

MEMO

TO	Peter Greene / Mt Iron Junction Limited	DATE	20/07/2026
CC	Charlotte Coyle / Lane Neave	OUR REF	P240103
FROM	Peter Joyce / Senior Surveyor/ Land Development Engineer		
REVIEWED	Duncan White/ Planner		
RE	Mt Iron Junction – Response to Minute 5 of the Expert Panel - Shared Path Costing		

1. Background, Purpose and Scope

Patersons have been engaged by Mt Iron Junction Ltd (MIJ) to undertake the engineering design and assessment of the infrastructure works required to facilitate the proposed development of the site.

I undertook the design work and authored the reports for the engineering elements of the project and respond in this memo to the active transport components contain in paragraph [3](a)(iv)(1-2 and 4) of the Expert Panel's request for further information in Minute 5 dated 6th July 2026. Designing, costing and contract oversight for subdivision and land development infrastructure (including roads and paths) make up the majority of my professional work.

In addressing this request for further information, consultants from MIJ including myself liaised with New Zealand Transport Agency Waka Kotahi (NZTA) and through these discussions we received a preliminary concept design from NZTA for future roundabout upgrades which show the extents of required earthworks to accommodate future two-laning of the SH6/SH84/ Riverbank Road roundabout and a plan showing NZTA's preferences for active transport links around the site.

2. Transport Issues [3](a)(iv) (1) Active Travel Links

An additional drawing (Sheet 350) has been added to the drawing set to show active travel links relevant to the site. The locations of these paths were identified in the 2018 Wanaka Network Operating Framework (NOF) and then updated as part of the Wanaka Network Optimisation Business Case (WNOBC) document as presented to the Wanaka Upper Clutha Community Board in August 2025 (see Diagram 1 – below). The relevant active link around the highway boundaries of the Site is identified as route 5. On this topic it is noted the Panel's preference in the second bullet point at the bottom of page 3 of Minute 5 that *"... the Panel confirms that it agrees in principle with the Applicant that, to the extent possible than any pedestrian/cycle routes for the public align with the Site rather than following the outer boundaries of the Site around the highways and exposed to the roundabout."*



Figure 2-4. Strategic Responses for the Wānaka Strategic Active Modes Network (Base map source: Nearmaps).

Diagram 1 – Figure 2 – 4 from Wānaka Network Optimisation Business Case (WNOBC)

Diagram 2 (also provided as **Appendix A**) shows an active transport link (shown **A**) from the existing Wānaka – Albert Town Active Link from the Aubrey/Old Racecourse Road intersection to the northern corner of the site. Section **A1** is the length on Aubrey Road and Section **A2** is the length on SH6. This active transport link then enters the site and extends down the eastern side of Junction Road as a 3m wide sealed shared path (Section **B**). Sections **C1** and **E2** are a new route following the former road alignment along the south-western boundary of the site to join with SH84. Section **C2** is an upgrade to the current informal cycle connection to the gravel cycle/pedestrian path at the base of Mount Iron and this will act as a recreational link from the site to the Mount Iron track. Section **E1** is a new section of active transport link that follows the recently laid underground trunk water and wastewater sewers to the former carpark opposite Puzzling World before joining the existing Wānaka – Albert Town Active Link and following this (Section **D1**) to the SH84 pedestrian and cycle underpass to Three Parks.

Sections **D1** – **D4** show the existing Mount Iron track connection through to Aubrey Road.

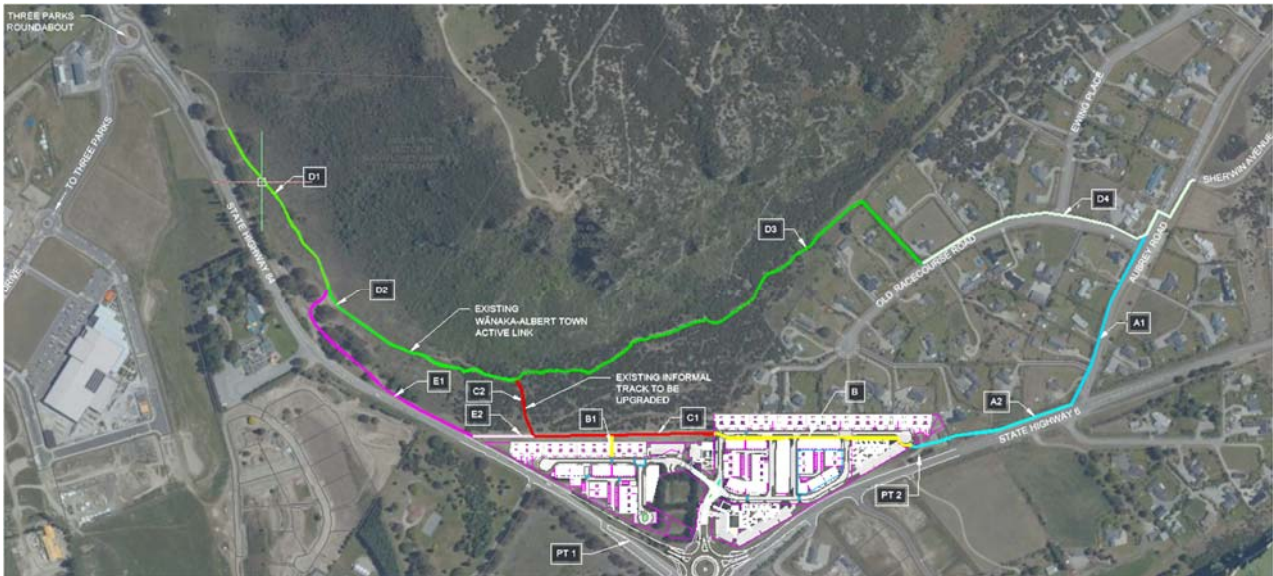


Diagram 2 – Mt Iron Junction Active Transport Links Excerpt – P240103 - Sheet 350 – 15/07/2026

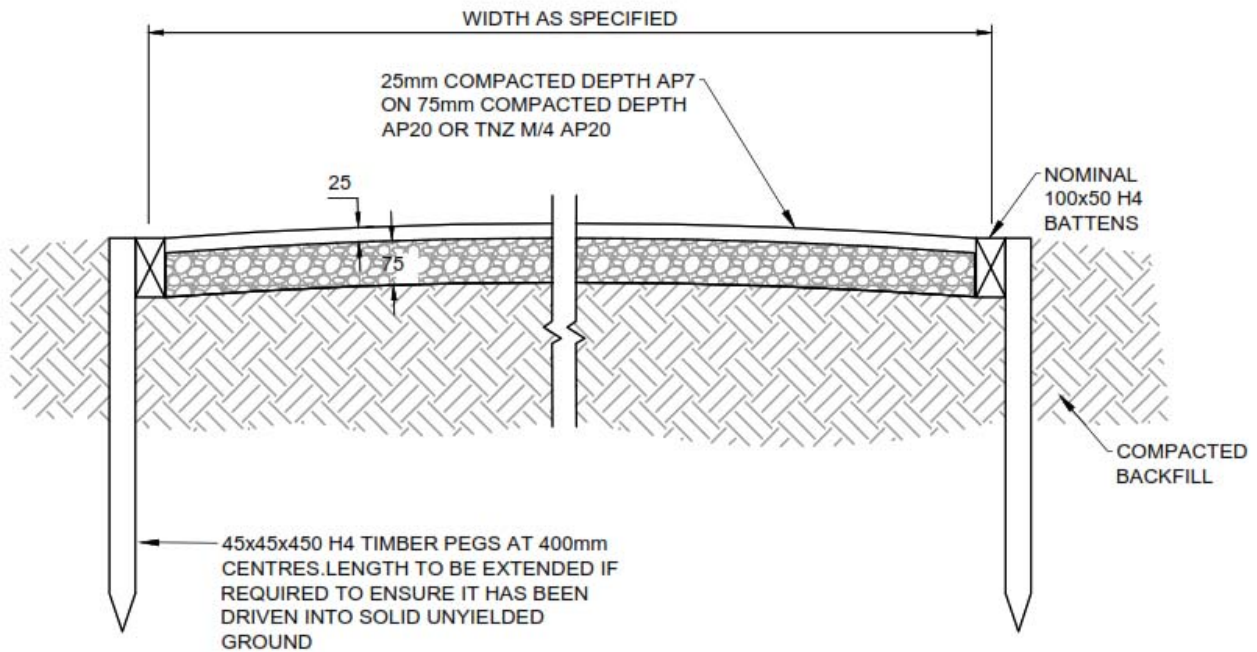
This plan duplicates the travel routes associated with the development provided by NZTA apart from the link shown from the junction of E1 and E2 to join into the development at the end of Mountain Road West.

I have not shown this additional link from the highway edge to the cul-de-sac head at the southern end of Mountain Road as the separation between the site boundary and seal edge is insufficient to accommodate a 2.5m wide path along with stormwater swales.

3. Transport Issues (iv) (2) Active Transport Paths Construction Standard

NZTA have advised that paths within the State Highway reserves should be 2.5m wide. The proposed connecting paths will use the same width for consistency.

The surface type for the shared paths will depend on the location. Shared active routes outside the site will have a gritted surface to reflect the semi-rural environment. Shared active paths within the site will be sealed to suit the urban environment.



GRITTED FOOTPATH

Diagram 3 – B523 – Queenstown Lakes District Council – Land Subdivision and Development Code of Practice - Appendix B – Standard Construction Drawings

In recent years Council has completed a mixed use path from the Gunn Road roundabout along Aubrey Road to Anderson Road, through to State Highway 84 and along to the Sir Tim Wallis Drive roundabout. This route is unlit apart from pre-existing streetlighting. It is therefore not proposed to light the proposed shared paths, except within the development where the path will be light by streetlights.

In summary the proposed path construction standard for the paths external to the site are:

- 2.5m wide gritted path constructed in accordance with the QLDC gritted path detail above (Diagram 3).
- Unlit apart from in areas where lighting exists or is required for the new roading network.

4. Transport Issues - (iv) (1) - Bus Stops

The Wānaka Network Optimisation Business Case (WSP, June 2025) identifies public transport as a long-term initiative, with supporting infrastructure and route implementation anticipated from the early 2040s. Given the uncertainty regarding future route alignments, service frequencies and stop locations, construction of bus stop infrastructure at this stage is considered premature.

I have however identified two locations where future bus stops could be accommodated. These are shown as PT1 and PT 2 on Drawing 350 which do not conflict with potential path alignments.

5. NZTA Roundabout Upgrades

A discussion plan has been issued by NZTA to show the concept layout for future upgrades required to enable a second circulation lane to be added to the existing roundabout. This plan shows one design solution and the associated earthworks extents, there will be alternate design solutions to create a multiple lane roundabout.

The extents of the associated earthworks being shown allows for the final ground slope to be 33% or 1v in 3h from the edge of the future highway widening works into MIJ land on either side of Junction Road.

The proposed future batter gradients are a desirable grade for landscape planting so once earthworks are undertaken this will allow the proposed MIJ landscaping plan to be implemented within the site boundaries.

The discussion plan enabled me to derive the future boundary levels that may be required by NZTA, should the design on the discussion plan proceed, and design the site boundary levels to respect their requirements. There are two areas where construction batters are shown as extending into the site that require comment.



Diagram 3 - Encroachment MIJ Road 1

The magenta coloured line in Diagram 3 above represent the proposed property boundaries as a result of the MIJ development, and the red line shows the extent of future earthworks batters to enable the possible roundabout widening. The green line shows a possible low retaining wall proposed on the NZTA plans as one design solution, this would be appropriate solution to ensure the development can proceed and sufficient land is available should NZTA proceed with the discussion plan design

Alternately a combination of sliding the cul-de-sac along the road alignment by 2-3 m and lowering the overall road height in this area is achievable.



Diagram 4 - Encroachment Car Park 7A/7B

The above diagram shows the earthwork batter encroachment lines along the Carpark 7A boundary, this varies from approximately 1.0 m for most of its length to a maximum of 4.7 m.

The corner of the building adjacent to Carpark 7 currently controls the carpark levels as the hard landscaping adjacent to this needs to accommodate both parking and pedestrians.

A combination of the following could be used in the detailed design to ensure that the levels at the site boundary provide for NZTA's required boundary levels for the future roundabout widening and retaining the same number of carparks

- Rotate the southern end of car park 7A away from the boundary.
- Increase car park cross fall from 2% to 4%.
- Reduce the car park longitudinal gradient from carpark 7 towards the loading zone.
- Utilize kerb and channel as vehicle wheel stops.

The solutions shown in Diagrams 3 and 4 demonstrate that minor additional earthworks undertaken as part of the MIJ development would enable future two-laning of the roundabout without generating a requirement for additional land to be taken from MIJ for future roundabout widening. These works can

be undertaken as part of the proposed MIJ earthworks. These works do not affect the ability to undertake the landscaping around the highway edges as shown in DCM's latest landscape design.

6. Transport Issues (iv) (4) - Costings for the Construction of the Shared Paths Outside the Site

I have prepared the following estimates for the construction of the shared paths outside the Site. The construction rates used for the paths are from construction rates submitted for the wider MIJ project. The estimates below have been prepared prior to detailed design drawings on the basis that they are undertaken as part of the overall works for the implementation of the project (ie the works would be undertaken by MIJ as part of the project, rather than as a separate project(s) by NZTA or Queenstown Lakes District Council).

I believe that all routes can be constructed without significant earthworks although depending on the final location of the E1 path this may require cut earthworks into the adjoining bank.

A contingency sum has not been included in these works but we would generally advise allowing a 20% contingency until such time as design is complete reducing to a 10% construction contingency once works are tendered.

I have made an allowance for traffic management for the construction of the tracks within the shoulders of Aubrey Road and the highways but have not made any allowance for lane closures.

The following prices do not include lighting for the proposed routes.

The following table is a summary table with the breakdown of the costs associated with the shared paths external to the site. Specific pricing for each of the components that make up each section of the active trail links are included in **Appendix B**.

Table 1 – Preliminary Shared Path Costing External to the Site

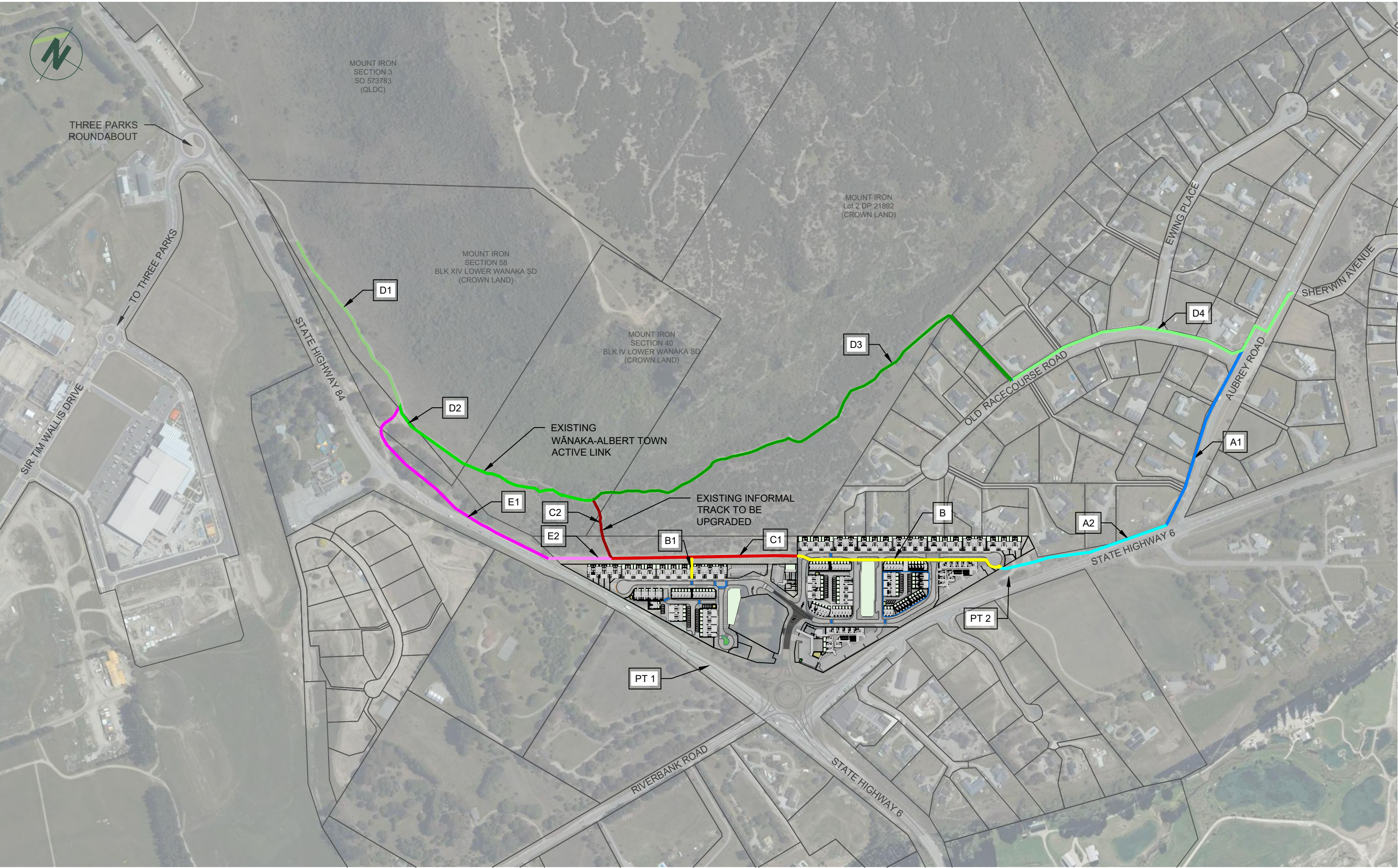
Section	Location	Estimate (exc GST)
A1	Aubrey Road path	\$ 68,327
A2	SH 6 path	\$ 75,688
C1	Sec 1 SO 626512 (QLDC stopped road) path	\$ 50,823
C2	Mount Iron informal track upgrade	\$ 17,885
D1	Existing Mount Iron track upgrade	\$ 54,330
E1	SH 84 path	\$ 89,879
E2	Sec 1 SO 626512 (QLDC) path to join to highway	\$ 16,547
	TOTAL	\$ 373,479

7. Implementation of Active Transport Links and Enabling Earthworks for Future Roundabout Widening

Mr White's evidence discusses the implementation and funding for the proposed active transport links. This evidence also covers how the earthworks to enable the proposed future widening of the roundabout could be undertaken.

Appendix A

Active Transport Links Plan



Appendix B

Active Transport Links Costing Breakdown

APPENDIX B ACTIVE TRANSPORT LINKS - COSTING BREAKDOWN

Aubrey Road (A1)		Length 274 m		Cost per m ²	\$	249
1.00	Strip topsoil to stockpile	m ³	411	9.50	\$	3,905
1.01	Simple E1 soakpits (90m spacing plus 2)	no	5	1500.00	\$	7,500
1.02	Prepare and trim surface	m ²	1096	4.35	\$	4,768
1.03	Place 100mm compacted depth m4AP40	m ²	959	15.00	\$	14,385
1.04	Timber edge	m	548	25.50	\$	13,974
1.05	Gritted footpath to QLDC standards	m ²	822	5.00	\$	4,110
1.06	Screened topsoil from MIJ	m ³	109.6	14.00	\$	1,534
1.07	Respread topsoil, swale and edges 150mm, and seed	m ²	548	5.75	\$	3,151
1.08	Traffic management	LS			\$	10,000
1.09	Shift streetlight	LS			\$	5,000
				SUBTOTAL	\$	68,327

State Highway 6 (A2)		Length 250 m		Cost per m ²	\$	303
2.00	Strip topsoil to stockpile	m ³	375	9.50	\$	3,563
2.01	Simple E1 soakpits (90m spacing plus 2)	no	4	1500.00	\$	6,000
2.02	Prepare and trim surface	m ²	1000	4.35	\$	4,350
2.03	Place 100mm compacted depth m4AP40	m ²	875	15.00	\$	13,125
2.04	Timber edge	m	500	25.50	\$	12,750
2.05	Gritted footpath to QLDC standards	m ²	750	5.00	\$	3,750
2.06	Screened topsoil from MIJ	m ³	100	14.00	\$	1,400
2.07	Respread topsoil, swale and edges 150mm, and seed	m ²	500	5.75	\$	2,875
2.08	Traffic management	LS			\$	20,000
2.09	Kerb and Channel	m	45	175	\$	7,875
				SUBTOTAL	\$	75,688

Link through Sec 1 SO 626512, QLDC Recreation Reserve (C1)		Length 268 m		Cost per m ²	\$	190
3.00	Strip topsoil to stockpile	m ³	402	9.50	\$	3,819
3.01	Simple E1 soakpits (90m spacing plus 2)	no	4	1500.00	\$	6,000
3.02	Prepare and trim surface	m ²	1072	4.35	\$	4,663
3.03	Place 100mm compacted depth m4AP40	m ²	938	15.00	\$	14,070
3.04	Timber edge	m	536	25.50	\$	13,668
3.05	Gritted footpath to QLDC standards	m ²	804	5.00	\$	4,020
3.06	Screened topsoil from MIJ	m ³	107.2	14.00	\$	1,501
3.07	Respread topsoil, swale and edges 150mm, and seed	m ²	536	5.75	\$	3,082
				SUBTOTAL	\$	50,823

Join Existing Wanaka- Albert Town Active Link (C2)		Length 89 m		Cost per m ²	\$	201
4.00	Strip topsoil to stockpile	m ³	133.5	9.50	\$	1,268
4.01	Simple E1 soakpits (90m spacing plus 2)	no	2	1500.00	\$	3,000
4.02	Prepare and trim surface	m ²	356	4.35	\$	1,549
4.03	Place 100mm compacted depth m4AP40	m ²	311.5	15.00	\$	4,673
4.04	Timber edge	m	178	25.50	\$	4,539
4.05	Gritted footpath to QLDC standards	m ²	267	5.00	\$	1,335
4.06	Screened topsoil from MIJ	m ³	35.6	14.00	\$	498
4.07	Respread topsoil, swale and edges 150mm, and seed	m ²	178	5.75	\$	1,024
				SUBTOTAL	\$	17,885

Upgrade existing Wanaka- Albert Town Active Link (D1)		Length 280 m		Cost per m ²	\$	194
5.00	Strip topsoil to stockpile	m ³	420	9.50	\$	3,990
5.01	Simple E1 soakpits (90m spacing plus 2)	no	5	1500.00	\$	7,500
5.02	Prepare and trim surface	m ²	1120	4.35	\$	4,872
5.03	Place 100mm compacted depth m4AP40	m ²	980	15.00	\$	14,700
5.04	Timber edge	m	560	25.50	\$	14,280
5.05	Gritted footpath to QLDC standards	m ²	840	5.00	\$	4,200
5.06	Screened topsoil from MIJ	m ³	112	14.00	\$	1,568
5.07	Respread topsoil, swale and edges 150mm, and seed	m ²	560	5.75	\$	3,220
				SUBTOTAL	\$	54,330

State Highway 84 to Wanaka- Albert Town Link (E1)		Length 364 m		Cost per m ²	\$	247
7.00	Strip topsoil to stockpile	m ³	546	9.50	\$	5,187
7.01	Simple E1 soakpits (90m spacing plus 2)	no	6	1500.00	\$	9,000
7.02	Prepare and trim surface	m ²	1456	4.35	\$	6,334
7.03	Place 100mm compacted depth m4AP40	m ²	1274	15.00	\$	19,110
7.04	Timber edge	m	728	25.50	\$	18,564
7.05	Gritted footpath to QLDC standards	m ²	1092	5.00	\$	5,460
7.06	Screened topsoil from MIJ	m ³	145.6	14.00	\$	2,038
7.07	Respread topsoil, swale and edges 150mm, and seed	m ²	728	5.75	\$	4,186
7.08	Traffic Management	LS			\$	20,000
				SUBTOTAL	\$	89,879

Path through Sec 1 SO 626512, QLDC Recreation Reserve (E2)		Length 81 m		Cost per m ²	\$	204
8.00	Strip topsoil to stockpile	m ³	121.5	9.50	\$	1,154
8.01	Simple E1 soakpits (90m spacing plus 2)	no	2	1500.00	\$	3,000
8.02	Prepare and trim surface	m ²	324	4.35	\$	1,409
8.03	Place 100mm compacted depth m4AP40	m ²	283.5	15.00	\$	4,253
8.04	Timber edge	m	162	25.50	\$	4,131
8.05	Gritted footpath to QLDC standards	m ²	243	5.00	\$	1,215
8.06	Screened topsoil from MIJ	m ³	32.4	14.00	\$	454
8.07	Respread topsoil, swale and edges 150mm, and seed	m ²	162	5.75	\$	932
				SUBTOTAL	\$	16,547