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Economic impacts of a Taieri Gorge extension to the Otago Central Rail Trail



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2. Executive summary

This report has been commissioned by the Otago Central Rail Trail Trust. Its purpose is to estimate the potential use and economic impacts of a proposed Taieri Gorge extension to the Otago Central Rail Trail. An extension would give opportunities for bikers or walkers to travel between Middlemarch and Taieri, allowing for easy access from Dunedin with its large population and range of supporting visitor amenities.

At its heart, this report helps answer the following questions:

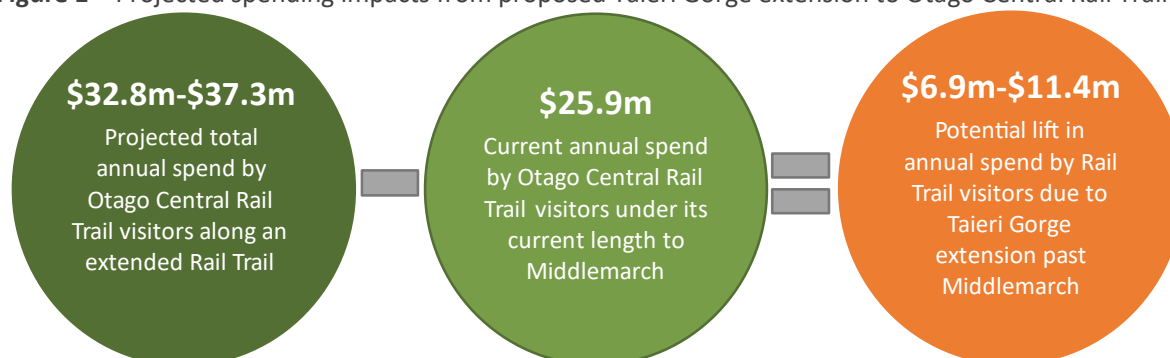
- How many people use the existing Otago Central Rail Trail and what are the economic impacts?
- How much usage could occur along a Taieri Gorge extension to the Otago Central Rail Trail?
- What would the potential additional economic benefits be from the Taieri Gorge Trail extension?

This report considers the economic impacts of an alternative use of the Taieri Gorge railway corridor as a trail for biking or walking, it does not include comparisons against the existing economic and social impacts from current rail operations along the Taieri Gorge, nor does it compare the capital or operational expenditure required under either use. It is recommended that further analysis is undertaken across all these factors to properly inform long-term decision-making regarding usage of the rail corridor.

2.1. Key findings

- The existing Otago Central Rail Trail between Clyde and Middlemarch attracts 12,756 trail users a year, of whom an estimated 11,901 are visitors who collectively spend \$25.9 million per annum.
- Rail Trail visitors stay over twice as long and spend double per day compared to typical travellers.
- A high and low usage scenario for the proposed Taieri Gorge trail extension have been modelled to factor in two trail corridors under consideration. Both trail options are about 60 kilometres and within an e-bike's range, which matters given that 53% of Rail Trail users ride an e-bike.
- Under a high scenario, 39,306 annual uses of the Taieri Gorge trail extension have been modelled, while 23,009 annual trail uses were modelled under a low scenario.
- It is estimated that visitors riding or walking the Taieri Gorge trail extension under these two usage scenarios could drive a \$6.9 million to \$11.4 million spending lift.
- Almost three quarters of total annual demand under the high scenario would be from trail users completing the Taieri Gorge segment only as a short 'destination ride' day trip, with the remaining riders being 'through bikers' traversing the length of the Otago Central Rail Trail.
- The 'destination ride' status modelled in the high scenario relies on a unique riding experience, which is more likely if the trail includes stretches of the most iconic heritage rail infrastructure.
- Estimated use of the Taieri Gorge trail, even under the high scenario, is conservative compared to what many other trails across New Zealand have achieved. Trails below the low usage scenario are often relatively technical compared to a rail trail gradient and so suit a narrower set of users.
- Many day trippers will likely make Dunedin their holiday base, meaning that additional spending will primarily accrue to Dunedin. The more amenity that develops in Middlemarch and along the trail corridor in response to demand, the wider the benefits will diffuse.

Figure 1 – Projected spending impacts from proposed Taieri Gorge extension to Otago Central Rail Trail



3. Current state of biking along Otago Central Rail Trail

This section gives a baseline understanding of usage patterns along the existing Otago Central Rail Trail.

3.1. About the existing Otago Central Rail Trail

The existing Otago Central Rail Trail is a 152-kilometre ride or walk that follows the former Otago Central railway line between Clyde and Middlemarch. The trail has a gentle gradient making it ideal for trail users of all ages and fitness levels. People are attracted to the trail by its blend of heritage, with old railway bridges and tunnels, and awe-inspiring vistas of Central Otago's rugged terrain. Along the way there are also several charming old towns and watering holes, where trail users can stay or enjoy refreshments.

Figure 2 – Map of Otago Central Rail Trail



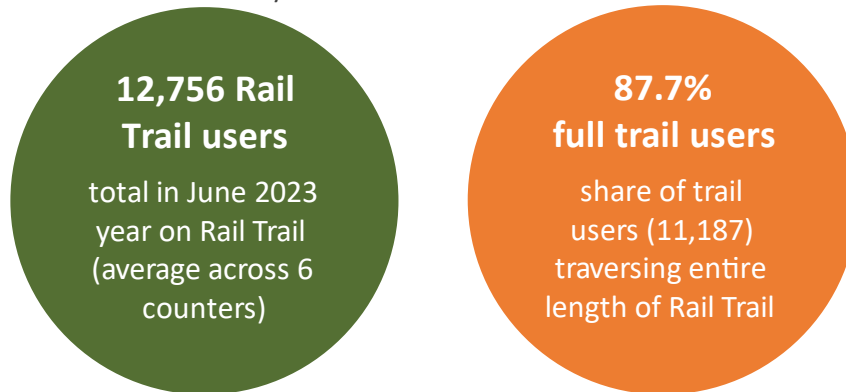
3.2. How many people use the Otago Central Rail Trail?

It is estimated that approximately 12,756 people journeyed along the Rail Trail in the June 2023 year¹, with 87.7% (11,187) of these people being 'full trail users' and the remainder completing parts of the trail².

¹ This was provided by the Otago Central Rail Trail Trust from average use at six Department of Conservation (DOC) counters. The estimate captures core use for people making significant journeys along the trail and does not capture all incidental use close to larger populations (i.e. Alexandra) when people momentarily hop on the trail for a short commute or daily exercise. A counter by Airport Road near Alexandra highlighted 40,446 trail uses on that short stretch alone in the June 2019 year, while other counts that include incidental use have even highlighted as many as 80,380 trail users (2021 Evaluation of Ngā Haerenga Great Rides of New Zealand).

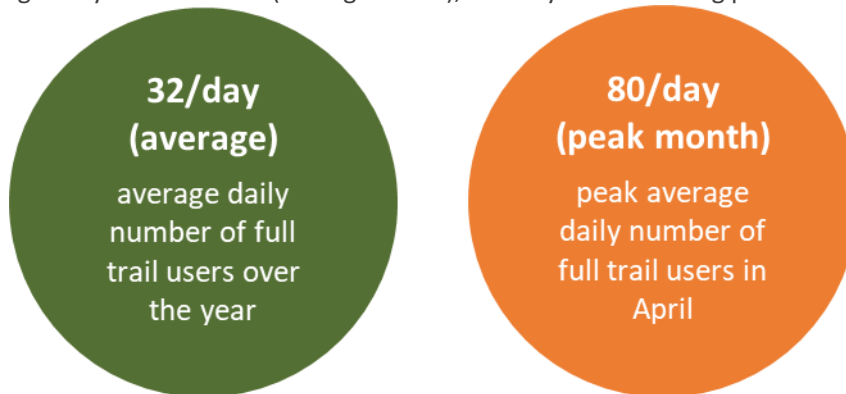
² The Otago Central Rail Trail Monthly Report (June 2023) of its trail users survey (283 respondees) showed 87.7% of trail users over the past year spent three or more nights on the Rail Trail. This cohort is assumed to be 'through bikers' or 'full trail users', who are traversing much or all of the trail. Applying this proportion to the 12,756 total average number of Rail Trail users suggests that 11,187 trail users were through bikers along the full trail. This through estimate is similar to a private counter on an isolated trail section near Wedderburn (11,578 users), which is predominantly passed by through bikers as the section is not particularly scenic compared to other sections with tunnels and viaducts and so doesn't get a lot of people passing on short trips.

Figure 3 – Rail Trail users in June 2023 year and share of users who traverse the full Rail Trail length



There is a high degree of seasonality for Rail Trail use. The cohort of 11,187 people who traversed the entire length of the trail last year translates into about 32 users per day passing along each point. But usage varies between 1 full trail user per day in July and 80 per day during the trail’s high season in April.

Figure 4 – Average daily full trail users (through bikers), across year and during peak months



Survey evidence (Otago Central Rail Trail Monthly Report, June 2023) has further highlighted that:

- Visitors accounted for 93.3% of trail users on the Rail Trail, with the remainder being locals.
- Two thirds of visitors are domestic travellers (67.8%) from other parts of New Zealand.
- Almost half (46.6%) of Rail Trail users are aged over 60 years, with 31.8% aged 50-59 years.

Figure 5 – Number of trail users on the Rail Trail, June 2023 year, author estimates



The Rail Trail was the primary purpose of travel for 92.4% of Rail Trail visitors, which suggests the Rail Trail was the primary travel motivation for 10,997 of the 11,901 visiting trail users from outside the local area.

4. Current economic impacts of the Rail Trail

This section introduces the economic impacts of bikers and walkers on the existing Otago Central Rail Trail. The purpose is to give a baseline understanding of existing economic impacts, which the additional impacts from the proposed Taieri Rail Trail extension can be compared against.

The analysis focusses on spending by visitors whose primary reason for coming to Central Otago is to use the Rail Trail because their spend represents fresh money into the local area that would not have existed in the absence of access to the Rail Trail. The potential employment supported by this spending is also estimated. Spending by local trail users is not factored into core economic impacts as it is likely they would spend their budget on other things in the local area had they not used the Rail Trail.

4.1. Characteristics of a Rail Trail visitor's holiday

The average Rail Trail visitor stays for 5.7 nights in the local area and spends \$414 per day.

These Rail Trail visitors stay more than twice as long and spend more than double per day compared with the typical traveller in New Zealand.

Figure 6 – Stay length and daily spend by Rail Trail visitors (author calculations)³



Of these 5.7 nights spent in the local area by Rail Trail visitors, it is estimated that 3.8 days are spent along the Rail Trail itself on average, with a total of 1.9 days during the holiday spent in the local area at either end of the Rail Trail experience⁴.

4.2. Spending and jobs supported by Rail Trail visitors

It is estimated that visitors to the Otago Central Rail Trail supported a total of \$25.9 million of new expenditure in the local area in the June 2023 year⁵.

³ Rail Trail visitors' stay characteristics pertain to the June 2023 year. These have been calculated by drawing on information from the Otago Central Rail Trail Monthly Report (June 2023) from its trail users survey, the 2021 Evaluation of Ngā Haerenga Great Rides of New Zealand summary for Otago Central Rail Trail, and inflation data. Characteristics across all visitors are based on author calculations of data drawn from the Ministry of Business, Innovation and Employment (MBIE), Statistics New Zealand, and Data Ventures.

⁴ Calculated using the Otago Central Rail Trail Monthly Report (June 2023) from its trail users survey.

⁵ The new expenditures supported in the local area by visitors to the Rail Trail was calculated as the total number of visitors to Central Otago on the Rail Trail, for whom using the Rail Trail was the main purpose of their trip, multiplied by the average stay length and daily spend.

Most of the \$25.9 million of annual visitor spending related to the Rail Trail currently accrues to Central Otago, with very little flowing into Dunedin's economy. Even though the trail heads of the Rail Trail are situated in both Central Otago (Clyde) and Dunedin City (Middlemarch), Rail Trail users typically only cross land which is in Dunedin City for no more than one day of their journey (between Hyde and Middlemarch). Furthermore, a survey of Rail Trail users showed that 82% begin their journey in Clyde, with 92% of visitors travelling by aircraft using Queenstown rather than Dunedin airport⁶, thus very few will stay in Dunedin City at either end of their trail experience.

It is currently estimated that only about \$5.2 million of the \$25.9 million of annual Rail Trail visitor spend passes through Dunedin City, with the rest being concentrated across Central Otago.

Rail Trail visitors spend money not just on trail-related services such as bike hire and transport, but they also spend money on accommodation, food and beverage, as well as non-trail related activities during rest days.

Some 42% of Rail Trail visitors spent money on non-trail related activities (e.g. vineyards, museums, golf) in association with their trail experience. This is a much higher proportion than nationally, where only 14% of trail users on other cycle trails spent money on such activities⁷.

New spending by Rail Trail users currently supports a considerable amount of employment along the way.

It is estimated that as many as 132 filled jobs in the June 2023 year were supported by Rail Trail visitors' spending during their time in the local area⁸.

This calculation is based on the theoretical level of employment which could be supported by bike visitors' spending. Actual outcomes may differ depending on each business' hiring behaviour.

Figure 7 – Spending and jobs currently supported by Rail Trail visitors, June 2023 year



⁶ Source: Otago Central Rail Trail User Survey, May 2015.

⁷ Source: Otago Central Rail Trail Monthly Report (June 2023).

⁸ A filled jobs estimate was formed by using a multiplier of tourism spending to jobs (calculated with inflation-adjusted data from Statistics New Zealand's 2022 Tourism Satellite Account).

5. Potential usage of a Taieri Gorge extension

This section introduces potential usage of a proposed Taieri Gorge trail extension to the Otago Central Rail Trail from Middlemarch to the Taieri. Two potential trail corridor options have been considered.

5.1. About the proposed Taieri Gorge trail extension

The Otago Central Rail Trail Trust is assessing the feasibility of two potential trail options for a proposed Taieri Gorge trail extension from Middlemarch through to the Taieri. The options are:

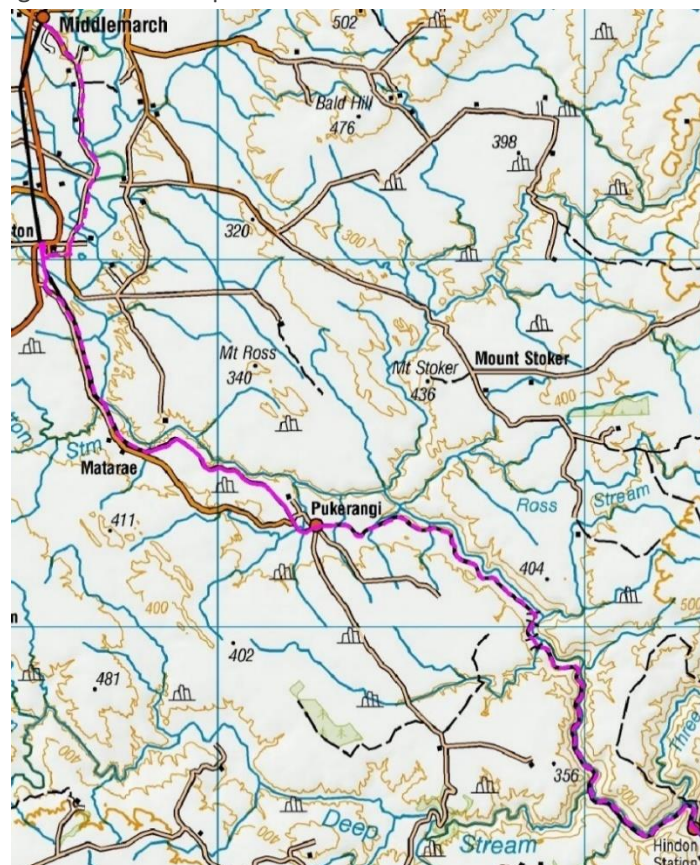
- 1) Middlemarch to Pukerangi away from the railway (to accommodate a historic steam train proposal from Middlemarch to Pukerangi), then Pukerangi to North Taieri via the rail corridor.
- 2) Middlemarch to Pukerangi away from the railway, Pukerangi to Hindon via the rail corridor, then Hindon to Outram via a disused walking track down the true right of the Taieri River.

Both trail options would be around 60 kilometres long and would have an easy gradient along a mix of existing tracks, roads, railways, and new tracks. Such a trail length means that it is within the range of a single charge of an e-bike, which matters given that 53% of existing Rail Trail users ride an e-bike, according to Otago Central Rail Trail surveys (to June 2023). For riders keen on a shorter journey, it would be possible to start partway along at Pukerangi or Hindon.

The ends of each option in the Taieri are easily accessible from Dunedin and Middlemarch, and could be serviced by existing Otago Central Rail Trail operators, or Dunedin-based bike hire and shuttle companies. Trails being developed in the Taieri will give connections for riders wishing to continue on to Dunedin.

The first half of each trail option being considered from Middlemarch to Hindon is the same and includes features such as the Reefs, as well as several tunnels and bridges.

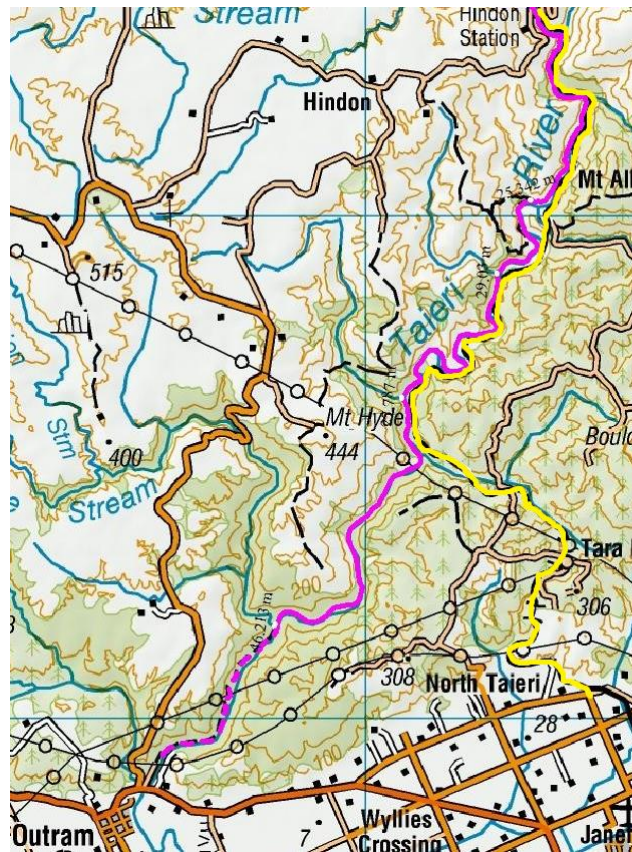
Figure 8 – Map showing first half of the potential trail extension from Middlemarch to Hindon (in purple)



The two trail options differ greatly in the second half of their journeys after Hindon:

- The first trail option would continue along the remaining length of the Taieri Gorge Railway through to Taieri, a segment which offers some of the most iconic heritage rail infrastructure and scenery, and includes a crossing of the impressive Wingatui Viaduct, as well as several other bridges and railway tunnels.
- The second option would have less opportunity for trail users to see and experience heritage infrastructure, and would continue along a trail along the river through bush through to Outram.

Figure 9 – Map showing two options for Taieri Gorge extension after Hindon – yellow is the first trail option following the rail corridor, while purple is the second trail option along the river.



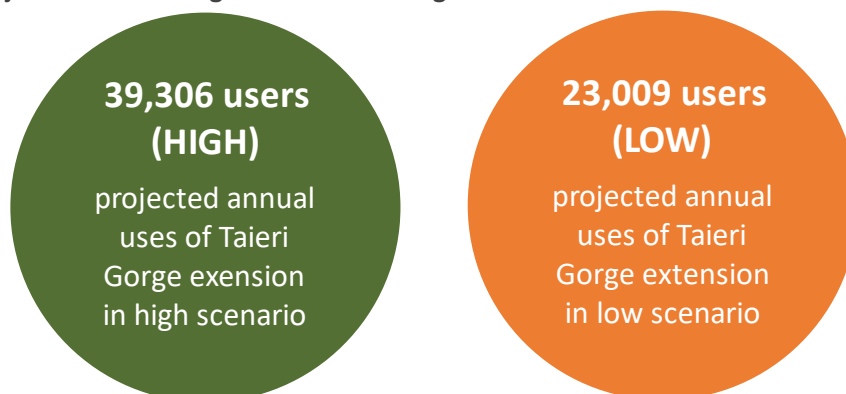
Hindon Road-Rail Bridge, Credit: Benje Patterson

5.2. Projected usage of the Taieri Gorge trail extension

Both a high and low scenario for usage of a proposed Taieri Gorge trail extension have been modelled. Modelling has been informed by desktop methods based on demand patterns for recently constructed destination trails elsewhere (e.g. the Lake Dunstan Trail), alongside discussions with stakeholders familiar with existing rail trail users in Central Otago, and site visits to view the proposed trail corridors firsthand⁹.

There could be 39,306 annual uses of the Taieri Gorge extension under a high scenario, while a low scenario would have 23,009 trail users.

Figure 10 – Projected annual usage of the Taieri Gorge trail extension



Demand under both the high and low scenarios will be a combination of through bikers, for whom the Taieri Gorge extension forms part of a traverse of the entire length of the Otago Central Rail Trail, as well as trail users who choose to ride along the Taieri Gorge segment only as a day trip.

Table 1 – Projected annual usage of the Taieri Gorge trail extension by type of trail user

Projected annual usage of a Taieri Gorge trail extension		
<i>Projected use based on demand patterns for similar trails, adjusted for Dunedin visitation + population</i>		
Type of trail user	Annual trail usage by type of trail user	
	High scenario	Low scenario
Through biker (completing entire Rail Trail)	11,187	8,949
Taieri Gorge segment only - visitor	18,470	9,235
Taieri Gorge segment only - local	9,649	4,825
Total annual Taieri Gorge trail extension users	39,306	23,009

Under the high scenario, almost three quarters (28,119) of total annual demand (39,306) would need to be from trail users completing the Taieri Gorge segment only as a short destination ride, with the remaining riders being through bikers traversing the length of the Otago Central Rail Trail.

Achieving the 'destination ride' status modelled in the high scenario is reliant on riders enjoying an exceptional and unique riding experience. Becoming a major destination ride is more likely if the Taieri Gorge trail corridor encompasses the most iconic heritage rail infrastructure and scenery.

Any compromises to the trail corridor that lessen the uniqueness of the riding experience may attract fewer trail users – such as those modelled under the low scenario.

⁹ The assumptions underpinning this modelling are introduced in more detail in the next subsection.

5.3. Approach to modelling projected trail usage scenarios

In general terms, modelling of the projected usage scenarios for the Taieri Gorge trail (introduced in the previous section) was primarily informed by analysis of recently constructed destination trails elsewhere in New Zealand. The usage patterns from elsewhere were applied to the local context in Taieri by taking into consideration relative differences in nearby resident populations, as well as underlying visitor flows. Data related to the existing behaviours of riders on the current Otago Central Rail Trail was also used to inform the modelling, complemented by discussions with stakeholders familiar with rail trail users, and site visits to view firsthand the characteristics of the proposed Taieri Gorge cycle trail corridors.

More specifically, with regards to each of the two scenarios, the following assumptions were made:

- The high scenario of 39,306 annual uses assumes that through traffic on the Taieri Gorge extension is equivalent to 100% of current through traffic on the Otago Central Rail Trail¹⁰. Additionally, with regards to people riding the Taieri Gorge extension as a standalone day ride segment, it is assumed that the Taieri Gorge trail extension will be viewed as a destination ride that is as equally appealing to residents and visitors as the recently opened Dunstan Cycle Trail between Bannockburn and Clyde. This assumption is most likely to hold if the Taieri Gorge trail encompasses the most iconic heritage infrastructure of the Taieri Gorge rail corridor. Under this assumption, differences in the number of day riders between the Dunstan and Taieri trails will only be due to different relative sizes of each place's local population and visitor economy.
 - The Dunstan Trail had 60,000 uses in its second year¹¹, which was 83% driven by visitors¹². Although Dunedin's resident population is almost twice the population which lives within 50 kilometres of the Dunstan Trail, the underlying visitor flows through Dunedin are only about 20% of the size of the visitor catchment that holidays near the Dunstan Trail¹³. Given the importance of visitors to overall trail numbers, this smaller visitor catchment for the Taieri is a crucial factor behind the more conservative estimate of 28,119 segment only uses for the Taieri Gorge trail under the high scenario.
- The low scenario of 23,009 annual uses conservatively assumes that only 80% of current through traffic on the Otago Central Rail Trail continues along the Taieri Gorge extension. Additionally, with regards to people riding the extension as a standalone day ride, the low scenario assumes that local residents and visitors have a 50% lower propensity to view the trail as a destination ride. This means that destination ride number for the segment as a day trip under the low scenario (14,060) have been set at 50% of what they were under the high scenario (28,119).

5.4. How realistic are these scenarios?

As cross-checks of how realistic the projection scenarios are for the proposed Taieri Gorge trail, it is important to compare the modelled usage against a broader set of trails across New Zealand, as well as against the visitor amenities available in the local area.

¹⁰ Through riders on the Otago Central Rail Trail were estimated at 11,187 in the June 2023 year.

¹¹ After welcoming over 80,000 trail users in its first year, the Dunstan Trail had 60,000 trail uses in its second year. It is assumed that the second year will be more indicative of long-term demand, after the first-year rush.

¹² Based on analysis of Trailforks data on the origins of riders. Visitors to the Dunstan Trail are assumed to be people who are usually resident of places further afield than Cromwell, Alexandra, Queenstown, and Wanaka.

¹³ Analysis of Statistics New Zealand population estimates for 2022 show that Dunedin's population (130,400) is 83% larger than that of Queenstown-Lakes, Cromwell, and Alexandra (71,300). Data from the Ministry of Business, Innovation, and Employment's Accommodation Data Programme showed that commercial guest nights in Dunedin in the June 2023 year were 872,900, while across the Queenstown, Wanaka, and Central Otago tourism catchments guest nights totalled 4,514,200 over the same period.

The following table compares the two projection scenarios for usage of the Taieri Gorge trail against other trails. Immediately apparent is that even the high scenario is relatively conservative compared to what many other trails achieve, including some in relatively remote places away from major population bases. Many trails below the low usage scenario for the Taieri Gorge extension are also of a relatively technical grade compared to a rail trail gradient and so appeal to a narrower cross section of trail users.

Table 2 – Comparing projected usage of the Taieri Gorge trail against other cycle trails

Projected annual usage of Taieri Gorge trail extension compared to usage of other trails	
<i>June-21 year (from NZ Cycle Trails), except Dunstan is May-23 year (from Dunstan Trail's own data)</i>	
Trail name	Annual trail usage
Hawke's Bay Trail	426,760
Remutaka Cycle Trail	316,905
Queenstown Trails	316,274
Tasman's Great Taste Trail	315,478
Coppermine Trail	102,272
Te Ara Ahi	99,200
Hauraki Rail Trail	82,063
West Coast Wilderness Trail	73,187
Alps 2 Ocean	68,534
Twin Coast Cycle Trail	62,665
Dunstan Cycle Trail	60,000
Great Lake Trail	48,387
HIGH - Taieri Gorge extension	39,306
Waikato River Trail	38,523
Mountains to Sea Trail	31,394
Roxburgh Trail	23,586
LOW - Taieri Gorge extension	23,009
Queen Charlotte Track	22,956
Motu Trails	21,726
Timber Trail	18,313
Clutha Gold Trail	12,756
Old Ghost Road	11,940
Around the Mountains	8,222
St James Cycle Trail	6,139

It is also important to assess whether Middlemarch has enough accommodation to support the trail extension. Not all trail users need accommodation that is immediately beside a trail head. Of the 39,306 trail users in the high scenario, 28,119 are likely to be day trippers who are either residents from close by or visitors who are able to base themselves in accommodation within Dunedin's urban boundaries.

Only the 11,187 trail users who are through riders along the length of the Otago Central Rail Trail will specifically need accommodation close to the trail – this translates into about 32 per day on average across the year, or 80 per day during peak cycling season in April. Middlemarch already has just enough capacity to meet this demand and there would potentially be further investment in quality accommodation and hospitality should the trail open. A stocktake of Middlemarch's accommodation across its hotel, camping ground, B&Bs, as well as holiday homes and private rooms, shows there are already around 40 stay units, able to accommodate more than 80 people.

6. Potential impacts of a Taieri Gorge extension

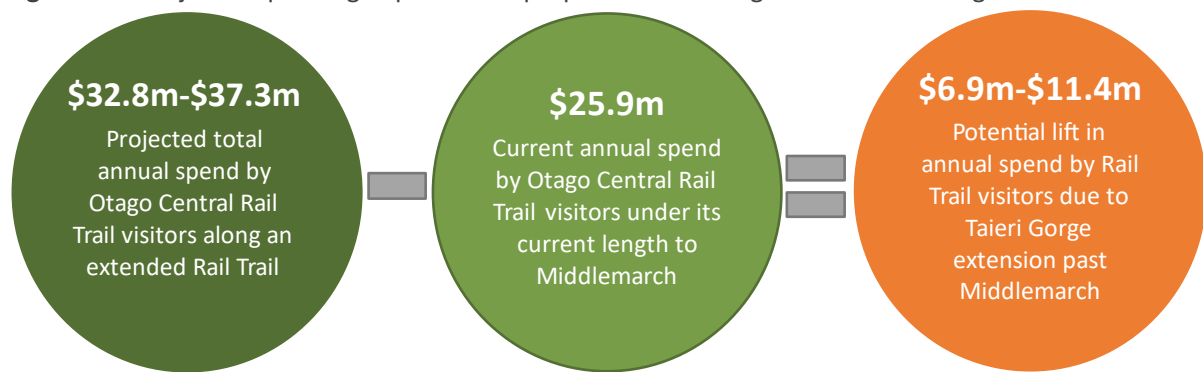
This section introduces the potential additional spending attributable to the Taieri Gorge trail extension. Employment that could be supported by this additional spending is also estimated.

6.1. Potential extra spend from the Taieri Gorge extension

Modelling under the high usage scenario for the Taieri Gorge extension shows that total annual spending attributable to visitors along the Otago Central Rail Trail could rise to as high as \$37.3 million (measured in current prices) after the extension has been made. Given that the current spend attributable to Otago Central Rail Trail visitors is estimated to be \$25.9 million, these estimates suggest that potential impact of Taieri Gorge extension would be the equivalent of \$11.4 million of increased visitor spend.

In a low scenario, where the Taieri Gorge extension has more conservative use patterns, the extension is anticipated to drive a \$6.9 million visitor spending lift and take total spending attributable to visitors along an extended Otago Central Rail Trail to \$32.8 million per annum.

Figure 11 – Projected spending impacts from proposed Taieri Gorge extension to Otago Central Rail Trail



Increased spending under both scenarios is driven primarily by visitors riding the Taieri Gorge on day trips as a destination ride – under the high scenario almost three quarters of total use would be day trippers, with the remainder being through bikers traversing the entire length of the Otago Central Rail Trail¹⁴.

Many of these day trippers are likely to have made Dunedin City their holiday base, meaning that much of the additional spending attributable to the Taieri Gorge extension is likely to primarily accrue to businesses within Dunedin. Riders traversing the entire length of the Otago Central Rail Trail are also likely to stay at least an extra night in the Dunedin area to give themselves time to peddle the Taieri Gorge extension. The more amenity that develops in Middlemarch and along other access points on the trail corridor in response to trail demand, the greater the opportunity there will be for benefits to also be diffused into smaller communities.

¹⁴ The following assumptions were made to estimate the spending lift attributable to the Taieri Gorge trail:

- Through riders – It is assumed that through riders (for whom the Rail Trail was the primary purpose of their visit) add one additional night to their Otago Central Rail Trail experience in order to enjoy the Taieri Gorge extension at their usual daily spend of \$414.
- Day trippers – It is assumed that experiencing the Taieri Gorge extension is the primary reason for travel to Dunedin for 65% of day trippers and they stay for 3.4 nights and spend an inflation adjusted \$299 per day (this assumption is consistent with the NZ Cycle Trail 2021 survey of behaviours of visitors to great rides). For the remaining 35% of visitors, riding a trail is just one of many reasons for visiting Dunedin, so for this subgroup it is assumed that the Taieri Gorge trail would add one day to their Dunedin trip (as validation of this assumption, the recent “Lake2Lake Trail Impact Assessment, March 2023”, contained survey evidence suggesting such riders usually add 1.3 days to their holiday).

A \$6.9 million to \$11.4 million spending lift by visitors riding the Taieri Gorge trail extension would represent a significant expansion to Dunedin’s bike economy. [Previous research](#) has shown that mountain biking on Dunedin’s forest trails is already worth at least \$16.7 million, with significant potential for further expansion.

6.2. The employment effects of the trail extension

From an employment perspective, the total number of jobs supported by expenditure of Otago Central Rail Trail visitors could rise from their current level of 132 jobs to reach 167 (low scenario) to 189 (high scenario) jobs after the Taieri Gorge trail extension was opened. This suggests that the employment impacts of the Taieri Gorge trail extension would be 35 to 57 jobs if the trail usage patterns under the low and high scenarios are realised¹⁵.

Figure 12 – Projected employment impacts from Taieri Gorge extension to Otago Central Rail Trail



6.3. Usage by locals and the social impacts

Spending by local trail users is not factored into core economic impacts as it is likely they would spend their budget on other things in the local area had they not used the Taieri Gorge trail.

But the fact that 4,825 (low scenario) to 9,649 (high scenario) annual trail users are anticipated to be local residents, demonstrates that use of the trail is clearly anticipated to be an important part of life for many.

Recreational cycling by locals also brings quantifiable health benefits. Waka Kotahi calculates that the [health benefits of cycling](#) are \$4.90 per kilometre.

It is estimated that riding the Taieri Gorge trail by local residents could add \$700,000 to \$1.4 million of mental and physical health benefits¹⁶.

¹⁵ Note: this calculation is based on the theoretical level of employment which could be supported by bike visitors’ additional spending. Actual outcomes may differ depending on each business’ hiring behaviour.

¹⁶ This estimate builds off the Waka Kotahi health benefit rate and the 4,825 to 9,649 uses of trail by local residents along its approximate 60 kilometre length. It also conservatively assumed that only half the biking on the trail is exercise that would not have otherwise occurred, with the remainder being baseline exercise that would still occur in some other shape or form had the Taieri Gorge trail not been available.

7. Concluding remarks

The analysis in this report has highlighted that there is already \$25.9 million of visitor spending that accrues annually from the existing Otago Central Rail Trail between Clyde and Middlemarch, and that there is realistic demand potential for these benefits to grow further in response to a Taieri Gorge extension to the trail from Middlemarch to Taieri.

The additional spending associated with visitors to the Taieri Gorge trail extension have been modelled at ranging from \$6.9 million to \$11.4 million per annum, depending on whether a low usage (23,009 trail users) or high usage (39,306 trail users) scenario is reached.

Demand under each scenario will be a combination of through bikers, for whom the Taieri Gorge extension forms part of a traverse of the entire length of the Otago Central Rail Trail, as well as trail users who choose to ride along the Taieri Gorge segment only as a 'destination ride' on a day trip. Under the high scenario, almost three quarters of total annual demand will be from trail users completing the Taieri Gorge segment as a short 'destination ride' day trip. Becoming a major destination ride is more likely if the Taieri Gorge trail corridor encompasses the most iconic heritage rail infrastructure and scenery.

The trail user scenarios modelled (23,009 to 39,306 trail users) are conservative compared to what has been achieved by recent trail developments across New Zealand. For example, the Lake Dunstan Trail achieved more than 80,000 trail uses in its first year, and 60,000 in its second year. Looking more broadly at trails across New Zealand, only trails that are of a relatively technical gradient or are far away from major population-bases fall below the low scenario modelled for the Taieri Gorge extension. In comparison, the Taieri Gorge trail will be on an easy rail gradient within the range of an e-bike charge and close to Dunedin with its major population base and large range of visitor amenities.

The trail heads of the Taieri Gorge extension are easily accessible from Dunedin and Middlemarch, and could be serviced by existing Otago Central Rail Trail operators, or Dunedin-based bike hire and shuttle companies. For riders keen on a shorter journey, it would be possible to start partway along at Pukerangi or Hindon. Although initially many of the economic benefits are likely to accrue to Dunedin, where the larger range of visitor amenities is located, the more amenity that develops in Middlemarch and along the trail corridor in response to demand, the greater the opportunity there will be for benefits to also be diffused into smaller communities.

Given these potential economic opportunities from an alternative use of the Taieri Gorge railway corridor as a trail for biking or walking, it is important that decision-makers factor this information into any decision-making process regarding future investment into the Taieri Gorge railway. This report's scope has been limited to assessing the potential economic benefits from using the railway corridor for biking or walking and has not included an analysis of existing economic and social impacts from current rail operations along the Taieri Gorge, nor does it compare the capital or operational expenditure required under either usage option for the rail corridor. It is recommended that further analysis is undertaken across all these factors to properly inform long-term decisions and consultation processes regarding usage of the rail corridor.



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