FILE: 39370 New

Document Date: 08.04.2018

COPY OF CONDITIONS IMPOSED BY THE ENVIRONMENT COURT IN ITS DECISION ENV-2017-AKL-000134 DATED 08.04.2018

BAY OF ISLANDS VINTAGE RAILWAY TRUST, C/O BAY OF ISLANDS PLANNING SERVICES, PO BOX 795, KERIKERI 0245

To undertake the following activities associated with the construction and operation of a railway terminus at Colenso Triangle, Opua on Legal Road, Pt Sec 38 Blk V Russell SO, Sec 1,2 & 3 SO 375917 and Pt Lot 1 DP 183897 at and about location co-ordinates 1701050E 6090735N:

Note: All locations referred to in this document are expressed as Geodetic Datum 2000, New Zealand Transverse Mercator Projection.

AUT.039370.01.01	Earthworks (infilling) within a 3,200 square metre area of indigenous wetland.
AUT.039370.02.01	Land disturbance (earthworks) within a riparian management zone.
AUT.039370.03.01	Discharge stormwater to land and water from land disturbance activities.
AUT.039370.04.01	Divert stormwater associated with land disturbance activities.
AUT.039370.05.01	Erect portion of a railway terminus structure (a piled platform and veranda) in an indigenous wetland.

subject to the following conditions:

- The Consent Holder shall ensure that the works are constructed generally in accordance with the **attached** Haigh Workman. Limited drawings referenced as Northland Regional Council Plan Numbers 4756/1A and 4756/2A.
- 1A Disturbance of indigenous wetland vegetation as a result of the exercise of these consents shall be limited to within the footprint of the areas of fill, the platform and veranda identified on the **attached** Haigh Workman Limited drawing referenced as Northland Regional Council Plan Number 4756/1A.
- The Consent Holder shall notify the Council's assigned monitoring officer in writing of the date that earthworks are intended to commence, at least two weeks beforehand. The Consent Holder shall arrange for a site meeting between the Consent Holder's principal earthmoving contractor and the Council's assigned monitoring officer, which shall be held on site prior to any earthworks commencing. No works shall commence until the Council's assigned monitoring officer has completed the site meeting.

Advice Note: Notification of the commencement of works may be made by email to mailroom@nrc.govt.nz.



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- No earthworks shall be carried out between 1 May and 30 September in any year unless the prior written agreement of the Council's Compliance Manager has been obtained.
- The wetland area to be infilled and the area to be disturbed within the riparian management zone shall be provided with erosion and sediment control measures to minimise the discharge of sediment laden stormwater into the wetland and/or adjacent coastal marine area. The erosion and sediment control measures shall be constructed and maintained in accordance with the principles and practices contained within the Auckland Council document entitled "GD05: Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region". Where there are inconsistencies between any part of GD05 and the conditions of these consents, then the conditions of these consents shall prevail.
- The erosion and sediment controls referred to in Condition 4 shall be installed prior to the commencement of any earthworks (other than those required for the erosion and sediment controls) within the works area. The installation of all erosion and sediment controls shall be supervised by an appropriately qualified and experienced person(s).
- An Erosion and Sediment Control Plan (ESCP), which outlines the proposed erosion and sediment control measures to be implemented comply with Condition 4 of these consents, shall be provided to the Council's assigned monitoring officer, at least two weeks prior to the commencement of earthworks. The ESCP shall also outline the proposed works methodology (including piling for any structure) and proposed mitigation measures to minimise the potential for slope instability occurring. The activities authorised by these consents shall be undertaken in accordance with the ESCP.
- 7 The external face of the wetland infill area shall be adequately protected against erosion and sediment discharges by the use of rock or other long-term protection measures.
- No slash, soil, debris, and detritus associated with the exercise of these consents shall be placed in a position where it may be washed into a water body, and all felled trees and prunings shall be removed from the wetland area and disposed of at a site that is authorised to accept such material.
- All bare areas of land and fill not covered by the railway station building or rail siding, shall be covered with aggregate, or topsoiled and established with a suitable grass/legume mixture to achieve an 80% groundcover within three months of the completion of earthworks in each construction season. Temporary mulching or other suitable groundcover material shall be applied to achieve total groundcover of any areas unable to achieve the above requirements.
- The Consent Holder shall remove all unwanted materials and refuse from the consent area and disposed of at a site that is authorised to accept such material upon the completion of the works authorised by these consents.
- 11 Refuelling and servicing of machinery shall not be carried out in such a way that soil or water at the site is contaminated. Where an accidental spillage to land occurs, all contaminated soil shall be collected and disposed of at a site that is authorised to accept such material.
- The exercise of these consents shall not cause any of the following effects on the wetland water quality as measured at the railway culvert location at coordinates 1700889E 6090594N, compared to an upstream reference site located at or near location coordinates 1700892E 6090696N during the same sampling event:
 - (a) The production of any conspicuous oil or grease films, scums or foams, floatable or suspended materials, or emissions of objectionable odour.

- (b) An increase in suspended solids concentration greater than 100 grams per cubic metre.
- (c) pH outside the range 6.5 to 9.0 units.
- (d) A reduction in visual clarity of more than 40%, as measured using black disc method or a council approved alternative method.
- The Consent Holder shall, for the purposes of adequately monitoring these consents as required under Section 35 of the Act, on becoming aware of any contaminant associated with the Consent Holder's operations escaping otherwise than in conformity with these consents:
 - (a) Immediately take such action, or execute such work as may be necessary, to stop and/or contain such escape; and
 - (b) Immediately notify the Council by telephone of an escape of contaminant; and
 - (c) Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the escape; and
 - (d) Report to the Council's Compliance Manager in writing within one week on the cause of the escape of the contaminant and the steps taken or being taken to effectively control or prevent such escape.

In regard to telephone notification, during the Council's opening hours the Council's assigned monitoring officer for these consents shall be contacted. If that person cannot be spoken to directly, or it is outside of the Council's opening hours, then the Environmental Emergency Hotline shall be contacted.

Advice Note: The Environmental Emergency Hotline is a 24 hour, seven day a week, service that is free to call on 0800 504 639.

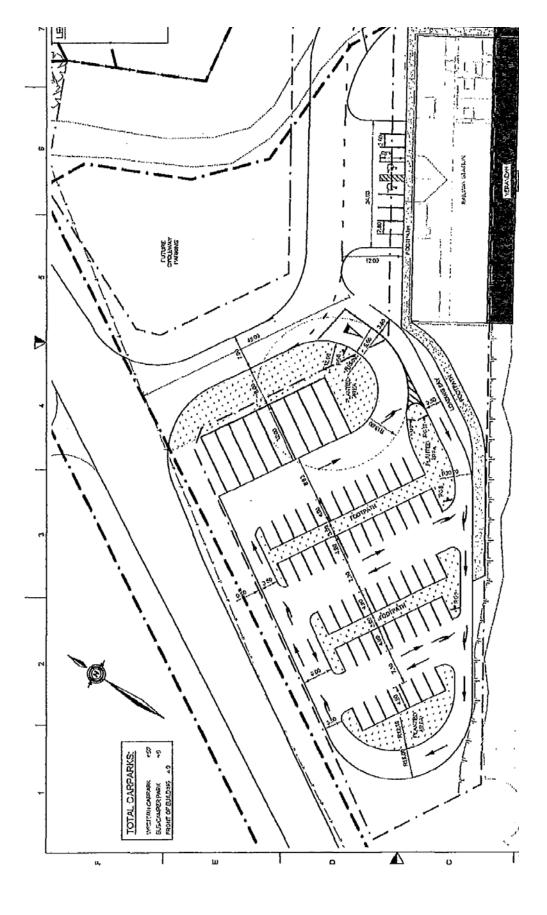
- In the event of archaeological sites or koiwi being uncovered, activities in the vicinity of the discovery shall cease. The Consent Holder shall contact Heritage New Zealand Pouhere Taonga. Work shall not recommence in the area of the discovery until the relevant Heritage New Zealand Pouhere Taonga approvals have been obtained.
- The Council may, in accordance with Section 128 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions annually during the month of April for anyone or more of the following purposes:
 - (a) To deal with any adverse effects on the environment that may arise from the exercise of these consents and which it is appropriate to deal with at a later stage; or
 - (b) To require the adoption of the best practicable option to remove or reduce any adverse effect on the environment; or

The Consent Holder shall meet all reasonable costs of any such review.

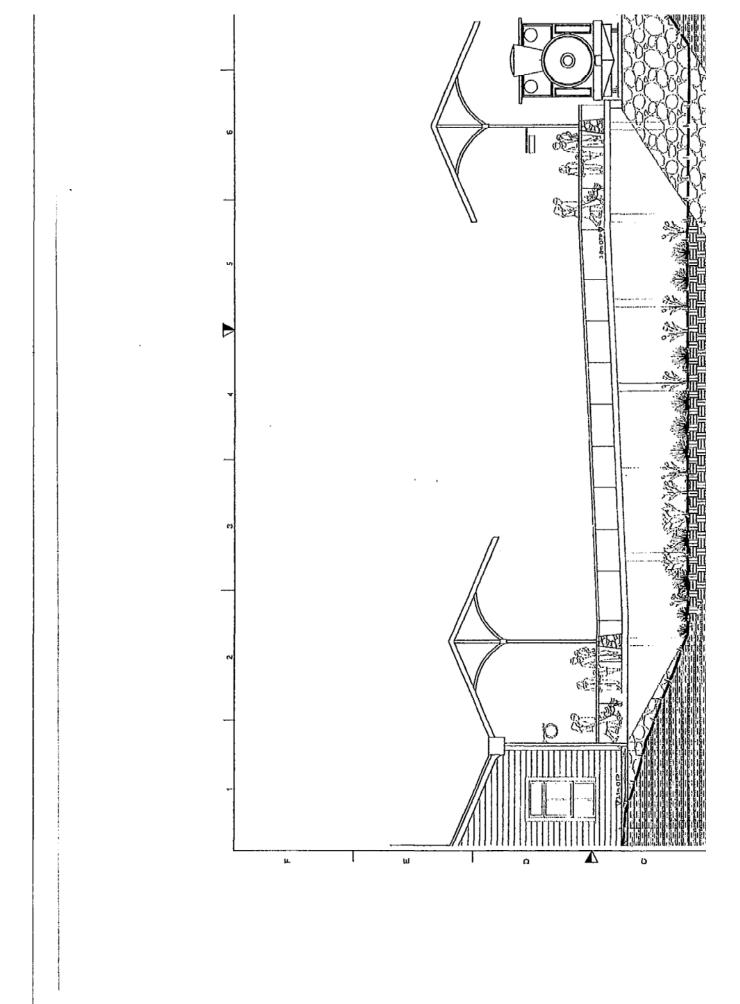
These consents shall not lapse until their expiry.

EXPIRY DATES: AUT.039370.01.01 (Infilling): IN PERPETUITY

All other Consents: 30 APRIL 2027



"A



BEFORE THE ENVIRONMENT COURT TE KOOTI TAIAO O AOTEAROA

IN THE MATTER

of the Resource Management Act 1991

AND

of an appeal under section 120 of the Act

BETWEEN

NGATI MANU, TE URI KARAKA & TE URI

O RAEWERA

ENV-2017-AKL-000134

Appellants

AND

FAR NORTH DISTRICT COUNCIL

First Respondent

AND

NORTHLAND REGIONAL COUNCIL

Second Respondent

Environment Judge D A Kirkpatrick sitting alone under s 279 of the Act In Chambers at Auckland

CONSENT ORDER

- [A] Under s 279(1)(b) of the Resource Management Act 1991, the Environment Court, by consent, orders that:
 - (1) the appeal is allowed subject to the amendments set out in this order;
 - (2) the appeal is otherwise dismissed.
- [B] Under s 285 of the Resource Management Act 1991, there is no order as to costs.



REASONS

Introduction

- [1] This appeal concerns the Council's decision to grant consent to the Bay of Island Vintage Railway Trust Inc to construct a railway terminus at Colenso Triangle Opua. The appellants' concern was that there would be adverse cultural effects on the wetland which is being reclaimed in part to accommodate the proposed railway building and terminus.
- The parties have now agreed that the appeal can be resolved by consent. The agreement reached involves repositioning the railway building further north so that it will sit on the ground and not over the wetland. The veranda to the south of the railway building will be connected to the platform by a narrow walkway over the wetland and access and parking have been realigned to accommodate the new location of the building.
- [3] In making this order the Court has read and considered the appeal and the memorandum requesting consent orders dated 7 March 2018.
- [4] The following parties have given notice of an intention to become parties under s 274 of the Act:
 - (a) Peter Clark;
 - (b) Janet Clark;
 - (c) Daniel Clark; and
 - (d) Far North Holdings Limited.
- [5] By email dated 13 February 2018, Peter, Janet and Daniel Clark withdrew their interest in the appeal.
- [6] The remaining parties to the appeal have signed the memorandum requesting consent orders setting out the relief sought.
- [7] The Court is making these orders pursuant to s 279(1)(b) of the Act, such order being by consent, rather than representing a decision or determination of the merits pursuant to s 297. The Court understands for present purposes that:



- (a) All parties to the appeal have signed the memorandum requesting consent orders except Peter, Janet and Daniel Clark who have withdrawn their interest; and,
- (b) All parties to the proceedings are satisfied that all matters proposed for the Court's endorsement fall within the Court's jurisdiction, and conform to relevant requirements and objectives of the Act, including in particular Part 2.

Order

- [8] Therefore, the Court orders the following, by consent:
- [9] The decisions of the Respondents are confirmed, subject to the following amendments:
 - (a) A new Concept Drawing OP2 Revision D dated 23/01/18 is to replace the earlier approved Concept Drawing as annexed hereto marked "A";
 - (b) In relation to the resource consent issued by the first respondent RC2170036, amended conditions are to replace the consented version, as annexed hereto marked "B"; and,
 - (c) In relation to the resource consents issued by the second respondent, amended conditions of consent are to replace the consented version as annexed hereto marked "C".
- [10] The appeal is otherwise dismissed.

[11] There is no order for costs.

DATED at Auckland this

day of Am7

2018.

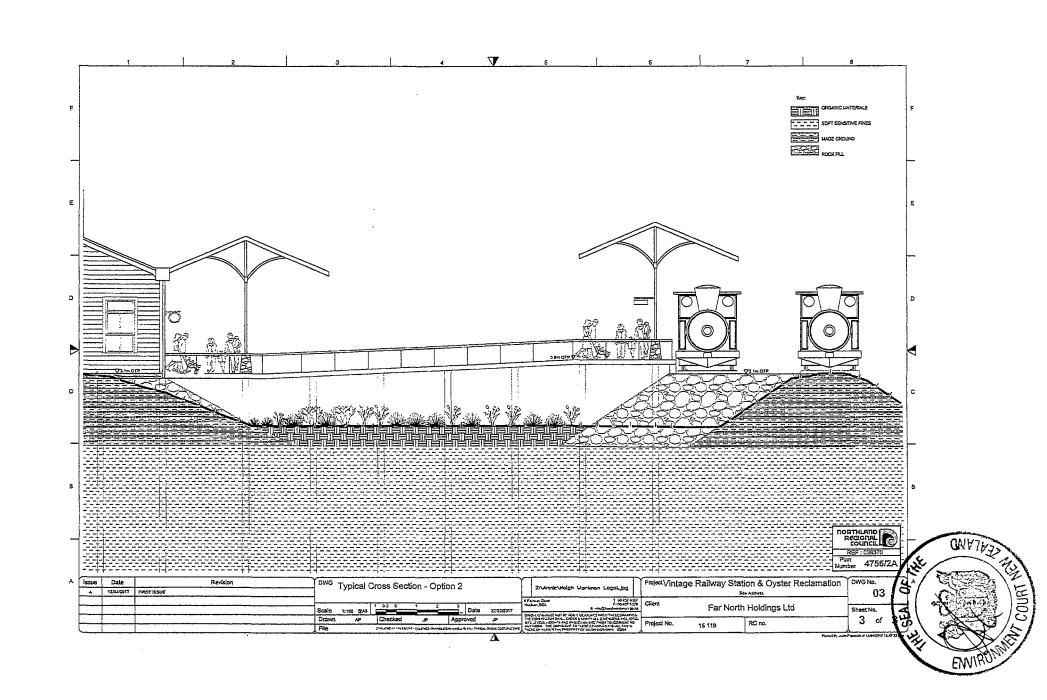
D A Kirkpatrick Environment Judge

EMINO MANAGEMENT OF THE PARTY O

Annexure A



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Annexure B



Appendix 2 Conditions-FarNorthDistrictCouncilConsents



Pursuant to section 108 of the Resource Management Act 1991, this consent is granted subject to the following conditions:

- 1. That the activity proceeds in accordance with plans and information provided within the application as prepared by Haigh Workman Limited, project number 15119 DWG No. OP1 dated 12/04/2017, OP2 Rev D dated 23/01/2018 and attached to this consent with the Council's "Approved Stamp" affixed to them, subject to any amendments required by the following conditions.
- 2. The consent holder shall submit plans and details of all works on legal road and works which are to vest in the Council for the certification of the Council prior to commencing construction. Such works shall be designed in accordance with the Council's current Engineering Standards and NZS4404:2004.
 - a. In particular the plans and details shall show:
 - i. The road to vest in the Council formed and sealed to comply with the Council standard for a Type B Rural Road standard.
 - ii. The realigned road sealed with a two coat (grade 3 and grade 5) chip seal.
 - iii. Road markings and street lighting on the roads to vest.
 - iv. The proposed stormwater control works to be in place prior to and during construction.
 - v. Permanent stormwater control structures proposed.
 - vi. A reticulated sanitary sewer system and pump station with a service connection to each lot.
 - vii. A reticulated water supply system with a metered connection to the site.
- 3. That, following certification of the plans and prior to the commencing any physical site works, a Construction Management Plan shall be submitted to and certified by the Council. The plan shall contain information on, and site management procedures, for the following:
 - a. The timing of construction works, including hours of work, key project and site management personnel.
 - b. The transportation of demolition and construction materials from and to the site and associated controls on vehicles through sign-posted site entrance/exits and the loading and unloading of materials.
 - c. The excavation works, including retaining structures and any necessary dewatering facilities, prepared by a suitably qualified geotechnical engineer.
 - d. Control of dust and noise on-site and any necessary avoidance or remedial measures.
 - e. Prevention of earth and other material being deposited on surrounding roads from vehicles and remedial actions should it occur.
 - f. Publicity measures and safety measures, including signage, to inform adjacent landowners and occupiers, pedestrians and other users or road.
 - g. An Erosion and Sediment Control Plan detailing measures to be in place for the duration of the works.

That all construction works on the site are to be undertaken in accordance with the approved Construction Management Plan required by condition 3.

- 5. Upon completion of the works, provide to the Council as-built plans complying with schedule 1D of NZS 4404:2004 and section 1.5.2.5 of the Council's Engineering Standards and Guidelines.
- 6. Upon completion of the works specified in condition(s) 2 5 above, provide certification of the work from a Chartered Professional Engineer (CPEng) that all work has been completed in accordance with the approved plans.
- 7. Prior to the commencement of the activity, provide suitable evidence, by way of certification and plans from a Chartered Professional Engineer (CPEng) or other suitably Independently Qualified Person (IQP), to illustrate that at least 67 on-site car parks and 9 bus parks plus associated manoeuvring areas have been formed, surfaced, and provided with adequate stormwater control.
- 8. Upon completion of the works on the State Highway and prior to the opening of the railway station the consent holder shall provide written confirmation to the Council that the following conditions, as outlined in the letter from New Zealand Transport Agency (NZTA) dated 24 March 2016, have been complied with:
 - a. The intersection at Beaufort Street and State Highway 11 shall be permanently closed, and replaced with a new vehicle crossing place constructed to a Planning Policy Manual (PPM) Dagram C standard to service the properties at 1, 2 and 2A Beaufort Street. This shall include:
 - i. Providing a 9 metre bell mouth radii on both sides of the crossing place.
 - ii. Sealing the access way to the boundary.
 - b. The consent holder shall trim road side vegetation along the AC vector at the proposed intersection to ensure a 139 metre Stopping Sight Distance (SSD) is achieved.
 - c. The proposed intersection shall be constructed to accommodate Austroads AUL(S) and CHR(S) treatment with Manual of Traffic Signs and Markings (MOTSAM) 3.25 road markings.
 - d. Crossing place 83 shall be relocated to a point opposite the proposed intersection, and constructed to a NZTA PPM Diagram C Standard.
 - e. A construction drawing, showing the full details of the proposed upgrade of the crossing place and the shoulder widening are to be forwarded to the NZTA's State Highway Network Manager, Opus International, for approval at least 15 working days prior to commencing any works on the State Highway.
 - f. The Consent holdershall advise the State Highway Network Manager, Opus International, the name(s) of the firm / persons who will be doing the works on the crossing place and associated works, and the time when it will be done, at least 10 working days prior to commencing works.
 - Advice Note 1: All works on the State Highway is to be carried out under an approved Traffic Management Plan (TMP) inaccordance with the latest version of the NZTA's Code of Practice for Traffic Management (CoPTIM).
 - Advice Note 2: The consent holder is advised of the necessity of obtaining certification and agreement from the NZTA to undertake the construction works in relation to the new intersection and Dagram C entrance and shoulder widening upgrade on the State Highway in terms of section 51 of the Government Reading Powers Act 1989. An application to that effect can be made to the Senior Asset Manager, Ed Varley, of NZTA. The NZTA will process the application within a reasonable time



frame. It is absolutely necessary that this approval and agreement form NZTA is obtained as a priority before commencing any upgrade works on the State Highway.

- 9. The consent holder shall obtain all necessary wastewater consents and install an internal sanitary sewer reticulation servicing the proposed development.
- 10. The consent holder shall provide to the Council a detailed landscape plan prepared by a suitably qualified and experienced landscape architect prior to the lodgement of any building consent for the railway terminus building. The landscape plan shall be consistent with Figure 4 contained in Appendix 3 of the attachments to the evidence of Simon Cocker dated April 2017. The landscape plan shall be certified by the Council's Duly Authorised Officer as fulfilling the requirements of this condition and shall include the following elements:
 - a. A schedule of species, plant grades, plant numbers, and planting density;
 - b. The final location of the proposed planted areas, any amenity paving, the wooden boardwalk, grassed areas, and the location and type of any street furniture;
 - c. The means and methods for implementing the proposed landscaping, including details of topsoil depths, staking, and mulching plants;
 - d. The means and methods for maintaining the proposed landscaping for a minimum of three further planting seasons or three years whichever is the longer;
 - e. A weed eradication plan and replacement planting program;
 - f. All native plants shall be eco-sourced from the northern part of the Whangaruru Ecological District, or the southern part of the Kerikeri Ecological District;
 - g. All landscaping shall be completed within six months of the final building consent inspection and maintained in perpetuity thereafter to the methodology specified in the approved landscape plan and;
 - h. The planting shall be maintained for an initial monitoring period of three years to ensure successful establishment. Thereafter the planting shall be maintained in perpetuity.
- 11. In the event of archaeological sites or kowi being uncovered, activities in the vicinity of the discovery shall cease and the consent holder shall contact Heritage New Zealand Pouhere Taonga and local wi. Work shall not recommence in the area of the discovery until the relevant Heritage New Zealand Pouhere Taonga approval has been obtained.
 - Advice Note: The Heritage New Zealand Pouhere Taonga Act 2014 makes it unlawful for any person to destroy, damage or modify the whole or any part of an archaeological site without the prior authority of Heritage New Zealand Pouhere Taonga.
- 12. Prior to the commencement of any works on site, the consent holder shall provide a Construction Traffic Management Plan, prepared in consultation with the New Zealand Transport Agency and the Northland Regional Council, which shall include, but not by way of limitation, specific details relating to avoiding, remedying or mitigating any adverse effects of:
 - a. Proposed numbers and timing of truck movements throughout the day and the proposed routes including the identification of heavy vehicle routes.

Safe and clear pedestrian access and thoroughfare on roads and footpaths in proximity to the site.



- c. Construction traffic on local residents by avoiding traffic movements before 7.00 a.m. and after 8.00 p.m.
- 13. Any construction noise shall comply with the NZ Standard NZS 6803: 1999 "Acoustic Construction Noise."
- 14. Sound levels shall be measured in accordance with New Zealand Standard NZS6801: 2008 Acoustics Measurement of Environmental Sound, and assessed in accordance with NZS6802: 2008 Acoustics-Environmental noise.
- 15. Prior to the operation of the railway terminus, the consent holder shall provide an "Ecological Restoration Plan" prepared by a suitably qualified and experienced ecologist that outlines the ecological restoration proposed for the remaining wetland to the west of the railway station building. The Ecological Restoration Plan shall be certified by the Council's Duly Authorised Officer as fulfilling the requirements of this condition and shall include the following elements / details:
 - a. The removal of the infestation of weed species on the landward side of the wetland beyond the railway building and its replacement by appropriate riparian native species.
 - b. On the seaward side of the wetland beyond the railway building, the removal of any weed species and replacement by appropriate native plantings to augment the existing native vegetation on the ralway embankment.
 - c. In the lower section of the wetland leading to the culvert beneath the railway, planting of the small area of grass which sits within the wetland with appropriate riparian species.
 - d. Means to protect the large totara tree and its root system at the entrance to the site during any construction works.
 - e. Details of a predator control programme around the vicinity of the development designed to ensure any predator impacts on the sustainability of banded rail and fernbird (and other wildlife) are avoided to the greatest extent practicable.
 - f. Details of the monitoring programme for the weed control and predator control for an initial period of three years.
- 16. During the operation of the railway terminus, the consent holder shall ensure that all measures outlined in the certified Ecological Restoration Plan required to be prepared by condition 15 shall be implemented to the satisfaction of the Council's Duly Authorised Officer on an ongoing basis.
- 17. In accordance with section 128 of the Resource Management Act 1991, Council may serve notice on the consent holder of its intention to review the conditions of this consent six months following the commencement of the activity and in one year intervals thereafter. The review will be for the purpose of dealing with any adverse effects on the neighbouring/surrounding environment not currently mitigated through the conditions of consent and which may arise from the exercise of the consent and/or is appropriately dealt with at a later stage or to require the consent holder to adopt the best practicable option to remove or reduce any adverse effects on the environment.

This condition will allow Council to have particular regard to the on-going management of the activity to ensure that it is carried out in the manner described in the application and in a manner that does not result in any more than minor adverse effects in the locality.



- The application includes no details of any proposed signage for the Vintage Railway Station. Any signage proposed will need to comply with the relevant provisions of the Far North District Plan, or alternatively obtain any necessary resource consents if compliance cannot be demonstrated.
- 2 This resource consent will lapse five years after the date of commencement of this consent (being the date of this decision) unless:
 - It is given effect to before the end of that period; or
 - An application is made to Council to extend the period after which the consent lapses, and such application is granted prior to the lapse of consent. The statutory considerations which apply to extensions are set out in Section 125 of the Resource Management Act 1991.
- 3. A copy of this consent should be held on site at all times during the establishment and construction phase of the activity.
- 4. The Consent Holder shall pay all charges set by Council under Section 36 of the Resource Management Act 1991, including any administration, monitoring and supervision charges relating to the conditions of this resource consent. The Consent Holder will be advised of the charges as they fall.
- 5. All archaeological sites are protected under the provisions of the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence under that act to modify, damage or destroy any archaeological site, whether the site is recorded or not. Application must be made to Heritage New Zealand Pouhere Taonga for an authority to modify, damage or destroy an archaeological site(s) where avoidance of effect cannot be practised.

SUBDIVISION

SEAL OF

- 1. The subdivision shall be carried out in accordance with the approved plan of subdivision prepared by Williams and King Registered Land Surveyors, Planners & Land Development Consultants, referenced "Proposed Road Realignment, Beaufort Street & Pt Section 38, BLK V RUSSELL SD & SEC \$ 1 & 3 SO 375917", dated July 2016, and attached to this consent with the Council's "Approved Stamp" affixed to it.
- 2. The survey plan, submitted for approval pursuant to Section 223 of the Act shall show:
 - (a) Sec 1 as "Land to be acquired for road", and Sec 2 as "Road to be stopped".
- 3. Prior to the approval of the survey plan, provide for the Council's approval a preferred road name and two alternative road names for the new road to vest. The consent holder shall also provide evidence of consultation with the existing users of Beaufort Street as to the preferred road name(s).
 - Advice Note: The consent holder is advised that in accordance with Community Board policy, road names should reflect the history of the area.
- 4. Prior to the issuing of a certificate pursuant to Section 224(c) of the Act, the consent holder shall:
 - a. Submit plans & details of all works on legal road and works which are to vest in the Council for the certification of the Council prior to commencing construction. Such works shall be designed inaccordance with the Council's current Engineering Standards and NZS4404:2004.
 - i. In particular the plans and details shall show:

- The road to vest in Council formed and sealed to comply with the council standard for a Type B Rural Road standard.
- The realigned road sealed with a 2 coat (grade 3 and grade 5) chip seal.
- Road markings and street lighting on the roads to vest.
- The proposed stormwater control works to be in place prior to and during construction.
- Permanent stormwater control structures proposed.
- A reticulated sanitary sewer system and pump station with a service connection to each bt.
- A reticulated water supply system with a metered connection to the site.
- b. Following certification of the plans and prior to the commencing any physical site works, a construction management plan shall be submitted to and approved by the Council. The plan shall contain information on, and site management procedures, for the following:
 - i. The timing of building demolition and construction works, including hoursofwork, key project and site management personnel.
 - ii. The transportation of demolition and construction materials from and to the site and associated controls on vehicles through sign-posted site entrance/exits and the loading and unloading of materials.
 - iii. The excavation works, including retaining structures and any necessary dewatering facities, prepared by a suably quafied geotechnical engineer.
 - iv. Control of dust and noise on-site and any necessary avoidance or remedial measures.
 - v. Prevention of earth and other material being deposited on surrounding roads from vehicles and remedial actions should it occur.
 - vi. Publicity measures and safety measures, including signage, to inform adjacent landowners and occupiers, pedestrians and other users or Road.
 - vii. An Erosion and Sediment Control Plan detailing measures to be in place for the duration of the works.
- c. Provide to the Council as-built plans complying with schedule 1D of NZS 4404:2004 and section 1.5.2.5 of Councils Engineering Standards and Guidelines.
- d. Upon completion of the works specified in conditions above, provide certification of the work from a Chartered Professional Engineer (CPEng) that all work has been completed in accordance with the approved plans.
- e. The consent holder shall provide written confirmation that the following conditions as outlined in the letter from New Zealand Transport Agency (NZTA) dated 24 March 2016 have been complied with:
 - The intersection at Beaufort Street and State Highway 11 shall be permanently closed, and replaced with a new vehicle crossing place constructed to a Planning Policy Manual (PPM) Diagram C standard to service the properties at 1 and 2A Beaufort Street. This will include:



- Providing 9 metre bell mouth radii on both sides of the crossing pace.
- · Sealing the access way to the boundary.
- ii. The consent holder shall trim road side vegetation along the AC vector at the proposed intersection to ensure a 139 metre Stopping Sight Distance (SSD) is achieved.
- iii. The proposed intersection shall be constructed to accommodate Austroads AUL(S) and CHR(S) treatment with Manual of Traffic Signs and Markings (MOTSAM) 3.25 road markings.
- iv. Crossing place 83 shall be relocated to a point opposite the proposed intersection, and constructed to a NZTA PPM Diagram C Standard.
- v. A construction drawing, showing the full details of the proposed upgrade of the crossing place and the shoulder widening are to be forwarded to the NZTA's State Highway Network Manager, Opus International, for approval at least 15 working days prior to commencing any works on the State Highway.
- vi. The Consent holder is to advise the State Highway Network Manager, Opus International, the name(s) of the firm / persons who will be doing the works on the crossing place and associated works, and the time when it will be done, at least 10 working days prior to commencing works.
- Advice Note 1: All works on the State Highway is to be carried out under an approved Traffic Management Plan (TMP) inaccordance with the latest version of the NZTA's Code of Practice for Traffic Management (CoPTTM).
- Advice Note 2: The consent holder is advised of the necessity of obtaining certification and agreement from NZTA to undertake the construction works in relation to the new intersection and Diagram C entrance and shoulder widening upgrade on the State Highway in terms of section 51 of the Government Roading Powers Act 1989. AN application to that effect can be made to the Senior Asset Manager, Ed Varley, of NZTA. The NZTA will process the application within a reasonable time frame. It is absolutely necessary that this approval and agreement form NZTA is obtained as a priority before commencing any upgrade works on the State Highway.



Annexure C



Changes are shown as strike through, and underscored and bolded text.

BAY OF ISLANDS VINTAGE RAILWAY TRUST, C/O BAY OF ISLANDS PLANNING SERVICES, PO BOX 795, KERIKERI 0245

To undertake the following activities associated with the construction and operation of a railway terminus at Colenso Triangle, Opua on Legal Road, Pt Sec 38 Blk V Russell SD, Sec 1,2 & 3 SO 375917 and Pt Lot 1 DP 183897 at and about location co-ordinates 1701050E 6090735N:

Note: All locations referred to in this document are expressed as Geodetic Datum 2000, New Zealand Transverse Mercator Projection:

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AUT.039370.04.01	Divert stormwater associated with land disturbance activities.	
AUT.039370.05.01	Erect portions of a railway terminus structure (a piled platform and veranda) in an indigenous wetland.	

subject to the following conditions:

- The Consent Holder shall ensure that the works are constructed generally in accordance with the **attached** Haigh Workman Limited drawings referenced as Northland Regional Council Plan Nos. 4756/1 and 4756/2 Numbers 4756/1A and 4756/2A.
- 1A Disturbance of indigenous wetland vegetation as a result of the exercise of these consents shall be limited to within the footprint of the areas of fill, the platform and veranda identified on the attached Haigh Workman Limited drawing referenced as Northland Regional Council Plan Number 4756/1A.
- The Consent Holder shall notify the Council's assigned monitoring officer in writing of the date that earthworks are intended to commence, at least two weeks beforehand. The Consent Holder shall arrange for a site meeting between the Consent Holder's principal earthmoving contractor and the Council's assigned monitoring officer, which shall be held on site prior to any earthworks commencing. No works shall commence until the Council's assigned monitoring officer has completed the site meeting.

Advice Note: Notification of the commencement of works may be made by email to mailroom@nrc.govt.nz.



- No earthworks shall be carried out between 1 May and 30 September in any year unless the prior written agreement of the Council's Compliance Manager has been obtained.
- The wetland area to be infilled and the area to be disturbed within the riparian management zone shall be provided with erosion and sediment control measures to minimise the discharge of sediment laden stormwater into the wetland and/or adjacent coastal marine area. The erosion and sediment control measures shall be constructed and maintained in accordance with the principles and practices contained within the Auckland Council document entitled "GD05: Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region". Where there are inconsistencies between any part of GD05 and the conditions of these consents, then the conditions of these consents shall prevail.
- The erosion and sediment controls referred to in Condition 4 shall be installed prior to the commencement of any earthworks (other than those required for the erosion and sediment controls) within the works area. The installation of all erosion and sediment controls shall be supervised by an appropriately qualified and experienced person(s).
- An Erosion and Sediment Control Plan (ESCP), which outlines the proposed erosion and sediment control measures to be implemented comply with Condition 4 of these consents, shall be provided to the Council's assigned monitoring officer, at least two weeks prior to the commencement of earthworks. The ESCP shall also outline the proposed works methodology (including piling for any structure) and proposed mitigation measures to minimise the potential for slope instability occurring. The activities authorised by these consents shall be undertaken in accordance with the ESCP.
- The downstream external face of the wetland infill area shall be adequately protected against erosion and sediment discharges by the use of rock or other long-term protection measures.
- No slash, soil, debris, and detritus associated with the exercise of these consents shall be placed in a position where it may be washed into a water body, and all felled trees and prunings shall be removed from the wetland area and disposed of at a site that is authorised to accept such material.
- All bare areas of land and fill not covered by the railway station building or rail siding, shall be covered with aggregate, or topsoiled and established with a suitable grass/legume mixture to achieve an 80% groundcover within three months of the completion of earthworks in each construction season, whichever is the sooner. Temporary mulching or other suitable groundcover material shall be applied to achieve total groundcover of any areas unable to achieve the above requirements.
- The Consent Holder shall remove all unwanted materials and refuse from the consent area and disposed of at a site that is authorised to accept such material upon the completion of the works authorised by these consents.
- Refuelling and servicing of machinery shall not be carried out in such a way that soil or water at the site is contaminated. Where an accidental spillage to land occurs, all contaminated soil shall be collected and disposed of at a site that is authorised to accept such material.

The exercise of these consents shall not cause any of the following effects on the wetland water quality as measured at the railway culvert location at coordinates

1700889E 6090594N, compared to an upstream reference site located at or near location coordinates 1700892E 6090696N during the same sampling event:

- (a) The production of any conspicuous oil or grease films, scums or foams, floatable or suspended materials, or emissions of objectionable odour.
- (b) An increase in suspended solids concentration greater than 100 grams per cubic metre.
- (c) pH outside the range 6.5 to 9.0 units.
- (d) A reduction in visual clarity of more than 40%, as measured using black disc method or a council approved alternative method.
- The Consent Holder shall, for the purposes of adequately monitoring these consents as required under Section 35 of the Act, on becoming aware of any contaminant associated with the Consent Holder's operations escaping otherwise than in conformity with these consents:
 - (a) Immediately take such action, or execute such work as may be necessary, to stop and/or contain such escape; and
 - (b) Immediately notify the Council by telephone of an escape of contaminant; and
 - (c) Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the escape; and
 - (d) Report to the Council's Compliance Manager in writing within one week on the cause of the escape of the contaminant and the steps taken or being taken to effectively control or prevent such escape.

In regard to telephone notification, during the Council's opening hours the Council's assigned monitoring officer for these consents shall be contacted. If that person cannot be spoken to directly, or it is outside of the Council's opening hours, then the Environmental Emergency Hotline shall be contacted.

Advice Note: The Environmental Emergency Hotline is a 24 hour, seven day a week, service that is free to call on 0800 504 639.

- In the event of archaeological sites or koiwi being uncovered, activities in the vicinity of the discovery shall cease. The Consent Holder shall contact Heritage New Zealand Pouhere Taonga. Work shall not recommence in the area of the discovery until the relevant Heritage New Zealand Pouhere Taonga approvals have been obtained.
- The Council may, in accordance with Section 128 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions annually during the month of April for any one or more of the following purposes:
 - (a) To deal with any adverse effects on the environment that may arise from the exercise of these consents and which it is appropriate to deal with at a later stage; or
 - (b) To require the adoption of the best practicable option to remove or reduce any adverse effect on the environment; or

The Consent Holder shall meet all reasonable costs of any such review.



16 These consents shall not lapse until their expiry.

EXPIRY DATES: AUT.039370.01.01 (Infilling): IN PERPETUITY

All other Consents: 30 APRIL 2027





Vintage Railway Station State Highway 11 Opua

Traffic Report

Prepared for Bay of Islands Vintage Railway Trust Haigh Workman reference 15119C

May 2016





Revision History

Revision N°	Issued By	Description	Date
A	Michael Winch	Draft for Client Comment	3 September 2015
В	Michael Winch	Revised Draft for Client Comment	7 September 2015
C	John McLaren	For NZTA approval	1 December 2015
D	John Papesch	For Resource Consent Application	3 June 2016

Prepared by

Michael Winch

Reviewed By

John McLaren



TABLE OF CONTENTS

Rev	ision Historyi
1	Executive Summary3
2	Introduction4
2.1	Objective and Scope4
2.2	Applicability4
3	Site Description5
3.1	Existing Site
3.2	Access from State Highway 115
3.3	Existing Activities
3.4	Proposed Development6
4	Traffic Impact Assessment
4.1	FNDC TIF
4.2	Trip Generation
4.3	State Highway 11 Traffic Volumes
4.4	Traffic Effects on State Highway 11
4.5	Sight Distances
4.6	Private Access to 1 and 2A Beaufort Street
4.7	Proposed New Intersection
5	Internal Access and Parking15
5.1	Beaufort Street
5.2	Access within Vintage Railway Station Site
5.3	Parking
6	NZTA Approval16
7	FNDC Assessment Criteria
7.1	Traffic intensity





7.2	Parking	19
8	Recommendations	. 20
Ар	pendix A – NZTA Approval	. 21
Ар	pendix B – Haigh Workman Drawings	. 22



1 Executive Summary

The Bay of Islands Vintage Railway currently operates over a short distance from its Kawakawa station. It is proposed to extend the track on the original railway corridor to Opua. It is proposed to construct a railway station and associated parking at the Opua terminal on land owned by Far North Holdings Ltd known as Colenso Triangle. The development also includes construction of a boat ramp and shore facilities for existing nearby oyster farms.

As part of the development it is proposed to relocate the Beaufort Street intersection on State Highway 11 some 55 metres south of its present location to improve sight distances. The owners of 1 and 2A Beaufort Street have requested that their access off State Highway 11 remain in its current location as a crossing point. Due to the practicalities surrounding the entrance, we support retention of the cossing point for these properties. The remainder of the Beaufort Street / Marina Rise properties will gain access from the new intersection.

Combined traffic volumes are estimated at a maximum of 352 vpd, with peak hour traffic of 47 vph.

Traffic design guidelines indicate that a turning bay is not warranted. However, to allow for future traffic growth, both on SH11 and at the railway station, a right turn bay is proposed as shown on the drawing. NZTA sight distances will be achieved at the proposed intersection.

Access and manoeuvring will be provided within the development as shown on the drawings. Ample parking is able to be provided within and near the railway station for even the most conservative assessment of visitor numbers.

We recommend that the development be approved as proposed, specifically:

- That the Beaufort Street intersection be moved 55 metres south to a new road providing access to Beaufort Street / Marina Rise, the Railway Station and the oyster farms.
- That the new intersection be formed with a right turn bay and full intersection markings in accordance with the NZTA manual of Traffic Signs and Road Markings.
- That access for 1 and 2A Beaufort Street (Lots 1 and 2 DP 208521) be retained at the existing Beaufort Street location. It is proposed to reduce the seal area at the existing intersection to a NZTA Planning Policy Manual Type C crossing point.
- That totars seedlings located on the western road frontage, 50 to 60 metres north of the existing Beaufort Street intersection be removed.
- That access to the Railway Station be formed off the new Beaufort Street, at least 45 metres back from the highway boundary.
- That parking within the Railway Station site be provided in accordance with Far North District Council requirements.

Traffic to and from the development is readily absorbable into the surrounding network.

The proposal complies with NZTA's letter of approval dated 24 March 2016.

Accordingly it is considered that the proposed improvements and controls are sufficient to accommodate the needs of the development. It is considered that the needs of NZTA have been accommodated, and that effects are no more than minor. It is therefore recommended that the proposed development be approved. From a traffic perspective no other controls are considered necessary.



2 Introduction

2.1 Objective and Scope

The Bay of Islands Vintage Railway currently operates over a short distance from its Kawakawa station. It is proposed to extend the track on the original railway corridor to Opua. It is proposed to construct a railway station and associated parking at the Opua terminal on land owned by Far North Holdings Ltd (Pt Section 38 Blk V Russell SD and Lot 1 DP 183897) known as Colenso Triangle.

As part of the development it is proposed to relocate the Beaufort Street / Marina Rise intersection on State Highway 11 some 55 metres south of its present location to improve sight distances and reduce the number of intersections on the highway. The development also includes the construction of a boat ramp and shore facilities for nearby oyster farms.

This report assesses the effects on traffic and parking of the proposed railway station in conjunction with existing uses.

2.2 Applicability

This report has been prepared for our Client, Bay of Islands Vintage Railway Trust with respect to the particular brief given to us by Indu Shrestha, Far North Holdings Ltd. This report is to be used by our Client and Consultants and may be relied upon by New Zealand Transport Agency and the Far North District Council when considering the applications associated with the proposed railway station. The information and opinions contained within this report should not be used in other context for any other purpose without our prior review and agreement.



3 Site Description

3.1 Existing Site

The Colenso Triangle site comprises Pt Section 38 Blk V Russell SD and Lot 1 DP 183897 owned by Far North Holdings Ltd. It is located on State Highway 11 (SH11) between the Whangae industrial area and Franklin Street. It is flat land currently used as a storage depot.

The site is illustrated below:



Figure 1 Location of the Site

3.2 Access from State Highway 11

Beaufort Street is an existing formed road that currently provides access to the subject site, eight residential properties, an oyster farm boat ramp and an intermediate access to the Bay of Islands Cycleway.

It is proposed to construct a new intersection some 55 metres south of the existing Beaufort Street intersection. The new intersection will be at route position 0/9.813.

The owners of 1 and 2A Beaufort Street have requested that their access off State Highway 11 remain in its current location as a crossing point. Due to the practicalities surrounding the entrance, we support retention of the cossing point for these properties. The remainder of the Beaufort Street / Marina Rise properties will gain access from the new intersection.

Visibility from the intersections and the proposed construction standard are discussed further below.



Occasionally, the new intersection will be used for access between dredging operations in the harbour and a fill site opposite the railway station site on Lot 12 DP 200225. This issue is discussed in Section 3.3 below.

3.3 Existing Activities

The subject site is currently used as an outdoor storage depot. The gate on Beaufort Street is normally locked and access to the depot is only occasional.

Two of the residential properties gain access from Beaufort Street at the SH11 intersection; the remaining six off a no-exit extension to Beaufort Street named Marina Rise. All properties are developed and enjoy normal residential use.

Beaufort Street provides access to the Waikare Inlet via an access track and boat ramp, but this is not currently used to any significant extent.

The site provides an access point for the Bay of Islands Cycleway, including emergency access. The Cycleway will remain when the Vintage Railway is operational and it is expected that many cyclists will take advantage of the train for a return journey to Kawakawa.

A land use consent has been granted to place dredgings on the fill site on Lot 12 DP 200225 opposite the railway station site. The vehicle crossing to Lot 12 DP 200225 is diagonally opposite the proposed railway station intersection and truck traffic will need to cross the highway during the dredging disposal operations. These occasions will be infrequent and are best managed by a specific traffic management plan and temporary speed restrictions as appropriate. The effects of access to the fill site on SH11 traffic has not been assessed in this report.

3.4 Proposed Development

In addition to the existing uses, it is proposed to construct a railway station with associated vehicle access and parking on the Colenso triangle site. The proposed development is shown on the Haigh Workman drawings included in Appendix A.

The station is proposed with a gross floor area (excluding platforms) of 840m². It will contain waiting room, toilets and ticketing office.

The Vintage Railway Trust plans to operate three trains per day; normally three days a week (Friday, Saturday and Sunday, but every day during school and public holidays. Arrival times at Opua are proposed at 10:45 am, 1:15 pm and 3:15 pm. Departure times will be 30 minutes later. Trains can carry up to 50 passengers.

The railway station will also provide a function room catering for up to 150 people. When the train is operating, most of these people will arrive or depart by train.

Visitors using the train and railway station will come to the site by private car, cycle or by coach. On Average there will be one coach load per week when on three day schedule and up to three per week during holidays.



Each train will have a bike carrying vehicle holding 28 bikes. It is not known of course, what how many cyclists may catch a train one-way.

As part of the development, a dredged channel, boat ramp and reclamation will be formed as shown on the drawings to provide access to nearby oyster farms, allowing the use of the boat ramp at Opua for oyster farm access to cease.

4 Traffic Impact Assessment

4.1 FNDC TIF

The Far North District Plan uses a 'Traffic Intensity Factor' (TIF) as a means of assessing the likely traffic effects from a particular new activity. Where there is more than one activity on a site the TIF is calculated separately for each activity, then added together.

The residential properties are zoned Coastal Residential. TIFs have not been calculated for residential properties as they are exempt from the TIF rules and there is no change in use proposed in that zone.

The site of the proposed railway station and oyster farm facility is zoned General Coastal. The Traffic Intensity Factor for a site in this zone is 30 daily one way movements as a Permitted Activity and 120 daily one way movements as a Discretionary Activity. Construction traffic is exempt from this rule.

As discussed in section 3.4 above, three train arrivals and departures per day are proposed; each train can carry a maximum of 50 people. Allowing for an additional 20 people using the station, but not on the train, the maximum number of people the train station may need to accommodate is 120. The railway station may also be used for functions catering for up to 150 people.

The Traffic Intensity Factors determined by reference to the far North District Plan Appendix 3A are:

Land Use Activity	Calculation	TIF
Place of Entertainment or Assembly / Recreational Purposes	2 per every person facility is designed for x 150	300
Port / Sea Terminal	4 per 100m² GFA x zero (no buildings are proposed)	0
(Oyster) Farming	Exempt from Traffic Intensity provisions	0

The total TIF for the proposed railway station is 300, making the activity a Non-complying Activity.



4.2 Trip Generation

Actual trips generated from all activities will be different to the TIF calculation as they include traffic movements that are exempt from the TIF rules. They are estimated by multiplying the various land use activities by corresponding traffic intensity factors. Peak hourly traffic generation from the proposed development has been estimated based on predictive models contained within the NZTA "Planning Policy Manual" 2007 (NZTA PPM), the Roading & Traffic Authority of New South Wales – RTA "Guide to Traffic Generating Developments" (RTA Guide) and Traffic Intensity Factors provided for within the Far North District Plan (FNDC).

A trip is defined as "a one way vehicle movement from one point to another, excluding the return journey". The terms 'trip' and 'vehicle movement' are synonymous.

Existing Dwellings

The NZTA PPM and the Far North District Plan allow for 10 vm/day and 1.2 vm/hour per residential dwelling. The RTA Guide recommends daily vehicle 9 vm/day and 0.85 vm/hour per dwelling.

Conservatively, the 8 dwellings generate 80 vm/day with peak hour traffic of 10 vm/hour.

Oyster Farms

The oyster farmers estimate the following annual trips associated with the oyster farms:

- 400 movement pa. (Trucks, 6-8 wheelers) 80% between May and December, 20% January to April.
- 2700 movements pa. (Cars staff/owners)
- 240 working days per year.

On that basis, the maximum traffic from the oyster farms is 32 vm/day with peak hour traffic of 4 vm/hour.

Railway Station

As discussed in section 3.4 above, three train arrivals and departures per day are proposed; each train can carry a maximum of 50 people. Allowing for an additional 20 people using the station, but not on the train, the maximum number of people the train station may need to accommodate is 120.

The NZTA PPM and RTA Guide have no land use category equivalent to a railway station. Traffic volumes are best calculated on the basis of the number of passengers the facility is designed for.

Assuming all 50 arriving train passengers leave by car within a 1 hour period, all 50 departing train passengers arrive within the same 1 hour period and a vehicle occupancy rate of 2.5, the peak hour traffic is estimated to be $2 \times 50 / 2.5 = 40$ vehicles per hour.



With three trains daily, the total number of vehicles would be $3 \times 40 = 120$ vehicles, or 240 vehicle movements per day.

The railway station will also be available for functions catering for up to 150 people. Assuming a vehicle occupancy rate of 2.5, a function would generate 60 vehicles or 120 vehicle movements on the day of the function. Arrival and departure is likely to be spread over 1.5 hours, resulting in peak hour traffic of 40 vehicles per hour.

Construction Traffic

The proposed development includes importing approximately 16,000 m³ (truck measure) of fill for the reclamations, as well as importing material for revetments, pavements and buildings.

Up to 20 vehicle movements (10 truck and trailer units) per hour x 10 hours per day (200 vehicle movements per day) can be expected.

Combined Traffic

It is not expected that peak hourly traffic between the residential properties, oyster farms and railway station activities will coincide. Peak traffic for Railway Station activities will be around the times of train arrivals and departures (refer section 3.4 above). Peak traffic for the residential properties and oyster farms will tend to be earlier and later in the day.

We have conservatively estimated combined peak traffic volumes to comprise: 100% of railway traffic + 50% of residential + oyster farm traffic; or 100% of residential + oyster farm + 50% of railway traffic, whichever is greater.

Combined traffic volumes are estimated as follows:

Activity	Vehicle Movements per Day	Peak Vehicle Movements per Hour
Residential Properties	80 vpd	10 vph
Oyster Farms	32 vpd	4 vph
Railway Station	240 vpd	40 vph
Combined	352 vpd	47 vph

Combined traffic volumes during construction are estimated as follows:

Activity	Vehicle Movements per Day	Peak Vehicle Movements per Hour
Residential Properties	80 vpd	10 vph
Construction	200 vpd	20 vph
Combined	280 vpd	30 vph



4.3 State Highway 11 Traffic Volumes

The most recent FNDC traffic counts for State Highway 11 are 25 Mar - 1 Apr 2009 had 2963 vehicles per day and 4-11 August 2010 at 2708 vehicles per day. For State Highway 11 daily traffic of 3000 vehicles per day has been adopted. Peak hourly traffic for State Highway 11 is estimated at around 400 vehicles per hour.

4.4 Traffic Effects on State Highway 11

From the above calculations, a peak hour traffic of 47 vehicles per hour for all activities on the Vintage Railway site has been adopted. Peak hour traffic for State Highway 11 of 400 vehicles per hour has been adopted. For the purposes of this analysis, State Highway 11 peak hour traffic and those of the proposed development are all assumed to coincide. Approximately 67% of the railway traffic will be to and from the South (Kawakawa).

The peak hourly traffic can be broken down as follows:

Movement	SH11 veh hour	Railway veh/hr
SH11 northbound through traffic	200 vph	N = 1 27 Mg intervention to the last
SH11 southbound through traffic	200 vph	
Railway right turn in		16 vph
Railway left turn out		16 vph
Railway left turn in		8 vph
Railway right turn out		8 vph
Total	400 vph	48 vph

Table 4.1 of the 2005 revision of AUSTROADS Part 5, Guide to Traffic Engineering Practice "Intersections at Grade", provides maximum flow combinations for uninterrupted traffic flow conditions. The table shows that a combination of up to 600 vehicles per hour on the through road, and 100 vehicles per hour on the side road, will result in traffic flow conditions remaining uninterrupted.

Figure 6.41 of the 2005 revision of AUSTROADS Part 5, Guide to Traffic Engineering Practice "Intersections at Grade", indicates that for an approaching traffic volume of 200 vph and turning traffic volume of 16 vph, a turning bay is not warranted. However, to allow for future traffic growth, both on SH11 and at the railway station, a right turn bay is proposed as shown on the drawing.



4.5 Sight Distances

State Highway 11 in the vicinity of the subject site has an 80km/hr speed limit. In the absence of any specifically recorded speed data at the site, NZTA Planning Policy Manual assumes the 85%ile operating speed is 10km/h higher than the speed limit; that is 90km/h.

For a 90km/h operating speed, NZTA Planning Policy Manual specifies a minimum sight distance of 203 metres (based on 3.0 sec observation time and 2.0 sec reaction time).

Visibility to the north from the existing Beaufort Street Intersection is restricted to 140m by a bank on the eastern side of the highway and does not comply with NZTA standards. Visibility to the south is excellent at 245m.

As discussed below, visibility from the proposed new intersection will comply with NZTA standards.

4.6 Private Access to 1 and 2A Beaufort Street

The owners of 1 and 2A Beaufort Street (Lots 1 and 2 DP 208521) have requested that their access off State Highway 11 remain in its current location.



Figure 2 Existing Beaufort Street Intersection showing driveway to Lots 1 and 2 DP 208521

Visibility to the north from the existing location does not comply with NZTA sight distance standards for an 80km/h speed limit. However the existing intersection has operated safely in the past as an access to nine properties and there is no reason to indicate that it cannot operate safely in the future as a private access to two of those properties.



The NZTA Planning Policy Manual Appendix 5B, Diagram B specifies a minimum separation of 100m for accessways on a highway with 80 km/h speed limit. The 55 metre separation distance from the proposed intersection to the existing access does not comply with this standard.

Access to 1 and 2A Beaufort Street could be provided from the new intersection and a realigned Beaufort Street. However, it would involve a circuitous journey through the Vintage Railway site and compromise the future development of the Far North Holdings land.

Due to these practicalities, it is recommended that the existing location be retained for access to 1 and 2A Beaufort Street. As the crossing would only serve two lots, it should be reduced in size to a Type C vehicle crossing in accordance with NZTA Planning Policy Manual Diagram C as detailed on Haigh Workman job 15 119 drawing P13.

4.7 Proposed New Intersection

It is proposed that a new intersection be constructed 55 m south of the existing intersection to serve the remainder of Beaufort Street / Marina Rise, the proposed Vintage Railway Station and the oyster farm boat ramp.

For an 80km/h speed limit, NZTA Planning Policy Manual specifies a minimum sight distance of 203 metres (based on 3.0 sec observation time and 2.0 sec reaction time).

Visibility from the new Vintage Railway entrance on State Highway 11 complies with NZTA standards as detailed below.



Figure 3 Sight distances at proposed Vintage Railway entrance.



Visibility to the north from the proposed intersection is partly obscured by some totara seedlings located on the western road frontage, 50 to 60 metres north of the existing Beaufort Street intersection. They are relatively small at this stage, but should be removed to provide clear visibility. Sight distances noted above are on the basis of the trees being removed.

Subject to the implementation of these recommendations, NZTA sight distances will be achieved at the proposed intersection.



Figure 4 Sight distance of 208m to the south.





Figure 5 Sight distance of 270m to the north.



Figure 6 Totara trees to be removed.



5 Internal Access and Parking

5.1 Beaufort Street

It is proposed to close part of Beaufort Street and realign the road from the new intersection to serve Marina Rise as shown on the drawings. Access to the Railway Station will be off the new road, at least 45 metres back from the highway boundary as shown on NZTA Planning Policy Manual Diagram B. Access to the oyster farms will be along an upgraded road on the existing track off Beaufort Street.

5.2 Access within Vintage Railway Station Site

Access to the proposed railway station is off the relocated Beaufort Street as shown on the drawings.

One-way circulation will operate within the railway station site to enable large vehicles, in particular buses, to turn. Buses and disability vehicles will be able to stop in front of the railway station to unload passengers before moving on to parking areas.

Cars can access two parking aisles within the railway site as shown on the drawings. If necessary, additional parking will be available to the east of the railway station. This area will also be available for people wanting to park while using the cycleway.

Kerb and channel will be provided to delineate circulating and parking areas. The railway station pavement will be sealed with appropriate line markings.

5.3 Parking

Adequate parking for cars and buses will be provided at the Railway Station site so that the effects of parking and manoeuvring do not extend to the highway.

Railway Station

As discussed in section 3.4 above, three train arrivals and departures per day are proposed; each train can carry a maximum of 50 people. Conservatively assuming that all 50 arriving passengers, a separate group of 50 departing passengers plus 20 staff / attendees are all at the station at one time, the maximum number of people the train station may need to accommodate is 120.

Far North District Plan Appendix 3C car parking requirements are as follows:

Land Use Activity	Calculation	Car Spaces Required
Place of Assembly	1 per 5 persons facility is designed for	24
Recreational Purposes	1 per 4 persons facility is designed for	30



The railway station may also be used for functions catering for up to 150 people. When the train is operating, most of these people will arrive or depart by train. At other times people attending the functions will mainly arrive by car.

Far North District Plan Appendix 3C car parking requirements are as follows:

Land Use Activity	Calculation	Car Spaces Required
Restaurants, Bars, Cafes	1 per 10m ² GFA plus 1 per 15m ² outdoor area or 1 space for every 4 persons the restaurant is designed to accommodate, whichever is greater	84
Places of Entertainment	1 per 4 persons facility is designed for	38

The railway station will accommodate 120 to 150 people. Assuming an average of 2.5 people per vehicle, up to 60 vehicle parking spaces will be required.

A total of 39 car parks are proposed within the railway station site as shown on the drawings. A further 38 car parks are available within the overflow / cycleway parking area to the east of the railway station, providing a total of 77 car parks.

Parking spaces for large vehicles (buses and large campervans) will also be provided within the railway station site as shown on the drawings. Nine vehicles between 12m and 15m long can be accommodated.

Thus, the proposal provides for a total of 86 vehicle parks for use by the vintage railway station.

The drawings show car park layout in accordance with Appendix 3D of the District Plan. The car parks within the railway station site will be delineated with painted line marking. The overflow / cycleway parking area will not be sealed. With no line markings, actual parking availability within the overflow area may not be as efficient as a carpark with line marking. Even so, ample parking is able to be provided within and near the railway station for even the most conservative assessment of visitor numbers.

6 NZTA Approval

The proposal involves changes to access on to State Highway 11 and was discussed with the appropriate roading authority, New Zealand Transport Agency (NZTA), at an early stage. Formal approval for the proposal was sought from NZTA once a traffic report and detailed drawings had been produced. NZTA granted approval to the proposal in a letter dated 24 March 2016 (NZTA ref 8/1/4/4/606 PID 4855).

The approval was subject to a number of conditions. The proposal complies with all NZTA conditions as summarised in the following table:



NZTA Condition	Response
The intersection Beaufort Street and SH11 shall be permanently closed, and replaced with a new vehicle crossing place constructed to a PPM Diagram C standard to service the properties at 1 and 2A Beaufort Street. This	Proposal complies with this Condition. Beyond the 9m radius bellmouth, the alignment tightens up to match the existing driveway to avoid disturbing established trees on either side.
will include: a. Providing 9m bellmouth radii on both sides of the Crossing Place b. Sealing the access way to the boundary	A double width crossing is proposed to allow for cars to pass at the crossing or for an 11m truck to make a left turn into the driveway without crossing the State Highway centreline by using the entire width of the vehicle crossing.
2. The Applicant shall trim roadside vegetation along the AC vector at the proposed intersection to ensure 139m SSD.	Proposed removal of totara trees 50 to 60m north of the existing Beaufort Street intersection will provide 275m sight distance from the new intersection along the AC vector.
3. The proposed intersection shall be constructed to accommodate Austroads AUL(S) and CHR(S) treatment with MOTSAM 3.25 road markings.	Proposal complies with this Condition
4. Crossing Place 83 shall be relocated to a point opposite the proposed intersection, and constructed to a NZTA PPM Diagram C standard.	Proposal complies with this Condition
5. A construction drawing, showing the full details of the proposed upgrade of the crossing place and the shoulder widening are to be forwarded to the NZ Transport Agency's State Highway Network Manager, Opus International, for approval at least 15 working days prior to commencing any works on the State highway.	Recommended as a consent condition
6. The applicant is to advise the SH Network Manager, Opus International, the name(s) of the firm/persons who will be doing the works on the crossing place and associated works, and the time when it will be done, at least 10 working days prior to commencing works,	Recommended as a consent condition
7 . All works on the State Highway is to be carried out under an approved Traffic Management Plan (TMP) in accordance with the latest version of the NZ Transport Agency's Code of Practice for Temporary for Traffic Management (CoPTTM).	Recommended as a consent condition
8. The applicant is to obtain approval of and agreement from the NZ Transport Agency to undertake the construction works in relation to the new intersection and Diagram C entrance and shoulder widening upgrade on the State highway in terms of section 51 of the Government Roading Powers Act 1989. An application to that effect can be made to the Senior Asset Manager, Ed Varley, of the NZ Transport Agency. The NZ Transport Agency will process the application within a reasonable time frame. It is absolutely necessary that this approval and agreement from the NZ Transport Agency is obtained as a matter of priority before commencing any upgrade works on the State highway.	Recommended as a consent condition



7 FNDC Assessment Criteria

7.1 Traffic intensity

Assessment Criteria for Traffic Intensity [Section 11.12]

CRITERIA	PERFORMANCE OF PROPOSAL
(a) The extent by which the expected traffic intensity exceeds the threshold set by the Traffic Intensity Factor contained in <i>Appendix 3A</i> in <i>Part 4</i> of the Plan.	The TIF calculated in accordance with Appendix 3A is 300 compared with a Discretionary Activity limit of 120. Actual two way traffic is estimated to be 240 vpd from the proposed railway station and 32 vpd from the oyster farm access.
(b) The time of day when the extra vehicle movements will occur.	Extra traffic movements will occur during the day (refer Section 3.4 above).
(c) The distance between the location where the vehicle movements take place and any adjacent properties.	The proposed railway station is over 100m from the closest dwelling.
(d) The width and capability of any street to be able to cope safely with the extra vehicle movements.	Beaufort Street will be realigned and upgraded to cope with traffic movements.
(e) The location of any footpaths and the volume of pedestrian traffic on them.	There are no existing footpaths. Footpaths will be provided between the main car park and railway station.
(f) The sight distances associated with the vehicle access onto the street.	Sight distances from the new intersection exceed NZTA minimum requirements.
(g) The existing volume of traffic on the streets affected.	Traffic on Beaufort Street will increase from approx 60vpd to approx 352vpd. The proposed road improvements are designed to accommodate the increased traffic. Traffic volumes on Marina Rise will not change.
(h) Any existing congestion or safety problems on the streets affected.	There are no congestion problems on Beaufort Street. The location of the existing intersection is not ideal for safety. Sight distances will be improved by relocating the intersection and removing obstructions.
(i) With respect to effects in local neighbourhoods, the ability to mitigate any adverse effects through the design of the access, or the screening of vehicle movements, or limiting the times when vehicle movements occur.	The proposal does not result in any additional traffic on Marina Rise. Extra traffic movements on Beaufort Street will occur during the day (refer Section 3.4 above).
(j) With respect to the effects on through traffic on arterial roads, strategic roads and State Highways, any measures such as right-turn bays, flush medians, left turn deceleration tapers, etc. proposed to be installed on the road as part of the development to accommodate traffic turning into and out of the site.	A full intersection with right turn bay and adequate provision for all other turning movements will be provided on the State Highway as shown on the drawings. NZTA has given written approval to the proposal.
(k) The extent to which the activity may cause or exacerbate natural hazards or may be adversely affected by natural hazards, and therefore increase the risk to life, property and the environment.	The proposal will not exacerbate natural hazards.



7.2 Parking

Assessment Criteria for Parking [15.1.7.1]

Note: Table excludes objectives and policies which are not applicable, e.g. particular requirements for Kerikeri Road or Coopers Beachfront Estate.

CRITERIA	PERFORMANCE OF PROPOSAL
(a) Whether it is physically practicable to provide the required car parks on site.	All required parking can and will be provided on site.
(b) Whether there is an adequate alternative supply of parking in the vicinity, such as a public car park or angled road parking.	Alternative car parking is not available and is not necessary.
(c) Whether there is another site nearby where a legal agreement could be entered into with the owner of that site to allow it to be used for the parking required for the application.	Alternative car parking is not available and is not necessary.
(d) Whether it can be shown that the actual parking demand will not be as high as that indicated in Appendix 3C .	Parking requirements assessed in accordance with Appendix 3C vary from 30 to 84 car parks depending on the land use activities adopted. It is estimated that 60 car parks will be required for the railway station. (refer section 5.3 above)
(e) Adequacy of the layout and design of the car parking areas in terms of other recognised standards.	A total of 39 car parks are proposed within the railway station site. A further 38 car parks are available within the overflow / cycleway parking area to the east of the railway station, providing a total of 77 car parks. Parking spaces for large vehicles (buses and large campervans) will also be provided within the railway station site as shown on the drawings. Nine vehicles between 12m and 15m long can be accommodated. Thus, the proposal provides for a total of 86 vehicle parks for use by the vintage railway station. The car parks and manoeuvring areas are detailed in accordance with the Far North District Plan Appendix 3D.
(f) Degree of user familiarity with the car park and length of stay of most vehicles.	The car parks and manoeuvring areas are detailed for 'casual users' in accordance with the Far North District Plan Appendix 3D.
(g) Total number of spaces in the car park.	The proposal provides for ample vehicle parking. Refer (e) above.
(h) Clear space for car doors to be opened even if columns, walls and other obstructions intrude into a car parking space.	The car parks and manoeuvring areas are detailed for 'casual users' in accordance with the Far North District Plan Appendix 3D.



8 Recommendations

We recommend that the development be approved as proposed, specifically:

- That the Beaufort Street intersection be moved 55 metres south to a new road providing access to Beaufort Street / Marina Rise, the Railway Station and the oyster farms.
- That the new intersection be formed with a right turn bay and full intersection markings in accordance with the NZTA manual of Traffic Signs and Road Markings.
- That access for 1 and 2A Beaufort Street (Lots 1 and 2 DP 208521) be retained at the existing Beaufort Street location. It is proposed to reduce the seal area at the existing intersection to a NZTA Planning Policy Manual Type C crossing point.
- That totara seedlings located on the western road frontage, 50 to 60 metres north of the existing Beaufort Street intersection be removed.
- That access to the Railway Station be formed off the new Beaufort Street, at least 45 metres back from the highway boundary.
- That parking within the Railway Station site be provided in accordance with Far North District Council requirements.

Traffic to and from the development is readily absorbable into the surrounding network.

Accordingly it is considered that the proposed improvements and controls are sufficient to accommodate the needs of the development. It is considered that the needs of NZTA have been accommodated, and that effects are no more than minor. From a traffic perspective no other controls are considered necessary.



Appendix A – NZTA Approval

NZTA Approval Letter Ref 8/1/4/4/606 PID 4855 dated 24 March 2016

21



NZTA Ref: 8/1/4/4/606 PID: 4855

24 March 2016

Indu Shresthra Far North Holdings Ltd PO Box 7 Opua 0241

Dear Indu,

The Proposal

To reiterate the NZ Transport Agency's understanding, the Applicant is proposing to construct and operate a new rail station on PT Section 39 BLK V Russel SD, known as the Colenso Triangle. To facilitate the proposal, the applicant seeks to close the existing intersection between Beaufort Road, and State Highway 11, and to construct a new intersection approximately 55m to the south.

Limited Access Road (LAR)

In terms of Government Roading Powers Act 1989, no person can lawfully drive or move a vehicle onto or from a LAR except at a road intersection that existed prior to the State highway being declared a LAR, a road intersection with a LAR that has been authorised by the NZ Transport Agency, or a Crossing Place (CP) that has been authorised by the NZ Transport Agency.

Decision

The NZ Transport Agency provides its approval subject to the following conditions being volunteered by the Applicant to form part of the conditions of consent lodged with Council.

- 1. The intersection Beaufort Street and SH11 shall be permanently closed, and replaced with a new vehicle crossing place constructed to a PPM Diagram C standard to service the properties at 1 and 2A Beaufort Street. This will include:
 - a. Providing 9m bellmouth radii on both sides of the Crossing Place
 - b. Sealing the access way to the boundary
- 2. The Applicant shall trim roadside vegetation along the AC vector at the proposed intersection to ensure 139m SSD.
- 3. The proposed intersection shall be constructed to accommodate Austroads AUL(S) and CHR(S) treatment with MOTSAM 3.25 road markings.
- 4. Crossing Place 83 shall be relocated to a point opposite the proposed intersection, and constructed to a NZTA PPM Diagram C standard.
- 5. A construction drawing, showing the full details of the proposed upgrade of the crossing place and the shoulder widening are to be forwarded to the NZ Transport Agency's State Highway Network Manager, Opus International, for approval at least 15 working days prior to commencing any works on the State highway.
- 6. The applicant is to advise the SH Network Manager, Opus International, the name(s) of the firm/persons who will be doing the works on the crossing place and associated works, and the time when it will be done, at least 10 working days prior to commencing works.

Level 11, HSBC House 1 Queen Street Private Bag 106602 Auckland 1143

> New Zealand T 64 9 969 9800 F 64 9 969 9813

www.nzta.govt.nz

In addition to the above, the following Transport Agency requirements in respect of the upgrade works are to be included in any condition granted as advice notes;

- 7. All works on the State Highway is to be carried out under an approved Traffic Management Plan (TMP) in accordance with the latest version of the NZ Transport Agency's Code of Practice for Temporary for Traffic Management (COPTTM).
- 8. The applicant is to obtain approval of and agreement from the NZ Transport Agency to undertake the construction works in relation to the new intersection and Diagram C entrance and shoulder widening upgrade on the State highway in terms of section 51of the Government Roading Powers Act 1989. An application to that effect can be made to the Senior Asset Manager, Ed Varley, of the NZ Transport Agency. The NZ Transport Agency will process the application within a reasonable time frame. It is absolutely necessary that this approval and agreement from the NZ Transport Agency is obtained as a matter of priority before commencing any upgrade works on the State highway.

Provided your client accepts the proposed conditions and Council imposes them as conditions of consent this letter may serve as written approval pursuant to S95E of the Resource Management Act 1991.

I trust this letter clearly outlines the NZ Transport Agency's position with respect to your client's proposal. If you have any queries, please do not hesitate to contact Peter Cooper on 021 638 789 (or email peter.cooper@nzta.govt.nz).

This response is the NZ Transport Agency's current view of the situation. Please note that if this application is put on hold for any length of time and resubmitted at a later date, the NZ Transport Agency's may need to review its comments in the light of any traffic, safety, planning, or policy change.

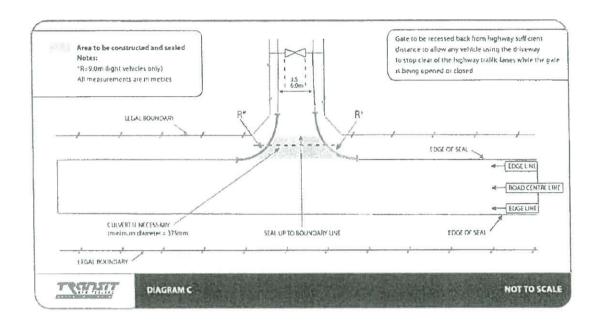
Yours faithfully

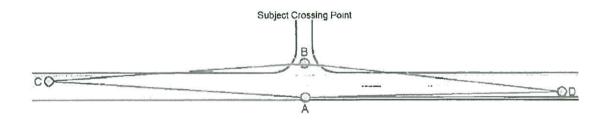
Peter Cooper

Planner

Planning and Investment

Attachment 1 - NZTA PPM Diagram and Sightline Vector



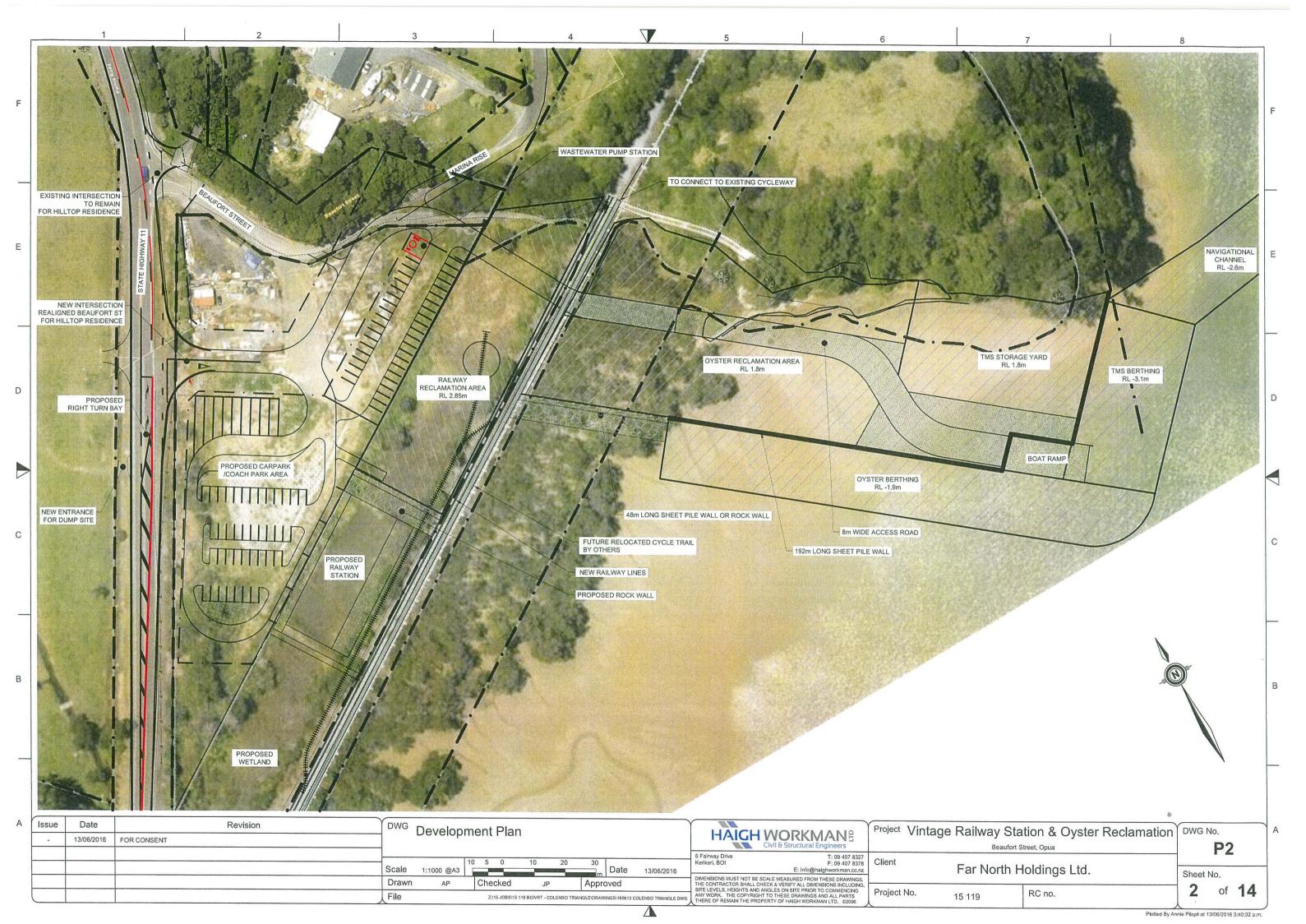


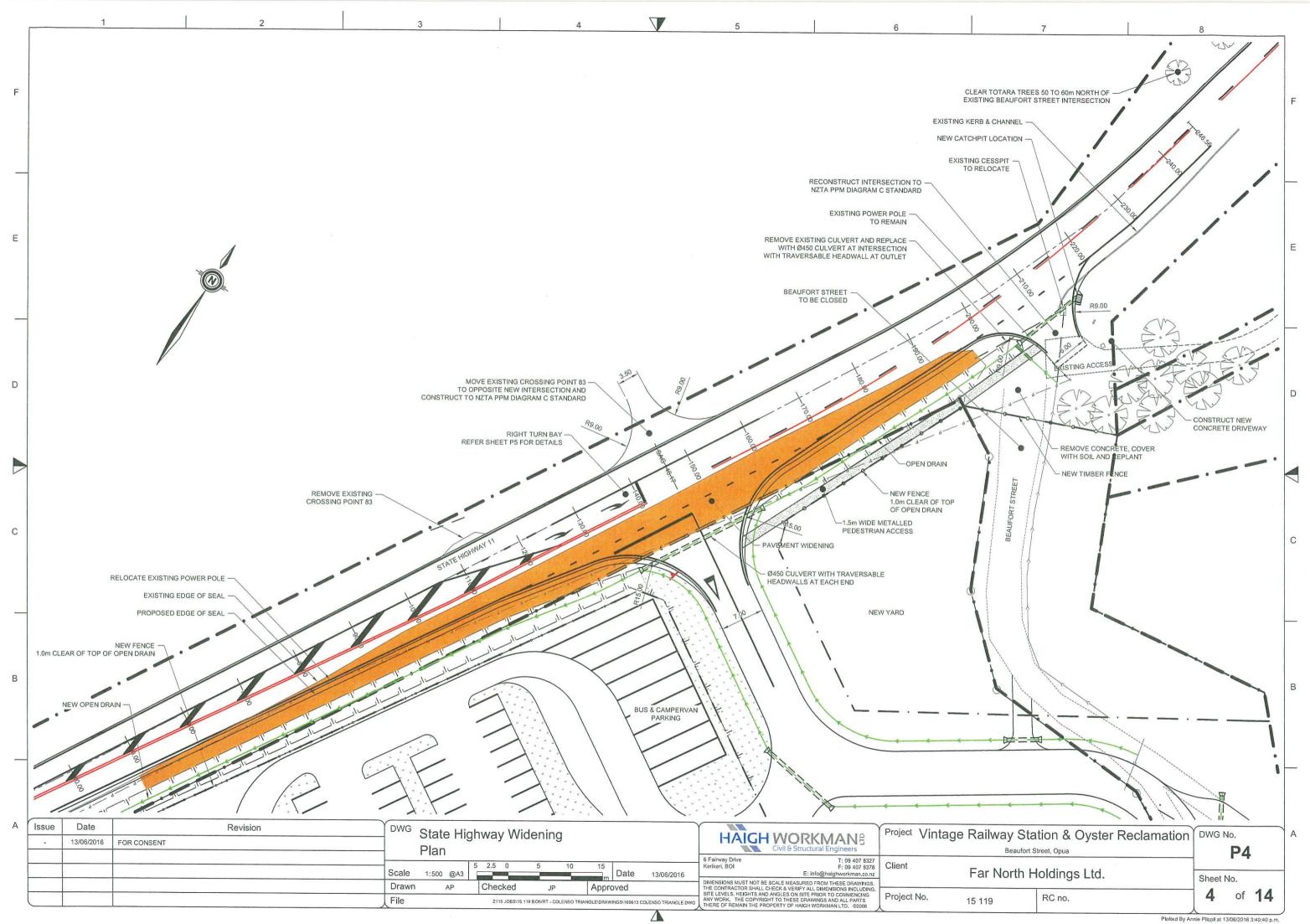


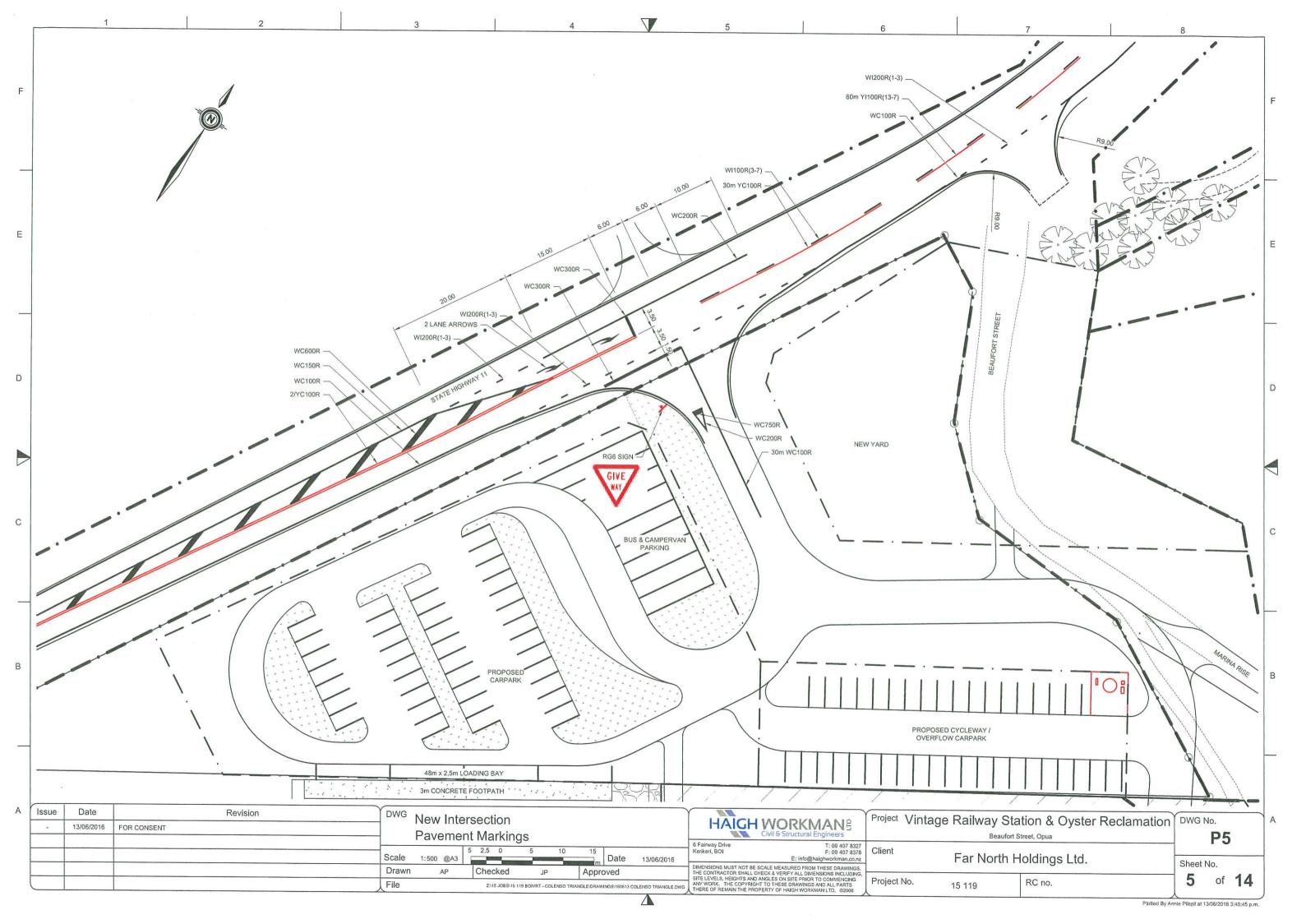
Appendix B – Haigh Workman Drawings

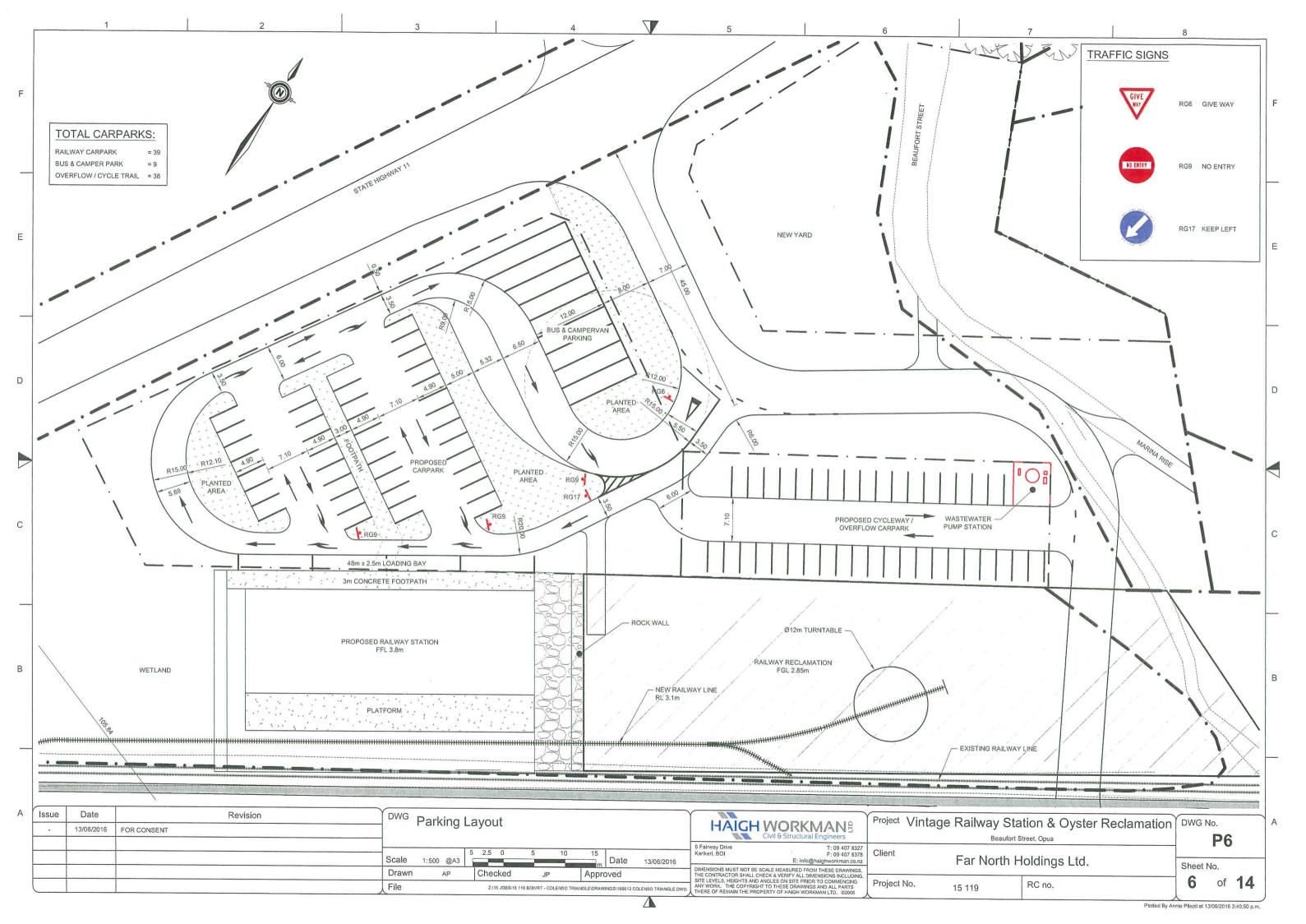
HW Project 15 119 Drawings:

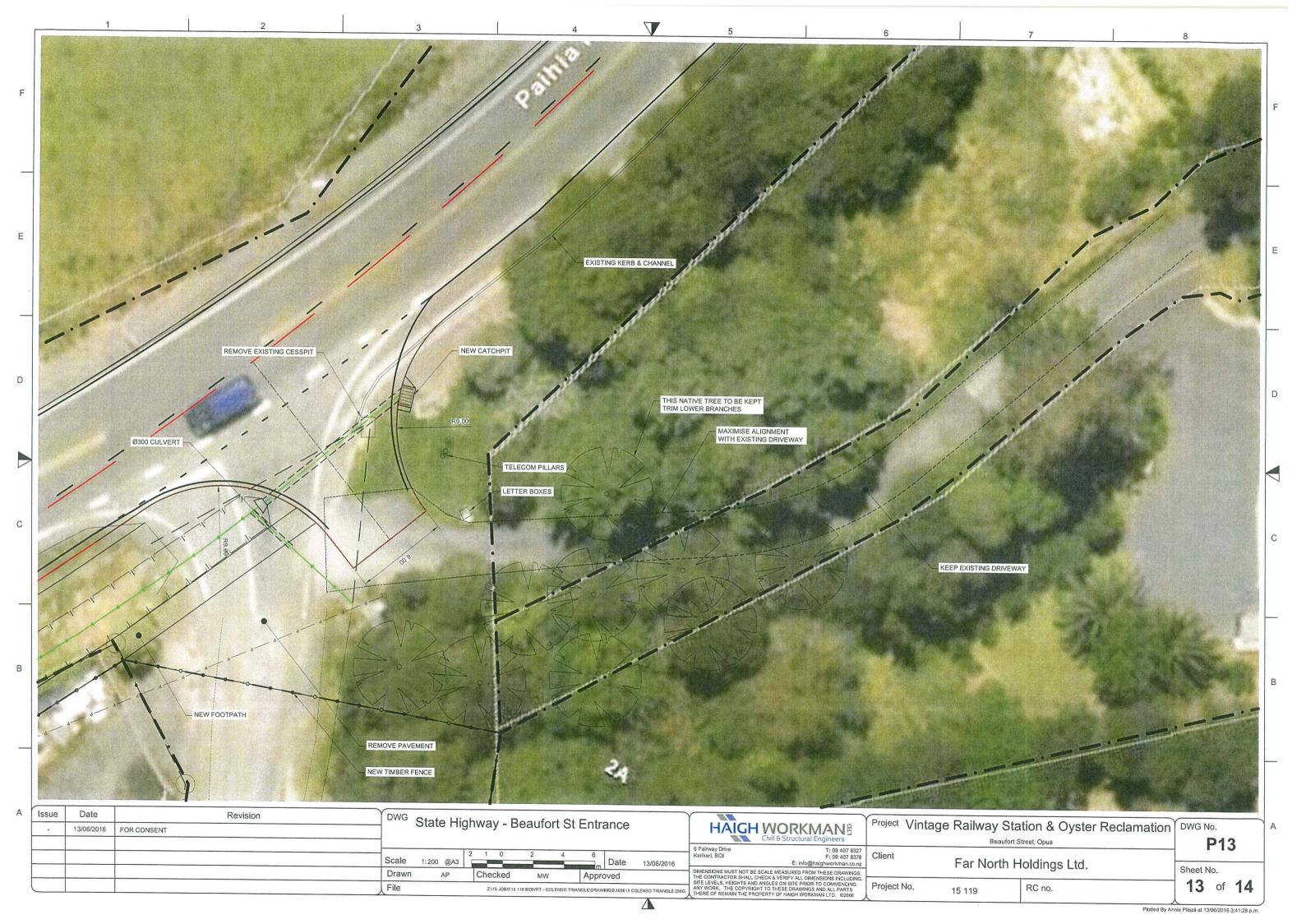
- P2 Development Plan
- P4 State Highway Widening
- P5 New Intersection Pavement Markings
- P6 Parking Layout
- P13 State Highway Beaufort Street Entrance











Resource Consent

FILE: 11535 (01 to 04) Replacement and New

Document Date: 12.6.2019

Pursuant to the Resource Management Act 1991, the Northland Regional Council (hereinafter called "the council") does hereby grant a Resource Consent to:

FAR NORTH HOLDINGS LIMITED, PO BOX 7, OPUA 0241

To undertake the following activities associated with the placement of dredged and cleanfill material on Sec 38 Kawakawa Parish Blk V Russell SD ('Colenso Triangle', State Highway 11, Opua) at or about location co-ordinates 1701007E 6090738N:

Note: All location co-ordinates in this document refer to Geodetic Datum 2000, New Zealand Transverse Mercator Projection.

AUT.011535.01.04	Place up to 3,000 cubic metres per annum of dredged spoil and cleanfill to land.	
AUT.011535.02.03	Discharge contaminated water to an unnamed tributary of Kawakawa River on Lot 1 DP 183897.	
AUT.011535.03.01	Discharge contaminants to land associated with the deposition of dredged spoil.	
AUT.011535.04.01	Divert stormwater associated with land disturbance activities.	

Subject to the following conditions:

- 1 The works shall be undertaken generally in accordance with the following **attached** plans:
 - (a) The Richardson Stevens Consultants (1996) Ltd drawing entitled: "Far North Holdings, Dredging Disposal Area – Silt Retention Pond", Ref: 8219; Sheet 3; dated July 2007; and
 - (b) The Northern Civil Consulting Engineers Ltd drawings entitled: "Far North Holdings Limited, Sect 38 Blk 5 Russell Survey District Dredge Fill Area"; Ref 1311; Sheets 1 & 2; dated 01/02/07
- The Consent Holder shall notify the council's assigned monitoring officer in writing of the date that the placement of dredged spoil is to commence at least one week before each period of dredge spoil placement.

Advice Note: Notification of the commencement of works may be made by email to info@nrc.govt.nz.

3 Sediment control measures shall be constructed and maintained in accordance with the principles and practices contained within the document entitled: "GD05 - Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region". Where there are inconsistencies between any part of GD05 and the conditions of these consents, then the conditions of these consents shall prevail.



- An earth bund shall be installed and maintained around the dredge spoil deposition site. The earth bund shall be of sufficient dimensions to contain stormwater and sediment runoff from the site.
- All stormwater runoff from the site shall be discharged via a sediment retention structure designed and constructed in accordance with GD05. Accumulated sediment from the sediment retention structure shall be removed before the sediment level reaches one third of its total volume (holding capacity). All sediment removed from the sediment detention structure shall be placed in a stable position where it will not enter any water body.
- No dredged spoil disposal shall be carried out between 1 May and 30 September in any year without the prior written approval of the council' Compliance Manager.
- 7 The final fill platform shall not exceed a height of RL 3.5 metres above mean sea level.
- The exercise of this consent shall not cause the water quality in the unnamed tributary of Kawakawa River, as measured at the point of discharge, to exceed the following:

Determinand	Concentration
Total copper	0.013 mg/L
Total lead	0.04 mg/L
Total Zinc	0.150 mg/L

Notwithstanding any other conditions of these consents, the discharge shall not cause the concentration of metals in sediments, as measured at or beyond any point 20 metres downstream of the railway culvert into the Coastal Marine Area, to exceed any of the following:

Metal	Maximum allowable concentration (milligrams per kilogram, dry weight)
Total arsenic	20
Total cadmium	1.5
Total chromium	80
Total copper	65
Total lead	50
Total zinc	200

The Consent Holder shall monitor the discharge in accordance with the Monitoring Programme attached as Schedule 1. The Consent Holder may make changes to the attached Monitoring Programme with the prior written approval of the council's Compliance Manager.

Advice Note: This condition does not preclude the council from monitoring the discharge at any time.

All bare areas of land created by the exercise of these consents shall be effectively stabilised against erosion and sediment loss. For the outside face of all earth bund areas stabilisation shall be achieved two months of their construction, and all other areas shall be stabilised by 30 June in each calendar year, except during the year when dredging spoil from the Paihia Waterfront project (if approved and exercised) is deposited. Stabilisation measures shall include topsoiling and establishing with suitable vegetation to achieve not less than an 80% groundcover, the placement of rock aggregate, or covering with mulch or other erosion protection material.

- 12 Prior to the commencement of filling operations, a stabilised construction entrance onto Beaufort Street shall be established to prevent the tracking of spoil or debris onto offsite road surfaces. The stabilised construction entrance shall be maintained throughout the duration of filling operations.
- 13 The exercise of these consents shall not give rise to any discharge of contaminants to air (e.g. dust), at or beyond the property boundary, which is noxious, dangerous, offensive or objectionable to such an extent that it has, or is likely to have, an adverse effect on the environment.
- 14 The Consent Holder shall, for the purposes of adequately monitoring the consent as required under Section 35 of the Act, on becoming aware of any contaminant associated with the Consent Holder's operations escaping otherwise than in conformity with these consents:
 - (a) Immediately take such action, or execute such work as may be necessary, to stop and/or contain such escape; and
 - Immediately notify the council by telephone of an escape of contaminant; and (b)
 - Take all reasonable steps to remedy or mitigate any adverse effects on the environment (c) resulting from the escape; and
 - Report to the council's Compliance Manager in writing within one week on the cause (d) of the escape of the contaminant and the steps taken or being taken to effectively control or prevent such escape.

For telephone notification during the council's opening hours, the council's assigned monitoring officer for these consents shall be contacted. If that person cannot be spoken to directly, or it is outside of the council's opening hours, then the Environmental Emergency Hotline shall be contacted.

Advice Note: The Environmental Emergency Hotline is a 24 hour, seven day a week, service that is free to call on 0800 504 639.

- 15 The council may, in accordance with Section 128 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions annually during the month of June for any one or more of the following purposes:
 - (a) To deal with any adverse effects on the environment that may arise from the exercise of these consents and which it is appropriate to deal with at a later stage; or
 - To require the adoption of the best practicable option to remove or reduce any adverse (b) effect on the environment.

The Consent Holder shall meet all reasonable costs of any such review.

16 These Consents shall not lapse until their expiry.

EXPIRY DATE: 30 NOVEMBER 2029

These consents are granted this Twelfth day of June 2019 under delegated authority from the council

by:

Paul Maxwell

Coastal & Works Consents Manager

SCHEDULE 1

MONITORING PROGRAMME

The Consent Holder, or its authorised agent, or the council shall monitor this consent in accordance with this monitoring programme.

1. WATER AND SEDIMENT QUALITY

1.1 Sediments

Sediment samples shall be collected annually after a prolonged dry period. Three sediment samples shall be collected from the Kawakawa River at around a 20 metre radius. A composite sample shall be analysed for the following:

- Sediment grain size characteristics;
- total arsenic:
- total cadmium:
- total chromium;
- total copper;
- total lead; and
- total zinc.

If the results of the analysis of the sediment samples indicates an increasing trend in heavy metal concentrations in the sediments, then water quality samples shall be taken in accordance with 1.2 of this Shedule.

1.2 Water Quality

Routine Monitoring

A sample shall be collected at pond outlet, during, or immediately following, a period of moderate to heavy rainfall annually.

Samples shall be analysed for the following:

- total suspended solids;
- total copper;
- total lead; and
- total zinc.

2. FIELD MEASUREMENTS, RECORDS, SAMPLE COLLECTION, SAMPLE TRANSPORT, DETECTION LIMITS, AND LABORATORY REQUIREMENTS

2.1 Records

A record of rainfall conditions preceding and during sampling shall be kept. The rainfall recorder site to be used shall be agreed to by the Northland Regional Council.

2.2 Sample Collection

All samples collected as part of this monitoring programme shall be collected using standard methods and approved containers.

2.3 Sample Transport

All samples collected as part of this monitoring programme shall be transported in accordance with standard procedures and under chain of custody to the laboratory.

2.4 Detection Limits

The detection limits for the analysis of metals in sediment and water samples collected shall be equivalent to, or better than, those specified below:

Metal	Sediment samples (milligrams per kilogram)	Water samples (milligrams per cubic metre)
Total copper	2	1.0
Total lead	0.4	0.2
Total zinc	4	2.0
Total arsenic	2	N/A
Total cadmium	0.1	N/A
Total	2	N/A
chromium		

2.5 Laboratory Requirements

All samples collected as part of this monitoring programme shall be analysed at a laboratory with registered quality assurance procedures (see definition below), and all analyses shall be conducted using standard methods.

Registered quality assurance procedures are procedures that ensure that the laboratory meets good management practices and would include registrations such as ISO 9000, ISO Guide 25, and Ministry of Health Accreditation.

