



**RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD
Search Copy**




R.W. Muir
Registrar-General
of Land

Identifier 965370
Land Registration District Hawkes Bay
Date Issued 29 January 2021

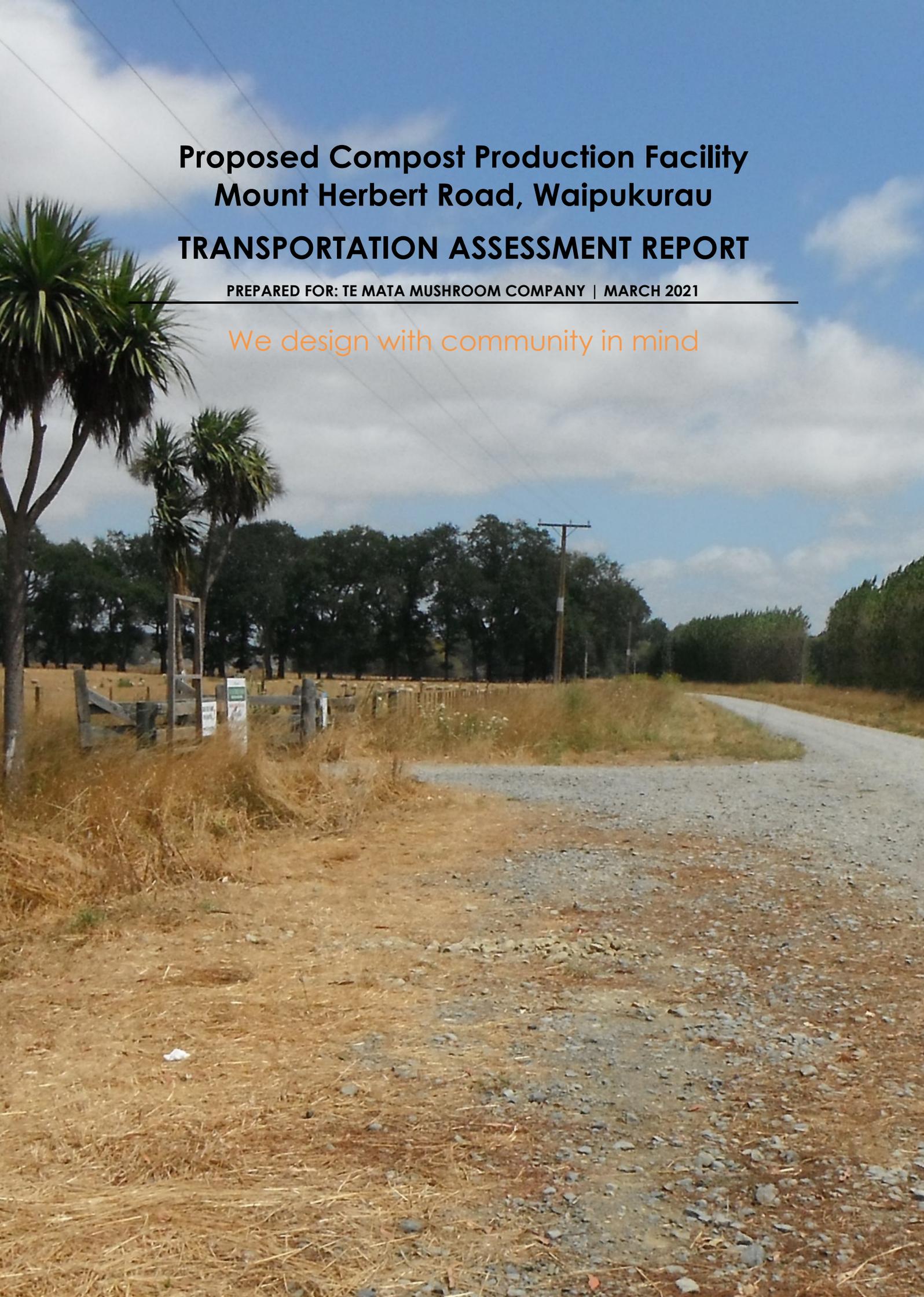
Prior References
507617

Estate Fee Simple
Area 5.6590 hectares more or less
Legal Description Lot 1 Deposited Plan 554782

Registered Owners
Te Mata Mushroom Land Company Limited

Interests

8401841.4 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 22.4.2010 at 3:34 pm
Subject to a right of way over part marked A on DP 554782 created by Easement Instrument 8401841.5 - 22.4.2010 at 3:34 pm
The easements created by Easement Instrument 8401841.5 are subject to Section 243 (a) Resource Management Act 1991
Subject to a right of way (in gross) over part marked A on DP 554782 in favour of Trustees of the Rotary River Pathways Trust created by Easement Instrument 11272558.2 - 5.2.2019 at 12:04 pm
11635827.3 Mortgage to Westpac New Zealand Limited - 13.12.2019 at 8:53 am
11635827.5 Mortgage to Due North Limited Partnership - 13.12.2019 at 8:53 am
11988046.3 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 29.1.2021 at 9:03 am
Subject to a right of way and a right to convey electricity, and telecommunications over part marked A on DP 554782 created by Easement Instrument 11988046.5 - 29.1.2021 at 9:03 am
Some of the easements created by Easement Instrument 11988046.5 are subject to Section 243 (a) Resource Management Act 1991 (See DP 554782)
Land Covenant in Covenant Instrument 11988046.6 - 29.1.2021 at 9:03 am



Proposed Compost Production Facility Mount Herbert Road, Waipukurau TRANSPORTATION ASSESSMENT REPORT

PREPARED FOR: TE MATA MUSHROOM COMPANY | MARCH 2021

We design with community in mind

Quality Statement

This document has been prepared for the benefit of Te Mata Mushroom Company. No liability is accepted by this company or any employee or sub-consultant of this company with respect to its use by any other person.

This disclaimer shall apply notwithstanding that the report may be made available to Te Mata Mushroom Company and other persons for an application for permission or approval to fulfil a legal requirement.

PROJECT MANAGER Jamie Whittaker	PROJECT TECHNICAL LEAD Mark Georgeson
---	---

PREPARED BY

Jamie Whittaker



09 / 02 / 2021

**REVIEWED AND APPROVED FOR
ISSUE BY**

Mark Georgeson



03 / 03 / 2021

WELLINGTON

Lvl 15, 10 Brandon Street, Wellington 6011
PO Box 13-052, Armagh, Christchurch 8141

STATUS Final | **Project No** 310204534

Table of Contents

1.0	INTRODUCTION	1
2.0	SITE LOCATION	2
3.0	EXISTING TRANSPORTATION ENVIRONMENT	4
3.1	ROADING HIERARCHY.....	4
3.1.1	Mount Herbert Road.....	5
3.1.2	Wider Network.....	8
3.2	CURRENT TRAFFIC VOLUMES.....	8
3.3	ROAD SAFETY.....	11
3.4	EXISTING FOOTPATH AND CYCLE ROUTES.....	13
3.5	RECENT AND CURRENTLY SCHEDULED WORKS.....	13
4.0	COUNCIL PLANNING STRATEGIES	14
5.0	DEVELOPMENT PROPOSAL	15
5.1	EXISTING SITE USE.....	15
5.2	PROPOSED DEVELOPMENT.....	15
6.0	DISTRICT PLAN	16
7.0	PARKING	20
7.1	DISTRICT PLAN PARKING REQUIREMENTS VERSUS DEMAND.....	20
7.2	PARKING LAYOUT.....	20
8.0	ACCESS	21
8.1	MOUNT HERBERT ROAD MAIN ACCESS.....	21
8.2	NEW LIGHT VEHICLE CROSSING TO ROW.....	22
9.0	ASSESSMENT OF TRAFFIC EFFECTS	23
9.1	ADJACENT NEW RESIDENTIAL DEVELOPMENT TRAFFIC.....	23
9.2	FORECAST DEVELOPMENT TRAFFIC GENERATION.....	23
9.3	MOUNT HERBERT ROAD - SEALED SECTION.....	24
9.4	MOUNT HERBERT ROAD - UNSEALED / GRAVEL SECTION.....	24
9.5	ACCESS TO GUM TREE FARM MOUNTAIN BIKE PARK.....	24
10.0	SERVICING	26
11.0	RECOMMENDATIONS	27
11.1	TRUCK ROUTES THROUGH WAIPUKURAU.....	27
11.2	MOUNT HERBERT ROAD.....	27
11.2.1	Downward Revision of the Existing Speed Limit.....	27
11.2.2	Unsealed Section of the Road Carriageway.....	27
12.0	CONCLUSION	28
LIST OF TABLES		
	<i>Table 1: Mount Herbert Road Characteristics</i>	5



<i>Table 2: Local Traffic Flows</i>	8
<i>Table 3: Summary of Crashes</i>	11
<i>Table 4: District Plan Compliance</i>	16
<i>Table 5: Summary of Site Trip Generation</i>	23

LIST OF FIGURES

<i>Figure 1: Site Location (Source: Council GIS)</i>	2
<i>Figure 2: Site Location within the wider Mount Herbert Property</i>	3
<i>Figure 3: Road Hierarchy</i>	4
<i>Figure 4: Road Hierarchy – Waipukurau Central Area</i>	5
<i>Figure 5: Mount Herbert Road – view east (approaching Mangatarata Road intersection)</i>	7
<i>Figure 6: Mount Herbert Road – view east (between Mangatarata Road and seal end)</i>	7
<i>Figure 7: Mount Herbert Road at seal end – view east to unsealed section</i>	7
<i>Figure 8: Mount Herbert Road – view east on unsealed section</i>	7
<i>Figure 9: Mount Herbert Road – view east towards proposed site access (existing RoW shown on the right)</i>	7
<i>Figure 10: Mount Herbert Road Traffic Volumes</i>	9
<i>Figure 11: AM Peak Hour Traffic Movements</i>	10
<i>Figure 12: PM Peak Hour Traffic Movements</i>	10
<i>Figure 13: Mount Herbert Road Crash Locations</i>	12
<i>Figure 14: CHBISP Waipukurau Spatial Plan</i>	14
<i>Figure 15: District Plan Access Standard</i>	21
<i>Figure 16: Mount Herbert Road – Proposed new access (view west)</i>	22
<i>Figure 17: Mount Herbert Road – Proposed new access (view east)</i>	22
<i>Figure 18: RoW – Proposed new secondary access (view north)</i>	22
<i>Figure 19: RoW – Proposed new secondary access (view south)</i>	22
<i>Figure 20: Proposed Site HGV Routes at Waipukurau</i>	27

LIST OF APPENDICES

APPENDIX A	INDICATIVE ACCESS DRIVEWAY DESIGN	A.1
APPENDIX B	VEHICLE TRACKING PLANS	B.2



1.0 INTRODUCTION

Stantec has been commissioned by the Te Mata Mushroom Company (**TTMC**) to examine and describe the effects of a proposed new compost production facility located at 464 Mount Herbert Road in Waipukurau.

The proposed development plans provide for the construction of a new compost production activity, for the primary purpose of supplying mushroom cultivation to an established mushroom farm at Brookfield Road, Havelock North and in the future to other sites in the region.

This Transportation Assessment Report (**TAR**) has been prepared to describe and evaluate the transport features of the proposed development, and in particular the traffic and access matters, and has been progressed with due regard to the rules and standards of the Central Hawkes Bay Council District Plan (**District Plan**).

The TAR addresses the following key matters:

- description of the existing local road network;
- the transport related components of the proposal;
- the traffic generated by the proposed development and associated effects on the performance and safety of the surrounding road network;
- the parking demand expected at the site, and arrangements to accommodate this;
- the particular servicing demands anticipated at the site;
- the proposed access arrangements, and description of the mitigation measures proposed for Mount Herbert Road to appropriately accommodate site traffic; and
- the relevant transportation rules and standards of the District Plan.

By way of summary, it is demonstrated that with the adoption of the recommendations proposed, the development of the site to establish a compost production facility can be undertaken in manner that ensures the generated traffic demands can be appropriately and safely accommodated within the surrounding transport environment.



2.0 SITE LOCATION

The site is located at 464 Mount Hebert Road approximately 4.3km east of Waipukurau, and as such falls within the Central Hawkes Bay District Council (**Council**) boundary.

Figure 1 shows the location of the Development Site in the context of the surrounding land use environment.

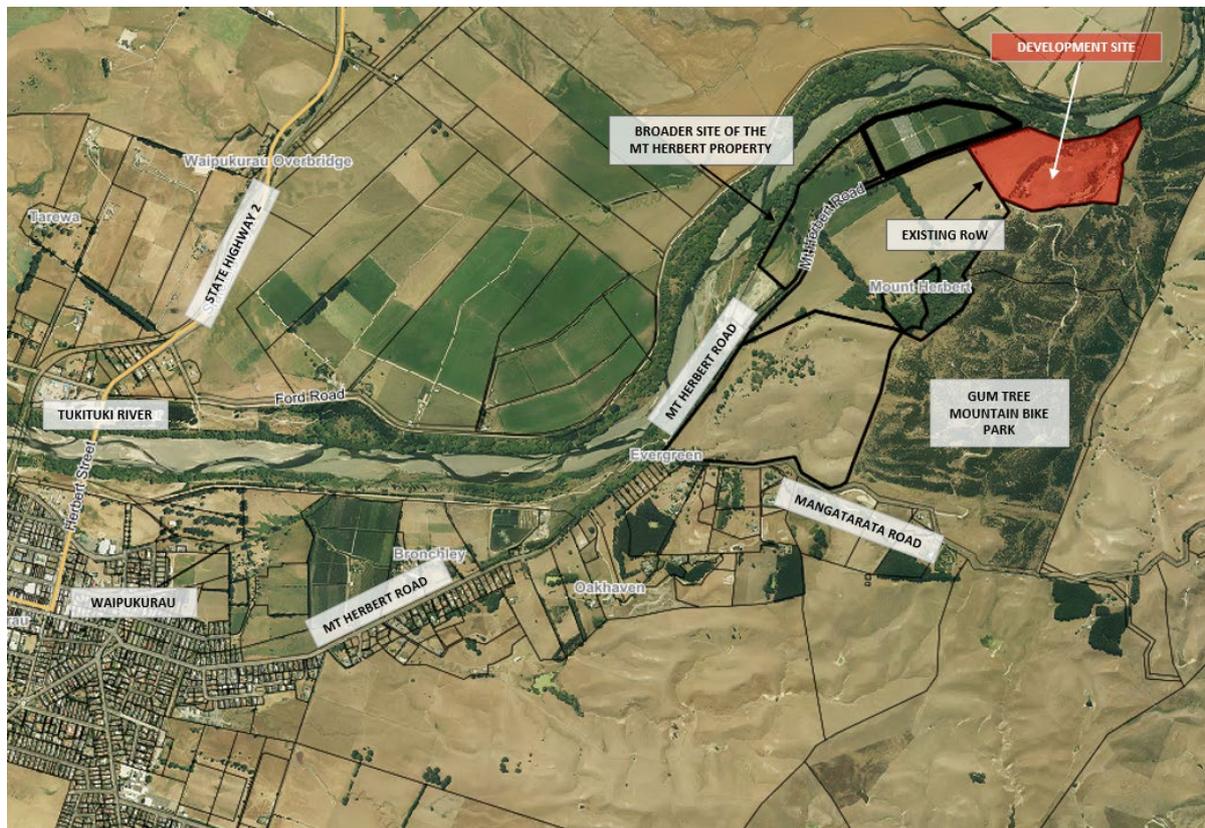


Figure 1: Site Location (Source: Council GIS)

The subject site is within a broader farm (approximately 115 hectares in total) owned by TMMC. The site has frontage to, and is accessed from, Mount Hebert Road.

During 2020 several subdivisions have been lodged creating a range of lots within this larger farm area. Consent has been obtained for Stage 1 (RM190134), Stage 2 (RM200168), and Stage 4 (RM200219), whilst Stage 3 (RM200184) is currently being processed. The consented and proposed lots are shown within the subdivision consent plan in **Figure 2**.



**TE MATA MUSHROOM COMPANY
MOUNT HERBERT ROAD DEVELOPMENT**

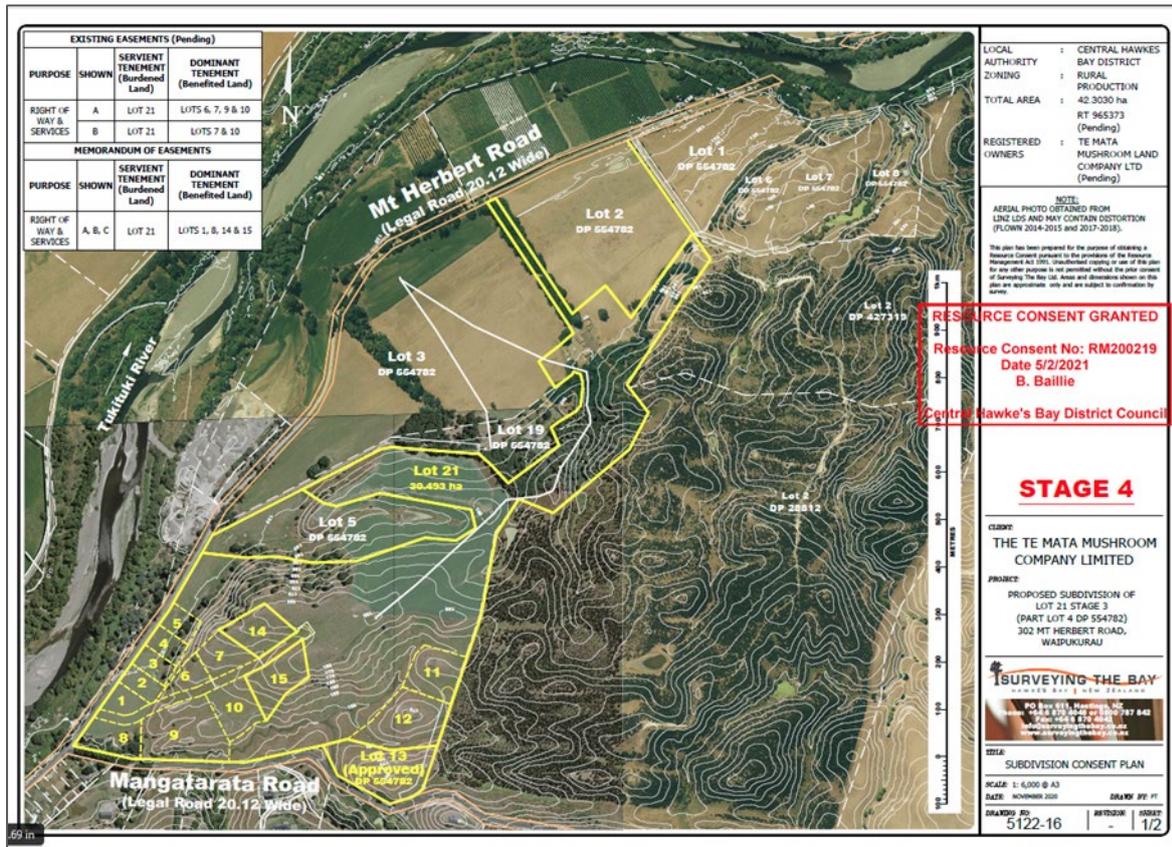


Figure 2: Site Location within the wider Mount Herbert Property

Land use in the vicinity varies with the Tukituki River corridor to the north (which attracts locals and tourists for swimming, walking, and cycling); a mixture of forestry land / mountain bike park to the east and south; and pastoral land to the west. Further to the southwest, at 307 Mount Herbert Road, is an established gravel quarry.



3.0 EXISTING TRANSPORTATION ENVIRONMENT

3.1 ROADING HIERARCHY

Discussions with Council to date in relation to development of the Mount Herbert property has identified a key area of consideration is the Heavy Goods Vehicle (HGV) movements generated between the site and the Waipukurau connection with the State Highway 2 (SH2) corridor. In particular, Council has requested HGVs avoid the Waipukurau town centre when routing to/from the site on Mount Herbert Road, and instead use the following intersections:

- Peel Street / State Highway 2 (Herbert Street);
- River Terrace / State Highway 2 (Herbert Street); and
- Ruataniwha Street / St Joseph Street / Mount Herbert Road / Wellington Road.

Accordingly, this assessment has given appropriate consideration to these intersections as well as the length of Mount Herbert Road (which together comprise the study area) when assessing the anticipated traffic impacts arising as a result of the proposed development.

Figure 3 and **Figure 4** in turn show the roading hierarchy classifications for the broader study area of Mount Herbert Road and its subsequent connection to the Waipukurau town centre network.

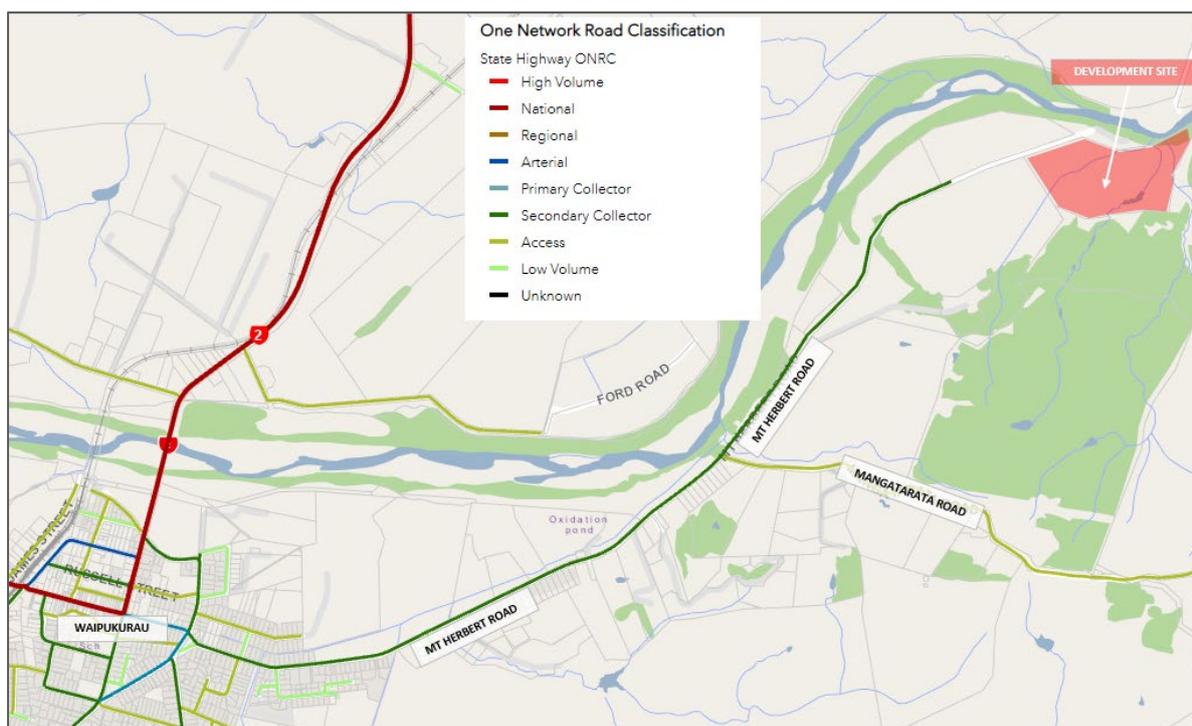


Figure 3: Road Hierarchy



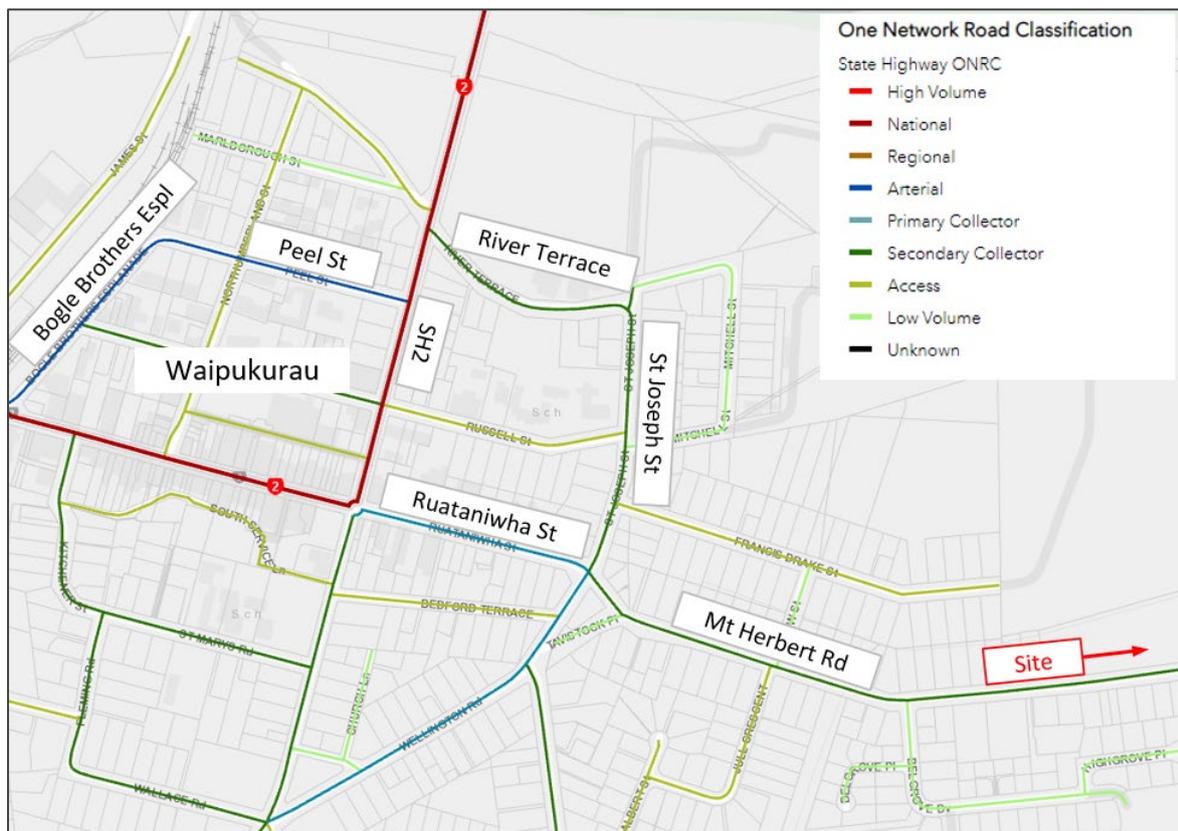


Figure 4: Road Hierarchy – Waipukurau Central Area

3.1.1 Mount Herbert Road

As shown in **Figure 3**, the length of Mount Herbert Road (except for the final portion adjacent to the site which is unclassified) is identified as a Secondary Collector under the Waka Kotahi NZ Transport Agency (**NZ Transport Agency**) ‘One Network Road Classification’ (**ONRC**) system¹. Such roads have the predominant function of linking areas of population and in some cases may be the only available route serving the local area, such as is the case here.

At its western end, Mount Herbert Road connects with Ruataniwha Street / Wellington Road / St Joseph Street via a crossroads intersection, with traffic on the latter two streets having priority. The form and function of Mount Herbert Road in the location is urban, as characterized by the presence of a sealed carriageway, 50kph posted speed limit, on-street parking, shoulders, marked on-road cycle paths, footpaths and streetlights. As the road continues east towards the development site, the form and function gradually change from urban to rural, as summarized in **Table 1**.

Table 1: Mount Herbert Road Characteristics

Section	Distance from Start ²	Road Characteristics
St Josephs Street - Gow Street	0m	<ul style="list-style-type: none"> Sealed carriageway (approx. 13.5m wide), two traffic lanes Marked on road cycle lanes on either side Shoulders / on-street parking on both sides Kerb and channel on both sides Pedestrian footpaths on both sides 50kph speed limit



¹ It is noted that Council has adopted the ONRC as their roading hierarchy.

² Intersection with Ruataniwha Street / Wellington Road / St Joseph Street

**TE MATA MUSHROOM COMPANY
MOUNT HERBERT ROAD DEVELOPMENT**

Gow St – 52 Mount Herbert St	240m	<ul style="list-style-type: none"> • Sealed carriageway (approx. 10.5m wide), two traffic lanes • Shoulders / on-street parking on both sides • Kerb and channel on both sides • Pedestrian footpaths on both sides • 50kph speed limit
52 Mount Herbert St – 106 Mount Herbert St	1,000m	<ul style="list-style-type: none"> • Sealed carriageway (approx. 10m wide), two traffic lanes • Shoulder / off-street one side, narrowing to no shoulders • Kerb and channel one side • Pedestrian footpath one side • 50kph speed limit
106 Mount Herbert St – 162 Mount Herbert St	1,650m	<ul style="list-style-type: none"> • Sealed carriageway (approx. 7m wide), two traffic lanes • No shoulders • Kerb and channel one side • Pedestrian footpath one side • 70kph speed limit
162 Mount Herbert St – Mangatarata Rd	2,440m	<ul style="list-style-type: none"> • Sealed carriageway (approx. 6.2m wide), two traffic lanes • No shoulders • No kerb and channel • Off-road walking / cycling track • 70kph speed limit
Mangatarata Rd – 307 Mount Herbert Rd	3,050	<ul style="list-style-type: none"> • Sealed carriageway (approx. 5.7m wide), two traffic lanes • No shoulders • No kerb and channel • Off-road walking / cycling track • 100kph speed limit
307 Mount Herbert Rd – 362 Mount Herbert Rd	3,900	<ul style="list-style-type: none"> • unsealed carriageway, 4.6m wide • No shoulders • No kerb and channel • Off-road walking / cycling track part way, then diverts to river • 100kph speed limit
362 Mount Herbert Rd – 464 Mount Herbert Rd	4,300m	<ul style="list-style-type: none"> • unsealed carriageway, 4.6m wide • No shoulders • No kerb and channel • 100kph speed limit

As shown, approximately 3km east of its origin in the Waipukurau urban area (adjacent the entrance to the gravel quarry), the Mount Herbert Road carriageway transitions from sealed to unsealed, after which the road narrows to 4.6m wide and continues to the development site as a gravel road. The photographs included at **Figure 5** through **Figure 9** below illustrate the carriageway environment for both the sealed and unsealed portions of Mount Herbert Road.



**TE MATA MUSHROOM COMPANY
MOUNT HERBERT ROAD DEVELOPMENT**



Figure 5: Mount Herbert Road – view east (approaching Mangatarata Road intersection)



Figure 6: Mount Herbert Road – view east (between Mangatarata Road and seal end)



Figure 7: Mount Herbert Road at seal end – view east to unsealed section



Figure 8: Mount Herbert Road – view east on unsealed section



Figure 9: Mount Herbert Road – view east towards proposed site access (existing RoW shown on the right)



Geometrically, Mount Herbert Road has a generally straight and level alignment with some shallow bends towards its eastern end.

3.1.2 Wider Network

As described above, Mount Herbert Road connects into the eastern end of the Waipukurau town centre via Ruataniwha Street (Primary Collector), which in turn connects with SH2 at a four-arm roundabout.

SH2 is classified as a 'national' route under the ONRC, providing a strategic connection between the Wellington Region and Hawkes Bay. To remove through traffic and HGV movements from the town centre, Waipukurau has a signposted bypass route which follows Bogle Brothers Esplanade and Peel Street, with each of these streets having a generous carriageway width (approximately 12m), and associated Arterial Road classification as illustrated earlier in **Figure 4**.

As previously intimated, Council has requested that associated site HGV movements utilize this bypass route if travelling to/from the south and west, with trucks travelling to/from the north routing via River Terrace and St Joseph Street. These latter two streets have an equivalent Secondary Collector road classification to Mount Herbert Road and accommodate existing HGV traffic demands associated with the adjacent established commercial and industrial activities.

3.2 CURRENT TRAFFIC VOLUMES

The latest available traffic count information has been obtained from the RAMM database for Mount Herbert Road and those streets connecting to the wider strategic network, including:

- Mount Herbert Road (approx. 1.6km east of Waipukurau)
- Ruataniwha Street;
- River Terrace; and
- SH2 (between Tukituki River Bridge and River Terrace).

The associated daily volumes, or 'vehicles per day' (**vpd**), are summarized in **Table 2**.

Table 2: Local Traffic Flows

Road	Count Date	ADT (vpd)	Heavy Vehicle (%)
Mount Herbert Road	2020	1,100	15%
Mangatarata Road	2019	200	3%
Ruataniwha Street	2019	4,150	3%
River Terrace	2020	1,350	7%
SH2	2020	11,000	12%

These existing flows are within the function expectations of these roads.

More detailed tube count data recorded in November 2020 provides an indication of the current hourly traffic profile for Mount Herbert Road³, as illustrated in **Figure 10**.



³ Count site [714] located approximately 1.6km east of the Ruataniwha Street intersection

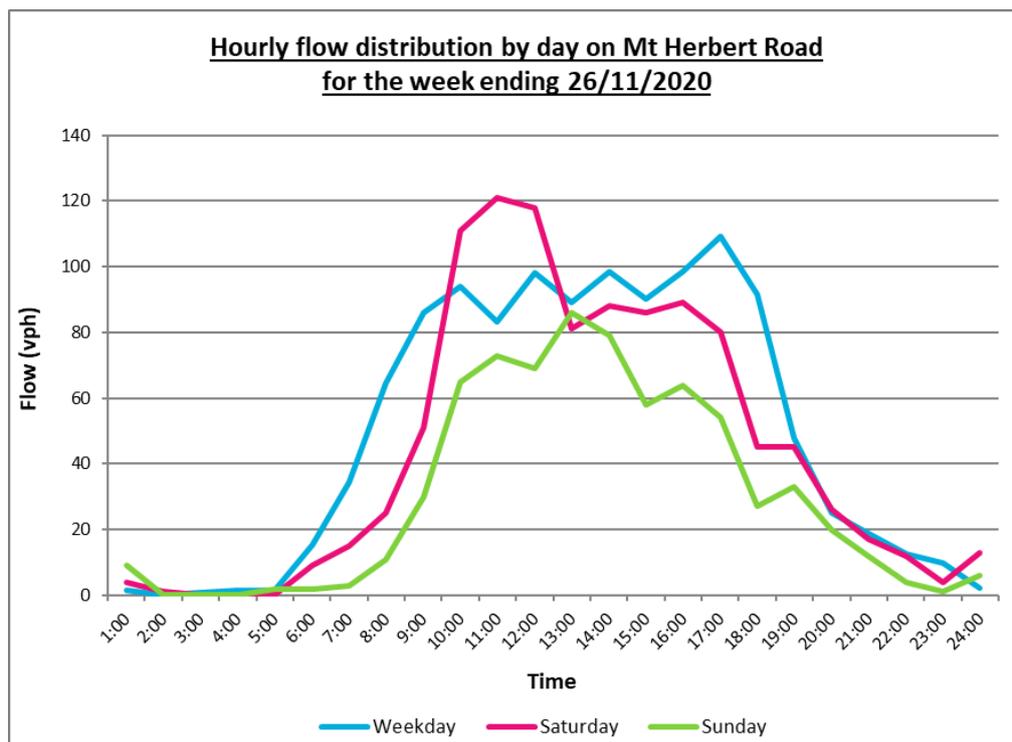


Figure 10: Mount Herbert Road Traffic Volumes

The graph shows two-way volumes on Mount Herbert Road to the east of the urban area peak at around 110 vehicles per hour (vph) during the weekday PM peak, with flows of around 90-100vph during the AM and midday peak periods. Traffic flows on the weekend peak at around 120vph during Saturday morning.

In addition to this data, and in order to capture typical peak hour traffic patterns at the connecting intersections at Waipukurau, manual traffic count surveys undertaken in 2018 are summarized for the weekday AM and PM peak hours in **Figure 11** and **Figure 12**, respectively.



**TE MATA MUSHROOM COMPANY
MOUNT HERBERT ROAD DEVELOPMENT**

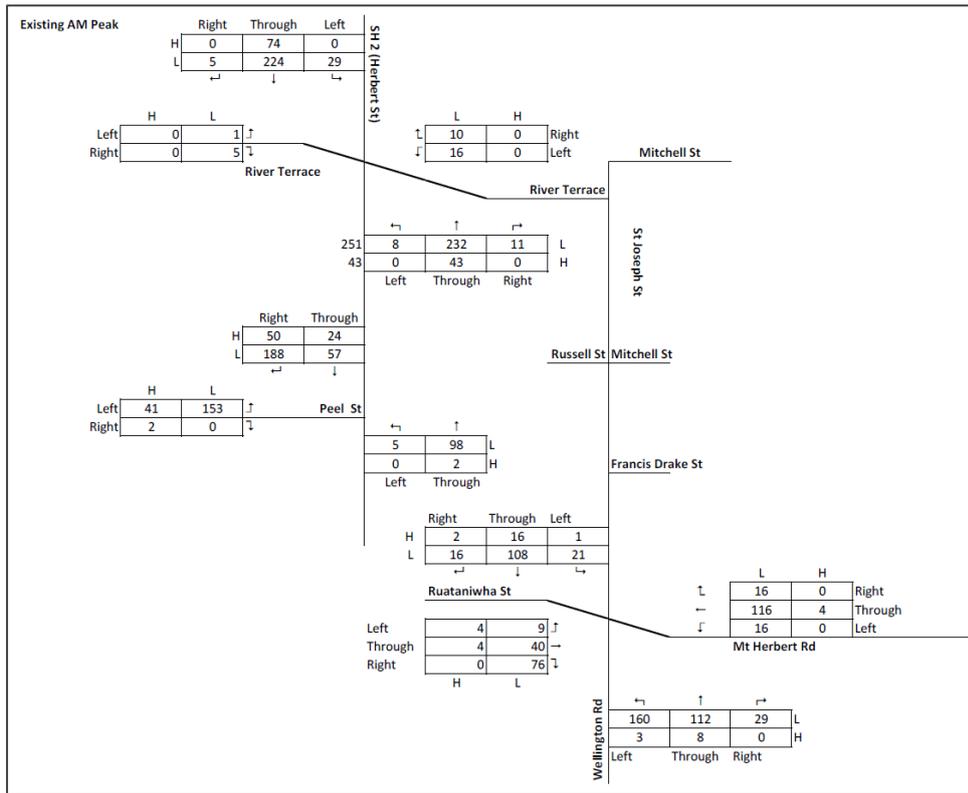


Figure 11: AM Peak Hour Traffic Movements

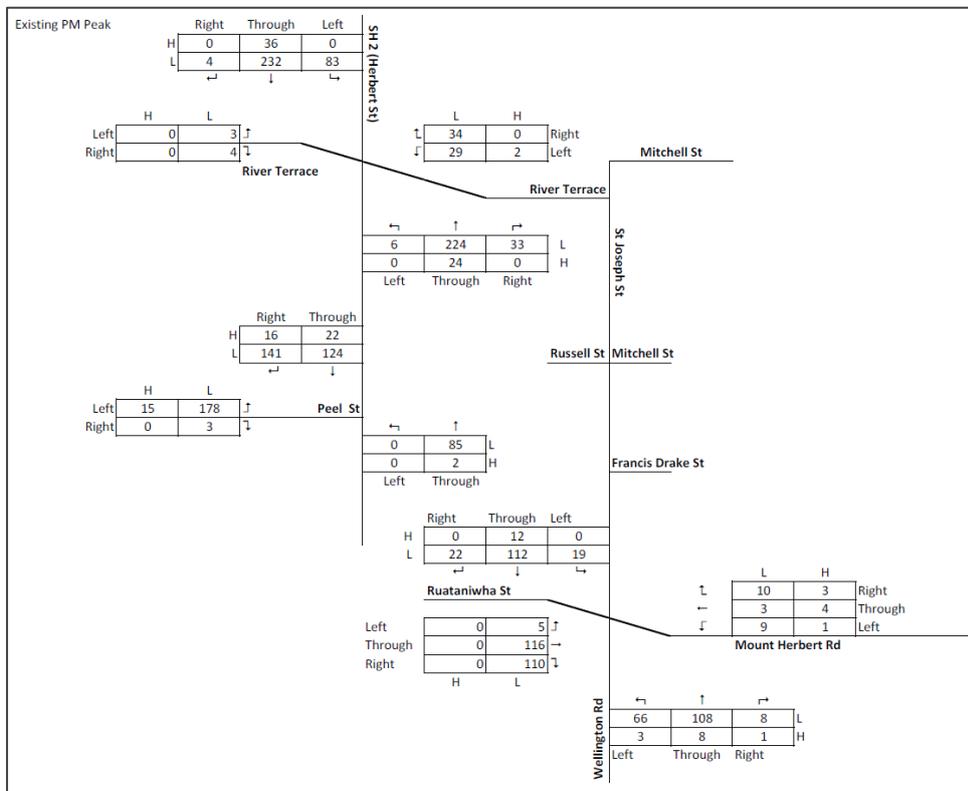


Figure 12: PM Peak Hour Traffic Movements



As shown, turning movements and associated opposing through traffic volumes at each of the respective intersections are not large, with an assessment of these intersections using the industry recognized 'SIDRA Intersection' indicating all approaches are operating at a very good Level of Service⁴ "A" for AM and PM peak hours. Accordingly, the adjacent network is operating well within capacity.

The diagrams above show around 10 existing HGV movements were recorded on Mount Herbert Road during each of the AM and PM peak periods, with these likely to be associated with either the established quarry or the waste transfer station / wastewater treatment plant (located at 177 Mount Herbert Road).

3.3 ROAD SAFETY

For the purpose of reviewing the road safety record between the site and the strategic road network at SH2, an examination of the NZ Transport Agency's national Crash Analysis database (**CAS**) for the full length of Mount Herbert Road and each of the intersections identified at Section 3.1 has been undertaken, for the most recent complete 5-year period (2016-2020).

The crash history is summarised in **Table 3** below.

Table 3: Summary of Crashes

Location	Cause	Severity	Crashes
SH 2 / River Terrace intersection	Vehicle turning right out of River Terrace (east) collided with NB through vehicle. Causal factors recorded as 'failed to give-way to priority traffic.'	Non-injury	1
	Rear end collision between two NB vehicles on SH2. Failed to notice vehicle in front slowing/turning / distracted by mobile phone recorded as causal factors.	Non-injury	1
	Truck and trailer turning left onto SH2 from River Terrace (west) forced to track wide to avoid road works at side of carriageway on the highway; vehicle behind also turning left onto SH2 assumed truck turning right and attempted to undertake on the left, and side-swiped by trailer. Mis-judged intention of other vehicle recorded as causal factor.	Non-injury	1
SH2 / Peel Street intersection	Truck turning left onto SH2 collided with vehicle undertaking on the left. 'Misjudged intentions of another party' and 'new driver under instruction' recorded as contributing factors.	Non-injury	3
SH2 / Porangahau Rd / Ruataniwha St intersection	Vehicle entering the roundabout failed to give-way and collided with circulating traffic. 'Failed to notice another party' and 'did not check/failed to give way to priority traffic' listed as causal factors.	Non-injury	2
	Eastbound vehicle on Ruataniwha Street turning left at roundabout collided with pedestrian (aged 7) crossing from right. Causal factors recorded as 'pedestrian crossing heedless of traffic'.	Minor	1
Mount Herbert Rd / Ruataniwha St / St Joseph St / Wellington Rd intersection	SB vehicle on Wellington Road lost control turning right, collided with traffic island. 'Inexperience' recorded as causal factor.	Minor	1
	Vehicle turning from side road collided with NB vehicle on Wellington Road. 'Failed to notice	Non-injury	1
		Minor	2



⁴ Level of Service (LOS) is a six-level grading system for intersection performance (A to F), where Level A represents totally uncongested operation with minimal delays and queues, and Level F represents highly congested operation with long delays and extensive queuing

**TE MATA MUSHROOM COMPANY
MOUNT HERBERT ROAD DEVELOPMENT**

	another party' and 'did not check/failed to give way to priority traffic' listed as causal factors.		
Mount Herbert Rd	EB vehicle towing a trailer lost control. 'Too far left' and 'lost control' recorded as contributing factors.	Non-injury	1
	EB vehicle lost control on left-hand hand. 'Alcohol suspected' and lost control when turning' recorded as casual factors.	Minor	1
Total			15

The analysis of the crash history at each of the intersections indicates less than one recorded incident per year, with the majority of these being non-injury (i.e., damage only).

It is noted that the Peel Street carriageway has been widened at the SH2 intersection in the last 2-3 years, which may be contributing to some of the crashes involving light vehicles attempting to 'undertake' (on the left) trucks waiting to turn onto the highway. An area of hatching adjacent to the kerb could potentially be introduced to mitigate such behaviour.

Of the two crashes that occurred on Mount Herbert Road (the location of which are shown in **Figure 13**), the first incident was due to the driver failing to maintain control around an easy left-hand bend on the gravel road. The second crash occurred when a driver towing a trailer was unaware that the carriageway seal ended, leading to a subsequent loss of control on the initial section of unsealed road.

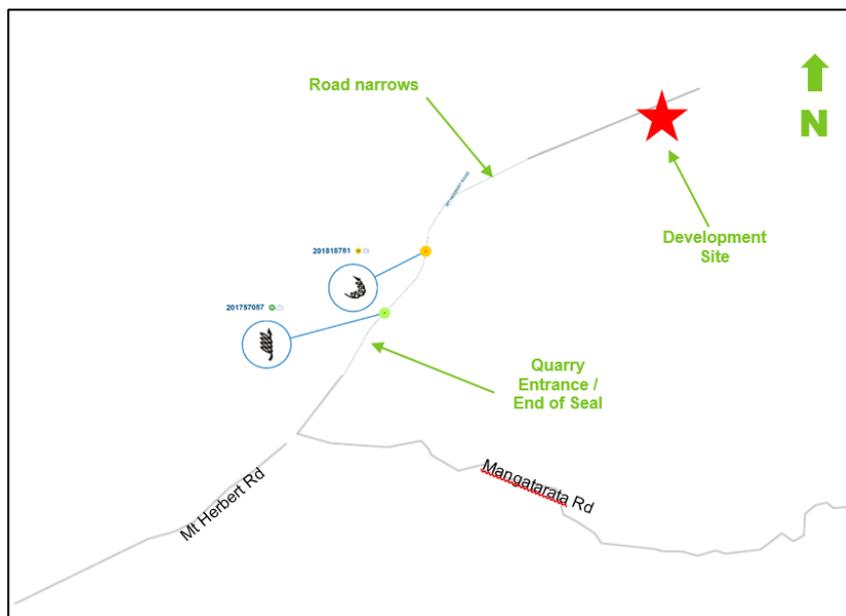


Figure 13: Mount Herbert Road Crash Locations

The crash record for Mount Herbert Road exhibits accidents that are not uncharacteristic of the rural environment which this route forms part of, involving loss of control crashes resulting from errors in judgement, speed, or vehicle placement.

Overall, from the analysis above, there is nothing to suggest from these records that there are existing safety concerns that would be exacerbated in respect of the current proposal. Notwithstanding this, some recommended improvements are set out in Chapter 11.0 aimed at mitigating the risk of loss of control crashes along the eastern section of Mount Herbert Road.



3.4 EXISTING FOOTPATH AND CYCLE ROUTES

The pedestrian and cycle network in the Waipukurau urban area is well established, with footpaths and on-road cycle lanes provided on the connecting streets between Mount Herbert Road and the town centre. To the east of the town centre, off-road walking and cycling tracks provide access to the Tukituki River recreational area.

The Gum Tree Farm Mountain Bike park, situated to the south and east of the development site, can be accessed either via Mangatarata Road or Mount Herbert Road. At present, those arriving by car via Mount Herbert Road typically park adjacent to the site frontage and access the park via the existing Right-of-Way (**RoW**) that abuts the site's western boundary; this practice is expected to continue in the future albeit with vehicles parking further east on Mount Herbert Road, clear of the new access driveway.

3.5 RECENT AND CURRENTLY SCHEDULED WORKS

It is noted that some recent regrading work was undertaken along the unsealed section of Mount Herbert Road in 2018/2019, to improve the carriageway surface.

A review of the various Council infrastructure and asset management plans⁵ shows there are currently no further scheduled works for Mount Herbert Road.



⁵ Including the latest Council 'Long Term Plan 2018-2028'

4.0 COUNCIL PLANNING STRATEGIES

In September of last year Council adopted the Central Hawke's Bay Integrated Spatial Plan 2020-2050 (CHBISP), which provides a framework for growth across the district over the coming 30-year horizon.

The CHBISP identifies areas of proposed urban / residential expansion within Waipukurau, as highlighted in **Figure 14** below. The location of the development site is highlighted at the top right of the figure.

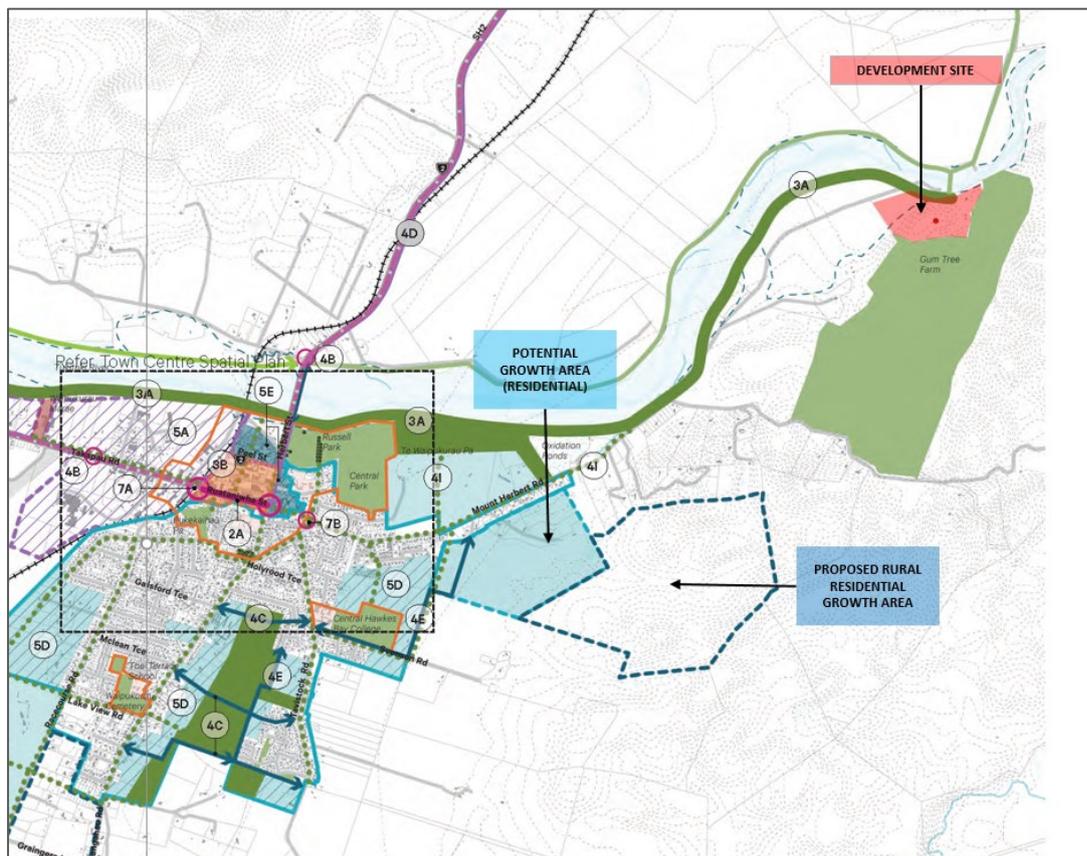


Figure 14: CHBISP Waipukurau Spatial Plan

As shown, the development site is located outside of the potential residential growth areas identified by Council. In addition, it is noted that the CHBISP includes a 'green links' safe walking and cycling street connection (illustrated by the green dotted line on the map above) along Mount Herbert Road, extending from the current urban boundary to the Mangatarata Road intersection, which in turn would connect with the off-road walking and cycling track towards the Tukituki River and Gum Tree Farm mountain bike park, providing improved pedestrian and cycle amenity along this route.



5.0 DEVELOPMENT PROPOSAL

5.1 EXISTING SITE USE

The development site, commonly referred to as the 'Mount Herbert' property, forms part of a farm block accessed off Mount Herbert Road. The site includes a number of separate lots comprising a mixture of pastoral grazing and river flats. Two existing residential dwellings are accommodated within the broader property, including the original residential homestead at #302 Mount Herbert Road, and a house and farm buildings on the proposal site at #464 Mount Herbert Road (Lot DP554782).

Existing and proposed subdivision consents for the wider property envisage the development of approximately 15 new dwellings within lifestyle blocks. Allowance for the associated traffic additions generated by such activity has been made in the assessment of the traffic effects undertaken herein.

5.2 PROPOSED DEVELOPMENT

The current development proposal relates to the establishment of a compost production facility within Lot 1 (DP554782) at the northeast end of the Mount Herbert property, as illustrated earlier in **Figure 1**. Compost produced at the site will primarily be used to serve the cultivation of mushrooms at a separate established growing facility in Havelock North. The detailed proposal plans are provided separately within the wider application documents.

The facility will include two new main buildings, as follows:

- 'Bunker' building comprising 1,631m² GFA that will accommodate the initial stage of the decomposition of the raw materials; and
- 'Main' building comprising 5,136m² Gross Floor Area (**GFA**) that will house the associated office, workshop, storage areas and mixing hall, as well as the enclosed compost 'tunnels' where the final stage of the compost production will take place.

In addition to the buildings described above the site will include freshwater and goodie⁶ water ponds, a water storage dam, an outdoor working yard, on-site parking, and associated vehicle circulation and manoeuvring areas to accommodate the servicing demands generated at the site.

Access to the site will be achieved via a new vehicle crossing connection to Mount Herbert Road, to the east of the existing RoW that forms the site's western boundary. A second vehicle crossing to the adjacent RoW will accommodate occasional light vehicle movements only.

The development will be supported by 10 on-site carparks for staff and occasional visitors, with ample additional space available within the wider site to informally accommodate further occasional demand as required.



⁶ Compost leachate pond

6.0 DISTRICT PLAN

The development site is zoned “rural” within the provisions of the operative District Plan. An assessment of the proposal against the relevant parking, loading and access standards has been undertaken, as set out in **Table 4**.

Table 4: District Plan Compliance

Standard	Requirement	Compliance
8.5.1 Parking and Loading		
(a)	<p><u>Minimum Parking Space Requirements</u></p> <p>i. All activities listed in Table 1 below shall provide at least the number of parking spaces on site required by the rates identified in that table. The required parking spaces shall be available for residents, staff and visitors at all times during the hours of operation of the activity</p> <p>ii. Where there are two or more different activities on the site, the total requirement for the site shall be the sum of the parking requirements for each activity.</p> <p><i>Table 1: “Factory Farming”:</i></p> <ul style="list-style-type: none"> • 1 visitor park per 500m² GFA or 2 parks whichever is greater; and • 1 park per 2 staff. 	<p>Does not Comply.</p> <p>With up to 8 staff and a combined building GFA of 6,767m², the District Plan requires a total of 18 parks (14+4). Whilst the proposed ten parking spaces falls short of this requirement the actual visitor demands at the site will be small (up to two at any time), meaning the proposed provision is expected to adequately accommodate all generated demand, noting extra informal parking is available within the site. Further assessment of this is provided at Chapter 7.0.</p>
(b)	<p><u>Car Parking for Staff</u></p> <p>Minimum parking requirement stated in Table 1 for staff shall be exclusively reserved for, and made available to, staff.</p>	<p>Can Comply.</p> <p>Spaces can be marked for ‘staff’ use.</p>
(c)	<p><u>Assessment of Parking Areas</u></p> <p>Where the parking requirements listed in Table 1 results in a fractional space, any fraction of one half or more shall be counted as one car parking space.</p> <p>The area of any parking space or spaces provided and of vehicular access, drives and aisles provided within a building shall be excluded from the assessment of gross floor area of that building for the purpose of ascertaining the total number of spaces required or permitted.</p>	<p>Noted.</p>
(d)	<p><u>Size of Parking Spaces</u></p> <p>All required parking spaces and associated manoeuvring areas, other than for residential units, are to be designed in accordance with the New Zealand Building Code approved document D1: Access Routes.</p>	<p>Complies.</p> <p>In line with the New Zealand Building Code approved document D1: Access Routes, on-site parking spaces and manoeuvring areas have been designed to align with AS/NZS2890.1</p>
(e)	<p><u>Accessible Car Spaces</u></p> <p>Accessible parking spaces are to be designed in accordance with the New Zealand Building Code approved document D1: Access Routes.</p>	<p>Can Comply.</p> <p>In line with the New Zealand Building Code approved document D1: Access Routes, on-site parking spaces and manoeuvring areas have been designed to align with NZS4121 i.e. the provision of one accessible carpark, for sites where <20 spaces are provided.</p>
(f)	<p><u>Queuing</u></p>	<p>Complies.</p> <p>The position of the on-site car parks is sufficiently removed</p>



	All queuing spaces are to be designed in accordance with the New Zealand Building Code approved document D1: Access Routes.	from the access driveway to align with the queuing space requirements of AS/NZS2890.1
(g)	<p><u>Reverse Manoeuvring</u></p> <p>i. On-site manoeuvring shall be provided for all vehicles to ensure that no vehicle is required to reverse either onto or off a road except where:</p> <ol style="list-style-type: none"> Any activity is required to provide, or contain, two or less parking or loading spaces; or An activity is in the Business 1 Zone and has access onto any road other than a State Highway. <p>Such on-site manoeuvring shall comply with the following requirements for a design vehicle anticipated to use a site:</p> <ul style="list-style-type: none"> for a design car (refer Appendix E3), for a design two axled truck (refer Appendix E4), for all other vehicles (refer Australian Standard AS 2890.2-1989, Off-street parking, Part 2: Commercial vehicle facilities). <p>ii. All truck refuelling sites shall be designed to accommodate a maximum length BTrain in a manner which will avoid the need to reverse off the site.</p> <p>iii. Parking spaces shall be located so as to ensure that no vehicle is required to carry out any reverse manoeuvring when moving from any vehicle access to any required parking spaces.</p> <p>iv. Vehicles shall not undertake more than one reverse manoeuvre when manoeuvring out of any required parking or loading space to depart the site.</p>	<p>Complies.</p> <p>The on-site vehicle circulation and carparking requirements have been designed to ensure that vehicles are not required to reverse to or from Mount Herbert Road. Adequate on-site manoeuvre aisle widths are provided to ensure vehicles can turn in/out of parking and loading spaces without needing to undertake more than one reverse manoeuvre.</p>
(h)	<p><u>Loading Areas</u></p> <p>All service, industrial and commercial activities (including retail activities) in the Business Zone 2 shall provide one loading space and associated manoeuvring area, in accordance with the following:</p> <p>Every loading space shall be of a useable shape and shall have a minimum height of 3.8m and a minimum width of 3.5m or such greater width as is required for adequate manoeuvring. The depth shall be as follows:</p> <ol style="list-style-type: none"> For transport depots or other similar activities, not less than 9m. For retail premises, offices, warehouses, bulk stores, industrial and service activities and other similar uses, not less than 8m. <u>except that:</u> Offices and other non-goods handling activities, where the gross floor area is less than 1500m² the space can be reduced to 6m in depth, 3m wide and 2.6m high. 	<p>Does not Apply.</p> <p>The site is zoned 'Rural' and therefore no requirement for on-site loading is anticipated within the District Plan. Notwithstanding this, the proposal plans include provision for all associated loading activities to be undertaken within the site.</p>
(i)	<p><u>Surface of Parking and Loading Areas</u></p> <p>i. The surface of all parking, loading and trade vehicle storage areas shall be formed and finished with an all weather, dust free surface and shall be drained to the satisfaction of the Council.</p>	<p>Complies.</p> <p>The on-site parking and loading areas will be formed and finished to an appropriate all weather standard.</p>
8.5.2 Vehicle Access		
(a)	<p><u>Vehicle Access to be Provided</u></p> <p>In all zones:</p> <ol style="list-style-type: none"> Every lot with direct vehicle access to a road or to a vehicle access lot, shall be provided with a complying vehicle crossing. 	<p>Complies.</p> <p>A formed and drivable surface will be provided between the proposal site and Mount Herbert Road.</p>



**TE MATA MUSHROOM COMPANY
MOUNT HERBERT ROAD DEVELOPMENT**

	<p>ii. Every vehicle access lot shall be provided with a complying vehicle crossing.</p> <p>iii. Every activity requiring access to a road shall have access to that/those road(s) only by way of a complying vehicle crossing.</p> <p>iv. A complying vehicle crossing shall meet the following requirements:</p> <ol style="list-style-type: none"> Where a lot has direct vehicle access to a road: a formed and drivable surface shall be provided between the carriageway of the road and the road boundary of the lot. Where a vehicle access lot meets the road: a formed surface and drivable surface shall be provided between the carriageway of the road and the road boundary of the vehicle access lot. Where the lot has direct vehicle access to a vehicle access lot: a formed and drivable surface shall be provided between the carriageway of the vehicle access lot and the boundary of the lot. An access space shall be established on the lot. This shall comprise an area of land within the lot 3.5m wide by 5.0m long, formed and set aside and useable by a motor car and accessible from the vehicle crossing. 	
(b)	<p><u>Formation and Sealing of Vehicle Crossings</u></p> <ol style="list-style-type: none"> All vehicle crossings shall be formed with an all weather surface and shall be drained to the satisfaction of the Council. Where the road carriageway adjacent to the vehicle crossing is sealed, then the vehicle crossing shall be sealed. <ul style="list-style-type: none"> Rule 8.5.2 (b) (i) and (ii) does not apply where the vehicle crossing gives access to paddocks which do not contain any buildings, and which are used exclusively for extensive grazing or cropping. Rule 8.5.2 (b) (i) applies to dairy herds using any vehicle crossing on a regular basis for milking. Minimum height clearance for vehicle crossings and common vehicle manoeuvring areas on-site, shall be 3.5 metres for residential units and 4.5 metres for all other activities. Vehicle crossing gradients be designed in accordance with the New Zealand Building Code approved document D1: Access Routes. 	<p>Can Comply. The vehicle crossing between the site and Mount Herbert Road will be formed to an all weather surface and will include appropriate gradients. Minimum vehicle clearance height requirements are fully met at the vehicle crossing and within the on-site manoeuvring areas.</p>
(c)	<p><u>Mitigation of Gravel onto Sealed Roads</u></p> <ol style="list-style-type: none"> All formed and drivable surfaces on any lot with direct access to a sealed road, and any vehicle crossing, shall be designed and constructed and maintained in such a way that gravel and/or stones and/or silt shall not migrate on to any formed public footpath or on to the sealed carriageway." 	<p>Does not Apply. Mount Herbert Road at the proposed site access driveway does not include a footpath or sealed carriageway.</p>
(d)	<p><u>Location of vehicle crossings with frontage in relation to intersections</u></p> <ol style="list-style-type: none"> The following standard applies to sites that have frontage to State Highway 2 and 50 in the Rural Zone: <ol style="list-style-type: none"> Where the road frontage of the site lies entirely within 212m of an intersection, the vehicle crossing to the site shall be located on the access frontage within 12 metres of the side 	<p>Does not Apply. Mount Herbert Road is not a State Highway.</p>



**TE MATA MUSHROOM COMPANY
MOUNT HERBERT ROAD DEVELOPMENT**

	<p>boundary of the site which is farthest from the intersection.</p> <p>b. Where the road frontage of the site is greater than 212m in length, the vehicle crossing to the site shall be located on the access frontage at least 200 metres from the intersection.</p> <p>ii. The following standards apply to all other sites in the Rural Zone:</p> <p>a. Where the road frontage of the site lies entirely within 80 metres of an intersection, the vehicle crossing to the site shall be located on the access frontage within 12 metres of the side boundary of the site which is farthest from the intersection.</p> <p>b. Where the road frontage of the site is greater than 80 metres in length, the vehicle crossing to the site shall be located on the allowed access frontage at least 68.0 metres from the intersection.</p> <p>iii. The following standards apply to all sites in all Zones except the Rural Zone:</p> <p>a. Where the entire road frontage of the site lies within 62 metres of an intersection, the vehicle crossing to the site shall be located on the access frontage within 12 metres of the side boundary of the site which is farthest from the intersection.</p> <p>b. Where the road frontage of the site is greater than 62 metres in length, the vehicle crossing to the site shall be located on the allowed access frontage at least 50 metres from an intersection.</p>	<p>Complies. The proposed site access is located approximately 1.9km from the nearest intersection, at Mangatarata Road.</p> <p>Does not Apply. The development site is zoned Rural.</p>												
(e)	<p><u>Width of Vehicle Crossings</u> The following crossing width (Table 2) shall apply:</p> <p>Table 2 - Crossing Widths</p> <table border="1" data-bbox="344 1227 1023 1350"> <thead> <tr> <th rowspan="2">Land Use</th> <th colspan="2">Width of Crossing (m)</th> </tr> <tr> <th>Minimum</th> <th>Maximum</th> </tr> </thead> <tbody> <tr> <td>Residential</td> <td>3.5</td> <td>6.0</td> </tr> <tr> <td>Other</td> <td>6.0</td> <td>9.0</td> </tr> </tbody> </table> <p>The width of culverts and crossings shall be the actual length of channel covers or the length of the fully dropped curb.</p>	Land Use	Width of Crossing (m)		Minimum	Maximum	Residential	3.5	6.0	Other	6.0	9.0	<p>Complies. The proposed vehicle crossing sits within the 9m maximum width allowed for at the property boundary.</p>	
Land Use	Width of Crossing (m)													
	Minimum	Maximum												
Residential	3.5	6.0												
Other	6.0	9.0												
(f)	<p><u>Sight Distances from Vehicle Crossings and Road Intersections</u> Unobstructed sight distances, in accordance with the minimum sight distances specified in Table 3, shall be available from all vehicle crossings and road intersections.</p> <p>Table 3 - Minimum Sight Distances from Vehicle Crossings and Road Intersections</p> <table border="1" data-bbox="344 1592 1023 1720"> <thead> <tr> <th>Legal Speed Limit for Road (km/hr)</th> <th>Minimum Sight Distance (m)</th> <th>Minimum Site Distances for State Highways</th> </tr> </thead> <tbody> <tr> <td>50</td> <td>45</td> <td>85</td> </tr> <tr> <td>70</td> <td>85</td> <td>140</td> </tr> <tr> <td>100</td> <td>170</td> <td>250</td> </tr> </tbody> </table> <p>All sight distance measurements shall be undertaken in accordance with the relevant diagram in Appendix E.</p>	Legal Speed Limit for Road (km/hr)	Minimum Sight Distance (m)	Minimum Site Distances for State Highways	50	45	85	70	85	140	100	170	250	<p>Can Comply. The available sightlines at the proposed access driveway extend >200m to the west, and with the clearance of vegetation along the property boundary to the east can achieve the 170m requirement. Similarly, sightlines at the existing RoW connection to Mount Herbert Road (onto which the second site vehicle access is achieved) will meet these standards.</p>
Legal Speed Limit for Road (km/hr)	Minimum Sight Distance (m)	Minimum Site Distances for State Highways												
50	45	85												
70	85	140												
100	170	250												

As shown, the development proposal aligns well with the traffic and transport provisions of the District Plan in satisfying each of the relevant standards, with the exception of the minimum on-site visitor car parking allocation. In this regard it is noted that the nature of the activity proposed is not one that will generate any significant visitor demand, and the scale of on-site parking provided (i.e. 2 visitor spaces) is expected to adequately cater for any related demand. Notwithstanding this, it is noted that ample residual space exists within the wider site to accommodate extra informal parking, but that formally marking out these spaces is not required.



7.0 PARKING

The proposal plans have been designed to ensure that adequate on-site car parking is provided to fully meet the anticipated parking demand generated by the proposed activity.

7.1 DISTRICT PLAN PARKING REQUIREMENTS VERSUS DEMAND

AT Rule 8.5.1(a), the District Plan sets out parking space requirements based on activity type. In reviewing the activities identified, none of these relate specifically to the nature of the proposed compost production facility, noting that the closest category of 'Factory Farming' has therefore been adopted and includes separate requirements for staff and visitors as follows:

- 1 visitor park per 500m² GFA or 2 parks whichever is greater; and
- 1 park per 2 staff.

The proposed 6,767m² GFA and 8 staff therefore require a total of 18 parking spaces to satisfy this requirement.

In this regard, the District Plan rates assume a reasonable visitor demand for such activities, presumably based on an allowance for customers to purchase goods directly from the site. Such will not be the case here, with visitor demands infrequent and involving no more than 1 or 2 associated vehicles at any one time.

Accordingly, the on-site parking supply has been informed based on the expected staff and visitor numbers, with the total of ten on-site car parks meeting anticipated demand associated with all staff and visitors at the site.

Notwithstanding this, it is noted that significant residual on-site space is available to accommodate any occasional larger demand that may eventuate from time to time, ensuring that all associated parking demand generated at the site can be adequately accommodated without the need for vehicles to park off-site.

7.2 PARKING LAYOUT

In line with District Plan Rules 8.5.1 (d) and (e) the on-site parking spaces are designed to meet the dimension requirements and minimum aisle widths prescribed within the industry standard AS/NZS2890.1:2004 Parking Facilities – Off-street car parking', and will include provision for at least one accessible carpark as per the requirements of NZS4121:2001 Design for Access and Mobility.



8.0 ACCESS

The development site accesses have been assessed to ensure they can be designed to comply with the relevant crossing formation requirements and minimum sight distance standards set out in the District Plan.

8.1 MOUNT HERBERT ROAD MAIN ACCESS

It is noted that approval for the new site vehicle crossing has been granted by Council on the basis of it being formed to the required standards and specifications identified in the District Plan's 'Minimum vehicle crossings for Multiple Residential Property & Farming or Commercial Activity (TS-LT-2009-08.2)', which is reproduced below.

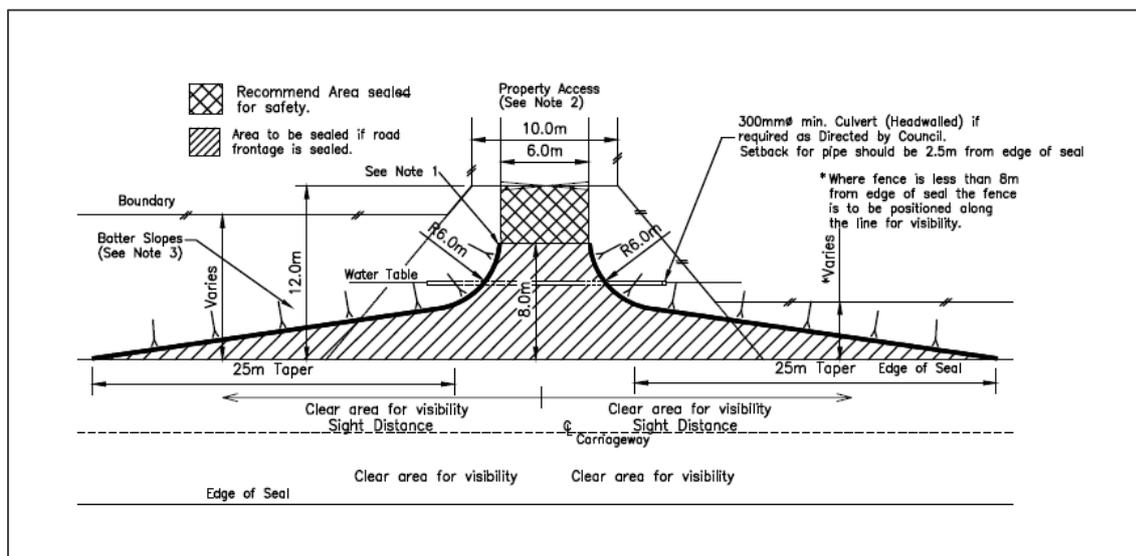


Figure 15: District Plan Access Standard

In regard to these standards, the site's location near the end of Mount Herbert Road will result in all vehicle movements at the site driveway involving 'right turn in' / 'left turn out'. With no 'left turn in' movements therefore expected, there is no requirement for widening and provision of a taper on the eastern approach to the site driveway (as envisaged in the diagram above) to accommodate such manoeuvres, providing the full sight distance requirements are still able to be met. It is therefore recommended the above approved design can be amended, and an indicative design for the access driveway is provided in **Appendix A**.

The unsealed nature of the Mount Herbert Road carriageway and location of the site near the road's termination serve to reduce the operating speed of traffic at the new driveway to below the posted 100kph limit. Notwithstanding this, the District Plan sets out minimum clear sightline requirements for commercial developments that access onto roads with a posted speed limit of 100kph of 170m.

The available sight distances at the proposed access driveway are illustrated in the photographs included at in **Figure 16** and **Figure 17**. Sightlines to the east are currently restricted by vegetation on the southern side of the carriageway to around 100m; to the west, clear sightlines extend >200m.





Figure 16: Mount Herbert Road – Proposed new access (view west)



Figure 17: Mount Herbert Road – Proposed new access (view east)

Given the straight and level alignment of Mount Herbert Road at the location where the new access will connect, the removal of vegetation within the road reserve on the south side of the carriageway will enable clear a sight distance to the east of 170m to be achieved (as illustrated by the plans included at **Appendix A**), noting this improvement will also beneficially increase sightlines for vehicles exiting the adjacent RoW. Accordingly, compliant sight lines for vehicles at the proposed new access can be provided, noting maintenance of the vegetation will need to be upheld.

8.2 NEW LIGHT VEHICLE CROSSING TO ROW

In addition to the main site driveway connection to Mount Herbert Road, a secondary site driveway access to the adjacent RoW is also proposed to facilitate occasional light vehicle access (including maintenance vans) to the bio filters etc., at the rear of the site. This driveway will connect with the existing RoW approximately 160m south of Mount Herbert Road. As illustrated by the photographs included in **Figure 18** and **Figure 19** below, the existing straight and generally level alignment of the RoW in this location will ensure that vehicles exiting the site are afforded good sightlines, noting a recommendation is made to install signage at the driveway egress to alert drivers of the potential presence of cyclists (accessing to/from the Gum Tree Farm mountain bike park) that may be on the RoW.



Figure 18: RoW – Proposed new secondary access (view north)



Figure 19: RoW – Proposed new secondary access (view south)



9.0 ASSESSMENT OF TRAFFIC EFFECTS

9.1 ADJACENT NEW RESIDENTIAL DEVELOPMENT TRAFFIC

As described earlier there are several lots within the wider Mount Herbert property that are planned for residential development, with consent being sought for a total of 17 lots (through Stages 1–4) that can be developed with new dwellings. Once built, the majority (15) of these properties will access the external network either via new driveway connections to the sealed portion of Mount Herbert Road or off Mangatarata Road. Two new properties (Lot 6–7 DP 554782) will connect with the unsealed portion of Mount Herbert Road via the existing RoW that forms the subject site’s western boundary, along with the existing dwelling on Lot 8 of 464 Mount Herbert Road. In addition to this residential development within the broader Mount Herbert property, it is understood that consent has recently been granted for three new dwellings on the south side of Mangatarata Road. Associated traffic generated by this new residential development will route to/from Waipukurau via Mount Herbert Road.

For the purposes of determining the traffic generated by this new residential activity, an assessment of the forecast trip generation has been made. In this regard, surveys of households reported within the NZ Transport Agency ‘Research Report 453 Trips and Parking Related to Land Use 2011’ indicates daily trip generation rates for ‘Rural’ residential activities typically average around 10.1vpd per dwelling, with associated peak hour movements of 1.4vph. Applying these rates to the consented and proposed new dwellings indicates additional peak hour trips on the local network of 28vph.

These additions are modest and in the context of the current low traffic volumes on Mount Herbert Road near the Mangatarata Road intersection (approximately 100vph during the peaks) can be more than adequately accommodated within the residual carriageway capacity.

These associated residential trips represent the baseline traffic against which the proposed compost production facility is to be assessed.

9.2 FORECAST DEVELOPMENT TRAFFIC GENERATION

An assessment of the expected trip generation for the proposed site development has been undertaken based on staff numbers and anticipated visitor and servicing demands.

Based on the scale of the activity it is expected that a total of 8 staff could potentially be on-site at any one time. Allowing for staff to drive to/from work would generate 16 vehicle movements at the site driveway, per day. In addition to staff, allowance for maintenance visits / occasional visitor demands involving on average one visit per day (two movements at the driveway) has been allowed for.

With respect to servicing demands these can be categorized into those delivering raw materials for the composting process, and those transporting the finished compost off-site. With the facility expected to operate Monday through Sunday, the weekly servicing demands have been averaged to provide a typical daily volume of around 12-14 truck movements at the site per day.

Accordingly, the expected daily trip generation for the site including staff, visitors and servicing demands can be forecast as follows:

Table 5: Summary of Site Trip Generation

Vehicle Activity	Vehicle Type	Average Trips Per Day (Arrivals plus Departures)
Removal of compost from site	HGV (Truck and Trailer)	3-4
Delivery of straw to site	HGV	7-8
Delivery of gypsum / chicken litter to site	HGV	2
Other (maintenance / visitors)	Light Goods Vehicle	2
Staff	Light	16
Total		30-32



As shown, the development is expected to generate on average around 30-32 vehicle movements at the site driveways each day, with approximately half of these involving light vehicles and the balance being trucks.

Such volumes are not large and will not materially impact on the current good levels of service experienced at the connecting intersections of SH2 and associated Waipukurau town centre roading network (as described earlier at Section 3.2). Assessment of the forecast development traffic on the operation of Mount Herbert Road is provided below.

9.3 MOUNT HERBERT ROAD - SEALED SECTION

The section of Mount Herbert Road between the Waipukurau urban area and the end of seal adjacent to the quarry access is formed to a minimum 5.7m width, facilitating two-way vehicle flow including quarry related HGV movements. With good sightlines available at the Mangatarata Road intersection and with no record of any existing crashes either at the intersection or along the sealed section of Mount Herbert Road, between the quarry access and the Waipukurau town centre, there is no reason why this part of the network cannot continue to operate safely with the additional compost production facility traffic added, even with the adjacent new residential traffic included on the network.

9.4 MOUNT HERBERT ROAD - UNSEALED / GRAVEL SECTION

As described earlier, the eastern section of Mount Herbert Road between the quarry entrance and the proposal site is unsealed and formed to an approximate 4.6m width, with grass berms provided either side of this. Current traffic volumes on this part of the network are small (<200⁷vpd) and comprise a mixture of residential traffic, some agricultural traffic movements associated with the established farming activity, and recreational users accessing either the Tukituki River or the Gum Tree mountain bike park. Given the current carriageway width along this section of Mount Herbert Road, on occasion where two opposing vehicles meet then use of the grass berms provided outside of the carriageway is typically required for vehicles to pass. Such practice is not uncommon for low trafficked rural roads.

It is noted that the two recently consented lots to the rear of current proposal site are anticipated to accommodate new dwellings, with associated traffic then accessing the unsealed section of Mount Herbert Road via the existing RoW. These two new dwellings can be expected to add around 2-3vph additional movements to the unsealed section of Mount Herbert Road, during the peak hours. These changes are small and will not materially impact on the current carriageway operation.

In considering the additional traffic movements generated by the proposal on this section of road, and noting that some of the site related HGV movements will involve the same truck undertaking several trips a day (rather than several trucks undertaking a single trip), the probability of opposing trucks meeting each other is small, and even then, these vehicles will be able to utilise the berm to pass safely, as occurs for existing traffic at present. Whilst the addition of the compost production facility traffic could result in a small increase in the frequency of occasions whereby opposing vehicles on Mount Herbert Road could meet, this would manifest as a minor loss of convenience rather than introducing any adverse safety impact. Accordingly, in taking account of the modest number of development trips that will be added to the unsealed section of Mount Herbert Road under this proposal (i.e. around 30vpd), widening of the current carriageway is not considered necessary, nor is it assessed that the additional traffic will give rise to any new dust issues.

9.5 ACCESS TO GUM TREE FARM MOUNTAIN BIKE PARK

Those visitors to the mountain bike park who arrive by vehicle currently park within the widened section of Mount Herbert Road immediately adjacent to the proposed new site driveway, to then access the bike park via the RoW which provides for 'cycle access only' (i.e. no vehicular access to the park). Once the new site driveway is constructed it is expected that visitors to the mountain bike park would continue to park adjacent to Mount Herbert Road (within the road reserve and clear of the carriageway, as they do at present), but further to the east.



⁷ Estimated Mobile Roads volume for unsealed section of Mount Herbert Road

**TE MATA MUSHROOM COMPANY
MOUNT HERBERT ROAD DEVELOPMENT**

Accordingly, cyclists accessing the RoW either from parked vehicles on Mount Herbert Road or from the adjacent Tukituki esplanade bike areas to the northeast, will be required to cross the new site driveway, noting that any associated site vehicle movements will be travelling slowly in manoeuvring at the driveway and will have good visibility of any cyclists in the carriageway. Notwithstanding this, and in an equivalent manner to signage at the site's new secondary access onto the RoW, signage alerting drivers exiting the site of the potential presence of cyclists is recommended, to further mitigate any potential conflict.



10.0 SERVICING

As shown above, servicing requirements for the proposed activity are expected to typically involve on average around 12-14 trips per day. These servicing trips will generally be undertaken outside of the staff arrival/departure times.

Whilst the District Plan does not specifically require dedicated on-site loading bays for activities in the rural zone, provision of two dedicated on-site (un)loading areas capable of accommodating the largest service vehicle expected at the site (i.e. truck and trailer), will ensure all servicing activities will be wholly contained within the site extent. Example tracking paths demonstrating a truck and trailer manoeuvring at the proposed new access driveway, and turning within the on-site circulation areas, is provided in **Appendix B**.

Accordingly, the servicing demands generated at the site can be accommodated in an appropriate manner, with all service vehicles able to turn on-site and therefore enter and exit to/from Mount Herbert Road in a forward gear.



11.0 RECOMMENDATIONS

Drawing from the assessment described above, a number of recommendations are made in respect of mitigating the associated traffic activity generated by the proposed compost production facility, as follows.

11.1 TRUCK ROUTES THROUGH WAIPUKURAU

In response to discussions with Council, **Figure 20** below shows the recommended HGV routes for site traffic travelling to/from the west (shown in red) and to / from the north (shown in blue).

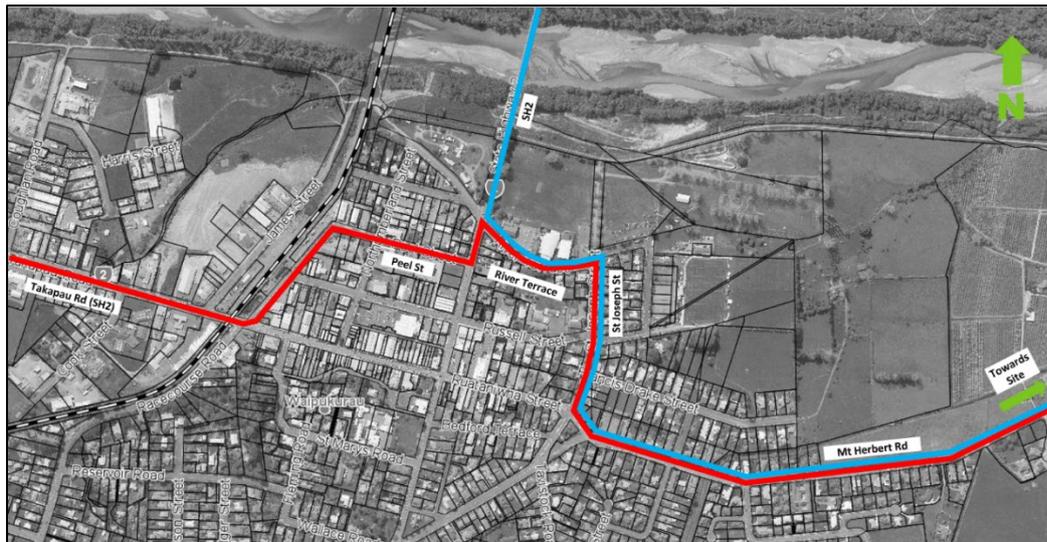


Figure 20: Proposed Site HGV Routes at Waipukurau

11.2 MOUNT HERBERT ROAD

11.2.1 Downward Revision of the Existing Speed Limit

It is recommended that a review be undertaken of the current posted speed limit on Mount Herbert, to confirm safe and appropriate speeds. The NZ Transport Agencies 'Speed Management Guide' should be used as the guidance document for this study. A preliminary assessment points to a 'safe and appropriate' speed limit for the adjacent unsealed section of Mount Herbert Road of 60km/h, noting that any review would logically include the full length of the Mount Herbert Road corridor. It is acknowledged that any downward revision of the posted speed limit sits outside of Resource Consent, and involves a separate process to be advanced by Council.

11.2.2 Unsealed Section of the Road Carriageway

For the unsealed section of Mount Herbert Road, it is recommended that:

- additional advance warning 'end of seal' signage be installed for eastbound traffic, prior to the quarry access;
- the current 4.6m unsealed carriageway width on Mount Herbert Road be extended from the RoW eastwards, to the proposed new main site driveway, and that the approved site access design be amended to take account of the right turn in/left turn out nature of vehicle movements to and from the site (as shown in the indicative design included at Appendix A); and
- signage be installed at the proposed new site driveways alerting drivers to presence of cyclists.



12.0 CONCLUSION

A detailed assessment of the transport related effects of a proposed new compost production facility has been undertaken with due regard to the provisions and requirements set out within the Central Hawkes Bay Council District Plan.

A suitable access strategy has been developed that provides for an appropriate site connection to Mount Herbert Road that can accommodate the associated vehicle demands generated by the proposed activity.

The amount of development site parking proposed is appropriate for the nature and scale of the planned activity.

All servicing demands generated by the proposed compost production facility are able to be accommodated on-site, with all associated vehicles able to enter and exit in a forward direction, removing the need for any reverse manoeuvres to/from Mount Herbert Road or the RoW.

With the adoption of the recommendations identified within this assessment, the resultant traffic generated by the proposed activity will not materially alter the existing traffic characteristics of the local road network, trigger safety concerns, or create new capacity issues.



Appendices

We design with community in mind



Appendix A INDICATIVE ACCESS DRIVEWAY DESIGN





LEGEND	
	170m SIGHT LINE TO THE EAST
	170m SIGHT LINE TO THE WEST

ORIGINAL SIZE A1

DO NOT SCALE - IF IN DOUBT, ASK



REV	REVISIONS	DRN	CHK	APP	DATE

SURVEYED	
DESIGNED	
DRAWN	
CAD REVIEW	
DESIGN CHECK	
DESIGN REVIEW	
APPROVED	NOT APPROVED
PROF REGISTRATION:	



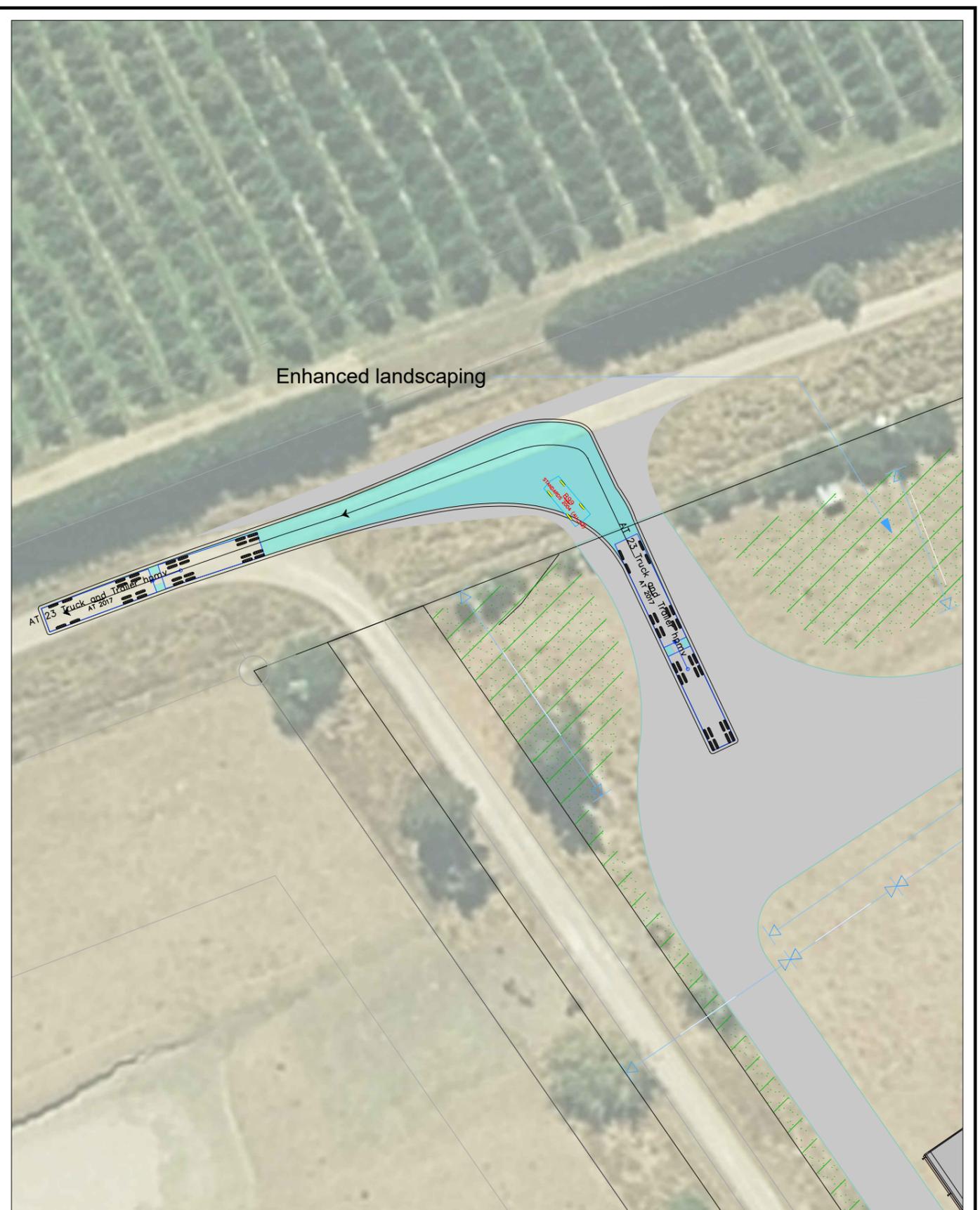
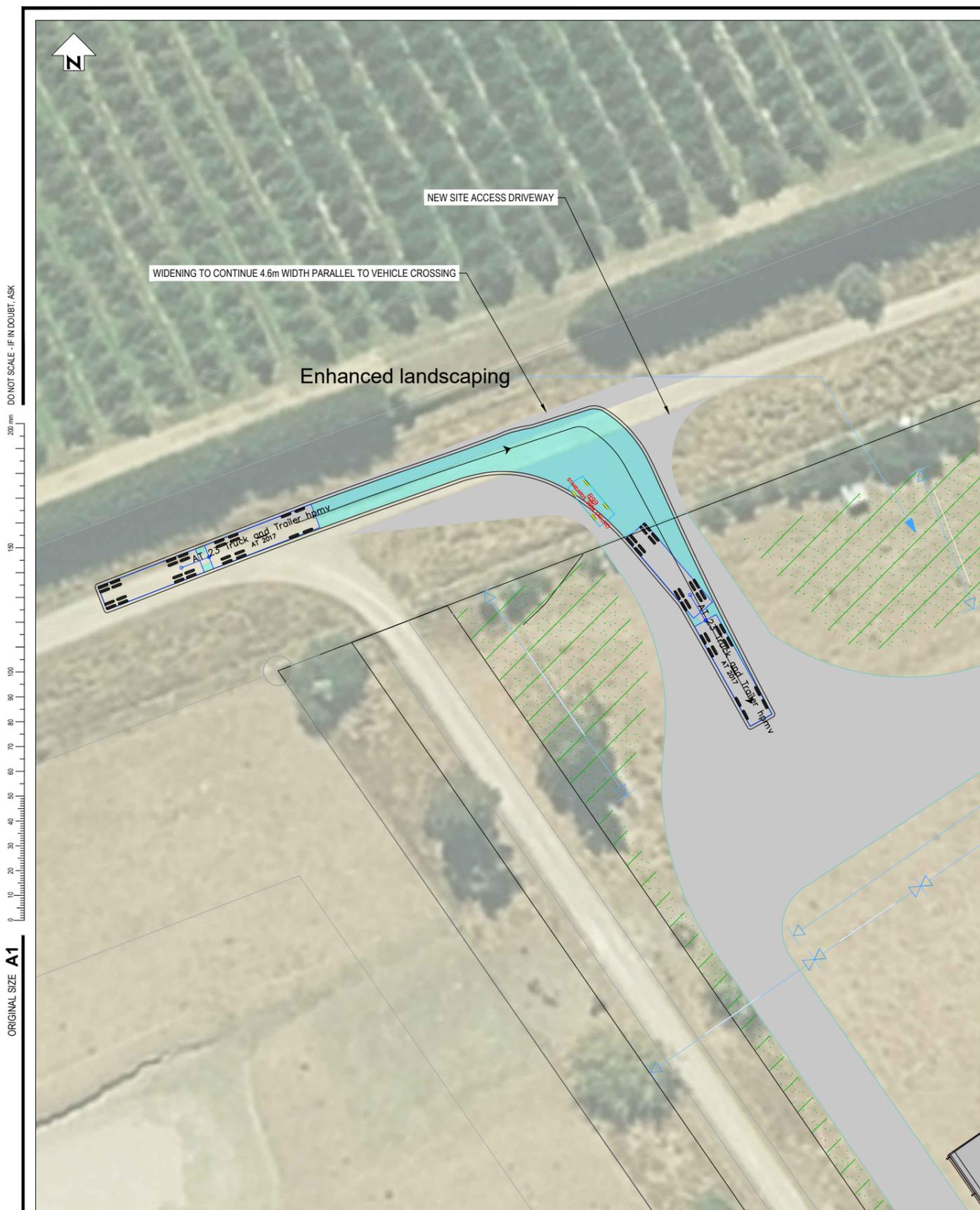
Client:
TE MATA MUSHROOMS

SIGHT LINES AT ACCESS DRIVEWAY

NOT FOR CONSTRUCTION	
Status Stamp	WORKING PLOT
Date Stamp	01.03.2021
Scales	1:500 (A1)
Drawing No.	
Rev.	A

Appendix B VEHICLE TRACKING PLANS





REV	REVISIONS	DRN	CHK	APP	DATE

SURVEYED	
DESIGNED	
DRAWN	
CAD REVIEW	
DESIGN CHECK	
DESIGN REVIEW	
APPROVED	NOT APPROVED
PROF REGISTRATION:	



Client:
 TE MATA MUSHROOMS

VEHICLE TRACKING AT ACCESS DRIVEWAY

Status Stamp	WORKING PLOT
Date Stamp	01.03.2021
Scales	1:500 (A1)
Drawing No.	
Rev.	A

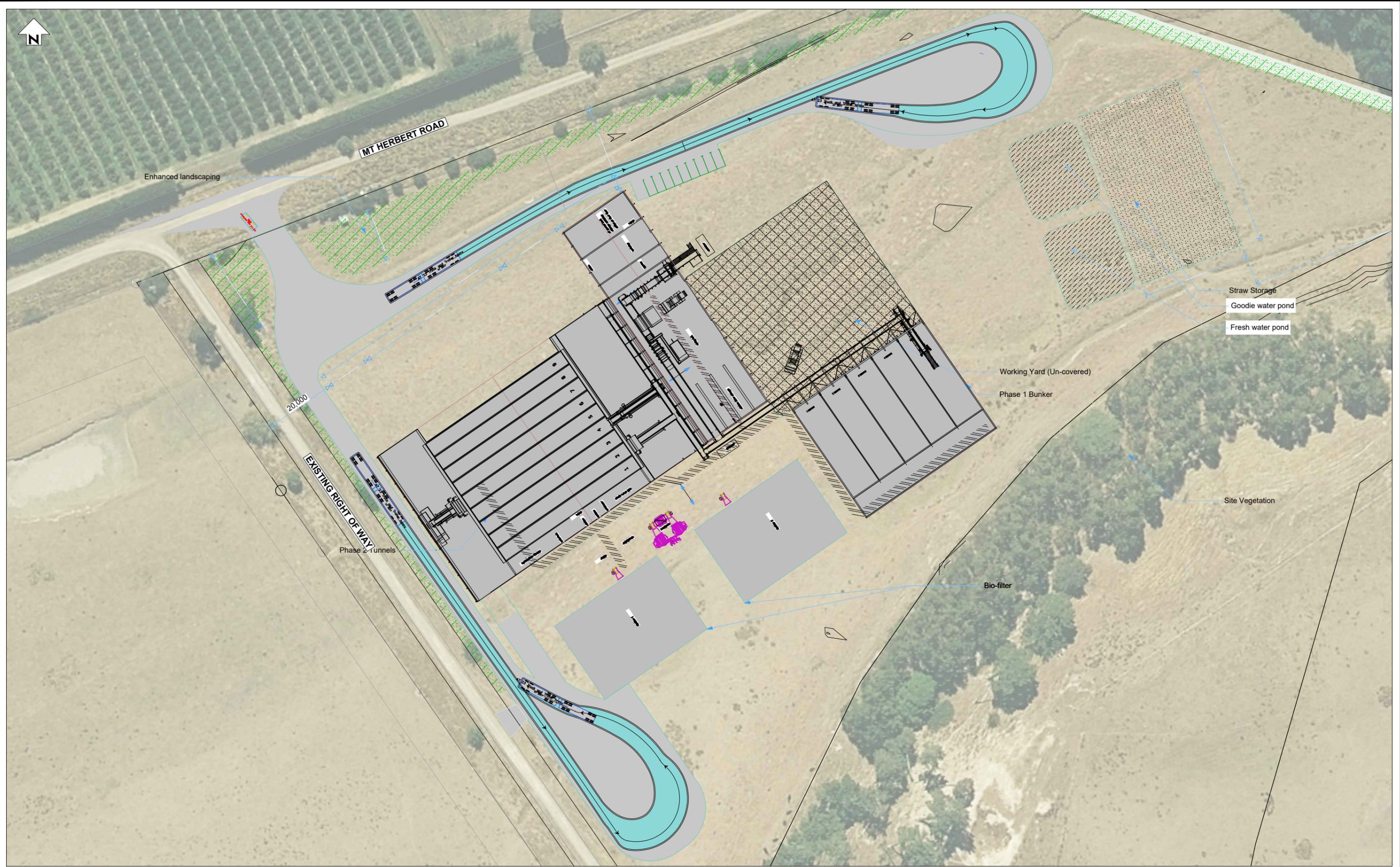
NOT FOR CONSTRUCTION



DO NOT SCALE - IF IN DOUBT, ASK



ORIGINAL SIZE **A1**



REV	REVISIONS	DRN	CHK	APP	DATE

SURVEYED	
DESIGNED	
DRAWN	
CAD REVIEW	
DESIGN CHECK	
DESIGN REVIEW	
APPROVED	NOT APPROVED
PROF REGISTRATION:	



Client:
TE MATA MUSHROOMS

VEHICLE TRACKING

Status Stamp	WORKING PLOT
Date Stamp	01.03.2021
Scales	1:500 (A1)
Drawing No.	
Rev.	A

NOT FOR CONSTRUCTION

CREATING COMMUNITIES

Communities are fundamental. Whether around the corner or across the globe, they provide a foundation, a sense of belonging. That's why at Stantec, we always **design with community in mind**.

We care about the communities we serve—because they're our communities too. We're designers, engineers, scientists, and project managers, innovating together at the intersection of community, creativity, and client relationships. Balancing these priorities results in projects that advance the quality of life in communities across the globe.

New Zealand offices:

Alexandra, Auckland, Balclutha, Christchurch, Dunedin,
Gisborne, Greymouth, Hamilton, Hastings, Napier,
Nelson, Palmerston North, Queenstown, Tauranga,
Wellington, Whangārei

Stantec

Stantec House, Lvl 15, 10 Brandon Street,
Wellington
PO Box 13-052, Armagh, Christchurch, 8141
New Zealand: | www.stantec.com



464 MOUNT HERBERT ROAD – PROPOSED MANUFACTURING FACILITY CHANGES TO THE PROPOSED OPERATION

The following memo has been prepared to assess the noise levels based on the request for further information request as follows:

1. *The Noise Assessment memorandum dated 20 October 2020 is acknowledged. In respect of that memo, the following clarifications/information is requested:*
 - a. *The February 2018 Earcon report did not provide any sound power level comparison for a conveyor system. As a conveyor system is now proposed as part of the current application, please provide an assessment of the sound power level of that system, including whether it will result in any adverse noise effects.*
 - b. *Does the reference to the ‘closest neighbouring receivers’ relate to those residential receivers identified on the noise prediction modelling maps on pages 8 and 9 of the Earcon Acoustic report dated February 2018?*
 - c. *If yes, then those are all residential dwellings within land owned by the applicant (albeit that only one of these dwellings is on the subject site). Please provide comment on the potential noise effects on the closest residential dwellings on land not owned by the applicant.*
 - d. *Although there are no notional boundaries within the nearby Tukituki River pathway and reserve, please provide comment on the potential noise effects on users of those recreational areas.*
 - e. *Please provide comment on the potential for new dwellings, and therefore new notional boundaries, to create future difficulties in complying with the District Plan noise limits, including on the closest properties on the opposite side of the Tukituki River and on the consented but unimplemented new lots created by the subdivisions listed in item 1(g) above.*

The noise modelling is based on an updated site plan dated 17/02/2021 by Atkinson Harwood Architecture.

This assessment includes the additional noise source of a conveyor system, which is currently assumed to produce a similar noise level to a wheeled loader, being 101dB LAw (sound power level). It anticipated to produce notably less than this level, nevertheless, assessment is based on 101dB as a worst case.

I note at this point that there have been previous assessments of the noise which included the conveyor system operation at a sound power level of 108dB. This assessment was in regards to the

maximum noise level that could be produced by the conveyer system whilst meeting compliance with night-time noise limit at the property boundaries to the north of the Tukituki River.

The following equipment will be operating during the daytime and night-time hours.

Table 1 - Equipment and Machinery Sound Power Levels

Equipment	Sound Power
	L _{WA} [dB]
Wheeled Loader	101
Wheeled Loader	101
Compost Fan	79
Compost Fan	79
Bunker Fan	97
Chiller Compressor	87
Conveyer System	101

Table 2 - Modelled Scenarios

Scenario	Equipment	Sound Power Level (dBA)
1	Wheeled Loader	101
	Wheeled Loader	101
	Compost Fan	79
	Compost Fan	79
	Bunker Fan	97
	Chiller Compressor	87
	Conveyer System	101
2	Compost Fan	79
	Compost Fan	79
	Bunker Fan	97
	Chiller Compressor	87

* Scenario 1 depicts the typical daytime operation (6am – 11pm, Mon - Sat), however, also represents the noise levels which may occasionally occur for periods on Sundays. Activity on Sunday will fall within the “daytime hours”, being 6am – 11pm, however, during this time the lower 45dB L_{A10} noise limit is applicable.

** Scenario 2 depicts the noise sources which operate at all other times, being fix mechanical plant sources which always operate.

With the equipment operating as specified above, being the original assessment plus the conveyer system, the noise levels are predicted to be no more than 47dB (daytime) at the site boundary to the north, adjoining the Tukituki River. At all other times the noise level will be no more than 33dB.

This is complying with the District Plan noise limits at all times, based on the rural zone noise limits.

With the exception of occasional operation on Sundays, the noise levels will be complying with the District Plan noise limits at all neighbour receivers. On Sundays, the low 45dB noise limit will be exceeded within a small area of the Tukituki River reserve as depicted below, and at the closest neighbouring receivers at Lots 2, 6 and 7 DP 554782.

The noise levels at these receivers will be complying at all other times with the lower 45dB noise limit.

We note that the assessment at Lots 2, 6 and 7 DP 554782 are made at the site boundary as there are currently no dwellings to provide assessment at the notional boundary. Therefore, the noise levels may be lower dependant on the location of any future dwellings.

Figure 1 – Predicted Noise Levels – Daytime Operation (Tukituki River Scenario)



Figure 2 – Predicted Noise Levels – Neighbouring Area (Scenario 1)

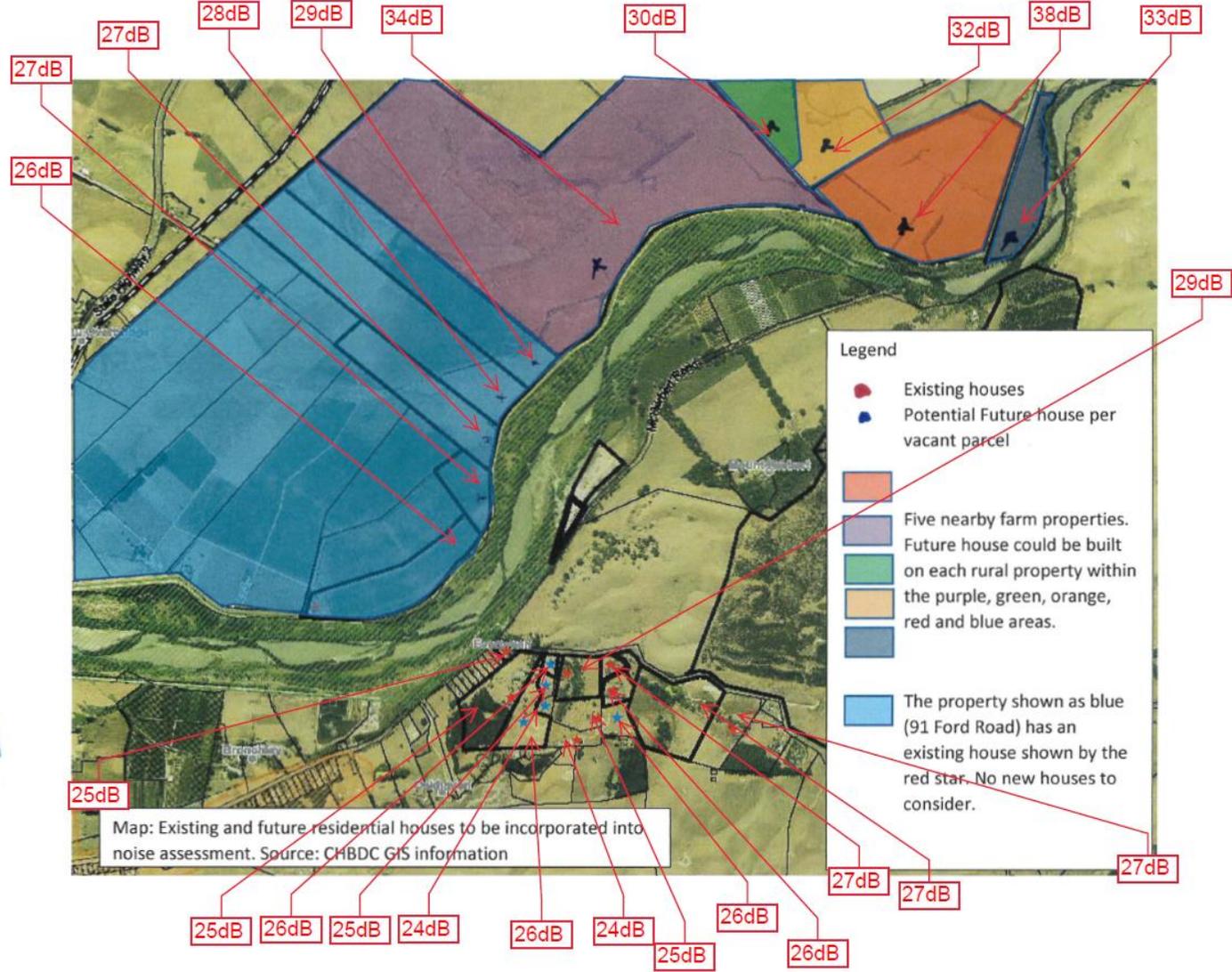
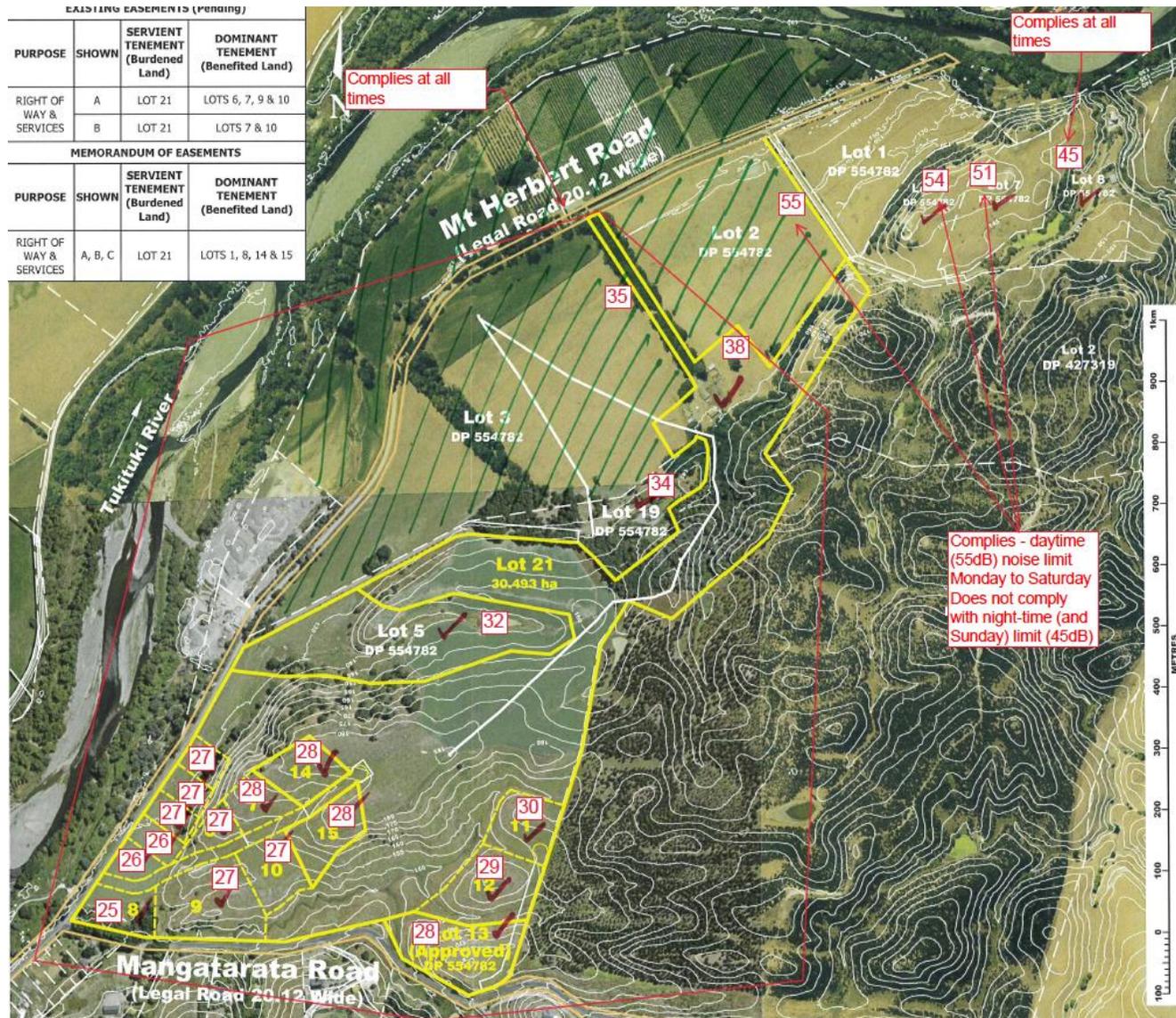


Figure 3 – Predicted Noise Levels – Farm Subdivision (Scenario 1)



Note: Figure 1 depicts the worst case scenario of operation in regards to the noise levels received at the Tukituki River. The noise levels predicted at other sites include movable noise source (e.g. wheeled loaders) operating in closer proximity to the receiver to assess the worst case scenario for those receivers.

For context, 47dB will be audible in most situations. However, typical noise levels from trees rustling in the breeze would produce between 60-65dB. Noise levels from cicadas or crickets (at night) can produce over 70dB. It is anticipated that the general ambient noise levels from nature will be significantly above those produced by the machinery on site.

The following is considered representative of the perceived noise levels.

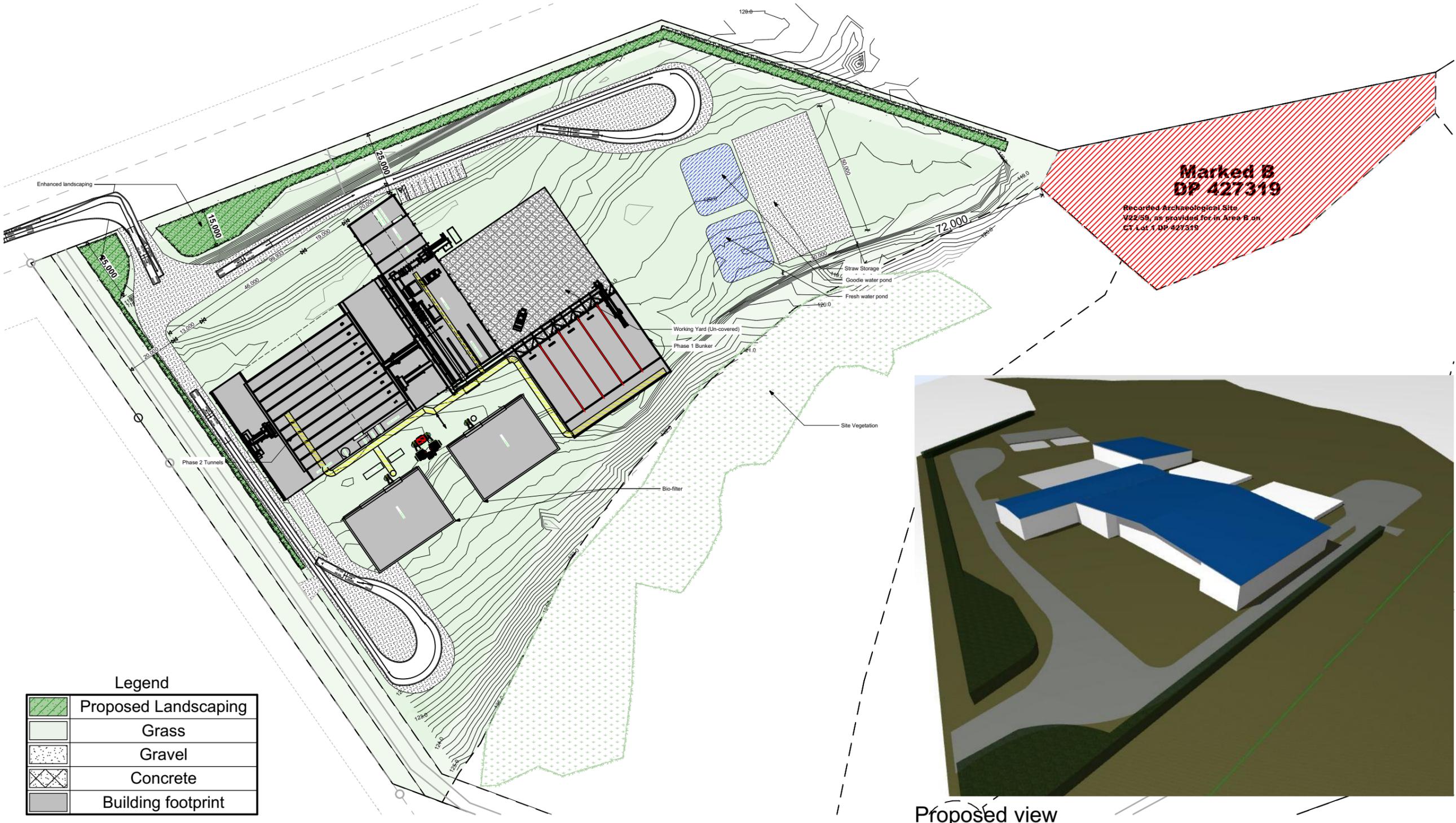
Table 3 – Noise Perception

Noise Level Range (dBA)	Perception
<35	Inaudible
35-40	Inaudible to barely audible (unlikely to be audible over ambient noise)
40-45	Audible, but masked by ambient noise level
45-50	Clearly audible

Yours faithfully
Earcon Acoustics Limited

Daniel Martens
Acoustician
PG DipSci. ME(EngSci),

Date	Issued	17/02/2021
Rev	Revision	Date

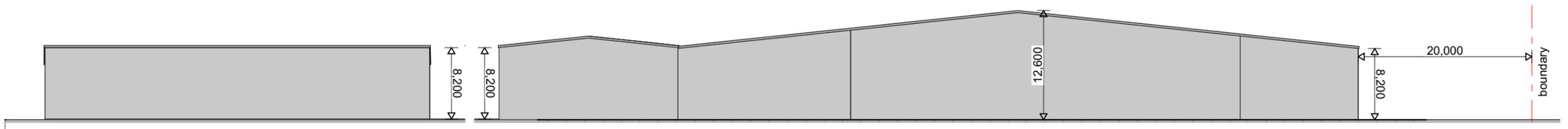


Proposed view

Site Scheme Plan

Legend

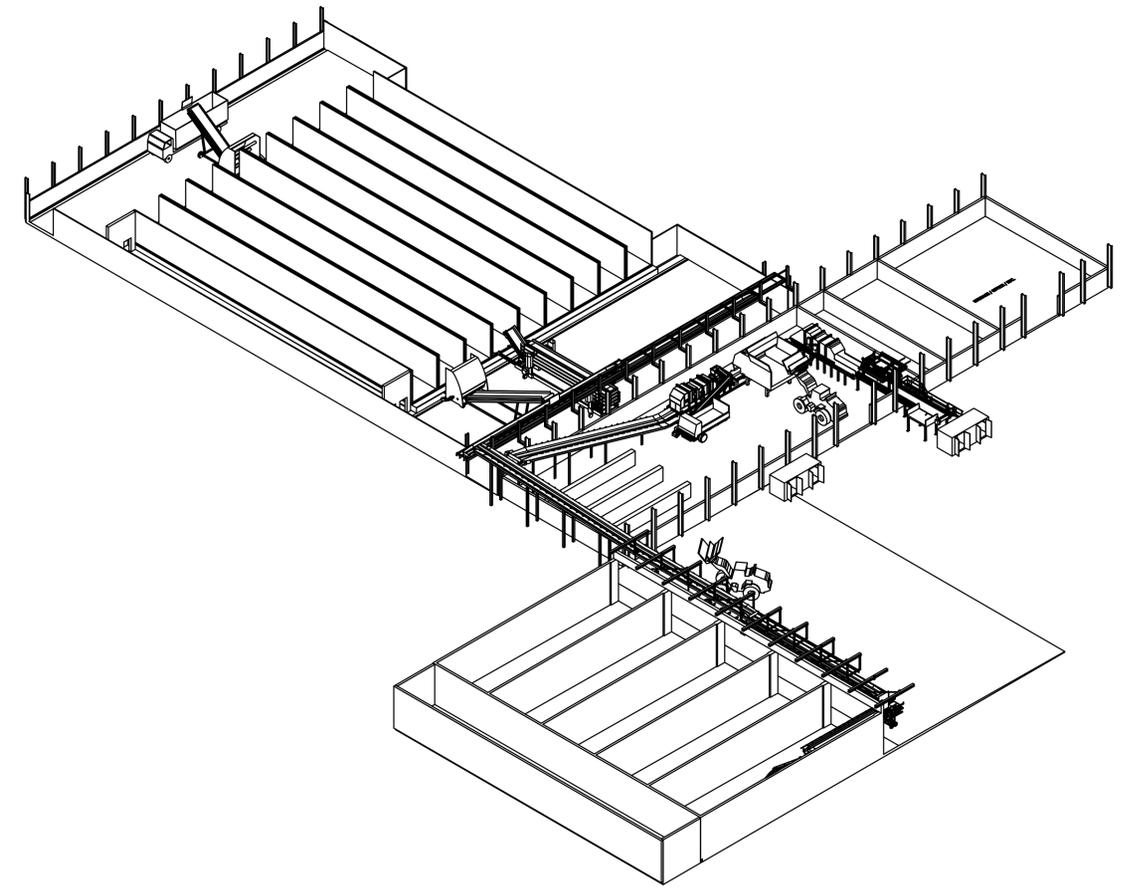
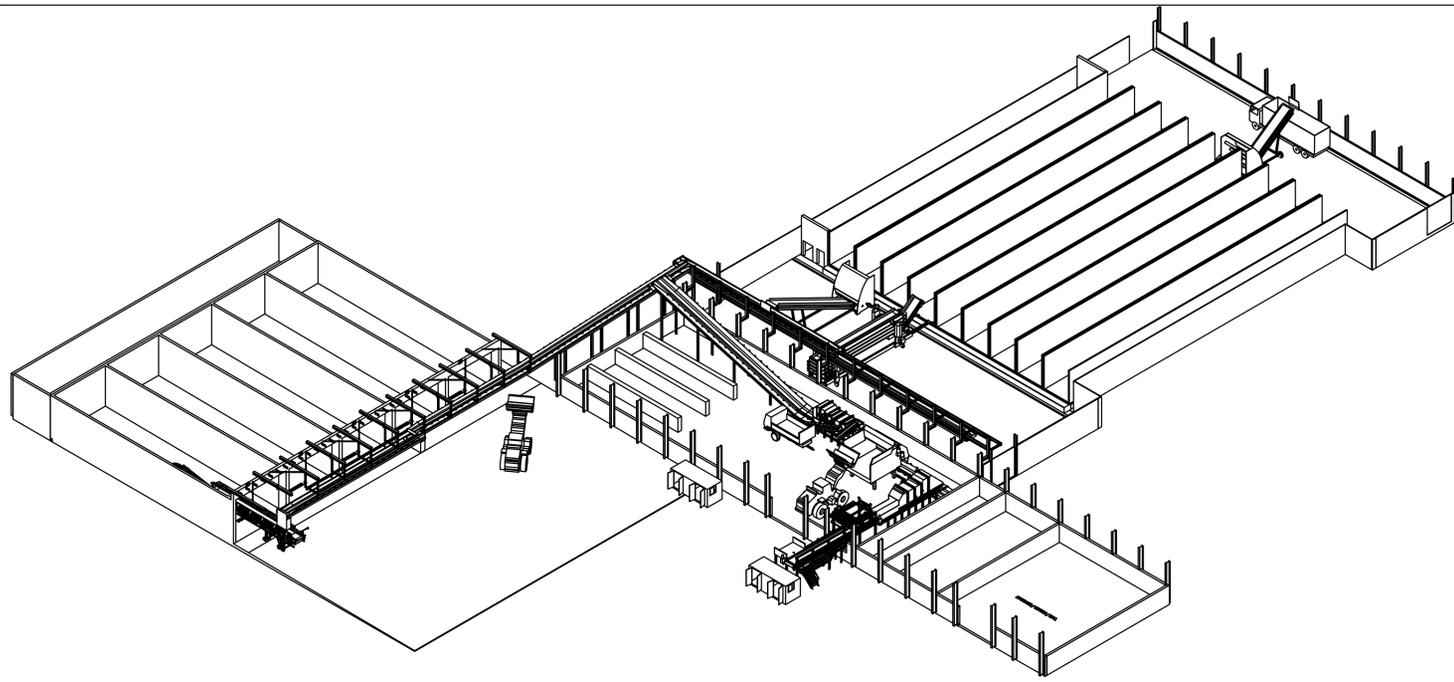
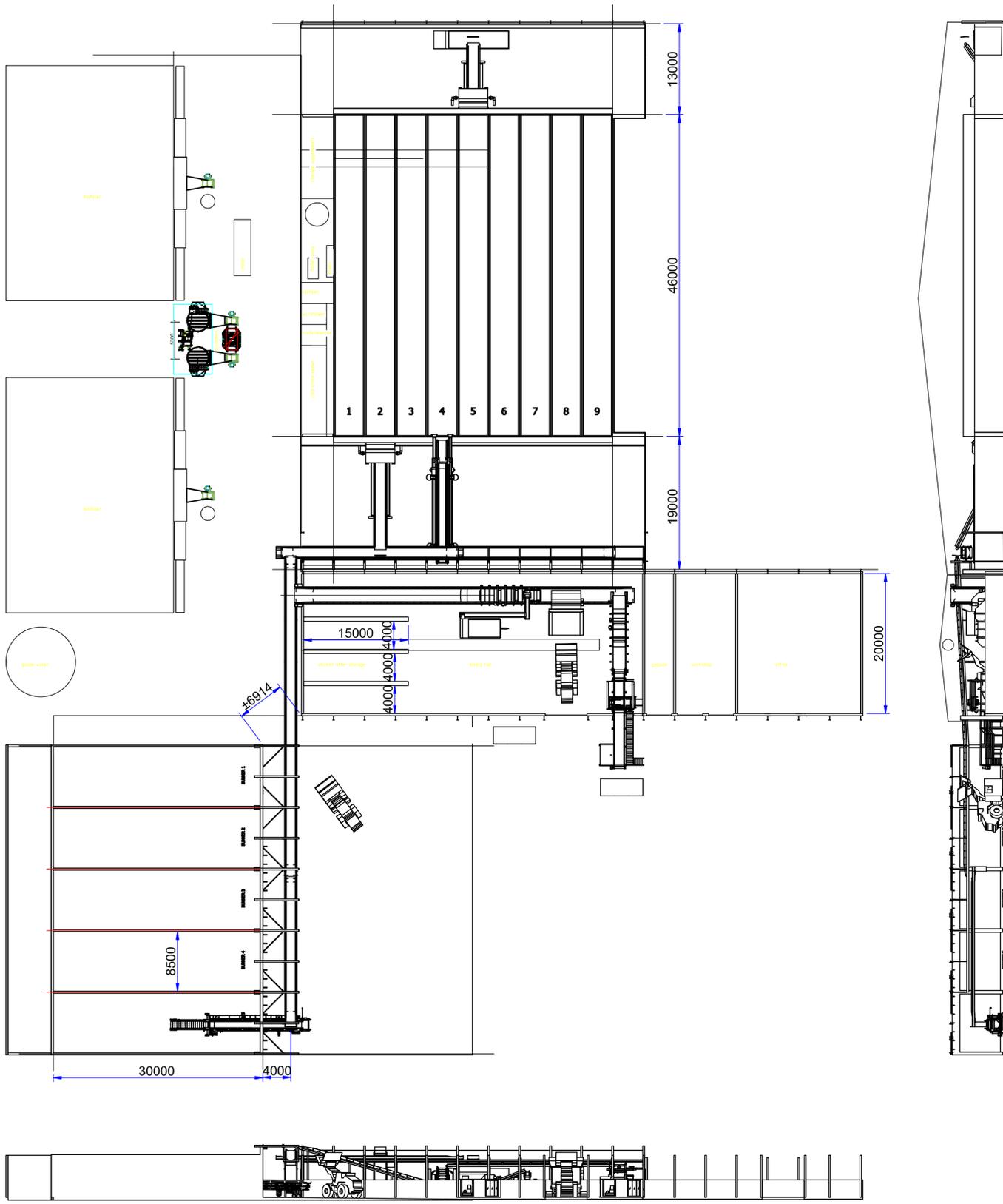
	Proposed Landscaping
	Grass
	Gravel
	Concrete
	Building footprint



Bunker North Elevation
 Scale 1:500

Mixing Hall North Elevation
 Scale 1:500





Oppervlakteruwheld volgens NEN 3634		Passingen volgens NEN-ISO 286-2		Lasaanduidingen volgens NEN-ISO 2553		Vorm- en plaatstoleranties NEN-ISO 1101		Kanten van onderdelen NEN-ISO 13715	
P.order				Aantal		Machine			
						HalfFabr.			
Toelaatbare afwijkingen				Date	Name	LAYOUT TE MATA			
				Drawn	PK				
1 t/m 30	Boven 30 t/m 120	Boven 120 t/m 315	Checked						
# 0,3	# 0,5	# 0,8	Standard						
Boven 315 t/m 2000	Boven 2000 t/m 4000	Boven 4000	gtl						
# 1	# 2	# 5	www.gtl-europe.nl						
504235XA									1 / 1
A1									

