

PREPARED FOR WAIKAKA GOLD MINES LTD
24 JUNE 2024
J2283

LANDSCAPE AND VISUAL EFFECTS ASSESSMENT

PROPOSAL TO ESTABLISH AND
OPERATE A GOLD MINE AT CHATTON
NORTH, GORE DISTRICT.

INTRODUCTION & METHODOLOGY

- 1 Waikaka Gold Mines Limited seeks resource consent from the Gore District Council and Environment Southland to undertake an alluvial gold mining operation in Chatton North in the Gore District. This report identifies and quantifies the effects of the proposed operation in relation to landscape character and visual amenity.
- 2 We have reviewed the resource consent application and all associated details including the descriptions of the proposed operation, the mine methodology report and the aquatic ecology report. We have visited the site and the surrounding vicinity and have examined the location of the various elements of the proposed operation and viewed them from relevant surrounding viewpoints.
- 3 The methodology for this assessment of landscape and visual effects has been guided by:
 - The Te Tangi A Te Manu, Aotearoa New Zealand Landscape Assessment Guidelines (TTatM)¹.
 - The landscape-related provisions of the regional and district planning documents.
- 4 When describing effects, we will use the hierarchy of adjectives given in the bottom row of the table below. The top rows show how the adjectives that we use can be related to specific wording within the RMA².

						SIGNIFICANT
LESS THAN MINOR	MINOR		MORE THAN MINOR			
VERY LOW	LOW	LOW-MOD	MODERATE	MOD-HIGH	HIGH	VERY HIGH

¹ Te Tangi A Te Manu, Aotearoa New Zealand Landscape Assessment Guidelines, July 2022, New Zealand Institute of Landscape Architecture

² Ibid.

THE PROPOSAL

- 5 The site of the proposed activities is approximately 95ha in area and sits between Waikaka-Willowbank Road³ to the west, Turnbull Road to the east, Waikaka-Chatton North Road to the north and a large pond (the L&M pond) to the south. The site consists of improved farmland that is cropped and grazed and is particularly used for wintering cattle. The Waikaka Stream runs northwest to southeast through the site and has an associated strip of public land. Shepherd's Creek (with no public strip) runs north to south and joins the Waikaka Stream. The watercourses, particularly Waikaka Stream, accommodate extensive willows in various stages of maturity. An unnamed public road with a gravel formation runs south from Waikaka-Chatton North Road to the northern edge of the site. The site in its context is shown on Appendix 2.
- 6 The proposed activities are described in detail in the resource consent application and associated documents. We will not repeat that information here but give the following brief summary with emphasis on aspects that are relevant to landscape considerations. Appendix 1, is a useful reference, showing schematics indicative yearly progression of the mine.
 - Mining starts at the starter pit and moves sequentially shown on Appendix 1. A total of eight years mining is anticipated, with the void being progressively refilled as the active pit moves along its path. Mining is always at least 30m from the Waikaka-Willowbank Road reserve, the L&M pond, and the Waikaka Stream (except where stream diversions are proposed). The pit will access the gold-bearing wash, which sits variably between 20 and 40m below ground. The pit will be formed as a series of excavated working benches and will have an area of 4 to 5ha at any given time.
 - Material from the Starter Pit is deposited as the Stockpile SP1. Overburden will be removed and either used to form perimeter bunding or be transported to SP1. Grassed bunds will be formed around the infrastructure area and starter pit. As the active pit advances in location through the stages shown on Appendix 1, the void behind the active pit is filled with excavated overburden and worked material. Topsoil will be pre-stripped and

³ With reference to Appendix 2, the road that runs from Willowbank in the south to Waikaka in the north is Waikaka Road. For the sake of clarity, we refer to the part of Waikaka Road to the west of the site as Waikaka-Willowbank Road, and the part of Waikaka Road to the north of the site as Waikaka-Chatton North Road.

handled separately so it can be replaced on top of the backfill. The mined stages will be progressively rehabilitated back into pasture as the active pit advances along its path. The maximum amount of unrehabilitated land disturbed by mining at any one time is expected to be approximately 20 ha.

- The material of Stockpile SP1 will be returned to the pit as backfill as space permits, however, over the 8-year course of mining SP1 will exist as an active stockpile in some form, although most likely decreasing in size as time moves on. Temporary stockpiles will also periodically be required and will be established on the backfill relatively close to the active pit.
- A Plant Area for processing is to be situated in the centre of the site for years 1 to 5 and is then to be relocated to the eastern side of the site for years 5 to 8. This Infrastructure Area comprises the Gold Recovery Plant, the pad area, the tailings bin, settling ponds and sediment treatment, workshop, site office, staff amenities, storage areas, vehicle parking, heavy machinery laydown areas and fuel storage areas. For years 1 to 5, vehicle access is to be from Waikaka-Willowbank Road (using an existing farm vehicle road alignment) and for years 5 to 8, vehicle access is to use the unnamed public road that approaches the site from the north.
- The proposed mine path intersects part of Waikaka Stream and Shepherd's Creek. The proposal involves temporarily diverting each of these watercourses as the mining operation moves along its path. Each diversion will be temporary, lasting approximately one year, and then the streams will be rehabilitated to their existing course. The timing and extent of each diversion is set out in the application information. Riparian enhancement work will be included as part of the stream diversion rehabilitation.
- Following the conclusion of mining after year 8, rehabilitation of the mining area will be completed. All plant and infrastructure will be removed from the site including the existing L&M mining equipment that is present. The site will be returned to its current use as improved pasture. The post-mining ground surface is shown on Appendix 1. The relevant

stretches of Waikaka and Shepherd's Creeks will be rehabilitated as described in the application in order to restore fish and invertebrate habitat.

RELEVANT STATUTORY CONTEXT

7 In relation to landscape issues, statutory guidance can be taken from:

- The Resource Management Act 1991 (**RMA**);
- The Southland Regional Policy Statement (**SRPS**);
- The Operative Gore District Plan (**ODP**);
- The Proposed Gore District Plan (**PDP**).

8 As will be discussed subsequently, the location of the proposed activities is not part of any identified Outstanding Natural Landscape or Feature. Therefore, the most relevant guidance that can be taken from the RMA is that particular regard shall be had in relation to:

- (c) *the maintenance and enhancement of amenity values;*
- (f) *maintenance and enhancement of the quality of the environment:*

9 The SRPS sets out regional level considerations relating to landscape issues. One type of activities that is identified as having the potential to affect landscape values is:

“extractive activities, such as mining for mineral use, and gravel and rock extraction involve temporary or permanent changes to landscapes as material is extracted from the ground or processed. While these activities have always been undertaken in Southland, the scale and intensity of new and proposed extractive industries has increased markedly in recent times. Further, the location of this extraction has led to significant landscape concerns being expressed

and a request for greater consideration of activities which can detrimentally affect landscape values.”⁴

- 10 The SRPS goes on to set out Objectives and Policies that seek to identify and appropriately manage Outstanding Natural Features and landscapes, and also locally distinctive and values features and landscapes.
- 11 The PDP has been through the process of notification, submissions and further submissions. It has not yet been subject to hearings and hence we understand that significant weight cannot be placed on it.
- 12 Pursuant to the ODP, the site is contained within the Rural Zone and not within any Outstanding Natural Landscape or Feature. The most relevant Objectives in relation to landscape matters are:

3.3(1) Maintain and enhance the amenity values of the various localities within the District whilst respecting the different values and characteristics that exist within each area.

3.3(2) Ensure that the effects of land use activities do not adversely affect the quality of the environment and are compatible with the characteristics and amenity values of each locality⁵.

- 13 Pursuant to the PDP, the site is contained within the General Rural Zone and not within any Outstanding Natural Landscape or Feature. We understand that the proposed activity meets the definition of primary production. The most relevant Objectives and Policies in relation to landscape matters are:

GRUZ-O1 Recognise the importance of primary production and rural industry to the social and economic wellbeing of the District.

GRUZ-O2 The character and qualities of the General Rural zone comprise:

⁴ Southland Regional Policy Statement 2017, Chapter 10, page 125.

⁵ Operative Gore District Plan, Chapter 3.

1. *a variety of primary production activities; and*
2. *a very low degree of built form, well setback from other properties and roads; and*
3. *high levels of open space and open pasture or crops; and*
4. *high levels of rural amenity from adjacent sites.*

GRUZ-P1 Enable existing and future primary production.

GRUZ-P5 Recognise the benefits of quarrying and mining activities on the local economy and supporting associated industries through enabling small scale quarries and mines.

GRUZ-P6 Manage the environmental and cultural effects of quarrying and mining and avoid quarrying and mining activities that result in adverse cultural or environmental effects that cannot be avoided, mitigated or offset.

GRUZ-P12 Require activities and development to maintain rural character, rural amenity and the underlying Ngāi Tahu relationships with the natural environment by:

1. *ensuring that buildings and structures are of a scale and height which is compatible with the rural character and amenity of the zone; and*
2. *requiring appropriate setbacks to waterways to maintain and enhance amenity values and natural character⁶.*

EXISTING LANDSCAPE

14 The ODP sets out that:

⁶ Proposed Gore District Plan, General Rural Zone Chapter.

*"The landscape of the District is dominated by pastoral and arable farming. At the same time, there are two natural features, being the Hokonui Hills and the Mataura River, that are outstanding landscape features"*⁷.

- 15 Similarly, the PDP sets out that:

*"The Landscape of the Gore District can largely be characterised as pastoral and arable farmland with two prominent natural landscapes / features - the Hokonui Hills and the Te Au Nui Pihapiha Kanakana Mataura Falls"*⁸.

- 16 The site of the proposed activities sits in the northern part of the Gore District on the plains south of the southern foothills of the Black Umbrella Range. The Waikaka Stream (both east and west branches) drain from the Garvie and Umbrella Mountains in the north to meet the Mataura River to the south. The plains of the Waikaka converge with the Waimea Plains to the north of Gore town. The site is part of the Waikaka Stream plains that extend approximately from Chatton North / Waikaka in the north to Maitland / Willowbank in the south. That landscape can be described as follows.

Physical Attributes⁹

- 17 Waikaka Road follows the river plans on their western side. The river plans consist of alluvial river deposit geomorphology that has been repeatedly worked for mining purposes. With reference to Appendix 2, the plains that follow the west branch of the Waikaka Stream form a flat valley floor between Waikaka Road and the low rounded spur that is followed by Turnbull Road. The stream winds through these plains which are geometrically fenced into paddocks. They are devoid of residential land use but feature some scattered farm buildings and remnant structures and other evidence of past mining operations, most notably, the L&M pond. The paddocks vary seasonally but are generally relatively verdant. Willows follow the watercourse. There is minimal remnant native vegetation although indigenous planting has been done around the L&M pond.

⁷ Operative Gore District Plan, Chapter 2, page 2-1.

⁸ Proposed Gore District Plan, Natural Features and Landscape Chapter, page 1.

⁹ TTatM define physical attributes as "both the natural and human-derived features, and the interaction of natural and human processes over time", at paragraph 4.23.

Associative Attributes¹⁰

- 18 Apart from some general historical knowledge, we have no expertise in how Tangata Whenua perceive this landscape. Some observers will have knowledge of the past mining history of the area, which adds a layer of meaning to the perception of the landscape.
- 19 Apart from the road network, there is minimal public recreational access through the landscape. A marginal strip allows angler's access along the watercourse of the Waikaka Stream.

Perceptual Attributes ¹¹

- 20 In perceptual terms, the landscape of which the site is a part reads as a working rural landscape. The degree of natural character that is evident is relatively low, since long-term modification of the landscape for rural productive purposes is dominant. Mining remnants are part of this but for most observers, the landscape reads as one that has been farmed for many decades, with pasture, fenced paddocks, farm vehicle tracks, farm structures and infrastructure, being prominent elements and patterns.
- 21 Notwithstanding the above, the aesthetics are pleasant and typical of the farmed rural lands of the Gore District. The winding and willow-lined course of the Waikaka Stream imparts a natural pattern and seasonal change.
- 22 The location and spatial extent of the proposed mining operation is described in detail in the resource consent application. The land to be used for the operation forms a part of four separate farming properties. The L&M mining operation worked the area in the recent past and has left evidence in the form of some structures and equipment, the large L&M pond, and the broad hill form to the south of the pond which, although appearing natural, is a large area of deposited worked material.

¹⁰ TTatM define associative attributes at paragraph 4.23 as *"the intangible things that influence how places are perceived – such as history, identity, customs, laws, narratives, creation stories, and activities specifically associated with a landscape"*.

¹¹ TTatM define perceptual attributes at paragraph 24.3 as being *"both sensory experience and interpretation. Sensory appreciation typically occurs simultaneously with interpretation, knowledge, and memory"*.

ASSESSMENT OF LANDSCAPE AND VISUAL EFFECTS

- 23 In light of the above description of the existing landscape and the relevant statutory provisions, the potential issues relate to the rural amenity values created by the open space and agricultural activities, landscape character and the potential degradation of these enabled by the proposed mining activity.

VISUAL CATCHMENT AND VIEWING AUDIENCES

- 24 The changes to the physical attributes that will result from the proposal will be:
- A stockpile of overburden a maximum of 10m high and with a maximum base dimension of 300m x 150m.
 - An open pit that will progressively move around the site and the unrehabilitated land disturbed by mining at any one time is expected to be approximately 20 ha. Additional smaller associated stockpiles.
 - The plant area that comprises an office, workshop and hard stand area, Run of Mine (ROM) pad, Gold Recovery Plant (GRP), thickener and filter press and settling ponds.
 - Evidential reinstatement and rehabilitation
- 25 The Appendix 2 context and viewpoint plan illustrates the location of the proposed mine and identifies viewpoints that correlate with the photographs provided in Appendix 3. The mine area is adjacent to Waikaka Road.
- 26 The proposed mine will be visible from surrounding roads including Waikaka Road, North Chatton Road, Nicholson Road, Turnbull Road and an unformed legal road. Additionally, it will be visible from public areas along the Waikaka Stream and from adjacent private properties.

EFFECTS ON VIEWS AND VISUAL AMENITY

- 27 Visual effects are:

“the consequences of change on landscape values as experienced in views. ... A proposal that is in keeping with the landscape values, for example, may have no adverse visual effects even if the proposal is a notable change to the view. Conversely, a proposal that is completely out of place with landscape values may have adverse effects even if only occupying a portion of the view.

They are a technique to help understand landscape effects. They are a subset of landscape effects¹²”.

- 28 Therefore, when considering visual effects, it is important to bear in mind the existing landscape values and the landscape attributes that lead to these values, as discussed in previous parts of this report.

Waikaka Road

- 29 Waikaka-Willowbank Road travels along the western boundary of the proposed mine site, continuing approximately 650 metres northwest past the site until it reaches a T-intersection. From there, the road turns east on the section we refer to as Waikaka-Chatton North Road and runs adjacent to the northern extent of the mine site, separated by a buffer of over 500 metres of farmland. As illustrated by photographs from viewpoints 9,10,1,12 and 13, infrastructure and earthworks associated with the proposed mine may be visible from both stretches of Waikaka Road, to varying degrees, over the lifespan of the mine.
- 30 Waikaka-Willowbank Road is slightly undulating. As such, the visibility of the proposed mining activity will vary, being most prominent where the road rises. A 30-metre buffer is proposed between the road and the mining activity, with flax and toe toe planted along a realigned drain that will run within the site, adjacent to the road. Flax and toe toe have a rapid growth rate and are expected to reach a height of 2 metres within 5 years. The proposed planting will tie in with roadside vegetation with the surrounding rural landscape and provide considerable screening once established.

- 31 The mine pit itself will be incised in nature, as such the landform will provide screening to activities carried out within the active pit. Earthworks and haul roads associated with the mining activity will be visible to varying degrees throughout the lifespan of the mine. Again, these will be most visible in the early stages of the mining activity becoming less conspicuous as the mine migrates away from Waikaka-Willowbank Road. The pit will be most visible from Waikaka-Willowbank Road during the first year while the paddocks next to the road are mined. After the first year, the pit will move away from the road as mining progresses. Once the initial (year 1) pit is rehabilitated, a 150-metre buffer of farmland will separate the mine from Waikaka Road. As the active pit moves away from the road, the degree of visibility will decrease.
- 32 The proposed SP1 stockpile will be setback approximately 30 metres from road and will be up to 10m high. Views of the stockpile will be available from both sections of Waikaka Road for approximately 2.5km. With reference to photographs 1 and 12, the stockpile will be a relatively conspicuous and clearly manmade element within the pastoral landscape. However, stockpiles are not uncommon in rural area and are often perceived as necessary for primary productive activities, which are supported by the objectives and policies as set out previously. Additionally, mining is a recognised part of the history and character of the area, with legible remnants including a large conveyor and rehabilitated tailings present in the vicinity. Those familiar with the area will perceive the stockpiles as a part of the mining activity and part of the character of the area.
- 33 The plant area will also be visible in from Waikaka Road. There are two proposed plant area locations. In the early stages of the mine the plant area will be located relatively centrally within the site. In the later stages of the mining activity the plant area will be relocated to the southeast at the base of a natural rise in topography. This second location be less visible due to the increased distance from the road, screen planting and the location at the base of a slope which will create a backdrop to the structures. Grassed bunding is proposed around the plant and will screen views towards the processing plants, outdoor storage, parking and office buildings.
- 34 These proposed mine and associated infrastructure elements are not necessarily aligned with the established rural amenity values of much of the site and will somewhat diminish the aesthetic

¹² The NZILA Guidelines, paragraphs 6.7, 6.25 and 6.27.

value associated with the pleasant rural landscape for the duration of mining activity from viewpoints such as 1,12, 13 and to a lesser extent 9 & 10. The degree of adverse effects on views and visual amenity is reduced by the recognised values associated with mining in the area and the transient nature of road users. Additional mitigation measures include constructing grassed bunds around the infrastructure area and planting vegetation alongside Waikaka-Willowbank Road are proposed to provide some screening in views towards the mining activity that will increase over time. These measures will screen views of the low lying and incised elements including the pit and some associated infrastructure. However, the stockpiles and parts of the processing plants will remain visible from several sections of road. These will be viewed as part of the mining operation which is a valued primary production activity in this area but nonetheless amounts to some detracting from the current aesthetic of pastoral paddock. The degree of adverse effects on views and visual effects for the duration of the mining activity will range from low-moderate initially reducing to low as the mine moves away from the road and structural landscaping becomes established. Once the mining activity is complete, the site will be reinstated in farmland, albeit without the mature shelter planting. In the long term the adverse effects on views and visual amenity will be negligible.

North Chatton Road & Nicholson Road

- 35 Chatton North Road and Nicholson Road terminate between 650m and 700m northwest of the proposed stockpile location. Here Chatton Road becomes Waikaka Road and Nicholson Road meets Chatton Road/Waikaka Road at a T intersection. Views towards the proposed stockpile, the active pit and infrastructure associated with the mining activity will be available along a short stretch of both roads as represented by the viewpoint 11 photograph. Views will be from a considerable distance (over 650m). Farmland will form the foreground of views and the established vegetation in the farmland, between the road and the subject site, will soften views towards the proposed mining activity. While the mining activity will be a visible feature in the landscape, it is not necessarily one that is incongruous with the established views, which comprise remnants from previous mining activities including a large conveyor and rehabilitated tailings. Considering the fleeting views, the transient nature of road users, and the distance of the views, the degree of adverse effects is considered to be low during the mining activity. Once

mining is complete and the site is restored to farmland, the adverse effects will reduce to negligible.

Turnbull Road

- 36 Turnbull Road is a gravel road that runs along the elevated hummocky landsform to the east of the subject site. With reference to photographs from viewpoints 7 & 8, the undulating topography is such that the landform considerably screens views towards the subject site. Very fleeting views towards the proposed mining activity are available through breaks in topography and vegetation. The change to views will be very difficult to perceive given the considerable screening, the distance of views and the fleeting nature of views. For the most part, there will be no adverse effect on views and visual amenity from Turnbull Road. However, from the very limited locations where the site is visible from Turnbull Road, there may be a very small adverse effects on views of visual amenity of up to a very low degree at most. In the long term, once the mine has been rehabilitated, there will be no lasting adverse effects on views and visual amenity.

Legal road

- 37 A dead end partially formed legal road extends 915m from Waikaka Road to the marginal strip along the Waikaka Stream. Approximately 600m of road is formed and appears to be utilised to access farmland. The farm track continues on from where the legal road ends. As such, the users of the road are likely limited to the those working on the relevant farmland. Parts of the mining operation will be visible from this short section of legal road to varying degrees throughout the duration of the mining activity. Given the limited viewing audience and their transient nature, the degree of adverse effects is considered to be of a very low degree at most.

Public land

- 38 Public access associated with the Waikaka Stream is available through the site. We understand that the proposal includes mining within these areas and public access will be restricted while mining is operational. The public will have continued access to the Waikaka Stream and associated public land to the north and south of the proposed mine and views towards the mining

operation may be visible from these locations. We note that the stream is incised in nature and generally has vegetated margins providing considerable screening. Essentially, there will be an adverse effect on views and visual amenity from public land. However, due to restricted access, the public will not experience this. There will be a reduction in recreational use of the stream during the mining work and while the proposed diversions are in place. Pursuant to the Aquatic Ecology Report, the reinstatement and rehabilitation of the stream will result in the long-term improvement of the stream as a recreational resource.

Surrounding private land.

39 Eight residential properties are located in the vicinity of the proposed mining activity. We understand that three of these are inhabited by owners of the land which forms part of the proposed mine, and these landowners have access agreements with Waikaka Gold Mines limited. We also understand that all but one of the surrounding landowners (who could not be contacted) have been consulted but none have provided written approval.

40 With reference to Appendix 2, the properties which do not have access agreements and have not provided written approval include:

- 41 Nicolson Road (Owner unknown)
- 971 Waikaka Road (Brownlee)
- 872 Waikaka Road (Drummond)
- 1261 Waikaka Road (Childs)
- 210 Turnbull Road (Davies)

41 We have not viewed the mine site from the relevant properties but have viewed the properties from the site itself and public viewpoints and base our assessment on these views combined with a desktop review.

- 42 Three neighbouring rural properties have dwellings that are significantly set back from the proposed mine such that it is well-screened by intervening topography and vegetation. These properties include the one with the unknown owner, the Childs property, and the Davies property. Of the three, the dwelling on the Childs property is closest to the site at a distance of approximately 620m. The dwellings on the unknown owner (41 Nicholson Road) and Davies properties are located more than 1.0km from the proposed mining activity. The three properties comprise established rural living with established amenity and shelter planting surrounding the dwellings. Intervening vegetation and topography in the land between the relevant neighbouring properties and the site provides additional screening such that views towards the proposed mining activity will be very limited and the degree of adverse effects on views and visual amenity from the inhabited parts of these sites will be of a very low degree at most. In practice, these owners are most likely to experience the proposed activities from the public roads, as has been discussed.
- 43 The Drummond and Brownlee properties are located closer to the proposed mining activity. The most frequent views will be experienced from the dwellings and outdoor living areas on these properties. The Brownlee dwelling is situated on a hillside overlooking the site, approximately 250 meters southwest of the southwestern point of the proposed mine (year 1). The Drummond dwelling is located south of the proposed mine, about 300 meters from the final stages (year 8).
- 44 The Brownlee dwelling is situated on a hillside overlooking the site, providing views of the proposed mining activity from parts of the house and outdoor living areas. Although established amenity and shelter trees around the dwelling will offer some screening, they cannot be relied upon as they are outside the applicant's control.
- 45 During the lifespan of the mine, views from the Brownlee dwelling will change from a panoramic, relatively pastoral landscape, with visible structures associated with historic mining activities and agriculture, to a view that includes stockpiles, a pit or disturbed area of up to 20ha in size, haul roads, and an infrastructure area. The proposed mining activity will introduce new elements into the view, such as vehicle movements, people coming and going, lighting, and processing activities.

- 46 Although not taken from the Brownlee dwelling, the photograph from viewpoint 5, taken from elevated farmland overlooking the site, illustrates the wider views. Given the scale of the views, the proposed mining activity that is present at one time will occupy a relatively small part of the broader pastoral panorama. However, it will create a contrasting, highly modified landscape that may be seen as less visually appealing than the surrounding natural farmland. Views will be most affected in the early years of the activity when the pit and infrastructure area are relatively central. As the pit and infrastructure area move eastward, away from the Brownlee property, and as roadside vegetation grows the modified mining elements will become less visually evident.
- 47 While the current view from the Brownlee property includes remnants of past mining, the introduction of a working mine will transform the visual landscape from a working rural landscape to one that includes earthmoving and mining activity, which may be perceived as less aesthetically pleasing. Given the scale of panoramic views and the recognition of mining as part of the established character of the Waikaka area, we consider the degree of adverse effects on views and visual amenity of the Brownlee property to be low-moderate, reducing to low as the mine moves east and eventually negligible once the land is rehabilitated.
- 48 The Drummond dwelling is situated on the flat to the south of the site, with a rise in topography created by rehabilitated tailings from a historic mining endeavour providing considerable screening of most of the proposed mining activity. Views of the later stages of the proposed mining activity may be available from parts of the house and outdoor living areas. Intervening riparian and shelter trees will offer some screening. However, they cannot be relied upon as they are outside the applicant's control.
- 49 We have not viewed the site from the Drummond property and rely of aerial photography and our observations on site to assess effects. During the later stages of the of the mining activity, views from the Drummond dwelling may change to include stockpiles, a pit and disturbed area of up to 20ha in size, haul roads, and an infrastructure area. The proposed mining activity will introduce new elements into the view, such as vehicle movements, people coming and going, lighting, and processing activities. These elements will be visible in direct northerly views only. The mounded rehabilitated tailings on the southern side of the L&M pond will otherwise screen the site. The activities will be seen horizontally, i.e. their southern edge will be seen, not a plan like view.

- 50 As with views from the Brownlee property, the proposed mining activity will occupy a relatively small part of broader pastoral views. However, it will create a contrasting, highly modified landscape that may be seen as less visually appealing than the surrounding more natural farmland. While the current view from the property includes remnants of past mining, the introduction of a working mine will transform the landscape from a working agricultural scene to one that includes earthmoving and mining activity, which may be perceived as less aesthetically pleasing. Given the established screening by topography and the recognition of mining as part of the established character of the Waikaka area, we consider the degree of adverse effects on views and visual amenity to be very low for the most part, increasing to low-moderate during the later stages of the mine when the eastern infrastructure area is used, and eventually negligible once the land is rehabilitated.

EFFECTS ON LANDSCAPE CHARACTER AND VALUES

- 51 *"A landscape effect is an outcome for a landscape value.*

While effects are consequences of changes to the physical environment, they are the outcomes for a landscape's values that are derived from each of its physical, associative, and perceptual dimensions. Change itself is not an effect: landscapes change constantly. It is the implications of change for a landscape's values that is the effect. To assess effects, it is therefore necessary to first identify the landscape's values—and the physical characteristics that embody those values.

A visual effect is a kind of landscape effect. It is a consequence for landscape values as experienced in views. Visual effects are a subset of landscape effects. Visual assessment is one method to help understand landscape effects. Landscape values are the various reasons a landscape is valued—the aspects that are important or special or meaningful."¹³

- 52 Landscape attributes, character and values are discussed in paragraphs 17 to 22 above. In summary, the proposed mining activity is situated within a working rural landscape, traversed by the Waikaka Stream and Shepherd's Creek. The subject site is primarily open paddock land with scattered farm buildings and remnants of past mining operations, including the notable L&M pond. Vegetation primarily consists of pasture and winter feed, with mature exotic trees forming

¹³ Ibid, paragraphs 5.06 and 6.01 to 6.04.

shelterbelts and lining the streams. Native vegetation is limited to plantings around the margins of the L&M pond.

- 53 The physical changes to the landscape that will result for the proposal are set out in paragraph 24; earthworks to create the mine pit and haul road, stockpiles, settling pond, processing plants, storage, offices and ancillary buildings, temporary diversion of watercourses and removal of vegetation. The proposed mine will introduce a human element with a working and active character that will have an effect on the values relating to openness, naturalness and rural amenity. The proposed mitigation measures will mitigate effects to a limited extent, as has been discussed.
- 54 The proposal will change the existing landscape mosaic by introducing impermanent elements such as infrastructure, waterway diversions, and backfilled mine pits, as well as permanent changes including removal of established vegetation across the site and introduction of riparian planting once the stream is reestablished. Ultimately, the site will go back to being pastureland, after eight years.
- 55 It is important to note that mining forms part of the established values of the area, with the site having been mined previously and remnants of the mining activity evident through rehabilitated tailing and abandoned mining relics scattered throughout the surrounding landscape. Adverse effects on landscape character will be limited to the operational area at any one time. The operational area will comprise up to 20ha of disturbed ground, haul roads and infrastructure area, with sequential rehabilitation being done in an ongoing way. The landscape values of the remainder of the site and the wider Waikaka area will be largely maintained while the activity proceeds and will be fully restored when the operation ceases. The proposal will result in adverse effects on landscape character of a moderate-low degree while the mine is operational through the degree of disturbance, busyness and relatively intensive working activity in an otherwise rural landscape but will not result in any lasting effects on landscape character once the activity ceases and the site is rehabilitated.

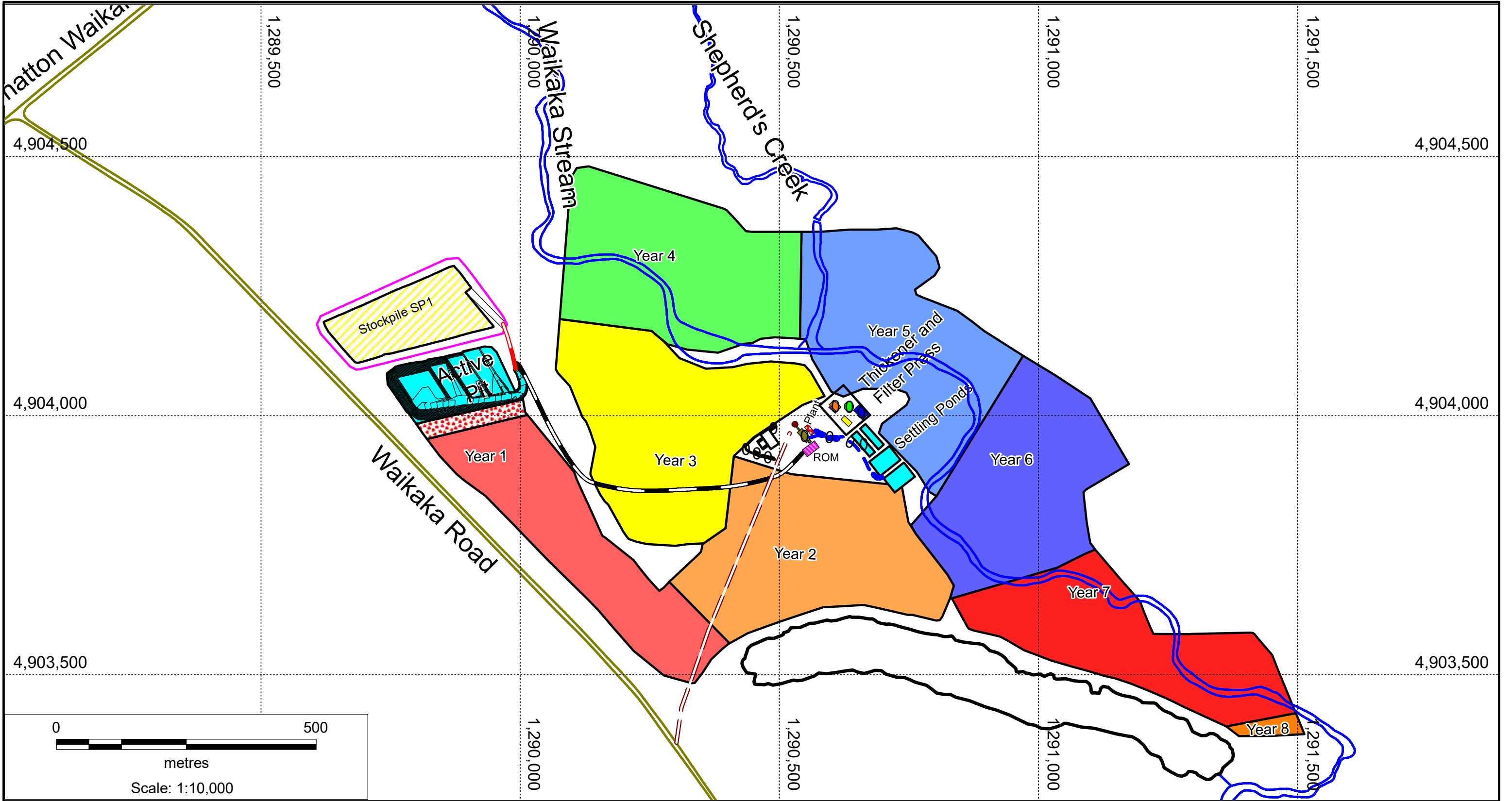
- 56 In an overall sense, the mining activity is one that only ever occurs in a rural landscape. As the relevant objectives and policies reflect, it is a primary production activity; one that is not at odds with a rural landscape, but the scale of which will cause some disruption.

CONCLUSIONS

- 57 The proposal seeks to introduce a mining activity to a site which is currently open rural landscape, but which has historical association with gold mining.
- 58 Views of the proposed site will be available to varying degrees from Waikaka Road, North Chatton Road, Nicholson Road, Turnbull Road, and an unformed legal road. It will also be visible from public areas along the Waikaka Stream and from nearby private properties, namely the Brownlee and Drummond properties. Taking into account the staging of the proposal, sequential rehabilitation and mitigation, adverse effects on views and visual amenities will be of a low-moderate degree at most.
- 59 The landscape character will be altered by the introduction of human modifications that detract from its ruralness, naturalness, and openness, adversely affecting the landscape's character. Overall, we consider that the proposal will bring about a noticeable change that reflects the significance of goldmining in the area. The degree of adverse effects on the landscape character and values will be of a moderate-low degree, while mining is operational. Ultimately, all effects will be remedied.
- 60 We consider that the proposed sits well with the guidance given in the relevant objectives and policies; that primary production activities are part of rural landscapes, but also that amenity values and the quality of the environment shall be maintained

vivian+espie

Report prepared by Vivian and Espie for Waikaka Gold Mines Ltd			
Reviewed and Approved By	Jess McKenzie	Landscape Architect	24 June 2024



LEGEND

- Pipelines
- Haul Road Pit to ROM
- Haul Road Pit to SP1
- Exusting Laneway
- Active Pit
- Pre-strip Topsoil
- Sealed Roads
- Waikaka Stream
- Stockpile SP1
- L&M Pond

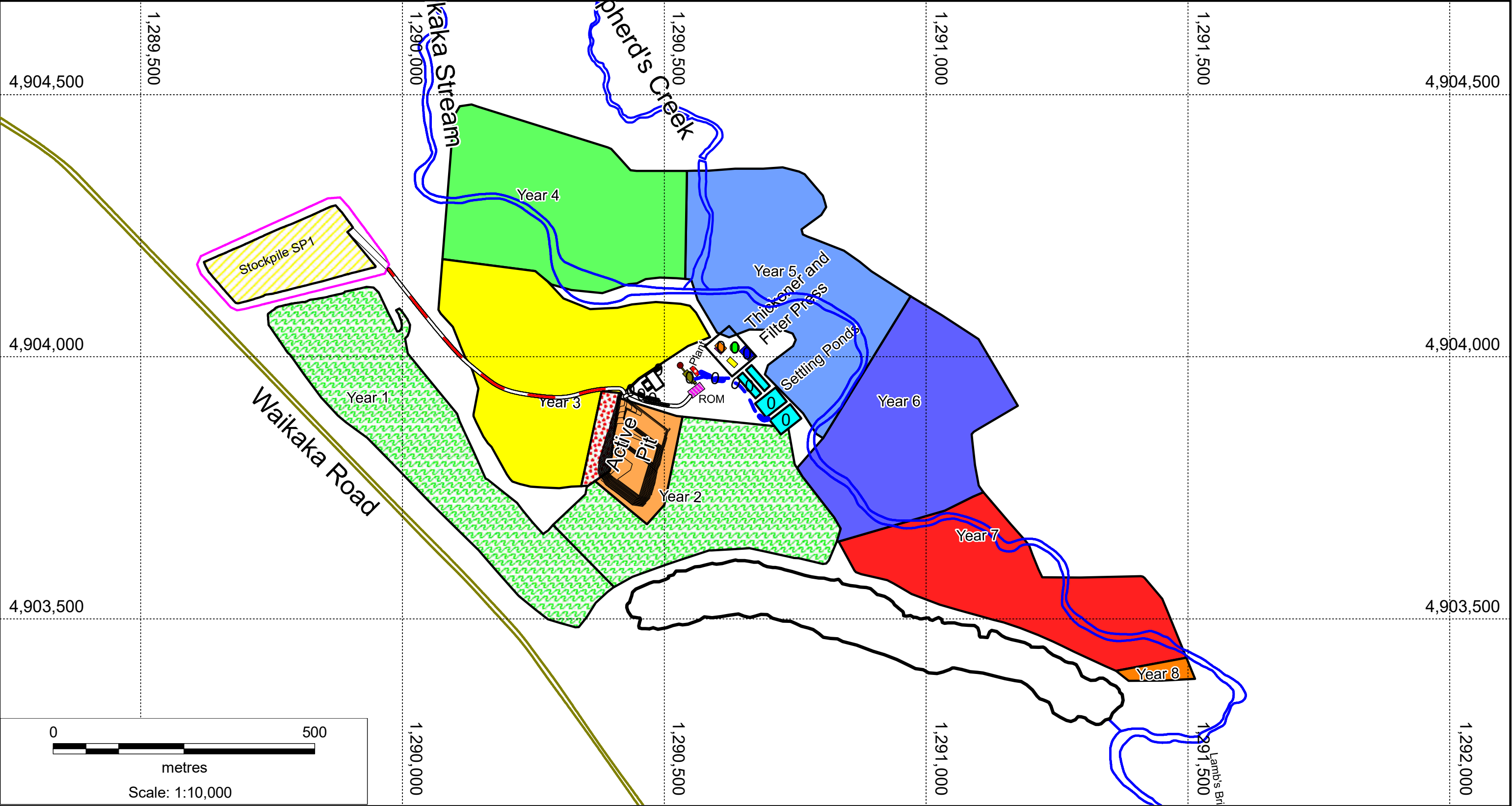
WAIKAKA GOLD MINES LTD - LANDSCAPE REPORT - MCKENZIE - APPENDIX 1: SCHEMATICS SHOWING INDICATIVE YEARLY MINE PROGRESSION

WAIKAKA
GOLD MINES LTD

WAIKAKA Exploration Permit 56372

Waikaka Mine Development - Schematic.
End of Year 0

Reference Files : Topography : Geology :	Compiled : WNB	Date : Nov 2023	Revision:
	Drawn : WNB	Scale : 1 : 10,000	Projection: NZTM
Drawing Path : I:\MapInfo\Plots			Drawing Name : WK0534_10k_A4



LEGEND

- Stockpile SP1
- Sealed Roads
- Waikaka Stream
- L&M Pond
- Pipeline
- Year 2 Active Pit
- Rehabilitated Land
- Pre-Strip Soil



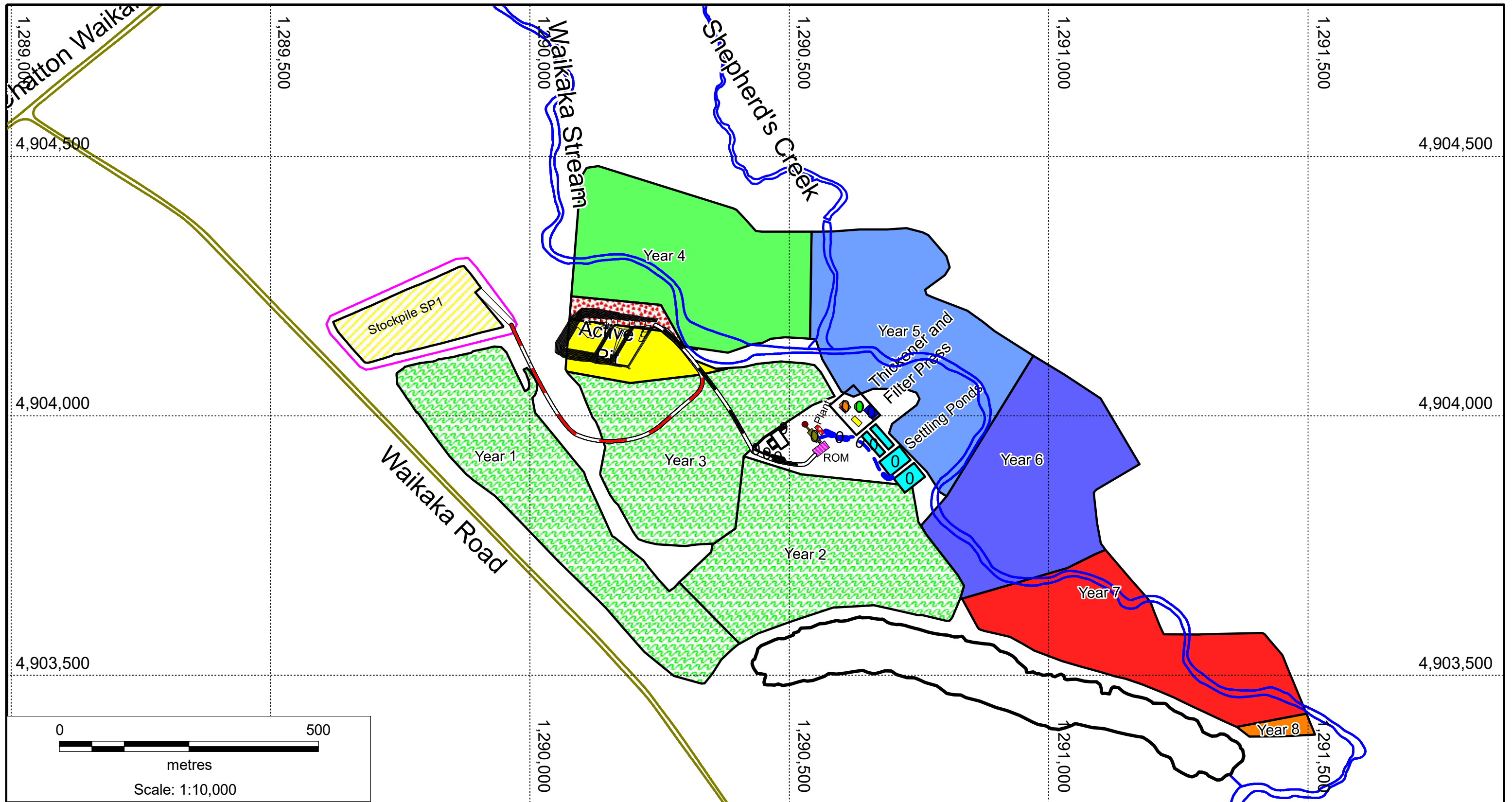
WAIKAKA GOLD MINES LTD - LANDSCAPE REPORT - MCKENZIE - APPENDIX 1: SCHEMATICS SHOWING INDICATIVE YEARLY MINE PROGRESSION

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WAIKAKA Exploration Permit 56372

Waikaka Mine Development - Schematic.
End of Year 2

Reference Files : Topography : Geology :	Compiled : WNB	Date : Nov 2023	Revision:
	Drawn : WNB	Scale : 1 : 10,000	Projection: NZTM
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LEGEND

- | | |
|---|--|
|  Stockpile SP1 |  Rehabilitated Land |
|  Sealed Roads |  Active Pit area |
|  Waikaka Stream |  Year 3 Advance |
|  L&M Pond |  Pre Strip Topsoil |
|  Haul Road to/from pit, SP1 | |
|  Haul Road Pit to ROM | |

WAIKAKA GOLD MINES LTD

WAIKAKA Exploration Permit 56372

**Waikaka Mine Development - Schematic.
End of Year 3**

Reference Files :

Topography

Geology

Compiled :

WNB

Date :

Nov 2023

Revision:

Drawn :

WNB

Scale :

1 : 10,000

Projection:

NZTM

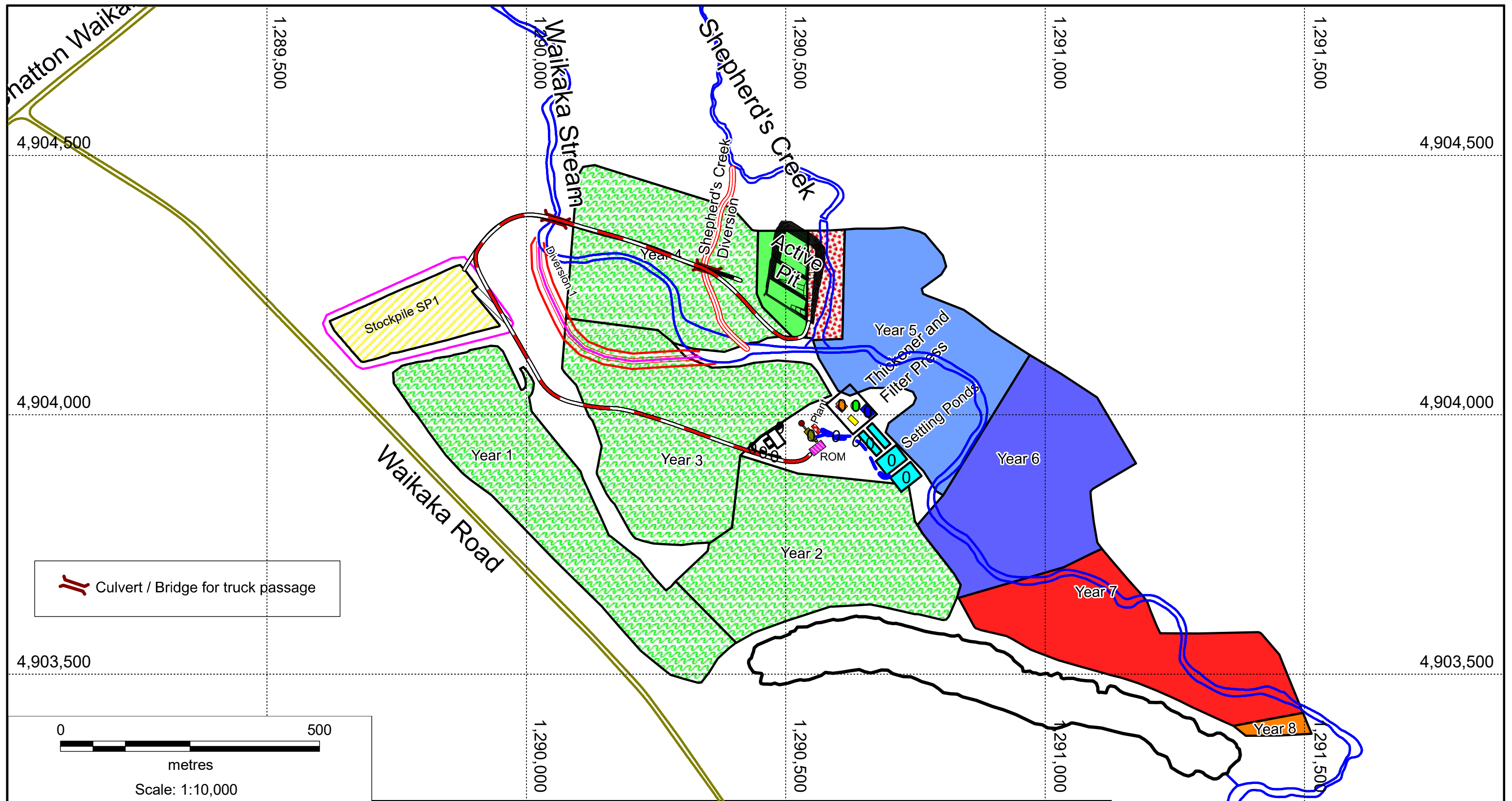
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WK0524_10k_A4

WAIKAKA GOLD MINES LTD - LANDSCAPE REPORT - MCKENZIE - APPENDIX 1: SCHEMATICS SHOWING INDICATIVE YEARLY MINE PROGRESSION



LEGEND

-  Stockpile SP1

 Sealed Roads

 Waikaka Stream

 L&M Pond

 Diversion 1
-  Rehabilitated Land

 Active Pit area

 Year 4 Advance

 Pre-strip Soils

 Pipeline
-  Haul Road. Pit to ROM

 Haul Road. Pit to SP1

 Shepherds Creek Diversion

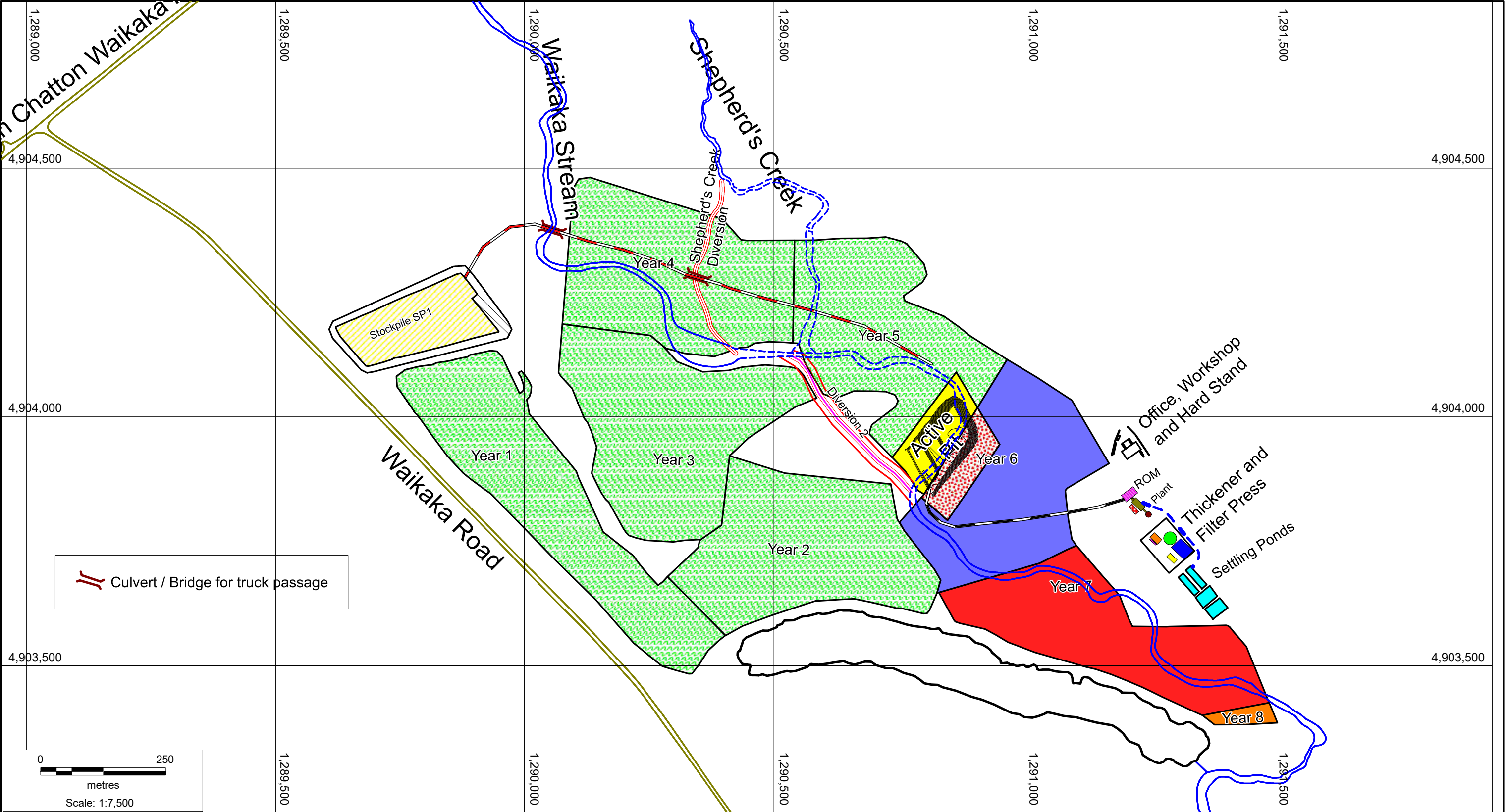


WAIKAKA
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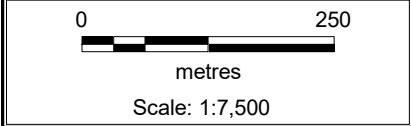
WAIKAKA Exploration Permit 56372

Waikaka Mine Development - Schematic.
End of Year 4

Reference Files : Topography Geology	Compiled : WNB	Date : Nov 2023	Revision:
	Drawn : WNB	Scale : 1 : 10,000	Projection: NZTM
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Culvert / Bridge for truck passage



LEGEND

- Sealed Roads
- L&M Pond
- Stockpile SP1
- Waikaka Stream
- Diverted Waikaka Stream and Shepherds Creek
- Diversion 2

- Shepherds Creek Diversion
- Haul Road Pit to ROM Pad
- Haul Road SP1 to Backfill
- Year_5_Infrastructure
- Rehabilitated Land
- Active Pit
- Pre-stripped Topsoil

Plan shows haul road to Plant Site 2.
Plant site1 not shown but could be
utilised by varying Diversion 2 to
avoid the plant site 1

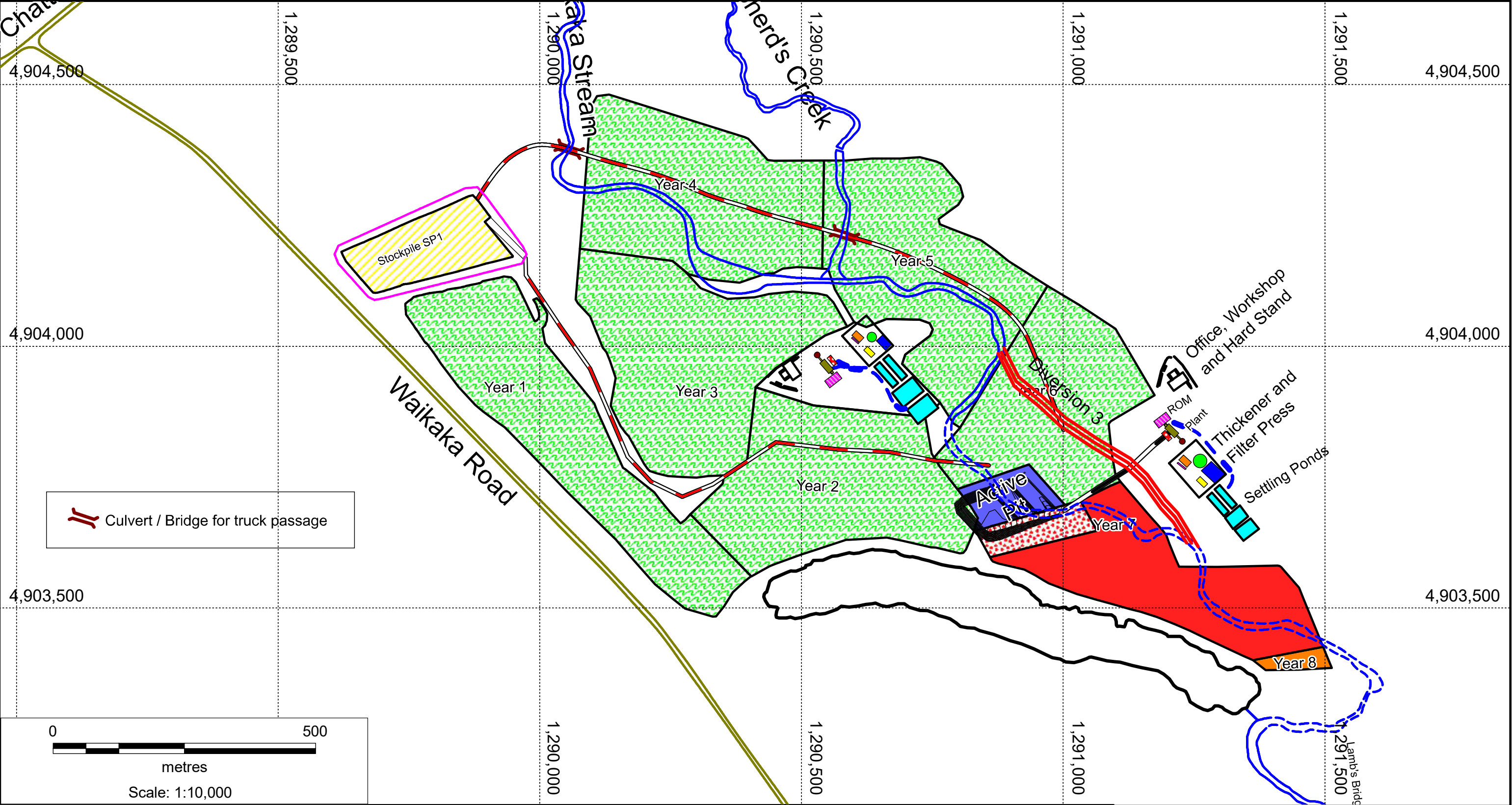


WGML WAIKAKA
GOLD MINES LTD

WAIKAKA EP 56372

**Waikaka Mine Development - Schematic.
End of Year 5. Eastern Plant site shown.**

Reference Files :	Compiled : WNB	Date : May 2024	Revision:
Topography :	Drawn : WNB	Scale : 1 : 7,500	Projection: NZTM
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Aeromag :			
Tenement :			



LEGEND

	Stockpile SP1		Pipeline		Active Pit
	Sealed Roads		Haul Road . Pit to ROM		Pre-Strip Soils
	L&M Pond		Haul Road. SP1 to Backfill		Rehabilitated Land
	Diversion 3				Year 7 Advance Block
	Waikaka Stream and Shepherds Creek, Original and restored				
	Waikaka Stream. Temporarily diverted				

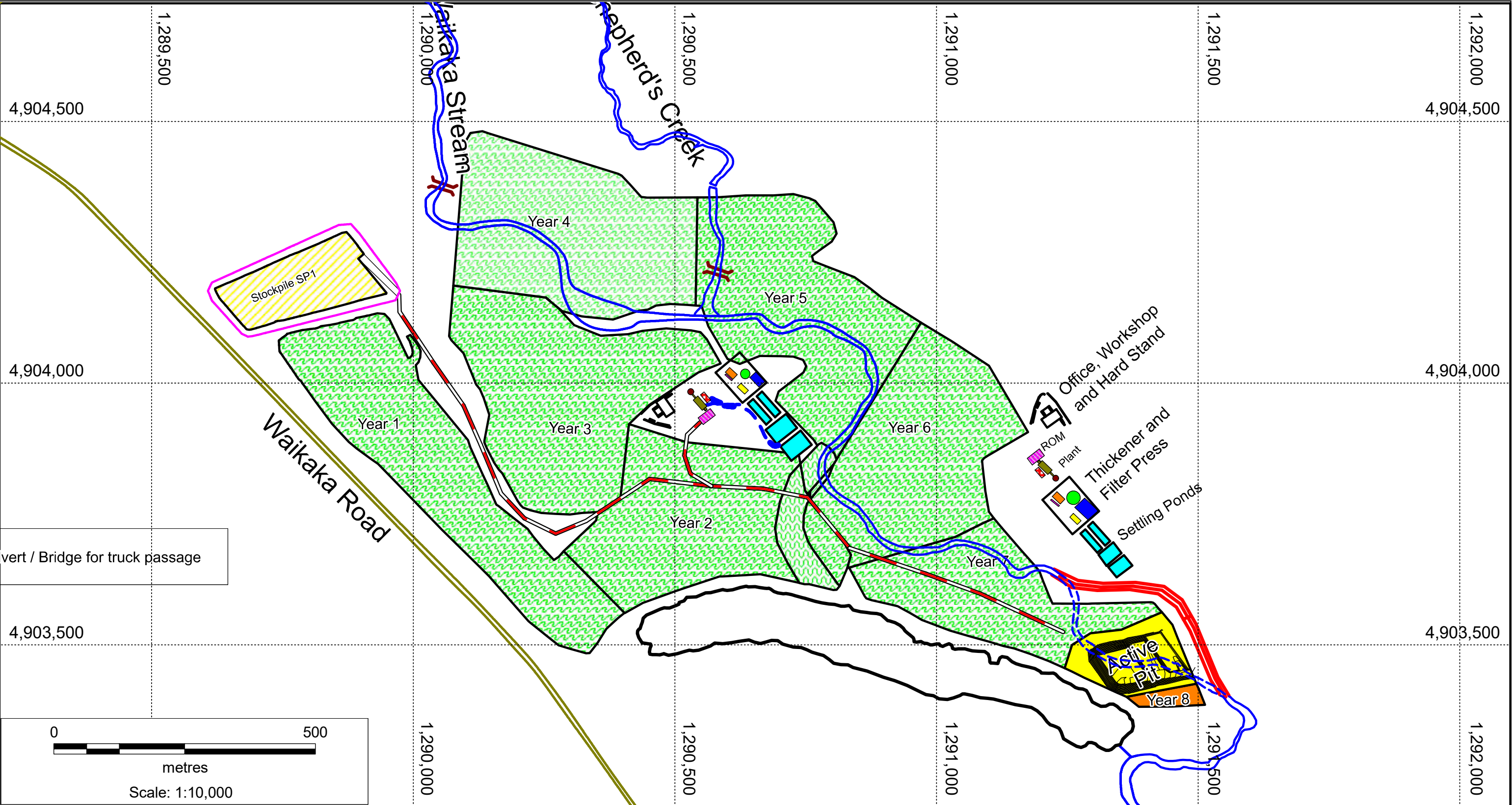
WAIKAKA GOLD MINES LTD - LANDSCAPE REPORT - MCKENZIE - APPENDIX 1: SCHEMATICS SHOWING INDICATIVE YEARLY MINE PROGRESSION

WAIKAKA GOLD MINES LTD

WAIKAKA Exploration Permit 56372

Waikaka Mine Development - Schematic. End of Year 6. Either Plant Site May be Used

Reference Files : Topography : Geology :	Compiled : WNB	Date : Nov 2023	Revision:
	Drawn : WNB	Scale : 1 : 10,000	Projection: NZTM
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LEGEND

Stockpile SP1

Sealed Roads

L&M Pond

Diversion 3

Waikaka Stream and Shepherds Creek, Original and restored

Waikaka Stream. Temporarily diverted

Pipeline

Haul Road Pit to ROM

Haul Road SP1 to Backfill

Rehabilitated Land

Active Pit area

WAIKAKA GOLD MINES LTD

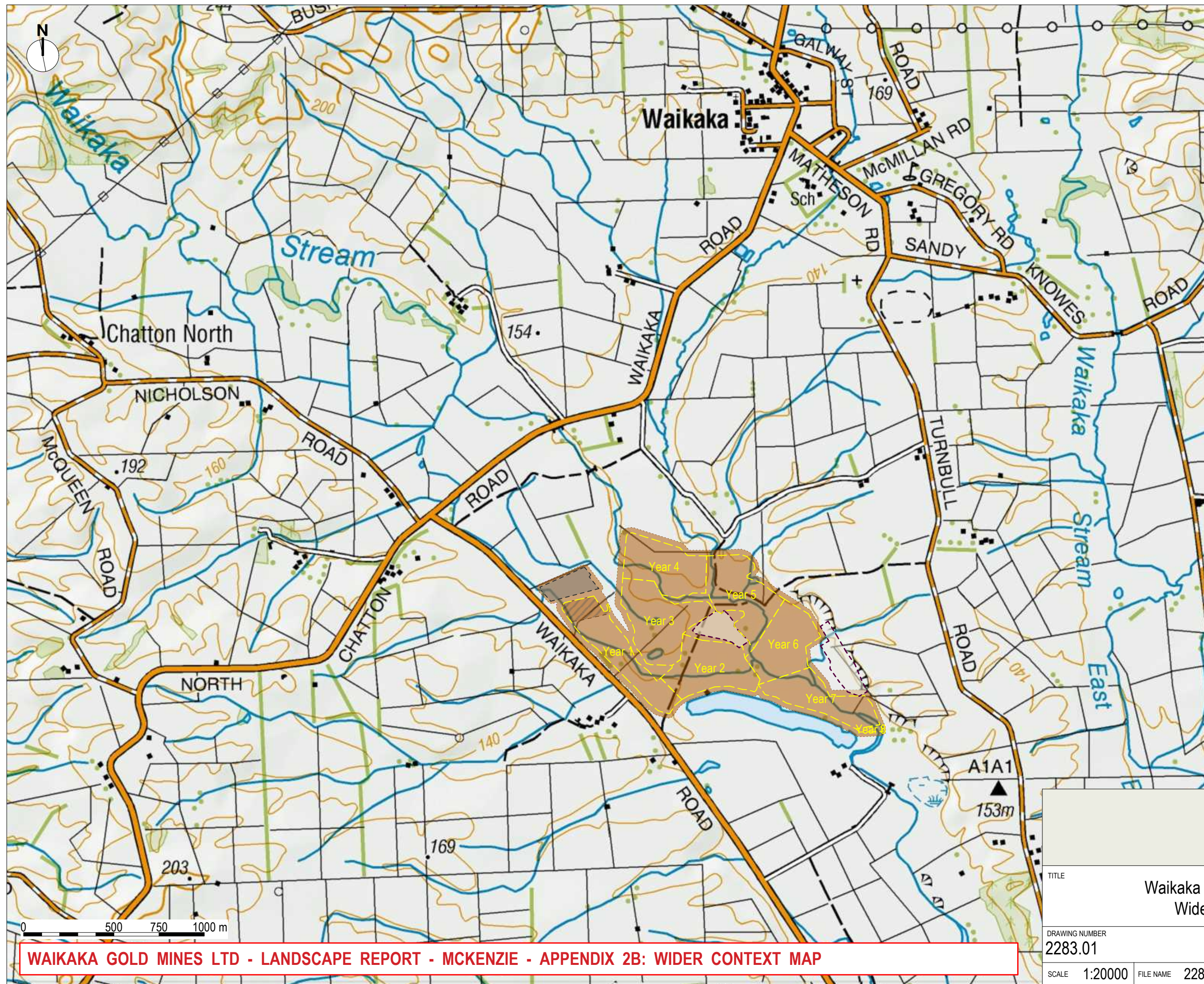
WAIKAKA Exploration Permit 56372

Waikaka Mine Development - Schematic. End of Year 7. Both Plant sites shown.

Reference Files : Topography Geology	Compiled : WNB	Date : Nov 2023	Revision:
	Drawn : WNB	Scale : 1 : 10,000	Projection: NZTM
	Drawing Path : I:\MapInfo\Plots		Drawing Name : WK0562_10k A4



0 500 750 1000 m



- Production Mine area (including 40m buffer from open pit)
- Plant area
- Starter pit
- Stock pile
- River diversion
- Yearly progression

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TITLE

Waikaka Gold Mines Limited
Wider Context Map

DRAWING NUMBER
2283.01

DRAWN BY
JM

DATE
14/06/2024

SCALE 1:20000

FILE NAME 2283.01.vwx

WAIKAKA GOLD MINES LTD - LANDSCAPE REPORT - MCKENZIE - APPENDIX 2B: WIDER CONTEXT MAP



Viewpoint 1 - Looking towards the part of the site where the stockpiles are proposed from Waikaka Road. The Brownlee residence can be seen on the hillside on the opposite side of Waikaka Road, overlooking the site.



Viewpoint 2 - Looking towards the plant area from within the site

WAIKAKA GOLD MINES LTD - LANDSCAPE REPORT - MCKENZIE - APPENDIX 3: PHOTOGRAPHS

Photographs were taken with a fixed focal length of 50mm. Photographs are intended to illustrate points made in this evidence. If this sheet is printed at A3 size, the photographs are not at full size so as to replicate the full-scale field of view as taken in by the human eye.



Viewpoint 3 - Looking north over the proposed year 1 & 3 pit towards the proposed stock piles from within the site.



Viewpoint 4 - Looking southwest from within the site. The proposed plant area is located over the farm track and extends to the left in front of the visible conveyor which is to be removed.

WAIKAKA GOLD MINES LTD - LANDSCAPE REPORT - MCKENZIE - APPENDIX 3: PHOTOGRAPHS

Photographs were taken with a fixed focal length of 50mm. Photographs are intended to illustrate points made in this evidence. If this sheet is printed at A3 size, the photographs are not at full size so as to replicate the full-scale field of view as taken in by the human eye.



Viewpoint 5 - Looking northwest over the site from elevated farm land adjacent to the site.



Viewpoint 6 - Looking towards the year 5 pit from an established farm track.

WAIKAKA GOLD MINES LTD - LANDSCAPE REPORT - MCKENZIE - APPENDIX 3: PHOTOGRAPHS

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Viewpoint 7 - Looking towards the proposed mine site from Turnbull Road. Glimpses of the mine can be seen.



Viewpoint 8 - Looking towards the proposed mine site from Turnbull Road. Glimpses of the mine can be seen.

WAIKAKA GOLD MINES LTD - LANDSCAPE REPORT - MCKENZIE - APPENDIX 3: PHOTOGRAPHS

Photographs were taken with a fixed focal length of 50mm. Photographs are intended to illustrate points made in this evidence. If this sheet is printed at A3 size, the photographs are not at full size so as to replicate the full-scale field of view as taken in by the human eye.



Viewpoint 9 - View of the proposed mine site from Waikaka Road. The stockpiles and northern edge of the mine, approximately 750 meters away, are well screened by the intervening vegetation.



Viewpoint 10 - View of the proposed mine site from Waikaka Road. The stockpiles and northern edge of the mine, approximately 750 meters away, are well screened by the intervening vegetation.

WAIKAKA GOLD MINES LTD - LANDSCAPE REPORT - MCKENZIE - APPENDIX 3: PHOTOGRAPHS

Photographs were taken with a fixed focal length of 50mm. Photographs are intended to illustrate points made in this evidence. If this sheet is printed at A3 size, the photographs are not at full size so as to replicate the full-scale field of view as taken in by the human eye.



Viewpoint 11 - . View of the proposed mine site from Nicholson Road. The stockpiles and northern edge of the mine will be visible at a distance of approximately 815 meters away.



Viewpoint 12 - View of the proposed mine site from Waikaka Road neat the stock piles and started pit.

WAIKAKA GOLD MINES LTD - LANDSCAPE REPORT - MCKENZIE - APPENDIX 3: PHOTOGRAPHS

Photographs were taken with a fixed focal length of 50mm. Photographs are intended to illustrate points made in this evidence. If this sheet is printed at A3 size, the photographs are not at full size so as to replicate the full-scale field of view as taken in by the human eye.



Viewpoint 13 - . View of the proposed mine site from Waikaka Road..The year 1, year 2 and year 3 pits will be visible from this location and the plant area will be visible from a distance of approximately 500m.