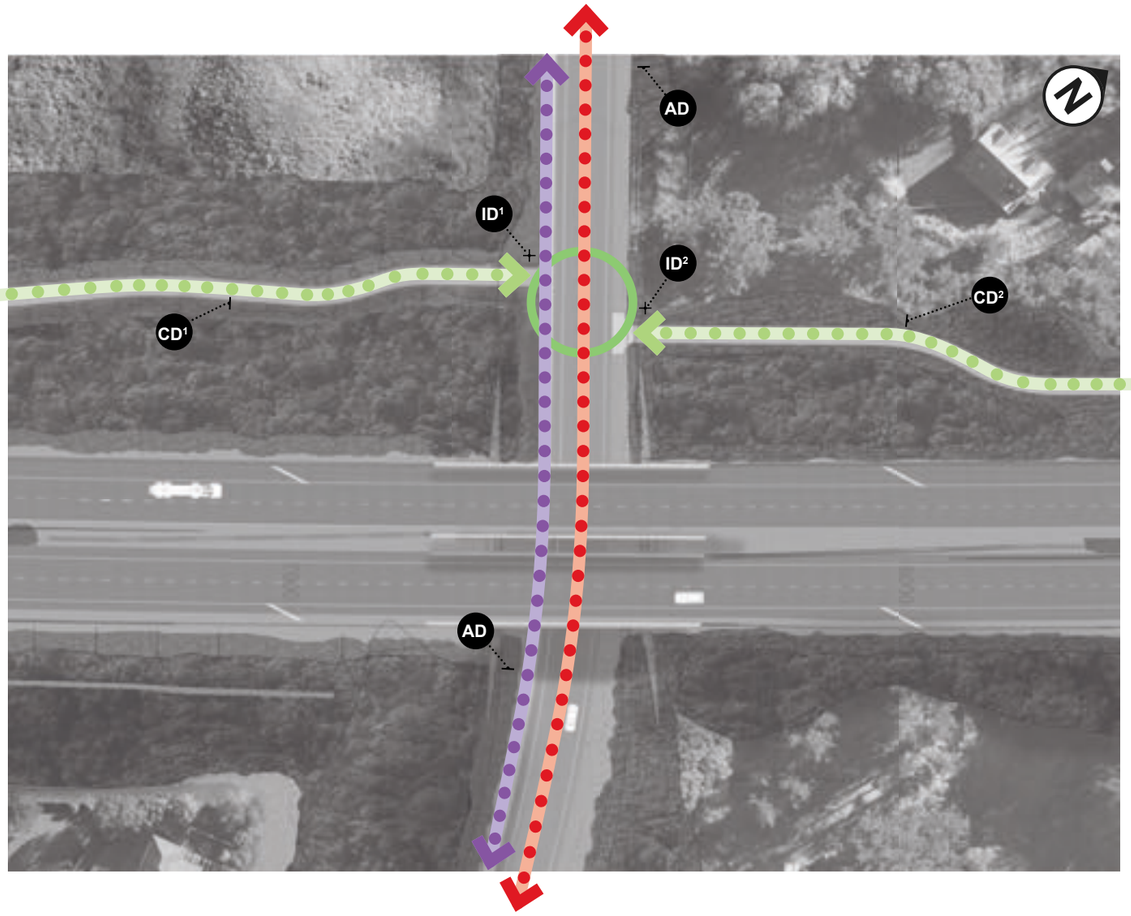
Drawing No: M2PP-121-D-DWG-8703

Rev. C

Document No.

DETAIL DESIGN (DET)





LEGEND

- CYCLWAY WALKWAY BRIDLEWAY
- EXISTING NETWORK
- LOCAL ROAD
- CROSSING POINT

A1 REPRODUCTION SCALE
100 80 60 40 20 0mm

A3 REPRODUCTION SCALE
50 40 30 20 10 0mm

No.	Revision	By	Chk	Chk V	Appd	Date
C	CERTIFIED ISSUE - REV C	VB			DC	21.07/14

Original Scale (A1) A1 SHOWN Reduced Scale (A3) A3 SHOWN	Design	SD	21/07/14	Approved For Construction*
	Drawn	VB	21/07/14	
	Dsg Verifier			
	Dwg Check			Date
	* Refer to Revision 1 for Original Signature			

NZ TRANSPORT AGENCY WAKA KOTAHI

MacKays to Peka Peka
Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY
RP 1012/0.00 TO 1023/5.00

Title: SHEET 21
SIGNAGE LOCATION PLAN

Drawing No: M2PP-121-D-DWG-8902

Rev. C

Document No.

DETAIL DESIGN (DET)

TYPICAL SIGN TYPES:

AI - ADVANCED INFO SIGNS

AT START OF ROUTE.
INCLUDES:
- MAP & INFO
- LENGTH & DURATION OF RIDE / WALK

AI - Advance Information Signs are not an essential requirement for public access tracks or cycle routes, nor are they standardised in terms of their design and layout. These signs may, if desired and appropriate, be installed at or near the start point of the route to provide detailed information, such as a map and information about the length and duration to ride etc. These signs should be clearly visible from the road, allowing cyclists and pedestrians a safe place to stop clear of the roadway or cycleway to read the information.

BE - BEGINNING AND ENDING SIGNS

BE - Begins/Ends Signs are used to indicate the start and/or end point of a cycle route. They will include route specific information. Route Begins Signs should be installed on the left hand side of the CWB immediately beyond or adjacent to any advance information sign or at a logical starting point for the cycle route.

ID - INTERSECTION DIRECTION

ID - The Intersection Direction Sign is located at or as near as possible to the actual intersection. Should include both Information about the destination and the distance.

Multiple sighs and destinations to be on one post

AD01 - ADVANCED DIRECTION SIGN - ON LOCAL ROAD APPROACHING CWB

AD - The purpose of the Advance Direction Sign is to give cyclists prior warning, to enable them to make decisions and, if necessary, place themselves in the best position to make any change in direction required before they reach the intersection. These signs should be used in any situation where the cyclist could easily miss making a required turn at an approaching intersection.

To occur 40-60m in advance of an intersection and should only include Information about the destination, not the distance.

CD - CONFIRMATION DIRECTION

CD - The Confirmation Direction Sign is used to confirm the direction/ destination of travel after an intersection it is intended to provide assurance to cyclists. The CD sign features a straight ahead arrow and should include both Information about the destination and the distance.

As a general rule of thumb, these signs should be installed; between 20-50m beyond an intersection where an Advance Direction Sign has been used and should generally be visible from that intersection;

Cyclists should see a CD sign at least every 15-30 minutes of typical cyclist travel, or every 5-10 km.

AD - ADVANCED DIRECTION - ON CWB

AD - The purpose of the Advance Direction Sign is to give cyclists prior warning, to enable them to make decisions and, if necessary, place themselves in the best position to make any change in direction required before they reach the intersection. These signs should be used in any situation where the cyclist could easily miss making a required turn at an approaching intersection.

To occur 40-60m in advance of an intersection and should only include Information about the destination, not the distance.

LOCAL ROAD INTERSECTION SIGNS

LR + GW - Local road (LR) and Giveway (GW) signs should to be used where the CWB crosses a local road. These are to be located at or as near as possible to the actual intersection. Where possible the LR should be kept to one per intersection and be able to be read by people on either side of the intersection. Both the LR and GW should share the same post and or be incorporateted onto an existing post.

A1 REPRODUCTION SCALE
100 80 60 40 20 0mm

A3 REPRODUCTION SCALE
50 40 30 20 10 0mm

No.	Revision	By	Chk	Chk.V	Appd	Date
D	POST CERTIFICATION AMMENDMENT	MP				01/09/15
C	CERTIFIED ISSUE - REV C	VB			DC	21.07/14

Original Scale (A1) NTS
Reduced Scale (A3) NTS

Design	SD	21/07/14	Approved For Construction*
Drawn	VB	21/07/14	
Dsg Verifier			
Dwg Check			Date

* Refer to Revision 1 for Original Signature

NZ TRANSPORT AGENCY WAKA KOTAHI
MacKays to Peka Peka Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY
RP 1012/0.00 TO 1023/5.00

Title: SHEET 22
CWB SIGN TYPE SUMMARY

Drawing No: M2PP-121-D-DWG-8901

Rev. D

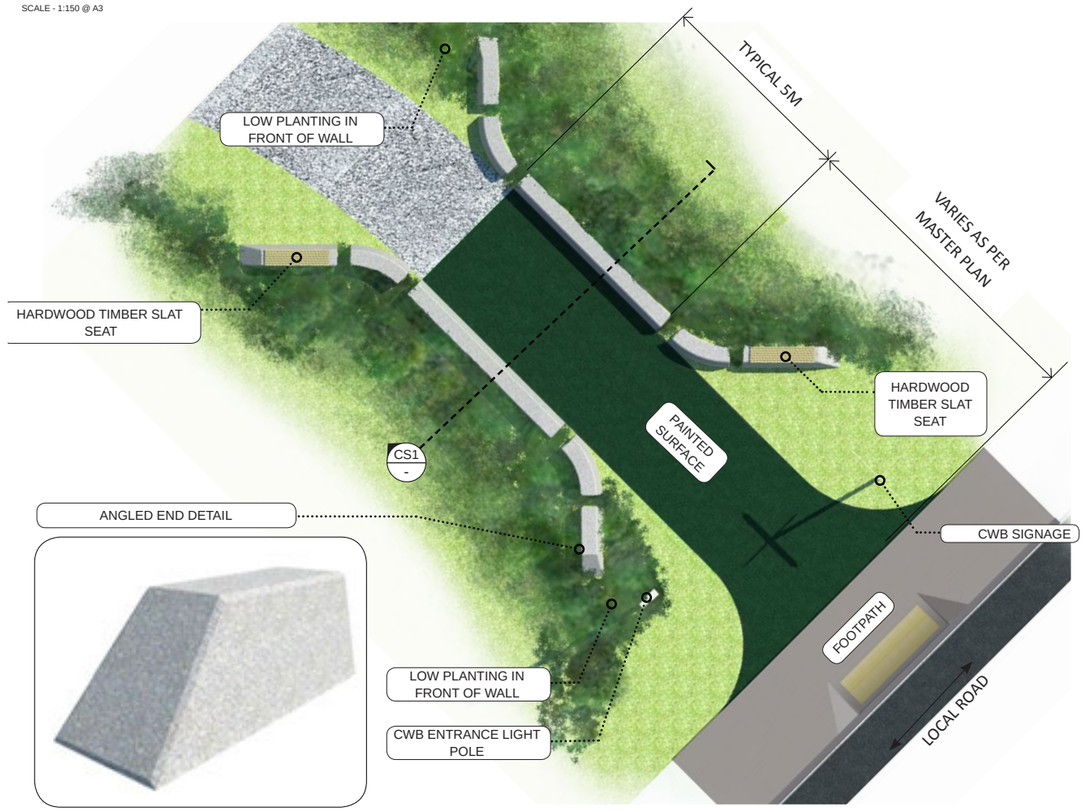
Document No.

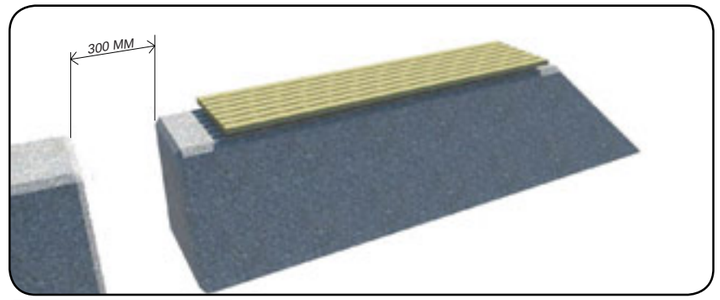
DETAIL DESIGN (DET)

DO NOT SCALE IF IN DOUBT ASK.

CYCLEWAY ENTRANCE TYPE 1 - TYPICAL PLAN

SCALE - 1:150 @ A3





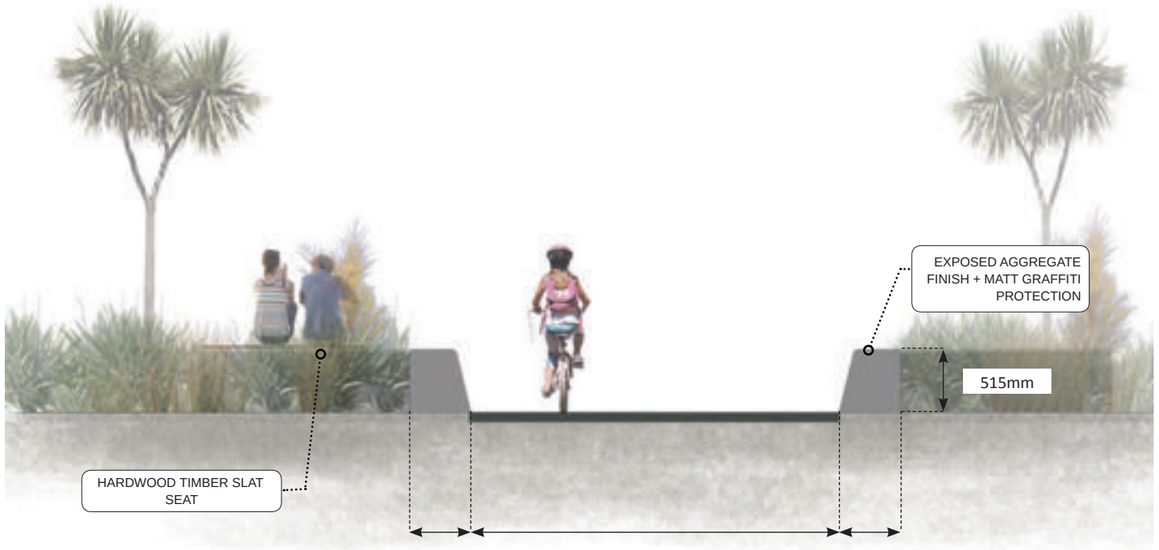
HARDWOOD TIMBER SLAT SEAT

HARDWOOD TIMBER SLAT SEAT EXAMPLE

GROUND LEVEL VIEW OF TYPICAL TYPE 1 CYCLEWAY ENTRANCE

CS1 - CYCLEWAY ENTRANCE TYPE 1 - TYPICAL SECTION

SCALE - 1:50 @ A3



A1 REPRODUCTION SCALE: 100 80 60 40 20 0mm

A3 REPRODUCTION SCALE: 50 40 30 20 10 0mm

No.	Revision	By	Chk	Chk V	Appd	Date
A	POST CERTIFICATION ISSUE	FB				01.09.15

Original Scale (A1)	Design	FB	01.09.15	Approved For Construction*
	Drawn	MP	01.09.15	
Reduced Scale (A3)	Dsg Verifier			
	Dwg Check			Date
	* Refer to Revision 1 for Original Signature			

NZ TRANSPORT AGENCY WAKA KOTAHI

MacKays to Peka Peka Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY RP 1012/0.00 TO 1023/5.00

Title: SSMP 4 [410-420] SHEET 23 - TYPE 1 CWB ENTRANCE DETAIL

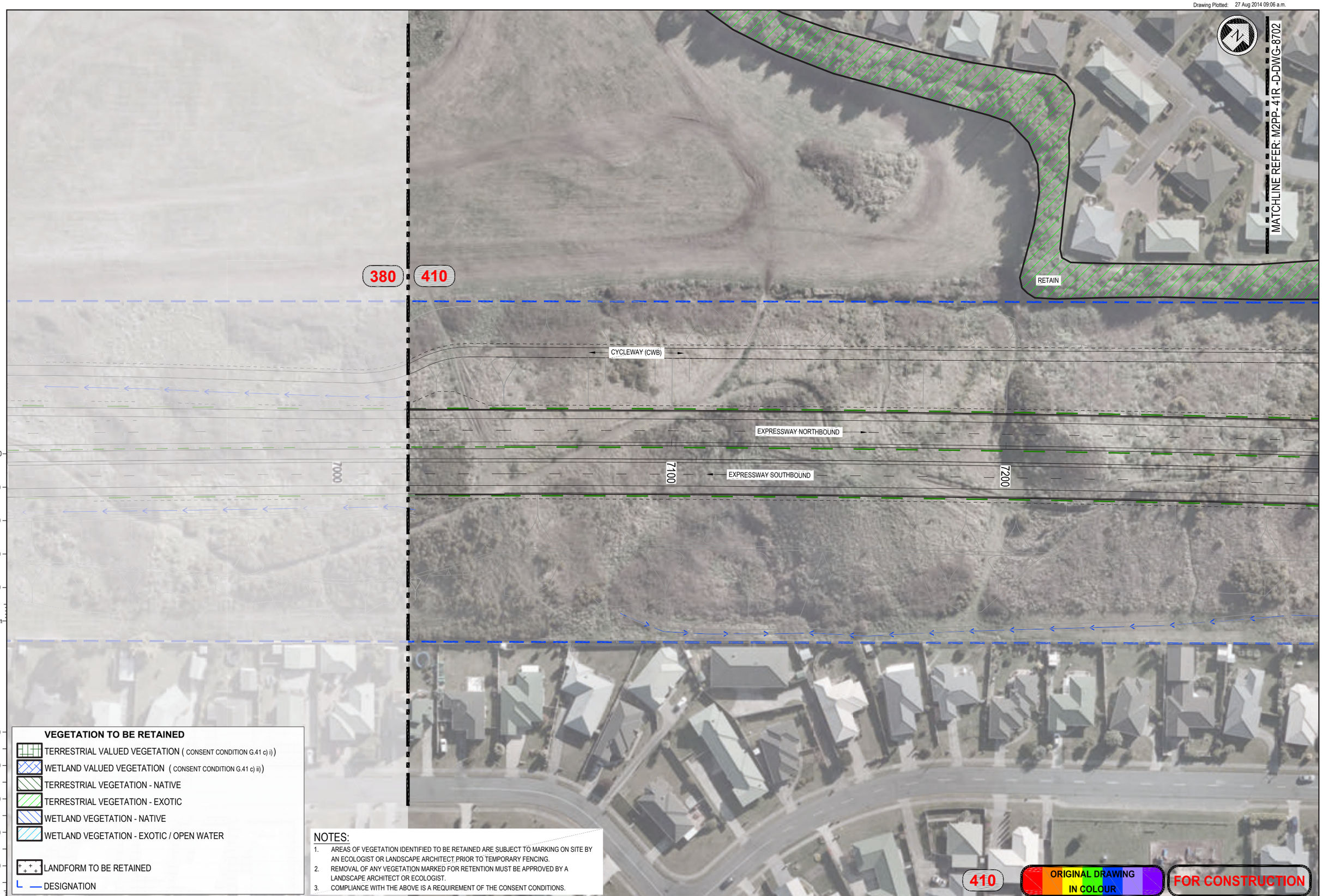
Drawing No: M2PP-121-D-DWG-8802

Rev. A

Document No.

DETAIL DESIGN (DET)

Drawing Plotted: 27 Aug 2014 09:06 a.m.



VEGETATION TO BE RETAINED

- TERRESTRIAL VALUED VEGETATION (CONSENT CONDITION G.41 c) i))
- WETLAND VALUED VEGETATION (CONSENT CONDITION G.41 c) ii))
- TERRESTRIAL VEGETATION - NATIVE
- TERRESTRIAL VEGETATION - EXOTIC
- WETLAND VEGETATION - NATIVE
- WETLAND VEGETATION - EXOTIC / OPEN WATER
- LANDFORM TO BE RETAINED
- DESIGNATION

NOTES:

1. AREAS OF VEGETATION IDENTIFIED TO BE RETAINED ARE SUBJECT TO MARKING ON SITE BY AN ECOLOGIST OR LANDSCAPE ARCHITECT PRIOR TO TEMPORARY FENCING.
2. REMOVAL OF ANY VEGETATION MARKED FOR RETENTION MUST BE APPROVED BY A LANDSCAPE ARCHITECT OR ECOLOGIST.
3. COMPLIANCE WITH THE ABOVE IS A REQUIREMENT OF THE CONSENT CONDITIONS.

410

ORIGINAL DRAWING IN COLOUR

FOR CONSTRUCTION

No.	Revision	By	Chk	Chk.V	Appd	Date
3	FOR CONSTRUCTION	MP	MP	SD	DC	27.08.14
2	FOR KCDC CERTIFICATION	MP	MP	BF	PB	08.07.14
1	FOR CONSTRUCTION - WEED CLEARANCE	MP	GFB	DH	DC	17.03.14

Original Scale (A1) 1:500
Reduced Scale (A3) 1:1000

Design	S. DUNN	24.01.14	Approved For Construction* P. BRADSHAW
Drawn	M. POWELL	24.01.14	
Dsg Verifier	B. FAULKNER	17.03.14	
Dwg Check	G. F-B	17.03.14	Date 19.03.14

* Refer to Revision 1 for Original Signature

NZ TRANSPORT AGENCY WAKA KOTAHI

MacKays to Peka Peka
Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY RP 1012/0.00 TO 1023/5.00

Title: KAPITI RD TO MAZENGARB RD VEGETATION TO BE RETAINED SHEET 1

Drawing No: M2PP-41R-D-DWG-8701

Rev. 3

Document No. M2PP-41R-D-DWG-8701.DWG

Drawing Plotted: 27 Aug 2014 09:07 a.m.

MATCHLINE REFER: M2PP- 41R -D-DWG-8701

MATCHLINE REFER: M2PP- 41R -D-DWG-8703

RETAIN

CYCLEWAY (CWB)

EXPRESSWAY NORTHBOUND

EXPRESSWAY SOUTHBOUND

7300

7400

7500

7600

MAKARINI ST

PALMER CT

A1 REPRODUCTION SCALE

100 80 60 40 20 0mm

A3 REPRODUCTION SCALE

50 40 30 20 10 0mm

VEGETATION TO BE RETAINED

- TERRESTRIAL VALUED VEGETATION (CONSENT CONDITION G.41 c) i))
- WETLAND VALUED VEGETATION (CONSENT CONDITION G.41 c) ii))
- TERRESTRIAL VEGETATION - NATIVE
- TERRESTRIAL VEGETATION - EXOTIC
- WETLAND VEGETATION - NATIVE
- WETLAND VEGETATION - EXOTIC / OPEN WATER
- LANDFORM TO BE RETAINED
- DESIGNATION

NOTES:

1. AREAS OF VEGETATION IDENTIFIED TO BE RETAINED ARE SUBJECT TO MARKING ON SITE BY AN ECOLOGIST OR LANDSCAPE ARCHITECT PRIOR TO TEMPORARY FENCING.
2. REMOVAL OF ANY VEGETATION MARKED FOR RETENTION MUST BE APPROVED BY A LANDSCAPE ARCHITECT OR ECOLOGIST.
3. COMPLIANCE WITH THE ABOVE IS A REQUIREMENT OF THE CONSENT CONDITIONS.

410

ORIGINAL DRAWING IN COLOUR

FOR CONSTRUCTION

No.	Revision	By	Chk	Chk.V	Appd	Date
3	FOR CONSTRUCTION	MP	MP	SD	DC	27.08.14
2	FOR KCDC CERTIFICATION	MP	MP	BF	PB	08.07.14
1	FOR CONSTRUCTION - WEED CLEARANCE	MP	GFB	DH	DC	17.03.14

Original Scale (A1) 1:500
Reduced Scale (A3) 1:1000

Design	S. DUNN	24.01.14	Approved For Construction*
Drawn	M. POWELL	24.01.14	P. BRADSHAW
Dsg Verifier	B. FAULKNER	17.03.14	
Dwg Check	G. F-B	17.03.14	Date 19.03.14

* Refer to Revision 1 for Original Signature

NZ TRANSPORT AGENCY WAKA KOTAHI

MacKays to Peka Peka Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY RP 1012/0.00 TO 1023/5.00

Title: KAPITI RD TO MAZENGARB RD VEGETATION TO BE RETAINED SHEET 2

Drawing No: M2PP-41R-D-DWG-8702

Rev. 3

Document No. M2PP-41R-D-DWG-8702.DWG

Drawing Plotted: 27 Aug 2014 09:06 a.m.

VEGETATION TO BE RETAINED

- TERRESTRIAL VALUED VEGETATION (CONSENT CONDITION G.41 c) i))
- WETLAND VALUED VEGETATION (CONSENT CONDITION G.41 c) ii))
- TERRESTRIAL VEGETATION - NATIVE
- TERRESTRIAL VEGETATION - EXOTIC
- WETLAND VEGETATION - NATIVE
- WETLAND VEGETATION - EXOTIC / OPEN WATER

- LANDFORM TO BE RETAINED
- DESIGNATION

NOTES:

1. AREAS OF VEGETATION IDENTIFIED TO BE RETAINED ARE SUBJECT TO MARKING ON SITE BY AN ECOLOGIST OR LANDSCAPE ARCHITECT PRIOR TO TEMPORARY FENCING.
2. REMOVAL OF ANY VEGETATION MARKED FOR RETENTION MUST BE APPROVED BY A LANDSCAPE ARCHITECT OR ECOLOGIST.
3. COMPLIANCE WITH THE ABOVE IS A REQUIREMENT OF THE CONSENT CONDITIONS.

410

420

CYCLEWAY (CWB)

EXPRESSWAY NORTHBOUND

EXPRESSWAY SOUTHBOUND

7700

7800

7900

8000

FF4

MAZENGARB RD

MATCHLINE REFER: M2PP-41R -D-DWG-8702

A1 REPRODUCTION SCALE

100 80 60 40 20 0mm

A3 REPRODUCTION SCALE

50 40 30 20 10 0mm

410

ORIGINAL DRAWING IN COLOUR

FOR CONSTRUCTION

No.	Revision	By	Chk	Chk.V	Appd	Date
3	FOR CONSTRUCTION	MP	MP	SD	DC	27.08.14
2	FOR KCDC CERTIFICATION	MP	MP	BF	PB	08.07.14
1	FOR CONSTRUCTION - WEED CLEARANCE	MP	GFB	DH	DC	17.03.14

Original Scale (A1) 1:500
Reduced Scale (A3) 1:1000

Design	F.BAGGALEY	31.01.14	Approved For Construction* P. BRADSHAW Date 19.03.14
Drawn	M.POWELL	31.01.14	
Dsg Verifier	B. FAULKNER	17.03.14	
Dwg Check	G. F-B	17.03.14	

* Refer to Revision 1 for Original Signature

NZ TRANSPORT AGENCY WAKA KOTAHI

MacKays to Peka Peka
Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY RP 1012/0.00 TO 1023/5.00

Title: KAPITI RD TO MAZENGARB RD VEGETATION TO BE RETAINED SHEET 3

Drawing No: M2PP-41R-D-DWG-8703

Rev. 3

Document No. M2PP-41R-D-DWG-8703.DWG

Drawing Plotted: 17 Aug 2015 11:10 a.m.

KEY

PLANTING TYPE / PLANTING MIX / AREA CODE — e.g. MT A 1 / 43R-8201 — PLANTING BOUNDARY — ASSOCIATED SHEET NUMBER

- MP MASSED PLANTING
- ML MASSED PLANTING - LOW
- MT MASSED PLANTING - TREE ENRICHMENT
- MS MASSED PLANTING - SWALE
- TF TREES - FORESTRY GRADE
- TS TREES - SPECIMEN GRADE
- TP TREES - POLE GRADE
- TREE WIND SHELTER
- EXISTING VEGETATION TO BE RETAINED
- GL GRASS - LOW
- GS GRASS - SWALE
- GR GRASS - ROUGH
- WP WETLAND PLANTING
- RP RIPARIAN PLANTING
- DESIGNATION

NOTES:

1. REFER TO PLANTING SCHEDULES (8211) FOR PLANT MIX DETAILS.
2. REFER TO STANDARD PLANTING DETAILS (8900 SERIES)FOR PLANTING DETAIL.
3. A 1.5m OFFSET FROM THE VERGE HAS BEEN MADE TO ACCOMODATE THE EXTENT OF SUBBASE. THE ACTUAL OFFSET IS TO BE CONFIRMED ON SITE.

MATCHLINE REFER: M2PP- 41R -D-DWG-8202

380 410

MP C 1 41R-8201
ML A 1 41R-8201
GL A 1 41R-8201
ML A 2 41R-8201
MP C 2 41R-8201
ML B 1 41R-8201
ML A 3 41R-8201
CYCLEWAY (CWB)
PEDESTRIAN BRIDGE PLANTING ADDED
MEDIAN PLANTING REMOVED
EXPRESSWAY NORTHBOUND
EXPRESSWAY SOUTHBOUND
7000
7100
7200
ML B 2 41R-8201
TOP OF BUND NOT PLANTED
MP C 3 41R-8201
SPECIES NOTED ON SCHEDULE WITH (*) TO BE LOCATED ONLY ON LOWER TO MID SLOPES OF NOISE BUND
MS A 1 41R-8201
MS A 2 41R-8201
ML A 4 41R-8201
ML A 5 41R-8201
PEDESTRIAN BRIDGEPLANTING ADDED
SPACKMAN CRES
MAKARINI ST

A1 REPRODUCTION SCALE: 100 80 60 40 20 0mm
A3 REPRODUCTION SCALE: 50 40 30 20 10 0mm

No.	Revision	By	Chk	Chk.V	Appd	Date
2	FOR CONSTRUCTION - REVISED AS NOTED, INCLUDES REDLINE	MP				17.08.15
1	FOR CONSTRUCTION	MP	GFB	DH	DC	15.09.14

Original Scale (A1) 1:500	Design	S DUNN	12.06.14
	Drawn	M POWELL	12.06.14
Reduced Scale (A3) 1:1000	Dsg Verifier	B.EVANS	19.08.14
	Dwg Check	J.VERANO	19.08.14

Approved For Construction* P.BRADSHAW Date 15.09.14
*Refer to Revision 1 for Original Signature

NZ TRANSPORT AGENCY WAKA KOTAHI — MacKays to Peka Peka, Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY RP 1012/0.00 TO 1023/5.00

Title: KAPITI TO MAZENGARB PLANTING PLANS SHEET 1

Drawing No: M2PP-41R-D-DWG-8201

Rev. 2

410 — ORIGINAL DRAWING IN COLOUR — FOR CONSTRUCTION

Document No. M2PP-41R-D-DWG-8201.DWG

Drawing Plotted: 31 Aug 2015 02:07 p.m.

MATCHLINE REFER: M2PP- 41R -D-DWG-8201

MATCHLINE REFER: M2PP- 41R -D-DWG-8203

KEY

PLANTING TYPE / PLANTING MIX / AREA CODE — e.g. MT A 1 / 43R-8201 — PLANTING BOUNDARY — ASSOCIATED SHEET NUMBER

- MP MASSED PLANTING
- ML MASSED PLANTING - LOW
- MT MASSED PLANTING - TREE ENRICHMENT
- MS MASSED PLANTING - SWALE
- TF TREES - FORESTRY GRADE
- TS TREES - SPECIMEN GRADE
- TP TREES - POLE GRADE
- TREE WIND SHELTER
- EXISTING VEGETATION TO BE RETAINED
- GL GRASS - LOW
- GS GRASS - SWALE
- GR GRASS - ROUGH
- WP WETLAND PLANTING
- RP RIPARIAN PLANTING
- DESIGNATION

NOTES:

1. REFER TO PLANTING SCHEDULES (8211) FOR PLANT MIX DETAILS.
2. REFER TO STANDARD PLANTING DETAILS (8900 SERIES)FOR PLANTING DETAIL.
3. A 1.5m OFFSET FROM THE VERGE HAS BEEN MADE TO ACCOMODATE THE EXTENT OF SUBBASE. THE ACTUAL OFFSET IS TO BE CONFIRMED ON SITE.

1 / 41R-8401

ML G 1 / 41R-8202

MP C 1 / 41R-8202

ML A 1 / 41R-8202

GL A 1 / 41R-8202

CYCLEWAY (CWB)

ML A 2 / 41R-8202

MP C 2 / 41R-8202

MP D 1 / 41R-8202

WP 1 1 / 41R-8202

WP J 1 / 41R-8202

WETLAND SWALE W5

ALLOWANCE FOR RIP RAP

MP D 2 / 41R-8202

ML B 1 / 41R-8202

EXPRESSWAY NORTHBOUND

MEDIAN PLANTING REMOVED

FORBAY EXPANDED AND 4m WIDE ACCESS ADDED

ML B 2 / 41R-8202

EXPRESSWAY SOUTHBOUND

300 400 500 600

TOP OF BUND NOT PLANTED

MP C 3 / 41R-8202

SPECIES NOTED ON SCHEDULE WITH (*) TO BE LOCATED ONLY ON LOWER TO MID SLOPES OF NOISE BUND

MS A 1 / 41R-8202

MAKARINI ST

PALMER CT

A1 REPRODUCTION SCALE: 100 80 60 40 20 0mm

A3 REPRODUCTION SCALE: 50 40 30 20 10 0mm

410

ORIGINAL DRAWING IN COLOUR

FOR CONSTRUCTION

No.	Revision	By	Chk	Chk.V	Appd	Date
2	FOR CONSTRUCTION - REVISED AS NOTED, INCLUDES REDLINE	MP	AJP	DH	DGS	17.08.15
1	FOR CONSTRUCTION	MP	GFB	DH	DC	15.09.14

Original Scale (A1) 1:500	Design	S DUNN	12.06.14
	Drawn	M POWELL	12.06.14
Reduced Scale (A3) 1:1000	Dsg Verifier	B.EVANS	19.08.14
	Dwg Check	J.VERANO	19.08.14

Approved For Construction* P.BRADSHAW Date 15.09.14

* Refer to Revision 1 for Original Signature

NZ TRANSPORT AGENCY WAKA KOTAHI — MacKays to Peka Peka — Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY RP 1012/0.00 TO 1023/5.00

Title: KAPITI TO MAZENGARB PLANTING PLANS SHEET 2

Drawing No: M2PP-41R-D-DWG-8202

Rev. 2

Document No. M2PP-41R-D-DWG-8202.DWG

MATCHLINE REFER: M2PP- 41R -D-DWG-8202

KEY

PLANTING TYPE / PLANTING MIX / AREA CODE / PLANTING BOUNDARY — MT A 1 / 43R-8201 — ASSOCIATED SHEET NUMBER

- MP MASSED PLANTING
- ML MASSED PLANTING - LOW
- MT MASSED PLANTING - TREE ENRICHMENT
- MS MASSED PLANTING - SWALE
- TF TREES - FORESTRY GRADE
- TS TREES - SPECIMEN GRADE
- TP TREES - POLE GRADE
- TREE WIND SHELTER
- EXISTING VEGETATION TO BE RETAINED
- GL GRASS - LOW
- GS GRASS - SWALE
- GR GRASS - ROUGH
- WP WETLAND PLANTING
- RP RIPARIAN PLANTING
- DESIGNATION

NOTES:

1. REFER TO PLANTING SCHEDULES (8211) FOR PLANT MIX DETAILS.
2. REFER TO STANDARD PLANTING DETAILS (8900 SERIES)FOR PLANTING DETAIL.
3. A 1.5m OFFSET FROM THE VERGE HAS BEEN MADE TO ACCOMODATE THE EXTENT OF SUBBASE. THE ACTUAL OFFSET IS TO BE CONFIRMED ON SITE.

410 420

ENSURE DUNE ROUNDING PRINCIPLES ARE FOLLOWED - REFER M2PP-23R-D-DWG-8904

2 / 41R-8401

MP C 1 / 41R-8203

ML A 1 / 41R-8203

MT A 1 / 41R-8203

CWB ENTRANCE REVISED

GL A 1 / 41R-8203

CYCLEWAY (CWB)

GL A 2 / 41R-8203

ML A 2 / 41R-8203

MT A 2 / 41R-8203

MP C 2 / 41R-8203

EXPRESSWAY NORTHBOUND

ML B 1 / 41R-8203

7000 7800 7900 8000

EXPRESSWAY SOUTHBOUND

ML B 2 / 41R-8203

SPECIES NOTED ON SCHEDULE WITH (*) TO BE LOCATED ONLY ON LOWER TO MID SLOPES OF NOISE BUND

TOP OF BUND NOT PLANTED

MP C 3 / 41R-8203

MT A 3 / 41R-8203

MS A 1 / 41R-8203

NOISE BUND CONSTRUCTED WITH BROWN ROCK - REFER M2PP-41D-D-DWG-2001 FOR DETAILED EXTENT

MAZENGARB RD

A1 REPRODUCTION SCALE: 100 80 60 40 20 0mm

A3 REPRODUCTION SCALE: 50 40 30 20 10 0mm

410

ORIGINAL DRAWING IN COLOUR

FOR CONSTRUCTION

No.	Revision	By	Chk	Chk.V	Appd	Date
2	FOR CONSTRUCTION - MEDIAN PLANTING REMOVED	MP	MM	DH	SW	03.07.15
1	FOR CONSTRUCTION	MP	GFB	DH	DC	15.09.14

Original Scale (A1) 1:500 / Reduced Scale (A3) 1:1000	Design	S DUNN	12.06.14
	Drawn	M POWELL	12.06.14
	Dsg Verifier	B.EVANS	19.08.14
	Dwg Check	J.VERANO	19.08.14

Approved For Construction* P.BRADSHAW Date 15.09.14

* Refer to Revision 1 for Original Signature

NZ TRANSPORT AGENCY WAKA KOTAHI

MacKays to Peka Peka — Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY RP 1012/0.00 TO 1023/5.00

Title: KAPITI TO MAZENGARB PLANTING PLANS SHEET 3

Drawing No: M2PP-41R-D-DWG-8203

Rev. 2

Document No. M2PP-41R-D-DWG-8203.DWG

Drawing Plotted: 15 Aug 2014 12:40 p.m.

KEY

PLANTING TYPE / PLANTING MIX / AREA CODE / PLANTING BOUNDARY / ASSOCIATED SHEET NUMBER

Example: MT A 1 / 43R-8201

- MP MASSED PLANTING
- ML MASSED PLANTING - LOW
- MT MASSED PLANTING - TREE ENRICHMENT
- MM MASSED PLANTING - MEDIAN
- MS MASSED PLANTING - SWALE
- TF TREES - FORESTRY GRADE
- TS TREES - SPECIMEN GRADE
- TP TREES - POLE GRADE
- TREE WIND SHELTER
- EXISTING VEGETATION TO BE RETAINED
- GL GRASS - LOW
- GS GRASS - SWALE
- GR GRASS - ROUGH
- WP WETLAND PLANTING
- RP RIPARIAN PLANTING

DESIGNATION

NOTES:

1. REFER TO PLANTING SCHEDULES (8211) FOR PLANT MIX DETAILS.
2. REFER TO STANDARD PLANTING DETAILS (8900 SERIES)FOR PLANTING DETAIL.
3. A 1.5m OFFSET FROM THE VERGE HAS BEEN MADE TO ACCOMODATE THE EXTENT OF SUBBASE. THE ACTUAL OFFSET IS TO BE CONFIRMED ON SITE.

EXPRESSWAY NORTHBOUND

8000

CYCLEWAY (CWB)

430

420

ALLOWANCE FOR PROPERTY ACCESS

MAZENGARB RD

GL A 1 42R-8201

ML D 1 42R-8201

ML D 2 42R-8201

GL A 3 42R-8201

MT A 1 42R-8201

ML D 3 42R-8201

ML A 1 42R-8201

420

410

MT A 2 42R-8201

ML A 2 42R-8201

1 42R-8401

7900

CYCLEWAY (CWB)

EXPRESSWAY NORTHBOUND

EXPRESSWAY SOUTHBOUND

CHILTON DRIVE

HOLD

DESIGN TO BE CONFIRMED

420

ORIGINAL DRAWING IN COLOUR

DETAILED DESIGN
NOT FOR CONSTRUCTION

A1 REPRODUCTION SCALE: 100 80 60 40 20 0mm

A3 REPRODUCTION SCALE: 50 40 30 20 10 0mm

No.	Revision	By	Chk	Chk.V	Appd	Date
B	FOR DETAILED DESIGN	MP				.08.14
A	85% REVIEW	MP			DC	22.07.14

Original Scale (A1) 1:500	Design	S DUNN	02.07.14	Approved For Construction*
Reduced Scale (A3) 1:1000	Drawn	M POWELL	02.07.14	
	Dsg Verifier		.08.14	
	Dwg Check		.08.14	Date

* Refer to Revision 1 for Original Signature

NZ TRANSPORT AGENCY WAKA KOTAHI

MacKays to Peka Peka — Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY RP 1012/0.00 TO 1023/5.00

Title: MAZENGARB ROAD CROSSING PLANTING PLAN

Drawing No: M2PP-42R-D-DWG-8201

Rev. B

Document No. M2PP-42R-D-DWG-8201.DWG

PLANT TYPE	PLANT MIX	BOTANICAL NAME	COMMON NAME	GRADE	% MIX	NOTES	PLAN REFERENCE	TOTAL	
							AREA	63822	m^2
							AREA ADJUSTED FOR SLOPE	65208	m^2
							MT MIX - 1.0M CRS MASSED PLANTING, ENRICHMENT 10.0M CRS, PLANT CENTRES (METRES)		
							MULCH TYPE OM = ORGANIC MULCH, GM = GRADED GRAVEL MULCH, BC = BIOCOIR		
							N = NO MULCH (IN RIPARIAN / WETLAND ZONES), WM = WOOL MAT SQUARE (RIPARIAN EROSION)		
MASSED LOW EDGE PLANTING - ADJACENT TO CYCLEWAY									
ML	A	Acaena novae-zelandiae	Red bidibidi	1.0 litre	10%	front edge		475	no
ML	A	Austroderia fulvida	syn Cortaderia, toetoe	1.0 litre	5%	back		238	no
ML	A	Carex dipsacea	Treasel sedge	1.0 litre	10%	front edge		475	no
ML	A	Carex solandri	Forest sedge, Solander's sedge	1.0 litre	10%	front edge		475	no
ML	A	Carex virgata	Swamp sedge	1.0 litre	5%	mid back		238	no
ML	A	Coprosma areolata	Thin leaved Coprosma	1.0 litre	5%	back		238	no
ML	A	Coprosma propinqua	Mingimingi	1.0 litre	5%	mid back		238	no
ML	A	Coprosma repens	Taupata	1.0 litre	10%	mid back		475	no
ML	A	Ficinia nodosa	Wiwi, Knobby club rush	1.0 litre	10%	front edge		475	no
ML	A	Hebe stricta	Koromiko	1.0 litre	10%	back		475	no
ML	A	Muehlenbeckia complexa	Pohuehue, wire vine	1.0 litre	20%	front edge		950	no
MASSED LOW EDGE PLANTING ADJACENT TO EXPRESSWAY								0	
ML	B	Acaena novae-zelandiae	Red bidibidi	1.0 litre	10%	front edge		559	no
ML	B	Austroderia fulvida	syn Cortaderia, toetoe	1.0 litre	5%	back		280	no
ML	B	Carex dipsacea	Treasel sedge	1.0 litre	10%	front edge		559	no
ML	B	Carex solandri	Forest sedge, Solander's sedge	1.0 litre	10%	front edge		559	no
ML	B	Carex virgata	Swamp sedge	1.0 litre	5%	mid back		280	no
ML	B	Coprosma acerosa	Sand Coprosma	1.0 litre	10%	front mid		559	no
ML	B	Coprosma areolata	Thin leaved Coprosma	1.0 litre	5%	back		280	no
ML	B	Coprosma propinqua	Mingimingi	1.0 litre	5%	mid back		280	no
ML	B	Coprosma repens	Taupata	1.0 litre	5%	mid back		280	no
ML	B	Ficinia nodosa	Wiwi, Knobby club rush	1.0 litre	10%	front edge		559	no
ML	B	Hebe stricta	Koromiko	1.0 litre	5%	back		280	no
MASSED LOW EDGE PLANTING WITH SMALL SCREEN TREE - LIMITED WIDTH FOR VEGETATION BUFFER OR SCREEN PLANTING ON BOUNDARY									
ML	G	Coprosma areolata	Thin leaved Coprosma	1.0 litre	5%			37	no
ML	G	Coprosma propinqua	Mingimingi	1.0 litre	10%			73	no
ML	G	Cordyline australis	Ti kouka	1.0 litre	5%	groups of 3 or 5		37	no
ML	G	Corokia cotoneaster	korokio taranga	1.0 litre	10%			73	no
ML	G	Griselinia lucida	Puka, Broadleaf	1.0 litre	5%			37	no
ML	G	Hebe stricta	Koromiko	1.0 litre	10%			73	no
ML	G	Melicope ternata	Wharangi	1.0 litre	5%			37	no
ML	G	Myrsine australis	Mapou, Matipo	1.0 litre	15%	back		110	no
ML	G	Pittosporum tenuifolium	Kohuhu	1.0 litre	5%	back		37	no
ML	G	Phormium tenax	Harakeke, Flax	1.0 litre	10%	back		73	no
ML	G	Pseudopanax crassifolius	Horoeka, Lancewood	1.0 litre	15%	groups of 3 or 4		110	no
ML	G	Sophora microphylla	Kowhai	1.0 litre	5%			37	no
MASSED LOW PLANTING - EDGE OF EMBANKMENT AND FOOTPATH EDGE FOR SIGHTLINES									
ML	D	Muehlenbeckia complexa	Pohuehue, wire vine	1.0 litre	100%			549	no
MASSED PLANTING - GENERAL MIX									
MP	C	*Aristotelia serrata	Makomako	1.0 litre	5%			1649	no
MP	C	Carex lessoniana	Cutty grass	1.0 litre	5%	east toe of bund		1649	no
MP	C	*Carpodetus serratus	Putaputaweta	1.0 litre	5%			1649	no
MP	C	Coprosma propinqua	Mingimingi	1.0 litre	10%			3299	no
MP	C	Coprosma robusta	Karamu	1.0 litre	12%			3958	no
MP	C	Cordyline australis	Ti kouka	1.0 litre	5%			1649	no
MP	C	Griselinia lucida	Puka, Broadleaf	1.0 litre	2%			660	no
MP	C	Hebe stricta	Koromiko	1.0 litre	8%	east toe of bund		2639	no
MP	C	*Kunzea ericoides	Kanuka	1.0 litre	12%			3958	no
MP	C	*Melicytus ramiflorus	Mahoe	1.0 litre	5%			1649	no
MP	C	Melicope ternata	Wharangi	1.0 litre	3%			990	no
MP	C	*Myoporum laetum	Ngaio	1.0 litre	3%			990	no
MP	C	Myrsine australis	Mapou, Matipo	1.0 litre	7%			2309	no
MP	C	Olearia solandri	Coastal tree daisy	1.0 litre	5%			1649	no
MP	C	*Pittosporum tenuifolium	Kohuhu	1.0 litre	8%			2639	no
MP	C	Pseudopanax arboreus	Whauwhaupaku, Fivefinger	1.0 litre	2%			660	no
MP	C	*Sophora microphylla	Kowhai	1.0 litre	3%			990	no
MASSED PLANTING - SCREEN NOISEWALL, ADJOINS A WETLAND									
MP	D	Austroderia fulvida	syn Cortaderia, toetoe	1.0 litre	5%			75	no
MP	D	Phormium tenax	Harakeke, Flax	1.0 litre	10%			150	no
MP	D	Coprosma propinqua	Mingimingi	1.0 litre	10%			150	no
MP	D	Coprosma tenuicaulis	Hukihuki, swamp Coprosma	1.0 litre	5%			75	no
MP	D	Cordyline australis	Ti kouka	1.0 litre	10%	large groups		150	no
MP	D	leptospermum scoparium	Manuka	1.0 litre	21%			316	no
MP	D	Pseudopanax crassifolius	Horoeka, Lancewood	1.0 litre	7%			105	no
MP	D	Carex secta	Pukio, Purei	1.0 litre	10%			150	no
MP	D	Cyperus ustulatus	Toetoe upokotangata, Giant umbrel	1.0 litre	20%			301	no
MP	D	Dacrycarpus dacrydioides	Kahikatea	Pb18	2%	mid zone groups		30	no
MASSED PLANTING + TREE ENRICHMENT - GENERAL HARDY MIX (LINK TO 430)									
MT	A	Aristotelia serrata	Makomako	1.0 litre	5%			581	no
MT	A	Carpodetus serratus	Putaputaweta	1.0 litre	5%			581	no
MT	A	Coprosma areolata	Thin leaved Coprosma	1.0 litre	5%			581	no
MT	A	Coprosma repens	Taupata	1.0 litre	5%			581	no
MT	A	Coprosma robusta	Karamu	1.0 litre	5%	east toe of bund		581	no
MT	A	Griselinia lucida	Puka, Broadleaf	1.0 litre	5%			581	no
MT	A	Hebe stricta	Koromiko	1.0 litre	5%	east toe of bund		581	no
MT	A	Kunzea ericoides	Kanuka	1.0 litre	15%			1742	no
MT	A	Leptospermum scoparium	Manuka	1.0 litre	10%			1161	no
MT	A	Melicope ternata	Wharangi	1.0 litre	5%	east toe of bund		581	no
MT	A	Melicytus ramiflorus	Mahoe	1.0 litre	5%			581	no
MT	A	Myoporum laetum	Ngaio	1.0 litre	5%			581	no
MT	A	Myrsine australis	Mapou, Matipo	1.0 litre	5%			581	no
MT	A	Olearia solandri	Coastal tree daisy	1.0 litre	5%			581	no
MT	A	Phormium tenax	Harakeke, Flax	1.0 litre	5%	east toe of bund		581	no
MT	A	Pittosporum eugenioides	Tarata, lemonwood	1.0 litre	5%			581	no
MT	A	Pittosporum tenuifolium	Kohuhu	1.0 litre	5%			581	no
MT	A	*Knightia excelsa	Rewarewa	Pb18	30%	enrich		348	no
MT	A	*Podocarpus totara	Totara	Pb18	10%	enrich		116	no
MT	A	Alectryon excelsus	Titoki	Pb18	20%	enrich		232	no
MT	A	*Dysoxylum spectabile	Kohekohe	Pb18	40%	enrich		465	no
WETLAND PLANTING - EDGE BARRIER AND NOISEWALL SCREENING									
WP	I	Carex secta	Pukio, Purei	0.5 litre	40%			1879	no
WP	I	Cordyline australis	Ti kouka	1.0 litre	5%			235	no
WP	I	Cyperus ustulatus	Toetoe upokotangata, Giant umbrella sedge	0.5 litre	30%	cwb edge		1410	no
WP	I	Leptospermum scoparium	Manuka	1.0 litre	15%	noise wall edge and groups to CWB		705	no
WP	I	Phormium tenax	Harakeke, Flax	0.5 litre	10%	noise wall edge		470	no
WETLAND PLANTING - WETLAND SWALE W5 LOWER SLOPES AND BASE									
WP	J	Carex secta	Pukio, Purei	0.5 litre	30%			1113	no
WP	J	Carex geminata	Cutty grass,		50%			1855	no
WP	J	Cyperus ustulatus	Toetoe upokotangata, Giant umbrella sedge	0.5 litre	20%			742	no
MASSED MEDIAN PLANTING									
MM	A	Ficinia nodosa	Wiwi, Knobby club rush	1.0 litre	100%			3083	no
MASSED SWALE PLANTING									
MS	A	Apodasmia similis	Oioi	0.5 litre	100%	no mulch		8579	no
GRASS									
GL	A	Grass low grow mix	sown, close mow to 100mm	sow				1933	m^2

A1 REPRODUCTION SCALE: 100 80 60 40 20 0mm

A3 REPRODUCTION SCALE: 50 40 30 20 10 0mm

PLANTING SCHEDULE

410 420 **DETAILED DESIGN** NOT FOR CONSTRUCTION

No.	Revision	By	Chk	Chk.V	Appd	Date
A	FOR DETAILED DESIGN	MP				.08.14

Original Scale (A1) NTS	Design	S DUNN	23.06.14
Reduced Scale (A3) NTS	Drawn	M POWELL	23.06.14
	Dsg Verifier		.08.14
	Dwg Check		.08.14

Approved For Construction* Date

*Refer to Revision 1 for Original Signature

NZ TRANSPORT AGENCY WAKA KOTAHI

MacKays to Peka Peka Wellington Northern Corridor

Project: SH1 MACKAYS TO PEKA PEKA EXPRESSWAY RP 1012/0.00 TO 1023/5.00

Title: KAPITI TO MAZENGARB PLANTING SCHEDULE

Drawing No: M2PP-41R-D-DWG-8211

Rev. A

Document No. M2PP-41R-D-DWG-8211.DWG

Appendix 2: CONSULTATION, FEEDBACK AND RESPONSES

Site Specific Management Plan 004 - [Sectors 410-420] MacKays to Peka Peka Expressway

01 SEPTEMBER 2014 - CERTIFIED ISSUE - REV C

NZ TRANSPORT AGENCY WAKA KOTAHI

MacKays to Peka Peka
Wellington Northern Corridor

The following tables set out the responses to comments raised by reviewers and those parties consulted in regard to the preliminary SSMP. The project responses are either reflected in the certification issue to which this Appendix pertains, or have been directed to other processes for action, or have been considered but for the reasons noted not agreed to. The parties consulted are those identified by the consent conditions are:

- Kapiti Coast District Council (KCDC).
- Kāpiti Cycling Incorporated and the Implementation Group of the Kāpiti Coast District Council Advisory on Cycleways, Walkways and Bridleways in respect of the CWB and any cycle or pedestrian connections.
- Te Āti Awa ki Whakarongotai;
- Two Landscape Focus Areas (DC 57A a)
    - ii) Eastern side of the designation between Kāpiti Road and Mazengarb Road including Greenwood Place, Elder Grove, Cypress Grove, Spackman Crescent, Makarini Street, Palmer Court, St James Court and Chilton Drive;
    - iii) Western side of the designation between Kāpiti Road and Mazengarb Road including Cheltenham Drive and Lincoln Court; (Metlife care)

COMMENTS ON PRELIMINARY ISSUE SSMP4: KAPITI MAZENGARB
KCDC REVIEWERS COMMENTS *[JW=Julia Williams- Landscape Architect; DP = Deyana Popova-Urban Designer; SK=Stu Kilmister-CWB Planner; provided as document and also meeting notes*

Condition Reference	*Condition Detail*	*Reviewer/ commenter*	*KCDC Reviewer's comment*	*reference in SSMP*	*Management Plan Author's response*
DC.59A g)	CWB detail	SK	Why are the CWB paths either side of Mazengarb road not opposite each other? Is acceptable to have pedestrians and cyclists crossing Mazengarb on an angle? My preference would be to introduce a curve into the CWB path bringing the path closer to the southern abutment, and more in line with the CWB opposite.	SHEET 7 bridge master plan	The CWB entrances are offset to discourage cyclists riding straight across the road. The crossings/drop kerbs will be opposite each other
DC.59A g)	CWB detail	SK	On the northern side of the newly lowered local road there appears to be either a wide shoulder or a path disappearing near contour 8.0. can you confirm what it is, either path or shoulder? More detail of the layout of the CWB exit onto Mazengarb Road form the north is desirable given the uncertainty of the pavement (path or shoulder) type in this area.	SHEET 8 bridge master plan	Drawn incorrectly. Mazengarb Road has a 1.5m shoulder on both sides of the road. Mazengarb Road will be kerb and channel with grass up to the kerb on the northern side, with Kapiti blue under the bridge decks.
DC.59A g)	CWB detail	SK	Cross section through CH 7800; will the highway have a barrier on the western side to prevent vehicles from ending up on the CWB in an accident scenario?	SHEET 10 section	There are safety barriers along the whole length of the Expressway
DC.59A g)	CWB detail	SK	CS3 cross sectional elevation of Mazengarb bridge appears to show a 2m wide footpath on the north side and a 1.5m wide footpath on the south beside a garden area, is that correct? (Question relates to sheet 8 also)	SHEET 11 Bridge elevations	No. footpath on south of Mazengarb Road only. Proposed width 2200mm to tie into existing. Space provision has been made for future footpath on north side- currently there is no footpath to tie into.

DC.59A g)	CWB detail	SK	Visualisation looks great although it doesn't show Mazengarb Road lowered and the difference in distance between the two CWB entries/exits to the abutments is not apparent.	SHEET 12 Mazengarb Road	Mazengarb Road has been lowered in the visualisation. The visualisation is intended to show the general appearance of the new bridge, detailed plans should be referred to as well.
DC.57A a) and b)	Maintenance along Makarini Street boundary	JW	Assumed that the maintenance track shown in the adjoining sector to the south in SSMP 3 would extend and run to Mazengarb Road. The swale (which is about 5.0m wide) could be also used for vehicle access for landscape maintenance. This would ensure that an eye would be kept on the boundary and thwart any incursion into the designation.	SHHETS 2 & 3	Maintenance access only needs to extend as far as shown on SSMP3 (ie to a sewer line manhole). The SSMP planting plans show swale planting extending between the end of the maintenance access and the swale; the SSMP and the planting plans are consistent with each other. The landscape constructor has confirmed that pedestrian access is only needed for vegetation establishment along the noise bund and this access will be along the unplanted top of the bund. The swale, which is a v-channel with riprap in the invert, could be straddled by vehicles if the swale was grassed but the series of scruffy domes along the length of the swale would be an obstacle to vehicles. A planted swale located adjacent to massed planting is consistent with planting design principles applied elsewhere. Additional maintenance width would require steepening the noise bund gradients beyond the standard.
DC.57A a) and b)	Noise wall	JW	On cross section CS3 the 2.0m noise wall is not shown.	SHEET 8	The cross section has been updated and annotated accordingly.
DC.57A a) and b)	Noise wall	JW	The noise wall at the Mazengarb Road bridge has been reduced from 3.0m to 2.0m in height. Is there a reason for this?	SHEET 11	There should have never been a 3.0m high wall shown here.
DC.57A a) and b)	Noise walls	JW	There appears to be two parallel noise walls to the southeast of the Mazengarb bridge, a 2.0m high timber wall along the residential boundary (shown in brown) and a 2.0m high concrete noise wall extending to the west from the barrier (shown in light blue). Are both needed, wouldn't the timber wall provide sufficient screening?	SHEET 11	The noise mitigation was well traversed at the recent Mazengarb hearing; the design shown is as directed by the noise expert and is in line with the council decision.
DC.57A a) and b)	Noise walls	JW	Is there a standard transition between noise walls? 2.0m transitional wall between TL4 and 2.5m noise wall. What is the transition between 2.0m wall and TL4-a 1.0m change in height?		Height change is 900mm (TL4 is 1100mm). There is no transitional structure between these heights.
DC.57A a) and b)	Timber noise fence	JW	Are the palings going to be buried 100mm ibn the ground? I assume the paling s will therefore be ground treated (H4), which is a large additional cost.	SHEET 15	The palings will be ground treated to H5. No additional cost as this treatment was allowed for in the original estimate.
DC.57A a) and b)	Property access	JW	Please firm detail re access to 353 Mazengarb Road	SHEET 3	NZTA Property are satisfied with the property access which is possible via the maintenance access to culvert in Sector 430 (north of Mazengarb Road). SHEET 3 has been annotated accordingly.

DC.59A e) vii)	Bridge Development Study	JW	Confirm whether there will be lighting under the Mazengarb Bridge (Principle 6, Bridge Development Study)	SHEETS 4, 5 |& 20	Lighting under the bridge is made clear in various parts of the SSMP. The bridge development study has been updated accordingly; there will be architectural lighting under the Mazengarb Road bridge (SHEET 20).

COMMENTS ON PRELIMINARY ISSUE SSMP4: KAPITI MAZENGARB **KAPITI CYCLING INC.** [LS] Lynn Sleath **IMPLEMENTATION GROUP OF THE KAPITI COAST DISTRICT COUNCIL, advisory on Cycleways, walkways and Bridleways** [JN] Jan Nisbet					
Condition Reference	*Condition Detail*	*Reviewer/ commenter*	*Comment*	*reference in SSMP*	*Management Plan Author's response*
DC59A.f ii and iii and DC59A.g, DC59Ai(xi) and DC.57 c)	CWB		As expressed to the Board of Enquiry, we remain concerned about the crossing of the CWB over Mazengarb Road. We note the comment "Details to be finalised" on Sheet 7 and look forward to commenting on these when available. The artist's illustration in Sheet 12 confirms that there will be limited visibility of westbound motor vehicles below the new bridge for northbound users of the CWB. The illustration suggests a very limited open crossing with no control. We suggest that our previous comments about Otaihanga Road crossing should apply here. They are repeated below. 1. Provide advance signs to alert vehicles of the potential for people crossing the road. The Alliance should consider the use of smart warning signs. There are products that detect the presence of a cyclist approaching on the CWB, and then provide a signal to a variable message sign set up to provide the standard MOTSAM 'cyclist' symbol in a yellow flashing mode. 2. The two ends of the CWB should incorporate the latest treatment used by KCDC for the nearby Otaihanga Road crossing beside the Main Trunk Rail Line. This includes a pair of steel crash barriers arranged to provide a physical message to cyclists, together with raised surfacing and words to warn of the proximity of traffic.	SHEET 7	'Details to be finalised' refers to the intersection of the CWB with the footpath. The four generic designs are currently being refined and finalised in consultation with Stu Kilmister (KCDC) and NZTA. The four design options will all be used at various locations along the route, and generally need to allow for maintenance vehicle access. Additional signs are not required as available sightlines match/exceed the design standards. NZTA do not concur with the use of barriers that force users to dismount. The design will clearly signal to users that the crossing is approaching through the use of; Gabion blocks that create a clear 'entrance' and visual narrowing of the 3.0m path, change in surface texture (chipseal) coloured surface at entrance. NZTA and M2PP traffic safety auditors strongly oppose the use of bollards or barriers on cycleways that can cause harm to cyclists.
	CWB	JN	Agrees with comments made by LS and Stuart Kilmister (KCDC). Also: • Need to ensure coloured surfaces at CWB entrances are non-slip • Confirm that there is space for horses (unclear on plans). • Reiterate preference for a pair of steel crash barriers arranged to provide a physical message to cyclists, together with raised surfacing and words to warn of the proximity of traffic.		Coloured surfaces would be standard textured surface used for on-road cycle lanes. 1.0m wide grass verge provided for horses beside 3.0m path see SHEET 20 NZTA and M2PP traffic safety auditors strongly oppose the use of bollards or barriers on cycleways that can cause harm to cyclists

COMMENTS ON PRELIMINARY ISSUE SSMP4: KAPITI MAZENGARB **TE ATIAWA KI WHAKARONGATAI**					
Condition Reference	*Condition Detail*	*Reviewer/ commenter*	*Comment*	*reference in SSMP*	*Management Plan Author's response*
57 e) i	SSMP to be prepared in consultation with Te Atiawa ki Whakarongatai		Comments not received as yet		SSMP 4 Issued for comment 10/7/14, no formal comments received as at 27/8/14, despite follow up email reminders requesting feedback on 6/8 and 14/8/14. In addition, the Alliance design team are working with Te Atiawa ki Whakarongatai to develop design of some elements along the CWB corridor. This work considers the whole Expressway route. The first stage, currently underway, will identify the particular locations of significance to Te Atiawa. If these locations occur within this SSMP area, landscape elements or features will be designed and incorporated into the CWB corridor, in consultation with Te Atiawa.

COMMENTS from 7 JULY INFORMATION EVENING SSMP4: KAPITI MAZENGARB **Landscape Focus Areas (DC 57A a)** Consultation with residents of properties close to the Expressway (identified for their sensitivity to visual effects) ***ii) Eastern side of the designation between Kāpiti Road and Mazengarb Road including ~~Greenwood Place, Elder Grove, Cypress Grove~~, Spackman Crescent, Makarini Street, Palmer Court, St James Court and Chilton Drive*** ***iii) Western side of the designation between Kāpiti Road and Mazengarb Road including Cheltenham Drive and Lincoln Court; (Metlife care)***					
Condition Reference	*Condition Detail*	*Reviewer/ commenter*	*Comment*	*reference in SSMP*	*Management Plan Author's response*
DC 57 A a)		Joe Patten, Jan Scrimshaw (14 & 16 Chilton Drive)	Can you put barbed wire or electric fence on top of noise fence?		The M2PP Alliance will not be installing barbed wire atop the noise fence. This would be an undesirable element in a residential area due to its institutional appearance. The double sided 2.0m high noise fence will deter people from climbing the fence.
			Will the noise fence adjoin existing fences to avoid gaps, and how would an existing fence on the boundary be maintained?		Yes, a security fence will join to each end of the noise fence to fully secure the Chilton Drive area from Mazengarb Road. NZTA will maintain the noise fence as it is a Condition of consent that noise mitigation be provided.
			How will the Mazengarb Road embankments prevent people from the road climbing up to Chilton Drive properties?		The embankments would be climbable (4h:1V grade), but they will be planted to discourage people from walking there. The 2.0m high noise fence at the top will be double sided to make it difficult to climb from both sides.
			Preference that the land at the end of Chilton Drive is not made into a playground -- it's better to be planted up openly. Cherry trees? Mix of grass and some planting?		The planting design will consist a combination of grass and trees to keep it open, where possible existing vegetation will be retained. The detailed planting design has not been completed yet; cherry trees could be included in this design. A playground is not planned for the area.

		Jeannette Cottier (22 Chilton Drive)	Concerned that ground rises on the back of her property and that planting will not be sufficient to achieve mitigation.		The rising ground is a noise bund that will hide views of the Expressway and will also reduce Expressway noise to consented levels.
		ML Adam (6 Oxford Court), Jeannette Cottier (22 Chilton Drive, Linda Schager (107B Makarini Street)	Requires cross-section through their property		Sections prepared and issued. 14/7/14
		Linda Schager (107B Makarini Street)	Can the boundary fence have clear panels to maintain light?		The Alliance is not constructing boundary fences.
		Linda Schager (107B Makarini Street)	Request low vegetation in area adjacent to boundary, not flax.		The cross section provided, shows low planting adjacent to the boundary. This will be a species of rush called oioi.
		Linda Schager (107B Makarini Street)	Wasps have been a nuisance in the area, and are attracted to native trees (like the "five finger"). Could the planting please avoid trees producing a strong honeydew.		Wasps are a recent problem is due to a proliferation of wasp nests that have established in the blackberry and long grass. On-going pest management within the designation will continue to control this problem.
		C Ramsey (37B Chilton Drive),	Will water run onto my section from the noise bund?		No it will not, the soil and plants on the bund will intercept and absorb rainwater. In the event of a storm when there may be run off, the drainage channel at the toe of the bund will intercept the water to be drained away in pipes.
		C Ramsey (37B Chilton Drive) Linda Schager (107B Makarini Street)	What will the view be from my section? Street lights? Will sunlight be blocked?		The new view beyond any existing boundary fence will be a planted bund, the Expressway will not be visible. There are no lights on the Expressway at this location. The CWB on the far side of the Expressway will be lit but these lights will not be visible beyond the earth bund. While the bund itself will not have potential to shade, the vegetation once grown may intercept the sun when it is at a low angle at some times of the year. Generally the bund planting will avoid tall growing species at the apex of the bund. The cross section provided to 107B Makarini St- shows the top of the bund approximately 19m from the dwelling and 2.5 m higher than the property ground level.

Appendix 3: BRIDGE SUMMARY- MAZENGARB BRIDGE

Site Specific Management Plan 004 - [Sectors 420] MacKays to Peka Peka Expressway

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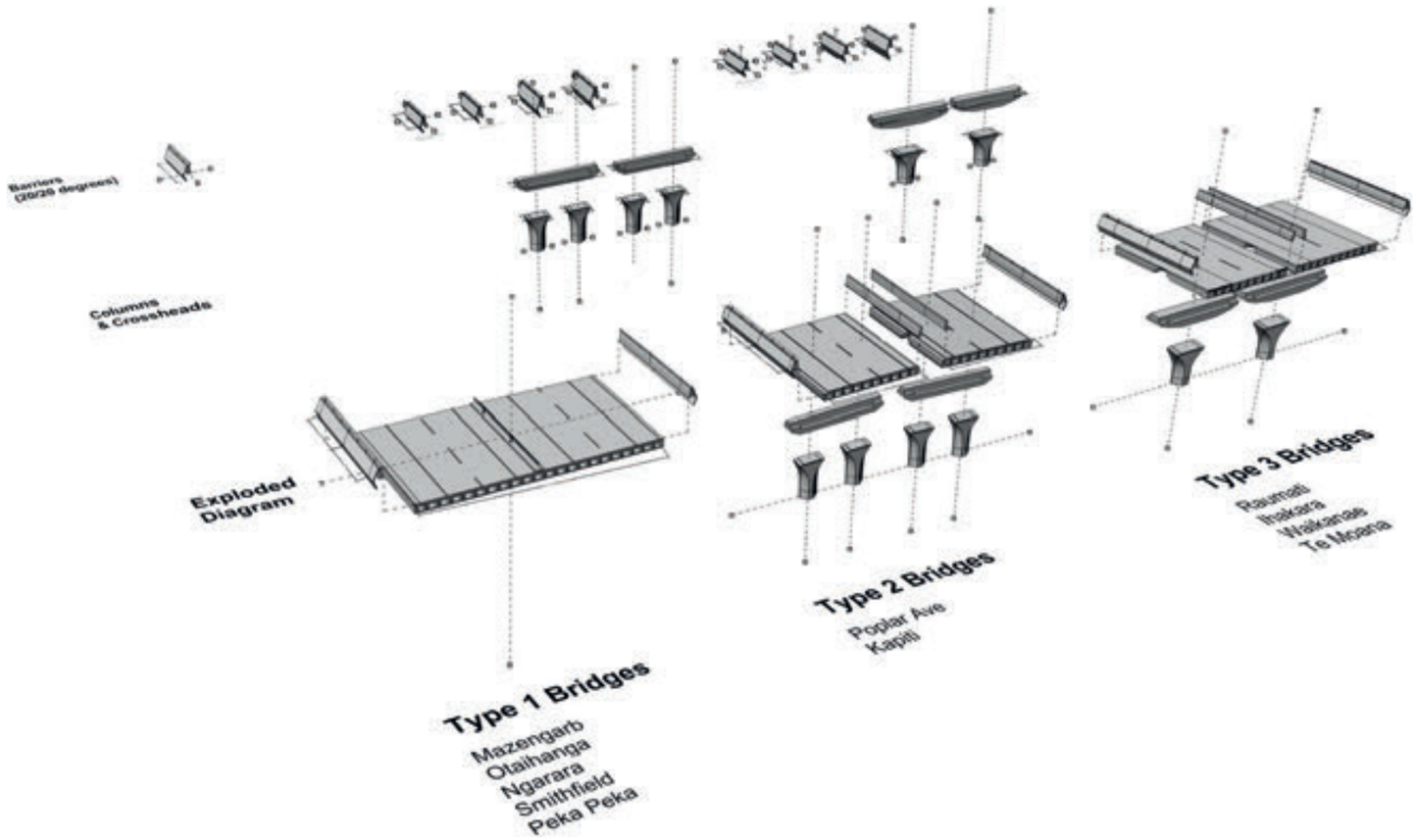
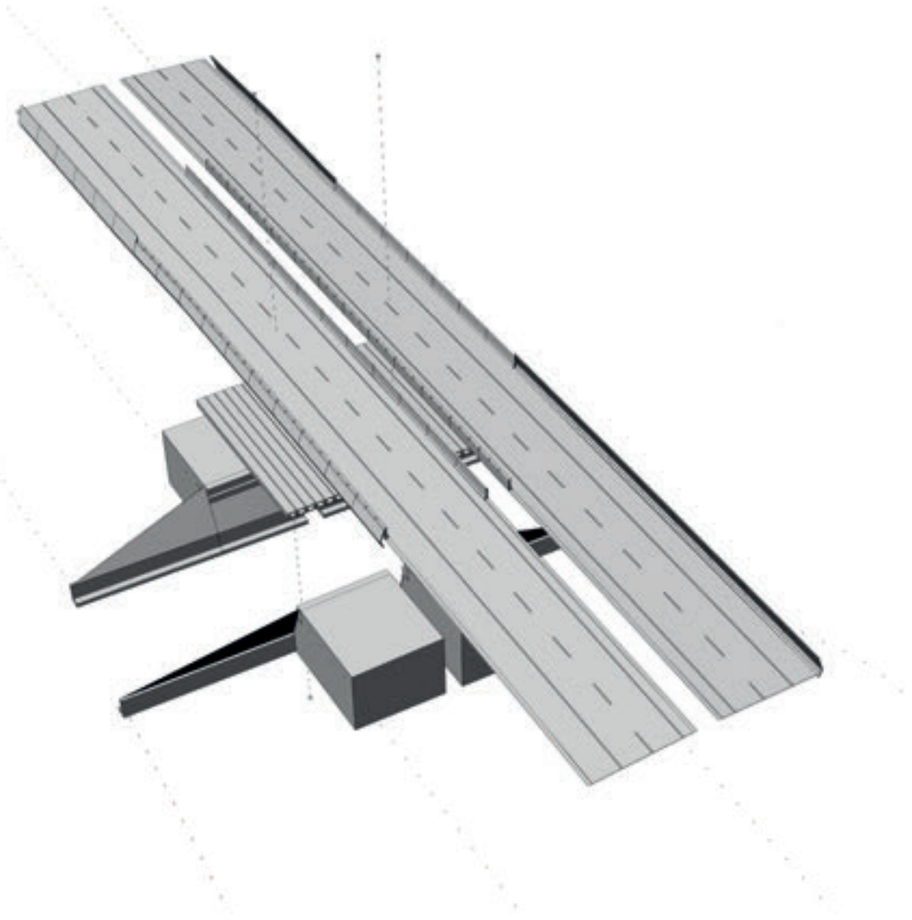
M2PP Bridge Design Objectives

Bridges as a series of components



Proposed Mazengarb exploded isometric



Design Objectives

With reference to the Urban and Landscape Design Framework (Technical Report 5) (ULDF) there are four design objectives for the bridges and their respective contexts. These four objectives are overarching aims for the project and have been extracted from the Design Concept statements in two sections of the ULDF: Local Road Interface Design (section 5.7) and Bridge Design (section 5.8).

The purpose of extracting these objectives is to enable any changes to bridge structures and their context made through the concept and detailed design process to be considered at the highest level of the design intent. There are design principles in each of the sections as noted above and these too form a basis for considering the development of the designs for the bridges and their context.

As is typical in a design evaluation process, any aspects of design that do not align with the design principles would be elevated to consideration against the design objectives.

Design Objectives:

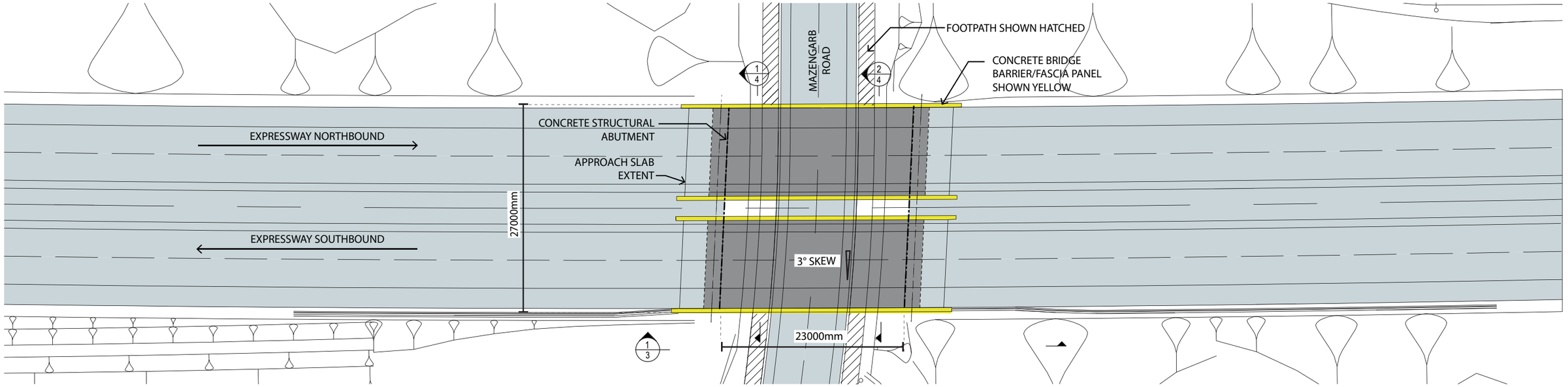
1. The public spaces of the roads and streets take primacy over the experience of the Expressway users. Local people will be making slower movements and as a consequence the bridges will be more visually apparent to them than to people travelling along the Expressway

2. As a new element in the landscape, the bridges respect the surrounding landscape and are expressed in terms of their horizontality, fluidity and simplicity because the landscape is relatively low key and low in scale; having several ‘feature’ bridges would become both visually complex and overwhelming in scale.

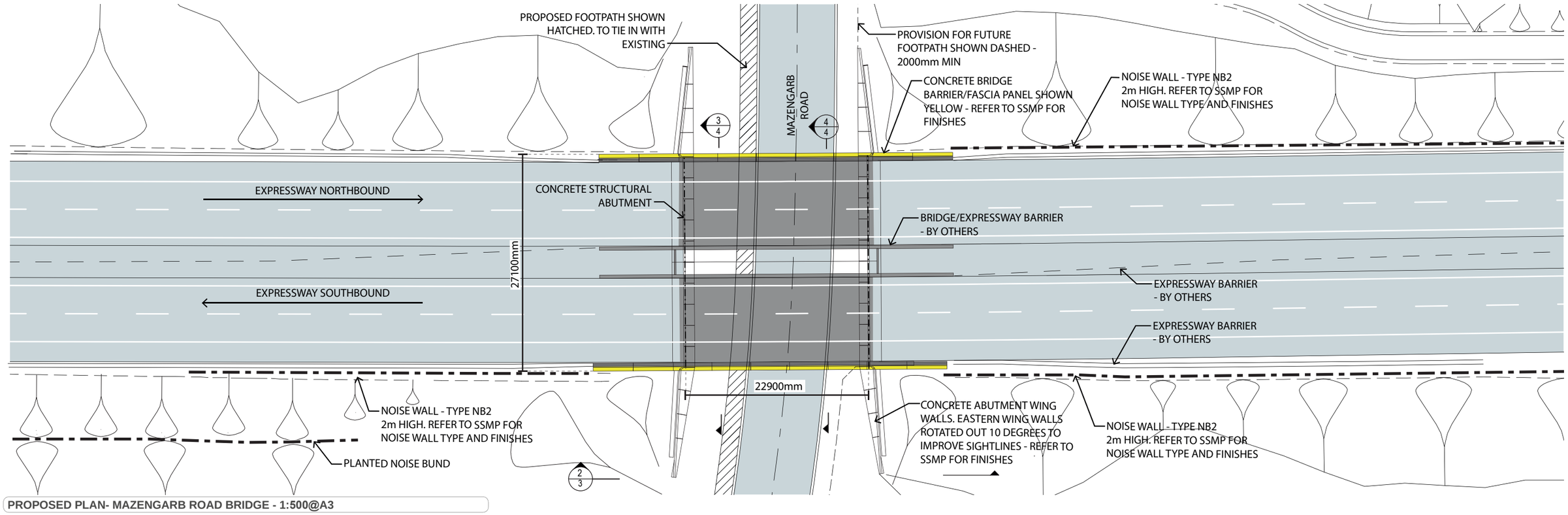
3. Bridges are formed as a whole from a single kit of parts, which allows the components to be repeated and a similar approach used at the multiple crossings to register as a ‘family’ of bridges because people will have multiple interactions day to day with the Expressway and this approach promotes simplicity and visual continuity.

4. Utilise concrete prefabricated parts because this allows fine levels of quality control, cost benefits and significant improvements in construction time at the crossings and reduces disturbance to the area.

AEE Consented to DET Proposed Graphic Comparison



AEE PLAN- MAZENGARB ROAD BRIDGE - 1:500@A3



PROPOSED PLAN- MAZENGARB ROAD BRIDGE - 1:500@A3

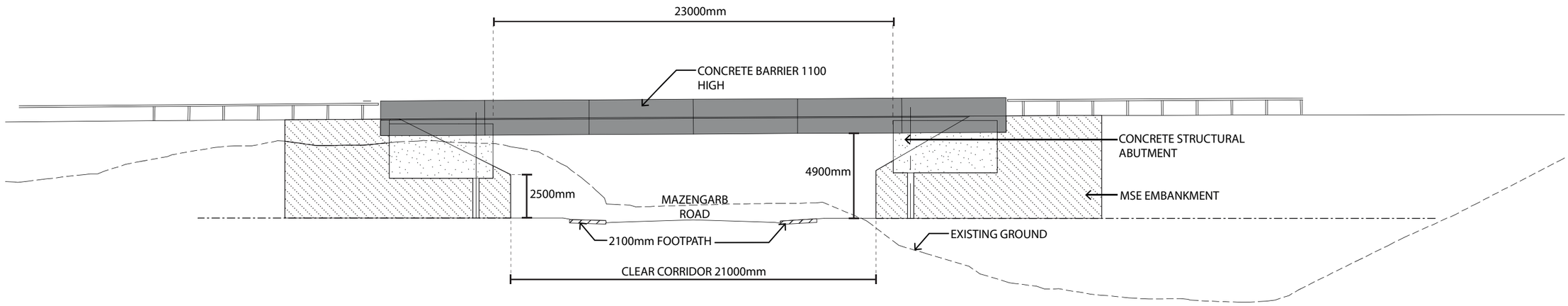
Design development

1. Reduced bridge skew. From 3° to 0°
2. More detail provided for abutment treatment
3. Extent of noise walls shown
4. No footpath constructed on the northern side of Mazengarb Road

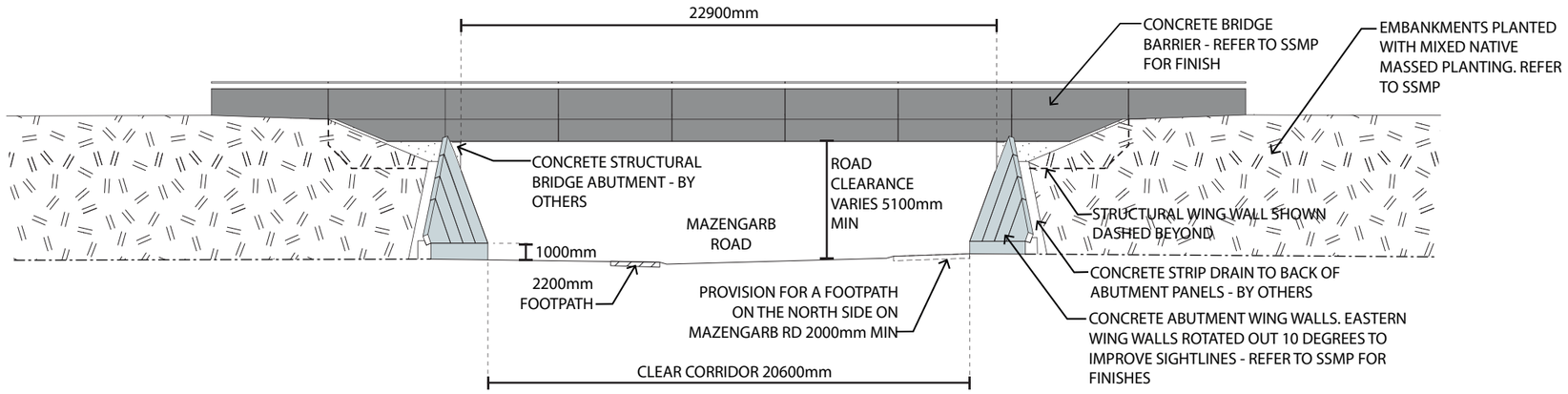
Rationale

1. Improves constructibility
2. Lack of abutment information in AEE phase. The bridge abutments tie in with and retain the proposed embankments. The abutment wing walls are designed as one long continuous element, they lead pedestrians though and under the bridge connecting one side to the other.
3. Provided for reference only. Refer to SSMP for more detail and finishes
4. No existing footpath to tie in to on the northern side. Space provision for future footpath.

AEE Consented to DET Proposed Graphic Comparison



1. AEE ELEVATION - MAZENGARB ROAD BRIDGE EAST ELEVATION - 1:250@A3



2. PROPOSED ELEVATION - MAZENGARB ROAD BRIDGE EAST ELEVATION - 1:250@A3

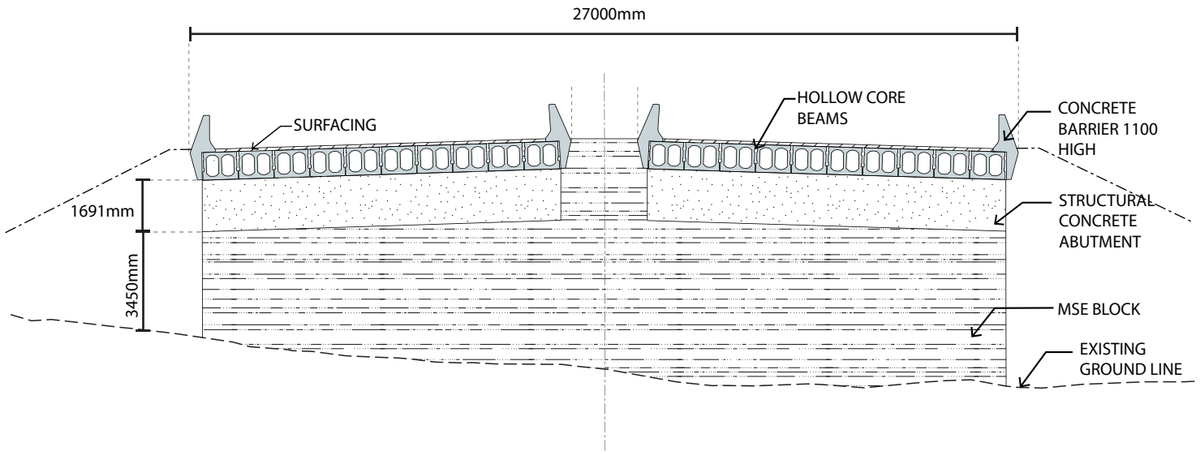
Design development

1. More detail provided for abutment treatment
2. No footpath constructed on the northern side of Mazengarb Road

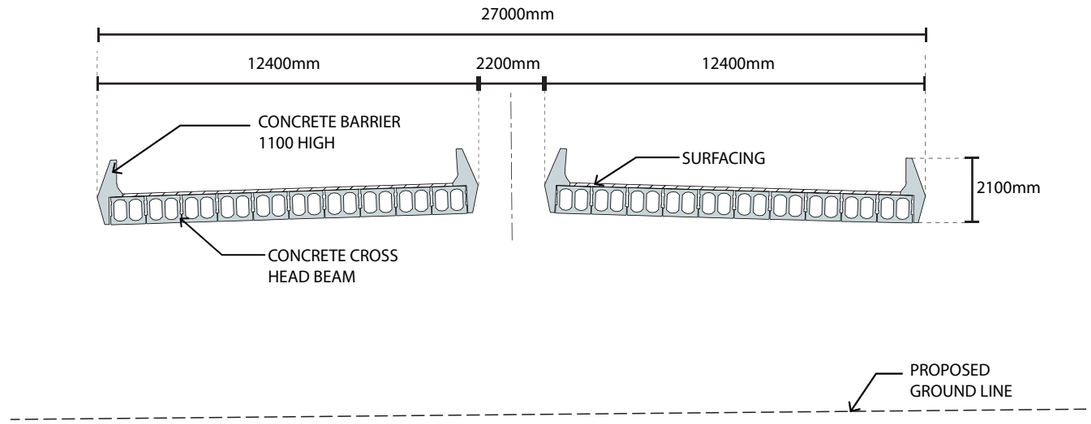
Rationale

1. Lack of abutment information in AEE phase. The bridge abutments tie in with and retain the proposed embankments. The abutment wing walls are designed as one long continuous element, they lead pedestrians though and under the bridge connecting one side to the other.
2. No existing footpath to tie in to on the northern side. Space provision for future footpath.

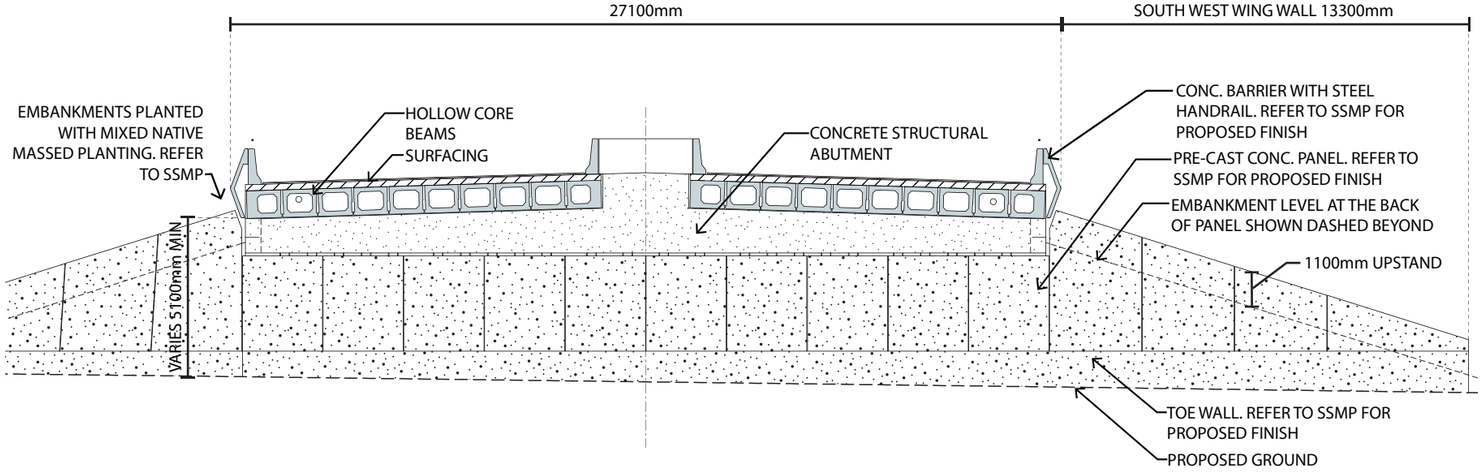
AEE Consented to DET Proposed Graphic Comparison



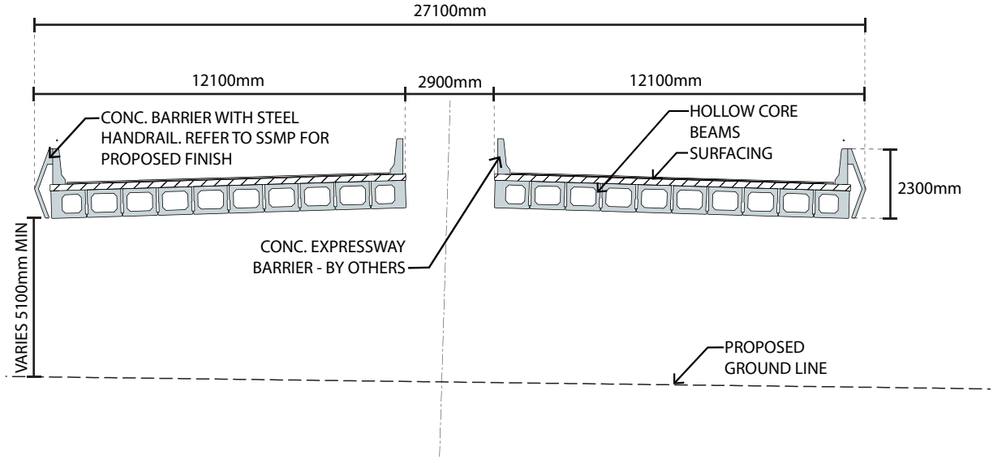
1. AEE SECTIONAL ELEVATION - MAZENGARB ROAD BRIDGE NORTH ABUTMENT - 1:200@A3



2. AEE SECTIONAL ELEVATION -MAZENGARB ROAD BRIDGE (LOOKING NORTH) - 1:200@A3



3. PROPOSED SECTIONAL ELEVATION - MAZENGARB ROAD BRIDGE NORTH ABUTMENT - 1:200@A3



4. PROPOSED SECTIONAL ELEVATION - MAZENGARB ROAD BRIDGE (LOOKING NORTH) - 1:200@A3

Design development

1. More information provided for the bridge abutment
2. Bridge concrete fascia panels removed from the inside of the bridge

Rationale

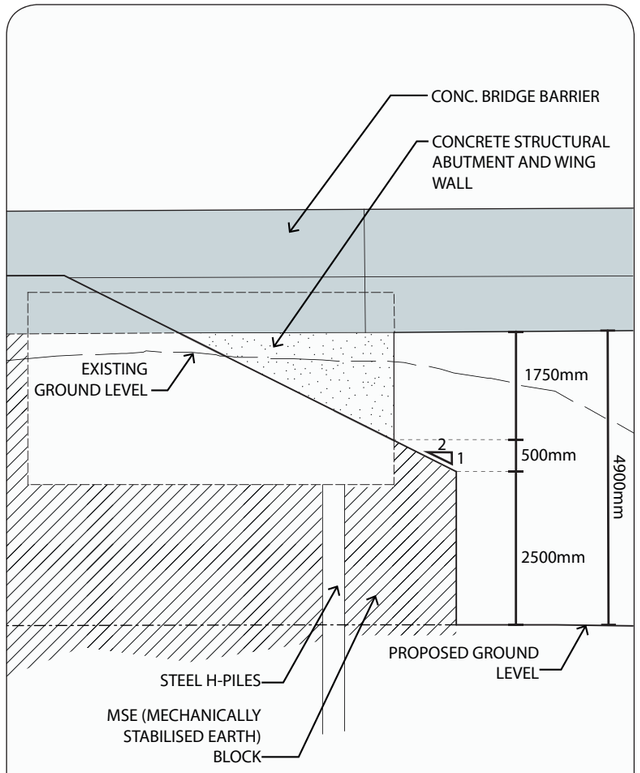
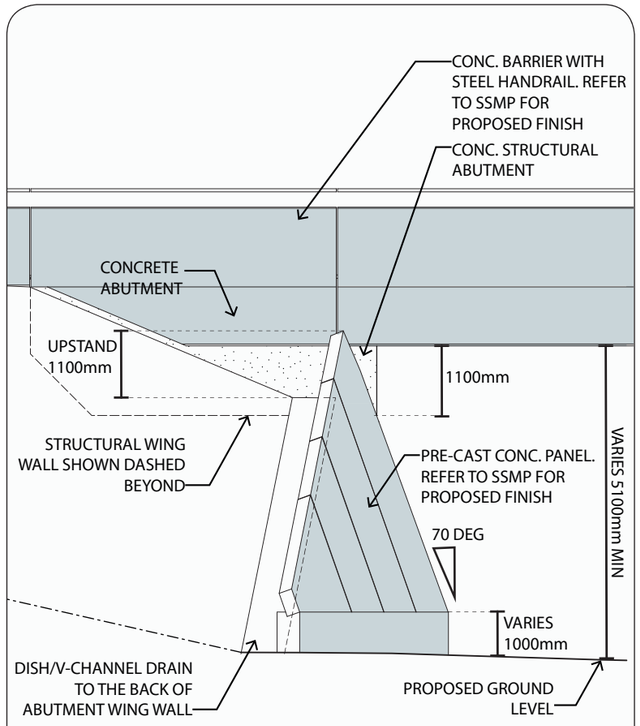
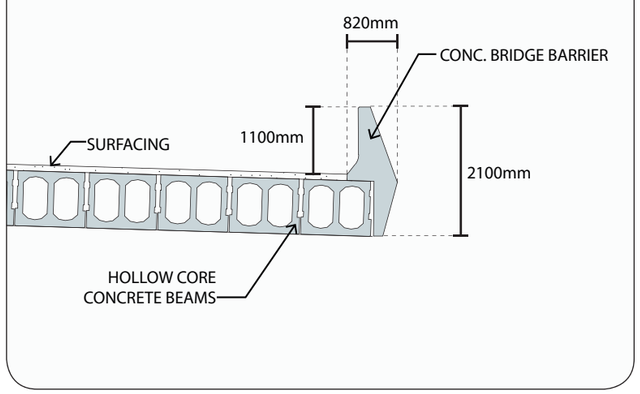
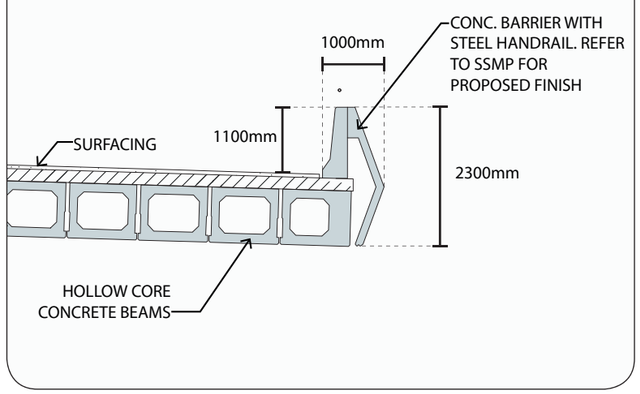
1. Lack of abutment information in AEE phase. The bridge abutments tie in with and retain the proposed embankments. The abutment wing walls are designed as one long continuous element, they lead pedestrians though and under the bridge connecting one side to the other.
2. Increase width of light shaft.

AEE Consented to DET Proposed Graphic Comparison

AEE VISUALISATION - MAZENGARB ROAD BRIDGE (NORTH WEST SIDE OF MAZENGARB LOOKING SOUTH EAST)

PROPOSED VISUALISATION - MAZENGARB ROAD BRIDGE (NORTH WEST SIDE OF MAZENGARB LOOKING SOUTH EAST)

Bridge Development Matrix

Elements	AEE Design	Current Design	Developments	Why?	ULDF Principles
Abutment Elevation 1:100@A3			1. More information provided for the bridge abutment 2. Spill through abutment angel reduced. 3. Handrail shown on top of barrier	1. Lack of abutment information in AEE phase. The bridge abutments tie in with and retain the proposed embankments. The abutment wing walls are designed as one long continuous element, they lead pedestrians though and under the bridge connecting one side to the other. 2. To be consistent with the proposed Otaihanga Road bridge, improve sightlines. 3. Missing from AEE. Safety requirement for cyclists using the expressway	1. Please refer to ULDF principles summary on sheet; 7 of this document. With particular reference to principle number; 1, 2, 3, 5, 8, 11 and 13
Cross Head & barrier junction 1:100@A3			1. Handrail shown on top of barrier 2. Bridge fascia panel height increased	1. Missing from AEE. Safety requirement for cyclists using the expressway. 2. Increase to the bridge deck depth.	1. Please refer to ULDF principles summary on sheet; 7 of this document. With particular reference to principle number 1, 2, 3, 4, 8 and 13

ULDF PRINCIPLES SUMMARY

ULDF principle	Assessment of ULDF principles
1. Make the bridges generally consistent in their form so they register as a 'family' and provide some visual continuity within the local environment	Proposed bridge form remains consistent with and has become even more so as there is less variation in bridge types from that shown in AEE. Accordingly there is enhanced consistency in the local environment.
2. Express the bridges as simple forms that sit across the changes in landscape and are not seen as strong statement in their own right	Proposed bridge form remains as in AEE. Mazengarb bridge is a visually simple structure that sits across the landscape as an horizontal element.
3. Unite the bridge elements of pier, cross head, deck and barrier as one sculptural form and ensure services are concealed from view	Proposed bridge form remains as in the AEE – has no piers and the form is generally consistent with other bridge forms – will appear as part of same family given the barrier/fascia panel form. There are no services elements or other extraneous protrusions below the bottom of the bridge fascia panels
4. Ensure the form of the bridges from the underside is visually appealing to recognise the primacy of the local roads user's experience in design consideration	Proposed bridge remains as in AEE. The abutment design leads the local road users (Pedestrian and vehicular) up to, beneath and then beyond the bridge space.
5. Design the intersection of the piers with the ground in concert with the local road interface design of abutment forms and materials (refer to local road interface design principles)	Proposed bridge remains as in AEE with no piers. The abutment form has been developed to better tie in with the proposed earthworks surrounding the bridge. The abutments provide for required sight lines for local road crossings by cyclists and walkers.
6. Light the spaces beneath local road over bridges to enhance the quality of the space including the use of natural light penetration where the local road has a higher frequency of pedestrian cycling and other non-vehicular users	There is lighting to be provided under the bridge to recognise the relatively high level of usage by cyclists, walkers and others. This lighting can be used to enhance the architectural forms. The split in the bridge deck, sloping abutment and no piers means there is some natural light penetration to the space beneath the bridge.
7. Use architectural lighting to emphasise the sculptural forms of the bridges and light units that are readily serviceable from the ground	Proposed bridge will be lit from beneath and objective will be to light the underside of the bridge deck
8. Utilise the opportunity provided by multiple bridges to make a system of parts that can be repeated at each location and improve efficiency of construction	Proposed bridge, as in the AEE, remains of the same systematised approach to allow repetition at other locations and improves the efficiency of construction.
9. Use textured finishes within the bridge elements surfaces' to provide a crafted finish – avoid printed forms	The proposed finish on the Mazengarb Road Bridge fascia panels will be fair faced concrete with a white wash, applied concrete coating to ensure colour and tonal uniformity between panels. The bridge abutment will be constructed with precast concrete panels with an inlaid Otaki pebble finish. The underside of the deck will be fair faced concrete without the applied white wash coating to help make these elements visually recessive relative to the barrier. Matt graffiti protection to be applied to all bridge elements surfaces. Refer to the SSMP for further detail on the proposed finishes.
10. Repeat the bridge design concepts within the design of pedestrians bridges recognising that these may be able to utilise lighter weight materials	Not relevant
11. Develop each bridge crossing design considering the piers types best suited to the location	Not relevant
12. Locate bridge piers associated with bridge watercourse crossings away from riparian edges to prevent need to armour stream edges	Not relevant
13. Ensure that the integrity and significance of the bridge forms as important to the amenity of the community is not accorded any less priority than the other design requirements of the project	Proposed bridge form at Mazengarb Road has seen the consideration of all the contributing factors of visual amenity, safe CWB crossing, structural design in high seismic zone, and constructibility.

MAZENGARB ROAD CROSSING - SIMULATION

NZ TRANSPORT AGENCY
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MacKays to Peka Peka
Wellington Northern Corridor

Appendix 4: LANDSCAPE SPECIFICATION

Site Specific Management Plan 004 - [Sectors 410-420]
MacKays to Peka Peka Expressway

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SEE SEPARATE A4 BOUND DOCUMENT.

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