

**PLANNING AND DEVELOPMENT ACT 2005**

**SHIRE OF MINGENEW - LOCAL PLANNING SCHEME NO. 4**

**AMENDMENT NO. 1**

**SCHEME AMENDMENT REPORT**

*PLANNING AND DEVELOPMENT ACT 2005*

**RESOLUTION TO ADOPT AMENDMENT TO LOCAL PLANNING SCHEME**

**SHIRE OF MINGENEW - LOCAL PLANNING SCHEME NO. 4**

**AMENDMENT NO. 1**

Resolved that the local government pursuant to section 75 of the Planning and Development Act 2005, amend the above Local Planning Scheme by:

- 1. Rezoning lot 802 Nelson Pearse Street, Mingenew from 'Rural Residential' to 'Rural Townsite' and amending the scheme maps accordingly.**

The Amendment is standard under the provisions of the Planning and Development (*Local Planning Schemes*) Regulations 2015 for the following reasons:

- The amendment is consistent with the Shire of Mingenew *Local Planning Strategy* (2016), which identifies a shortage of workers accommodation in the existing housing stock for key service workers;
- The land the subject of the amendment does not directly abut any existing sensitive land uses and has minimal potential to impact on surrounding land uses;
- The rezoning to the 'Rural Townsite' zone will establish a framework that requires subsequent planning to deliver the proposed workforce accommodation facility in a manner which accords with the surrounding (existing) community.

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## 1.0 BACKGROUND

The amendment area measures approximately 1.1ha and is in the Shire of Mingenew, approximately 800m west of the Mingenew town centre, and is bound by:

- Midlands Road to the north;
- Nelson Pearce Street to the east;
- Unmade road reserve to the south; and
- Two large rural residential lots to the west.

The site comprises a rural residential lot, accommodates a single residence, is largely cleared of vegetation, and includes a number of associated structures in the southern portion of the site. The majority of these structures are in poor condition and will be removed and demolished should this amendment be approved and subsequent development progressing over the site. The site currently connects into the existing road network to Nelson Pearce Street to the east, with no vehicle connection provided to Midlands Road to the north.

CBH has over 150 sites across the State which together receive, handle, store and outload approximately 90 percent of Western Australia's grain harvest and have acquired the site for the purpose of delivering a 48-person workforce accommodation facility to support CBH's grain operations in the Mingenew townsite. The site represents an opportunity for CBH to establish its own accommodation facility within the Mingenew townsite as it is in close proximity to CBH's grain handling facilities at the corner of Midlands Road and Boolinda Road – approximately 1.6km east of the subject site.

Pre-lodgement discussions with the Shire and DPLH were undertaken in December 2022 to inform the amendment, the necessary supporting information and confirm the most appropriate zoning for the future workforce accommodation facility. Both the Shire and DPLH were generally supportive of the proposed zoning and the resultant outcome for the site.

### *Shire of Mingenew Shire of Local Planning Scheme No. 4 (LPS4)*

The site is zoned 'Rural Residential' under the Shire's LPS4, which currently prohibits 'Workforce Accommodation' reflected in its 'X' use classification in LSP4. To ensure the appropriate planning framework for the facility, an amendment to the Shire's LPS4 is therefore required.

The 'Rural Townsite' zone of LPS4 has been acknowledged as the most appropriate local scheme zoning to guide future development of the site, and simply involves continuing the zoning already established on the eastern side of Nelson Pearce Street, facing on to Midlands Road.

The objectives of the 'Rural Townsite' zone are as follows:

- *To provide for a range of land uses that would typically be found in a small country town.*
- *To provide for the variety of predominantly commercial, service, social and administrative uses required to service the needs of local residents and visitors alike.*

The proposed workforce accommodation facility satisfies these objectives, is an 'A' use in the 'Rural Townsite' zone and reflects previous approvals for existing facilities in the 'Rural Townsite' zone across the Shire.

As Australia's largest co-operative and a leader in the Australian grain industry, with operations extending along the value chain from grain storage, handling, transport, marketing and processing CBH's continued operation in the Mingenew site is not only beneficial but critical to the Shire's broader rural activities. CBH's workforce accommodation facility further supports this notion, in that these workers will not only enhance the rural pursuits of the Shire but also provide ongoing support for the local economy. The facility which will increase the transient population in the locality will support Mingenew by virtue of increased economic activity for businesses in the townsite, and as well as providing accommodation for the essential workers that underpin the farming and rural pursuits of Mingenew and its surrounds.

Accordingly, this amendment to LPS4 proposes to rezone the subject site to 'Rural Townsite', with the scheme map to be modified to show the site as the 'Rural Townsite' zone. The LPS 4 Zoning Plan, the current and proposed LPS 4 zoning is shown in Figure 1 below.

This amendment does not propose any text changes to LPS4.

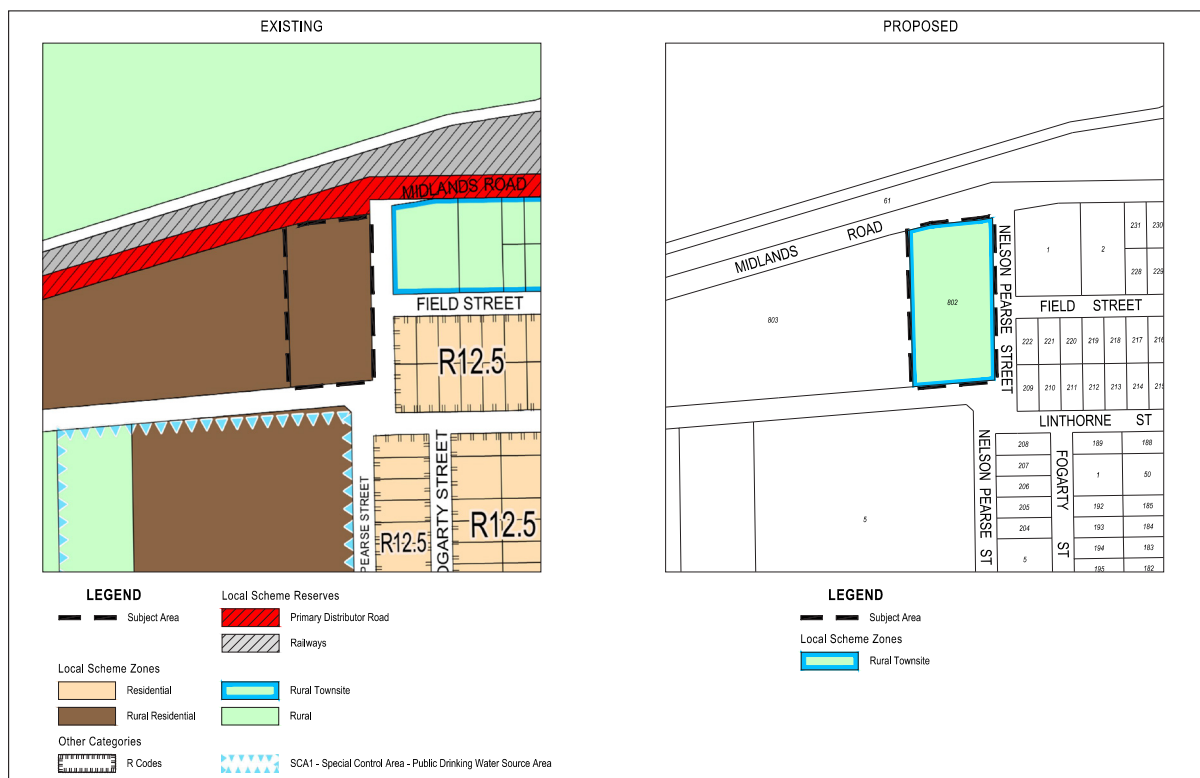


Figure 1 - Existing and Proposed Local Planning Scheme No.4 Map

*Standard Amendment*

Part 5, Clause 34(i) of the Planning and Development (Local Planning Scheme) Regulations 2015 ('the Regulations') states that a local scheme amendment is defined as 'standard' if the amendment is consistent with:

- Any local planning strategy for the locality.
- The region planning scheme.
- Poses minimal impact on land in the area which is not subject to the amendment.
- Does not result in any significant environmental, social, economic or governance impacts.

This Amendment responds to the needs of the Shire's Mingenew Townsite Local Planning Strategy (2016) which identifies a shortage of workers accommodation in the existing housing stock for key service workers. The Amendment also establishes a framework that requires subsequent planning to deliver the proposed workforce accommodation facility in a manner which accords with the surrounding (existing) community. It is therefore requested that the Shire confirm that the Amendment will be defined as 'standard' and will be processed in accordance with the procedures set out in Part 5; Division 4 of the Regulations.

As is outlined in detail further below, the Amendment does not have any impact on the land and its surrounds nor does it result in any significant environmental, social, economic or governance impacts to the Mingenew locality. In providing the framework to support development that supports the local economy, the Amendment delivers a range of social and economic benefits for the Mingenew community without having any impact on the surrounding environment.

## 2.0 PLANNING DISCUSSION

The following documentation has been prepared in support of the amendment:

- Concept Plans;
- Engineering Servicing Report (McDowall Affleck); and
- Traffic Impact Statement (Shawmac).

These supporting documents are discussed in further detail below.

### 2.1 CONCEPT PLAN

A concept plan has been prepared for the site in support of the Amendment, at the request of the Shire, and demonstrates one way that the site can be developed and that all relevant planning considerations for the site can be addressed as part of a comprehensive development application.

The concept plan has been informed by pre-lodgement discussions with the Shire who provided input on the general location of units, parking, drainage infrastructure and landscaping. These discussions have been accommodated within the concept.

It should be emphasised that the concept plan is purely indicative and is ultimately subject to detailed planning and design, and further consultation with the Shire of Mingenew as part of a comprehensive development application. Further discussion is provided below on matters that will be refined as part of the subsequent planning for the site.

Key aspects that have been considered in preparing the concept plan include:

- Approximately 48 new accommodation units, dispersed across eight self-contained blocks, being an operational requirement of CBH to support the nearby grain handling facility, located at the corner of Midlands Road and Boolinda Road;
- The facility will be operational during harvest season, occurring from October to the end of January;
- A consolidated car parking area along the north-east boundary of the site, accommodating a total of 48 cars, at a ratio of one bay per unit. One vehicular access point is proposed along the eastern boundary of the site from Nelson Pearce Street.
- A new common room to provide day-to-day recreational activities for residents;
- The general location of new landscaping areas along the periphery of the site, intended to provide a visual buffer to and from adjoining properties and Midlands Road;
- The location of leach drains and associated sewerage treatment system in the south-eastern portion of the site.

## 2.2 TRAFFIC MOVEMENT

A Traffic Impact Statement (TIS) has been prepared by Shawmac (Appendix 2) demonstrating that the site is well connected to the surrounding road network and that the proposed facility will not result in significant changes to traffic movements on the surrounding road network.

As shown on the concept design, vehicular access is to be taken via a new crossover on Nelson Pearse Street along the south-east boundary of the site. This will provide direct access to the Mingenew townsite via existing east-west roads, Field Street, Linthorne Street and Phillip Street. Informal crossovers are currently provided from a portion of unmade road reserve to the south and will be removed at time of construction.

To minimise the potential for unsafe movements to and from Midlands Road, no direct access will be provided to Midlands Road from Nelson Pearse Street. This will also ensure that traffic flows are directed to the east-west roads noted above.

The proposed development will generate approximately 48 vehicle movements during each peak hour, including 48 outbound vehicle movements during the morning peak hour and 48 inbound vehicle movements during the afternoon peak hour. This assumes that workers will travel to the nearby CBH facility in the morning between 5:30am and 6:00am and then return in the evening between 5:30pm and 6:00pm, and that all workers drive individually, noting that in all likelihood there will be an element of 'car pooling' and/or some workers walking to CBH's facility – and therefore can be considered as a conservative, yet robust assessment. Ultimately, the assessment concludes that the impact on the surrounding road network is minor in accordance with the WAPC's Traffic Impact Assessment Guidelines.

The TIS also demonstrates that the site is able to be provided with the appropriate level of parking, sightlines and manoeuvring areas, noting that these matters will ultimately be refined and determined as part of detailed designs that will be lodged as part of a subsequent development application.

Further detail is provided as part of Shawmac's Transport Impact Statement enclosed as Appendix 2.

## 2.3 SERVICE INFRASTRUCTURE

The Engineering Services Report prepared by McDowall Affleck (refer Appendix 3) clearly demonstrates that the site can be provided with all essential services in an efficient, timely and economical manner.

In most cases the provision of services is simply a logical expansion of the existing infrastructure network, with all service networks, except for sewer, proven to have the capacity to accommodate the development of the site. These specifically relate to the provision of water, power and telecommunications infrastructure.

As the Shire of Mingenew have no reticulated sewerage infrastructure and the Water Corporation have no plans to expand, the site will need to be provided with an on-site wastewater disposal system. To clarify, the site is not within a Sensitive Sewage Area or a Public Drinking Water Source Area according to the Department of Water and Environmental Regulation, allowing for onsite effluent disposal. The final location and configuration of the effluent disposal system is subject to further investigation at time of detailed designs. Given the lack of any reticulated sewer infrastructure in Mingenew, the site has no option other than being serviced by an on-site waste water system at time of development – which has been demonstrated to be able to be accommodated on site.



In terms of water supply, an existing water main is located along the southern boundary of the site with the site able to be connected in a relatively straightforward manner. The Water Corporation has advised that the total peak water demand may have an effect on pressure and supply but that there are options to counter this impact should they arise. These options will be explored as part of future detailed design.

The site can be easily connected to power via the existing Western Power infrastructure along Nelson Pearce Street and along the southern side of the unmade road reserve to the south of the site (overhead high voltage power lines), as well as the underground circuits located along the south-east corner of the site with preliminary investigations indicating that there is sufficient capacity in the Three Springs substation.

In summary, the site can be provided with all essential services, noting that as further investigation occurs prior to development, the final manner and configuration of these services will be refined.

This is discussed in further detail as part of McDowall Affleck's Engineering Services Report enclosed as Appendix 3.

## 2.4 NOISE

The northern most boundary of the Amendment area is located approximately 10m south of the Midland Road (taken from the edge of pavement) and 40m south of the adjacent freight rail.

The TIA (discussed above) identifies Midland Road as comprising 2 lanes with a posted speed limit of 60km/h, carrying a total of only 374 vehicle per day with 124 of these movements been classified as 'heavy vehicles' (capturing Class 3 and above Austroads vehicles).

*State Planning Policy 5.4: Road and Rail Noise* (SPP 5.4) applies where a proposal falls within 300m of a 'Strategic freight or major traffic route' or within 200m of a 'Other Strategic freight route', with these broadly being defined as 'carrying either 500 or more Class 7 to 12 Austroads vehicles per day, and/or 50,000 per day traffic volume' or 'greater than 100 Class 7 to 12 Austroads vehicles daily or more than 23,000 daily traffic count' respectively.

In terms of the daily traffic volumes, with Midland Road having a total of only 374 vehicles per day, this clearly falls well under the threshold set by SPP 5.4.

Regarding the volumes of Class 7 to 12 Austroads vehicles, the TIA indicates that 124 of these are 'heavy vehicle' movements; however, this captures all vehicles classified as Class 3 and above meaning that this count includes two axel tucks, three axel trucks, three axel truck articulates and four axel trucks which are by far the most likely to found on Midland Road and are most likely to account for the majority of this movement count. For context, Class 7 to 12 captures the much heavier vehicle types such as five and six axels articulated and B Double and Double Road Train – truck types and configurations that are certainly not commonplace within Mingenew given its agriculture nature. Consequently, there is a high probability that the 124 'heavy vehicles' are primarily Classes 3 to 6, which are not accounted for in SPP 5.4 freight route definitions. On this basis, Midland Road has not been considered as a Strategic freight or major traffic route' or 'Other Strategic freight route', warranting an acoustic assessment.

Similarly, the noise impacts associated with rail movements are negligible in the context that train movements will only occur on an intermittent basis along the adjacent portion of rail. During periods of the year where the CBH facility will be operative, monthly movements are expected to peak at 49 train per month, with movements as low as 18 per month as summarised below:

- October – 18 movements/month
- November – 19 movements/month
- December – 41 movements/month
- January – 49 movements/month

The current monthly train movements in Mingenew (as above) are considerably significantly lower than that set out in the SPP5.4 Guidelines which only provides a framework to assess noise impacts based on 1 freight rail movement per hour.

SPP5.4 acknowledges the limitations in applying the standard noise limit values to short-term noise events such as freight rail noise. Section 5.2 of the Guidelines states that in the absence of any clear wider regulatory framework and/or any implementation strategy to reduce the noise levels at source, the policy does not require the application of noise mitigation measures.

In any case, it should be emphasised that train movements along this portion of rail are generated by activities undertaken exclusively by CBH, to and from its facility on the eastern side of the townsite and are likely to occur during standard day time hours only, when workers will be working at the CBH facility rather than resting at the workforce accommodation site.

## 2.5 SUBSEQUENT INFORMATION

This amendment provides the necessary planning framework for the workforce accommodation facility to be developed. Further information relating to the final design will be provided as part of a comprehensive development application once the zoning is in place. These include:

- Bushfire Management;
- Landscaping Plans;
- Waste Management; and
- Stormwater Management Plans.

These matters ultimately cannot be resolved until detail designs have been finalised, which in turn can only progress once the land is rezoned to 'Rural Townsite' in Local Planning Scheme No. 4.

### 3.0 CONCLUSION

The amendment to the Shire of Mingenew Local Planning Scheme No. 4, which proposes to rezone the site to 'Rural Townsite', will ensure that the local scheme is able to accommodate the intended land use for the site, providing much needed accommodation for a critical workforce that underpin the farming and rural pursuits of Mingenew and its surrounds.

Zoning the site 'Rural Townsite' will facilitate a comprehensive development application, which provides the mechanism to address the design and spatial arrangement of the workforce accommodation facility.

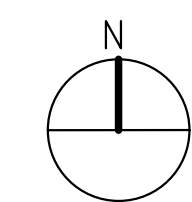
# APPENDIX 1

Workforce Accommodation Concept Plan (CBH Group)









**CBH GROUP**  
ABN 29 256 604 947

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## APPENDIX 2

Transport Impact Statement (Shawmac)



# Transport Impact Statement

Project:	Proposed Accommodation Development 18 Nelson Pearce Street, Mingenew
Client:	CBH Group
Author:	Paul Nguyen
Date:	7 <sup>th</sup> February 2023
Shawmac Document #:	2301022-TIS-001

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**ISO 9001 QUALITY**  
Certified System



## Document Status: Client Review

Version	Prepared By	Reviewed By	Approved By	Date
A	P. Nguyen	R. Needham	P. Nguyen	07/02/2023

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## 1. Introduction

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### 1.1. Proponent

Shawmac has been engaged by CBH Group to prepare a Transport Impact Statement (TIS) for a proposed accommodation development in Mingenew.

This TIS has been prepared in accordance with the Western Australian Planning Commission (WAPC) *Transport Impact Assessment Guidelines Volume 4 – Individual Developments*. The assessment considers the following key matters:

- Details of the proposed development.
- Vehicle access and parking.
- Provision for service vehicles.
- Daily traffic volumes and vehicle types.
- Traffic management on frontage streets.
- Public transport access.
- Pedestrian access.
- Cycle access
- Site specific and safety issues.

### 1.2. Site Location

The site address is 18 Nelson Pearse Street, Mingenew. The local authority is the Shire of Mingenew.

The general site location is shown in **Figure 1** and an aerial view of the site is shown in **Figure 2**.





Figure 1: Site Location



Figure 2: Aerial View



## 2. Proposed Development

---

CBH propose to construct an accommodation development on the site comprising 48 rooms, a common room and parking for 50 cars. The development will be occupied by CBH workers who will travel to and from the nearby CBH site.

The proposed site plan is shown in **Figure 3**.



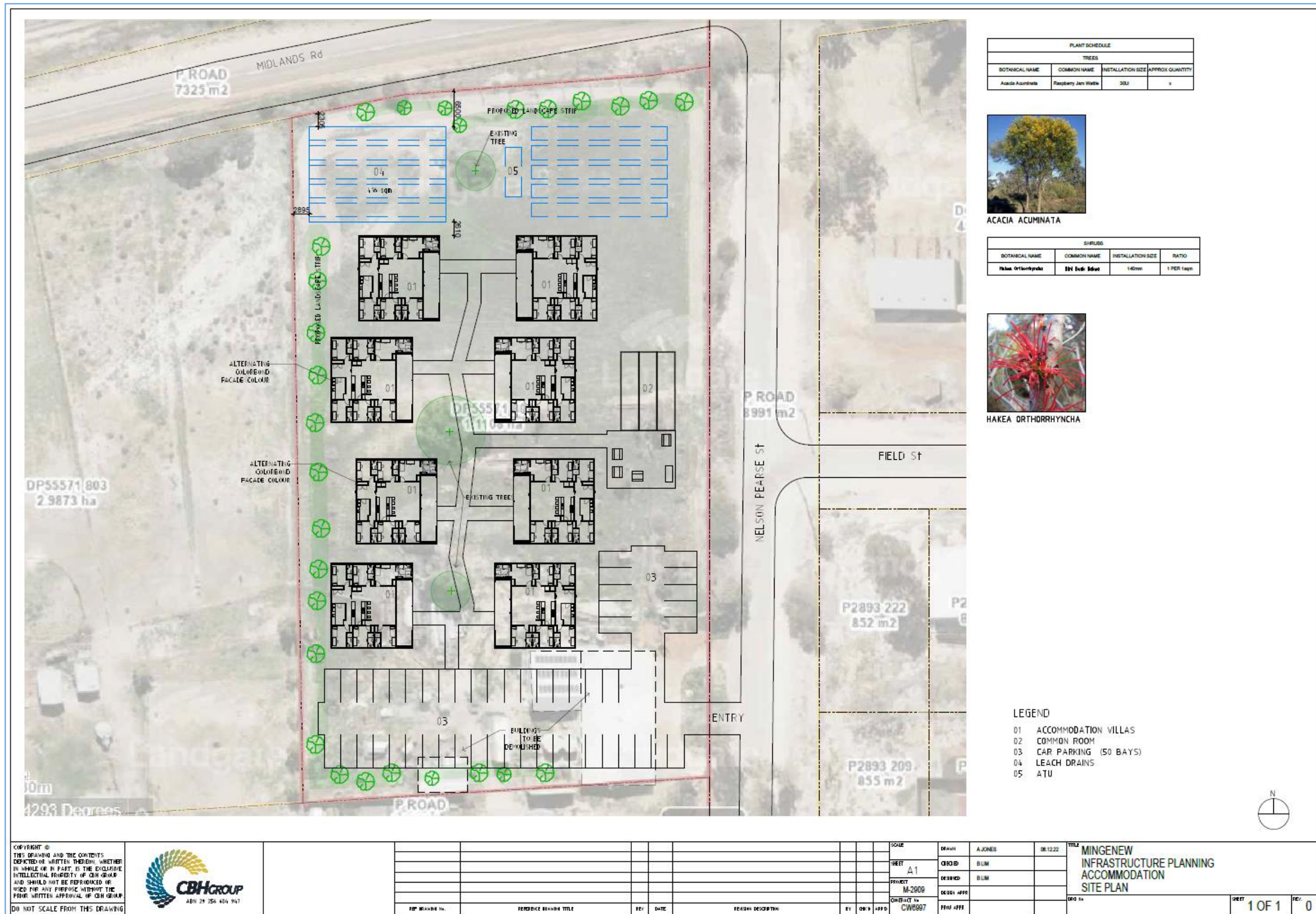


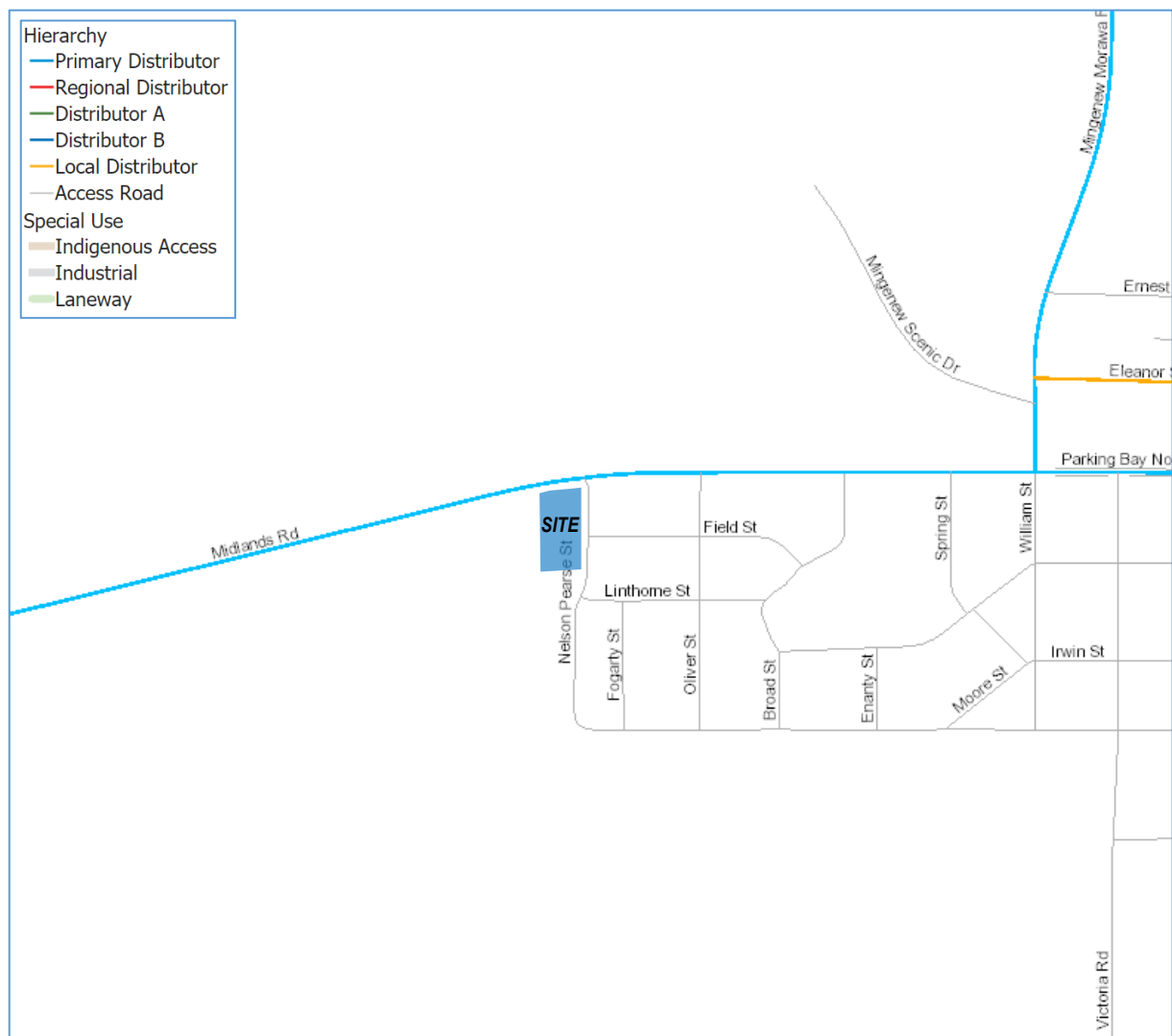
Figure 3: Site Layout

### 3. Traffic Management on Frontage Streets

#### 3.1. Road Network

##### 3.1.1. Existing Road Layout and Hierarchy

The layout and hierarchy of the existing local road network according to the Main Roads WA *Road Information Mapping System* is shown in **Figure 4**.

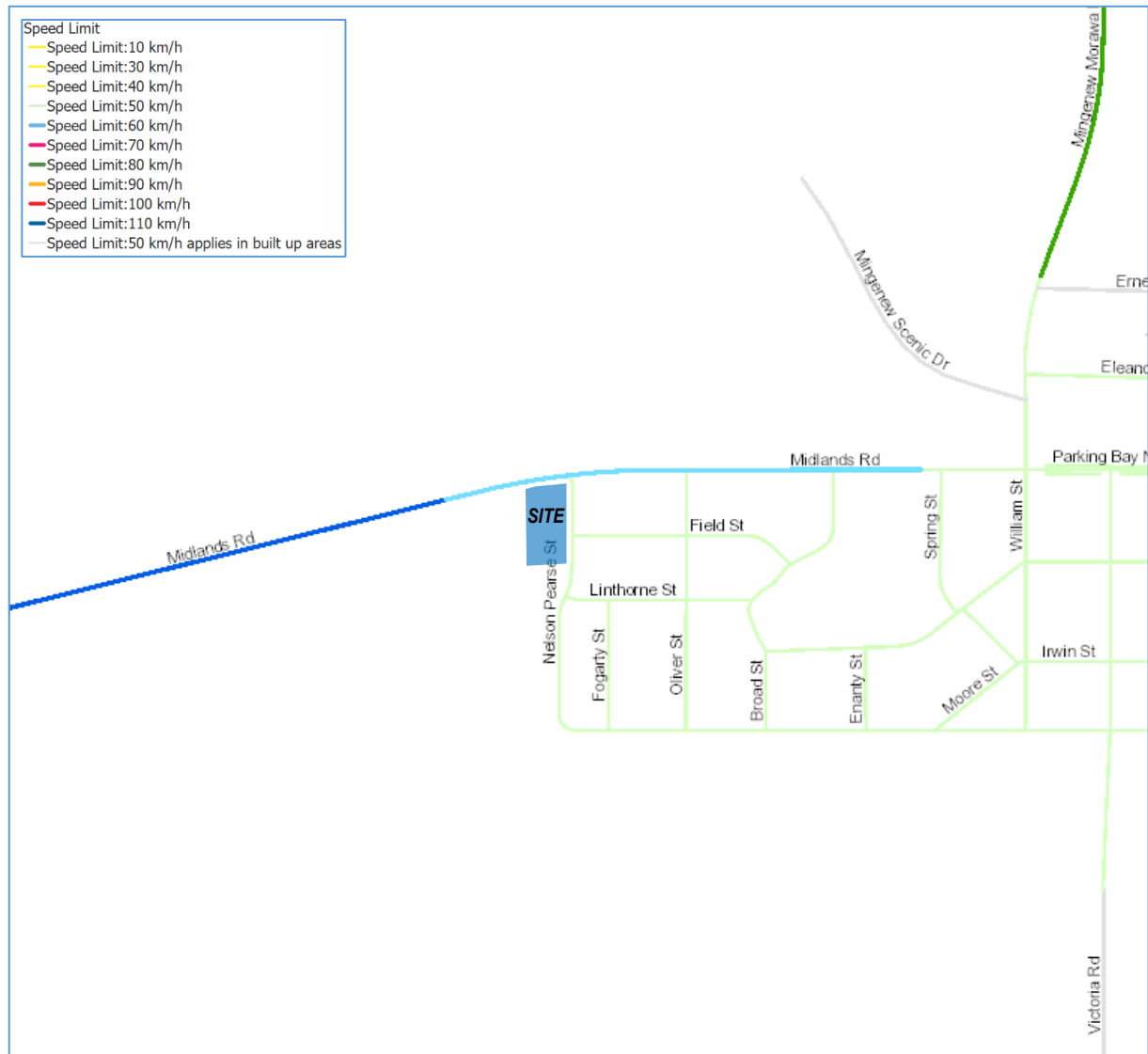


**Figure 4: Existing Road Network Hierarchy**

As shown, Midlands Road is a Primary Distributor which is under the jurisdiction of Main Roads WA.

### 3.1.2. Speed Limits

The speed limits are shown in **Figure 5**.



**Figure 5: Existing Speed Limits**

### 3.2. Traffic Volumes

The latest traffic volumes along Midlands Road were obtained from Main Roads WA *Traffic Map* as summarised in Figure 6.

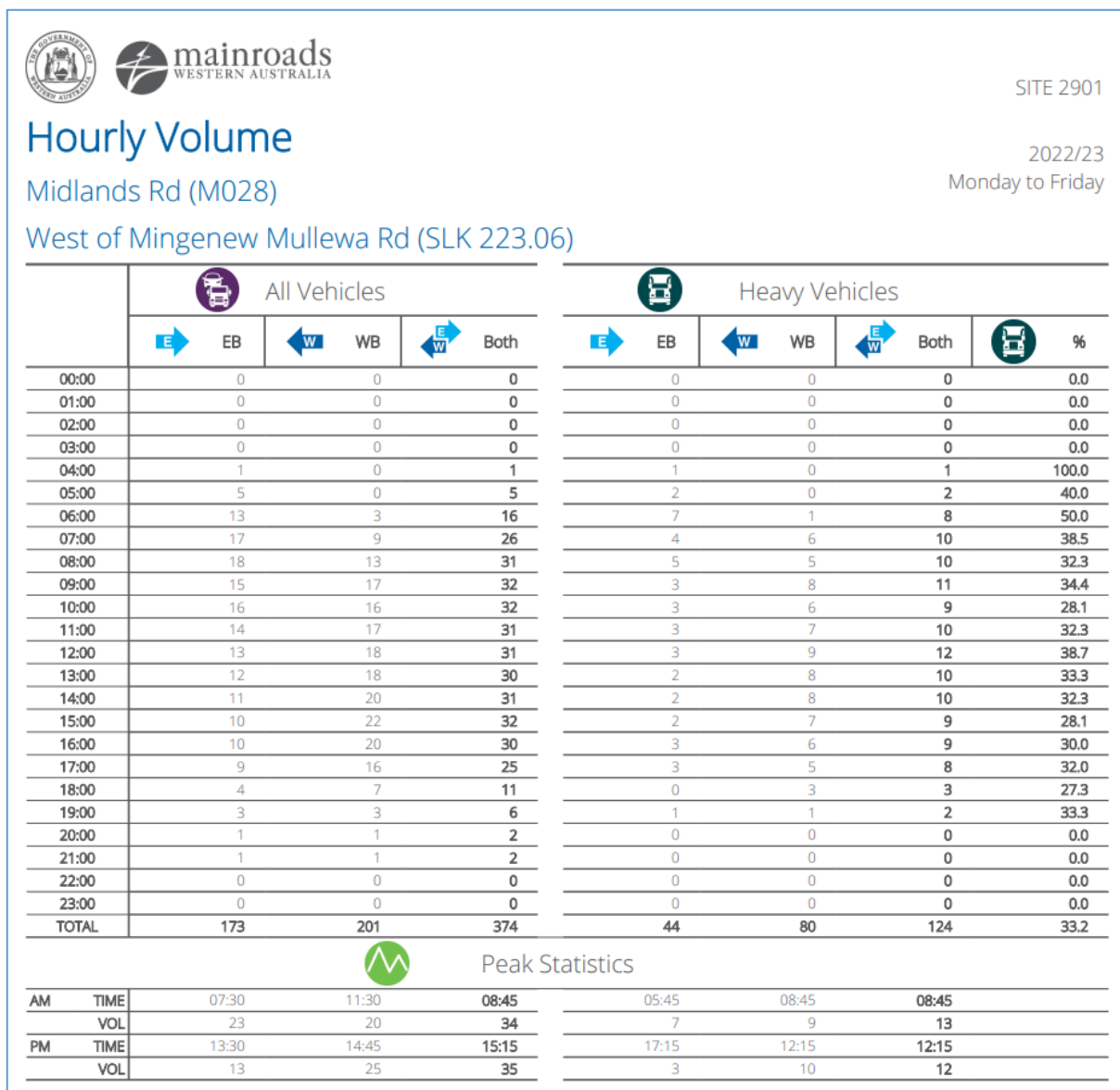


Figure 6: Traffic Volumes – Average Weekday (2022/2023)

# Hourly Volume

Midlands Rd (M028)

2022/23  
Weekend

West of Mingenew Mullewa Rd (SLK 223.06)

	All Vehicles			Heavy Vehicles			
	EB	WB	Both	EB	WB	Both	%
00:00	0	0	0	0	0	0	0.0
01:00	0	1	1	0	1	1	100.0
02:00	0	0	0	0	0	0	0.0
03:00	0	0	0	0	0	0	0.0
04:00	0	0	0	0	0	0	0.0
05:00	2	0	2	1	0	1	50.0
06:00	3	2	5	1	1	2	40.0
07:00	5	4	9	2	2	4	44.4
08:00	10	11	21	3	3	6	28.6
09:00	13	16	29	1	4	5	17.2
10:00	15	17	32	1	5	6	18.8
11:00	16	16	32	2	4	6	18.8
12:00	17	14	31	3	2	5	16.1
13:00	13	12	25	3	2	5	20.0
14:00	12	14	26	1	3	4	15.4
15:00	12	12	24	2	2	4	16.7
16:00	10	11	21	1	2	3	14.3
17:00	9	11	20	1	3	4	20.0
18:00	6	6	12	0	1	1	8.3
19:00	2	2	4	0	1	1	25.0
20:00	1	1	2	0	0	0	0.0
21:00	1	1	2	0	0	0	0.0
22:00	0	0	0	0	0	0	0.0
23:00	0	0	0	0	0	0	0.0
TOTAL	147	151	298	22	36	58	19.5

Peak Statistics						
AM	TIME	11:30	09:15	09:30	07:45	09:15
	VOL	20	19	35	4	6
PM	TIME	12:15	14:30	12:00	12:15	16:45
	VOL	18	14	31	5	4

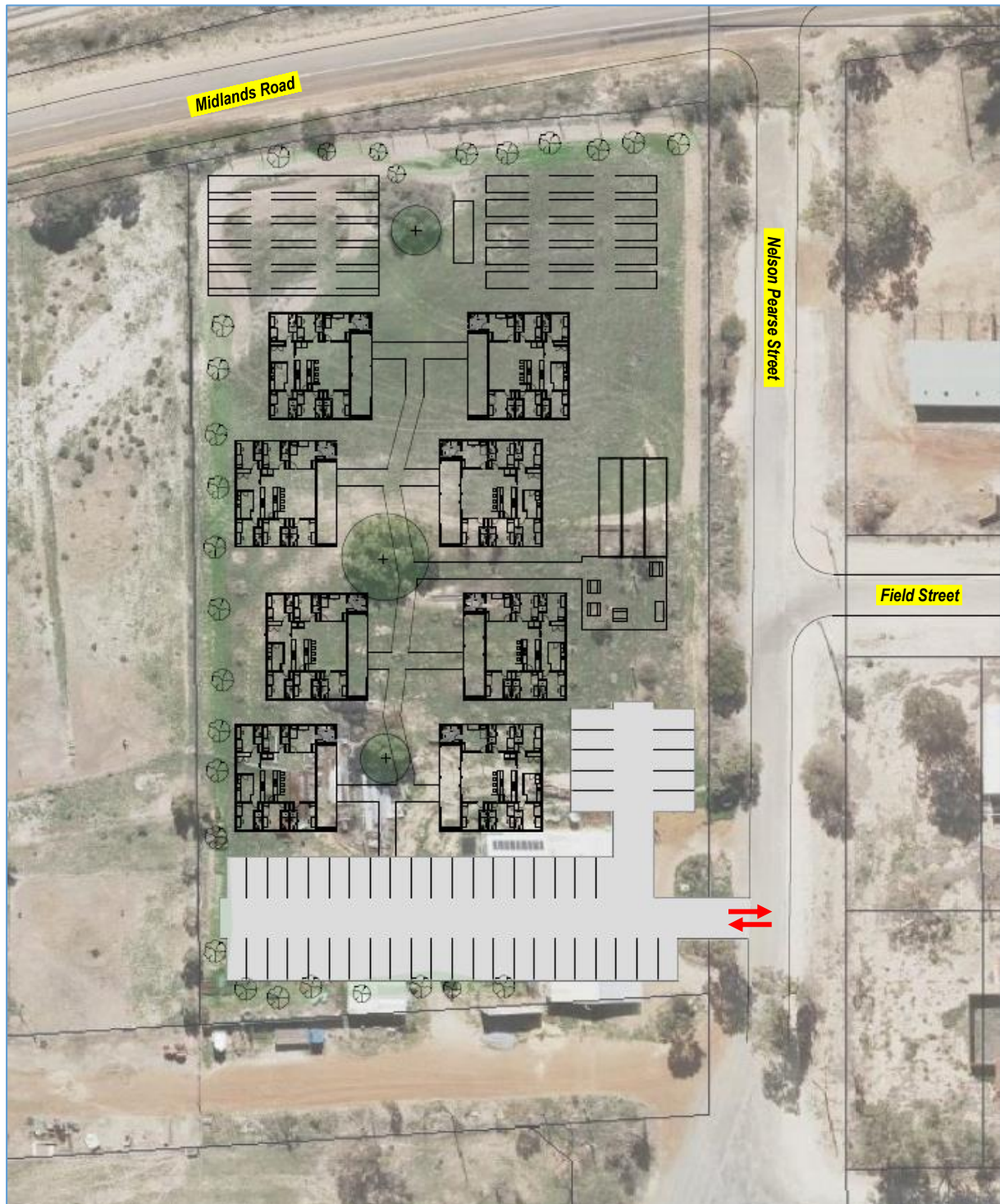
Figure 7: Traffic Volumes – Average Weekend (2022/2023)



## 4. Vehicle Access and Parking

### 4.1. Access

Vehicle access is proposed via new crossover on Nelson Pearce Street as shown in **Figure 8**.



**Figure 8: Vehicle Access Arrangement**

## 4.2. Sight Distance

Sight distance requirements from vehicle exit points are defined in Figure 3.2 of AS2890.1 which are based on the Austroads Stopping Sight Distance (SSD).

Based on the 50km/h speed limit along Nelson Pearce Street, the minimum SSD requirement is 55m.

The sight distance check is shown in **Figure 9**.

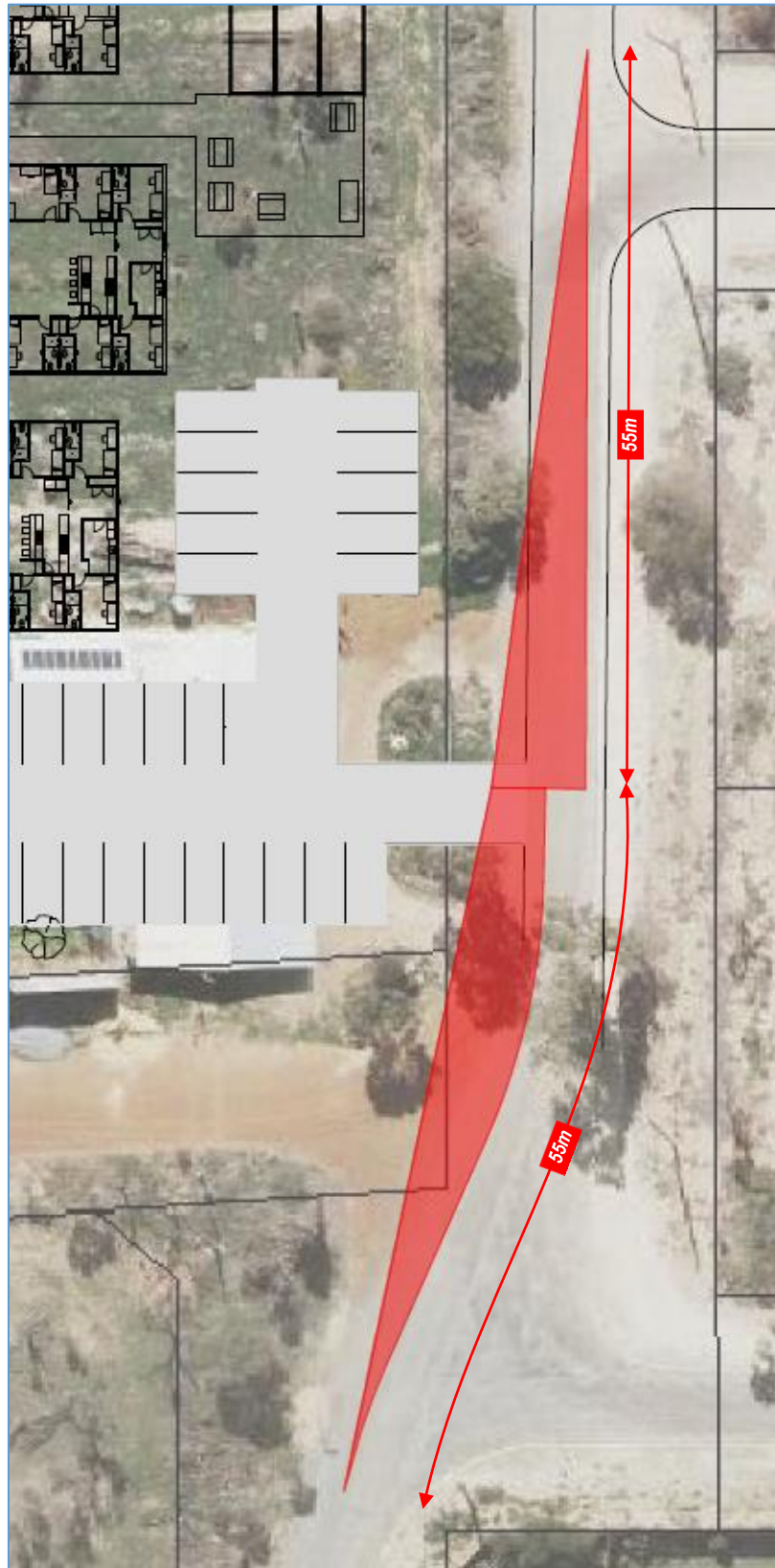


Figure 9: Sight Distance Check – Nelson Pearce Street



As shown, 55m sight distance is achieved at the proposed vehicle access towards the north.

Towards the south, there is an existing tree located within the sight triangle. From Google Street View (refer **Figure 10**), the canopy of the tree appears to mostly be above the typical driver eye height (1.15m), the tree trunk is relatively narrow and so the tree is unlikely to impact the sight distance unacceptably. However it is recommended to trim back any low hanging branches to ensure visibility is maintained.



**Figure 10: Existing Tree South of Proposed Access**

### 4.3. Car Parking

The development plan indicates a total provision of 50 car parking bays on the site.

#### 4.3.1. Planning Scheme Requirements

The car parking requirements for developments in the Shire of Mingenew are outlined in the Shire's Local Planning Scheme. The closest applicable use would be *Workforce Accommodation* and the parking rate for this use is listed as being at the discretion of local government.

Based on the proposed 48 rooms, 48 bays would be considered to be sufficient for the workers. It is considered that 1 or 2 additional spaces for any maintenance or operating staff should be sufficient. It is understood that staff movements are expected to occur only during the day when workers are away from the site.

Overall, the proposed 50 bays is assessed as being sufficient.

#### 4.3.2. Parking Design

Car parking areas are typically required to comply with the requirements of Australian Standard AS2890.1. The user class will depend on the purpose of the bay as detailed in **Figure 11**.

User class	Required door opening	Required aisle width	Examples of uses (Note 1)
1	Front door, first stop	Minimum for single manoeuvre entry and exit	Employee and commuter parking (generally, all-day parking)
1A	Front door, first stop	Three-point turn entry and exit into 90° parking spaces only, otherwise as for User Class 1	Residential, domestic and employee parking
2	Full opening, all doors	Minimum for single manoeuvre entry and exit	Long-term city and town centre parking, sports facilities, entertainment centres, hotels, motels, airport visitors (generally medium-term parking)
3	Full opening, all doors	Minimum for single manoeuvre entry and exit	Short-term city and town centre parking, parking stations, hospital and medical centres
3A	Full opening, all doors	Additional allowance above minimum single manoeuvre width to facilitate entry and exit	Short term, high turnover parking at shopping centres
4	Size requirements are specified in AS/NZS 2890.6 (Note 2)		Parking for people with disabilities

Figure 11: Classification of Parking Facilities

Resident parking (long-term parking) would be classified as User Class 1A. A summary of the AS2890.1 parking requirements is detailed in **Table 1**.

**Table 1: AS2890.1 Car Parking Compliance**

Dimension	Requirement	Provided
<b>90 degree parking – Class 1 – Long Term Parking (Residents)</b>		
Car Bay Width	2.4m	3.0m
Car Bay Length	5.4m	6.0m
Parking Aisle Width	5.8m	6.0m

All proposed parking bays are 3.0m wide, 6.0m long and the parking aisles is 6.0m. The key parking dimensions are compliant with AS2890.1.

The Shire's Local Planning Scheme also specifies a different standard for car parking design as shown in **Figure 12**.

Parking angle	Width (m)	Length (m)	Separation / Aisle (m)
<b>45 degree</b>	3.5	5.2	3.7
<b>60 degree</b>	2.8	5.6	5
<b>90 degree</b>	2.5	5.5	6.5
<b>Paving</b>	All parking spaces shall be paved to the satisfaction of the local government (unless otherwise agreed with the local government).		
<b>Landscaping</b>	Landscaping shall be undertaken at a rate of 1 tree per every 10 bays being proposed.		

**Figure 12: Shire of Mingenew Car Parking Standards**

The proposed bays satisfy the width and length requirements but the parking aisle is 0.5m narrower than the 6.5m requirement. In this instance, the much wider and longer bays are considered to adequately compensate for the shortfall in aisle width. It is also noted that the AS2890.1 requirements are satisfied and these standards are usually applied in most instances.

#### 4.4. Bicycle Parking

The proposed use is unlikely to generate any demand for cycling and so the provision of bicycle parking or end of trip facilities is not considered to be warranted.

#### 4.5. Provision for Service Vehicles

Waste is proposed to be collected from the site on a fortnightly basis.

A vehicle swept path analysis has been undertaken in Autodesk Vehicle Tracking to check the manoeuvring of waste vehicles through the site crossover. The analysis has been undertaken using a vehicle template for a typical 10m long waste collection vehicle.

The results of the analysis are shown in **Figure 13**. The analysis demonstrates that the site provides adequate room for the waste vehicle to enter and exit the site in a forward direction. However, crossover splays will be required to accommodate the turning movements in and out of Nelson Pearse Street.



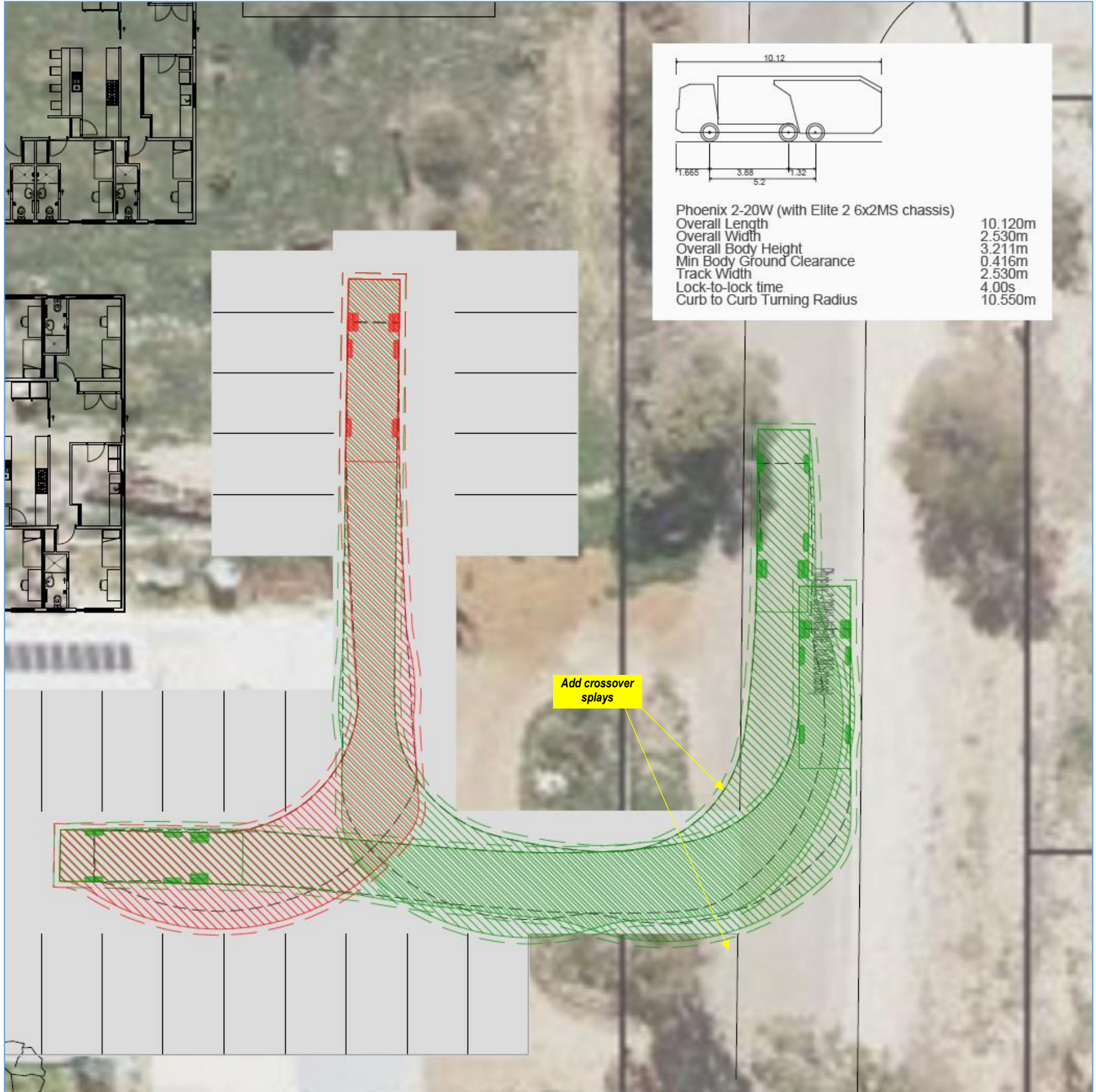


Figure 13: Swept Path Analysis

## 5. Traffic Generation

---

The proposed development will accommodate CBH workers who will travel to the nearby CBH facility in the morning between 5:30am and 6:00am and then return in the evening between 5:30pm and 6:00pm.

Assuming all workers drive individually, it is estimated that the development will generate approximately 48 vehicle movements during each peak hour, including 48 outbound vehicle movements during the morning peak hour and 48 inbound vehicle movements during the afternoon peak hour. This estimate is considered to be a worst-case scenario as some workers may travel together and some may potentially be transported by bus.

According to the WAPC TIA guidelines, an increase of between 10 to 100 peak hour vehicles is considered to have a low to moderate impact and is generally deemed acceptable without requiring detailed capacity analysis. The estimated 48 vehicles per hour is around the middle of this range and so the development traffic is considered to have a low to moderate impact and can be accommodated within the existing capacity of the road network.

It is also noted that the current background traffic volumes along the road network are very low and the peak hours of the development do not coincide with the peak hours on the road network as indicated by the traffic data shown previously in **Figure 6** and **Figure 7**.



## **6. Pedestrian and Cyclist Access**

---

There are no paths along Nelson Pearce Street or along the adjacent roads. Based on the location of the site and the proposed use, the demand for walking and cycling to and from the site would be minimal and so the provision of new paths or cycle lanes is not warranted by the proposed development.

## **7. Public Transport Access**

---

There are no existing public transport services within reasonable walking distance of the site. All guests and visitors are expected to travel via private vehicle and so there is no demand for public transport.

## **8. Site Specific Issues and Safety Issues**

---

### **8.1. Crash History**

The crash history of the adjacent road network was obtained from the MRWA Reporting Centre.

No crashes have been recorded along Nelson Pearce Street, Field Street, Oliver Street, Lee Steere Street or the adjacent section of Midlands Road over the five-year period from January 2017 to December 2021 and so the crash history does not appear to indicate any major safety issues on the adjacent road network.

The proposed redevelopment itself will generate a low to moderate volume of additional traffic and there is no indication that the development would increase the risk of crashes unacceptably.



## 9. Conclusion

---

This Transport Impact Statement for the proposed accommodation development at 18 Nelson Pearce Street in Mingenew concluded the following:

- It is estimated that the development would generate approximately 48 vehicle movements during each peak hour, including 48 outbound vehicle movements during the morning peak hour and 48 inbound vehicle movements during the afternoon peak hour. This volume of traffic is low to moderate and can be accommodated within the existing capacity of the road network with no major impact. This estimate is considered to be a worst-case scenario as some workers may travel together and some may potentially be transported by bus.
- The minimum sight distance requirement is achieved from the proposed crossover on Nelson Pearce Street towards the north.
- Towards the south, there is an existing tree located within the sight triangle. The canopy of the tree appears to mostly be above the typical driver eye height (1.15m), the tree trunk is relatively narrow and so the tree is unlikely to impact the sight distance unacceptably. However it is recommended to trim back any low hanging branches to ensure visibility is maintained.
- The minimum car parking provision is to be determined at the discretion of local government. The provision of 50 car bays is considered to be sufficient for the workers. It is understood that staff movements are expected to occur only during the day when workers are away from the site and so the proposed 50 bays would be sufficient.
- The key parking dimensions are compliant with AS2890.1.
- The proposed bays satisfy the width and length requirements of the Shire's Local Planning Scheme but the parking aisle is 0.5m narrower than the 6.5m requirement. In this instance, the much wider and longer bays are considered to adequately compensate for the shortfall in aisle width. It is also noted that the AS2890.1 requirements are satisfied and these standards are usually applied in most instances.
- A vehicle swept path analysis demonstrates that the site provides adequate room for the waste vehicle to enter and exit the site in a forward direction. However, crossover splays will be required to accommodate the turning movements in and out of Nelson Pearce Street.
- The crash history of the adjacent road network did not indicate any safety issue on the adjacent road network and there is no indication that the development would increase the risk of crashes unacceptably.
- It is expected that all residents and visitors will be accessing the site via a motor vehicle and so there is no demand for additional path infrastructure or public transport services.

## APPENDIX 3

Engineering Servicing Report (McDowall Affleck)



# ENGINEERING SERVICING REPORT

FOR

**No. 18 Nelson Pearse Street, Mingenew**

Prepared by

**McDOWALL AFFLECK PTY LTD**

**CONSULTING ENGINEERS | PROJECT MANAGERS**



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# 1 INTRODUCTION

McDowall Affleck Pty Ltd have been commissioned by CBH Group to conduct an engineering servicing report to enable the planning application to WAPC for the proposed 50-bed workforce accommodation of No. 18 Nelson Pearse Street, Mingenew herein referred to as the site.

The site is zoned as 'rural residential' under the Shire of Mingenew Town Planning Scheme No. 4, which can be accessed from the Department of Planning, Lands and Heritage (DPLH).

CBH have provided a proposed concept design for the site. Refer to APPENDIX 1 – PROPOSED CBH CONCEPT PLAN.

This report is based on the findings from a desktop study of available information from records and discussion with relevant statutory authorities.

## 2 SURFACE FEATURES

### 2.1 Existing Features

The site is located approximately 800m west from the town of Mingenew, and currently zoned as rural residential. Refer to APPENDIX 2 – SHIRE OF MINGENEW LOCAL PLANNING SCHEME NO. 4.

The site consists of sparse grassland with few trees and vegetation within the northern half of the site. The existing house resides within the south-eastern corner fronting Nelson Pearse Street with additional sheds, stockpiles and sundry items behind the house. Refer to APPENDIX 3 – AERIAL PHOTO NO. 18 NELSON PEARSE STREET MINGENEW.

### 2.2 Land Surface

The site is described relatively flat with a low point within the north-western corner of the site, fronting Midlands Road. Starting at approximately 170mAHD at the south-eastern corner, and gradually decreasing to 164mAHD at the north-western corner. This information can be accessed from the DataWA catalogue.

### 2.3 Existing Drainage

Based off the contour information obtained, it is expected that stormwater runoff will follow the natural topography of the site. Most of the site would flow towards the north-western corner of the site towards Midlands Road. It is expected that stormwater will infiltrate on site due to lack of piped drainage infrastructure along Nelson Pearse and Field St.

### 2.4 Roads

As shown in the aerial photo in Appendix 3, Nelson Pearse Street runs along the eastern side of the site and a gravel access along the southern side. There are no current notable roads within the site, only access / driveway to the house and firebreaks surrounding fields within the northern half of the site.

## 3 GEOTECHNICAL

Currently, there is no known geotechnical studies for the site.

Through desktop investigation, a soil-landscape map of the Geraldton Region had been sourced from the digital library of the Department of Primary Industries and Regional Development (DPIRD) which indicates that the site consists of:

- Mh – Mount Horner soil-landscape described as long gentle slopes and open depressions with gravel ridges and lateritic breakaways. Deep pale yellow and white sands, gravelly sands and sandy duplex soils.



Refer to APPENDIX 4 – SOIL-LANDSCAPE MAP OF THE GERALDTON REGION.

A geotechnical study of the site may be required to confirm if the on-site soil material is consistent with the geological soil-landscape mapping.

### *3.1 Groundwater*

The Department of Water and Environmental Regulation (DWER) “Perth Groundwater Map” & “Water information reporting” provides information on average and historical maximum groundwater levels within the site.

Searching within the Mingenew district, there seems to be no recent reporting of groundwater levels close to the site to give an approximate indication of the groundwater level. Further investigation as part of the Geotechnical study may be required to determine if groundwater may influence the site.

### *3.2 Acid Sulphate Soils*

Acid Sulphate Soil (ASS) testing has not been conducted for the site and there is no known evidence for ASS risk assessments conducted within the Mingenew region. As indicated by the soil-landscape information, sands typically have a low risk associated with ASS.

An Acid Sulphate Soil investigation may be considered alongside the Geotechnical study to confirm the low risk however this is not a requirement.

## **4 EARTHWORKS**

The site has not currently been given a classification and a geotechnical investigation will be required to gain further information on preparation and classification of the site.

It is expected that there would be minimal deep excavation within the site with exception for the wastewater tanks and possible soak-wells within the carpark. Localised levelling would be required for the accommodation villas, common room and the area for the leach drains.

## **5 ROADS & CARPARKING**

The only proposed road within the development would be for access into the carpark. This would typically be 5.5m wide to allow for two-way entry / exit with the carparking bays sized in accordance with Australian Standard AS2890.1 – Parking Facilities Part 1: Off-street car parking.

## **6 STORMWATER DRAINAGE PLAN**

The Shire of Mingenew has no known stormwater management plan for the town of Mingenew. As a guide we would expect stormwater to be discharged in its natural flow path at predevelopment flow rates. Its anticipated that that run-off generated from the carpark, accommodation villas and the common room will be conveyed by pit and pipe system or open swales to a small detention basin to provide attenuation to limit outflows from the site to predeveloped flow rates at the north-western corner of the site.

## **7 WASTEWATER (EFFLUENT) DISPOSAL**

There is no reticulated sewer infrastructure within the Town of Mingenew and it will be some time until Water Corporation’s networks expands to this area. Therefore, wastewater will be managed and disposed of on-site via a primary or secondary treatment device before being discharged to an onsite effluent disposal field.

This site is not within a Sensitive Sewage Area or a Public Drinking Water Source Area according to the Department of Water and Environmental Regulation.





Following the Department of Health (DoH) 'Supplement to Regulation 29 and Schedule 9', for non-residential premises we would consider the proposed development to be very similar to mine-site accommodation camp units for a combined hydraulic loading rate of 180L/person/day.

Multiplying this value by the 50-person maximum occupancy gives a total of 9,000L/day. This total can be managed on-site using flat-bed leach drains within the onsite effluent field. Given the deep sand and gravels that may be expected from the soil-landscape information for the Mingenew area, a soil category of 1 – 2 could be estimated. For secondary treated effluent, a Design Loading Rate would be 50mm/day determined from Table L1 from Australian Standard AS1547:2012 'On-site domestic wastewater management'. The required length for the leach drains would be estimated by dividing the total hydraulic loading rate by the design loading rate and the width of the leach drain (DoH have provided a list of approved manufacturers and the associated infiltrative areas).

An example had been provided in the appendices, using DoH approved flat-bed leach drains from DS Agencies for secondary treated effluent. Utilizing 1.8m setback distances between lengths and surrounding the leach drains, a total area required for the effluent disposal field is 416m<sup>2</sup>. Refer to APPENDIX 5 – ON-SITE WASTEWATER MANAGEMENT CALCULATIONS for further information regarding the calculations.

The location of the effluent disposal system may be subject to change and the area may need to be investigated to check the depth and category of sand, as well as separation between possible shallow rock or groundwater.

## 8 WATER SUPPLY

Network mapping provided by the Water Corporation from Before You Dig Australia (BYDA) indicates that there is an existing DN100 PVC water main on the southern side of the site. Refer to APPENDIX 5 – WATER CORPORATION WATER MAINS NETWORK MAP. The site is on the boundary of the existing water network with reduced pipe sizes at the outer edges. After discussions with the Water Corporation planning team, they have indicated that the total water demand of the site will have an effect on pressure and supply if they are to accommodate the peak water demands of the proposed development.

Considering 270L/person/day as a conservative water consumption equates to an average demand of 13,500L/day, which the Water Corporation have indicated is a 10% increase in demand above the current scheme. This would affect the reserve storage tanks to the Town and possibly back to where the water is sourced from.

If the Water Corporation is required to supply the peak demand flow, then upgrades to at least 300m of the existing water main through Linthorne Street will be required. Another option would be to install tanks and a pump system on-site with a trickle feed supply from Water Corporation at the average demand. Further investigation into the exact water demand will be required.

Ultimately the site can still be serviced for water, with consideration of the above mentioned options.

## 9 UNDERGROUND POWER

Overhead and Underground Power Network mapping supplied by Western Power indicates the following:

- The site is serviced by the Western Power Three Springs substation, approximately 49.5km south-east of Mingenew.
- There are existing overhead high voltage power poles below the south-eastern corner of the site on Nelson Pearse Street and along the southern side of the gravel road.
- There is an existing underground low voltage cable and pillar at the south-western corner of the site.



There would need to be further investigation into the electrical demand for the proposed development and if the existing nearby electrical infrastructure has enough capacity. If the existing network does not have enough capacity, then an on-site transformer may be considered or upgrades to the existing nearby network will be needed. Refer to APPENDIX 6 – WESTERN POWER OVERHEAD AND UNDERGROUND NETWORK MAP.

Using the Western Power Network Mapping Tool, we have assessed the remaining capacity of the Three Springs substation to service the proposed development. The substation currently indicates a remaining capacity of 5 to 10 MVA as of 2023. The forecasted capacity is estimated to remain at this capacity until 2029 noting that there is currently no plan for increasing this capacity for the next 6 years. Refer to APPENDIX 7 – WESTERN POWER NETWORK CAPACITY MAP.

The site can ultimately be serviced with overhead and underground power.

## **10 COMMUNICATIONS**

Network information supplied by Telstra indicates an existing in-service cables/ducts along Field Street and across the Nelson Pearce intersection. It is anticipated that the proposed accommodation village within the site can be serviced by the existing Telstra service or existing mobile phone coverage. Refer to APPENDIX 8 – TELSTRA NETWORK MAP. The NBN network has no known existing service within the area along Nelson Pearce Street. From accessing NBN's network website it does indicate that it is available and further investigation is needed to see if additional work is to be completed before the site can be connected.

The site can ultimately be serviced with communications services.

## **11 CONCLUSION**

This report has investigated that the site is able to be supplied by the required services for a 50 person accommodation village based on a desktop investigation for planning purposes. As design development occurs prior to construction, then additional investigations and calculations will be required to confirm the exact sizes and requirements for items such as water supply, onsite effluent disposal, stormwater design, communications and electrical supply.

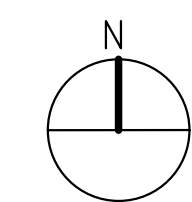


## APPENDIX 1 – PROPOSED CBH CONCEPT PLAN



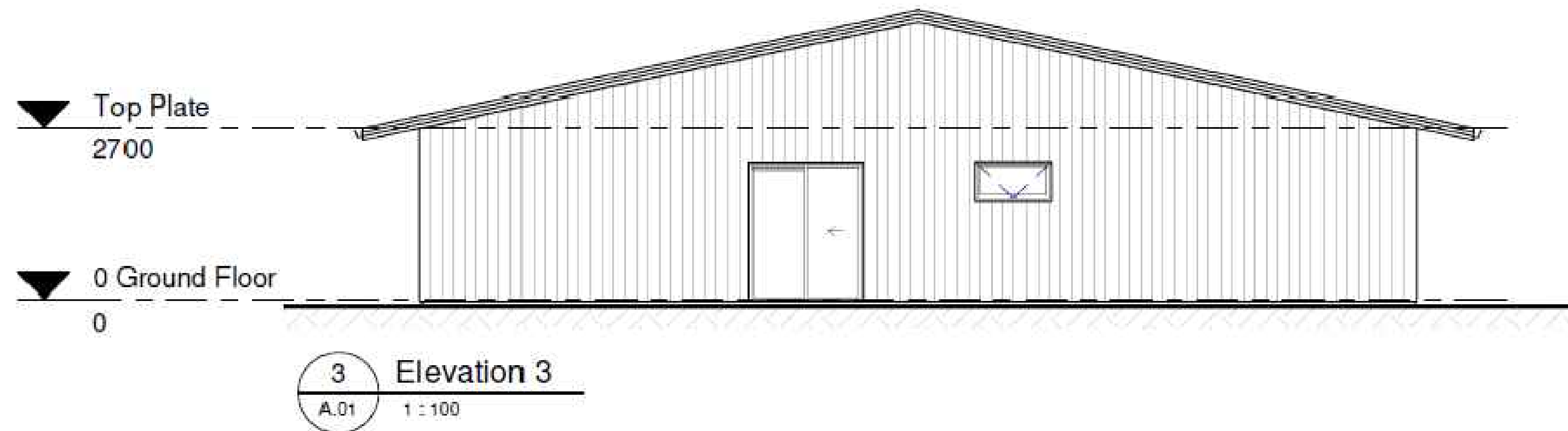
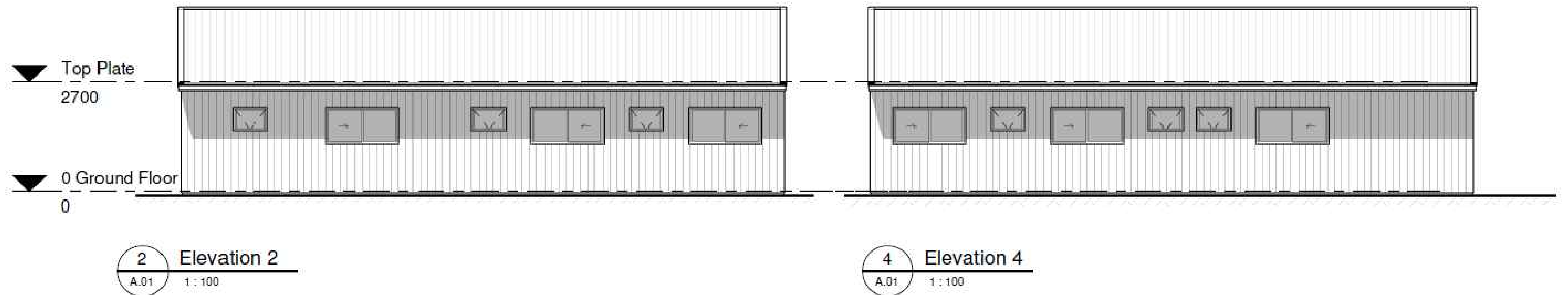
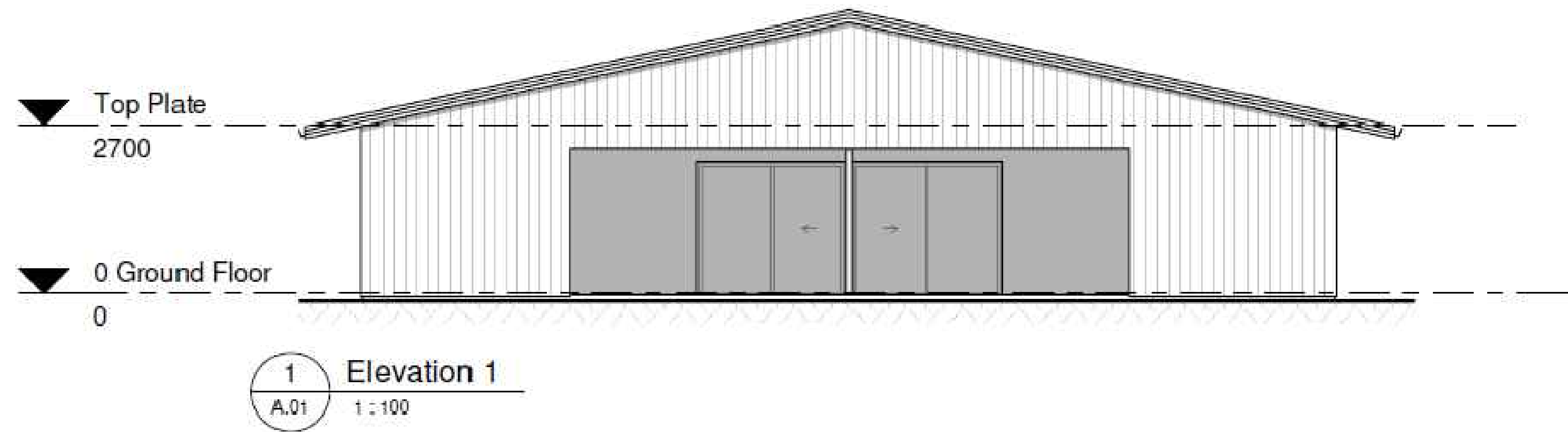






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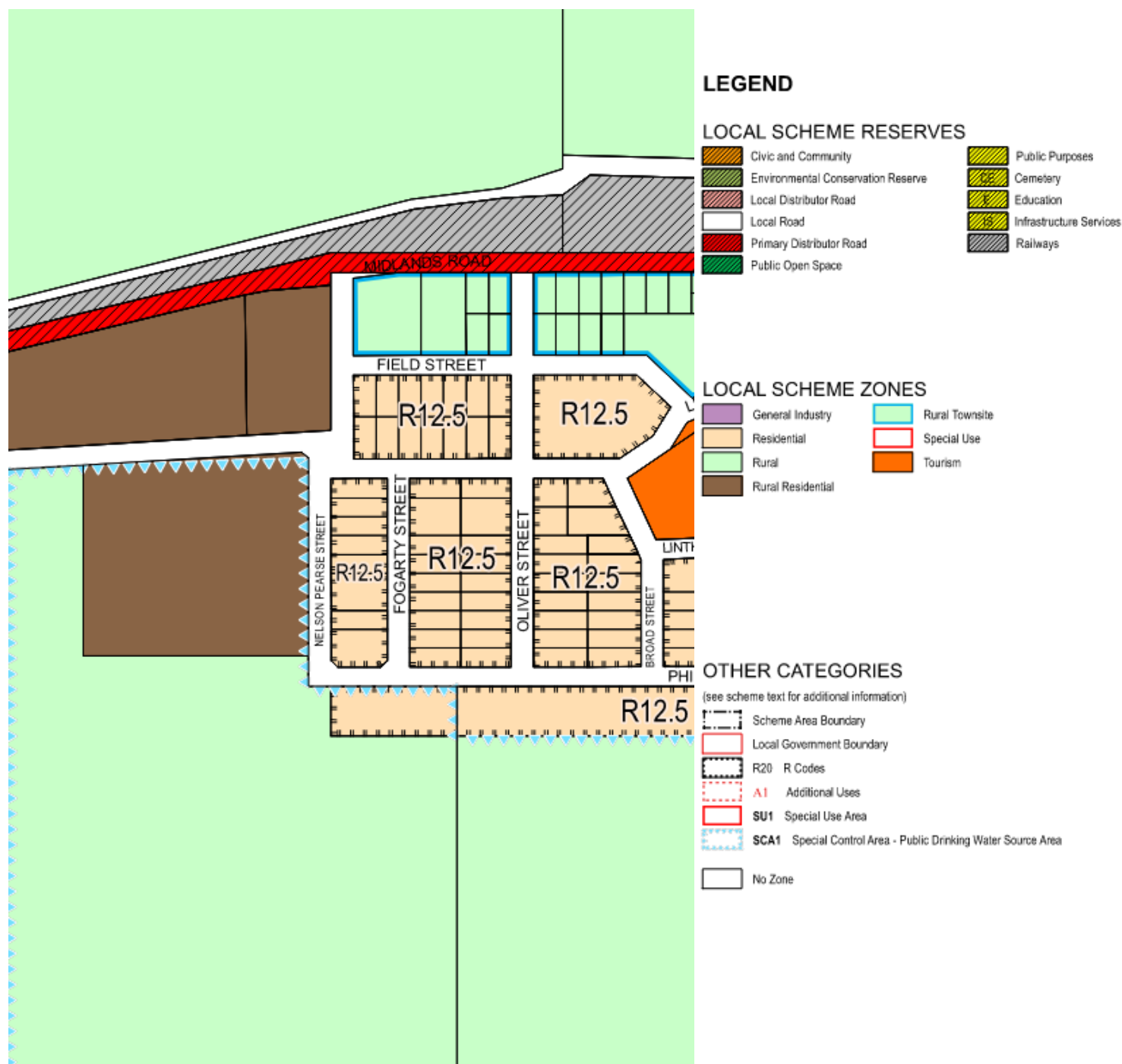
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## APPENDIX 2 – SHIRE OF MINGENEW LOCAL PLANNING SCHEME NO. 4





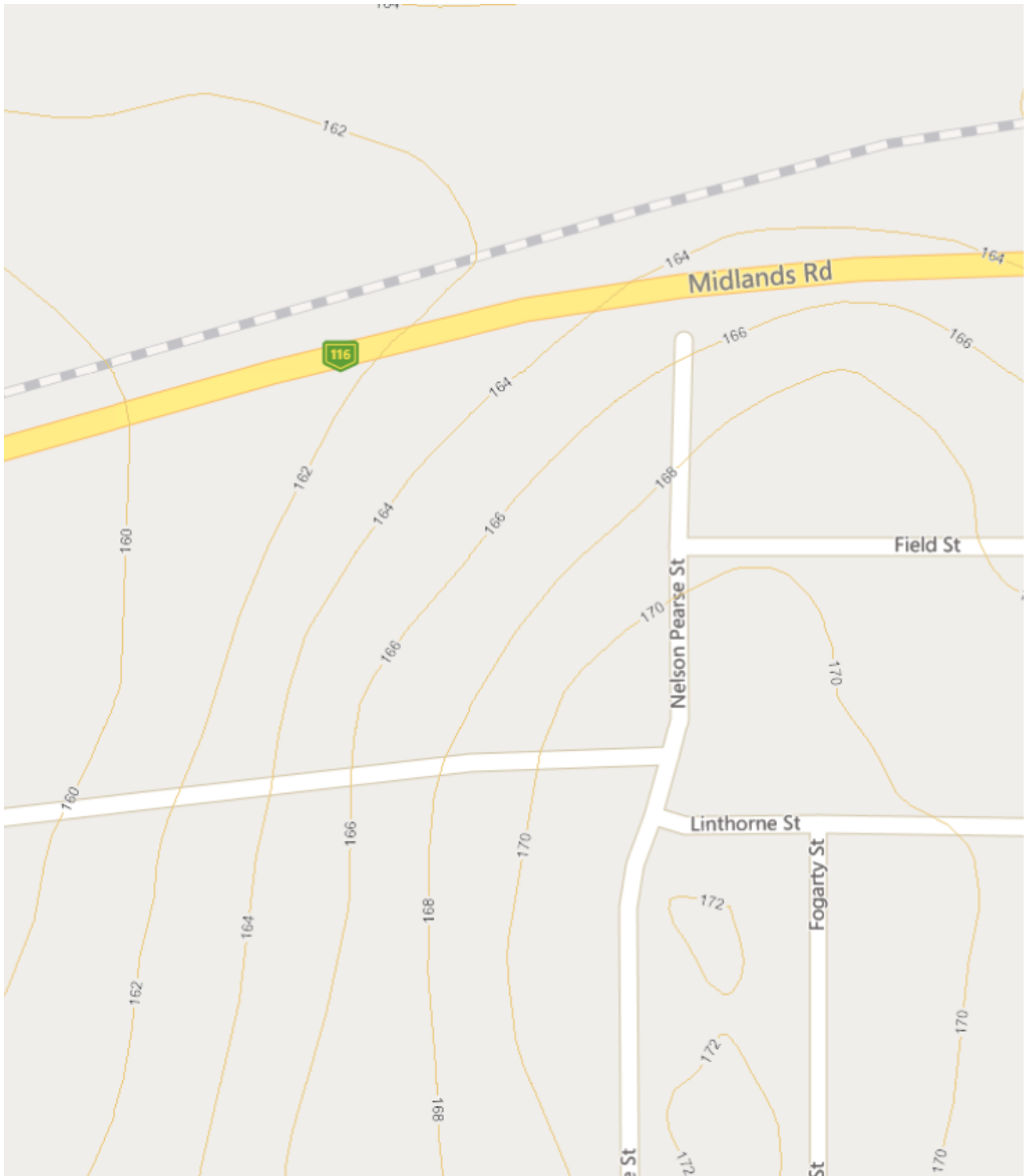
## APPENDIX 3 – AERIAL PHOTO NO. 18 NELSON PEARSE STREET MINGENEW





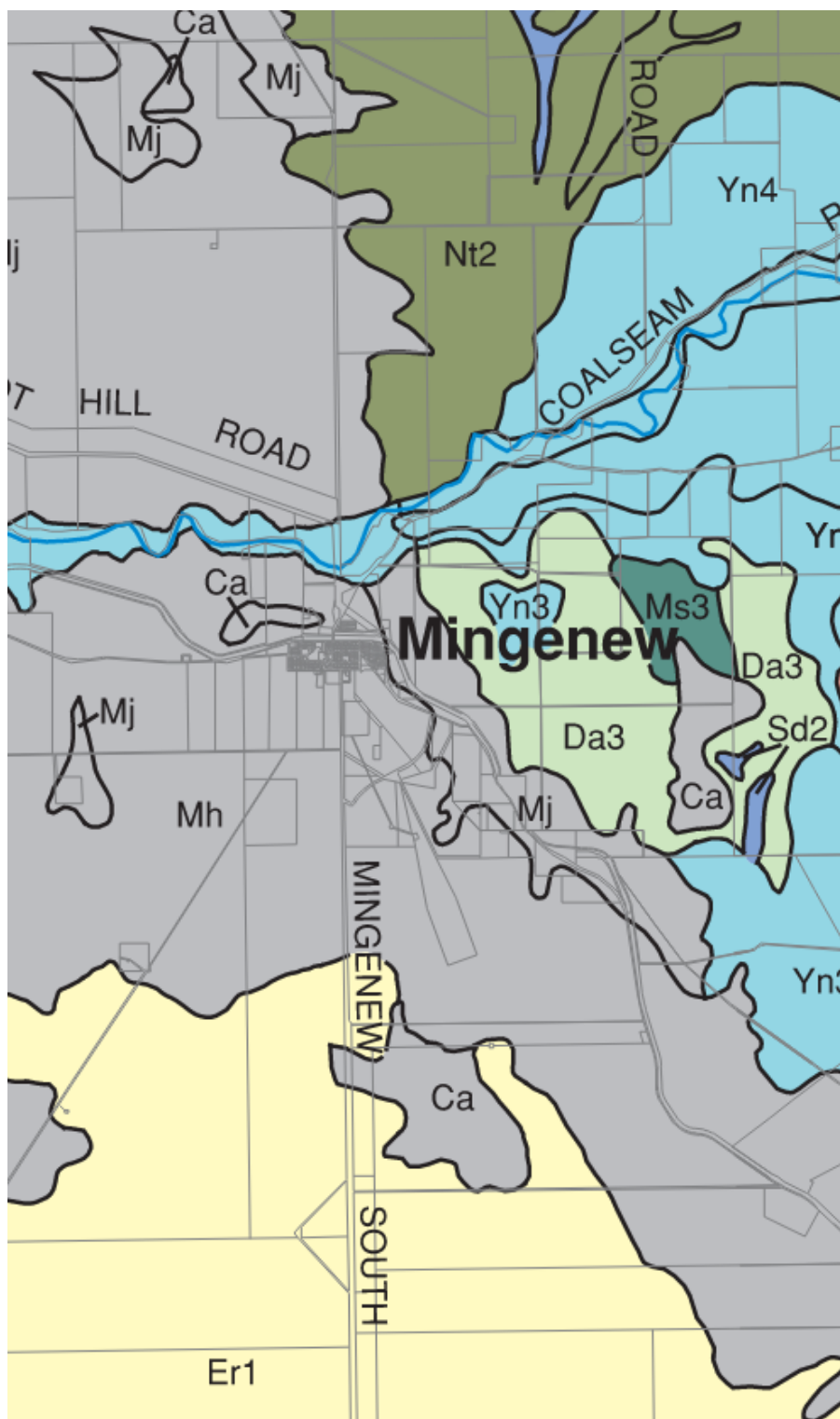
# 2M CONTOUR PLAN NO. 18 NELSON PEARSE STREET MINGENEW

Obtained from DataWA





## APPENDIX 4 – SOIL-LANDSCAPE MAP OF THE GERALDTON REGION



Mh Mount Horner

Long gentle slopes and open depressions with gravel ridges and lateritic breakaways. Deep pale yellow and white sands, gravelly sands and sandy duplex soils.



## APPENDIX 5 – ON-SITE WASTEWATER MANAGEMENT CALCULATIONS



**18 Nelson Pearse Street, Mingenew**

- Secondary Treatment
- Category 1 & 2 expected to be receiving

**Hydraulic Calculation**

9000 L/day  
/ 50 mm/day According to Table L1 AS1547 (soil category 1-2 > DLR - 50mm/day)  
= 180 m<sup>2</sup>  
/ 2.4 m (Width of drain [i.e. concrete or non-concrete leach drain])  
= 75.00 m required length for drainage  
/ 20 m recommended length for drains  
= 3.75 >> 4 - number of drains required (must be even)

Insert Setback distance 1.8 m

- Alternatively, the width can be replaced for Infiltrative Area (m<sup>2</sup>/m) to determine the total LAA required in accordance with DoH.

**18.75 m in length**

AS1547 recommends maximum drain lengths of 20m. Longer lengths are possible provided even distribution can be demonstrated.

**Length of Land Application Area (Effluent disposal field)**

18.75 m  
+ 2 \* Setback distances = 3.6 m  
= **22.35 m**

**Width of Land Application Area (Effluent disposal field)**

2.4 m width of standard concrete leach drains  
\* 4 drains  
9.60 m  
+ 1.8 m minimum separation between each drain \* 3  
= 15.00 m  
+ 3.6 m (2\*setback distances for outer edge drains)  
= **18.60 m**

**Total Land Application Area Required**

22.35 X 18.60  
= **415.71 m<sup>2</sup>**

**DoH Supplement of Regulation 29 and Schedule 9 - Wastewater system loading rates for non-standard dwellings.**

Table 2: Human waste hydraulic loading rates

Type of premises (Regulation 29)	Equivalent Use	Combined Flow (L/person/day)
Hotel	Minesite accommodation camp units	180

**Table L1 - Recommended Design Loading Rates (DLR) for Trenches and Beds**

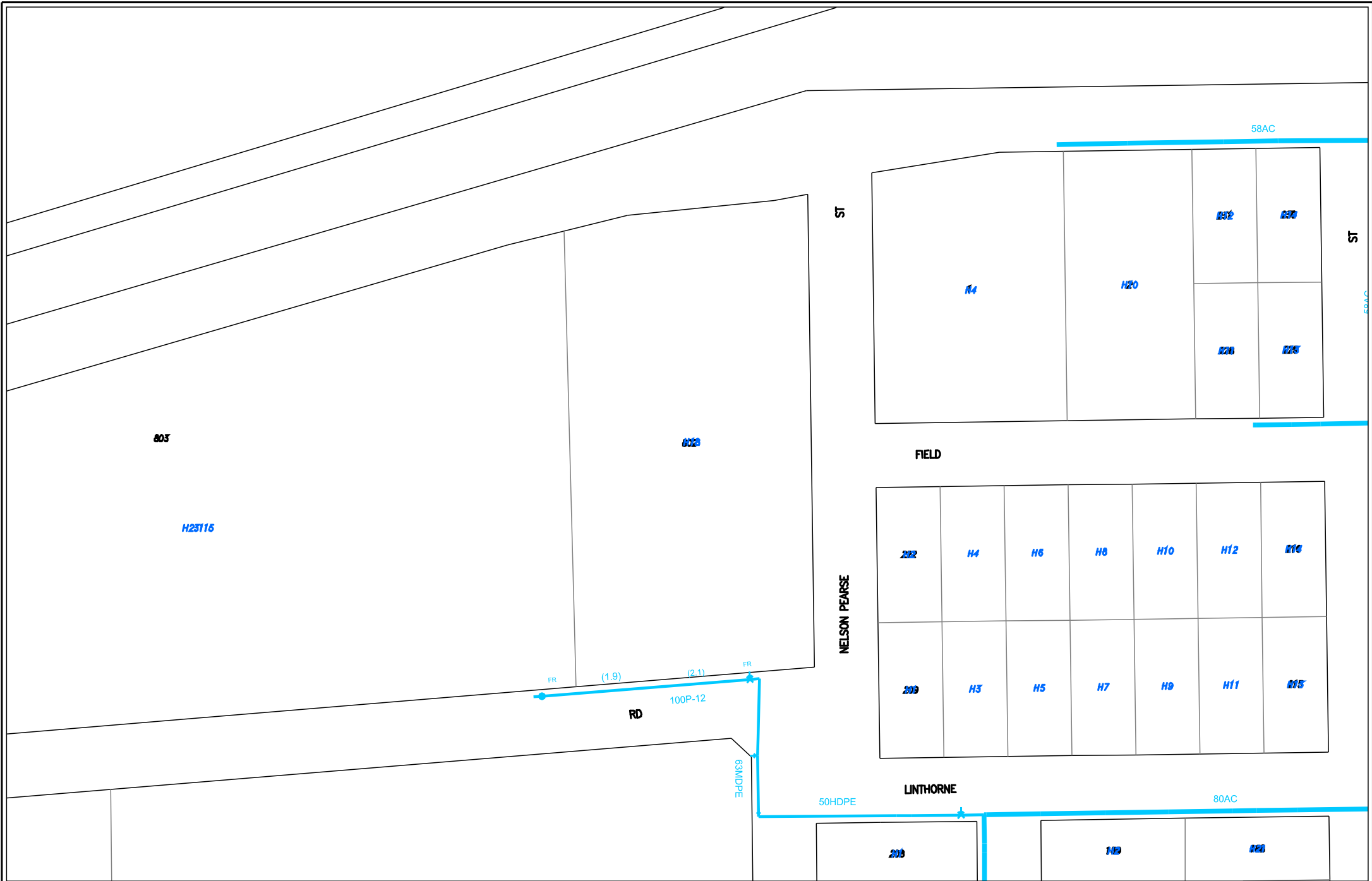
TABLE L1 RECOMMENDED DESIGN LOADING RATES FOR TRENCHES AND BEDS							
Soil category	Soil texture	Structure	Indicative permeability (K <sub>sat</sub> )(m/d)	Design loading rate (DLR) (mm/d)			
				Trenches and beds			ETA/ETS beds and trenches
				Primary treated effluent		Secondary treated effluent	
Conservative rate	Maximum rate						
1	Gravels and sands	Structureless (massive)	> 3.0	20 (see Note 1)	35 (see Note 1)	50 (see Note 1)	(see Note 4)
2	Sandy loams	Weakly structured	> 3.0	20 (see Note 1)	30 (see Note 1)	50 (see Note 1)	
3	Loams	Massive	1.4 – 3.0	15	25	50	
		High/moderate structured	1.5 – 3.0	15	25	50	
4	Clay loams	Weakly structured or massive	0.5 – 1.5	10	15	30	
		High/moderate structured	0.5 – 1.5	10	15	30	
		Weakly structured	0.12 – 0.5	6	10	20	
5	Light clays	Massive	0.06 – 0.12	4	5	10	
		Strongly structured	0.12 – 0.5	5	8	12	
		Moderately structured	0.06 – 0.12		5	10	
6	Medium to heavy clays	Weakly structured or massive	< 0.06			8	
		Strongly structured	0.06 – 0.5	(see Notes 2 & 3)			
		Moderately structured	< 0.06				
		Weakly structured or massive	< 0.06				5 (see Notes 2, 3, & 5)

**AS1547:2012 Typical details for for trenches & beds**

TABLE L2 TYPICAL DIMENSIONS OF CONVENTIONAL TRENCHES AND BEDS			
	Typical dimensions (mm)	Maximum (mm)	Minimum (mm)
<b>Trench dimensions</b>			
Width	300 – 450	600	200
Depth of aggregate	200 – 400	400	200
Depth of topsoil	100 – 150	150	100
Spacing between adjacent trenches (sidewall to sidewall)	–	N/A	1000
<b>Bed dimensions</b>			
Width	1000 – 4000	4000	1000
Depth of aggregate	300 – 600	600	300
Depth of topsoil	100 – 150	150	100
Spacing between adjacent beds (sidewall to sidewall)	–	N/A	1000



## APPENDIX 6 – WATER CORPORATION WATER MAINS NETWORK MAP



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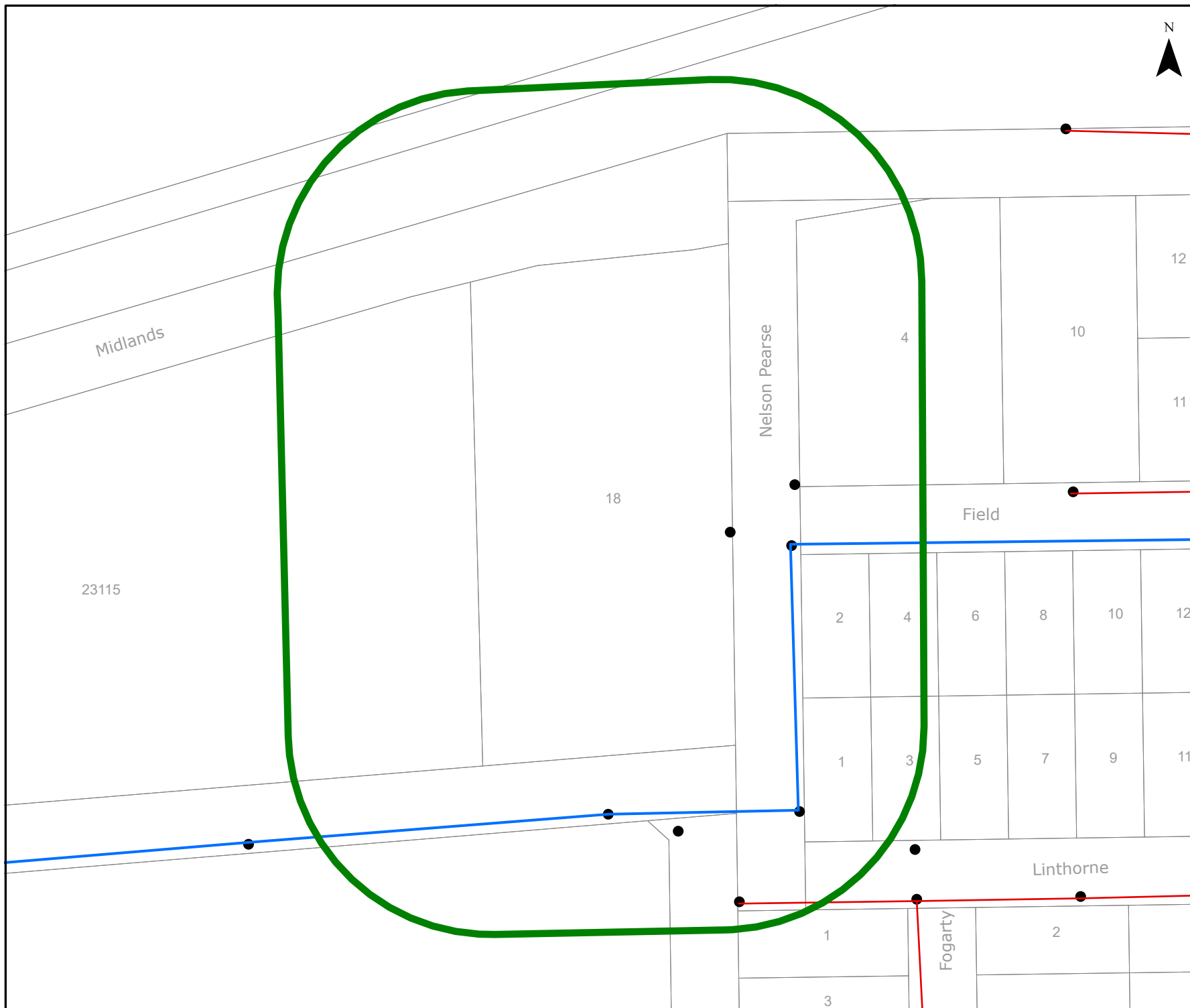


**WARNING - CRITICAL PIPELINE**  
 Refer to Information Brochure Damage  
 Prevention and Legend for details

The Water Corporation has taken due care in the preparation of this map but accepts no responsibility for any inaccuracies or inappropriate use. This plan may be reproduced in its entirety for the purpose of site work planning but shall not otherwise be altered or published in any form without the permission of the Water Corporation. The Water Corporation may need to be advised of any planned ground disturbing activities near facilities on this map. Refer to Brochure - "Protecting Buried Pipelines". Please report any inaccuracies to Asset Registration Team by email to [asset.registration@watercorporation.com.au](mailto:asset.registration@watercorporation.com.au).



## APPENDIX 7 – WESTERN POWER OVERHEAD AND UNDERGROUND NETWORK MAP



**OVERHEAD LEGEND**

Structures	
● Power Pole	■ Transmission Poles
Transmission Overhead Powerline	
— Transmission (33kV - 330kV)	
Distribution Overhead Powerline	
— High Voltage (1kV - 33kV)	
— Low Voltage (< 1kV)	
Proposed Construction Assets	
■ Design Area *	
— High Voltage Overhead Powerline	
— Low Voltage Overhead Powerline	
● Power Pole	
Communications Assets	
— Overhead Pilot Cable	
Feature	
■ Area of Interest	

**\* Please refer to coversheet**

**Privately owned cables NOT SHOWN (including house services)**

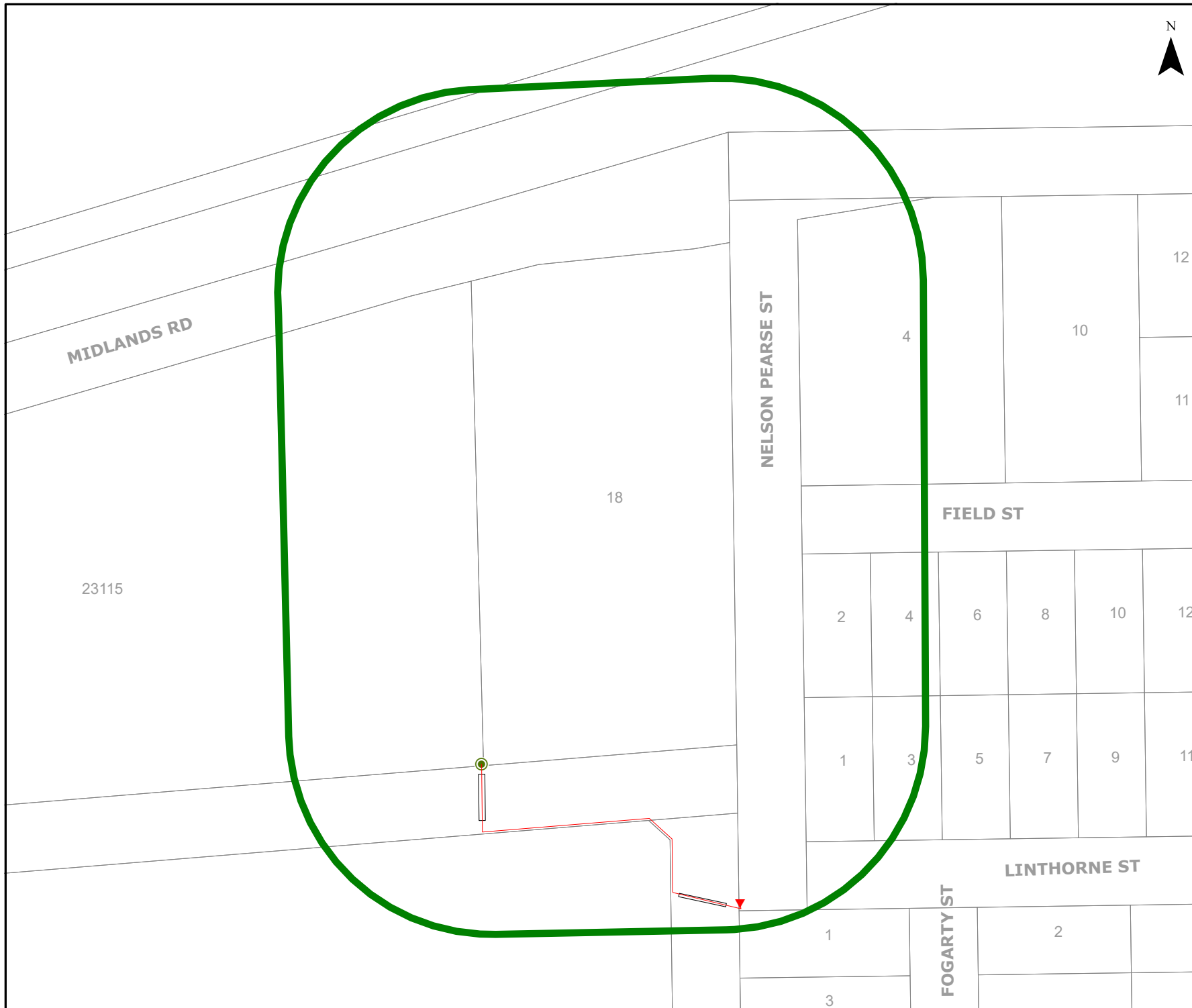
This map is **INDICATIVE ONLY**.  
Check that you have enough clearance from the **DANGER ZONES** near overhead powerlines.

Telephone Support: 1300 769 345  
Mon to Fri - 08:00 to 16:30

Information valid for 30 days from date of issue

A4 | Scale : 1:1500

**WARNING! Look out for overhead power lines**



**UNDERGROUND LEGEND**

**Structures**

Pillar

Metal Pole

Transformer Site

UG Crossing \*

Ring Main Unit

LV Distribution Frame

**Distribution Cables**

High Voltage Cable (1kV - 33kV)

Low Voltage Cable (< 1kV)

Street Light Circuit (< 1kV)

Street Light Pilot (< 1kV)

Earth Wire

**Cable Pole Terminations**

HV Termination

LV Termination

**Proposed Construction Assets**

Design Area \*

High Voltage Underground Cable

Low Voltage Underground Cable

Metal Pole

Pillar

Transformer site

HV Termination

LV Termination

**State Underground Power Project**

CURRENT Work Area \*

COMPLETED Area \*

**Feature**

Area of Interest

**\* Please refer to coversheet**

**Privately owned cables NOT SHOWN (including house services)**

**This map is INDICATIVE ONLY. Hand exposure via pothole method is MANDATORY.**

**Telephone Support: 1300 769 345  
Mon to Fri - 08:00 to 16:30**

**Information valid for 30 days from date of issue**

A4

Scale : 1:1500

**WARNING! Look out for overhead power lines**

Sequence Number: 220240765

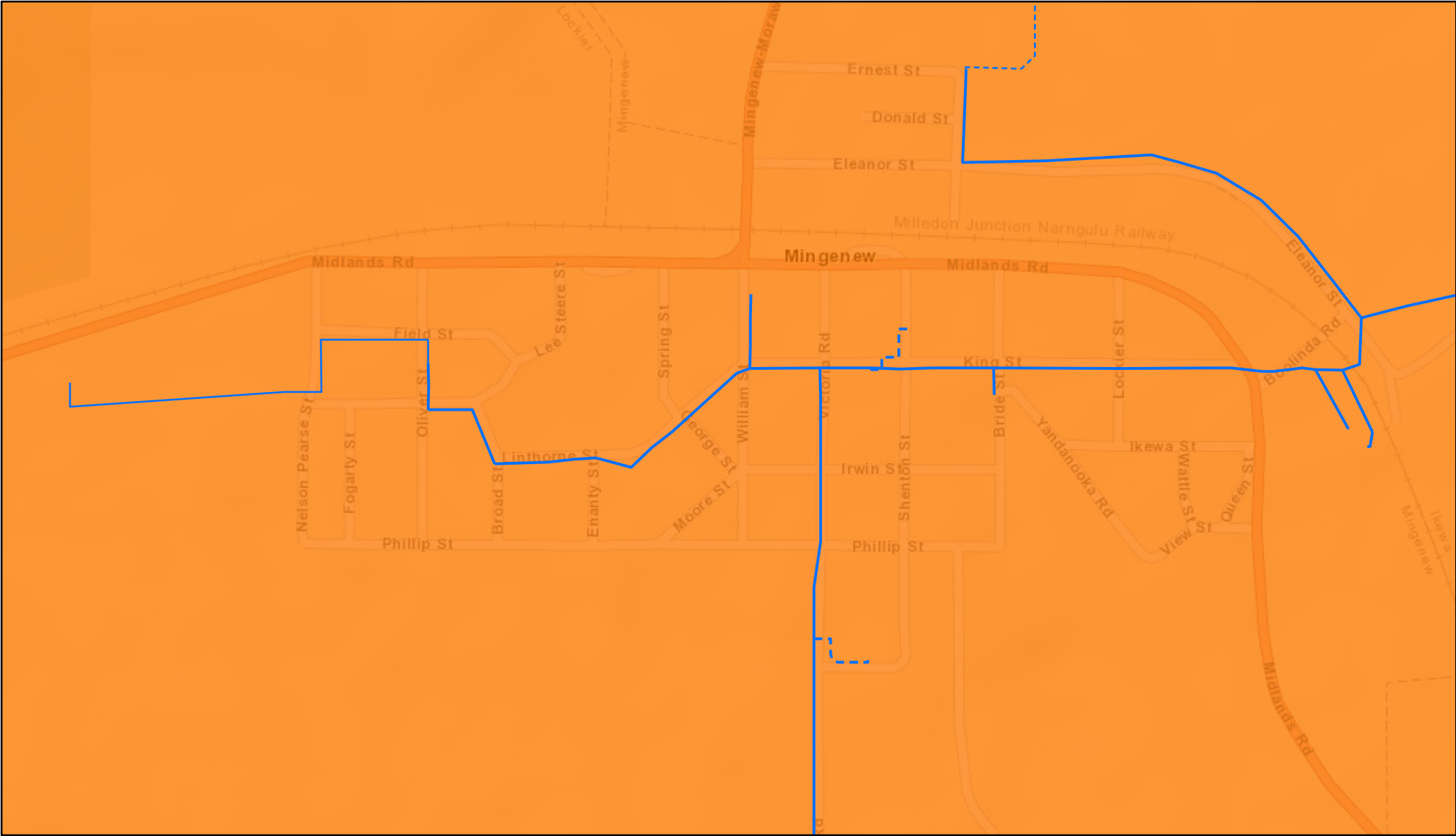
Date of Issue: 19/01/2023



## APPENDIX 8 – WESTERN POWER NETWORK CAPACITY MAP



# 18 Nelson Pearce St - WP NCMT 2023



25/01/2023, 14:18:51

NCMT High Voltage Distribution Lines (WP-052)    - - - - - Underground Three Phase

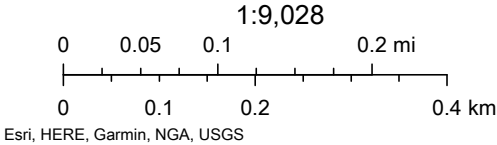
— Overhead Single Phase

— Overhead Three Phase

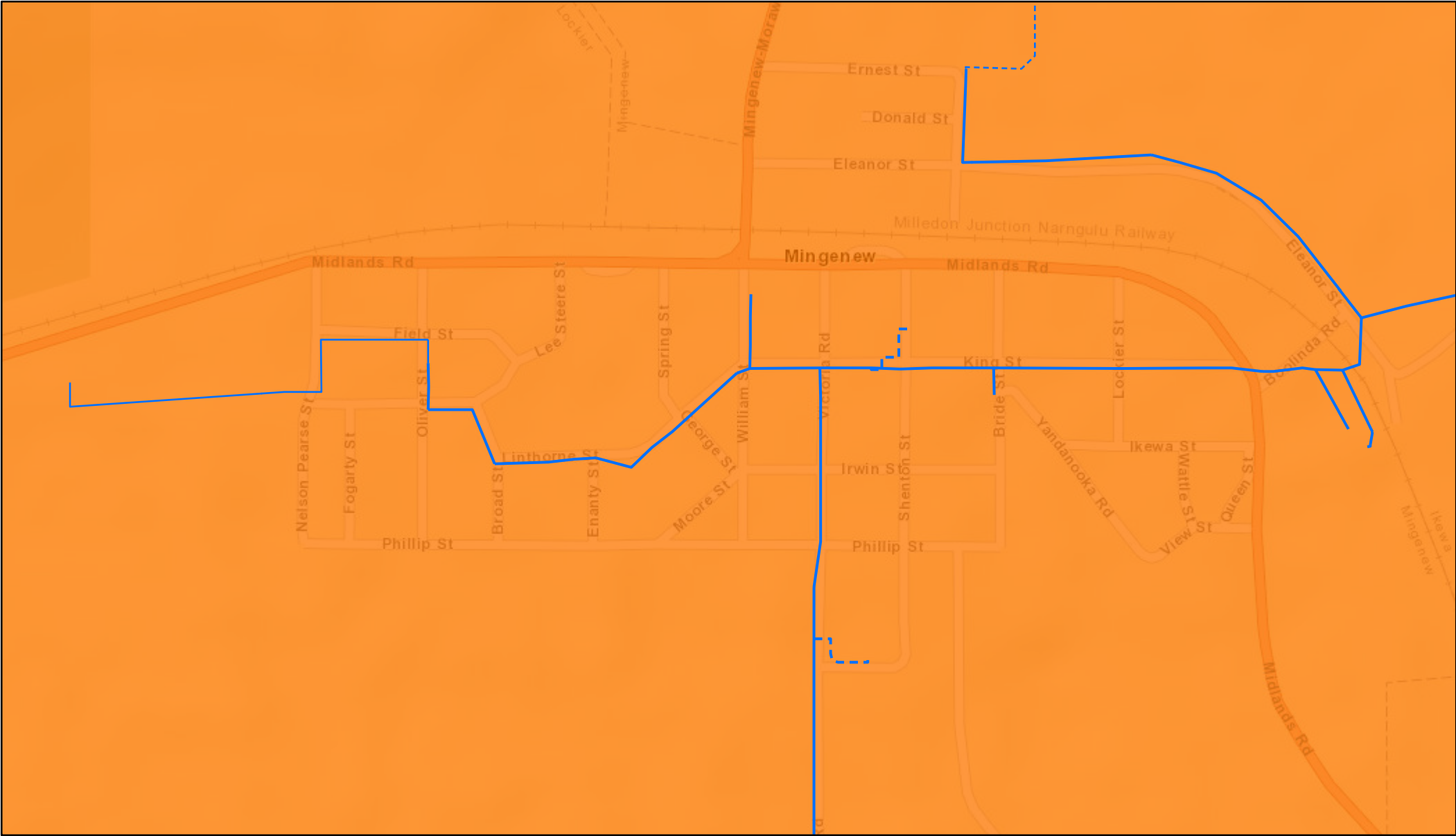
- - - - - Underground Single Phase

NCMT Forecast Remaining Capacity 2023 (WP-053)

5 to 10 MVA



# 18 Nelson Pearce St - WP NCMT 2026



25/01/2023, 14:19:36

NCMT High Voltage Distribution Lines (WP-052)

Overhead Single Phase

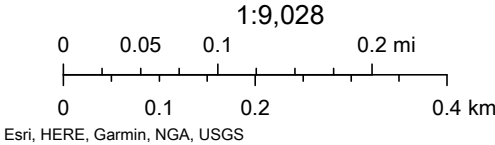
Overhead Three Phase

Underground Single Phase

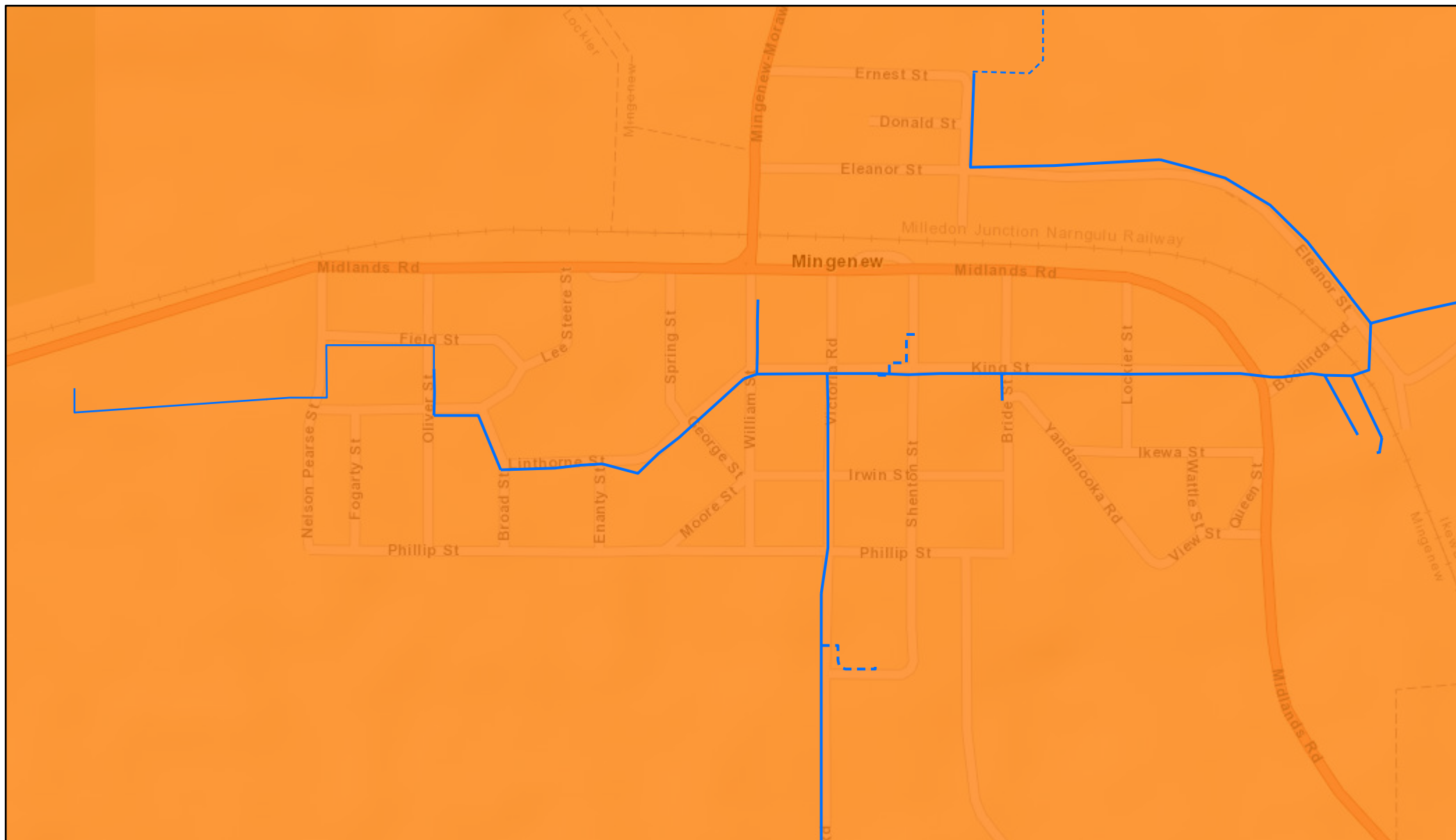
Underground Three Phase

NCMT Forecast Remaining Capacity 2026 (WP-056)

5 to 10 MVA



# 18 Nelson Pearce St - WP NCMT 2029



25/01/2023, 14:20:28

NCMT High Voltage Distribution Lines (WP-052) --- Underground Three Phase

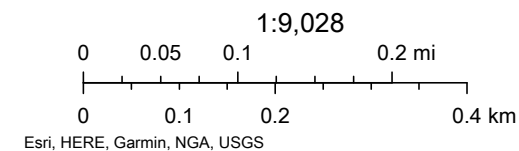
Overhead Single Phase

Overhead Three Phase

Underground Single Phase

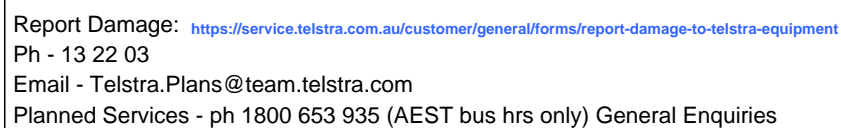
NCMT Forecast Remaining Capacity 2029 (WP-059)

5 to 10 MVA





## APPENDIX 9 – TELSTRA NETWORK MAP

[illegible]

Generated On 19/01/2023 16:49:37

**CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance.**

See the Steps- Telstra Duty of Care that was provided in the email response.