

May 2026

Graymont (NZ) Ltd Ōparure South-Western Pit Recreation and Tourism Assessment



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Graymont Ōparure South-Western Pit

Recreation and Tourism Assessment

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1 Executive Summary

This report considers the recreation and tourism effects of Graymont (NZ) Limited's ('Graymont') proposed 'South-Western' limestone quarry pit (SW Pit, or Project). Graymont is proposing to secure its existing quarry operations on Ōparure Road near Te Kūiti by developing a site immediately adjacent to its existing Ōparure quarry over a period of 53 years. The Project will include the progressive removal of overburden and extracted limestone at the new SW Pit, and infilling of exhausted areas of the Ōparure Pit, and the staged rehabilitation of both pits. The projected end-of-mine period for the SW Pit is quite distant – around 2080 – but eventual full restoration of the landscape is proposed.

The study area for this assessment includes land owned by Graymont at and near the SW Pit (and the caves beneath it), the local roads accessing the site (specifically Ōparure Road between the quarry entrance and SH3) and tourism operations in the area which rely on cave systems which may be connected to those potentially affected by the Project.

There are no existing limits on the number of truck movements from the Graymont Quarry but no changes are anticipated.

There are no publicly accessible recreation settings within Graymont-owned land at the site. A tourism operation has previously accessed the nationally significant Mangawhitikau cave system from Boddies Road north of the SW Pit project area via Graymont land by agreement (Spellbound Glowworm and Cave Tours).¹

Three recreation and tourism opportunities have been identified in the study area.

- Caving. There is one caving system identified by the Waitomo District Plan within the Ōparure quarry footprint - Digme – Camelot. This is defined in the Plan as of 'high significance' due to its geological features but is not described as of recreation or tourism value. The system is largely beneath the existing quarry and like the SW Pit area has no public access.
- Road cycling. Ōparure Road between Troopers Road and SH3 is used occasionally as a road cycling option by a small number of local riders, and forms part of a bike touring route (avoiding SH3 as much as possible) between Auckland (and locales south) and various destinations south of Te Kūiti, including New Plymouth and the likes of the Timber Trail.
- Fishing. There is no reported angling on the Mangapu River in the immediate catchment of the SW Pit, but the Waipa River was the second-most popular tributary of the Waikato River for trout fishing, with 867 ± 250 angler days in the 2015/16 season, declining from $2,337 \pm 995$ angler days in 2014/15 due to reported natural slips within the catchment. Most angling activity occurs upstream of the confluence of the Waipa and Mangapu Rivers.

The effects of the Project on recreation and tourism are very limited due to:

- The avoidance of effects on known caving systems not already within the existing Ōparure quarry footprint, and proposed methods to avoid impacting on the Camelot Cave system which will remain intact at least 23m below the floor of the proposed SW Pit (with seismic assessments required to ensure avoidance). The *Landscape Assessment* (Brown 2026) notes the potential for 'very low' landscape effects from tourists viewing a minor part of the SW Pit after year 10 when accessing Mangawhitikau Cave from Boddies Road. The landscape assessment recommends the planting of a shelter belt to mitigate this effect. The tourism experiences affected are largely underground, and the potential for a 'very low' landscape effect en-route is highly unlikely to have any effect on patronage or satisfaction. The Styles Group *Acoustics Assessment* (2026) identifies that vibration from blasting within the Pit will be

¹ <https://www.glowworm.co.nz/cave/mangawhitikau-glowworm-cave>

imperceptible at the closest publicly accessible cave (Mangawhitikau Glowworm Cave / Spellbound Cave).

- The low level of cycling on Ōparure Road with no significant change to the frequency of heavy traffic movements by Graymont.
- The low potential for effects on instream habitat in waterways downstream of the proposed Pit, as identified in the Water Assessment (PDP 2026), and the implementation of a 'Betterment Plan' to improve water quality entering the subterranean Camelot Stream and to restore the ecological condition and biodiversity of Gate Spring, where the Camelot Stream emerges.

This report recommends the erection and maintenance of heavy traffic warning signs for cyclists entering Ōparure Road from Fullerton and Troopers Roads and SH3, and this is echoed in the *Traffic Assessment* (Team 2026).

Otherwise, adverse effects from the Project on recreation and tourism are negligible.

2 Introduction

This report considers the recreation and tourism effects of Graymont (NZ) Limited's ('Graymont') proposed 'South-Western' limestone Pit (SW Pit, or Project). Graymont is proposing to secure its existing quarry operations on Ōparure Road near Te Kūiti by developing a site immediately adjacent to its existing Ōparure Quarry to operate over a period of 53 years. The Project will include the progressive removal of overburden and extracted limestone at the new SW Pit, and infilling of exhausted areas of the Ōparure Pit and the staged rehabilitation of both pits. The projected end-of-mine period for the SW Pit is quite distant – around 2080 – but eventual full restoration of the landscape is proposed.

The study area for this assessment includes land owned by Graymont at and near the SW Pit (and the caves beneath it), the local roads accessing the site (specifically Ōparure Road between the quarry entrance and SH3) and tourism operations in the area which rely on cave systems which may be connected to those potentially affected by the Project.

There are no limits on the number of truck movements from the Graymont Quarry, and there are no increases in road activity proposed.

2.1 Study area and method

The study area includes:

- Land owned by Graymont at and near the SW Pit (and the caves beneath it).
- Local roads accessing the site (specifically Ōparure Road between the quarry entrance and SH3).
- Tourism operations in the area which rely on cave systems which may be connected to those potentially affected by the Project.
- Any waterbodies with recreation value which might be hydraulically connected to the SW Pit.

This assessment is based on:

- A site visit;
- Literature review;
- Review of parallel technical reports, particularly Traffic, Landscape, Water, Freshwater Ecology, Noise and Vibration Effects and Subterranean Habitat (all appended to the Assessment of Environmental Effects); and
- Interviews with road cyclists.

2.2 Assessment framework

The Assessment of Environmental Effects provides a full summary of the consents required for the Project and the statutory and policy framework for the assessment.

This report considers assessment matters relevant to recreation and tourism, and specifically:

Waikato Regional Policy Statement 2018:

IM-P5 Maintain and enhance areas of amenity value

Areas of amenity value are identified, and those values are maintained and enhanced.

These may include:

- a) *areas within the coastal environment and along inland water bodies;*
- b) *scenic, scientific, recreational or historic areas;*
- c) *areas of spiritual or cultural significance;*

- d) *other landscapes or seascapes or natural features; and*
- e) *areas adjacent to outstanding natural landscapes and features that are visible from a road or other public place.*

Other adjacent policies refer to maintaining and enhancing access to and along the coastal marine area, lakes and rivers. None of these is affected by the Project.

Operative Waikato Regional Plan 2024

Regional water quality (Ob 3.1.2(b):

Net improvement of water quality across the Region.

Pol 3.2.3(1):

Manage all water bodies to enable a range of water use activities, whilst ensuring that a net improvement in water quality across the Region is achieved over time...

River and Lake Bed Disturbances (Ob 4.3.2(b):

adverse effects on aquatic habitat, downstream water uses and on the passage of trout and indigenous fish of elevated suspended solids and temperature levels in surface water bodies are not inconsistent with objectives in Chapter 3.1

Proposed Waitomo District Plan June 2025

NFL-P5 - Recognise, protect, and where practicable, enhance the values of the karst overlay by:

- 1. Ensuring that the effects of any activity which could compromise the values of the karst overlay are avoided in the first instance, and where this is not practicable, minimised; and*
- 2. Managing the adverse effects of earthworks through appropriate development design, mitigation measures and rehabilitation; and*
- 3. Avoiding any activity, particularly vegetation clearance and large-scale earthworks including quarrying activities, where these will adversely affect the values of the karst systems or features;*

3 Recreation and tourism activities

The list of recreation activities potentially affected by the Project is very short considering the SW Pit is entirely based on private land with no public access. Caving is the key activity, with some road cycling on Ōparure Road. A short review of freshwater fishing is also provided.

3.1 What activities are within scope?

Assessments of effect for recreation and tourism generally focus on areas accessible to the public. Effects on a farmer or their guests, for example, when enjoying their own property, are not considered, unless there is a formal tourism service in place. These effects are personal and cannot be generalised, and are considered by assessments of, for example, landscape values, noise, dust and light spill. If a site has no public access and no tourism business, regardless of what its use, there are generally no existing public recreation or tourism values. There may be tourism values based on landscape values within private and inaccessible land – but these would need to be visible from a public site which tourists or recreational visitors are likely to frequent.

There could be future recreation or tourism values in any setting (for example, for quadbike races on a standard farm block, or Zorbing on a grassed slope), so unless a business is proposed for the site and is permitted by the relevant planning framework, and is clearly of real development potential for tourism (is not fanciful), there is no point in assessing unknown future opportunities.

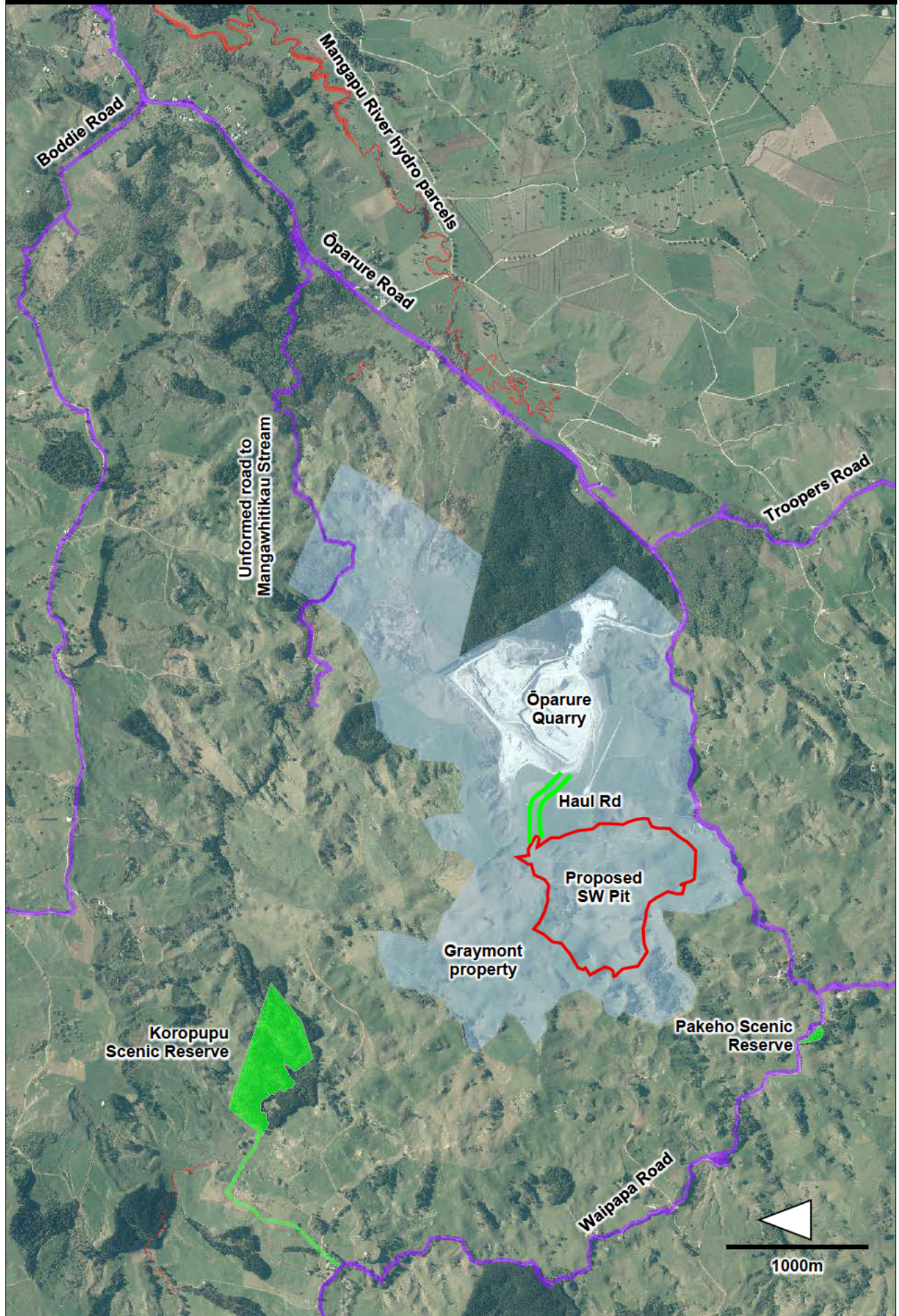
3.2 Public access

Figure 1 shows the publicly accessible lands near the proposed SW Pit site. This includes legal road (formed and unformed) in purple, two scenic reserves in green, and hydro parcels in the bed of the Mangapu River in red.

The nearest public access option near the SW Pit area is Ōparure Road, but there is no public access available to any of the cave systems on Graymont-owned land. No cave system on Graymont land can be accessed underground from a public site (further considered in the following section). The two scenic reserves to the north-west and south-west of the SW Pit – Koropupu and Pakeho respectively – are not developed for recreation access. The former is defined as a significant biodiversity site (Waikato Regional Council 2015) with occasional visits for botanising.² The unformed legal road leading to Mangawhitikau Stream from Ōparure Road has no formation for vehicle or foot access and does not currently provide practical public access.

² For example, see: <http://www.nzbotanicalsociety.org.nz/newsletter/NZBotSoc-2001-65.pdf>
<http://waikatobotsoc.org.nz/newsletters/WaiBotSoc%20Newsletter%2034.%20Nov%202011.pdf>

Figure 1: Public access areas and proposed South-Western Pit location



3.3 Caving

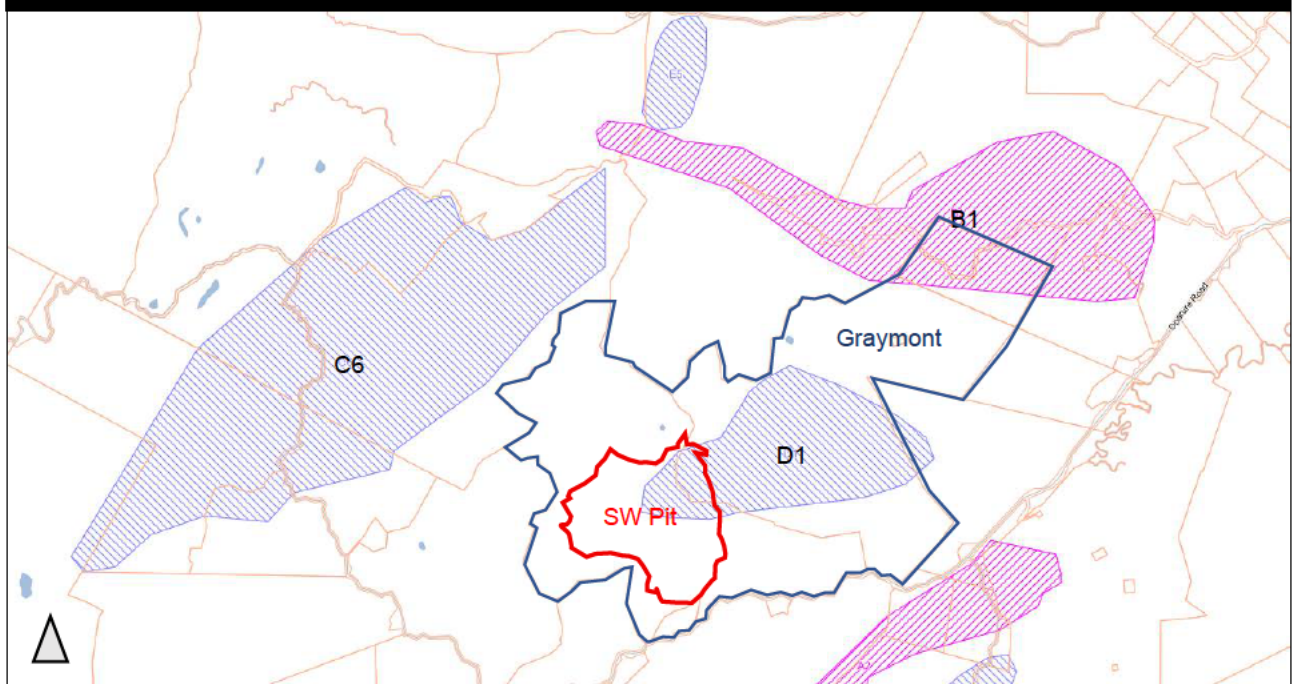
The Waitomo District Plan (WDP) identifies in its Appendix 6 the significance of known cave systems, including their recreation and tourism value (Figure 2: WDP – known cave systems – showing proposed SW Pit in red and Graymont property in blue). Those on or near Graymont-owned land are:

- *National significance: B1 Mangawhitikau System. Largest river cave in North Island. Very high recreational value. High tourism use. Over 8km of cave passage. Classic two-tiered geomorphic development and dry valley leading to former stream cave. Historic use of associated cave. Spectacular long slit gorge upstream. Includes Mason's Dry Cave, Flood Caverns, Mason's Glowworm Cave, Mangawhitikau Gorge and other small caves.*
- *Regional Significance: C6 Waipapa Road Systems. Multiple caves in two systems. Length, high recreational use. Speleothems (best calcified tree roots in region). Includes Rumbling Gut, Catherwoods, Waipapa, Lembergs, Guildford, Yoyo.*
- *High significance: D1 Digme – Camelot. Only example of gypsum rope in New Zealand (Digme). Part of largest autogenic karst system known in North Island. Troglodytic biota. Two caves. Large streamway (Camelot).*

The Pattle Delamore Partners (PDP) / Graymont GIS shows the Guildford system extending to just within its property boundary, while the Waitomo DC GIS shows it further to the west. It is outside the proposed development area regardless. Nearby cave systems include:

- The Mangawhitikau System (B1 in Figure 2: WDP – known cave systems – showing proposed SW Pit in red and Graymont property in blue) where access is based on formal agreements with Graymont for tourism access across private land (Spellbound Glowworm and Cave Tours³ and Kiwi Cave Rafting, which ceased operations in 2025⁴). It is an important tourism asset but has no casual public recreation access.

Figure 2: WDP – known cave systems – showing proposed SW Pit in red and Graymont property in blue



³ <https://www.glowworm.co.nz/cave/mangawhitikau-glowworm-cave>

⁴ <https://www.blackwaterraftingwaitomo.co.nz/>

- The Guildford system (C6) is only accessible over private land – although it is listed within the WDP as within the Waipapa Road System which is described as having ‘multiple caves in two systems’ with ‘high recreational use’.
- The Digme - Camelot system (D1) is also only accessible over private land and has no public recreation or tourism values. The entrance to Camelot was blocked prior to exploration associated with ecological assessments for this Project, but access was abandoned due to high risk levels, and Digme is largely beneath the existing Ōparure Pit and is unsafe for access.

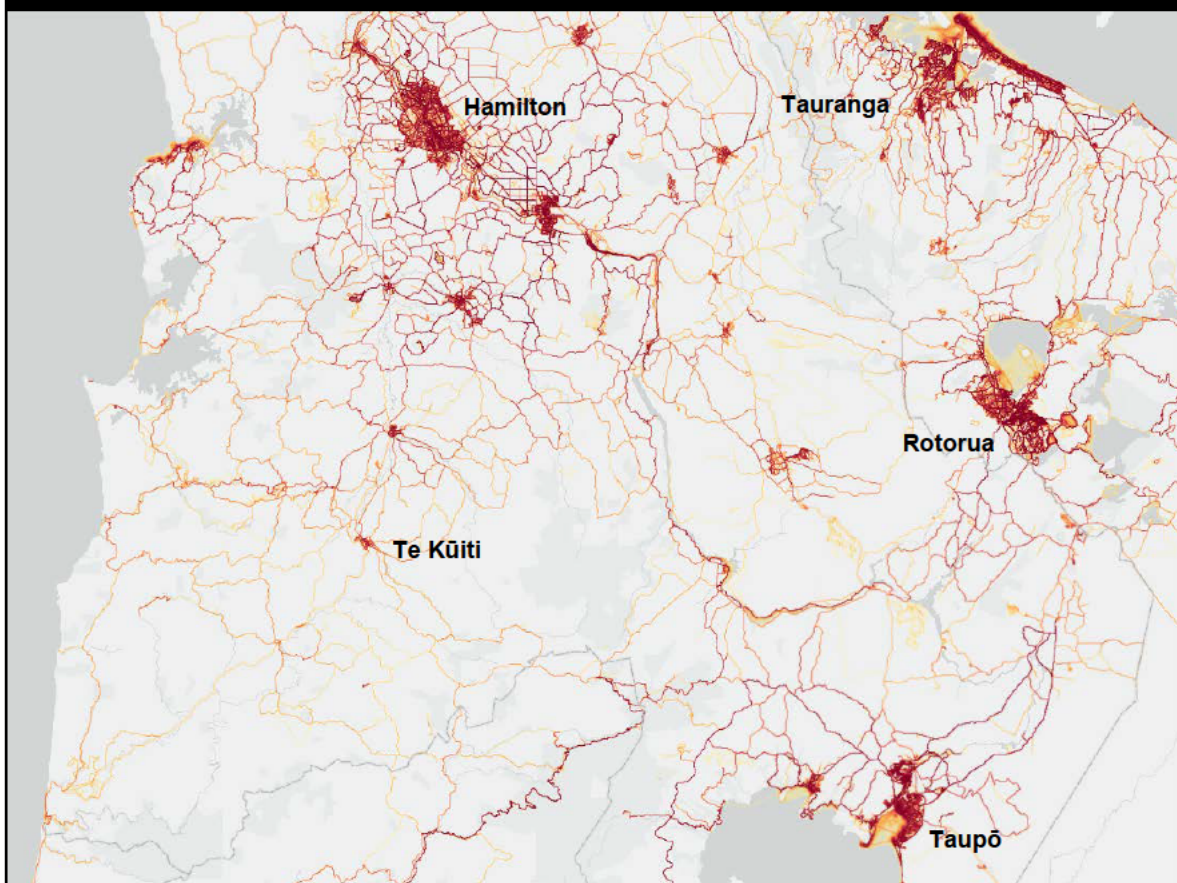
The *Terrestrial and Subsurface Ecology Assessment* (BlueGreen Ecology 2026) located 20 caves within the SW Pit area that were able to be entered, and seven were explored. All were described as not being ‘substantive, long, complex or deep’. All are on private land and have no established recreation value. That report and the *Water Assessment* (PDP 2026) details the difficulties in accessing the Camelot Cave system due to gas issues. The *Terrestrial and Subsurface Ecology Assessment* also recommends a buffer from quarrying activity to protect the system’s ecological values.

In summary, there are no cave systems of value to recreation or tourism within the SW Pit footprint. Effects of interest only relate to the potential for effects on cave systems further afield due to changes in surface and subterranean water flows, and noise and vibration.

3.4 Road cycling and running

Base data in this section rely partly on information provided publicly by Strava – a popular online physical activity recording and comparison service.⁵ Strava is a useful tool for identifying the relative levels of interest in various recreation activities by setting. Strava is a social media platform where users record their GPS activity via their smartphones and other devices while recreating. The data

Figure 3: Strava heat map for the Waikato area, all activities, 12 months of data to Dec ‘25



⁵ <https://www.strava.com/maps/global-heatmap>

are uploaded to a central database, allowing speed and time comparisons with other cyclists, runners, kayakers, surfers and swimmers (for example), and the monitoring of individual activity or training targets. While the service is popular with professional athletes, its membership is dominated by casual recreation participants. Strava indicates that it had 95 million international users in 2022 (80% outside the United States) with nearly an additional two million joining per month. It is now popular amongst regular cyclists, mountain bikers and runners, and is also used by the likes of walkers, waka ama and swimmers. Figure 3: Strava heat map for the Waikato area, all activities, 12 months of data to Dec 2025 gives an indication of the scale of data available in the Waikato area.

International comparisons between different forms of data gathering show a degree of reliability for Strava data with a range of 1% to 12% of users recorded on-site that are connected to the service; and this is growing. The author of this report has recorded participation levels for cycling in Aotearoa/New Zealand in one study of up to 20%, and in another 60% for runners, 43% for cyclists, 13% for walkers and 10% for dog walkers. Strava is therefore a little like a tag-and-release programme. Strava essentially tags several thousand active people in an area and monitors where and how they recreate. Its greatest strength is in showing the relative value of settings for different forms of recreation. However, it must be noted that Strava data are biased to a sector of the population which is more likely to be physically active and reasonably tech-savvy. Some Strava data are also recorded while users are driving from their activity (they forget to turn tracking off), and some users miscode their activities (for example, as marine activities when cycling). There is also inaccuracy in GPS recording from some devices, with some recorded routes offset.

Global Strava heatmaps show the relative level of activity by all members for several activity groups, including running and walking and cycling. The heatmaps show data over 12 months, updated monthly. Figure 4 (for 2025) and Figure 5 (for 2022) show the results for cycling near Te Kūiti and along Ōparure Road. Road cycling activity is widespread. Over the period, Ōparure Road appears to have declined a little in use (more blue – cold – in colour), while Boddies Road has become more popular (redder – hot – in colour).

Strava also provides an analysis of the number of people who have used particular segments of a route for a particular activity. All Strava members who pass through one of these segments are recorded as users, and the data are also useful for showing relative levels of activity (each recorded use is called an 'attempt'). These data date back to 2013, and so present a different use pattern to that shown in the heatmaps above (which are for 12-month periods). For example, Figure 6: Strava segment analysis, cycling segments (in orange) near Ōparure Road, Strava Dec 2025 shows the segment analysis for cycling near Ōparure Road, with one 1.7 km segment immediately adjacent to the Graymont quarry entrance ('Ōparure Rd climb') and, locally, the 'Fullerton Rd Climb' and 'Boddie Gravel Reverse'. The 1.7 km 'Ōparure Rd climb' in Figure 6: Strava segment analysis, cycling segments (in orange) near Ōparure Road, Strava Dec 2025 is within a longer 13.4 km segment called the 'Ōparure Rd Downhill' and does not show well as a stand-alone segment. The 'Ōparure Rd climb' showed, at December 2025, 135 efforts by 59 cyclists since 2013, compared with 114 attempts by 40 cyclists at December 2021. At December 2025, the Boddie Gravel Reverse showed 57 efforts by 39 cyclists, and the Fullerton Rd Climb 594 attempts by 143 cyclists (all measured in one direction only, radiating away from Te Kūiti). The 13.4 km 'Ōparure Rd Downhill' segment leading downhill from Mairoa Road to the west of Ōparure and ending east of the Graymont entrance recorded 77 attempts by 53 cyclists since 2013.

For comparison, a road climb near Hamilton – 'Peacockes Climb (extended)' on Peacockes Road – showed 10,307 attempts by 1,016 cyclists since 2013 (at December 2025).

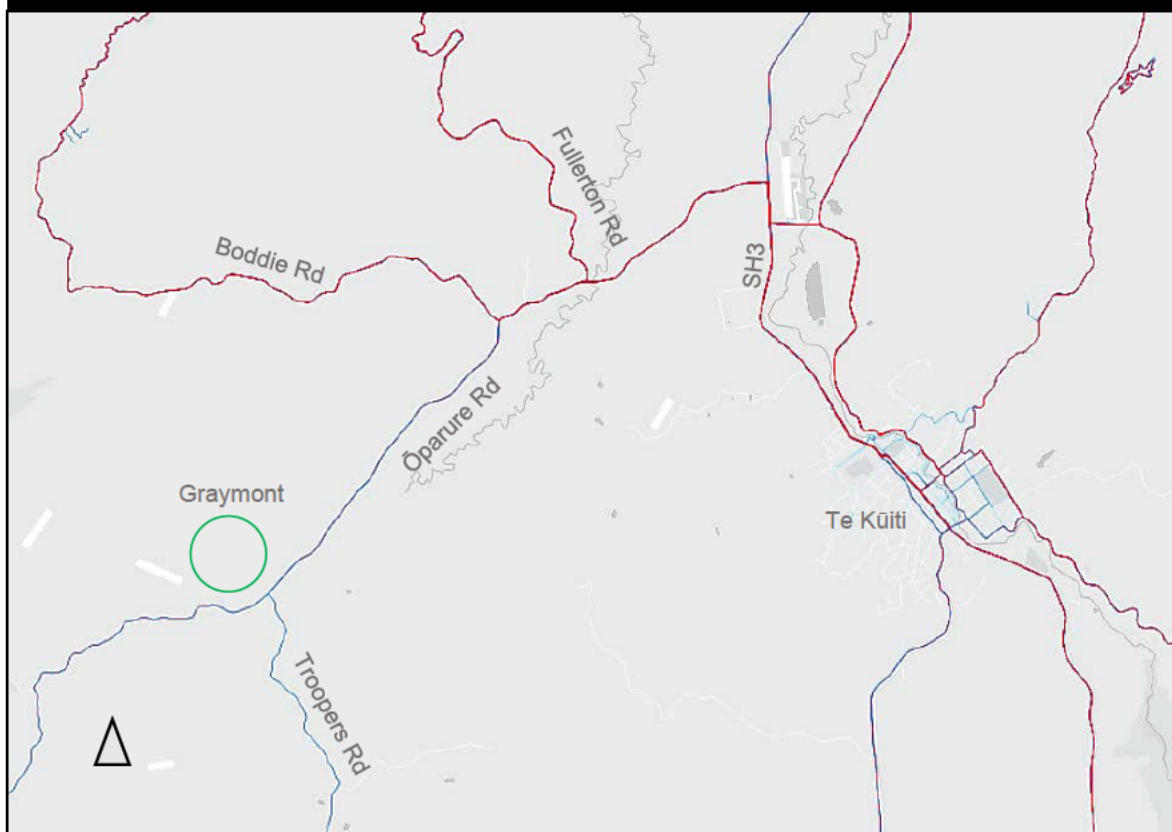
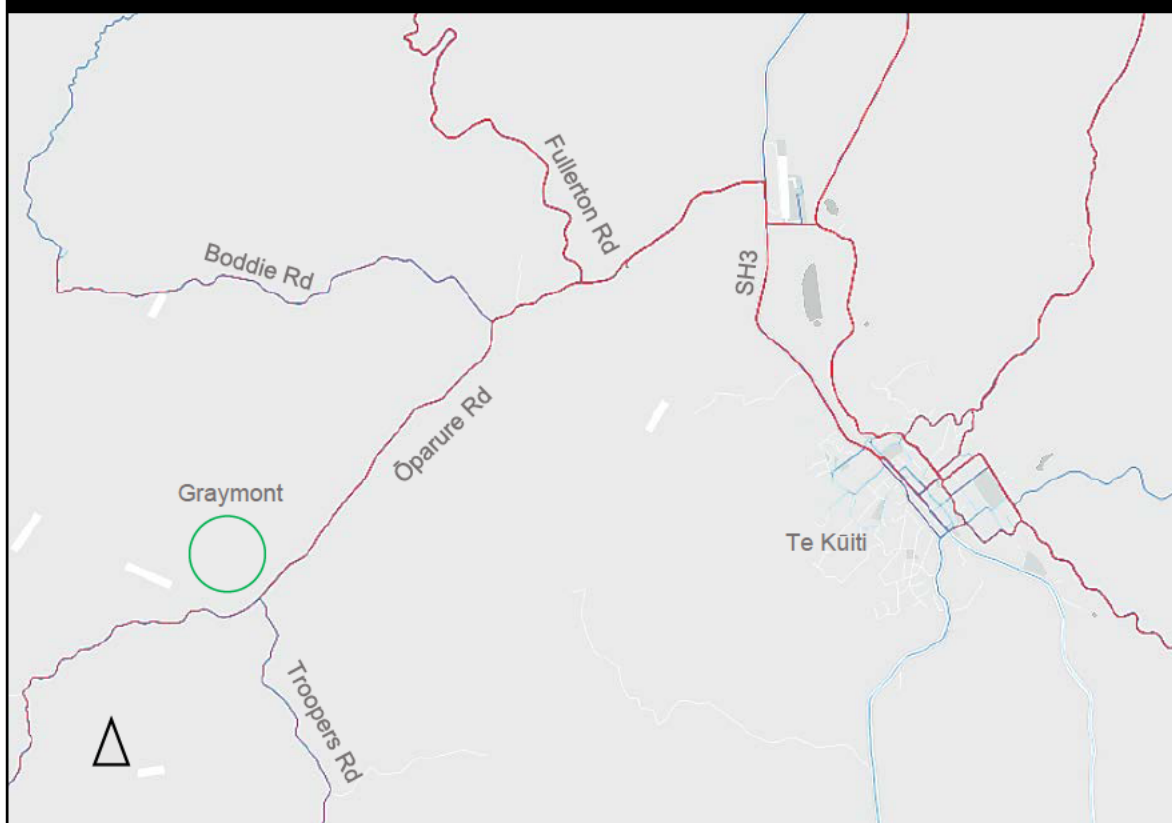
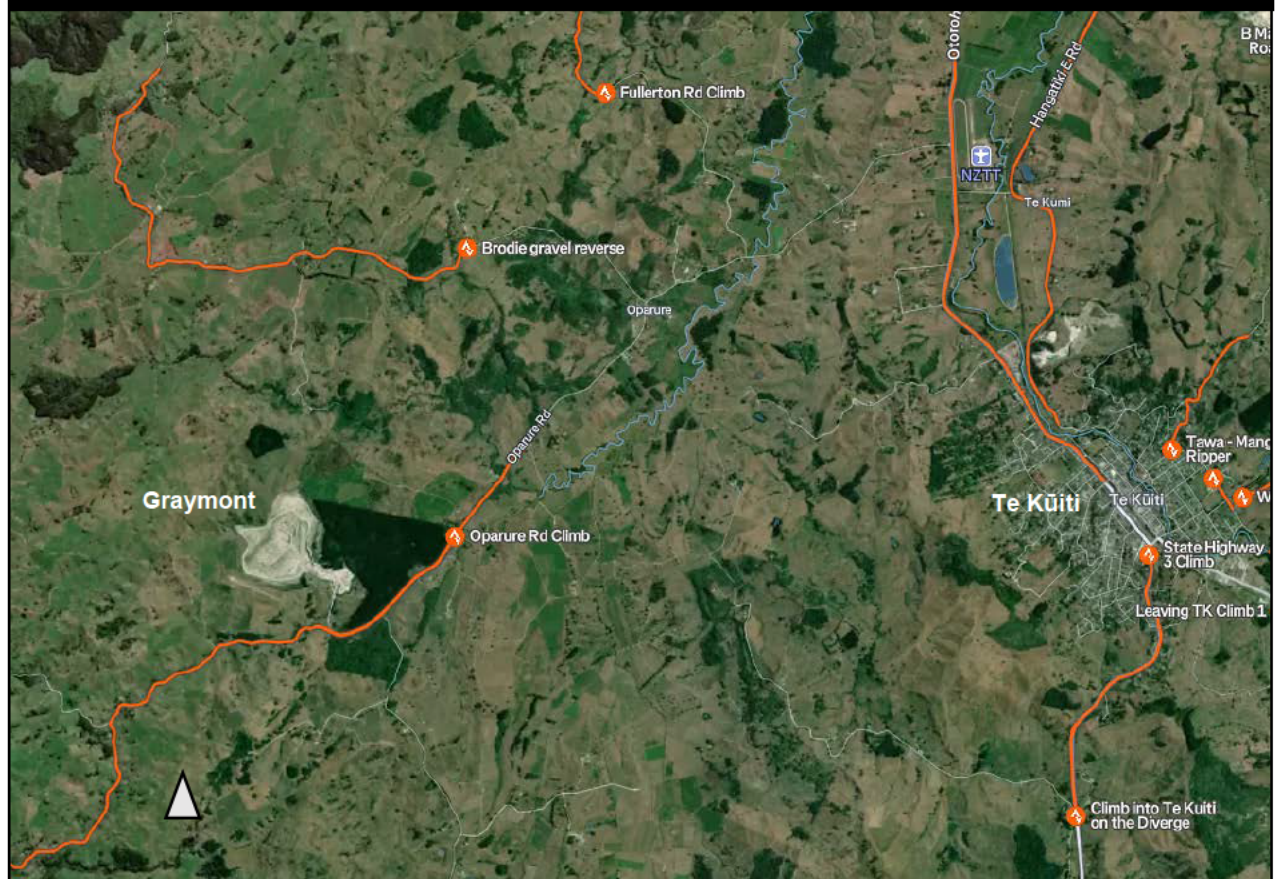
Figure 4: Strava heat map, red/blue showing cycling locations for Te Kūiti, 12 months to Dec '25**Figure 5: Strava heat map, red/blue showing cycling locations for Te Kūiti, 12 months to Sept '22**

Figure 6: Strava segment analysis, cycling segments (in orange) near Ōparure Road, Strava Dec 2025

To support the Strava data, two cyclists who appear in the Strava data were interviewed for this study in 2022: one a local rider () and a long-distance cyclist based out of Auckland and a member of the Grey Lynn Cycle Club (). of the Grey Lynn Cycle Club reported his use of the area as part of a long-distance bike-packing ride from Auckland to New Plymouth or various destinations in Taranaki or Ruapehu, including the Timber Trail and the Forgotten World Highway (Taumarunui to New Plymouth via Whangamomona).

reported that the preferred route when bypassing Te Kūiti is via Fullerton Road and Oparure Road to Troopers Road, avoiding as much of SH3 as possible on the way to Piopio; and that cycling activity in the area is likely to increase as more destinations develop in the Taranaki, Waitomo and Ruapehu areas, and interest in the activity continues to grow. does not recall encountering quarry trucks on the route local to Graymont, but notes that trucks are generally an issue on any ride.

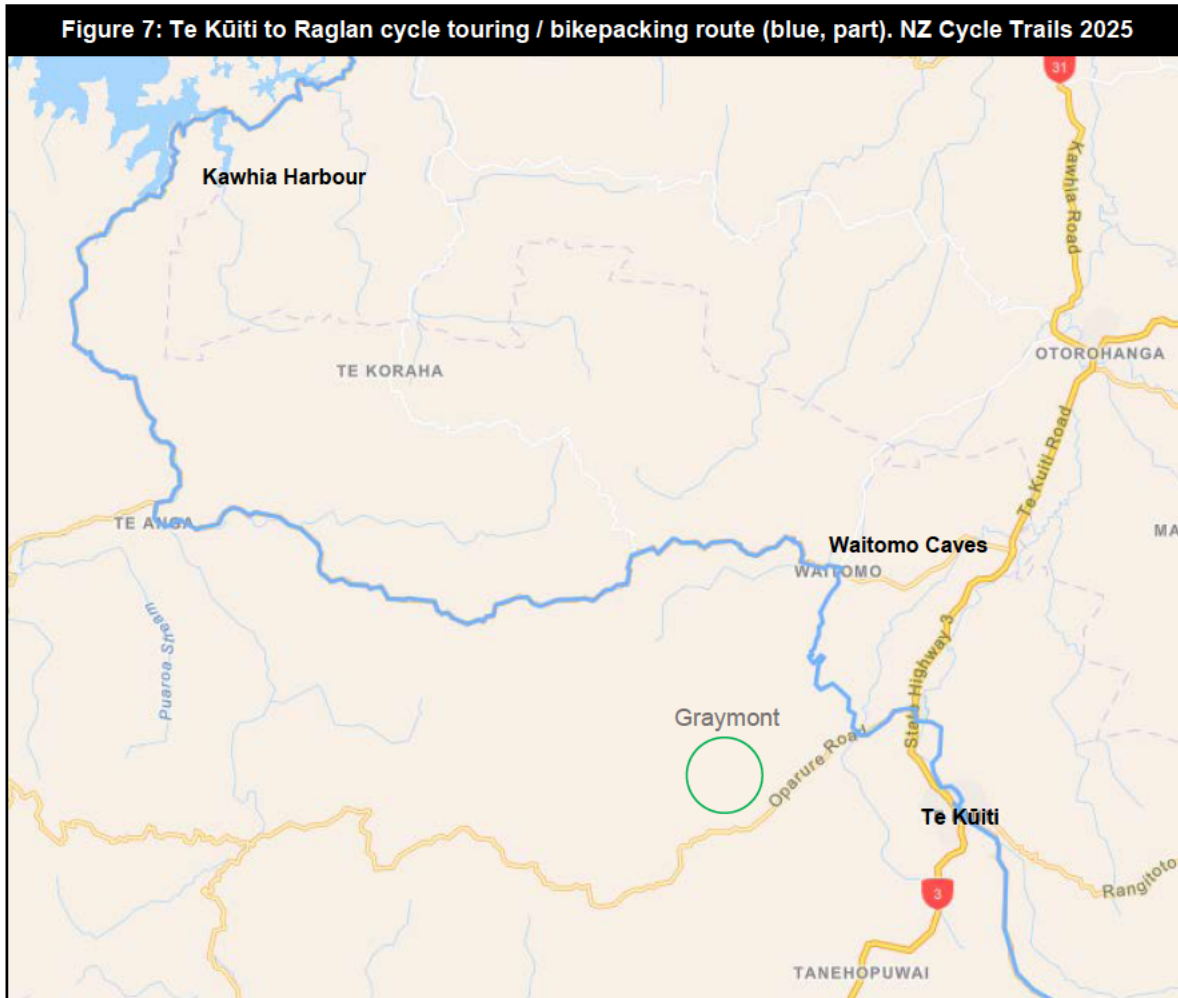
– a local cyclist – reported only a handful of regular other local road cyclists who use various loops near Te Kūiti, including Ōparure Road. Locals are aware of truck movements on Ōparure Road and take care – riding single file for example – and he does not recall any specific incidents of concern on his rides. noted that visiting cyclists riding in a peloton or small group could present a risk if they were not aware of the use of the Ōparure route by heavy trucks.

The Fullerton Road route – relying on the eastern-most 2.3 km of Ōparure Road – forms part of the Te Kūiti to Clevedon bikepacking route recommended by Ngā Haerenga NZ Cycle Trails.⁶ The 161 km section between Te Kūiti and Raglan is described as of an 'intermediate' grade (Figure 7: Te Kūiti to Raglan cycle touring / bikepacking route (blue, part). NZ Cycle Trails 2025).

The same route - described as the Raglan to Waitomo ride – is shown in a national cycle trail guide as a 'Heartland Ride' (Figure 8: Raglan to Waitomo Caves cycle touring / bikepacking route. Kennett

⁶ See <https://www.nzcycletrail.com/find-your-ride/new-zealand-cycling-map/>

Brothers (2023)) (Kennett Brothers, 2023 – the location of the Ōparure Quarry is obscured by the elevation chart). ‘Heartland Ride’ is a defined term used by the New Zealand Cycle Trail – along with ‘Great Ride’ – to define formally promoted national cycle routes. In this case, the Raglan to Waitomo route is a route recommended only by the guide authors – rather than being an official ‘Heartland Ride’⁷ – and the authors provide a relevant proviso: “This book contains all the best holiday rides in the country, regardless of whether they are officially part of the New Zealand Cycle Trail yet or not.” The section from Waitomo to Te Kūiti – via Fullerton and Ōparure Roads – in this guide is described as an ‘optional extra’.



⁷ See <https://www.nzcycletrail.com/find-your-ride/heartland-rides/>

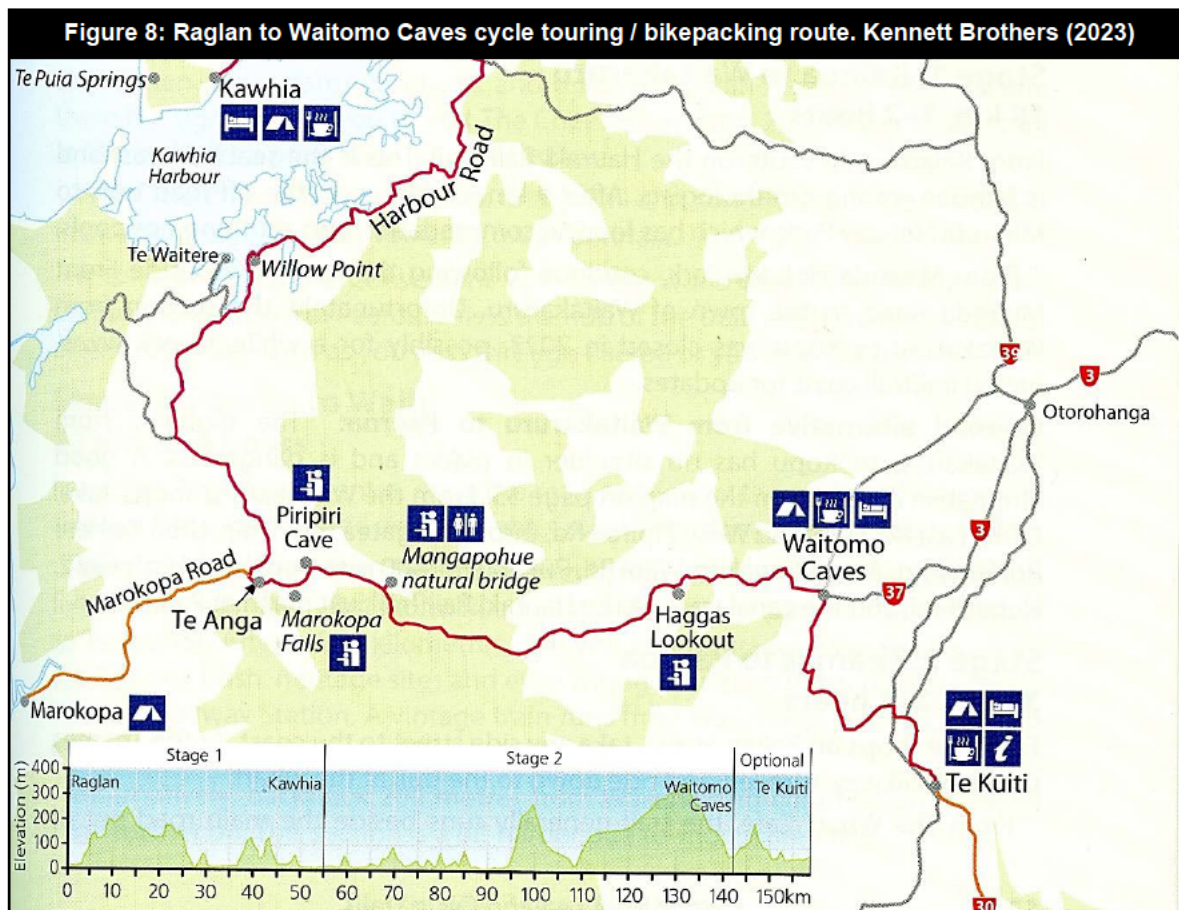


Figure 9: Caves to Coast loop cycle touring / bikepacking route. Kennett Brothers (2025) shows another recommended cycle route near Ōparure, but avoiding Ōparure Road (Kennett Brothers 2025). The quarry location is the white spot in the aerial base image above the scale.

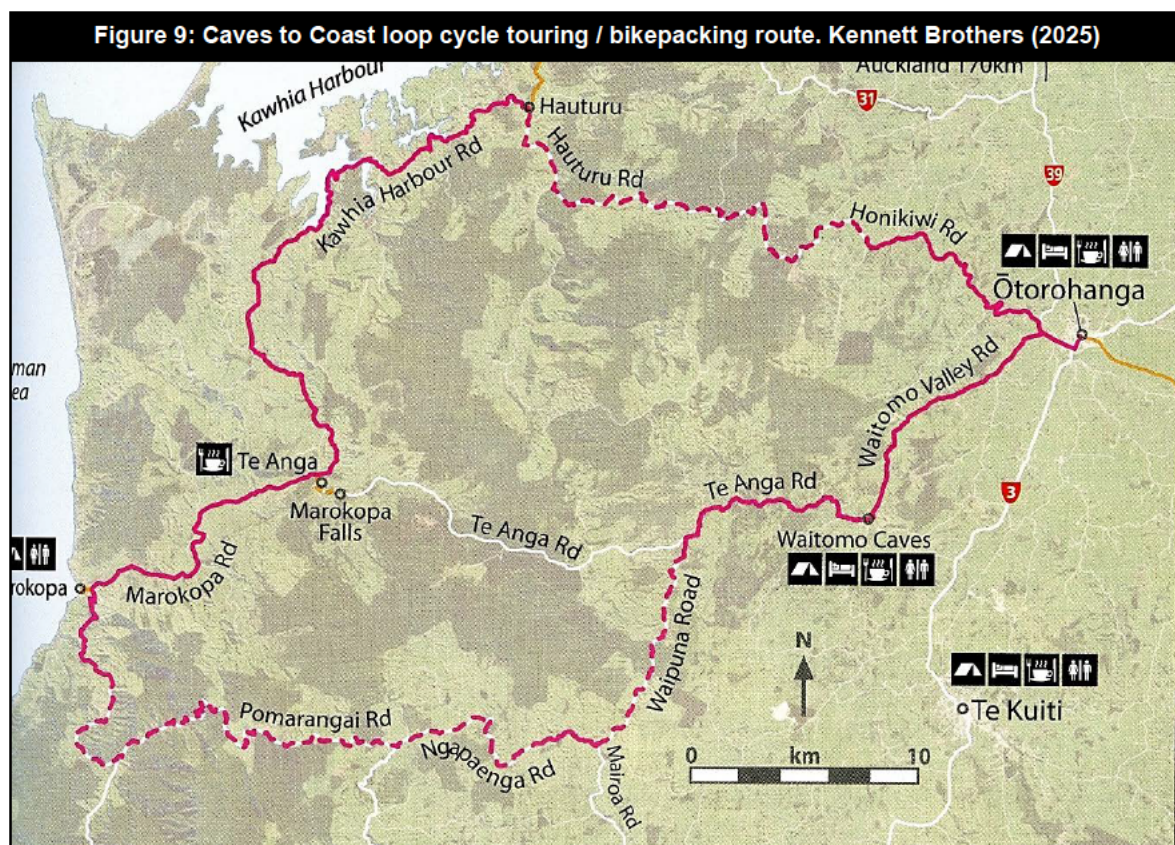
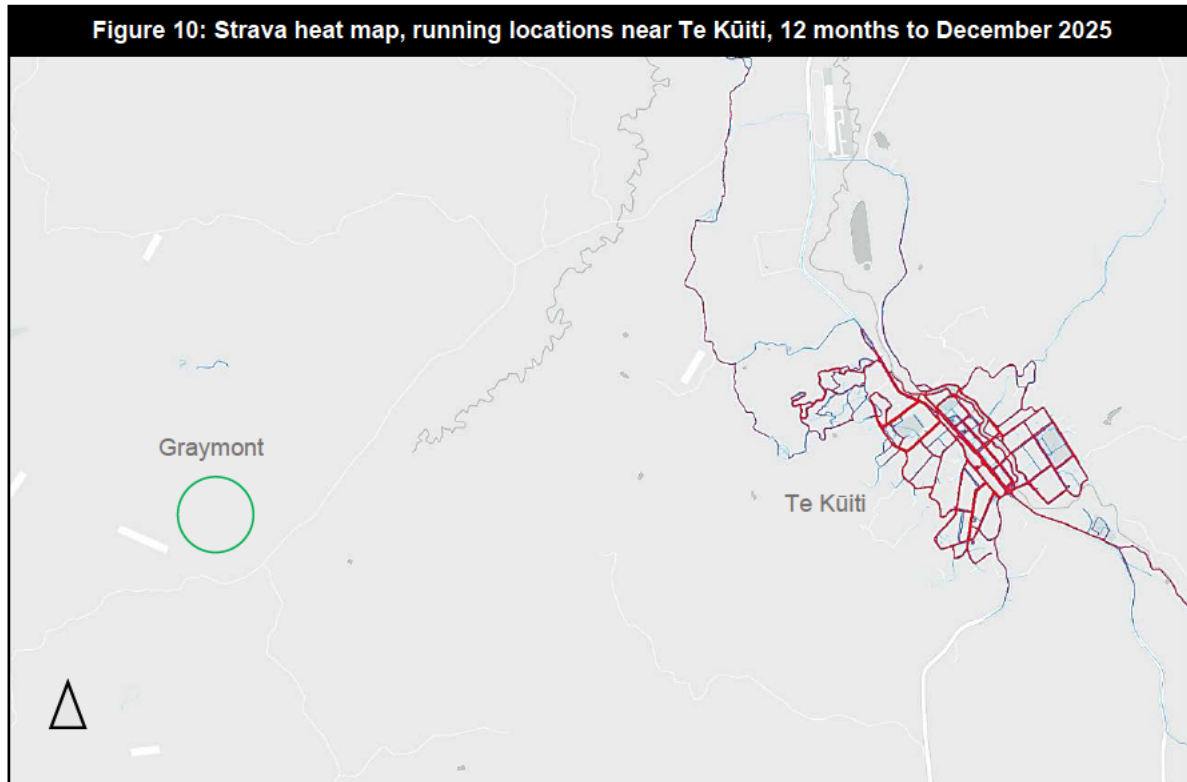


Figure 10: Strava heat map, running locations near Te Kūiti, 12 months to December 2025 shows no recorded running activity within Strava on Ōparure Road, with all activity close to Te Kūiti. This does not suggest that there is no running or other pedestrian activity on Ōparure Road, but only that it is of low significance and very unlikely to be used for any running events (running events are almost certain to be recorded on Strava by a large percentage of participants).



The *Traffic Assessment* (Traffic Engineering & Management 2026) reports on video analysis of road activity over three days at the SH3/Ōparure Road intersection, near the Twin Bridges site over five days, and at the Te Wharekura o Maniapoto kura over one day. One pedestrian walking a dog was recorded at the Twin Bridges site, and no cyclists, and two pedestrians were recorded at the SH3 intersection, and nine cyclists.

The Traffic Assessment also reviewed NZ Transport Agency crash records for Ōparure Road from 2020 to 2022 and noted that of the 22 vehicle crashes recorded, none involved pedestrians or cyclists.

The 2026 Traffic Impact Assessment concluded that the camera footage showed that:

From this assessment and observations that have been carried out at other times, it is considered that the vehicles associated with the quarry are coexisting without creating operational difficulties that could be cause for concern from a traffic engineering perspective.

3.5 Freshwater angling

The quarry is within the catchment of the Mangapu River, the headwaters of which are largely on the southern side of Ōparure Road. The Fish & Game Council National Angler Survey for the 2015/16 season (Stoffels & Unwin 2023) – one of New Zealand's most sophisticated periodic national survey of recreational activity – shows no angling activity in the Mangapu over five survey periods (1994/95, 2001/02, 2007/08, 2014/15 and 2021/22). The Mangapu River meets the Waipa River at Otorohanga, which is one of the most popular tributaries of the Waikato River for trout fishing, with a range of $2,600 \pm 708$ angler days in the 1994/95 season to 867 ± 250 in 2021/22. The Fish & Game Auckland/Waikato Region online angling guide to the Waipa River⁸ notes (explaining the decline in fishing activity in the 2021/22 season):

The Waipa is an extensive river system with superb fishing not only in the mainstem but also in the many streams that contribute to its flow. Both rainbow and brown trout are present in approximately equal numbers. The rainbows are resident fish that spend their entire lives in a short stretch of river. In contrast the brown trout are migratory spending the winter months in the Waikato River and then moving up into the Waipa headwaters during early December. This seasonal migration allows the brown trout to feed on the abundance of small fish that are present in the Waikato River and consequently the brown trout found in the Waipa headwaters over the summer months are often huge.

There is surprisingly little public water available in the Waipa fishery as most trout streams flow across private land. Nevertheless anglers have traditionally had a very good relationship with Waipa landowners and a polite request to cross private land will rarely be refused.

Some Waipa streams are slow to clear after heavy rain, but the Mangatutu Stream and the streams that flow from Mt Pirongia will clear quickly. In recent years, several large landslides have affected water quality in the mainstem of the Waipa but the river appears to be recovering quickly.

⁸ [https://www.fishandgame.org.nz/freshwater-fishing-in-new-zealand/where-to-fish/regional-info/aucklandwaikato/the-mighty-waipa/](https://www.fishandgame.org.nz/freshwater-fishing-in-new-zealand/where-to-fish/regional-info/aucklandwaikato/the-mighty-waip/) at December 2025

4 Effects of the Project on recreation

This section considers the effects of the Project on caving, non-vehicular road use and angling.

4.1 Caving

There are no caves with recreation or tourism values within the SW Pit area. The Camelot system is reported to be unsafe for recreational access, and will be protected by a buffer for ecological reasons.

The Water Assessment (PDP 2026) identifies that dye tracing demonstrated that no discharges from the SW Pit area will enter the Guildford Cave system in the Mangawhitikau catchment.

The Assessment of Noise (Styles 2026) assesses the perception of vibration at Mangawhitikau Glowworm Cave / Spellbound Cave from blasting within the SW Pit. The Mangawhitikau Glowworm Cave / Spellbound Cave is the closest publicly accessible cave to the Pit. The assessment finds that blasting vibration will be imperceptible.

There are therefore no effects on recreational caving to consider.

4.2 Road cycling, walking and equestrian use

The Project represents an extension to existing quarry activities and not an increase in quarry traffic. Vehicle entry to the SW Pit will be via the existing Ōparure Quarry and no additional entrance to Ōparure Road for the SW Pit is proposed. The main area of interest for road cycling is the section of Ōparure Road between Fullerton and Troopers Roads, and Ōparure Road between Fullerton Road and SH3. Some cycling occurs west of the intersection of Ōparure Road and Troopers Road past the quarry entry.

The *Traffic Assessment* (Traffic Engineering & Management 2026) considers traffic issues on these sections of road and notes that levels of local pedestrian and cycle traffic are low. The Traffic Assessment found that non-motorised and vehicular traffic were coexisting well.

For road cyclists, those entering Ōparure Road from Fullerton and Troopers Roads and SH3 should be warned of the presence of heavy trucks on Ōparure Road. 'Trucks Crossing' road signs are already mounted west and east of the Ōparure Quarry entry on Ōparure Road.

This report recommends the erection and maintenance of heavy traffic warning signs for cyclists entering Ōparure Road from Fullerton and Troopers Roads and SH3. The *Traffic Assessment* (Team 2026) recommends the same outcome.

4.3 Fishing

The *Water Assessment* (PDP 2026) finds that there are no permanent surface water bodies in the proposed development area, but that the subterranean Camelot Stream drains the catchment and feeds into the Mangawhitikau Stream, and from there to the Waipa River. Increased suspended sediment from quarrying activity is identified as the only potential adverse effect on instream habitat, although the scale of potential effect is considered low ('less than minor'). Nevertheless, a 'Betterment Plan' is proposed to reduce the level of suspended sediment and other contaminants entering the Stream in the catchment above the proposed SW Pit and to restore habitat at Gate Spring where Camelot Stream emerges, including stock fencing, riparian planting, pest predator control and erosion and sediment control. No loss of ecological value is expected, with gains over time. No adverse effects on angling are therefore likely.

5 Conclusion

Three statutory documents guide this recreation assessment:

- The Waikato Regional Policy Statement 2018 requires certain areas with amenity values to be maintained or enhanced.
- The Waikato Regional Plan 2024 seeks to maintain high water quality standards, with specific reference to the passage and habitat of trout.
- The Waitomo District Plan 2025 identifies significant cave systems in the District and seeks to avoid, remedy or mitigate any adverse effects of quarrying or earthworks on them, depending on their significance and sensitivity. It also refers to managing potential adverse effects on the function of roads and highways.

This assessment identifies that effects on recreation and tourism will be less than minor, and that:

- There are several amenity values potentially affected by the Project, including caving, road cycling and fishing.
- None of the cave features in the proposed SW Pit area has been identified as significant for recreation or tourism, and their values are only geological or ecological. These values are assessed separately, and geological effects are avoided by the retention of the Camelot Cave below the SW Pit floor.
- There are no connections to known cave systems beyond the proposed SW Pit area and those within the Digme and Camelot systems have no public recreation access or tourism value. These values could be realised when the existing quarry pit is rehabilitated, although exploration associated with the other technical reports indicates safety issues with cave access.
- Road cycling is a recreational use of Ōparure Road, but at low levels. With no significant change to current quarry traffic activity proposed, there should be no additional adverse effects on this activity. The traffic assessment finds non-vehicular and vehicular traffic co-existing well.
- The *Water Assessment* (PDP 2026) identifies an approach to the control of suspended sediment and other contaminants which will see long-term gains in instream habitat. No adverse effects on angling are therefore likely.

5.1 Mitigations

No mitigations are proposed for recreation values, apart from new signage on the intersections of Fullerton Road, Troopers Road and SH3 warning cyclists on the presence of heavy trucks on Ōparure Road. However, the installation of such signs would occur outside the consenting process and would be at the discretion of the Waitomo District Council.

6 References

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