mitchell partnerships

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4 February 2011

Our Ref: 6674

Department of Conservation
C/- Chris Visser
P O Box 123
STEWART ISLAND

Attention: Chris Visser

Dear Chris

RE: RIVERSTONE HOLDINGS LIMITED - FIORDLAND LINK EXPERIENCE

We are writing in response to your email dated 5 December 2010, which asked us to consider section 17 U (4) of the Conservation Act 1987, which is the provision relating specifically to concessions to build structure or facilities and which refers to alternatives. You have specifically asked that Riverstone Holdings Limited (Riverstone) consider a possible alternative location to the proposed Kiwiburn terminus and also whether there might be a private land option near Limestone Hill (i.e. Glen Echo Station).

The purpose of this letter is to discuss section 17 U (4) of the Conservation Act with respect to its applicability to the Riverstone concession application currently being considered by you on behalf of the Department. We outline the reasons as to why it is reasonably necessary to undertake the proposal at the proposed location within the conservation area and that it could not be reasonably undertaken at another location. There are two possible exceptions to this, and we identify and assess alternative sites for the monorail route in relation to the Kiwiburn end and the Limestone Hill area.

This letter is written on behalf of Riverstone, and has had input from Paul Beverley of Buddle Findlay.

Necessity for Proposed Location

We note that section 17 U (4) of the Conservation Act requires that the Minister shall not grant an application for a concession, if she or he is satisfied that the proposed activity could reasonably be undertaken in another location that is outside of the conservation area, or is in another conservation area or in another part of the conservation area to which the application relates, where the potential adverse effects would be significantly less.

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This is outlined below.

> *"The Minister shall not grant any application for a concession to build a structure or facility, or to extend or add to an existing structure or facility, where he or she is satisfied that the activity-*
>
> *(a) Could reasonably be undertaken in another location that-*
> *(i) Is outside the conservation area to which the application relates; or*
> *(ii) Is in another conservation area or in another part of the conservation area to which the application relates, where the potential adverse effects would be significantly less; or*
> *(b) Could reasonably use an existing structure or facility or the existing structure or facility without the addition."*

We set out below information which, in Riverstone's view, demonstrates that the Minister could **not be satisfied** that:

a) the activity could reasonably be undertaken outside of the conservation area; or
b) the activity could reasonably be undertaken in another conservation area or part of a conservation area; or
c) the activity could reasonably use an existing structure or facility.

It is evident from the discussion below that the monorail proposal has been shaped by several elements (that are relevant to this test), all of which contribute to the necessity of the proposal being situated in this particular location within the conservation area. While much of this information is set out in the application documents, it may be useful to reiterate the key points, which are discussed in further detail below:

- The provision of enhanced accessibility between Queenstown and Milford, and reduction in the current significant midday visitor congestion at Milford;
- An existing small commercial hub at Te Anau Downs which can be utilised at one end of the monorail trip and potentially provide vehicle consolidation facilities for vehicle movements to and from Milford Sound;
- The purpose of the experience is to allow large numbers of international and domestic visitors to engage with the natural environment and showcase New Zealand's high conservation values, without being unnecessarily intrusive; and
- The minimisation of adverse effects to protect the conservation values and the intrinsic value of the resources in the conservation area and to ensure statutory compliance, and to also therefore protect and enhance the overall tourism experience created by the proposal.

Accessibility

The proposed monorail route will enhance the accessibility between Queenstown and Milford Sound.

As outlined in Riverstone's concession application the distance in a straight line from Queenstown to Milford Sound/Piopiotahi is 75km. A number of people travel by air (circa 4%) and use this direct route. For those travelling by surface transport (which is

the vast majority) the current trip is around 600km return and approximately nine and a half hours of coach travel, including a stop each way at Te Anau. When a boat trip at Milford is added the total trip time becomes 11-13 hours. As key tourism destinations within New Zealand it is important to enhance as much as is possible the accessibility and linkages between Queenstown and Milford Sound.

Both Central and Local Government have been aware of the need for enhanced access between Queenstown and Milford Sound for many years. Over the past 30 years a number of investigations have been undertaken to identify options that would enhance the accessibility between Queenstown and Milford Sound. This history and the various options are outlined in the concession application submitted by Riverstone.

Riverstone considers that the monorail and the proposed route will provide an environmentally sound solution to enhance access between Queenstown, Milford Sound and Fiordland generally, and will therefore have significant additional tourism and economic benefits. The more varied and quicker Fiordland Link Experience will be an attractive alternative for a good portion of the Queenstown based visitors.

There is also currently significant midday congestion with visitors arriving at Milford in private vehicles and coaches. The Fiordland Link Experience is intended to spread the load of visitors arriving at Milford from the current midday peak to a more even distribution throughout the day. This will result in significant reductions in the intensity of visitor and coach movements into and out of Milford Sound as a result of the dispersion of daily visitors generated by the project, with consequent positive social, economic and environmental effects.

The location of the proposed monorail has been carefully selected to provide a quality tourist link between Queenstown and Fiordland, and to reduce midday congestion at Milford in particular:

Te Anau Downs

The proposed monorail route is easily accessible from Queenstown via Lake Wakatipu and the Mavora Lakes Road. The land at Te Anau Downs where the monorail is proposed to terminate is also within the conservation estate (Fiordland National Park). Te Anau Downs is currently a small commercial hub and is leased by the Department for a number of purposes including motel, hotel and backpacker accommodation, restaurant, and cafe facilities (Fiordland National Park Lodge). It is considered an ideal opportunity to co-locate the terminus building within this existing commercial environment, rather than establish new facilities elsewhere.

The monorail route provides a direct link between the Mavora Lakes Road and Fiordland National Park Lodge. If the monorail route was moved, the monorail route would either need to be longer, or alternatively, new facilities would be required to be established for termini at each end.

The monorail will also create a sense of arrival to the National Park, with the opportunity to educate visitors as to the values of the Park while on route. The monorail will deliver visitors to the National Park and Te Anau Downs in a controlled, timed

manner which will assist in the management of potential effects of visitors throughout the immediate area and beyond. The unique experience that is to be provided by the monorail is outlined further below.

Experience and Scale of Effects

The very purpose of the proposed monorail is to create a unique travel and tourism experience. The proposed journey will be unparalleled, passing through the edge of the Snowdon Forest, itself part of the Te Wahipounamu (South West New Zealand) World Heritage Area and finish at the edge of the Fiordland National Park.

Riverstone submits that the proposed monorail and overall Fiordland Link Experience will create new ways of accessing and enjoying the New Zealand landscape and the ecosystems found along the route. The retention of the construction track as a cycle way is a benefit, or positive effect, of the monorail construction in that it will allow increased opportunities for recreation in the area and has the potential to create an important off-road cycling experience. This increases the diversity of recreation options in the Te Anau and Wakatipu Basins. The monorail will provide those people not easily able to access the outdoors such as elderly or disabled people with an opportunity to experience the ecosystems along the route from the monorail. This increases the diversity of people able to use the area. By providing interpretive information at the termini and detailed conservation based narrative within the monorail cars people using the monorail route will be able to learn about the environments they are seeing and engage with them.

The proposal is considered to be consistent with the Department of Conservation's Statement of Intent (2009 – 2012). The statement recognises that conservation is both an economic investment and has social value, particularly with respect to the intrinsic worth of natural and historic heritage. Conservation is seen as playing a critical role in validating the "clean pure" brand which has given New Zealand producers and tourism a market advantage internationally. The strategic direction outlined in the Statement of Intent indicates that the overarching purpose of the Department is to increase the values that New Zealanders attribute to conservation which in turn is expected to lead to enhanced care of New Zealand's unique heritage for people to enjoy and benefit from.

The monorail will enhance the journey by capturing and informing visitors about the natural ecology, geomorphology and ecosystems in this part of New Zealand in a way that the current motorised vehicle trip through a largely modified farming landscape cannot do. In this way, the proposal meets the Statement of Intent. It is considered appropriate to locate the monorail within this part of the conservation estate, and unnecessary to locate it elsewhere.

Riverstone is also very aware of the significance of any adverse effects on the conservation estate. Not only would significant adverse effects from the construction and/or operation of the monorail have detrimental effects on the environment, but the very purpose of the monorail and the experience it seeks to provide would be fundamentally compromised. The primary goal of the project has therefore been to avoid adverse environmental effects and maintain an active connection with the

conservation estate. This premise has influenced route decisions and will continue to do so. For example, the route selection is in many places on the periphery of the forested conservation estate, predicated to have significantly less environmental effects than a route through the centre of the conservation estate in this area. Areas of significant natural conservation value, for example the Dunton Swamp have also been avoided in route selection.

The focus of Department of Conservation management for both Snowdon Forest and the South West New Zealand World Heritage site is maintaining ecological integrity. Because of the recognised national importance of habitats such as mountain beech forest and the international importance of the tussock grassland and wetland habitats, site management is regarded as critically important by Riverstone to maintain that integrity in the face of changes brought about by the construction and operation of the proposed monorail. This is important from Riverstone's perspective as the opportunity to experience the natural habitats along the route and within a World Heritage Area is likely to be a major draw card to the experience.

Overall it is considered that there are no suitable alternative locations within the conservation estate which the monorail would achieve a lesser level of adverse effects, and similarly, no private land options for the monorail in its entirety that would achieve the objectives of the project. Given this, the construction and operation of the monorail could not reasonably be undertaken elsewhere.

In conclusion:

a) This activity could not reasonably be undertaken outside the conservation estate given the impossibility in accessing private land; and
b) The experience being sought is one largely within conservation land; and
c) The activity could not be undertaken in another conservation area or part of a conservation area where the effects would be significantly less, as in our view this current proposal minimises potential effects on the conservation area; and
d) There is no existing structure or facility that could be utilised for the monorail.

With these conclusions made, there are two parts of the proposed monorail route that have the potential to be relocated, which are likely to result in lesser adverse effects, and would still ensure the FiordlandLink Experience would meet its objectives. Each of these two alternatives is discussed below.

Alternative Terminus Site

As you are aware, and as identified by the Department's external auditors there is an existing marginal strip which extends down from the Mavora Lakes Road to the Mararoa River, downstream of the existing Kiwiburn Swing Bridge (and downstream from the original Kiwiburn terminus location). At your request, this site has been considered by Riverstone as an alternative option to locating the terminus building and associated facilities at Kiwiburn. It has also been identified that this alternative site would shorten the monorail route by approximately 1.7km and would provide a greater degree of separation between existing users and the proposed new activities.

A site visit to assess the feasibility of this alternative site was undertaken in December 2010. Riverstone's experts have confirmed that the site is workable from an engineering perspective and that environmentally the effects on recreation and ecological values are significantly less when compared to the current proposal. On this basis Riverstone would like to proceed with a new alternative, and seeks to amend its application accordingly. Material to support this amendment has been prepared by Riverstone's experts (engineering, recreational and ecological) and this is attached. Revised plans indicating the amended terminus and monorail route are also attached.

We would appreciate if you would consider this letter as formally amending the application in this regard.

As discussed with you at our meeting, we see merit in the mountain bike activity commencing at the existing swing bridge off the Mavora Lakes Road, and making use of part of the Kiwiburn track until it connects with the monorail. However we would be happy to discuss the merits of this approach with you.

Limestone Hill

As you are aware the proposed monorail route currently traverses around Limestone Hill, staying within the Conservation Estate. An alternative route has been identified through Glen Echo Station, which is privately owned land. Riverstone agrees that there is merit in adopting this alternative route which is a more direct line, provides easier terrain and consequently probable lesser ecological effects on the environment. However the current status of Glen Echo Station means that Riverstone is not in a position at this time to commence formal negotiations regarding the future use of this land. In the event a concession is granted and should an opportunity arise to locate the monorail through Glen Echo Station, thus avoiding going around Limestone Hill, Riverstone undertakes to fully investigate this option. On this basis Riverstone seeks to progress with its current proposed route design.

We trust that this information is useful, however please get in touch if any additional details would assist.

Yours sincerely,
MITCHELL PARTNERSHIPS LIMITED

L ROBERTSON

Email: louise.robertson@mitchellpartnerships.co.nz

Enc

cc: John Beattie — Riverstone Holdings
Paul Beverley — Buddle Findlay
Stewart Genery — Department of Conservation, Invercargill

ATTACHMENT 1

Engineering Statement (including plans)

27 January 2011

Louise Robertson
Mitchell Partnerships
PO Box 489
Dunedin 9054

Dear Louise

Riverstone Holdings, Fiordland Link Experience, Civil & Structural Engineering Commentary on Alternative Kiwiburn Terminus

Further to our site visit on 13 December 2010 to investigate the suitability of an alternative Kiwiburn Terminal approximately 1.7km downstream of the original location, discussions and as requested, this document contains a brief outline of the Civil and Structural aspects of the alternative Kiwiburn site (Option 2), relative to the original terminus location (Option 1).

The Alternative Terminus Location (Option 2)

Opus drawing sheets 50 and 52 show the location of the alternative terminus. Further description of the site is provided in the Mitchell Partnerhips report.

Terminal Building

The terminal building is intended to be located on the southern side of the gully and sited below road level. This is readily achievable as there are signs that there has been prior excavation in this area, possibly for gravel extraction (refer to Figure 1). Locating the terminal at this level would have two benefits;

1. The monorail wouldn't have to climb up to the upper river terrace level, and
2. The building would be less visible from the road.

Figure 1: Location of prior gravel extraction.

Monorail Alignment

Horizontal

The monorail will follow the same alignment until just downstream of where it would have entered the Beech Forest on the True Right of the Mararoa River. In this location the alignment will curve towards the True Left of the River leaving the upper river terrace and crossing the Mararoa River. The alignment then follows the centre of the gulley, avoiding the banks which are eroded in some locations. Once past the narrower section between the banks, the monorail will move closer to the southern side of the gulley adjacent to the terminal building. There is sufficient space within the area of DoC land to incorporate a turning circle. Refer to figure 2, and sheets 50 & 52.

Figure 2: Mararoa River, looking upstream. Alternative terminus location shown on the True Left of the River.

Vertical

The vertical alignment will be largely dictated by the requirement to provide a flood clearance to the Mararoa River. Across the river, the piers will be elevated and this height with some additional climbing through to the terminal site will bring the monorail to a level suitable for the terminal building.

Geotechnical

The site comprises similar granular material to the original Kiwiburn Terminal, the main difference being that there is no bedrock outcropping in this location. Refer to figure 3 for a photo of the typical soils.

There is some erosion of the True Left bank of the Mararoa River up and especially downstream of the site but the monorail foundations in the river channel will accommodate these effects. The gulley leading into the terminal site also has localised bank erosion, this is towards the downstream end of the gulley. Depending on its proximity to the final location of the terminus building, the introduction of localised rock protection would prevent any further erosion.

Figure 3: Eroded bank at stream in the gulley downstream of the terminal building.

Figure 4: Soil type exposed by eroded bank on True Left of stream in the gulley downstream of the terminal building.

River Crossing

The river crossing will be similar to that proposed for approximately 1.5km upstream, although the active river channel is wider in the alternative location. Deep piled foundations will be required for this section of active channel and on the lower river terraces.

Mountain Bike Track

It is intended that mountain bikes would use the Kiwiburn loop track between where the monorail swings east to cross the Mararoa River and the Kiwiburn footbridge over the Mararoa River (in the location of the option 1 terminus).

Services for the Terminus Building

The requirement and availability of services is effectively the same as for the option 1 location, and there is a similar amount of land on the upper terrace available for a disposal field.

Conclusions

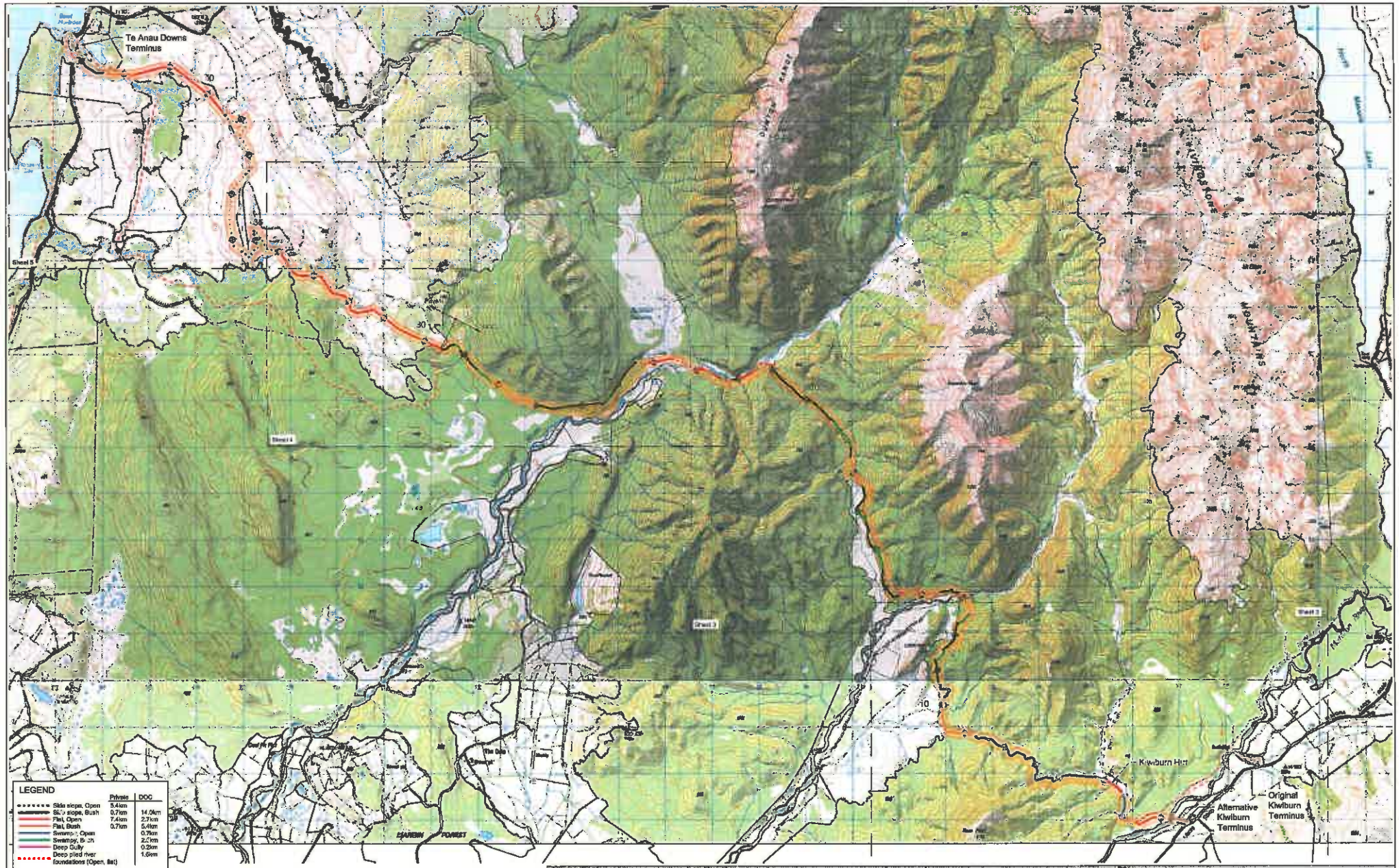
Construction of the monorail at the alternative Kiwiburn Terminus (option 2) is feasible.

The civil & structural engineering required for the alternative (Option 2) Kiwiburn terminal location is very similar to that required for option 1.

Please don't hesitate to call to discuss any aspect.

Yours sincerely

Will Parker
Principal Civil & Structural Engineer



R1	Mountain bike track to original terminus added	WSJ	26.01.11

Riverstone Holdings Ltd.

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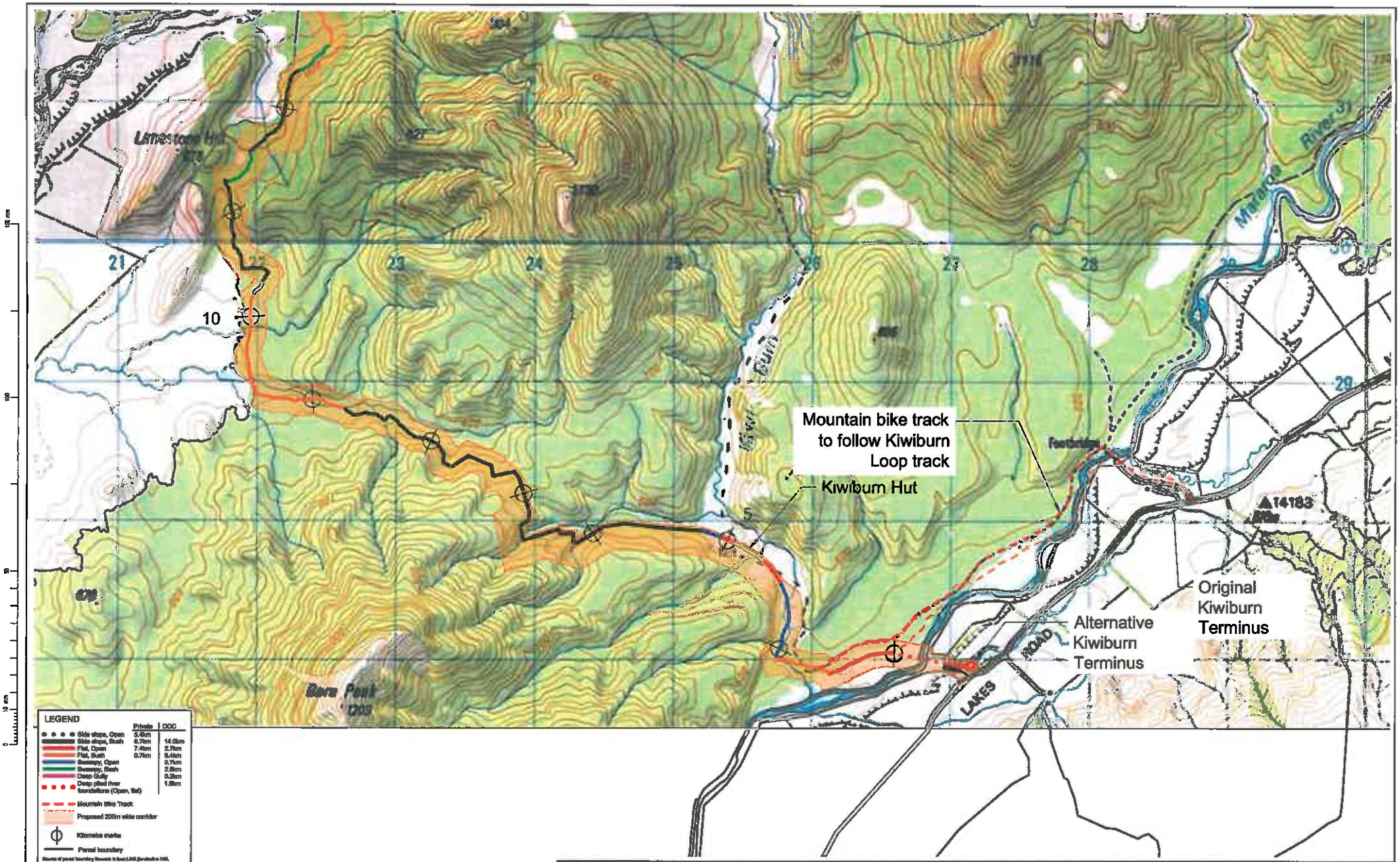
RIVERSTONE HOLDINGS LTD
FIORDLAND LINK EXPERIENCE
MONORAIL

ALTERNATIVE KIWIBURN TERMINUS
ROUTE & TERRAIN TYPE PLAN (TOPO)

Drawn	Checked	Approved	Date
C Lowry		W Parker	26.01.11

Job No	Scale	Drawing No	Sheet No	Rev No
6-DP038.00	1:37500 @ A1	7/5460/1/5604	51	R1

Original Sheet Size A1 [841x594] Plot Date 27/01/11 10:12 g:\clients\prj\5\p038.00 - fiordland link\drawings\7_5460_1\dwg\7_5460_1_5604_51-55.dwg - 51 R1



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Rev	Description	Drawn	Date
R1	Mountain bike track to original terminus added	WRP	28.01.11

Riverstone Holdings Ltd.

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RIVERSTONE HOLDINGS LTD
FIORDLAND LINK EXPERIENCE
MONORAIL

ALTERNATIVE KIWIBURN TERMINUS
ROUTE & TERRAIN TYPE PLAN (TOPO PAGE 1 OF 4)

Drawn	Checked	Date
C Lowry	W Parker	28.01.11

Job No.	Scale	Sheet No.	Rev.
6-DP038.00	1:25000 @ A3	52	R1

7/5460/1/5604

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1:2000 @ A3 — 0 20 40 60 80 m

All dimensions in millimetres (mm) unless shown otherwise

GRAPHIC SCALES

AMENDMENT	APP'D	DATE
R2 Access Road & Rail Alignment Amended	WP	27/01/11
R1 Access Road Amended	JD	23/12/10

	BY	CHECKED	DATE
DESIGN	RHL	WP	22/12/2010
DRAWN	CY	WP	22/12/2010
APPROVED	W PARKER		27/01/11

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OPUS

TITLE: FIORDLAND LINK EXPERIENCE MONORAIL

ALTERNATIVE KIWIBURN TERMINUS INDICATIVE SITE PLAN

STATUS	FILE
PRELIMINARY	6DP038.00

SCALE	PLOT DATE	FEATURE IDENTIFIER	CODE	SHEET	REVISION
1:2000 @ A3	27/01/11 @ 12:18	7/5460/1	5604	50	R2

g:\clients.pvt\6dp038.00 – fiordland link\services\alternative kiwi burn site plan.dwg – 50R2 ORIGINAL SHEET SIZE A3 [420x297]

ATTACHMENT 2

Recreation Assessment

Rob Greenaway & Associates
R&R Consulting (NZ) Ltd

PO Box 358, Nelson 7040, NZ
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M: 027 22 34567
www.greenaway.co.nz
Global Leisure Group | www.glgnz.co.nz

Wednesday, 22 December 2010

Louise Robertson
Mitchell Partnerships Ltd
PO Box 489
DUNEDIN

By email: louise.robertson@mitchellpartnerships.co.nz

Re: Fiordland Link Experience (FLE) – alternative Kiwi Burn terminus

Dear Louise

I have considered the alternative location for the proposed Kiwi Burn terminus as requested.

Figure 1 shows the esplanade reserve which follows – generally – the true left bank of the Mararoa River, and the two extensions of the reserve which meet the Mavora Lakes Road.

Option 1 in Figure 1 is the proposed location of the eastern monorail terminus as it appears in the FLE consent application. Option 2 is an alternative location for the terminus which has been identified by the Department of Conservation as worthy of consideration.

The following recreational uses are evident at each site:

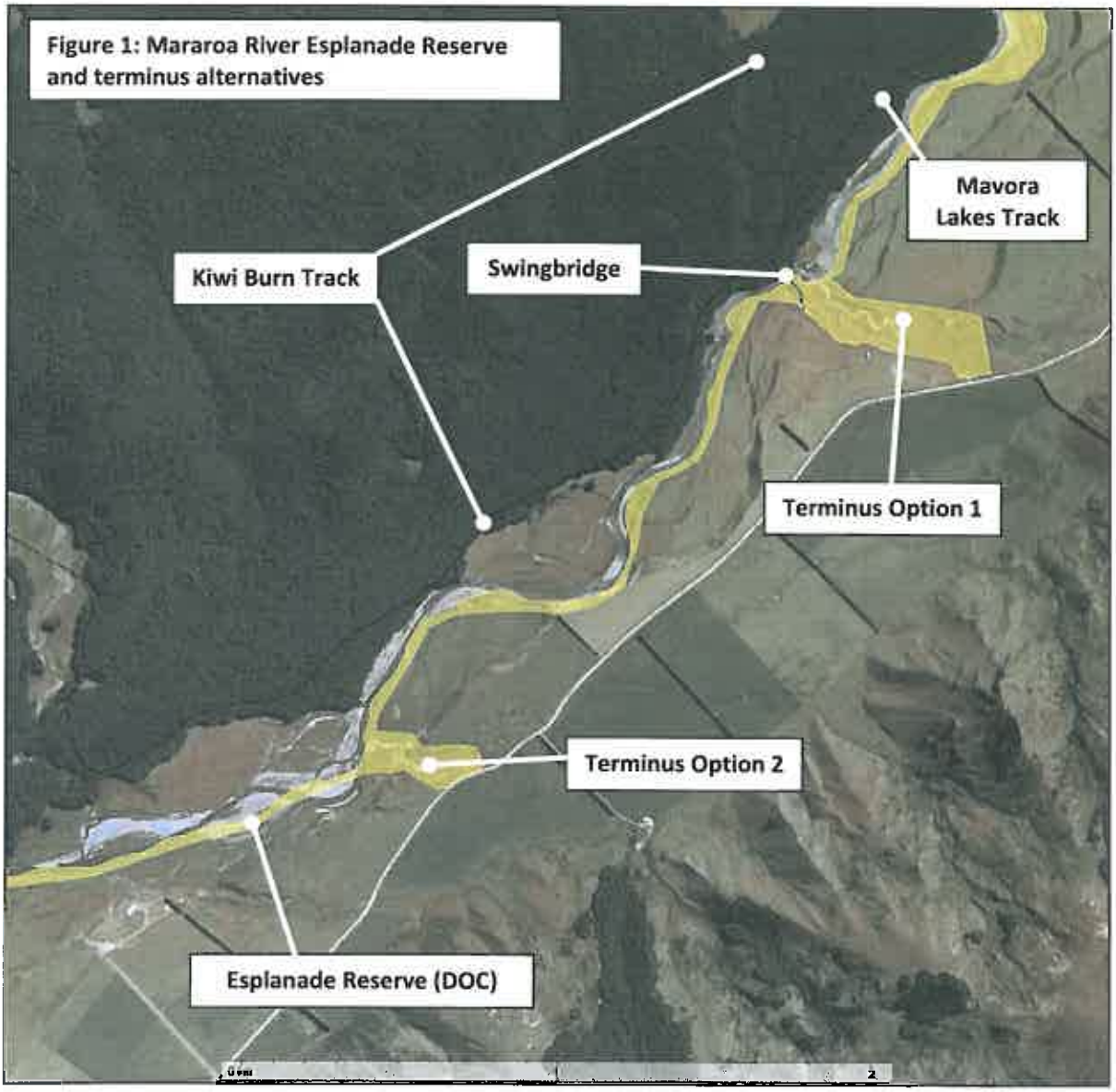
Option 1:

- Car park for Kiwi Burn Track and other local activities,
- Walking access for Kiwi Burn Track from the car park,
- Walking access to Mavora Lakes,
- River viewing from swingbridge,
- Angler access to river and esplanade reserve,
- Access and parking for kayaking activities,
- Swimming,
- Kayak passage on the Mararoa River.

Option 2:

- Angler access to river and esplanade reserve,

- Kayak passage on Mararoa River (low use),
- Swimming (low use).



Option 1 coincides with a section of the Mararoa River which passes over bedrock and provides a section of white water suitable for kayaking. Option 2 is adjacent to an area of gravel bed where the River meanders without any white water features, although it remains kayakable. However, the traditional get-in point is at the southern end of the South Mavora Lake and the get-out is at the swingbridge. Option 2 will therefore avoid the key kayaking section of the Mararoa River. Swimming is assumed to be a potential use at the site of Option 2, although there does not appear to be any significant swimming holes.

Option 2 reduces potential effects on several activities, particularly kayaking and walking, and maintains the local carpark as a dedicated site for casual recreation. The alternative location of the terminus also reduces the length of monorail by approximately 1.7km. This minimises effects on the

River and Kiwi Burn Track, benefiting walking, kayaking and angling. As a result, Option 2 is preferable from a recreation perspective.

In my November 2009 AEE report on the proposal, I made the following assessment of effects for the terminus area (Table 1):

Table 1. Summary of impacts and mitigations by site. Option 1.

Site and proposed activity	Current recreation services, use and ROS class.	Impact without mitigation	Proposed mitigation	Impact with mitigation and consideration of level of use of setting
1. Kiwi Burn parking area, including Mararoa River, access to Mararoa River, access to Kiwi Burn Track. Kiwi Burn terminus and bridge over Mararoa River.	Parking area, track start, swingbridge. Kayaking, viewing river, fishing, swimming, walking. No ROS class: assume 'backcountry drive-in'.	Significant – overlay of proposed terminus facilities on parking area and tracks. Potential for interaction between visitors.	Separate terminus visitors from existing car parking facilities. Place monorail river crossing 900m below swingbridge. Landscape facilities to visually and physically separate areas. Review angling access and if monorail crossing is within an activity area, provide alternative access.	More than minor. However, ROS class remains 'backcountry drive-in'.
2. Part of Kiwi Burn round trip and start of Snowdon Forest route. Monorail route.	Walking, tramping. ROS class: 'backcountry walk-in'. Change immediate ROS class in CMS to 'backcountry 4x4 drive-in, within narrow corridor.	Significant – overlay of facilities and proximity to Kiwi Burn Hut.	Build new Kiwi Burn Hut within same ROS class area and in similar setting. Relocate tramping track to outside of noise boundary. Retain existing hut for mountain bike use. See Figure 10 for alternatives.	Minor. Current activities relocated to same ROS class and beyond noise effects of monorail.

The same assessment with Option 2 in mind is shown in Table 2. While the 'impact without mitigation' appear similar as a result of the terms used ('significant' refers to a location where the monorail infrastructure overlays a recreation setting), the net effect of Option 2 is more limited as a result of the lower level of recreation activity at the area , the lesser diversity of activities and the loss of impact on an access point to a large recreation area.

The reduced effect of the shorter monorail route along the Mararoa River is also not shown in the assessment, as 'Site 2' in the table includes the Kiwi Burn Track and the start of the Snowdon Forest route. However, the smaller footprint of the monorail track clearly has a lesser effect on the Kiwi Burn area.

Table 2: Summary of impacts and mitigations by site. Option 2.				
Site and proposed activity	**Current recreation services, use and ROS class.**	**Impact without mitigation**	**Proposed mitigation**	**Impact with mitigation and consideration of level of use of setting**
1. Esplanade reserve and angler access to Mararoa River	Angler access, kayaking in river, swimming. No ROS class: assume 'backcountry drive-in'.	Significant – overlay of proposed terminus facilities on access area. Potential for interaction between visitors.	Manage to maintain access to the river for angling and swimming, and passage for kayaking under bridge.	Minor. ROS class remains 'backcountry drive-in'.
2. Part of Kiwi Burn round trip and start of Snowdon Forest route. Monorail route.	Walking, tramping. ROS class: 'backcountry walk-in'. Change immediate ROS class in CMS to 'backcountry 4x4 drive-in, within narrow corridor.	Significant – overlay of facilities and proximity to Kiwi Burn Hut.	Build new Kiwi Burn Hut within same ROS class area and in similar setting. Relocate tramping track to outside of noise boundary. Retain existing hut for mountain bike use.	Minor. Current activities relocated to same ROS class and beyond noise effects of monorail.

Kind regards

Rob Greenaway

ATTACHMENT 3

Terrestrial Ecology Assessment

mitchell partnerships

Environmental Consultants
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25 January 2011

Our Ref: FLE 6674

Mitchell Partnerships Ltd
PO Box 489
DUNEDIN

BY EMAIL

Attention: Louise Robertson

Dear Louise

RE: LOCATION OF ALTERNATIVE MONORAIL TERMINUS AT KIWI BURN

1. INTRODUCTION

Thank you for your email of 16 December 2010 in which you advise that an alternative site is being considered for the Fiordland Link Experience monorail terminus at Kiwi Burn. The newly proposed alternative location is situated on the marginal strip between the Mavora Lakes Road and the Mararoa River downriver of the existing Kiwi Burn swing bridge as shown in Figure 1. I refer to this alternative location here as "**Terminus Option 2**" or "**Option 2**" and the originally proposed location as "**Option 1**". Terminus Option 2 would shorten the monorail route by approximately 1.7 km and would also provide a greater degree of separation between existing users and the proposed new activities. You have asked me to undertake a desk top search for information in respect to the ecological significance of the Option 2 site. This includes a literature search and reference to the photographs taken during your recent site visit (attached as Appendix 1).

2. TERMINUS OPTION 2 SITE

The Option 2 site is managed as a marginal strip under the Conservation Act (1987). Marginal strips are areas of land around lakes and along foreshore and waterways greater than three metres wide that are to be managed for the conservation of their natural and historic resources and those of the adjacent water. The purpose of marginal strips is to enable the conservation of those riparian and aquatic resources and to maintain public access to the water. Marginal strips are 20 metres wide unless a reduction of width has been approved by the Minister of Conservation. They move automatically if the boundary of the adjacent water body moves either naturally or as a result of human activities. The Minister of Conservation can exchange or otherwise dispose of marginal strips and issue concessions or easements for their use provided that this does not conflict with the purpose for which they were protected by the

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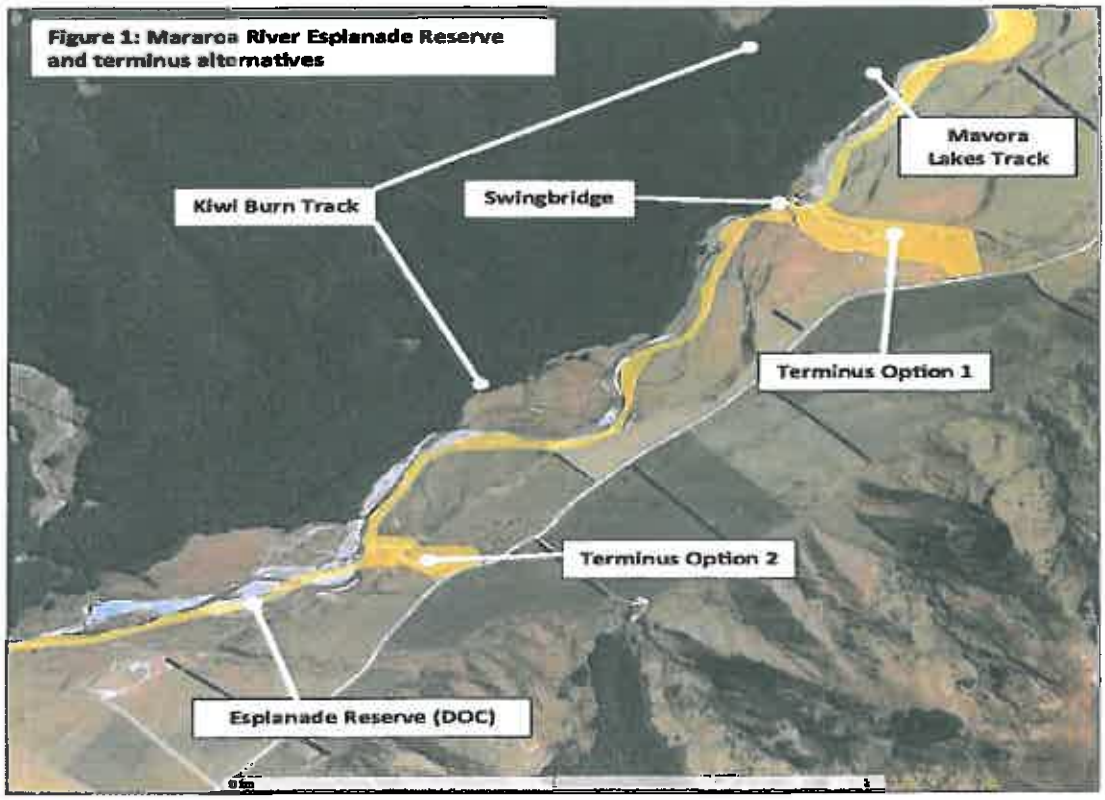

Conservation Act. The Mainland Southland/West Otago Conservation Management Strategy (1998 - 2008) ('**CMS**') notes that without knowing the natural values of particular marginal strip areas commercial uses of that area should not be allowed.

The CMS identifies that the Department of Conservation administers over 500 marginal strips in Mainland Southland/West Otago. The natural values of many marginal strips and small pieces of land alongside rivers are uncertain, but such areas may provide good opportunities for riparian restoration and survey of such areas to identify the restoration potential is seen as a priority in the CMS. I could find no information pertaining specifically to the Mararoa River marginal strip which covers approximately 71.62 ha including both the originally proposed terminus site and the Option 2 site. At the Option 2 site approximately 5 ha of marginal strip reserve protects approximately 140 m of the Mararoa River itself and surrounds a tributary on the true left bank of the river. Reference to photographs of the site provided in Appendix 1 and discussion with those who attended the site visit indicate that the area is fenced to exclude livestock, but has obviously been grazed in the past and quarrying to remove gravel has also occurred there.

The Option 2 site includes small areas of three Level IV Land Environment types: L1.1c, M2.3b and Q4.2a. It appears that the terminus and associated infrastructure would be located primarily within environment Q4.2a whilst the monorail track would cross the other environments. Both environments M2.3b and Q4.2a are regarded as less reduced and better protected by the Threatened Environment Classification (i.e. more than 30% remains). Land Environment L1.1c is chronically threatened with less than 20% remaining and only 6.4% formally protected. In our 2009 report outlining the ecological values along the proposed route we recommended that environment L1.1c be avoided where possible so as to protect indigenous communities. Where these environments could not be avoided we recommended full rehabilitation as soon as

practicable. Option 2 reduces the amount of land environment L1.1c which would be affected by the proposal by leaving intact the larger areas of these habitats on the true right of the river which would be crossed by Option 1. Restoration of the areas surrounding the terminus, particularly the fertile well drained flood plains which comprise environment L1.1c, to a more natural vegetation type if Option 2 is adopted is still recommended.

The photographs in Appendix 1 show that much of the vegetation cover within the marginal strip area appears to comprise exotic pasture grasses, such as sweet vernal (*Anthoxanthum odoratum*) and browntop (*Agrostis capillaris*), and weeds such as briar rose (*Rosa rubiginosa*). There are elements of native vegetation, including tussocks (*Chionochloa* spp.), matagouri (*Discaria toumatou*) and speargrass (*Aciphylla* spp.), particularly on the steeper gully sidlings and bluffs. The vegetation appears similar, but less ecologically intact and with a higher proportion of exotic pasture species, to that found at the Option 1 site. It is likely that small native herbs, ferns and other plants are found between the grasses, as they are at the Option 1 site, however it is not possible to determine the presence or significance of those without visiting the site.

I note that the clearance or modification of indigenous grasslands (where the percentage canopy cover of tussock species is less than 50%) is a permitted activity under the Southland District Plan (**"the district plan"**). From the photos it would appear that tussocks cover less than 50% of the flat portions of site and therefore vegetation clearance, at least at some localities at the Option 2 site, would presumably be permitted.

Vegetation at the Option 1 site consists of exotic pasture with a higher proportion of native species, including relatively intact red tussock grassland, found closer to the Mararoa River. At the Option 2 site the vegetation also appears to include a higher proportion of native species (particularly shrubs) closer to the Mararoa River, although the best examples of native vegetation appear to be restricted to the steeper gully walls.

Based on the evidence to hand with respect to terrestrial ecology, Option 2 appears to be a better alternative than Option 1 for the following reasons:

i) The Option 1 site appears more natural and presumably has higher ecological values.

ii) Option 2 reduces the length of the monorail by approximately 1.7 km. This reduces the overall footprint of the project and removes the need to affect the more intact areas of tussock and mountain beech (*Nothfagus solandri* var. *cliffortioides*) forest and areas of land environment L1.1c upstream of the Option 2 site.

iii) Option 1 would require negotiating a curve at the Kiwi Burn/Mararoa confluence before travelling up Kiwi Burn past the existing hut. Realignment to a more direct route near Kiwi Burn may make it easier to avoid localised red beech trees there. Red beech trees are not common at the eastern end of the route, and as noted in our earlier report, avoiding their removal is a priority.

iv) Option 2 could provide a suitable site for ecological restoration if this turns out be necessary/desirable.

3. ASSESSMENT OF ECOLOGICAL SIGNIFICANCE

Whilst it is acknowledged that the application for concession to build the monorail falls under the jurisdiction of the Conservation Act (1987), reference to the district plan and other Resource Management Act (1991) ("**RMA**") related documents is useful in assessing the potential ecological significance of the site.

The district plan does not identify criteria for the assessment of ecological significance in terms of the RMA. As noted above, the clearance or modification of indigenous grasslands where the percentage canopy cover of tussock species is less than 50% is a permitted activity under the current district plan. Indigenous vegetation which does not meet permitted activity standard, is a discretionary activity under Rule HER 3 of the district plan.

The council will have regard to the following ecological matters when considering discretionary consents for clearance of indigenous vegetation:

a) The significance of the affected vegetation or habitat of indigenous fauna in terms of ecological, intrinsic, cultural or amenity values, and the effects of the proposed activity on those values. Methods for determining significance are not defined within the district plan.

b) The representativeness of the affected indigenous vegetation or habitat of indigenous fauna and its relationship with other habitats or area of vegetation.

e) Whether the habitat and/or vegetation are important to indigenous species which are regionally rare or nationally threatened, and the effects of the proposed activity on these values.

f) Whether the area has been identified on Schedule 6.14 of the district plan or by the Protected Natural Areas Programme administered by the Department of Conservation.

The Southland Regional Policy Statement ("**RPS**") lists significant areas in Southland, but does not identify any near Kiwi Burn. According to Section 5.2 of the RPS identifying whether an area contains significant indigenous vegetation or is a significant habitat of indigenous fauna in Southland must take into account:

- The diversity of species contained within the habitat.
- The species composition and association.
- Any international importance.
- Any national importance.
- Representativeness, uniqueness, abundance and/or rarity in the Southland region.
- Abundance of an indigenous species.
- Contribution to the functioning of ecosystems.

Both the district plan and the RPS are currently being reviewed.

Notwithstanding the possible presence of rare or threatened plant species which are not visible in the photographs, it seems unlikely that the Option 2 site would be significant in terms of Section 6(c) of the RMA. It is also unlikely to be significant in terms of the Conservation Act, beyond its purpose as a marginal strip. The site has been modified in the past and includes a high proportion of exotic species, meaning

that it is unlikely to contain representative vegetation. The Option 2 site is unlikely to provide habitat for threatened bird species, except possibly the chronically threatened New Zealand pipit (*Anthus novaeseelandiae*), and its small size means that it would not provide habitat for more than one or two pipits at most. Lizards or other fauna may use the site, but the small area and its location surrounded by farms mean that if any species of conservation concern was present then habitat restoration at the site could outweigh any adverse effects due to small areas of vegetation removal required for the construction and operation of the monorail. Retirement of grazing by livestock since the construction of the fence will have improved the riparian function and water quality of the site. The area is not particularly well connected or obviously functionally linked to other protected areas, except the Mararoa River, and provided that water quality in the tributary is protected this connection would not be affected by the monorail proposal. The existing or restored vegetation would still act to buffer the stream from adjacent land uses. The area is protected by statute, but in the absence of other significant ecological values (representativeness, intactness, size, diversity, connectedness, rarity, threat, importance for fauna, sustainability, national importance or scientific value) the proposed development would not be inconsistent with the CMS provided the water quality, aquatic health and public access were maintained.

4. CONCLUSION

Based on a desktop assessment the Terminus Option 2 site has no obvious features which elevate it in ecological significance above the Option 1 site, and it appears likely that the Option 1 site is more ecologically valuable than the Option 2 site. Adopting Option 2 would reduce the project footprint overall, and in particular reduce the vegetation clearance required in the mountain beech and tussock communities upstream, including areas of the chronically threatened L1.1c land environment. Option 2 would also provide a suitable site for ecological restoration of tussock communities.

I trust that this accords with your expectations, please let me know if I can assist you any further.

Yours sincerely,
MITCHELL PARTNERSHIPS LIMITED

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Plate 1: **The Terminus Option 2 site viewed from near Mavora Lakes Road.**

Plate 2: **The gully bottom of the Terminus Option 2 site.**

Plate 3: Native vegetation is confined to steeper sites at the Option 2 site.

Plate 4: The vegetation covering flatter areas at the Option 2 site is dominated by exotic pasture.

Plate 5: **The river terrace on the true left bank of the Mararoa River near the Option 2 site.**

Plate 6: **Vegetation surrounding the seasonally dry streambed at the Option 2 site.**

Plate 7: Vegetation on the Mararoa River Terrace.

Plate 8: The Option 2 site.

Plate 9: The unnamed tributary at the Option 2 site.

Plate 10: Location of historic gravel extraction at Option 2 site.

Plate 11: The Terminus Option 2 site viewed from upstream.