Po Tu O Te Rangi (Harding Park) Safety & Connectivity Assessment

Prepared For:
Kaipara District Council
by Shane Dale
Ref: #J002411

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www.stellarprojects.co.nz
info@stellarprojects.co.nz
www.linkedin.com/company/4818682
PO Box 1101, Whangarei 0140
Level 1, 2 James Street, Whangarei 0110

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Report Prepared For: Kaipara District Council

Report Prepared By: Stellar Projects Limited

Document Author: Shane Dale (Senior Engineer)

Reviewed By:

Claire Bodmin – Senior Project Manager & Landscape Architect

22/01/2020

Authorised for issue: Natalie Blandford – Northland Regional Manager

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TABLE OF CONTENTS

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1. GENERAL

1.1 Introduction

Kaipara District Council (KDC) has engaged Stellar Projects Limited (SPL) to undertake an investigation and feasibility assessment of options to improve safety and connectivity within Harding Park, Dargaville.

Harding Park is a popular destination for visitors and residents of Dargaville alike and contains the following tourist attractions:

- The Dargaville Maori Maritime and Pioneer museum;
- The Kaipara Vintage Machinery club;
- The Lighthouse function centre;
- Pou Tu Terangi Pa site look out;
- Old Mount Wesley Cemetery;
- Harding Park family cemetery, and
- An overnight campervan parking area.
- Views along the Wairoa River to the Kaipara Heads

The following stakeholders have interest in Harding Park and hold regular meetings to ensure good management of the park and its facilities.

- Harding Park Governance group
- Kaipara District Council (Parks reserves and Roading)
- Local Board members

The governance group that manages Harding Park - made up collectively of Iwi representatives, Hagley family members, Museum and Vintage group members) - has discussed the following vision for the park.

Vision for the park (source - Reserve Management Plan 2012)

"Pou Tu o Te Rangi/Harding Park will be an important enjoyable learning environment rich in natural and cultural heritage for both the local community and visitors. Throughout the site, stories will be expressed hinting at the unique qualities of this place and this community; past, present and future".

and

"Pou Tu o Te Rangi/Harding Park will be a shared public place for recreation, events, fun and learning".

Key objectives from the Harding Park vision statement include:

Improving perceived and actual safety. Ensure all parts of Pou Tu o Te Rangi/ Harding Park are accessible to the public and that the public feels welcome to explore all parts of the site(s). Ensure Pou Tu o Te Rangi/Harding Park is well connected to its immediate surrounds.

In order to achieve these objectives a schematic diagram is required for the park that considers; road safety, connectivity, accessibility, parking capacity, traffic circulation, landscaping and the overall amenity of Harding Park.

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1.2 Background information

The following background information was provided by KDC for consideration.

Opus traffic report (2017)

A Traffic Management report was prepared by Opus in 2017, to consider traffic circulation within Harding Park.

This report covered the safety of the existing park access at the intersection off Harding Park Access Road and Mount Wesley Coast Road, as well as the direction of traffic circulation through Harding Park itself.

The report concluded that the existing 'clockwise traffic circulation' was most desirable and that some minor modification to signage and road marking was necessary to improve road safety within the park.

The scope of the Opus Report did not include consideration of connectivity within the park for current and future proposed activities (e.g. parking capacity improvements and future mountain bike paths).

Littoralis Landscape plans (2019)

Concept plans (1:500 scale) were provided for certain improvements within Harding Park. These landscape plans were focussed on the immediate areas surrounding the Museum and Vintage Machinery Yard, with some suggested improvements to parking capacity, footpath connectivity, landscaping adjacent to existing roads and buildings as well as improvements to the Vintage Machinery Yard entrance.

The work presented in these concept plans is an improvement on the existing layout and amenity within the park but does not fully address the issues with parking capacity, traffic circulation, safety and connectivity, especially during special events like funerals etc. For clarity the items that require further consideration are listed below:

- Removal of the parking and roadway to the east of the Lighthouse convention centre to improve vistas across the Wairoa River;
- Two-way traffic circulation between the Museum and Vintage Machinery Yard between the proposed parking areas;
- Safety issues on the one-way circuit, particularly with the bus stop location, pedestrian drop off and bus turn around areas;
- The future proposed mountain bike track network to the west of the access road and potential parking area for these visitors;
- Provision of an alternate access or road widening to facilitate future growth, increased visitor numbers and event management.

The schematic connectivity plans provided in this report are a high-level assessment of connectivity, road safety and traffic circulation only. We recommend these concepts are developed further with the assistance of Stellar Projects and Litoralis once the preferred option is adopted.

The scheme plans (Options 1,2 and 3) are included in Appendix A of this report.

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1.3 Project Objectives

In line with the reserve management plan the following project objectives are considered as part of this report.

Supporting future growth

That future growth is supported by the provision of improved infrastructure for traffic, pedestrians and public health.

- Parking capacity that services the Vintage Machinery Yard, the Museum and the Mountain Bike Park;
- Public facilities such as improved bus circulation and bus stop, public toilets
- Signage that welcomes and encourages an increase in customers

Connectivity

That connectivity is improved between different features within the park to ensure that the public feels welcome to visit all parts of the park and that visits are memorable for the right reasons.

- Footpath connections between all facilities (Cemetery, Museum, Vintage Machinery Yard, Mountain Bike Park and Maori Pa Site.
- Wayfinding signage to ensure visitors can find their way around the improved facilities, to ensure that visits are memorable.

Road Safety

That with an increased number of visitors to Harding Park, road safety improvements are sufficient to ensure safety of visitors by considering the following:

- Information and direction signage is clear and easy to understand (mainly for tourists);
- Road and intersection layouts are 'self-explaining';
- Eliminate hazardous areas (e.g. tight narrow bends with no visibility).

Level of service to facilities

Ensure that all tourist attractions within Harding Park have an equal level of service:

- Equal facilities provided for Museum and Vintage Yard (Parking, Toilets, pedestrian access and interest)
- Equal level of Service for all visitors to the park (all modes and abilities)

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1.4 Site location

Harding park is located to the south of Dargaville town centre on the western bank of Wairoa River. The main access to Harding Park is via Colville Road, Pouto Road and Mount Wesley Coast Road to the park entrance.

Mount Wesley Coast Road is a rural arterial road that links Dargaville with Mahuta on the west coast, the traffic volume on this road is approximately 375 vehicles per day and the posted speed limit is 100km/h.

The current access to the park is provided off Mount Wesley Coast Road, via Harding Park Access Road. The intersection at the entrance to the park is a T Junction and has a Right Turn Bay (RTB) provided for visitors to the park. Harding Park Access Road is currently a loop road operating in a clockwise direction, with the lower section being wide enough for entry and exit movements.

Old Golf Course Road is a local road to the west of Harding Access Road which has a traffic volume of approximately 195 vehicles per day and a speed limit of 50km/h. Old Golf Course Road is on the western boundary of Harding Park and consideration is given in this report to using Old Golf Course Road as an alternative access to Harding Park, noting it is currently unsealed

2. SITE INVESTIGATION

Site visits were conducted on the 12 December 2019 and again on 16 January 2020 to assess the feasibility of design options. While visiting Harding Park as a visitor, we got a good feel for the 'user experience'.

User Experience

Upon arrival in Dargaville we found that there was a good level of information and direction signage from Dargaville to Harding Park, reinforced by 'MUSEUM' wording on the roof of the Museum building itself.

Dargaville town concrete footpath (constructed by Kaipara District Council) connects Dargaville to Harding Park via River Road and Pouto Roads.

The vehicle entrance to the park is well laid out, calm and welcoming to visitors when they arrive with information signage for the park and the Harding family burial sites. After entering Harding Park and stopping, the environment was very peaceful and quiet, information was at hand and the road entering the park was also quiet in terms of vehicular traffic. There are immediately some picnic tables near the entrance and open grassy areas to relax and read the information boards.

The drive up into Harding Park from the gate was enjoyable, with various interesting features along the way, including information signage, ponds, bush walks, Vintage Machinery, landscaping and a maritime display.

Arriving at the carpark area, the parking area and toilet was reasonably well laid out, although it was unsealed and therefore unmarked. One or two campervans and house buses were present, with very little other vehicular traffic.

Toilets were available within the carpark, although the condition was not great and accessibility, capacity and cleanliness could be improved. Better toilet facilities were available within the Museum building.

Traffic generators

The following activities within the park contribute to trip generation / traffic movements:

- Museum & Café patrons and staff
- Campervan parking area (although less popular now that other camp sites near the river have been provided)
- Cemetery visits and burials / wakes held at the Museum area (also requires hearse access)
- Proposed mountain bike park (some people drive up with bikes, although the intention is to provide connectivity to the road so cyclists can cycle to the site)
- Walkers visiting the cemetery paths
- Motorists visiting just for the view

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Discussions with Museum and Vintage Machinery Yard

During our site visit on 16th January 2020 we were able to discuss the current operation of the Museum and Vintage Machinery Yard with the Museum director and a manager from the Vintage Machinery club.

Some of the operational issues experienced by the Museum include:

- Patron numbers are approximately 7000/year (increased from 5,000/year over the last 3 years)
- During large events (such as funerals / weddings) some visitors want to travel back against the One-way flow of traffic, presenting various safety issues with turning traffic, pedestrians and potential 'head on' crashes
- One-way traffic circulation works well for the museum as many visitors come to Harding Park for the view and it is only once they drive past the museum door and see the facilities that they decide to stop and visit the museum
- The one-way road loop is a journey through Harding Park, and most of the views are only experienced by motorists once they pass the Museum door
- Many motorists drive up for the view and to take photos. If the route is truncated near the museum door, visitors may not come up at all as they can't 'drive by' to take photos
- During funerals the hearse needs to be able to drive in followed by family, and then drive down past the Pa site to the cemetery area. Truncating the road network at the museum would not allow this to happen. The hearse would instead be required to turn in the bus turn around area and reverse back to the lighthouse function centre
- Similar to the above, during weddings the wedding procession moves in one direction through the park and the Museum operators are keen to keep the one-way circuit for the flow of these events
- If hearses or wedding vehicles were forced to turn around at the bus turn around area, this would introduce both safety and operational issues for the Museum and Lighthouse function centre
- The open shed near the campervan car parking area will be used to store the ceremonial Waka. This Waka is used from time to time in events and needs to be able to be moved in and out with relative ease. Similar to weddings and funerals above, the one-way loop best supports the use of the Waka in ceremonies as the waka is transported down past the Pa site towards the river, as opposed to backwards through the park to Mount Wesley Coast Road
- The existing disabled parking spaces are currently at the entry to the museum. If the road was truncated at the Museum, either these parking spaces would be moved to the main car park, or drivers with disabilities would be expected to do a 3 point turn to exit the parking area
- Few buses - approximately 7 per month

The Museum Director has serious concerns with changing the road to two-way, as this will bring a plethora of safety and operational issues that do not currently exist in the park

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Current issues observed during site visit:

- Narrow road widths (4m)
- Topography doesn't allow for wholesale widening of roads (sideling cut and fill and retaining walls)
- Possible Geotech issues
- Working on a site with archaeological / historic value
- No facility for bus turn-around
- Buses drop passengers off on opposite side of the road with passing vehicles
- Rainbow Warrior masts and parking obscure the view and Governance group has the desire to remove these and reinstate natural landscaping
- Potential connection for exit route is unsealed

Options:

- Remove sharp curve, masts and parking area and reinstate landscaping and improve view
- Possibly retain and modify existing road as part of proposed cycle route or pedestrian route
- Upgrade road and parking areas around the museum and Vintage Machinery areas for better traffic flow, accommodating buses and improved parking facilities
- Integrating with walking tracks, mountain bike tracks, pa site, cemetery museum and Vintage Machinery Yard activities
- Providing a better exit route via the metal road (Old golf course road)

Safety:

- The earlier signage recommended by Opus has been installed and appears to be working well (advance warning, one-way signage and speed limit signage)
- Currently the intersection with Mount Wesley Road is well laid out with RTB provision for those entering the site
- The intersection control is a STOP control, with signage and yellow limit line present
- Some restricted visibility around the curve for oncoming vehicles (at existing RTB into Hagley Park)
- Speed environment de-restricted with no advance warning signage of Harding Park and the Museum
- The speed limit within Harding Park itself is low (30km/h) and this is reinforced by the calm environment created within the park by the presence of cemeteries, landscaping and bush tracks

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- Signage within Harding Park reinforces the one-way traffic circulation
- The intersection of Old Golf Road has a skew layout, there is no RTB nor intersection controls and the intersection is not very conspicuous for traffic travelling along Mount Wesley Coast Road
- There is a de-restriction sign when leaving Old Golf Road that is positioned in an awkward location on Old Golf Road
- Old Golf Road is sealed only for the first 150m; beyond this point a seal extension of Old Golf Course Road is required for approximately 500m
- Old Golf Road is 5.5 – 6.0m in width and some widening would be required prior to sealing
- A new exit from Harding Park onto Old Golf Road is possible, with good visibility in each direction (near to the existing farm gate access)

Constraints:

- Kauri Tree near Museum entrance (can't be moved)
- Titoki trees along driveway (can be relocated if required)
- Tying in with existing drainage (lack of GIS information)
- Financial constraints for seal extension on 'Old Golf Course' road – and getting the Roading department to commit funding for this portion (0.6km x $750,000 = $450,000)

Design drivers:

- Investigate the provision for two-way traffic at top end between Vintage Machinery Yard and Museum to provide equal level of service to both tourist destinations
- Provide parking areas at the top of the hill between the two tourist destinations that provide equally for both (near toilet facilities)
- Provide a new link road to link with the existing metalled road to the west of the site
- Provide additional overflow parking near the new link road and start of mountain bike tracks

3. OPTIONS CONSIDERED

Three options are being considered to improve the traffic circulation within Harding Park. The main driver for this is to improve vistas from the Lighthouse function centre and the overall experience by the park user. There are also potential safety and connectivity benefits that can be realised through improved traffic and pedestrian facilities.

An aspect common to two of the options is provision of a two-way road network between the Vintage Machinery Yard and museum with parking, toilet and footpath facilities that service both tourist destinations equally. Further to the above, a new parking facility and access road is provided to service the Mountain

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Bike Track and provide additional parking capacity for the Vintage Machinery Yard.

A third alternative option is considered which maintains the current traffic circulation but provides additional parking capacity for the proposed Mountain Bike track and Vintage Machinery Yard.

The options take on board earlier landscaping concepts from Littoralis and are discussed in more detail below.

3.1 Option 1 - Old Golf Course Rd becomes the new two-way connection to the park

This option considers adjusting the gateway into Harding Park to restrict it to entry and one-way circulation into the park only.

A new exit from the park will be provided by constructing a new link road to Old Golf Course road to the west. If vehicles are encouraged to exit via Old Golf Course Road, then intersection improvements may be required at Old Golf Course Rd / Mount Wesley Coast Road intersection.

This option would require a costly 'seal extension' on Old Golf Course Road to ensure safety of visitors to the park.

Pros	Cons
Safer options for traffic circulation / removes potential 'head on' conflicts between buses and cars on narrow bends	Large cost sealing Old Golf Course Rd (possibly subsidised by Roading team)
Less congestion within the park, with two alternative entry points (Main entry and mountain bike track via Old Golf Course Rd)	May require an investigation of Mount Wesley / Old Golf Course Rd intersection for safety improvements
Provides an alternative exit should an event close off the road to the Museum	Truncates the road at the Museum bus turn around area, resulting in park visitors not driving past the museum
	Old Golf Road residents would not be happy with the increased traffic volumes and associated noise
	Increased road maintenance costs for maintaining the new road network on Old Golf Course Road and new Harding Park access road
	Potential for safety issues arising at the intersection of Old Golf Course Rd and Mount Wesley Road
	Adversely affect the operation of funerals or weddings and other similar functions

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3.2 Option 2 - Convert the existing one-way entry road to two-way

This option differs from Option 1 in that the portion of Harding Park Access Road is changed to two-way between Mount Wesley Road and the Vintage Machinery Yard, as opposed to providing a link road connection to Old Golf Course Road.

This option eliminates the need to seal Old Golf Course Road between the new connection and mount Wesley Coast Road. However, this option is likely to have geotechnical and retaining wall challenges with widening the existing access road to two lanes.

This option would require costly cut and fill retaining walls on the portion of Harding Park Access Road between the pond and the Vintage Machinery Yard.

Pros	Cons
Does not require sealing Old Golf Course Rd	Geotech and retaining wall challenges for widening the road between the pond and Vintage Machinery Yard
Existing Mount Wesley Rd intersection has RTB and can safely accommodate all traffic movements	Min road width (6m) could still present some 'head on' challenges on curves i.e. bus vs car
	Truncates the road at the Museum bus turn around area, resulting in park visitors not driving past the museum
	Slightly more congestion with bike track visitors sharing same intersections
	A wider road environment encourages higher vehicle speeds
	Increased road maintenance costs for sealing and road marking within Harding Park
	Adversely affect the operation of funerals or weddings and other similar functions

Either option 1 or 2 would require extensive topographical survey, geotechnical investigation and scheme design prior to confirming feasibility.

3.3 Option 3 – No change to roads, but introduce carpark for mountain bike track

An alternative option is considered to reduce project costs.

This option works on the premise that the existing One-way traffic flow is working well and that there is sufficient capacity within the park to accommodate vehicles during peak periods for the current activities within the park.

The addition of the new proposed mountain bike track will encourage more people to drive to the park with their bikes. There will therefore be a requirement for additional parking near the start of the mountain bike tracks. Without this there is likely to be mountain bikers using the current sealed road and travelling in the wrong direction to access the new track location. This introduces a new safety concern that is not currently an issue in the park.

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It is therefore necessary to provide a parking area near the start of the mountain bike track. This parking area could either be accessed off the existing one-way road network with a two-way entry / exit onto Harding Access Road.

Pros	Cons
Much lower cost when compared to the other two options	Does not provide an increase in capacity for growth or new activities within the park except for the proposed mountain biking and overflow parking
Avoids the potential for conflict between cyclists and motorists on Harding Park Access Road between the museum car park and the proposed mountain bike track	Doesn't address the traffic management issue when there is an event at the museum; there is still only one exit that requires vehicles to pass the Museum during events like funerals and weddings
Maintains the narrow cross-sectional widths, which assist in keeping speeds low within the park	
No disruption to landscaping already planted along the length of Harding Park Access road between the Vintage Machinery Yard and Museum	
New sealed parking area can be used as overflow parking for the Vintage Machinery Yard during events	
Maintains the one-way loop which is in itself a journey through the park for visitors	
Does not adversely affect the operation of funerals or weddings and other similar functions	

The preferred option is Option 3, which maintains the existing road network and operation within the park but provides additional parking capacity by formalising and providing new carparking areas.

3.4 Cost Estimate & Risks

The high-level rough order costs are as follows:

Option 1 – Maintain one-way access between Mount Wesley Coast Road and the Vintage Machinery Yard, widen the road between Vintage Machinery Yard and the Museum to facilitate two-way traffic, provide a connection to Old Golf Road and seal Old Golf Road. The cost for this option is $2.32M, including 30% contingency.

Option 2 – Creating two-way access between Mount Wesley Coast Road and the Vintage Machinery Yard, widen the road between Vintage Machinery Yard and the Museum to facilitate two-way traffic, provide parking near the proposed mountain bike tracks. The cost for this option is $2.25M, including 30% contingency.

Option 3 – Maintain the existing one-way road circuit, provide parking near the proposed mountain bike tracks and Museum. The cost for this option is $0.85M, including 30% contingency.

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The preferred option is Option 3, maintaining the one-way circuit as it is, with improvements to parking facilities and footpaths. This option does not adversely affect the existing operation of the Museum and Vintage Machinery Yard but does cater for additional visitors to the new facilities.

The above estimates do not include renewing the toilet block or any landscaping associated with the Littoralis designs.

3.5 Potential Safety & Operational Issues Associated with Preferred Option

The preferred option (Option 3) has been designed to have the least impact on the existing operation within Harding Park. We believe that changing the one-way circuit to a two-way road would introduce a number of new safety concerns. Given the length of the road network, there is capacity within Harding Park to cater for a large number of vehicles. The use of overflow parking during main events seems to adequately accommodate the additional traffic and parking requirements.

The only new feature for the park is the Mountain Bike Track; any visitors to this facility will be catered for by the new carpark area to the west of the Vintage Machinery Yard.

4. Conclusion & Recommendation

Following careful consideration of project objectives, site constraints as well as the likely safety and operational impacts of the project we consider the preferred option to be Option 3.

Appendix A contains schematic plans to be used for internal consultation to gain support for the proposal and confirm the preferred option. Should internal stakeholders require more detailed explanation, the comments supporting our decisions are contained in the body of this report.

Appendix B contains a Rough Order Cost estimate (R.O.C) with 30% contingency, for budgeting purposes. These Rough Order Costs have been developed using current contract rates and quantities obtained from KDC Geomaps data.

Appendix C contains site photos, Appendix D the current Littoralis plans and Appendix E the proposed Mountain Bike Tracks.

5. Limitations

This report is a high-level connectivity assessment prepared solely for the use of Kaipara District Council. The estimates in this report are high level and indicative only to guide Kaipara District Council on which option is likely to be the most reasonable in terms of benefit vs cost for Kaipara District Council.

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6. References

The following websites were used during the preparation of this report:

https://www.kaipara.govt.nz/uploads/documents/h/Reserve%20Management%20Plan%20July%202012%20FINAL%20-%20full%20appedice%20version.pdf

https://data.linz.govt.nz/

https://www.tripadvisor.co.nz/

http://www.dargaville.co.nz/VintageMachines.cfm

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7. Appendices

APPENDIX A: SCHEMATIC DIAGRAMS

APPENDIX B: ROUGH ORDER COST ESTIMATES

APPENDIX C: SITE PHOTOS

APPENDIX D: LITTORALIS LANDSCAPE PLANS

APPENDIX E: MOUNTAIN BIKE TRACKS

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APPENDIX A: CONNECTIVITY DIAGRAMS

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KEY

1. Maintain one way traffic flow
2. 2 way traffic connecting Old Golf Course Road with Reserve facilities
3. Upgrade & seal Old Golf Course Road
4. Roading and parking improvements
5. Vehicle access to reserve
6. Detune road to landscaping and footpath
7. Improved Pa site entry
8. Remove Rainbow Warrior Masts (possible)
9. Future mountain bike tracks
10. Consider new public toilet adjacent to car park
11. Gum digger camp
12. Refer to landscaping plans by 'Littoralis' for details (minor amendments shown for bus circulation)

Two way traffic

One way traffic

Indicative Retaining walls

N

Overflow Parking

Vintage Machinery

Museum

Old Golf Course Road

Pa Site

Cemetery

Mount Wesley Coast Road

HARDING PARK , DARGAVILLE - CONNECTIVITY ASSESSMENT

L101 - OPTION 1 CONNECTIVITY LAYOUT PLAN

30.01.20
REV 04
DRAWN:AN

DISCUSSION DOCUMENT

KAIPARA DISTRICT
Kaipara te Oranganui • Two Oceans Two Harbours

STELLAR

KEY

1. Widen existing road to 6m for two way traffic flow
2. 2 way traffic between museum & vintage machinery and access to mountain bike car park and trails
3. No vehicle connection to Old Golf Course Road
4. Roading and parking improvements
5. Refer to landscaping plans by 'Littoralis' for details (minor amendments shown for bus circulation)
6. Detune road to landscaping and footpath
7. Improved Pa site entry
8. Remove Rainbow Warrior Masts (possible)
9. Future mountain bike tracks
10. Consider new public toilet adjacent to car park
11. Gum digger camp

Two way traffic

Indicative Retaining walls

N

Overflow Parking

Vintage Machinery

Museum

Old Golf Course Road

Pa Site

Cemetery

Mount Wesley Coast Road

HARDING PARK , DARGAVILLE - CONNECTIVITY ASSESSMENT

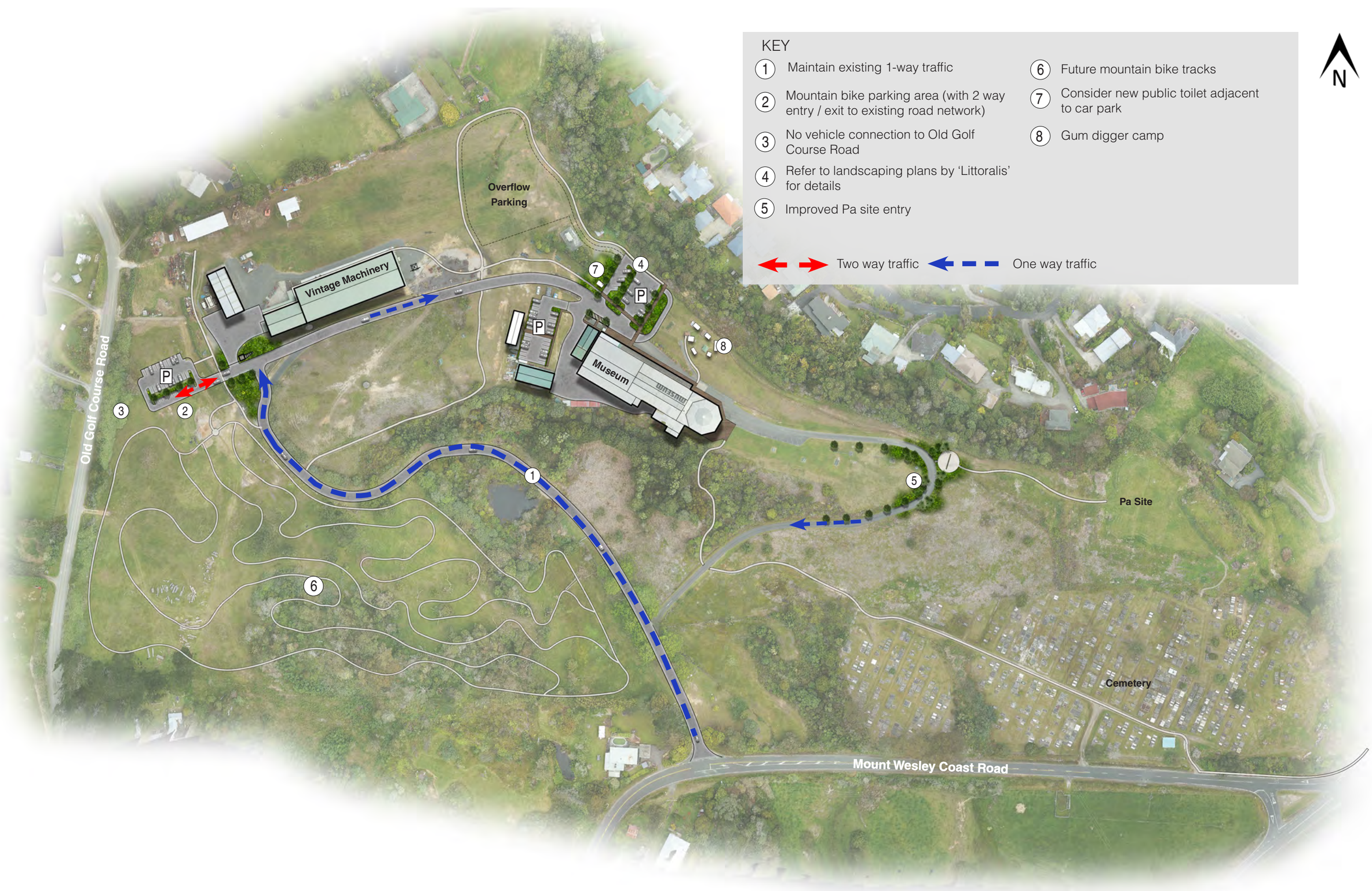
L102 - OPTION 2 CONNECTIVITY LAYOUT PLAN

30.01.20
REV 04
DRAWN:AN

DISCUSSION DOCUMENT

KAIPARA DISTRICT
Kaipara te Oranganui • Two Oceans Two Harbours

STELLAR



HARDING PARK , DARGAVILLE - CONNECTIVITY ASSESSMENT

L103 - OPTION 3 CONNECTIVITY LAYOUT PLAN

30.01.20
REV 04
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KAIPARA DISTRICT
Kaipara te Oranganui • Two Oceans Two Harbours

STELLAR

APPENDIX B: ROUGH ORDER COST ESTIMATES

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HIGH LEVEL COST ESTIMATE

Project Name	Harding Park Safety and connectivity assessment - Option 1
	(Car Parks & Roadworks only excl Landscaping)
Date:	30/01/2020
Schedule Status:	High Level Costing
Revision No:	Rev A

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
A	**PRELIMINARY AND GENERAL**				
	10% of Physical works cost	L.S.	1	162,250.00	162,250.00
				SUBTOTAL A	**$162,250.00**
B	**SITE PREPARATION**				
B1	Site Clearance				
	□ Mountain Bike carpark area	L.S.	1	2,100.00	2,100.00
	□ Access to Old Golf Road	L.S.	1	7,500.00	7,500.00
	□ Vintage Machinery Yard to Museum	L.S.	1	5,000.00	5,000.00
	□ Museum Car Park area (incl bus turnaround area)	L.S.	1	5,500.00	5,500.00
	□ Metal footpaths (Pa site and Vintage Macjinery Yard)	L.S.	1	3,300.00	3,300.00
				SUBTOTAL B	**$23,400.00**
C	**EARTHWORKS**				
C1	Bulk earthworks & Road box				
	□ Mountain Bike carpark area	m^3	640	30.00	19,200.00
	□ Access to Old Golf Road	m^3	200	30.00	6,000.00
	□ Vintage Machinery Yard to Museum	m^3	400	30.00	12,000.00
	□ Museum Car Park area	m^3	200	30.00	6,000.00
C2	Imported Fill (benching and pavements)				
	□ Mountain Bike carpark area	m^3	100	120.00	12,000.00
	□ Access to Old Golf Road	m^3	40	120.00	4,800.00
	□ Vintage Machinery Yard to Museum	m^3	200	120.00	24,000.00
	□ Museum Car Park area (incl bus turnaround)	m^3	1340	30.00	40,200.00
C3	Timber retaining wall (0 - 2m)				0.00
	□ Fill Bank (incl hardfill) - bus turnaround	m^2	100	1,000.00	100,000.00
C4	Removal of road carriageway (and reinstate T Soil)				
	□ De-Tune Road to east of Museum	m^2	640	100.00	64,000.00
	□ Near Vintage Machinery Yard	m^2	200	100.00	20,000.00
				SUBTOTAL C	**$308,200.00**
D	**STORMWATER DRAINAGE**				
D1	Supply and Install Manhole:				
	□ Mountain Bike carpark area	P.S	1	50,000.00	50,000.00
	□ Access to Old Golf Road	P.S	1	20,000.00	20,000.00
	□ Vintage Machinery Yard to Museum	P.S	1	20,000.00	20,000.00
	□ Museum Car Park area	P.S	1	20,000.00	20,000.00
				SUBTOTAL D	**$110,000.00**

HIGH LEVEL COST ESTIMATE

Project Name	Harding Park Safety and connectivity assessment - Option 1
	(Car Parks & Roadworks only excl Landscaping)
Date:	30/01/2020
Schedule Status:	High Level Costing
Revision No:	Rev A

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
E	**KERB AND CHANNEL AND CONCRETE WORK**				
E1	Kerb and Channel				
	□ Mountain Bike carpark area	L.S	1	6,400.00	6,400.00
	□ Access to Old Golf Road	L.S	1	12,000.00	12,000.00
	□ Vintage Machinery Yard to Museum	L.S	1	40,000.00	40,000.00
	□ Museum car park	L.S	1	20,000.00	20,000.00
				SUBTOTAL E	**$78,400.00**
F	**ROAD PAVEMENT & SURFACING**				
F1	Seal extension (Old Golf Road)	Km	0.60	700,000.00	420000.00
F2	Road widening within Harding Park				
	□ Mountain bike track parking to Vintage Machinery Yard	Km	0.10	300,000.00	30000.00
	□ Vintage Machinery Yard to Museum	Km	0.20	300,000.00	60000.00
	□ Wesley Coast Road to Vintage Machinery Yard	Km	0.40	300,000.00	120000.00
F4	Car Parks				
	□ Mountain Bike Car Park	m^2	250.00	200.00	50000.00
	□ Museum Car Park	m^2	500.00	200.00	100000.00
F5	Safety Improvements to Old Golf Rd and Mount Wesley Coast Rd intersection	P.S	1	150,000.00	150000.00
				SUBTOTAL F	**$1,030,000.00**
G	**ROADMARKING**				
G1	Roads (centrelines, intersection controls etc)	P.S	1	10,000.00	10,000.00
G2	Car Parks (parking spaces, direction arrows etc)	P.S	1	50,000.00	50,000.00
				SUBTOTAL G	**$60,000.00**
H	**FOOTPATHS AND PEDESTRIAN FACILITIES**				
H1	Metalled footpath connections	Lm	250	50.00	12,500.00
				SUBTOTAL H	**$12,500.00**
	CONSTRUCTION TOTAL				**$1,784,750.00**
	CONTINGENCY (30%)				$ 535,425.00
	TOTAL (exclusive GST)				**$ 2,320,175.00**

HIGH LEVEL COST ESTIMATE

Project Name Harding Park Safety and connectivity assessment - Option 2
(Car Parks & Roadworks only excl Landscaping)

Date: 30/01/2020
Schedule Status: High Level Costing
Revision No: Rev A

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
A	**PRELIMINARY AND GENERAL**				
	10% of Physical works cost	L.S.	1	157,120.00	157,120.00
				SUBTOTAL A	**$157,120.00**
B	**SITE PREPARATION**				
B1	Site Clearance				
	□ Mount Wesley Coast Road to Vintage Machinery Yard	L.S.	1	8,000.00	8,000.00
	□ Mountain Bike carpark area	L.S.	1	2,100.00	2,100.00
	□ Vintage Machinery Yard to Museum	L.S.	1	5,000.00	5,000.00
	□ Museum Car Park area (incl bus turnaround area)	L.S.	1	5,500.00	5,500.00
	□ Metal footpaths (Pa site and Vintage Macjinery Yard)	L.S.	1	3,300.00	3,300.00
				SUBTOTAL B	**$23,900.00**
C	**EARTHWORKS**				
C1	Bulk earthworks & Road box				
	□ Mount Wesley Coast Road to Vintage Machinery Yard	m^3	2000	30.00	60,000.00
	□ Mountain Bike carpark area	m^3	640	30.00	19,200.00
	□ Vintage Machinery Yard to Museum	m^3	400	30.00	12,000.00
	□ Museum Car Park area	m^3	200	30.00	6,000.00
C2	Imported Fill (benching and pavements)				
	□ Mount Wesley Coast Road to Vintage Machinery Yard	m^3	250	120.00	30,000.00
	□ Mountain Bike carpark area	m^3	100	120.00	12,000.00
	□ Vintage Machinery Yard to Museum	m^3	200	120.00	24,000.00
	□ Museum Car Park area (incl bus turnaround)	m^3	1340	30.00	40,200.00
C3	Timber retaining wall (0 - 2m)				0.00
	□ Cut Bank	m^2	300	750.00	225,000.00
	□ Fill Bank (incl hardfill) - bus turnaround	m^2	100	1,000.00	100,000.00
	□ Fill Bank (incl hardfill) - Mount wesley to Vintage Machinery Yard	m^2	120	1,000.00	120,000.00
C4	Removal of road carriageway (and reinstate T Soil)				
	□ De-Tune Road to east of Museum	m^2	640	100.00	64,000.00
	□ Near Vintage Machinery Yard	m^2	200	100.00	20,000.00
				SUBTOTAL C	**$732,400.00**
D	**STORMWATER DRAINAGE**				
D1	Supply and Install Manhole:				
	□ Mount Wesley Coast Road to Vintage Machinery Yard	P.S	1	50,000.00	50,000.00
	□ Mountain Bike carpark area	P.S	1	50,000.00	50,000.00
	□ Vintage Machinery Yard to Museum	P.S	1	20,000.00	20,000.00
	□ Museum Car Park area	P.S	1	20,000.00	20,000.00
				SUBTOTAL D	**$140,000.00**

HIGH LEVEL COST ESTIMATE

KAIPARA DISTRICT
Kaipara te Oranganui • Two Oceans Two Harbours

Project Name	Harding Park Safety and connectivity assessment - Option 2
	(Car Parks & Roadworks only excl Landscaping)
Date:	30/01/2020
Schedule Status:	High Level Costing
Revision No:	Rev A

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
E	**KERB AND CHANNEL AND CONCRETE WORK**				
E1	Kerb and Channel				
	□ Mount Wesley Coast Road to Vintage Machinery Yard	L.S	1	16,000.00	16,000.00
	□ Mountain Bike carpark area	L.S	1	6,400.00	6,400.00
	□ Vintage Machinery Yard to Museum	L.S	1	40,000.00	40,000.00
	□ Museum car park	L.S	1	20,000.00	20,000.00
				SUBTOTAL E	**$82,400.00**
F	**ROAD PAVEMENT & SURFACING**				
F1	Seal extension (Old Golf Road)	Km	0.00	700,000.00	0.00
F2	Road widening within Harding Park				
	□ Mountain bike track parking to Vintage Machinery Yard	Km	0.10	300,000.00	30000.00
	□ Vintage Machinery Yard to Museum	Km	0.20	300,000.00	60000.00
	□ Wesley Coast Road to Vintage Machinery Yard	Km	0.40	300,000.00	120000.00
F4	Car Parks				
	□ Mountain Bike Car Park	m^2	250.00	200.00	50000.00
	□ Museum Car Park	m^2	500.00	200.00	100000.00
F5	Safety Improvements to Old Golf Rd and Mount Wesley Coast Rd intersection	P.S	1	150,000.00	150000.00
				SUBTOTAL F	**$510,000.00**
G	**ROADMARKING**				
G1	Roads (centrelines, intersection controls etc)	P.S	1	20,000.00	20,000.00
G2	Car Parks (parking spaces, direction arrows etc)	P.S	1	50,000.00	50,000.00
				SUBTOTAL G	**$70,000.00**
H	**FOOTPATHS AND PEDESTRIAN FACILITIES**				
H1	Metalled footpath connections	Lm	250	50.00	12,500.00
				SUBTOTAL H	**$12,500.00**
	CONSTRUCTION TOTAL				**$1,728,320.00**
	CONTINGENCY (30%)				$ 518,496.00
	TOTAL (exclusive GST)				**$ 2,246,816.00**

Date Printed: 4/02/2020 at 8:34 am

HIGH LEVEL COST ESTIMATE

KAIPARA DISTRICT
Kaipara ki Oraiganui • Two Oceans Two Harbours

Project Name	Harding Park Safety and connectivity assessment - Option 3 (Car Parks & Roadworks only excl Landscaping)
Date:	30/01/2020
Schedule Status:	High Level Costing
Revision No:	Rev A

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
A	**PRELIMINARY AND GENERAL**				
	10% of Physical works cost	L.S.	1	59,970.00	59,970.00
				SUBTOTAL A	**$59,970.00**
B	**SITE PREPARATION**				
B1	Site Clearance				
	□ Mountain Bike carpark area	L.S.	1	2,100.00	2,100.00
	□ Museum Car Park area (ecl bus turnaround area)	L.S.	1	4,000.00	4,000.00
	□ Metal footpaths (Pa site and Vintage Macjinery Yard)	L.S.	1	3,300.00	3,300.00
				SUBTOTAL B	**$9,400.00**
C	**EARTHWORKS**				
C1	Bulk earthworks & Road box				
	□ Mountain Bike carpark area	m^3	640	30.00	19,200.00
	□ Museum Car Park area	m^3	200	30.00	6,000.00
C2	Imported Fill (benching and pavements)				
	□ Mountain Bike carpark area	m^3	100	120.00	12,000.00
	□ Museum Car Park area (excl bus turnaround)	m^3	140	30.00	4,200.00
C4	Removal of road carriageway (and reinstate T Soil)				
	□ Near Vintage Machinery Yard	m^2	200	100.00	20,000.00
				SUBTOTAL C	**$61,400.00**
D	**STORMWATER DRAINAGE**				
D1	Supply and Install Manhole:				
	□ Mountain Bike carpark area	P.S	1	50,000.00	50,000.00
	□ Museum Car Park area	P.S	1	20,000.00	20,000.00
				SUBTOTAL D	**$70,000.00**
E	**KERB AND CHANNEL AND CONCRETE WORK**				
E1	Kerb and Channel				
	□ Mountain Bike carpark area	L.S	1.00	6400.00	6400.00
	□ Vintage Machinery Yard to Museum	L.S	1.00	40000.00	40000.00
	□ Museum car park	L.S	1.00	20000.00	20000.00
				SUBTOTAL E	**$66,400.00**
F	**ROAD PAVEMENT & SURFACING**				
F2	Road widening within Harding Park				
	□ Mountain bike track parking to Vintage Machinery Yard	Km	0.10	300,000.00	30000.00
F4	Car Parks				
	□ Mountain Bike Car Park	m^2	250.00	200.00	50000.00
	□ Museum Car Park	m^2	500.00	200.00	100000.00
F5	Safety Improvements to Old Golf Rd and Mount Wesley Coast Rd intersection	P.S	1	150,000.00	150000.00
				SUBTOTAL F	**$330,000.00**
G	**ROADMARKING**				
G2	Car Parks (parking spaces, direction arrows etc)	P.S	1	50,000.00	50,000.00
				SUBTOTAL G	**$50,000.00**
H	**FOOTPATHS AND PEDESTRIAN FACILITIES**				
H1	Metalled footpath connections	Lm	250	50.00	12,500.00
				SUBTOTAL H	**$12,500.00**
	CONSTRUCTION TOTAL				**$659,670.00**
	CONTINGENCY (30%)				$ 197,901.00
	TOTAL (exclusive GST)				**$ 857,571.00**

Date Printed: 4/02/2020 at 8:34 am

APPENDIX C: SITE PHOTOS

DRAFT

Information signage on River Road

Intersection direction signage near the start of Pouto Road

Footpath connection from River Road to Harding Park

RTB into Mount Wesley Coast Road

DRAFT

Information signage on Mount Wesley Coast Road

RTB into Harding Park

Entrance into Harding Park

Calm environment on entering Harding Park

DRAFT

Placemaking with 'Pou' style poles on entry to park

Information map

Quiet environment on entry

Harding family cemetery

DRAFT

Start of one-way loop

Quiet road environment

Quiet road environment

Interesting roadside features (left) and native planting (right)

DRAFT

Interesting roadside displays (Maritime artefacts from Dargaville)

Arrival at the museum (showing direction boards for parking area)

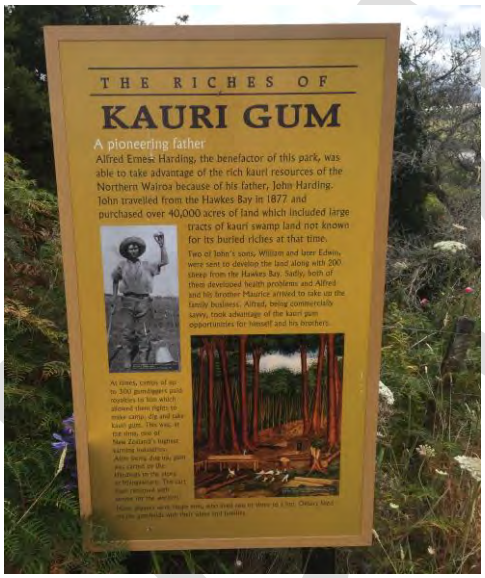
Placemaking with **'Pou'** style poles at parking area and on entry to Museum

Parking area and toilet block

DRAFT

Historic bridge pier and plaque

Adjacent to gum digger village where bus turnaround would be constructed



Interesting display boards

Gum digger village and start of view across the river

Museum, Lighthouse Function Centre and carpark area

Existing bus stop (left) and disabled parking (right)

Lighthouse Function Centre and activities held at the venue

View over Dargaville and the river

Rainbow Warrior masts (parking and picnic areas)

Dargaville Lighthouse replica

Bush walks below Museum and Lighthouse Function Centre

Bush walks below Museum and Lighthouse Function Centre

Bush walk connection to road network

Footpath connection via cemetery to meet footpath on Mount Wesley Coast Road

One way exit via Harding Park Access onto Mount Wesley Coast Road

View to the right exiting Harding Park Access road

Road marking reminds tourists to stay on the correct side of the road

Skew intersection at Old Golf Road

Skew intersection at Old Golf Road

Sealed section of Old Golf Road (RP0 to RP150)

Unsealed section of Old Golf Road (5.0m – 5.5m wide)

Unsealed section of Old Golf Road, near where the new intersection would be

Footpath connection to Old Golf Road

DRAFT

APPENDIX D: LITORALIS PLANS

DRAFT

DRAFT

KAIPARA VINTAGE MACHINERY CLUB

KEY

1. Barrier composed of simple machinery elements arranged in sculptural way.
2. Gatehouse / ticket booth.
3. Planting frames and defines entry.
4. Entry pulled north and acting as simple two way access. Tracking curves to cater for large vehicles.
5. Simple sign advertising Club and advising hours etc. Graphics to fit with family of signs for wider park.
6. Tree (evergreen) avenue reinforced with low planting.
7. Building either finished in darker colour or a well-executed mural.
8. Outdoor display area rationalised and fencing revisited in partnership with Club.

Scattered specimen planting adds informal diversity. Possible dog exercise area? More picnic tables.

Existing vegetation patterns extended to define open space.

0 25 50 m

scale 1 : 500 @A3

Ref: 1240_DC1_20190423

LITTORALIS LANDSCAPE ARCHITECTURE

CONCEPT SHEET 1/3
PO TU O TE RANGI / HARDING PARK

Prepared for Kaipara District Council

KEY

9 Interpretation for old water treatment structure.

10 Walking routes defined with more subtle waymarkers and refined (but informal) path formation where appropriate.

11 Toilet access improved and building presentation improved.

12 Parking better resolved to optimise capacity and ease of use.

13 Maritime themed display subtly updated and maintenance eased.

14 Picnic area emphasised and parking bays allocated.

15 Paths feed to carpark and picnic area. Crossing doubles as speed control device.

16 Steps down to gum-digger village.

Bland space enhanced with groves of specimen trees. Grass surface improved topsoil and drainage.

17 Steep bank vegetated with robust, low maintenance planting.

18 Old bridge pillar emphasised as entry feature.

19 Existing records lean-to removed to simplify building elevation.

20 Covered walkway and new path to entry. Surface drainage resolved.

21 Old library frontage emphasised with formal planting etc. Used to close road width somewhat.

22 Overnight campervan facilities further clarified (eg signage, facility provision).

23 Possible supplementary storage building. Balance against demand for campervan facilities.

24 Planting extended to buffer presence of transmission tower.

25 Potential extensions to existing building as first response to future storage requirements.

DRAFT

OVERFLOW PARKING AREA

EXISTING COVERED PORT

0 25 50 m

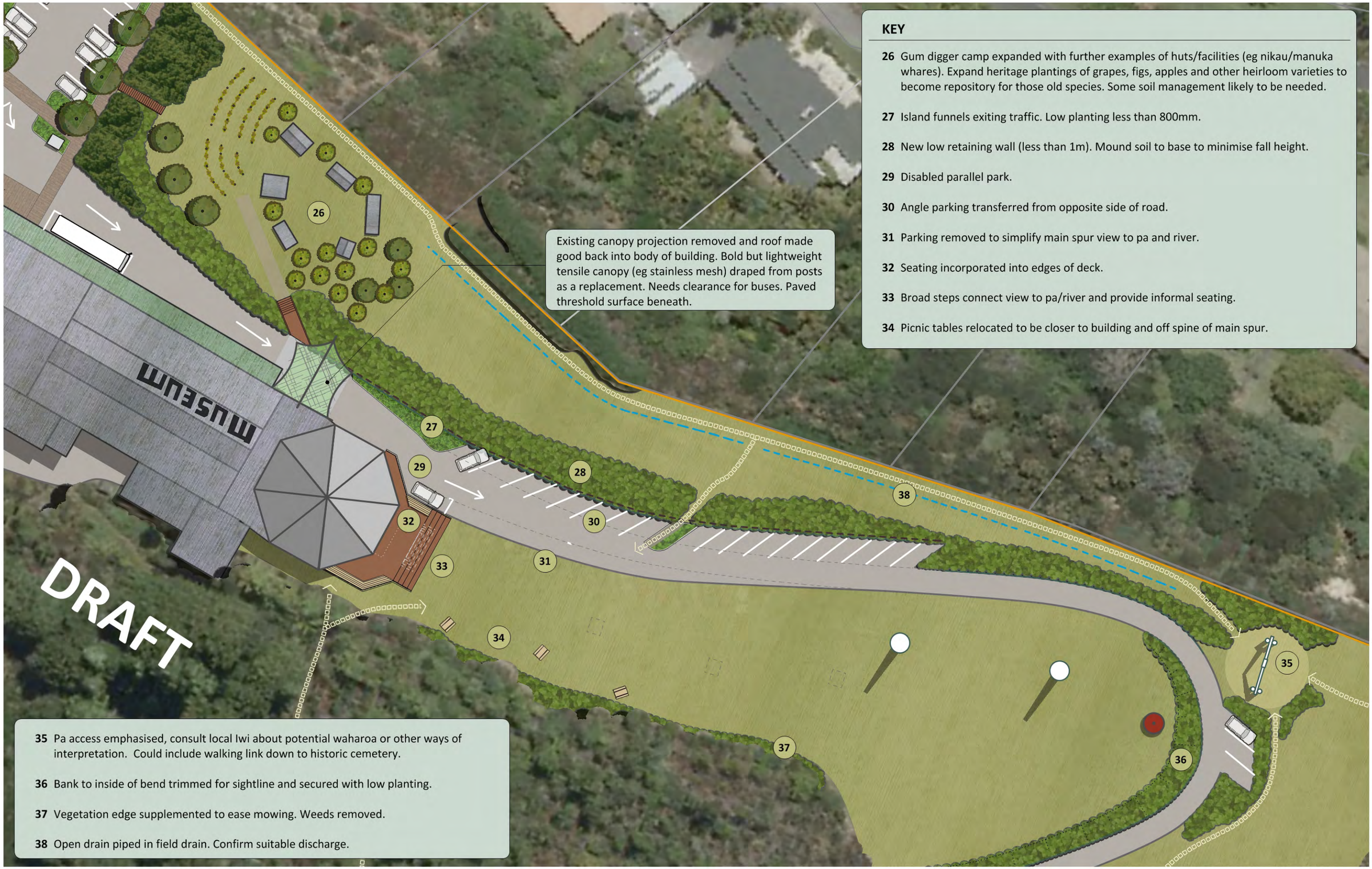
scale 1 : 500 @A3

Ref: 1240_DC1_20190423

LITTORALIS
LANDSCAPE ARCHITECTURE

CONCEPT SHEET 2/3
PO TU O TE RANGI / HARDING PARK

Prepared for Kaipara District Council



Existing canopy projection removed and roof made good back into body of building. Bold but lightweight tensile canopy (eg stainless mesh) draped from posts as a replacement. Needs clearance for buses. Paved threshold surface beneath.

KEY

26 Gum digger camp expanded with further examples of huts/facilities (eg nikau/manuka whares). Expand heritage plantings of grapes, figs, apples and other heirloom varieties to become repository for those old species. Some soil management likely to be needed.

27 Island funnels exiting traffic. Low planting less than 800mm.

28 New low retaining wall (less than 1m). Mound soil to base to minimise fall height.

29 Disabled parallel park.

30 Angle parking transferred from opposite side of road.

31 Parking removed to simplify main spur view to pa and river.

32 Seating incorporated into edges of deck.

33 Broad steps connect view to pa/river and provide informal seating.

34 Picnic tables relocated to be closer to building and off spine of main spur.

35 Pa access emphasised, consult local Iwi about potential waharoa or other ways of interpretation. Could include walking link down to historic cemetery.

36 Bank to inside of bend trimmed for sightline and secured with low planting.

37 Vegetation edge supplemented to ease mowing. Weeds removed.

38 Open drain piped in field drain. Confirm suitable discharge.

0 25 50 m

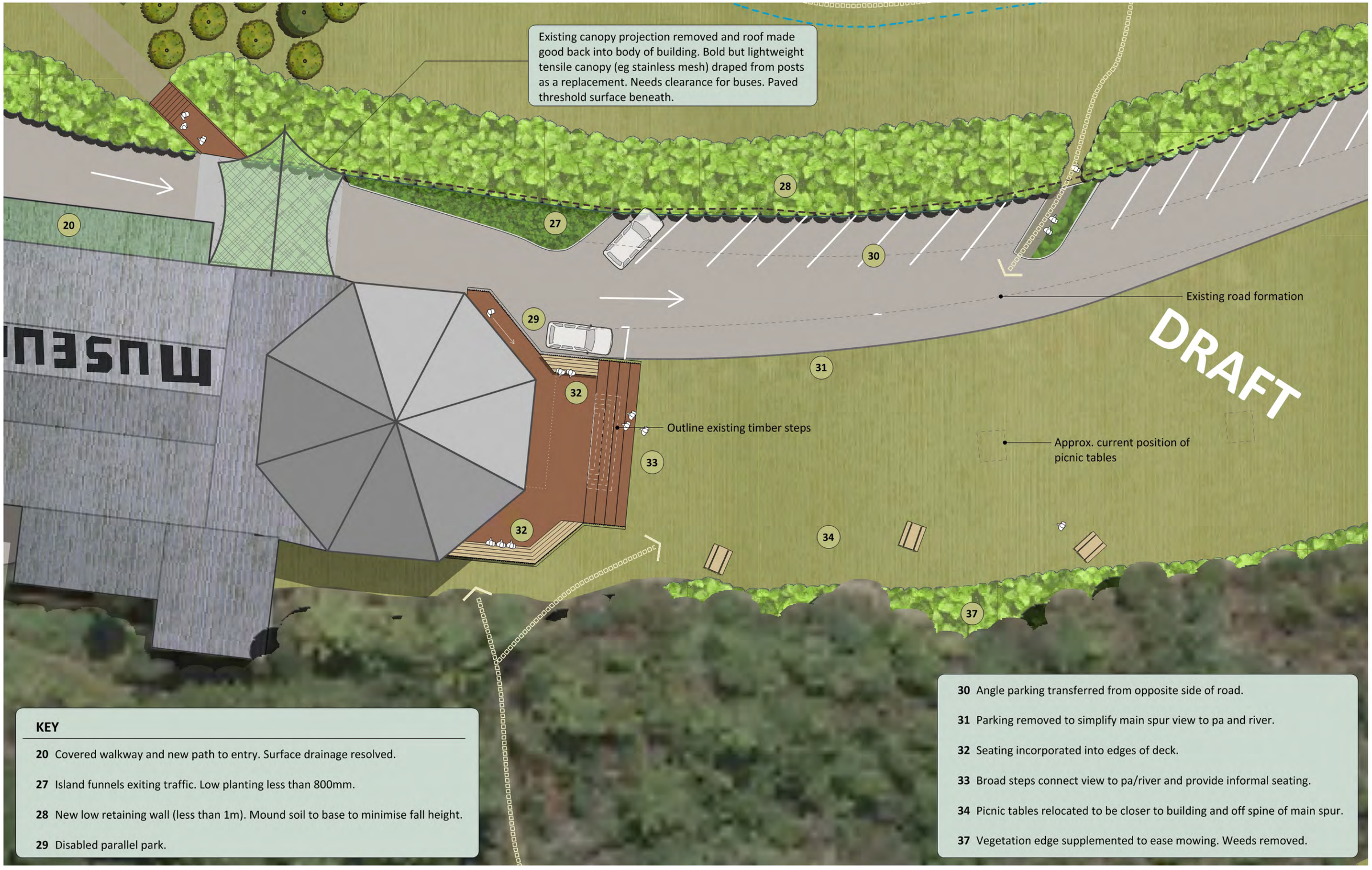
scale 1 : 500 @A3

Ref: 1240_DC1_20190423

LITTORALIS
LANDSCAPE ARCHITECTURE

CONCEPT SHEET 3/3
PO TU O TE RANGI / HARDING PARK

Prepared for Kaipara District Council



KEY

20 Covered walkway and new path to entry. Surface drainage resolved.

27 Island funnels exiting traffic. Low planting less than 800mm.

28 New low retaining wall (less than 1m). Mound soil to base to minimise fall height.

29 Disabled parallel park.

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33 Broad steps connect view to pa/river and provide informal seating.

34 Picnic tables relocated to be closer to building and off spine of main spur.

37 Vegetation edge supplemented to ease mowing. Weeds removed.

0 5 10 15 20 25 m

scale 1 : 250 @A3

Ref: 1240_DC1_20190423

LITTORALIS LANDSCAPE ARCHITECTURE

CONCEPT DETAIL 1
PO TU O TE RANGI / HARDING PARK

Prepared for Kaipara District Council

0 5 10 15 20 25 m

scale 1 : 250 @A3

Ref: 1240_DC1_20190423

LITTORALIS
LANDSCAPE ARCHITECTURE

CONCEPT DETAIL 2
PO TU O TE RANGI / HARDING PARK

Prepared for Kaipara District Council

KEY

1. Barrier composed of simple machinery elements arranged in sculptural way.
2. Gatehouse / ticket booth.
3. Planting frames and defines entry.
4. Entry pulled north and acting as simple two way access. Tracking curves to cater for large vehicles.
5. Simple sign advertising Club and advising hours etc. Graphics to fit with family of signs for wider park.
6. Tree (evergreen) avenue reinforced with low planting.
7. Building either finished in darker colour or a well-executed mural.

KAIPARA VINTAGE MACHINERY CLUB

DRAFT

Existing vegetation patterns extended to define open space.

Scattered specimen planting adds informal diversity. Possible dog exercise area? More picnic tables.

0 5 10 15 20 25 m

scale 1 : 250 @A3

Ref: 1240_DC1_20190423

LITTORALIS LANDSCAPE ARCHITECTURE

CONCEPT DETAIL 3
PO TU O TE RANGI / HARDING PARK

Prepared for Kaipara District Council

DRAFT

KAIPARA VINTAGE
MACHINERY
CLUB

KEY

1. Barrier composed of simple machinery elements arranged in sculptural way.
2. Gatehouse / ticket booth.
3. Planting frames and defines entry.
4. Entry pulled north and acting as simple two way access. Tracking curves to cater for large vehicles.
5. Simple sign advertising Club and advising hours etc. Graphics to fit with family of signs for wider park.
6. Tree (evergreen) avenue reinforced with low planting.
7. Building either finished in darker colour or a well-executed mural.
8. Outdoor display area rationalised and fencing revisited in partnership with Club.

Scattered specimen planting adds informal diversity. Possible dog exercise area? More picnic tables.

Existing vegetation patterns extended to define open space.

0 25 50 m

scale 1 : 500 @A3

Ref: 1240_DC1_20190423

LITTORALIS
LANDSCAPE ARCHITECTURE

CONCEPT SHEET 1/3
PO TU O TE RANGI / HARDING PARK

Prepared for Kaipara District Council

KEY

9 Interpretation for old water treatment structure.

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23 Possible supplementary storage building. Balance against demand for campervan facilities.

24 Planting extended to buffer presence of transmission tower.

25 Potential extensions to existing building as first response to future storage requirements.

0 25 50 m

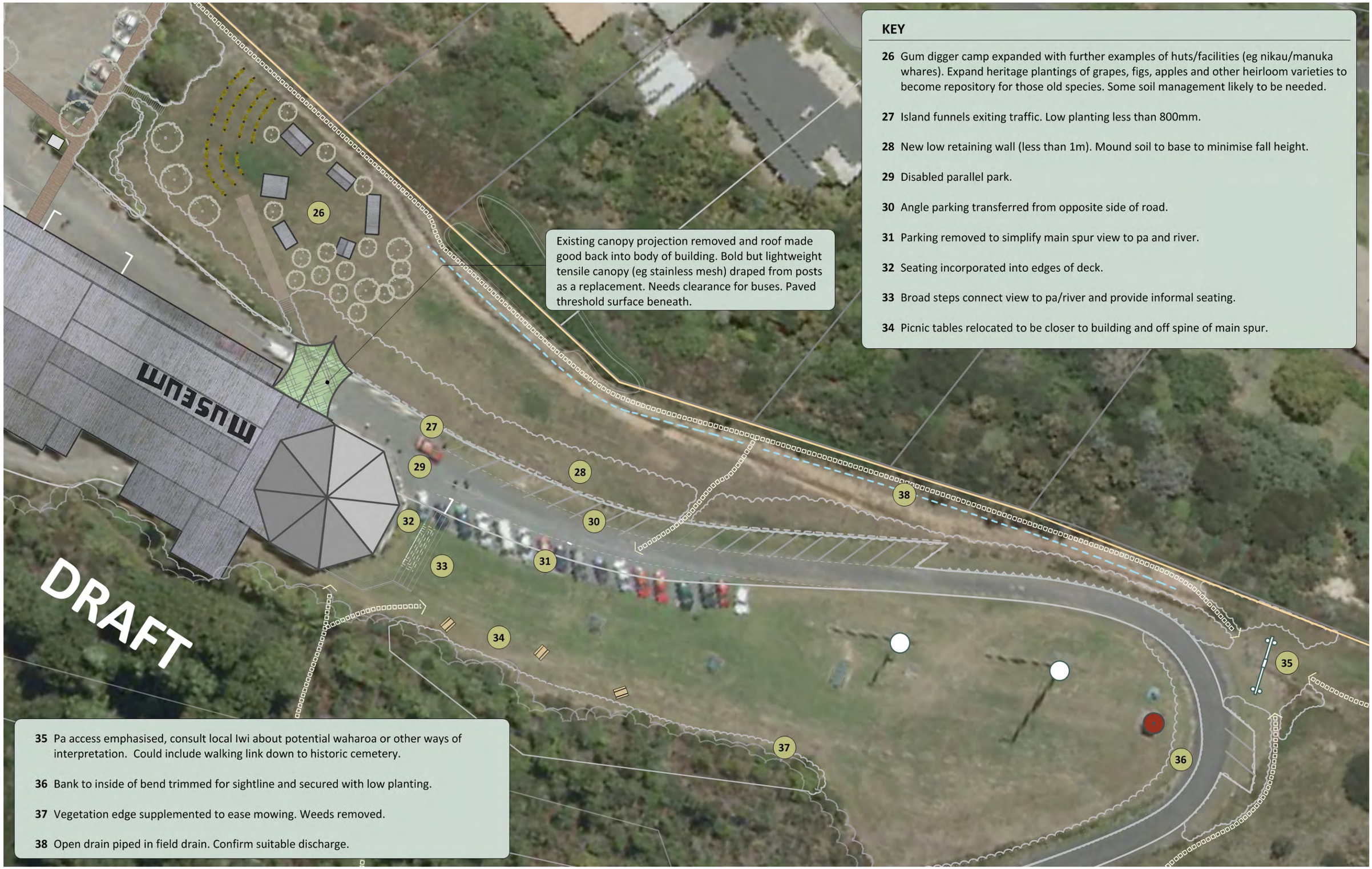
scale 1 : 500 @A3

Ref: 1240_DC1_20190423

LITTORALIS
LANDSCAPE ARCHITECTURE

CONCEPT SHEET 2/3
PO TU O TE RANGI / HARDING PARK

Prepared for Kaipara District Council



KEY

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38 Open drain piped in field drain. Confirm suitable discharge.

0 25 50 m

scale 1 : 500 @A3

Ref: 1240_DC1_20190423

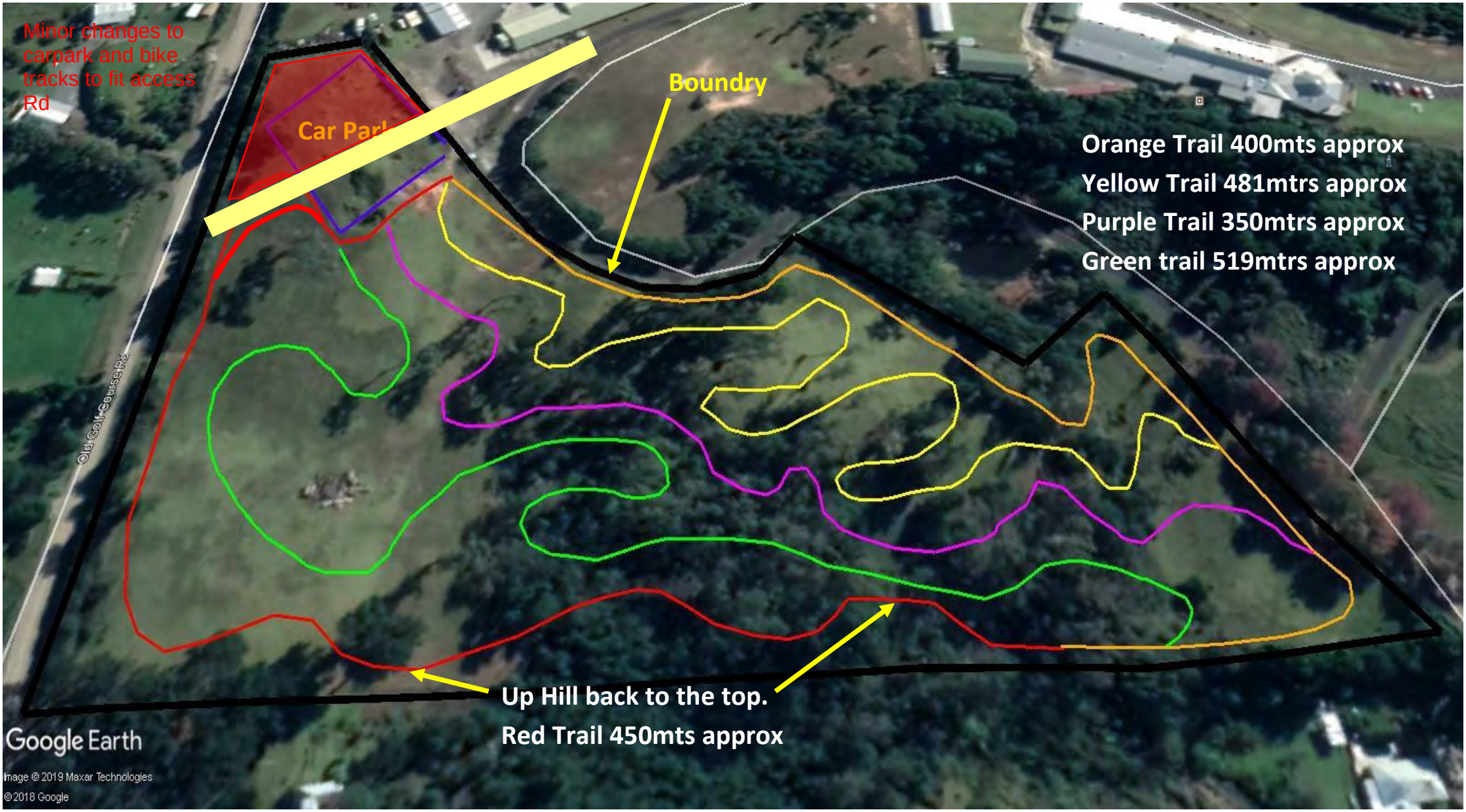
LITTORALIS
LANDSCAPE ARCHITECTURE

CONCEPT SHEET 3/3
PO TU O TE RANGI / HARDING PARK

Prepared for Kaipara District Council

APPENDIX E: MOUNTAIN BIKE TRACK

DRAFT



Andrew Younger Contracting Ltd

Po Box 296

Paihia

Mobile : 021 439

Email:

andrew@earth-movers.co.nz

Website:

PROJECT:
HARDING PARK
DARGAVILLE

CLIENT: FOCUS PAIHIA

DRAWING:

Harding Park
Dargaville

DRAWING NO: