ASSESSMENT OF ECONOMIC IMPACT ASSOCIATED WITH TAUPō CYCLING

PREPARED FOR
BIKE TAUPō INC.

BY
APR CONSULTANTS LTD

AUGUST 2013
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EXECUTIVE SUMMARY

Purpose

The focus on the report's analysis was twofold:

1. To provide a conservative estimate of the overall economic impact of visitors on Taupō’s economy where the amount of current cycle-specific economic data is limited.

2. To make general recommendations about further research required to enable more comprehensive estimates to be made in the future.

To derive an overall economic impact figure, individual impact estimates associated with selected visitor segments were evaluated. Key selected segments were as follows:

1. Those who attended cycling-inclusive events (eg, Lake Taupō Cycle Challenge). This included those that attended and took part in cycling-inclusive events as well as those who accompanied them to the event as friends, family or support staff.

2. Those who trained in the Taupo District for selected events as well as friends, family or support staff who accompanied them.

3. Those in Taupō specifically to cycle selected Taupo trails and tracks (eg, use of the local network of mountain bike trails.)

Summary of impacts

Large events

The main focus of the report was to outline the quantum and characteristics of the economic impact associated with visitor spending made at Taupo's largest cycling-related events. Event impact assessment is primarily an empirically-based methodology that requires an underlying survey. As APR’s assessment did not involve any surveys and very little current secondary cycle inclusive event research is available, the impact estimates presented in this report’s assessment simply provide an indication of the quantum of economic impact. Notably, the impacts evaluated were for 2012. These impacts are a snapshot as event entrant numbers fluctuate from year to year.

APR did not model the impact of the Taniwha, a new event in 2012 which involves a running and mountain biking event of various lengths. Attributable to the event base’s proximity to Tokoroa and Rotorua the overwhelming majority of economic impact will likely accrue to South Waikato and Rotorua districts. Without a survey to address where attendees’ spending was made, APR was unable to evaluate the impact of this event on Taupo. However, it is likely that the impact on the Taupo District would be small. APR did not evaluate the impact of the National Schools Duathlon Championships as this involves school-age competitors. APR does not have survey-based information about relevant economic parameters for this segment.

Out of selected large cycling inclusive events, the event with the largest economic impact was the Contact Lake Taupo Cycle Challenge followed by Kellogg’s Nutri-Grain Ironman New Zealand. Ironman New Zealand with a much smaller number of competitors than the Cycle Challenge, achieves a large impact because of the relatively long average length of stay of its event attendees, its significant number of international entrants and their higher daily expenditure. The overall impacts of selected large cycling-related event impacts were as follows:

- direct output (ie, expenditure without any flow-on effects) of $7.1 million;
- total output (ie, expenditure inclusive of all flow on effects) of $10.0 million;
- total value added (ie, value added inclusive of all flow on effects) of $3.8 million; and
- 73.7 FTE total jobs (ie, employment inclusive of all flow on effects) created or sustained.
Table 1: Summary of selected large cycling-related event impacts – 2012

<table>
<thead>
<tr>
<th>Event</th>
<th>Direct output</th>
<th>Total output</th>
<th>Total value added</th>
<th>Total FTE jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Lake Taupo Cycle Challenge</td>
<td>$3.49</td>
<td>$4.88</td>
<td>$1.95</td>
<td>36.0</td>
</tr>
<tr>
<td>Kellogg’s Nutri-Grain Ironman New Zealand</td>
<td>$2.02</td>
<td>$2.83</td>
<td>$1.13</td>
<td>20.9</td>
</tr>
<tr>
<td>Day Night Thriller</td>
<td>$0.60</td>
<td>$0.84</td>
<td>$0.23</td>
<td>6.2</td>
</tr>
<tr>
<td>100k Flyer</td>
<td>$0.38</td>
<td>$0.53</td>
<td>$0.21</td>
<td>3.9</td>
</tr>
<tr>
<td>Kellogg’s Nutri-Grain Taupo Half Ironman</td>
<td>$0.31</td>
<td>$0.43</td>
<td>$0.17</td>
<td>3.2</td>
</tr>
<tr>
<td>Contact Tri Series Kinloch</td>
<td>$0.25</td>
<td>$0.36</td>
<td>$0.14</td>
<td>2.6</td>
</tr>
<tr>
<td>National Duathlon Championships</td>
<td>$0.09</td>
<td>$0.12</td>
<td>$0.05</td>
<td>0.9</td>
</tr>
<tr>
<td><strong>Total (million)</strong></td>
<td><strong>$7.1</strong></td>
<td><strong>$10.0</strong></td>
<td><strong>$3.8</strong></td>
<td><strong>73.7</strong></td>
</tr>
</tbody>
</table>

Notes:
1. In 2012 dollars.
2. Figures shown in the table may not sum to the stated totals as a higher degree of precision (ie, more decimal points) were used in calculations.
3. Note that the word ‘direct’ denotes the initial spend made by visitors to Taupō District, whereas the term ‘total’ in an impact context denotes the fact that the impact detailed is inclusive of direct, indirect and induced effects. In other words the term ‘total’ denotes the fact that impact considered is inclusive of the initial expenditure and all its flow-on (re-spending) effects.

Event training
APR estimated the impact made by domestic Cycling Challenge and Ironman New Zealand entrants making trips to Taupo to train (refer to the body of the report for assumptions). Because of a lack of historic and current research data about entrants training characteristics, the estimates evaluated in this section simply provide an indication of impacts. APR only made estimates for the events aforementioned as these were only two we have sighted survey evidence that shows an established pattern of trainees visiting Taupo. The impact made by those who came to Taupo to train and the friends and family who accompanied them in 2012 was estimated to be:

- total output (ie, total expenditure) of $0.55 million;
- total value added of $0.22 million; and
- 4.0 total FTE jobs created or sustained.

Overnight cycle tourism (‘causal’, ie, cycling was the main reason for visiting)
Overnight visit impacts made by Taupo tourists with cycling as the causal motivation for visiting were:

- total output (ie, total expenditure) is $0.37 million;
- total value added is $0.15 million; and
- 2.7 total FTE jobs are created or sustained.

Day visits to the Great Lake Trail
Based on 6,000 day visits per annum to the Great Lake Trail, the economic impacts were as follows:

- total output (ie, total expenditure) of $0.53 million;
- total value added of $0.21 million; and
- 3.9 FTE jobs created or sustained.

Overall impact estimates
A summary of economic impacts is shown in Table 2. Overall, conservative estimates of the annual economic impact of cycling were as follows:

- direct output (ie, expenditure without any flow-on effects) of $8.17 million;
- total output (ie, expenditure inclusive of all flow on effects) of $11.44 million;
- total value added (ie, value added inclusive of all flow on effects) of $4.41 million; and
- 84.3 total FTE jobs (ie, employment inclusive of all flow on effects) created or sustained.

The largest annual impact in 2012 was made by events. The reason why the impact of events is relatively large is because they attract significant numbers of out-of-town entrants across a wide range of abilities, experience and ages. Entrants are generally accompanied by a significant

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1 Most overnight visitors to Taupo who come to train for an event and use various cycle track and trails primary motivation for visitation is to undertake cycling. The visitors who come to Taupo to train for the Cycle Challenge and Ironman New Zealand during the year prior to the event and those who accompany them were excluded from this section’s analysis in order to avoid double counting of impacts.
number of friends, family and support staff, with the overwhelming majority of these making multiday overnight visits, rather than day visits.

Overall, the conservative estimates presented in Table 2 represent a likely minimum level of impact that was made in 2012 (refer to the body of the report for a comprehensive outline of assumptions). The event impacts presented do not include event organisers’ impacts and a small impact made by a number of much smaller events. The overall impact would also be larger if there was available current data to support estimating the impacts associated with a larger population of people who come to Taupo to train for events. The main factor that limited the size of APR’s conservative estimates was the lack of economic impact friendly data about day visitors to selected trails (refer to conclusions and recommendations).

### Table 2: Summary of selected Taupo cycling-related economic impact estimates – 2012

<table>
<thead>
<tr>
<th>Impact source</th>
<th>Direct output ($ million)</th>
<th>Total output ($ million)</th>
<th>Total value added ($ million)</th>
<th>Total jobs (FTE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selected large cycling-related events</td>
<td>$7.14</td>
<td>$9.99</td>
<td>$3.84</td>
<td>73.7</td>
</tr>
<tr>
<td>Event training for Cycle Challenge and Ironman New Zealand</td>
<td>$0.39</td>
<td>$0.55</td>
<td>$0.22</td>
<td>4.0</td>
</tr>
<tr>
<td>Day visitors to Great Lake Trail</td>
<td>$0.38</td>
<td>$0.53</td>
<td>$0.21</td>
<td>3.9</td>
</tr>
<tr>
<td>Overnight cycle tourism (causal, ie, cycling is the main reason for visiting)</td>
<td>$0.26</td>
<td>$0.37</td>
<td>$0.15</td>
<td>2.7</td>
</tr>
<tr>
<td><strong>Total ($ million)</strong></td>
<td><strong>$8.17</strong></td>
<td><strong>$11.44</strong></td>
<td><strong>$4.41</strong></td>
<td><strong>84.3</strong></td>
</tr>
</tbody>
</table>

Notes: (1) In 2012 dollars. (2) Figures shown in the table may not sum to the stated totals as a higher degree of precision (ie, more decimal points) were used in calculations. (3) Note that the word ‘direct’ denotes the initial spend made by visitors to Taupō District, whereas the term ‘total’ in an impact context denotes the fact that the impact detailed is inclusive of direct, indirect and induced effects. In other words the term ‘total’ denotes the fact that impact considered is inclusive of the initial expenditure and all its flow-on (re-spending) effects.

### CONCLUSIONS

#### Events and training

1. APR modeled the economic impacts of large cycle-inclusive events on the Taupo economy. APR lacked sufficient information on a number of smaller events to model their economic impact. The inclusion of these would have made the event impact totals slightly higher, although not significantly larger as the number of entrants who enter these are relatively low and a much greater proportion of these are locals who do not have a net economic impact on the local economy.

2. Event impact assessment is primarily an empirical based methodology that requires an underlying survey. As APR’s assessment did not involve any surveys and very little current secondary research was available, the impact estimates purely provide an indication of the quantum of economic impact.

3. APR sourced data relating to event entrant numbers, the number of locals and out-of-town entrants and the number of domestic and international entrants from event organisers. However, very conservative assumptions were used for all other estimation parameters (eg, average length of stay). This implies that the event impact estimates made in this report are more likely to underestimate the actual impact rather than over-estimate them.

4. The impact analysis carried out included any event that includes cycling as an integral part of the event (eg, triathlon). If APR’s definition of cycling events was to be narrowed purely to cycling events (eg, Night Day Thriller), the total event impact figures estimated would exclude duathlons and triathlons and would be significantly lower.

5. The event analyses presented in this report do not include impacts made by event organisers. For APR to analyse this, detailed information pertaining to each event organiser’s spending in Taupo District would be required.
6. Because of the Taniwha event’s proximity to Tokoroa and Rotorua the overwhelming majority of its economic impact will likely accrue to South Waikato and Rotorua districts. Without a survey to address where attendees’ spending was made APR was unable to evaluate the impact of this event on Taupo. However, it is likely that the impact on Taupo District would be relatively low.

7. APR did not evaluate the impact of the National Schools Duathlon Championships as this involves school age competitors. APR does not have survey-based information about relevant economic parameters for this segment.

8. Event impact estimates do not include the economic value of marketing achieved by media coverage of event and participants’ word-of-mouth. Downstream impacts resulting from events are a building out of Taupo’s tourism brand and the attraction of event participants and their friends, family and colleagues to Taupo in the future. Taking these facts into account the true impacts of events may be significantly greater than just the upstream (ie, immediate) economic impacts.

**Tracks/trail usage**

9. There is a lack of data that can be used to make accurate estimates of economic impact associated with usage of Taupo cycling trail and tracks, therefore the estimates made simply provide an indicative of impact. Ideally impact estimation would need to take an across the board, bottom-up approach and model the impacts associated with each individual trail separately in terms of day and overnight visitors to Taupo. Although APR was supplied with DOC counter data for some of the trails in and around the Taupo township, including the Great Lake Trail, this was of limited use for economic impact analysis as:

- Counter data does not take into account where riders are from. Only visitors from outside of Taupo make a net economic impact on Taupo’s economy. Rides made by locals would need to be identified and removed from the counter data.
- Counter data does not distinguish day from overnight visitors to Taupo. Each type of visitor has a different impact.
- From overnight visitors counter data cannot distinguish riders for whom cycling was a primary or main reason for coming to Taupo and those for whom riding was not a causal attracting factor for their visit.
- Counter data does not distinguish between the rides made by the same overnight visitors during their stay and those made by ‘new’ overnight visitors. In other words, there is a need to distinguish between the number of riders and the number of rides undertaken in a set period of time (ie, the need to distinguish between the number of visits to a selected trail and the number of visitors associated with this).
- Counter data typically has accuracy issues unless it is regularly calibrated and trails are long-established with visitor usage patterns being relatively stable. This implies that the range of visitor segments (eg, markets) using the tracks is stable.

10. In terms of motivation for visiting Taupo there are two types of visitors who undertake cycling:

- a) Those for whom experiencing the trail/ride is the causal driver for visitation to Taupo.
- b) Those for whom experiencing the trail/ride is just one attracting factor from a bundle of attracting motivations for visiting Taupo.

11. Trail visitation can occur by riders making a day visit from another district to a selected trail or by riders staying overnight in the Taupo District. Those who stay in the District will either make a day trip to a track or use a track which is in the vicinity of where they are staying. For those making a day trip from another district (eg, Rotorua) causality is implied. For those staying overnight in Taupo the reason for staying may, or may not be the primary reason (ie, the cause) for their visit to Taupo.
12. For day visits APR undertook a bottom-up approach and modeled the available data, but unfortunately there is insufficient data to model most trails. It appears that currently the largest proportion of ‘causal’ cycle tourism in Taupo is made by day visitors, leaving aside those who travel to Taupo to train for events. We modeled the impact of The Great Lake Trail. Although the majority of visitors to Craters of the Moon are likely overnight visitors whose primary reason(s) for visiting is not to undertake cycling, it is likely that there are a small but significant number of day visits made from those staying in other districts to this attraction. Further primary research would be required for APR to determine the composition of visits to Craters of the Moon and therefore enable an assessment of its economic impact.

13. To assess the impact of overnight tourism visits, APR undertook a top-down modeling approach using the projected numbers of total holiday and visiting friends and family (VFR) overnight visitors to Taupo District in 2012, estimates of cycling tourism activity rates from the Ministry of Business, Innovation and Employment's (MBIE) International Visitor Survey (IVS) and Domestic Tourism Survey (DTS) for the year ended December 2012, and selected assumptions. Because these rates are for cycle tourism at a national level, rather than a local level, they are likely to be conservative, especially for domestic visitors. The impact estimates were also low because the overwhelming majority of ‘causal’ cycle tourism on Taupo-based trails was made by day visitors as well as the fact that APR’s estimates excluded those who may have used selected trails to train for events.

14. It is reasonable to assume that cycling is the primary reason for those visitors who come to Taupo to train for an event and use various cycle tracks and trails. For this reason, those who came to Taupo to train for the Cycle Challenge and Ironman New Zealand during the year prior to an event, as well as those who accompanied them, were excluded from APR’s general overnight cycle tourism impact analysis (ie, to avoid double counting of impacts). This a conservative approach as the DTS and IVS survey methodologies randomly target New Zealand residential households, and those who travel to train in Taupo are members of a very specific segment that is unlikely to have made much of contribution to the survey sample.

RECOMMENDATIONS

Events and training
1. Impact surveys for a small number of large cycle-related/inclusive events need to be undertaken at the time of each event over the next few years. This will enable an updating of representative cycle event specific parameter estimates for average length of visitor stay, daily/nightly expenditure rates, average proportion of event entrants who are ‘time-switchers’ and the average number of people who accompany entrants to an event.

2. The impact surveys detailed above need to provide a comprehensive section that considers regarding event entrants’ annual training in Taupo. Visitors should be asked where they train, so that any impact assessments of selected Taupo trails/tracks can avoid double counting of impacts. The survey also needs to ask questions that ascertain whether respondents’ training is associated with time-switching.

3. A comprehensive annually updated spreadsheet of cycling-inclusive events’ entrant numbers in terms of total entrants, visitors to Taupo, locals and international entrants should be maintained. The combination of annual entrant data and up-to-date parameter estimates will enable the estimation of annual event impacts, even if event surveys have not been carried out in a particular year.

4. APR recommends the event surveys include a few questions about how many friends, family and colleagues respondents are likely to recommend Taupo as a holiday destination to and also the likelihood of them visiting Taupo for a holiday in the future as a consequence of their event participation.
**Tacks/trail usage**

To implement a bottom-up approach to economic impact estimation it would be necessary to conduct small scale surveys. Given funding constraints it would be most efficient to survey 2-3 selected iconic trails in order to evaluate the following information:

1. Where riders are from and hence the proportion of riders on trails who are from outside of Taupo District.
2. The proportion of riders from out of district on trails who are day visitors and the proportion who are overnight visitors.
3. From overnight visitors to Taupo, the proportion of riders for whom cycling is a primary or main reason for coming to Taupo and those for whom riding was not a causal attracting factor for their visit.
4. For overnight visitors to Taupo, the average number of visits to a trail per overnight visit for those whose motivation to visit Taupo was not to undertake cycling in the District and the number per of trail visits per overnight visit for those visitors whose motivation to visit was to undertake cycling.

The information contained in points 1-4 above is the minimum necessary to estimate the economic impact of trail usage. In essence, this information only requires asking respondents three short questions. Average length of stay, daily expenditure rates and the number of people accompanying respondents are parameters that could be based on other Taupo studies. However, for a more accurate estimation, questions about these parameters would also need to be asked.

Overall, trail usage can be evaluated using counter data if it can verified that it is accurately calibrated for cyclists’ activity. Alternatively, visitor counts taken at strategically during each season, so that a model can be formulated that estimates the total number of annual visits to selected trails made by cyclists.

Realistically, for a selected trail 100 short surveys would need to collected in each season (ie, a total of 400 surveys) by a couple of paid interviewers. Typically for a 10-15 minute face-to-face survey, part-time, reliable interviewers can be employed for around $6 per survey. Given that the short survey would take around 3-4 minutes (the first set of questions only), $3 per survey would be sufficient to hire some reliable tertiary students. A modest survey budget would be sufficient to enable parameter estimates to be assessed for say, two iconic trails. Trail surveying for different trails could be spread out over two years to make it more affordable to cover 2-4 trails. With data about Taupo visitors’ usage of selected trails, the economic benefits can be more accurately substantiated with reliable impact estimates.
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1.0 PURPOSE

The focus on the report’s analysis was twofold:

1. To provide a conservative estimate of the overall economic impact of visitors on Taupō’s economy where the amount of current cycle-specific economic data is limited.

2. To make general recommendations about further research required to enable more comprehensive estimates to be made in the future.

To derive an overall economic impact figure, individual impact estimates associated with selected visitor segments were evaluated. Key selected segments were as follows:

1. Those who attended cycling-inclusive events (eg, Lake Taupō Cycle Challenge). This included those that attended and took part in cycling-inclusive events as well as those who accompanied them to the event as friends, family or support staff.

2. Those who trained in the Taupo District for selected events as well as friends, family or support staff who accompanied them.

3. Those in Taupō specifically to cycle selected Taupo trails and tracks (eg, use of the local network of mountain bike trails.)

2.0 SCAN OF TAUPŌ CYCLING

2.1 Market access

Taupo benefits from its location in the middle of the North Island, providing easy access for large urban markets. Lake Taupo attracts a large number of visitors from Auckland and Wellington (many have holiday homes in the region) and is close to other cities like Hamilton and Napier.

Table 3: Access to major markets

Source: Compiled from Statistics New Zealand, Sub-national Population Estimates as at June 2012.
Notes: (1) Estimates are projections at June 2012.
(2) Wellington, Manawatu/Wanganui, Waikato and Taranaki estimates are regional data.
2.2 Cycling destinations in the wider Bay of Connection area

Aside from the resident population of large urban areas proximal to Taupo, other areas that provide a resource in terms of potential visitors are tourist hubs. In this regard, because of Rotorua’s visitor activity (especially international visitors) and its mountain biking infrastructure, a number of visitors will choose to use Rotorua as a hub for mountain biking activities in Rotorua and surrounding areas such as Great Lake Trail and Waikato River Trails. This implies that the majority of visitor activity on the Great Lake Trail will be made by day visitors. For Taupo trails that are more remote from other districts (e.g., 42nd Traverse and Tree Trunk Gorge), Taupo would likely be used as a hub from which day trips would be made to selected tracks (refer to Figure 1).

Figure 1: Bay of Connections cycle attraction locations

<table>
<thead>
<tr>
<th>Map ref.</th>
<th>Cycle trail/feature name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Whakarewarewa Forest</td>
</tr>
<tr>
<td>2.</td>
<td>NZ Cycle Trail – Te Ara Ahi</td>
</tr>
<tr>
<td>3.</td>
<td>Rainbow Mountain MTB Loop</td>
</tr>
<tr>
<td>4.</td>
<td>Wairakei Forest – Craters of the Moon MTB</td>
</tr>
<tr>
<td>5.</td>
<td>Rotary Ride - Aratiatia</td>
</tr>
<tr>
<td>6.</td>
<td>Lion’s Walk</td>
</tr>
<tr>
<td>7.</td>
<td>NZ Cycle Trail – Great Lake Trail (W2K – K2K – Orakau)</td>
</tr>
<tr>
<td>8.</td>
<td>NZ Cycle Trail – Waikato River Trails</td>
</tr>
<tr>
<td>9.</td>
<td>Te Iringa</td>
</tr>
<tr>
<td>10.</td>
<td>Tongariro River Trail</td>
</tr>
<tr>
<td>11.</td>
<td>Tree Trunk Gorge</td>
</tr>
<tr>
<td>12.</td>
<td>42nd Traverse</td>
</tr>
<tr>
<td>13.</td>
<td>NZ Cycle Trail – Mountains to Sea</td>
</tr>
<tr>
<td>14.</td>
<td>NZ Cycle Trail – The Timber Trail (Pureroa – Ongarue)</td>
</tr>
<tr>
<td>15.</td>
<td>Whirinaki Forest Trails</td>
</tr>
<tr>
<td>16.</td>
<td>NZ Cycle Trail – Motu Trails</td>
</tr>
<tr>
<td>17.</td>
<td>Rawhiti MTB Park</td>
</tr>
<tr>
<td>18.</td>
<td>Onepu MTB Park</td>
</tr>
<tr>
<td>19.</td>
<td>TECT Park</td>
</tr>
</tbody>
</table>

Source: Compiled from Bike Taupo Inc., Ministry of Business, Innovation and Employment, selected trail websites, Google Maps and APR analysis.
2.3 Overview of main cycling areas in and around Taupo township

Figure 2 shows key areas and trails in and around the Taupo township that are popular destinations. Table 4 provides an outline about each key cycling area.

Figure 2: Key Taupō cycling areas

Source: Compiled from Google Maps, event site websites and APR Consultants

Table 4: Map key

<table>
<thead>
<tr>
<th>Reference</th>
<th>Key area</th>
<th>Distance to City Centre (km)</th>
<th>Use/description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>City Centre/ Taupo Domain</td>
<td>-</td>
<td>Hub for major events such as the Taupō Cycle Challenge, Taupō Ironman and Taupō Half-Ironman.</td>
</tr>
<tr>
<td>2</td>
<td>Taupō Velodrome</td>
<td>3.7</td>
<td>Used as part of the Festival of Cycling and for the Bay of Plenty/ Waikato Sprint Championships.</td>
</tr>
<tr>
<td>3</td>
<td>Great Lake Trail</td>
<td>21.2 (Kinloch) 12.9 (Whakaipo Bay)</td>
<td>The Great Lake Trail is part of the Nga Haeranga (New Zealand Cycle Trail). Close to 45 km is completed of an estimated 85km. There are uninterrupted views of the Tongariro National Park and Lake Taupō that can only be accessed by foot or bicycle.</td>
</tr>
<tr>
<td>4</td>
<td>The Rotary Ride - Spa Park &amp; Huka Falls Trails</td>
<td>3.0 (Spa Park car park)</td>
<td>Base for the Day-Night Thriller event and the popular Rotary Ride trails through Spa Park to Huka Falls. Extended link exists to Craters of the Moon MTB Park.</td>
</tr>
<tr>
<td>5</td>
<td>Craters of the Moon Mountain Bike Park</td>
<td>6.1</td>
<td>Popular cycling destination with around 46 individual trails to ride.</td>
</tr>
</tbody>
</table>

Source: Compiled from Google Maps, event site websites and APR Consultants
2.3.1 Overview of activity

The wider Taupo area offers a wide range of trails catering to all levels of fitness and experience (refer to Appendix 1). Table 5 details the visitor activity levels of selected main Taupo cycling trails that are within close proximity to the Taupo township.

Table 5: Main Taupo cycling trails activity

<table>
<thead>
<tr>
<th>Trail</th>
<th>Annual Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great Lake Trail</td>
<td></td>
</tr>
<tr>
<td>Kinloch (W2K)</td>
<td>15,368</td>
</tr>
<tr>
<td>Kawakawa (K2K)</td>
<td>10,699</td>
</tr>
<tr>
<td>Orakau</td>
<td>1,500(3)</td>
</tr>
<tr>
<td>Huka Falls Trails</td>
<td></td>
</tr>
<tr>
<td>The Rotary Ride</td>
<td>15,000</td>
</tr>
<tr>
<td>Craters of the Moon Mountain Bike Park</td>
<td>35,000</td>
</tr>
<tr>
<td>Tree Trunk Gorge (2)</td>
<td>2,000-2,500</td>
</tr>
<tr>
<td>Tongariro River Trail (2)</td>
<td>≈20,000</td>
</tr>
</tbody>
</table>

Source: DOC and Bike Taupo
Notes: (1) Best estimates as at June 2013.
(2) The count data combines walkers and cyclists.
(3) Assumes 500 cycle visits for the March 2013 quarter, 500 for the December 2013 quarter and that the winter quarters experience 50% of the level of activity experienced in each of the summer quarters.

2.3.2 Great Lake Trail

Developed as part of the National Cycleway, the Great Lake Trail comprises a number of individual sections, some of which are established and popular cycling destinations such as W2K and K2K trails (refer to Figure 3). Developed around the township of Kinloch and the Kinloch Headland, expanding west of Taupo to Waihora and Waihaha, the trails are maintained in partnership by Bike Taupo and DOC and offer unique views of Lake Taupo, the surrounding bays, and south across the lake to Tongariro and Ruapehu.

Figure 3: Great Lake Trail

Source: www.biketaupo.com
Table 6 outlines the current Great Lake Trail state of completion. The W2K, K2K and Orakau sections are open and already established as popular cycling destinations. However, stage 4 of the trail, Kawakawa Bay to Boat Harbour, will now not be proceeding in development, and other sections will not be open and operational until 2014.

**Table 6: Summary of trail section completion to date**

<table>
<thead>
<tr>
<th>#</th>
<th>Section</th>
<th>Length (km)</th>
<th>Complete?</th>
<th>Expected Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The Bays</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>W2K</td>
<td>25.0</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Kinloch Waterfront</td>
<td>1.0</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Kawakawa Bay Track</td>
<td>7.0</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Gorge and Beaches</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Kawakawa Bay to Boat Harbour</td>
<td>13.3</td>
<td>Not Proceeding</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Boat Harbour to Waihora Landing</td>
<td>15.7</td>
<td>December 2014</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Lake and Rivers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Waihora Landing to Waihaha</td>
<td>16.6</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Waihaha to Western Bay Road</td>
<td>14.4</td>
<td>January 2014</td>
<td></td>
</tr>
</tbody>
</table>

Source: Lake Taupō Track Feasibility and Business Case 2010 and Bike Taupō Inc.

### 2.3.3 Craters of the Moon Mountain Bike trails

Craters of the Moon Mountain Bike Park is located on the Thermal-Explorer Highway, 5.5 km’s North of the Taupo Township (Figure 4). The park is a popular cycling destination attracting around 35,000 cycling visitors per year (Bike Taupo). The park is also a popular non-cycling visitor destination featuring unique geothermal formations that provide a point of difference in promoting the area as a unique cycling experience. Craters of the Moon Mountain Bike Park offers a wide range of trails, ranging from a collection of beginner and intermediate level rides through to more advanced trails catering to the more experienced riders seeking new and exciting challenges.

**Figure 4: Craters of the Moon Mountain Bike Trails**

Source: www.biketaupo.org.nz
2.3.4 Huka Falls Trails

The Huka Falls Trails are comprised of three easy inter-connected trails: the Rotary Ride, the Redwoods track and the Aratiatia Dam ride (Figure 5). Beginning at Spa Thermal Park, the track heads North to Huka Falls. The track crosses the Otumuheke Thermal Stream, and has views of the Waikato River and open valleys all the way to the Huka Falls. From Huka Falls the track crosses over the river and either heads back to Taupo along Redwood Track, which is an easy single track back to town on Huka Falls Rd. Alternatively, the track continues on the Rotary Ride as it turns into a trail all the way to Aratiatia Dam approximately seven kilometers away.

Figure 5: Huka Falls Trails

2.4 Selected major cycling and cycling-related events event numbers

Table 7 presents selected annual major cycling and cycling-related events in Taupo. The Contact Lake Taupo Cycle Challenge is the largest annual cycling event in New Zealand in terms of the number of entrants (8,000 plus). The event incorporates a number of different events spread over two days and attracts cyclists of varying skill levels (refer Table 8). Other major cycling-inclusive events on the Taupo events calendar that attract competitors from around the country and in some cases internationally include:

- Contact Lake Taupo Cycle Challenge.
- Day Night Thriller.
- Rotorua to Taupo 100K Flyer.
- Kellogg’s Nutri-Grain Ironman New Zealand.
- Kellogg’s Nutri-Grain Taupo Half.
- Contact Tri Series Kinloch.
- National Duathlon Championships.

Notably, the Ironman New Zealand is unusual in that it attracts a significant number of international event entrants. According to the event’s organisers in 2012 the event had a 50/50 split between international and domestic entrants.

With the exception of the Taniwha these events take place in and around the Taupo township. The Taniwha based at Whakamaru Christian Camp started in 2012 and uses the Waikato River Trails. The event has a number of running and mountain bike event categories of differing lengths. A total of 300 out of 800 inaugural participants entered mountain biking event categories. Because of the event’s proximity to Tokoroa and Rotorua the overwhelming majority of economic impact will likely accrue to South Waikato and Rotorua districts. Without a survey to ascertain where attendees’ spending was made APR was unable to evaluate the impact of this event on Taupo. APR did not evaluate the impact of the National Schools’ Duathlon Championships as this involves school-age competitors. APR does not have survey-based information about relevant economic parameters for this segment.

Table 7: Selected major recurring cycling-related events in Taupō – 2012

<table>
<thead>
<tr>
<th>Event</th>
<th>Event type</th>
<th>Entrants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Lake Taupo Cycle Challenge</td>
<td>Multi-event cycle challenge</td>
<td>8,214</td>
</tr>
<tr>
<td>Day Night Thriller</td>
<td>MTB</td>
<td>2,000</td>
</tr>
<tr>
<td>Rotorua to Taupo 100K Flyer</td>
<td>Cycle Race</td>
<td>1,737</td>
</tr>
<tr>
<td>Kellogg’s Nutri-Grain Ironman New Zealand</td>
<td>Ultra-distance Triathlon</td>
<td>1,608</td>
</tr>
<tr>
<td>Kellogg’s Nutri-Grain Taupo Half</td>
<td>Triathlon</td>
<td>1,022</td>
</tr>
<tr>
<td>Contact Tri Series Kinloch</td>
<td>Triathlon</td>
<td>1,074</td>
</tr>
<tr>
<td>The Taniwha – MTB categories</td>
<td>MTB</td>
<td>300</td>
</tr>
<tr>
<td>National Duathlon Championships</td>
<td>Duathlon</td>
<td>287</td>
</tr>
<tr>
<td>National Schools Duathlon Championships</td>
<td>Duathlon</td>
<td>184</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>16,426</td>
</tr>
</tbody>
</table>

Sources: Contact Lake Taupo Cycle Challenge Statistics 2012, event organisers and event websites.

Table 8 details the individual events which make up the Contact Lake Taupo Cycle Challenge. The challenges with the largest number of entrants are the Solo (4,566 people), relay (2,495 people) and Huka MTB challenge (690 people).

Table 8: Lake Taupo Cycle Challenge 2012 participation

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Event type</th>
<th>Entrants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women’s Road Race</td>
<td>Pro/elite Race</td>
<td>39</td>
</tr>
<tr>
<td>Men’s Classic</td>
<td>Pro/elite Race</td>
<td>82</td>
</tr>
<tr>
<td>Kids @Heart Ride</td>
<td>5km ride</td>
<td>192</td>
</tr>
<tr>
<td>Solo</td>
<td>160km circuit</td>
<td>4,566</td>
</tr>
<tr>
<td>Relay</td>
<td>4 x 40km relay</td>
<td>2,495</td>
</tr>
<tr>
<td>Maxi/Extreme Enduro</td>
<td>2-4-8 x 160km circuits</td>
<td>110</td>
</tr>
<tr>
<td>Huka MTB Challenge</td>
<td>MTB event</td>
<td>690</td>
</tr>
</tbody>
</table>

Source: Contact Lake Taupo Cycle Challenge Statistics 2012
2.5 Taupō Cycle survey results summary

2.5.1 Background
APR carried out an analysis of a 2013 survey of the Contact Lake Taupo Cycle Challenge’s database of previous event entrants. The survey focused on the recreational cycling activity of previous event entrants’ in Taupo during the 12 months prior to the survey. The analysis of the survey’s data provides background information that supports APR’s analysis of the economic impact of cycling in the Taupō area in 2012. For a full write up refer to the appendix report accompanying this report.

Although the results are biased towards participants in the Contact Lake Taupo Cycle Challenge, given the survey’s sample size (2,839 respondents) the results provide an indication of Taupo visitors’ cycling activity.

2.5.2 Analysis results summary

Demographics

Age and gender
Out of 2,839 survey respondents, those aged between 45 to 54 (36.8%) were the largest age group represented, followed by those aged between 35 to 44 years (26.6%), 55 to 59 years (12.4%) and 20 to 34 years (11.8%). In the survey sample, male respondents (72%) strongly outnumbered female respondents (28%).

Origin
Auckland respondents (29.9%) were the largest respondent group followed by those from Wellington (19.8%), Waikato (8.7%), Taupō (7.2%), Manawatu (7.1%) and Bay of Plenty (6.5%). The majority of international respondents (4.1%) were Australians (101 respondents out of 116 international respondents). The balance of international respondents came from the USA, United Kingdom (UK) and Singapore among other countries.

Occupation
Engineering (8.5%) was the occupation group most strongly represented in the survey’s sample followed by information technology (7.3%), healthcare (7.2%) and education (6.6%).

Cycling behavior

Types of cycling undertaken
Respondents were asked what types of cycling they usually take part in. Road cycling (92.4%) was by far the most popular option followed by mountain biking (56.9%) leisure cycling (34.2%), commuting (21.8%) and touring (12.5%). The other category (2.7%) included triathlon, tandem cycling and Cyclocross.

Taupō visitors’ cycling participation
Respondents who came from outside Taupō were asked what type of cycling they undertook when visiting the Taupō area during the 12 months prior to the survey. Out of 2,634 respondents who came from areas outside of Taupo, 91.3% took part in road cycling events when visiting Taupō, while 38.4% took part in recreational mountain biking and 14.8% took part in mountain biking events.

2 More than one answer was allowed.
**Annual cycling-related expenditure**
Respondents were asked to estimate how much they spend on cycling in an average year. The average spend per year was $1,852 and the median spend was $1,000 per annum across all respondents.

**Taupo trail usage**
Respondents who had undertaken mountain biking in Taupō were asked which rides they had experienced. The most popular trail in the area was Craters of the Moon MTB Park (41.1%) followed by the Upper Waikato River Trails (Spa, Huka and Aratiatia) (30.4%), the Great Lake Trail (27.1%) and Tongariro River Trail (Turangi; 9.3%). Other trails (5.8%) included the 42 Traverse, Pureora Forest, Timber Trail and Tree Trunk Gorge rides.

**Visit motivation**

**Number of visits that included cycling**
Respondents from outside of Taupō (2,634 respondents) were asked whether they had undertaken cycling on their visits to Taupō in the past 12 months. A total of 72.9% respondents went riding while visiting the area while 27.1% of respondents did not. The respondents who undertook riding during their visits were asked how many visits had involved cycling during 2012. The majority (54.3%) of respondents visited once while 23.3% of respondents visited Taupō twice, 10.2% of respondents visited three times and the remaining 12.2% of respondents visited more than three times.

**Importance of cycling in determining visit**
Taupō visitors were asked to indicate the importance of cycling in determining their visit to Taupō. A total of 45.9% of respondents indicated that cycling was the main reason for their visit, while 30.8% of respondents specified it was the sole/only reason, 21.4% respondents specified it was a reason and 1.9% indicated it was not important. Overall, for 76.7% of respondents, the primary reason for visiting Taupo was to undertake cycling.

**Respondents’ other reasons for visiting Taupō**
Taupō visitors were asked about other reason(s) that were important in their decision to visit. The most popular reason was holiday (14.5%), followed by visiting friends and relatives (8.4%) and other recreational activities (7.2%).

**2012 Contact Lake Taupō Challenge participation**

**Reasons for non-participation**
Respondents were asked if they participated in the 2012 Contact Lake Taupō Challenge event. Out of the 2,839 respondents, 62.4% competed in the event and 37.6% did not.

**Participation in 2012 event**
Those who did not compete in the 2012 event were asked for the reasons for their non-participation. Respondents lack of training accounted for 37.7% of non-participation in the 2012 event, followed by injuries and sickness (13.3%) and other event conflicts (12.1%).
Overnight visitors’ statistics

Accommodation usage
Out of the 1,921 people who travelled to Taupō to ride during the past 12 months, 93% stayed overnight. For overnight visitors’ private rental accommodation (30.3%) was the most popular form of accommodation, followed by motel (25.1%), staying with friends and family (15.7%) and hotel (8.6%).

Number of people accompanying respondents on their visit
Respondents who came from areas outside of Taupo were asked how many people (including children) accompanied them on their visits to Taupō. A total of 8% of respondents travelled to Taupō on their own while one quarter of respondents travelled with one other person, 16.7% of respondents came with two other people, 16.1% of respondents came with three others and 11.8% of respondents came with four other people.

Visitors’ trip expenditure
Respondents who came from outside of Taupo were asked to estimate their visit-related expenditure in Taupō in the past two months including their spending on immediate family/friends. Accommodation costs (39.2%) accounted for the highest proportion of total expenditure followed by food and drink (20.8%), shopping and retail (13.1%) and cycling (8.9%). The average respondent group expenditure per trip was $770.

Taupō visitors’ average trip expenditure on a per person basis was $382. Assuming an average length of stay of two nights the average total expenditure was $191 per person per night. This reasonably high rate likely reflects respondents’ preferences for quality accommodation with a significant proportion (30.3%) staying in private rental accommodation.
3.0 ECONOMIC IMPACT ANALYSIS

3.1 Methodology

**Entity analysed**
Economic impact analysis is based upon analysing the effects of the spending made by private or commercial entities. In this report the spending analysed was that made by visitors who travelled to the Taupō District to undertake cycling.

**Conversion of spending data to total value added, total output and total employment**
In this report's analysis, spending data (ie, termed ‘direct output’) was converted to a metric called value added (ie, GDP). Valued added is money in the form of profit, interest, taxes (local and national) and workers' remuneration (ie, salary and wages). The analysis of newly created value added in this section shows how much the size of the local economy will expand as a result of visitors' spending.

Expenditure (ie, direct output) data was also converted to total output (ie, this includes direct, indirect and induced flow-on spending effects) and total employment created or sustained (ie, this includes direct, indirect and induced flow-on employment creation effects).

**Period analysed**
This section represents an estimation of economic impact associated with visitor activity during the year ended December 2012.

**Gross impact adjusted for non-additional economic impacts**
The gross impact of visitor's spending needs to be adjusted to exclude impacts which are not additional to the local economy (ie, estimate a net impact). To estimate net economic impact, offsetting effects (ie, non-additional effects) need to estimated and then subtracted off from the gross impact. Selected typical non-addition effects (ie, off-setting effects) that must be taken into account are:

1. A number of visitors to an event in a selected area will simply substitute this visit for another intended/planned trip to the area during the same year (ie, ‘time-switchers’).
2. Events or activities which simply displace attendees to another event or activity which provides a similar bundle of spending opportunities in the same geographic area in the same period.
3. Council, sponsorship or grants funding etc. that would have occurred in the Taupo in the same year for a different project, event or activity, even if the particular project/event/activity being analysed had not taken place.
4. Local event attendees' impact is not considered additional as it is assumed that their annual discretionary leisure/recreational budgets are fixed and they would have spent their allocated funds in the District even if the event/activity of interest had not taken place.

In general off-setting effects are those forms of spending that would have occurred in the District even if the cycling was not a visitor attraction. The main sources of visitors' non-additional spending in the District were:

1. Taupō residents spending.
2. Spending made by visitors to Taupō who cycled but whose sole or main reason for visiting Taupō was to undertake activities other than cycling.
Multiplier effects
Direct output\(^3,4\) (ie, the initial ‘raw’ spending) made in Taupō is subject to flow-on (multiplier) effects:

1. Visitor expenditure causes an on-spending effect within the industry sector in which the initial spend is made. This is called the indirect effect.
2. The on-spending effect will cause salaries, wages and profits to increase leading to an increase in household income. This in turn results in an increase in household expenditure (ie, an induced effect).

Direct, indirect and induced expenditure are collectively covered by what are termed as type-two multipliers, which are multiplied by the initial spend to give a total impact figure. The total flow-on effect is the difference between total impact and the initial expenditure.

Value added conversion factors and multipliers
Examples of average total employment tourism multipliers are shown in Table 9. To estimate the total impact of the visitors spending in Taupō, a total value added multiplier of 1.4 was used. This value lies within the range of multipliers associated with other relatively small areas (Table 9). Before the value added multiplier was applied to expenditure data (ie, direct output) it was converted to value added. The average value added conversion factor (ie, the ratio of direct value added to direct output) APR selected was 0.4.

Table 9: Examples of average (ie, across sector) total value added tourism multipliers\(^6\)

<table>
<thead>
<tr>
<th>Location</th>
<th>Average ratio of direct value added to direct output (ie, raw expenditure)</th>
<th>Average (ie, across sector) total value added tourism multiplier (Type-Two)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaikoura</td>
<td>0.42</td>
<td>1.38</td>
</tr>
<tr>
<td>Rotorua</td>
<td>0.41</td>
<td>1.59</td>
</tr>
<tr>
<td>Westland</td>
<td>0.54</td>
<td>1.19</td>
</tr>
<tr>
<td>Christchurch</td>
<td>0.34</td>
<td>1.98</td>
</tr>
<tr>
<td>Akaroa</td>
<td>0.35</td>
<td>1.15</td>
</tr>
</tbody>
</table>


Output multipliers
Examples of average total output (ie, expenditure) tourism multipliers are shown in Table 10. In APR’s analysis to estimate total output (ie, expenditure plus all flow-on effects) impacts for Taupō District a total output multiplier of 1.4 was used.

Table 10: Examples of average (ie, across sector) total output (ie, expenditure) tourism multipliers

<table>
<thead>
<tr>
<th>Location</th>
<th>Average total output tourism multiplier (Type-Two)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaikoura</td>
<td>1.31</td>
</tr>
<tr>
<td>Rotorua</td>
<td>1.49</td>
</tr>
<tr>
<td>Westland</td>
<td>1.19</td>
</tr>
<tr>
<td>Christchurch</td>
<td>1.75</td>
</tr>
<tr>
<td>Akaroa</td>
<td>1.11</td>
</tr>
</tbody>
</table>

Source: As specified for Table 9

---

\(^3\) Note that the word ‘direct’ denotes the initial spend made by visitors to Taupō District, whereas the term ‘total’ in an impact context denotes the fact that the impact detailed is inclusive of direct, indirect and induced effects. In other words the term ‘total’ denotes the fact that impact considered is inclusive of the initial expenditure and all its flow-on (re-spending) effects.

\(^4\) Output (ie, spending) is a measure of cash-flows and is therefore a measurement of the level of business activity.

\(^6\) Figures shown in the table have been rounded to two decimal places.
Employment multipliers and conversion factors

Examples of average total employment tourism multipliers are shown in Table 11. In APR’s analysis to estimate total employment (ie, this includes direct employment plus all flow-on employment) impacts for the Taupō District a ratio of direct employment to direct output (ie, a conversion multiplier) of 11 FTEs per $1 million of direct expenditure was used while an average total employment tourism multiplier of 1.3 was used. Overall, APR assumed that total employment (direct employment plus flow-on employment) created or sustained in Taupō District was 14.3 FTEs per $1 million of direct expenditure (ie, direct output). The FTE statistics shown in Table 11 were made between 1987 and 2002. Inflation adjusting the 14.3 FTE per $1 million for CPI inflation between March 2000 and June 2012 results in 10.32 FTEs created or sustained per $1 million of direct expenditure.

Table 11: Examples of average (ie, across sector) total employment tourism multipliers

<table>
<thead>
<tr>
<th>Location</th>
<th>Average ratio of direct employment to direct output (direct FTEs per $1 million direct output)</th>
<th>Average (ie, across sector) total employment tourism multiplier (Type-Two)</th>
<th>Total FTEs per $1 million of direct output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Akaroa</td>
<td>9.41</td>
<td>1.08</td>
<td>10.16</td>
</tr>
<tr>
<td>Kaikoura</td>
<td>11.68</td>
<td>1.21</td>
<td>14.13</td>
</tr>
<tr>
<td>Westland</td>
<td>9.88</td>
<td>1.11</td>
<td>10.97</td>
</tr>
<tr>
<td>Rotorua</td>
<td>11.29</td>
<td>1.39</td>
<td>15.69</td>
</tr>
<tr>
<td>Christchurch</td>
<td>9.95</td>
<td>1.46</td>
<td>14.53</td>
</tr>
</tbody>
</table>

Source: As specified for Table 9

The same multipliers were used for all events. Without purchasing multipliers for Taupo in 2012 the choice of a historic multiplier was a subjective decision. In a more detailed survey-based analysis, sector specific multipliers would be used.
3.2 Events and training impacts

Structure of analysis
An analysis of the impact of events was carried out in two parts:

1. Individual analyses of selected large events.
2. A general model of Lake Taupo Cycle Challenge and Ironman New Zealand event entrants’
   training impacts made in Taupo during the year prior to the events.

The main focus of the report was to outline the quantum and characteristics of the economic
impact associated with visitor spending made at selected large Taupo cycling-inclusive events
which include:

- Contact Lake Taupo Cycle Challenge.
- Day Night Thriller.
- Rotorua to Taupo 100K Flyer.
- Kellogg’s Nutri-Grain Ironman New Zealand.
- Kellogg’s Nutri-Grain Taupo Half.
- Contact Tri Series Kinloch.
- National Duathlon Championships.

Because of the Taniwha’s proximity to Tokoroa and Rotorua the overwhelming majority of
economic impact will likely accrue to South Waikato and Rotorua districts. Without a survey to
address where attendees’ spending was made APR was unable to evaluate the impact of this
event on Taupo’s economy. It is likely that the impact on Taupo District would be limited.

APR did not evaluate the impact of the National Schools Duathlon Championships as this involves
school age competitors. APR does not have survey-based information about relevant economic
parameters for this segment.

APR did not estimate the impact of a number of small events due to a lack of availability of
information. Numbers entered in small events are typically less than 150-200 entrants with a
significant proportion of entrants being locals and therefore not making a net economic impact on
the local economy.

Analysis assumptions and methodology
Economic impact assessment for events generally requires a survey of event participants. Since
no event surveys were undertaken for this assessment, the estimates made are indicative only. Where no survey data is available a number of economic-related parameters such as length of
stay and daily expenditure rates need to be applied from event-specific historic assessments that
are relatively current. The most recent assessment APR was able to access was published
2009. Some of the parameter settings from this assessment will be unchanged as at 2012 while
others will have changed. Event entrance numbers, the number of local participants and the
domestic/international split in APR’s assessment were sourced from event organisers and event
websites. However, in 2012 the average length of overnight stay, the number of supporters,
friends and family accompanying event entrants and overnight/daily expenditure rates for each
event are all unknown. These parameters in APR’s assessment were set to conservative levels to
ensure an overestimate of impact was avoided and to provide defensible estimates. Attributable to
this fact the estimates of event economic impact presented in this report represent an indication of
the likely minimum economic impact.
Average length of overnight stay

In Auckland University of Technology’s (AUT) 2010 assessment of the economic impact of the 2009 Lake Taupo Cycle Challenge, the average length of attendee overnight stay was two nights. The average length of visitor stay in commercial Taupo-based accommodation for the year ended December 2009 and the year ended December 2012 (Statistics New Zealand) were both 1.71 nights. The average length of stay is clearly event-specific and commercial accommodation statistics averaged across a wide range of visitor segments cannot be directly applied to an event analysis. In APR’s view, defensible estimates of average length of stay we could use in our economic impact assessment given an absence of 2012 event surveys were as follows:

- the average length of stay for the Lake Taupo Cycle Challenge participants should be two nights given its extended multi-day format and the fact that a substantial 74% of 2,772 event entrants surveyed in 2009 stayed two nights, implying that even if this statistic significantly declined, it is unlikely that it would decrease significantly enough to shorten the average length of stay as at 2012 from two nights in 2009.
- With the exception of the 100k Flyer, for all other events modelled the overwhelming majority of attendees who stay overnight, will likely stay either one, or two nights. Assuming a 50/50 split, a conservative average estimate is 1.5 nights.
- A significant number of entrants in the 100k Flyer will stay one night at each end of the point to point race, or one night at one end. Therefore, a conservative average overnight length of stay in Taupo is assumed to be one night.

For Ironman New Zealand a number of entrants have longer durations of stay attributable to coming to Taupo prior to the event to train. In AUT’s 2007 analysis of the event, the average length of stay of domestic event attendees was 4.6 nights, while international attendees’ average length of stay was 5.6 nights. APR carried out an analysis using these average lengths of stay figures and using a conservative baseline estimate of just 1.5 nights.

Multipliers

The same multipliers were used for all events analysed. Without purchasing multipliers for Taupo in 2012 the choice of a historic multiplier is a subjective decision (refer to section 3.1). In a more detailed survey-based analysis, sector-specific multipliers would be used.

The average conversion factor used to convert raw expenditure to direct value added across the tourism sector was 0.4.

The average value added multiplier used to convert direct value added to total value added (which includes direct, indirect and induced multiplier effects) across the tourism sector was 1.4. In comparison, Rotorua’s value added multiplier is 1.49.

The average output multiplier used to convert direct spending to total spending (which includes direct, indirect and induced multiplier effects) across the tourism sector was 1.4.

The average value added multiplier used to convert direct expenditure to total expenditure (which includes direct, indirect and induced multiplier effects) across the tourism sector was 1.4.

For every $1 million of expenditure made, 10.32 FTE jobs were assumed to be created or sustained.

Expenditure rates

Event attendees’ domestic overnight and day visit expenditure rates from AUT’s 2010 analysis of the 2009 Lake Taupo Cycle Challenge adjusted to the CPI price level as at June 2012 are as follows:

- $101 - overnight rate.
- $63 - day visit.

These rates have been rounded to whole numbers.
There is no particular reason not to accept the 2009 Lake Taupo Cycle Challenge cycle-specific event expenditure estimates as conservative baseline estimates for 2012’s level in the absence of current survey-based estimates\(^7\). A substantial part of visitor spend will depend on visitors’ quality of accommodation preferences which are partially determined by the nature of cycling events and the availability of accommodation. Looking at relevant data, New Zealand’s seasonally adjusted real retail (across all sectors) expenditure\(^8\) declined by 7.5% between March 2008 and March 2009 (the year prior to the recession which began in 2009) but between March 2009 and March 2013 seasonally adjusted real retail expenditure increased 12.5%\(^9\). While some peoples’ discretionary recreation expenditure may not have rebounded beyond recessionary levels, overall for most households 2009’s level represented discretionary domestic retail expenditure at its lowest. Furthermore, it is likely that cost savings made by potential event participants on recreational expenditure would be manifested by decreased numbers entering events\(^10\), rather than significantly decreased expenditure levels made by those who actually enter an event.

Looking at the Ministry of Business, Innovation and Employment’s (MBIE) Domestic Tourism Survey (DTS) for the year ended December 2012, dividing the total number of holiday domestic visitor nights by the total domestic holiday overnight expenditure gives an estimate per person per night expenditure of $124 for all overnight trips to domestic destinations. This estimate provides an indication that $100 per night per person is a conservative estimate that APR can use.

Event attendees’ international overnight visitor expenditure in AUT’s analysis of the 2009 Lake Taupo Cycle Challenge was adjusted to the CPI price level as at June 2012. This figure was $177. As the quantum of this figure mostly represents international visitors’ event specific accommodation and food and beverage preferences which may not have changed since 2009, it is likely not an overestimate of 2012’s figure. However, in the absence of recent cycling event specific survey data and in the interest of taking a conservative approach APR used MBIE’s New Zealand tourism sector outlook forecasts (2012). MBIE’s estimate of $133 per person per day for Australian visitors in 2012 was used, as by far the greatest proportion of international visitors to the events modelled were Australian.

**Event organisers’ impact**

The event analyses presented in this section do not include impacts made by event organisers’. For APR to analyse this would require detailed information pertaining to each event organiser’s spending in the Taupo District.

**Event types modelled**

The impact analysis presented in this section of the report incorporates any event that includes cycling as an integral part of the event (eg, triathlon).

**Number of accompanying attendees**

The 2009 Lake Taupo Cycle Challenge had an average group size of 2.8 people (domestic) and 2.5 (international). Throughout the several hundred event impact assessments APR has carried out, two or three was the most common attendee group size in sport events. Taking a conservative approach in the absence of recent primary research APR assumed a baseline group size of 2.5 people based on 50% of groups comprised of two people and 50% of groups containing three people.

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\(^7\) Given that AUT’s 2009 Lake Taupo Cycle Challenge research was based on a large survey sample of 2,808 participants it was by far the most reliable source of information available.

\(^8\) In 2010 dollars.

\(^9\) Also, New Zealand’s real GDP rebounded from -1.8% growth in the year ended March 2009 to 1.9% and 2.5% for the years ended March 2012 and 2013 respectively.

\(^10\) Previous or future potential event entrants may permanently give up entering an event, or may decide to enter in alternate years to decrease the average annual costs they face.
‘Time-switchers’
A proportion of visitors who attend events simply change the timing of their visit to a selected area (ie, ‘time-switchers’). Typically, in New Zealand events 10% are time-switchers. In the absence of current cycling event-specific primary research, APR used the 2009 Lake Taupo Cycle Challenge estimate of 11%.

Day and night visitors
In the absence of current cycling event-specific primary research, APR used the 2009 Lake Taupo Cycle Challenge estimate of 3% of out-of-town attendees (who made an additional economic impact on the local economy) being ‘day trippers’ and 97% attendees staying overnight.

3.2.1 Contact Lake Taupo Cycle Challenge

Entrant numbers
There were event 8,214 entrants in 201211.

Additional economic impact
Local attendees (381 people) are not associated with an additional economic impact as they do not introduce ‘new money into the economy. Therefore, there were 7,833 event entrants who made an additional economic impact on Taupo’s economy.

All volunteers were assumed to be locals and will therefore not make an additional economic impact.

A total of 11% of attendees were assumed to be ‘time-switchers’. Therefore, overall only 89% of entrants of out-of-town attendees had an additional impact (ie, 6,971 people).

Attendee entrant numbers
Based on assuming an average of 1.5 people accompanying each participant, there was an average of 2.5 event attendees per entrant. The number of entrants who made an additional economic impact (ie, people) multiplied by 2.5 equates to 17,428 people.

Day and night visitors
A total of 3% of out-of-town attendees (who made an additional economic impact on the local economy) were assumed to be ‘day trippers’ and 97% were assumed to have stayed overnight. Therefore, 16,905 attendees were overnight visitors and 523 were day visitors.

Average length of stay
The average length of stay of attendees was assumed to be two nights.

Expenditure rates
AUT’s survey-based estimate of March 2009 Cycle Challenge event domestics attendees’ overnight expenditure was inflation adjusted to June 2012 prices ($100.85) and a conservative international overnight rate based on MBIE’s Australian forecast visitor estimate for the year ended December 2012 of $133 per person per night was also used in our analysis. These rates were weighted to account for the ratio of the number of international attendees to domestic attendees in 2012 resulting in an overall rate of $102.21 per person per day (ie, APR used a single average rate for domestic and international visitor’s overnight expenditure).

Based on survey-based estimates of 2009 event attendees’ inflation-adjusted day trip expenditure, international and domestic-based attendees’ day trip expenditure in 2012 (in 2012 dollars) was assumed to be $63.17 per person per day.

11 Contact Lake Taupo Cycle Challenge Statistics 2012.
Visitor impact estimates
In 2012 dollars, predicated on the assumptions outlined above, total output (ie, spending inclusive of all flow-on effects) for the 2012 Lake Taupo Cycle Challenge was estimated to be $4.88 million while $1.95 of total value added (ie, value added inclusive of all flow-on effects) was added to the local economy and 36.0 total FTE jobs in the year subsequent to the event were sustained or created.

Table 12: Impact estimates - Lake Taupo Cycle Challenge 2012

<table>
<thead>
<tr>
<th>Total output ($ million)</th>
<th>Total value added ($ million)</th>
<th>Total jobs (FTE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$4.88</td>
<td>$1.95</td>
<td>36.0</td>
</tr>
</tbody>
</table>

3.2.2 Kellogg’s Nutri-Grain Ironman New Zealand

Entrant numbers
There were 1,608 event entrants in 2012 with a 50/50 domestic-international split\(^{12}\).

Additional economic impact
Local attendees (ie, 76 people) are not associated with an additional economic impact as they do not introduce ‘new’ money into the economy. Therefore, there were 1,532 event entrants who made an additional economic impact on Taupo’s economy.

All volunteers were assumed to be locals and will therefore not make an additional economic impact.

A total of 11% of attendees were assumed to be ‘time-switchers’. Therefore, overall only 89% of entrants of out-of-town attendees had an additional impact (ie, 1,363.5 people).

Attendee entrant numbers
Based on assuming an average of 1.5 people accompanying each participant, there was an average of 2.5 event attendees per entrant. The number of entrants who made and additional economic impact (ie, people) multiplied by 2.5 equates to 3,409 people.

Day and night visitors
A total of 3% of out-of-town attendees (who made an additional economic impact on the local economy) were assumed to be ‘day trippers’ and 97% were assumed to have stayed overnight.

Average length of stay
Based on AUT’s 2007 analysis of the event, the average length of stay of domestic event attendees was assumed to be 4.6 nights, while international attendees’ average length of stay was assumed to be 5.6 nights. These relatively long stay lengths reflect a significant number of entrants coming to Taupo in the period before the event to train.

Because APR does not possess current research about how these lengths of stay may have changed over time subsequent to 2006, we also carried out a baseline assessment using an average length of stay or 1.5 nights. The conservative estimates show how the impact would be affected if length of stay has shortened. A significant number of entrants in 2012 will still have come to Taupo prior to the event to train, the percentage of which will determine the quantum of impact.

Expenditure rates
AUT’s survey-based estimate of March 2009 Cycle Challenge event domestics attendees’ overnight expenditure was inflation adjusted to June 2012 prices (ie, $100.85) and a conservative international overnight rate based on MBIE’s Australian visitor estimate for 2012 of $133 per person per night were also used in our analysis. These rates were weighted to account for the

\(^{12}\) Personal communication with Athlete Services, Nutri-Grain Ironman New Zealand.
ratio of the number of international attendees (ie, a 50/50 split) to domestic attendees in 2012 resulting in an overall rate of $118.44 per person per night (ie, APR used a single average rate for domestic and international visitors' overnight expenditure).

Visitor impact estimates
In 2012 dollars, predicated on the assumptions outlined above including 2007 average lengths of stay, total output (ie, spending inclusive of all flow-on effects) for the 2012 Ironman New Zealand was estimated to be $2.83 million while $1.13 million of total value added (ie, value added inclusive of all flow-on effects) was added to the local economy and 20.9 total FTE jobs in the year subsequent to the event were sustained or created.

Table 13: Impact estimates – Kellogg’s Nutri-Grain Ironman New Zealand 2012 – using 2007 average length of stay

<table>
<thead>
<tr>
<th>Total output ($ million)</th>
<th>Total value added ($ million)</th>
<th>Total jobs (FTE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2.83</td>
<td>$1.13</td>
<td>20.9</td>
</tr>
</tbody>
</table>

In 2012 dollars, predicated on the assumptions outlined above but using a very conservative average length of stay of 1.5 nights, total output (ie, spending inclusive of all flow-on effects) for the 2012 Ironman New Zealand was estimated to be $0.83 million while $0.33 million of total value added (ie, value added inclusive of all flow-on effects) was added to the local economy and 6.1 total FTE jobs in the year subsequent to the event were sustained or created.

Table 14: Impact estimates – Kellogg’s Nutri-Grain Ironman New Zealand 2012 – using conservative average length of stay of 1.5 days

<table>
<thead>
<tr>
<th>Total output ($ million)</th>
<th>Total value added ($ million)</th>
<th>Total jobs (FTE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.83</td>
<td>$0.33</td>
<td>6.1</td>
</tr>
</tbody>
</table>

3.2.3 Day Night Thriller

Entrant numbers
There were 2,000 event entrants in 2012\(^\text{13}\).

Additional economic impact
Local attendees (ie, 185 people) are not associated with an additional economic impact as they do not introduce new money into the economy. Therefore, there were 1,815 entrants who made an additional economic impact on Taupo’s economy.

All volunteers were assumed to be locals and will therefore not make an additional economic impact.

A total of 11% of attendees were assumed to be ‘time-switchers’. Therefore, overall only 89% of out-of-town attendees had an additional impact (ie, 1,615 people).

Attendee entrant numbers
Based on assuming an average of 1.5 people accompanying each participant, there was an average of 2.5 event attendees per entrant. The number of entrants who made and additional economic impact (ie, people) multiplied by 2.5 equates to 4,038 people.

Day and night visitors
A total of 3% of out-of-town attendees (who made an additional economic impact on the local economy) were assumed to be ‘day trippers’ and 97% were assumed to have stayed overnight.

\(^{13}\) Personal communication with Murray Fleming, General Manager of Event Promotions.
Average length of stay
The average length of overnight stay of attendees was assumed to be one night in Taupo.

Daily expenditure rates
In the absence of 2012 survey-based spending estimates, estimates from AUT’s analysis of the March 2009 Cycle Challenge domestics Taupo visitors’ expenditure rates were inflation adjusted to June 2012 prices. These equated to $100.85 per person per night for domestic overnight expenditure and $63.17 per person per day for day trip expenditure.

Visitor impact estimates
In 2012 dollars, predicated on the assumptions outlined above, total output (ie, spending inclusive of all flow-on effects) for the Day-Night Thriller was estimated to be $0.84 million while $0.23 million of total value added (ie, value added inclusive of all flow-on effects) was added to the local economy and 6.2 total FTE jobs in the year subsequent to the event were sustained or created.

Table 15: Impact estimates – Day Night Thriller 2012

<table>
<thead>
<tr>
<th>Total output ($ million)</th>
<th>Total value added ($ million)</th>
<th>Total jobs (FTE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.84</td>
<td>$0.23</td>
<td>6.2</td>
</tr>
</tbody>
</table>

3.2.4 100km Flyer - Rotorua to Taupo

Entrant numbers
There were 1,737 event entrants in 2012.

Additional economic impact
Local attendees (ie, 63 people) are not associated with an additional economic impact as they do not introduce new money into the economy. Therefore, there were 1,674 entrants who made an additional economic impact on Taupo’s economy.

All volunteers were assumed to be locals and will therefore not make an additional economic impact.

A total of 11% of attendees were assumed to be ‘time-switchers’. Therefore, overall only 89% of out-of-town attendees had an additional impact (ie, 1,490 people).

Attendee entrant numbers
Based on assuming an average of 1.5 people accompanying each participant, there was an average of 2.5 event attendees per entrant. The number of entrants who made an additional economic impact (ie, people) multiplied by 2.5 equates to 3,725 people.

Average length of stay
Entrants and those accompanying them to the event could stay at Rotorua or Taupo depending on which destination they used as a hub. The average length of overnight stay of attendees in Taupo was assumed to be one night.

Expenditure rates
As used for Day-Night Thriller.

Visitor impact estimates
In 2012 dollars, predicated on the assumptions outlined above, total output (ie, spending inclusive of all flow-on effects) for the 100k Flyer was estimated to be $0.53 million while $0.21 million of total value added (ie, value added inclusive of all flow-on effects) was added to the local economy and 3.9 total FTE jobs in the year subsequent to the event were sustained or created.

14 Personal communication with Murray Fleming, General Manager of Event Promotions.
Table 16: Impact estimates – 100k Flyer 2012

<table>
<thead>
<tr>
<th>Total Output ($ million)</th>
<th>Total value added ($ million)</th>
<th>Total jobs (FTE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.53</td>
<td>$0.21</td>
<td>3.9</td>
</tr>
</tbody>
</table>

3.2.5 Kellogg’s Nutri-Grain Taupo Half

Entrant numbers
There were 1,022 event entrants in 2012\(^\text{15}\).

Additional economic impact
Local attendees (ie, 97 people) are not associated with an additional economic impact as they do not introduce new money into the economy. Therefore, there were 925 entrants who made an additional economic impact on Taupo’s economy.

All volunteers were assumed to be locals and will therefore not make an additional economic impact.

A total of 11% of attendees were assumed to be ‘time-switchers’. Therefore, overall only 89% of out-of-town attendees had an additional impact (ie, 823 people).

Attendee entrant numbers
Based on assuming an average of 1.5 people accompanying each participant, there was an average of 2.5 event attendees per entrant. The number of entrants who made an additional economic impact (ie, people) multiplied by 2.5 equates to 2,058 people.

Day and night visitors
A total of 3% of out-of-town attendees (who made an additional economic impact on the local economy) were assumed to be ‘day trippers’ and 97% were assumed to have stayed overnight.

Average length of stay
The average length of overnight stay of attendees was assumed to be 1.5 nights in Taupo.

Expenditure rates
As used for the Day-Night Thriller.

Multipliers
As used for other events.

Visitor impact estimates
In 2012 dollars, predicated on the assumptions outlined above, total output (ie, spending inclusive of all flow-on effects) for the Taupō Half Ironman was estimated to be $0.43 million, while $0.17 million of total value added (ie, value added inclusive of all flow-on effects) was added to the local economy and 3.2 total FTE jobs in the year subsequent to the event were sustained or created.

Table 17: Impact estimates - Kellogg’s Nutri-Grain Half - 2012

<table>
<thead>
<tr>
<th>Total Output ($ million)</th>
<th>Total value added ($ million)</th>
<th>Total jobs (FTE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.43</td>
<td>$0.17</td>
<td>3.2</td>
</tr>
</tbody>
</table>

\(^{15}\) Information extracted from Kellogg’s Nutri-Grain Taupo Half’s website: [http://www.halfironmantaupo.co.nz/](http://www.halfironmantaupo.co.nz/)
3.2.6 Contact Tri Series - Kinloch.

Entrant numbers
There were 1,074 event entrants in 2012\(^{16}\).

Additional economic impact
Local attendees (ie, 304 people) are not associated with an additional economic impact as they do not introduce ‘new money into the economy. Therefore, there were 770 entrants who made an additional economic impact on Taupo’s economy.

All volunteers were assumed to be locals and will therefore not make an additional economic impact.

A total of 11% of 770 entrants were assumed to be ‘time-switchers’. Therefore, overall only 89% of out-of-town entrants had an additional impact (ie, 685 people).

Attendee entrant numbers
Based on assuming an average of 1.5 people accompanied each participant, there was an average of 2.5 event attendees per entrant. The number of entrants who made an additional economic impact (ie, 685 people) multiplied by 2.5 equates to 1,713 attendees associated with an economic impact.

Day and night visitors
A total of 3% of out-of-town attendees (who made an additional economic impact on the local economy) were assumed to be ‘day trippers’ and 97% were assumed to have stayed overnight.

Average length of stay
The average length of overnight stay of attendees was assumed to be 1.5 nights in Taupo.

Expenditure rates
As used for the Day-Night Thriller.

Multipliers
As used for other events.

Visitor impact estimates
In 2012 dollars, predicated on the assumptions outlined above, total output (ie, spending inclusive of all flow-on effects) for the Contact Tri Series - Kinloch was estimated to be $0.36 million while $0.14 million of total value added (ie, value added inclusive of all flow-on effects) was added to the local economy and 2.6 total FTE jobs in the year subsequent to the event were sustained or created.

Table 18: Impact estimates - Contact Tri Series - Kinloch

<table>
<thead>
<tr>
<th>Total output ($ million)</th>
<th>Total value added ($ million)</th>
<th>Total jobs (FTE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.36</td>
<td>$0.14</td>
<td>2.6</td>
</tr>
</tbody>
</table>

\(^{16}\) Personal communication with Kate Melvill, Event Director, Triathlon New Zealand.
3.2.7 National Duathlon Championships

Entrant numbers
There were 287 event entrants in 2012\(^{17}\).

Additional economic impact
Local attendees (ie, 21 people) are not associated with an additional economic impact as they do not introduce new money into the economy. Therefore, there were 266 entrants who made an additional economic impact on Taupo’s economy.

All volunteers were assumed to be locals and will therefore not make an additional economic impact.

A total of 11% of 266 entrants were assumed to be ‘time-switchers’. Therefore, overall only 89% of out-of-town entrants had an additional impact (ie, 237 people).

Attendee entrant numbers
Based on assuming an average of 1.5 people accompanying each participant, there was an average of 2.5 event attendees per entrant. The number of entrants who made an additional economic impact (ie, 237 people) multiplied by 2.5 equates to 592 attendees associated with an economic impact.

Day and night visitors
A total of 3% of out-of-town attendees (who made an additional economic impact on the local economy) were assumed to be ‘day trippers’ and 97% were assumed to have stayed overnight.

Average length of stay
The average length of overnight stay of attendees was assumed to be 1.5 nights in Taupo.

Expenditure rates
As used for the Day-Night Thriller.

Multipliers
As used for other events.

Visitor impact estimates
In 2012 dollars, predicated on the assumptions outlined above, total output (ie, spending inclusive of all flow-on effects) for the National Duathlon Championships 2012 was estimated to be $0.12 million while $0.05 million of total value added (ie, value added inclusive of all flow-on effects) was added to the local economy and 0.9 total FTE jobs in the year subsequent to the event were sustained or created.

Table 19: Impact estimates - National Duathlon Championship - 2012

<table>
<thead>
<tr>
<th>Total output ($ million)</th>
<th>Total value added ($ million)</th>
<th>Total jobs (FTE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.12</td>
<td>$0.05</td>
<td>0.9</td>
</tr>
</tbody>
</table>

\(^{17}\) Personal communication with Kate Melvill, Event Director, Triathlon New Zealand.
3.2.8 Summary of selected large event impacts

Economic impact assessment for events generally requires a survey of event participants. Since no event surveys were undertaken for this assessment, the estimates made are indicative only. The event with the largest impact was the Contact Lake Taupo Cycle Challenge followed by Ironman New Zealand. Kellogg’s Nutri-Grain Ironman New Zealand with a much smaller number of competitors than the Cycle Challenge achieved a large impact because of the relatively longer average length of stay of event attendees, its significant number of international entrants and their higher daily expenditure. The overall impacts of selected large cycling-inclusive event impacts were as follows:

- direct output of $7.1 million
- total output (ie, total expenditure) of $10.0 million;
- total value added of $3.8 million; and
- 73.7 total FTE jobs created or sustained.

Table 20: Summary of selected large cycling-related event impacts - 2012

<table>
<thead>
<tr>
<th>Metric</th>
<th>Direct output</th>
<th>Total output</th>
<th>Total value added</th>
<th>Total FTE jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Lake Taupo Cycle Challenge</td>
<td>$3.49</td>
<td>$4.88</td>
<td>$1.95</td>
<td>36.0</td>
</tr>
<tr>
<td>Kellogg’s Nutri-Grain Ironman New Zealand</td>
<td>$2.02</td>
<td>$2.83</td>
<td>$1.13</td>
<td>20.9</td>
</tr>
<tr>
<td>Day Night Thriller</td>
<td>$0.60</td>
<td>$0.84</td>
<td>$0.23</td>
<td>6.2</td>
</tr>
<tr>
<td>100k Flyer</td>
<td>$0.38</td>
<td>$0.53</td>
<td>$0.21</td>
<td>3.9</td>
</tr>
<tr>
<td>Kellogg’s Nutri-Grain Taupo Half Ironman</td>
<td>$0.31</td>
<td>$0.43</td>
<td>$0.17</td>
<td>3.2</td>
</tr>
<tr>
<td>Contact Tri Series Kinloch</td>
<td>$0.25</td>
<td>$0.36</td>
<td>$0.14</td>
<td>2.6</td>
</tr>
<tr>
<td>National Duathlon Championships</td>
<td>$0.09</td>
<td>$0.12</td>
<td>$0.05</td>
<td>0.9</td>
</tr>
<tr>
<td><strong>Total (million)</strong></td>
<td><strong>$7.1</strong></td>
<td><strong>$10.0</strong></td>
<td><strong>$3.8</strong></td>
<td><strong>73.7</strong></td>
</tr>
</tbody>
</table>

Notes: (1) In 2012 dollars. (2) Figures shown in the table may not sum to the stated totals as a higher degree of precision (ie, more decimal points) were used in calculations.

3.2.9 General model of economic impacts of visitors' training in Taupo

APR did not locate any historic secondary research specifically dedicated (ie, stand-alone research) to evaluating the training behaviour of cycle tourists in Taupo. Historic economic impact assessments carried out by AUT detail significant levels of cyclists visiting Taupo in the year prior to the 2006 Ironman New Zealand and 2009 Lake Taupo Cycle Challenge. Because of a lack of historic and current research data the estimates evaluated in this section can only provide an indication of annual impacts. Use of conservative parameter estimates prevents any overestimates. The key consideration is the population size of those who visit to train. While small numbers of entrants will potentially come to train in Taupo for the Taupo Half Ironman and Kinloch Contact Tri Series, the majority of training will be made by Cycle Challenge and Ironman New Zealand participants. Taking a conservative approach APR only modelled the training associated with these two events as these are the only events with previous survey evidence that we have sighted.

Some conservative assumptions used in this section were similar to those used for the impact of events detailed in the previous section:

- Visitors’ average length of overnight stay is 1.5 days.
- Each event entrant was accompanied by 1.5 other friends and/or family, therefore the average event attendee group size was 2.5 people (ie, a support multiplier of 2.5).
- The average conversion factor used to convert raw expenditure to direct value added across the tourism sector was 0.4.
- The average value added multiplier used to convert direct value added to total value added (which includes direct, indirect and induced multiplier effects) across tourism sector was 1.4.
- For every $1 million of expenditure made, 10.32 FTE jobs were assumed to be created or sustained.
- Visitors’ average day expenditure was $63.17 per person.
- Visitors’ average overnight stay expenditure $100.85 per night per person.
Additional conservative assumptions used were as follows:

- The training undertaken in Taupo is generally carried out by domestic entrants in the Cycling Challenge and Ironman New Zealand events who come from outside of Taupo. Some international entrants may come to Taupo to train, however, this is less common or likely. APR took a conservative approach and did not assess the impact of international entrants’ training.
- Based on 2009 Lake Taupo Cycle Challenge data:
  - 8% of event entrants undertake training in Taupo during the year prior to the event.
  - Out of the 8%, 57% undertake one day visit, 28% undertake two day visits, 68% undertake one overnight visit and 21% made two overnight visits.

Although the parameter settings from the survey of the 2009 Cycle Challenge are not recent, they are the best cycle event specific parameters currently available without conducting new primary research. Given New Zealand’s emergence from recession, from a consumer budgetary perspective there is no reason not to believe that that many of the parameter settings will have drastically changed from 2009’s levels for a significant proportion of event entrants who came to Taupo to train. However, there is the possibility that the overall proportion of event entrants who came to Taupo to train in 2012 has changed from 2009. For this reason, in Table 21 we have provided impact estimates over a range of proportions of event entrants. For the 2012 Ironman New Zealand APR took a conservative approach by using attendees’ visit parameters taken from AUT’s 2009 Cycle Challenge survey, rather than AUT’s 2006 survey of Ironman New Zealand entrants. This was because the 2006 survey was much older, less specific about visitors’ stay preferences, used a much smaller survey sample (implying less accuracy) and had other parameters settings that unlike the Cycle Challenge that were not conservative, or plausible for 2012 (without being substantiated by a recent survey).

At 8% of domestic Cycling Challenge and Ironman New Zealand entrants making trips to Taupo to train and making use of the assumptions listed above, the impact made by these people and the friends and family who accompanied them was:

- total output (ie, total expenditure) of $0.55 million;
- total value added of $0.22 million; and
- 4.0 total FTE jobs created or sustained.

### Table 21: Impact attributable to training by the percentage of Cycle Challenge and Ironman NZ attendees who came to Taupo to train in the year prior to the event

<table>
<thead>
<tr>
<th>% of Cycle Challenge and Ironman NZ attendees who visit to Taupo to train in the year prior to the event</th>
<th>Total output (ie, expenditure) ($ million)</th>
<th>Total value added ($ million)</th>
<th>Total jobs (FTE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2%</td>
<td>$0.14</td>
<td>$0.05</td>
<td>1.0</td>
</tr>
<tr>
<td>4%</td>
<td>$0.27</td>
<td>$0.11</td>
<td>2.0</td>
</tr>
<tr>
<td>6%</td>
<td>$0.41</td>
<td>$0.16</td>
<td>3.0</td>
</tr>
<tr>
<td>8%</td>
<td>$0.55</td>
<td>$0.22</td>
<td>4.0</td>
</tr>
<tr>
<td>10%</td>
<td>$0.68</td>
<td>$0.27</td>
<td>5.0</td>
</tr>
<tr>
<td>12%</td>
<td>$0.82</td>
<td>$0.33</td>
<td>6.1</td>
</tr>
<tr>
<td>14%</td>
<td>$0.96</td>
<td>$0.38</td>
<td>7.1</td>
</tr>
</tbody>
</table>

---

18 AUT’s 2009 Lake Taupo Cycle Challenge specifies additional percentages for those survey respondents who undertook three or more overnight or day visits. In the interest of taking a conservative approach these less common, higher visit frequencies, were not modelled in our analysis.

19 AUT’s 2006 research indicated that 49% of survey respondents in 2006 came to Taupo to train.

20 Predicated on Cycle Challenge data.
3.3 Economic impacts of Taupo trail/tracks usage

There is a lack of data that can be used to make accurate estimates of impact associated with the usage of Taupo cycling tracks, therefore the estimates made in this section are broadly indicative only. From an impact analysis perspective a number of facts are known:

- Net economic impact (ie, ‘new money’) is made by the spending of those who visit Taupo, rather than residents.

- Residents’ contribution to the annual level of activity on tracks will be dis-proportionately large compared to the level made by visitors given the size of resident population. This is because residents make a much larger number of repeat visits to tracks.

- Genuinely iconic Taupo District tracks currently are the 42nd Traverse (ie, T42) and the Great Lake Trail (mostly W2K). The Waikato River Trails and the Timber Trail will likely become more iconic as they increase in popularity over coming years.

- As more tracks/trails become more popular, the probability of attracting overnight visitors to Taupo will increase.

- Aside from T42 and the Waikato River Trails, the most significant levels of visitation in the Taupo District unsurprisingly occur on trails in and around the Taupo township (ie, Craters of the Moon, Huka Fall Trails, Tongariro River Trails, The Great Lake Walkway and the Great Lake Trail. Much of the usage of these tracks (eg, Craters of the Moon) is made by those whose primary motivation for staying in Taupo is not to undertake cycling.

- The main iconic cycling trail located close by to the Taupo township is the Great Lake Trail. Its usage by those from outside of Taupo is predominantly made by day visitors from other districts, rather than overnight visitors.

- Visitation levels to tracks located further away from Taupo township are generally made by visitors making day visits usually from a tourist hub located in other districts. For Taupo trails that are not immediately located close to Taupo township or other Districts such as the T42, day visits are more likely to be made by visitors staying in and around Taupo or Turangi townships.

- In the case of the Waikato River Trails, the majority of day visits are likely made by visitors who base themselves in Rotorua or Tokoroa. Since there are limited commercial opportunities at the trail, most of the impacts will likely be made in South Waikato and Rotorua and will likely not accrue to Taupo.

Methodology

In terms of motivation for visiting Taupo there are two types of visitors who undertake cycling:

a) Those for whom experiencing the trail/ride is the causal driver for visitation to Taupo.

b) Those for whom experiencing the trail/ride is just one attracting factor from a bundle of attracting motivations for visiting Taupo.

Trail visitation can occur by riders making a day visit from another district to a selected trail or by riders staying overnight in the Taupo District. Those who stay in the District will either make a day trip to a track or use a track which is in the vicinity of where they are staying. For those making a day trip to a trail from another district, (eg, Rotorua) causality is implied. For those staying overnight in Taupo the reason for staying may, or may not be the primary reason (ie, the cause) of their visit to Taupo.
APR’s analysis was constrained by a lack of empirical data. Ideally impact estimation would need to take a bottom-up approach and model each individual trail separately. Although APR was supplied with DOC counter data for some of the trails in and around the Taupo township including the Great Lake Trail, this was of limited use for economic impact analysis as:

- Counter data does not specify where riders are from. Only visitors from outside of Taupo make a net economic impact on Taupo’s economy. Rides made by locals would need to be identified and removed from the counter data.
- Counter data does not distinguish day from overnight visitors to Taupo. Each type of visitor has a different impact.
- From overnight visitors counter data cannot distinguish riders for whom cycling was a primary or main reason for coming to Taupo and those for whom riding was not a causal attracting factor for their visit.
- Counter data cannot distinguish between the rides made by the same overnight visitors during their stay and those made by ‘new’ overnight visitors. In other words, there is a need to distinguish between the number of riders and the number of rides undertaken in a set period of time (ie, the need to distinguish between the number of visits to a selected trail and the number of visitors associated with this).

Trail data was modeled in terms of day and overnight visits as follows:

**Day visits**
For day visits APR undertook a bottom-up approach and modeled the data we have, but unfortunately there is sufficient data to model most trails. It appears that currently the largest proportion of causal cycle tourism is made by day visitors, leaving aside those who travel to Taupo to train for events.

**Overnight visits**
For overnight visits APR used a top-down approach. APR modeled two types of overnight visit:

**Causal (cycling was the main/primary reason for visiting Taupo)**
The two Taupo-based rides that would be considered iconic (T42 and GLT), and to a lesser extent Te Iryinga, the Timber Trail and Tree Trunk Gorge are likely to attract a small number of individuals to stay overnight in the Taupo township and Turangi for the purpose of riding these tracks at their convenience.

**Non-causal (cycling was not the main/primary reason for visiting Taupo)**
A number of visitors staying in Taupo township or Turangi for a holiday as part of a diversified bundle of attractions and activities experienced may ride relatively close-by, family-friendly tracks such as Craters of the Moon and Huka Falls Trails, as well as the Great Lake Trail. A smaller number of visitors will make a day trip to more remotely located tracks.

Mainstream tourism impact analysis is based on the concept of attributing the expenditure/impacts made by visitors to an area to the primary motivating factor (ie, the causal factor) that attracts these visitors. For events, attendees’ possess a well-defined primary (ie,‘casual’) motivation for coming to Taupo, however, for Taupo holiday visitors who experience a bundle of attractions, activities and experiences (including spending time with friends and family), the strength of individual motivations and their relationship to economic impact will be complex and varied. Where visitors’ motivation for staying overnight in Taupo is not primarily to undertake cycling in order to attribute cycling activity impact APR assumed that holiday and VFR visitors’ motivations for experiencing recreational and leisure attractions/opportunities in Taupo was not dominated by any single attracting factor. This enabled APR to attribute indicative impacts on the basis of the estimated length of time these cycle tourists spent undertaking biking during their visit. However, it is not a standard (or safe) methodology to attribute economic impact to attractions/activities that are not a primary reason for visitation. For this reason, APR did not include its estimates made using this method in our overall estimates of economic impact.
3.3.1 Day visits from area outside of Taupo - Great Lake Trails (GLT)

In the absence of alternative data, APR used Tourism Research Consultants (2010) ‘realistic’ estimate of the number of day visitors to the Great Lake Trail after three years which was 5,875 visits p.a. to provide an indication of conservative day visitor numbers. APR selected 6,000 visits.

In terms of day visitor expenditure APR used domestic cycling-related visitor day expenditure of $63 per person (2012 dollars)\(^{21,22}\). According to MBIE’s Domestic Tourism Survey the average day spend (for all domestic destinations) was $112 per person in the year ended June 2012. This figure reflects the fact that many visitors’ trips are made to destinations that provide a number of commercial recreational and leisure opportunities/attractions. Trips made to trails are often very focused around cycling with visitors travelling to a trail, experiencing it, then returning home. Spending by day visitors to GLT will likely only occur around buying a meal in town (usually fast food), buying petrol and possibly making use of a shuttle at the trail. Using the same multipliers as the rest of this report’s analysis, the impacts of between 5,000 and 8,000 day visits p.a. to GLT are shown in Table 22. At 6,000 visits p.a. the impacts were as follows:

- total output (ie, total expenditure) of $0.53 million;
- total value added of $0.21 million; and,
- 3.9 total FTE jobs created or sustained.

<table>
<thead>
<tr>
<th>Impact/day visitors</th>
<th>Total Output ($ million)</th>
<th>Total Value added ($ million)</th>
<th>Total jobs (FTE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5,000</td>
<td>$0.44</td>
<td>$0.18</td>
<td>3.3</td>
</tr>
<tr>
<td>5,500</td>
<td>$0.49</td>
<td>$0.19</td>
<td>3.6</td>
</tr>
<tr>
<td>6,000</td>
<td>$0.53</td>
<td>$0.21</td>
<td>3.9</td>
</tr>
<tr>
<td>6,500</td>
<td>$0.57</td>
<td>$0.23</td>
<td>4.2</td>
</tr>
<tr>
<td>7,000</td>
<td>$0.62</td>
<td>$0.25</td>
<td>4.6</td>
</tr>
<tr>
<td>8,000</td>
<td>$0.71</td>
<td>$0.28</td>
<td>5.2</td>
</tr>
</tbody>
</table>

**Triangulation of estimates**

On an anecdotal level, a number of riders who have cycled on the Great Lake Trail have reported seeing numbers of out-of-town day riders during the weekends in the peak parts of the summer season that, if extrapolated and adjusted for seasonality, would imply between 6,000 and 9,000 day visits per year. An estimate of 6,000 day visitors therefore appears to be a reasonable and relatively conservative estimate with the number day visitors potentially reaching between 2,000 and 3,000 per annum greater than this figure.

3.3.2 Overnight visits

**Causal cycle tourism (ie, cycling was the main/primary reason for visiting)**

Insufficient data was possessed by APR to analyse the impacts of individual trails in terms of overnight visits (in other words a ‘bottom up’ approach). Therefore, overnight visit numbers were analysed by using assumed levels of visitors’ propensity for undertaking cycling activity.

Approximate projected numbers of total holiday and visiting friends and family (VFR) overnight visitors to Taupo District in 2012 (Ministry of Business, Innovation and Employment, 2009) are 1,225,894 overnight visitors\(^{23}\). For the year ended December 2012 estimates of cycling activity from the Ministry of Business, Innovation and Employment’s (MBIE) International Visitor Survey (IVS) and Domestic Tourism Survey (DTS) record cycling tourism participation as 1.15% and 3.27% of domestic and international visitors surveyed respectively. Because these rates are for cycle tourism at a national level, rather than specifically for Taupo, they may be conservative, especially for domestic tourists. Using the projected numbers of international and domestic visitors in 2012, a weighted cycling tourism participation rate was 1.72%.

\(^{21}\) This is the 2009 Cycle Challenge’s day visitor spend inflation adjusted to June 2012 dollars.

\(^{22}\) Tourism Research Consultants used $105 per day per person expenditure in the Lake Track Feasibility and Business Case - APR considers this figure to be quite large and opted to use a more conservative $63 per person.

\(^{23}\) Although these forecasts were made in 2009, they are still likely to be relatively accurate. Since MBIE no longer provides district level forecasts, they are the best data currently available.
MBIE’s cycling tourism participation rates do not distinguish between casual and non-casual cycle tourism (ie, between those whose primary reason for visitation is cycling and those for whom it is not). The best APR can do in this situation is assume 50% of the rate for each type of cycle tourism. MBIE’s cycling tourism participation rates do not distinguish between overnight and day visitors. In terms of causal cycling tourism, much of the visitation to Taupo Cycle trails is day visits. Most casual visits to Taupo’s popular trails appear to be made by visitor who are staying overnight in another District town (eg, visits to Great Lake Trail or Timber Trail). There are a significant number of visits to Craters of the Moon by visitors to Taupo who stay overnight, but the primary reason for visiting Taupo for these tourists is unlikely to be cycling. A significant number of visitors who cycle the 42nd Traverse, Te Iringa or Tree Trunk Gorge may stay overnight in Taupo, however, there are still a significant number of visitors who make day trips from other districts to these. In the absence of any current survey research that accurately estimates the ratio of day to overnight out-of-town visitors whose primary reason for visiting Taupo is to undertake cycling, APR assumed that only 20% of causal Taupo cycle tourists stay overnight. The 20% figure does not include those who travel to Taupo to train (refer to the next paragraph).

It is reasonable to assume that cycling is the primary reason for those visitors who come to Taupo to train for an event and use various cycle tracks and trails. For this reason, those who came to Taupo to train for the Cycle Challenge and Ironman New Zealand during the year prior to an event, as well as those who accompanied them, were excluded from APR’s general overnight cycle tourism impact analysis (ie, to avoid double counting of impacts). This a conservative approach as the DTS and IVS survey methodologies randomly target New Zealand residential households, and those who travel to train in Taupo are members of a very specific segment that is unlikely to have made much of contribution to the survey sample.

APR’s assumed a conservative $100 per person per night for all ‘casual’ cycle tourism overnight visitors. In Table 23 overnight visit impacts made by Taupo cycle tourists whose primary (ie, causal) motivation for visitation was trail cycling are shown assuming an average 1.5 night stay:

- total output (ie, total expenditure) of $0.37 million;
- total value added of $0.15 million; and
- 2.7 total FTE jobs created or sustained.

The impact estimates are low primarily because the overwhelming majority of ‘casual’ cycle tourism to Taupo-based trails is made by day visitors, because these estimates exclude those who may use selected trails to train for events and because the estimates make use of conservative cycling tourism propensities that are not Taupo specific.

Table 23: Overnight visit impacts made by Taupo cycle tourists whose primary (ie, causal) motivation for visitation was cycling

<table>
<thead>
<tr>
<th>Total output (ie, expenditure)</th>
<th>Total value added</th>
<th>Total jobs (FTE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>($ million)</td>
<td>($ million)</td>
<td></td>
</tr>
<tr>
<td>$0.37</td>
<td>$0.15</td>
<td>2.7</td>
</tr>
</tbody>
</table>

The multipliers used in this section’s analysis were the same as those used in the rest of the report’s analysis.

Non-causal cycle tourism (ie, going cycling was not the main/primary reason for visiting Taupo)

Similar to the previous section overnight visit numbers were analysed by using assumed levels of visitors’ propensity for undertaking cycling activity from projected numbers of total holiday and VFR visitors to Taupo District in 2012. APR’s again assumed a conservative expenditure rate of $100 per person per night.

The economic impact associated with Taupo cycle tourists whose motivation for visitation to the District was not primarily to undertake cycling was attributed in terms of the estimated length of time they spent undertaking biking during their holidays. As previously stated the validity of this approach at very least is predicated on an assumption that no one particular component of visitors’ motivations for travelling to Taupo dominates any other. Mainstream economic impact analysis only models impacts associated with attractions, events and people that are the primary...
(ie, causal) reasons for visitation to an area. For this reason we did not include the estimates shown above in our overall estimates of economic impact.

Looking at the average length of stay to consider how much time visitors have to undertake a range of activities. According to Statistics New Zealand, Accommodation Survey, for the year ended December 2012 the average length of stay in commercial accommodation was just 1.7 days while APR’s historic Taupo Private Accommodation Monitor data shows the average length of stay in private accommodation, especially batches generally ranges between three (in winter) and five nights (in January). Taking this data into account and taking a conservative approach, the average number of days spent participating in cycling activities by cycle tourists whose motivation for visitation was not primarily cycling would likely only average a quarter to half a day per trip. Table 24 show impacts and at selected average number of days visitors spend participating in cycling activities in Taupo District. At an average of quarter of a day spent cycling the impacts made were:

- total output (ie, total expenditure) of $0.37 million;
- total value added of $0.15 million; and,
- 2.7 total FTE jobs created or sustained.

Table 24: Overnight visit impacts made by Taupo cycle tourists whose motivation for visitation was not primarily cycling

<table>
<thead>
<tr>
<th>Average number of days spent participating in cycling activities</th>
<th>Total output ($ million)</th>
<th>Total value added ($ million)</th>
<th>Total jobs (FTE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.25</td>
<td>$0.37</td>
<td>$0.15</td>
<td>2.7</td>
</tr>
<tr>
<td>0.50</td>
<td>$0.74</td>
<td>$0.30</td>
<td>5.5</td>
</tr>
<tr>
<td>1.00</td>
<td>$1.48</td>
<td>$0.59</td>
<td>10.9</td>
</tr>
<tr>
<td>1.50</td>
<td>$2.22</td>
<td>$0.89</td>
<td>16.4</td>
</tr>
<tr>
<td>2.00</td>
<td>$2.96</td>
<td>$1.18</td>
<td>21.8</td>
</tr>
</tbody>
</table>

The multipliers used in this section’s analysis were the same as those used in the rest of the report’s analysis.
4.0 SUMMARY OF IMPACTS

Summary of impacts

Large events
The main focus of the report was to outline the quantum and characteristics of the economic impact associated with visitor spending made at Taupo’s largest cycling-related events. Event impact assessment is primarily an empirical based methodology that requires an underlying survey. As APR’s assessment did not involve any surveys and very little current secondary cycle inclusive event research is available, the impact estimates presented in this report’s assessment simply provide an indication of the quantum of economic impact. Notably, the impacts evaluated were for 2012. These impacts are a snapshot as event entrant numbers fluctuate from year to year.

APR did not model the impact of the Taniwha, a new event in 2012 which involves running and mountain biking event of various lengths. Attributable to the event base’s proximity to Tokoroa and Rotorua the overwhelming majority of economic impact will likely accrue to South Waikato and Rotorua districts. Without a survey to address where attendees’ spending was made APR was unable to evaluate the impact of this event on Taupo. However, it is likely that the impact on Taupo District would be small. APR did not evaluate the impact of the National Schools Duathlon Championships as this involves school-age competitors. APR does not have survey-based information about relevant economic parameters for this segment.

Out of selected large cycling inclusive events, the event with the largest economic impact was the Contact Lake Taupo Cycle Challenge followed by Kellogg’s Nutri-Grain Ironman New Zealand. Ironman New Zealand with a much smaller number of competitors than the Cycle Challenge achieves a large impact because of the relatively long average length of stay of its event attendees, its significant number of international entrants and their higher daily expenditure. The overall impacts of selected large cycling-related event impacts were as follows:
- direct output (ie, expenditure without any flow-on effects) of $7.1;
- total output (ie, expenditure inclusive of all flow on effects) of $10.0 million;
- total value added (ie, value added inclusive of all flow on effects) of $3.8 million; and
- 73.7 FTE total jobs (ie, employment inclusive of all flow on effects) created or sustained.

Table 25: Summary of selected large cycling-related event impacts – 2012

<table>
<thead>
<tr>
<th>Metric</th>
<th>Direct output</th>
<th>Total output</th>
<th>Total value added</th>
<th>Total FTE jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Lake Taupo Cycle Challenge</td>
<td>$3.49</td>
<td>$4.88</td>
<td>$1.95</td>
<td>36.0</td>
</tr>
<tr>
<td>Kellogg’s Nutri-Grain Ironman NZ</td>
<td>$2.02</td>
<td>$2.83</td>
<td>$1.13</td>
<td>20.9</td>
</tr>
<tr>
<td>Day Night Thriller</td>
<td>$0.60</td>
<td>$0.84</td>
<td>$0.23</td>
<td>6.2</td>
</tr>
<tr>
<td>100k Flyer</td>
<td>$0.38</td>
<td>$0.53</td>
<td>$0.21</td>
<td>3.9</td>
</tr>
<tr>
<td>Kellogg’s Nutri-Grain Taupo Half Ironman</td>
<td>$0.31</td>
<td>$0.43</td>
<td>$0.17</td>
<td>3.2</td>
</tr>
<tr>
<td>Contact Tri Series Kinloch</td>
<td>$0.25</td>
<td>$0.36</td>
<td>$0.14</td>
<td>2.6</td>
</tr>
<tr>
<td>National Duathlon Championships</td>
<td>$0.09</td>
<td>$0.12</td>
<td>$0.05</td>
<td>0.9</td>
</tr>
<tr>
<td><strong>Total (million)</strong></td>
<td><strong>$7.1</strong></td>
<td><strong>$10.0</strong></td>
<td><strong>$3.8</strong></td>
<td><strong>73.7</strong></td>
</tr>
</tbody>
</table>

Notes:
(1) In 2012 dollars.
(2) Figures shown in the table may not sum to the stated totals as a higher degree of precision (ie, more decimal points) were used in calculations.
(3) Note that the word ‘direct’ denotes the initial spend made by visitors to Taupo District, whereas the term ‘total’ in an impact context denotes the fact that the impact detailed is inclusive of direct, indirect and induced effects. In other words the term ‘total’ denotes the fact that impact considered is inclusive of the initial expenditure and all its flow-on (re-spending) effects.
**Event training**
APR estimated the impact made by domestic Cycling Challenge and Ironman New Zealand entrants making trips to Taupo to train (refer to the body of the report for assumptions). Because of a lack of historic and current research data about entrants training characteristics, the estimates evaluated in this section simply provide an indication of impacts. APR only made estimates for the events aforementioned as these were only two we have sighted survey evidence that shows an established pattern of trainees visiting Taupo. The impact made by those who came to Taupo to train and the friends and family who accompanied them is estimated in 2012 to be:

- total output (ie, total expenditure) of $0.55 million;
- total value added of $0.22 million; and
- 4.0 total FTE jobs created or sustained.

**Overnight cycle tourism (‘causal, ie, cycling was the main reason for visiting’)**

Overnight visit impacts made by Taupo cycle tourists whose causal (ie, primary) motivation for visiting Taupo was cycling were:

- total output (ie, total expenditure) is $0.37 million;
- total value added is $0.15 million; and
- 2.7 total FTE jobs are created or sustained.

**Day visits to the Great Lake Trail**
Based on 6,000 day visits p.a. to the Great Lake Trail the economic impacts were as follows:

- total output (ie, total expenditure) of $0.53 million;
- total value added of $0.21 million; and
- 3.9 FTE jobs created or sustained.

**Overall impact estimates**
A summary of selected economic impacts is shown in Table 26. Overall, conservative estimates of the annual economic impact of cycling were as follows:

- direct output (ie, expenditure without any flow-on effects) is $8.17 million;
- total output (ie, expenditure inclusive of all flow on effects) is $11.44 million;
- total value added (ie, value added inclusive of all flow on effects) is $4.41 million; and
- 84.3 total FTE jobs (ie, employment inclusive of all flow on effects) are created or sustained.

The largest annual impact in 2012 was made by events. The reason why the impact of events is relatively large is because they attract significant numbers of out-of-town entrants across a wide range of abilities, experience and ages. Entrants are generally accompanied by significant numbers of friends, family and support staff, with the overwhelming majority of these making multiday overnight visits, rather than day visits.

The largest annual impact in 2012 was made by events. The reason why the impact of events is relatively large is because they attract significant numbers of out-of-town entrants across a wide range of abilities, experience and ages. Entrants are generally accompanied by significant numbers of friends, family and support staff, with the overwhelming majority of these making multiday overnight visits, rather than day visits.

Overall, the conservative estimates presented in Table 26 represent a likely minimum level of impact that was made in 2012 (refer to the body of the report for a comprehensive outline of assumptions). The event impacts presented do not include event organisers’ impacts and a small impact made by a number of much smaller events. The overall impact would be also be larger if there was available current data to support estimating the impacts associated with a larger population of people who come to Taupo to train for events. The main factor that limited the size of

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24 Most overnight visitors to Taupo who come to train for an event and use various cycle track and trails primary motivation for visitation is to undertake cycling. The visitors who come to Taupo to train for the Cycle Challenge and Ironman New Zealand during the year prior to the event and those who accompany them were excluded from this section’s analysis in order to avoid double counting of impacts.
APR's conservative estimates was the lack of economic impact friendly data about day visitors to selected trails (refer to conclusions and recommendations).

Table 26: Summary of selected Taupo cycling-related economic impact estimates – 2012

<table>
<thead>
<tr>
<th>Impact source</th>
<th>Direct output ($ million)</th>
<th>Total output ($ million)</th>
<th>Total value added ($ million)</th>
<th>Total jobs (FTE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selected large cycling-related events</td>
<td>$7.14</td>
<td>$9.99</td>
<td>$3.84</td>
<td>73.7</td>
</tr>
<tr>
<td>Event training for Cycle Challenge and Ironman New Zealand</td>
<td>$0.39</td>
<td>$0.55</td>
<td>$0.22</td>
<td>4.0</td>
</tr>
<tr>
<td>Day visitors to Great Lake Trail</td>
<td>$0.38</td>
<td>$0.53</td>
<td>$0.21</td>
<td>3.9</td>
</tr>
<tr>
<td>Overnight cycle tourism (causal, ie, cycling is the main reason for visiting)</td>
<td>$0.26</td>
<td>$0.37</td>
<td>$0.15</td>
<td>2.7</td>
</tr>
<tr>
<td><strong>Total ($ million)</strong></td>
<td><strong>$8.17</strong></td>
<td><strong>$11.44</strong></td>
<td><strong>$4.41</strong></td>
<td><strong>84.3</strong></td>
</tr>
</tbody>
</table>

Notes:  (1) In 2012 dollars.  (2) Figures shown in the table may not sum to the stated totals as a higher degree of precision (ie, more decimal points) were used in calculations.  (3) Note that the word ‘direct’ denotes the initial spend made by visitors to Taupō District, whereas the term ‘total’ in an impact context denotes the fact that the impact detailed is inclusive of direct, indirect and induced effects. In other words the term ‘total’ denotes the fact that impact considered is inclusive of the initial expenditure and all its flow-on (re-spending) effects.

CONCLUSIONS

**Events and training**

1. APR modeled the economic impacts of large cycle-inclusive events on the Taupo economy. APR lacked sufficient information on a number of smaller events to model their economic impact. The inclusion of these would have made the event impact totals slightly higher, although not significantly larger as the number of entrants who enter these are relatively low and a much greater proportion of these are locals who do not have a net economic impact on the local economy.

2. Event impact assessment is primarily an empirical based methodology that requires an underlying survey. As APR’s assessment did not involve any surveys and very little current secondary research was available, the impact estimates purely provide an indication of the quantum of economic impact.

3. APR sourced data relating to event entrant numbers, the number of locals and out-of-town entrants and the number of domestic and international entrants from event organisers. However, very conservative assumptions were used for all other estimation parameters (eg, average length of stay). This implies that the event impact estimates made in this report are more likely to underestimate the actual impact rather than over-estimate them.

4. The impact analysis carried out included any event that includes cycling as an integral part of the event (eg, triathlon). If APR's definition of cycling events was to be narrowed purely to cycling events (eg, Night Day Thriller), the total event impact figures estimated would exclude duathlons and triathlons and would be significantly lower.

5. The event analyses presented in this report do not include impacts made by event organisers. For APR to analyse this, detailed information pertaining to each event organiser’s spending in Taupo District would be required.

6. Because of the Taniwha event’s proximity to Tokoroa and Rotorua the overwhelming majority of its economic impact will likely accrue to South Waikato and Rotorua districts. Without a survey to address where attendees’ spending was made APR was unable to evaluate the impact of this event on Taupo. However, it is likely that the impact on Taupo District would be relatively low.
7. APR did not evaluate the impact of the National Schools Duathlon Championships as this involves school age competitors. APR does not have survey-based information about relevant economic parameters for this segment.

8. Event impact estimates do not include the economic value of marketing achieved by media coverage of event and participants’ word-of-mouth. Downstream impacts resulting from events are a building out of Taupo’s tourism brand and the attraction of event participants and their friends, family and colleagues to Taupo in the future. Taking these facts into account the true impacts of events may be significantly greater than just the upstream (ie, immediate) economic impacts.

Tracks/trail usage

9. There is a lack of data that can be used to make accurate estimates of economic impact associated with usage of Taupo cycling trail and tracks, therefore the estimates made simply provide an indicative of impact. Ideally impact estimation would need to take an across the board, bottom-up approach and model the impacts associated with each individual trail separately in terms of day and overnight visitors to Taupo. Although APR was supplied with DOC counter data for some of the trails around the Taupo township, including the Great Lake Trail, this was of limited use for economic impact analysis as:
   - Counter data does not take into account where riders are from. Only visitors from outside of Taupo make a net economic impact on Taupo’s economy. Rides made by locals would need to be identified and removed from the counter data.
   - Counter data does not distinguish day from overnight visitors to Taupo. Each type of visitor has a different impact.
   - Counter data does not distinguish riders for whom cycling was a primary or main reason for coming to Taupo and those for whom riding was not a causal attracting factor for their visit.
   - Counter data does not distinguish between the rides made by the same overnight visitors during their stay and those made by ‘new’ overnight visitors. In other words, there is a need to distinguish between the number of riders and the number of rides undertaken in a set period of time (ie, the need to distinguish between the number of visits to a selected trail and the number of visitors associated with this).
   - Counter data typically has accuracy issues unless it is regularly calibrated and trails are long-established with visitor usage patterns being relatively stable. This implies that the range of visitor segments (eg, markets) using the tracks is stable.

10. In terms of motivation for visiting Taupo there are two types of visitors who undertake cycling:
   - c) Those for whom experiencing the trail/ride is the causal driver for visitation to Taupo.
   - d) Those for whom experiencing the trail/ride is just one attracting factor from a bundle of attracting motivations for visiting Taupo.

11. Trail visitation can occur by riders making a day visit from another district to a selected trail or by riders staying overnight in the Taupo District. Those who stay in the District will either make a day trip to a track or use a track which is in the vicinity of where they are staying. For those making a day trip from another district (eg, Rotorua) causality is implied. For those staying overnight in Taupo the reason for staying may, or may not be the primary reason (ie, the cause) for their visit to Taupo.

12. For day visits APR undertook a bottom-up approach and modeled the available data, but unfortunately there is insufficient data to model most trails. It appears that currently the largest proportion of ‘causal’ cycle tourism in Taupo is made by day visitors, leaving aside those who travel to Taupo to train for events. We modeled the impact of The Great Lake Trail. Although the majority of visitors to Craters of the Moon are likely overnight visitors whose primary reason(s) for visiting is not to undertake cycling, it is likely that there are a small but significant number of day visits made from those staying in other districts to this
attraction. Further primary research would be required for APR to determine the composition of visits to Craters of the Moon and therefore enable an assessment of its economic impact.

13. To assess the impact of overnight tourism visits, APR undertook a top-down modeling approach using the projected numbers of total holiday and visiting friends and family (VFR) overnight visitors to Taupo District in 2012, estimates of cycling tourism activity rates from the Ministry of Business, Innovation and Employment's (MBIE) International Visitor Survey (IVS) and Domestic Tourism Survey (DTS) for the year ended December 2012, and selected assumptions. Because these rates are for cycle tourism at a national level, rather than a local level, they are likely to be conservative, especially for domestic visitors. The impact estimates were also low because the overwhelming majority of ‘causal’ cycle tourism on Taupo-based trails was made by day visitors as well as the fact that APR’s estimates excluded those who may have used selected trails to train for events.

14. It is reasonable to assume that cycling is the primary reason for those visitors who come to Taupo to train for an event and use various cycle tracks and trails. For this reason, those who came to Taupo to train for the Cycle Challenge and Ironman New Zealand during the year prior to an event, as well as those who accompanied them, were excluded from APR’s general overnight cycle tourism impact analysis (ie, to avoid double counting of impacts). This a conservative approach as the DTS and IVS survey methodologies randomly target New Zealand residential households, and those who travel to train in Taupo are members of a very specific segment that is unlikely to have made much of contribution to the survey sample.

**RECOMMENDATIONS**

*Events and training*

1. Impact surveys for a small number of large cycle-inclusive events need to be undertaken at the time of each event over the next few years. This will enable an updating of representative cycle event specific parameter estimates for average length of visitor stay, daily/nightly expenditure rates, average proportion of event entrants who are ‘time-switchers’ and the average number of people who accompany entrants to an event.

2. The impact surveys detailed above need to provide a comprehensive section that considers event entrants’ annual training in Taupo. Visitors should be asked where they train, so that any impact assessments of selected Taupo trails/tracks can avoid double counting of impacts. The survey also needs to ask questions that ascertain whether respondents’ training is associated with time-switching.

3. A comprehensive annually updated spreadsheet of cycling-inclusive events’ entrant numbers in terms of total entrants, visitors to Taupo, locals and international entrants should be maintained. The combination of annual entrant data and up-to-date parameter estimates will enable the estimation of annual event impacts, even if event surveys have not been carried out in a particular year.

4. APR recommends the event surveys include a few questions about how many friends, family and colleagues respondents are likely to recommend Taupo as a holiday destination to and also the likelihood of them visiting Taupo for a holiday in the future as a consequence of their event participation.
**Tracks/trail usage**

To implement a bottom-up approach to economic impact estimation it would be necessary to conduct small scale surveys. Given funding constraints it would be most efficient to survey 2-3 selected iconic trails in order to evaluate the following information:

1. Where riders are from and hence the proportion of riders on trails who are from outside of Taupo District.
2. The proportion of riders from out of district on trails who are day visitors and the proportion who are overnight visitors.
3. From overnight visitors to Taupo, the proportion of riders for whom cycling is a primary or main reason for coming to Taupo and those for whom riding was not a causal attracting factor for their visit.
4. For overnight visitors to Taupo, the average number of visits to a trail per overnight visit for those whose motivation to visit Taupo was not to undertake cycling in the District and the number per of trail visits per overnight visit for those visitors whose motivation to visit was to undertake cycling.

The information contained in points 1-4 above is the minimum necessary to estimate the economic impact of trail usage. In essence, this information only requires asking respondents three short questions. Average length of stay, daily expenditure rates and the number of people accompanying respondents are parameters that could be based on other Taupo studies. However, for a more accurate estimation, questions about these parameters would also need to be asked.

Overall, trail usage can be evaluated using counter data if it can verified that it is accurately calibrated for cyclists’ activity. Alternatively, visitor counts taken at strategically during each season, so that a model can be formulated that estimates the total number of annual visits to selected trails made by cyclists.

Realistically, for a selected trail 100 short surveys would need to collected in each season (ie, a total of 400 surveys) by a couple of paid interviewers. Typically for a 10-15 minute face-to-face survey, part-time, reliable interviewers can be employed for around $6 per survey. Given that the short survey would take around 3-4 minutes (the first set of questions only), $3 per survey would be sufficient to hire some reliable tertiary students. A modest survey budget would be sufficient to enable parameter estimates to be assessed for say, two iconic trails. Trail surveying for different trails could be spread out over two years to make it more affordable to cover 2-4 trails. With data about Taupo visitors’ usage of selected trails, the economic benefits can be more accurately substantiated with reliable impact estimates.
5.0 REFERENCES


### APPENDIX ONE: INVENTORY OF TAUPō CYCLING RELATED INFRASTRUCTURE

**Figure 6: Inventory of Cycling related infrastructure in Taupo District**

<table>
<thead>
<tr>
<th>Feature, Location and Length</th>
<th>Difficulty</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mountain Biking</strong></td>
<td></td>
</tr>
<tr>
<td>Craters of the Moon MTB Park</td>
<td>21 Grade 2 (Easy)</td>
</tr>
<tr>
<td>Wairakei Forest</td>
<td>15 Grade 3 (Intermediate)</td>
</tr>
<tr>
<td>46 Trails (40 km+)</td>
<td>8 Grade 4 (Advanced)</td>
</tr>
<tr>
<td>Kaimanawa Forest Trail (17.5 km)</td>
<td>2 Grade 5-6 (Expert)</td>
</tr>
<tr>
<td>Waikato River/Spa Rd - 3 Trails (25.88 km)</td>
<td>Grade 2</td>
</tr>
<tr>
<td>Western Side (20.25 km+)</td>
<td>Grade 3</td>
</tr>
<tr>
<td><strong>NZ Cycle Trail – Great Lake Trail</strong></td>
<td>Grade 2-3</td>
</tr>
<tr>
<td>W2K (25 km)</td>
<td>Some sections still under construction.</td>
</tr>
<tr>
<td>K2K (7 km)</td>
<td>W2K, K2K and Waihora to Waihaha sections complete</td>
</tr>
<tr>
<td>Orakau</td>
<td></td>
</tr>
<tr>
<td>Tongariro River Trail (15 km)</td>
<td>Grade 2</td>
</tr>
<tr>
<td>Tree Trunk Gorge Track (19 km)</td>
<td>Grade 3</td>
</tr>
<tr>
<td>National Park (40-50 km)</td>
<td>Grade 3</td>
</tr>
<tr>
<td>42 Traverse</td>
<td></td>
</tr>
<tr>
<td>Fishers Track</td>
<td></td>
</tr>
<tr>
<td>Old Coach Road</td>
<td></td>
</tr>
<tr>
<td>Te Ininga (38 km)</td>
<td>Grade 5</td>
</tr>
<tr>
<td><strong>The Timber Trail (5-80km)</strong></td>
<td>Grade 2</td>
</tr>
<tr>
<td>Moerangi Track (Whirinaki Forest) (35 km)</td>
<td>Grade 3</td>
</tr>
<tr>
<td><strong>BMX</strong></td>
<td></td>
</tr>
<tr>
<td>Taupō BMX Tracks:</td>
<td>-</td>
</tr>
<tr>
<td>Cnr Taharepa Rd &amp; Kiddle Dr (0.4km)</td>
<td></td>
</tr>
<tr>
<td>Spa Park Pump Track (0.25km)</td>
<td></td>
</tr>
<tr>
<td><strong>Track</strong></td>
<td>-</td>
</tr>
<tr>
<td>Velodrome - Owen Delany Park Outdoor Asphalt 333m</td>
<td></td>
</tr>
</tbody>
</table>

Source: APR Consultants and Bike Taupo Inc.