

**BEFORE THE COMMISSIONERS APPOINTED BY
THE QUEENSTOWN LAKES DISTRICT COUNCIL**

Submitter 31021

IN THE MATTER

of the Queenstown Lakes District
Council Proposed District Plan
Stage 3

**Corbridge Estate Limited
Partnership**

Submitter

BRIEF OF EVIDENCE OF MICHAEL JAMES BOTTING

**GALLAWAY COOK ALLAN
LAWYERS
DUNEDIN**

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BRIEF OF EVIDENCE OF MICHAEL JAMES BOTTING

1. My full name is Michael James Botting, I am a Partner of Paterson Pitts Limited Partnership (Paterson Pitts). I hold the qualification of Bachelor of Surveying and am a Registered Professional Surveyor and Licensed Cadastral Surveyor. I am also a member of the New Zealand Institute of Surveyors.
2. I have over 20 years' experience in land development including 15 years of project management of large greenfield subdivisions. I started my career in Auckland working on a variety of land development projects across Auckland before moving to Wanaka in 2004.
3. I have experience in all aspects of the land development process from feasibility, budgeting, planning, detailed design, tendering, construction supervision and compliance with local authorities. My previous experience of particular relevance to the current proposal includes the Peninsula Bay, Riverside Residential and Kirimoko subdivisions in Wanaka and many smaller residential subdivision developments that require comprehensive infrastructure.
4. I was involved in preparing the scheme plan, concept engineering plans and infrastructure report that supported obtaining approval for subdivision consent RM 120572 that approved a 35 lot subdivision, communal buildings, a boatshed, jetties, two utility buildings and bulk earthworks for roading and formation of an amenity lake on the Corbridge site.
5. I have read the Expert Witness Code of Conduct set out in the Environment Court's Practice Note 2014 and agree to comply with it. I have complied with the Code of Conduct in preparing this evidence and I agree to comply with it while giving oral evidence before the hearing committee. Except where I state that I am relying on the evidence of another person, this written evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed in this evidence.

SCOPE OF EVIDENCE

6. In this evidence I discuss the nature of infrastructure available to the site, servicing requirements and options for roading, stormwater and waste water disposal, potable water, and power and telecom supplies.

ROADING

7. Any future development of the Corbridge site would gain access via the existing consented and formed entrance off State Highway 6 approximately 240m to the west of the intersection of State Highway 6 and Ballantyne Road. There is good visibility in excess of 300m in both directions. Enclosed in **Appendix A** are design plans showing the approved entrance design. These roading designs were approved pursuant to RM120572.
8. The existing entrance has been designed to meet NZTA and Austroads highway side road intersection standard which includes widening to allow for formation of a standard right turn bay, a left turn lane, and flag lighting. At this stage only road widening and formation of the entrance into the site has been constructed. It has been agreed with NZTA that they will undertake the road marking of the right turn bay and left turn lane at a future date when traffic generation requires its provision. It is anticipated that flag lighting would be installed when required.
9. Under RM120572 roading access was designed for multiple areas of the site including access to the central lake and communal buildings along with provision of roading to the northern end of the site to several consented house sites. To date only approximately 450m of the main access road into the site has been constructed up to the consented woolshed venue area. This roading has been formed to a 6m wide rural roading standard but not yet sealed.
10. Given the undulating nature of the site ranging mostly from low to moderate terrain there are multiple options for development of an internal roading network. There is also the option for a secondary access into the site from the along the south western road boundary with State Highway 6.

11. I see no major impediments to development of a roading pattern within the site. The main entry to the site has already been built to a highway side road intersection standard and can be relied on for access to the proposed Rural Visitor Zone and associated development within it.

STORMWATER

12. Stormwater disposal within the site is possible either to ground or via wetland treatment prior to entry into the central lake. Roadside swale drains would be used to incorporate a low impact design approach to the treatment and disposal of stormwater from hard surfaces.
13. Options exist for enhancement of existing areas for wetland planting surrounding the proposed central lake at multiple points where existing gullies drain into the central lake area.
14. Given the nature of the terrain all stormwater can be collected from the proposed development areas and contained and disposed of within the confines of the site.
15. I see no major impediments to designing a low impact stormwater solution for treatment and disposal of stormwater from roading, accommodation units and runoff from the proposed golf course fairways. There may also be options to incorporate stormwater management areas into the golf course design.

WASTE WATER

16. A wastewater solution for future development could include connection to the existing Project Pure gravity main that is located near the south east corner of the site. Under RM120572 approval was obtained from Council to connect the proposed 35 Lot development to this Council waste water network. Enclosed in **Appendix B** is an overview of the waste water concept approved under RM120572. Obviously the proposed RVZ would ultimately require much greater capacity. However, the options for waste water disposal are essence the same.
17. An alternative option to connection to Council's waste water network would be the installation of a centralised waste water treatment system

located within the site.. The treatment facility could be privately managed by a maintenance body or company.

18. The proposed visitor accommodation and golf club house, could be serviced by a combination of gravity reticulated sewer and low pressure pumping from individual units to a centralised collection point located within the site before being pumped to discharge to either the existing Project Pure gravity main in the south east corner of the site or conveyed to the private centralised waste water treatment area within the site. The treated water could then be used within the site or discharged.
19. Further modelling of waste water flows would be required at the time of detailed design to confirm capacity requirements. I also note that the likely development timeframe of this proposal could enable upgrades of Council infrastructure if they proved necessary and desirable. Regardless, I see no impediments to servicing the site for waste water either by connection to Councils network or by way of centralised private waste water treatment within the site.

POTABLE WATER

20. Potable water supply was confirmed for RM 120572 by way of connection to the Corbridge Water Scheme that is operated by Council. There are options to utilise Council supply and or supply the site with water from the existing permitted bores within then site. Enclosed in **Appendix B** is an overview of the water supply concept approved under RM 120572. Enclosed in **Appendix C** is an overview of the existing permitted water bores onsite including the existing Council Corbridge water bore.
21. Alternatively there is scope to gain a connection in future from the proposed upgrade for the water supply intake, treatment and storage water service proposed for Luggate and the Wanaka Airport.
22. Fire fighting for the central part of the site around the proposed lake would be achieved by way of gravity water fed from a water tank located with sufficient height to supply firefighting pressure. A concept

was proposed under RM 120572 and it is anticipated that a similar arrangement would serve part of the site with necessary changes in scale.

23. Firefighting for the wider parts of the sites could be achieved by way of buried or partially buried firefighting tanks placed at regular intervals to provide sufficient volume of water for use during a fire incident.
24. I see no impediments to supplying the site with water for the proposed accommodation. Adequate firefighting tanks can be provided through the site. There are options for the water supply to be connected to Council water supply or managed as a private supply.

POWER & TELECOMMUNICATIONS

25. Power and telecommunications supplies are readily available from existing supplies that pass the site within State Highway 6. I see no impediments to supplying the site with power or telecommunications.

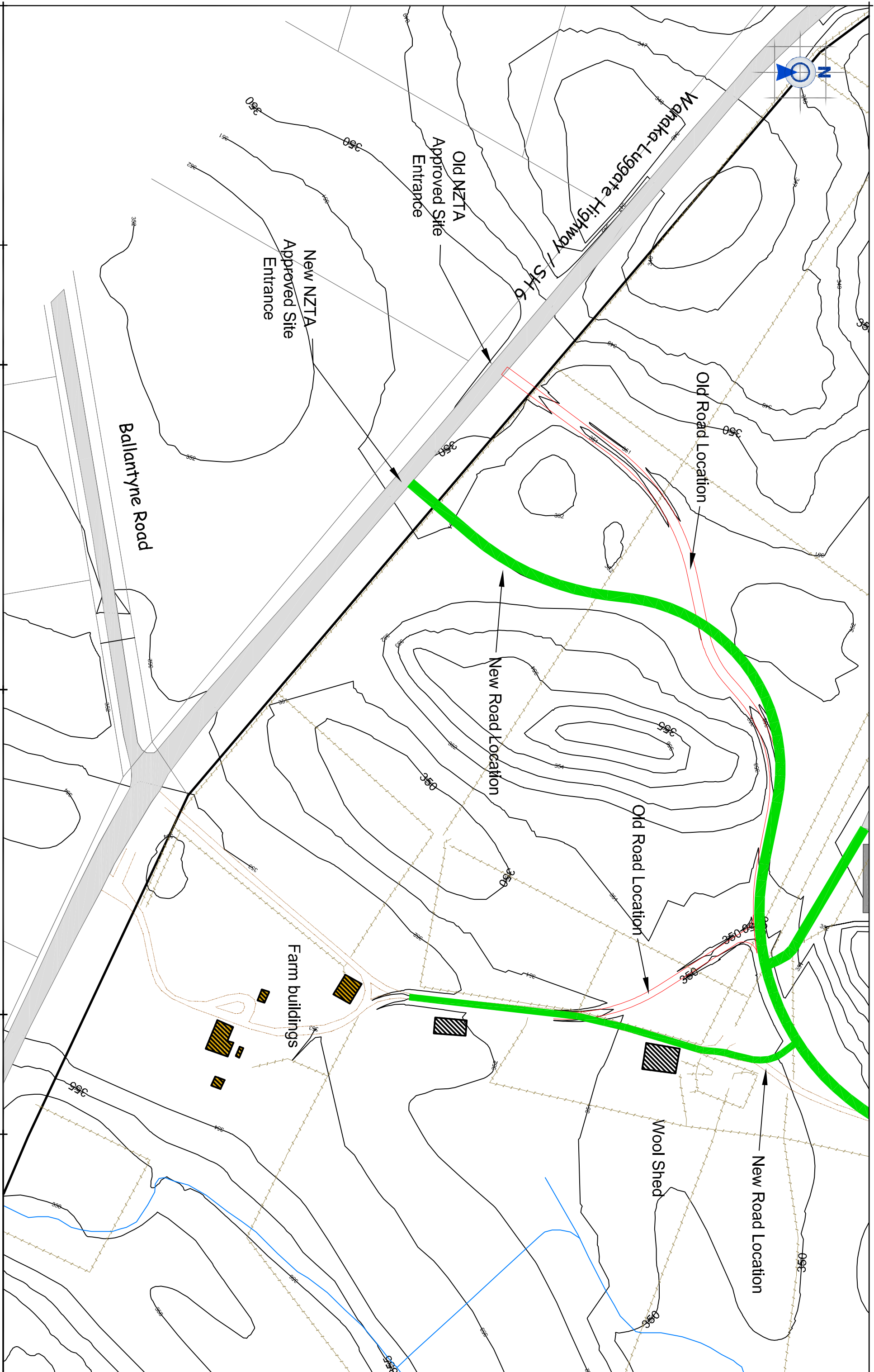
CONCLUSION

26. Overall, it is my opinion that future land use and development to densities anticipated by the Corbridge Rural Visitor Zone can be appropriately serviced.
27. Specifically in respect of Roothing, I consider that the site has suitable access off the State Highway and there are multiple options for developing an internal roading pattern.
28. Specifically in respect of stormwater disposal, I consider that the site is suitable for a low impact design approach for the collection, treatment and disposal of stormwater within the confines of the site.
29. Specifically in respect of Waste Water Disposal, I consider that the site can be connected to the existing Council waste water network or could be managed by a private waste water scheme within the confines of the site. Which option is ultimately selected would depend on factors such as capacity within existing Council infrastructure.
30. Specifically in respect of Water Supply, I consider that there exists an immediate solution by way of private water scheme to supply water to the zoned site. This water scheme can be managed separately from Council's existing water network by a private management company. Alternatively the zoned site could be connected to the existing Corbridge water supply or in time to the wider Wanaka water supply when this is upgraded to supply water to the Wanaka Airport and Luggate Township.
31. Specifically in respect of power and telecommunications there exists existing main supplies that run close to the site within the State Highway.

Michael James Botting

Date: 21 May 2020

**APPENDIX A – APPROVED NZTA HIGHWAY SIDE ROAD
INTERSECTION DESIGN**



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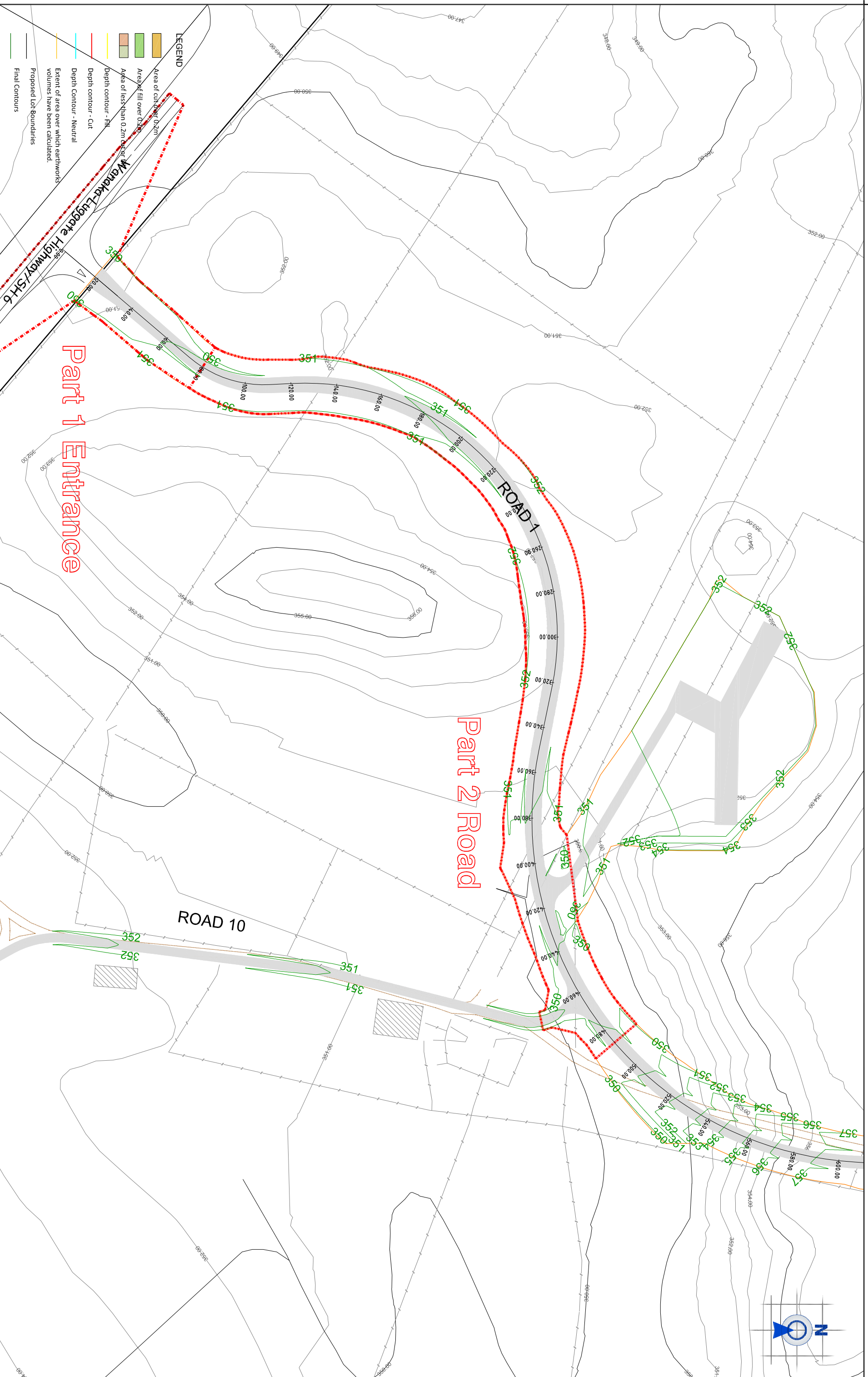
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 or P.O. Box 283
 Wanaka 9343
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 E wanaka@ppgroup.co.nz

Client & Location:
Corbridge Estates Limited
 707 Wanaka - Luggate State Highway

Purpose & Drawing Title:
Site Entrance Relocation

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LEGEND

- Area of cut over 0.2m
- Area of fill over 0.2m
- Area of less than 0.2m over
- Depth contour - Fill
- Depth contour - Cut
- Depth Contour - Neutral
- Extent of area over which earthworks volumes have been calculated.
- Proposed Lot Boundaries
- Final Contours

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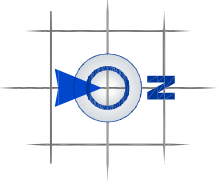
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 707 Wanaka - Luggate State Highway

Purpose/Drawing Title:
Earthworks Plan
 Corbridge Estates Subdivision
 Design Contours

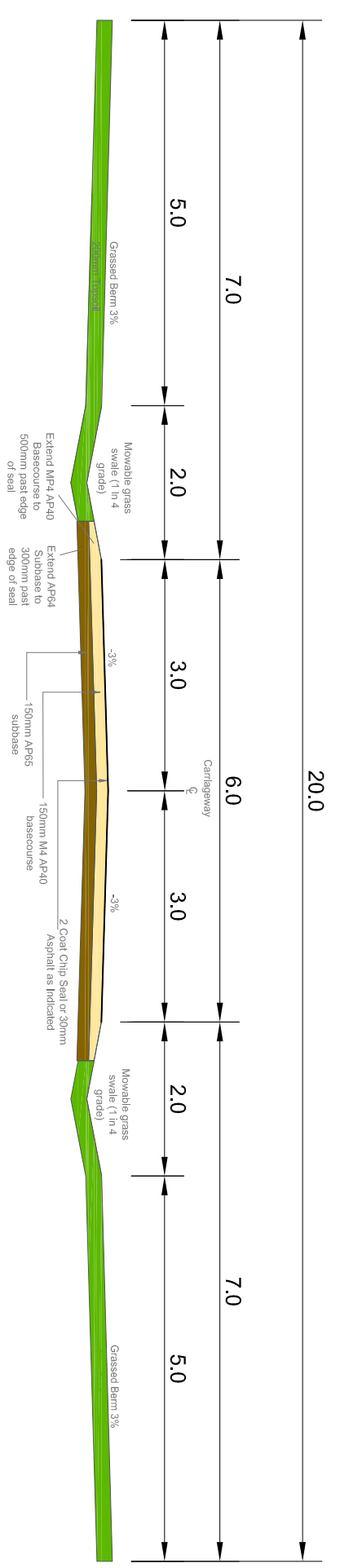
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CHAINAGE	CUT/FILL	NATURAL SURFACE	FINISHED SURFACE
0.00	-0.00	349.83	349.83
9.22	0.42	350.16	349.74
19.22	0.27	349.94	349.68
20.00	0.28	349.95	349.67
20.77	0.29	349.97	349.67
40.00	0.45	350.24	349.79
60.00	0.55	350.49	349.95
72.81	0.35	350.40	350.04
80.00	0.21	350.31	350.10
100.00	0.14	350.40	350.26
110.62	0.18	350.52	350.34
120.00	0.23	350.64	350.41
120.86	0.26	350.68	350.42
140.00	0.78	351.34	350.57
160.00	0.28	351.00	350.72
180.00	-0.10	350.78	350.88
200.00	-0.13	350.91	351.03
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240.00	0.25	351.59	351.34
260.00	-0.04	351.41	351.45
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300.00	0.20	351.69	351.48
309.61	0.31	351.77	351.45
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360.00	0.42	351.50	351.08
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460.15	0.29	349.90	349.61
474.05	0.34	349.84	349.51
480.00	0.25	349.77	349.52
490.00	0.09	349.73	349.64

Road 1



TYPICAL CROSS SECTION 1 - MAIN ENTRY (ROAD 1)
Scale 1:25 @ A1

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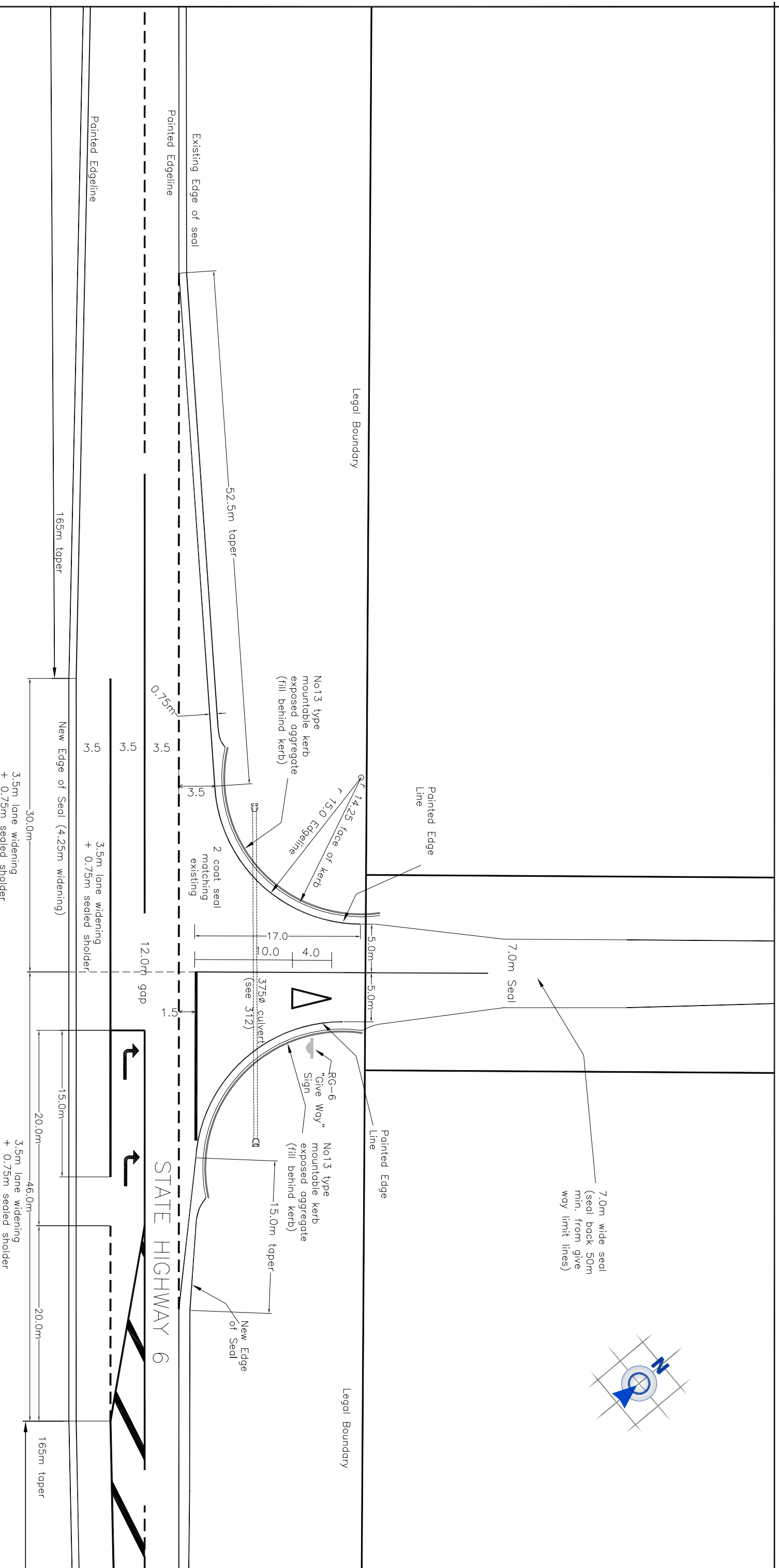
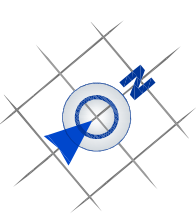
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Client/Location:
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Purpose/Drawing Title:
Earthworks Plan
Corbridge Estates Subdivision
Road 1 Longsection

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NOTE: Road marking of right turn bay as per MOTSAM shall be undertaken by the NZ Transport Agency at a future date when traffic generation requires its provision. As per Fig 3.25

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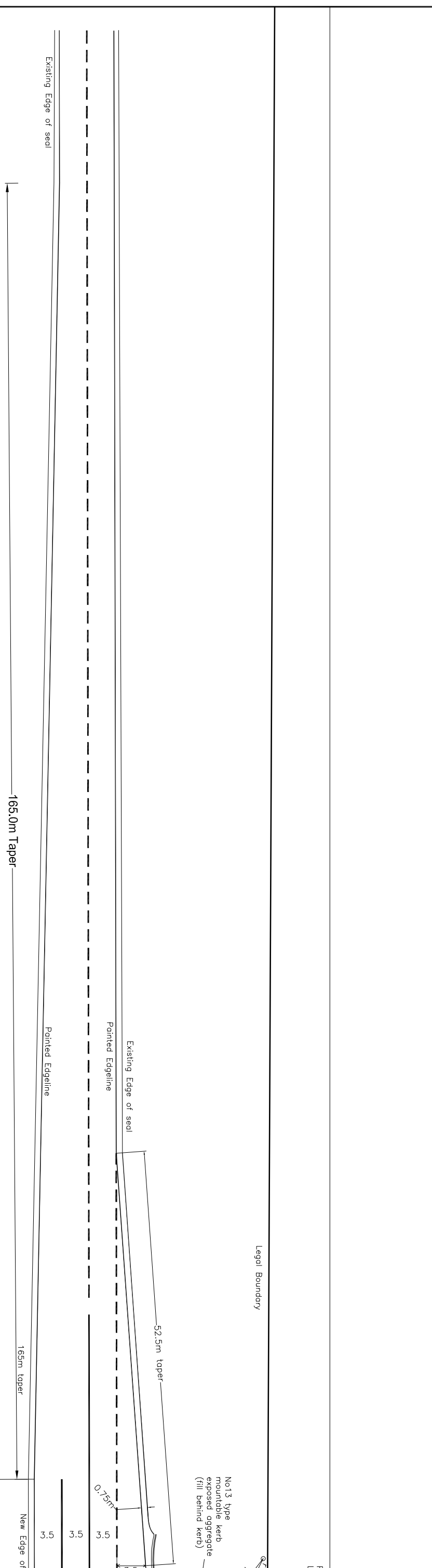
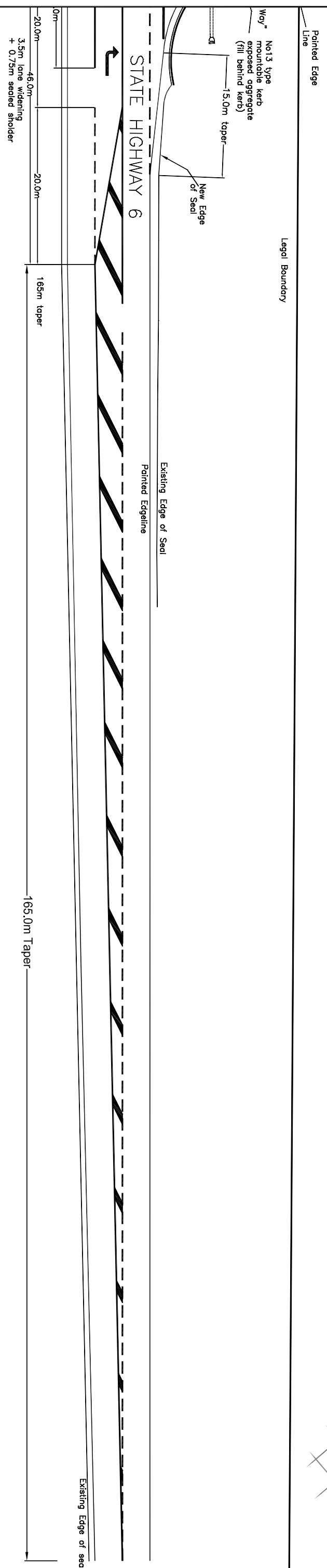
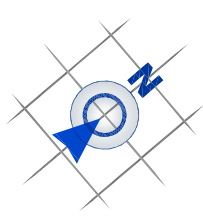
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Purpose/Drawing Title:
Engineering Plan
Intersection Design
State Highway 6 & Road 1

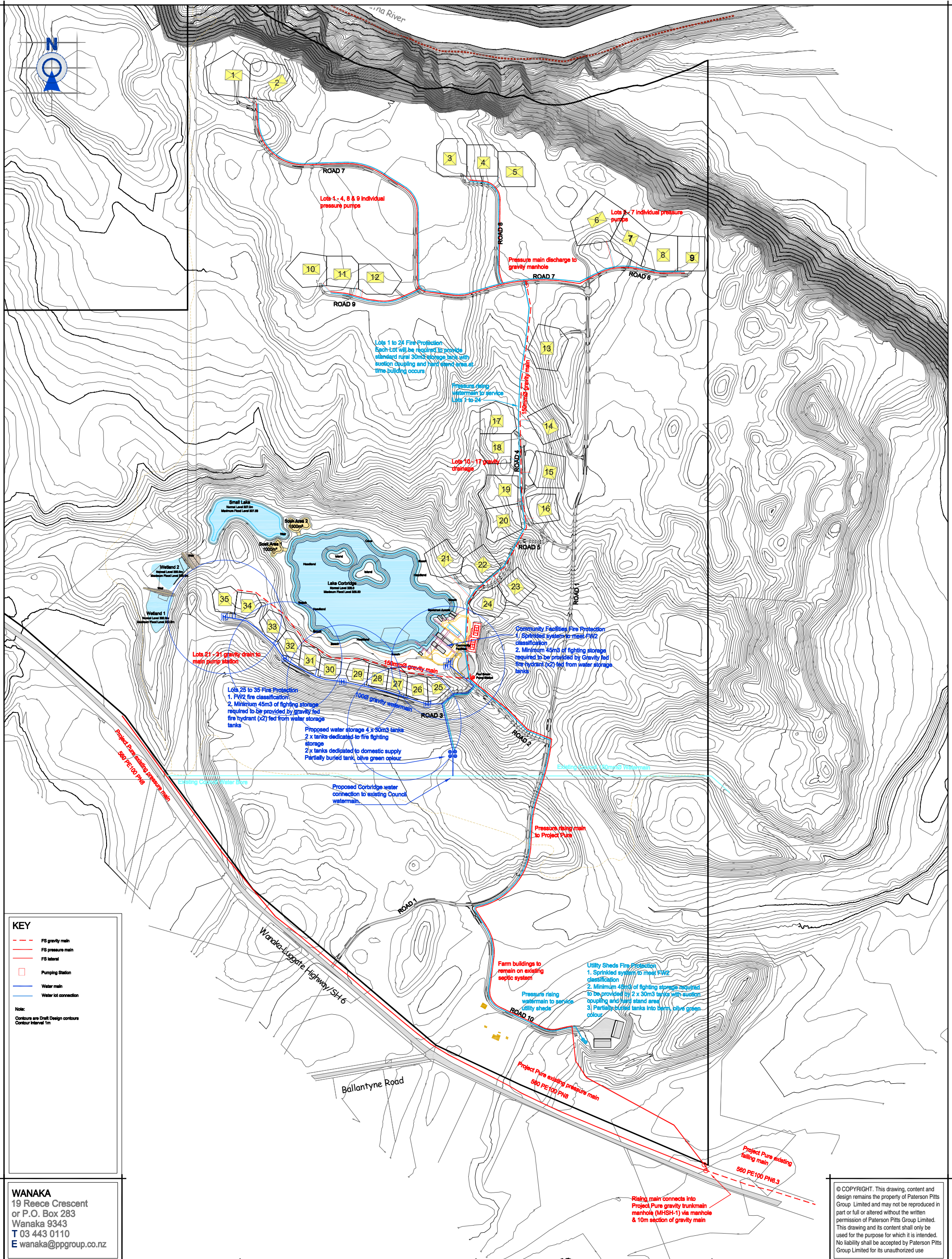
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**APPENDIX B - EXISTING WASTE WATER AND POTABLE WATER
NETWORK APPROVED UNDER RM 120572**



KEY

- - - FS gravity main
- FS pressure main
- FS lateral
- Pumping Station
- Water main
- Water lot connection

Note:
Contours are Draft Design contours
Contour interval 1m

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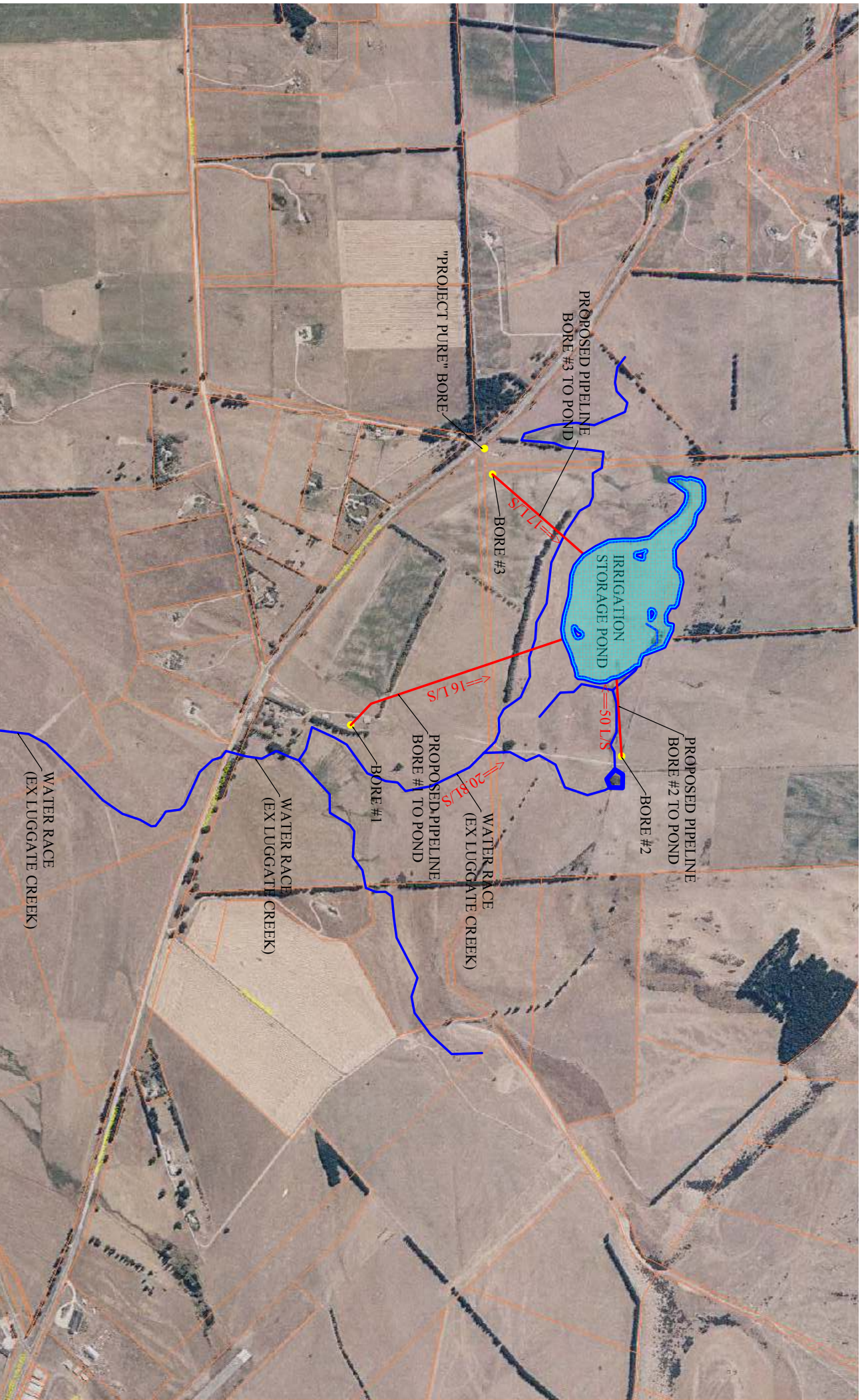
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Client Location:
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Purpose/Drawing Title:
Concept Engineering Plan
Corbridge Estates Subdivision
 Roding, Sewer, Water

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		W3098	23/07/2012
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APPENDIX C – EXISTING CORBRIDGE WATER SUPPLY PLAN



Ken Higgle Ltd
 Water Systems Consultant,
 P.O. Box 52,
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 Phone/fax 03 4487673
 Cell 0274 716411
 Email khiggle@cs.co.nz

CORBRIDGE ESTATES LIMITED PARTNERSHIP
- PROPOSED IRRIGATION
STORAGE POND WATER SUPPLIES

DRAWN :- K. HIGGLE
 DATE :- 28/5/2010
 SCALE :- 1:15,000 (A4)
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