Taranaki Maunga reflected in the Pouākai Track tarn July 2018
Credit: Peter Laurenson www.occasionalclimber.co.nz

Taranaki Crossing

Feasibility report and investment proposition

Prepared for: Ministry of Business, Innovation and Employment

Date: **15 March 2019**

Whakatauki

Pikipiki maunga tāngengae,

Pikipiki pari tāngaengae,

Hei āhua tāngangae,

mō tēnei tauira tāngangae

mō tēnei tauhou tāngaengae

Tahau ora, tahau ariki

Māu e kai te manawa ora o tēnei tauhou

This Whakatauki is drawn from a Taranaki ceremonial chant. It inspired and protected the old ocean voyagers from evil influences when travelling across vast oceans into new lands. It is offered in like-manner here.

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Executive summary

The Taranaki Maunga is unique in New Zealand, in offering an area of public conservation land ideally suited to walking experiences of varying length and type, located less than 20 minute's drive from a vibrant city, the ocean and strong rural communities.

Our assessment work has confirmed the various components of the Taranaki Crossing satisfy core 'feasibility' criteria, justifying investment to improve their quality and market suitability. The net effect of this investment will be a significant addition to New Zealand's repertoire of premium short and longer walks. We have found, , that, with careful investment into components of the Taranaki Crossing:

- Cultural values will be protected and enhanced.
- An appropriate balance can be found between the need to protect and preserve the Egmont / Taranaki National Park and the need to provide for its use and enjoyment.
- Environmental impacts can be sustainably managed.
- The smorgasbord of components of the Crossing will be suited to varying parts of the visitor market.
- Safety concerns can be appropriately managed.
- The costs of capital and the costs for maintaining the track / facilities and related infrastructure can essentially be met within available budgets provided the North Egmont Visitor Centre is not included.
- The benefits to the Taranaki, New Zealand and Māori economies will outweigh the costs of the investment required to create the experience.

Most importantly, we have assessed the net biodiversity and environmental impacts of the proposed upgrades as being either neutral or positive i.e. the upgrades will in general terms, improve the quality of the Egmont / Taranaki National Park.

Egmont / Taranaki National Park currently receives about 480,000 visitors per year. Our Commercial estimate of the total increase in user days achievable from use of the combined upgraded components of the Taranaki Crossing is between Commercial Infor and Commercial Infor. Two thousand of these users may complete the two to three-day Taranaki Crossing experience. Commercial Information

Demand for use of components of the Taranaki Crossing, particularly the Pouākai Tarns, is clearly apparent and is growing annually. Upgrade is imperative to ensure the quality of current and future visitor experiences are enhanced and the environment is protected. At other locations safety issues need to be managed.

At some locations, upgrades must be implemented with urgency to manage the increasing tendency for walkers to avoid muddy and awkward sections of track by walking on adjacent fragile flora.

Significant iwi and wider community, employment and economic and skill-building opportunities will be established as a result of the increased visitor use of the upgraded tracks.

Project managers should be contracted immediately to progress the upgrade of Crossing components. One of these managers should have skills enabling them to fully engage with iwi. Highest priority should be accorded to the need to stabilise the Boomerang Slip / Slip Alley area. Equal high priority should be given to increasing the capacity and more strongly managing use of the Pouākai Hut and the Pouākai Tarns.

A new more-direct track is not required across the Ahukawakawa Swamp. Upgrade of the existing route will be far less impactful. In addition, a new suspension bridge should be constructed in the Manganui Gorge for safety reasons, noting this is likely to become a significant visitor attraction.

Commercial Information

Funds need to be made available both for capital costs (capex) and for the cost of maintaining and operating the upgraded tracks, bridges and huts (opex) etc. Commercial Information

- Commercial Information .
- A second option is to set aside Comm% of capex expenditure for opex, from within available funds. Sadly, this does not allow all components of the proposed Taranaki Crossing to be funded from the $Commercial total budget we estimate to be available.
- A third option is therefor to provide for opex at Comm% of capex but address some components of the Taranaki Crossing separately from the current proposal. We recommend adoption of this third option. Investment in the North Egmont Visitor Centre should be considered separately via a stand-alone PGF application. This will enable adequate opex to be provided for all other components and a balanced budget to be achieved.

Commercial Information

Our research suggests proceeding with the Crossing is not inconsistent with the direction of current Maunga settlement negotiations. We see the need for iwi to have greater opportunities than in the past to be more actively involved in all decisions about the management, construction and potential ownership of new and upgraded Taranaki Crossing components.

A trial shuttle transport service to North Egmont Visitor Centre suggested merit in considering how such a service may be expanded to operate to the three key access points within the Park. Increased use of shuttles will have measurable carbon emission-reduction benefits.

With the above points in mind, we recommend the release of $13,340,000 from the Provincial Growth Fund to complement funds already provided, to make a total of $Commercial Information available for expenditure on the Taranaki Crossing.

Further feasibility assessment of individual components is not required beyond that encompassed in this report, except for that to be carried out as part of project management and the separate consideration of matters related to the North Egmont Visitor Centre.

Introduction and background

Context

Taranaki is blessed with a combination of mountain and sea environments near a vibrant city and close to strong neighbouring towns. This makes the region unique in terms of the ease of access, for visitors and residents, to open space, the coast and public conservation land.

The residents of Taranaki know they are fortunate to live in one of the most beautiful parts of New Zealand. The coast, New Plymouth coastal walkway, Pukekura Park, Mount Taranaki (Taranaki Maunga) and the connection of Taranaki residents and iwi with these features, anchor the region's stories, images and pride.

At the same time, the region is a little 'out on the edge'. This is reflected in the need for a conscious visitor decision to turn west from the more beaten track. More and more visitors are becoming aware of the opportunities provided by the region. The reward is enjoyment of memorable, nature-based, cultural, uncrowded and authentic experiences.

Taranaki is a region punching well above its weight in the arts e.g. Len Lye / Govett Brewster Art Centre, culture, and the events scene e.g. WOMAD. It has the capacity to perform in a similar positive manner with provision of appropriate nature-based experiences.

While the overall performance of the Taranaki visitor sector has recently improved, the long-term performance of the sector has lagged national growth rates. The challenge for Taranaki is to sustain the recent upward swings in visitor interest. Increasing the number of visitor nights and expenditure in the region, through expansion of the range of visitor sector experiences, is one sure way of adding depth to the economy. Having more things to do which are monetised is a primary means of achieving this objective.

The things that attract visitors also make a region attractive to new residents. Moreover, the things that make a region attractive also create a sense of pride amongst existing residents.

The Taranaki economic development action plan 'Tapuae Roa' (2018) makes it clear Taranaki needs and wants a further iconic outdoor and nature-based visitor experience. Maunga Taranaki is the visitor attraction within which that could and should occur. The Maunga is the cultural and spiritual heart of the region. It dominates the landscape from every angle.

Proposed recognition as a legal personality during recent Treaty of Waitangi settlement processes, Taranaki Maunga is a sacred taonga. It stands sentinel to Taranaki's turbulent past and has capacity to be a lynchpin to a new, wide and positive future for the region. But opportunities for increased use and enjoyment of the Maunga, if they are to occur, need to be carefully planned and delivered with sensitivity to the paramount importance of cultural and environmental values.

Purpose

The purpose of this report is to assess Taranaki Crossing options and components and prepare recommendations about the optimal investment proposition for protecting cultural values, promoting tourism, growing the visitor economy, and enhancing biodiversity.

The Regional Economic Development Ministers Group met on 19 March 2018 to discuss the Taranaki Crossing proposal. They resolved to release Provincial Growth Fund investment of $13,340,000, conditional on the preparation of a feasibility study:

- Determining the optimal investment proposition for promoting tourism in the Taranaki region and enhancing biodiversity on Taranaki Maunga including options to improve public and shuttle transport.
- Determining a broad conception of what a potential investment proposition could entail; i.e. it should cover both built infrastructure (including alternatives to private car transport on existing roads, upgrades to tracks, visitor centre and huts); and investment in natural infrastructure (predator control, habitat restoration) which is the responsibility of the Department of Conservation.
- Assessing any other component, as determined by the Ministry of Business, Innovation and Employment and the Department for Conservation, including how the Taranaki Crossing experience:
    - Supports regional ambitions for growing Taranaki's visitor economy.
    - Addresses protecting conservation values and enhances indigenous biodiversity on Taranaki Maunga;
    - Recognises the significance of Taranaki Maunga to Ngā Iwi o Taranaki.
    - Develops sustainable tourism, including with respect to minimising the impacts of visitors and visitor transport and reducing private vehicles on the Maunga.
    - Offers a reasonable return on investment in terms of economic, social, cultural and environmental outcomes.
    - Is consistent with local iwi objectives.
    - Aligns with the Egmont National Park Management Plan.
    - Assesses and measures the environmental impact of track upgrades and/or new track construction for the protection of natural values.
    - Considers the cost of construction and ongoing maintenance, given the difficult conditions on the Maunga.

In simple terms, our task is therefor to confirm the '**feasibility**' of the Taranaki Crossing proposal and to define a preferred investment proposition. With the help of Google, we interpret this to imply a need to confirm the practicality, workability, viability, lawfulness, achievability, sensibility, cost-effectiveness and general reasonableness of the proposal.

With this definition in mind and taking account of the requirements established by the Ministerial Group, we believe the feasibility of the Taranaki Crossing would be confirmed if: cultural values are protected and enhanced; an appropriate balance is found between the need to protect and preserve our national parks and the need to provide for their use and enjoyment; environmental impacts are sustainably managed; the components of the Crossing are suited to the visitor market; safety concerns are appropriately managed; the cost of capital and costs for maintaining the track / facilities and related infrastructure (opex) can be met within available budgets; and the benefits to the economy outweigh the costs of the investment required to create the experience.

Scope

Conceptually, the Taranaki Crossing may be viewed as an experience centred around the idea of 'Maunga ki Moana' – mountains-to-sea, extending from Dawson Falls on the south-eastern slopes of Taranaki Maunga to Ōākura in the north-west.

The market for visitors wanting to experience the full two or more days of this Taranaki Crossing experience may be quite limited but we can see different visitor groups or types enjoying parts or components of the Taranaki Crossing on different occasions. Commercial Information

A short walk experience may be to Wilkies Pools near Dawson Falls, or to a proposed new suspension bridge over the Manganui Gorge near the Stratford Plateau. In other words, the total Taranaki Crossing experience provides a **smorgasbord** of short, one day and or multi day experience opportunities.

Components of the Taranaki Crossing project

The components of the project include huts, tracks, car-parks, roads, facilities and the services linking Dawson Falls to Pukeiti Gardens. Of these components, we have been asked to give special attention to the:

- North Egmont Visitor Centre.
- Dawson Falls Entrance.
- Ridge Track.
- Stratford Mountain House.
- Manganui Track.
- Bridge across the Manganui Gorge.
- Round the Mountain Track.
- Commercial Information

Commercial Information


Commercial Information

Our discussions with an informed range of stakeholders suggests the Taranaki Crossing contains or may contain a significant array of landscape and experience 'wow' factors able to attract and be enjoyed by visitors. The most frequently referenced components were:

- Wilkies Pools.
- Proposed Manganui Gorge suspension bridge.
- Humphries Castle.
- Ahukawakawa Swamp.
- Bells Falls / Te Rere o Tahurangi.
- Expansive coastal views from the Pouākai Range.
- Pouākai Tarns.
- Views to the Taranaki Ring Plain and Ruapehu / Tongariro from the Holly Hut Track.

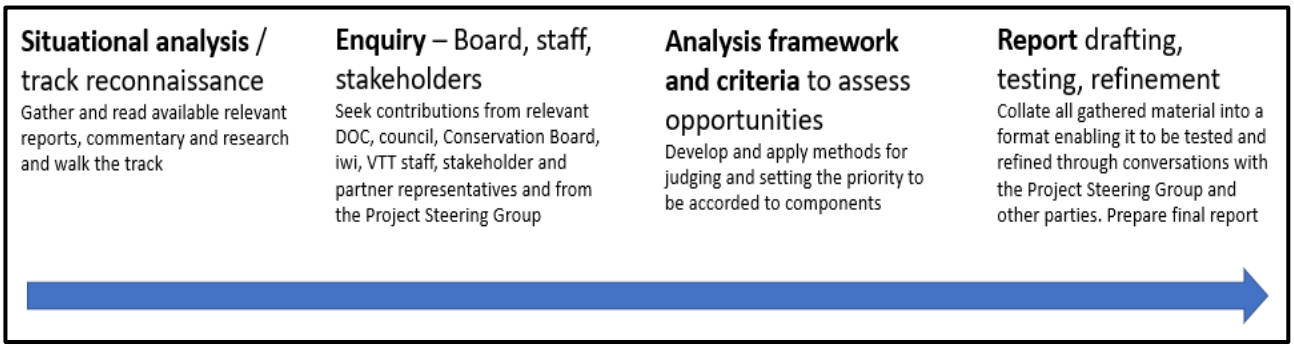
Approach to the development of this report

A team of five specialist consultants were engaged to work on different aspects of the project as follows:

- Toko Kapea – iwi matters.
- John Hutchings – project management and regional economic development matters.
- Maggie Bayfield – biodiversity, ecology and environmental matters.
- Dave Bamford – use, market, cost benefit and economy matters.
- Trevor Butler – track, bridge, hut, information centre, road, toilets, carpark etc. matters.

We have used a wide range of data to help us with our assessment including that available from StatsNZ, MBIE, DOC and from relevant reports (Table One lists some of these reports). Our deep dive into data about the use of tracks and huts within Egmont National Park (henceforth referred to as 'Egmont / Taranaki National Park') included assessment of DOC visitor centre counters, track counters, hut visitor books and NZTA road counters. (NB Some of these counters generate both entry and exit use-numbers resulting in the risk of 'double counting' or in the instance of huts, 'under counting'. The team cross-checked various sources of information and consulted with senior DOC staff to recalibrate anything that appeared inconsistent with expected use patterns to generate the final use estimates quoted later in this report).

In overall terms, we applied a four-step approach to our work:



The report addresses the interwoven themes identified by the Ministerial Group (Figure Three) including those related to usage, operational issues and opportunities, strategic risks and the costs and benefits of components of the Taranaki Crossing, to then draw conclusions about the optimum investment proposition and overall feasibility of the Crossing proposal.

Table One: Timeline of the evolution of the Taranaki Crossing experience

Pre-2012:	DOC officers first conceived of the idea of a 'Pouākai Crossing' extending from the North Egmont Visitor Centre (NEVC) to Mangorei Road.
2012:	Mangorei walk / track upgrade completed.
2014:	DOC prepared a Destination Management Plan. The Pouākai Crossing was viewed as key strategic opportunity within this Plan.
2014:	A Taranaki mountain guide further developed and socialised the idea of the Pouākai Crossing as a one-day walk.
2015:	A Pouākai Crossing Project Team was formed to develop details about the Pouākai Crossing proposal.
2015:	Taranaki Regional Council (TRC) and the Venture Taranaki Trust (VTT) prepared a report exploring 'Future Outdoor Recreational Opportunities' in the Pouākai, Pukeiti area and beyond. Among other opportunities, this report suggested: a one-day Pouākai Crossing option; a two-day Pouākai Crossing (with the option of an overnight stay in a private lodge) and; reinforced the value / potential of a multi-day mountains-to-sea option at a cost of around $13m (inclusive of the upgrade of the NEVC).
2016:	New Plymouth District Council (NPDC) prepared a 'Blue print' as a high-level spatial plan' to guide and support achievement of the District's vision and outcomes. The 'Taranaki Traverse' was viewed within this Blue-print as a 'world class recreational, cultural and environmental experience' – from mountains to sea.
2016:	VTT prepared a Taranaki Destination Strategy. This identified the Pouākai Crossing as an 'emerging experience.'
2016:	DOC prepared a business case for the Pouākai Crossing. This gave rise to the May 2017 allocation of $3.4m for the upgrade of the track between the NEVC and Mangorei Road, including funding for the construction of a new 'more direct' track across the Ahukawakawa Swamp.
2015:	TRC prepared a case for presentation to Prime Minister John Key seeking $10m for the upgrade of various parts of the Taranaki Traverse from NEVC to Ōākura, noting the intention of TRC to invest a further $3m+ into upgrading a track between Pukeiti and Ōākura, to create a full Mounga ki Moana experience.
2017	Lonely Planet identified Taranaki as the second-best region in the world to visit and the Pouākai Tarns as the Facebook photo opportunity to post to friends.
2016-19:	TRC invested $7m in the upgrade of facilities at the Pukeiti Gardens.
2017 / 2018:	A 'Lead Group' prepared a Taranaki Regional Economic Development Strategy and then prepared 'Tapuae Roa', an economic development action plan for the Taranaki region. The completion of the Taranaki Crossing was viewed as one of the key indicators of success within the Visitor Sector part of this Action Plan.
2017 / 2018:	NPDC purchased land adjacent to the Mangorei Road-end to construct a carpark and toilet facilities. In addition, NZTA and NPDC shared the cost of upgrading Mangorei Road
Late in 2017:	DOC invited interested parties to identify candidate public-conservation-land walking tracks for consideration for upgrade to 'Great Walk' standard. VTT prepared an application based on the idea of a three-day 'Taranaki Crossing' walk extending from Dawson Falls to Ōākura.
2017/18:	PwC completed a Business Case for the 45km 'Mounga ki Moana: Taranaki Crossing' experience. The capital cost of these works was estimated to be $Commercial and operating costs for the subsequent ten years (2020-31) were estimated to be $Commercial (Commercial Information Commercial Information The cost benefit of this investment (at a mid-level scenario of 31,000 visitor days).
April 2018:	The release of the Tapuae Roa Action Plan included announcement of Government's commitment to contribute $13.4m toward the costs of upgrading and operating the Taranaki Crossing.
2018:	The 2019-28 TRC Long-term Plan included a commitment of $3.5m toward the cost of a track between Pukeiti Gardens and Ōākura. NPDC committed to meeting the operational costs of this project and project managing its establishment.
2018:	MBIE sought a report to confirm the feasibility, priority, viability of components and an 'optimal investment proposition' for the Taranaki Crossing.

History and evolution of the idea of a Taranaki Crossing experience

The idea of creating a Taranaki Crossing experience is not new (Table One, above). Initial thinking started before 2012. The upshot of this previous work was an April 2018 decision by the Regional Economic Development Ministers Group, to allocate $13,340,000 from the Provincial Growth Fund (PGF), on top of other previous commitments, towards the Taranaki Crossing project.

End point of the process

At the completion of the feasibility study, a joint Ministers group made up of the Minister for Regional Economic Development the Hon Shane Jones, and the Minister of Conservation, the Hon Eugenie Sage will convene to further assess the merits of the project and to provide final sign-off to allow funds for the construction of components of the Crossing to be drawn-down.

We note the memo prepared by MBIE for the April 2018 meeting of the Ministerial Group viewed the substance of the 'feasibility' work addressed in this / our report, as being an 'initial first stage feasibility study.' At the completion of this 'first stage feasibility,' further feasibility studies were envisaged as being necessary on each component of the proposal, to identify key outcomes and risks before any implementation is considered.

The stakeholders we have spoken to about the Taranaki Crossing proposal have emphasised their desire, once core feasibility matters are resolved, to move at pace to capitalise on the potential benefits of the Crossing for the Taranaki region. With this desire in mind, we have adopted a comprehensive approach to our work. This has included the provision of extensive and detailed information about the upgrade works and the design, materials and impact-reducing methods to be applied to make each component of the Crossing suited to expanded use i.e. 'market ready'.

With the information contained within this report at hand, our recommendation is that 'further feasibility studies,' [redacted] Commercial Information [redacted], only be those required as a core part of project management – albeit with regular reporting and approval from a proposed project implementation steering or governance group.

Project Steering Group

A summary of the governance and general parameters affecting the approach applied to the project is provided (Figure four). A Project Steering Group was established to provide guidance to the consultants about the:

- Matters to be considered as part of the project.
- Approach to be applied to the project.
- Conclusions resulting from the assessment of each component of the Taranaki Crossing.
- Nature of the 'informed decisions' and recommendations to be made to the Minister for Regional Economic Development and the Minister of Conservation.

Project Steering Group members included:

- [redacted] Privacy of natural persons [redacted]
- Al Morrison (MBIE)

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- Privacy of natural persons

Support people who have worked with the Steering Group have included:

- Bridget Sullivan (MBIE)
- Privacy of natural persons
- Privacy of natural persons

Available funding

Determining an optimum investment proposition depends not only on our assessment of the identified interwoven themes, issues and opportunities associated with each component of the Crossing etc. it also depends on how much money is available to make core components of the Crossing 'market ready' and to sustain them in this condition.

As noted above, in April 2018, the Regional Economic Development Ministers Group approved investment of $13,340,000 from the Provincial Growth Fund (PGF) towards the Taranaki Crossing project. Earlier information, including that provided in a prefeasibility report prepared by PWC (2018), noted that a total of $Commercial Information has been 'earmarked' at various times, to various components of the Taranaki Crossing – Commercial Information and the Mangorei-road-end carpark upgrades.

Four questions arise in relation to this previous and potential future funding:

- Has DOC accrued other funds for expenditure on the Taranaki Crossing from 'depreciation' or operational budgets arising from historic previous capital programmes, to help meet current operational needs?

- Does the $13,340,000 allocated from the PGF include a requirement to provide for DOC's operational expenses after establishment of the each of the proposed components?

- Does the allocated sum include a requirement to meet the cost of previous but deferred maintenance of existing tracks?

- Can unspent parts of the funds earmarked for components of the Crossing by earlier decisions be influenced / reset / allocated as a result of the findings of the current feasibility study?

We offer our thoughts about these questions as follows:

Question one: additional available operational funds from DOC

DOC generally do not currently make an annual allocation of operational expenditure (opex), when an initial decision is made to invest capital expenditure, to maintain capital assets during their life. The unavailability of this funding leads to incremental asset depreciation, with consequent impacts on the quality of the visitor experience.

In our view, a preferred approach would be to establish a general requirement for Comm% of the value of the sum invested as capex (for example, to construct a hut or track or bridge) to be spent on sustaining the asset

in as 'good as new' condition over its agreed life. This 'opex' sum could be spent incrementally, say over ten years.

For example, we note $1,800,000 has been previously allocated for capital works for upgrading the Pouākai Crossing. A further $1,600,000 was earmarked for operational expenses aligned to these upgrades.

Without such a capex plus opex approach, the quality of visitor experience expectations of track / hut etc. conditions would incrementally deteriorate over the life of the asset.

We know that bridges, huts, boardwalks and tracks deteriorate at different rates. In a perfect world each of these assets would have a different depreciation rate allocated to it. For the sake of simplicity and for the purposes of this report, we have grouped these assets together and have assumed an average opex requirement on all of them at Comm% of the initial capital cost, for expenditure over Commercial Informatio.

With this approach in mind, we asked DOC about the sum currently available within DOC budgets for opex as a result of previous capital expenditure decisions. The information provided by DOC suggests that, given the absence of capital expenditure on tracks, bridges and huts within Taranaki National Park for many years, (except minor expenditure on the upgrade of the Mangorei track), we should not expect any additional revenue to be available from within current DOC budgets.

Question two: providing for future DOC operational expenses from the Provincial Growth Fund

As noted above, the previous $3,400,000 earmarked for upgrading the Pouākai Crossing included $1,600,000 for future operational expenses. Our assumption is therefore that $1,800,000 of this sum is available for consideration as part of capital works for this project and the remainder should be earmarked for future opex.

On the question of the $13,340,000 announced in April 2018 by government for expenditure from PGF on the Taranaki Crossing, two perspectives could be applied. The first would be to suggest that it would be inappropriate for one government department – in this instance, MBIE's Provincial Growth Unit – from whom the current funding for the Taranaki Crossing is to be sourced, to fund another government department i.e. DOC, for operational matters.

If this perspective is applied, then all the earmarked $13,340,000 would be available for capital expenditure on components of the Taranaki Crossing. This approach would of course imply that DOC is able to secure enough opex from the budget it is allocated by government, on an annual basis, to sustain the Taranaki Crossing in good condition. Currently there appears to be little appetite for this type of budget provision to be secured for DOC.

The second perspective would imply that, for sustained provincial growth, provision must be made for future operational / maintenance expenses associated with projects of this type, from the PGF. If this approach is applied, then based on our previously described formula, we estimate that, from the total $13,340,000 announced for the Taranaki Crossing from the PGF, $Commercial Information would be available for capital expenditure on components of the Taranaki Crossing and Comm% of this i.e. $Commercial Information would be available for future opex.

Our proposed approach is to recommend provision be made available for adequate opex to sustain the Taranaki Crossing assets in quality condition. This implies establishing a prioritised order of capital expenditure works, to achieve a balanced budget approach, using available revenue. (NB as advance notice about our conclusions on this point, we suggest that one of the components of the Taranaki Crossing experience – the upgrade of the North Taranaki Visitor Centre, be addressed via a separate PGF process to enable opex to be provided for all other components and thereby, an overall balanced budget to be achieved).

Question three: providing for the cost of deferred maintenance

Taranaki National Park has not been the recipient of significant capital or operational expenditure for many years. Therefore, many of the Park's tracks are no longer fit-for-purpose. Investment is now well over-due to 'make good' on this deferred maintenance. In other words, despite the absence of past track maintenance expenditure, we should now provide new capex to meet the cost of establishing tracks and huts suited to current and future market needs.

Question four: including recommendations about unspent but previously allocated funds

We have assumed that in addition to the $13,340,000 conditionally provided from the PGF, previously earmarked but unspent funds for components of the Taranaki Crossing, should be considered as part of our thinking about future investment priorities. This implies that the following additional funds are available:

- $Commercial Information earmarked by the previous government for capital expenditure on parts of the Pouākai Crossing.
- $Commercial Information earmarked by the previous government for operational expenses associated with the Pouākai Crossing.
- $Commercial Informa remaining from the Stratford District Council and NZTA for car park improvements at the Stratford Plateau.
- $9(2)(b)(ii) remaining from the South Taranaki District Council and NZTA for road improvements at Dawson Falls.

Summary – available funding

If the assumptions and recommendations inherent in the above sections of this report are applied, and putting aside capex / opex Commercial Information , then $Commercial Information is available for expenditure on implementation of capital works components of the Taranaki Crossing and around $Commercial Information should be earmarked for sustaining these capital assets, via operational expenditure, over the first ten years of their life (Table Two). If all previous unallocated funds are considered, the total available for expenditure as part of this project is $Commercial Information.

Table Two: Available funding for consideration in this report as part of the Taranaki Crossing

Component	Expected expenditure	Comment	Estimated sum available for consideration as part of this report
Pouākai Crossing	$3,400,000	Announced by the previous government for the upgrade of the Pouākai Crossing including the possible relocation of the length of track from near the Holly hut turn-off to the Pouākai tarns. Includes $1,600,000 of future operational expenditure for track maintenance	$1,800,000 for capex and $1,600,000 for opex
Commercial Information	$Commercial Information	Commercial Information	
Carpark improvements at Dawson Falls	$80,000	Earmarked by NZTA and South Taranaki District Council. Not yet expended	$Commercial Infor
Car park improvements at Stratford Plateau	$320,000	Earmarked by NZTA and partially spent by Stratford District Council early in 2018	$Commercial Informa
Mangorei Road and carpark	$Commercial Information	From Commercial Information and the Tourism Infrastructure Fund for improvements to Mangorei Road and the Mangorei Road-end carpark and toilets. Carpark now completed. Road improvements to be completed early in Commercial I	$Com
Taranaki Crossing	$13,340,000	Announced by the current government as a PGF allocation subject to adoption of this 'feasibility' assessment	$13,340,000
Total available for detailed consideration within this report			$Commercial Information of which $Commercial Information is for capex and $Commercial Information is for opex

Figure Two: Diagrammatic representation of study area and the matters to be addressed within this report

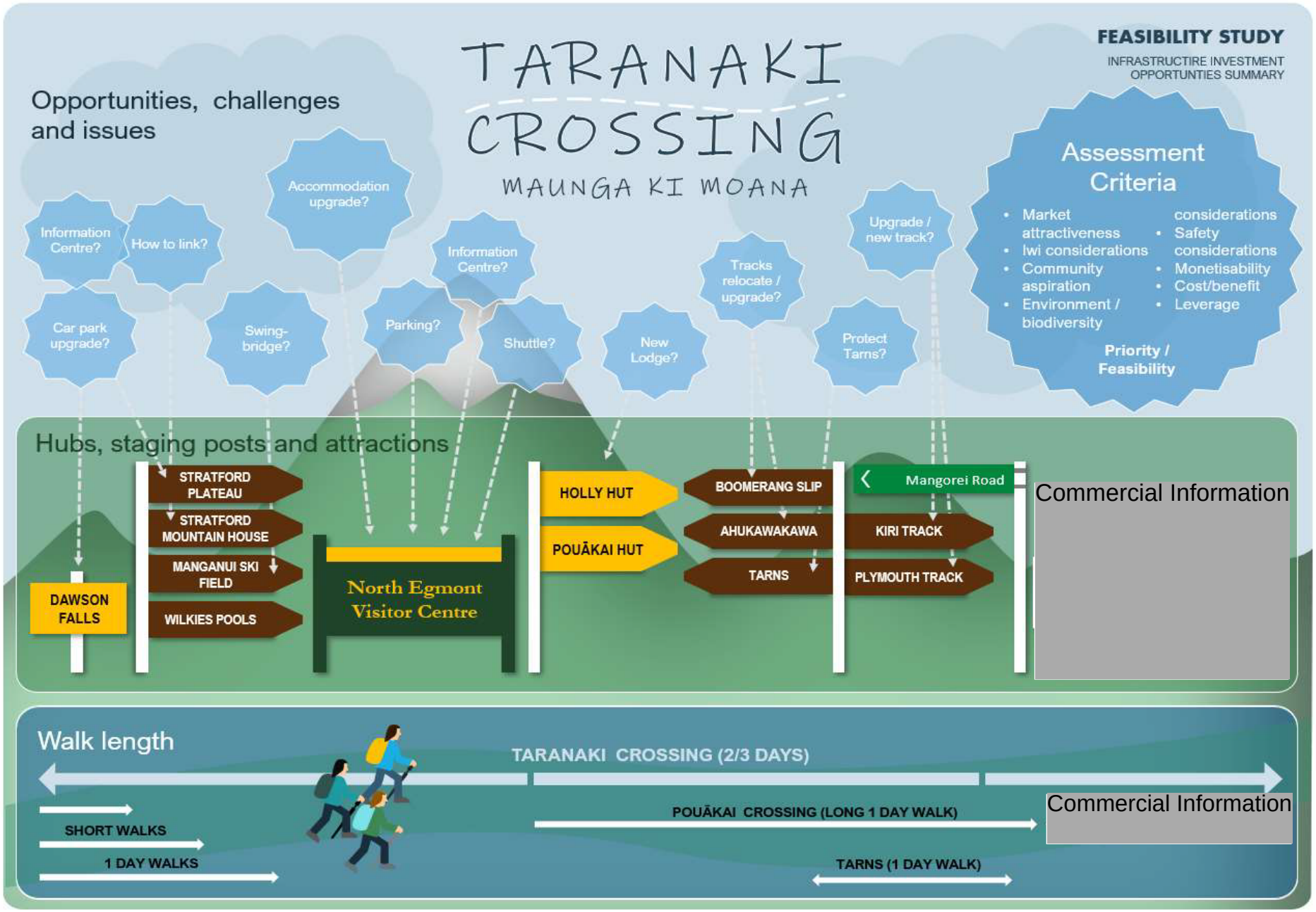


Figure Three: Interwoven themes to be addressed within project

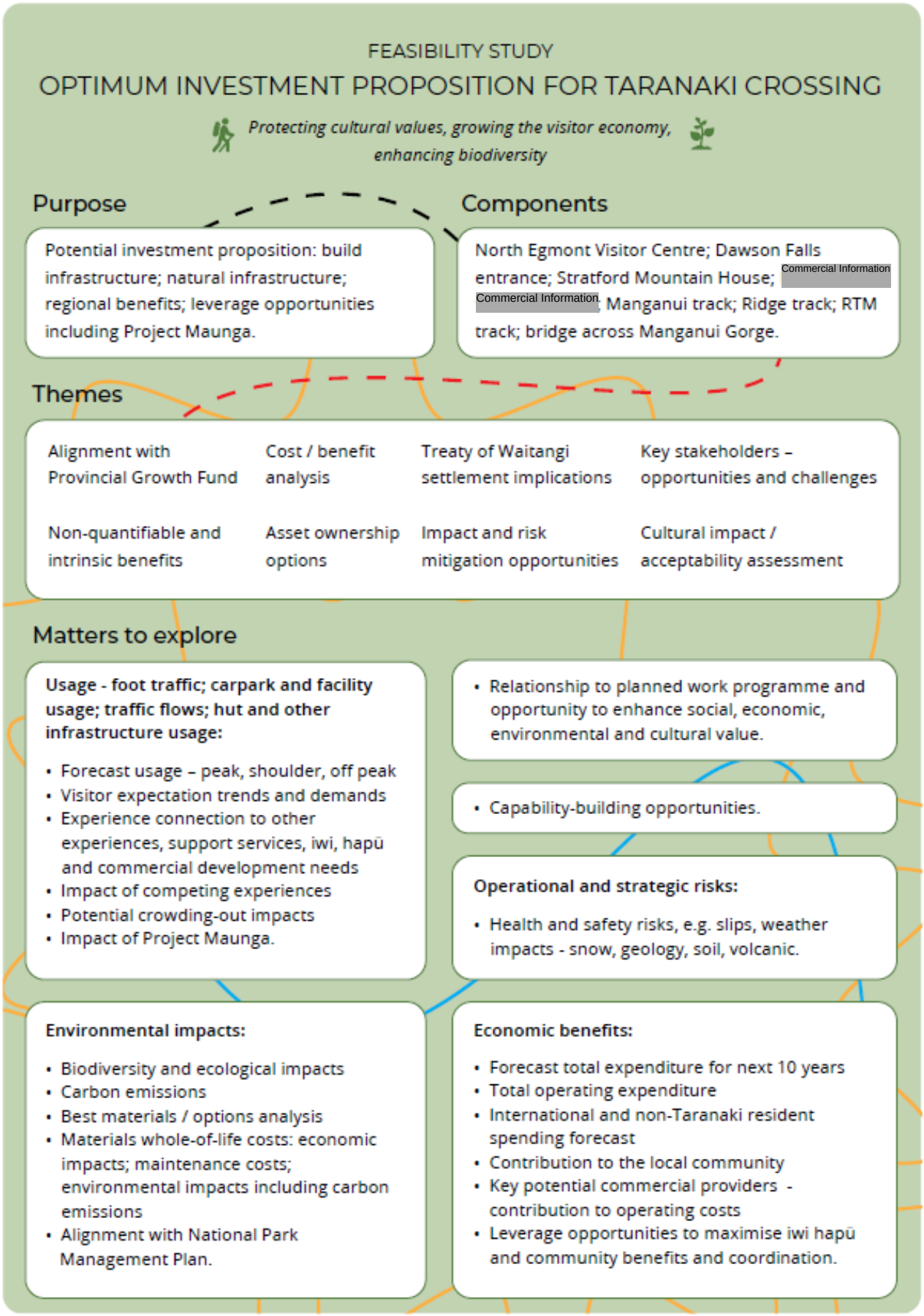
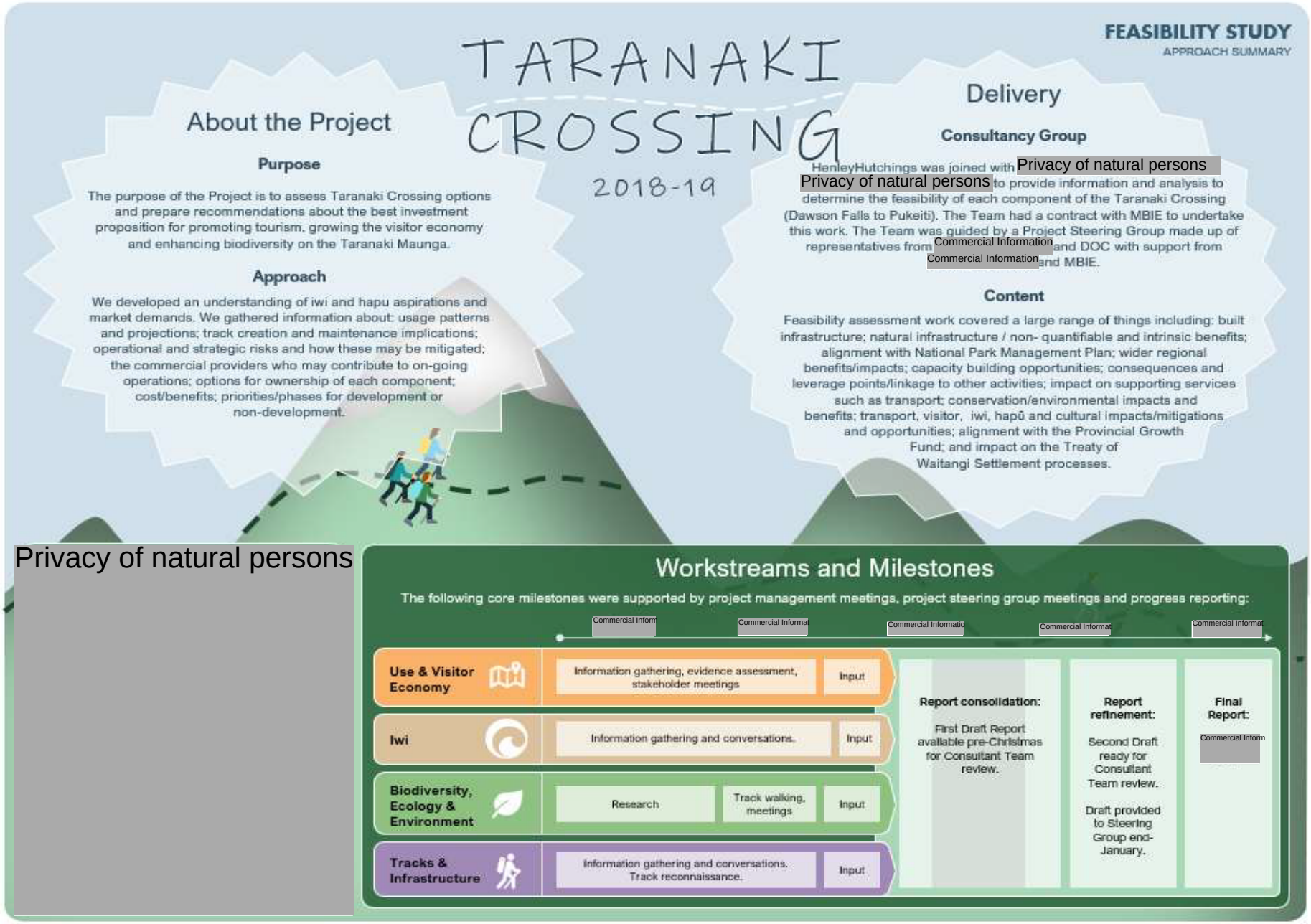


Figure Four: Governance and general parameters affecting our approach to the project



Structure of our report

Following this introductory and background section of the report, we discuss the:

- **Legislative and policy context** affecting the development of the components of the Taranaki Crossing experience.
- **Iwi** aspirations, opportunities, concerns and mitigations about the Taranaki Crossing.
- **Visitor sector dynamics** and the likely interest in various components of the Taranaki Crossing.
- **Tracks and built infrastructure** including an assessment of their existing condition and the scale of the investment required to get affected infrastructure 'market ready.'
- **Biodiversity and other environmental matters** (the 'natural infrastructure') including carbon footprint reduction opportunities.
- **Economic impact of investment** in components of the Taranaki Crossing including an assessment of the alignment of the Crossing investment proposition with the principles of the PGF.
- **Conclusions and recommendations** for sequencing and managing investment in components of the Taranaki Crossing experience.

Iwi considerations

Context and Maunga mythology

Taranaki Maunga is a "wahi tapu" i.e. a place sacred to Māori in the traditional, spiritual, religious, and mythological sense. Taranaki Maunga is linked by legend to the mountains of the central North Island. His journey from the central plateau has been recounted by iwi for centuries. On one account it is said that at one time, Taranaki Maunga stood near Tūrangi with Ruapehu, Tongariro, and Pihanga. Taranaki and Tongariro both loved Pihanga and fought over him.

But Tongariro was stronger and Taranaki withdrew underground, carving out the bed of the Whanganui River on his journey to the sea. When he / she surfaced, he / she saw the beautiful Pouākai range standing inland and he / she was drawn towards her / him. Pouākai and Taranaki's offspring became the trees, plants, birds, rocks and rivers flowing from their slopes.

Captain Cook named the mountain 'Mount Egmont' in 1770. However, the traditional Māori name of Mount Taranaki or Taranaki Maunga is now more widely used. The Māori name was noted as an official name for the mountain in 1986.

The Egmont National Park (called the Egmont / Taranaki National Park in our report) became New Zealand's second national park (after Tongariro) in 1900.

Taranaki Maunga is a symbol of significance for Crown, Pākehā and Māori relationships over the years. The mountain was confiscated from Māori in 1865 under the powers of the New Zealand Settlements Act 1863. This legislation allowed the Crown to seize land owned by deemed 'rebels' and handed over to settlers and military for occupation. The Maunga was transferred back to Māori in 1978 via the Mount Egmont Vesting Act 1978 and vested in the Taranaki Māori Trust Board. The Maunga was immediately passed back to the Crown as a gift from Māori.

Approach

This section of our report draws on the following sources of information:

- Taranaki Regional Development Strategy - Tapuae Roa: Make Way for Taranaki Strategy and Action Plan (August 2017).
- Māori Economy Action Plan – developed as part of Tapuae Roa by KPMG (in Draft, October 2017).
- Māori Economic Profile: Taranaki – Martin Jenkins (Draft Report, July 2017)
- Deeds of Settlement with iwi who have settled Treaty matters with the Crown.
- Taranaki Maunga – Te Anga Pūtakerongo mō ngā Maunga o Taranaki, Pouākai me Kaitake (Record of Understanding for Mount Taranaki, Pouākai and the Kaitake Ranges), December 2017.
- Meetings between iwi representatives and our consultancy team (October to December 2018 and during January 2019).

Our conversations with iwi representatives suggested we should lean toward exploring the following themes in our assessment of the feasibility of the Taranaki Crossing proposal:

- Protect cultural values.
- Resolve environmental challenges.
- Meet infrastructure needs.
- Provide for appropriate story telling.
- Align with Maunga settlement processes and decisions.
- Align with the Taranaki Mounga Project.
- Provide iwi with employment opportunities and build the capacity of iwi to participate in these opportunities.

Our conversations with iwi leaders suggested we should also keep the following additional considerations in mind as part of our assessment of the feasibility of the Taranaki Crossing Project, its various components and all operational planning:

- Ngā Iwi o Taranaki expect to play a key role in decision-making on how any Taranaki Crossing funding will be spent on the Maunga.
- There will be significant changes to the ownership (legal personality), management and operations / management on the Maunga, post the settlement and these may impact on the long-term management of the Taranaki Crossing.
- The Taranaki Crossing project provides an opportunity for DOC, the Taranaki Regional Council and iwi to work together to enhance the overall experience of all people that visit Taranaki and the Maunga.
- How the Taranaki Crossing Project is implemented will also highlight how the Treaty settlement could be expressed, in a meaningful manner, in the longer-term.

These themes are further addressed in the following part of our report.

Maunga Treaty matters

On 30 November 2016, the Government announced its intention to start negotiating settlement of Taranaki Maunga with the eight Taranaki iwi. Subsequently, a 'Record of Understanding' was signed between these eight iwi - 'Ngā Iwi of Taranaki' and the Crown, on 20 December 2017. The Maunga negotiators estimate that the final Taranaki Maunga settlement could be signed later this year (2019).

Under this Record of Understanding, several significant changes for the Maunga and the National Park operationally (and symbolically) were secured, including:

- The Mount Egmont Vesting Act will be repealed.
- A new joint Crown-Iwi governance entity will be created that will look after the interests of the Maunga.
- A legal personality and operations / management arrangements will be declared for Ngā Maunga.
- Available Crown land will be vested in that legal personality.
- The official name for Egmont National Park and other features in and around the Maunga will be changed.

An agreed set of values – 'Maunga Values', was also established. These relate to:

- The status of Ngā Maunga as an indivisible whole and as Tūpuna.
- Preserving and protecting the natural environment and features of Ngā Maunga and the relationship o Ngā Iwi o Taranaki and all people have with Ngā Maunga.
- Upholding the ancestral, historical, spiritual and cultural relationships of Ngā Iwi o Taranaki with their Tūpuna.
- Providing guidance to decision-makers exercising functions and powers under the National Parks Act 1980.

Maunga - signification and importance for iwi

The following points were conveyed to us about the significance of the Maunga and about the desire of Ngā iwi o Taranaki to be more actively involved in its management:

- Iwi have an interest in the heritage and future of the Maunga as, according to local history, all Taranaki tribes trace their genealogy back to 'Taranaki'. The record notes that the Maunga is an ever-present and personified ancestor that '*transcends our perception of time, location, culture and spirit. His presence pervades our scenery, projecting mystery, adventure and beauty, capturing our attention and our imagination in how humanity can be closely bound to a landscape*.'

- The ancestors of current iwi fought tirelessly to regain control over Taranaki Maunga for decades. '*The Maunga is huge for us, people may not know but Ngāti Maru Tūpuna have been making submissions to the Crown since the 1970s about handing that Maunga back*.'

- Having a footprint on Mt Taranaki is significant for Ngā iwi o Taranaki. '*Today we're in the Mountain House and obviously there's a huge historical reason for why we purchased this building, but also tourism and being able to be involved in the environmental kaupapa is really important for us as well and we're the only iwi that has a guiding concession for the Maunga*.'

- Te Whiti o Rongomai, Tohu Kākahi, Ratana and other spiritual leaders were known to have visited the sacred waterfall Te Rere o Kapuni which flows from the slopes of the Maunga. We were informed these waters were used for healing, baptisms and that they held a lot of mana for local iwi.

- Non-Māori must be educated to respect the beliefs of Māori. Visitors were asked, by all the persons we spoke to, to show respect to Taranaki Maunga.

- Ngā iwi o Taranaki are working together for a more prosperous future and are keen to work with non-Māori partners. '*Iwi are highly invested in this region and we're not going anywhere so we're long-term players. We're not businesses that are going to come and go overnight or next month or next year*. *We're committed intergenerationally and I think that puts us in a unique position and we will be a big player in this region because of that*.'

- Iwi want to:
    - Be an active participant in the NEXT Project Mounga iwi governance group.
    - Hold three wānanga on Ngāruahine reo relating to the Maunga to develop the Ngāruahine story ahead of negotiations for the return of the Maunga to the iwi of Taranaki.
    - Protect and gather the kōrero from whānau in a way that preserves the mātauranga of Ngāruahine and in a way that provides a record for their whanau.
    - Work with other iwi, Te Papa Atawhai and others to ensure our Tūpuna is cared for.
    - Re-establish the Ngāruahine story on the Maunga within the broader community.

- Iwi urge DOC / Councils to better understand the constraints on the time, priority and resources available to iwi. They urged that more sustainable engagement models be put in place with better support at both governance and implementation levels.

Environmental considerations and aspirations

As an example of how iwi are viewing environmental aspects of the Maunga, Taranaki a number of spokespersons for iwi outlined the following statements to describe preferred 'objectives for Taranaki Maunga':

- **Mauri:** The mauri of Taranaki Maunga will be protected, cared for and restored.
- **Protect:** Taranaki Maunga will be given comprehensive protection; risks of damage from invasive weeds and pests will be removed for native flora and fauna to flourish in abundance.
- **Korowai:** The korowai of native habitat will proliferate and flow down the sides of the Maunga towards the sea.
- **Water**: All water that flows from the Maunga will be given active protection from the detrimental impacts of human activity, wider environmental degradation and invasive species to ensure waterbodies are maintained in a pristine state.
- **Active protection**: All waterbodies that start on the Maunga, flowing to the sea, will be given riparian shelter and protection from erosion and contamination from land use by native vegetation as an extension of the ngahere on Taranaki Maunga.
- **Awareness:** All people involved in activity on the Maunga will be aware of the environmental and cultural values associated with Taranaki Maunga and will be required to treat these values with respect and care.
- **Engagement:** Ngā iwi o Taranaki are fully engaged in all levels of management and operations linked with the Maunga and are active kaitiaki of the Maunga.
- **Understanding:** Communities will understand key elements of the value placed on the Maunga by Taranaki iwi and will share in the task of active protection and respect, in line with these views.

The above statements summarise how Ngā Iwi o Taranaki may position themselves with the Maunga. Other **environment** issues raised during our discussions with iwi leaders were:

- New developments and human activity (growing numbers of Park users and the infrastructure put in place to service them) on and around the Maunga can impact on the natural environment and the important cultural values associated with Taranaki Maunga.
- These impacts can include habitat destruction, creation of an imbalance within ecosystems and introduction of pest species.
- Hazards and risks on Taranaki Maunga may have detrimental effects on the important natural environment, cultural values and the landscape of the Maunga.
- The natural ecosystems that draw people to Taranaki Maunga must be given priority for active protection over the needs of park users, use of modern track construction techniques will be required to protect fauna and flora.
- Specifically, for Pukeiti and Pouākai, and particularly the Ahukawakawa area, less tracks with higher quality infrastructure is better than more tracks with inferior construction.
- More detail is required and important on the proposed track and platform ideas for the Ahukawakawa area.
- Any new development must be sensitive to iwi values and practices and reflect them during construction and use.
- If there are to be new tracks then iwi should be consulted at the beginning and throughout the design, build and management of those tracks.

Translating cultural and heritage elements and aspirations into decisions about the Taranaki Crossing

Taranaki iwi have a strong cultural identity and heritage, with inspiring stories reflecting their resilience and determination. Some of the **cultural and heritage** matters raised by them in relation to the proposal to develop the Taranaki Crossing were:

- **Signage:** Māori names and narration should be applied for all new tracks, special areas, and infrastructure. Iwi should be consulted on existing names or new names. Decisions about any new signage during implementation of any component of the Taranaki Crossing Project should involve iwi.
- "**Pou" and other markers (boulders / carvings):** These could be used throughout the Crossing. Iwi should be engaged to help.
- **Iwi involvement:** Iwi should be engaged at an early stage to provide assessments of names, narration and in some cases design of interpretation / way finding.
- **North Egmont Visitor Centre:** Commercial Information
- **Culturally significant sites:** Once the final components of the Taranaki Crossing tracks are agreed, iwi should be engaged to assist with the identification of culturally significant sites and the consequential development of the narration and protocols relating to those sites.
- **Project management:** The proposed Project Manager to guide implementation of the components of the agreed components of the Taranaki Crossing could be partnered with a Manager capable of ensuring matters of iwi concern are fully embraced during project implementation, with the side benefit of building the capabilities of this person to enable them to become a highly skilled project manager.
- **Summit climbs**: Although recognised as not being an explicit part of the Taranaki Crossing, iwi noted they did not support climbs on to the summit for cultural reasons. (NB the first recorded European climber to the summit (Ernst Dieffenbach) initially struggled to find Māori guides because iwi chiefs would not allow

it). The accepted position from an iwi perspective is that the Maunga is a person, and the summit, is the head of the person and therefore “tapu” (sacred).

A DOC Park Ranger told the Daily News that:

- Most mountain users were good about following the rules, if they knew them.
- While we (DOC) don't stress cultural significance in our signposting, we do outline the rules quite clearly. If someone breaks the rules e.g. standing on the summit for example, don't be surprised if someone confronts you about it.
- Places like Dawson Falls / Te Rere a Kāpuni, which hold extreme spiritual significance to the Ratana Church, are special places where cultural values must be respected. It's not about believing some of these values, it's about respecting other people's beliefs.

All eight iwi have a connection to Taranaki Maunga. Each have certain areas of special value within the National Park and on the mountain itself. Iwi feedback included:

- It is difficult to give an exhaustive list of things people can and can't do on the mountain because it represents different things to different iwi.
- For Te Atiawa, the National Park has several burial sites in it and they don't necessarily have headstones. For us there are certain things you can and cannot do around burial grounds; it's no different to how you would act or treat a cemetery.
- It is important people come and speak to iwi and DOC before doing anything that could cause offence.
- The mountain isn't something to simply conquer, there is a broader story to him / her that people need to be aware of.
- Kiwis travelling abroad showed an inherent respect to places like the Taj Mahal and to the pyramids in Egypt. People give these places respect without question, while Māori values for their mountain seem to sometimes be something of contention.
- More signage about what is appropriate on the Maunga was something iwi were working on with DOC.

Economic opportunities

Seven of the eight Taranaki iwi now have Treaty settlements. Ngāti Maru is expecting to settle this year (2019). The Taranaki Maunga settlement is also expected to settle this year. These settlements provide iwi with funds for judicious investment in projects capable of further improving iwi well-being.

As well as the iwi-owned interests, Parininihi ki Waitotara Incorporation (**PKW**), Parihaka settlements and the Waitara leased-land financial arrangements (New Plymouth District Council (Waitara Lands) Act 2018) provide further economic development opportunities.

The collective economic position of Taranaki iwi and Māori has grown significantly in the last 10 years. It will continue to grow as iwi leadership grows and diversification of their investment strategies occurs.

The recent purchase of the Novotel hotel in New Plymouth highlights that iwi / Māori are prepared to further invest in tourism infrastructure in the region and more importantly, invest outside of traditional land development options.

Iwi current investments within Taranaki National Park

DAWSON FALLS MOUNTAIN LODGE AND CAFE

Te Korowai o Ngāruahine Trust bought the Dawson Falls Mountain Lodge and Cafe on 30 September 2016. The facility was built in 1896, sits 905m above sea level and is surrounded by forest and streams. The Lodge is situated near the entrance point to tracks and has significant cultural sites nearby.

The managers of the Dawson Falls Lodge told us '*This place is really special to a lot of people and we want to be able to demonstrate manaakitanga (sharing, caring hospitality) and we would love to see more people coming back here to celebrate special occasions*.' Trustee Will Edwards told us the Lodge, which can accommodate up to 30 people, was the *'Jewel in the Crown'* for the iwi and he hoped they could take advantage of a resurgence in the tourism industry by offering authentic cultural experiences. '*We are keen to be part of that and to be actively involved in that. This is an amazingly special place and should be one of the places that both our international and domestic tourists must visit'*. He said the site was also significant for the people of Ngāruahine and it was important that the stories told there, reflected iwi stories and ways. '*It's really important for the iwi that a place that is so sacred can be shaped by the iwi.'*

Commercial Information

STRATFORD MOUNTAIN HOUSE FOR NGĀTI RUANUI

Ngāti Ruanui own the Stratford Mountain House. Te Rūnanga o Ngāti Ruanui CEO Debbie Ngarewa-Packer told us having a footprint on Mt Taranaki was significant for the iwi. Ms Ngarewa-Packer said there was huge potential for authentic tourism experiences with an Iwi-Inc stamp, but that Ngāti Ruanui was not putting all its eggs in one basket. (Source*: https://www.radionz.co.nz/news/national/359664/taranaki-iwi-open-for-business-we-re-not-going-anywhere).*

Like Ngāruahine, Ngāti Ruanui would consider other opportunities on the Maunga that support or enhance their investment in the Mountain House.

Opportunities for further investment within Taranaki National Park

Our general discussions with iwi suggested they were open to the idea of involvement in the following potential opportunities:

- **Pouākai and Ahukawakawa area** – either the upgrade of an existing hut or the construction of a new hut / lodge.
- **North Egmont Visitor Centre** – either upgrading the existing centre or building a new one and / or constructing serviced accommodation on adjacent road reserve land.
- **Iwi guiding businesses** – services capable of adding depth to visitor experiences by sharing the stories of Taranaki (as a region) and specific sites on the Maunga.
- **Iwi-owned visitor shuttle services** – these could be set up as part of the guiding experience or simply as a stand-alone business.
- **General matters** - improvements are required to car parks, lodges, cabins, shelters, etc.

Overall economic effect of the Taranaki Crossing for the Maori economy

A successful Taranaki Crossing Project that appropriately addresses all iwi concerns was viewed by the iwi leaders we spoke to as likely to have positive effects on the Māori / iwi economy, especially if it helped to improve existing Māori-owned and / or Māori-operated businesses or if it enabled new businesses on the Maunga to come to fruition and to thrive.

In terms of Māori-owned / operated businesses and as noted in Tapuae Roa, the preference expressed by some iwi leaders was to *'focus less on establishing large corporate entities and more on small enterprises in niche business areas. This will help expand the small business foundation of iwi and the Taranaki economy'*.
Given the expected higher visitor numbers to be drawn to Taranaki by the Taranaki Crossing project, direct and indirect positive externalities were anticipated to be supportive of the Māori / iwi economy in Taranaki. The specific or exact quantifiable measure of such positive impact is yet to be determined but Leaders suggested encouraging signs can be anticipated as a result of the provision of more monetised services, products and experiences.

Attracting, capturing, and enabling increased Māori participation in opportunities arising from the Taranaki Crossing project was viewed as being crucial for securing the likelihood and scale of actual positive economic effects from the Taranaki Crossing project on the Taranaki Māori / iwi economy.

Capability-building opportunities

Iwi told us the Taranaki Crossing project should provide clear support for iwi training and opportunities for a hands-on role within each and all the projects components should be established. They noted that:

- In the past, iwi have been excluded from management roles, which were held by the Crown.
- Direct involvement of iwi will build skills and experience and enhance the traditional practice of kaitiakitanga on the Maunga.

One specific recommendation that iwi urged us to consider was the development of a form of 'social procurement' arrangement that enhanced iwi involvement. In support of this recommendation it was noted that Auckland City Council have negotiated percentage thresholds for Māori and Pasifika contractor and employment targets for certain infrastructure projects that are being managed by the Council (e.g. light rail and roading projects). We also note that MBIE is in the process of preparing a paper on social procurement and that this approach has been supported by the Māori Economic Development Advisory Board (the governance board that oversees the He Kai Kei Aku Ringa programme).

With this point in mind, we note that while the deadlines and timeline may be tight for spending allocated money on the Taranaki Crossing, the principle of ensuring iwi / Māori have access to some of the contracts associated with this development should be discussed and agreed.

Iwi and PKW also told us they may be interested in investing, in a collaborative manner, with the Western Institute of Technology at Taranaki (**WITT**) and with other providers in the region, to support the building of iwi visitor-sector capability and capacity.

Public Safety

The "kaitiaki" role of iwi is core component of their tribal plans. Safety of "manuhiri" / visitors is of paramount importance. Some existing tracks need improvement / restoration to overcome safety concerns, for example on the Pouākai and Kōkōwai Tracks and on the tracks near the Boomerang Slip.

Summary

The desire by Ngā Iwi o Taranaki to exercise strong kaitiaki over the Maunga is real and active. Furthermore, the desire to protect flora, fauna, waterways and native species on the Maunga is of fundamental importance, as is the desire to seek out and secure opportunities to grow the Māori economy through involvement with the construction and operation of components of the Taranaki Crossing. We are confident that the measures to be adopted (as described in the remainder of this report) will contribute to these objectives.

Legislative and policy context

Conservation Act 1987

In general terms, the Conservation Act contains provisions enabling DOC to promote the conservation of the natural and historic resources of New Zealand and, to the extent that this is not inconsistent with conservation, foster the use of natural and historic resources for recreation and allow the use of these resources for tourism.

National Park planning documents

The planning documents that guide the management of Egmont / Taranaki National Park include the Egmont National Park Management Plan (2002) and the Wanganui Conservation Management Strategy (1997-2008). Both documents (10-year plans) are somewhat aged. Reviews have not yet been scheduled.

Egmont National Park Management Plan

The Vision of the Egmont National Park Management Plan is: Taranaki Te Maunga He tapu! He tapu! He tapu!

The Plan includes two key provisions with effect on the Taranaki Crossing proposal – the first focuses on protection and preservation and the second focuses on use and enjoyment:

- **Protection and preservation**: The scenery, ecosystems and natural features of the National Park are preserved. The full range of indigenous plants and animals remain and all major animal and weed threats to the park have been eradicated or controlled. The intrinsic worth of the Park is recognised. The Park is renowned for the preservation of its natural, historic, cultural and landscape values.
- **Use and enjoyment**: Recreation is fostered, and tourism allowed where it is not inconsistent with conservation and National Park values. The public has freedom of entry and access to the Park for inspiration, enjoyment and recreation. The increasing numbers of visitors are aware of how their activities impact on the environment and natural features of the Park, and know more about the Park's natural, cultural and historic values. The impacts of people on the Park are managed effectively and reduced where possible. Land adjacent to the Park is managed to protect and enhance the natural, historic and landscape values of the park.

Whanganui Conservation Management Strategy

The Conservation Management Strategy – for the Taranaki Region, includes the following provisions:

- Ensure that highly sensitive environments such as areas containing threatened species and fragile ecosystems are not used unless adverse effects can be avoided.
- Protect and enhance recreation opportunities in the National Park by:

- Providing high quality, well-maintained visitor facilities and interpretation at the major park road-ends (North Egmont, East Egmont and Dawson Falls).
- Maintaining huts, tracks and routes to a standard consistent with their classification and use
- improving sub-standard sections of track on the Around-the-Mountain Circuit.
- Monitoring and, if necessary, controlling visitor impact on the North Summit Route.
- Providing up-to-date multilingual information at suitable locations to ensure visitors to the park are made aware of potential alpine hazards.

Taranaki Whanganui Conservation Board

We discussed the Taranaki Crossing proposal with the Board on 22 November 2018. Board members asked focussed questions about the proposed methods to manage development impacts and the scale of opportunity for iwi involvement. We provided tentative answers to these questions at the meeting. These answers are expanded upon in this report. In general terms, members of the Board were supportive of the project's intentions.

Related policy and project initiatives

Taranaki Mounga Project

The 'Taranaki Mounga' (He Kawa Ora – Back to Life) project has an ambitious vision for the Maunga over a 20-year time frame involving intensive pest and weed control. The project will cover an area that includes the 34,000 ha of the National Park encompassing Taranaki, Pouākai, Kaitake and the protected Ngā Motu / Sugar Loaf Islands.

It aims to eradicate goats, making Taranaki National Park New Zealand's first ungulate-free National Park. It will also involve controlling possums, rodents, hares and mustelids to low densities through a combination of trapping, ground and aerial predator control.

This project will support the Taranaki Regional Council's development of a 'biodiversity halo' to minimise pest reinvasion from lands surrounding the Park.

The project is a collaboration between DOC, the eight Taranaki iwi and philanthropic investor, the NEXT Foundation, with support from founding sponsors Shell New Zealand, Jasmine Social Investments, the TSB Community Trust and Landcare Research.

One of the motivations behind the Mounga project is to restore the Park to a level enabling it to enter a new period of post-Treaty settlement governance and management with its former values intact, as opposed to degraded. It will also enable visitor appreciation and enjoyment of ecosystems more reflective of the Park's initial state than the current pest-modified state.

A director of the project identified the three priority project workstreams as being:

- To reduce and remove pests from the National Park.
- To reintroduce native species and revitalise local ecology.
- Building a community project that 'resets our footprints' back on the Maunga and the National Park.

The view was also expressed that the Taranaki Mounga project is something to be celebrated by all New Zealanders and that the Taranaki Crossing Project should find ways to enhance the Taranaki Mounga project.

He suggested any new developments via the Taranaki Crossing Project must ensure there is no detrimental effect to the Taranaki Mounga project.

New Plymouth District Council (NPDC) Blueprint

In 2016, NPDC prepared a high-level 'Blue print' spatial plan to guide and support achievement of the District's vision and outcomes and to guide development of content to be included in the Council's 2018-28 Long-Term Plan. Eight key directions were identified in the Blue Print including the 'flagship' initiative, the 'Taranaki Traverse' (now the 'Taranaki Crossing'). This was perceived as being a 'world class recreational, cultural and environmental experience' – from mountains-to-sea. The Council's Blue-print document also included the idea of a circular walkway extending along the Waiwhaikaiho River at New Plymouth to the North Egmont Visitor Centre Commercial Information then back to New Plymouth via an extension of the existing coastal walkway.

Tapuae Roa – Taranaki Economic Development Strategy and Action Plan

In the period between late 2016 and early 2018, a 'Lead Group' made up of local government, business and iwi prepared a Taranaki Regional Economic Development Strategy and then 'Tapuae Roa', an economic development action plan for Taranaki.

These documents identified eight sectors of the economy for focused attention. This included the visitor sector. The completion of the Taranaki Crossing was viewed as one of the key indicators of success within the Visitor Sector part of this Action Plan. Tapuae Roa noted the region was already in transition from an economy based on natural resources such as water, land, climate, minerals and oil, toward a value-adding economy characterised by more reliance on human comparative advantage.

The mission underpinning these documents was… *'Taranaki – where talent becomes enterprise - Kia eke panuku.'* Having more people, all with a desire to share in the Taranaki lifestyle, was a critical component of the Strategy. At the heart of this 'people-centred' approach was the pulling power of Taranaki's quality of life and outdoor lifestyle / experiences as a key factor. This was viewed as a key factor to 'attract and retain talent'.

Visitor Sector Action Plan

The Taranaki Visitor Sector Action Plan set the goal of achieving 7.5% annual growth in the sector with the expectation of an increase in visitor expenditure by 2025 of $260m, over and above the 2018 base of close to $400m. A critical initiative required to achieve this aspiration was listed as being…'the Taranaki Crossing is fully funded and developed under urgency'.

Tourism New Zealand Strategy

Tourism New Zealand's (TNZ) March 2017 'refreshed' four-year strategy for the period FY18 – FY21 focuses on:

- Increasing international tourism in the regions and shoulder seasons
- Working with partners to improve experiences for visitors and Kiwis
- Strategically managing New Zealand's markets and sectors by for example, targeting special interest visitors such as cyclists, golfers and backpackers and encouraging them to visit more regions

Draft 'Aotearoa New Zealand Government Tourism Strategy'

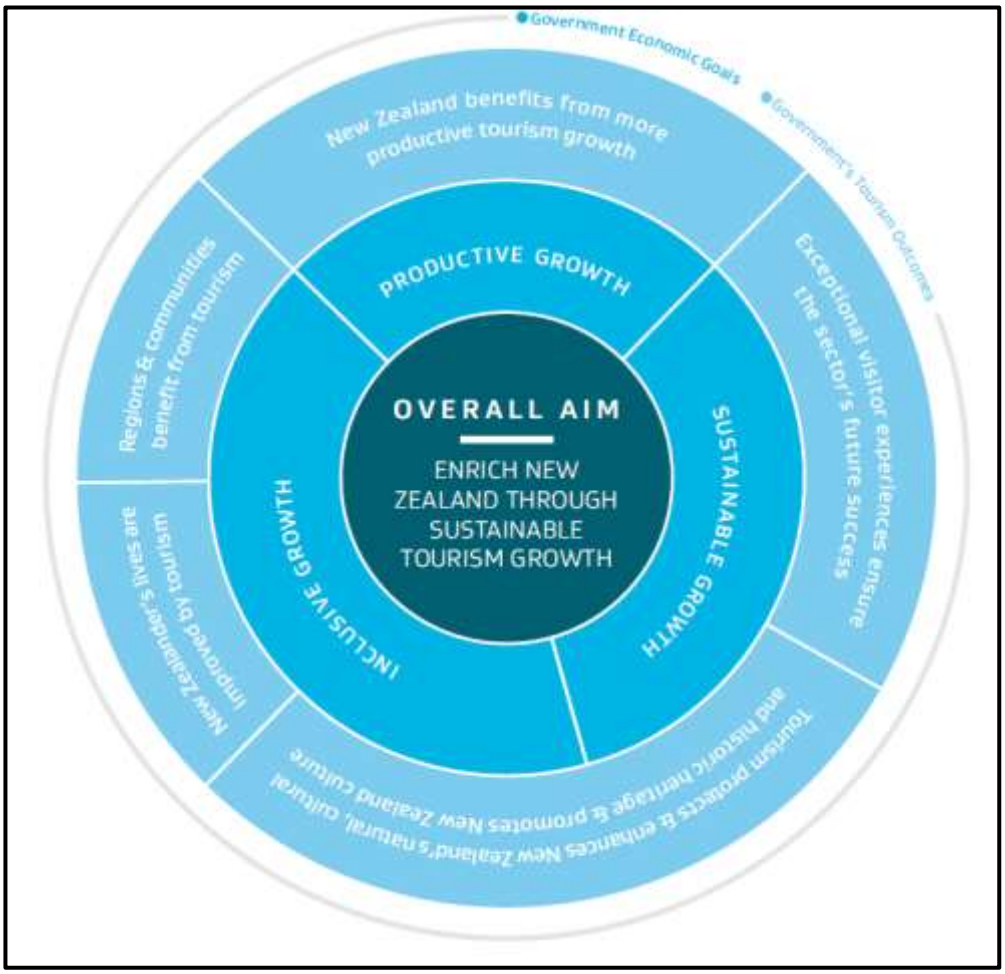
A draft 'Aotearoa New Zealand Government Tourism Strategy' was released for consultation by MBIE in November 2018. The Strategy notes international visitor arrivals have grown by 43% in the last five years, with five million international visitors expected by 2024.

The desire expressed in the Strategy is for tourism growth to be productive, sustainable and inclusive (Figure Five). There is also a desire to strengthen stewardship, better shape future growth, manage its impact and better coordinate investments. This was viewed as being achievable by 'managing demand', through the efforts of Tourism New Zealand, and by 'shaping the supply' of visitor experiences – through such initiatives, for example, as the development of the Taranaki Crossing.

In addition, the Tourism Strategy emphasises the need for measures that better manage seasonal and regional travel patterns and ensure the gains from tourism are better spread across New Zealand. This objective was viewed as being achievable by providing 'exceptional visitor experiences' that enhance new Zealand's natural, cultural and historic heritage.

We have taken account of all these themes in our assessment of the feasibility of the Taranaki Crossing. Details follow but, at the risk of jumping to conclusions too soon, we are comfortable that the Crossing concept is a good fit with the objectives sought from the Government's Draft Tourism Strategy.

Figure Five: Aotearoa New Zealand Government Tourism Strategy



DOC's draft Heritage and Visitor Strategy

To meet the aspirations of the government and New Zealanders, DOC has recognised it needs to exercise leadership in developing heritage and visitor policy and management systems capable of responding to an environment characterised by fast-growing visitor numbers, changing visitor and community expectations, and increasingly complex conservation management issues.

To assist it meet this objective, DOC developed a draft Heritage and Visitor Strategy (September 2018). While this is still a draft, and noting it may be subject to further amendment, we note it is influenced by recognition by DOC of the need to:

- Develop an integrated approach to conservation and visitor management.
- Support more opportunities for tangata whenua to benefit from visitors to public conservation lands and waters.
- Build a clear and understood analysis of visitor impacts, behaviours, motivations and expectations to inform strategic directions.
- Develop a cohesive portfolio of visitor experiences.
- Integrate conservation and visitor outcomes that raise regional and community wellbeing.
- Work more effectively with partners.

We endorse these commitments. We have reflected them in our assessment of the feasibility of components of the Taranaki Crossing.

DOC's Stretch Goals

DOC has developed a set of well-grounded KPI's to guide them in their work. They include:

- 90% of visitors rate their experience on public conservation lands and waters as exceptional
- 90% of New Zealanders think the impacts of visitors to public conservation lands and waters are very well managed
- Stories about 50 historic icon sites are told and protected
- 90% of New Zealanders' lives are enriched through connection to our nature and heritage
- Whānau, hapū and iwi can practise their responsibilities as kaitiaki of natural and cultural resources on public conservation lands and waters

As was the case DOC's draft Heritage and Visitor Strategy, we have been guided in our work by considering how and to what degree the various components of the Taranaki Crossing may contribute to the achievement of these KPIs.

In summary, we believe there is nothing in existing statutory policy documents that prevents the Taranaki Crossing from proceeding, and much in other policy documents that supports or could be furthered by developing the Taranaki Crossing.

Visitor sector dynamics

Taranaki visitor sector - general characteristics

The Taranaki visitor sector:

- Has historically grown at a slow rate - although recent growth in visitation has picked-up, particularly as a result of growing interest from the international market
- Accounts for 1.3% of national visitor sector spending
- Involves visitors staying in the region for about two nights each
- Consists of 86% domestic visitors accounting for 80% of spending and 14% of international visitors accounting for 20% of spending
- Involves 50% of domestic visitors staying with friends and relatives, with comparatively low levels of daily expenditure
- Involved 316,657 visitors (YE June 2018) who stayed in commercial accommodation (e.g. motels) in the Taranaki region resulting in over 668,266 guest nights
- Experienced (YE June 2018) an increase of visitor arrivals of 4.2% who stayed 2.3% longer than during the previous 12 months
- Is characterised by a limited range of commissionable or 'monetised' products in comparison to places like Rotorua and Queenstown
- Takes great advantage of the experiences to be had on public conservation land and from activities such as walking and riding on the New Plymouth Coastal Walkway
- Capitalises on events like WOMAD

Taranaki visitor sector – well positioned for growth

As noted in the Taranaki Visitor Sector Action Plan (2018), the Taranaki visitor sector is well positioned for growth because:

- Taranaki tourism is a sector with extensive undeveloped potential – particularly as it is aligned to the nature-based outdoor adventure, arts and culture, sports and events, iwi and marae-based tourism and garden experiences sought after by visitors
- Lonely Planet's award (206 / 2017) to Taranaki of 'second best region to visit in the world' is a worthy accolade with considerable further 'leverage' potential
- The international visitor sector is expected to contribute $45b to the national economy by 2025. It currently (2018) contributes $39b.
- With continued product and market development and a clear understanding of the 'destination proposition' offered by the region, Taranaki is a likely region to be given much more 'consideration' as a place for inclusion in visitor itineraries.

A critical contributor to visitor sector growth is social media coverage. According to Lonely Planet (Best in Travel Yearbook, 2017), *Pouākai Crossing is an Instagram-worthy contender for the country's finest one-day walk*. (NB the region's ranking is the highest ever for a New Zealand destination in Lonely Planet's annual publication).

New Zealand's 'Wilderness' magazine has had four major articles on Taranaki Maunga in recent years (September 2016, April, October and December 2018). Although the emphasis has been on the positive aspects of the Pouākai Crossing, concerns about social media commentary (TripAdvisor, Facebook, Twitter)

have also been expressed, with a focus on the impact of photographers / much larger numbers of walkers and the 'artificiality' of a social media created experience compared to the traditional 'heart and mind inspired' experience. One of the expressed concerns has been about damage to areas surrounding the Pouākai Tarns.

Market demand for nature-based walking experiences

Tourism New Zealand (TNZ) research (2017) suggests international visitors want: personalized experiences; a share in 'locals' way-of-life; nature-based experiences; short stay, multi-experience visits and; peer-to-peer Face-book photo opportunities such as those featuring the Pouākai Tarns. New Zealand's natural environment is the main attraction for visitors to New Zealand. Components of the Taranaki Crossing are well positioned to contribute to these market demands.

The International Visitor Survey conducted by MBIE shows the number of visitors visiting a national park has steadily increased from 1.5m visitors in 2016 to 1.75m visitors in 2018 (YE March). The number of visitors going for a walk, hike or tramp has also steadily been increased from 1.9m in 2016 to 2.27m in 2018 (YE March). We feel this data may be on the low side, however beyond doubt is the fact that 73% of visitors participated in walking/hiking and 14% cited walking/hiking as a factor influencing consideration of New Zealand when selecting their travel destination.

New Zealand's national parks are also popular with domestic visitors. 60% of New Zealanders participate in walking and 80% of New Zealanders visit New Zealand's public conservation land (Tourism New Zealand, 2017).

The Domestic Growth Insight Tool (DGiT) shows that 14% of the New Zealand population want to get outdoors to explore nature. They go on an average of 9.4-day trips and 5.5 overnight trips a year. The main activities they are interested in are: wildlife in their natural environment; walking, hiking, trekking or tramping; visiting a beach, a national park, other natural attraction; photography; and cycle trails.

DGiT also shows that throughout New Zealand, there are 8.8m potential trips per year by domestic visitors to go on a hike, trek or tramp in a national park. This consists of 4.8m potential day trips and 3.9m potential overnight trips.

Of specific interest to Taranaki, DGiT data suggests there are 1.15m 'potential' trips by domestic visitors wanting to go on a hike, trek, tramp in Taranaki National Park, consisting of 392,325 potential day trips and 756,942 potential overnight trips (NB many of these experiences will be undertaken by Taranaki residents – they are not all undertaken by visitors).

The domestic visitors that are interested in a hike, trek or tramp in a national park in Taranaki are mainly travelling with other adults (72%), but a small group also travel with children (28%). The majority (91%) are travelling by car, with only 9% travelling by air.

Preferred walk length

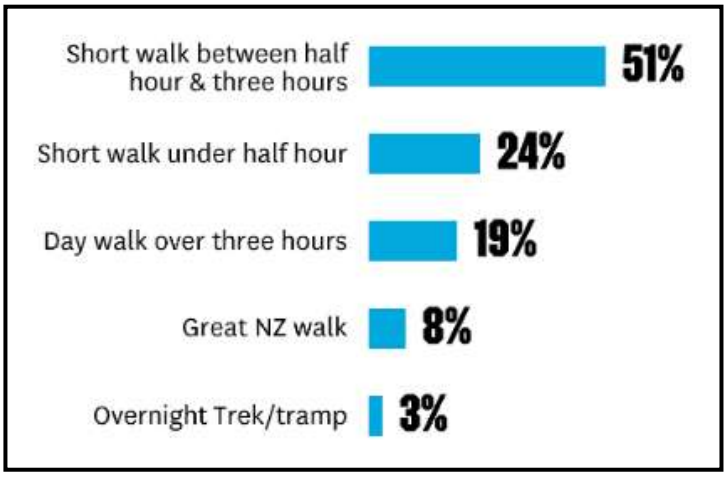
The most popular walking experiences sought by both domestic and international visitors (Tourism New Zealand, 2017) are short walks between half an hour and three hours, followed by short walks of under half hour duration (Figure Six).

The current demand for New Zealand's Great Walks, short walks and day hikes is dependent on several factors, of which Tourism New Zealand's (TNZ) marketing efforts play an important role in determining a track's popularity. For example, the Tongariro Crossing is extremely popular with overseas visitors partly because of TNZ using imagery from this track to promote New Zealand overseas for many years.

Short walks (30 minutes to 3 hours) appeal to those with compact itineraries. They allow people to sample our natural heritage and serve the needs of those who may be less fit than average. Day hikes (3 to 7 hours) encourage visitors to stay longer and spend more money in a region while not having to commit to the full overnight back country experience. Multi-day trips provide further opportunities to monetise an experience.

We comment in more detail on the match between market demand for walks of various lengths later in our report but for now, we simply note that one of the beauties of the Taranaki Crossing proposal is that it will provide a smorgasbord of walk-duration opportunities suited to the various types of walk opportunity sought by different market segments.

Figure Six: Preferred walk time of nature-based walk experiences (Tourism NZ, 2017)



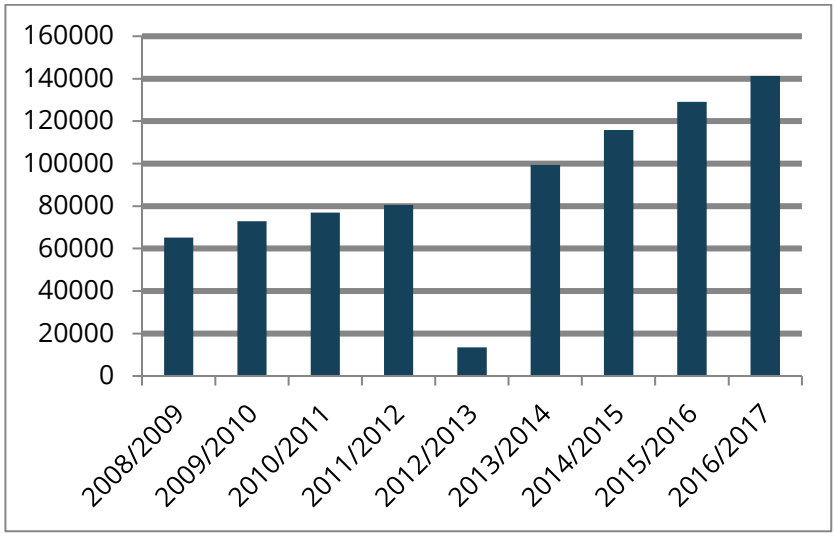
Comparison between the Taranaki Crossing and the Tongariro Crossing

The Tongariro Alpine Crossing is one of most sought-after day walks in the world. Tongariro National Park is a UNESCO dual World Heritage Area and was the first in the world to receive Cultural World Heritage Status. It is classified as an intermediate Great Walk / Easier tramping track. The track is 19.4km long and takes about 7-8 hours to complete. It is currently experiencing in excess of 140,000 visitors per annum, over 80% of whom are international visitors (Figure Seven).

Many interested stakeholders have concerns that a developed Taranaki Crossing experience could have similar management issues to those experienced on the Tongariro Alpine Crossing such as: overcrowding; congestion on parts of the track; human waste management; carparking; safety; and cultural impacts on iwi and the Maunga values.

In our view, given Taranaki's 'off-the-beaten-track' location, fewer visitors, weather, the market dominance of the Tongariro Alpine Crossing and the intention to apply good track user management practices, it is highly unlikely a developed Pouākai / Taranaki Crossing will experience these problems. The main visitor pressure is likely to occur on the Pouākai walk to the Tarns. Later in the report, we make recommendations about how pressure on this part of the walk may be best managed.

Figure Seven: Tongariro Alpine Crossing (Ketetahi) visitor numbers



Source: DOC (2018) – NB 2012/13 use was affected by the Te Maari eruption

Use of tracks and facilities in Taranaki National Park

Introduction / overview

Taranaki National Park currently receives about 477,000 visitors per year i.e. close to half a million visitors. In 2017, most visitors arrived in the Park via three main routes:

- Manaia Road to the Dawson Falls area - 105,000 visitors.
- Pembroke Road to the Stratford Plateau area - 150,000 visitors.
- Egmont Road to the North Egmont Visitor Centre area- 206,000 visitors.

Further north is the Mangorei Road access to the start of the Pouākai Tarns track. This had 14,000 visitors in 2017 but the numbers using this access point are likely to have grown by about 20% since this time because of the social media-inspired popularity of the walk. We estimate that by the end of YE 2019, visitors to the Pouākai Tarns, from the end of the Mangorei Road, may total 15,000.

To the north-west on Carrington Road is Pukeiti Gardens. This had 75,000 visitors in 2018 – a significant increase in the 30,000 visitors it received in 2016. Well-formed access to Taranaki Maunga is not currently provided from Pukeiti, but Pukeiti Gardens does provide access to the Kaitake Range part of the Egmont / Taranaki National Park. In addition, a small group of hardy trampers are known to use a 4.5hr circuit route from Carrington Road via the Plymouth Track, Commercial Information or to return to the start of the Plymouth Track (Daily News, 8 January 2019).

Characteristics of users of Egmont / Taranaki National Park

Influence of weather

Taranaki National Park has weather that can at times be challenging for walking. Average annual rainfall with the Taranaki National Park is as follows:

- Pukeiti 3,400mm.

- North Egmont Visitor Centre 7,000mm.

Taranaki is much wetter than Tongariro National Park (Chateau Tongariro 2,700mm of rainfall pa). Activity most often occurs in the summer months except for the Manganui Plateau and ski-field where winter-snow dependent use has ranged from 6,700 users in the winter of 2007, to just 2,780 during the winter of 2018, to occasional almost-zero ski / snow-day years.

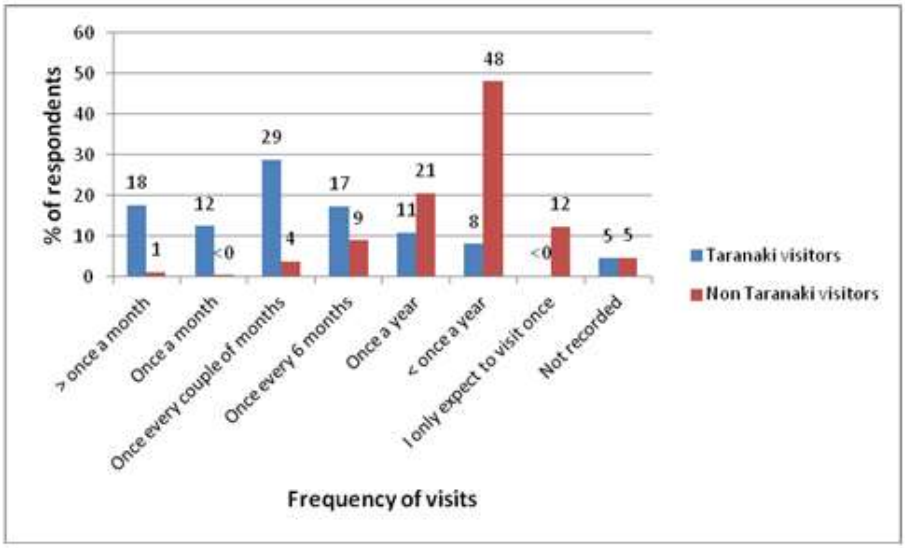
Frequency, motivation and activities of users

A DOC survey (DOC, 2014) of users of Taranaki National Park, although now a little dated, provides useful data about the nature of Park visitors. The survey of 1,244 individuals included 906 Taranaki residents.

Taranaki residents who responded to the survey broadly reflected the wider population of the Taranaki region. They were asked to rate seven statements about how they valued the Maunga. Ratings were made on a scale from 1 (not at all important) to 7 (very important). Responses suggested that the most valued aspect, out of the options provided, was the Maunga's value as an iconic feature of the region (average 6.7). Two other aspects also received average ratings greater than 6. These were the mountain's value as a place for nature conservation (6.5) and as a place to take visitors to (6.2).

Taranaki residents visited Taranaki National Park at least once 'every couple of months' (Figure Eight). In contrast DOC's national monitoring survey found that in 2012/13 the majority of New Zealanders visited conservation areas no more than once every six months, if at all. This demonstrates the comparative value of the Taranaki National Park to Taranaki residents because of its proximity and ease of access when compared to the national parks available to other New Zealanders.

Figure Eight: Frequency % of visits to Taranaki National Park



Taranaki National Park visitors were also asked to indicate which outdoor activities they had undertaken within the Park in the previous 5 years (Figure Nine). The most common activities undertaken by respondents were short walks (71%), day walks (61%) and sightseeing (55%) – with the latter most probably centred on the three main road ends / Park access points.

Several facilities on the mountain appear to be a draw-card for visitors. Most respondents who had visited Taranaki National Park had visited the visitor centres at North Egmont (70%) and Dawson Falls (56%). More

than 40% had visited the cafe / restaurant facilities at North Egmont or the Stratford Mountain House while almost a quarter had visited the Manganui Ski field (Figure Ten).

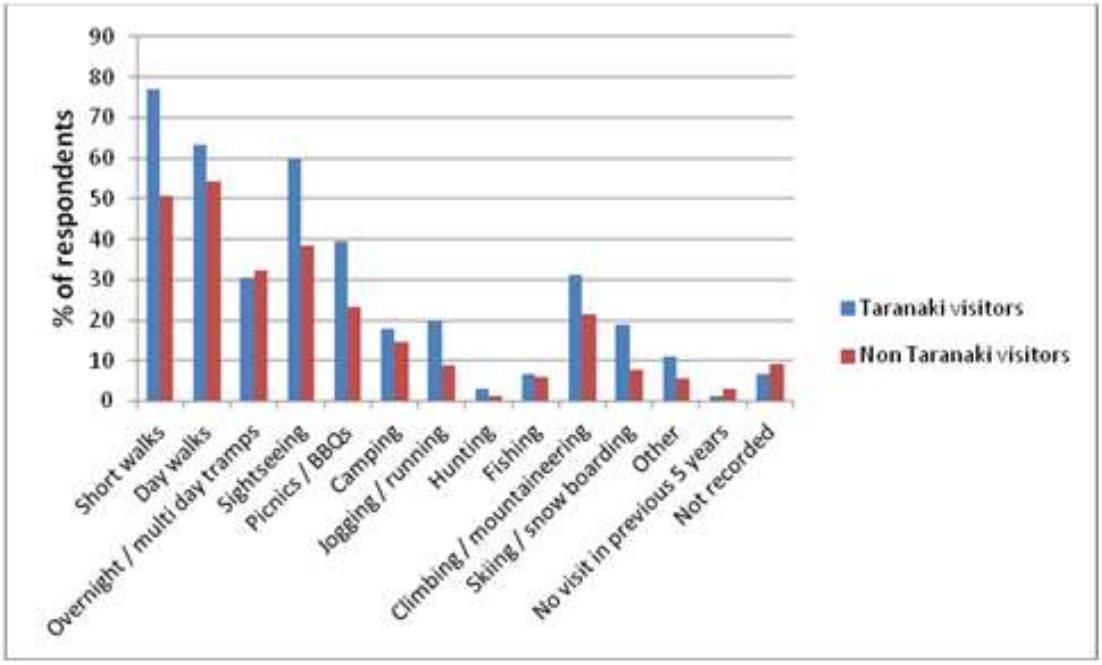
Respondents who had visited Taranaki National Park were also asked what would encourage them to visit more often. The most common theme within this category was around the provision of easy / family friendly opportunities.

Popularity of tracks

Taranaki National Park has close to 190km of managed recreation tracks – many of which were initially developed for pest management purposes (Figures Thirteen and Fourteen). They are a mix of tramping tracks (142km), easy tramping tracks (25km), walking tracks (19km), short tracks (2km) and short walks (1km).

Several short walks were particularly popular (Figure Eleven). Just over half of respondents who had visited the Park had walked to Dawson Falls. Other popular walks included the Wilkies Pools (44%), and Veronica Loop Tracks (26%), the North Egmont Nature Walk and Enchanted Track (both 25%), and the lookouts at North Egmont (40%) and Stratford Plateau (36%).

Figure Nine: Percent of activities undertaken within Taranaki National Park in previous 5 years



Day walk opportunities were less popular than short walks, but there were three walks that were used by more than a quarter of those who had visited the Park. These were the Summit Climb (30%), the Pouākai Track (27%) and the Holly Hut Track (25%).

Overnight / multiday tramping trips and overnight stays in the Park were less popular than day activities. The most popular of the overnight opportunities was the Pouākai Circuit with a stay in Pouākai Hut (both 19%). Accommodation on the mountain was used by only 10% of those who had visited the Park. The complete multi-day 'Around-the-Mountain' track is not actively used and is likely to have been used by only 75 persons in YE 2017.

Figure Ten: Percent of use of visitor centres, ski field and cafes in previous 5 years

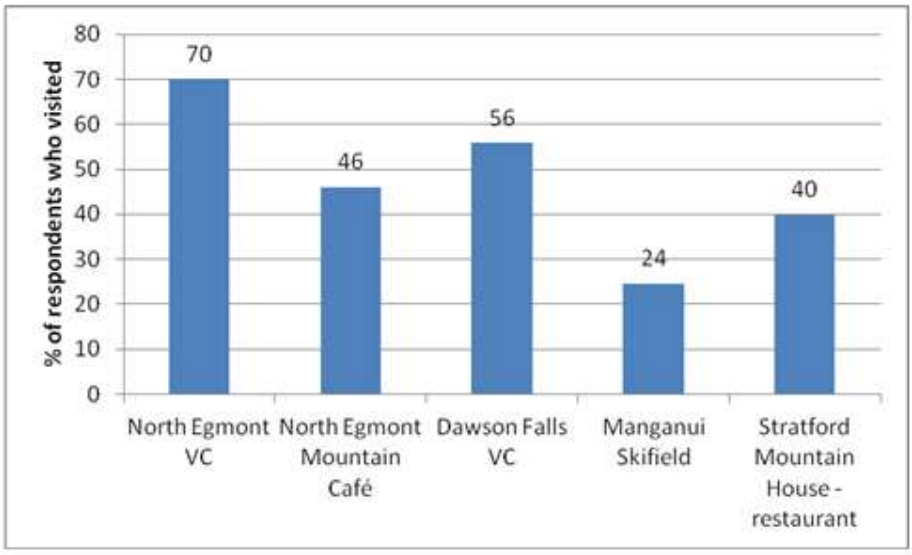
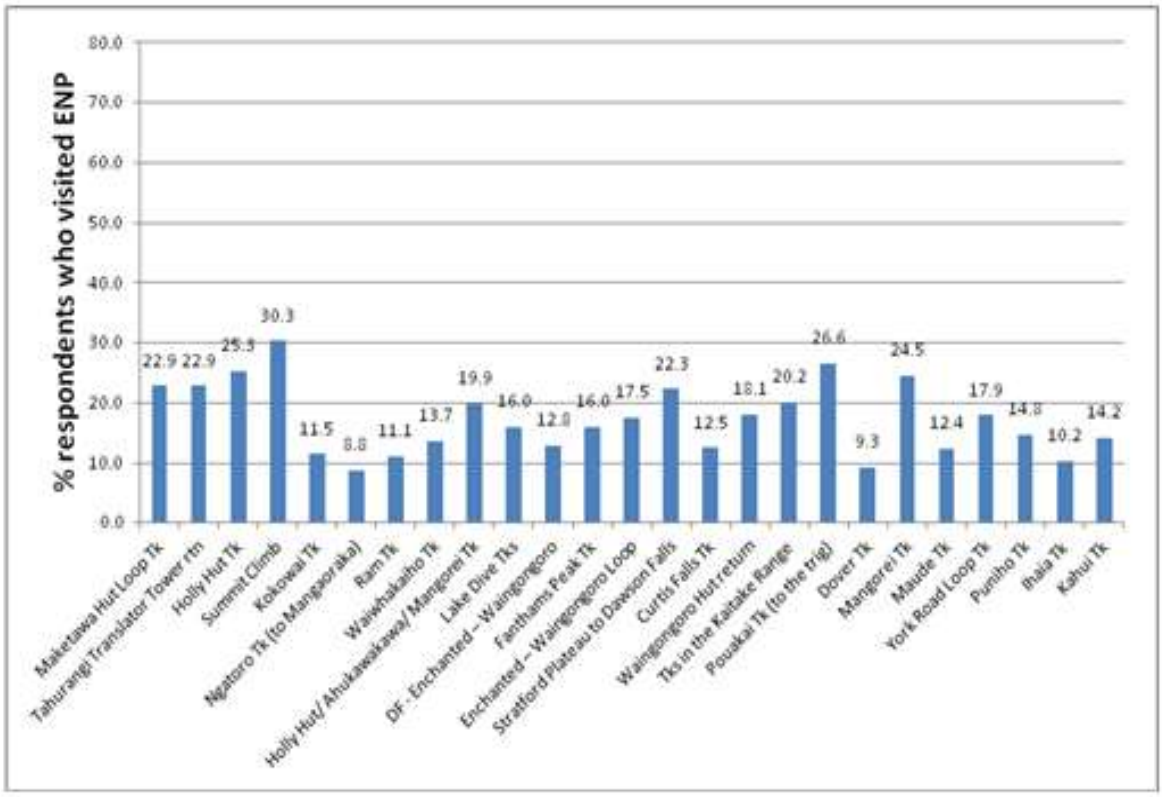


Figure Eleven: Percent of use of selected day-walks in previous five years



Use of tracks making up components of the Taranaki Crossing

The following section of our report provides details about changes in use of selected Taranaki National Park tracks. For the reader of this report who is short of time, we suggest you skip forward six pages to our summary of this information.

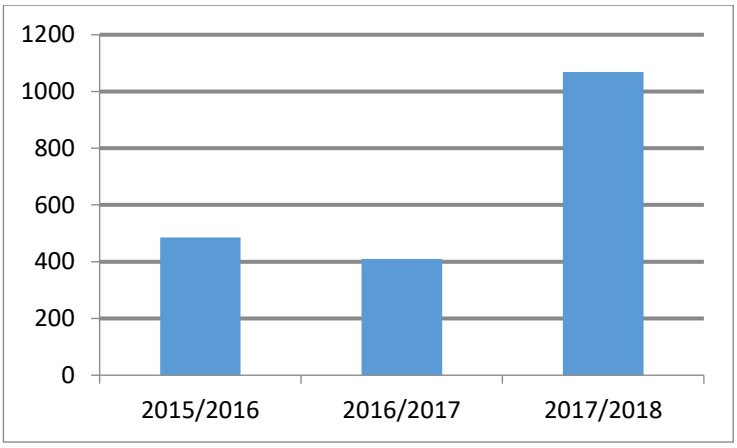
Pouākai Tarns Walk

The Mangorei Track to Pouākai Tarns track is a 4-5-hour return walk composed of two hours up hill, twenty minutes from Pouākai Hut to the Tarns (5km) and one and half hours back to Mangorei Road. Visitors can either do this as a short-day tramp or stay overnight in the Pouākai Hut. The track is currently classified as an 'advanced tramping' track. The annual growth rate for use on this track is around 22%.

Kōkōkwai Track (Pouākai Circuit)

The Pouākai Circuit is a 12km, 6-hour loop. The Circuit usually commences at the North Egmont Visitor Centre, traverses the Holly Hut track, crosses the Ahukawakawa Swamp to the Pouākai Hut and Tarns and then returns via Henry Peak, the Kaiauai and Ram Tracks. It is classified as an 'advanced tramping' track. Provided access issues are resolved, users of the Pouākai Circuit may favour the uphill climb via the Holly hut track from the North Egmont Visitor Centre rather than the reverse circuit via a start point midway down Egmont Road. Currently, due to access issues associated with Boomerang Slip / Slip Alley, the Circuit is completed via the Kōkōkwai track which commences mid-way down Egmont Road.

Figure Twelve: Kōkōkwai / Pouākai Circuit Track visitor numbers



source: DOC (2018)

Figure Thirteen: East Egmont walks and facilities

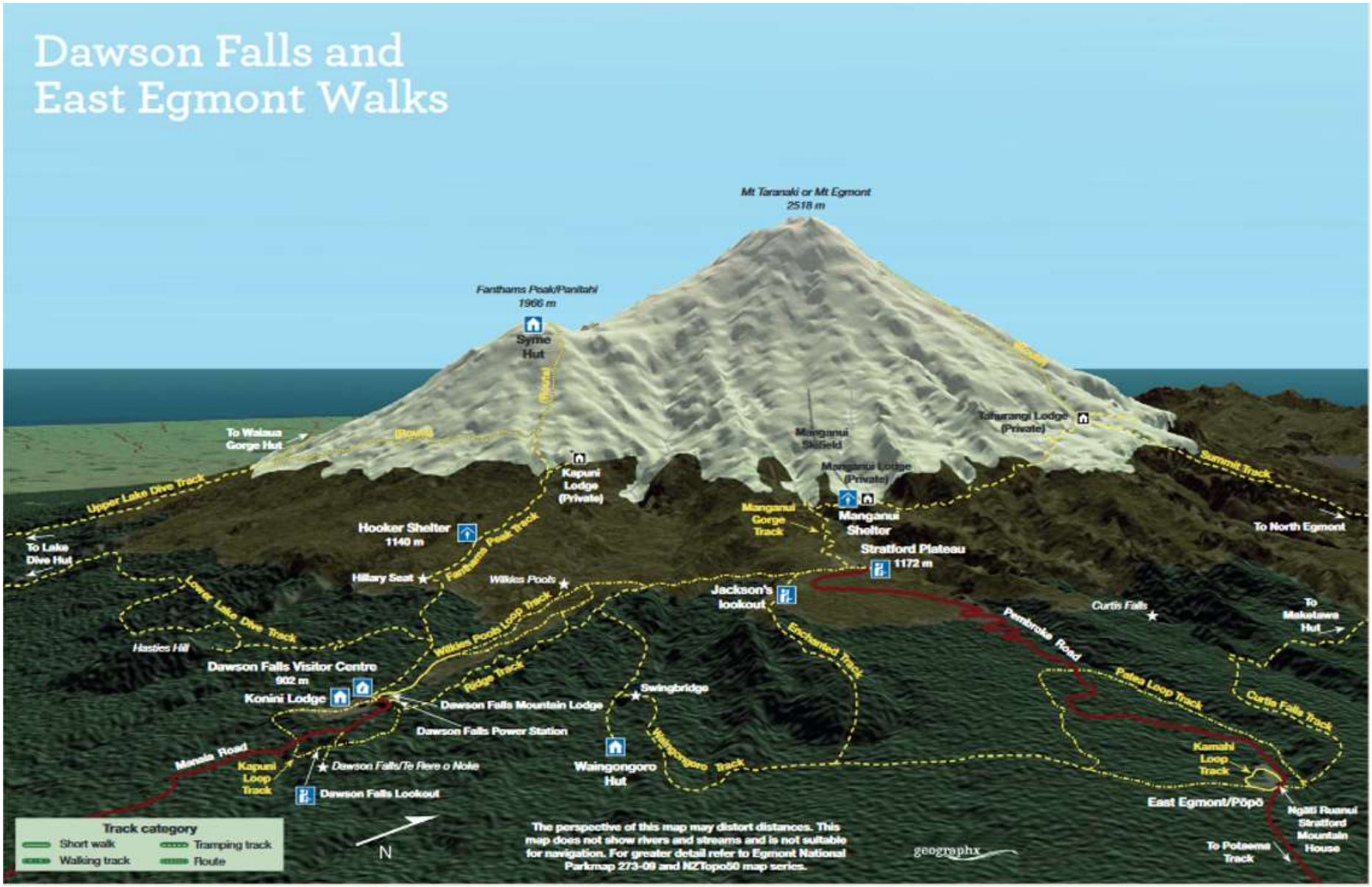
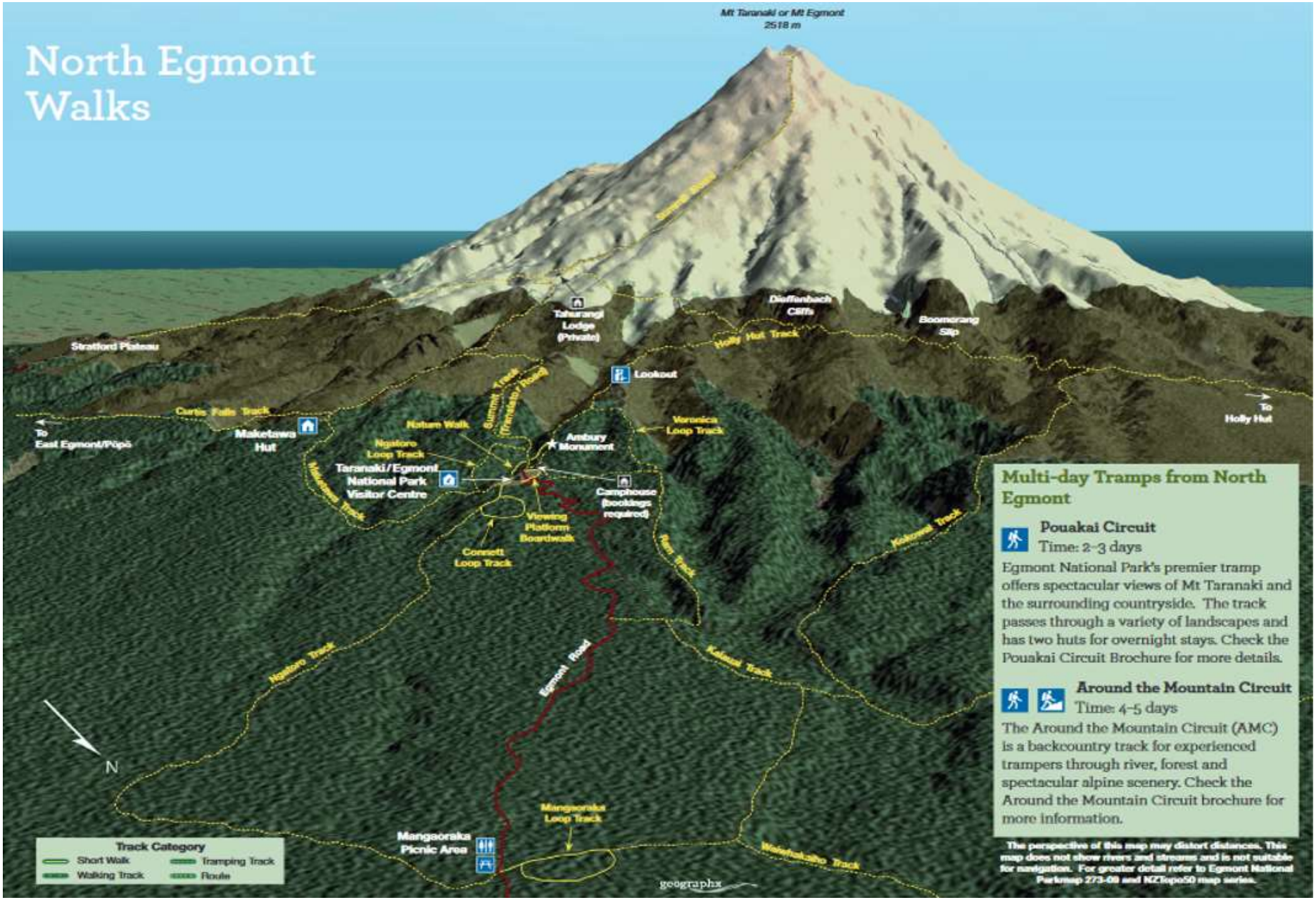


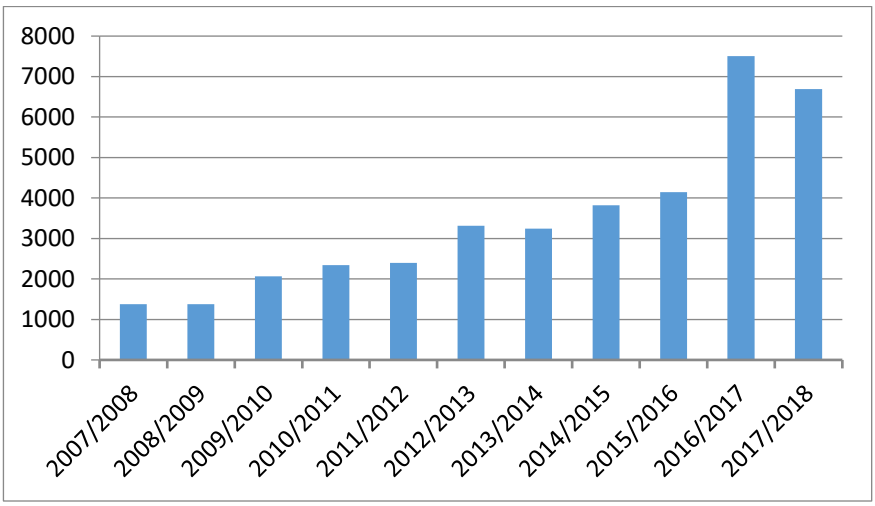
Figure Fourteen: North Egmont walks and facilities



Ahukawakawa Swamp Track (on the Pouākai Crossing)

The track counter on the climb toward the Pouākai Hut from the Ahukawakawa Swamp provides the most reliable estimate of the number of Park visitors doing the Pouākai Crossing (Figure Fifeteen) although this may be subject to some double counting. Our estimate of use is 5,000 walkers although this will now have reduced significantly because of the closure of the 'slip alley' part of this track, requiring use of the longer Kōkōkwai uphill climb.

Figure Fifteen: Ahukawakawa track visitor numbers

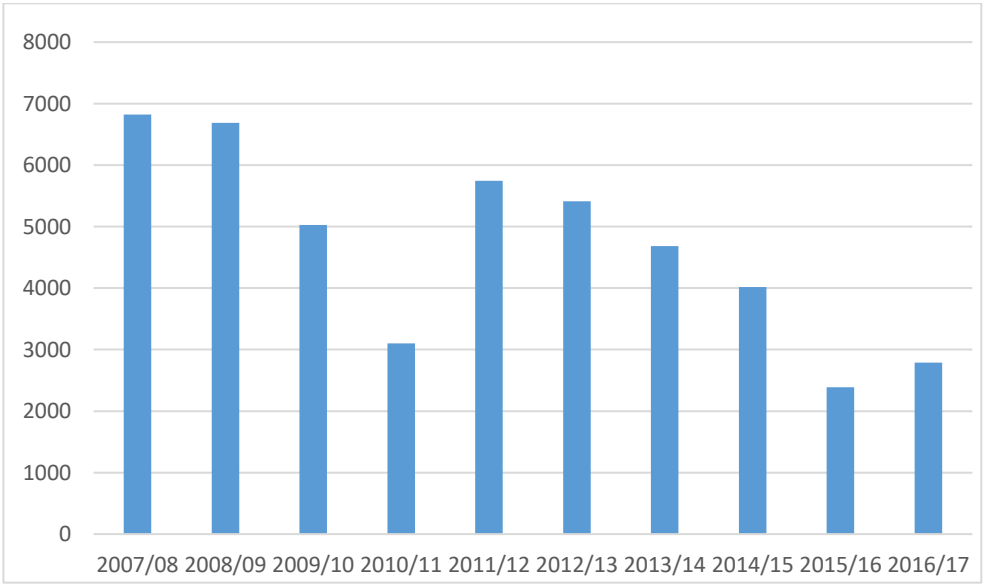


Source: DOC (2018)

Manganui Gorge Track

This one-hour return track begins at the top end of the Stratford Plateau car park. Use varies enormously between years due to wide variations in seasonal winter ski area conditions (Figure Sixteen).

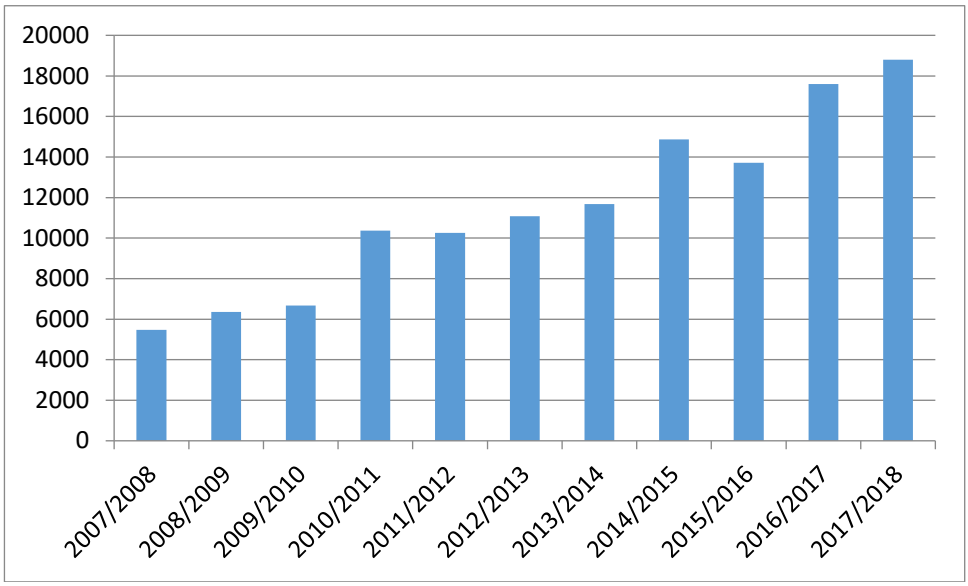
Figure Sixteen: Manganui Gorge track visitor numbers



Wilkies Pools walk

This 1.9km, 1hour 20-minute loop is suitable for children. The first 900m of the track (to the Pools) is baby-buggy / wheelchair friendly. The track is used by over 18,000 visitors and is growing (Figure Seventeen).

Figure Seventeen: Wilkies Pools visitor numbers

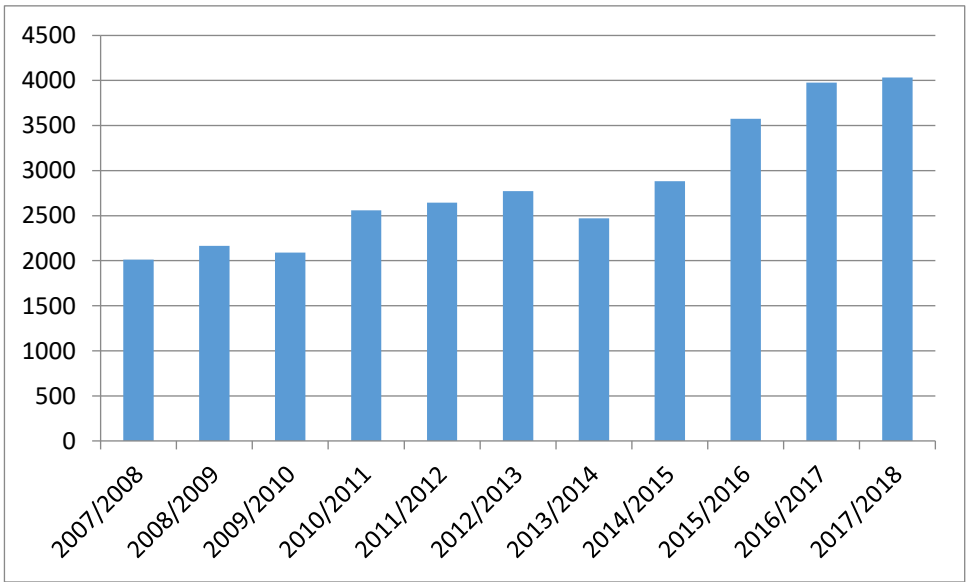


source: DOC (2018)

Ridge Loop Track

The Ridge Loop Track is a 1.9km, 1hour 20-minute track that starts at the Wilkies Pools Loop Track. The track is used by just over 4000 walkers (Figure Eighteen).

Figure Eighteen: Ridge Loop Track visitor numbers

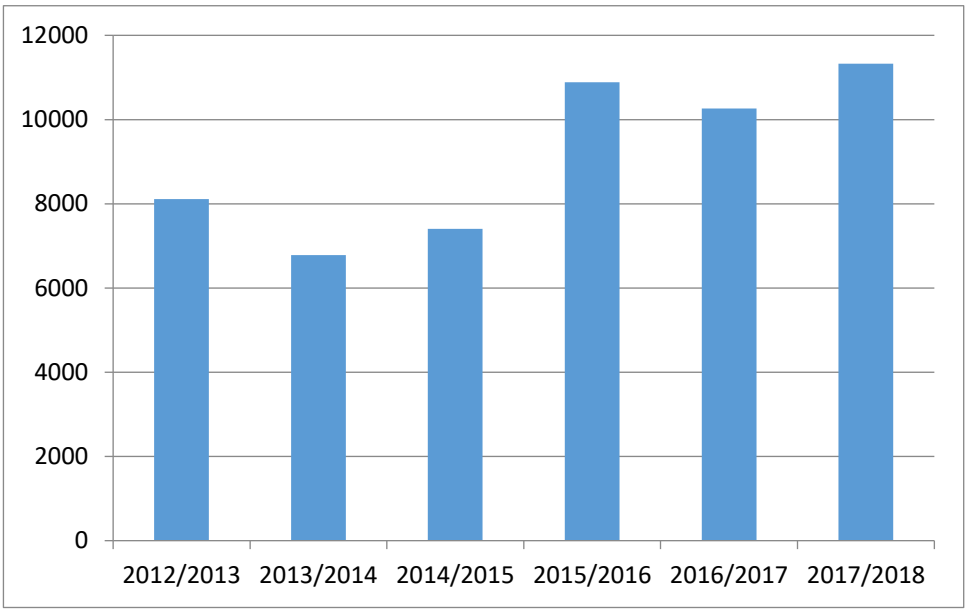


Source: DOC (2018)

Mount Taranaki Summit Track

Assessment of the Mount Taranaki Summit Track is not a core component of our report although for interest, we note that it is a 6.3km one-way return via same track for advanced trampers. It takes 5-6 hours to go up the Summit and 3-4hrs to come down. It is used by more than 11,000 walkers per annum mostly over a three-month summer period (Figure Nineteen).

Figure Nineteen: Mount Taranaki summit track visitor numbers



Source: DOC (2018)

Summary of track use 2017/18

A summary of the core use information provided in the preceding section of our report follows (Table Four)

Table Four: Summary of current track use and expectations of future demand

Track	Length	Current use	Future demand *
Dawson Falls – Wilkies Pools	1.5 hours	18,000	Strong
Dawson Falls – North Egmont Visitor Centre	6 hours	5,000 est.	Flat
Ridge track	1-2 hours	4000	Flat
Stratford Plateau to Manganui ski field and Lodge	30 mins	3000 _+	Variable
Around the Mt Track circuit (60km)	4-5 days	700± est.	Flat
North Egmont Visitor Centre – Holly Hut – Pouākai – Henry Peak – (Pouākai Circuit)	12 hours	3,000 est.	Flat
Mangorei Road Pouākai Tarns return	5 hours	14,000±	Strong

**Flat <3% growth; Moderate 4-7% growth; Strong 8-15% growth*

Commercial Information

Commercial Information

Survey results – Mangorei Road

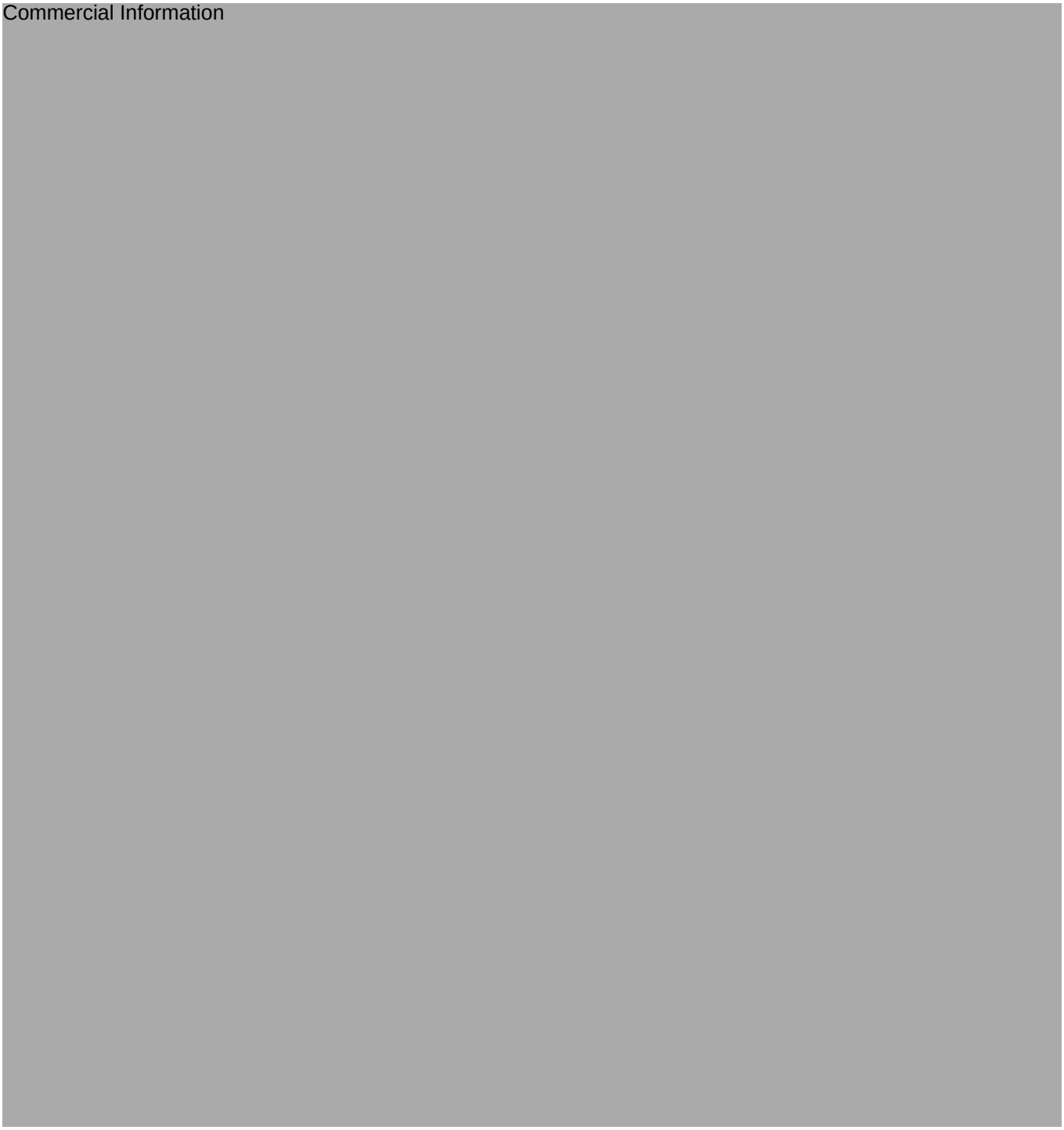
Commercial Information

Also noted was the high number of the sample population who said 'Yes' to having the option of paying for return shuttle-style transport service. Commercial Information

In addition, a high number of respondents said they had walked the Tongariro Crossing – indicating potential interest in marketing based on crossing the two 'T's' – Taranaki and Tongariro. Most walkers stated their destination was the Pouākai Hut or Tarns or both. Only 12% stated their destination was other locations (Figure Twenty).

Commercial Information

Commercial Information



Views expressed by users of the Pouākai Hut

RESPONDENTS

We had 64 respondents to the voluntary Pouākai Hut Questionnaire. One quarter were locals from Taranaki. Of the 45 non-locals, just over half were from elsewhere in New Zealand and the other half were international. (Figure Twenty-Two). 59% were overnight visitors and 41% were day visitors, with locals more likely to come for the day than internationals. Most respondents were there to visit the Tarns (53%) or were heading to or from the North Egmont Visitor Centre (27%) with the same purpose. After Pouākai Hut, most of the respondents (Figure Twenty-Three) were heading to the Mangorei Carpark (35 respondents) or the North Egmont Visitor Centre (13 respondents).

Figure Twenty-Two: Home location of Pouākai Hut survey respondents

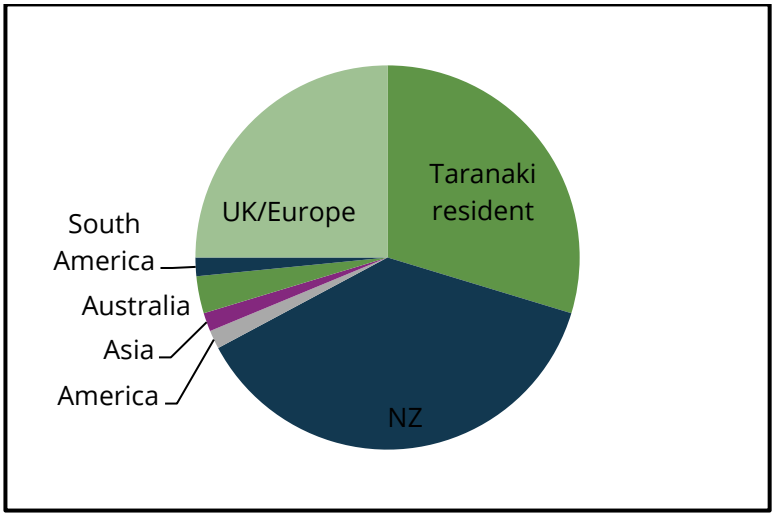
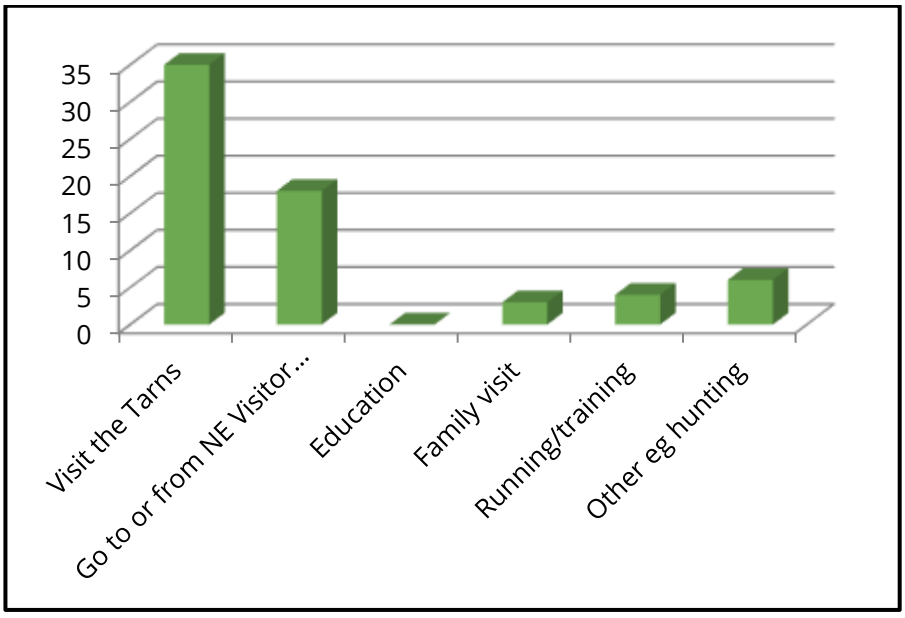


Figure Twenty-Three: Reason for going to the Pouākai Hut



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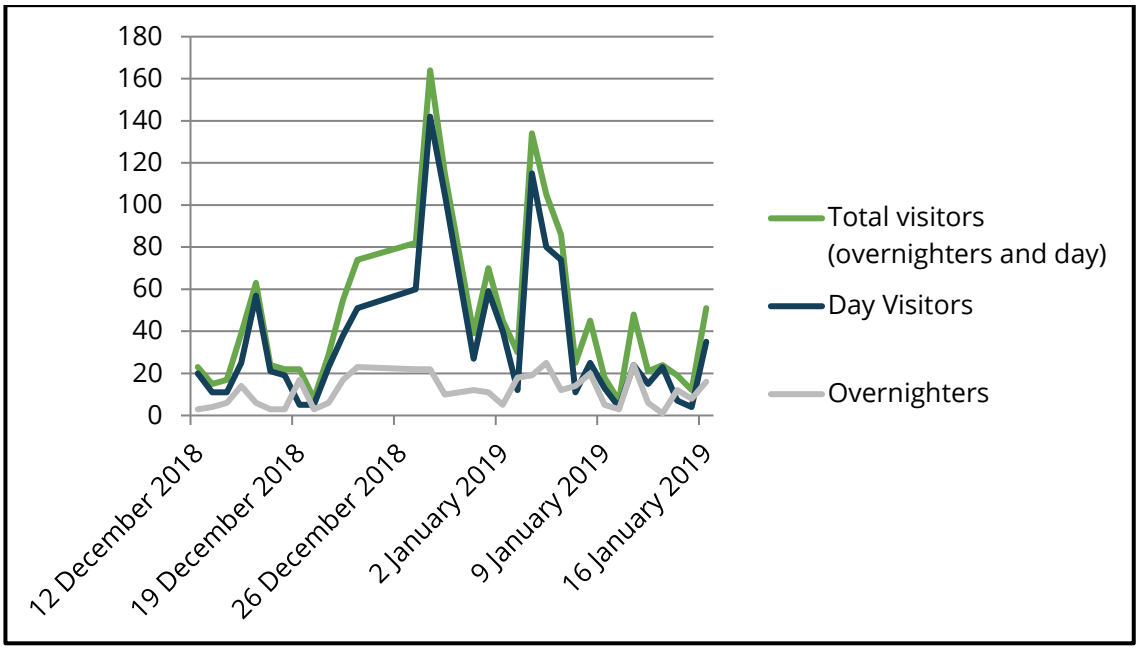
POUĀKAI HUT DAILY LOG DURING LATE DECEMBER 2018 / EARLY JANUARY 2019

Over the period of 12 December 2018 to 16 January 2019, there were 1,531 day and overnight visitors to Pouākai Hut. Peak days – particularly 28 December, 4 January and 29 December saw 142 visitors, followed by 115- and 105-day visitors respectively. We note this hut is designed for just 15 persons (Figure Twenty-Five). The peak number of overnighter visitors was 25 people on 5 January.

Figure Twenty-Five: Weekly number of visitors to Pouākai Hut between 12 December 2018 and 16 January 2019



Car parks and toilets

Availability of carparks and toilets

All the car parks and toilet facilities within Taranaki National Park (Table Five) have significant capacity but this capacity may be exceeded on peak days, such as on sunny winter days with good snow coverage or on fine weather mid-summer days.

Table Five: Car parks and toilets in Egmont National Park

	Dawson Falls (DNF)	Stratford Plateau		North Egmont (NE)		Mangorei road end	Pukeiti Gardens
Car parks	40	69 lower car parks	125 upper car parks	15 upper car parks	55 lower car parks	70- 72	120
Public toilets	5 bowls, 1x 3-person urinal	3 bowls, 1x2 person urinal		3 bowls		2	11

When the Dawson Falls Visitor Centre is open there is another toilet bowl inside this building and when the North Egmont Visitor Centre is open there are another 3 bowls and 2 urinals inside this building.

There are an additional 8 parking spaces at the Dawson Falls Lodge, 6 parking spaces at Konini Lodge, and 6 parking spaces beyond the North Egmont Camp-house locked gate. There are an additional 30 carpark spaces in an overflow carpark below the Stratford Plateau. There are an additional 2 bus parking spaces at North Egmont.

Car-park pressures

NORTH EGMONT

The carparking problem at North Egmont is compounded by the presence of freedom campers who may occupy this area for several days in succession. We recommend that limits be imposed on the length of time a car may be parked at this location. This should be subject to variation only upon the issue of a dispensation permit by DOC. Such parking should be for 24 hours and should be policed with clear signage and paid car parking with electronic management techniques. Additional car parks should not be provided at this location.

DAWSON FALLS CAR PARK

An area has been designated for an extension of the existing carpark within the road reserve. A proposal was submitted for the design and construction of this expanded carpark. We think this proposal is more grandiose than required. Our recommendation is that a development with a cost of about $80,000 be implemented to assist to overcome existing carpark pressures. This should provide for about 20 car parks at Dawson Falls Lodge and up to 20 at the Dawson Falls Visitor Centre.

STRATFORD PLATEAU CARPARK

The Plateau carpark comes under considerable pressure on peak new snow winter fine-weather days. The existing upgraded facility has only been partially completed. We recommend that this work be completed, together with the planned landscaping. This involves sealing and construction of dish drains, bollards etc and implementation of a closed-off area for expansion when ski / snow days demand it.

USE OF SHUTTLES TO TRANSPORT PARK VISITORS

Under ideal conditions, national parks should not be used as a place to park cars. Nevertheless, use and enjoyment of a national park, particularly for short walks, requires that carparking be made available.

Pressure is placed on existing car park spaces at all Taranaki National Park access points during fine summer-holidays and fine winter days with new, low-level snow conditions.

A new shuttle bus service has recently been established (January 2019) to ease parking congestion at the North Egmont Visitors Centre. The service is the result of collaboration between NPDC, DOC and the Volcano View Café on Egmont Road. The trial service will take travellers from the Café to the Visitors Centre from January through to early April 2019.

We think this service should be extended to also enable summer-time access or exit and connection between Pukeiti, Mangorei Road, North Egmont, Stratford Plateau and Dawson Falls. We recommend that shuttle services, possibly with NZTA subsidy, be further explored as the primary means of transiting Park visitors from Taranaki towns to points of access and egress from the Park. We recommend that, subsequent to the completion of the current North Egmont trial, the results be reviewed, and DOC and the four Taranaki local authorities be invited to develop a discussion document outlining a more substantive service.

Carbon footprint implications of car vs shuttle use

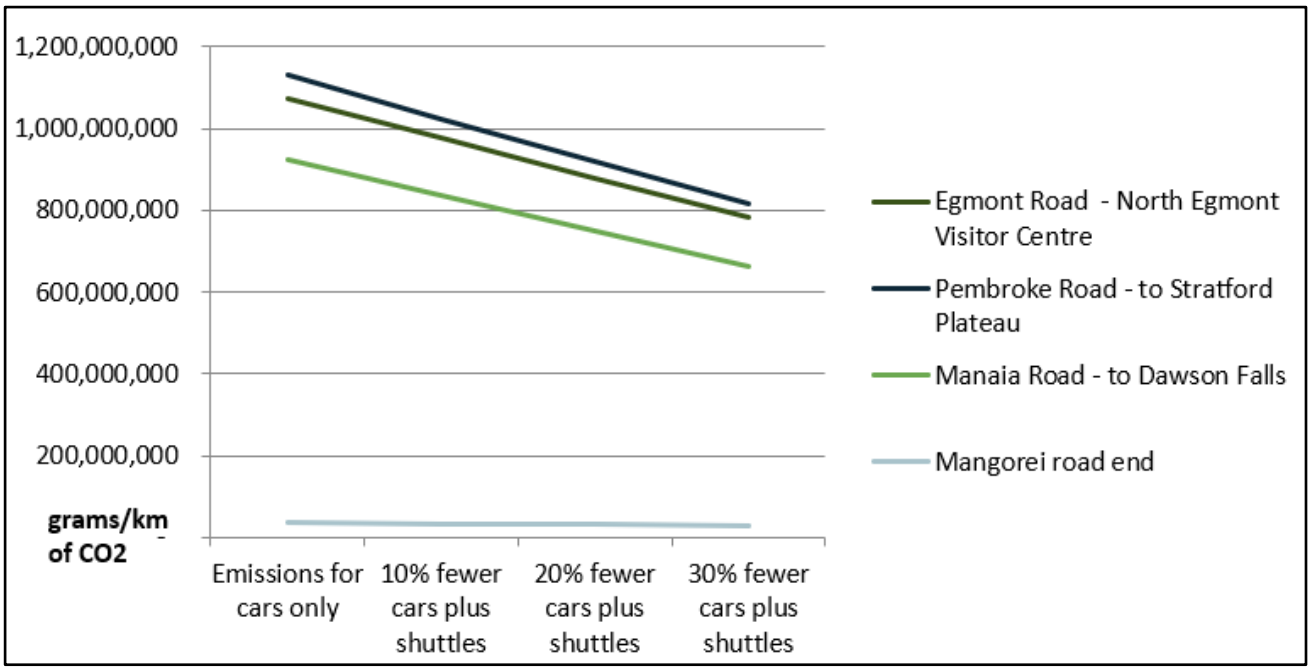
The current estimated carbon dioxide emissions for return car journeys to all four main entry sites to the Taranaki National Park total 3,161 tonnes of CO2 annually. This figure is derived by using current visitor numbers arriving in cars via Egmont Road to the North Egmont Visitor Centre, Pembroke and Manaia Roads to the Stratford Plateau and Dawson Falls, respectively and Mangorei Road to access the Pouākai Tarns etc.

We have assumed 75% of travellers are driving from New Plymouth and the remainder are coming from surrounding towns in the district such as Hawera or Stratford. In the case of Mangorei Road, we assumed 90% of the car journeys were return from New Plymouth. We used July 2018 Motor Industry Association (MIA) emission data which states passenger vehicles emit on average 151.1 grams of CO2 per kilometre.

Looking at possible scenarios for the reduction of emissions from cars (of 10%, 20% and 30%) by introducing shuttles, we found carbon emissions could be lowered by between 2,800 tonnes and 2,900 tonnes of CO2 annually (Figure Twenty-Six). This is based on use of a 15-seater van/shuttle travelling to and from shuttle hubs in New Plymouth, Egmont Village and elsewhere emitting 181.5 grms/km (using ‘light’ vehicle MIA data). The number of shuttle journeys needed to support the reduction in cars ranges from 1,373 to 4,120 journeys per year to North Egmont Visitor Centre, 1000 to 3000 to Pembroke Road, 700 – 2,100 to Manaia Road and 100 – 300 to Mangorei Road.

For interest we also note that under the leadership of Venture Taranaki’s ‘Just Transitions’ programme, Taranaki is contributing to New Zealand’s transition to a lower emissions economy by developing a Taranaki 2050 Roadmap. Use of shuttles rather than cars to access Taranaki National Park will help contribute to the objectives of this programme.

Figure Twenty-Six: Current car use and projected emission reductions by introducing shuttle transit



Accommodation on the Maunga

Demand for accommodation by potential users of the Taranaki Crossing

The Taranaki Crossing could be completed in two or three days or even four if time was not a constraining factor, depending on the fitness and length of time available to users. A three-day walk would be a comfortable leisurely achievement for walkers of less than average fitness - with more than ample provision for breaks and enjoyment of short side trips to the Holly Hut, Bells Falls Te Rere o Tahurangie and the Tarns etc. Walkers with average to better-than-average fitness could achieve the walk in two days.

Existing Taranaki Crossing-related accommodation within the National Park

Accommodation options suited to use by users of the Taranaki Crossing, located within the National Park, are described in Table Six.

Table Six: Accommodation options

ACCOMMODATION	CHARACTERISTICS
Dawson Falls Lodge	12 room lodge accommodation with en-suites and café / restaurant for 24 guests, owned by Ngāruahine, located at the Dawson Falls road end. Rooms range in size and price from $125 (single) to the honeymoon suite at $230 per night
Konini Lodge	DOC owned and managed, booking required, vehicle access, located adjacent to Dawson Falls Lodge, sleeps 38 in 6 bunk rooms, self-catered and bring your own sleeping bags, well equipped kitchen and shared bathrooms with hot showers
Stratford Mountain House	8 chalets with en-suites in swiss style lodge accommodation with café and restaurant. Rooms range in size, with average price per night of

	$175, owned by Ngāti Ruanui and located on Pembroke Road 15 minutes from Stratford
Stratford Mountain Club / Manganui Ski-field Lodge	Private ski lodge with accommodation for 33 people located on the Manganui Ski-field 40 minutes' walk. Sleeping options include 6 smaller bunk room for 2-6 guests and one large bunk room that sleeps 8, with shared bathrooms / showers, self-catering and quests are required to bring their bedding with them. Currently managed by Top-guides Ltd. Priced at $25 for adults and $60 for families
Tahurangi Lodge	Owned by the Taranaki Alpine Club, with 26 beds in two bunkrooms with shared bathroom facilities, located at 1500metres on the Around-the-Mountain track above the North Egmont Visitor Centre (1.5hrs walk). Guests (mostly Alpine Club members) bring their own food and sleeping bags. The Lodge has electricity and a fully equipped kitchen
North Egmont Camp-house / Bunkhouse	Historic facility managed by DOC and serviced by the managers from the Kamahi café in the adjacent North Egmont Visitor Centre. Sleeps 34 in 5 rooms with self-catered food and sleeping bags. Shared bathrooms and fully equipped kitchen. $25 per adult night or $600 for the whole lodge – all requiring pre-booking
Holly Hut	32 bunk facility managed by DOC, bookings not required (first come first served). Located 4 hours from the Mangorei Road end. Outside toilets, cold water, solar lighting and fire place. $15 per night
Pouākai Hut	Located 2 hours from the Mangorei Road end. 16 bunk beds. Bookings not required – first-come-first-served. Cold rain water and outside toilet
Pukeiti Hut	As part of its redevelopment of Pukeiti the Taranaki Regional Council has proposed to build a 12 room DOC style hut within Pukeiti Gardens.

Existing use of Crossing-related accommodation in Taranaki National Park

Exact use numbers for the **Holly and Pouākai huts** are not known although our analysis of the DOC hut book indicates there were about 1,220 users of Holly hut and 2,277 users of the Pouākai hut with 75% of these being New Zealanders.

Given that many users of DOC huts do not complete an entry into the hut book, experienced DOC staff and our team have suggested that recorded numbers should be multiplied by 2.5 to estimate actual 2018 overnight hut use. This would suggest:

- Holly hut use: 2,500
- Pouākai hut use: 6,500

Use of the Pouākai Hut is known to exceed the 15-bed capacity of this facility over the summer peak season with up to 40 persons staying overnight on one recent occasion. This poses health and safety concerns requiring urgent attention by inclusion of the Hut in the DOC booking system and by programming the urgent expansion of this facility.

Konini Lodge and the Stratford Mountain / Ski Club / Manganui Lodge have considerable underutilised capacity over the summer months. Tahurangi Lodge is not likely to be a viable option for most walkers unless they are current Taranaki Alpine Club members or if Club policies are amended to enable greater use by non-members.

The North Egmont Visitor Centre **Camp-house** is more likely to be used by walkers doing the Pouākai Crossing than those doing the Taranaki Crossing. It needs an upgrade to make it attractive to a wider spectrum of current and potential Park users. This is unlikely to be a justifiable priority for expenditure of scarce capital although it should be programmed for investment within the next five years. In addition, for users of the Taranaki Crossing, a night's accommodation at the North Egmont / Egmont Road-end would imply a one hour-plus walk down the 'Translator Road' and then a return one hour climb back up the Holly Hut Track to re-join the Around the Mountain / Taranaki Crossing track. Most walkers are unlikely to select this option.

Another, perhaps longer-term accommodation option, is the construction of a serviced lodge on the road reserve adjacent to the North Egmont Visitor Centre. We do not consider this option to be a priority because of both market demand and environmental considerations. The existing Camp-house serves a purpose as base accommodation for those Park-users wanting an early start as part of their experience. Other Park users appropriately seek accommodation in New Plymouth or within other nearby Taranaki towns.

We can also see opportunity for market development to promote the link between Dawson Falls Lodge and the Stratford Mountain House. Both are owned by iwi. They are connected by a track options including the Waingongoro track and the 'Enchanted Track' – both of which have heritage, cultural and environmentally-interesting features.

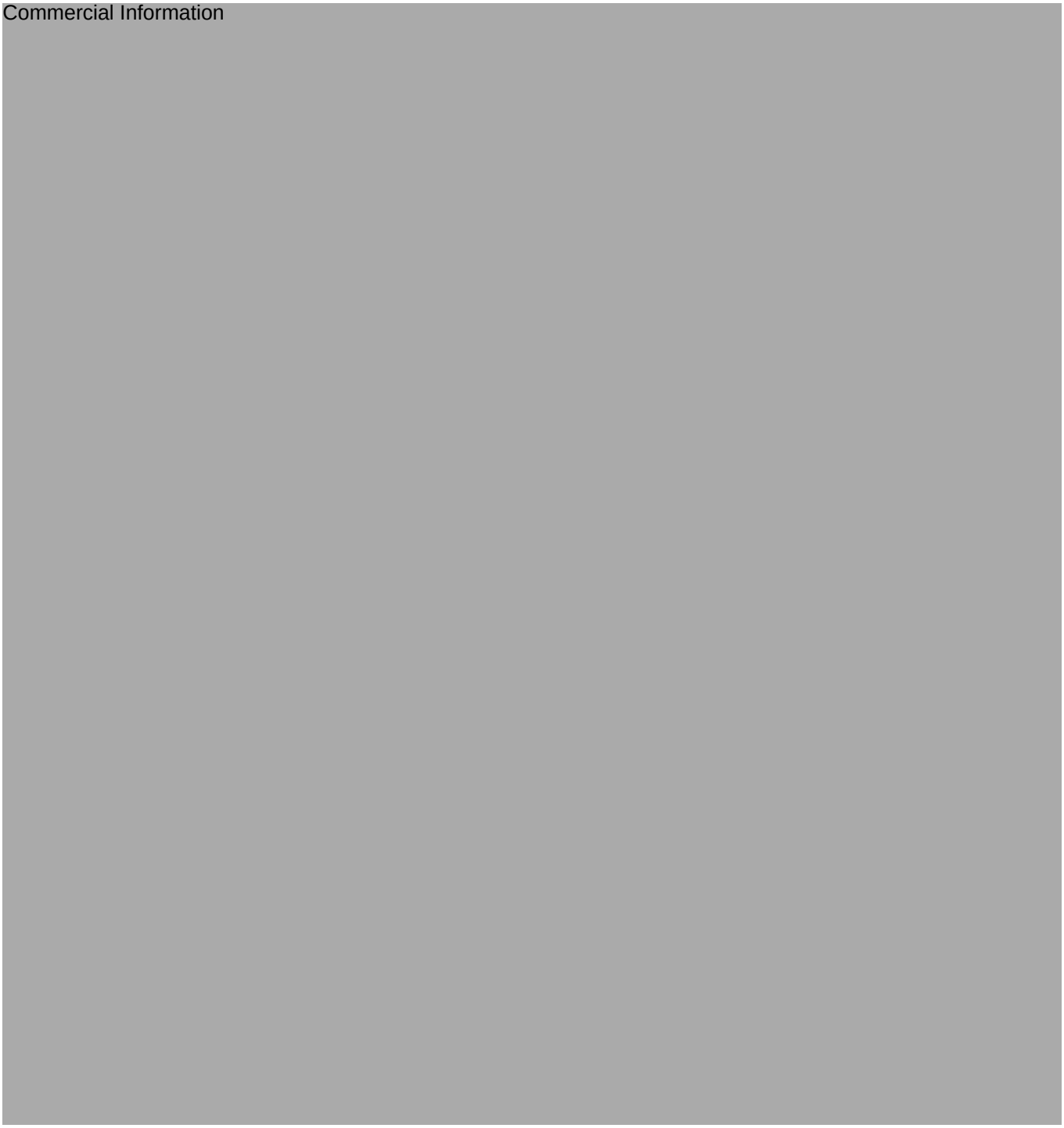
Visitor centres

Use of the North Egmont Visitor Centre

There were 108,000 visitors to the North Egmont Visitor Centre in YE2017. There has been an incremental increase in the number of persons since 2012 when the door counter indicated close to 70,000 visitors. The purpose of visits varies. Some make the café experience the destination. Some come to read the information displayed at the centre. Some come to seek information about tracks, walks and the weather. The café managers currently also service the Camp-house.

Commercial Information

Commercial Information



Dawson Falls Visitor Centre

This Centre is open on Thursdays to Sundays and during school holidays. It provides an array of track, hut, heritage, conservation and weather information-provision services expected by Park visitors. Café facilities are provided at the adjacent Dawson Falls Lodge.

Current use numbers have incrementally increased from 37,000 in in FY 2012 / 13 to 47,000 in the FY 2017 / 18 years. The Centre currently adequately serves the purpose for which it was established. We do not recommend any changes to this facility although consideration could be given to combining the existing Dawson Falls café with the Visitor Centre to enable both to be open for extended hours.

Pukeiti Gardens

Pukeiti Gardens have a reputation of international significance as a centre for viewing rhododendrons and other plants. The Gardens are in the geographic area between two sections of the Taranaki National Park, to the northwest of the main cone of Taranaki Maunga, on a saddle between it and the Kaitake Range.

Pukeiti Gardens are open daily with free entry. Visitor numbers have grown from 30,000 in 2016 to now being in excess of 75,000 persons per year. The garden manger expects visitor numbers to reach 100,000 persons by 2020.

The area is managed by the Taranaki Regional Council. The Council provides a regular programme of educational, creative, active and fun events in both the garden itself and in the rain-forest which surrounds it. The facilities include a 60-seat function room, café and other facilities and services including limited accommodation.

A total of $7m is expected to be spent on upgrading the quality of the Pukeiti experience in the period 2016 to 2019. The Council are currently just over half way through this development plan. This includes extensive track upgrades, tree huts, a canopy walk and experiences targeted toward children. At the core is the maintenance of the quality of the Garden's large collection of Rhododendron plants.

Commercial Information

Summary of projected use of components of the Taranaki Crossing

The core use data described above about current and projected use of the various components of the Taranaki Crossing may be summarised into a single diagram (Figure Twenty-Seven). This diagram applies our understanding of the visitor market and our assumptions about necessary track and hut upgrades etc.

We have also estimated likely additional future (Commercial) user-days of the Crossing.

The difference between 'use' and 'user days' numbers reflects the need to avoid double counting of visitors to each destination, for example, visitors to the Dawson Falls Visitor Centre may also visit Wilkies Pools (Table Seven).

For some components of the Taranaki Crossing we have had to make bigger assumptions than for other components. The critical assumptions are: an expanded Pouākai Hut / Lodge will be constructed and; Commercial Informat .

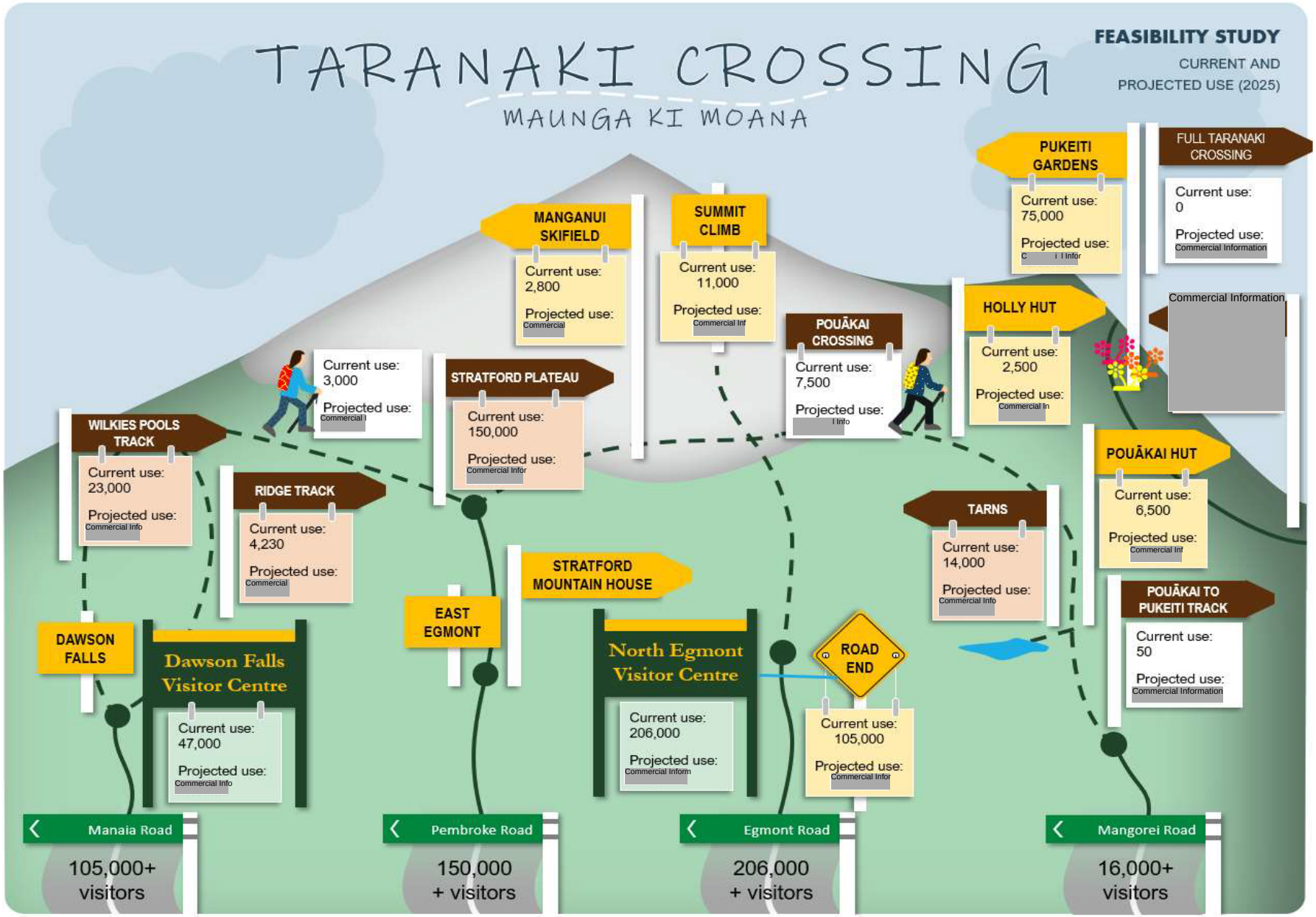
Also, of interest is our assumption about the possible number of persons using Maunga ki Moana – from Dawson Falls to Ōākura, the complete Taranaki Crossing. With current use of the more difficult Hump Ridge Track in mind (2,050 users in calendar year 2018, with three days involving nine-hours each of walking and 900 metres of climb), we estimate there will be between Commercial In and Commercial In users of the Taranaki Crossing by 2025. Commercial Information .

In the next section of our report we discuss the track and facility upgrades required to make the various components of the Crossing market-ready. If these upgrades are applied, then our Commercial estimate of the total increase in user days achievable from interest in use of the combined upgraded components of the Taranaki Crossing Commercial Information is between Commercial Infor and Commercial Infor.

Table Seven: Estimated projected increase in use and user days (+ or -) of components of the Taranaki Crossing

Component	Current use	Estimated increase in use by Commercial	Estimated increase n user ays by mmercial	Comment
Wilkies Pools	23,000	Commercial Info	mmercial Info	Reflects the popularity of short walks with stunning features like those to be found at Wilkies Pools
Ridge Track	4,230	C	C	Most walkers will go to Wilkies Pools but the upgrade of the Ridge Track could increase the number of walkers doing the short circuit of the Pools and the Ridge Track
Dawson Falls Visitor Centre / café	47,000	Commercial Info	Commercial Info	Road ends are a destination particularly when combined with a café and information centre experience
Stratford Plateau	150,000	Commercial Info	Commercial Info	The road-end and viewing platform will grow in popularity
Manganui Ski-field	2,800	Commercial In	Commercial I	A new Manganui Gorge bridge will become a destination experience, with most walkers continuing their short walk to include a visit to the ski-field itself
Pouākai Crossing	7,500	Commercial Info	Commercial I	Track improvements will make this one day walk more accessible – with exit either at Pukeiti or Mangorei Road
Taranaki Crossing (2/3 days)	0	Commercial	Commercial	With establishment of suitable accommodation on the Pouākai range we expect 2000 x 2-person extra user days
North Egmont Visitor Centre	106,000	Commercial Info	Commercial Info	Road-ends are a destination particularly when combined with café and information centre
Pouākai Tarns	14,000	Commercial In	Commercial I	The Tarns are becoming a Park premium short / medium walk attraction
Pouākai Hut	6,500	Commercial In	Commercial I	This is a conservative estimate based on extension of the current hut facilities to accommodate 36 bunk beds. The development of a lodge facility may increase user days to over 2,500 per annum
Commercial Information	50	Commercial In - Commercial In	Commercial I	Commercial Information
Commercial Information	10	Commercial Inform - Commercial Info	Commercial Info - Commercial Info	Commercial Information
Taranaki Crossing	0	Commercial In – Commercial In	Commercial In – Commercial I	We note this level of use is based on several assumptions e.g. provision of upgraded Pouākai Lodge / Hut and tracks
Total increase in use / user days		Commercial Information	Commercial Information	We consider this to be a conservative estimate of the possible increase in user days

Figure Twenty-Seven: Existing and projected use of components of the Taranaki Crossing



Taranaki Crossing track conditions and upgrade requirements

Approach and methodology

We walked and assessed existing track, hut and other infrastructure to determine its general characteristics, track condition, the stability of the adjacent landscape, environmental impact, amenity value, and risks to users. This on-site information was augmented by assessment of topographic data, DOC inspection reporting, specialist reports on specific issues, and from discussion with several stakeholders and users.

Assessment criteria

Tracks, huts and other facilities were assessed on the premise that their quality, configuration, capacity and nature should reflect the needs and preferences of the visitor market for each targeted segment or component of the Taranaki Crossing. Having established the recommended target-user groups for the various sections of the track / infrastructure network, the gap between current track / infrastructure standard, quality and condition and the preferred standard was identified and the cost of creating a track / other infrastructure suited to the market was calculated.

Classification of tracks

The basis used for track classification in our work was the "New Zealand Handbook – Tracks and Outdoor Visitor Structures". This is a Standards NZ publication (SNZ HB8630:2004, HB8630) providing a basis for segmentation of users / visitors into six broad groups and defining the track design parameters suited to each of these groups (Table Eight). Four of the broad categories of track apply on components of the Maunga assessed within this report.

Table Eight – Walking User / Visitor Groups and Classification of Tracks

User/Visitor Group	Track Classification	Typical Parameters
User Group 2. Short Stop Travellers (SST)	Short Walk (SW)	Well-formed easy walking track with well drained benched surface of at least 0.75m width, but typically 1.2m wide. Steps, boardwalks and all streams bridged where necessary to ensure footwear stays dry and free of mud. Suitable for most ages and fitness.
User Group 3. Day Visitors (DV)	Walking Track (WT)	Well defined benched track suitable for relatively inexperienced people with a low level of backcountry skill. Minimum 0.75m width drained surface that has minimal wet or muddy sections. Steps, boardwalks and all but the smallest of streams bridged.
User Group 4. Backcountry Comfort Seekers (BCC)	Easy Tramping Track (ETT)	Well defined marked track generally benched but may include some wet or uneven sections. Minimum surface width 0.6m with reasonable footing in all conditions. Suitable for relatively inexperienced backcountry trampers. Steps, boardwalks and all major streams bridged.

User Group 5. Backcountry Adventurers (BCA)	Tramping Track TT)	Marked track that may not be benched, and may have a rough and uneven surface, with sections of mud and wet areas. Suitable for people with a reasonable level of back country skill and experience.

The 'User Group' categories and 'Track Classifications' described in Table Seven were applied to the target users for each of the track components of the Taranaki Crossing to enable us to derive a recommended classification (Table Nine) for each of these components.

Table Nine - User Groups and Recommended Classification of Taranaki Crossing Tracks

Track Classification	Description	Examples
Short walk	Tracks in the vicinity of road ends that are likely to be used by casual walkers who are seeking an easy short walking experience in natural forest, typically of an hour or so in duration. Suitable for disabled persons and may be accessible by wheelchairs, buggies and mobility scooters.	Wilkies Pools Loop Track, Kapuni Loop Track, Kamahi Loop Track, Manganui Gorge Track, North Egmont Lookout Track
Walking Track	Tracks offering an easy extended walk of several hours' duration, but in a relatively safe comfortable environment. Track capacity capable of accommodating expected visitor numbers without resulting in environmental damage.	Dawson Falls to Plateau Track, Mangorei Track
Easy Tramping Track	Tracks offering a comfortable extended walking experience for people with a reasonable level of fitness and skill to enable them to deal with more challenging topography, greater remoteness, natural hazards and possible adverse weather conditions.	Manganui to North Egmont Track, Holly Hut Track, Ahukawakawa Track, Kōkōwai Track
Tramping Track	Basic tracks for experienced trampers with appropriate skills and preparation.	This category includes most of the current tracks in Egmont / Taranaki National Park

User Risks

Visitors who venture into wilderness areas are potentially exposing themselves to risks that are not generally present in urban environments. Most visitors to forest and mountain areas recognise and accept certain levels of risk. There is an obligation on track managers like DOC to provide adequate information to visitors on these potential risks, and to mitigate these risks as much as practicably possible.

Notwithstanding, the potential for injury (or in extreme cases, death) cannot be fully eliminated, but it is reasonable to expect that mitigation should aim to reduce the probability of injury or death to a similar level

to the risk associated with other common activities readily accepted by the public, such as vehicle travel, aircraft travel, etc.

In respect of the key risks to visitors to Egmont National Park, our recommended approach to the management of these risks is as follows (Table Ten).

Table Ten: Management of visitor risks on the Taranaki Crossing

Risk Category	Description	Management Approach
Slips, trips, falls from the track	This is the highest category of injury to persons venturing on walks into the outdoors. Incidents are rarely fatal, and generally not serious, but many involve the need for rescue assistance.	➢ Ensuring track classifications are clearly identified and communicated to visitors ➢ Providing quality track surfaces that are well drained, free from trip hazards, are of a suitable gradient and include steps of good geometry and installing barriers to protect from falls where necessary ➢ Ensuring tracks are appropriately maintained
Adverse weather conditions	Taranaki National Park has an annual rainfall in excess of 7 metres in places and the potential for severe weather conditions to occur at any time of year. Hypothermia is a significant risk on exposed tracks above the bush-line. In winter, snow and ice may be present on some tracks.	➢ Ensuring adequate visitor information is provided on weather hazards ➢ Providing suitable shelter in key locations ➢ Ensuring track information signage is accurate and relevant
Rockfall, avalanche, lahar	Steep slopes and cliffs are prone to the potential for rockfall or landslide. Incidents are rare, but certain sites are actively eroding and have a high risk (Boomerang Slip, Manganui Gorge).	➢ Re-aligning track from high risk locations where practical. (e.g. bridge at Manganui Gorge) ➢ Monitoring stability and expected frequency of events at key sites and review the probability of incidents ➢ Providing adequate warning and instruction to track users on how to minimise individual risk ➢ Undertaking mitigation where appropriate in the form of rock removal, pinning, catch fencing etc.
Drowning	Potential for visitors being swept away by swollen streams in adverse weather	➢ Providing bridges at all major streams e.g. the Minarapa Stream near the Holly Hut ➢ Ensuring good information is provided at Visitor Centres
Communications	Inability of those who may be injured to communicate with those who may be able to help	➢ Erecting cell-phone repeater facilities to allow communication from the Ahukawakawa Swamp area

Risk deserving of priority attention on the Taranaki Crossing – Boomerang Slip

Recent rock fall events on the Holly Hut track have raised concerns about the long-term viability of certain sections of this track. Taranaki Maunga is a relatively young volcano. It is subject to a high level of erosion with landslides, cliff face failures, gully erosion and individual rock fall events.

The risks associated with these events have been present for some time. The probability of an incident is increased when the use level of a track increases. Most rock-fall events occur during adverse weather conditions i.e. during high rainfall or extreme freeze / thaw events, when the visitor use levels are likely to be comparatively lower.

The Boomerang Slip has been present on the Holly Hut Track for over 70yrs. While the risk of a serious incident cannot be fully eliminated, attempts to re-route sections of the Holly Hut Track away from the Boomerang Slip and Hidden Valley Slip are unjustified, and may in fact result in the track being exposed elsewhere to another landslide or rock-fall risk. We believe the risk to users from rock-face 'failure' events can be managed to an appropriate level without track relocation.

Low scale intervention (minor scale blasting, scaling, rock bolting, or mesh installation), is our preferred approach. This approach would cost less and have much less environmental impact and visual impact than significant re-alignment of tracks away from current identified areas of instability. It would also avoid additional ecological damage. We further discuss the cost of undertaking this upgrade work later in our report.

Overall current condition of tracks – an introduction

Most of the walking tracks in Egmont / Taranaki National Park have been in place for a long period of time. They generally follow ridges directly up the slope of the Maunga or they traverse around the slopes, crossing numerous streams or gullies.

The original tracks were well-formed, well located and established with reasonable gradients. The extremes of rainfall experienced on the Taranaki Maunga have had an ongoing adverse effect on these tracks since their original construction.

The common deficiencies observed on the tracks assessed as being components of the Taranaki Crossing are as follows:

- **Inadequate drainage**: Tracks are often lower than the adjacent ground, or have become a cut-off drain, intercepting surface flow from slopes above the track and collecting and concentrating stormwater flows within the track. In some locations, the water flows on the track extend for over 100m, resulting in significant flow volumes and extreme erosion of the track surface.
- **Rough surfacing**: Erosion of the original scoria and ash track-surfacing material has exposed coarse andesite rock outcrops and broken rocks, of some size, on many of the tracks on the slopes of the Maunga.
- **Uneven surfacing**: The tracks frequently traverse rock-fall debris at the base of cliffs, some of which require careful foot placement to avoid slipping or tripping. Visitors must constantly look at where they place their feet in order to remain safe. This detracts significantly from the enjoyment of the views and flora along the track.

- **Wet and muddy surfaces**: Saturation of ash soils in poorly drained areas has resulted in these becoming muddy under-foot. The Pouākai Ranges and the Ahukawakawa Swamp consist of sensitive alpine wetlands and tussock-land vegetation. These are particularly vulnerable to saturated soils. Even modest foot traffic has had a major impact on these tracks. Use of timber rafts has been the main response to these muddy conditions. These have had mixed success, and in many cases, these are slowly settling into the soft soils and becoming inundated with water or mud themselves.
- **Poor step geometry:** Random installation of steps on many tracks has resulted in irregular and in places, very high steps. These are tripping hazards, and many are tedious to the user. Most existing step geometry in Egmont / Taranaki National Park does not meet current best practice standards.
- **Adverse environmental effects:** Muddy or uneven track surface often results in visitors migrating off the sides of track to find better footing. This results in damage to the flora adjacent to the track, and eventually creates a wide braided track corridor or impact zone rather than a single walking path. In addition, poor drainage may result in erosion of soils into streams. The concentration of water flows may also trigger slope instability.

In selected locations, improvements to sections of track have occurred to address specific problems. The recent upgrade of the Wilkies Pools track, for example, has achieved a high standard of construction suited to the use market. The track to the Pools has good drainage, ample track width and a durable walking surface.

However, this is not the case for the market demands likely to be expressed for most other tracks making up components of the full Taranaki Crossing experience. The past and current maintenance regime on most of these tracks has failed to keep the tracks to a state that can sustain any further increase in visitation, without significant track upgrade works.

In summary, the current poor track condition is not conducive to the attraction of the type or number of visitors that are needed to realise the economic potential of the Taranaki Crossing for the Taranaki region. Capital upgrade, at varying scales, of virtually all the tracks included in the Taranaki Crossing is required. Details follow.

Recommendations for the upgrade of each of the component tracks of the Taranaki Crossing

The location of each of the tracks making up the Taranaki Crossing has been described in the figures supplied earlier in our report. For convenience and re-orientation, these may also be described in terms of comparative altitude (Figure Twenty-Eight) and walk-time (Table Eleven).

We have estimated these typical walking times using models considering the amount of climb and descent, with adjustments for track surface condition. These provide comparative data for typical walking times on track routes for people of average fitness. They also provide a base for us to calculate the time-savings that may accrue after track upgrade (NB we address this question later in the report).

To satisfy the requirements of our brief and to establish evidence to enable speedy implementation of our findings, the following section of this report provides considerable detail. If you are a reader with a time constraint, we recommend you focus your attention on the figures and tables or simply skip to the summary at the end of this section.

Table Eleven: Summary of typical walking times for track components

Track Route	From/To	Typical Walking Time (excluding breaks)
Day Return Trip on Mangorei Track to Pouākai Tarns	Mangorei Rd to Tarns and Return	4 hrs 50min (current track condition) 4hrs 25min (upgraded track)
Taranaki Crossing from Dawson Falls to Mangorei Road via Around-the-Mountain, Holly Hut, Ahukawakawa, Pouākai and Mangorei Tracks	Dawson Falls to Mangorei Rd including visit to the Pouākai Tarns	10hrs 35min (current track condition) 9hrs 30 mins (upgraded track)
Taranaki Crossing from Dawson Falls via Around-the- Mountain, Holly Hut, Ahukawakawa, Pouākai tracks and new track to Pukeiti	Commercial Information	10hrs and 30 minutes Commercial Information
Taranaki Crossing via Around-the-Mountain, Holly Hut, Ahukawakawa, Dover tracks and new Kiri Track	Dawson Falls to Pukeiti Gardens excluding visit to the Pouākai Tarns	9hrs 25min Commercial Information
Pouākai Crossing via Holly Hut, Ahukawakawa, Pouākai and Mangorei Tracks	North Egmont to Mangorei Rd including visit to the Pouākai Tarns	8hrs (current track condition) 7hrs (upgraded track)
Pouākai Crossing via Kōkōwai, Holly Hut, Ahukawakawa, Pouākai and Mangorei Tracks	North Egmont Road to Mangorei Rd including visit to the Pouākai Tarns (Alternative route when slips close Boomerang / Hidden valley section)	9hrs (current track condition) 8hrs (upgraded track)

Dawson Falls Short Walks

Dawson Falls and the associated Lodge is established as a destination for day visits to Mt Taranaki, as well as for overnight stays. Both categories of visitor are likely to seek short walk opportunities of an easy / safe standard. The Wilkies Pools Loop and the Kapuni Loop offer good quality opportunities for such walks. They are of 1hr to 1.5hrs duration.

The Wilkies Pools track has been upgraded by DOC in recent years, including installing a new suspension bridge across the Kapuni Stream, a boardwalk, and an improved track up to Wilkies Pools.

The return Kapuni Loop part of the track is of poor quality with uneven steps, poor track surface and no return bridge crossing over the Kapuni Stream. This return track does not meet the normal expectations of casual visitors.

The Kapuni Loop Track provides access to the top of Dawson Falls from the main carpark, and to a viewing point looking out over the falls. We consider upgrade of these tracks to Short Walk standard is a high priority. This would provide greater support to Dawson Falls Lodge and café and increase visitor numbers and satisfaction.

Upgrade works would consist of re-shaping the track, installation of new boxed steps, re-surfacing of the track and construction of the suggested additional bridge. There is also a significant opportunity to provide interpretive and cultural signage as well as seats on the Loop to enhance the visitor experience.

The estimated construction cost for these upgrades is $Commercial Informa.

Dawson Falls to the Stratford Plateau

The track from Wilkies Pools to the Stratford Plateau, together with the initial part of the Wilkies Pools Loop track, provides an extended walk for more energetic visitors to Dawson Falls. Some visitors to Dawson Falls may choose this track as the means to reach the Plateau viewing platform or venture even further e.g. to the Manganui Gorge. This track also serves as the first leg of the proposed Taranaki Crossing. The 3km distance to the Plateau is an easy 1hr 15min walk.

The existing track above Wilkies Pools is of average standard, but in adverse conditions this track becomes muddy and has areas of ponded water. The step geometry is poor, and some uneven sections would be challenging for inexperienced or elderly walkers.

Upgrade of this track to Walking Track standard is recommended as a medium priority. Upgrade would consist predominantly of re- shaping to improve drainage, replacement of steps, application of surfacing aggregate, and bridging the small streams.

We consider an overhanging rock outcrop above the track near the stream crossing about 700m from the Plateau to be a potential rock-fall hazard. This risk could be eliminated by a re-alignment of a short portion of the track to cross the stream on a new bridge before reaching the rock outcrop, and then the re-joining of this portion to the original alignment about 20m beyond the stream.

The estimated construction cost for upgrade of this track to Walking Track standard is $Commercial Informa.

Stratford Plateau to Manganui Ski-field

The existing track sidles into the gorge and then out to the Manganui Ski-field. The Manganui Gorge is prone to avalanche risk during winter months, and occasional lahar flows in high rainfall events. These events damage the track where it crosses the base of the gorge.

This 1.7km section of track provides the main access to the Stratford Mountain Club Lodge and the Manganui Ski-field on the slopes to the north of the Manganui Gorge. On winter days when snow is present on the Plateau and on the Manganui ski-field, this track is a popular short walk for visitors seeking to enjoy the snow. This track is also a popular summer walk.

The first part of this track is a 4wd track that provides vehicle access to the Stratford Mountain Club goods lift, used for supplying their Manganui Lodge. This section offers easy walking. From here the track passes through a concrete tunnel which was installed to provide protection from the unstable slip near the gorge entrance, and then it sidles into and out of the Manganui Gorge following ledges between the rocky bluffs of the Gorge walls.

The Manganui Gorge section of the track is a significant hazard, especially in winter months when avalanches are funnelled into the gorge from the eastern slopes above. These avalanches and occasional lahar flows in the Gorge often result in remedial work being required to the track.

Options for bypassing the Gorge track have been considered for some time. A 200m span pedestrian suspension bridge spanning the Gorge in the approximate location of the current Manganui Lodge goods cableway would be the ideal option, however the south wall of the Gorge at this location is unstable as it consists of weakly consolidated volcanic debris. A bridge at this location would likely cost in excess of $Commer and would involve extensive earthworks to find a suitable foundation on the south side.

An alternative bridge site, part way up the Gorge from the goods lift would require a 90m span. This site has the advantage of the presence of suitable andesite rock bluffs on either side for anchorage. A bridge located here would have enough clearance above the Gorge floor to be above all but the most extreme of avalanche debris.

The existing track tunnel on the south side would be utilised together with much of the existing track on other side of the Gorge to reach the mid-Gorge bridge site.

There is a desire by the Stratford Mountain Club to have access for ATV vehicles to the Manganui Lodge, however, to provide a bridge with light vehicle capability would increase the construction cost to over $Commercial I. This additional cost is hard to justify given the option of continuing to use the existing goods lift for supply of services to the Manganui Lodge.

The recommended option for providing safe year-round access across the Manganui Gorge is the construction of a mid-gorge pedestrian suspension bridge. The estimated cost of construction of this pedestrian suspension bridge with a 10-person limit at this location is $Commercial Info. If a wider bridge is required, then it may well be that the Stratford Mountain Club should contribute to the additional cost of achieving this objective.

The connecting track approaches to the new bridge should be upgraded to ‘Short Walk’ standard.

The combined cost of construction of a suspension bridge across the Manganui Gorge and the upgraded track is estimated to be $Commercial Informa.

Manganui Ski-field to North Egmont

This 4.4km section of the Taranaki Crossing follows the Around-the-Mountain Circuit and provides a link from the south-eastern side of Taranaki Maunga to Holly Hut Track / North Egmont.

The Taranaki Alpine Club's Tahurangi Lodge is reached 2.5km from the Manganui Ski-field. From here it is possible to descend directly to the North Egmont road-end and Visitor Centre via the 3.6km 4WD "Translator Road".

This very steep, 2.5m-4m-wide vehicle track has become the default summit route for people making or returning from the Maunga Taranaki summit climb from North Egmont. The steep nature and the 'road' character of this route makes this unattractive as a descent route for walkers going to the North Egmont Visitor Centre.

We recommend the Taranaki Crossing route follows the Around-the-Mountain Circuit beyond Tahurangi Lodge, across the moss slopes and past Te Tahuna o Tūtawa / Humphries Castle to reach the Holly Hut Track at a point 2.4km above the North Egmont Visitor Centre.

The existing track from Manganui Ski-field to the Holly Hut track has received little maintenance in recent years and hence it has become eroded and is quite rough and prone to water ponding between steps. In places, rocky boulders must be negotiated and there is potential for lesser experienced walkers to incur injury.

In its current condition, this track serves as a basic 'Tramping Track'. Given the exposed nature of this track and the risk of unfavourable weather, it is not recommended that casual day-walk visitors be encouraged to walk this link. For this reason, upgrading this length of track to 'Easy Tramping Track' standard is recommended.

This would include undertaking track re-shaping and drainage improvements, replacing boxed steps, rock blasting, and the construction of minor bridges and boardwalks at watercourses. The recommended work includes extensive drainage to reduce the increasing environmental damage arising from the current poor drainage of the track and the consequent propensity of walkers to stray onto adjacent vegetation.

The estimated construction cost of this upgrade is $Commercial Informa.

Boomerang and Hidden Valley Slip area

We introduced the need for additional work in this area earlier in our discussions about risk. Further details follow.

The Boomerang Slip on the Holly Hut Track has been an active landslide for at least 70 years. A large failure of the rock bluffs located 300m above the track released a significant landslide in 1952. One fatality is recorded for this site, when a boulder rolled on a child in the 1990s. There are no records of other serious injuries. The slip face generally appears to be more stable than it was in the 1970s but it is still actively eroding over time.

The distance across the slip zone is about 70m, but this can take time for walkers to traverse due to the need to negotiate boulders on the eastern side, and then the need to cross the loose scree on the western side. The most active area is the gully near the eastern and middle parts of the slip.

Investigations by Opus International Consultants in 2016 identified possible mitigation options, including monitoring of slope movement and installing warning devices or construction of a bridge over the slip. The estimated construction cost for a bridge over the Boomerang Slip is likely to be in the order of $Commercial Informa.

In February 2018, during a period of intense rainfall, a new rockfall occurred approximately 300m further west of the Boomerang Slip in a location known as the Hidden Valley. This slip occurred as a result of the collapse of a part of the bluff located about 40m above the track. The new slip has also been investigated by Opus International Consultants and their results are documented in their May 2018 report. The report identifies mitigation options including removal of the remaining unstable blocks of rock, improvements to the track bench to facilitate easier passage of walkers and / or construction of a bridge over this slip.

A further option considered by DOC has been to establish a significant re-alignment of the Holly Hut track below the Boomerang and Hidden Valley slips. The cost of construction of a re-alignment could be well over $Commercial Informa as it would require extensive step construction and a new bridge over the Kōkōwai Stream.

While the geological processes giving rise to the Boomerang and Hidden Valley slips have been investigated, the probability of a future rockfall occurring at the same time as visitors are exposed in the danger area is yet to be accurately determined. Higher visitor numbers will increase this probability.

Natural processes will continue to cause rockfalls and landslides on the slopes of Taranaki Maunga. There is no guarantee that a re-aligned track will not also be adversely affected by the same instability problems in the future as those occurring now.

A further disadvantage of a re-aligned track is that it would detract from visitor enjoyment by introducing a significant descent of possibly 200m and then a climb back up of 200m to the ridge at the Kōkōwai Track junction. This would extend the total trip time by typically 30 minutes. The additional time and effort to walk this alternative route would reduce the potential market for the Taranaki Crossing and Pouākai Crossing walks.

Our recommendation is that urgent further investigation be carried out to determine the real probability (risk) of injury or death to walkers at these slip sites. This investigation should focus on our recommendation for mitigation of risk by rock removal, track improvement, monitoring etc. as the preferred option rather than re-routing the track. We believe that with adoption of these remedial actions, and the installation of instructions and warnings to visitors on how to minimise the risk associated with crossing this section of track, continued use of the original track route, at an acceptable level of risk, is very possible. Instructions and warnings may include advice to walkers about checking for signs of movement, crossing slips one person at a time, not stopping on the slips, etc. It would be valuable to have this work completed by Easter Commercial.

The estimated cost of our suggested mitigation works adjacent to ‘slip gully’ is $Commercial Informa.

North Egmont Visitor Centre to Kōkōwai Ridge

The traditional Holly Hut Track from the North Egmont Visitor Centre initially climbs steeply on what was previously known as the North Egmont Summit Track. This very old track has become deeply eroded and suffers from drainage problems.

The initial 1.1km section to the Lookout is a popular short walk for visitors to North Egmont. Upgrade of this section of track to 1.2m width 'Short Walk' standard is recommended. The estimated construction cost for this section is $Commercial Informa.

Above the Lookout, the track enters the alpine scrub zone. It is likely that most visitors proceeding beyond here will be either Pouākai Crossing walkers, or Taranaki Maunga summit climbers. An 'Easy Tramping' track standard from this point is appropriate.

The existing condition of the track through to the Kōkōwai Ridge junction is like the Manganui Ski-field to Tahurangi Lodge track. The original track bench is badly eroded, and it has poorly formed steps, poor drainage and occasional sections where historic rock-fall debris must be negotiated.

The estimated construction cost to address the drainage issues and to improve the walking quality of this track section (from the Lookout to the Kōkōwai Track junction) is $Commercial Informa.

Kōkōwai Track

The Kōkōwai Track from the North Egmont Road to the Holly Hut Track provides a 5.3km alternative for users of the Pouākai Crossing and the Taranaki Crossing in the event of the Holly Hut Track from North Egmont to Kōkōwai track junction being closed due to instability at the Boomerang and Hidden Valley slip sites, snow, or poor weather conditions. There is merit in this track being included as an option in the Taranaki Crossing project. This track has been used as the Pouākai Crossing route since February 2018 when the Hidden Valley slip closed the Holly Hut Track route.

Upgrade of this track to 'Easy Tramping' Track standard is recommended so that it becomes a sustainable alternative. An upgrade construction cost of $Commercial Informa is estimated. This includes the cost of installing steps and improving track drainage and surface conditions.

Kōkōwai Junction to Pouākai Range / Hut

The track from the Kōkōwai junction descends gently through alpine scrub toward the Holly Hut junction. This part of the track is generally well benched, but in places it is also suffering the effects of water erosion and poor drainage. Track re-shaping, drainage improvement and occasional surfacing is necessary.

The final section before the Holly Hut junction consists of timber rafts. While these are narrow, they are adequate for an 'Easy Tramping' track standard.

From the Holly Hut junction, the Ahukawakawa Track descends through lowland shrub-tussock toward the tussock, sedge and moss vegetation of the Ahukawakawa Swamp. This track has been provided with extensive timber rafts, but these have settled into the mossy ground such that the track has now become a watercourse, funnelling surface water directly down the slope. This makes the track potentially wet for

walkers, who are tempted to avoid the risk of wet feet by traversing fragile moss areas beside the track. The existing timber rafts are un-sustainable and replacement of most of these with a boardwalk on driven piles is recommended.

The existing Ahukawakawa stream bridge is of a suitable standard for an 'Easy Tramping' track. It has at least 20 years remaining life. The initial section of track from the wetland to the Pouākai Ridge climbs on well-constructed boxed steps, but above here there is a combination of steps and rafts with some quite muddy sections. Track re-shaping, improvement of drainage, additional steps and surfacing is necessary to provide a durable track in these ash soils.

At the ridge, the Ahukawakawa Track meets the Pouākai track which leads east for a further 1km to the Pouākai Hut and west to Pouākai and Kiri Peaks.

The total estimated upgrade cost for the 6.9km track section from the Kōkōwai Track junction to the Pouākai Hut, is $Commercial Info.

An alternative track alignment across the Ahukawakawa Swamp, providing a more direct route to the Pouākai Tarns, has been suggested as a means of reducing the Pouākai Crossing walking time by an hour to make it more appealing to more visitors. This option would require a new bridge over the Ahukawakawa stream (or re-location of the existing bridge) and extensive board-walking on the new alignment. It would also require new track formation down to the wetland from the Holly Hut track and up the spur of the Pouākai Range on the other side. The estimated construction cost of this re-alignment is $Commercial Info.

We do not recommend adoption of this more direct route across the Ahukawakawa Swamp. While this is only $Commercial Informa more than upgrade of the existing track, the cost of removal and rehabilitation of the existing track route could add a further $Commercial Informa to this option. In addition, our track travel time estimates indicate that the typical walking time for the Pouākai Crossing could be reduced by up to an hour by implementing the recommended upgrade improvements to the existing track between North Egmont and Mangorei Rd. But most importantly, the damage to the fragile and unique wetland, together with the landscape impact of creating a new track, work strongly against this option.

Potential Bells Falls / Te Rere o Tahurangi Side Track

There is potential to enhance the Taranaki Crossing and Pouākai Crossing experiences by creating a 0.7km side track from the track across the Ahukawakawa Swamp to the top of Bells Falls / Te Rere o Tahurangi. A platform providing a view of the falls at this location would add a significant 'wow' attraction to the crossing experience and would add only about 30min to the total journey. Currently, Bells Falls / Te Rere o Tahurangi can only be visited by taking a 1.7km diversion via Holly Hut to the base of the falls, which very few Crossing walkers would undertake, unless they choose to overnight at Holly Hut.

The construction cost of creating this side track, including a viewing platform at the falls is estimated at $Commercial Informa

Pouākai Tarns Track and area

The 790m track from the junction above Pouākai Hut to the Pouākai Tarns follows the broad Pouākai ridge crest on alpine-wetland and tussock-land.

The strong growth in visitation to this location has prompted DOC to install extensive timber rafting on this track. Unfortunately, these are beginning to settle in a similar way to the Ahukawakawa Swamp rafts. Some sections are inundated with water for long periods of time and most are of inadequate width to allow the two-way passing necessary as a result of the high visitor numbers to this site. The sensitive vegetation beside the rafts will further deteriorate as a result of people stepping off them to pass or to find drier footing. Replacement of most of this section of rafting with a 1.2m wide piled boardwalk is recommended.

At the Tarns, the boardwalk should expand in width to form a platform of enough area to accommodate groups of 20 or more visitors. This boardwalk should be raised above the ground to discourage visitors from stepping off, and it should be curved to soften the visual impact. Signage should be installed to deter visitors from stepping off the boardwalk onto the fragile environment. We understand this work may already have commenced and that awareness of the need for visitors to treat this special area with respect is growing (Daily News, 25 January 2019).

The estimated cost for construction of new raised boardwalks and a platform on this section of the Taranaki Crossing is $Commercial Informa.

Pouākai to Mangorei Rd

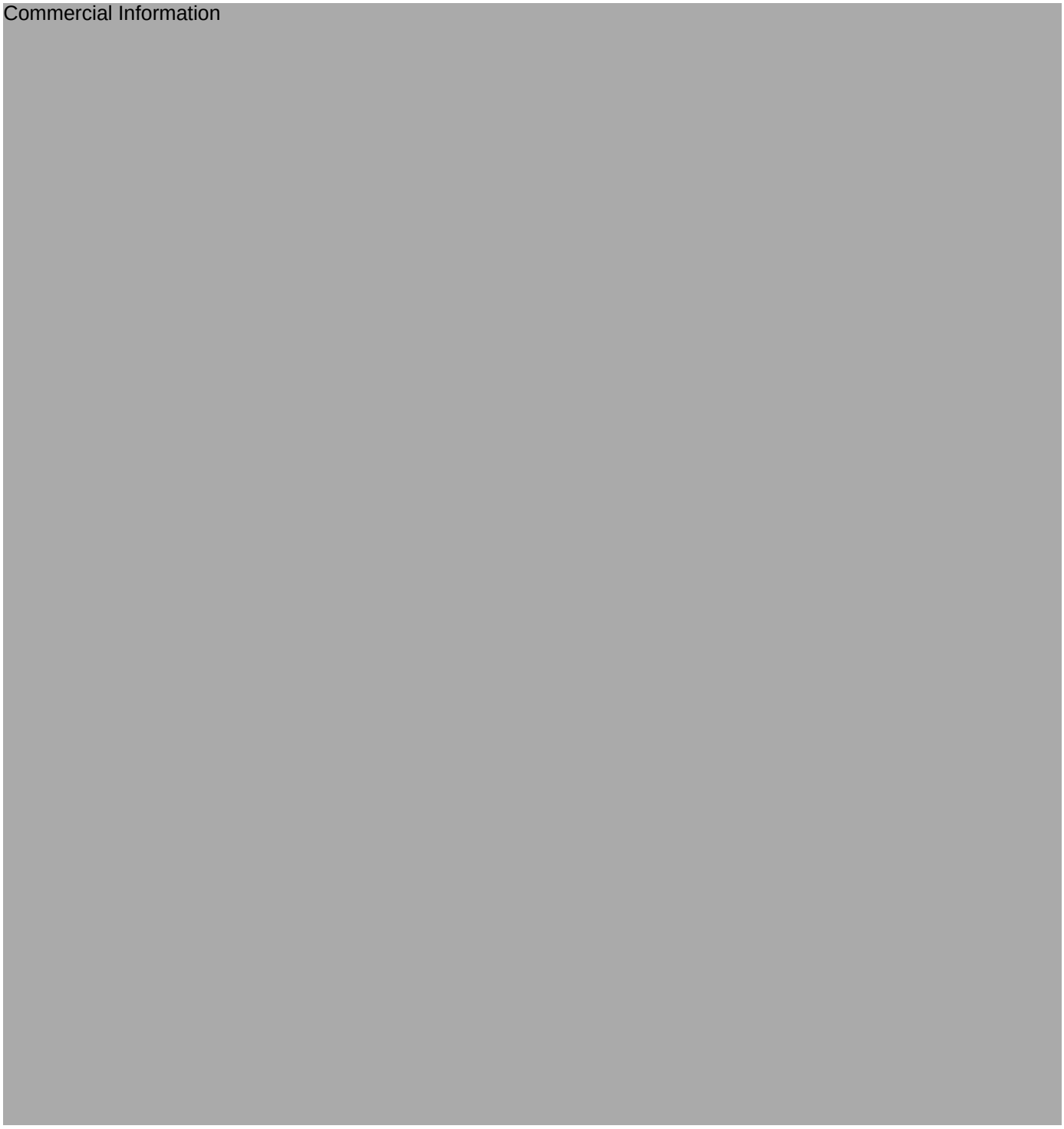
The 5.2km track from the junction above Pouākai Hut to Mangorei Rd has been upgraded over the past 10 years. This track will continue to be the most popular access to the Pouākai Tarns.

Rafts and steps of width ranging from 0.6m to 1.2m exist for most of the distance, apart from the final 300m adjacent to Mangorei Road which follows an unsealed road. Unfortunately, the width and the geometry of much of the rafting and steps is poor and this provides a somewhat tedious walking experience. Walkers continually must re-adjust their stride to accommodate the varying irregularly-spaced steps.

Given the increasing visitor numbers, including many one-day return visitors making the trip to the tarns and back from Mangorei Road, this track should be upgraded to ‘Walking’ track standard with a width of at least 0.9m. With improved drainage and adequate track surfacing, significant sections of rafting could also be replaced with aggregate-surfaced walking track.

This upgrade work when implemented, will significantly improve the visitor experience on this popular walk. The estimated construction cost of upgrade of this section is $Commercial Information.

Commercial Information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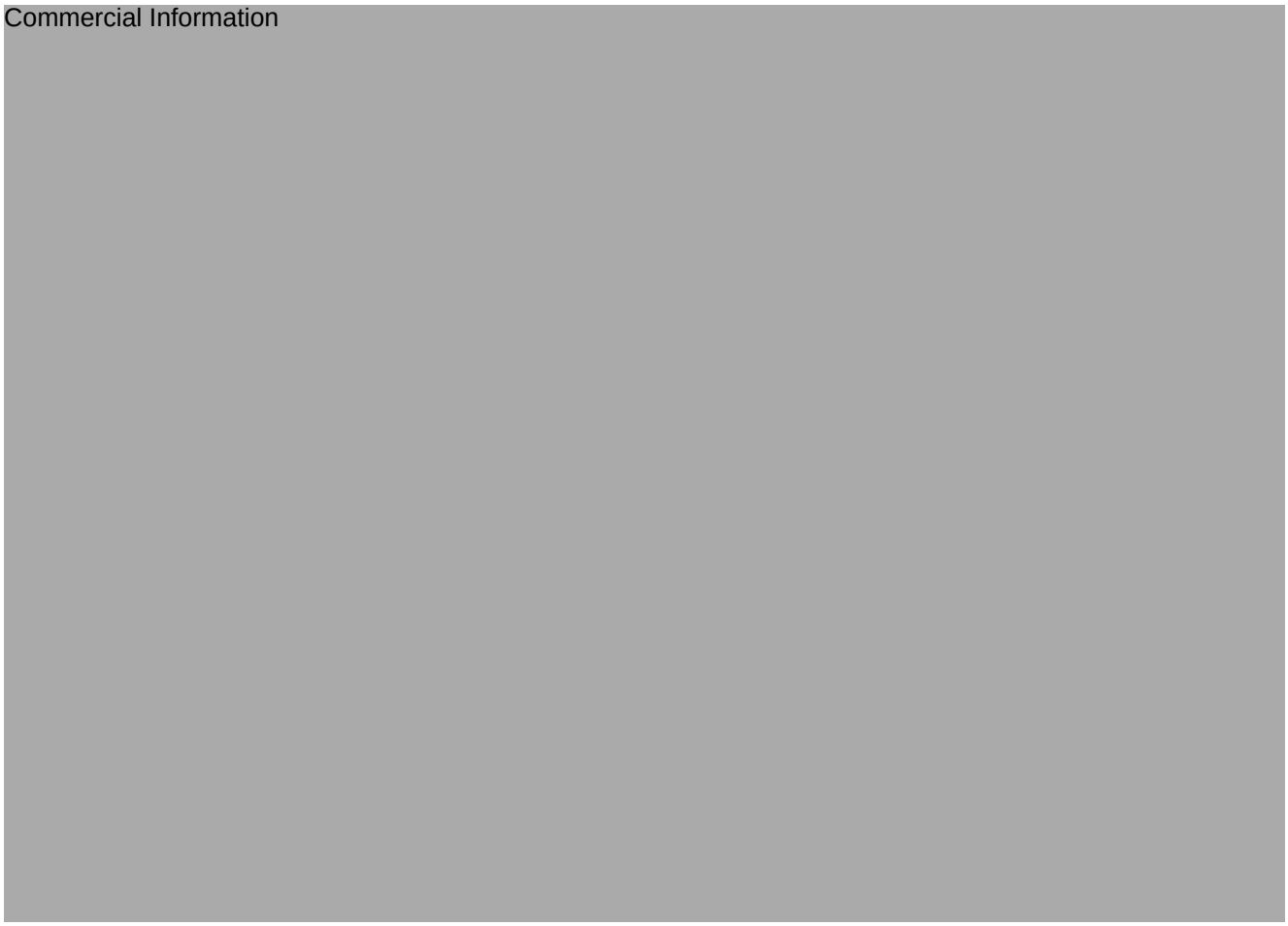


Track construction: materials and methods - summary

Significant capital upgrade of much of the track network is necessary to address the gap between the current condition and a suitable standard for a quality experience. Track, boardwalk and step construction required for the Taranaki Crossing development should use well-proven track construction techniques used elsewhere, but with due consideration to the specific issues associated with the high rainfall in Egmont / Taranaki National Park, and the susceptibility of volcanic soils to water erosion.

The necessary track work will typically consist of the following:

- **Track design**: Re-shaping and compaction of the track formation to re-establish a uniform bench of the required width, having drainage cross-fall or side drains where necessary and frequent drainage discharge points, is necessary. In almost all cases, this work will be possible within the original track footprint width. Some of this work could be undertaken by mini-excavator, while in some locations (especially for narrower 'Easy Tramping' tracks) this work would be undertaken with hand tools. Where necessary, the track edges would be supported with low timber retaining walls, or stacked rock retaining walls. Where existing tracks are eroded deeply below the adjacent ground, drainage channels would be excavated outward from the track to direct water away from the track formation.

- **Steps**: Replacement of existing random boxed steps with new stringer-type timber boxed steps, constructed to a width to match the preferred track classification. Steps would be constructed with

uniform step heights and grade, frequent landings, and good drainage. Steps would be extended at additional locations where the current track gradient exceeds recommended maximums.

- **Board-walks**: Replacement of most existing timber rafts over wetlands with piled boardwalks, of the required deck width for the track classification, should be constructed. These boardwalks would be extended to cover all sensitive vegetation. Piles would be driven to firm ground and the deck installed at a level above the adjacent ground so that there is a gap under the boardwalk joists to allow natural surface water flows and vegetation cover to re-establish under the boardwalk. Boardwalks, boxed steps, bridges and retaining walls should be constructed predominantly from suitably treated radiata pine timber. This would mainly be sourced from locally grown plantation forests within Taranaki. Appropriately treated timber will have a serviceable life of 50 years when used for bridges, boardwalks and steps in this environment. Timber should be treated well before use to minimise the risk of treatment chemicals leaching from the wood into the soil.

- **Track surface material**: Application of crushed rock surfacing to track and boxed step surfaces should occur on all 'Short Walks' and 'Easy Walk' tracks and on many sections of 'Tramping' track to provide a durable surface that is resistant to surface water erosion and will provide good firm footing. Much of this track surfacing material could be sourced from the immediate location of the tracks by using a small mobile crusher to produce the required aggregate size and mix from surplus rock and gravel arising from track formation works. Where suitable rock is not available from near the track for track surfacing, crushed aggregate will need to be lifted by helicopter to the track sites. It is preferable that this imported aggregate be sourced from andesite rock quarries within the Taranaki ring plain to minimise the mixing of foreign mineralogy with naturally occurring material on Mt Taranaki. The use of artificial track surface stabilisation products such as geocells and geo-web should be kept to a minimum. While these products are very effective, their widespread use would add significantly to the project cost, and they introduce foreign material in the form of plastics that may make future track rehabilitation problematic.

Project management and implementation

Appointing a project manager

As noted earlier in this report, the PGF funds earmarked for expenditure on components of the Taranaki Crossing, must be committed by about July 2020. This is a tight but manageable time-line particularly as our recommendations are designed to place agreed elements into 'spade-ready' condition.

The project is of a size that engagement of a full-time or near full-time Project Manager is justified at an early stage of project implementation i.e. immediately after acceptance of this Feasibility Report. This appointed Project Manager would

- Develop the final construction programme.
- Regularly engage with the proposed Steering Group.
- Tender for, arrange, brief, contract and monitor / audit delivery by Taranaki-based (by preference) construction procurement teams for the various project components.
- Achieve consent for the required works.
- Commission detailed design.
- Complete an opex / maintenance schedule, with cost estimates, to sustain the quality of the new assets over the subsequent ten years of their life.

The cost for such a suitable person is likely to be in the range of $Commercial -$Commercial, plus a further $Commercial In/ year for expenses.

A local manager with strong awareness of cultural and environmental matters should also be engaged on a part-time basis. This person would lead engagement with iwi and build their capability to undertake future project management tasks.

Retaining the current Project Steering Group

Project governance is important. Having made decisions on this report, the current Project Steering Group is well positioned, assuming appropriate costs are covered, to provide the base of membership to continue to lead the implementation of the Taranaki Crossing project.

Sequencing / priority of component implementation

Our preference is to have all track, hut, bridge and ancillary upgrade works committed within two years.

- The number one priority is to undertake works to secure the health and safety of users of the length of track adjacent to the Boomerang Slip and Slip Alley.
- Equally important is the need to continue with works designed to better manager visitors to the Pouākai Tarns and to provide more beds at Pouākai Hut.
- Second order priorities are the upgrade of most track components and the construction of the swing-bridge across the Manganui Gorge.
- Third order priorities would be the upgrade of other track components including the: track and viewing platform at Bells Falls / Te Rere o Tahurangi; Kōkōwai Track from the North Egmont Road to the Holly Hut Track (contingency against possible closure of the track adjacent to slip alley) Commercial Informa

We would also like to see the North Egmont Visitor Centre progress over the next two years in parallel but separate to other Taranaki Crossing components.

The components will need to follow a 'design, consent, contract and construct sequence' (Figure Twenty-Nine). Subsequent to the receipt and adoption of this report by the Ministers, our hope and expectation is that 'design' work will commence for priority components in Commercial and Commercial Information and that construction will commence by Commercial Informa ion and that all components will be contracted and ready for completion by Commerc Commercial In

Signage and interpretation

The quality of the wayfinding signage and interpretation of the cultural, ecological, geomorphological and other components of the Taranaki Crossing is vital. Iwi should be invited to take an upper hand in helping to develop this material. Tracks and other components should be not be given designated names without the guidance of iwi and an interpretation specialist. This is an important factor enhancing the experience people will have with the Crossing. There is also an opportunity to establish an agreed theme and brand for the Taranaki Crossing. Signage and interpretation should be aligned with locations providing extensive landscape views and well-planned and designed seating / resting areas.

Total cost of upgrade of Taranaki Crossing

Our estimate of the cost of capital to make the Taranaki Crossing 'market-ready' is $Commercial Information (Table Thirteen). This is exclusive of the upgrade of the North Egmont Visitor Centre.

If Comm% of the cost of initial capital expenditure is set aside to cover the cost of operational expenditure over ten years, then close to $Commercial Information of funding is required for this purpose. This brings the total cost of the Taranaki Crossing to $Commm.

Table Thirteen: Cost and timing for capex and opex and other costs associated with establishing components of the Taranaki Crossing

Components	Expense	Timing
Boomerang and Hidden Valley slip area tracks	$Commercial Informa	Commercial Informatio
Pouākai Hut bunk upgrade	$Commercial Informa	Commercial Informatio
Pouākai Hut to Pouākai Tarns track and viewing platform	$Commercial Informa	Commercial Informatio
North Egmont Visitor Centre to Veronica Lookout track	$Commercial Informa	Commercial Informatio
North Egmont to Kōkōwai Ridge track	$Commercial Informa	Commercial Informatio
Dawson Falls car-park	$80,000	Commercial Informatio
Dawson Falls short walks / tracks	$Commercial Informa	Commercial Informatio
Dawson Falls to Stratford Plateau track	$Commercial Informa	Commercial Informatio
Ahukawakawa Swamp track upgrade	$Commercial Information	Commercial Informatio
Stratford Plateau to Manganui ski-field track including suspension bridge	$Commercial Informa	Commercial Informatio
Stratford Plateau car-park	$Commercial Informa	Commercial Informatio
Manganui ski-field to North Egmont track	$Commercial Informa	Commercial Informatio
Veronica Lookout to Holly Hut track	$Commercial Infor	Commercial Informatio
Kōkōwai track as contingency against closure in slip gully area	$Commercial Informa	Commercial Informatio
Bells Falls / Te Rere o Tahurangi track and lookout platform	$Commercial Informa	Commercial Informatio
Pouākai Hut to Mangorei Road track	$Commercial Information	Commercial Informatio
Commercial Information	$Commercial Information	Commercial Informatio
Project management	$Commercial Informa	All times
Iwi engagement	$Commercial Infor	All times
Signage and interpretation	$Commercial Informa	Commercial Informatio
Contingency @ about Com%	$Commercial Informa	
Total capex (rounded-up, inclusive of management)	**$**Commercial Information	
Contribution toward DOC's operational (opex) costs (rounded down)	$Commercial Information	
Overall Total	**$**Commercial Information	

Revenue / expense balance

With acceptance of the above assumptions – including a payment toward DOC's operational expenses, the cost of the listed Dawson Falls to Pukeiti Gardens components of the Taranaki Crossing is $Commercial Information. This matches the available revenue / funding recommended for expenditure on these components at various times from various sources. Expenditure of this sum makes the Taranaki Crossing 'feasible' from a cost and revenue perspective.

Ecological impact of proposed tracks and facilities

Approach

Our ecological team-consultant Privacy of natural persons undertook a literature search, walked and assessed the flora and fauna along the current and proposed tracks and held discussions with other experienced ecologists and DOC staff about the ecological value of areas adjacent to the proposed Taranaki Crossing. Privacy of natural p worked closely with our track and visitor sector team members when carrying out this reconnaissance. (NB the comments which follow build on the comments made previously in our report).

Ecological conditions and opportunities / values to be protected on various components of the Taranaki Crossing

Dawson Falls carpark and facilities

The area around the Dawson Falls carpark, visitor centre and accommodation is characterised by rimu-rata / mahoe forest. Rimu (*Dacrydium cupressinum*) and rata (*Metrosideros robusta*) are emergent over a canopy dominated by mahoe (*Melicytus ramiflorus*). This forest is a different composition to that found in other parts of the Park because of the partial destruction of the original forest by the Burrell eruption and because of the subsequent increased soil fertility (Clarkson, 1986).

There is enough modified footprint at the Dawson Falls site to upgrade facilities without significant impact. Detailed ecological assessment should be carried out to determine the impacts of any specific vegetation clearance proposal.

Dawson Falls to Wilkies Pools track

Track upgrades have already been completed on the Dawson Falls to Wilkies Pools track. No further ecological impact is envisaged. The Taranaki Crossing is most likely to take this route to include Wilkies Pools. The return Kapuni part of the loop track requires is not as well developed with no bridge crossing over the Kapuni Stream. It is envisaged that track upgrades to make this a popular loop walk could be carried out within the existing footprint with minimal ecological impact.

Ridge and Round-the-Mountain tracks to the Plateau car park

These tracks pass through subalpine forest and scrub. The tracks have become overgrown from their original footprint. The track to the Stratford Plateau above Wilkies Pools is currently 600mm wide with an additional 20-30cm cleared of woody vegetation on each side. There are many sections where drains have become

blocked resulting in flooding of the track and egress of walkers into surrounding vegetation to retain dry feet causing damage to this vegetation.

The broad vegetation type at the Dawson Falls end of the track is kamahi-mountain totara montane forest. Kamahi (*Weinmannia racemosa*) and mountain totara (*Podocarpus laetus*) are dominant in the canopy, with kanuka (*Kunzea ericoides*), kotukutuku (*Fuchsia excorticata*), and mountain horopito (*Pseudowintera colorata*) frequent, particularly around the Kapuni Stream.

This changes into mountain totara/broadleaved shrubs forest higher up as the track joins the Round-the-Mountain track. Opportunistic species such as *Ourisia macrophylla* subsp. *macrophylla*, koromiko (*Veronica sticta* var. *egmontiana*, *Carex* sp., *Parablechnum procerum, Pratia angulata, Astelia* sp. (aff *A. nervosa*), mountain tutu (*Coriaria plumosa*) and mosses have colonised the disturbed groundcover margins. Mountain tutu is a summer green perennial and new shoots were only just appearing when our reconnaissance took place – these are likely to cover parts of the track in summer.

Some vegetation clearance may be required to install more effective drainage, but this is likely to be mostly to the groundcover species currently evident along the sides of the track. Work should be done in a careful manner and not cause deposit of spoil on the sides of the track. If work is undertaken in this way, track upgrades should have minimal impact on the integrity of the subalpine forest and scrub. Action to reduce the accelerated erosion caused by channelled runoff from the track would be beneficial.

Realignment of a short portion of the track across the stream on a new bridge about 700m from the Plateau to avoid an overhanging rock outcrop is considered necessary for safety purposes. While the cutting of the track through the vegetation has obvious impacts, the safety purpose justifies the cutting of a small section of track through the vegetation. Allowing the old track to regenerate naturally is preferred.

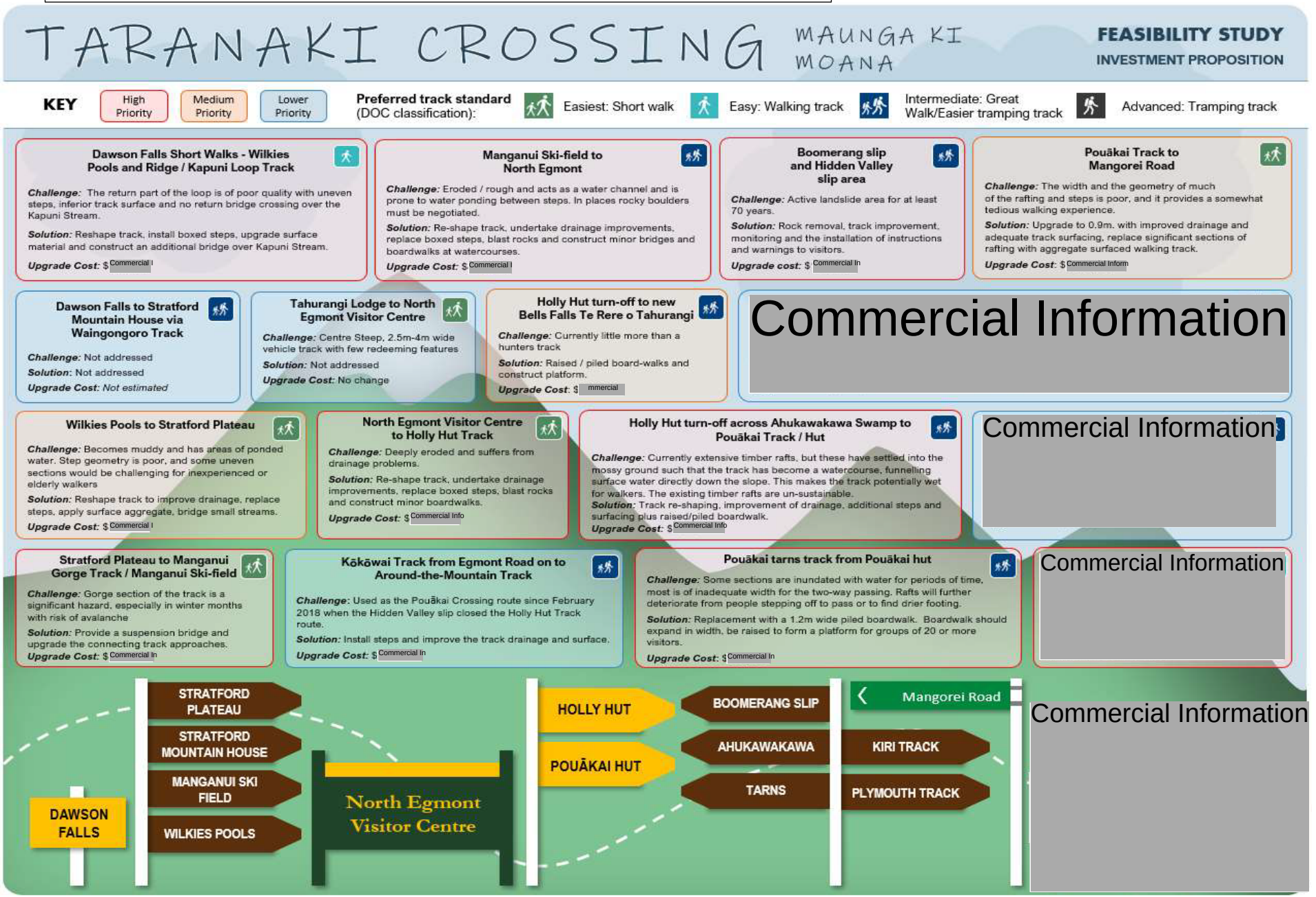
Manganui Gorge Track - Plateau car park to Manganui Ski-field

The existing Plateau car park and wide track up to the flying fox allow a high number of people to access the ski-field particularly during snow events. Only limited work to upgrade the track is required in this section of the Crossing. The flying fox has already created a significant modified ecological footprint.

The instalment of a new bridge across the Manganui Gorge will not have any significant ecological impact. As described, this area is modified with a large footprint for the cableway, ski-field and the concrete tunnel to mitigate against rockfall. The bridge will eliminate the need for access around the head of the gorge which currently passes over unstable material resulting in accelerated erosion.

Figure Twenty-Nine: Sequencing of components of Taranaki Crossing

Figure Thirty: Challenge, solution, cost and priority of proposed track upgrades



Manganui Ski-field to Tahurangi Lodge

The vegetation of the ski-field is induced red tussock (*Chionchloa rubra*) tussock-land and herb-field. Regular mowing of the vegetation retains it in this state rather than the leatherwood scrub that would naturally occur at this elevation. The footprint of the ski-field and associated buildings is sufficiently modified to allow for any track further track upgrades to occur without additional environmental impact.

From the ski-field the track traverses induced tussock-land, leatherwood (*Brachyglottis elaeagnifolia*) scrub and shrub-tussock-land. The track in many places has become entrenched and eroded. When the track becomes wet and muddy visitors tend to walk along the sides, increasing the width of the track and impacting further on the vegetation. Soil erosion and runoff occur along the sides of the track.

Upgrading of the track and drainage could be achieved within the existing footprint of previously cleared and damaged vegetation. This would result in a better track, minimising future ecological effects from soil erosion and channelled runoff.

Round the Mountain Track to North Egmont

In the section from the Lookout to the junction with the Round-the-Mountain track, the track has been severely entrenched, and visitors are walking beside the track, encroaching further into the vegetation and causing further erosion. This track requires remediation to prevent further ecological damage. This can be achieved within the already ecologically-damaged footprint.

North Egmont Visitor Centre

The current footprint of the visitor centre and car park allows room for extension / replacement of the Visitor Centre without further significant ecological risk. The concept of shuttle buses operating between the Volcano View café on Egmont Road and the North Egmont Visitor Centre during busy periods should be pursued to eliminate the need to increase the size of the carpark.

Once decisions are made and any plans are prepared for the upgrading or replacement of the Visitor Centre, an ecological impact assessment should be made of the proposal.

Mountain Lacebark (*Hoheria lyallii* var. (*H. glabrata*) was recorded (NB this is the only North Island record of this species) near the old North Egmont Chalet in the 1960s but this has not been seen since (Clarkson et al. 2018). Any work carried out at this site should include a careful search for this plant.

Round the Mountain track to Kōkōwai Junction

The section of the Round-the-Mountain track past Dieffenbach Cliffs and the slips was not assessed by our ecologist because this section was closed.

Kōkōwai track to Holly Hut

At the top of the Kōkōwai track the vegetation is leatherwood scrub. Leatherwood and associated species such as mountain fivefinger (*Pseudopanax colensoi*), inaka (*Dracophyllum longifolium*), koromiko and *Coprosma pseudocuneata* form a dense tight-knit canopy at this location.

There is a sign near the track junction with information about the rare snails to be found in the vicinity. This location is also used by walkers as a lookout point. Given that *Powelliphanta* "Egmont" snails have been found at this location and at only a few other locations in the National Park, it is important that their habitat is protected. Trampling has caused patches of bare ground and this may or may not have impacted on the snails as little monitoring is carried out on this species. We recommend a small raised boardwalk and viewing platform be constructed at this location to avoid further trampling of the habitat. This would also be a useful location for the establishment of interpretative material.

The track to Holly hut is of enough width to allow for any upgrade of drainage and surface without further impacting on the leatherwood scrub through which most of the track passes. In fact – as is the case elsewhere, track upgrading will be of benefit to soil and water management and hence reduce impacts.

Ahukawakawa Swamp

The Ahukawakawa Swamp is a montane wetland with a predominant cover of red tussock shrub-tussock-land with patches of more poorly drained areas of sedge and sphagnum bog.

Wetlands have been severely reduced in extent over the last 100 years in New Zealand with only 10% of the previous area now remaining. Most lowland wetlands have been impacted by drainage and or invasion of weeds. Montane mires such as those present within the Ahukawakawa Swamp, in relatively natural condition, are therefore highly valuable.

The existing track down the Maero Debris Flow to the wetland and across the wetland to the base of Pouākai currently has a track made of floating boardwalks. The Maero Debris Flows are debris from the collapsed western crater rim of Taranaki over the last 500 years - some of which have extended down the north-western slopes as fan-shaped deposits into the Ahukawakawa Basin. These debris flows have a variable low hummocky relief with a cover of inaka (*Dracophylum longifolium* var.*),* red tussock, *Coprosma paludosa*, *Hebe odora*, flax (*Phormium tenax*), and tauhinu (*Ozothamnus leptophyllus*). Inaka, coprosma, hebe and tauhinu being more frequent on the slightly raised ridges and red tussock and flax between.

The track crosses red tussock-tussock-land (red tussock dominant with hummocks of *Sphagnum cristatum* carrying dwarfed shrub species such as inaka, hebe) and sedge-land (including *Juncus antarcticus*, *Carex echinata*, *Oreobolus pectinata*). At the time of our reconnaissance the summer green perennial *Carex coriacea* and *Bulbinella hookeri*, which are two important components in the vegetation during the summer months, were only just appearing. Several species are restricted in their location to the Ahukawakawa Swamp. These include the small comb fern *Schizaea australis*, *Myriophullum pedunculatum* subsp. *novae-zelandiae* found in pools of water and the club moss *Lycopodium australe.*

At this location boardwalks have sunk, and additional boardwalks have simply been placed on top of them. The continual sinking of boardwalks is most likely impacting on the functioning of the wetland, with drainage patterns being altered through the boardwalk and water channelling down the track. Differences in water flow affects the acidity and fertility of the substrate and therefore the distribution of some species. These effects should be remedied and avoided.

The boardwalk does, however, confine visitors to the track where many years ago visitors increasingly widened the track to keep their feet dry. The vegetation assemblages in the wetland are very fragile and easily

impacted by trampling. As the Ahukawakawa Swamp lies at an altitude of 914 metres with a very high rainfall, recovery of vegetation after disturbance is slow.

Construction of a raised and piled boardwalk would reduce the current impacts. Removal of the current boardwalks and construction of a new raised track would cause damage as trampling of the vegetation beside the track would necessarily occur. All efforts should be made to minimise the damage caused during this process.

Alternative track across the Ahukawakawa Swamp to Pouākai hut and the tarns

You will recall that earlier in this report we advised of our preference for the existing track to be improved rather than creating a new, more direct track to the Tarns. Our ecological information, as provided below, provides further support for this recommendation.

If a new track was constructed, it would pass through the wetland over similar vegetation to the current track. The construction of a new track to a high standard is feasible but this would impact a significant (750m) new length of the wetland. This would further impact the natural drainage pattern of the wetland although negative effects could be minimised by constructing a piled and raised boardwalk. Monitoring and control of invasion by weed species on disturbed ground, would be imperative. Some of these are already present (such as buttercup - *Ranunculus repens* and *Juncus articulatus*),

If a new track across the wetland is created, then the existing boardwalks across the lower end of the wetland would need to be removed and the track closed. The removal of the boardwalks, as discussed above, is likely to create substantial additional impact. Care would need to be taken to minimise trampling of the adjacent vegetation. Natural re-vegetation of the old track site would be preferred, though again, monitoring and removal of any invasive weed species would need to be regularly carried out, and revegetation would take some time to occur.

In addition, we note the cutting of a new track through the leatherwood scrub and kaikawaka-mountain totara/kamahi forest to the top of the Pouākai Range would create a significant visual impact. As noted previously, the canopy of this vegetation type is dense and interwoven. The new track would be highly visible from both the section of the Round-the-Mountain track from Kōkōwai to Holly hut and from the track along the top of Pouākai.

If a new track is to be created, then detailed vegetation assessment would need to be carried out to determine a location that minimised impacts. As part of this exercise, further mapping would be required of the Pouākai – Ahukawakawa mire margins to avoid any individuals of *Melicytus drucei*, a plant that is found nowhere else in the world.

Pouākai Tarns

The Pouākai ridge has a mix of low scrub, red tussock-tussock-land and wetland vegetation. The well-used track from Pouākai Hut has been board-walked for the most part which has tended to confine visitors to the track, although with increased numbers, and being a bidirectional track, visitors are stepping off the track to allow others to pass causing compaction and damage to the adjacent vegetation.

The area around the tarn closest to the track has been severely trampled and impacted by large numbers of visitors. Species such as the comb sedge *Oreobolus pectinata* have been severely damaged and there are now areas of bare ground. Visitors have also walked to the second tarn creating an informal track and damage to the margin.

Upgrade of the track and viewing area in this location to minimise visitor impacts is urgent.

We note local occurrences of several examples of valuable plants in the Park (Clarkson et al 2018). These include species that are found on the Pouākai Ranges but not on the Taranaki Maunga such as snow totara (*Podocarpus nivalis*), bog mingimingi (*Androstema empetrifolia*), and a whipcord hebe (*Hebe subsimilis* var. *astonii*). A prostrate form of *Hebe odora* has also been recorded on exposed ridge crests of the Pouākai Range. This species retained its prostrate form in a garden experiment implying it may be an unnamed variety of the more widespread erect form of *Hebe odora* characteristic of red tussock tussock-land. In addition, the dwarf sedge *Carex hectori* found in the herb-field vegetation of the Pouākai Range has not been seen for 40 years but may still be present. This implies that careful site selection will be required if any new track is established near the top of the Range to avoid impact on any of these species.

Pouākai to Mangorei Rd

The track from the junction above Pouākai Hut to Mangorei Rd has been upgraded over the past 10 years. Proposed further upgrading of this track to accommodate the large number of visitors, and the expected continued increase in these numbers, is essential. While upgrading of the track may require some soil and vegetation disturbance in parts, it is envisaged such disturbance will be minimal and natural recovery of the vegetation will occur.

Commercial Information

Fauna within Egmont / Taranaki National Park

The National Park provides the only habitat for many of Taranaki's bird species. At last count 28 native and 15 introduced bird species were found in the park. Threatened species include North Island brown kiwi, fernbird and blue duck.

The Park is also home to several unique invertebrate species, and almost half of New Zealand’s indigenous fish species are found in or near the Park. Nationally threatened fish species include the giant kokopu, short-jawed kokopu, banded kokopu and koaro.

The upgrading of existing tracks (including stream crossings) in the Park and increased visitor numbers as part of a Taranaki Crossing experience are unlikely to have any impact on the indigenous fauna of the park.

It is widely accepted that the greatest threats to our native birds and other fauna is predation by introduced species. The PCE report Taonga of an Island Nation: saving New Zealand’s Birds notes (2017) ‘*Our native birds need three things – safety from predators, suitable habitat, and enough genetic diversity for long-term resilience.*

Undoubtedly, the first challenge– safety from predators – is the most urgent. Possums, rats, stoats, and other introduced animals kill millions of birds every year. And it is not just birds – they also devour lizards and frogs and insects.'

Work is underway as part of Project Mounga to reduce the predators in the Park and to eliminate goats. This has required the cutting of additional tracks through the vegetation for trapping. The benefits of increased trapping networks have justified the track cutting through the vegetation because the overall conservation gains justify this intervention.

There is an active programme of reintroducing species to the national park – kiwi, whio (blue duck), toutouwai (North Island robin) to date. Increased bird populations due to predator control and reintroductions will enhance the visitor experience. Increased visitor numbers also provide an opportunity to educate and enthuse the public about natural values and therefore engender their support for ongoing management.

In summary, the proposed track and facility upgrades may be achieved with net positive impacts on ecological values. Additional research should be carried out at some sites and care would need to be exercised during construction to protect and enhance ecological values at all sites.

Economic impact / cost-benefit of investment in Taranaki Crossing components

The Taranaki economy has traditionally mostly been reliant on the oil and gas sector and the dairy sector. Both sectors face future growth risks. Tapuae Roa (2018) documented these risks and urge focused attention now be given to opportunities to diversify the economy. With the abundance of natural assets and pubic conservation land in the region, the visitor sector was identified as a critical sector for focused attention.

We are also conscious that the things that attract visitors also make a region attractive to new residents. Moreover, the things that make a region attractive also create a sense of pride and long-term Taranaki home-location-retention amongst existing residents.

This section of our report draws on the information provided previously, as well as information drawn from third party and other sources, to discuss matters specifically relating to the cost and benefit of achieving visitor sector growth through development of the Taranaki Crossing proposal.

DOC's draft Visitor and Heritage Strategy

DOC's draft Visitor and Heritage Strategy (November 2018) provides good content to guide consideration of the net benefit of providing visitor services and facilities within public conservation lands, including within National Parks. The following points are particularly salient:

- **Benefits of accessing nature**: Across the globe there is increasing recognition of the benefits of time spent in nature for people's health and wellbeing. These benefits tend to be non-quantifiable - in a traditional accounting sense. They are 'intrinsic' in nature. The principles underpinning these benefits are:
  - Community wellbeing depends on healthy ecosystems.
  - Protected areas nurture healthy ecosystems.
  - Contact with nature is essential for improving emotional, physical and spiritual health and wellbeing.

- **Contributes to DOC's stretch goal**: Providing opportunities to enjoy public conservation land contributes to DOC's stretch goal of '90% of New Zealanders' lives being enriched through connection to our nature.'
- **Important for the New Zealand economy**: The tourism sector makes a significant contribution to New Zealand's success. In 2016, New Zealand's tourism industry was valued at $34 billion. Domestic tourism provides more than half of the sector's economic activity. In 2017, tourism provided jobs for over 230,000 New Zealanders with tourism likely to continue as a large employer in the future. International tourism is the New Zealand's biggest export sector, contributing more the 20 percent of New Zealand's export earnings. Half of all international visitors to New Zealand travelled to a national park in 2016. International tourism associated with national parks alone contributed $1.15 billion to New Zealand's economy and employed 11,943 people. These international visitors also tend to stay longer in New Zealand and spend more than those who do not visit national parks, even if they had a similar length of stay.
- **Distributes visitor benefits into the regions**: As a large area of public conservation land and water are outside of the main metropolitan centres, recreation and tourism opportunities in these areas generates jobs and opportunities for inclusive growth by distributing these across regions and communities.
- **Business generation**: Protecting, restoring and providing sustainable access to public conservation lands and waters can increase regional wellbeing as well as conservation outcomes. Visitors contribute by using recreation-based operators and by spending on fuel, food, accommodation, hospitality and other businesses in nearby communities. In 2017 about 1,100 businesses operated recreation and tourism-based activities on public conservation lands and waters.
- **Iwi opportunities**: Use and enjoyment of public conservation lands also brings wider economic, social and cultural benefits. It provides an opportunity for Māori to showcase their cultural heritage and realise their aspirations as a key part of the tourism sector. New Zealand Māori Tourism estimates there are now over 2,000 Māori tourism businesses employing more than 14,000 people and annually providing more than six million activity days to international visitors as a result of provision of services within public conservation lands.

PwC assessment of the business case for the Taranaki Crossing

The initial $13,340,000 earmarked and announced by Hon Shane Jones as being available for investment in the Taranaki Crossing (April 2018) was calculated with the assistance of research carried out by PwC (2018).

PwC suggested economic benefits could be achieved in Taranaki as a result of the flow-on opportunities arising from:

- Additional visitor expenditure.
- New economic output from visitor sector businesses.
- New economic output from visitor sector operators.
- Additional economic activity at the North Egmont Visitor Centre.

PwC's cost / benefit analysis was based on three possible Commercial scenarios:

- Scenario one: Commercial Infor additional visitors reflecting modest growth.
- Scenario two: Commercial Infor additional visitor reflecting higher growth.
- Scenario three: Commercial Infor additional visitors reflecting accelerated growth.

You will recall that with the benefit of the more detailed assessment carried out within our report, our projection of likely future growth in visitor days by Commercial, not including the use of the part of the Taranaki Crossing Commercial Information .

PwC assumed the present-day value of the costs likely to be incurred to create the Taranaki Crossing was $Commercial m inclusive of the costs Commercial Information . Based on their assumptions about increased visitors, visitor spending and the additional benefits of this spending throughout the economy by Commercial, the following conclusions were drawn (Table Fourteen).

Table Fourteen: PwC estimate of cost benefit of monetary costs and benefits

Commercial Information

Further development of cost / benefit assessment

Our estimate of the cost of capital to make the Taranaki Crossing 'market-ready' is $Commercial Information. We also recommend provision for $Commercial Information to assist with the operational expenses likely to be incurred in managing and maintaining the Taranaki Crossing over the next ten years. This brings the total cost of the Taranaki Crossing to $Commercial Information. Commercial Information

We estimate the increase in visitor user-days resulting from development of the Taranaki Crossing to be between Commercial Information. For convenience, we recommend use of the mid-point in this range of Commercial Infor.

Calculating the monetary benefits arising from these visitors is more challenging than calculating the cost of establishing the Taranaki Crossing experience. There are three matters to consider: first the origin of the visitors; second the quantum of their daily spending and; third, the multiplier that may be applied to daily spending to reflect the benefit of expenditure within the regional economy.

Origin of visitors using the Taranaki Crossing

The location of the origin of users of the Taranaki Crossing may be grouped as follows:

- **Local recreational users** — regularly visit places near where they live, driven by convenience of access, or limited need for planning before a visit.
- **Domestic visitors** — are travelling from outside their local area and have often taken time to plan their trip and book activities in advance.
- **International visitors** — are travelling from overseas and will have often invest considerable time in planning their trip. It is likely they will have limited knowledge of the places they intend to visit, their values or local expectations.

We expect Comm% of the users of the Taranaki crossing to be international visitors by Commercial, although if the popularity for international visitors to the Pouākai Tarns is anything to go by, we expect this number to grow to Comm% within Commer years. The remainder of the users of the Taranaki Crossing are likely to be evenly split between being local Taranaki residents and visitors from other parts of New Zealand i.e. Comm% from each. (NB data supplied by Venture Taranaki suggests that Comm% of visitors to Taranaki from elsewhere in New Zealand stay with friends and relatives with relatively low levels of daily expenditure).

Expenditure of visitors to the Taranaki Crossing within Taranaki

We have assumed the following daily expenditure of visitors to the Park:

- Taranaki residents: $Comm.
- Visitors from elsewhere in New Zealand: $Comm.
- International visitors: $Commerc.

Multipliers

We have assumed the following multipliers may be applied to expenditure by visitors to the Park:

- Taranaki residents: 1.2
- Visitors from elsewhere in New Zealand: 1.4
- International visitors: 1.8

Total expenditure of visitors (2025) using the Taranaki Crossing

If the above assumptions are applied, then expenditure by Commercial by users of the Taranaki Crossing will be $Commercial Information per year. We expect expenditure by visitors to incremental ramp-up every year from the time all components of the Taranaki Crossing are in place.

Connections to other experiences

Most visitors to the Taranaki region will be attracted by a package of potential and related experiences rather than simply experiences associated with components of the Taranaki Crossing (Figure Twenty-Six).

Experience-crowding and experience-displacement

One of the matters to consider is whether the provision of new nature-based experiences such as the Taranaki Crossing risks 'crowding-out' or causing less use of existing services, facilities and experiences. The opposite effect can also occur. This would be the generation of 'crowding-in' of the Taranaki Crossing to the point at which it exceeds the 'carrying capacity' of the experience, with deleterious effect on the 'quality' of the experience for users or damage to the 'natural character and values' associated with the experience.

On the 'crowding-out' issue, we do not see the provision of components of the Taranaki Crossing causing less use of existing experiences. On the contrary, we envisage use of components of the Taranaki Crossing generating, rather than undermining additional interest in ancillary and supportive experiences.

On the 'crowding-in' issue, there are risks – as current levels of use of the Tongariro Alpine Crossing attest. We believe the risks of this occurring on the Taranaki Crossing are manageable. Management can be exercised in two ways. The first is by investing in the upgrade of supportive infrastructure and facilities such as track upgrades, carparks, shuttle transit services, accommodation upgrades etc. (NB adoption of our recommendations and DOC's current work to manage the Pouākai Tarns experience is an example of this type of intervention). The second can be applied by providing better information to visitors or by applying other measures to better distribute visitors throughout different periods of time or on different / related track experiences / components.

Monetising the Taranaki Crossing experience

A general challenge faced by the Taranaki visitor sector is how to monetise the many nature, outdoor and public conservation land experiences on offer in the region.

Research carried out by Venture Taranaki confirms that visitor spending flows or 'multiplies' widely throughout the economy (Figure Thirty-Two). The 'retail sales – other' category experienced the most visitor spend, followed by 'food and beverage serving services' and 'retail sales - fuel and other automotive products'.

Figure Thirty-One: Examples of Taranaki experience connections

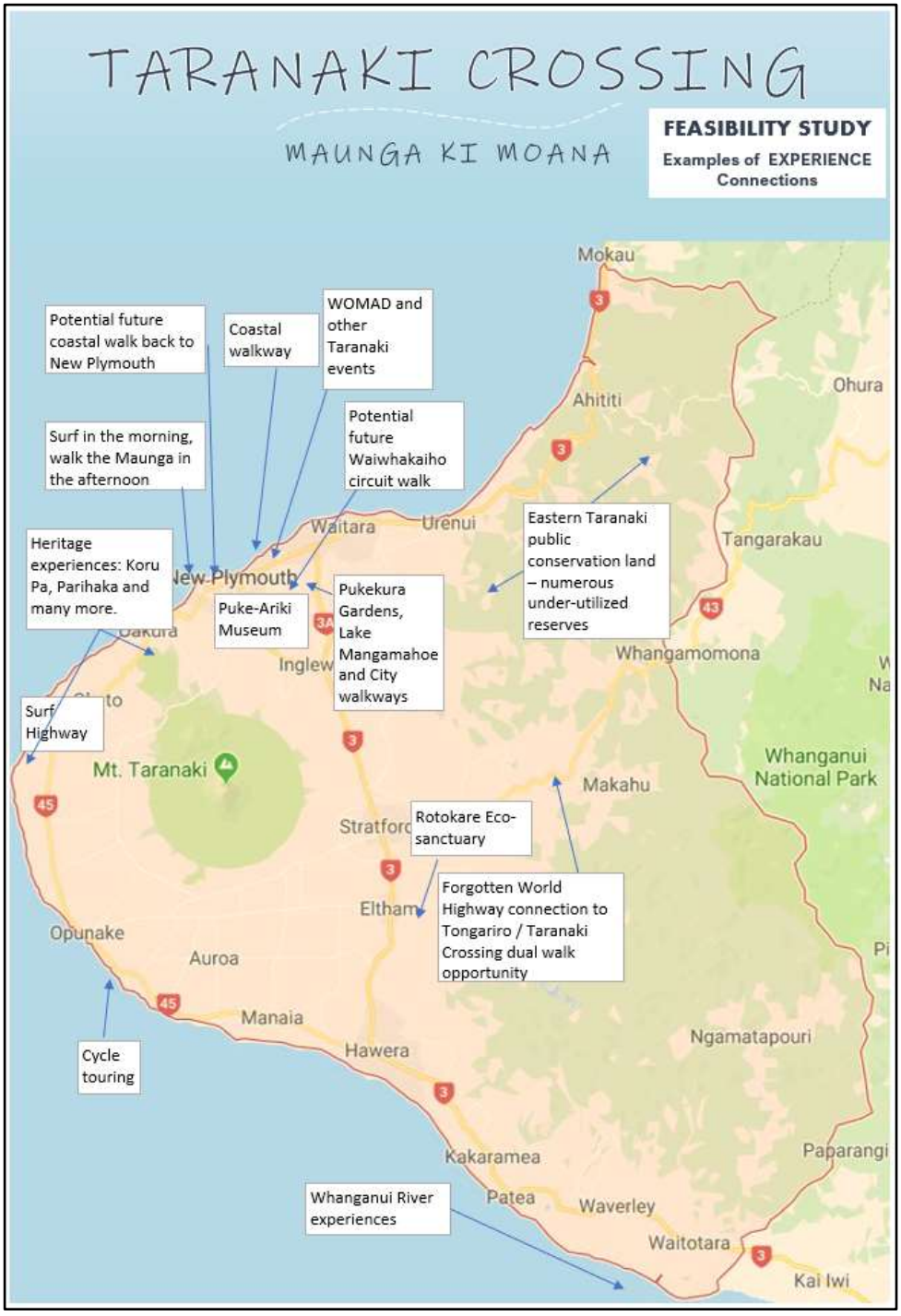


Figure Thirty-Two: Visitor Spend by Product in Taranaki, Year to July 2018

Earlier in our report we flagged the following potentially new or more direct opportunities to 'monetise' the Taranaki Crossing experience:

- Hut fees
- Serviced Lodge accommodation at Dawson Falls, Stratford Mountain House and potentially in a new facility on the Pouākai Range
- Café expenditure at Dawson Falls, Stratford Mountain House, the North Egmont Visitor Centre and at cafés in and around Mangorei Road
- Guiding services
- Shuttle transport services
- Travel itinerary providers who include the Taranaki Crossing into a package, alongside other Taranaki experiences, transport, food and accommodation

In addition, direct monetisation opportunities will also arise from the purchase of materials, management, construction and maintenance of tracks, huts, infrastructure and facilities associated with the Taranaki Crossing. The Taranaki Crossing may also leverage the growth of interest in investment in ancillary experiences both within and outside the region e.g. the Forgotten World Highway.

Alignment with PGF principles and criteria

Objectives and goals

We have closely examined the investment statement and application templates for the Provincial Growth Fund. We have also assessed recent successful applications. These documents state successful projects will help achieve government's objectives by:

1. Creating jobs, leading to sustainable economic growth.
2. Increasing social inclusion and participation.
3. Enabling Māori to realise aspirations in all aspects of the economy.
4. Encouraging environmental sustainability and helping New Zealand meet climate change commitments (alongside their support of productive use of land, water and other resources).
5. Improving resilience, particularly of critical infrastructure.
6. Diversifying the economy.

The Taranaki Crossing project will make strong contributions to objectives 1, 2, 3, and 6 and moderate contributions to other objectives.

Content matters

Previous successful applications and the information on the MBIE's PGF website suggests the PGF is designed to support tourism-related funding proposals and applications that:

- Encourage more tourism **all year round**, rather than just the traditional high season, and to **more regions**
- Reduce existing **pressures on tourism infrastructure**, particularly in communities that lack local funding capacity to achieve this goal
- Add **value to the tourism and the visitor economy**, including attracting high-value tourists
- **Enhance the productivity** of tourism businesses, drive innovation and support professional tourism career development
- Improve the sustainability of the industry or assist the industry's transition to a **low-emission** footprint
- Develop **Māori culture and iwi involvement** in tourism ventures as an asset for New Zealand tourism

The Taranaki Crossing scores well against these elements. It will: help distribute more tourism to regions outside the main routes; does not suffer from pressure on its visitor infrastructure; will be a catalyst to visitor sector growth; will support the development of guiding and other visitor services; will help justify provision of lower-carbon shuttle transit services and; provides opportunity for more involvement of iwi.

Process matters

Our reading of PGF related material also suggests there are several critical 'process' matters that need to be addressed to receive PGF funds. We list these below, together with a statement about how these matters will be satisfied:

- Demonstrate the way in which the project will contribute to lifting the productivity potential of the region: Our earlier material provides clear evidence of the employment, GDP and intrinsic contributions that will be made as a result of providing the Taranaki Crossing.
- Provide clear evidence of public benefits (i.e. benefits other than increased profitability for the applicant): Many of the benefits from the Taranaki Crossing are tied to visitor use and enjoyment of the experience rather than the profits accruing to individuals.
- Be connected to regional stakeholders and frameworks: The Taranaki Crossing proposal is the product of over five years of intensive research, engagement and inclusion within core documents like Tapuae Roa and the Taranaki Visitor Sector Action Plan.
- Address risks to project execution: We have recommended engagement of a skilled project manager and other measures to ensure smooth project execution.
- Have a governance framework in place: We have recommended the existing Steering Group be retained to provide on-going governance influence over project deliver.

Employment and asset ownership opportunities

We expect Commercial In full-time equivalent (FTEs) persons to be employed during the two years of track and bridge construction for the Taranaki Crossing. Conservative and short-term estimates of the additional direct employment opportunities that may occur are as follows:

- Guiding – six-month season – Commercial In persons.
- DOC operational and management staff – Commerc persons.
- Shuttle and visitor transport services – Commercial Inf persons.
- Café and on-mountain accommodation – Commercial Inf persons.

If a new Lodge is established on the Pouākai Range, this may generate a further Commercial In FTEs.

Summary

Monetary cost and benefit assessments suggest the Taranaki Crossing adequately satisfies the 'feasibility' criteria that may be applied to this area of consideration.

Conclusion - the feasibility of the Taranaki Crossing experience

Our task was to confirm the practicality, workability, viability, lawfulness, achievability, sensibility, cost-effectiveness and the general reasonableness of the Taranaki Crossing proposal.

To satisfy the above 'feasibility' criteria, and to define a preferred investment proposition we: talked with iwi; assessed current use and likely market demand; assessed the cost of making components of the Taranaki Crossing market-ready; assessed statutory and other policy instruments; assessed the relationship to complementary initiatives like the Taranaki Maunga project; assessed available funding and the criteria affecting investment of PGF funds; assessed the environmental and ecological effect of Crossing components and; applied various other monetary and intrinsic cost and benefit criteria.

We drew upon the memo considered by the regional economic development Ministerial Group, together with our terms of reference to suggest the feasibility of the Taranaki Crossing would be confirmed if:

- Cultural values were protected and enhanced.
- An appropriate balance was found between the need to protect and preserve our National Parks and the need to provide for their use and enjoyment.
- Environmental impacts were sustainably managed.
- Components of the Crossing were suited to the visitor market.
- Safety concerns were appropriately managed.
- The cost of capital and costs for maintaining the track / facilities and related infrastructure could be met within available budgets.
- Benefits to the Taranaki economy outweighed the costs of the investment required to create the experience.

We also applied Google's very practical guidance about what truly makes a proposal feasible. This emphasised such as things as: practicality, workability, viability, lawfulness, achievability, sensibility, cost-effectiveness and general reasonableness of the proposal.

We have concluded the Taranaki Crossing proposal satisfies the criteria inherent in the above determinations.

If the upgrade of the North Egmont Visitor Centre is put to one side, enough funds are available to create a substantive set of experiences, with suitably graded tracks and appropriate infrastructure, appropriate management of environmental effects, benefits to the Taranaki economy and most importantly, protection of cultural and biodiversity values to justify the Taranaki Crossing proceeding.

With the above points in mind, we recommend the release of $13,340,000 to complement funds already provided, to make a total of $Commercial Information for expenditure on the Taranaki Crossing.

Further feasibility assessment of individual components is not required, except for that needed for the final design and consent associated with project management and the separate consideration of matters related to the North Egmont Visitor Centre.

We have made several important discoveries in our 'feasibility assessment' journey. These include:

- The components of the Taranaki Crossing provide a '**smorgasbord' of experiences** ranging from short to two / three-day walks. These experiences are suited to a wide variety of market segments.
- The **Pouākai Hut** is under extreme pressure. Health and safety implications arise. It should immediately be placed within the DOC booking system and the Hut should be more actively managed. Priority should be given to increasing its bunk capacity.
- **Iwi** should be provided with expanded opportunities to be more actively involved in decisions about the management, construction and potential ownership of new and upgraded Park assets. This may include ownership of a new serviced lodge on the Pouākai Range and provision for an expanded role within the North Egmont Visitor Centre.
- Commercial Information
- A new track is not required across the **Ahukawakawa Swamp**. The landscape and ecological implications associated with construction of this would not be appropriate. Focus should be directed toward the upgrade of the existing track, with a piled boardwalk replacing the existing floating raft system.
- Nor is a new track required as the means to reduce risk in the **Boomerang Slip** area. Less impactful methods and warning signs would significantly reduce current risks.
- A suspension bridge should be constructed across the **Manganui Gorge**. This will become a walk-attraction experience in its own right.
- A highly experienced **Project Manager** should immediately be engaged to lead and drive the delivery of the necessary upgrades required to establish all components of the Taranaki Crossing. The objective should be to have all earmarked funding committed by July 2020.
- The appointed Project Manager should be partnered with a Manager capable of ensuring matters of iwi concern are fully embraced during project implementation with side benefits of building the capabilities of this person to enable them to become a highly skilled project manager.
- The current Crossing **Steering Group**, with minor refinement and appropriate stipend, should be invited to provide appropriate oversight to project delivery.
- Early consultation indicated the **Taranaki Whanganui Conservation Board** were broadly supportive of the Taranaki Crossing proposal. Now that our findings have been refined, the Board should be further briefed and invited to add value to the likely direction of travel.
- Funds need to be made available both for **capital costs (capex)** and for the cost of maintaining and operating the upgraded Taranaki Crossing tracks, bridges and huts (**opex**) etc. The size of the funding required to be set aside for opex will affect the scope of the capital works that may be undertaken. We recommend consideration be given to providing for opex at a rate Comm% of the sum expended on capex.
- All opex derived from capex for new components of the Taranaki Crossing should be clearly tagged for future expenditure within Egmont / Taranaki National Park rather than it being consumed within DOC's general budget.

- The **North Egmont Visitor Centre** is a valued and popular visitor attraction. It should be upgraded, but not as part of the current Crossing proposition. Proposals for its redevelopment should be addressed via a stand-alone PGF application. Iwi have a critical role to play in deciding on the preferred role for this facility and in defining the scale of investment required to achieve this objective. Separate consideration also has the advantage of enabling iwi to bring to the Taranaki Crossing experience a significant new cultural and heritage-focused offering reflecting their aspirations for the Maunga
- The Pouākai **Tarns**, courtesy of Facebook and Lonely Planet exposure, are the current 'sought-after' short or one day walk experience within the Egmont / Taranaki National Park. Managing the large number of walkers, by establishing additional boardwalks and an expanded viewing platform, should continue to be made a priority for investment.
- **Shuttle transport** of visitors to Park entry points should be extended, with the potential help of subsidies. Shuttles have a lower carbon and ecological footprint than providing for more use of cars and carparks within the Park.
- Our report provides comprehensive information about the feasibility of all components of the Crossing. We have also provided comprehensive information about the design, materials and environmental impact-reducing methods to be applied to construct these components. We do not see a need for **further feasibility work** except for that required as part of detailed project management and that required for the North Egmont Visitor Centre.

Appendix one: Accommodation - comparison between a potential Pouākai Lodge and current accommodation / services on the Hump Ridge Track

	Hump Ridge	Taranaki Crossing	Comment
Experience	Three-day loop walk track near Tuatapere in South-West Fiordland; 21km per day; two lodges; 900 metre climb to sub-alpine environment and Otara Lodge with tarns; mixed podocarp forest; extensive boardwalks of high quality on all climb and wet sections; strong 1920s heritage values with extensive viaducts on third day with stay at Port Craig Lodge	Two to three/four-day point-to-point walk (yet to be fully developed); multiple-entry points and shorter-walk options; located in the Egmont / Taranaki National Park; with tarn and unique Ahukawakawa wetland areas, Pukeiti Gardens experiences and exit at the coast; multiple 'tramping' style accommodation options with possibility of Pouākai Lodge.	When completed, the Taranaki Crossing will offer a similar two / three-day experience to the Hump Ridge but with slightly shorter walking distances and less strenuous climbs. Both tracks offer iconic natural and person-made attractions
Capacity	45 persons max for three-day option	Capacity of continuous walk will be limited by accommodation options	The Taranaki Crossing offers shorter walk alternatives compared to the Hump Ridge. Hump Ridge is fully booked for two months around Christmas
Options	Provides options ranging from freedom walking to guided / fully serviced walks. Has helicopter option for packs or persons and general service e.g. laundry and food transport. Includes six private rooms with bedding and shared bathrooms and guiding	Currently mostly freedom walking focused but with guided option; DOC hut options plus mountain accommodation at Dawson Falls, Stratford Mountain House, Manganui Plateau Ski lodge accommodation etc.	The Hump Ridge offering demonstrates the value of serving different segments of the market. Available options provide significant 'monetisation' opportunities. These could be replicated within the Taranaki Crossing
Season	Six months	Six months	Both options could be extended to include part of the winter season
Pricing	$Commerc for freedom walk and shared bunk accommodation; $Commerc per night extra for twin room accommodation with bedding; shuttle transport options to start of track;	Current arrangements - standard DOC hut fees $Comm per adult night; walkers bring everything they require	Hump Ridge options indicate the market interest in serving different price points

	hot shower and towel ($Comm); coffee / tea at no cost and kitchen utilities available; beer and wine for purchase; free porridge breakfast		
Management	Concession held by Hump Ridge Trust but operated by Hump Ridge Track Ltd.; $c me paid to DOC per three-day walker; boardwalks maintained by Trust, coastal walk track maintained by DOC	DOC managed; hut wardens over summer	Hump Ridge option demonstrates opportunity to free DOC staff from service provision roles and enable them to focus on protection and preservation elements
Current use	Commercial three-day walkers	Variable (the Maunga ki Moana complete Taranaki Crossing does not yet exist)	Hump Ridge is 'paying its way' with capacity to extend use outside the peak Christmas period
Employment	Commercial Inf hut wardens (six-month contract) plus one full-time manager; sustains 2 B & Bs / three motels and three hotels plus other multiplier benefits in Tuatapere – petrol / supermarket etc; sustains helicopter company	Hut wardens and DOC staff; one guiding company; multiplier benefits into the Taranaki economy	Hump Ridge Ltd managers said Tutapere would 'be dead' if it were not for the Hump Ridge Track experiences
Lodge construction cost	$Commercia (Okara) and $Commer (Craig)	Variable	The big cost item for construction at Hump Ridge was for helicopter time and the construction of boardwalks. The same would apply on the Taranaki Crossing
Summary	The Hump Ridge Track demonstrates the opportunities available for development of the Taranaki Crossing. Hump Ridge Track employment and multiplier benefits are demonstratable. The critical infrastructure item needing development is serviced accommodation on the Pouākai Range, Commercial Information . The concession and management options applied at Hump Ridge could be applied with ease at the Taranaki Crossing perhaps with an iwi-based Trust and company at the helm		

John Hutchings
Partner, HenleyHutchings
Level 4, 276 Lambton Quay
Wellington 6011
Phone: Privacy of natural persons
Privacy of natural persons
www.henleyhutchings.co.nz

Henley Hutchings