



**TRAFFIC & PARKING ASSESSMENT**

**MIXED USE RETAIL DEVELOPMENT  
SHOPPING VILLAGE**

**PROPOSED LOT 1001,  
CORNER SPRINGFIELD DRIVE & ROBERT ROAD  
LOCHINVAR**

**PREPARED FOR: GWH**

**DECEMBER 2022**

REF: 22/150

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SHOPPING VILLAGE  
GWH****PROPOSED LOT 1001,  
CORNER SPRINGFIELD DRIVE & ROBERT ROAD, LOCHINVAR**

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Issue	Date	Description	By
A	22/11/22	Draft	JG
B	26/11/22	Edit	JG
C	05/12/22	Final Proof	JG
D	05/12/22	Approved	JG
E	06/12/22	Final Plans / Approved	JG

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# 1. INTRODUCTION

Intersect Traffic Pty Ltd has been engaged by GWH to prepare a Traffic and Parking Assessment Report for a proposed mixed use retail development on proposed Lot 1001 on the corner of Springfield Drive and Robert Road, Lochinvar. The site is currently vacant rural land but is within the Lochinvar Urban Release area (Lochinvar URA) and has been zoned commercial to accommodate a local shopping precinct / village to service the Lochinvar URA. The development includes a supermarket, a stage 2 future commercial building and a tavern. The proposed development plans for the site are provided within **Appendix 1**.

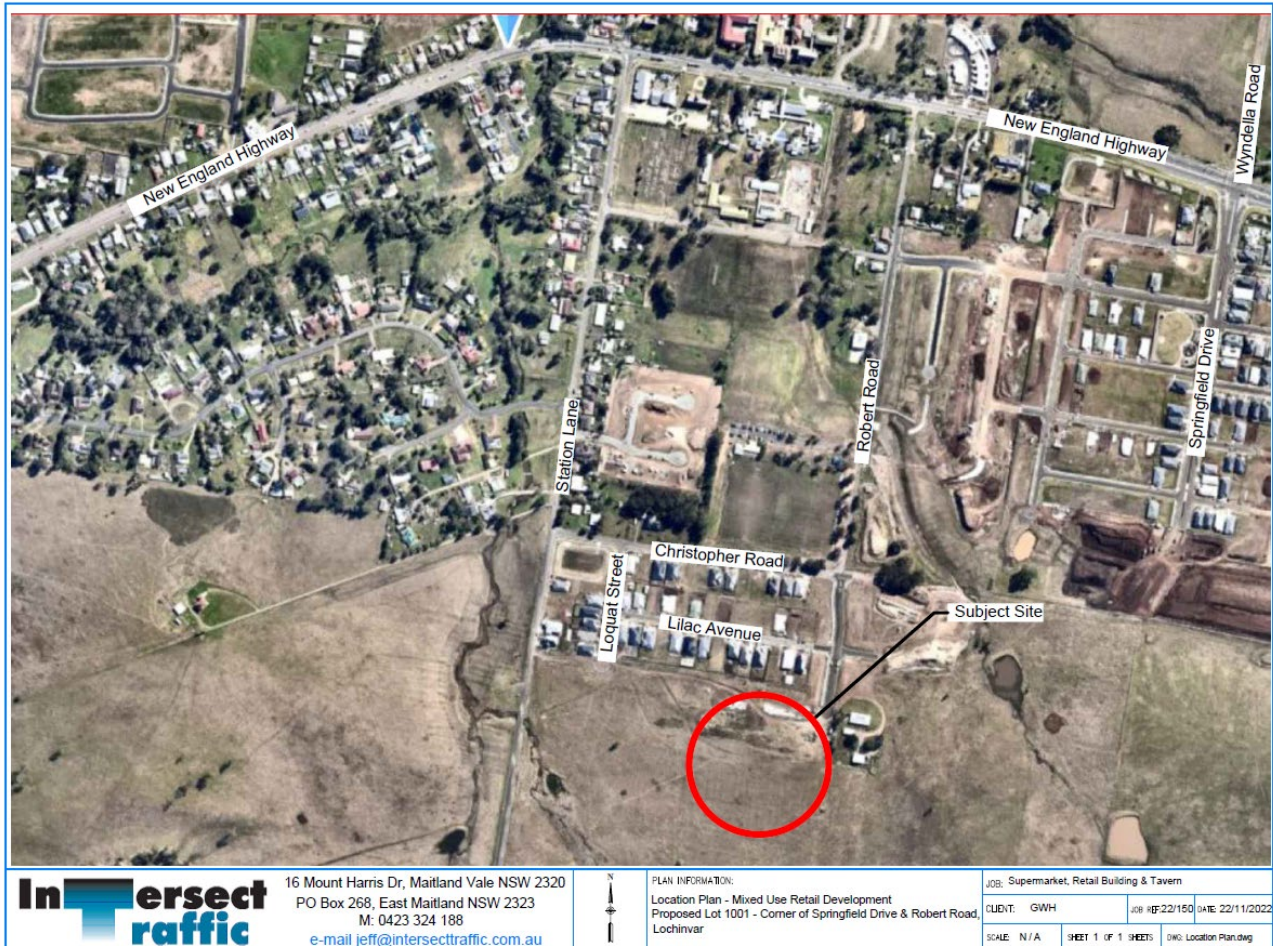
Access to the development will be via the yet to be constructed Lochinvar URA road network in accordance with the approved Lochinvar URA structure plan which was supported by a Traffic Impact Assessment report (*URaP-TTW September 2012 v10*) which anticipated retail / commercial development on the site therefore it is reasonable to conclude that subject to the road network being constructed in accordance with the structure plan it would have sufficient capacity to cater for the proposed development. The aim of this assessment is to determine the likely impact of the proposal on the adjacent existing local and state road network as a result of the additional traffic generated by the development.

This report presents the findings of the traffic and parking assessment and includes the following:

1. An outline of the existing road network in the vicinity of the proposed development.
2. An assessment of the likely peak traffic generation from the development.
3. An assessment of the likely traffic impacts of the proposal on the adjacent road network in particular in regard to the capacity of the existing road network.
4. An assessment of the proposed development access and on-site parking.
5. An assessment of the impact of the development on alternate transport mode services and facilities in the vicinity of the site.
6. Presentation of conclusions and any recommendations.

## 2. SITE DESCRIPTION

The subject site is located in the Lochinvar URA south of the New England Highway and east of Station Lane adjacent to the Lochinvar Downs and Hereford Park residential estates. It is approximately 1.2 km south-east of the existing Lochinvar shops and 6.5 kms and 9.3 kms west of the Rutherford and Maitland CBD areas respectively. **Figure 1** below shows the site amidst the residential developments, roads and parkland surrounds.



**Figure 1 – Site Location**

Currently the site contains the following property descriptors:

- ◆ Formal land title of proposed Lot 1001 in a subdivision of Lot 200 in DP 1269482.
- ◆ Street address of 30 Christopher Road, Lochinvar.
- ◆ Total development site area of approximately 24,537 m<sup>2</sup>; and
- ◆ Land zoning of B2 – Local Centre pursuant to Maitland LEP (2011).

The site currently contains vacant rural land as shown in **Photograph 1**. The main access to the site will be via the as yet constructed section of Springfield Drive which connects to the New England Highway via a signalised intersection as shown in **Photograph 2**.



*Photograph 1 – Existing site conditions.*



*Photograph 2 – New England Highway / Springfield Drive signalised intersection.*

## 3. EXISTING ROAD NETWORK

### 3.1 New England Highway (A43)

The New England Highway is part of the classified State Highway network and is a major sub-arterial road in the region. It is currently under the care and control of Transport for NSW (TfNSW). With the opening of the Hunter Expressway, it now performs the function of a sub-arterial road connecting Maitland to the rural areas of Lochinvar, Greta and Branxton. In the vicinity of the site the New England Highway is a two-lane two-way sealed urban road constructed to highway standards. Lane widths are in the vicinity of 3.4 to 3.8 metres with a left turn lane into Station Lane and Cantwell Road and sealed shoulders being provided. A 60 km/h speed limit applies to this section of road with a 40 km/h school zone operating during school start and finish times. At the time of inspection, the New England Highway was observed to be in good condition (**Photograph 3**).

### 3.2 Station Lane

Station Lane in the vicinity of the site is a local access road under the care and control of Maitland City Council with its primary function providing access to properties on its length. In the vicinity of the site, it is a two lane two way sealed urban road with some kerb and gutter. The total sealed carriageway width is approximately 8 metres wide. A 50 km/h speed limit applies to this section of road and at the time of inspection Station Lane in the vicinity of the site was observed to be in fair condition. (See Photograph 4). In the future with the development of the Lochinvar URA Station Lane will become a collector road and will be upgraded and widened as development occurs.



**Photograph 3 – New England Highway near Springfield Drive.**



*Photograph 4 – Station Lane near New England Highway.*

### **3.3 Springfield Drive**

Springfield Drive is the major north-south local collector road within the eastern section of the Lochinvar URA and connects from the New England Highway to Station Lane. It is currently only constructed from the New England Highway for a length of 475 metres within the Hereford Park Estate. Advice from the applicant is that this connection will be established within the next 12 months.

Springfield Drive as a local collector road is under the care and control of Maitland City Council. In the vicinity of the site, it will be a two lane two way sealed urban road with kerb and gutter and a central vegetated median with lane widths of 3.5 metres wide with parking / break down lanes on each side of the road as well as on-road cycle lanes in both directions. The total sealed carriageway width is 7.5 metres for each travel direction. A 50 km/h speed limit will apply to this section of road and at the time of inspection constructed section of Springfield Drive, being a relatively new construction, is in excellent condition (*see Photograph 5*).

### **3.4 Robert Road**

Robert Road in the vicinity of the site is a local access road under the care and control of Maitland City Council with its primary function providing access to properties on its length. In the vicinity of the site, it is a two lane two way sealed urban road 11.5 metres wide some kerb and gutter. It is noted Robert Road has recently been extended within the Lochinvar Downs residential estate to immediately north of the subject site. A 50 km/h speed limit applies to this section of road and at the time of inspection Robert Road near the site was observed to be in excellent condition. (See *Photograph 6*). In the future with the development of the Lochinvar URA, Robert Road will become a collector road and will be upgraded and widened as development occurs. Current works between Christopher Road and the New England Highway associated with an adjoining subdivision is currently widening and upgrading the road to an 8.5 metre width.





*Photograph 5 – Springfield Drive near New England Highway.*

## 4. ROAD NETWORK IMPROVEMENTS

Future upgrades to the road network will occur as the Lochinvar URA develops. The works that will impact on the development will be the future conversion of the New England Highway / Robert Road intersections to a left in and left out only intersection. The connection of Christopher Road to the Springfield Drive and the extension of Springfield Drive to the will improve both the efficiency and safety of access to the site for motorists. Whilst a timeframe for all these changes is currently unknown at the current rate of development in the area these road network changes / improvements are likely to occur within 5 years.



*Photograph 6 – Robert Road near site.*

## 5. TRAFFIC VOLUMES

Northern Transport Planning and Engineering on behalf of Intersect Traffic undertook intersection traffic counts at the New England Highway / Station Lane and New England Highway / Robert Road intersections during likely AM and PM peak traffic periods. These counts were undertaken on Wednesday 14<sup>th</sup> July 2021 (PM peak) and Thursday 15<sup>th</sup> July 2021 (AM peak) and the peak hour periods found to be 8 am – 9 am and 3 pm to 4 pm. The count results sheets are provided in **Attachment B**. There is insufficient traffic using the New England Highway / Springfield Drive / Wyndella Road intersection for it to be counted at this stage, so reference is made to the traffic report for the Lochinvar URA in determining future traffic volumes on Springfield Drive.

The existing 2022 two-way mid-block traffic volumes extracted from this data and the predicted 2032 two-way mid-block traffic volumes predicted from this data using a 1.5 % p.a. background traffic growth rate are as shown in **Table 1** below.

**Table 1 – Two-way mid-block traffic volume data.**

Road	Section	2022	2022	2032	2032
		AM (vtph)	PM (vtph)	AM (vtph)	PM (vtph)
New England Highway	west of Station Lane	1285	1346	1491	1562
New England Highway	east of Station Lane	1422	1406	1650	1631
New England Highway	east of Robert Road	1524	1438	1768	1669
Station Lane	south of New England Highway	275	180	319	208
Robert Road	south of New England Highway	246	102	285	118
Cantwell Road	north of New England Highway	11	13	13	15

These current and future traffic volumes without development have been adopted in this assessment.

## 6. ROAD CAPACITIES

The capacity of urban roads is generally determined by the capacity of intersections. However, Table 4.3 of the RTA's *Guide to Traffic Generating Developments* provides some guidance on mid-block capacities for urban roads for a level of service C (LoS C). This table is reproduced below.

**Table 4.3**

**Typical mid-block capacities for urban roads with interrupted flow**

Type of Road	One-Way Mid-block Lane Capacity (pcu/hr)	
Median or inner lane:	Divided Road	1,000
	Undivided Road	900
Outer or kerb lane:	With Adjacent Parking Lane	900
	Clearway Conditions	900
	Occasional Parked Cars	600
4 lane undivided:	Occasional Parked Cars	1,500
	Clearway Conditions	1,800
4 lane divided:	Clearway Conditions	1,900

Source: - RTA's *Guide to Traffic Generating Developments* (2002).

From this table the local road network around the site as a two-way two-lane network would have a one-way capacity of 900 vtpm or a two-way road capacity of at least 1,800 vtpm on the basis a LoS C is considered satisfactory. However, as a sub-arterial road it is still acceptable for the New England Highway to have a (LoS) D with one lane capacities of at least 1,100 vtpm. Therefore, the New England Highway is considered to have a two-way mid-block capacity of at least 2,200 vtpm.

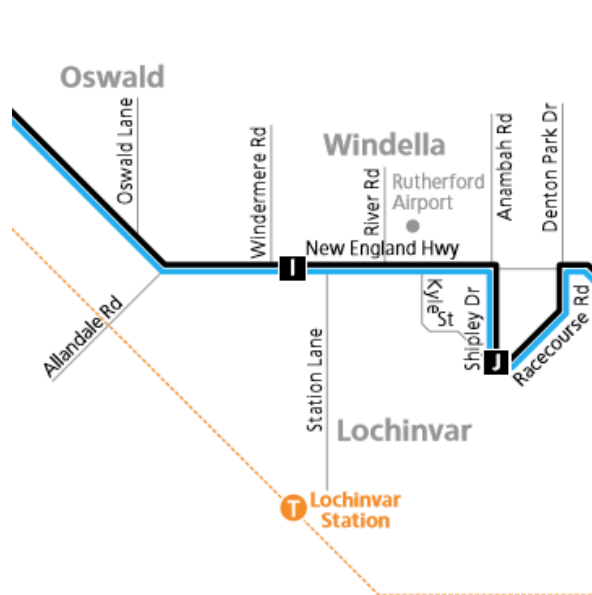
Therefore, the local road network capacities adopted in this assessment are.

- ◆ New England Highway – 2,200 vtpm; and
- ◆ Station Lane, Springfield Drive and Robert Road (as all upgraded / widened) – 1,800 vtpm.

As existing traffic volumes are below this capacity threshold it is reasonable to conclude that the existing road network has spare capacity to cater for additional development in the area.

## 7. ALTERNATIVE TRANSPORT MODES

Hunter Valley Buses run public transport (bus) services in the area. Routes 179, 180, 401, 402 and 403 (Singleton to Maitland) runs along the New England Highway through Lochinvar (see **Figure 2** below). The nearest bus stops are located within convenient walking distance of the site (400 metres) on the New England Highway. This provides a frequent and regular public transport service to the Lochinvar area.



**Figure 2 – Bus route map.**

There are constructed pedestrian footpaths along the New England Highway directing pedestrians to the signalised pedestrian crossing of the Pacific Highway in front of the two catholic schools on both sides of the Highway while pedestrian footpaths and on-road cycle lanes are being provided on Springfield Drive from the New England Highway that will eventually be extended to the site as the Lochinvar URA continues to develop. There are also on-road cycle lanes on the New England Highway running through the recently constructed signalised intersection of the Highway with Springfield Drive and Wyndella Road as well as the new channelised give way intersection at Station Lane and Cantwell's Road.

The newly constructed section of Springfield Drive has been provided with a number of bus stops to cater for the future diversion of public transport (bus) services into the Lochinvar URA along Springfield Drive once demand is established for these services as more and more dwellings are developed within the URA.

Springfield Drive which is to be extended to the site has been constructed with concrete pedestrian footpaths on both sides of the road and on-road cycle lanes again on both sides of the road. Robert Road which has been extended to the site has also been provided with an off-road shared concrete pedestrian / bicycle path along the western side of the road. **Photograph 7** below shows the footpaths and bus stops being constructed on Springfield Drive while **Photograph 5** shows the on-road cycle lanes on Springfield Drive.



*Photograph 7 - Footpath and bus stop – Springfield Drive*

## 8. DEVELOPMENT PROPOSAL

The proposed development involves the construction of a supermarket and tavern on the site. A future commercial building is also proposed as Stage 2 development on the site. The proposed development plans are provided within **Appendix 1**. Specifically, the proposal includes the following:

- ◆ Construction of a supermarket (3,000 m<sup>2</sup> GFA), bottle shop (188 m<sup>2</sup> GFA) and retail shops (439 m<sup>2</sup> GFA) with loading and back of house facilities plus a centre management office and Village common area.
- ◆ A tavern with a total floor area of 966 m<sup>2</sup> GFA.
- ◆ On-site car parking for staff and customers totalling 313 spaces plus 4 click and collect spaces: and
- ◆ A combined entry / exit access to Springfield Drive for access to the customer car park, a combined entry/exit access to Robert Road for access to the customer car park, a combined entry / exit access off Springfield Drive for access to the loading area and staff car parking and a one-way drive through access off Springfield Drive to a 4-space direct to boot pick up area.

The Stage 2 retail building will contain a number of commercial, retail or similar tenancies with a total floor area of 3,382 m<sup>2</sup> which for the purposes of this assessment will be assumed to include a medical centre (40%), Food and Drink premises (40%) and specialty retail (20%).

## 9. TRAFFIC GENERATION

The RTA's Guide to Traffic Generating Development's provides specific advice on the traffic generation potential of various land uses.

In regard to retail floor space the RTA's Guide advice for peak hour trip generation is as follows.

*Thursday:*

$$V(P) = 20 A(S) + 51 A(F) + 155 A(SM) + 46 A(SS) + 22 A(OM) \text{ (vehicle trips per } 1000m^2\text{)}.$$

*Friday:*

$$V(P) = 11 A(S) + 23 A(F) + 138 A(SM) + 56 A(SS) + 5 A(OM) \text{ (vehicle trips per } 1000m^2\text{)}.$$

*Saturday:*

$$PVT = 38 A(S) + 13 A(F) + 147 A(SM) + 107 A(SS) \text{ (vehicle trips per } 1000m^2\text{)}.$$

where:

*A(S): Slow Trade gross leasable floor area (Gross Leasable Floor Area in square metres) includes major department stores such as David Jones and Grace Bros., furniture, electrical and whitegoods stores.*

*A(F): Faster Trade GLFA - includes discount department stores such as K-Mart and Target, together with larger specialist stores such as Fosseys.*

*A(SM): Supermarket GLFA - includes stores such as Franklins and large fruit markets.*

*A(SS): Specialty shops, secondary retail GLFA - includes specialty shops and take-away stores such as McDonalds. These stores are grouped as they tend to not be primary attractors to the centre.*

*A(OM): Office, medical GLFA: includes medical centres and general business offices.*

Therefore, the potential traffic generation from the retail space on the site can be calculated as follows (rounded up).

### Thursday PM peak

$$PVT = 155 \times 3000/1000 + 46 \times 2657 /1000 + 22 \times 1353 /1000 = 617 \text{ vtp}$$

### Friday PM peak

$$PVT = 138 \times 3000/1000 + 56 \times 2657 /1000 + 5 \times 1353 /1000 = 570 \text{ vtp}$$

### Saturday AM peak

$$PVT = 147 \times 3000/1000 + 107 \times 2657 /1000 = 726 \text{ vtp}$$

The Tavern will not generate any traffic in the AM peak but during the PM peak is likely to generate the following traffic based on the advice within the RTA guide for clubs which states in the PM peak traffic generation can be expected to be 10 vtp per 100 m<sup>2</sup> of licensed floor area.

$$\text{Tavern PM peak} = 966 / 100 \times 10 = 97 \text{ vtp}.$$

Therefore for this assessment the following AM and PM peak hour traffic generation has been adopted;

$$\text{AM peak} = 726 \text{ vtp}; \text{ and}$$

$$\text{PM peak} = 617 \text{ vtp} + 97 \text{ vtp} = 714 \text{ vtp}.$$

# 10. TRAFFIC IMPACTS OF DEVELOPMENT

## 10.1 – Road Network and Intersection Capacity

It has previously been shown in **Section 6** of this report that the adjoining road network is currently operating within its technical mid-block capacity. As a local shopping village, the majority of trips generated by the development will be internal subdivision trips or trips already generated by the subdivision for travel to and from work to schools and shops which have already been considered within the traffic assessment prepared for the Lochinvar URA (*URaP-TTW September 2012 v10*). The additional external trips will be generated by employees and servicing of the site. However, the URaP traffic assessment considered a large commercial zoned area between Station Lane and Robert Road south of Springfield Drive in the vicinity of the proposed site. The area considered within the URaP traffic study was significantly larger than the proposed development. Therefore, it is considered the proposed development is consistent with the development considered in the URaP study and that the URaP study has already assessed the traffic impacts of the development in regard to the efficiency and effectiveness of the local and state road network in the Lochinvar area.

As such it is reasonable to conclude that subject to the road network being constructed in accordance with the adopted structure plan and the recommendations of the URaP traffic assessment then the proposal will not adversely impact on the local and state road network adjacent to the site. Noting the site has direct access to Springfield Drive being the main collector road within this part of the URA as well as Robert Road it is considered the development is supported by the road network structure used in the URaP traffic assessment therefore it will not adversely impact on the local and state road network near the site.

## 10.2 – Site Access

The proposed development is serviced by a number of accesses including.

1. Combined entry / exit driveway 11 metres wide off Springfield Drive to the main customer car park (281 car parks including tavern car park and service bay).
2. Combined entry / exit access 11 metres wide off Robert Road to the main customer car park (281 car parks including tavern car park and service bay).
3. Combined entry / exit access 9.5 metres wide servicing the on-site loading / servicing facilities (2 x loading docks and a waste enclosure) as well as a 32-space staff car park; and
4. Separate entry and exit driveways 5 metres wide off Springfield Drive facilitating a one-way drive through pick up bay for the collect to boot service to be provided by supermarket (4 spaces).

This access set up is supported for the following reasons.

1. Australian Standard *AS2890.1-2004 Parking facilities – Off-street car parking (AS2890.1-2004)* recommends more than one access for car parks with over 260 spaces.
2. The use of accesses off separate roads improves the distribution of traffic onto the local road network thereby minimising delay and congestion in accessing the site in peak periods.
3. The separate loading / staff car parking access suitable separates heavy vehicle traffic from light vehicles using the high turnover customer car park.
4. Separating the direct to boot service from the main car park encourages use of this service thereby reducing the overall peak parking demand of the development and minimises the number of possible vehicle conflict points within the main customer car park.

Whilst the proposed access arrangement will limit the availability of on-street car parking in Springfield Drive along the site frontage this is considered a positive road safety impact given the level of traffic expected around the site during peak times. It would be recommended that on-street

car parking be prohibited around the proposed accesses to ensure suitable sight lines are provided for vehicles exiting the site.

In terms of the main customer parking noting the car park will be for Class 3 short term customer car parking and with each of the two accesses off a local road to the main customer car park supporting approximately 140 spaces Table 3.1 of AS2890.1-2004 requires these accesses to be Category 3 accesses which Table 3.2 of AS2890.1-2004 identifies as separate entry and exit driveways a minimum 6 metres and 4 metres wide respectively separated by at least 1 metre. The development plans show suitable median separated entry / exit driveways to the main car park off both Springfield Drive and Robert Road therefore access to the car park is compliant with AS2890.1-2004.

The access to the loading / servicing and staff parking area under the same two tables within AS2890.1-2004 but for Class 1 parking with between 25 and 100 spaces needs to be only a category 1 access which is a combined entry / exit driveway 3 metre to 5.5 metres wide. However, with heavy vehicle use this access needs to cater for the swept paths of the largest service vehicle entering and exiting the site in a forward direction which will be a 19 metre semi-trailer as shown in the plans within **Appendix 1**. The swept path demonstrates satisfactory forward entry and exit from the site for this vehicle therefore the proposed 9.5-metre-wide access is considered suitable for the development.

With the direct to boot collect bay servicing only 4 spaces the entry and exit driveway widths only need to be a minimum 3 metres wide (Category 1 access) to satisfy AS2890.1-2004. Therefore, the proposed pick-up bay off Springfield Drive is also suitable for use with the development.

With Springfield Drive and Robert Road being 50 km/h roads the required vehicular sight lines from the accesses need to be a minimum 45 metres or 69 metres desirable. Given the location of the accesses and the relatively straight alignments of both Springfield Drive and Robert Road the only constraint to the provision of suitable sight lines is likely to be on-street car parking adjacent to the accesses. Therefore, it is recommended that on-street car parking be prohibited within 10 metres of the accesses through appropriate regulatory signage approved by Maitland City Council's traffic Committee. Provision of such signage will ensure suitable vehicular sight lines are available for exiting traffic from these accesses.

The requirements for pedestrian sight lines within AS2890.1-2004 can be ensured through conditioning of the consent to ensure no walls, fencing or landscaping above 1.2 metres high exists within the pedestrian sight triangle required by AS2890.1-2004.

Overall, it is concluded that the proposed access arrangements to the development are satisfactory and would comply with the requirements of Australian Standards and Maitland City Council. It is however also recommended that approval be sought from Maitland City Council's Traffic Committee for the installation of on-street regulatory parking signage to prohibit on-street car parking within 10 metres of the proposed accesses to the site.

### **10.3 – On-Site Car Parking**

On-site parking and manoeuvrability should comply with Australian Standard AS2890.1-2004 *Parking facilities – Part 1 - Off-street car parking and Maitland City Council's DCP (2011) – Part C11 – Vehicular access & parking*.

The parking provision rates applicable for the development taken from the DCP are.

#### Supermarket (shops greater than 1,000 m<sup>2</sup>)

1 space per 16 m<sup>2</sup>GFA

Other Retail (local shops)

1 space per 25 m<sup>2</sup> GFA

Food and Drink Premises

1 space per 6.5 m<sup>2</sup> GFA

Medical Centre

*As no fit-out is proposed at this stage and the no. of practitioners is not known the parking rate for a medical centre contained within TfNSW's RTA's Guide to Traffic Generating Developments (2002) (is used.*

1 space per 25 m<sup>2</sup> GFA

Tavern

1 space per 10 m<sup>2</sup> GFA

*It is however argued that as a local tavern the peak parking demand for the proposed development will be lower than 1 space per 10 m<sup>2</sup> as it will have a higher proportion of patrons either walking to the venue or being dropped off and picked up from the venue due to its proximity to the adjoining residential estates and a peak parking demand rate of 1 space per 15 m<sup>2</sup> is proposed as being indicative of the likely peak parking demand for this development.*

In undertaking this parking assessment however, it is important to consider the impact the direct to boot grocery collection will have on the actual peak parking demand for the supermarket. Whilst 4 spaces are provided for this service with a 10-minute turnaround within the spaces at full capacity the service could cater for up to 24 customers in a peak hour. Assuming an average turnaround time for customers shopping in the supermarket rather than on-line as 1 hour the direct to boot service could reduce the peak parking demand for the supermarket by 24 – 4 = 20 car spaces. Home delivery services for supermarkets have also increased significantly since the COVID pandemic commenced as customers become more accustomed to the convenience and time savings provided by on-line shopping. As a result, it is considered reasonable to apply a 20 % concession to the supermarket car parking demand.

Further it is considered that the other adjoining retail and medical centre are going to have significant patronisation from customers also using the supermarket and it would be reasonable to adopt a 50 % concession on the required parking for these establishments. The food and drink premises are also likely to have an even greater rate of patronisation from customers using the supermarket as well as the other retail and the medical centre to the point that these are likely to be ancillary to the rest of the development and would only generate additional parking demand from staff. However, for this assessment a 70 % concession has been adopted.

It is also argued that the peak parking demand for the Tavern will not occur during the peak parking demand periods for the supermarket as the peak parking demand for the Tavern will occur on Friday and Saturday evenings after 6 pm when the parking demand for the supermarket, medical centre and other retail shops are significantly lower than the peak demands for these uses. During the peak demand period for these uses, Thursday evening 4.30 pm to 5.30 pm and Saturday mornings, the Tavern parking demand would be at worst 75% of peak demand on a Thursday evening and as low as 25 % of peak parking demand on a Saturday morning. Therefore, it is considered reasonable to provide a 30% concession on the Tavern car parking for the overall parking calculation.

Therefore, the DCP calculation of required parking on the site with justified concessions (variations) is as follows based on the following areas.



- ◆ Supermarket – 3,000 m<sup>2</sup> GFA.
- ◆ Medical Centre – 1,304 m<sup>2</sup> GFA.
- ◆ Retail – 1,353 m<sup>2</sup> GFA.
- ◆ Food and Drink Premises – 1,353 m<sup>2</sup> GFA; and
- ◆ Tavern – 966 m<sup>2</sup> GFA

$$\begin{aligned}\text{Parking} &= 0.8 \times (3000/16) + 0.5 \times (1304/25) + 0.3 \times (1353/6.5) + 0.5 \times (1353/25) + 0.7 \times (966/15) \\ &= 150 + 26.1 + 62.4 + 27.1 + 45.1 \\ &= 311 \text{ spaces.}\end{aligned}$$

With the proposed development providing 313 car spaces on the site within the customer car parking, the staff car parking plus 4 spaces in the direct to boot pick-up area it is considered the development has provided sufficient car spaces to meet the likely peak parking demand for the development therefore is compliant with the intent of the Maitland DCP car parking rates.

In considering the car parks compliance with *AS2890.1 – 2004* the following design detail is noted.

- ◆ Car spaces are 2.6 metres wide x 5.5 metres long.
- ◆ Minimum aisle widths of 7 metres have been provided.
- ◆ The only blind aisle is only 6 spaces long and has been provided with a 1-metre-wide blind aisle extension.
- ◆ Circulation around the car park is excellent with convenient forward entry and exit from the site easily achieved.
- ◆ Suitable protection blisters have been provided at the end of parking bays; and
- ◆ A clearly defined pedestrian linkage through the customer car park and from the adjoining streets has been provided directing customers to the supermarket entry via a safe walkway.

Therefore, on review it is determined that the proposed car parking design is compliant with *AS2890.1-2004* and that overall suitable and sufficient on-site car parking has been provided within the development.

The development provides bicycle parking in front of the Supermarket and near the Tavern while storage rooms within the back of house areas can be used to store staff bicycles. No motorcycle spaces are provided as motorcycles are able to use car spaces.

#### 10.4 – Site servicing

1. Deliveries to the site will be in vehicles up to a 19 metre semi-trailer however the majority of deliveries and servicing will be undertaken by medium rigid vehicles. Swept turning paths showing convenient entry and exit from the site for all likely service vehicles are provided in the plans within **Appendix 1**.
2. A separate loading and servicing area is provided for the development that separates the heavy vehicle movements from most of the light vehicle movements in the site.
3. Two loading bay areas are provided in the loading area with the main bay provided for the supermarket development and a second bay provided for the other retail developments.
4. Waste collection is designed for private contractor use from the loading and servicing area; and
5. A separate loading area is provided for the Tavern and deliveries to the Tavern will be outside operating hours to minimise the impacts of this servicing to the adjoining car park.

Overall, it is considered that the proposed servicing facilities provided for the development are satisfactory and suitable for the development.

### 10.5 - Construction Traffic

The construction of the development will result in additional traffic entering and exiting the site. It is estimated that during the peak construction periods up to 50 construction employees will be on-site at any one time. If a car occupancy rate of 1.2 is assumed for employee traffic this would result in an AM and PM peak traffic flow to the site of in the order of 42 vtp. This of course will also increase the peak parking demand at the site by a similar number during construction.

Material deliveries will add to this traffic with peak materials delivery traffic expected during the pouring of concrete slabs within the construction period. It is likely that a further 8 vtp could occur during the AM peak period as a result of this construction activity. Therefore overall, it is estimated that the peak construction traffic generation resulting from the construction of the development will be in the order of up to 50 vtp during the AM peak or PM peak traffic periods. This is still significantly less than the operational traffic generation from the site and thus would not adversely impact on the local road network.

Construction traffic is a short-term traffic impact that is best managed through the preparation of a construction traffic management plan prepared and implemented by the building contractor prior to commencement of construction activities. This plan may seek to minimise the impacts of construction activities by designating travel routes, access points, construction employee parking areas, material delivery procedures and times etc. This plan is best prepared, implemented and enforced by the head contractor. It is recommended that a construction traffic management plan be prepared and implemented prior to the commencement of construction activities.

## 11. ALTERNATE TRANSPORT MODE FACILITIES

The proposed development will generate additional external pedestrian and bicycle traffic from both staff and customers. However, the extension of Springfield Drive and Robert Road to the site will ensure suitable pedestrian footpaths and on and off-road bicycle lanes / paths are provided connecting the residential areas around the site, to the site.

Once the public transport service is extended to the site it would be expected that the development will generate some demand for the service. Extension of the service to the site will be a matter for the bus company and Department of Transport to determine however suitable bus stops and shelters should be provided within the extension of Springfield Drive to the site that would adequately service the proposed shopping village.

## 12. CONCLUSIONS

This traffic and parking assessment for a mixed-use retail development (Lochinvar Village Shopping Centre) on proposed Lot 1001 on the corner of Springfield Drive and Robert Street, Lochinvar has concluded the following.

- ◆ Existing traffic volumes on the adjacent road network are below the two-way mid-block road capacity thresholds of the existing road network indicating the existing adjacent road network has spare capacity to cater for development in the area.
- ◆ It is expected that the additional traffic generated by the development will be a maximum of 726 vtpm in the Saturday AM peak period and 714 vtpm in the Thursday PM peak period.
- ◆ As a local shopping village, the majority of trips generated by the development will be internal subdivision trips or trips already generated by the subdivision for travel to and from work to schools and shops which have already been considered within the traffic assessment prepared for the Lochinvar URA (*URaP-TTW September 2012 v10*).
- ◆ As such it is reasonable to conclude that subject to the road network being constructed in accordance with the adopted structure plan and the recommendations of the URaP traffic assessment then the proposal will not adversely impact on the local and state road network adjacent to the site. Noting the site has direct access to Springfield Drive being the main collector road within this part of the URA as well as Robert Road it is considered the development is supported by the road network structure used in the URaP traffic assessment therefore it will not adversely impact on the local and state road network near the site.
- ◆ The proposed access arrangements to the development are satisfactory and would comply with the requirements of Australian Standards and Maitland City Council. It is however also recommended that approval be sought from Maitland City Council's Traffic Committee for the installation of on-street regulatory parking signage to prohibit on-street car parking within 10 metres of the proposed accesses to the site.
- ◆ With the proposed development providing 313 car spaces on the site within the customer car parking and the staff car parking areas plus 4 direct to boot parking spaces in the pick-up area it is considered the development has provided sufficient car spaces to meet the likely peak parking demand for the development, therefore is compliant with the intent of the Maitland DCP car parking rates as a justified variation to the rates.
- ◆ The proposed car parking design is compliant with AS2890.1-2004 and that overall suitable and sufficient on-site car parking has been provided within the development.
- ◆ Overall, it is considered that the proposed servicing facilities provided for the development are satisfactory and suitable for the development.
- ◆ That a construction traffic management plan be prepared and implemented prior to the commencement of construction activities.
- ◆ The extension of Springfield Drive and Robert Road to the site will ensure suitable pedestrian footpaths and on and off-road bicycle lanes / paths are provided connecting the residential areas around the site, to the site.
- ◆ Once the public transport service is extended to the site it would be expected that the development will generate some demand for the service. Extension of the service to the site will be a matter for the bus company and Department of Transport to determine however suitable bus stops and shelters should be provided within the extension of Springfield Drive to the site that would adequately service the proposed shopping village.

## 13. RECOMENDATION

Having carried out this traffic and parking assessment for a proposed mixed use retail development (Lochinvar Village Shopping Centre) on proposed Lot 1001 on the corner of Springfield Drive and Robert Street, Lochinvar, it is recommended that the proposal can be supported as it will not have an adverse impact on the adjacent road network and subject to Council supporting a variation to its DCP car parking requirements as described in the report would comply with all relevant Maitland City Council, Australian Standards and TfNSW requirements.

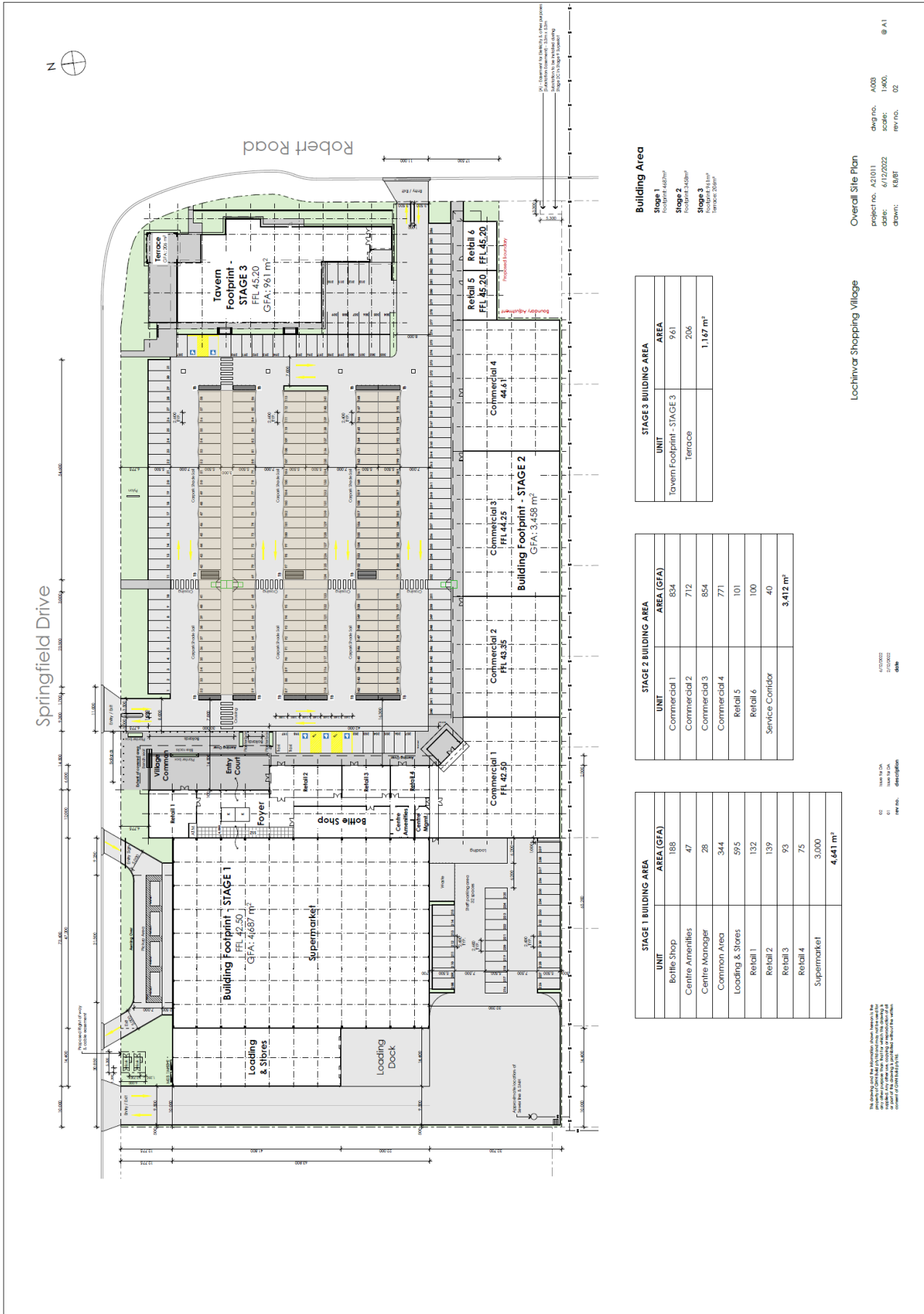


**JR Garry BE (Civil), Masters of Traffic**  
**Director**  
**Intersect Traffic Pty Ltd**



# APPENDIX 1 DEVELOPMENT PLANS





**Building Area**

Stage 1	Footprint: 4487m <sup>2</sup>
Stage 2	Footprint: 3458m <sup>2</sup>
Stage 3	Footprint: 1348m <sup>2</sup>
Terrace	Footprint: 206m <sup>2</sup>
<b>Total</b>	<b>11,167 m<sup>2</sup></b>

**STAGE 3 BUILDING AREA**

UNIT	AREA
Tavern Footprint - STAGE 3	961
Terrace	206
<b>Total</b>	<b>1,167 m<sup>2</sup></b>

**STAGE 2 BUILDING AREA**

UNIT	AREA (GFA)
Commercial 1	834
Commercial 2	712
Commercial 3	854
Commercial 4	771
Retail 5	101
Retail 6	100
Service Corridor	40
<b>Total</b>	<b>3,412 m<sup>2</sup></b>

**STAGE 1 BUILDING AREA**

UNIT	AREA (GFA)
Bottle Shop	188
Centre Amenities	47
Centre Manager	28
Common Area	344
Loading & Stores	595
Retail 1	132
Retail 2	139
Retail 3	93
Retail 4	75
Supermarket	3,000
<b>Total</b>	<b>4,641 m<sup>2</sup></b>

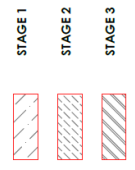
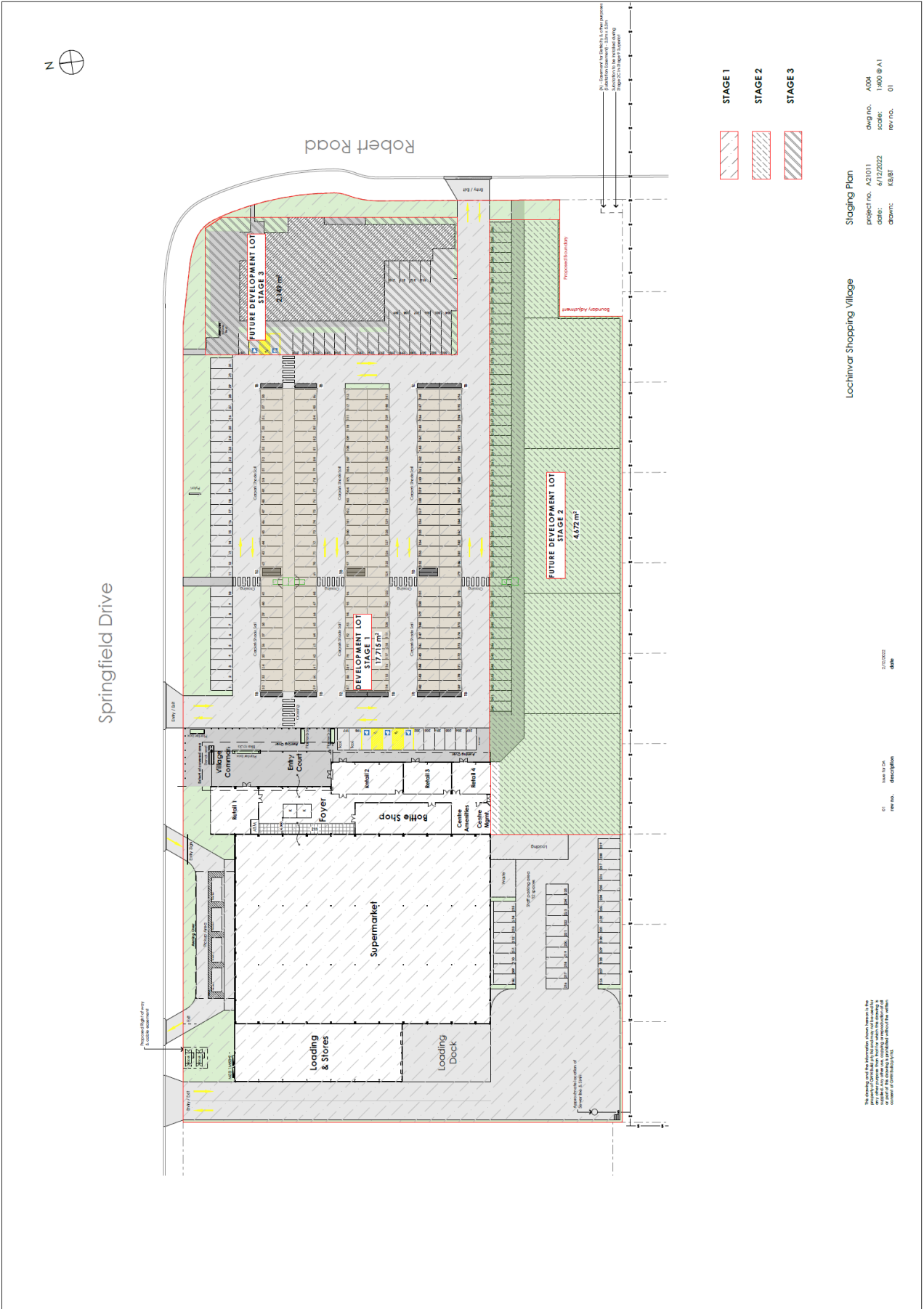
Overall Site Plan  
 project no. A21011  
 date: 6/12/2022  
 drawn: KEB/RT

Lochinvar Shopping Village

01/12/2022  
 5/12/2022  
 date

02  
 03  
 issue no. /  
 issue date /  
 rev. no. / description

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**Staging Plan**  
 Lochinvar Shopping Village

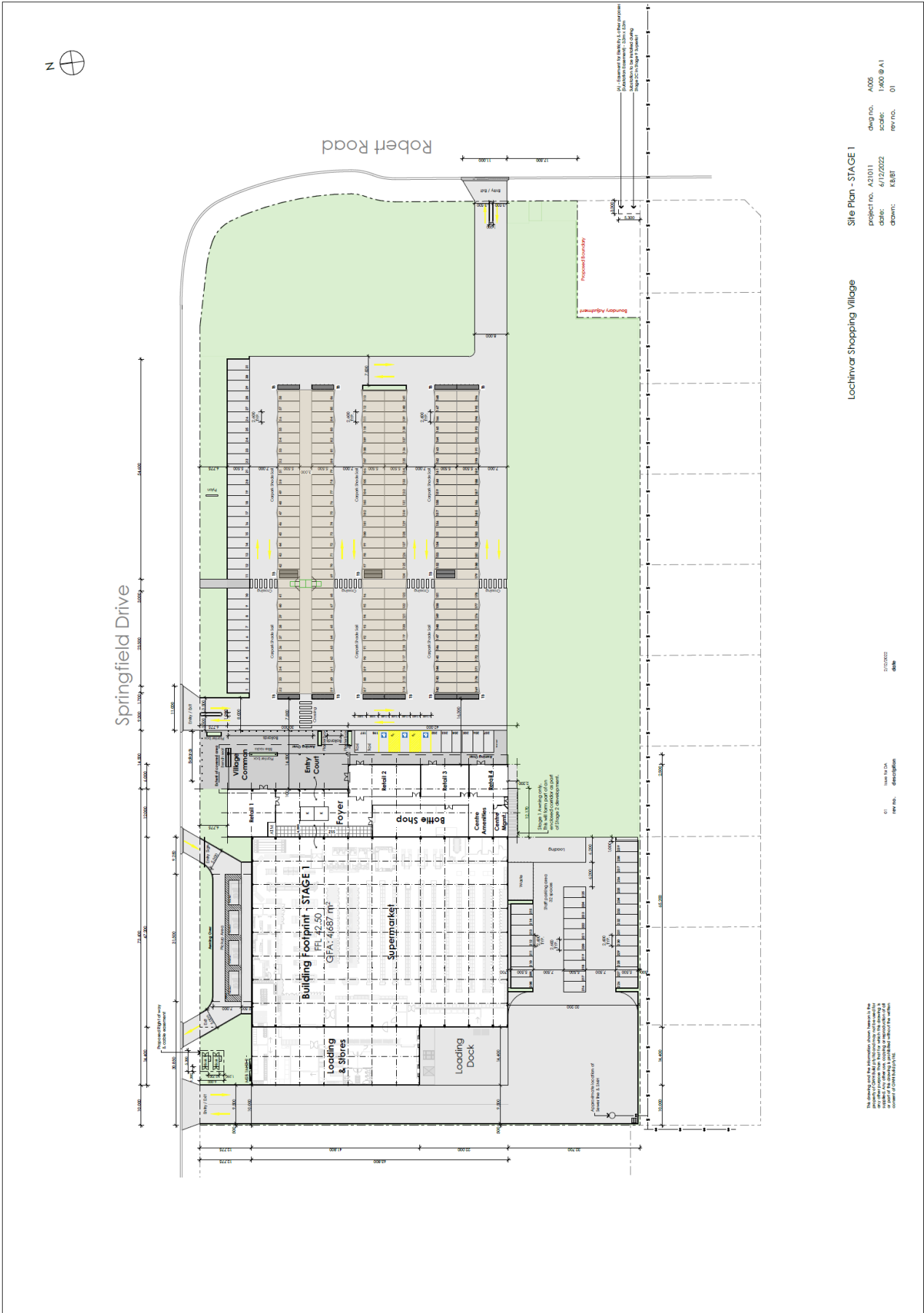
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 client: 6/12/2022  
 drawn: R/GBI

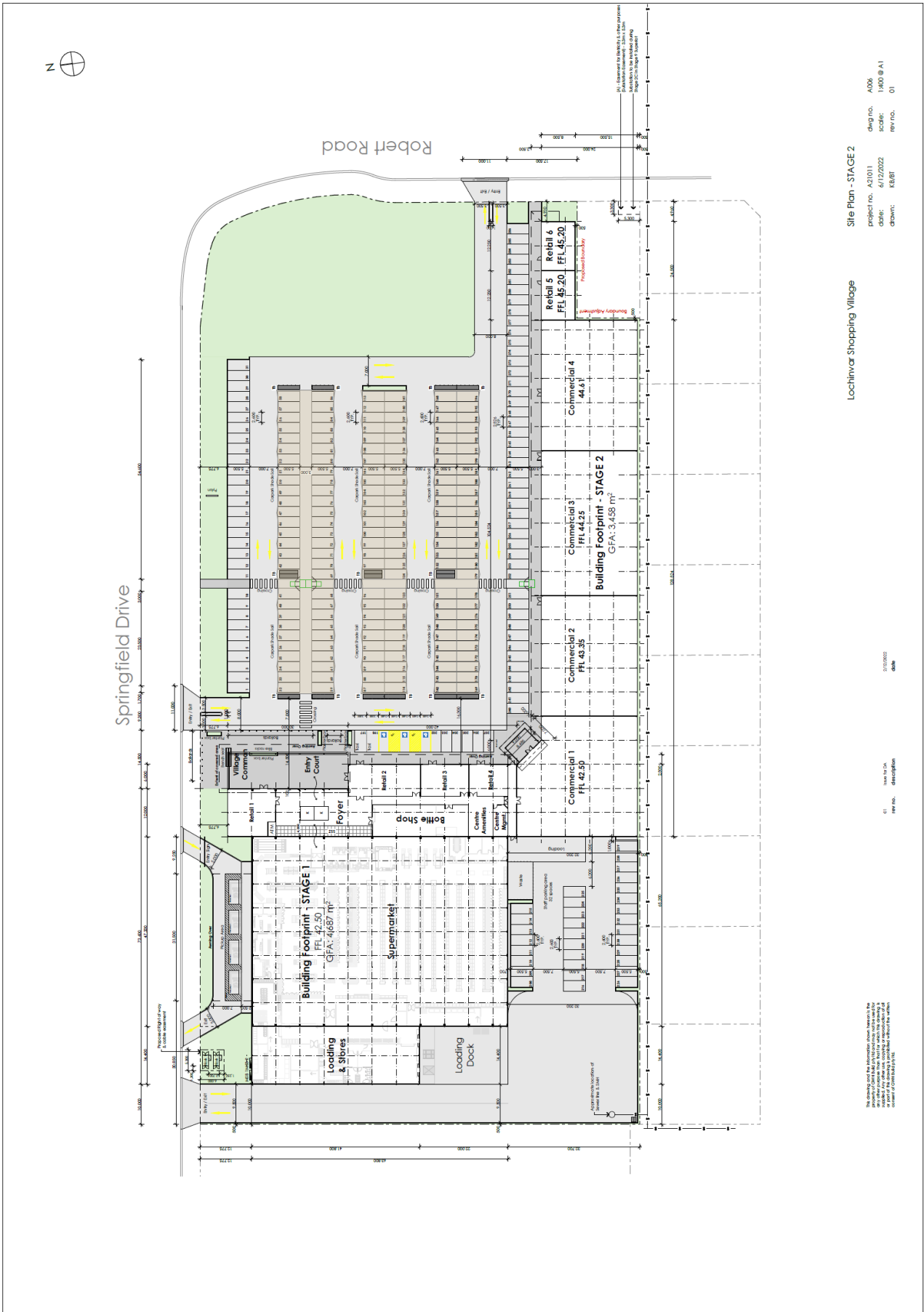
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rev no.	description	date
01	Issue for D.A.	2/12/2022

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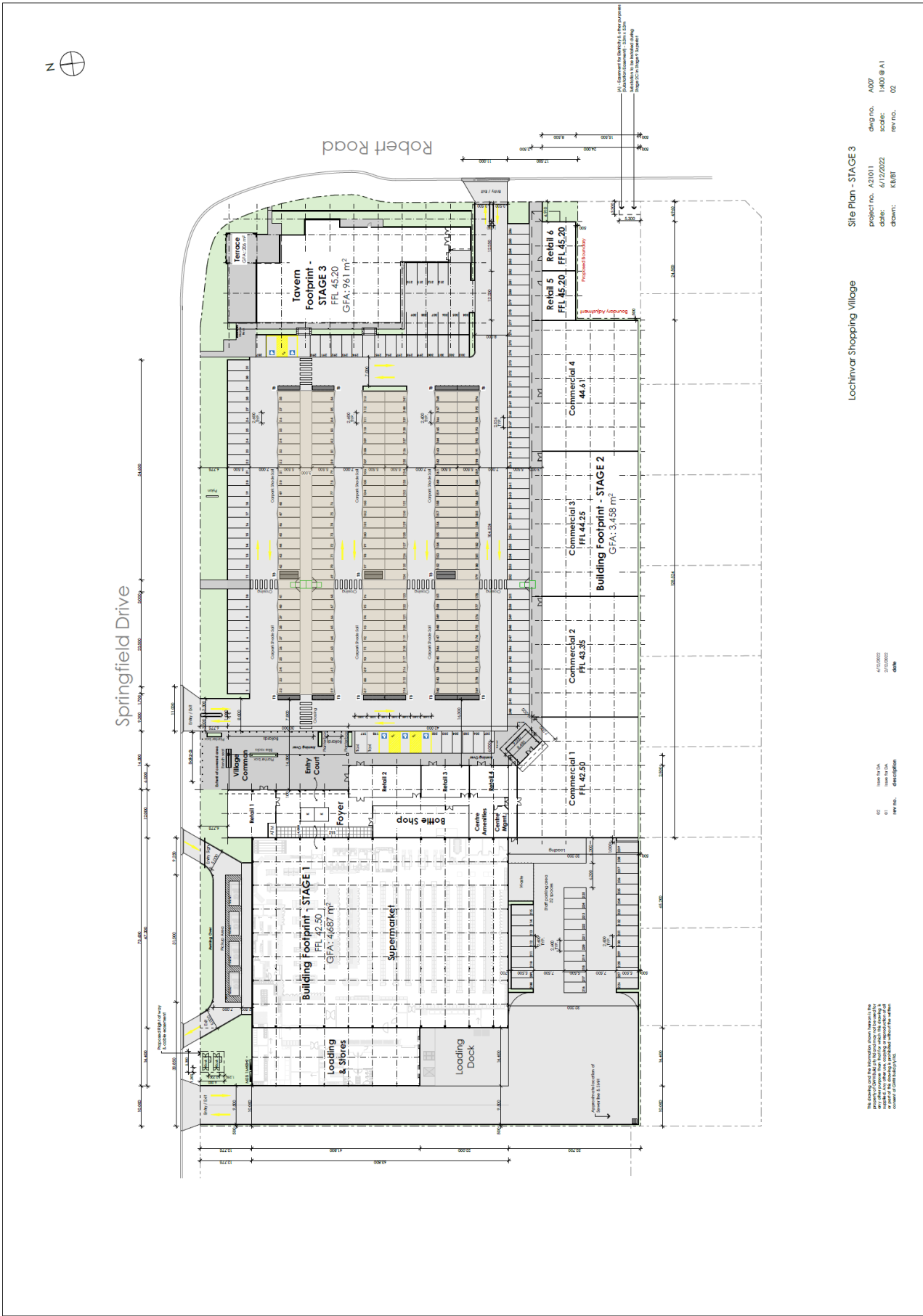


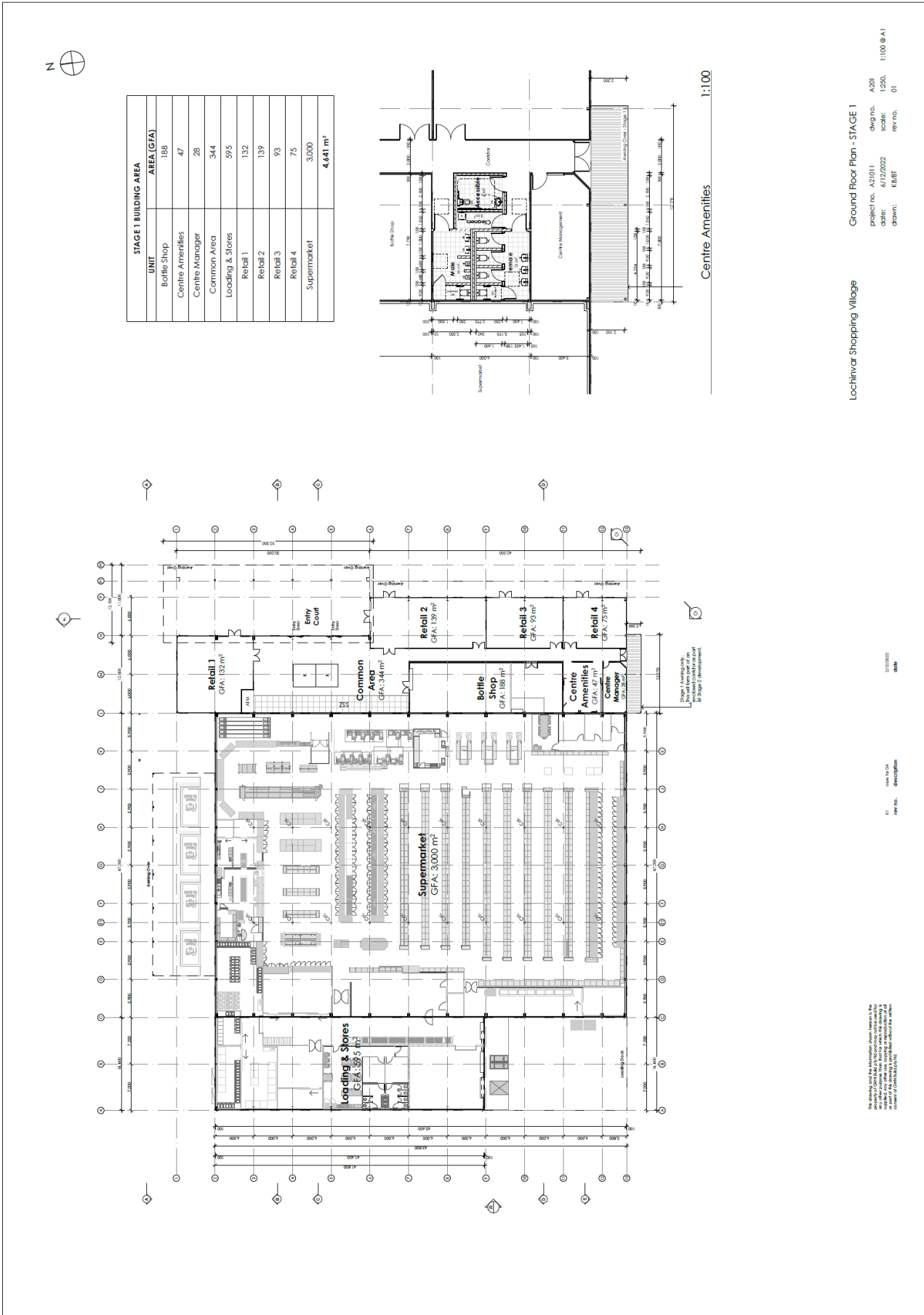
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 rev no. 01

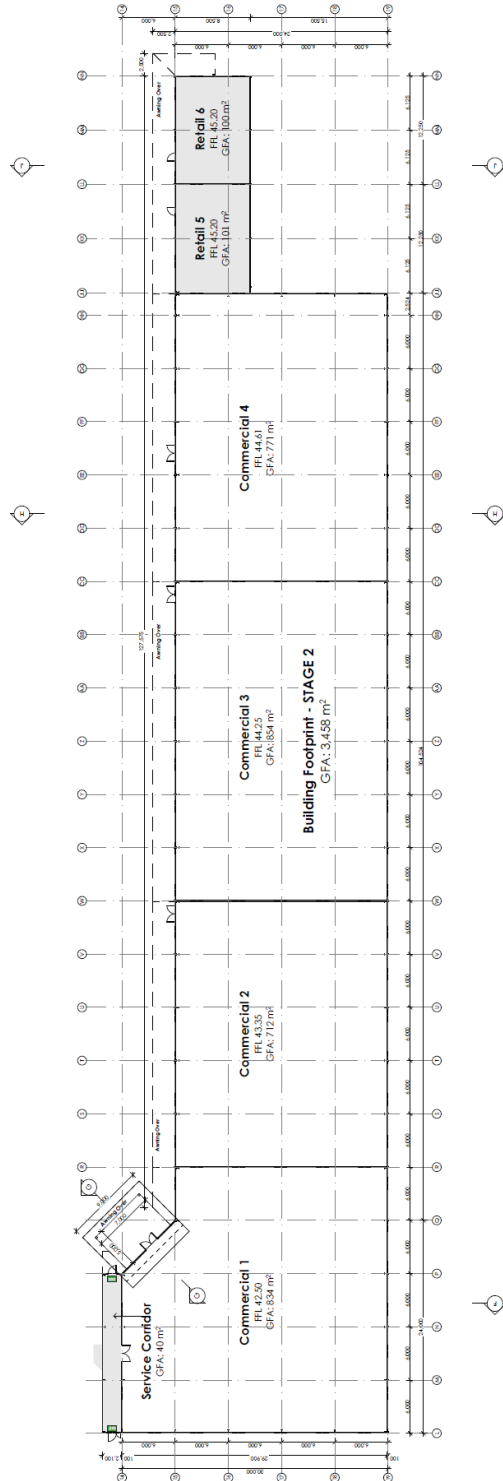
Lochinvar Shopping Village

01 Rev by JSA description  
 21/02/2022  
 006

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STAGE 2 BUILDING AREA	
UNIT	AREA (GFA)
Commercial 1	834
Commercial 2	712
Commercial 3	854
Commercial 4	771
Retail 5	101
Retail 6	100
Service Corridor	40
	<b>3,412 m<sup>2</sup></b>

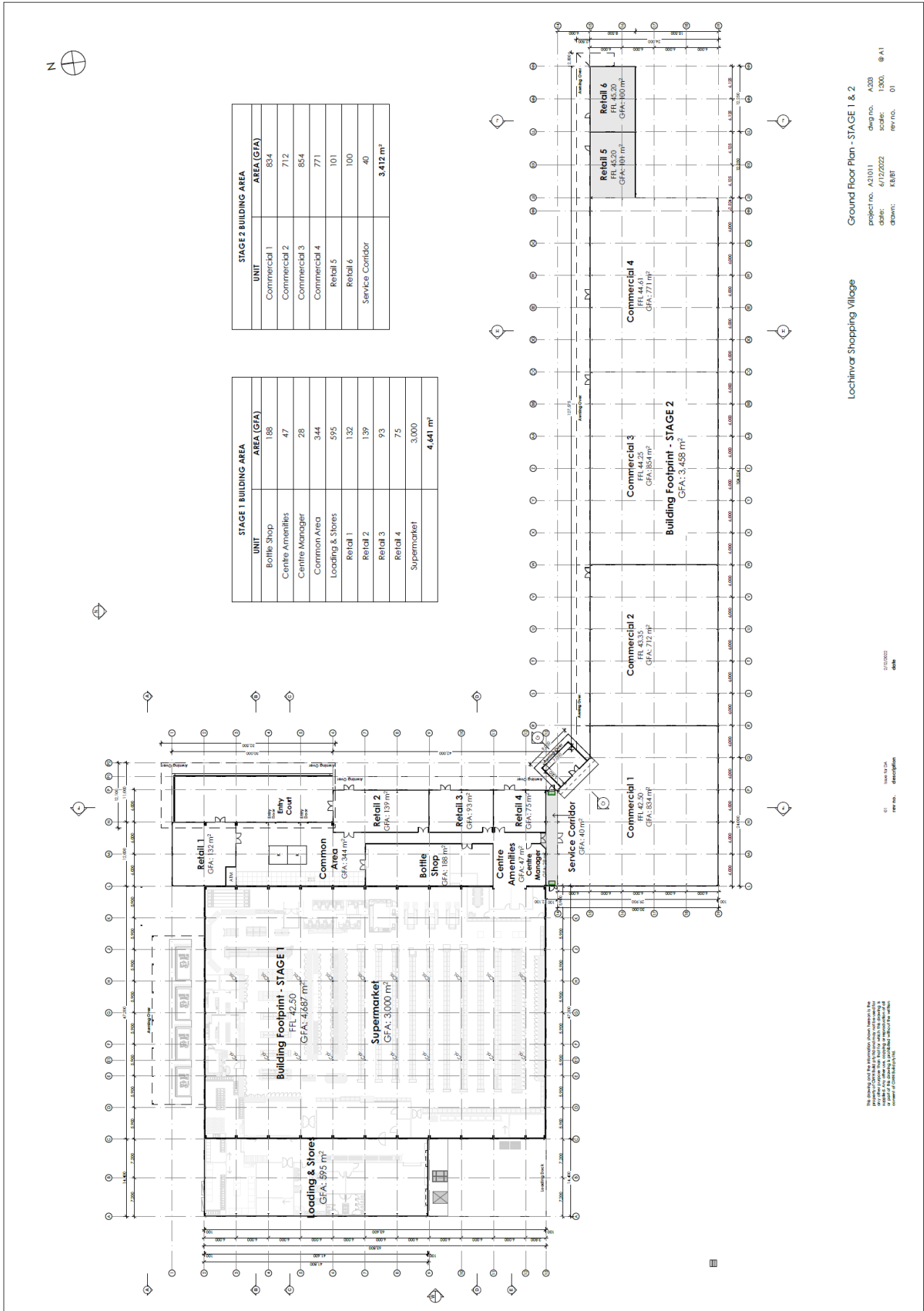
Lochinvar Shopping Village  
Ground Floor Plan - STAGE 2

project no. A21011  
date: 6/12/2022  
drawn: KEB/BT

rev no. 01  
issue in UK  
#refsignature  
date: 21/02/2022

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dwg no. A202  
scale: 1:250  
rev. no. 01



Ground Floor Plan - STAGE 1 & 2

project no. A21011  
 date: 6/12/2022  
 drawn: RJB/1

Lochinvar Shopping Village

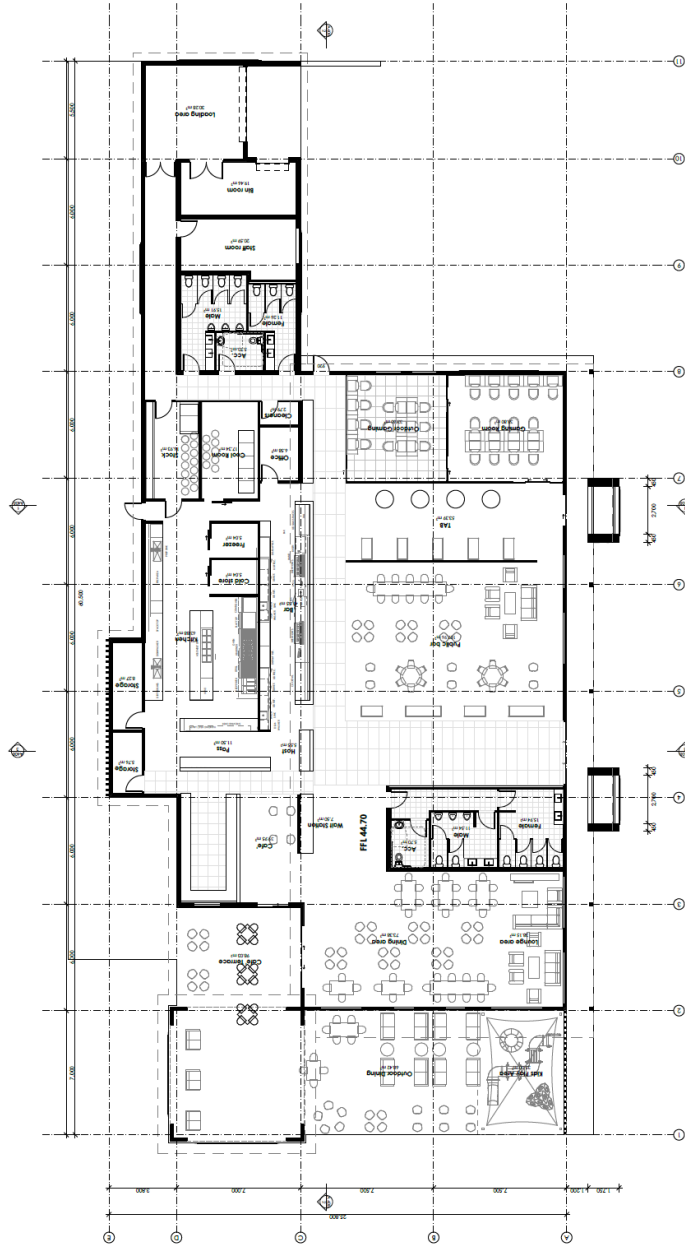
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 rev no. description

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LINE	STAGE 3 TAVERN AREAS	AREA
A.C.C.	ACC.	6
A.C.C.	ACC.	6
Bar	Bar	42
Bin room	Bin room	19
Cafe	Cafe	40
Cafe Terrace	Cafe Terrace	98
Cherries	Cherries	3
Cold Store	Cold Store	5
Cool Room	Cool Room	17
Dining area	Dining area	72
Furniture	Furniture	11
Furniture	Furniture	16
Freezer	Freezer	5
Gaming room	Gaming room	39
Hall	Hall	6
Ice Play Area	Ice Play Area	35
Kitchen	Kitchen	64
Loading area	Loading area	30
Lounge area	Lounge area	38
Male	Male	12
Male	Male	16
Office	Office	7
Outdoor Dining	Outdoor Dining	68
Outdoor Gaming	Outdoor Gaming	34
Pass	Pass	11
Public bar	Public bar	110
Staff room	Staff room	21
Stock	Stock	17
Storage	Storage	6
Storage	Storage	8
TAB	TAB	53
Wet Station	Wet Station	8



Lochinvar Shopping Village

Ground Floor Plan - STAGE 3

project no. A21011  
 date: 6/12/2022  
 drawn: RJB

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 rev no. 02

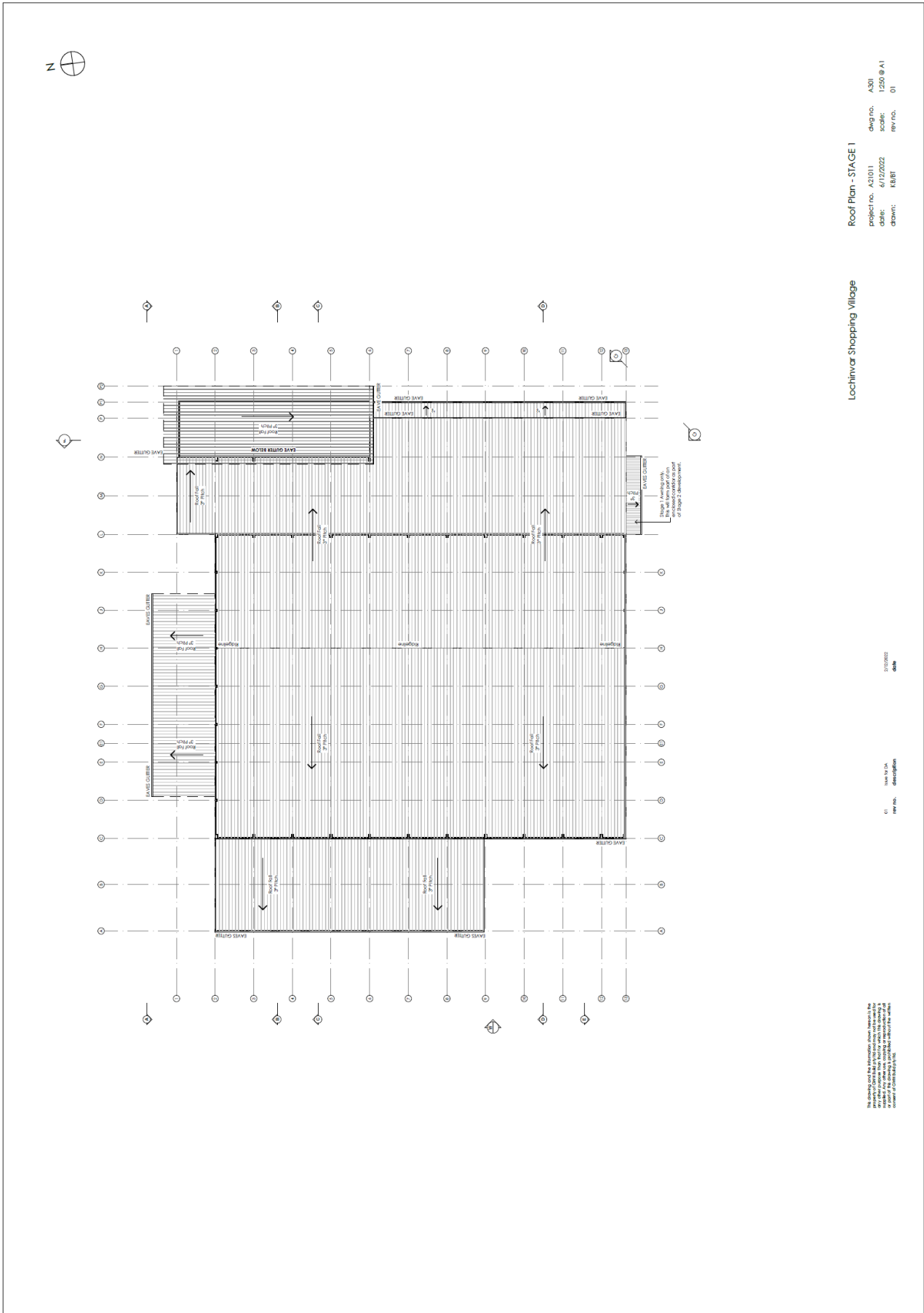
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 01 Issue to DA

4/10/2022  
 2/10/2022

date

rev no. description

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 drawn: KMBT  
 sheet no. A301  
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 rev no. 01

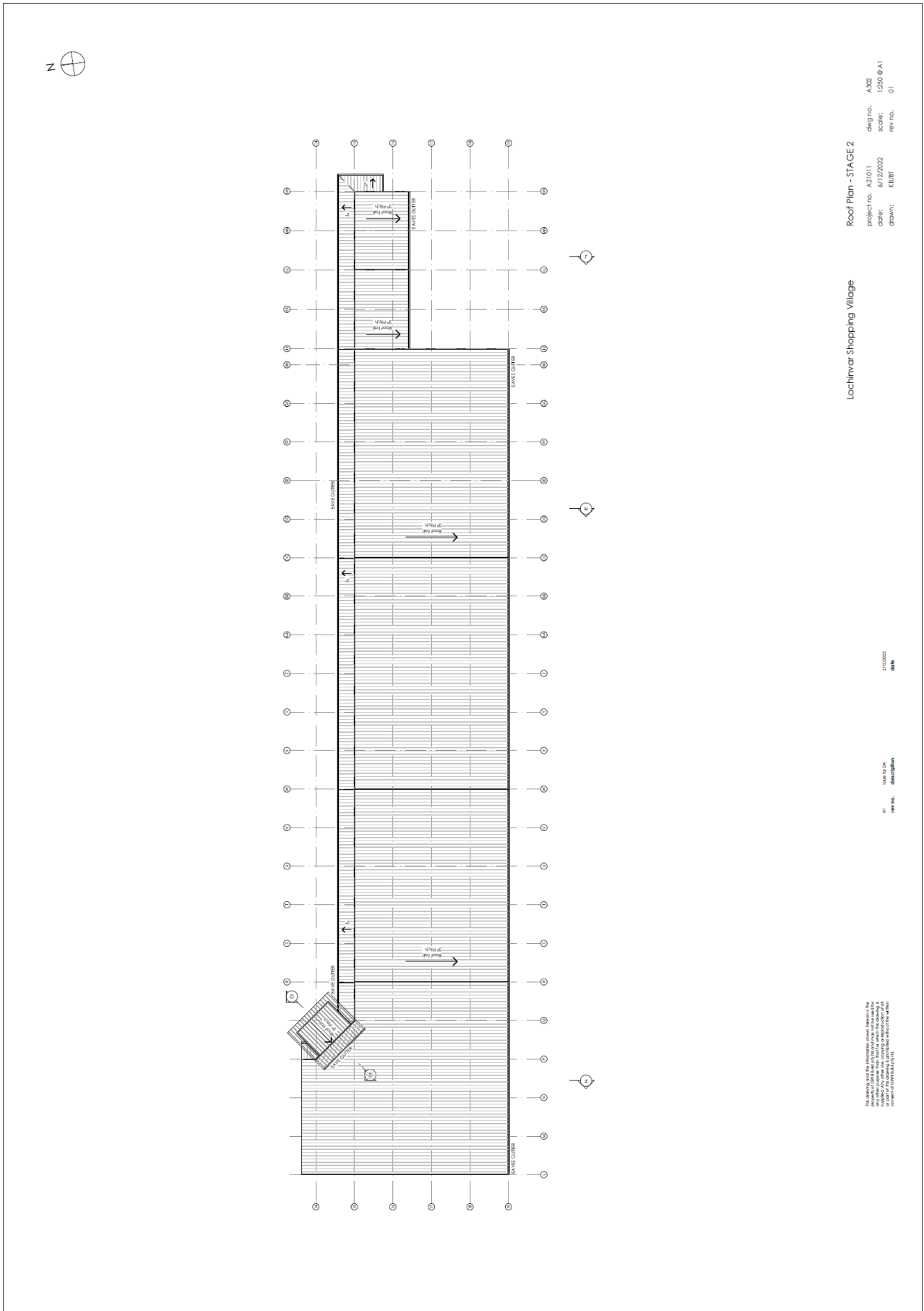
Lochinvar Shopping Village

27/02/2022  
 KMB

11 1000 N/A  
 Rev No. Identification

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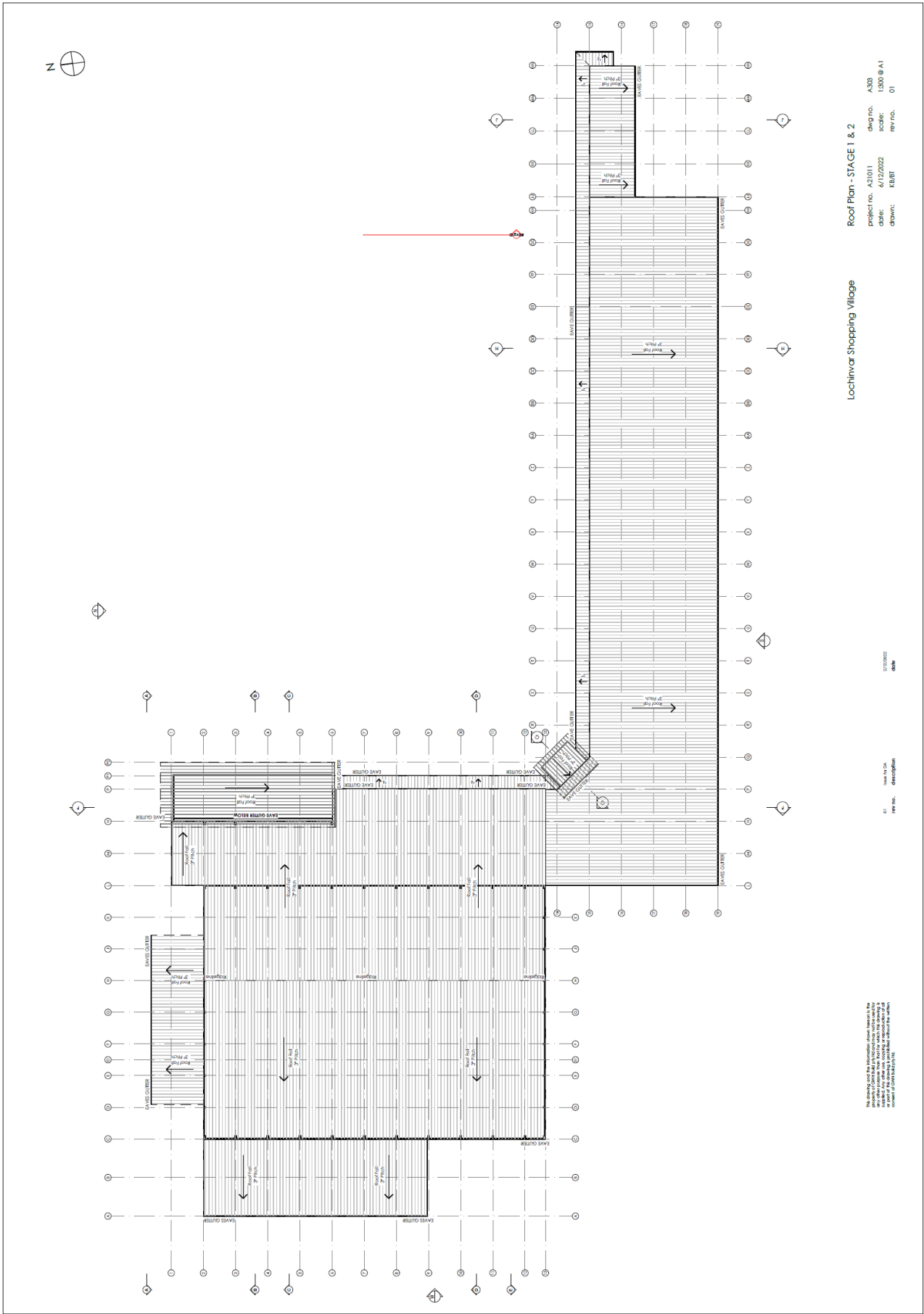
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 date: 6/12/2022  
 drawn: KBJB  
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 rev no. 01

Lochinvar Shopping Village

2/2/2022  
 date

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 rev no. description

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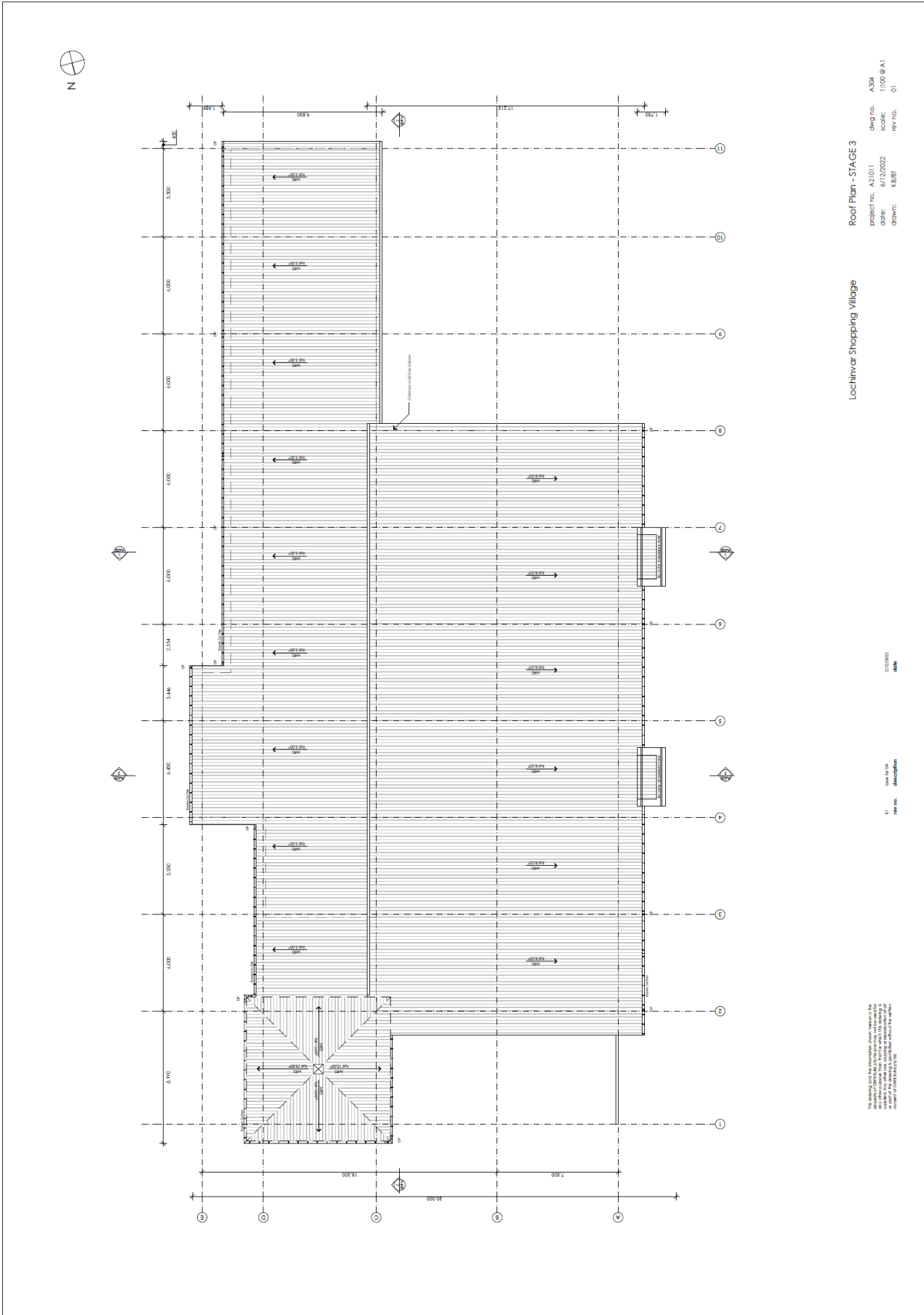


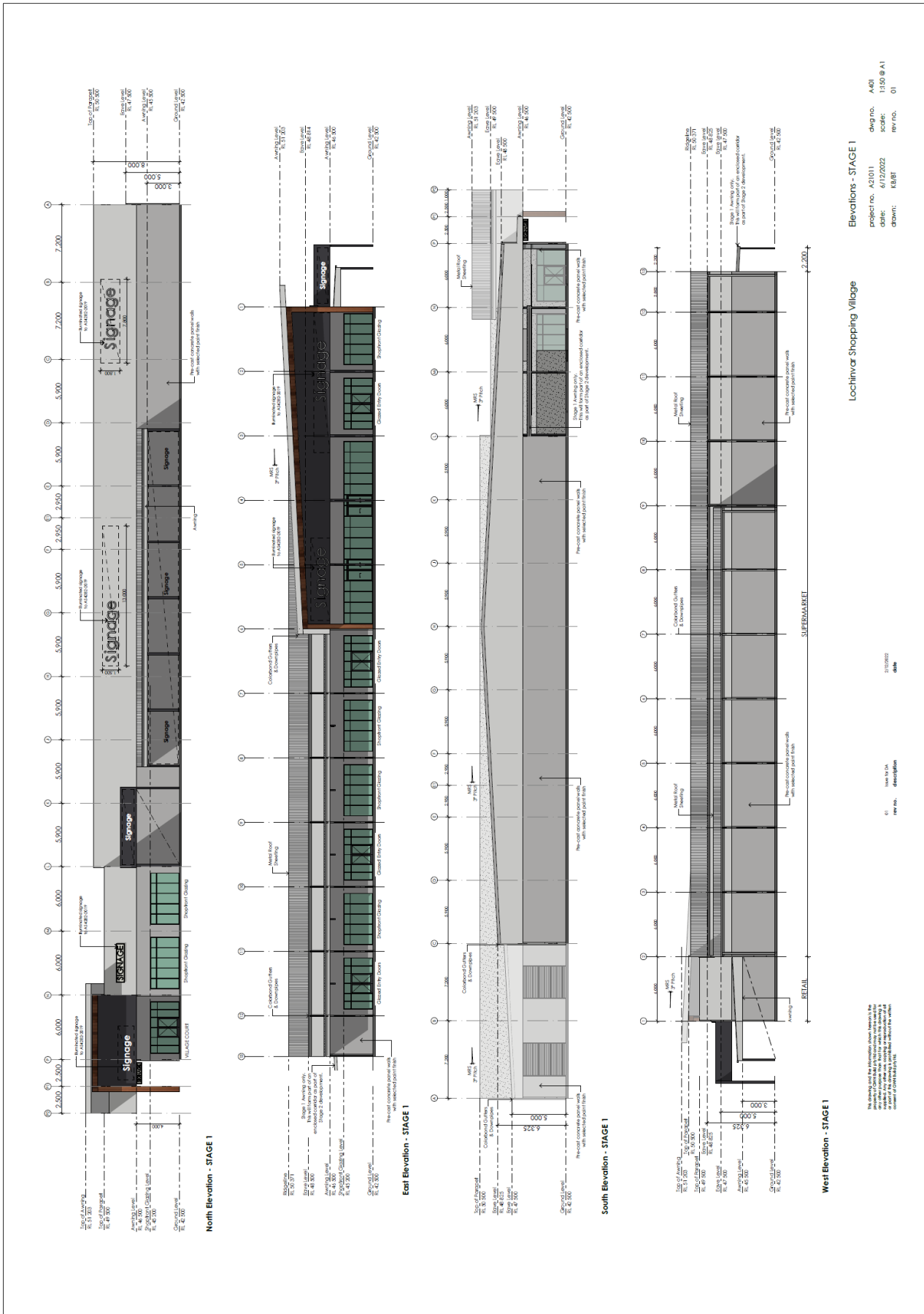
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 client: RUGB

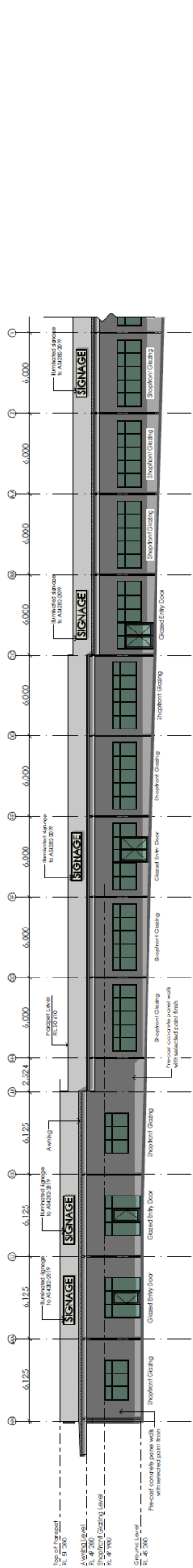
Lochinvar Shopping Village

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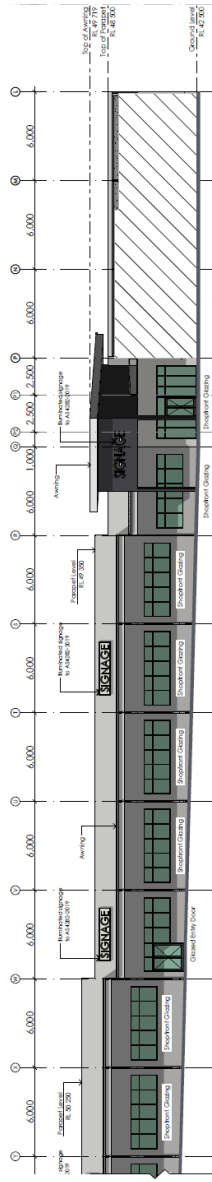
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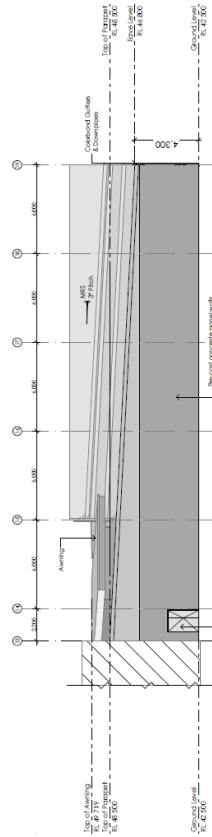




North Elevation - STAGE 2



North Elevation - STAGE 2

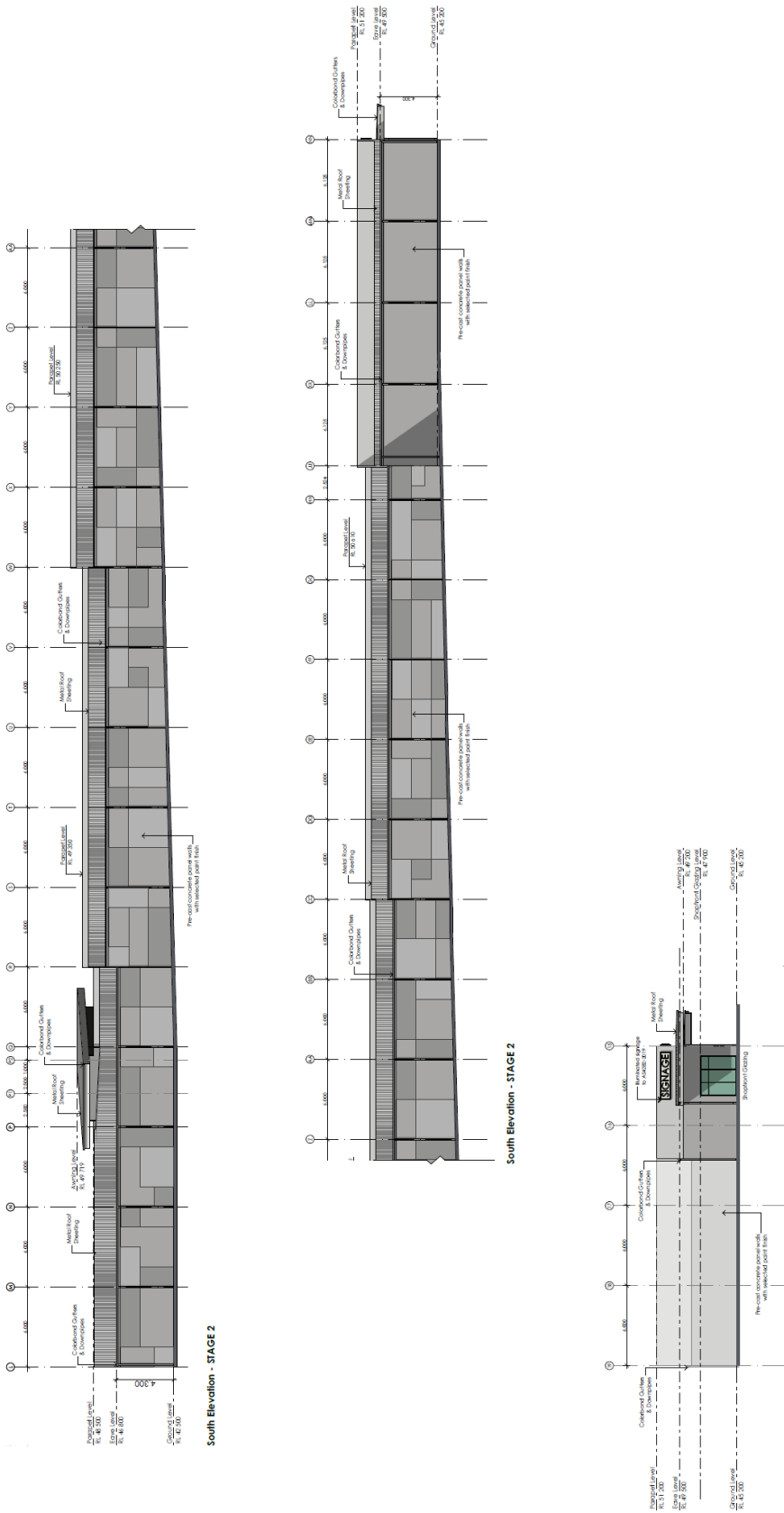


West Elevation - STAGE 2

Lochinvar Shopping Village  
Elevations - STAGE 2  
project no. A21011  
date: 6/12/2022  
drawn: RB/BJ

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rev no. description  
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date: 2/12/2022

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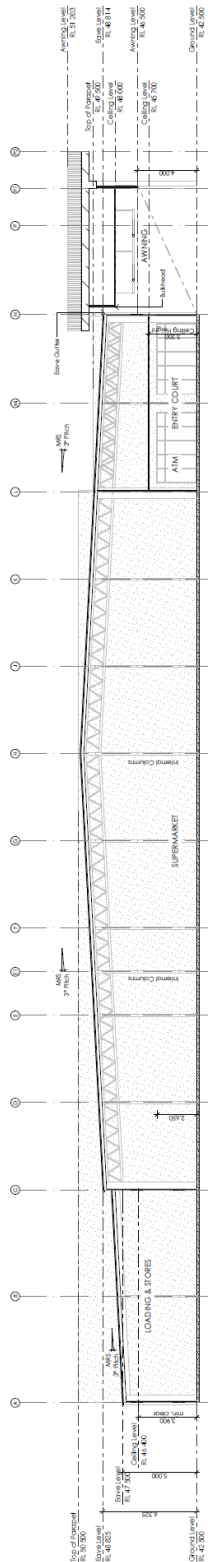
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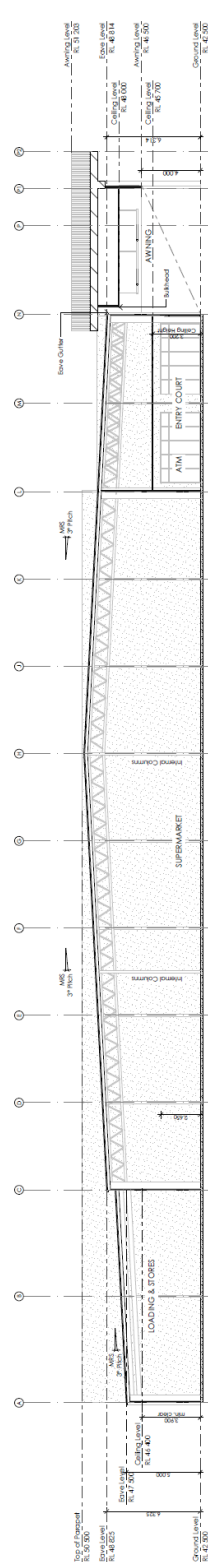
rev no.	date	description
01	07/02/2022	ISSUE FOR DA

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Section B-B



Section C-C

Sections - STAGE 1  
 Lochinvar Shopping Village

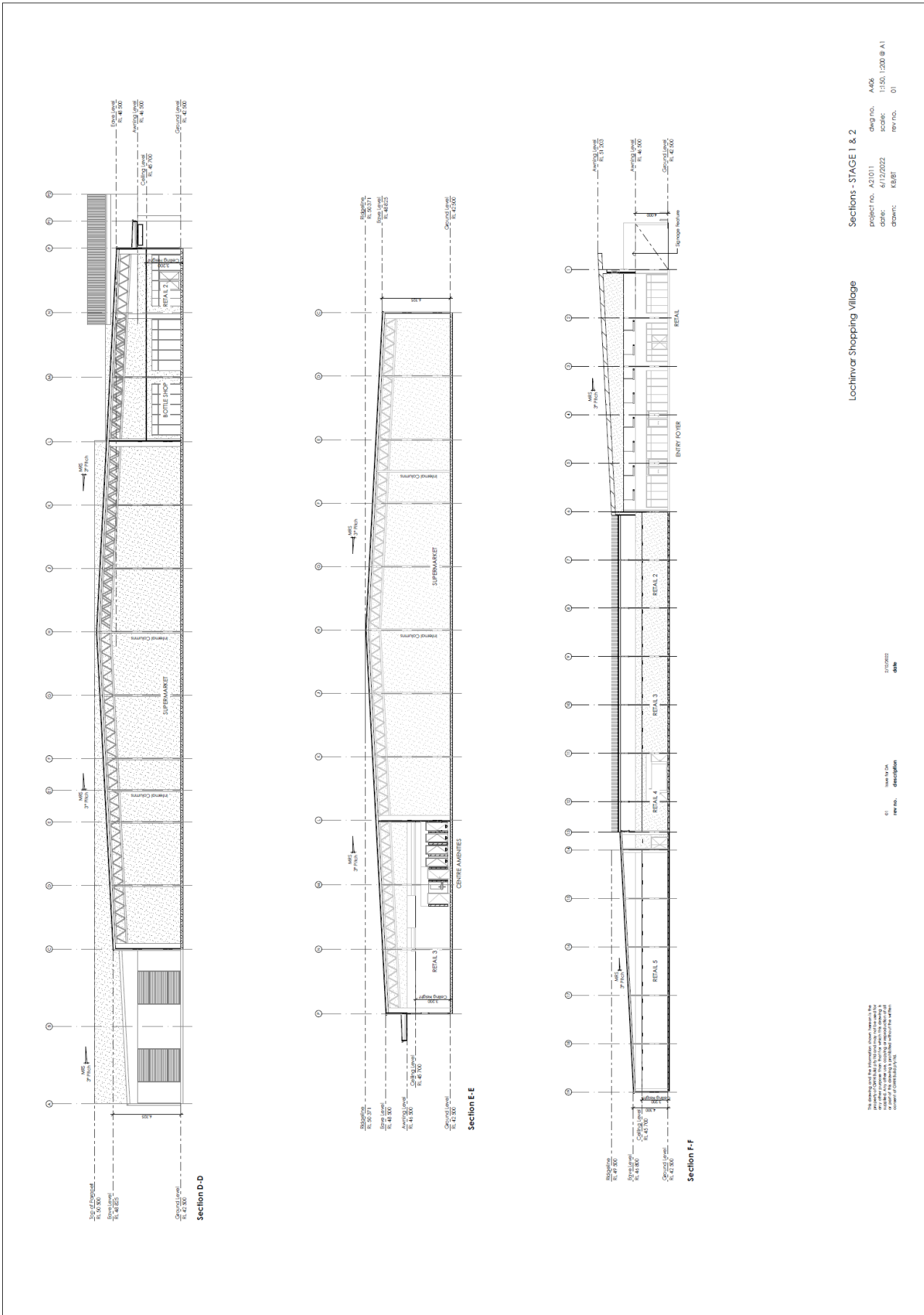
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 rev no. 01

rev no.	date	description
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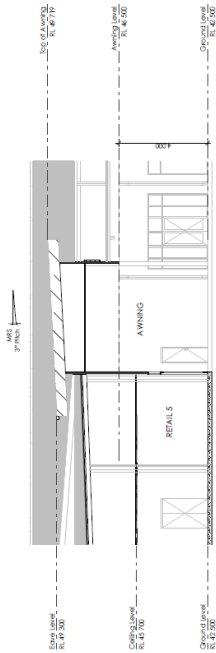


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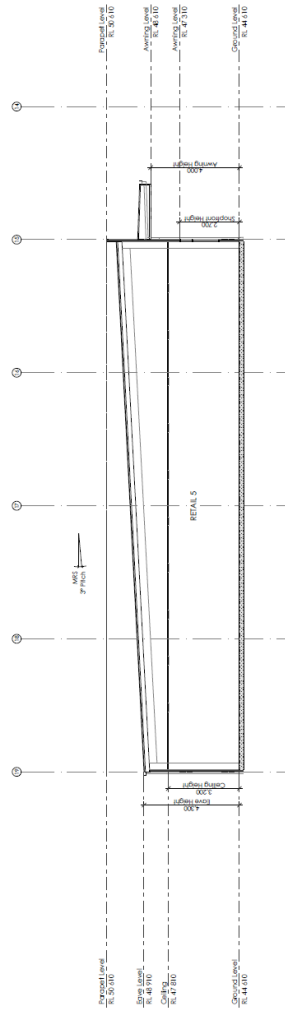
Lochinvar Shopping Village

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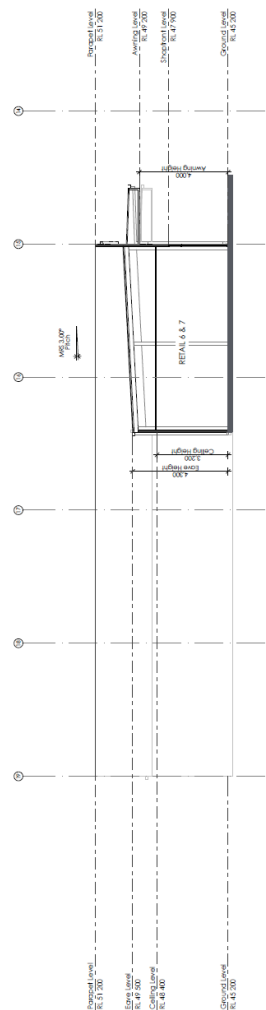
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SECTION C-G



Section H-H



Section J-J

Lochinvar Shopping Village

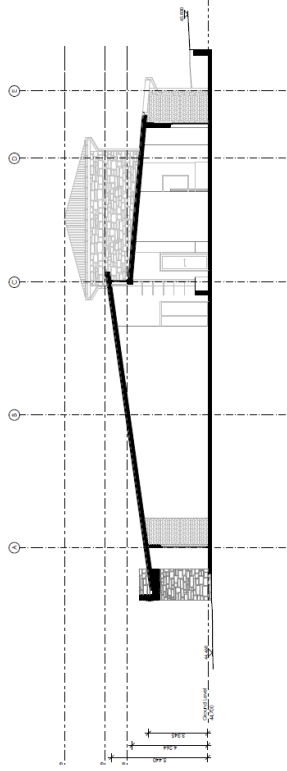
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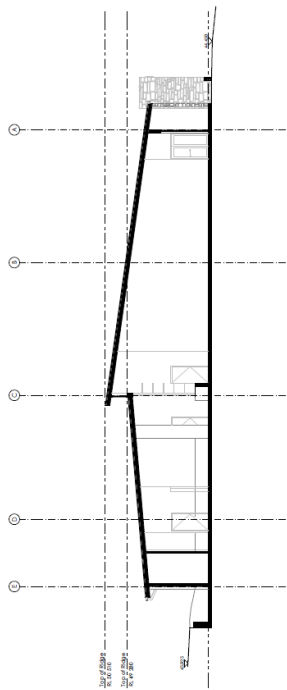
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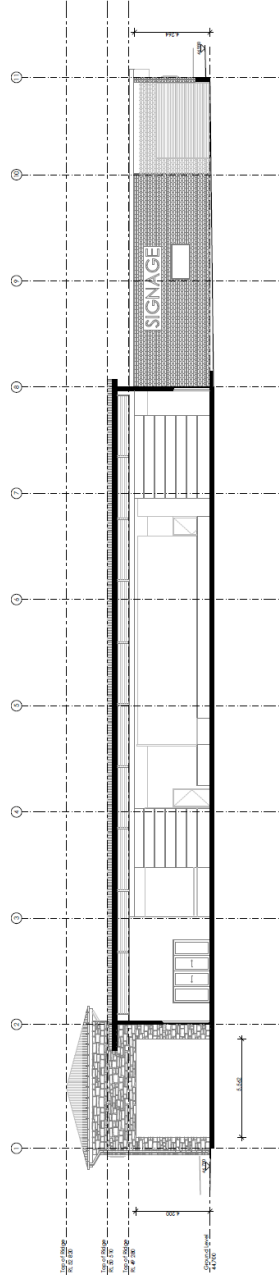
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Section B & South



Section B & North



Section A-A Long

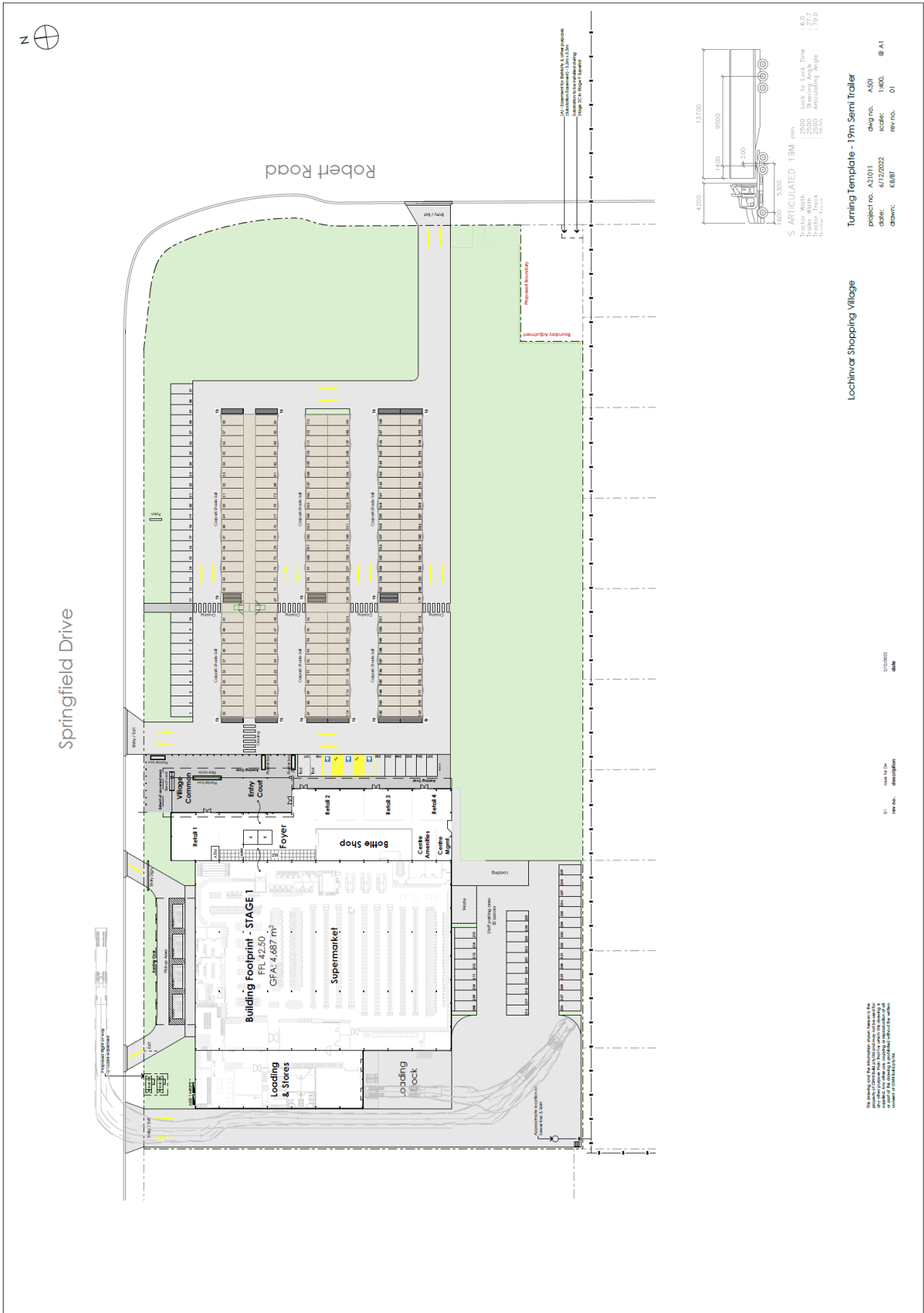
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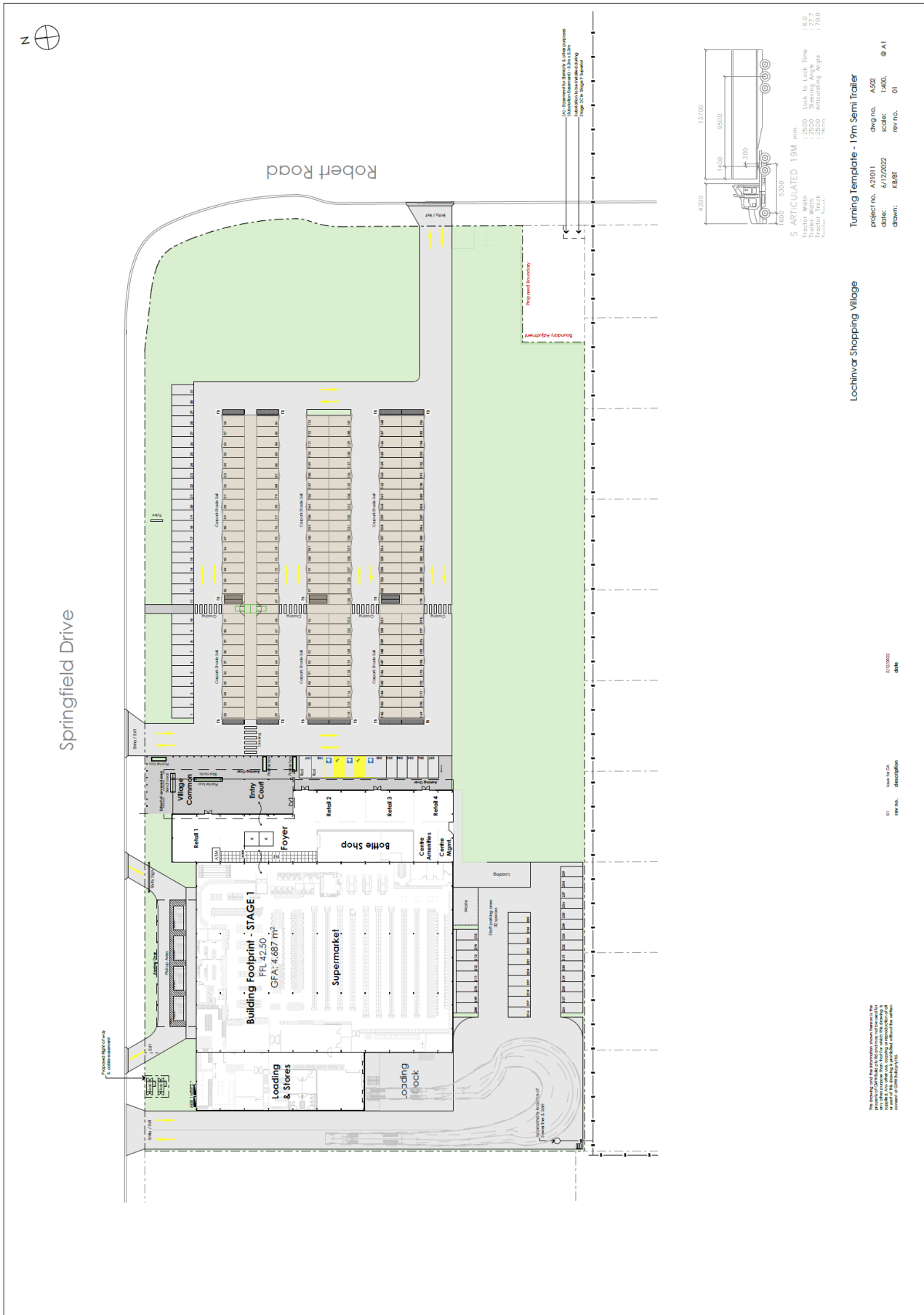
Lochinvar Shopping Village

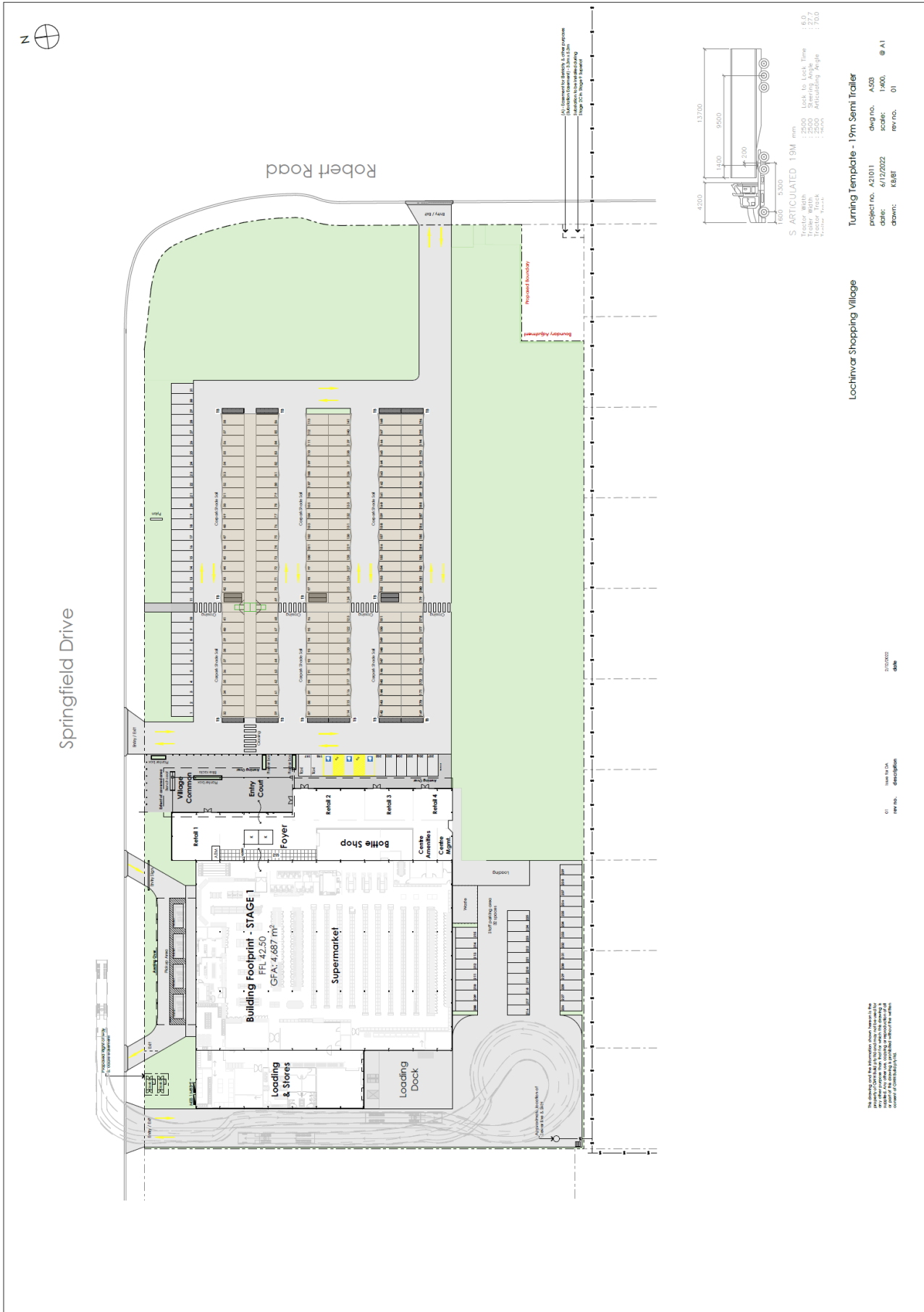
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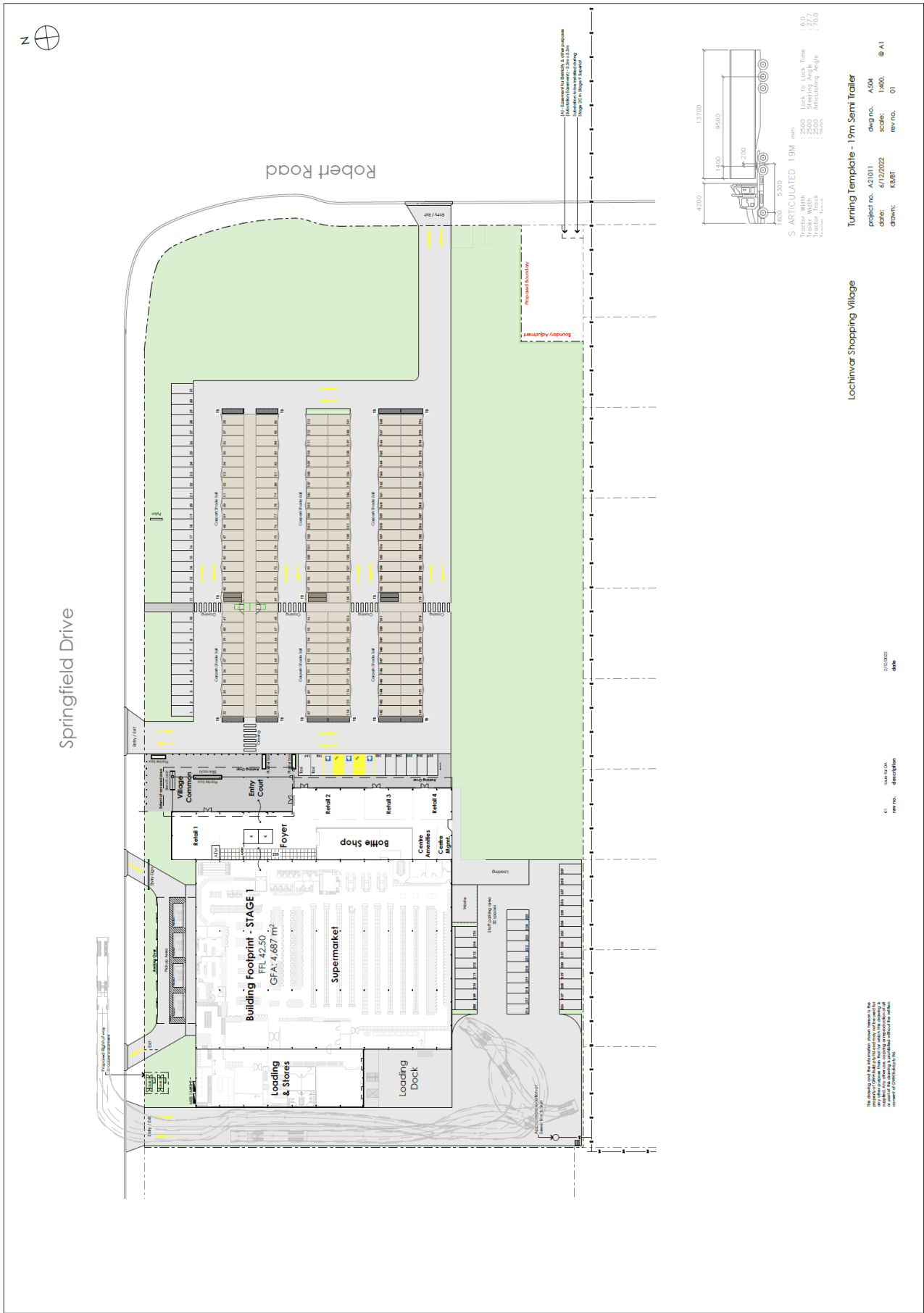
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01	ISSUE FOR ICA

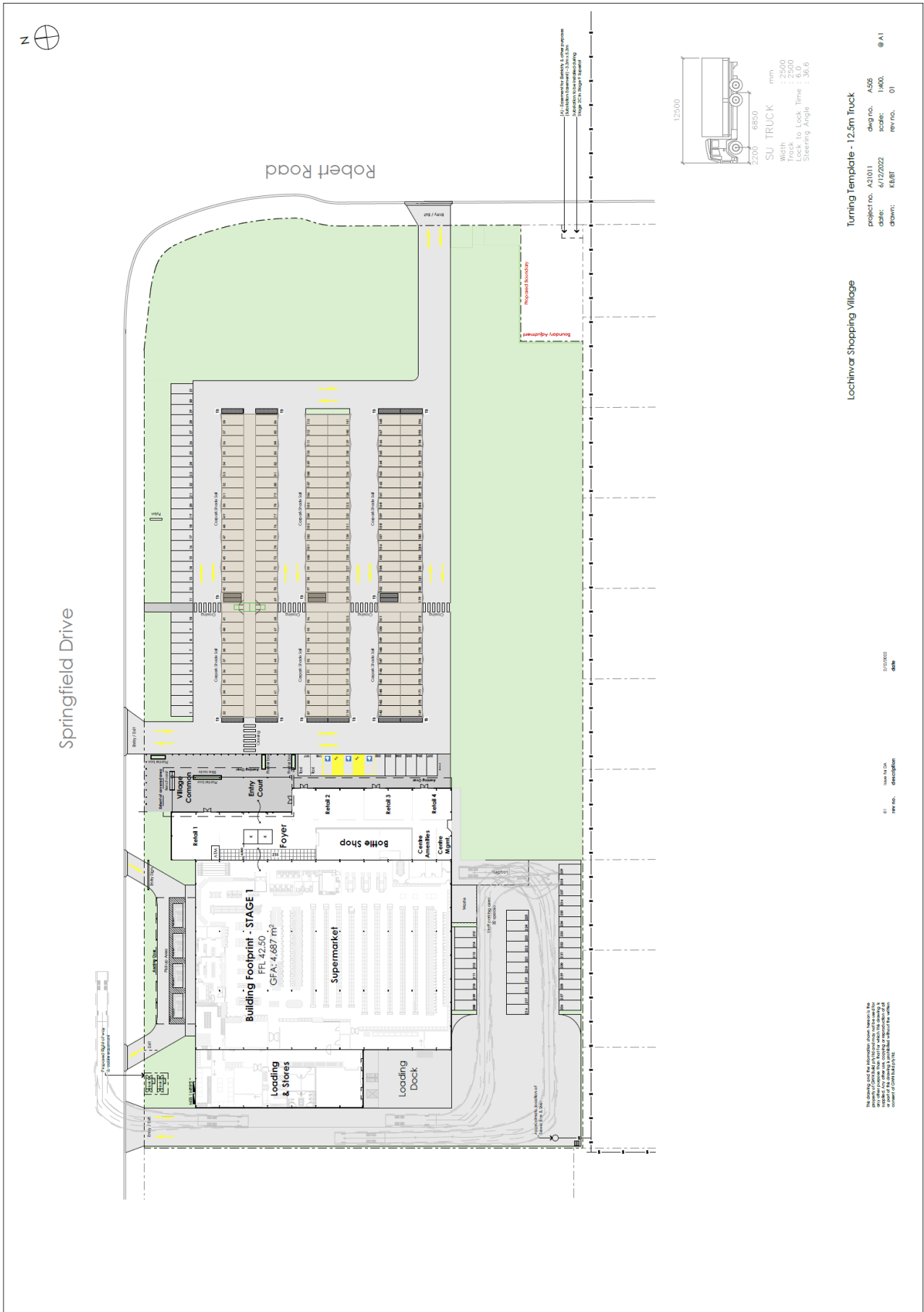
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# APPENDIX 2 TRAFFIC COUNT DATA

15/7/2021 - NEW ENGLAND HWY / ROBERT RD, LOCHINVAR

9:00 <<< HOUR ENDING Thursday

<b>Summary:</b>	
<b>NEW ENGLAND HWY / ROBERT RD</b>	
1458	Total Light Vehicles
114	Total Heavy Vehicles
0	Total Pedestrians

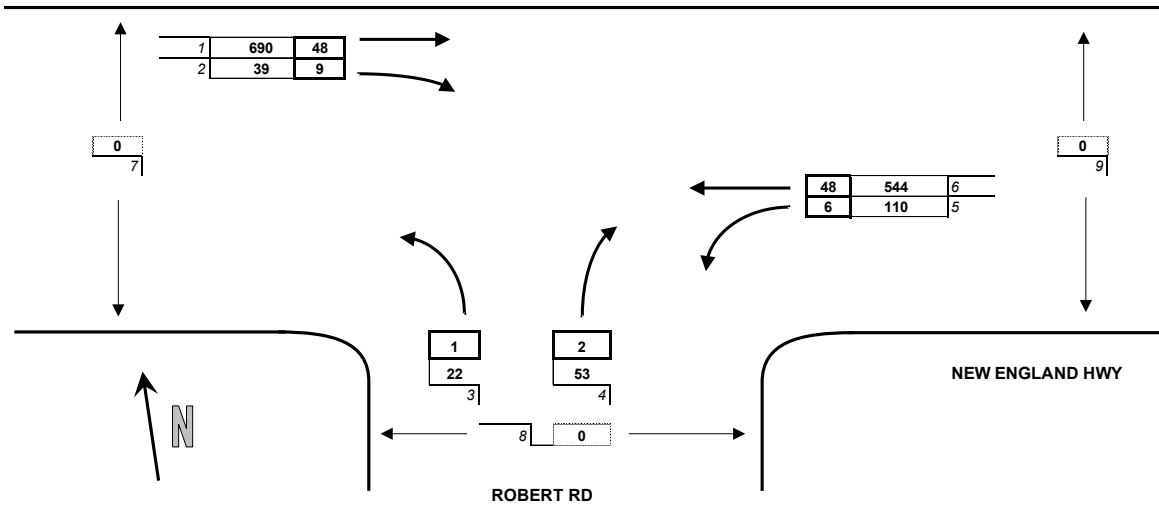


Quality Surveys  
223333

690	Light Vehicles
48	Heavy Vehicles
0	Pedestrians

← TO STATION LN

NEW ENGLAND HWY



14/7/2021 - NEW ENGLAND HWY / ROBERT RD, LOCHINVAR

16:00 <<< HOUR ENDING Wednesday

<b>Summary:</b>	
<b>NEW ENGLAND HWY / ROBERT RD</b>	
1392	Total Light Vehicles
88	Total Heavy Vehicles
0	Total Pedestrians



Quality Surveys  
223333

700	Light Vehicles
45	Heavy Vehicles
0	Pedestrians

← TO STATION LN

NEW ENGLAND HWY

