



LANDSCAPE ASSESSMENT GRAYMONT SOUTH-WESTERN PIT

Prepared For:
Graymont NZ Limited

Brown NZ Ltd
May 2026



CONTENTS:

1.0	Introduction	2
2.0	The Proposal	4
2.1	Mitigation	8
3.0	Site Context	9
3.1	The Site's Context – Geology	9
3.2	The Site and Its Context – Landscape	11
3.3	Identified Values	13
4.0	Statutory Considerations	20
4.1	The Proposed Waitomo District Plan	20
4.2	Waikato Regional Policy Statement	21
4.3	The Maniapoto Environmental Management Plan	21
4.4	Vision & Strategy for the Waikato River	23
5.0	Effects	25
5.1	Receiving Environments & Audiences	25
5.2	Effects Assessment	27
	Viewpoint 1	30
	Viewpoint 2	32
	Viewpoint 3	34
	Viewpoint 4	38
5.3	Landscape Effects Summary	41
6.0	Amenity Effects	43
6.1	Rural Character	43
6.2	Residential Amenity	46
6.3	Identity	47
6.4	Summary of Amenity Effects	47
7.0	Statutory Assessment	48
8.0	Conclusions	50

1.0 INTRODUCTION

This report addresses the landscape effects associated with the proposed development of the South-Western Pit as an extension to Graymont NZ Ltd's existing quarry at Oparure, near Te Kūiti.

As with the current Oparure Quarry, immediately east of the proposed South-Western Pit site, the South-Western Pit would accommodate the extraction of limestone from within an area of rolling karst terrain that is located on the farm) at 806 Oparure Road. The extracted material would then be transported to the existing quarry for crushing, grading and trucking off-site, with all vehicle access to and from the new pit via the existing quarry entrance.

This report is accompanied by **Attachments 1-35**, which show the following:

- The existing Oparure Quarry pit;
- The proposed South-Western Pit;
- Proposed mitigation planting that is designed to minimise the quarry's effects on its wider landscape setting;
- The more immediate landscape of the South-Western Pit site, including some of the characteristics and features of the karst landscape within which it is located;
- Maps which identify the main receiving environments around the pit site, some of which might be exposed to it, in part or whole;
- Existing views to the site from public vantage points on Oparure Road, Troopers Road, Boddies Road (including the driveway entrance to 531 Boddies Road) and Mangatea Road (above the Mangatea Marae); and
- 'After' views from 531 Boddies Road and Mangatea Road incorporating the proposed quarry pit at various stages of development.

In relation to the 'after' views just referred to, it is recognised that a quarry pit, unlike buildings or other structures, is not a fixed entity that can be accurately surveyed and incorporated in photomontages or simulations as a static, finished development. Quarries evolve over time, move across the landscape and change in terms of their depth, width and exposed faces. Consequently, the images employed in this assessment depict the 'worst case' situation in relation to each of the viewpoints employed for more detailed analysis of the application's effects. In so doing, they also respond to the anticipated direction of quarry operations and the introduction of shelterbelts and other planting designed to limit the quarry's off-site visibility.

This report has been prepared in conformity with the *New Zealand / Aotearoa Te Tani a te Manu Landscape Assessment Guidelines* (NZILA), including the assessment methodology and effects ratings scale recommended within it. Based on my assessment, I have concluded that:

- The proposed Pit would be both physically and visually contained by its rural surroundings;

- It would have a quite limited impact on the surficial karst features that are scattered across the site's present farmland;
- Its exposure to the public domain would be restricted to distant and quite fleeting views from one section of Mangatea Road – looking between vegetation next to that road corridor;
- Its effects in relation to a farm residence at 531 Boddies Road and other dwellings located near Oparure, Troopers and Waipapa Roads, would be of a very low order;
- The mitigation and longer term 'betterment' measures proposed would help to both screen the Southwestern Quarry and enhance the pit site physically over time; and
- The Pit's landscape effects – overall – would be well contained and typically of a very low order through to Year 53 and beyond.

2.0 THE PROPOSAL

As indicated above, the South-Western Pit site is located west of both Te Kūiti and the Mangapu River valley and west to north-west of the current Oparure Quarry. The quarry's location is shown below (Figures 1 & 2), as well as on Attachment 1.



Figure 1: General location plan, with proposed pit located within red circle



Figure 2: Location of the proposed pit (blue line) & the existing Oparure Quarry

Attachment 2 contains photos of the existing Oparure pit, which is similar in nature to the proposed pit, while **Figure 3** (below) shows that the proposed pit is located within an area of mixed siltstone and limestone with the broad geological classification of “**Taumataraire Formation (MET)**”. GNS’s geological classification system describes this as comprising “*massive to weakly bedded, calcareous mudstone with local interbedded limestone*”. The proposed pit – like the existing quarry – is located where the concentration of limestone layers – topped by mudstone overburden – is noticeably higher, giving rise to a prevalence of limestone cave systems, tomos, sink holes and other karst features.

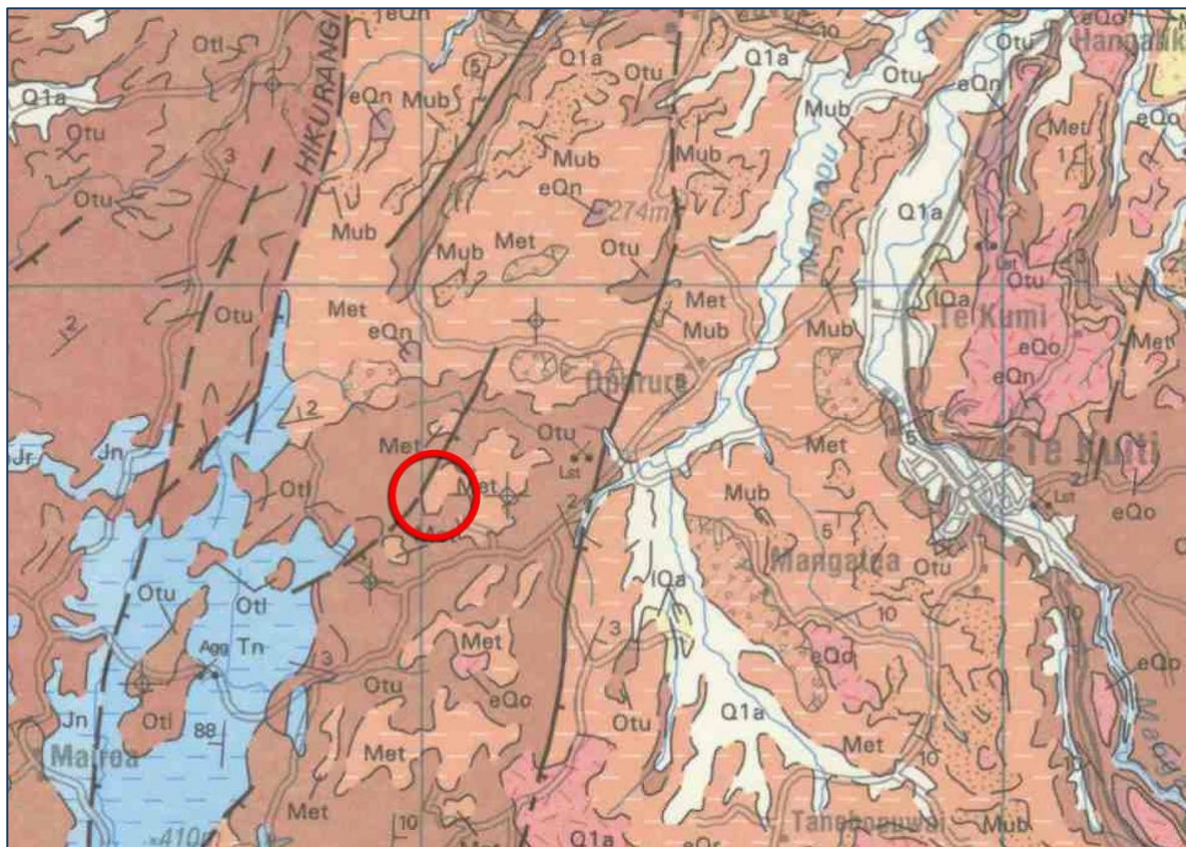


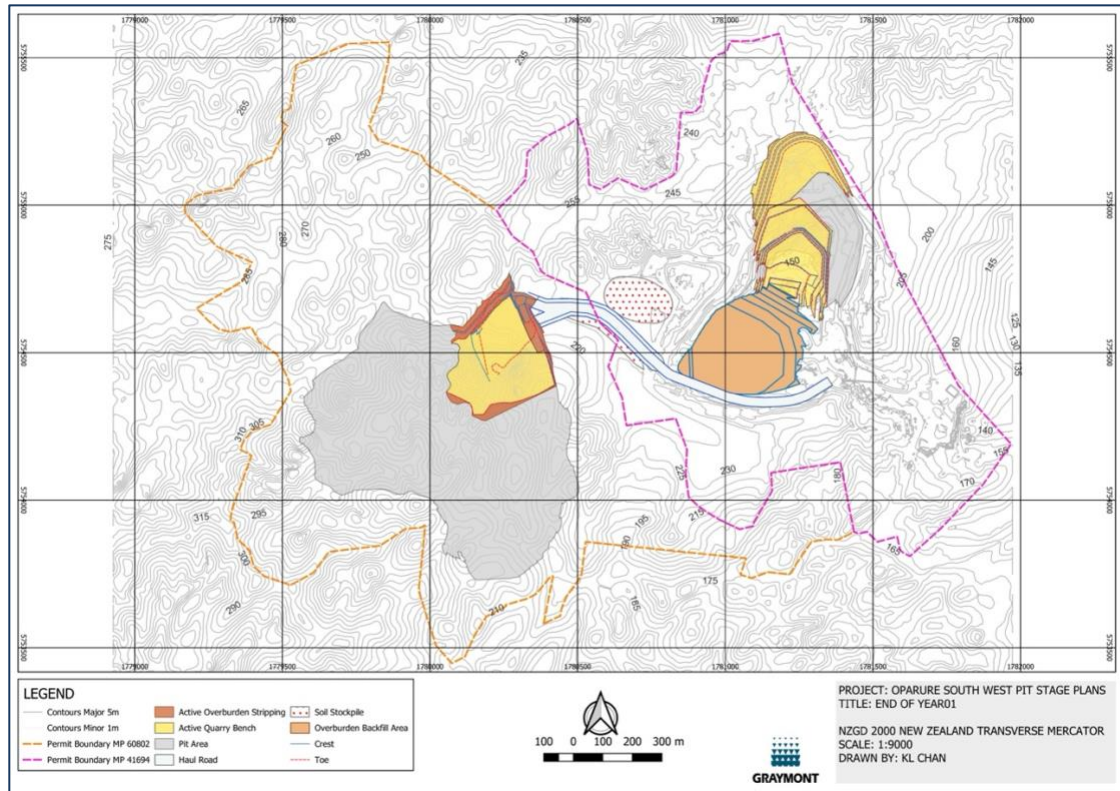
Figure 3: General location plan, with proposed pit located within red circle

The following sequence of images (overleaf) highlight the anticipated extent and direction of operations at various phases of the new pit’s working life, from Years 1 to 53. Key points revealed by these images include the following:

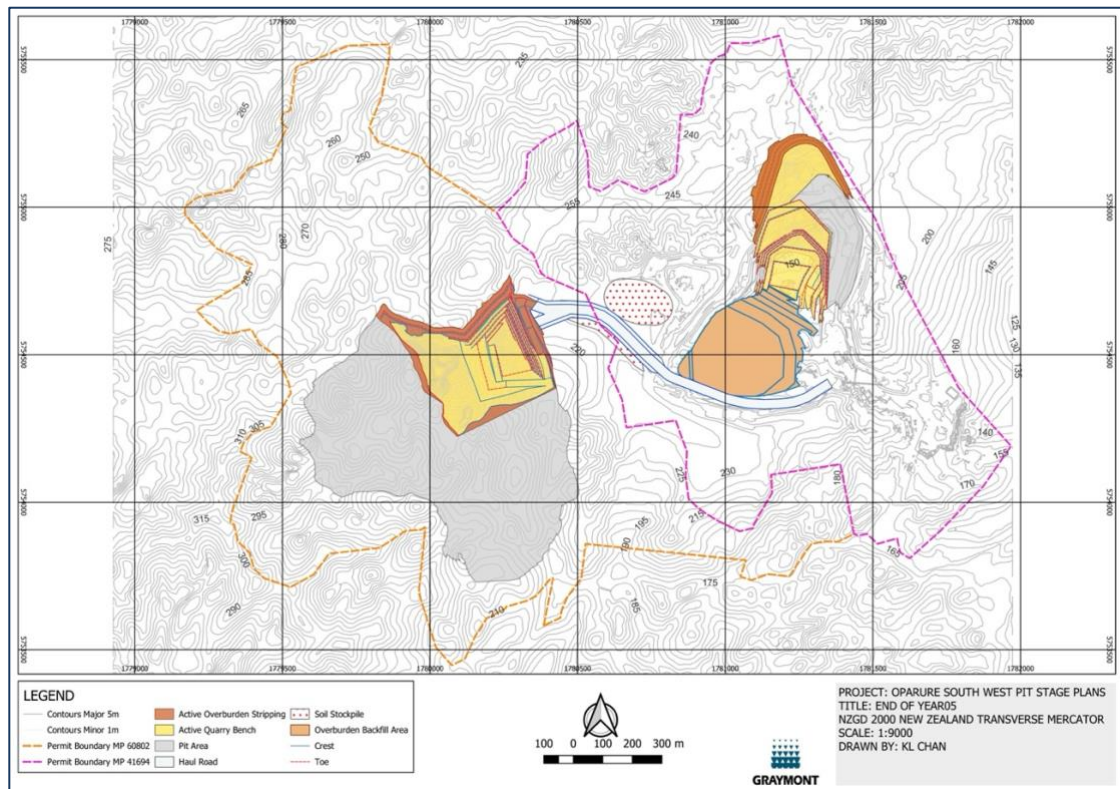
- The pit’s evolution would start with the removal of overburden directly west of the current quarry, with both further overburden removal and limestone extraction then moving southwards, generally towards Oparure Road.
- The South-Western Pit would start within an area of more gently rolling to rolling terrain, approximately parallel with the existing Oparure Pit (on a north-south axis), before working southwards down the line of a ridge that bisects the application site. The quarry would start to expand into areas of steeper, more sharply defined gullies and ridges to the west from Year 5 onwards, but more noticeably after Year 23.

- In the long term – beyond Year 33 – extraction would extend further westwards (into the foothills near Waipapa Road, although it would also progress southwards, towards Oparure Road and a series of small ridges which separate that corridor from most of the subject site.

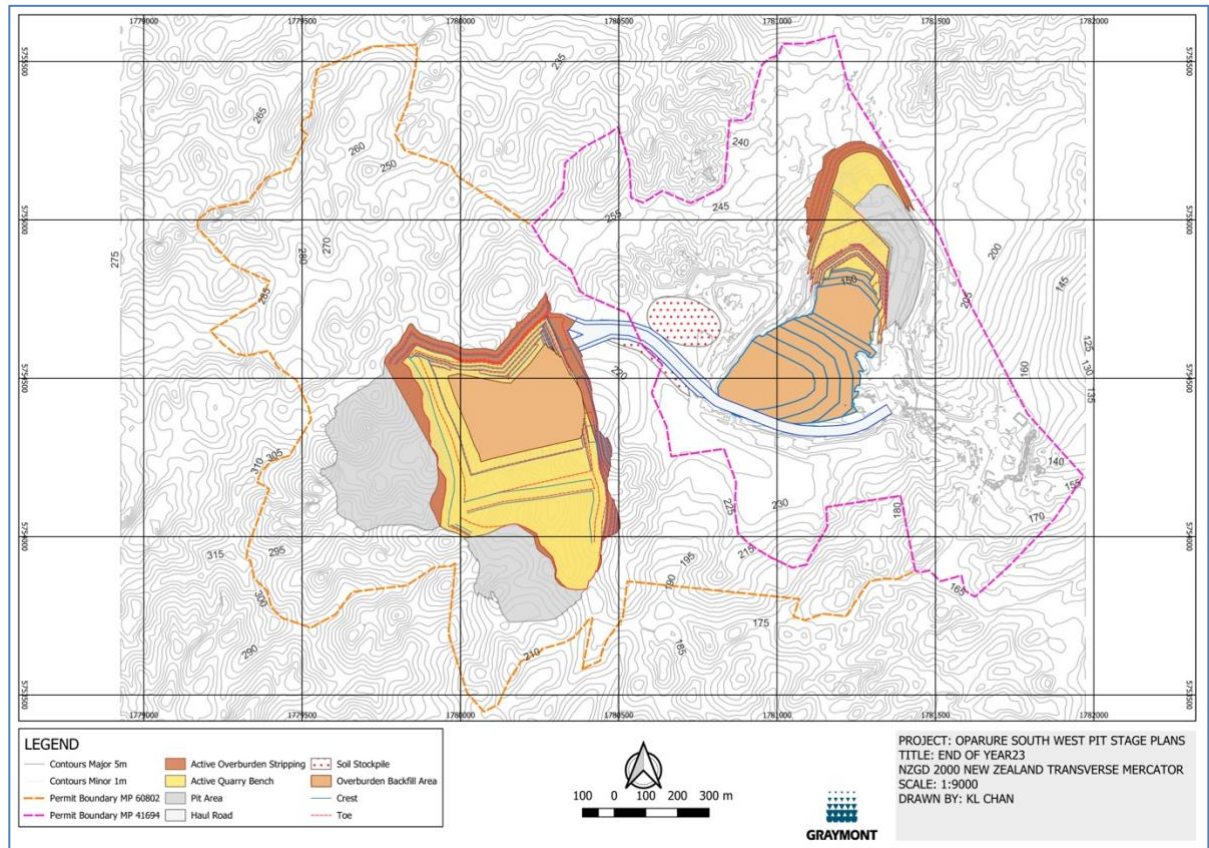
Proposed Pit: Year 1



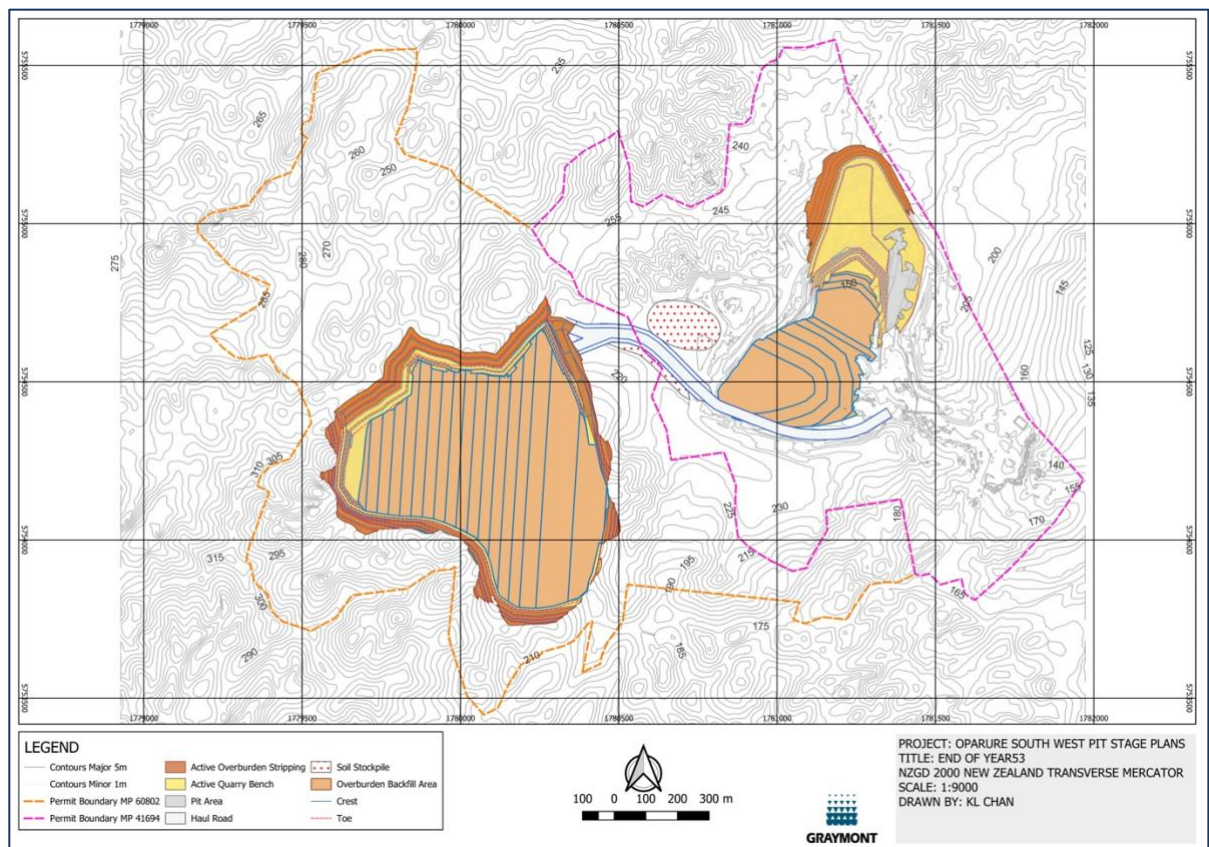
Proposed Pit: Year 5



Proposed Pit: Year 23



Proposed Pit: Year 53



2.1 Mitigation

Attachment 3A highlights key measures designed to minimise the impact of the proposed quarry on both the public and private domains:

1. Containment of the quarry site within a site that is flanked by a sharply rising series of ridgelines and foothills to the west (near Waipapa Road) and a saddle to the immediate east (containing the current private airstrip between the Oparure and South-Western Pit sites). A series of more gently undulating ridges and gullies lies to the north (in the direction of Boddies Road), while a sequence of smaller ridges and spurs separates most of Oparure Road from the proposed pit site.
2. Additionally, **Attachment 3A** shows planting proposed along and near the application site's northern boundary to help to reduce the visibility of the pit and its upper faces in the medium to long term – effective from around Years 10-13 onwards – as well as to assist with its general integration into the quarry's wider landscape setting. In particular, this planting would address views from a farm property and house at 531 Boddies Road, and the accessway to the Mangawhitikau Cave System off that same road further to the east.

In relation to the second point (above), a mixture of planting is proposed:

- A single line of faster-growing exotic species, such as Mexican Alders (*Alnus jorullensis*) or similar, to quickly establish an outer shelterbelt – facing westwards and northwards;
- A belt of Totara (*Podocarpus totara*) that would provide another layer of screening and shelter near the site boundary in the longer term;
- A stand of Totara (*Podocarpus totara*) either side of the main farm track that enters the Project site from Oparure Road.

The exotic shelterbelt would remain until the belt of totaras next to it has attained an average height of 6-7m – after which it would be removed. The totara shelterbelt near the site boundary, together with the stand near the main farm track, would be retained through to the end of quarry operations with the intention that they remain as permanent features of the reinstated farm.

Attachment 3B shows the longer-term proposals for protection and covenanting of existing stands of native bush to the west of the proposed pit, while the eventual rehabilitation (and 'betterment') of the wider site would result in most of it being returned to pasture. Steeper parts of the pit's margins would be subject to 'native shrubland' and 'native canopy' planting, while a small wetland could remain at the foot of the pit basin, depending on the post-extraction water table.

3.0 SITE CONTEXT

3.1 The Site's Context – Geology

Both the current Oparure Quarry and the proposed South-Western Pit site are located within an area that lies at the interface of contrasting geological and topographic formations: the older volcanic strata (basalt, rhyolite and ignimbrite) that dominate the Waikato 'shield' extending north from Taupo and the Volcanic Plateau to straddle Hamilton, and the sedimentary formations (greywacke and limestone) that predominate across much of the hill country west of State Highways 3 (north of Te Kūiti down to Eight Mile Junction) and 4 (south of Eight Mile Junction). Although the area around Oparure Road is therefore dominated by layers of limestone with mudstone overburden, these are also intermixed with 'threads' of volcanic strata closer to Te Kūiti, while alluvial formations run up the Mangapu River corridor and other local river and stream corridors.

The limestone formations and geological systems that are particularly prevalent within both the Waitomo and Otorohanga Districts culminate in the Landscape Policy Area that wraps around the Waitomo Caves and other karst features near the Aranui, Ruakuri and Waitomo Glowworm Caves that act as an important magnet for tourists and locals alike. Although the caves articulate the area's limestone geology in a way that most New Zealanders are familiar with, it is also evident in an array of other features that include dolines (enclosed depressions), karren (fluted outcrops), arches and the sort of pancake 'tors' found at Oparure, while near Paemako and on the edge of the Herangi Range (west to south-west of Te Kūiti) and down the eastern side of the North Island it is articulated in the 'wave' like formations of cuesta ridges and landforms, such as that of the Puketoi Range and Te Mata Peak.

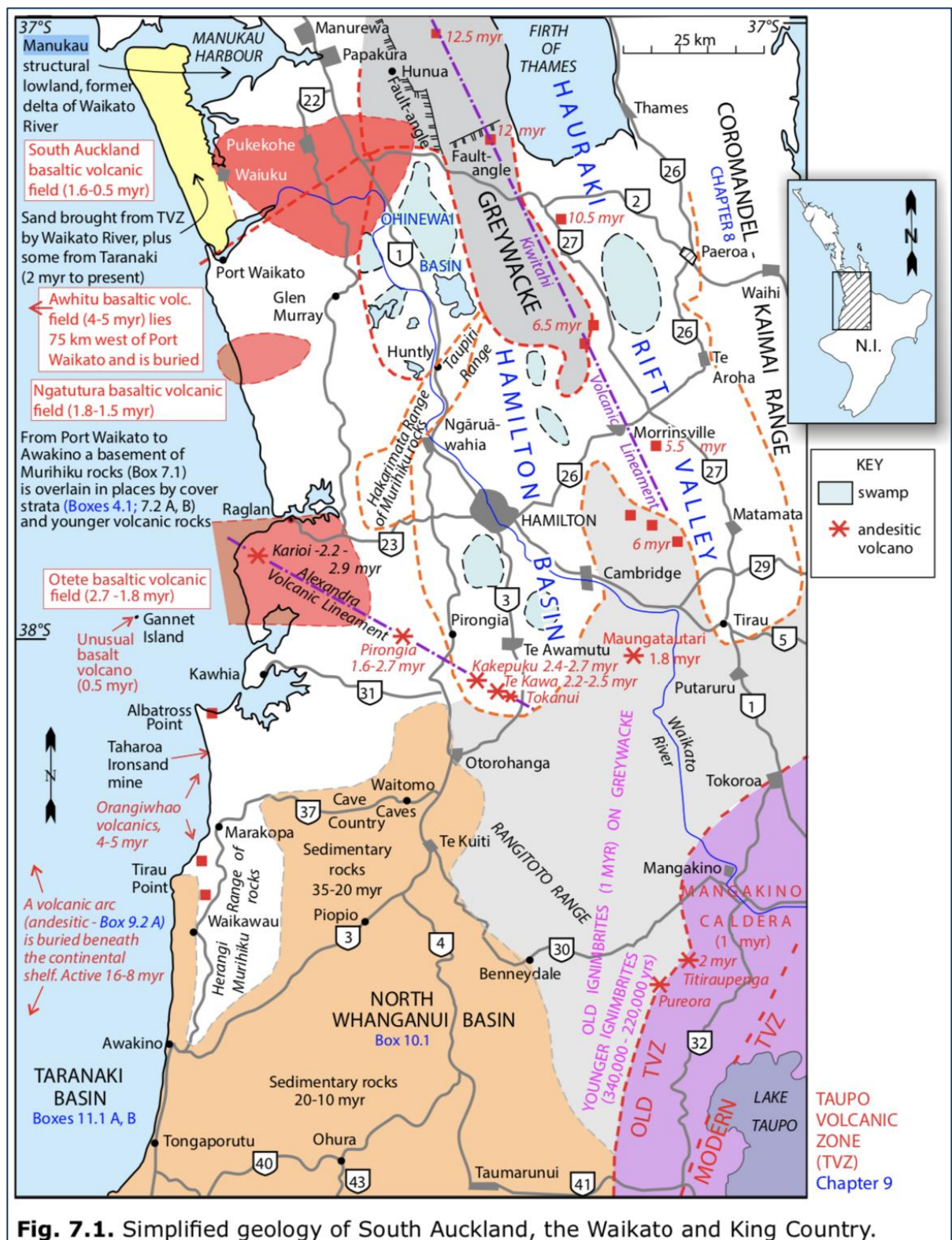
Within the book, *New Zealand Geology: An Illustrated Guide* (written by Peter Balance with illustrations by Louise Cotterall, published by the Geoscience Society of New Zealand: *Miscellaneous Publications No.148*), the history of the southern Waikato area is summarised as follows:

Geological History

Starting with the basement rocks (Chapter 5), we have the same two terranes in this region that underlie Northland, corresponding to phase one of New Zealand's formation (Box 5.3). Without the westerly tilt, however, both of these terranes are visible at the surface. Thus greywacke rocks of the Waipapa Terrane (Boxes 6.2 A–C, Fig. 6.7) form the eastern ranges of the region, from Hunua Range in the north to Rangitoto Range in the south; and Murihiku Terrane rocks (Box 7.1) form the western belt, from Port Waikato southwards to the Herangi Range near Awakino. They adjoin along a major tectonic boundary or terrane suture, the Waipa Fault, which like many major faults is not exposed to view anywhere.

The region's cover strata comprise representatives of both phases three and four of New Zealand's development. During phase three, extensive coastal swamps formed as the low-lying landmass slowly subsided, these resulting in the coal measures found today (see below). As in Auckland and Northland, they were overlain by shell limestones and associated glauconite-bearing sandstones deposited on a wide continental shelf. Where the land was higher, swamps did not develop and so here limestone rests directly on basement, as it does between Port Waikato and Awakino. Limestone is prominent in the landscape, forming whitish bluffs, all down the west coast as far as Awakino. It is particularly strongly developed around Waitomo, where it hosts the famous Waitomo Caves (Box 7.2 A, B). [My emphasis]

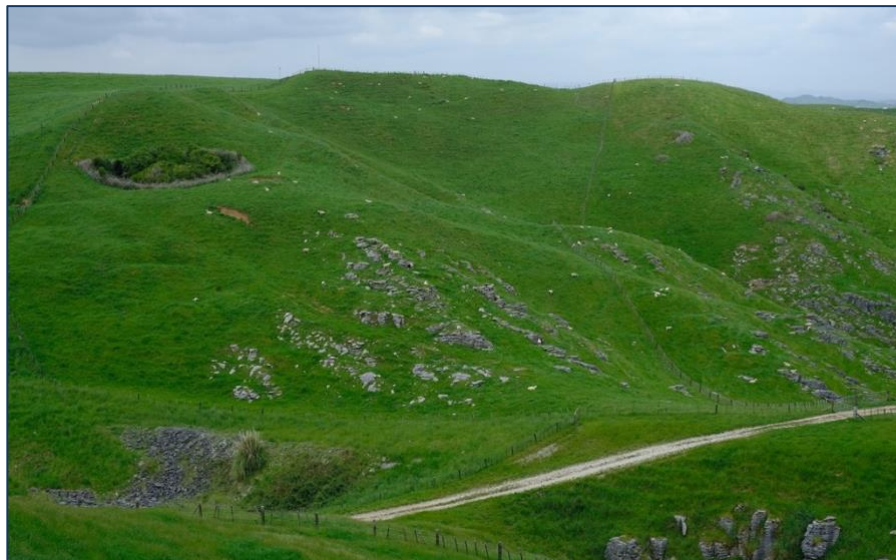
Figure 7.1, below, helps to further elaborate on the evolution and various geological classifications now associated with the southern Waikato.



3.2 The Site & Its Context – Landscape

The current Oparure pit sits on a terrace north-west of the Mangapu River. However, a number of localised ridges also wrap around much of that existing pit to enclose it on the southern and northern sides. These help to separate it from both Oparure Road and Boddies Road, and associated farm properties. The pit is further enclosed to the east and south-east by a large stand of pines, in the direction of both Oparure Road and the Mangapu River.

The proposed South-Western Pit and access roads to it would be located west to southwest of the existing quarry, amid pasture-dominated terrain that starts as a shallow plateau near the edge of the current pit, then becomes increasingly rolling and dissected to the west and southwest. Occupying a broad area of upland north-west of the Mangapu River, the site mainly comprises open sheep pasture that is bisected by fencing and farm tracks. The site is also ‘pockmarked’ by a range of karst features, including dolines and sinkholes, small limestone outcrops or ‘tors’ and, in places, scattered outcrops of exposed regolith that striate the site’s slopes and open grassland.



A doline and scattering of exposed limestone (above), with limestone outcrops and tors exposed on the edge of a gully system and ridge (below)



Limestone outcrops and tors exposed across ridge slopes and crests

A scattering of native trees and shrubs – including taraire, mapou and pigeonwood – are also found within some of the site’s gullies and depressions, as well as on some of its steeper slopes scattered across the site. A few willows and other exotic trees are also interspersed with both its pasture and native remnants, although these tend to be more obvious near the farm entrance off Oparure Road, together with its woolshed and current farmhouse.

Moving away from the area within the more immediate scope and margins of the proposed pit, the landscape west to north of the proposed quarry, remains relatively open and dominated by pasture. It is only as one moves towards Waipapa Road to the west and northwest that the landscape appreciably changes, with firstly production pine forest, then native forest, at the very outer edges of the northern Herangi Range. These loosely enclose the rolling uplands near Oparure.

To the south, around Oparure Road, the landscape remains ‘clothed’ in a broad carpet of pasture, but it also becomes increasingly dissected by rises and falls in the local terrain, pockets of remnant bush and farm woodlots. This area of rolling terrain continues westwards, generally following the western side of Troopers Road towards a high point near Mathers Road. East of both this roadway and Oparure Road, the landscape falls away to meet the basined headwaters and flats of the Mangapu River. These comprise a relatively open checkerboard of paddocks, drains and hedgerows that sit some 70-100m below the elevation of the Oparure Quarry, nearby, but are separated from both it and the South-Western Pit site by a series of quite gentle slopes that climb up to Troopers Road and Oparure Road, then the matrix of much more varied terrain north and west of both roads – as described above.

The edges of this river catchment and its near margins are also marked by two other landscape features: the large stand of pines already mentioned that wraps around the eastern side of the Oparure Quarry, and a scattering of native vegetation remnants further east to north-east again, which culminate in a bush-covered scarp enclosing the small settlement of Oparure and its marae. This limestone ridge, together with the vegetation spread along it, helps to further isolate the existing quarry from both the village and river headwaters.

As a whole, most of the area just described comprises a working rural landscape that is hallmarked by activities and structures associated with farming and – on a much more limited scale – pine forestry. Although the Oparure Quarry sits at the centre of the Oparure area, it remains quite discreet and self-contained. Indeed, the only public vantage points that offer any real sense of exposure to the current quarry and application site are found on two, similarly elevated, sections of Troopers Road, on one section of Mangatea Road (across the upper catchment basin of the Mangapu River), and on part of Boddies Road, some 3km west of the small settlement of Oparure. Oparure Road, running directly past the current quarry and proposed pit, offers a more close-up view of the southern end of the subject site, but one that is also fleeting.

Attachments 4-11 provide a more detailed overview of the application site, showing:

- Attachment 4:** Location Map of on-site viewpoints
- Attachment 5:** Photo Location 1: from near the central ‘water tank knoll’ over the South-Western Pit site – towards the current quarry and Oparure Road;
- Attachment 6:** Photo Location 2: view from near the central ‘water tank knoll’ over the South-Western Pit site – in the direction of Waipapa Road and the Herangi Range;
- Attachment 7:** Photo Location 3: view from near the central ‘water tank knoll’ over the South-Western Pit site in the direction of the northern Herangi Range and Boddies Road;
- Attachment 8:** Photo Location 4: view from the northern end of the site over the South-Western Pit site – back towards the central ‘water tank knoll’;
- Attachment 9:** Photo Location 5: view from the northern end of the pit site towards the north and north-east, in the direction of Dundle Hill and Boddies Road;
- Attachment 10:** Photo Location 6: view from the northern end of the pit site towards Oparure Road and the main entrance to the farm; and
- Attachment 11:** Photo Location 7: view from the north-western edge of the pit site towards the centre of the site and the current Oparure Quarry.

3.3 Identified Values

Neither the South-Western Pit site nor its surrounds are identified as an Outstanding Natural Landscape (ONL) in the Appeals Version of the Proposed Waitomo District Plan and the Waikato Regional Policy Statement. Even so, the proposed pit would be located within a Landscape of High Amenity Value: LHAV3 Limestone Country. As described in the Plan’s Schedule 9, this covers most of

the district's 'elevated central hills and valleys', and it is described as having the following attributes (among others) that are more relevant to the Oparure area:

Biophysical Attributes and Values

..... Numerous extremely high value limestone bluffs, rock outcrops, tomos and cave features throughout. Often within highly attractive bush setting or as highly sculptural elements within pastoral landscape.....

Perceptual (Sensory) Attributes and Values

Highly attractive and memorable close and mid-range rural views to: dramatic limestone bluffs, rock outcrops and landforms; intimate stream valleys and gorges (e.g. Totoro Gorge); and impressive waterfalls.....

Attractive rural views across low intensity farmland in which the complex landform patterns and arrangement of vegetation (exotic and indigenous) create a pleasing composition.

Attractive rural views from highpoints on Te Anga Road and Troopers Road.

Generally high aesthetic values as a consequence of the perceptual values described above.

A moderate degree of naturalness across much of the unit, as a consequence of the dominant influence of the low intensity working rural landscape and, to a lesser extent, production forestry and the prevalence of tourism activities (signage, parking, traffic etc). The frequent occurrence of dramatic limestone bluffs and outcrops within the pastoral areas confers a sense of naturalness.

In general, the relatively low-key built development character (outside of Waitomo Caves village) assists the perception of naturalness.....

Associative Attributes and Values

Several scattered cultural sites throughout the unit. Very high public profile as a consequence of Waitomo Caves, numerous waterfalls and walkway features, local tourism operations, Te Araroa and scenic routes. The close proximity and relatively easy access of the unit to SH3 confers a higher public profile than, many other parts of the district.

Very high recreational values associated with the as a result of the proliferation of a range of varied and highly engaging features including:

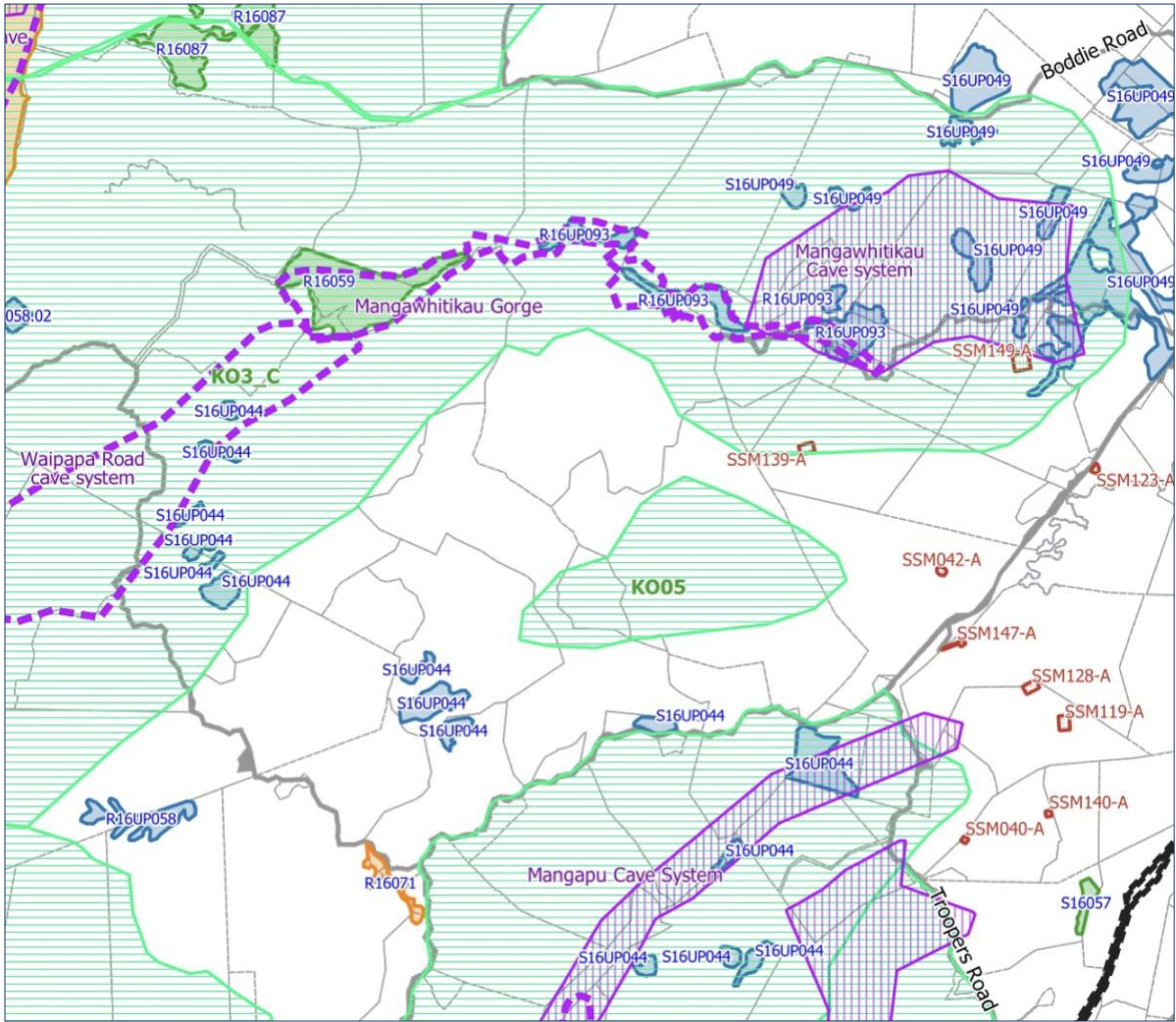
- Accessible caves offering a wide range of recreational experiences on offer ranging from glow-worm boat tours to blackwater rafting and abseiling adventures.

Focusing more specifically on the karst landscape around the subject site, the Mangawhitikau and Mangapau Cave Systems are located north and south of it. These are identified as being Outstanding Natural Features (ONFs) in the PDP, and Schedule 8 describes them as follows:

ONF32	Mangapu Cave System Includes Lost World, Hamland Hole, Wellington Hole	Between Oparure and Troopers Roads	Claimed to be the second largest underground river in North Island. Many important speleothems including the only calcite shields and the only aragonite speleothems so far recognised in North Island. Major use for tourism and recreation. Two side caves nearby have some of densest straws and best calcite speleothem assemblages in New Zealand. Best example of karst window in New Zealand. National Importance.
ONF36	Mangawhitikau Cave System	South side of Boddies Road, Waitomo	One of the largest river caves in North Island. High recreational and tourist value. Over 8 km of cave passage. Classic two-tiered geomorphic development and dry valley leading to former stream cave upstream. Includes Mason's Dry Cave (fossil deposits), Flood Caverns, Mason's Glowworm Cave, Mangawhitikau Gorge and other small caves. National Importance.

Their associated gorge systems are also identified as ONFs in the PDP (ONFs 33 and 35, respectively), although, like the cave systems, these would remain untouched by the proposed pit and related activities.

In addition to these key features, the PDP’s Karst Overlay identifies other “*subterranean caves and catchment areas of high geomorphological and ecological diversity*” that are important to the Waitomo District, some of which are located on and around the South-Western Pit site. The map below shows their distribution within and near Oparure (extracted from PDP Map 12):



Of relevance to Graymont’s proposal, Schedule 12 of the PDP identifies the Digme-Camelot Cave System (K005) as covering part of the pit site. This system is described as follows:

K005	Digme-Camelot Cave:	Oparure Road, Graymont Quarry	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).
------	---------------------	-------------------------------	--

It is anticipated that both the existing Oparure Pit and the new South-Western Pit would affect this cave system. It is important to note, however, that this report focuses solely on the attributes and values of the Oparure landscape at, or above, ground level. As such, it does not address the cave

systems within or near the proposed pit site. In this regard, it is acknowledged that speleological values are a very particular area of investigation, which are outside the scope of this assessment.

Even so, the landscape values of the Karst Overlay and its surrounds, at and above ground level, are relevant to this assessment with reference to Chapter 28 (Natural Features and Landscapes) of the PDP. In this regard, while the cave systems within and near the site remain largely hidden from view, they are still partly ‘expressed’ through the scattering of karst features described in Section 3.2. This layering of rock outcrops, dolines, and other features is visually apparent, but it is not notably coherent, integrated or notable in its own right – apart, possibly, from the circular entrance to the “Quarter Acre” System in the south-eastern corner of the South-Western Pit site (shown in the upper photo on p.9).

Indeed, the karst remnants found within and near the South-Western Pit site remain reasonably typical components of the rural landscapes found across the Waitomo, Otorohanga, Waipa and even Waikato Districts. For instance, scattered limestone elements, with a relatively low profile are also found at the bottom of Boddies Road and near the intersection of Troopers Road with Mather Road (see below), as well as other nearby locations.



Karst elements near the junction of Troopers Road with Mather Road

By contrast, a range of much more prominent, and dramatically expressed, ‘limestone features and landscapes’ are found at publicly accessible locations within the Waitomo District and Waikato Region, including:

- Above the Oparure Marae next to the settlement of Oparure;
- On the edge of the Herangi Range and at Paemako (Waitomo District);
- Near the Te Kauri and Wairoa Stream Valleys framing the south-eastern margins of Kawhia Harbour (Otorohanga District);

- Around Ngaroma (Otorohanga District) near the Waipari, Mangarata and Mangaharakeke Stream corridors; and
- 'Limestone Downs' (Waikato District), and from there northwards, around the Port Waikato Waikaretu Road.

Photos of some of these karst landscapes are shown below and overleaf and in **Attachments 12 - 14**.



Limestone cliffs above the Oparure Marae



Limestone cliffs above the Pangaki Stream near Paemako



'Standing stone' rock formations near Ngaroma above the Mangaharakeke Stream

Consequently, while the array of sinkholes, plinths and 'pancake tors' found within and around the subject site is reasonably expressive of the area's geological heritage, these features lack the degree of scale, visual presence or – with reference to the Awakino Gorge and Kawhia Harbour karst features – natural context that might render them of district or regional significance. The more dramatic, and regionally to nationally, significant components of this karst environment remain predominantly underground.

The *Maniapoto Environmental Management Plan* and the Waikato River Authority's *Vision and Strategy For The Waikato River* have also been examined to see if they identify any locations or areas of specific value near Te Kūiti. Both documents allude to the need to carefully and sensitively manage the headwaters catchments of the Waikato River and, in parallel, the Waipa River (which the Mangapu River feeds into). However, such management tends to focus on generic issues, such as the protection of native vegetation and significant landscapes that are connected to both rivers. Neither identifies any particular values or locations of significance in the general vicinity of Oparure.

4.0 STATUTORY CONSIDERATIONS

4.1 The Proposed Waitomo District Plan

As indicated in Section 3.2, above, most of the Proposed Waitomo District Plan (Appeals Version) is now operative. The proposed pit is located in the District Plan's Rural Production Zone. Even so, the majority of statutory 'hurdles' that the proposal faces are found in Chapter 28 of the PDP addressing Outstanding Natural Features and Landscapes, Landscapes of High Amenity Value and the Karst Overlay. The objectives and policies of particular relevance to Graymont's proposal and its site include the following:

Outstanding Natural Features

NFL-P1. *Ensure the values and character of the outstanding natural features are protected from inappropriate subdivision, use and development by:*

- 1. Avoiding adverse effects which compromise the values and character of outstanding natural features; and*
- 2. Ensuring the location, scale, materials, design, colour and grouping of buildings, structures and infrastructure avoid adverse effects on the values and character of outstanding natural features and landscapes; and*
- 3. Ensuring earthworks integrate with the existing landform to preserve the values and character of outstanding natural features and landscapes; and*
- 4. Avoiding any activity, particularly earthworks, harvesting of plantation forestry and structures, where this will adversely affect caves and fragile outstanding natural features identified in SCHED8; and*
- 5. Ensuring developments in locations that are of significance to mana whenua appropriately assess those effects and any resulting development is managed in a way that protects the values of the site; and*
- 7. Ensuring any earthworks or vegetation removal activities focus on protecting existing indigenous vegetation in the first instance, minimising clearance in the second instance and undertaking any measures necessary to rehabilitate the land including restoration and re-planting as a final resort;*

Landscapes of High Amenity Value

NFL-O4. *Recognise, maintain, and where practicable, enhance the qualities and values of the landscapes of high amenity value identified in SCHED9, including those values associated with working agricultural, pastoral and horticultural landscapes.*

NFL-P4. *Maintain and where practicable, enhance the qualities and values of the landscapes of high amenity value during subdivision, land use and development by:*

- 1. Ensuring that the effects of any activity which could compromise the qualities and values of the landscapes of high amenity value are minimised; and*
- 2. Ensuring that buildings, structures and infrastructure are integrated into landscapes of high amenity value to minimise, to the maximum extent practicable, any visual impacts; and*
- 3. Managing the adverse effects of earthworks for buildings, driveways, new tracks and farm quarries through appropriate subdivision and development design; and*

4. *Ensuring developments in locations that are of significance to mana whenua appropriately assess those effects and any resulting development is managed in a way that protects the values of the site; and*
5. *Minimising the removal of indigenous vegetation as far as practicable;*

The Karst Overlay

NFL-O5. *Ensure the unique geomorphological, hydrological and ecological values of the karst overlay identified in SCHED12 are recognised and protected.*

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; and*
4. *Avoiding developments in locations that are of significance to mana whenua; and*
5. *Minimising the removal of indigenous vegetation; and*

4.2 The Waikato Regional Policy Statement

Chapter 12 of the Waikato Regional Policy Statement identifies ONLs across the Region – from the northern Coromandel Range to Mt Ruapehu. The Herangi Range, west to south-west of Te Kūiti is one such ONL, but the area around Oparure is not identified as having any specific or particular landscapes values and significance.

In addition, Chapter 12 addresses the maintenance and enhancement of amenity values across the Region, including rural character and amenity. Thus, under Policy 12.3.1 it is stated that: “*subdivision, use and development is managed to avoid, remedy or mitigate the adverse effects on the identified values of areas of amenity value.*” However, the area around Oparure is not identified as having any particular amenity values that might be subject to this policy. Again, therefore, it is not subject to any specific management overlays or controls.

4.3 The Maniapoto Environmental Management Plan

Although a non-statutory document, the Waikato RPS requires that regard be had to the *Maniapoto Environmental Management Plan* (MEMP). In Part 1.1.2 of the MEMP it is described as a “*high level, direction setting document*” that “*..... describes issues, objectives, policies and actions, to protect, restore and enhance the relationship of Maniapoto with the environment; and also the social, cultural, spiritual and economic relationships.*” The aims of the MEMP (Section 1.1.8) are described as being to:

- *give effect to the overarching purpose of Ngā Wai o Maniapoto Waipā River Act 2012 (Waipā River Act) to restore, maintain, and protect the quality and integrity of the waters that flow into and form part of the Waipā River for present and future generations.*

- *raise awareness and understanding of Maniapoto values, interests, and aspirations in the management of physical and natural resources.*
- *outline issues that Maniapoto perceive effect Maniapoto values, interests and aspirations in the management of physical and natural resources.*
- *outline expectations, through policies and actions, that should resolve the above issues.*

Key Objectives of Te Ture Whaimana are then outlined in Part 1.6.9.1, which focus on the protection of the values of the Waikato River and its catchments. Of those objectives, the following is the only one that appears to apply to the South-Western Pit proposal:

I The protection and enhancement of significant flora

In response, therefore, to the highly modified nature of the site environs and the very broad nature of the above objective, an appropriate response would be to supplement the residue of native vegetation around the pit site through the use of native mitigation planting to help buffer its operational effects. In particular, the proposed use of totara around key parts of the quarry site (**Attachment 3A**), as well as the use of native plants for stormwater management, would assist in this regard. Such an approach appears to be endorsed in Parts 4.4 and 4.5 of the MEMP, which include the following directives:

- 4.4.2 For Maniapoto, it is essential that natural resources are managed in a way that ensures the continued health and wellbeing of the mauri of resources. Towards environmental enhancement is essential to ensure that any resource use or activity must give back to the environment what is taken from the environment in kind, contribute to enhancing the mauri and wairua of natural resources, and provide a positive net benefit to the environment.*
- 4.4.3 Where resources are depleted (e.g. mineral mining), then careful consideration and assessment will be required to ensure a net benefit for the environment.*
- 4.4.4 Resource users and decision makers have a reciprocal obligation and responsibility to provide a positive net benefit back to the environment to ensure it is passed on to future generations in a state that is better than the current state.*
- 4.5.6 The effects of activities are to be managed through a hierarchy assessment and include; avoid the effect, remedy the effect, minimize the effect, mitigate the effect and balance positive and negative effects. This is known as offset mitigation.*
- 4.5.10 The aim of environmental enhancement is for the environment to benefit from any resource use, activity or development rather than the environment being expected to accommodate further degradation and/ or pollution.*
- 4.5.12 Riparian planting/restoration: riparian planting and restoration is a recognised environmental protection and restoration method and is a means of managing environmental effects. Generally Maniapoto wish to restore and protect all riparian areas, though these aspirations for restoration and protection may differ at specific sites. Additionally Maniapoto generally prefers indigenous species to be used in riparian planting and restoration that provides important cultural, economic and environmental benefits.....*

Part 18 of the MEMP, addressing management of the “**Land**”, goes on to include the following objectives and policies:

18.3.3.2 Policy

Land use prioritises the protection and restoration of the mauri of land and its resources.

Action

- (a) *Indigenous vegetation areas are enhanced and, where possible, expanded or established to improve and restore the mauri of the land.*

In addition, Part 19 – “**Natural Heritage and Biodiversity**” – addresses a number of key landscape issues:

19.3.2 Objective: Landscapes

To protect and enhance significant cultural, spiritual, natural and ecological landscapes, features and locations in the Maniapoto rohe and to protect and enhance Maniapoto relationships and associations with these features.

19.3.2.1 Policy

Activities and uses that adversely affect significant cultural, spiritual natural and ecological landscapes, features or locations in the Maniapoto rohe are avoided, and Maniapoto relationships with those landscapes, features or locations are maintained and restored.

Action

- (a) *Ensure resource use and activities maintain and restore connections between ecological corridors and landscapes and enable species to exist within their natural ecological range.*
- (b) *Mitigation measures for the management of effects includes, where appropriate, the restoration of ecological corridors and landscapes.....*
- (d) *Appropriately protect significant landscapes from destructive activities such as vegetation clearance and earthworks.*
- (e) *Appropriately protect significant landscapes, features, locations and associated view shafts (lines of sight to significant areas) from development or any other adverse effects on their character or amenity values.*

Again, these objectives and policies appear to have a strong focus on the avoidance of adverse effects – in particular on significant landscapes, but also the mitigation of effects and the restoration of both landscapes and habitats using native species. It is notable that effects in relation to ‘character’ and amenity values are also addressed.

4.4 Vision & Strategy for The Waikato River

The Waikato River Authority’s *Vision and Strategy For The Waikato River* (VSWR) also embraces a ‘whole of river’ approach to management of the Waikato River and its headwater catchments. Thus, key objectives include:

- e. *The integrated, holistic and coordinated approach to management of the natural, physical, cultural and historic resources of the Waikato River.*
- g. *The recognition and avoidance of adverse cumulative effects, and potential cumulative effects, of activities undertaken both on the Waikato River and within its catchments on the health and wellbeing of the Waikato River.*
- i. *The protection and enhancement of significant sites, fisheries, flora and fauna.*

By and large, these remain similar to the introductory principles of the *Maniapoto Environmental Management Plan*, again with a strong focus on the actual river corridor and its spiritual / cultural

dimensions (as indicated in Section 3.3). As such, it neither identifies specific values around Te Kūiti that need to be protected, nor is it directive in relation to management of the catchments and landscapes near Oparure.

Notwithstanding this, the VSWR still supports environmentally sound management of the headwaters and catchments of both the Waikato and Waipa Rivers, and could be regarded as a high-level, 'umbrella' document that supports the sort of planning approach outlined in relation to the *MEMP* above.

5.0 EFFECTS

Adverse impacts upon landscape, amenity and natural character values typically arise where there is evident discontinuity between the character and values of an existing environment and what is proposed, and where the resultant 'challenge' to the existing landscape 'order' is perceived in a negative light. Consequently, this section of the report addresses the effects of the proposed South-Western Pit and related operations, as described in Section 2.0 of this report.

5.1 Receiving Environments & Audiences

In order to gauge the realistic exposure of the new quarry to different parts of the Oparure landscape, a series of site visits has been undertaken to both sides of the Mangapu River corridor, including Oparure Road, Boddies Road, Waipapa Road, Troopers Road and Mangatea Road (which provides access to the Motiti Marae). In addition, a set of maps – **Attachments 15-18** – have been prepared, which show the Zones of Theoretical Visibility (ZTVs) associated with the more elevated margins of the South-Western Pit site. These focus on the northern and south-western edges of the Pit at Year 53, while a composite ZTV – **Attachment 19** – shows these combined areas of potential visual exposure to the proposed quarry.

It is important to note, however, that the ZTVs do not take account of buildings or vegetation cover, such as the stand of pines south to southwest of the current Oparure pit. As a result, this analysis of intervisibility is limited to landforms and, if anything, indicates the worst case situation relative to the proposed pit's visibility. Even so, the combination of this analysis and visits to the application site's surroundings, indicates that:

- The proposed quarry might be exposed to views from a relatively short section of Boddies Road west of the office for Spellbound Glowworm and Cave Tours, which provides access to the Mangawhitikau Cave System.
- A single farmhouse at 531 Boddies Road looks more directly towards the pit across intervening farmland, and would (without screening) be exposed to the pit faces and emerging quarry as it works / moves away from this quarter – albeit over a viewing distance of some 2km.
- The proposed quarry would also be visible from some parts of Mangatea Road running along a ridgeline between the headwater catchments of the Mangapu River and the Mangatea Stream. However, such views would be over a viewing distance of some 5.1km or more, through and between stands of road-side vegetation, and at viewing angle that is oblique to the road axis.
- The Motiti Marae, at the end of Mangatea Road, also looks across the headwaters of the Mangapu River towards both the existing Oparure Quarry and proposed South-Western Pit site beyond it (to the northwest). However, views from this quarter start at an elevation some 80m lower than those from the section of Mangatea Road described above, and thus largely fall on the large stand of pines near Oparure Road that screens the existing pit. Together with

the rising landforms around the farm airstrip between both pit sites, these pines would also screen the proposed quarry.

- The South-Western Pit would be screened from most of Oparure Road, much as the current quarry is largely hidden behind both pines and landforms (**Attachments 21, 22 & 23**). Even so, the proposed quarry would still be theoretically visible at three points on Oparure Road as it skirts the farm and both vehicle entrances to the property. However, with the pit moving in a south to south-westerly direction over its anticipated 53-year lifespan, the operational quarry and its cut faces would be largely screened from Oparure Road by the residual, natural landforms 'in front of' it. As such it should remain all but invisible from this close-up, part of the public domain.
- Finally, the existing Oparure Quarry is visible at three points on Troopers Road to the south of Oparure – above and beyond the screen of pines and other vegetation close to Oparure Road (**Attachments 24 & 25**). The quarry's northern cut faces rise above that fringe and are apparent without being particularly prominent or intrusive. The proposed quarry would be located to the left (west) of the current pit, and both the ZTV mapping and site visits indicate that it would be substantially screened by intervening landforms. Vegetation between Troopers Road and the South-Western Pit site would compound this screening.

The remaining areas exposed to the proposed quarry would comprise pastoral farmland, together with some areas of production forestry and native forest; and even though Waipapa Road traverses rising terrain to the west of the South-Western Pit site, both the road corridor and farmhouses near it would remain screened from the emerging quarry by intervening landforms and vegetation.

The one obvious exception to this situation is the farmhouse on the farm itself, which looks directly towards the South-Western Pit site. However, the [REDACTED] Family have provided their written consent for the proposal.

Responding to this analysis, **Attachment 3A** shows shelterbelt planting located so as to restrict, then gradually foreclose, views of the quarry from the direction of Boddies Road and a stand of native revegetation designed to achieve the same outcome near Oparure Road. A second shelterbelt could be located directly south-west of the current Oparure pit, but this would interfere with the operational airstrip in that area. Consequently, it was decided not to recommend additional planting in that area.

Taking all of these factors into account, it is considered that the South-Western Pit will primarily affect:

- Users of Mangatea Road, including members of the Motiti Marae travelling to and from the marae;
- The farm owners and occupants of 531 Boddies Road – primarily over an initial 8-10 years while the intervening shelterbelts mature;
- Users of Boddies Road – again in the short term;

- Cavers using the Spellbound Glowworm and Cave Tours accessway off Boddies Road to access the Mangawhitikau System – again in the short term; and
- Local farmers and farm workers.

5.2 Effects Assessment

To assess the effects of the proposed pit's development and related operations, 'before and after' images have been prepared for viewpoints at the driveway entrance to 531 Boddies Road and on Mangatea Road. These images show the pit site at present, together with its anticipated appearance after 5, 23 and 53 years (showing the pit at a range of dates and at different stages of its expansion). They also show the growth of mitigation planting near the quarry site's northern and north-eastern boundaries. Again, it is important to reiterate that these images are based on the engineering drawings provided by Graymont, but unlike buildings or other structures, are not static elements that can be simulated with survey precision. As a result, the 'after' images shown in **Attachments 26-28** and **31-33** are based on analysis of the site's terrain, together with that of its wider surrounds, and the appearance of the current Oparure Quarry in a very similar setting.

In addition to analysis from these viewpoints, the effects of the proposal are evaluated in relation to other viewpoints on Oparure Road, Boddies Road and Troopers Road (**Attachments 21, 22, 23** and **24**), using existing photos from each of these roads. These locations have been selected as they comprise the main public vantage points close to the site, in addition to Mangatea Road. The Viewpoints / Photopoints employed in this assessment are therefore representative of those relatively few external vantage points potentially exposed to the South-Western Pit site and are located as follows (**Attachment 20**):

- Viewpoint 1. **531 Boddies Road** (Attachments 25-28)
- Viewpoint 2. **Boddies Road - near the Mangawhitikau Cave System** (Attachment 29)
- Viewpoint 3. **Mangatea Road** (Attachments 30-33)
- Viewpoint 4. **Oparure Road –Farm Access Point** (Attachments 34 & 35)

The assessment of effects for each of these viewpoints involves three steps that address the following:

Step 1 - Existing Values & Sensitivities: explores the values associated with the views towards the proposed pit site and its wider landscape setting, taking into account both biophysical factors and human perception of the landscape captured from each vantage point. The higher the existing values associated with each view are, the more sensitive it will be to modification. While Outstanding Natural Landscapes (ONLs) – which are protected under Section 6(b) of the Resource Management Act – represent the 'higher end' of this spectrum, other landscapes may also reveal features, elements and patterns that are significant at the local level and that make them sensitive to change.

Step 2 - Legibility / Prominence: addresses the relative visibility and visual prominence of the application site is assessed, taking into account a range of factors, that typically include:

- Viewing distance;
- Angle of view to the subject site relative to the natural orientation of the viewpoint, eg. in line with, or tangential to the view from a road corridor or other viewpoint;
- Whether the subject site is on / near the skyline or other key 'edges' and landscape features that naturally draw attention?
- The way in which the view to the application site is affected – positively or negatively – by vegetation, local landforms, buildings and other elements within or around it;
- The relative simplicity or complexity of the landscape around the subject site.

Together these factors indicate the degree of visual presence that the subject site has, and that the proposed development within its also likely to have.

Step 3 - Landscape Effects: involves assessment of the degree and nature of qualitative change that would arise in relation to a development proposal taking into the Legibility / Prominence already identified, together with any changes to key qualities found in the landscape encompassing and surrounding the subject site. These range from changes to its landforms, vegetation cover and other physical attributes, to modification of the landscape's perceived coherence and unity, and – as a whole – its identity and sense of place. This assessment is the last 'step' in the chain of evaluation undertaken for each viewpoint, taking into account site visits, photos and photo simulations (where applicable) – effectively combining the information gathered at Stages 1 and 2 with a stronger focus on the qualitative landscape changes that would accompany the proposed development. Together, these give rise to an evaluation of the adverse effects (if any) that would be generated by it.

More specifically, each step employs the following 'guidelines' / criteria / factors:

1. Existing Values & Sensitivities:

Reflecting the relative extent to which a landscape / environment is valued in terms of:

- Biophysical Components: including landforms, vegetation cover, freshwater bodies, and key cultural elements / features: buildings, other structures and activities
- Perceptual Components: aesthetic value, expressiveness, legibility (focusing on the degree to which landscape elements combine to create an attractive composition, 2D patterns, 3D sense of structure) and ephemeral / transient values

2. Legibility / Prominence:

- Visibility / Legibility of The Proposed Development / Activities: indicating the extent to which the proposed quarry would be legible and visually prominent from the vicinity of each viewpoint

3. Landscape Effects:

- Impacts on Landscape Elements & Patterns: the extent to which the proposal would adversely affect the structure of Oparure's rural landscape: its layering of elements & the interplay between different types of land use / structures

- **Impacts on Visual Coherence / Unity:** the extent to which the proposal would adversely affect the perceived integrity of the Oparure landscape by altering the balance between natural and man-made elements found within that landscape and/or disrupt its visual cohesion
- **Impacts on Character & identity:** the extent to which the activity would adversely affect public perceptions of the Oparure landscape and its related sense of place and identity
- **Impacts on Key Features / Views:** (where applicable) the extent to which the presence of the proposed activity would disrupt or disturb views to, and of, any features evident in current views

Taking all of the above into account, each viewpoint analysis concludes with an overall **Impact Rating** for the individual development component. These ratings employ the following impact scale:

<i>Landscape Effects:</i>		<i>Effect Rating:</i>	<i>RMA Rating:</i>
1	<i>No change or barely legible change to some landscape elements & character; no change to values</i>	<i>Very Low</i>	<i>Less Than Minor Effect</i>
2	<i>Limited change to some landscape elements & character; no change to values</i>	<i>Low</i>	<i>Minor Effect</i>
3	<i>Increasingly evident change to some landscape elements & character; limited change to values (naturalness, expressiveness, aesthetic value, etc)</i>	<i>Low / Moderate</i>	<i>More Than Minor Effect</i>
4	<i>Appreciable change to some landscape elements & character; more obvious impact on some values</i>	<i>Moderate</i>	
5	<i>Marked change to some landscape elements, character and values</i>	<i>Moderate / High</i>	<i>Significant Effect (or greater)</i>
6	<i>Obvious degradation of landscape elements, character and values</i>	<i>High</i>	
7	<i>Very serious and obvious degradation of elements, character & values</i>	<i>Very High</i>	

This scale is aligned with the 7-point scale of ratings recommended by the NZ Institute of Landscape Architects (*Te Tangi a te Manu*, 2022, paragraph 6.21).



Existing Values & Sensitivities: Views from near 531 Boddies Road reveal a rolling sequence of ridges and valleys / gullies that are uniformly covered in a virtually unbroken layer of pasture. The only exceptions to this are the scattering of willows and other vegetation in the foreground to middle distance, and a large stand of pines north of the existing Oparure Quarry – that is entirely hidden from view. Below that stand of pines, the grey ‘upstands’ of limestone scarps and ‘tors’ near the valley entrance to the Mangawhitikau System are also visible, as is a more distant ‘dotting’ of quite isolated bush remnants across the South-Western Pit site.

Overall, however, this is clearly a productive, rural landscape that is almost entirely dominated by a rolling ‘sea’ of pasture. No features or patterns of note are evident (other than the overwhelming dominance of open pasture), with even the karst elements near the Mangawhitikau entrance effectively subordinated by the working character of the landscape that unfolds in front of this viewpoint. Even distant views across the Mangapu River valley to the rising terrain that encloses both Mangatea Road and Te Kuiti remain largely characterised by open farmland, with little more than a scattering of remnant bush, woodlots and shelterbelts interrupting the broad sweep of pasture across its ridges and main slopes.

While, therefore, the swathe of grassland exposed to Viewpoint 1 provides a certain unity and cohesion of appearance, it also robs the local environment of any real feeling of spatial (3D) structure. In a related vein, the openness and simplicity of the landscape, together with its lack of obvious features or focal-points, render it potentially sensitive to even quite fine-grained modification, but also makes it appear bland and austere, even bleak. Accordingly, it is rated as having a Low level of value and sensitivity overall.

Legibility / Prominence: The proposed pit would be almost entirely screened by a sequence of ridges and knolls that traverse the terrain immediately north of the South-Western Pit site. At most, some of the pit’s initial ground disturbance and overburden might emerge amid the layering of ridges near the far (southern) horizon – roughly parallel with the paddock of close-cropped pasture and hay bales faintly visible to the right of the viewpoint photo. With a viewing distance to the near edge of the quarry over some 1.9-2.0km and most of the quarry sitting below the level of the ridge at the northern edge of the South-Western Pit site, little, if anything, of the actual pit would be visible until extraction starts to eat into land near the distant 180mm contour line – at the far edge of the pit near

Year 53. At most, this would be barely visible without the proposed screen planting north of the pit, and impossible to see with it. This screening would become effective from approximately Year 8 onwards, so that the pit and its margins would be entirely screened from view by the time it moves southwards towards the more elevated contours just described.

As a result, it is considered that the proposed quarry would have a Very Low degree of visual 'presence' initially, and this would further 'tail off' as the proposed screening becomes apparent.

Landscape Effects: Although the quarry and related extraction operations would theoretically be visible for a period of time stretching out to around 8 years, albeit to a very limited degree, it would sit within a landscape that is already dominated by rural production; one that reveals relatively few natural remnants or qualities, apart from the karst outcrops near the Mangawhitikau Cave entrance. Within this working landscape, the proposed quarry would remain relatively remote and would not appreciably alter the prevailing array of pasture traversing successive ridges and valleys.

As the shelterbelt planting on the near side of the quarry matures, any signs of extraction and overburden deposition would be dissipated, then lost. Increasingly, the quarry and its margins would be screened by the proposed alders and totaras, and these, in turn, would be consistent with the patterning of open paddocks and shelterbelts already evident within the wider Oparure landscape.

Any related landscape effects would therefore be of a Very Low order initially and would remain so beyond that time.

EXISTING VALUES & SENSITIVITIES:							
RATINGS:	VERY LOW	LOW	LOW - MODERATE	MODERATE	MODERATE - HIGH	HIGH	VERY HIGH
Biophysical:							
Perceptual:							

LEGIBILITY / PROMINENCE:							
RATINGS:	VERY LOW	LOW	LOW - MODERATE	MODERATE	MODERATE - HIGH	HIGH	VERY HIGH
Visibility:							

LANDSCAPE EFFECTS:							
RATINGS:	VERY LOW	LOW	LOW - MODERATE	MODERATE	MODERATE - HIGH	HIGH	SEVERE
Elements & Patterns:							
Coherence/ Unity:							
Character / Identity:							
Key Features / Views:							



Existing Values & Sensitivities: In general, this viewpoint reveals a landscape that is very similar to that exposed to Viewpoint 1. However, there are some subtle differences between views from this quarter and those from 531 Boddies Road. Most notably, the shift in outlook from a southern to more south-western aspect reveals a large stand of production pine forestry south of Waipapa Road, together with more bush remnants generally west of the South-Western Pit site. It also reveals the near edge of the current Oparure Quarry, wedged between a large stand of pines directly north of the pit and the large stand of pines that is interposed between the quarry and much of Oparure Road. The karst outcrops near the Mangawhitikau System also sit more centrally within views from this quarter.

Even so, the rolling layers of pasture described in relation to Viewpoint 1 still dominate views towards and beyond the South-Western Pit site from this vantage point and it retains a distinctly working / productive character overall. The relatively few natural elements and remnants visible continue to take a 'back seat' to 'waves' of pasture that unfold in front of this viewpoint, and its starkly open character limits the landscape's 3-dimensional structure, degree of interest and appeal as a whole. As with Viewpoint 1, it appears rather austere and bleak, with these attributes more than offsetting any visual cohesion and continuity.

Accordingly, the landscape exposed to Viewpoint 2 is, like that for Viewpoint 1, rated Low in terms of its values and sensitivities.

Legibility / Prominence: See the Viewpoint 1 analysis. Again, the proposed quarry would be located roughly parallel with the area of hay bales, now visible more centrally within the photo taken from this viewpoint. However, with the viewing distance from this vantage point stretching out to very nearly 2.5km, the near edge of the quarry would appear even more remote than in relation to 531 Boddies Road, with the initial deposition of overburden sitting amid the distant patina of ridges and knolls screening the actual pit. However, as for Viewpoint 1, the proposed planting of alders and totaras between this viewpoint and most of the proposed pit would further limit exposure to both the pit and related activities beyond an initial 8 year period.

As a result, it is anticipated that the quarry would have a Very Low level of visibility, both initially and throughout the remainder of the South-Western Pit's life.

Landscape Effects: See Viewpoint 1 analysis. The initial placement of pit overburden might be visible but would not appear so close or obtrusive that it is likely to appear out of place or appreciably different within this working landscape. The highly modified nature of the landscape would be little changed, while the gradual emergence of the alder and totara shelterbelts along the near edge of the South-Western Pit site would progressively screen the greater bulk of the pit as it moves southwards and westwards – into the slightly more elevated terrain around those parts of the subject site.

Consequently, the South-Western Pit's landscape effects would remain of a Very Low order, both initially and through to the cessation of limestone extraction. The following table summarises these findings:

EXISTING VALUES & SENSITIVITIES:							
RATINGS:	VERY LOW	LOW	LOW - MODERATE	MODERATE	MODERATE - HIGH	HIGH	VERY HIGH
Biophysical:							
Perceptual:							

LEGIBILITY / PROMINENCE:							
RATINGS:	VERY LOW	LOW	LOW - MODERATE	MODERATE	MODERATE - HIGH	HIGH	VERY HIGH
Visibility:							

LANDSCAPE EFFECTS:							
RATINGS:	VERY LOW	LOW	LOW - MODERATE	MODERATE	MODERATE - /-HIGH	HIGH	SEVERE
Elements & Patterns:							
Coherence/ Unity:							
Character / Identity:							
Key Features / Views:							



Existing Values & Sensitivities: Currently, two spots on Mangatea Road accommodate quite expansive views out over the upper Mangapu River headwaters catchment, towards Oparure Road and the distant landscape that encompasses the South-Western Pit site. Unlike the views captured from north of the subject site via Viewpoints 1 and 2, those from this elevated part of Mangatea Road – following a narrow ridgeline some 100-120m higher than the nearby river catchment – reveal a much more complex matrix of pasture intermixed with bush and native tree remnants, stands of pines, and shelterbelts. Views are also framed by a large area of bush and exotic trees (including planes in the near foreground) on steep slopes directly below, and abutting Mangatea Road. In the far distance, bush and elevated hill country of the Herangi Range add another dimension to this landscape – albeit far more subtly. Indeed, this landscape is notable for the concentration of many of the key elements that contribute to its significant appeal within the catchment south of Oparure Road, and the South-Western Pit site is located within an area of pasture-dominated ridges and gullies or valleys that provide a backdrop to the more varied Mangapu River basin in the closer middle ground.

Although the existing Oparure Quarry is located centrally within views from this road, it is mostly screened by the intervening stand of pines on the northern side of Oparure Road. In fact, the presence of the quarry is mainly signalled by the lighter colour of the pit's northern quarry wall and pit contrasting with the dark profile of the pines in front of them. However, when viewed over a distance of some 4.5-4.6km they typically remain quite distant and less than intrusive. As a result, it is other aspects of the landscape that tend to prevail in views from both vantage points on Mangatea Road, with a 'patchwork' of natural vegetation, pasture, and pine woodlots on rolling terrain creating a landscape that has considerable complexity. It also has a much stronger sense of three-dimensional layering than is evident in views from Viewpoints 1 and 2. Together with the elevated naturalness of parts of this landscape – both near and distant – these factors contribute to an environment that also has a relatively strong sense of visual cohesion and unity. Notwithstanding the presence of the existing quarry, it also has significant appeal, although still falling well below the thresholds of naturalness and 'outstandingness' typically associated with most ONLs.

Overall, therefore, the Mangapu River / Oparure landscape exposed to Viewpoint 3 is rated as having a Moderate to Moderate-High level of value and sensitivity.

Legibility / Prominence: Both views from Mangatea Road towards the South-Western Pit site are fleeting and well offset to the road's axis. In effect, one has to stop and stand by the roadside to appreciate the outlook and landscape described above fully. Even then, only one or two vantage points next to the ridgeline section of Mangatea Road offer the sort of outlook described above – through and over the mixed native and exotic vegetation abutting the gravel road corridor (see photo overleaf).



Viewpoint 3 on Mangatea Rd

Moreover, as is evident in views towards the existing quarry, the South-Western Pit site tends to comprise part of the backdrop to the more prominent Mangapu River catchment and basin in the more immediate middle distance. Stands of bush and other vegetation, intermixed with pasture across the valley floor, and even the pines between Oparure Road and the existing quarry, have much more visual presence than that part of the Oparure pit currently visible.

The South-Western Pit site would be located on a terrace beyond the existing quarry, both above and to the left of the existing pit. A sequence of rising landforms near the grass runway at the eastern edge of the farm – rising to between 190 and 230m asl – would screen most of the proposed pit, while the slightly lower elevation of Mangatea Road (approximately 180m asl near Viewpoint 3) would further help to screen most of its working area and margins. Consequently, while the pit would cut into landforms along its western boundary as high as 270m (asl) in the longer term, most of its main cut faces and benches would remain well below the 200m (asl) for much of the proposed pit's life. As a result, the greater bulk of the pit would be substantially screened by intervening ridges near the existing Oparure pit. The two parts of the South-Western Pit that would be visible are:

- its northern edge emerging above the existing quarry, both at the pit's inception and in the long term – with pit margins ranging in elevation from 200-270m asl; and
- parts of the pit biting into slopes at the south-western and western margins of the site from approximately Year 23 onwards – visible to the left of the current quarry.

The emerging pit would sit beyond the current quarry, and this, together with the 5.1km viewing distance to the proposed quarry, would push the South-Western Pit into the background of most views from this quarter. Initially, it would tend to 'read' as a strip of lighter coloured land (overburden) stretching across the 'plateau' beyond the existing quarry, then, over time, stretching to the left of the current pit. In the longer term, as the proposed pit face and areas of extraction turn to the west and south, they would descend into a lower lying sequence of valleys and swales closer to Oparure Road, before finally climbing up to around the 270m (asl) level in the later and concluding stages of quarry development.

Overall, it is considered that the quarry would have a Low level of visibility for some 20-30 years, becoming slightly more visible – though still to a relatively Low level – once the pit faces progress into the more elevated landforms that line the western and southern sides of the site.

Landscape Effects: Although visible beyond the existing Oparure Quarry, the proposed pit would remain a quite distant component of the local landscape. It would not appreciably affect those elements and patterns that already contribute more meaningfully to its character and appeal, most noticeably the interplay of pasture with vegetation and the basin landform of the river valley in the foreground to middle distance and the layers of rolling farmland beyond. Nor would it noticeably alter, or affect, the 3-dimensional spatial structure, diversity of elements and rural qualities of the landscape spread out below Mangatea Road.

Instead, the proposed pit would initially 'read' as a sliver of disturbed land above and beyond the currently operational Oparure Pit, and even in the longer term – beyond 20-30 years – it would remain relatively remote and recessive as part of an area that is very much secondary to the key landscape catchment and elements on the near side of Oparure Road. The 'disturbance' generated by the proposed pit would be framed by farmland and related development, which stretches across the Mangapu River's catch basin before dominating the slopes around Oparure and Troopers Roads, and the more distant hill country on the margins of the Herangi Range. It would also be contextualised by the current quarry and the large stand of pines that encloses it.

Consequently, even though the margins of the pit and associated activity would inevitably reduce some of the visible landscape's sense of coherence and continuity, as well as its intrinsic naturalness, in the longer term, they would not appear inconsistent with a landscape that is already notable for the existing Oparure Pit and the working rural landscape found around the South-Western Pit site. The new pit would exacerbate the effects of the Oparure Quarry, but not in an intrusive or particularly obvious fashion. Moreover, the narrow viewshaft captured by Viewpoint 3 remains oblique to the Mangatea Road axis and views from it towards the subject are fleeting.

On balance, therefore, it is considered that the effects of the South-Western Pit quarry proposal would be of a Low order throughout the period of the pit's expansion and eventual rehabilitation. The following table summarises these findings:

EXISTING VALUES & SENSITIVITIES:							
RATINGS:	VERY LOW	LOW	LOW - MODERATE	MODERATE	MODERATE - HIGH	HIGH	VERY HIGH
Biophysical:							
Perceptual:							

LEGIBILITY / PROMINENCE:							
RATINGS:	VERY LOW	LOW	LOW - MODERATE	MODERATE	MODERATE - HIGH	HIGH	VERY HIGH
Visibility:							

LANDSCAPE EFFECTS:							
RATINGS:	VERY LOW	LOW	LOW - MODERATE	MODERATE	MODERATE - HIGH	HIGH	SEVERE
Elements & Patterns:							
Coherence/ Unity:							
Character / Identity:							
Key Features / Views:							

VIEWPOINT 4. Oparure Road – next to main Farm entrance

(Attachments 34 & 35)

Existing Values & Sensitivities: As Oparure Road twists and turns its way west of the Oparure Quarry, it offers vehicular access to the farm at two locations, firstly to the main body of the farm past an existing shearing shed and the ridgeline that separates it from the Oparure pit, then to the farmhouse. Three ‘openings’ emerge through the screen of landforms and vegetation next to Oparure Road, offering fleeting views to the farm and South-Western Pit site – either side of, and between, these farm accessways. In each case, a brief view opens up across the southern edge of the farm, looking towards both the sequence of ridges at the centre of the South-Western Pit site and the ridge at the south-eastern edge of the property that is to remain – separating it from the current quarry.

Also revealing a number of sheds around the farm entrance and a central farm track that wends its way through the property, the landscape revealed at this juncture comprises multiple knolls that are part of the ridge systems just described, together with a small ridge or knoll on which the farmhouse is located. Looking from each of the vantage points just described, the more central knolls are part of the landform system, pivoting around the ‘water tank knoll’ that would be the main focus for limestone extraction over the next 83 years. These, together with the more peripheral ridges around the South-Western Pit site, are covered in little more than pasture, conveying the feeling of a landscape very similar to that described in relation to Viewpoints 1 and 2, but with its rolling profile more pronounced and ‘close up’. On the other hand, its karst features remain (as for the other viewpoints assessed) quite recessive and largely obscured from public viewing.

As a result, many of the qualities attributed to the local landscape when viewed from Viewpoint 1 are also relevant to this vantage point: it remains austere to the point of being almost barren, largely devoid of natural elements, and while clearly structured, both physically and visually, by the ups and downs of its limestone / sedimentary geology, it is otherwise generally lacking in points of interest or focus. Together with the presence of sheds, tracks and fencing, this lends views from Oparure Road across the subject property the sort of productive, working character described in relation to both Viewpoints 1 and 2. They do not display any real distinction or obvious aesthetic appeal.

In addition, the varied terrain evident from this quarter limits views into the subject site, limiting them largely to the area in close proximity to Oparure Road. As a result, the combined values and sensitivities associated with the site are considered to be of Low order.

Legibility / Prominence: This, together with the quarry’s largely north-to-south development, also has a bearing on the future visibility and relative prominence of the proposed quarry. Both its working faces and the expanding quarry floor behind that area of cut would be effectively isolated from motorists using Oparure Road. The residual ridge landforms ‘in front of’ the quarry would create a screen and buffer between the pit and the nearby road (Attachments 3B and 3C).

At the same time, views from Oparure Road to the subject site occur within a winding part of the roadway, immediately after and before sharp bends either side of Viewpoint 4. The view over the woolshed is largely at right angles to the road, and it is not an outlook that immediately commands attention. Rather, it emerges as part of a sequence of moderately interesting views that unfold in the

course of driving down Oparure Road beyond (west of) the existing quarry. Even though the quarry would, around Years 43-53, come close to Oparure Road, it is anticipated that the quarry would remain substantially screened from the public domain, apart from possibly some activities around its margins in the later stages of the quarry's development.

Accordingly, it is considered that the South-Western Pit would either have no appreciable exposure to Viewpoint 4, and a Very Limited degree of exposure for at least 30 years. After that, the degree of exposure would depend on how much of the ridge behind the barn and left of the main farm track remains intact while quarrying is undertaken behind it. As indicated in Section 2.1 (Mitigation), it is recommended that this ridge be retained until both extraction and rehabilitation at the southern end of the pit is completed. At the same time, it is proposed that a stand of totaras be established either side of the current farm track to reinforce such screening (**Attachment 3A**). This would ensure that there is little exposure to Oparure Road and Viewpoint 4 for the lifetime of the proposed pit.

Landscape Effects: The knolls at the centre of views from Oparure Road would be progressively removed as the quarry expands southwards. However, it and other ridges behind it, would be quarried and removed from 'behind' (as indicated above), with nearly all quarrying activity concealed by the remaining landforms closer to the road corridor, including the ridge referred to above, which is shown in the centre of **Attachment 34**. This screening would be supported by retention of the ridges both right and left of the farm track, and the maturation of the massed stand of totaras between, and partly in front of, them – as depicted in **Attachment 3A**. These measures would also help to screen both the existing and proposed quarries from that part of Oparure Road near the entrance to the residence shown in **Attachment 35**.

Consequently, few road users would fully appreciate the significance of the change that has occurred within the bounds of the quarry site. The landscape facing Oparure Road would still appear to be part of the farm, while its current array of sheds, pasture and domestic development would still dominate the near margins of the road corridor. Accordingly, the essential character and values of the landscape exposed to passing motorists would be little changed. Also taking into account the fleeting nature of views from Oparure Road and the highly modified, 'working' nature of the landscape exposed to the road corridor, it is considered that the proposed pit's effects on Viewpoint 4 would be of a Very Low order.

EXISTING VALUES & SENSITIVITIES:							
RATINGS:	VERY LOW	LOW	LOW - MODERATE	MODERATE	MODERATE - HIGH	HIGH	VERY HIGH
Biophysical:							
Perceptual:							

LEGIBILITY / PROMINENCE:							
RATINGS:	VERY LOW	LOW	LOW - MODERATE	MODERATE	MODERATE - HIGH	HIGH	VERY HIGH
Visibility:							

LANDSCAPE EFFECTS:							
RATINGS:	VERY LOW	LOW	LOW - MODERATE	MODERATE	MODERATE - HIGH	HIGH	SEVERE
Elements & Patterns:							
Coherence/ Unity:							
Character / Identity:							
Key Features / Views:							

5.3 Landscape Effects Summary

The following table summarises the effects ratings for all four viewpoints:

Viewpoint:	Existing Values & Sensitivities:	Legibility / Prominence:	Landscape Effects Rating:
Viewpoint 1. 531 Boddies Road	Low	Very Low	Very Low
Viewpoint 2. Boddies Road – West of Spellbound Glowworm & Cave Tours	Low	Very Low	Very Low
Viewpoint 3. Mangatea Road	Moderate High	Low	Low
Viewpoint 4. Oparure Road	Low to Very Low	Very Low	Very Low

These ratings are heavily influenced by the following factors:

1. The relatively isolated location of the South-Western Pit site, especially so in relation to dwellings (farm houses in particular) and public roads. This is clearly reflected in the limited number of viewpoints employed in this assessment.
2. The viewing distance from most public vantage points – on Boddies and Mangatea Road, especially – to the subject site: ranging from 2.0km at 531 Boddies Road (**Viewpoint 1**) to 5.1km on Mangatea Road (**Viewpoint 3**).
3. The way in which the site sits within, rather than on top of, the rolling terrain at Oparure, with successive ‘waves’ of ridges and valleys enclosing the site. This would help to ‘bed’ the quarry into its surrounds, screen its cut faces (overburden in particular) and create a very sizeable buffer area around its operational area.
4. The proposed direction of quarry development – from north to south – which is especially important in relation to views from Oparure Road (**Viewpoint 4**), the closest point of theoretical public contact with the quarry during its 80 year lifespan.
5. The likely effectiveness of the proposed mitigation planting in relation to Boddies Road and Oparure Road (**Attachment 3A**), which would help to limit the proposed pit’s impact on Boddies Road and Oparure Road, in particular.
6. The fleeting nature of views towards the quarry from Mangatea Road and the way in which the pit site is offset, almost at right angles, to the road corridor.

Although **Viewpoint 2** does not specifically address effects on the Spellbound Glowworm and Cave Tours operations, it does give a good indication of the proposed quarry’s impact on part of the public road network in close proximity to that company’s accessway to the Mangawhitikau Cave System. In saying this, it is noted that the operation’s offices and parking area would be entirely screened from the quarry site by a small intervening ridge-cum-knoll, while the accessway passes behind established macrocarpas, pines and other shelterbelt planting before descending into a valley well below the level of Boddies Road. This, together with the accessway’s natural orientation towards the valley entrance

to the cave system, would significantly limit exposure to the northern margins of the proposed pit, while the mitigation planting proposed would progressively close off views from this quarter.

To the south, **Viewpoint 4** – addressing the main entrance to the farm on Oparure Road (**Attachment 34**) and the driveway entrance (**Attachment 35**) – captures much more close-up views of the subject site; indeed, the only ones from its immediate vicinity. However, the proposed direction of quarry operations and sequence of ridges near this road (**Attachment 3C**) would screen virtually all of the pit from these vantage points, while the undulating, rising, terrain between Oparure Road and Troopers Road would serve to curtail most views of the proposed quarry operations from further afield to the south. Again, this screening would be reinforced, over time, by the proposed totara planting near the main track through the farm.

Looking to other sectors around the South-Western Pit site, the proposed quarry would remain screened to the west by rising terrain that culminates in a series of ridges close to 300m high near Waipapa Road. Although it is possible that some of the rural land further north to northwest of the South-western Pit site would afford partial views of the initial overburden removal and evolving pit at the northern end of the pit site, they are from land that is almost exclusively employed as pasture. As a result, it is doubtful that the South-Western Pit would have a meaningful impact on this highly modified, rural-production landscape, while its paddocks and open space would, in turn, serve to buffer the proposed pit from local farmhouses much closer to Waipapa Road.

To the north and north-east, the Boddies Road ridgeline would curtail views of the proposed pit from further afield, including from the direction of the small settlement of Oparure. This screening is already amplified by the large stand of pines next to the existing quarry, which additionally helps to buffer both pit sites from ‘lower’ Oparure Road – east of the village – and the Mangapu River headwaters catchment. This extends to the area around Motiti Marae, with **Viewpoint 3** capturing one of very few public views to the proposed quarry site from an elevated part of Mangatea Road. Few, if any, residential properties in this area would be affected by the proposal, although it might be distantly visible from some farmland.

Despite its physical extent, the proposed quarry would therefore be largely isolated from most vantage points and areas of elevated sensitivity in its general vicinity – both in relation to the public domain and private properties. Unsurprisingly, those most affected by the proposal would be the [REDACTED] family, who have given their approval for the proposed pit. The effects in relation to all other locations exposed to the South-Western Pit site would typically be of a Low to Very Low level. These impact ratings are exceptionally low for a development of the scale proposed.

In relation to the wider array of physical catchments around Oparure – most of which would remain screened from the proposed pit – any effects would be even more limited. As a result, it is considered that the landscape effects of the South-Western Pit, as a whole, would be no more than minor.

6.0 AMENITY EFFECTS

The Resource Management Act describes "Amenity Values" as being:

those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes.

This alone indicates that 'amenity' is more localised and pertains to areas that are known, understood and appreciated by those who live within it or visit them on a reasonably regular basis. Amenity values also relate to such factors as noise, lighting, smells and awareness of activity and movement; in effect, the fuller spectrum of sensory factors that contribute to perception and appreciation of an area's character, pleasantness and aesthetic coherence. This includes appreciation of the mixture of productive and natural elements that contribute to rural character and amenity. Inevitably, this also brings into play perceptions of identity and sense of place that reflect the more particular, even unique, qualities of a locality or environment. Concepts of familiarity, shared ownership (in a figurative sense) and pride of place are also important in this regard.

Taking into account the South-Western Pit site's surrounds and landscape context, this means that three kinds of amenity effect could conceivably arise from the proposed limestone pit:

- Those related to changes to the rural character and 'aesthetic coherence' of that environment – as are largely addressed above in relation to Landscape Effects.
- Those impacting on the amenity of local residents associated with changes to the 'pleasantness' of the local environment. These also include such potential effects as noise, lighting, dust, awareness of vehicle movements and other factors which disturb the aesthetic character and relative peace and quiet of the current environment (to the extent that this relevant).
- Those derived from both the above that affect the local community's perception of the Oparure area: its identity and sense of place.

6.1 Rural Character

The key effects that the proposal would generate in relation to its rural landscape setting are described in relation to **Viewpoints 1-4** and surrounding areas in Sections 5.2 and 5.3 above. That analysis concludes that changes to the character and values of the Oparure landscape – together with surrounding areas – would be modest and typically of a Low to Very Low order. Focusing more specifically on the issue of rural character in isolation, the following are some of the key 'threats' that development can pose for the rural domain in my experience:

***The Inappropriate Location
of Development:***

Development increasingly ends up located on prominent ridgelines, hill-tops and across landscapes that are otherwise dominated by rural uses. In addition, it may start to appear sporadic and ad-hoc, without any clear

relationship to other areas of countryside living or urban development. In some instances, the effects of such development on sensitive landforms – especially ridges and headlands – are accentuated by roads and lots carving through bush / forest and related earthworks.

Excessive Development

Intensity:

As development intensities increase, buildings and residential structures become much more physically and visually dominant. The visual ‘separateness’ and discreteness of individual dwellings, as well as of the residential activity that accompanies them, is gradually dissipated so that the buildings, driveways fencing and domestic activities within any one property increasingly overlap with those on adjoining properties. This is often exacerbated by the way in which such development becomes increasingly clustered and aligned near road corridors, exacerbating the perception of a modified rural environment even where sizeable areas of rural open space remain behind this road-side ‘edge’.

Erosion of Open Space:

The erosion and loss of pastoral character, horticulture use, or other productive activities marked by a reduction of the separation distances between dwellings and rural buildings generally. The concentration of new development near road margins (especially) often accentuates this. It also contributes to both the interruption of ‘long views’ and the diminution of public perceptions of rural open space. The related emergence of shelterbelts, hedges and other planting – to define boundaries and create a sense of privacy and separation – can exacerbate this subdivision and fragmentation of the rural domain.

Diminution of the Landscape’s

Patterning & Structure:

As landscapes become more occupied by development they also become increasingly fragmented and visually subsumed by development. This reduces the significance of the landscape’s natural cues – its threads of bush and stream courses, its open ridges and headlands, the sense of interaction with rivers, lakes and the sea, its expansive open spatial qualities, and the awareness of natural features within the landscape (which often contribute to a locality’s identity).

Diminution of Coherence:

The combination of increased development intensity and the loss of open space disrupts the patterns and natural sequences found within rural / natural landscapes, including the appreciation of vegetative networks and links, the continuity and form of ridges or headlands and hilltops, and the overall sense of separation of ‘country’ from ‘town’.

Diminution of Natural

Features & Values:

As development becomes more dominant or prevalent the landscape can soon become increasingly, even overwhelmingly, dominated by a mixture of dwellings, ancillary structures and driveways / accessways, and related activities – all which compete, visually, with the remnant natural elements and patterns of the rural landscape.

Assessed against these 'issues', the South-Western Pit proposal would have the following effects:

The Inappropriate Location

of Development:

Waitomo's rural landscape contains multiple quarries and the Proposed District Plan acknowledges the presence of limestone quarries, in particular, within its rural domain. The Oparure Quarry adjoins the South-Western Pit site, and the combination of both quarries would tend to register as an expansion of existing operations, rather than a new and separate development. The effects of the new quarry would therefore be incremental and consistent with those already generated by the existing quarry. The South-Western Pit site is not considered to be inappropriate.

Excessive Development

Intensity:

The proposed quarry would be an extensive, rather than intensive, development. It would not give rise to buildings or other structures within the Oparure landscape that create a sense of incursion because of their proliferation and close co-location. Rather, the South-Western Pit quarry would utilise the infrastructure already found within the current Oparure Quarry for the stockpiling, grading, crushing, drying and transportation of limestone offsite, and this interconnection of the existing and proposed pits would minimise any awareness of 'excessive development intensity' from the surrounding road network and other public vantage points.

Erosion of Open Space:

The new quarry would not alter the open space values of its surroundings. Most of the proposed pit would sit below the level of surrounding ridges and knolls or behind them (as described in relation to **Viewpoints 3 and 4** more specifically), so that it would have little or no effect on the open space qualities of the Oparure landscape in its own right. Although the proposed shelterbelts down the northern side of the South-Western Pit site would disrupt some of the flow of open space across the pasture dominated landscape west of the existing pit, shelterbelts are also an established feature of rural landscape generally (more noticeably, around the upper Mangapu River locally) while stands of pines are already well established southeast and north of the current Oparure Quarry. If anything, the proposed shelterbelts might add some 3-dimensional definition and containment to a landscape that is otherwise almost unremittingly open – particularly once both shelterbelts start to mature. This would be a positive outcome, rather than an adverse effect.

Diminution of the Landscape's

Patterning & Structure:

The existing landscape on and around the subject site is not notable for any patterning or structure beyond that associated with the 'waves' of pasture-covered, ridges and valleys-gullies described in

Section 3.2 of this report, together with the evaluation of *Existing Values and Sensitivities* for **Viewpoints 1-4**. Stands of natural vegetation are few and far between across the South-Western Pit site, there are no obvious stream corridors – apart from some ephemeral courses – and the landscape as a whole appears quite austere. As described above, it is very much a working landscape. The proposed quarry would not alter this situation, while the new shelterbelts could add some structure, definition and containment to a landscape that largely lacks these qualities at present.

Diminution of Coherence: The current landscape on and around the pit site is mainly ‘coherent’ in the sense that it is totally dominated by open pasture. Indeed, this is an overwhelming characteristic that also contributes to the austere, working, landscape qualities described above, together with its quite limited aesthetic appeal overall. The proposed quarry would disrupt the ‘sea’ of grass that surrounds it in views from locations at, and around, Viewpoints 1-4, but as is indicated in Sections 5.2 and 5.3, such factors as viewing distance, the flat angle of viewing from Boddies Road, the physical containment of the quarry by other landforms, and the proposed direction of quarry operations would all limit this disruption to the point where such effects would be of a Low to Very Low order – further assisted by mitigation planting in the medium to long term.

**Diminution of Natural
Features & Values:**

The only natural features found on the subject site currently are the karst features described in Sections 3.1-3.3 of this report. For the most part, these are not visible from off-site, while those few remnants that are visible from Oparure Road – near the farm entrance and woolshed – would be retained during and after the proposed quarrying operations. The removal of those karst elements within the pit site would not, therefore, affect public appreciation of the residual natural components found on site.

Overall, the South-Western Pit would have a very limited impact on the rural character of its landscape setting, both with reference to the key matters described above and overall. It would not appreciably affect public perception of Oparure’s aesthetic coherence and pleasantness – to the extent that these qualities are presently manifest within its landscape.

6.2 Residential Amenity

Very few residential dwellings are exposed to the South-Western Pit site; the most critical of those being that at 531 Boddies Road. Boddies Road and Mangatea Road offer distant views to the subject site – potentially affecting other local landowners’ perception of their local environment, but not the amenity of their actual properties – while Oparure Road would be screened from the proposed pit and most operations associated with it.

The effects in relation to 531 Boddies Road would be as described in Section 5.2 for **Viewpoint 1**. Such effects – influenced by viewing distance, intervening landforms and the nature of the current outlook towards the quarry site – would be limited. They would become even more so as shelterbelt planting near the South-Western Pit site’s northern boundary matures. Furthermore, it is not anticipated that the proposed quarry would generate any significant ‘nuisance effects’ in relation to this or other local farm properties, such as those associated with lighting, noise and awareness of machinery operating nearby. As described above, the interconnection of both the existing and proposed pits would lead to effective internalisation of such effects and their continued concentration within the bounds of the existing Oparure Quarry.

Overall, it is therefore considered that any effects in relation to the ‘pleasantness’ experienced by the occupants of 531 Boddies Road would be of a Low order and the proposed quarry’s effects on the residential amenity of the wider area around the subject site would be minimal.

6.3 Identity

Locals are already very aware of the current quarry, together with the productive, highly modified, nature of the surrounding rural landscape. These qualities are, in effects, endorsed by the local community, which mainly comprises farmers, farm workers, and their families. This situation also creates a certain preconditioning to both the proposed pit and other productive activities within and around Oparure.

The quarry proposal would still, inevitably, exacerbate the focus on extractive uses within the local environment to some extent. Yet, given the limited degree of public exposure to the new pit and the incremental nature of its effects, this is most unlikely to result in an appreciable change to locals’ appreciation of their local environment. It would remain part of a much wider environment that is fundamentally rural, with a working character. The limited nature of public exposure to the site’s karst features and the relative absence of other natural features would reinforce such perceptions.

As a result, the South-Western Pit would either have no appreciable impact on the local area’s identity or sense of place or a very limited effect in this regard.

6.4 Summary of Amenity Effects

Overall, it is therefore considered that the South-Western Pit proposal would have a Low to, more typically, Very Low level of effect in relation to rural character, residential amenity and the local area’s identity. Returning to Section 7(c) of the RMA it would have much the same, limited, degree of effect on Oparure’s aesthetic coherence, pleasantness and cultural attributes.

Again, given that most of the rural area surrounding the South-Western Pit site would be completely screened from the pit and related operations, it is considered that the amenity effects of the new pit would be no more than minor overall.

7.0 STATUTORY ASSESSMENT

As indicated above, the pit site is located within Waitomo District's Rural Production Zone. Even so, the provisions pertaining to ONFs, the Karst Overlay and Landscapes of High Amenity Value set out in Section 4.1, together with the Identified Values of Section 3.3, provide the clearest indication of the matters that need to be addressed in relation to Graymont's proposal. The following comments respond to those key statutory matters:

The avoidance of adverse effects on ONFs and the avoidance or minimising of effects on Karst Overlay cave systems:

The proposed quarry would not directly affect the Mangawhitikau and Managapu ONFs. It would, however, affect the Digne-Camelot system and, of more relevance to this assessment, would impact many of the smaller scale karst elements and features that are found within the KO05 Karst Overlay and across the farm. Yet, within the ambit of this report, such effects would be limited to the scattered array of limestone outcrops, dolines, sinkholes and 'tors' within the bounds of the South-Western Pit site. The proposal would not affect the sort of features addressed in Section 3.3 of this report (including, for example, the limestone cliffs, pavement and pedestals found within the Awakino Gorge, closer to Kawhia, and the Otorohanga and Waikato Districts). Nor would it affect the exposed regolith and 'standing' outcrops of limestone within the Mangawhitikau Gorge that lie north of the subject site.

For the most part, it would instead impact a loose skein of surficial limestone remnants that are of lesser value than the features described above, including those identified in Schedule 8 and the NZ Geopreservation Inventory. It is also important to note that the various karst elements and features scattered across the South-Western Pit site are contained, both physically and visually, within the farm property at 806 and 966 Oparure Road; they are barely visible from neighbouring farms and are effectively screened from all public vantage points.

Ensuring earthworks integrate with the existing landform to preserve the values and character of ONF cave systems:

The proposed pit would be physically isolated from the ONFs north and south of it, and would integrate with the complex matrix of old alluvial terraces, ridges, gullies and other landforms found at Oparure. It would not be sufficiently visible that it would disturb the area's existing sequence and patterning of landforms.

Ensuring the location and appearance of buildings, structures and infrastructure avoids adverse effects on ONF cave systems:

The proposed buildings, structures and infrastructure accompanying the proposed pit development would remain largely concentrated within the existing Oparure Pit, so that the additional effects generated by the South-Western Pit development and expansion would be largely avoided.

Ensuring that adverse effects on the qualities and values of high amenity landscapes are minimised:

The proposed pit and related activities, structures and infrastructure accompanying the proposed pit development would have a very limited impact on the amenity values of the wider Oparure landscape. Its effects would be largely internalised within the site and its more immediate surroundings, so that any 'nuisance effects' would be minimal and any effects in relation to the character and identity of the area around the quarry would be of a low order – as identified in relation to Viewpoints 1-4. This would be reinforced by the strategic location of screen and mitigation planting around the margins of the South-Western Pit site.

Overall, it is considered that the South-Western Pit proposal is consistent with the ONF Karst Overlay and Landscape of High Amenity Value provisions found in the PDP. It would also be consistent with the Waikato RPS policies addressing rural amenity (those addressing ONLs are not relevant to this assessment).

Turning to the *Maniapoto Environmental Management Plan* and the *Vision and Strategy For The Waikato River*, it is acknowledged that the proposed pit would exacerbate the environmental degradation – mainly related to karst landforms and features – already generated by the Oparure Quarry within the Te Kuiti headwaters catchment. It would also compound, to a limited degree, the loss of native vegetation across the new pit site, although decades of grazing and browsing by livestock and sheep across the farm has already taken a significant toll of both native fauna and ecological links across it.

Indeed, partly as a result of these actions, both the landscape and amenity values associated with the site are modest at best. As such, it is not the sort of 'significant landscape' that much of the MEMP's Part 18 appears to focus on.

Given this situation, it is considered that both the site and its surrounds would benefit from a landscape response that focuses on reintroducing native plant species to the combined South-Western Pit / Oparure sites via the mitigation and screening of quarry operations and – in the longer term – progressive rehabilitation of both quarry pits. **Attachment 3A** reflects this by relying on a 'backbone' of native planting, in conjunction with existing landforms, to screen the future pit and operations around it. Initially, exotic planting would supplement some of that native planting (helping it to get established) before being removed over time when the native species have started to mature. These stands of native trees would help to link up patches of native vegetation both east and west of the proposed pit site. In the longer term, rehabilitation of the South-Western Pit site would introduce more native shrubland and canopy species to the farm and the Oparure landscape. Adopting this approach, it is considered that the proposal would meet the objectives and policies of both the MEMP and VSWR.

8.0 CONCLUSIONS

On the basis of this assessment, including evaluation of the proposal against relevant statutory provisions, it is considered that the South-Western Pit application is appropriate in terms of its landscape and amenity effects.



Stephen Brown

BTP, DIP LA, Fellow NZILA, Affiliate NZPI

