Summary for Resource Consent Applications – Tauranga Northern Link

August 2017

Resource Consent Applications to the Bay of Plenty Regional Council for construction and operational activities

1. INTRODUCTION

1.1. The New Zealand Transport Agency (the Transport Agency) seeks to obtain resource consents from the Bay of Plenty Regional Council (BoPRC) to undertake construction and operational activities in association with the proposed Tauranga Northern Link Expressway (TNL).

1.2. The purpose of this report is to describe the proposal and to outline the resource consent requirements so that stakeholders and other interested parties can understand the proposal and its likely effects. It will be expanded and added to so as to form a full Assessment of Environmental Effects report which will be lodged with the resource consent applications.

2. PROJECT BACKGROUND

2.1. In the early 1990s, Transit NZ (now the Transport Agency) was considering highway bypasses for both Bethlehem and Te Puna due to the capacity problems on SH2. From these initial studies, a designation of the favoured corridor, being a new greenfields corridor to the south (and inland of the existing SH2) was approved in 2001. The designation is subject to conditions which require the TNL design to consider effects such as signage, noise, visual appearance, lighting and glare, public access along the Wairoa River and construction effects. The designated TNL is shown within the Tauranga City Plan and the Western Bay of Plenty District Plan as designations NZTA15 and D180 respectively.

3. SITE AND LOCALITY

3.1. The Tauranga Northern Link is a proposed 6.8km four-lane inland route extending from Loop Road (Te Puna) to the Takitimu Drive Toll Road (Tauranga). The specimen design for the route comprises a 26m wide highway pavement comprising 3.5m wide lanes, a variable 6m wide median (split by a wire-rope median barrier), and 3m wide shoulder (with wire-rope barriers separating the shoulder from drainage swales). A locality plan showing an overview of the TNL is provided as an attachment to this report.

3.2. From the northern connection of TNL to the existing SH2 alignment, the TNL is aligned generally to the south-east towards an interchange at Minden Road. Land uses within this area typically comprise a combination of open farmland and avocado orchards. At the Minden Road Interchange, the alignment straightens to cross the Minden Road Gully by way of either bridge crossing or culverted fill embankment to a terraced kiwifruit orchard south-east of the gully. The southern side of this bisected orchard is to be used as a large-scale borrow site to win fill material required for the TNL construction activities. The northern part of the orchard will continue in agricultural use.

3.3. From the orchard, the TNL crosses through Te Mete Road and across a valley basin before being cut under Wairoa Road. From Wairoa Road, the alignment immediately drops over a steep escarpment before entering the wide Wairoa River valley. The valley floor within this area acts as a flood plain for the Wairoa River. The Wairoa River is crossed via a proposed bridge structure with a minimum ground clearance of 4.6m.

3.4. After crossing the Wairoa River, the TNL crosses the eastern Wairoa River flood plain before climbing towards Cambridge Road. The TNL is to be cut under Cambridge Road. Cambridge Road marks a transition point as the semi-rural environment gives way to an urban landform. After crossing Cambridge Road, TNL turns and descends through a small valley system before connecting with Takitimu Drive.

Ecology

3.5. An ecological survey completed for the TNL has identified the presence of both indigenous and exotic fish species, including a number of 'at risk' fish species (i.e. inanga, redfin bully, longfin eel and giant kokopu) Within the TNL corridor, bird and bat surveys have further identified the presence of the 'at risk' black shag, New Zealand dabchick, North Island kaka and Long-tailed bat species.

3.6. Specific protocols are to be incorporated into an Indigenous Fish Management Plan (IFMP) to ensure that instream works activities include a hold point prior to de-watering/infilling of any channel section at which a fish trapping and transfer operation will be implemented to ensure that resident populations are relocated. This may include implementation of fyke nets, minnow traps or electric fishing for a set period prior to works to maximise capture and relocation of fish. The provisions of the IFMP will further be replicated within the Streamworks Management Plan.

3.7. While 'At Risk' bird species are not likely to be permanently present within the proposed project alignment, the potential loss of freshwater habitat, especially areas of open water and riparian vegetation, are likely to affect black shag and New Zealand dabchick. It is likely that during initial clearance works any birds that are present within the works area will be able to avoid direct affects through flying away from the construction zone and re-establish within adjacent habitat. The exception to this is during the nesting season when eggs, chicks or protective parents are unable or unwilling to vacate the construction zone. To mitigate for this, pre-construction surveys, nest and roost searches and incidental kill and harm minimisation protocols will be implemented under a Bird Management Plan prior to construction.

3.8. Habitat and night-time searches for lizards have revealed the presence of exotic and indigenous lizard species. A Lizard Management Plan will be implemented to manage the capture and translocation of lizards within the road footprint prior to road construction.

3.9. Long tail bats roost primarily in trees, selecting the oldest, tallest trees available. The bats are cavity roosting, selecting knot-holes high in tall large diameter trees. Trees of this description within the TNL alignment are limited as the trees are generally too young or unsuitable to be cavity trees. As such, the impact of the proposed road construction on the habitat quality and quantity of bats are considered to be minor and the risk of affecting bat roosting is low. A precautionary approach is however to be adopted when felling any large trees which could potentially comprise roost habitat for long tailed bats. Mortality of roosting bats during tree felling should be avoided by adherence to tree-felling protocols which will be incorporated into a proposed Bat Management Plan.

Geology

3.10. Geotechnical investigations have identified that there is a significant variation in site geology and subsoil materials throughout the alignment, ranging from volcanic ash (suitable for engineered fill) to very weak alluvial sediments (which are problematic to earthworks).

3.11. Through the four main terrace features, cuts of up to 23m dep are anticipated, while across the valley floors fill of up to 20m high are anticipated. Ground improvements to reduce post construction settlements are thus proposed in the areas of weak alluvial sediments, which are anticipated to comprise the construction of temporary pre-load embankments that consolidate the natural soils.

Contaminated land

3.12. A Preliminary Site Investigation for contaminated sites has identified a number of locations throughout the alignment where historic and present land use activities may have resulted in ground contamination. These include pesticide use by agricultural activities, landfills, mechanical and agricultural workshops, buildings which may contain asbestos materials and identified methamphetamine impacted dwellings. Each of the identified locations will be further investigated and a Remedial Action Plan developed to ensure any areas of contamination are appropriately dealt with.

Archaeology

3.13. The TNL project forms part of a larger pre-European Māori archaeological landscape. A total of 34 recorded archaeological sites are within or immediately adjacent to the designation corridor. There is a high probability that unrecorded archaeological sites will also be present within the TNL alignment. Recorded sites will be investigated and recorded prior to construction, whilst an accidental discovery protocol will be prepared to manage any unrecorded sites uncovered during construction.

4. SUMMARY OF CONSENTS SOUGHT

4.1. The Transport Agency seeks a comprehensive range of resource consents from the Bay of Plenty Regional Council for construction and operational activities in accordance with the proposed Tauranga Northern Link Expressway. In summary, the following consents are required from the Bay of Plenty Regional Council:

- A land use consent to undertake bulk earthworks, vegetation clearance and overburden placement;

- A land use consent to undertake contaminated land disturbance, remediation and disposal;
- A bed disturbance consent to install water intake structures;
- A water take consent to take and use groundwater;
- A water take consent to take and use surface water;
- A bed disturbance consent to drill within the bed of a watercourse;
- A land use consent to drill below the water table;
- A water use consent to discharge contaminants to land and water;
- A water use consent to divert and discharge sediment contaminated stormwater and surface water to land and water;
- A bed disturbance consent to install culverts;
- A bed disturbance consent to install discharge structures;
- A water use consent to divert surface water;
- A water use consent to divert groundwater; and
- A bed disturbance consent to erect structures over and within the bed of a watercourse.

4.2. Overall, the resource consents are a Discretionary Activity. The Transport Agency has notified the Bay of Plenty Regional Council of its intentions to seek approval to those resource consents under a publicly notified process.

5. DESCRIPTION AND ASSESSMENT OF ENVIRONMENTAL EFFECTS OF THE ACTIVITIES

5.1 Earthworks, vegetation clearance, overburden placement and contaminated land works

5.1.1. Construction of the TNL will comprise major earthworks through a variety of terrains and ecological environments for the formation of the road carriageway. Earthworks volumes required throughout the site have been estimated as comprising 3.1 million m^3 of cut, 2.8 million m^3 of fill (including 1.1 million m^3 of imported fill) and 0.9 million m^3 of surplus unsuitable disposal and/or landscaping fill. In general, earthworks will comprise the stripping of topsoil's and other organic plant material, followed by a series of cut and fill operations, overburden removal and disposal, and site reinstatement. Other ground and site preparation improvements will be necessary including pre-loading, wick drainage and undercutting, access tracking and temporary road relocations. Where the TNL passes through a large kiwifruit orchard adjacent to Te Mete Road, this area will be utilised as a borrow area, providing up to 500,000m^3 of structural fill. Cartage of material earthworked within the site is to be restricted to an internal haul road where possible. Imported fill will be transported to the site via the State Highway network and local roads.

5.1.2. In consideration of the scale and duration of the TNL earthworks, the potential for sediment effects to occur as a result of the site earthworks is considered to be significant. An Erosion and Sediment Control Plan (ESCP) will be implemented to manage these effects. The proposed erosion and sediment controls will be designed in general accordance with BoPRC's 'Erosion and Sediment Control Guidelines for Land Disturbing Activities, 2009 (TR: 2010/10)'. Another key component of the ESCP is establishment of a capable Sediment Control Team who will be focused on vigilant monitoring and maintenance of all erosion and sediment control devices

over the earthworks duration, particularly immediately preceding and following any major storm events to ensure optimal function of these devices.

5.1.3. A Dust Management Plan will also be developed to ensure that earthworks adjacent to identified sensitive receivers produce an objectionable dust nuisance. Examples of measures to be employed to avoid dust are the avoidance of stockpiles near dwellings or crops, managing internal haul road speed, stabilising haul routes and exposed surfaces immediately post earthworks, and establishing best practice controls including the use of water carts and dust suppressant agents.

5.1.4. Flocculant use is a common best practice method for maximising sediment treatment efficiencies on earthworks sites and is promoted within the BoPRC 2010/10 Guideline. The TNL project will thus use flocculants within sediment ponds to aggregate the suspended particles, and allowing the coagulated particles to be readily removed from the base of the sediment ponds into the site earthworks areas.

5.1.5. Examples of methods for erosion and sediment control to be implemented within the ESCP are as follows:

Perimeter bunding

Silt fencing

Sediment retention and treatment pond

Stabilised ground

Decanting earth bund

5.2 Culverts

5.2.1. TNL requires the installation of temporary culverts to establish initial construction access. Where possible those culverts will be placed in the location of the permanent culverts.

5.2.2. TNL also requires the installation of approximately 30 culverts to convey water from the road carriageway and watercourses after completion of the construction works. The location of the culverts are shown on the attached plans. Hydraulic investigations have sized the culverts to prevent backstream flooding and account for climate change impacts, while the design provides for armouring of embankments, wingwalls, fish passage and flow velocity dissipation.

5.2.3. A key aspect of the culvert installation activities is to minimise impacts upon aquatic ecology. A Streamworks Management Plan will thus be prepared to establish the procedures for the capture/transfer of any stranded fish from the redundant stream channel section prior to de-watering and either backfilling (off-line methodology) or pipe installation (on-line methodology). This will ensure that any stranded fish are actively searched for, captured and transferred to the downstream reaches thus avoiding direct impacts upon local fish communities within the works.

5.2.4. All culverts within the site will be installed with the pipe invert at the inlet and outlet embedded below the adjacent channel inverts to minimise potential erosion and scouring effects. For the majority of the culverts through the site where culverts are to be installed within low gradient channel reaches, this design feature in itself will also ensure that a depth of water is maintained within the pipes at all times allowing fish to swim through.

5.3 Surface water diversion

5.3.1. Construction of the TNL will require the temporary and permanent diversion of streams and flood waters. Stream diversions will be required during off-line installation of culverts resulting in temporary diversions, and permanent diversions where the alignment passes directly along stream channels. Additional to the stream diversions, placement of fill within

existing flood storage or floodplain locations displaces surface water flows within flood events, in particular across the Wairoa River floodplain and within the Takitimu Drive valley.

5.3.2. A Streamworks Management Plan is proposed to avoid the potential for erosion and sediment effects and effects on aquatic ecology during diversion of surface water bodies. That Plan will ensure a preference for undertaking stream diversion and associated works off-line, and to relocate fish species within the off-line area prior to works occurring. Diversion shall only occur once all new and worked streambank surfaces are stabilised. While immediate loss of existing aquatic habitat values will occur, these stream sections will typically be replaced with new stream reaches on a new alignment, with the new channel sections configured to replicate the aquatic habitat values of the existing streams; including by maintaining profile, relocation of streambed substrates and riparian planting.

5.4 Drilling below the water table and bridge piling activities

5.4.1. Drilling and piling activities, both below the water table and for the construction of the Minden Road Gully and Wairoa River Bridges will require use of various driven, steel top or bored piles. Alternative piling methods and underlying materials will determine the need for use of drilling fluids. Finished piling activities will typically be backfilled with concrete and reinforced steel to form the bridge structure foundations. During construction of the Wairoa River bridge, the installation of a off-line temporary bridge will be necessary to construct the Expressway bridge and for the movement of machinery and materials within the alignment.

5.4.2. Potential contamination effects associated with the drilling operations may occur through spillages or discharges of drilling fluids or other liquids where they may enter surface water or groundwater. Fluids are generally recycled by the drilling contractor and thus containment and management of materials is key to the operation. All other construction materials/liquids associated with the piling operations which pose a risk of contamination will be managed in accordance with best practice protocols including appropriate storage, containment and spill management which will be in accordance with a Construction Environmental Management Plan.

5.4.3. Potential aquifer effects associated with the drilling/piling operations include potential mixing of previously isolated aquifers creating a potential for aquifer contamination and potential effects on aquifer pressure/levels. The piling operations are expected to comprise driven piles with the potential for mixing between aquifers thus minimised by the immediate sealing effect of the steel pile tubes. Nonetheless, should a bored pile method be implemented, rapid backfilling with concrete and reinforcing steel to form the permanent pile will be implemented and thus any pressure effects that do occur will be of a temporary nature only.

5.4.4. During construction, disturbance of stream and riverbanks will present varying degrees of effects, in particular for vegetation removal, bridge abutments, embankments and temporary works platforms. An Ecological Assessment of Effects prepared for TNL has identified vegetation within those areas as not comprising significant ecological habitat and any loss will be remediated by the Transport Agency on completion of the works. Impacts on the river/ streambanks during the bridge construction phases will be mitigated through the adoption of best practice erosion and sediment controls. Implementation of those measures is necessary to prevent the scour of those river/ streambanks from stormwater and surface runoff and to avoid the deposition of silt materials within the waterways.

5.4.5. It is unavoidable that as part of the TNL public access from esplanade reserves either side of the Wairoa River banks, and use of the Wairoa River itself, will be restricted during the course

of the works. Effects on those users of the river will be managed during construction, although temporary restrictions will be required to ensure the maintained safety of those users by limiting their proximity to the works at certain stages of construction. These controls are to include installation of temporary signage upstream and downstream of the site to warn river users of construction activities and to advise users of any specific navigational safety restrictions (bridge piles, anchored barges, temporary bridge height restrictions etc.), including the installation of temporary lighting for night-time navigation through the works site.

5.5 Groundwater diversion and take

5.5.1. The TNL requires numerous large scale cuts throughout the site with the potential for some of the cuts to extend below groundwater levels resulting in the interception and drainage of groundwater flows. Groundwater take volumes are not known, being dependant on the depth of cuts, water table levels at the time of construction and whether water tables are encountered during excavations.

5.5.2. Potential for adverse groundwater effects arising from the depth and scale of cuts at ridgeline locations may result in reduced water levels and availability at nearby water bores, potential settlement effects due to consolidation of soils under existing structures, and the potential for the interception and diversion of groundwater which would have otherwise entered stream environs. The actual volume of the drawdown cannot be estimated prior to construction, however, based on the soil characteristics, a drawdown zone of interference has been estimated within a range of up to 70m from the toe of earthworks cuttings. Analysis of the area 70m from the toe of all cuttings has identified no consented water bores that may be affected by the activities. In consideration of buildings, the closest structures to the cuts are approximately 60m from the toe cuttings giving rise to potential settlement of the soils by 10mm. Such settlement is expected to have negligible effects on existing building structures.

5.6 Surface water take

5.6.1. TNL requires a large-scale surface water take to provide water for dust suppression, earthworks construction, pavement construction, concrete batching and the irrigation of re-vegetation and landscape plantings during the construction phase. Within the designation, the Wairoa River is considered to be the only reliable, large volume, sustainable water supply. As the TNL crosses the river near the lowest point of its catchment, and considering the flow rate of the river, the proposed take of up to 800m^3 per day will have little to no effect on river users or ecology. That is, analysis of the available water flow data for the Wairoa River has identified an average daily flow rate during summer periods of up to 302,400m^3. Considering the mean summer flow, the 800m^3 take sought is equivalent to 0.26% of that daily flow at the terminus of the catchment. Further, BoPRC has determined the available allocable flow volume remaining is equal to 1,210m3 per day, to which there is sufficient capacity to accommodate the 800m^3 temporary water take. For those reasons, it is considered the proposal will not result in adverse sustainability or allocation effects within the downstream reaches of the river.

5.6.2. Additional to this water take from the Wairoa River, a secondary water supply is proposed to occur from sediment control devices throughout the site, comprising intercepted groundwater and surface runoff flows. While those devices provide a more practical option for low volume takes, the supply during summer and other low runoff periods will limit their use.

5.6.3. Typical surface water take structures to be used are shown below:

Sediment pond intake structure

Surface water intake structure

5.7 Diversion and discharge of stormwater and surface runoff

5.7.1. Construction of the TNL will result in the creation of significant lengths of new pavement, resulting in the permanent generation of stormwater runoff. Runoff is proposed to be captured and conveyed within wetland treatment devices, treatment swales and extended detention drains to discharge points at adjacent water bodies. Systems are designed to cater to the 1% AEP flood flow event and to meet the Transport Agency's *Stormwater Treatment Standard for State Highway Infrastructure* (May 2010).

5.7.2. Effects of stormwater runoff from pavement surfaces are required to be managed to ensure water quality control (contaminants in stormwater) and water quantity control (flooding and hydrological change). In terms of water quality, the majority of the TNL runoff will be contained and treated within multi-functional wetland devices based on the configuration of the drainage characteristics. These devices further require minimal maintenance and provide for high rates of contaminant removal, reductions in flow velocities and promotion of biofiltration. Where residence wetlands are unable to be constructed, swales are included and designed to maximise residence times of contaminated water before discharge. The attached plans illustrate the location of wetlands and swale drains.

5.7.3. The creation of impervious surfaces within a catchment can result in the increase in stormwater peak flows, velocities, longer duration of high rates of runoff, and more runoff from smaller storms than would have occurred prior to land development. The approach to management of quantity effects is thus to size the majority of attenuation and treatment wetlands to manage up to the 100-year flood event. This level of attenuation is considered to mitigate any potential adverse increases in catchment flows from the TNL stormwater discharges which could contribute to increased downstream flooding effects and is consistent with the methods promoted through the Transport Agency Stormwater Standard. Additionally, the wetlands have been designed to incorporate the extended detention of catchment flows during the smaller channel forming flow events which could contribute to potential downstream channel erosion effects.

5.7.4. Lastly, an Operations and Maintenance Manual will be developed by the Transport Agency to outline specific monitoring and maintenance requirements for Contractors post construction to ensure the long-term effective function of the treatment devices.

5.8 Discharge structures

5.8.1. Discharge of concentrated, high velocity stormwater flows from discharge outfalls into watercourses creates the potential for adverse erosion effects. As described above, the majority of outlets will comprise constructed channels extending from the proposed stormwater management devices to enter the receiving watercourses as opposed to direct pipe outfalls. Nonetheless, all outlet structures will incorporate provision of headwall/apron structures and rock armour to prevent any adverse erosion/scour effects at these discharge points. Any discharge structures which do extend directly into the bed of a watercourse will comprise localised pipe/rock installations within stream areas and will be designed and installed to fit in to the existing stream bank profile. Armoured culverts and stream outfalls will be constructed as follows:

6. PLANS

6.1. A specimen design has been completed and demonstrates that the TNL can be constructed within the designation that can meet ecological, geotechnical and Transport Agency standards. The specimen design is shown on the attached plans. Note that the final design may differ as a result of unintended construction complications (earthworks, access, etc.) and may be subject to change prior to lodgement of the construction application with BoPRC.

6.2. The attached plans illustrate:

- alignment and expressway layout and connections;
- cuts;
- fill embankments;
- stormwater treatment wetlands;
- culverts; and
- structures.

100mm

SCALE FOR VALIDATING SIZE OF A3 PLOT ONLY

0

SH 2

Minden Road

Loop Road

Te Mete Road

Wairoa Road

Auckland

TAURANGA NORTHERN LINK (TNL)

Wairoa Road

N

KEY

- LEGAL BOUNDARY
- TNL DESIGNATION BOUNDARY
- ALTERATION TO DESIGNATION
- DESIGN CENTRELINE
- FILL BATTER
- CUT BATTER

Tauranga

Moffat Road

WAIROA RIVER

Cambridge Road

Takitimu Drive

N

	Date	Issue/revision detail	By	Chk	Appr
C	29.08.2017	DESIGNATION UPDATED	AB	CM	SGB
B	17.08.2017	REVISED ROAD DISCRIPTION	AB	CM	SGB
A	31.07.2017	FOR INFORMATION	CM	BH	SB

Designed: CM | Checked: BH
Drawn: ML | Approved: SB
mx model version: DESIGN OPT1 0.00

BLOXAM BURNETT OLLIVER
Phone 64-7-838 0144, Fax 64-7-839 0431

Client: NZ TRANSPORT AGENCY WAKA KOTAHI

Project: TAURANGA NORTHERN LINK

Drawing: GENERAL OVERVIEW PLAN

Status: FOR INFORMATION
Date: 31.07.2017
Scale (Original Size A3): A3=1:10,000
Drawing Number: 144700/00 /P /0100
Revision: C

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Version 2.04 – October 2013

100mm

SCALE FOR VALIDATING SIZE OF A3 PLOT ONLY

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KEY

- LEGAL BOUNDARY
- TNL DESIGNATION BOUNDARY
- ALTERATION TO DESIGNATION
- DESIGN CENTRELINE
- FILL BATTER
- CUT BATTER

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Version 2.04 – October 2013

100mm

SCALE FOR VALIDATING SIZE OF A3 PLOT ONLY

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TIES INTO EXISTING

PROPOSED RETAINING WALL

STATE HIGHWAY 2

TIES INTO EXISTING

LOOP ROAD

TAURANGA NORTHERN LINK

TIES INTO EXISTING

LIMIT OF WORKS

-37 0 50 100 150 200 250 300 350 400 450 500 550 600 650

JOINS BELOW

STORMWATER TREATMENT WETLAND

STORMWATER TREATMENT WETLAND

KEY

- LEGAL BOUNDARY
- DESIGNATION BOUNDARY
- ALTERATION DESIGNATION
- 1000 DESIGN CENTRELINE
- PROPOSED MARKINGS
- FILL BATTER
- CUT BATTER
- PROPOSED CULVERT

MINDEN ROAD

JOINS ABOVE

600 650 700 750 800 850 900 950 1000 1050 1100 1150 1200 1250 1300 1350 1400 1450 1500

MINDEN GULLY STREAM

STORMWATER TREATMENT WETLAND

JOINS SHEET 0162

TAURANGA NORTHERN LINK

MINDEN GULLY BRIDGE

SHARED PATH

PROPOSED RETAINING WALL

1:2500 (A3) 0 50 100 150m

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	Date	Issue/revision detail	By	Chk	Appr
C	29.08.2017	DESIGNATION UPDATED	AB	CM	SGB
B	17.08.2017	REVISED ROAD DISCRIPTION	AB	CM	SGB
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BLOXAM BURNETT OLLIVER
Phone 64-7-838 0144, Fax 64-7-839 0431

Client: NZ TRANSPORT AGENCY WAKA KOTAHI

Project: TAURANGA NORTHERN LINK

Drawing: TAURANGA NORTHERN LINK GENERAL OVERVIEW PLAN SHEET 1

Status: PRELIMINARY

Date: 15.08.2017 | Scale (Original Size A3): A3=1:2500

Drawing Number: 144700/00 /P /0161 | Revision: C

100mm

SCALE FOR VALIDATING SIZE OF A3 PLOT ONLY

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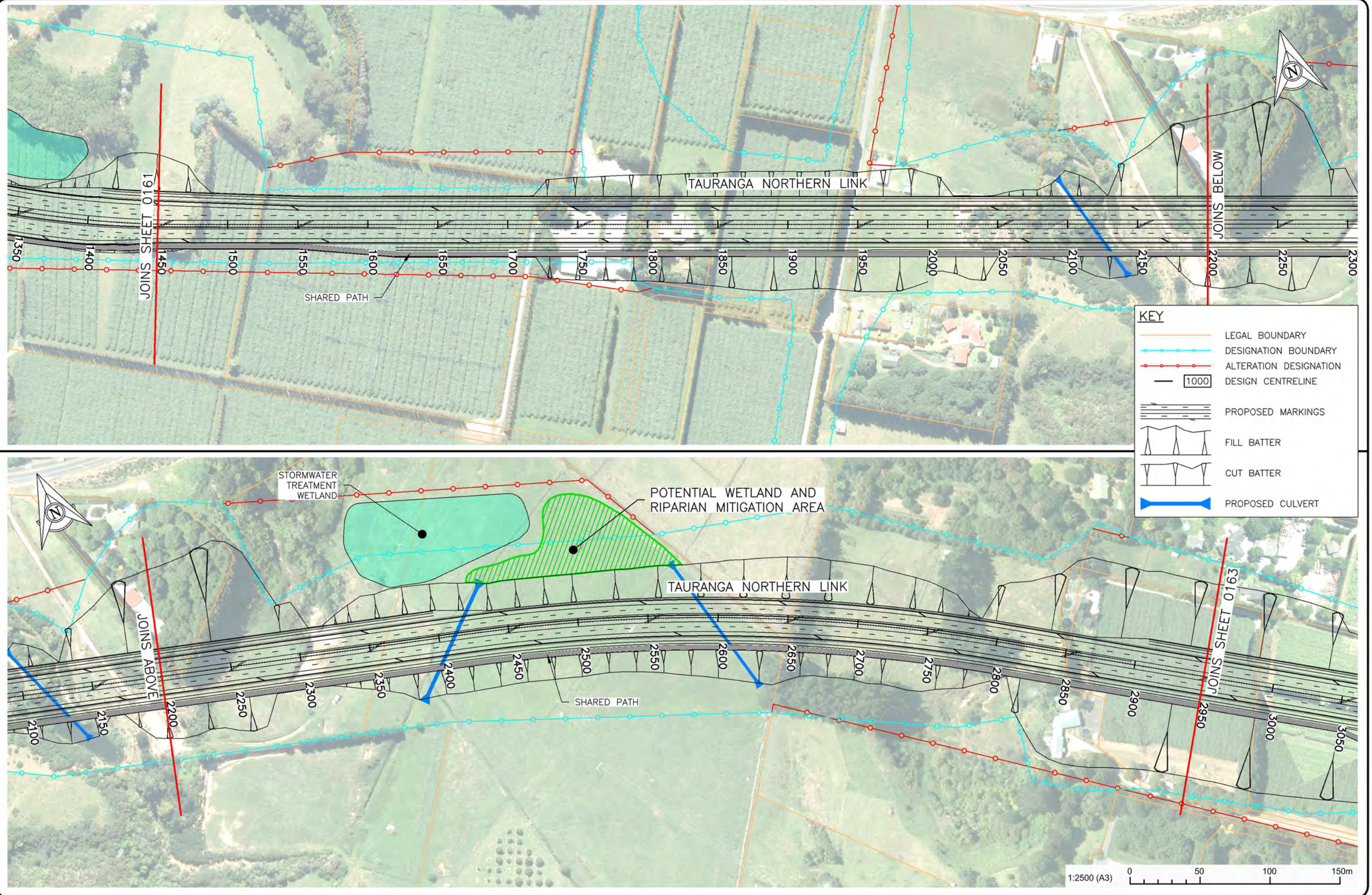

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						Designed: CM	Checked: BH
						Drawn: AHB	Approved: SB
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A	15.08.2017	FOR INFORMATION	AHB	CM	SGB		
	Date	Issue/revision detail	By	Chk	Appr		

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BLOXAM BURNETT OLLIVER
Phone 64-7-838 0144, Fax 64-7-839 0431

Client: NZ TRANSPORT AGENCY WAKA KOTAHI

Project: TAURANGA NORTHERN LINK

Drawing: TAURANGA NORTHERN LINK GENERAL OVERVIEW PLAN SHEET 2

Status: PRELIMINARY

Date: 15.08.2017

Scale (Original Size A3): A3=1:2500

Drawing Number: 144700/00 /P /0162

Revision: C

100mm

SCALE FOR VALIDATING SIZE OF A3 PLOT ONLY

0

WAIROA ROAD

JOINS SHEET 0162

JOINS BELOW

STORMWATER TREATMENT WETLAND

TAURANGA NORTHERN LINK

2850 2900 2950 3000 3050 3100 3150 3200 3250 3300 3350 3400 3450 3500 3550 3600 3650 3700 3750 3800

SHARED PATH

KEY

- LEGAL BOUNDARY
- DESIGNATION BOUNDARY
- ALTERATION DESIGNATION
- 1000 DESIGN CENTRELINE
- PROPOSED MARKINGS
- FILL BATTER
- CUT BATTER
- PROPOSED CULVERT

WAIROA RIVER

JOINS ABOVE

SHARED PATH

PROPOSED STREAM REALIGNMENT

JOINS SHEET 0164

TAURANGA NORTHERN LINK

3600 3650 3700 3750 3800 3850 3900 3950 4000 4050 4100 4150 4200 4250 4300 4350 4400 4450 4500

STORMWATER TREATMENT WETLAND

1:2500 (A3) 0 50 100 150m

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Drawing: TAURANGA NORTHERN LINK GENERAL OVERVIEW PLAN SHEET 3

Status: PRELIMINARY

Date: 15.08.2017 | Scale (Original Size A3): A3=1:2500

Drawing Number: 144700/00 /P /0163 | Revision: C

100mm

SCALE FOR VALIDATING SIZE OF A3 PLOT ONLY

0

JOINS SHEET 0163

TAURANGA NORTHERN LINK

SHARED PATH

MOFFAT ROAD

CAMBRIDGE ROAD

JOINS BELOW

HARRISON ROAD

CAMBRIDGE ROAD

4350 4400 4450 4500 4550 4600 4650 4700 4750 4800 4850 4900 4950 5000 5050 5100 5150 5200 5250 5300

KEY

- LEGAL BOUNDARY
- DESIGNATION BOUNDARY
- ALTERATION DESIGNATION
- 1000 DESIGN CENTRELINE
- PROPOSED MARKINGS
- FILL BATTER
- CUT BATTER
- PROPOSED CULVERT

CAMBRIDGE ROAD

JOINS ABOVE

SMITHS FARM ACCESS

SHARED PATH

STORMWATER TREATMENT WETLAND

SMITHS FARM ACCESS ROAD UNDERPASS

STORMWATER TREATMENT WETLAND

TAURANGA NORTHERN LINK

JOINS SHEET 0165

5100 5150 5200 5250 5300 5350 5400 5450 5500 5550 5600 5650 5700 5750 5800 5850 5900 5950 6000 6050

PROPOSED STREAM REALIGNMENT

STORMWATER TREATMENT WETLAND FOR FUTURE ADJACENT DEVELOPMENT

PROPOSED WETLAND AND RIPARIAN MITIGATION AREA

1:2500 (A3) 0 50 100 150m

C	29.08.2017	DESIGNATION UPDATED	AB	CM	SGB	
B	17.08.2017	REVISED ROAD DISCRIPTION	AB	CM	SGB	
A	15.08.2017	FOR INFORMATION	AHB	CM	SGB	
	Date	Issue/revision detail	By	Chk	Appr	

Designed: CM | Checked: BH
Drawn: AHB | Approved: SB
mx model version: DESIGN OPT1 0.00

BLOXAM BURNETT OLLIVER
Phone 64-7-838 0144, Fax 64-7-839 0431

Client: NZ TRANSPORT AGENCY WAKA KOTAHI

Project: TAURANGA NORTHERN LINK

Drawing: TAURANGA NORTHERN LINK GENERAL OVERVIEW PLAN SHEET 4

Status: PRELIMINARY
Date: 15.08.2017
Scale (Original Size A3): A3=1:2500
Drawing Number: 144700/00 /P /0164
Revision: C

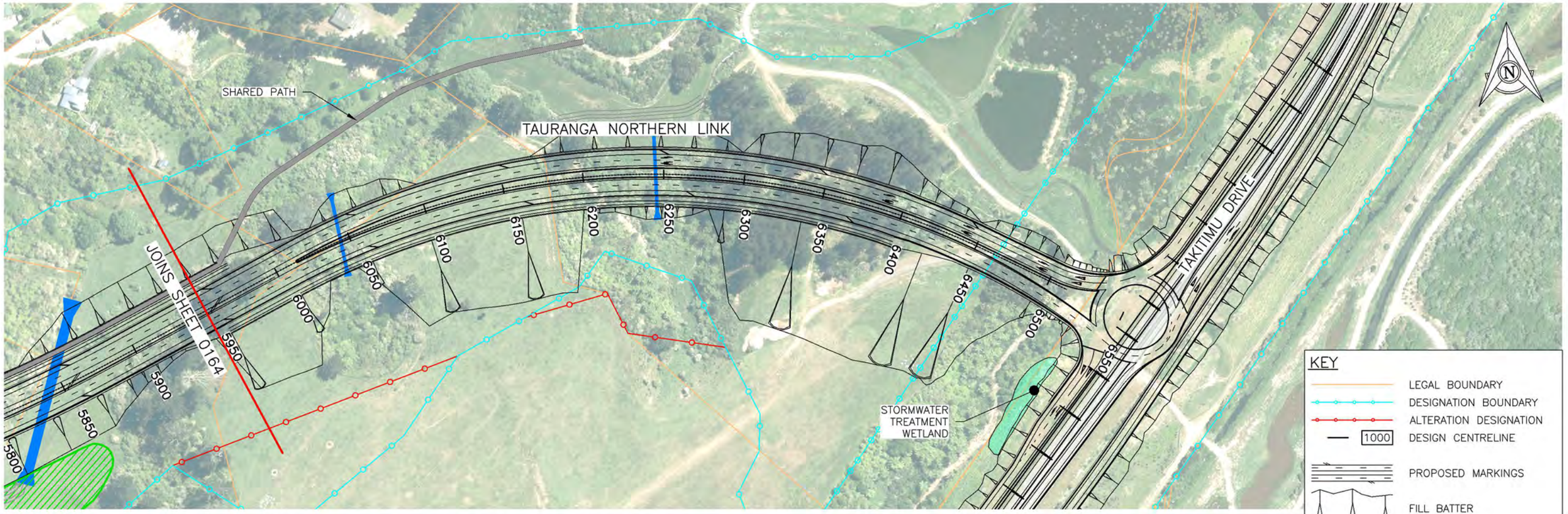
K:\144700 Tauranga Northern Link\Drawings\144700_00_0164.dwg 29/8/2017 2:59 p.m. dbolt

Version 2.04 – October 2013

100mm

SCALE FOR VALIDATING SIZE OF A3 PLOT ONLY

0



1:2500 (A3) 0 50 100 150m

K:\144700 Tauranga Northern Link\Drawings\144700_00_0165.dwg 29/8/2017 2:59 p.m. abolt

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Client: NZ TRANSPORT AGENCY WAKA KOTAHI

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Drawing: TAURANGA NORTHERN LINK
GENERAL OVERVIEW PLAN
SHEET 5

Status: PRELIMINARY

Date: 15.08.2017

Scale (Original Size A3): A3=1:2500

Drawing Number: 144700/00 /P /0165

Revision: C