

Appendix 7: Landscape DA Report

Superseded

SPIRES ESTATE TOWN CENTRE

LANDSCAPE DA REPORT

JUNE 2021



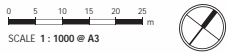


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REVISION	DATE	ISSUE OR AMENDMENT	BY	REVIEWED
A	28/04/2021	ISSUE FOR DEVELOPMENT APPLICATION	MM	SC
B	04/06/2021	ROAD PAVING AMENDMENT	MM	SC

1.0 Landscape Masterplan



2.0 Character Images



3.0 Paving Treatments



GRANITE PAVING ROAD & PEDESTRIAN TREATMENT



CHARCOAL EXFOLIATED GRAPHITE EXFOLIATED LAKESIDE EXFOLIATED

BRICKMAKERS PAVING ROAD TREATMENT



BRICKMAKERS STONEWASH CHARCOAL BRICKMAKERS STONEWASH GREY BRICKMAKERS SILVER

EXPOSED AGGREGATE CONCRETE TREATMENT



JARRAH



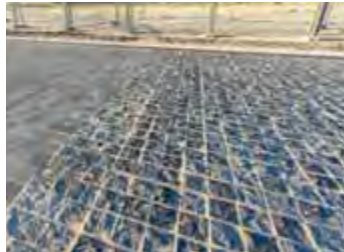
EXFOLIATED ROUGH CUT



4.0 Material Palette



FEATURE GRANITE PAVING
Granite Paving to Pedestrian Areas
Size: 600x300x40mm Finish: Exfoliated



FEATURE GRANITE COBBLESTONE PAVING
Granite Cobblestone to Feature Areas
Size: 100 x 100x 80mm Finish: Exfoliated



EXPOSED AGGREGATE
Colour: Jarrah. Supplier: Holcim
Finish: Honed



SEATING WALL
Gabion Wall with Recycled Infill

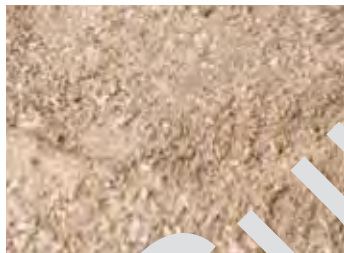


SEATING WALL
Precast Concrete Wall

OPTIONAL MATERIALS (SUBJECT TO FURTHER DETAILED DESIGN) TO TIE INTO ADJACENT POS MATERIAL PALETTE



RUBBER SOFTFALL
Patterned Rubber Softfall to Australian Standards



CRUSHED GRANITE
Summerstone lines to infill play creating areas



SEATING WALL
Recycled Red Brick



DECKING & TIMBER FURNITURE
Spotted Gum Timber. Finish: Natural Oiled



FEATURE PAVING
Recycled Red Brick Paving
Finish: Cleaned Recycled

5.0 Furniture Palette



DECO by QUATRO DESIGN
2200 Deco Bench Seat & 750mm Planter
L 2200 mm x H 450 mm



TWIG by QUATRO DESIGN
L 2370 mm x H 460 mm



POD MODULAR SEATING by QUATRO DESIGN
1200 Pod Cylindrical Seat / Bollard
D 1200 mm x H 450 mm



POD MODULAR SEATING by QUATRO DESIGN
500 Pod Cylindrical Seat / Bollard
D 500 mm x H 450 mm



DECO by QUATRO DESIGN
3200 Deco Bench & Timber
L 3200 mm x H 450 mm



SOUL SEATING & PLANTERS by QUATRO DESIGN
2200 Soul Seat, Timber Top & Centre Planter
D 2200 mm x H 500 mm



SOUL SEATING & PLANTERS by QUATRO DESIGN
2200 Soul Seat & Timber Top
D 2200 mm x H 500 mm



SOUL SEATING & PLANTERS by QUATRO DESIGN
2200 Soul Seat & Centre Planter
D 2200 mm x H 500 mm



CRUSTAL BINS by MMCITE
CS330 - CS331
Triple litter bin for recycling



CUSTOM LASERCUT CORTEN STEEL TREE GRATE
1200mm x 1200mm
Final Design TBC



BIKE RACKS by MMCITE
ELK110 Bicycle Stands



SLIM BOLLARDS by STREET FURNITURE AUSTRALIA
Slim Bollards

6.0 Planting Palette

TREES



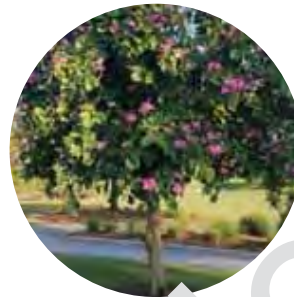
Delonix regia
'Royal Poinciana'



Lagerstroemia indica x *L. fauriei*
'Natchez'



Pyrus calleryana
'Bradford'



Bauhinia blakeana
'Hong Kong Orchid Tree'



Agonis flexuosa
'WA Peppermint'



Corymbia citriodora
'Lemon Scented Gum'

GROUNDCOVERS



Dichondra repens
'Silver Falls'



Trachelospermum jasminoides
'Chinese Star Jasmine'



Senecio macranthus
'Blue Chalk Sticks'



Casuarina glauca
'Cousin It'



Myoporum parvifolium
'Creeping Boobialla'



Hibbertia scandens
'Golden Guinea Vine'

SHADE PLANTING



Alpinia caerulea
'Native Ginger'



Alocasia
'Elephant Ears'



Rhaps excelsa
'Rhaps Palm'



Philodendron
'Xanadu'



Asplenium nidus
'Bird's Nest Fern'



Zamia furfuracea
'Cardboard Palm'

FEATURE

SHRUBS



Lomandra confertifolia
'Seascape'



Lomandra longifolia
'Tanika'



Pittosporum
'Miss Muffet'



Strelitzia reginae
'Bird of Paradise'



Leucospermum cordifolium
'Wedding Pincushion'



Syzygium australe
'Big Red'



Raphiolepis indica
'Oriental Pearl'



Banksia ashbyi dwarf
'Ashby's Banksia'



Syzygium
'Trev'



Westringia fruticosa
'Coastal Rosemary'



Olearia lanuginosa
'Ghost Town'



Melaleuca incana
'Nana'

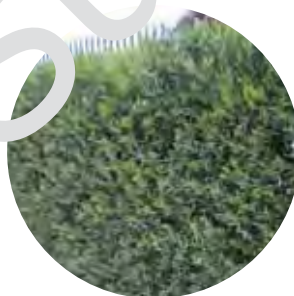
SCREENING PLANTS TO *SPECIAL LANDSCAPING ZONE*



Adenanthos sericeus
'Woolly Bush'



Raphiolepis indica
'Cosmic White'



Grevillea olivacea



Ricinocarpos pinifolius
'Wedding Bush'



Viburnum odoratissimum
'Sweet Viburnum'

PS Ref: 6622
DAP Ref: DAP/21/02023
LG Ref: 20-2021-167-1

13 August 2021

City of Rockingham
PO Box 2142
ROCKINGHAM DC WA 6967

Attention: Chris Parlane, Senior Planning Officer

**LOT 9005 NAIRN DRIVE, BALDIVIS
PROPOSED SPIRES NEIGHBOURHOOD CENTRE
RESPONSE TO CITY'S INTERNAL PLANNING COMMENTS, REFERRAL COMMENTS AND
MODIFIED PLANS**

Planning Solutions acts on behalf of Piperpoint Pty Ltd, the proponent of the proposed Spires Neighbourhood Centre on Lot 9005 Nairn Drive, Baldivis (**subject site**).

The following additional information package addresses the matters raised by the City's planning and internal departments.

MODIFIED PLANS

Please find enclosed in **Appendix 1**, a set of modified development plans. The plans have been modified in accordance with feedback received from the City's planning and internal departments.

RESPONSE TO INTERNAL REFERRAL COMMENTS

Planning Solutions' response to the key matters raised by the City's various referral departments is provided in **Appendix 2** of this document.



RESPONSE TO PLANNING COMMENTS

Planning Solutions' response to the key matters raised by the City's planning department is provided in **Table 1** below:

Table 1: Response to the planning comments

No	City's comments	Applicant Response
1	<i>The application does not state the proposed supermarket trading hours, it only refers to the Retail Trading Hours Act 1987. Please confirm the proposed trading hours of the supermarket as this information will inform the Acoustic Report, and Waste Management Plan as well as the planning assessment.</i>	The proposed trading hours of the supermarket will be in accordance with the requirements of the <i>Retail Trading Hours Act 1987</i> and/or in accordance with other permits/licenses as required. Notwithstanding, the development seeks approval to operate with staff up to 24 hours per day to allow for operations such as replenishment of stock on shelves, price label changes, cleaning, baking, and fresh food preparation.

No	City's comments	Applicant Response
2	<i>Regarding the Waste Management Plan, there are concerns with the location of waste bin stores within the car parks; the design of the car parks to handle waste vehicles and the timing of private contractor waste collections (as there's conflict within the WMP and with the Acoustic Report). There's also an information gap, in that waste collection from the supermarket (and fast food pad site) has not been included. The City considers this information is essential to assessing the functionality of the site plan layout and management measures proposed to enable to effective operation of the shopping centre.</i>	<ul style="list-style-type: none"> • The Waste Management Plan (WMP) has been updated to reflect waste will be collected between 7:00am and 8:00am Monday to Saturday and will not be collected before 9.00am or after 7.00pm on Sundays and Public Holidays. Refer to Appendix 3 for a copy of the updated Waste Management Plan. • The proposed location of the bin storage areas are site-specific responses that are entirely appropriate given the proposed land uses and the context of the site. We note, the proposal includes a dedicated waste area provided for the supermarket as this is the primary waste generator. The remaining waste will be stored and collected from the remaining bin storage areas. Notwithstanding, for the shopping centre portion of the development a 30m² short term waste collection area has been included next to the supermarket parcel pick up/ amenities. • For all tenancies other than the supermarket, waste will be transported from the point of generation in the tenant's premises to the short term waste collection area and then the main waste storage area outside of regular business hours. Alternatively, the waste can be transported directly to the waste storage area. This can be done either by the tenant's staff or the centre's cleaners. • A Waste Management Plan has been provided for the waste collection from the supermarket tenancy. Refer to Appendix 4 for a copy of the supermarket specific Waste Management Plan. • The updated swept path diagrams demonstrate the car parks can adequately handle waste vehicle movements. There are two parking bays still impacted by these turn paths, however, the proponent has agreed to remove these bays two bays. The plans will be updated to reflect this in the upcoming days. Refer to Appendix 5 for a copy of the updated swept path diagrams. • The proposal does not seek approval for a fast food outlet on the pad site. The plans have been updated to include temporary car parking and landscaping for the future pad site, until such a time that the future pad site is developed. Refer to Appendix 1 for a copy of the updated development plans.
3	<i>Regarding the car park layout on the site plan, there are concerns with the design of the car parks to handle service vehicles generally, and swept path diagrams are required. Importantly, there is a need for a dedicated space for large service vehicles to manoeuvre and reverse into loading areas without impacting on traffic flow within the car parks.</i>	<ul style="list-style-type: none"> • The updated swept path diagrams demonstrate the car parks can adequately handle the waste and service vehicle movements. Refer to Appendix 5 for a copy of the updated swept paths. • It is proposed that the use of the service yard will occur outside of regular business hours. Truck deliveries will generally operate on a predetermined schedule, and it is in the operator's best interest to ensure deliveries occur when the car parking area is not full. As such, service vehicle movement throughout the car parking area is not considered to be an issue nor adversely impact the traffic flow.
4	<i>In respect to the proposed car park shade structures, elevation plans are required to be provided.</i>	The plans will be updated to address the car parking shade structures.
5	<i>It is accepted that the future fast food pad site and future development site (on the northern Lot) are not included within the current application. The provision of car parking for these uses will be considered in the future on merit, outside of the current DA process.</i>	Noted. To mitigate any adverse amenity impact as a result of the future pad site the plans have been updated to include temporary car parking and landscaping, until such a time that the future pad site is developed.

6	The Landscape Masterplan presents inconsistencies with the Development/ Site Plans and 3D images provided.	The landscaping plan will be updated to ensure consistency with the development plans. It is respectfully requested that this is addressed as a condition of approval.
7	The Bushfire Management Plan needs to be updated to address the City's technical comments and to align with the development site plans/ landscape plan.	The Bushfire Management Plan (BMP) has been updated to reduce the extent of the APZ to only that area necessary. Landscaped areas not in the APZ will be planted with low-threat vegetation. Refer to Appendix 6 for a copy of the BMP.
8	In terms of floor plans, are there any floor plan layouts that can be provided to enable the City to review the nett lettable areas? There is little internal detail shown on the site plan.	The tenancies are proposed to be utilised for a range of interchangeable uses such as a Shop, Restaurant, Fast Food Outlet, and Office. As such, details of the internal floor plan layouts are not available at this stage.
9	For the northern commercial centre, please provide eastern and western elevations of the proposed gym.	The proposed gym will not be visible from the western boundary at Yellowstone Road as it will be screened by the medical centre. As such the western elevation of the gym has not been provided. The western gym façade will be consistent with the built form on the remainder of the site. The eastern elevation is contained within the plan package details the eastern façade of the gym, as shaded in 'red' in the extract below: 
10	It is unclear from the plans as to the extent that pedestrian shelter (awnings) extend over the footpaths of the surrounding streets. Please clarify.	The site plan demonstrates that the awnings extend over the footpaths of the surrounding street network. These have been shaded in 'red' in the extract from the plans below:  Additionally, the roofing plans show the extent of the awnings over the surrounding pedestrian paths.

11 The proposed 'public art' will not be accessible to public at large outside the business hours. The location and selection of art does not satisfy the intent of the PP3.3.25. A location outside the complex is recommended for public art work to be displayed.

The proposed public art is to be provided in the mall of the Shopping Centre development, suspended from the roof structure as detailed in below:



In circumstances that the applicant elects to install public art on the subject site, clause 2 of the City's Planning Policy 3.3.25 Percent for Public Art – Private Developer Contribution (**LPP 3.3.25**) requires:

"provision of public art in a publicly visible location within the boundaries of an approved development site"

The public art is proposed to be located on the roof of the centre's internal public spine. This will be accessible to the general public during the centre's operating hours. The shopping centre's internal spine will be fitted with secure and transparent roller shutters to ensure access will be restricted after hours.

Notwithstanding, the roller shutters will be transparent ensuring the public art remains visible to the public at large. As such, the location of the public art is site responsive and considered entirely appropriate.

CONCLUSION

We trust this additional information package addresses the comments raised through the assessment process. We look forward to working with the City towards a favourable recommendation to the Metro Outer Joint Development Assessment Panel.

Should you have any queries or require further clarification in regard to the above matter please do not hesitate to contact the writer.

Yours faithfully

A handwritten signature in black ink, appearing to read 'F. Smith'.

FINN SMITH
PLANNING CONSULTANT

Spires Commercial

Lot 9005, Future Lot 461 Nairn Drive & Lot 462 Eighty Road

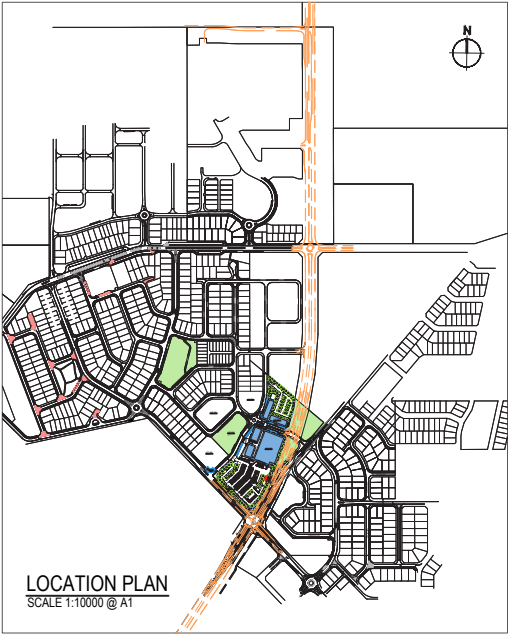


Wednesday 11th August 2021

dm|g

Subdivision Plan - 1:2000 @ A3

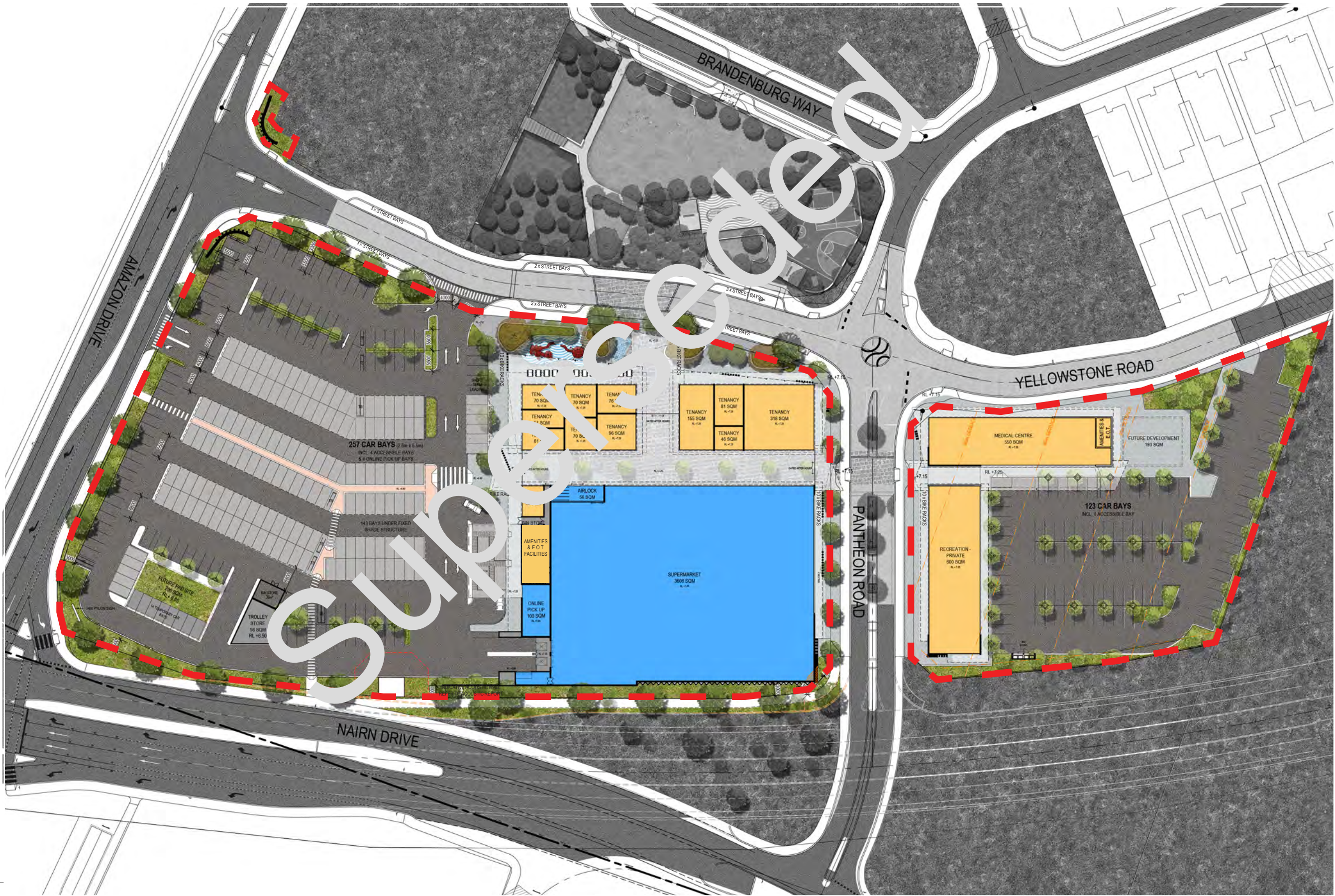
Spires Commercial



Lot Boundaries and Typography - 1:2000 @ A3

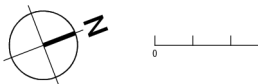
Spires Commercial





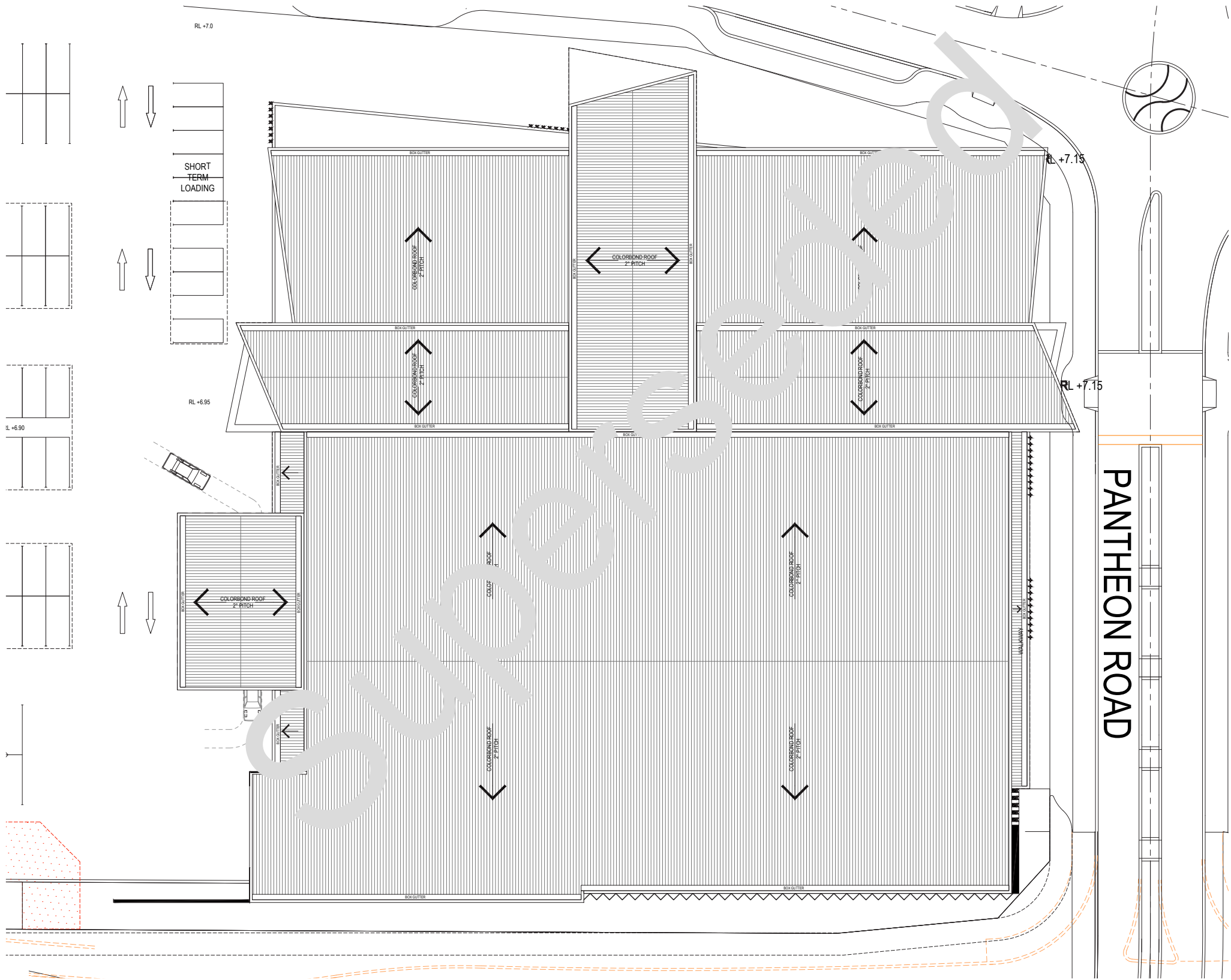
SUBJECT SITE AREA

- 2 x END OF TRIP FACILITIES EACH WITH:
- 2 x UNISEX CHANGE ROOMS (INCL. SHOWER)
 - 12 x LOCKERS
 - BIKE STORAGE



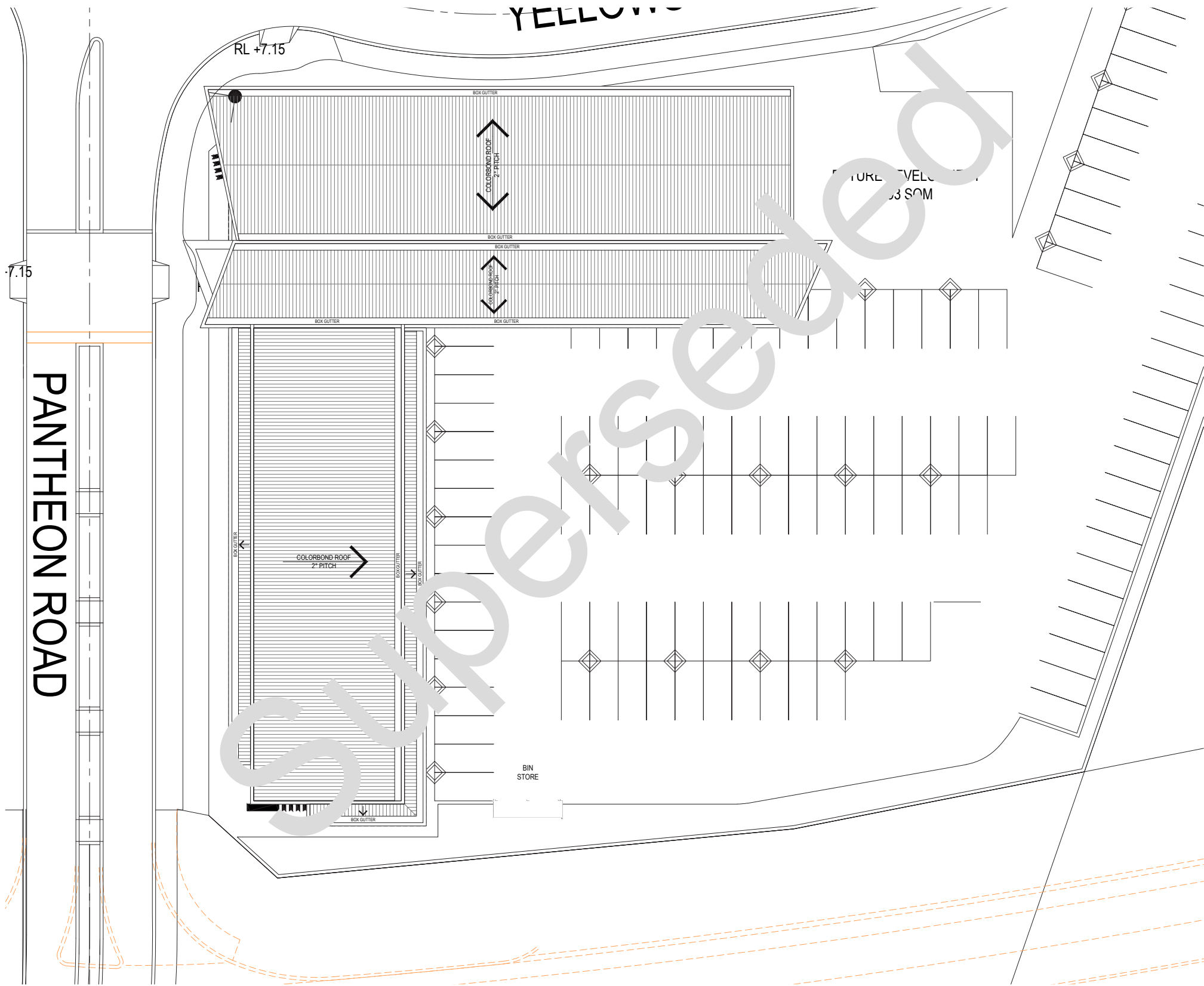
Shopping Centre Roof Plan - 1:500 @ A3

Spires Commercial



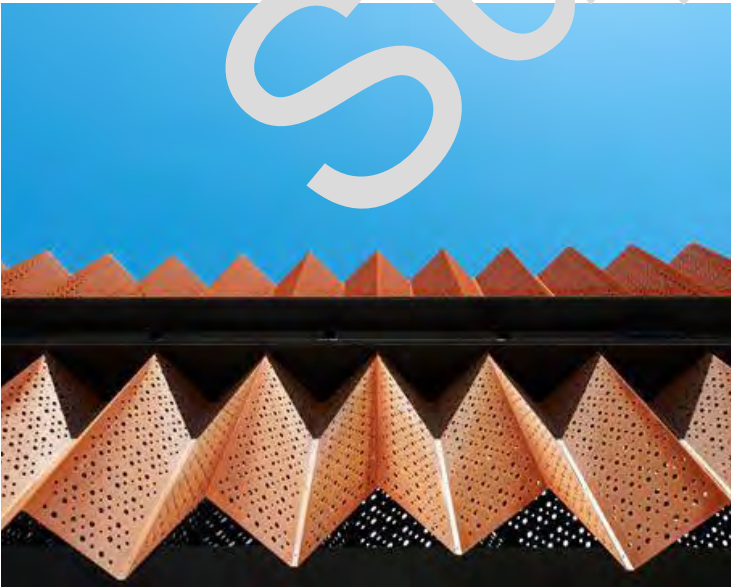
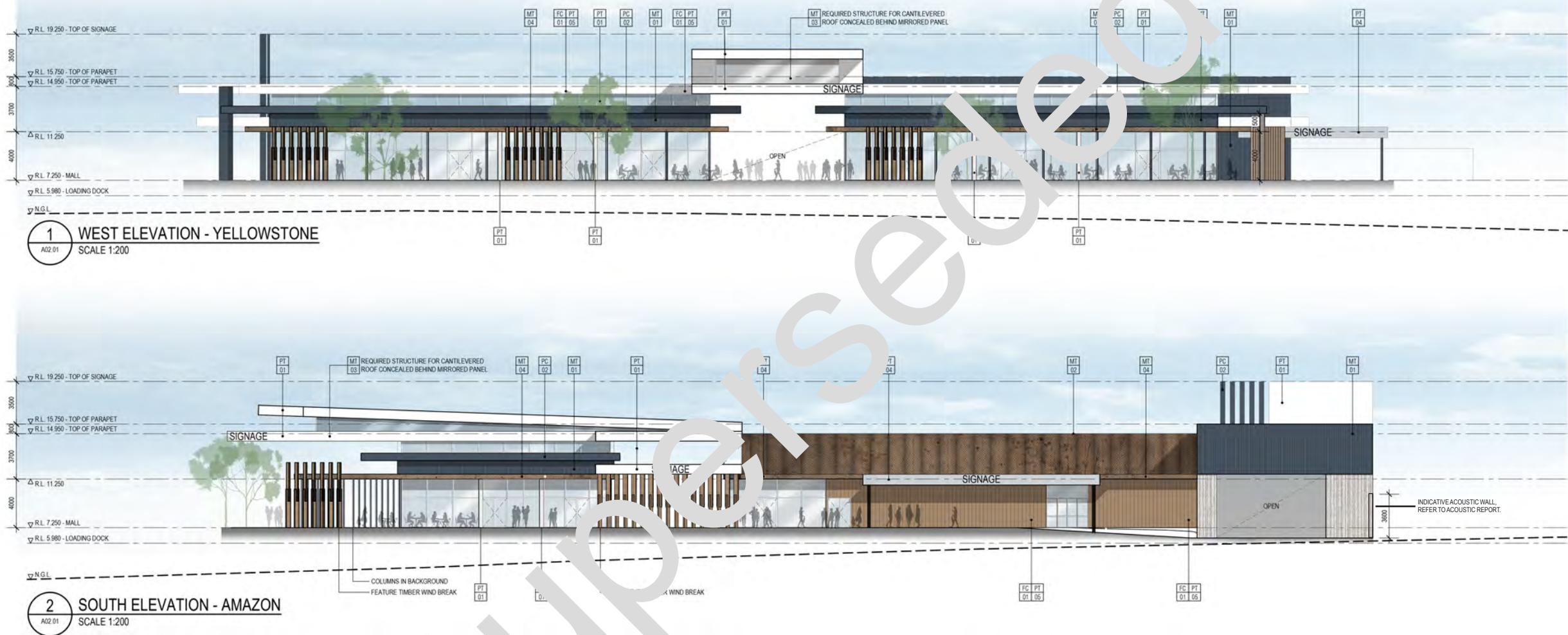
Commercial Centre Roof Plan - 1:500 @ A3

Spires Commercial



Shopping Centre Elevations - 1:400 @ A3

Spires Commercial



Project Palette

Spires Commercial



Timber Cladding



Folded Perforated Metal Cladding



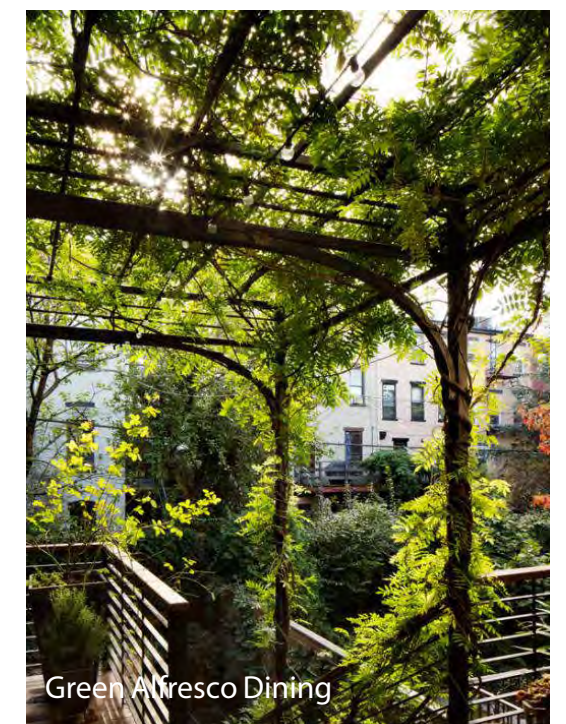
Profiled Metal Cladding



Timber Battened Ceiling



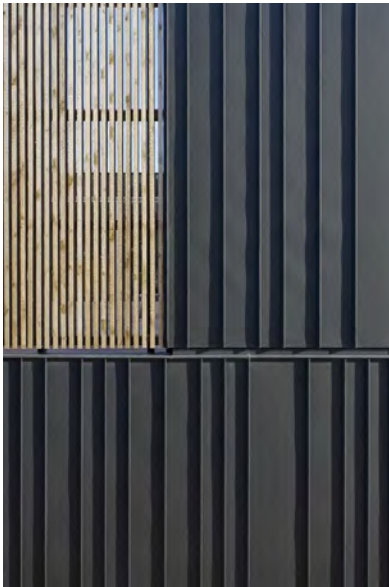
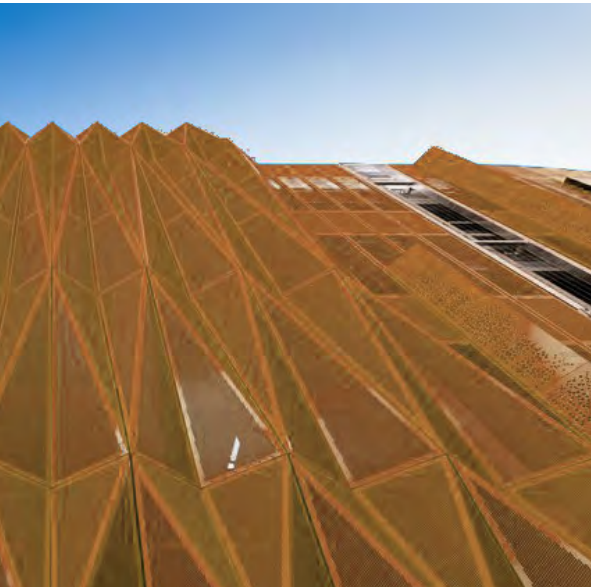
Corten



Green Alfresco Dining

Shopping Centre Elevations - 1:400 @ A3

Spires Commercial



Project Palette

Spires Commercial



Corten Mesh



Feature Canopy



Feature Basalt Paving



Granite Paving

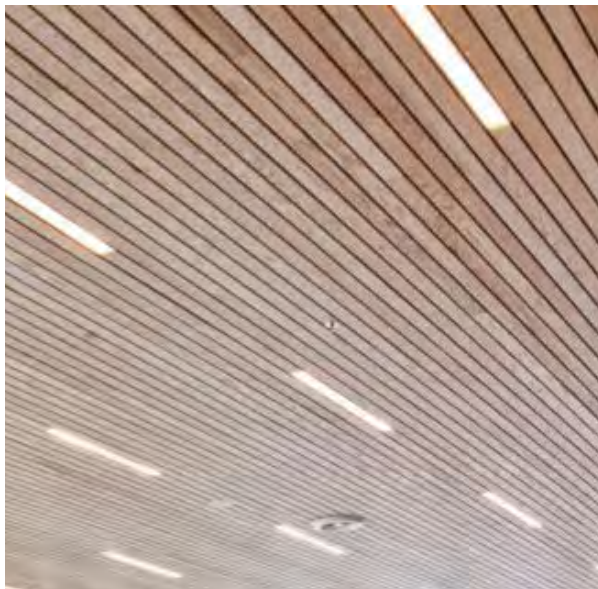
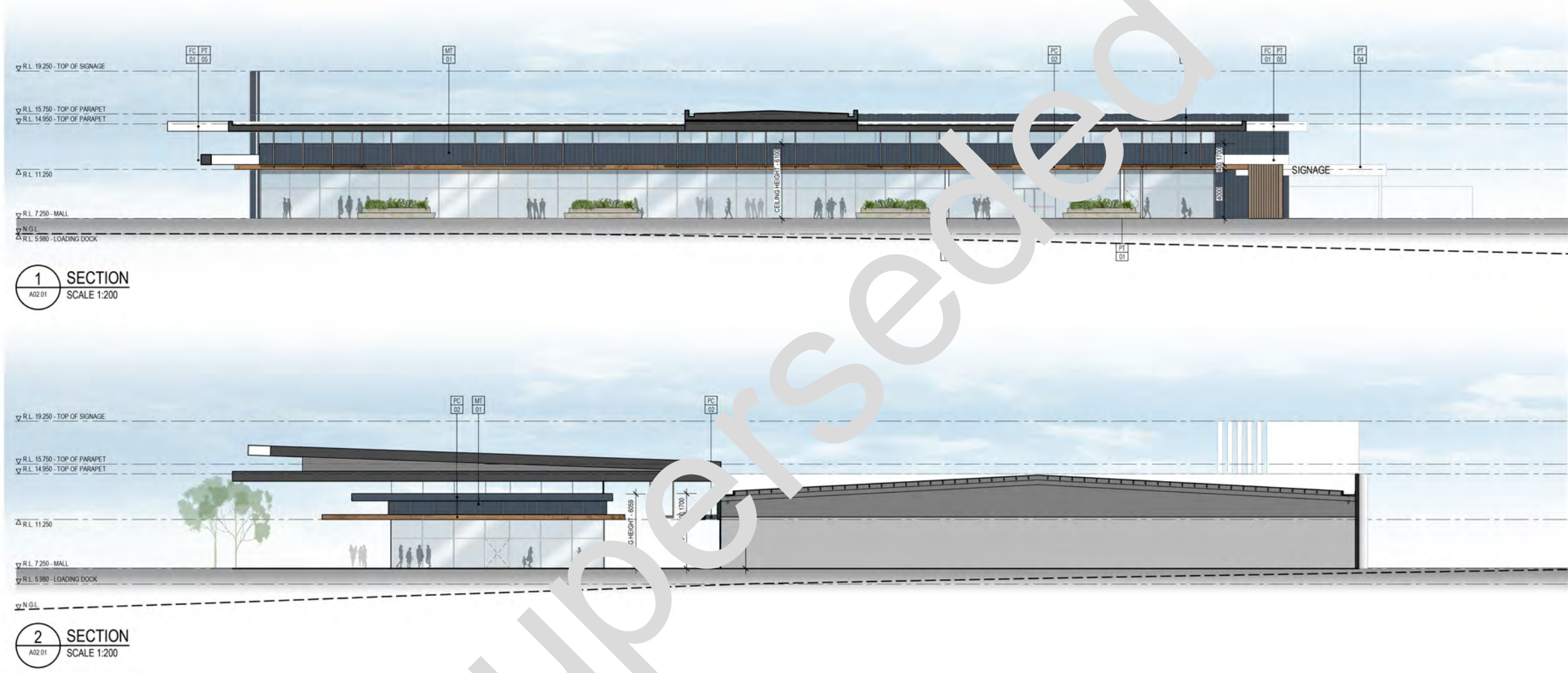


Commissioned Local Artwork (Example Only)



Shopping Centre Sections - 1:400 @ A3

Spires Commercial



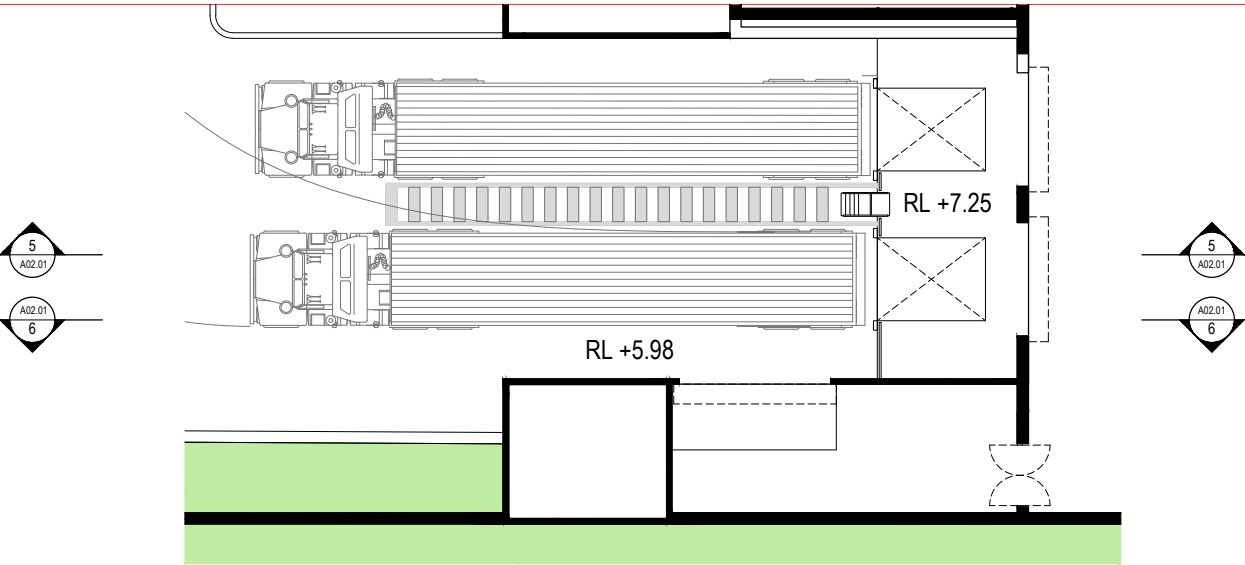
Shopping Centre Sections - 1:400 @ A3

Spires Commercial

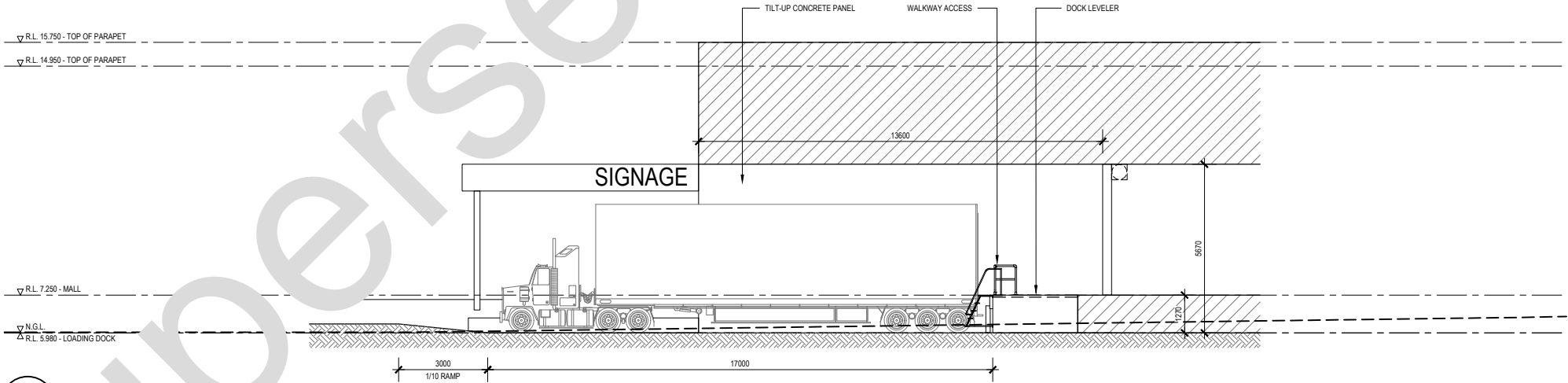


Loading Dock Sections - 1:200 @ A3

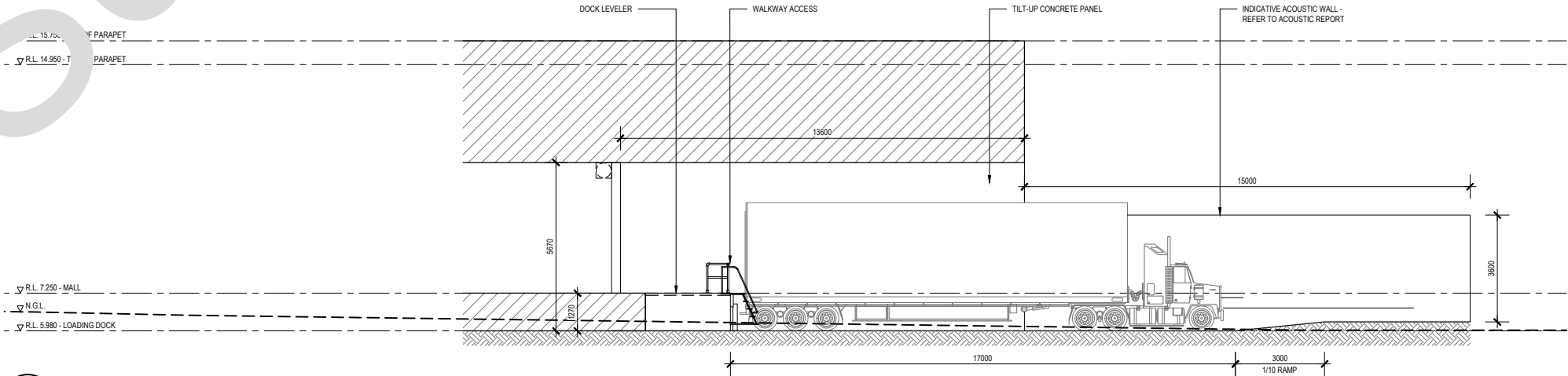
Spires Commercial



LOADING DOCK PLAN
SCALE 1:100



5 LOADING DOCK SECTION
SCALE 1:100

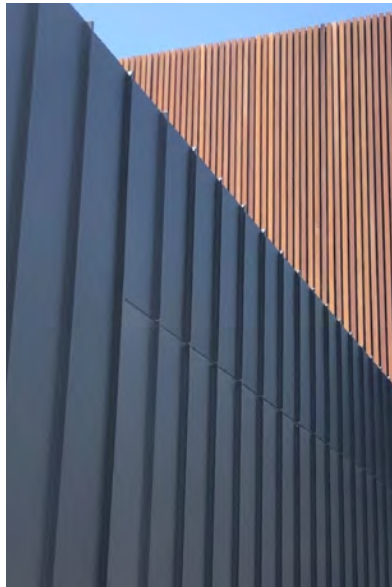
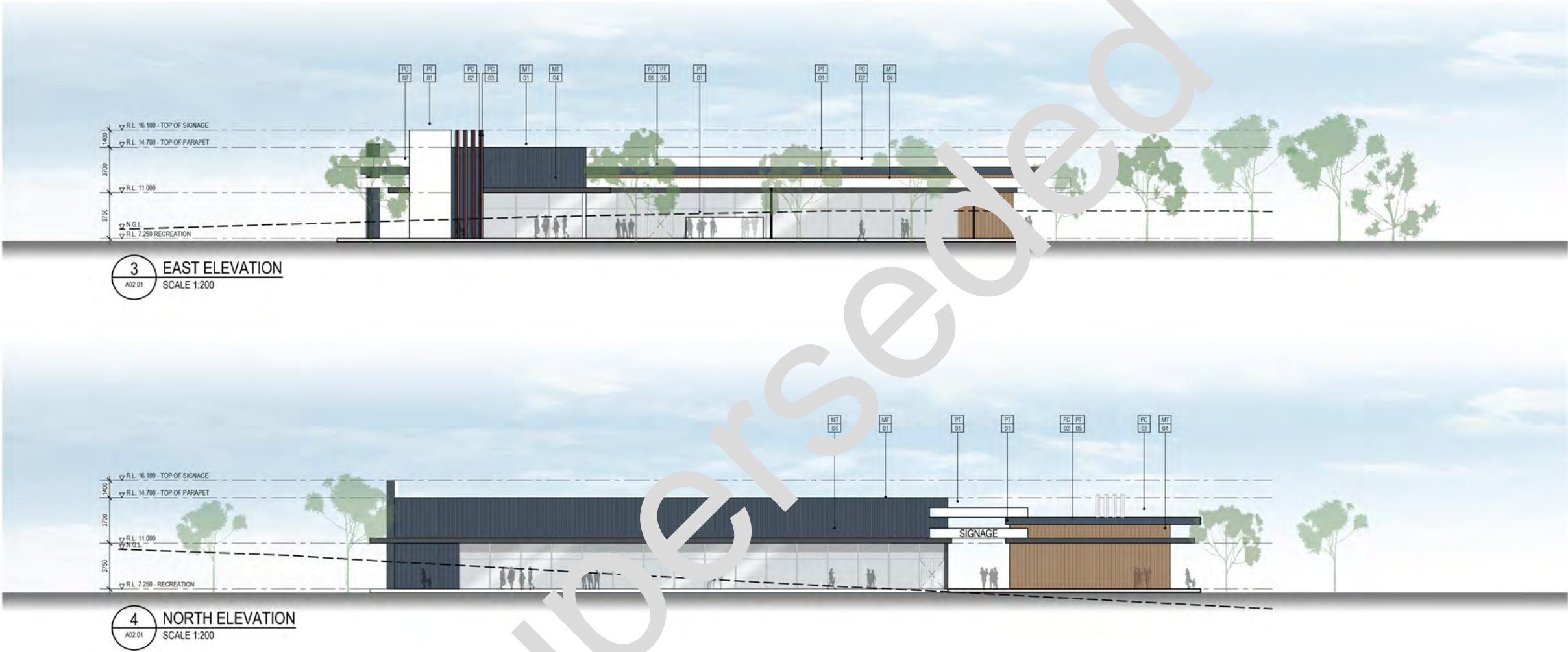


6 LOADING DOCK SECTION
SCALE 1:100



Commercial Centre Sections - 1:400 @ A3

Spires Commercial



Materials Palette Legend

Spires Commercial



											
FC-01	MT-01	MT-02	MT-03	MT-04	PT-01/PC-01	PT-02/PC-02	PT-03/PC-03	PT-04/PC-04	PT-05	CE-01	CE-02
TIMBER CLADDING	PROFIED METAL CLADDING	DECORATIVE MESH	MIRROR METAL PANEL	CORTEN	PAINT/ POWDERCOAT	PAINT/ POWDERCOAT	PAINT/ POWDERCOAT	PAINT/ POWDERCOAT	PAINT/ POWDERCOAT	PATTERNED CONCRETE	PATTERNED CONCRETE

Shopping Centre - Western Entrance

Spires Commercial



Shopping Centre - Western Entrance

Spires Commercial

dm|g



Shopping Centre - Southern East Elevation

Spires Commercial

dm|g



Shopping Centre - Southern Entrance

Spires Commercial



Shopping Centre - F&B View to Park

Spires Commercial



Shopping Centre - Mall View to Medical Centre

Spires Commercial

dm|g



Shopping Centre - Pantheon Road Entrance

Spires Commercial



Shopping Centre - Pantheon Road East

Spires Commercial



Shopping Centre - Aerial

Spires Commercial



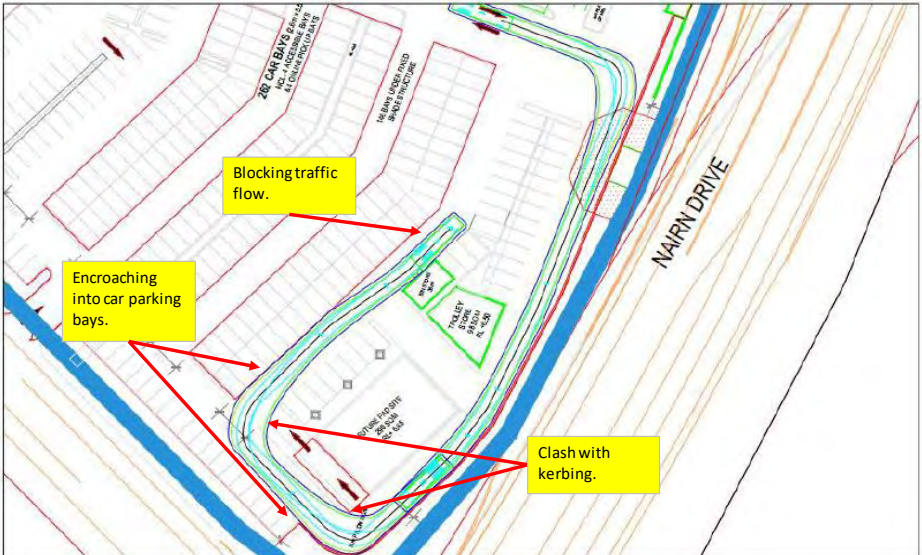
Amazon Gateway Entrance Statement

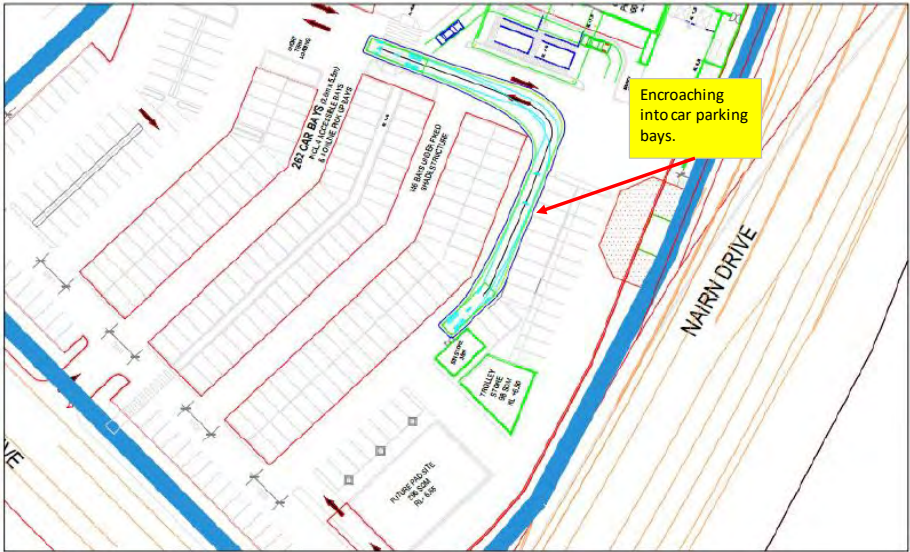
Spires Commercial



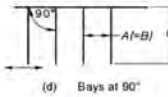
No.	Sector	City Comments	Applicant Response
Health Comments			
1.	Noise	A preliminary acoustic assessment of the proposed development has been undertaken by Lloyd George Acoustics (Ref: 21036236-01A) recommends waste collections to occur within daylight hours, which is inconsistent with the waste management plan, as discussed further below.	The Waste Management Plan (WMP) has been updated to reflect waste will be collected between 7:00am and 8:00am Monday to Saturday (as was the original intent) and will not be collected before 9.00am or after 7.00pm on Sundays and Public Holidays. Refer to Appendix 3 for a copy of the updated Waste Management Plan. The external car park bin store has been retained in the original position shown. The plans have been updated to include an additional bin store adjacent to the supermarket parcel pick up/amenities. This is to allow retailers (other than the supermarket) to temporarily store waste during the normal course of the day prior to transfer to the external waste point in the car park outside of business hours. The waste collection for the supermarket is stored and collected in a dedicated waste area within the supermarket loading area. A separate WMP has been provided for the supermarket tenancy. Refer to Appendix 4 for a copy of the supermarket specific Waste Management Plan. The fast food outlet has not been included in the WMP as it is not the subject of this application. If the fast food outlet is proposed in the future it will be subject to development approval. At this stage, waste management procedures can be determined.
2.	Waste	Regarding the Waste Management Plan prepared by Talis consultants: <ul style="list-style-type: none">Bin stores are located in the middle of car park (on the southern site) for use of food (and other) tenancies, and adjacent the car park in the northern site – this is not considered a very practical arrangement as the locations are remote from the tenancies making servicing difficult, and there is potential for blocking car bays during waste collections. It is recommended that the bin stores are relocated to within the buildings, where they can be used and serviced more conveniently.The WMP does not include the supermarket or the fast food pad site. Without this information the City is unable to determine if appropriate waste management areas have been provided for the development as a whole. Please update the WMP to include at least the supermarket, and (for reasons of robustness), also consider waste management (spatial planning) implications for the fast food pad site.The WMP indicated servicing is proposed outside of normal operating hours (to enable servicing with an empty car park), however, also states that due to the Environmental Protection (Noise) Regulations, waste vehicles should not service the site “before 7.00am or after 7.00pm Monday to Saturday, or before 9.00am or after 7.00pm on Sundays and Public Holidays. Please confirm the waste collection arrangements for the development.	
Traffic Comments			
3.	Planning Report	Section 3.1.1 mentioned that the loading bay has been designed to accommodate for a 19.5m long delivery vehicles. It should be noted that the Transport Impact Assessment instead suggests a 19.0m long semi-trailer delivery vehicles therefore there is a slight inconsistency. As discussed below,	Refer to response to item 22.

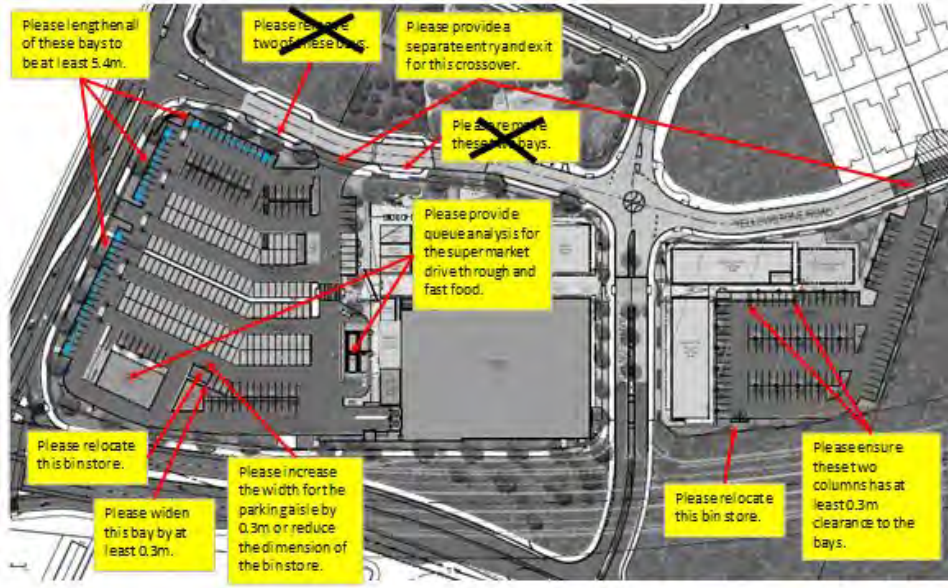
No.	Sector	City Comments	Applicant Response
		swept path analysis is required demonstrating how commercial vehicles can enter and exit the site in a forward gear, as well as servicing the loading bays for both the shopping and commercial centres. It should be noted that reversing along a circulating roadway, especially near the exit for the drive through facility will not be supported (i.e. dedicated service area for turning movements is to be provided for commercial truck movements).	
4.		Section 3.1.2 suggests a floor area of 550m ² for the proposed medical centre however the drawings suggest a floor area of 519m ² therefore there is a slight inconsistency. Please amend the documents to align as appropriate.	The floor area is 550m ² . The previous difference was the area occupied by the amenities & end of trip facility. The plans have been updated to correct the inconsistency.
5.		Section 4.3.3.1 mentioned that the parking assessment has not addressed the parking requirements for the pad site and future development site. In order to provide more land use certainty for the applicant, the City recommends that future parking for these sites be included, such that the required car parking area can be set aside now instead of having to justify parking shortfalls in later stages of the development.	<p>The proposed development does not seek approval for development on the pad site at this stage.</p> <p>Given the future land use for the pad site has not yet been determined we are unable to undertake a car parking assessment. Notwithstanding, the proposed development has a car parking surplus of approximately 30 bays.</p> <p>This is considered sufficient to provide the additional car parking demand in the instance the pad site is developed.</p>
6.	Waste Management Plan	Section 4 mentioned that the swept path analysis for the waste collection vehicles is included within the Transcore's traffic report, however the provided Transport Impact Assessment does not seem to contain this information. Please include the relevant swept path analysis in the Transport Impact Assessment such that a full assessment can be made.	The kerb shapes at corners have been adjusted and the width of the aisle increased to 6800mm from the previous 6500mm at the waste collection area to ensure manoeuvring. Waste collection will take place outside of hours to minimise the negligible and short term impact to parking traffic flows at times of collection.
7.		The City has some concerns (i.e. encroaching into car parking bay, clash with kerbing, blocking traffic flow) regarding the provided swept path analysis in Diagram 1 and 2 within this report, which raises traffic safety concerns. Please revise swept path analysis, otherwise amend design accordingly. It should be noted that the City is unlikely to support the location of the proposed bin stores.	<p>Refer to Appendix 5 for a copy of the updated swept path diagrams.</p> <p>The updated swept path diagrams demonstrate the car parks can adequately handle waste vehicle movements. However, as detailed in Sketches sk12a to sk15a there are two parking bays still impacted by these turn paths. The proponent has agreed to</p>

No.	Sector	City Comments	Applicant Response
			<p>remove these bays two bays. The plans will be updated to reflect this in the upcoming days.</p> <p>Sketches sk18a to sk21a for the pad site bin store confirm that the parking layout around the pad site needs to be slightly adjusted to accommodate the truck turn path. The proponent has agreed to address this and update the plans accordingly.</p>

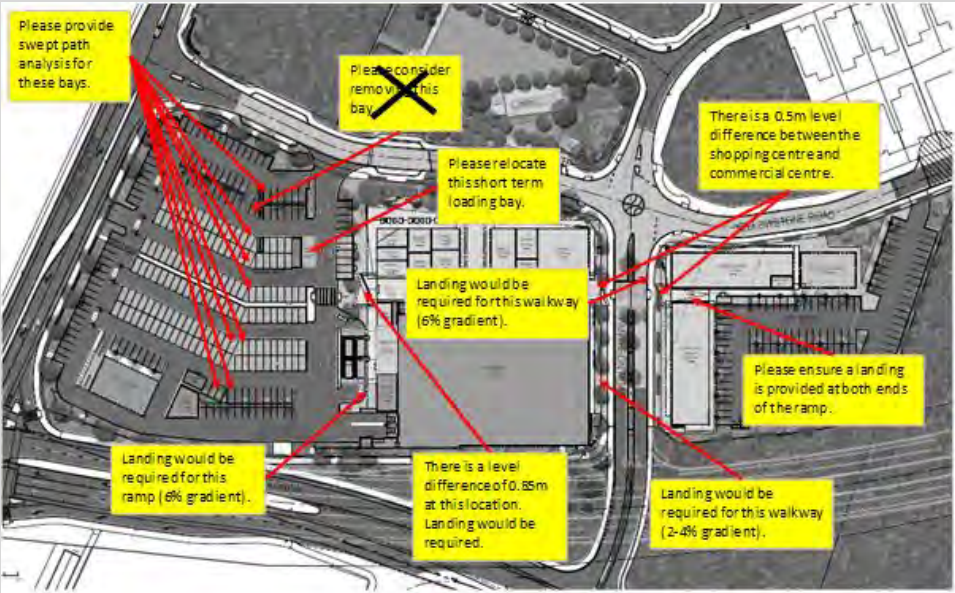
No.	Sector	City Comments	Applicant Response
			
8.		<p>Section 4 mentioned that <i>“It is proposed that servicing will be conducted outside of normal operating hours to allow the waste collection vehicle to utilize the empty carpark for maneuvering and mitigate impacts on local traffic movements during peak traffic hours”</i>.</p> <p>However, the report also states that due Environmental Protection (Noise) Regulations, waste vehicles should not service the site <i>“before 7.00am or after 7.00pm Monday to Saturday, or before 9.00am or after 7.00pm on Sundays and Public Holidays”</i>, contradicting the previous statement. Please clarify the timing of waste collections for the development, and amend the relevant reports accordingly.</p>	<p>The Waste Management Plan (WMP) has been updated to reflect waste will be collected between 7am and 8am Monday to Saturday and will not be collected before 9.00am or after 7.00pm on Sundays and Public Holidays.</p>
9.		<p>In order to effectively manage waste collection, the City recommends providing a dedicated service area (i.e. not shared with the general public) to minimise traffic safety risks.</p>	<p>During the concept design phase, the location of the bin storage area was carefully considered. The proposed location of the bin storage areas are site-specific responses that are entirely appropriate given the proposed land uses and the context of the site. The proposal includes a dedicated waste area provided for the supermarket as this is the primary waste generator. The</p>
10.	Drawings	<p>The City is concerned with the location of both proposed bin stores (especially for the bin store located to the south of the shopping centre), because they are located too far away from the building that they are intended to service. This would require the staff to carry the waste bags along and</p>	

No.	Sector	City Comments	Applicant Response
		<p>across the circulating roadway (i.e. conflicting with vehicular traffic) as well as the waste collection vehicles will need to stop within the circulating roadway therefore potentially blocking internal traffic flow. The City recommends to relocate both bin store locations such that they are located directly adjacent to the building that they service, as well as a dedicated loading area for the waste collection vehicles.</p>	<p>remaining waste will be stored and collected from the remaining bin storage areas.</p> <p>It is common in shopping and commercial centres, such as the proposed, for tenants and retailers to take their own waste from their shop or premises to a common waste area. Unlike other commercial operations, where a relatively small group of people use the waste management system, a large number of people use the system in shopping and commercial centres meaning it is not desirable for these to be located adjacent to the building as it has the potential to result in an adverse odour and amenity impact.</p> <p>Notwithstanding, for the shopping centre portion of the development a 30m² short term waste collection area has been included next to the supermarket parcel pick up/ amenities.</p> <p>For all tenancies other than the supermarket, waste will be transported from the point of generation in the tenant's premises to the short term waste collection area and then the main waste storage area outside of regular business hours. Alternatively, the waste can be transported directly to the waste storage area. This can be done either by the tenant's staff or the centre's cleaners.</p> <p>The movement of approximately one staff member from the tenancy to the bin storage area each day is not considered to result in a discernible impact on the internal traffic flow. Notwithstanding, this can be mitigated by staff transporting waste across the car park after hours to waste collection points.</p>
11.		<p>The areas used for vehicle movements have not been designed in accordance with AS2890;</p> <ul style="list-style-type: none"> AS2890.1 requires a separate entry (6.0m wide) and exit (between 4.0m and 6.0m wide) for an access driveway where the number of car parking bays is between 101 and 300 for User Class 3 (i.e. for shopping centres). Both proposed access driveway off Yellowstone Road do 	<ul style="list-style-type: none"> The plans have been revised to include a separate entry (6.0m wide) and exit (between 4.0m and 6.0m wide on Yellowstone as requested by the City. The car park entry

No.	Sector	City Comments	Applicant Response																																																								
		<p>not conform to this requirement therefore provide justifications, otherwise amend design accordingly.</p> <ul style="list-style-type: none">The proposed car parking bays located to the south of the shopping centre (i.e. those located directly adjacent to Yellowstone Road and Amazon Drive) has a length of approximately 4.9m therefore does not conform to AS2890.1 which requires a minimum length of 5.4m. Please amend design accordingly.AS2890.1 requires that if one side of the car parking bay has a vertical obstruction (i.e. higher than 0.15m) that restricts door opening then the width of the bay shall be increased by 0.3m. The proposed car parking bay located directly adjacent to the bin store has one of its side restricted from door opening therefore please increase the width of the bay by 0.3m. It should be noted that the City does not support the location of this bin store.AS2890.1 requires that if angle parking is on one side and the other is restricted by a vertical obstruction (i.e. higher than 0.15m) then the aisle width shall be increased by 0.3m. Please reduce the dimension of the bin store (located to the south of the shopping centre) by 0.3m to provide the additional width requirements for the single sided parking aisle.	<p>from Amazon Drive has also been updated to meet these criteria.</p> <ul style="list-style-type: none">These spaces have a low kerb & no obstruction. Therefore, they are compliant 4800mm spacesThe plans have been revised to adjust the bin store dimension to provide additional 300mm width for clearanceThe aisles are already designed to be 6500mm. AS2890.1 (below in green highlight) shows 6200mm minimum aisle width. Therefore, the 6500mm aisle as drawn meets the City's requirements. <div><table><thead><tr><th>User class (Note 1)</th><th>A (Note 3)</th><th>B</th><th>C₁</th><th>C₂</th><th>C₃</th><th>Aisle width (Note 4)</th></tr></thead><tbody><tr><td>1</td><td>2.4</td><td>2.4</td><td>5.4</td><td>4.8</td><td>5.4</td><td>6.2</td></tr><tr><td>1A</td><td>2.4</td><td>2.4</td><td>5.4</td><td>4.8</td><td>5.4</td><td>5.8</td></tr><tr><td>2</td><td>2.5</td><td>2.5</td><td>5.4</td><td>4.8</td><td>5.4</td><td>5.8</td></tr><tr><td>3</td><td>2.6</td><td>2.6</td><td>5.4</td><td>4.8</td><td>5.4</td><td>5.8</td></tr><tr><td>3A</td><td>2.6</td><td>2.6</td><td>5.4</td><td>4.8</td><td>5.4</td><td>5.6</td></tr><tr><td>3A</td><td>2.7</td><td>2.7</td><td>5.4</td><td>4.8</td><td>5.4</td><td>5.3</td></tr><tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td></tr></tbody></table><p>(See Note 5)</p><p>*Dimension C is selected as follows (see Note 6): C₁—where parking is to a wall or high kerb not allowing any overhang. C₂—where parking is to a low kerb which allows 600 mm overhang in accordance with Clause 2.4.1(a)(ii). C₃—where parking is controlled by wheelstops installed at right angles to the direction of parking, or where the ends of parking spaces form a sawtooth pattern, e.g. as shown in the upper half of Figure 2.4(b). For Notes—see over.</p><p>DIMENSIONS IN METRES</p><p>FIGURE 2.2 LAYOUTS FOR ANGLE PARKING SPACES</p></div> <ul style="list-style-type: none">Notwithstanding, the bin store dimension has been adjusted to add 300mm width as it could be easily accommodated.	User class (Note 1)	A (Note 3)	B	C ₁	C ₂	C ₃	Aisle width (Note 4)	1	2.4	2.4	5.4	4.8	5.4	6.2	1A	2.4	2.4	5.4	4.8	5.4	5.8	2	2.5	2.5	5.4	4.8	5.4	5.8	3	2.6	2.6	5.4	4.8	5.4	5.8	3A	2.6	2.6	5.4	4.8	5.4	5.6	3A	2.7	2.7	5.4	4.8	5.4	5.3	4						
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12.		<p>Please provide a queue analysis for the proposed supermarket drive-through taking into account random arrivals to ensure that vehicle queues will not overflow onto the circulating roadway, because it will impact upon internal vehicle traffic flow as well as the pedestrian crossing.</p>	<p>Random arrivals are not anticipated at the proposed supermarket drive-through area as orders need to be made prior to collection.</p> <p>The prospective tenant has confirmed that the customers will be notified of a specific time to collect their groceries. Given the pick-up times operate on a predetermined schedule, excessive vehicle queuing is not considered to be an issue. Furthermore, it is in the operator's best interest to ensure pickups do not overlap to ensure the best possible experience for customers.</p>																																																								


No.	Sector	City Comments	Applicant Response
13.		<p>Please provide a queue analysis for the proposed pad site recommended for fast food restaurant taking into account random arrivals to ensure that vehicle queues would not overflow onto the circulating roadway because it will impact upon the internal vehicle traffic flow. Preliminary look suggests that sufficient vehicle queueing space has not been provided and would require a redesign. Please amend design accordingly as changes adopted in the future instead of now is likely to reduce the number of car parking bays.</p> 	<p>Queue analysis has not been provided as this development application does not seek approval for a fast food outlet on the southern future pad site.</p> <p>The plans have been updated to include temporary car parking and landscaping for the future pad site, until such a time that the future pad site is developed.</p>
14.		<p>Please provide swept path analysis demonstrating commercial vehicles entering and exiting the site in forward gear as well as the loading bays for both the shopping and commercial centres. It should be noted that reversing along a circulating roadway, especially near the exit for the drive through facility is unlikely to be supported (i.e. dedicated service area for turning movements is to be provided for commercial truck movements).</p>	<p>The Transport Impact Assessment (TIA) has been updated to include the swept path diagrams.</p>
15.		<p>Please provide a vertical swept path analysis for the proposed 19.0m semi-trailer entering and exiting the loading bay as there is a concern that the proposed ramp would scrape the bottom of the 19.0m semi-trailer.</p>	<p>Vertical swept path analysis of the ramp has not been provided as this is a matter appropriately dealt with at the detailed design (building permit) stage.</p>

No.	Sector	City Comments	Applicant Response
16.		Please provide swept path analysis for the standard vehicles entering and exiting the bay near the proposed bend for the parking aisle. There is a concern that difficult turning movements are expected for bays located near the bend.	The site plan has been revised in the vicinity of this bend (near the proposed pad site) to include a pedestrian pathway that also separates the parking bays on this bend, negating the need for car parking turn paths.
17.		Please provide more information regarding the proposed usage for the “ <i>Short Term Loading</i> ” located to the south of the proposed shopping centre. The City recommends that loading bays are to be located adjacent to the building that they intend to service otherwise they will need to load/unload within the circulating roadway as well as crossing the roadway which increases traffic safety risks.	<p>Short term loading has been relocated to the front of the retail rather than across the roadway. This is intended for van deliveries for small tenancies.</p> <p>Centre management will be responsible for overseeing the operation of short term loading They will be informed about their responsibility to work closely with tenants regarding the schedule for deliveries. This will ensure that any potential conflicts with delivery vehicles accessing the short bays are managed ahead of time and ideally undertaken outside of regular business hours.</p>
18.		<p>There are a number of locations within the site where ramps (i.e. walkway steeper than 3%) are proposed and therefore is a concern for universal access if a landing is not provided at both ends. Please provide additional information to address the concern regarding universal access</p> <ul style="list-style-type: none"> • There is a level difference of 0.5m between the Northern and Southern verge of Pantheon Road, at the main central pedestrian crossing. Would the level difference be accommodated within the road reserve? • There is a level difference of 0.85m (approximately 6.5% ramp gradient) to the north of the proposed zebra crossing in the car parking area. A landing would be required approximately every 9.0m. • Manual measurements suggests that the ramp leading to the supermarket loading bay is approximately 6%. A landing would be required approximately every 9m. • The north elevation for the shopping centre suggest a walkway gradient between 2% and 4%. It is likely that a landing would be required to accommodate for universal access. • The south elevation for the commercial centre suggest a ramp gradient of approximately 6%. A landing would be required approximately every 9m. • Please ensure that a landing is provided at both the top and bottom of the proposed ramp located between the medical centre and private recreation building. 	The plans have been updated to achieve compliance with AS1428 throughout the development.


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19.		Please consider providing additional areas for shopping trolley bays to reduce the risks of having trolleys within the parking aisle or car bays which will reduce the efficiency of the car parking areas.	Additional trolley bays have been provided on the revised plans.
20.		Please confirm that the proposed entry statements are located within the private property, not road reserve.	The proposed entry statements are located within the private property and not the road reserve.
21.		Gradients are to be designed in accordance with AS2890.1 (standard vehicles), AS2890.2 (commercial vehicles) and AS2890.6 (universal bays).	Gradients will comply with AS2890.1 & 2890.6. Further detail will be provided at the detailed design / BP stage.
22.	Transport Impact Assessment	Section 2 mentioned that "The southern site has a loading dock at the southeast corner of the supermarket, designed to accommodate 19m semi-trailer delivery vehicles. Delivery vehicles and waste collection vehicles will access via the Yellowstone Road driveway and will not use the Amazon Drive left in / left out driveway" and "The northern site will only be serviced by rigid trucks (not semi-trailers) for deliveries and was collection". Please provide swept path analysis demonstrating commercial vehicles entering and exiting the site in forward gear as well as the loading bays for both the shopping and commercial centres. It should be noted that reversing along a circulating roadway,	19m semi-trailers will need to manoeuvre within the southeastern circulation roadway (parallel to Nairn Drive) to reverse into the supermarket loading zone. Those reversing movements would not conflict with vehicles exiting from the supermarket drive through bays, but would potentially conflict with cars accessing the row of parking bays along that aisle between the supermarket loading zone and the trolley store.


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		especially near the exit for the drive through facility is unlikely to be supported (i.e. dedicated service area for turning movements is to be provided for commercial truck movements).	<p>To minimise this potential risk it is recommended that the circulation roadway east of the supermarket drive through bays should be restricted to truck access only (i.e. No Entry for cars) and that row of parking bays should be allocated as staff parking only, with access to and from those bays via the southern end only, so cars will not drive up behind trucks while reversing.</p> <p>This can be enforced as a condition of approval.</p>
23.		Section 3.3 mentioned that “A 7-day traffic count (7-13 December 2020) of existing traffic volumes on Eighty Road south of Fifty Road recorded average weekday traffic flows of 5,338 vehicles per day (vpd) with 4,513vpd on Saturday and 3,908vpd on Sunday”. Please provide the raw traffic survey data in the Appendix such that its validity could be assessed.	The raw traffic data has been provided in Appendix 7 of this submission.
24.		The City understands that as part of traffic signal application for the intersection of Nairn Drive/Amazon Drive, a proposed tavern and bottle shop is recommended to the west of the proposed development. Has this been considered in this traffic assessment? If not, please revise traffic analysis accordingly as it may impact upon the level of service of the proposed traffic signal.	The tavern and bottle shop option is subject to a separate structure plan amendment and (future) development application. It is not part of the current shopping centre DA. However, it was taken into consideration in the separate analysis undertaken for approval of the signalised intersection through Main Roads WA in consultation with the City, so the operation of the signalised intersection in that option has already been addressed. It is expected a proposal for a future tavern or liquor store in the locality will be subject to its own TIA.
25.		The City has some concerns regarding the traffic distribution suggested in Table 2 as it is expected that majority of traffic would be coming from Nairn Drive (north and south) instead of from the minor roads. The traffic distribution suggests that more would be coming from Yellowstone Road (north) instead of Nairn Drive (north). The City is of the view that if the main entry to the neighbourhood centre is off Amazon Drive then more allocation should be provided to Nairn Drive (north). It also appears that quite a large number of trips are associated with Amazon Drive (especially the east) and no trips are associated with the commercial centre to the Amazon Drive (west). Please provide further justification for the adopted trip generation, otherwise please amend traffic model accordingly.	Traffic exiting toward the north from the southern site does use Nairn Drive in the TIA traffic distribution via left turns out onto Nairn Drive at Pantheon Rd. We agree that a similar proportion of traffic approaching from the north would also prefer to use Nairn Drive if they could turn right from Nairn Drive into Pantheon Road but the City has advised that this right turn movement will not be permitted. The alternative route (southbound on Nairn Drive then right turn into Amazon Drive with right turn delays at traffic signals then right turn into Yellowstone Road then right turn into the southern car park) is so much longer that the traffic analysis indicates this traffic would approach from the north via

No.	Sector	City Comments	Applicant Response
			Yellowstone Road instead, hence the traffic distribution model inputs.
26.		Section 4.4 mentioned that “ <i>Weekday AM and PM peak hour traffic flows for each component were then calculated by applying appropriate peak hour factors</i> ”. Please provide more information regarding the peak hour factors and how it was applied such that a full assessment could be made.	The quote from section 4.4 of the TIA relates specifically to the Nairn Drive / Amazon Drive signalised intersection analysis, as stated in the first line of section 4.4. That additional information was requested and subsequently included in the modelling report for that signalised intersection. Therefore, please refer to that previous report for that detailed level of information.
27.		Please provide more information regarding on how the base 2031 peak hour turning volume movements had been determined. It is also recommended that this information be provided in a plan.	Similarly, the derivation of 2031 peak hour base traffic (i.e. excluding shopping centre traffic) was documented more fully in that previous modelling report. This DA TIA report does not warrant further repetition of that level of detailed documentation.
28.		Please confirm that the total turning volume movements shown in Figure 10 and 11 has included the site's generated traffic volumes (i.e. Figure 8 and 9) as well as the 2031 base traffic turning volume movements.	The total volumes in Figures 10 and 11 are the development traffic (Figures 8 and 9) plus 2031 base traffic.
29.		The SIDRA analysis for the intersection of Nairn Drive/Amazon Drive suggests that the queue length for Amazon Drive (north-west approach) is 98.3m and 86.7m respectively and therefore would block the proposed crossover off Amazon Drive (i.e. located approximately 80.0m from the stop line). This is a concern therefore please provide some remedial measures to ensure that vehicle queues do not extend beyond the access driveway.	The queue lengths quoted in the SIDRA outputs are 95th percentile queue lengths (i.e. 95% of the time the queues will be shorter than that). This means that queues will only extend back past the driveway location for a short period during the traffic signal cycle and cars will have more than sufficient opportunity to enter and exit at that driveway during the rest of the signal cycle. This is already automatically accounted for in the SIDRA analysis which confirms satisfactory operation of that proposed driveway
30.		For Table B2b and B5b, should it be Saturday peak instead?	Yes.
Landscape Comments			
31.	Landscape Master Plan	The Landscape Masterplan contained within the DA Report presents some inconsistencies against the approved LDP. The Landscape Masterplan (and site plans where applicable) must be updated to align with the LDP to particularly address the items below:	The proponent agrees with the City's request for screening vegetation (i.e. shrubs and ground cover within 3m of the building along the Nairn Drive frontage). There is a need to


No.	Sector	City Comments	Applicant Response
		<ul style="list-style-type: none"> Special Landscape Zone (SLZ) – The LDP notes a minimum landscape screening element of 3m, however the Landscape Masterplan reflects a number of pinch points of reduced size well below 3m. Please provide confirmation that the full 3m wide SLZ can be achieved within the Lot boundary, ensuring sufficient allocation of space for any future infrastructure associated with the installation of Nairn Drive. Note: it remains unclear if any retaining structures or level changes are likely to occur on the Nairn Drive interface. <div data-bbox="445 485 1375 735">  <p>Possibly truncate the building to provide an improved visual architectural response to the intersection.</p> <p><i>Snip from Landscape Masterplan - numerous pinch points in SLZ and building setbacks.</i></p> </div> <ul style="list-style-type: none"> In addition, the City suggests the planting types within the SLZ are revised to provide a varying degree of screening solutions, as follows; <ul style="list-style-type: none"> Medium high screening to back of house areas (Nairn Drive Interface) such as the transformer cabinets, trolley store, bin store, loading docks, acoustic walls, and the rear elevation of the supermarket. Reduced height of vegetation screening to Amazon Drive interface i.e targeting vehicle headlights level, while maintaining sight lines into the centre and pedestrian routes. 	<p>soften the appearance of the wall with vegetation, and so an alternative solution will be submitted which permits this within 3m of the building.</p> <p>The landscaping plan will incorporate the species recommended by the City.</p> <p>Additionally, the landscaping Plan is required to meet the provisions and recommendations detailed in the Bushfire Management Plan (BMP). The City can enforce this as a condition of approval.</p>
32.		<p><u>Building Setbacks to road reserve boundary.</u> - The corner of the shopping centre and Nairn Drive / Pantheon should be reviewed in light of providing sufficient setbacks to achieve an improved architectural statement, i.e possibly truncate the building on the corner to further address the long term intersection profile.</p>	<p>The setbacks are compliant with the requirements contained within the applicable Spires Commercial Local Development Plan.</p> <p>We believe the proposed built form at the corner is justified as this is an important 'landmark' junction with architectural emphasis for wayfinding. Truncation is an undesirable</p>

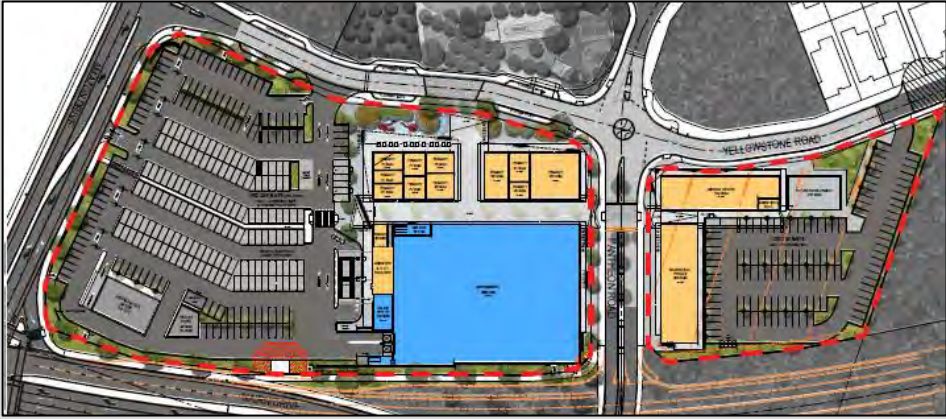

No.	Sector	City Comments	Applicant Response
			<p>compromise to the architectural importance of this prominent entry corner of the development.</p> <p>Furthermore, there are no 45 angles in the entire project design. Introducing one here would be arbitrary and inconsistent with the remainder of the design.</p>
33.		<p><u>Stormwater</u> – The Landscape Masterplan indicates there <u>may</u> be an opportunity to incorporate Water Sensitive Urban Design (WSUD) elements to treat the first 15mm of rainfall, in line with the Approved UWMP. It is the City's expectation that WSUD measures will be incorporated, and proposes to condition this in the event approval is granted.</p>	<p>Noted – This can be enforced as a suitably worded condition of approval.</p>
34.		<p><u>Continuous pedestrian shelter</u> – It is unclear in the Landscape Masterplan how the hierarchy of footpaths and pedestrian networks function, in particular it is unclear how the private alfresco dining zones interface with the public walkways and circulation areas. Further information is requested detailing the location and dimensions of the proposed continuous pedestrian networks routes in relation to the building facades, covered canopies and outdoor alfresco spaces (licensed areas), and achieving universal access (given the current level differences).</p> <p>It is noted that the pathway network wrapping the NW corner of the main supermarket development appears to meander through the support poles and screens of the building façade and canopy above, which has the potential to direct pedestrians away from under the canopy cover towards the roadside. Please confirm sufficient space is provided to allow for free movement of pedestrians of all abilities under the shelter of a continuous roof canopy.</p>	<p>Emerge will provide a cross section to these areas to provide the City with the comfort that there is sufficient walkway space, shade and circulation, including for people of all abilities. This can be enforced as a condition of approval.</p> <p>Emerge will provide an additional cross section to the alfresco area which will provide some context on the relationship between trees & the architectural canopy. This can be enforced as a condition of approval.</p> <p>Please note, the proposed tree within the Main Street would be 500L+ in size. This means it would have a clear trunk height of a minimum 2.1m and an estimated installation height of 4-5m+.</p>

No.	Sector	City Comments	Applicant Response
		 <p><i>Snip from Landscape Masterplan - possible conflict between pathways and screens/poles.</i></p> <p>Furthermore, the City notes a possible conflict between numerous street trees and canopy's above. The Landscape Masterplan differs from the Development Masterplan, which reflect varying extents of canopies and covered walkways. The City suggests further consideration is required to the design of the canopy's to ensure a consistent avenue of advanced trees can be adopted to all streetscapes.</p>	

No.	Sector	City Comments	Applicant Response
		 <p>Snip from Development Masterplan vs Snip from Landscape Masterplan</p>	
35.		<p><u>Sacrificial landscape area</u> – The Landscape Masterplan does not include any details or information relating to the Sacrificial Landscape Zone to the future Nairn Drive Road reserve, as nominated in the LDP. The applicant must provide a temporary landscape solution within this zone, which is to be maintained by the applicant until such time as the Nairn Drive road connection is constructed, cognizant of the Bushfire Management Plan (BMP).</p>	<p>An updated landscaping plan will be provided detailing the Sacrificial Landscape Zone. This can be enforced by the City as a suitably worded condition of approval.</p> <p>Additionally, the landscaping plan will meet the standards and provisions detailed in the updated Bushfire Management Plan (BMP) provided in Appendix 6.</p> <p>We intend to provide an updated landscaping plan in the days following the submission of this written response.</p>
36.		<p><u>Street Lighting</u> – The Landscape Masterplan does not reflect any street or security lighting to Yellowstone Road, nor within the development.</p>	<p>The provision of lighting within the subject site can be addressed as a condition of approval.</p> <p>Furthermore, the provision of street lighting would have been provided as part of the subdivision works, which are not part of this application.</p>

No.	Sector	City Comments	Applicant Response
37.		<p>Additionally, the Landscape Masterplan presents inconsistencies with the Development/ Site Plans and 3D images provided. It is recommended that the DA Package is updated to ensure the most current information is presented consistently across all consultant's drawings (architects, civils, landscape etc). In particular, clarification is sought on the below;</p> <ul style="list-style-type: none"> Transformer location – including any relevant setback requirements to landscape treatments (impacts on BMP) Acoustic wall to loading dock – clarify length of wall, to ensure sufficient screening provided from Nairn Drive within the Special Landscape Zone, Canopies and covered walkways (as highlighted above), Shade Sails – Please confirm if any sails are proposed above the play space as reflected within the 3D model renders, Extent of works boundary which vary between drawings from the Lot boundary to the back of kerb. Note: It must be made clear that the applicant is responsible for the development of all adjoining verge areas and will be responsible for maintain the adjoining verges in perpetuity. 	<p>The landscape drawings will be updated in accordance with the updated plan package. This will ensure consistency between the architectural and landscaping plans.</p> <p>This can be enforced by the City as a condition of approval.</p>
38.		<p>Provision of additional pedestrian access routes into the development to deliver a safe, fully integrated pedestrian network, as listed below;</p> <ul style="list-style-type: none"> Connection from the Nairn Drive footpath through the main carpark to reach the supermarket central entrance. Connection from the Nairn Drive footpath into the proposed Fast Food outlet to avoid pedestrian's shortcutting through the landscape areas. Crossing point from the Amazon Drive footpath to the central carpark footpath (suggested zebra crossing in this location). Crossing point at the supermarket carpark entry from Yellowstone Road, as the current alignment presents safety concerns given the proposed road treatment changes to provide priority to vehicles rather than pedestrians. 	<ul style="list-style-type: none"> The plans have been updated to include a pedestrian connection from Nairn drive that provides access to the central pedestrian spine. A second Nairn Drive pedestrian access point was considered but was not included as it created conflict with the loading areas. A connection from the Nairn Drive footpath into the proposed Fast Food outlet will not be necessary. The proposed development does not seek approval for a fast food outlet on the future pad site. This area has now been marked as temporary parking and landscaping. The provision of a footpath can be explored at a later stage if the pad site is proposed to be developed in the future. As per the original site plan, a zebra crossing already links the Amazon Drive footpath to the central car park footpath. The site plan has been updated to include a zebra crossing treatment that clearly prioritises pedestrians rather than vehicles.

No.	Sector	City Comments	Applicant Response
		 <p><i>Snip from Landscape Masterplan – possible pathways connections.</i></p>	
39.		<p>There are a number of locations within the site which present a concern for dealing with levels and interfaces with the road reserve and maintaining universal access due to the proposed level differences.</p>	<ul style="list-style-type: none"> • The levels have been modified based on civil engineering input. Universal access will be provided throughout and can be further detailed during the detailed design stage. • The level difference of 1.0m between the proposed Shopping Centre and Recreation Centre FFL's was

No.	Sector	City Comments	Applicant Response
		<p>Please provide updated detailed cross sections (i.e include the levels of proposed adjoining roads) to demonstrate how the level differences interact with road reserve (identify if any retaining walls will be required) and how universal access is provided across the development;</p> <ul style="list-style-type: none"> There is a level difference of 1.0m between the proposed Shopping Centre and Recreation Centre FFL's, There is a level difference of 0.5m between the Northern and Southern verge of Pantheon Road, at the main central pedestrian crossing, There is a level difference of 0.85m at the southern entrance to the complex, between the main entrance and the carpark zebra crossing, There is a level difference of 0.25m between the Medical Centre and the Recreation Centre.   <p><i>Snip of DA Report, view of Pantheon Road, illustrating a level difference, which is unresolved.</i></p>	<p>intentional. Notwithstanding, the levels have been reworked with civil engineering input to include a retaining wall to the Nairn Drive frontage to lower the floor level of the recreation centre & medical to align with the supermarket.</p> <ul style="list-style-type: none"> The remaining minor level changes were intentional and accommodated within shop frontages and paving, however, they have now been adjusted based on civil engineering input.

No.	Sector	City Comments	Applicant Response
40.		The City seeks clarification on the timing of the proposed Stage 2 works and the proposed Fast Food outlet. Please include further information relating to the interim treatment proposed in these areas which are subject to construction at a later date. I.e will the area be fenced to prevent authorised access and screened from view when becomes overgrown (past experience, suggests these undeveloped areas become difficult to manage).	This area has been paved and landscaped for the purpose of this development application. Once the operator and tenant requirements are confirmed a separate application will be pursued.
41.		<p>The Bushfire Management Plan (BMP) states that the all landscape areas are to be maintained accordance with standards for Asset Protection Zones (APZ), however the Landscape Plan and the requirements for screening contradicts the APZ guidelines and must be addressed prior to approval.</p> <div data-bbox="432 619 1366 746" data-label="Text"> <p>All landscaping areas within the subject site will be maintained in accordance with Standards for Asset Protection Zones (Appendix B).</p> <p><i>Snip from BMP</i></p> </div> <p>In particular, screening vegetation is required on the Nairn Drive location which is a tiered planting solution of shrubs i.e 2 metres high with trees overhead within the 'Special Landscaping Zone' which surrounds much of the development. This proposal contradicts the requirement of the APZ which stipulates that shrub plantings must be in clumps less than 5m² and separated by a minimum of 10m, with no trees/shrubs greater than 5m in height to be planted within 6m of the building.</p> <p>The City recommends amending the BMP Report (prior to approval) to reflect a planting palette which achieves the required screening and visual amenity to the large commercial complex.</p>	<p>The Bushfire Management Plan (BMP) has been updated to pare back the APZ to only those areas necessary. Other areas are to be planted with low-threat vegetation.</p> <p>The landscaping plan will be updated to comply with the BMP.</p> <p>The updated landscaping plan is intended to be lodged with the City over the upcoming days.</p>
42.		Please confirm if the shopping centres internal spine is designed as an open corridor 24 hours a day, as represented within the Development 3D images provided. Please confirm how security and unauthorized access will be restricted into this corridor after hours. Please confirm the extent of CCTV (if provided) and lighting proposed for the complex.	<p>The shopping centre's internal spine will be fitted with secure and transparent roller shutters. This will ensure an appropriate level of security whilst maintaining sightlines.</p> <p>Extensive CCTV will be provided throughout the development.</p>

No.	Sector	City Comments	Applicant Response
43.		<p><i>Corymbia citriodora</i> trees are not supported by City, as they are known to require extensive ongoing maintenance due to their propensity to shed large, heavy limbs when stressed. The City suggests the following species as possible alternatives;</p> <ul style="list-style-type: none"> • <i>Corymbia ficifolia</i>, • <i>Eucalyptus torquata</i>, • <i>Eucalyptus victrix</i>, • <i>Eucalyptus forrestiana</i>. 	The landscaping plan will be updated to include the City's preferred species. This can be addressed as a condition of approval.
44.		Estate entry signage should be located within the private land holdings and be maintained by the developer for a period of until six (6) months after the release of blocks in the last stage of subdivision, in accordance with PP 3.4.1 Public Open Space; 4.1.8.	Estate entry signage will be located on private land.
Urban Water			
45.		<p>The approved Spires Stages 8 to 10 UWMP specified a storage rate of 1m³ per 32m² of commercial area with surcharge directed towards the adjacent POS. To demonstrate compliance with the UWMP criteria, a Stormwater management plan must be provided prior to lodgment of a building permit. Because it is a large commercial development, the following items must be included within a Stormwater Management Plan, as a minimum:</p> <ul style="list-style-type: none"> • Drainage calculations and results, including runoff assumptions, catchment areas, stormwater residence times, top water levels, volumes and areas. • Plans, detailing catchment areas, elevations, storage dimensions, storage locations, groundwater levels and stormwater treatment design (i.e. WSUD). • Details of any interim stormwater management measures. 	Noted – This can be enforced as a condition of approval.
Bushfire			
46.		<p>As mentioned above, the Bushfire Management Plan (BMP) states that all landscape areas are to be maintained accordance with standards for Asset Protection Zones (APZ), however the Landscape Plan and the requirements for screening contradicts the APZ guidelines and must be addressed prior to approval.</p> <p>In particular, screening vegetation is required on the Nairn Drive location which is a tiered planting solution of shrubs i.e 2 metres high with trees overhead within the '<i>Special Landscaping Zone</i>' which surrounds much of the development. This proposal contradicts the requirement of the APZ which</p>	<p>The Bushfire Management Plan (BMP) has been updated to pare back the APZ to only those areas necessary. Other areas are to be planted with low-threat vegetation.</p> <p>The landscaping plan will be updated to comply with the BMP, including screening vegetation in the Special Landscaping Zone.</p>

No.	Sector	City Comments	Applicant Response
		<p>stipulates that shrub plantings must be in clumps less than 5m² and separated by a minimum of 10m, with no trees/shrubs greater than 5m in height to be planted within 6m of the building.</p> <p>The City recommends amending the BMP Report (prior to approval) to reflect a planting palette which achieves the required screening and visual amenity to the large commercial complex.</p>	An updated landscaping plan will be provided in the coming days.
47.		The boundary of the 'subject site' delineated on the plans within the BMP includes portions of surrounding streets and does not align with the subject site boundary shown on the Site Plan submitted with the DA.	Noted. The inclusion of adjoining streets does not affect the BMP in any way.
48.		Figure 7 in the BMP shows an APZ extending beyond the subject site, greater in width than required to achieve BAL19. The actual width shown on the plan cannot be determined, as the scale shown is incorrect. Please amend the BMP accordingly.	Refer to Appendix 6 for a copy of the updated BMP.



Waste Management Plan

Lot 9005 Nairn Drive, Baldivis

Prepared for Carcione Nominees

10 August 2021

Project Number: TW21039

DOCUMENT CONTROL

Version	Description	Date	Author	Reviewer	Approver
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2.0	Second Approved Release	28/05/2021	DP	RH	RH
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4.0	Fourth Approved Release	10/08/2021	DP	RH	DP

Approval for Release

Name	Position	File Reference
Dilan Patel	Project Manager – Waste Management Consultant	TW21039_Waste Management Plan_4.0
Signature		

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Executive Summary

Carcione Nominees is seeking development approval for the proposed commercial development located at Lot 9005 Nairn Drive, Baldivis (the Proposal).

To satisfy the conditions of the development application the City of Rockingham (the City) requires the submission of a Waste Management Plan (WMP) that will identify how waste is to be stored and collected from the Proposal. Talis Consultants has been engaged to prepare this WMP to satisfy the City's requirements.

A summary of the bin size, numbers, collection frequency and collection method is provided in the below table.

Proposed Waste Collection Summary

Waste Type	Generation (L/week)	Bin Size (L)	Number of Bins	Collection Frequency	Collection
Central Commercial Bin Storage Area					
Refuse	12,524	660	Ten	Twice each week	Private Contractor
Recycling	8,328	660	Seven	Twice each week	Private Contractor
Northern Commercial Bin Storage Area					
Refuse	783	660	Two	Once each week	Private Contractor
Recycling	783	660	Two	Once each week	Private Contractor

A private contractor will service the Proposal onsite, directly from the respective Bin Storage Areas.

Building management/the caretaker will oversee the relevant aspects of waste management at the Proposal.

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1 Introduction

Carcione Nominees is seeking development approval for the proposed commercial development located at Lot 9005 Nairn Drive, Baldivis (the Proposal).

To satisfy the conditions of the development application the City of Rockingham (the City) requires the submission of a Waste Management Plan (WMP) that will identify how waste is to be stored and collected from the Proposal. Talis Consultants has been engaged to prepare this WMP to satisfy the City's requirements.

The Proposal is bordered by Fifty Service Road to the north, Nairn Drive to the east, Amazon Drive to the south and Yellowstone Road to the west, as shown in Figure 1.

1.1 Objectives and Scope

The objective of this WMP is to outline the equipment and procedures that will be adopted to manage waste (refuse and recyclables) at the Proposal. Specifically, the WMP demonstrates that the Proposal is designed to:

- Adequately cater for the anticipated volume of waste to be generated;
- Provide adequately sized Bin Storage Areas, including appropriate bins; and
- Allow for efficient collection of bins by appropriate waste collection vehicles.

To achieve the objective, the scope of the WMP comprises:

- Section 2: Waste Generation;
- Section 3: Waste Storage;
- Section 4: Waste Collection;
- Section 5: Waste Management; and
- Section 6: Conclusion.

2 Waste Generation

The following section shows the waste generation rates used and the estimated waste volumes to be generated at the Proposal.

2.1 Proposed Tenancies

The anticipated volume of refuse and recyclables is based on the floor area (m²) of the commercial tenancies at the Proposal. The indicative tenancy mix at Proposal is as follows:

- Southern Commercial Tenancies:
 - Pad Site – 290m².
- Central Commercial Tenancies:
 - T1 – Pizza – 70m²;
 - T2 – Massage – 51m²;
 - T3 – Beauty/Nail – 61m²;
 - T4 – Kebab – 70m²;
 - T5 – Hair Salon – 70m²;
 - T6 – Modern Asian – 76m²;
 - T7 – Optometrist/Fashion/Gift – 96m².
 - T8 – Café – 155m²;
 - T9 – F&C – 81m²;
 - T10 – Barber – 46m²;
 - T11 – Pharmacy/Lotto – 318m²;
 - T12 – Health Food – 46m²;
 - Online Shop Pick Up BOH – 100m²; and
 - Supermarket – 3,608m².
- Northern Commercial Tenancies:
 - T13 and T14 – Medical and Paramedical – 519m²; and
 - T15 – Gym – 600m².

Note, the Pad Site (Fast Food) and Online Shop Pick Up BOH/Supermarket is anticipated to include their own back of house and manage their waste through their own internal processes governed by national contracts, and therefore has not been included as part of this report.

2.2 Waste Generation Rates

The estimated amount of refuse and recyclables to be generated by the Proposal is based on the City of Melbourne's *Guidelines for Preparing a Waste Management Plan* (2017).

It should also be noted that a conservative approach has been taken with regards to waste generation across the Proposal by overestimating the potential waste volumes for the commercial tenancies. Seven days of operation has been assumed for all commercial tenancies. This is considered to be an over estimation as it is not uncommon for food and beverage tenancies to close

operations post weekend trading therefore resulting in an over estimation of waste volumes generated.

Table 2-1 shows the waste generation rates which have been applied to the Proposal.

Table 2-1: Waste Generation Rates

Tenancy Use Type	City of Melbourne Guideline Reference	Refuse Generation Rate	Recycling Generation Rate
Central Commercial Tenancies			
Pizza	Takeaway/Café	150L/100m ² /day	150L/100m ² /day
Massage	Shop (non-food)	50L/100m ² /day	50L/100m ² /day
Beauty/Nail	Shop (non-food)	50L/100m ² /day	50L/100m ² /day
Kebab	Takeaway/Café	150L/100m ² /day	150L/100m ² /day
Hair Salon	Hairdresser	60L/100m ² /day	60L/100m ² /day
Modern Asia	Restaurant	660L/100m ² /day	200L/100m ² /day
Optometrist/Fashion/Gift	Shop (non-food)	50L/100m ² /day	50L/100m ² /day
Café	Café	300L/100m ² /day	200L/100m ² /day
F&C	Café	300L/100m ² /day	200L/100m ² /day
Barber	Hairdresser	60L/100m ² /day	60L/100m ² /day
Pharmacy/Lotto	Shop (non-food)	50L/100m ² /day	50L/100m ² /day
Health Food	Delicatessen/Convenience Store	80L/100m ² /day	50L/100m ² /day
Northern Commercial Tenancies			
Medical and Paramedical	Office	10L/100m ² /day	10L/100m ² /day
Gym	Office	10L/100m ² /day	10L/100m ² /day

As medical waste is highly dependent on the nature and scale of medical practices undertaken, there are currently no medical/clinical waste generation rates available within published waste management guidelines. The Pharmacy, Medical and Paramedical tenancies will typically manage medical waste (i.e. sharps, infectious waste, pathological waste, pharmaceuticals, chemical waste and non-regulated medical waste) in-situ, therefore storage space is not required within the Bin Storage Areas. Therefore, medical waste has not been included within this waste generation assessment.

2.3 Waste Generation Volumes

Waste generation is estimated by volume in litres (L) as this is generally the influencing factor when considering bin size, numbers and storage space required.

2.3.1 Central Commercial Tenancies

Waste generation volumes for the Central Commercial tenancies in litres per week (L/week) adopted for this waste assessment is shown in Table 2-2. It is estimated that the Central Commercial tenancies will generate 12,524L of refuse and 8,328L of recyclables each week.

Table 2-2: Estimated Waste Generation – Central Commercial Tenancies

Commercial Tenancies	Area (m ²)	Waste Generation Rate (L/100m ² /day)	Waste Generation (L/week)
REFUSE			
Pizza	70	150	735
Massage	51	50	179
Beauty/Nail	61	50	214
Kebab	70	150	735
Hair Salon	70	60	294
Modern Asia	76	660	3,511
Optometrist/Fashion/Gift	96	50	336
Café	155	300	3,255
F&C	81	300	1,701
Barber	46	60	193
Pharmacy/Lotto	318	50	1,113
Health Food	46	80	258
Total			12,524
RECYCLABLES			
Pizza	70	150	735
Massage	51	50	179
Beauty/Nail	61	50	214
Kebab	70	150	735
Hair Salon	70	60	294
Modern Asia	76	200	1,064
Optometrist/Fashion/Gift	96	50	336
Café	155	200	2,170
F&C	81	200	1,134
Barber	46	60	193
Pharmacy/Lotto	318	50	1,113
Health Food	46	50	161
Total			8,328

2.3.2 Northern Commercial Tenancies

Waste generation volumes for the Northern Commercial tenancies in litres per week (L/week) adopted for this waste assessment is shown in Table 2-3. It is estimated that the Northern Commercial tenancies will generate 783L of refuse and 783L of recyclables each week.

Table 2-3: Estimated Waste Generation – Northern Commercial Tenancies

Commercial Tenancies	Area (m ²)	Waste Generation Rate (L/100m ² /day)	Waste Generation (L/week)
REFUSE			
Medical and Paramedical	519	10	363
Gym	600	10	420
Total			783
RECYCLABLES			
Medical and Paramedical	519	10	363
Gym	600	10	420
Total			783

3 Waste Storage

Waste materials generated within the Proposal will be collected in the bins located in the Bin Storage Areas, as discussed in the following sub-sections.

3.1 Internal Bins

The Proposal will also have a minimum of two bins to facilitate the separate disposal of refuse and recycling within each commercial tenancy. The bins will be transferred by tenants, staff and cleaners, or their authorised representative, to the respective Bin Storage Area and be deposited into the appropriate bin.

All bins will be colour coded and labelled in accordance with Australian Standards (AS 4123.7) to assist the tenants, staff and cleaners to dispose of their separate waste materials in the correct bins.

3.2 Bin Sizes

Table 3-1 gives the typical dimensions of standard bins sizes that may be utilised at the Proposal. It should be noted that these bin dimensions are approximate and can vary slightly between suppliers.

Table 3-1: Typical Bin Dimensions

Dimensions	Bin Sizes			
	240L	360L	660L	1,100L
Depth (mm)	730	848	780	1,070
Width (mm)	585	680	1,260	1,240
Height (mm)	1,060	1,100	1,200	1,300
Area (mm ²)	427	577	983	1,327

Reference: SULO Bin Specification Data Sheets

3.3 Bin Storage Areas

The waste generation volumes are best practice estimates and the number of bins to be utilised represents the maximum requirements once the Proposal is fully operational. Bin requirements may be impacted as the development becomes operational and the nature of the tenants and waste management requirements are known.

3.3.1 Central Commercial Bin Storage Area

To ensure sufficient area is available for storage of the bins, the amount of bins required for the Central Commercial Bin Storage Area was modelled utilising the estimated waste generation in Table 2-2, bin sizes in Table 3-1 and based on collection of refuse and recyclables twice each week.

Based on the results shown in Table 3-2, the Central Commercial Bin Storage Area has been sized to accommodate:

- Ten 660L refuse bins; and
- Seven 660L recycling bins.

Table 3-2: Bin Requirements for the Central Commercial Bin Storage Area

Waste Stream	Waste Generation (L/week)	Number of Bins Required			
		240L	360L	660L	1,100L
Refuse	12,524	27	18	10	6
Recycling	8,328	18	12	7	4

The configuration of these bins within the Central Commercial Bin Storage Area is shown in Figure 2. It is worth noting that the number of bins and corresponding placement of bins shown in Figure 2 represents the maximum requirements assuming two collections each week of refuse and recyclables. Increased collection frequencies would reduce the required number of bins.

3.3.2 Northern Commercial Bin Storage Area

To ensure sufficient area is available for storage of the bins, the amount of bins required for the Northern Commercial Bin Storage Area was modelled utilising the estimated waste generation in Table 2-3, bin sizes in Table 3-1 and based on collection of refuse and recyclables once each week.

Based on the results shown in Table 3-3, the Northern Commercial Bin Storage Area has been sized to accommodate:

- Two 660L refuse bins; and
- Two 660L recycling bins.

Table 3-3: Bin Requirements for the Northern Commercial Bin Storage Area

Waste Stream	Waste Generation (L/week)	Number of Bins Required			
		240L	360L	660L	1,100L
Refuse	783	4	3	2	1
Recycling	783	4	3	2	1

The configuration of these bins within the Northern Commercial Bin Storage Area is shown in Figure 3. It is worth noting that the number of bins and corresponding placement of bins shown in Figure 3 represents the maximum requirements assuming one collection each week of refuse and recyclables. Increased collection frequencies would reduce the required number of bins.

3.4 Bin Storage Area Design

The design of the Bin Storage Areas will take into consideration:

- Located behind the building setback line and not to be visible from the property boundary or areas trafficable by the public;
- Constructed of material of suitable thickness;
- Smooth impervious floor draining to the sewer system;
- Taps for washing of bins and Bin Storage Area;
- Undercover where possible and designed not to permit stormwater to enter into the drain;
- Ventilated to a suitable standard;
- Adequate aisle/door widths for easy manoeuvring of bins in and out;

- Doors to the Bin Storage Area self-closing and vermin proof;
- Doors to the Bin Storage Area wide enough to fit bins through;
- No double stacking of bins;
- Appropriate signage; and
- Bins are reasonably secured from theft and vandalism.

Bin numbers and storage space within the Bin Storage Areas will be monitored by building management/the caretaker during the operation of the Proposal to ensure that the number of bins and collection frequency is sufficient.

4 Waste Collection

A private contractor will service the Proposal and provide the Central Commercial tenancies with:

- Ten 660L refuse bins, collected twice each week; and
- Seven 660L recycling bins, collected twice each week.

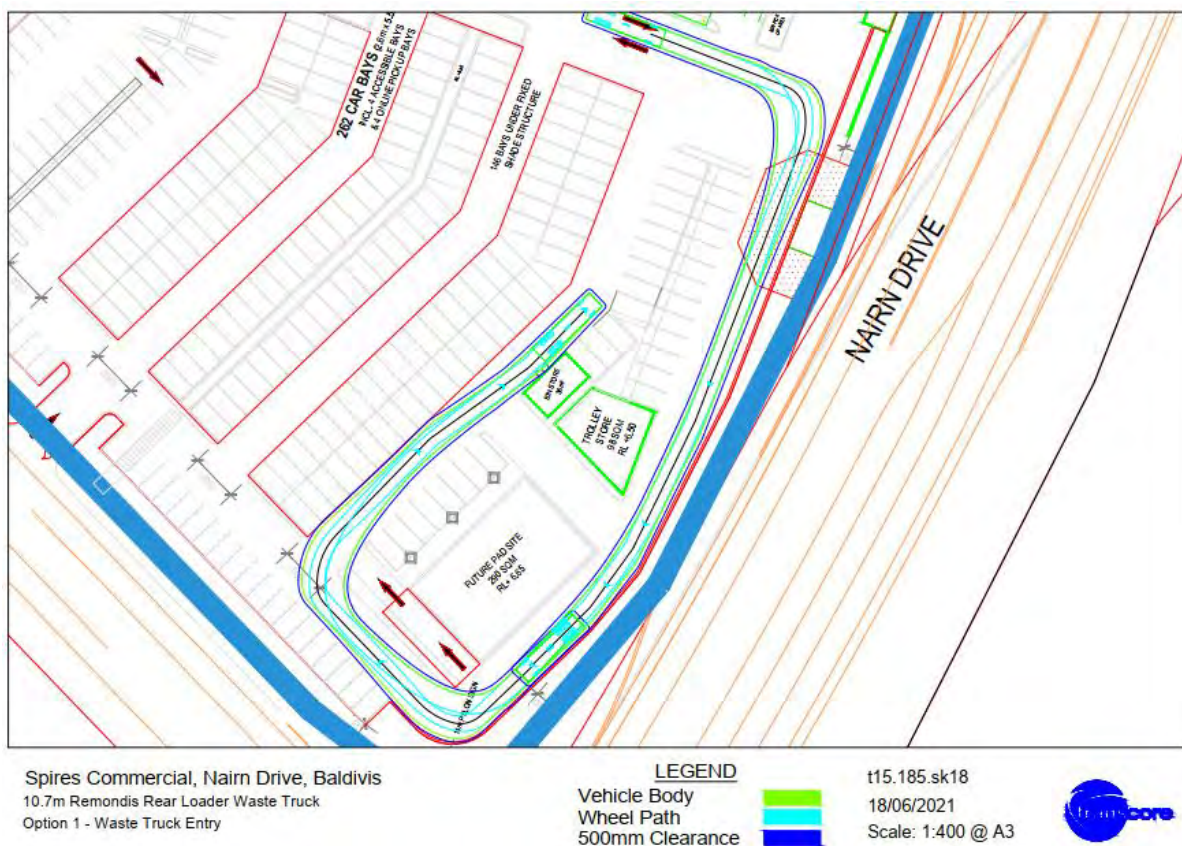
A private contractor will service the Proposal and provide the Northern Commercial tenancies with:

- Two 660L refuse bins, collected once each week; and
- Two 660L recycling bins, collected once each week.

The private contractor will collect refuse and recyclables from the respective Bin Storage Area utilising a rear loader waste collection vehicle.

The private contractor's waste collection vehicle will service the bins onsite, directly from the respective Bin Storage Area. The private contractor's waste collection vehicle will travel with left hand lane traffic flow and turn into the Proposal in forward gear into the Proposals carpark and pull up adjacent to the Bin Storage Areas for servicing, as shown in Transcore's traffic report (refer Diagram 1).

Diagram 1: Waste Collection Swept Path - Entry



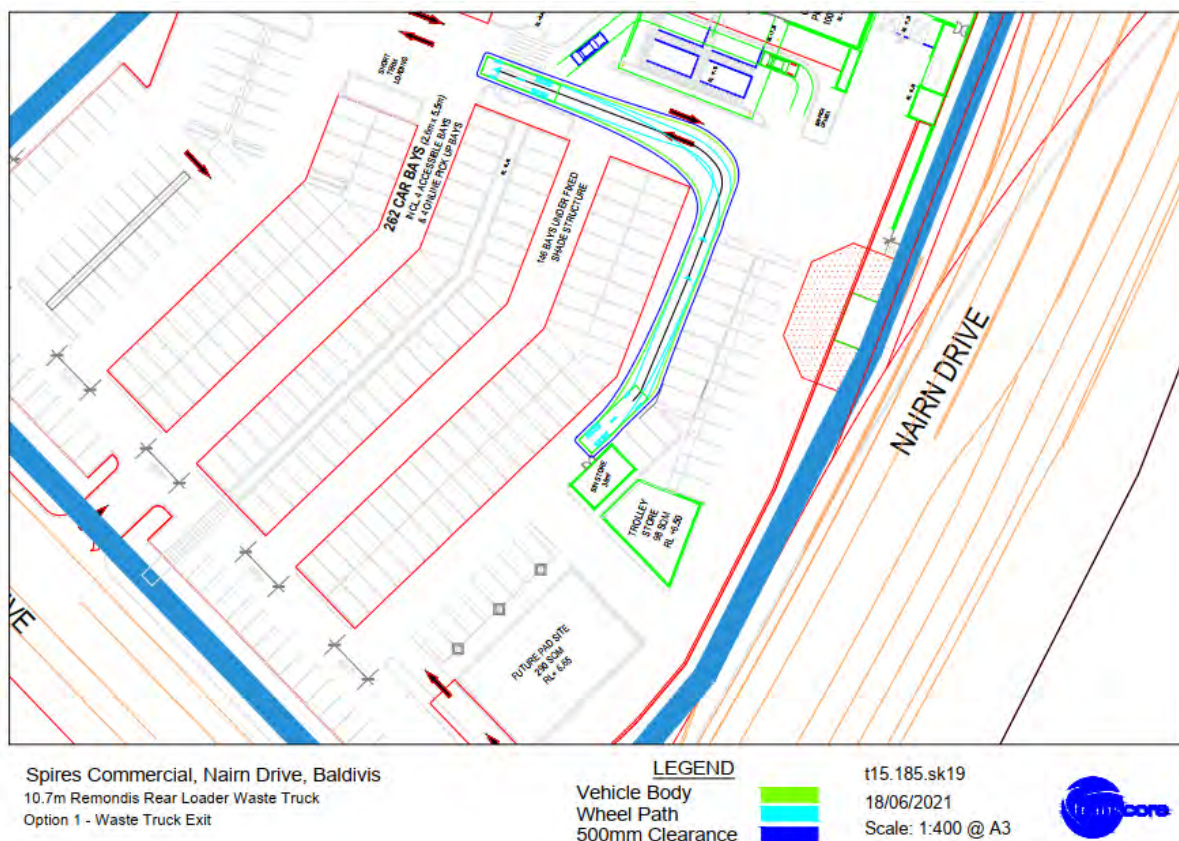
The private contractor waste collection staff will ferry bins to and from the waste collection vehicle and the Bin Storage Areas during servicing. The private contractor will be provided with key/PIN code access to the Bin Storage Areas and security access gates to facilitate servicing, if required.

Once servicing is complete the private contractor's waste collection vehicle will exit in a forward motion, moving with traffic flow, refer Diagram 2.

It is proposed that servicing will be conducted between 7am and 8am and will not service the development before 9.00am or after 7.00pm on Sundays and Public Holidays.

The ability for a 10.7m rear loader waste collection vehicle to access the Proposal in a safe manner has been assessed by Transcore.

Diagram 2: Waste Collection Swept Path - Exit



4.1 Sharps and Controlled Medical Waste

The volume of sharps and controlled medical waste generated at the Proposal will be dependent on the nature and scale of the medical practises undertaken. Appropriate containers will be placed in all locations where particular categories of medical waste may be generated. Instructions on identification and separation of these medical wastes will be posted at each waste collection point to remind tenants and staff of procedures. Suitably qualified medical waste service providers will be engaged to determine storage and collection requirements.

4.2 Bulk and Speciality Waste

Bulk and speciality waste materials will be removed from the Proposal as they are generated. Removal of these wastes will be monitored by building management/the caretaker, who will liaise with tenants, staff and cleaners to assist with the removal of these wastes, as required.

5 Waste Management

Building management/the caretaker will be engaged to complete the following tasks:

- Monitoring and maintenance of bins and the Bin Storage Areas;
- Cleaning of bins and Bin Storage Areas, when required;
- Ensure all tenants, staff and cleaners at the Proposal are made aware of this WMP and their responsibilities thereunder;
- Monitor tenants, staff and cleaners behaviour and identify requirements for further education and/or signage;
- Monitor bulk and speciality waste accumulation and assist with its removal, as required;
- Regularly engage with tenants, staff and cleaners to develop opportunities to reduce waste volumes and increase resource recovery; and
- Regularly engage with the private contractors to ensure efficient and effective waste service is maintained.

6 Conclusion

As demonstrated within this WMP, the Proposal provides sufficiently sized Bin Storage Areas for storage of refuse and recyclables, based on the estimated waste generation volumes and suitable configuration of bins. This indicates that adequately designed Bin Storage Areas have been provided, and collection of refuse and recyclables can be completed from the Proposal.

The above is achieved using:

- Central Commercial Bin Storage Area:
 - Ten 660L refuse bins, collected twice each week; and
 - Seven 660L recycling bins, collected twice each week.
- Northern Commercial Bin Storage Area:
 - Two 660L refuse bins, collected once each week; and
 - Two 660L recycling bins, collected once each week.

A private contractor will service the Proposal onsite, directly from the respective Bin Storage Areas.

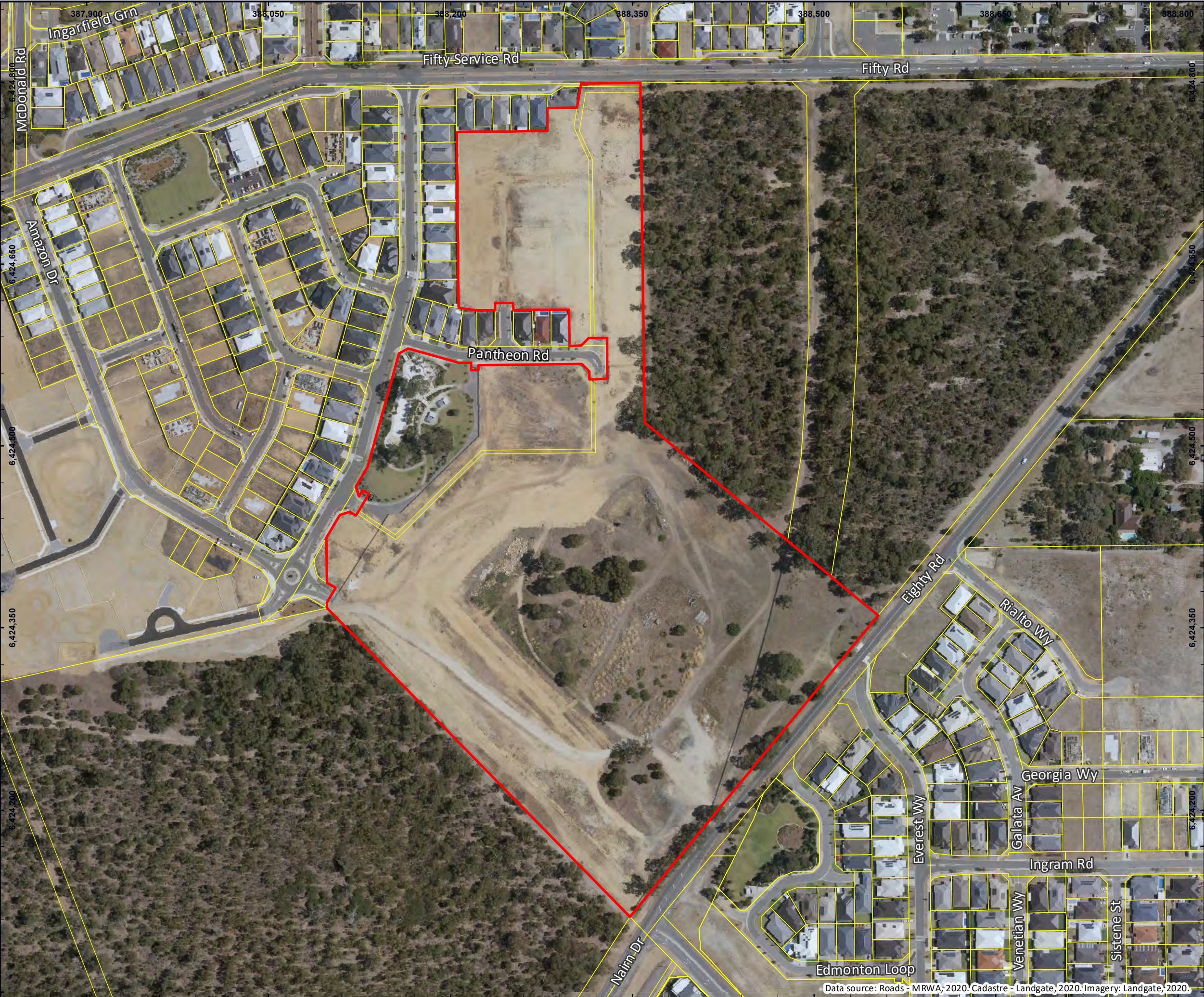
Building management/the caretaker will oversee the relevant aspects of waste management at the Proposal.

Figures

Figure 1: Locality Plan

Figure 2: Central Commercial Bin Storage Area

Figure 3: Northern Commercial Bin Storage Area



LEGEND

Site Boundary

Cadastre

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LOCALITY

0 20 40 60 80 km

LOCALITY

North Baldvis Commercial Centre
Lot 9005 Nairn Drive
Baldvis, WA 6171

Carcione Nominees

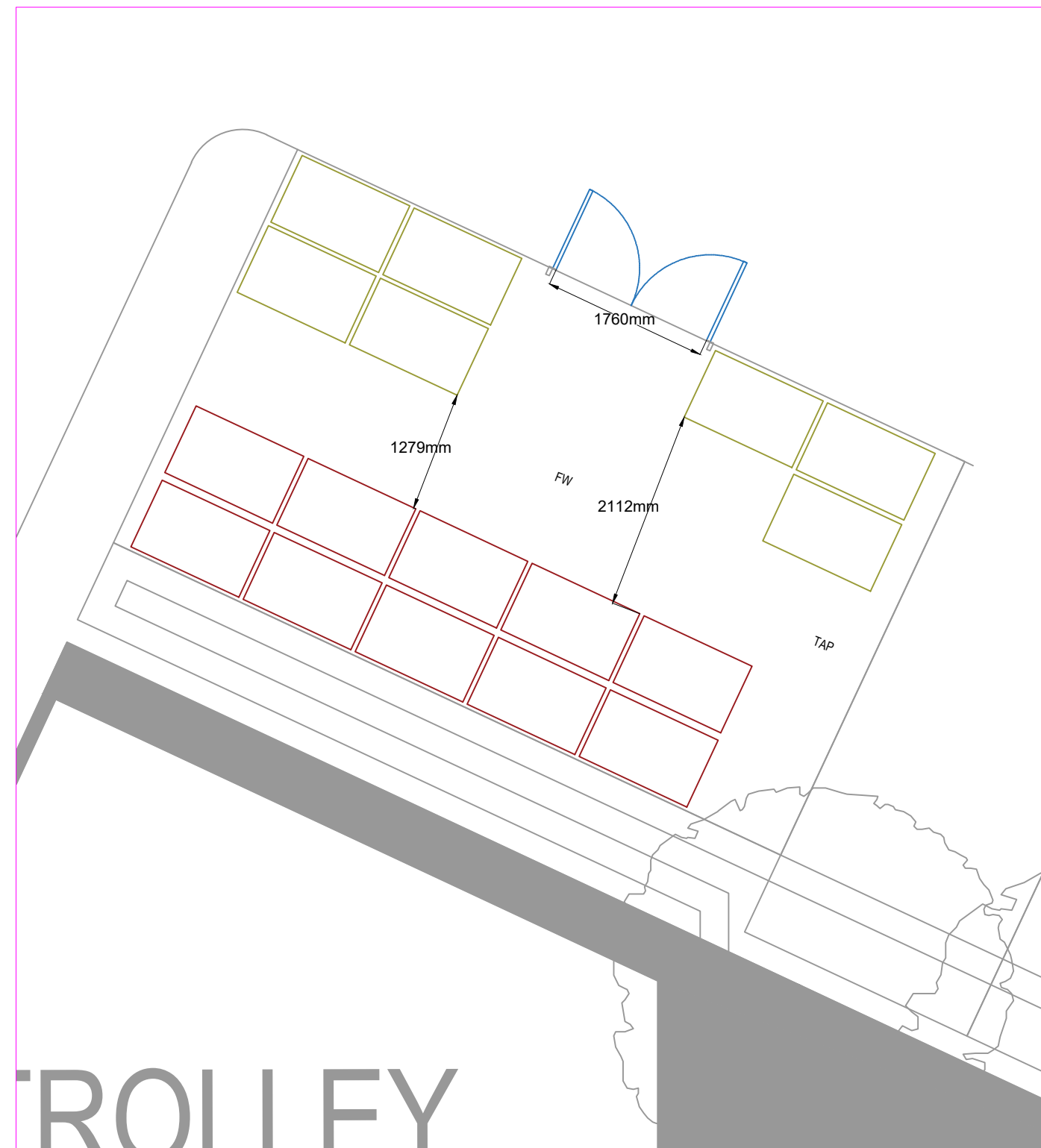
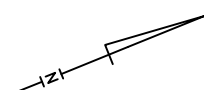
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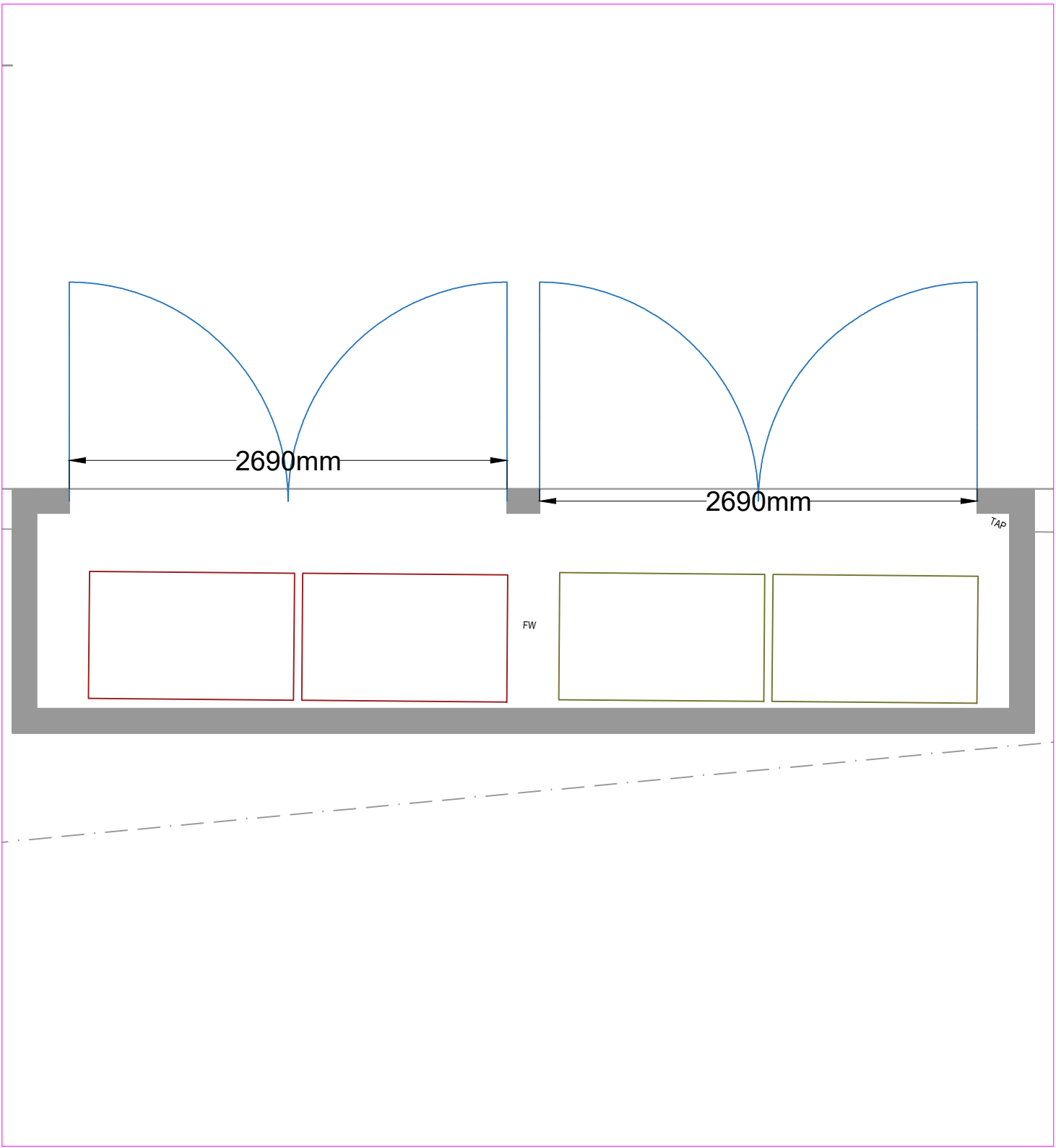
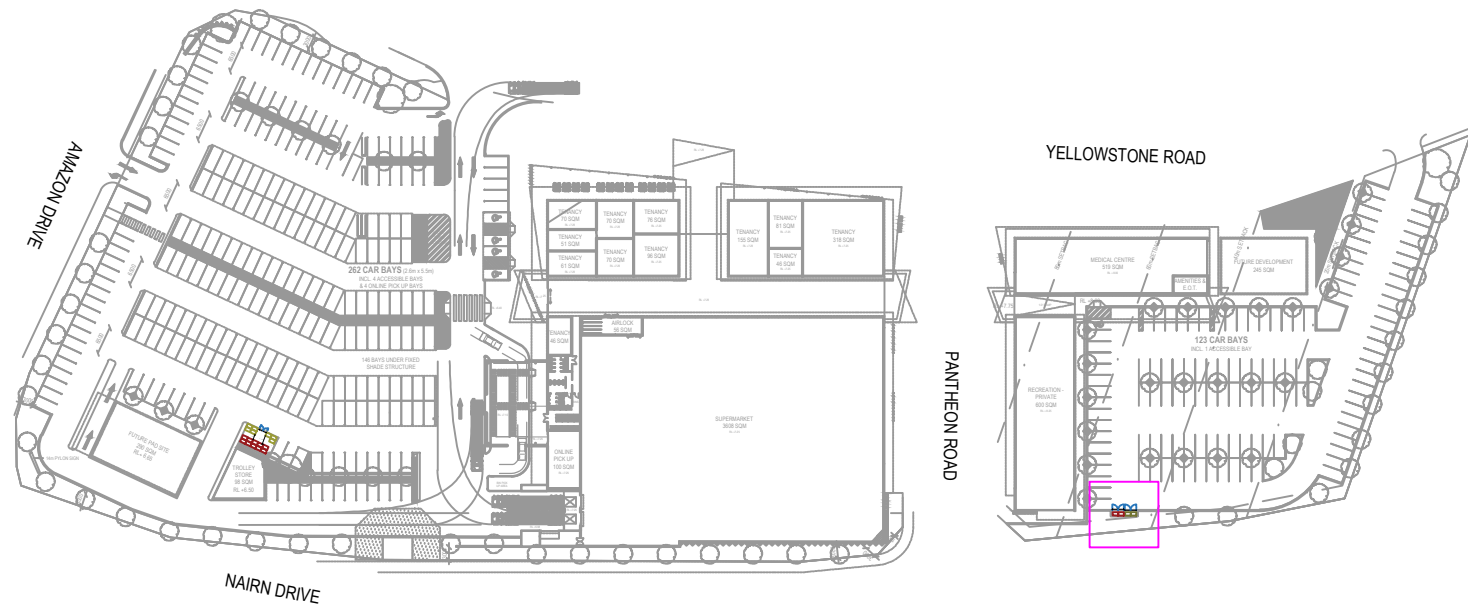
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Scale @ A3: 1:3,000

Prepared: T Daymond	Date: 12/04/2021
Reviewed: D Patel	Revision: A
Project: TW21039	

Figure 01

Document Path: \\server\\Talis\\SECTIONS\\Waste\\PROJECTS\\TW2021\\TW21039 - Lot 9005 Nairn Drive, Baldvis WMP\\GIS\\Maps\\TW21039_01_Locality_RevA.mxd





Legend:

Northern Commercial Bin Storage Area

- 2 x 660L refuse (780mm x 1,260mm)
- 2 x 660L recycling (780mm x 1,260mm)



Assets | Engineering | Environment | Noise | Spatial | Waste

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Supermarket specific Waste Management Plan



WASTE MANAGEMENT PLAN

Baldivis

Prepared for:

Development Application Submission Lot 9005 Nairn Drive, Baldivis

WASTE MANAGEMENT

The supermarket operator takes its environmental responsibilities very seriously and continues to investigate trial & implement new concepts to further improve the business' environmental sustainability. These initiatives & programs are constantly reviewed & evolving to ensure best results against our environmental measures.

The supermarket operator current programs range from food diversion to those in need via food charities; donations of waste to farmers, organics waste collection (diverted out of the waste stream), recycle of plastics and cardboard as well as use of technologies such as grease eradication systems.

In addition, there may be an opportunity to enter into an arrangement whereby local farmers and/or environmental or school groups can regularly collect food waste to feed stock and/or for compost and worm farming.

Typical waste volumes are based store size and the level of trade expected at the Hilton supermarket. It is envisaged that the volume of waste will be in line the highlighted row below:

GENERAL WASTE (m3)	GREEN WASTE (m3)	ORGANIC WASTE (m3)**	CARDBOARD (m3)*	No. OF 5kg PLASTIC BAGS
3-6	2-3	2	4	24
8-14	4-9	2	8	51
14-19	7-13	3	14	78
19-24	9-17	4	19	101
24-28	12-23	4	24	126
28-33	15-28	5	31	158
33-45	16-30	6	40	199
45+	21-41	6	45	211

Typical waste removal times and frequency for an average store utilising 4.5m³ bins are:

- General refuse – 3 times per week
- Green waste – 3 times per week
- Recycled plastic – 2 times per week
- Clear plastic pallet wrap – 2 times per week
- Compactor – Once per week minimum
- Food Charities – 5 times per week (weekdays)
- Grease traps – Once every 6-8 weeks
- Farmer donations – 3 times per week

Typical waste collection vehicles are:

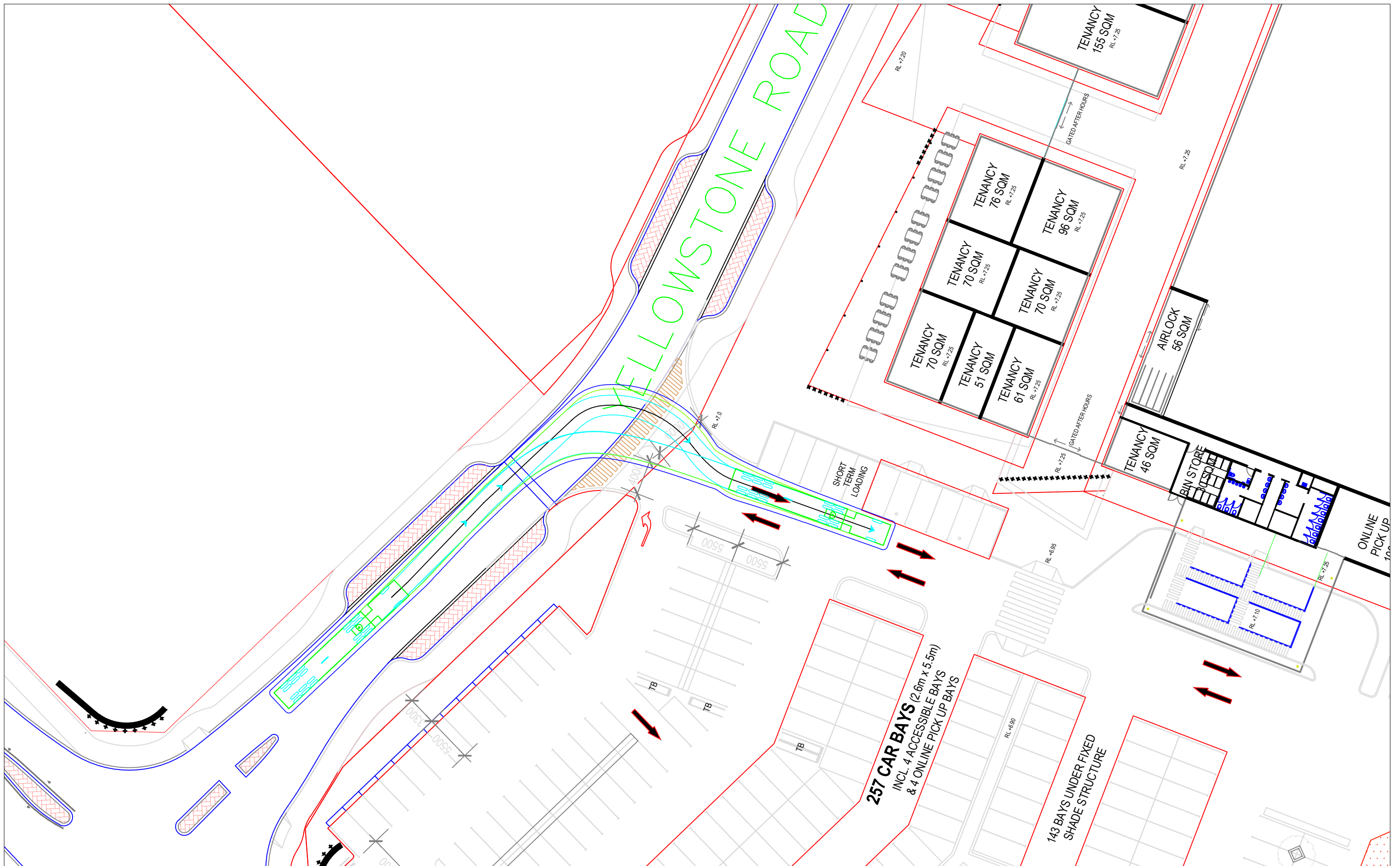
Waste (landfill & organics): 10.5m trucks: up to 24 hours a day:

Recycling (cardboard & plastic): 9.8m trucks: up to 24 hours a day:

*Note: truck delivery frequencies may vary nominally during peak Christmas and Easter periods.

Technology waste such as store computers., ink cartridges, mobile phones and printers are either returned to the service provider for re-use / recycling or returned to head office and recycled with recycling contractors. This type of waste typically represents less than 1% of the supermarkets weekly waste output.

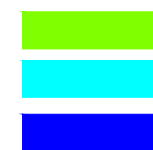
Lighting such as store use globes and tubes are managed by an external contractor who manages this waste stream. Again, this type of waste represents less than 1% of the supermarkets weekly waste output.



Spires Commercial, Nairn Drive, Baldivis
 Austroads 2013: 19.0m Semi-Trailer
 Truck left & right turn entries to the site from Yellowstone Rd

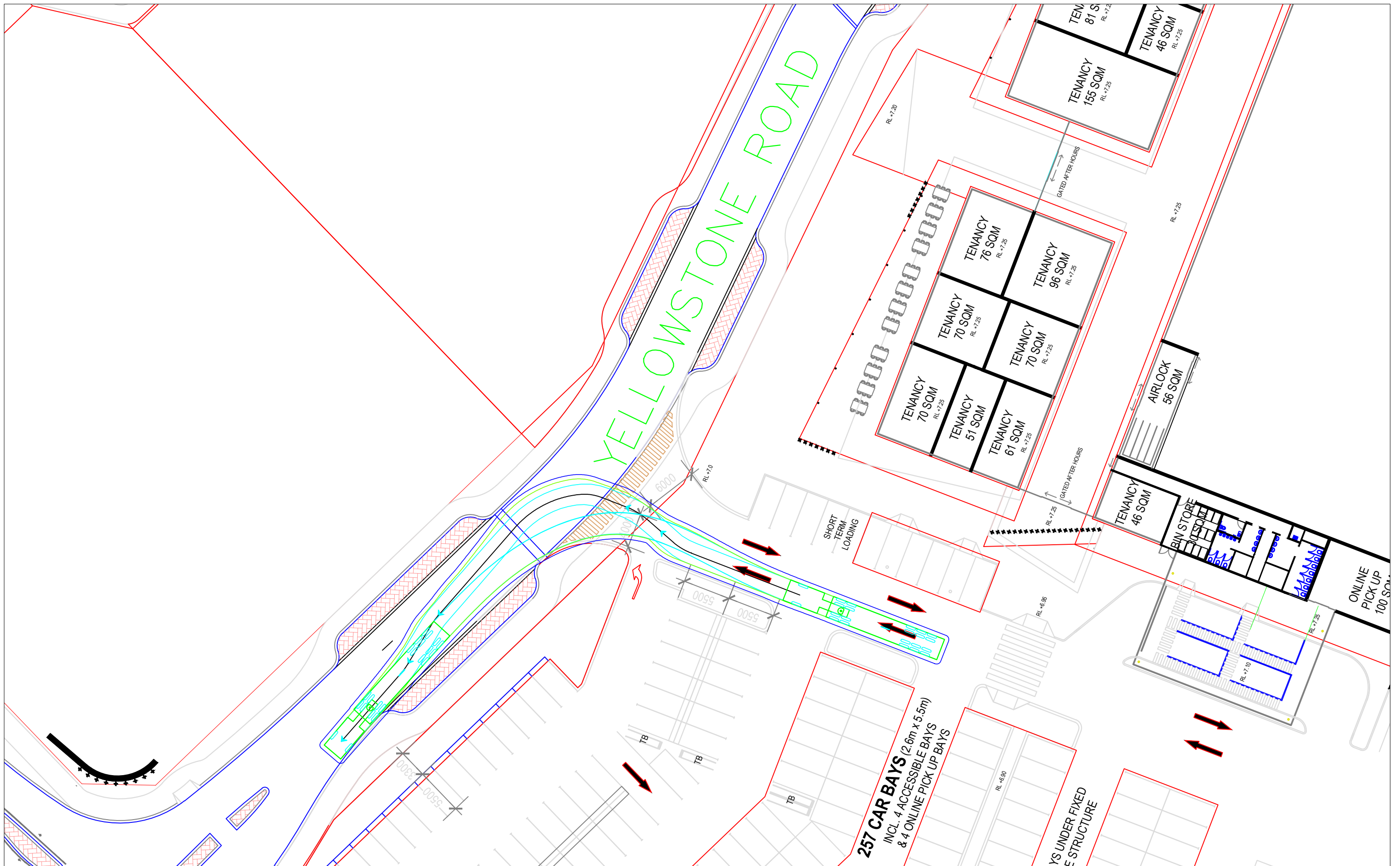
LEGEND

Vehicle Body
 Wheel Path
 500mm Clearance



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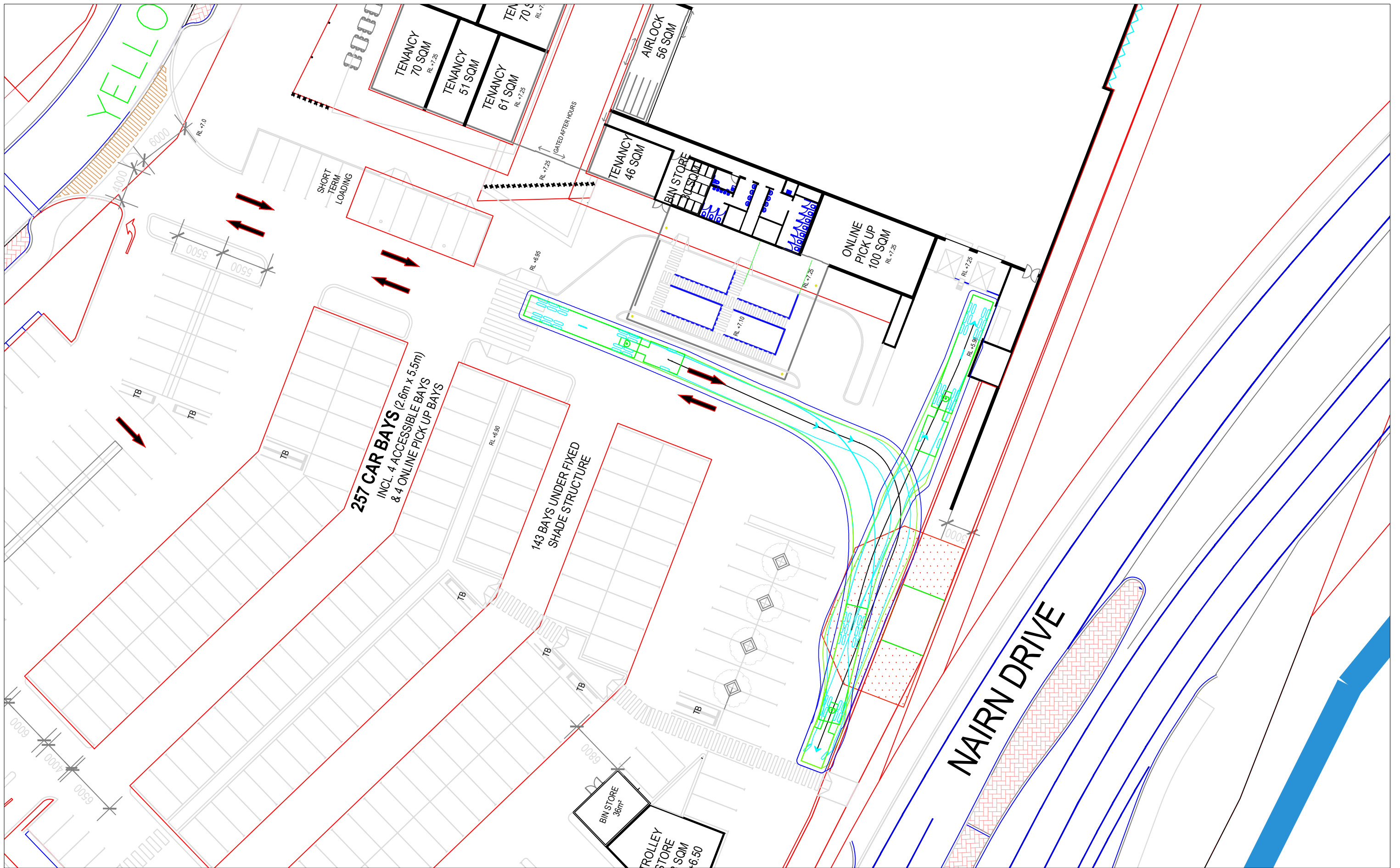
Spires Commercial, Nairn Drive, Baldivis
 Austroads 2013: 19.0m Semi-Trailer
 Truck left & right turn exits from the site onto Yellowstone Rd

LEGEND
 Vehicle Body
 Wheel Path
 500mm Clearance



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 Scale: 1:400 @ A3





Spires Commercial, Nairn Drive, Baldivis

Austrroads 2013: 19.0m Semi-Trailer

Truck entry to the loading bay 1

LEGEND

Vehicle Body
Wheel Path
500mm Clearance

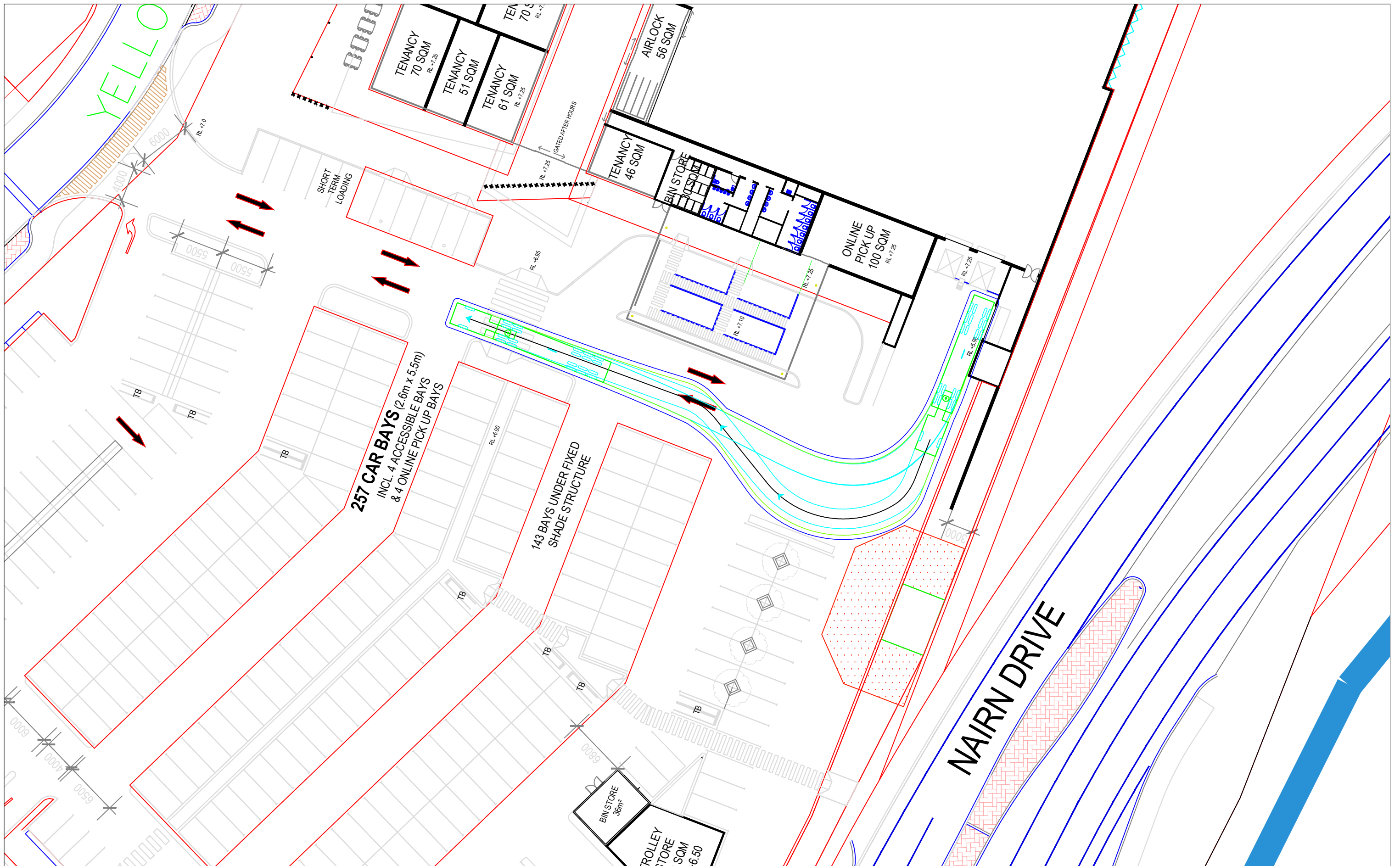


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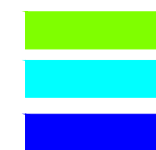
Truck exit from the loading bay 1

LEGEND

Vehicle Body

Wheel Path

500mm Clearance

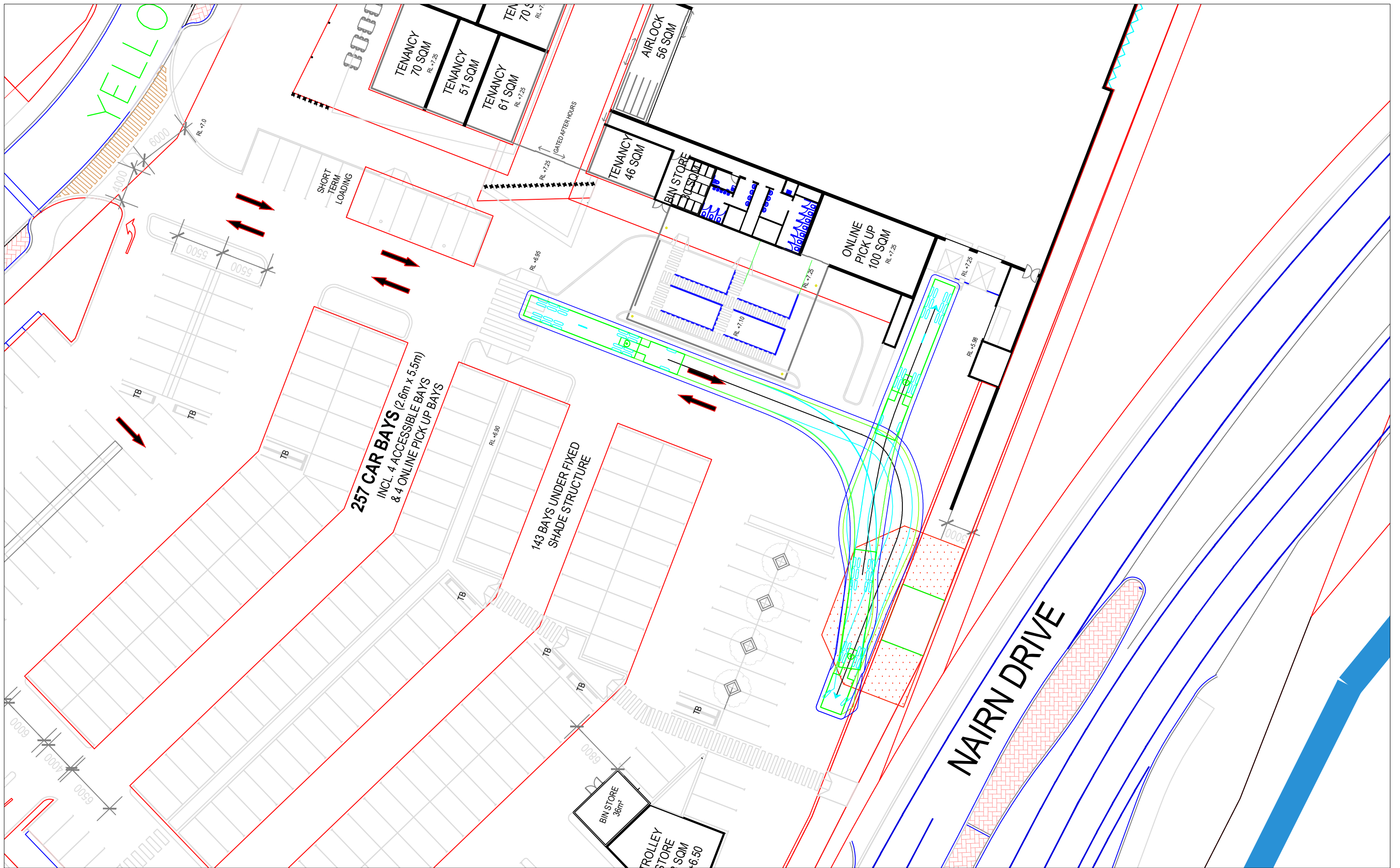


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Spires Commercial, Nairn Drive, Baldivis

Austrroads 2013: 19.0m Semi-Trailer

Truck entry to the loading bay 2

LEGEND

Vehicle Body
Wheel Path
500mm Clearance



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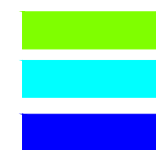
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Austrroads 2013: 19.0m Semi-Trailer

Truck exit from the loading bay 2

LEGEND

Vehicle Body
Wheel Path
500mm Clearance

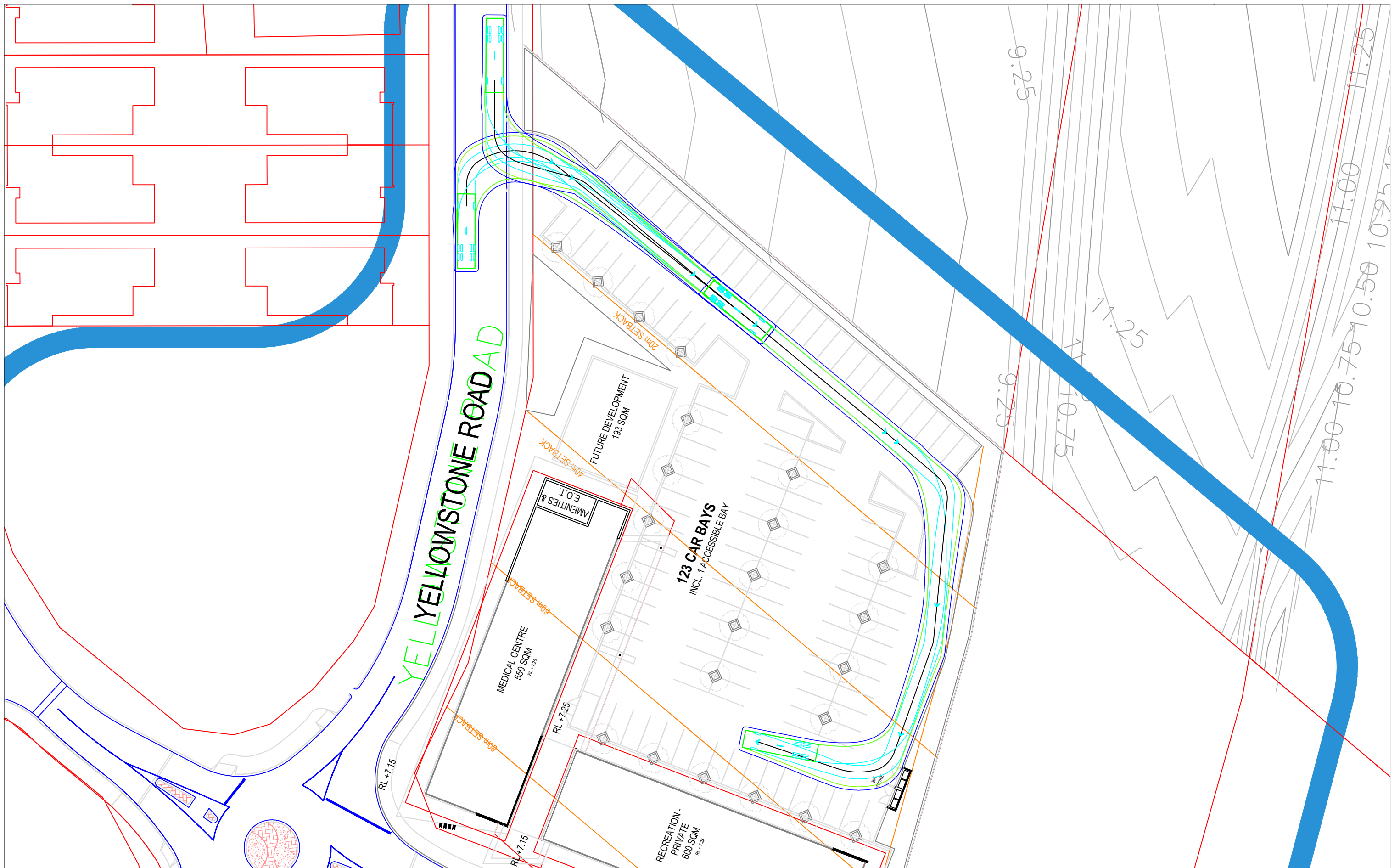


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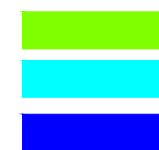




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 Waste Truck Entry - Option 1

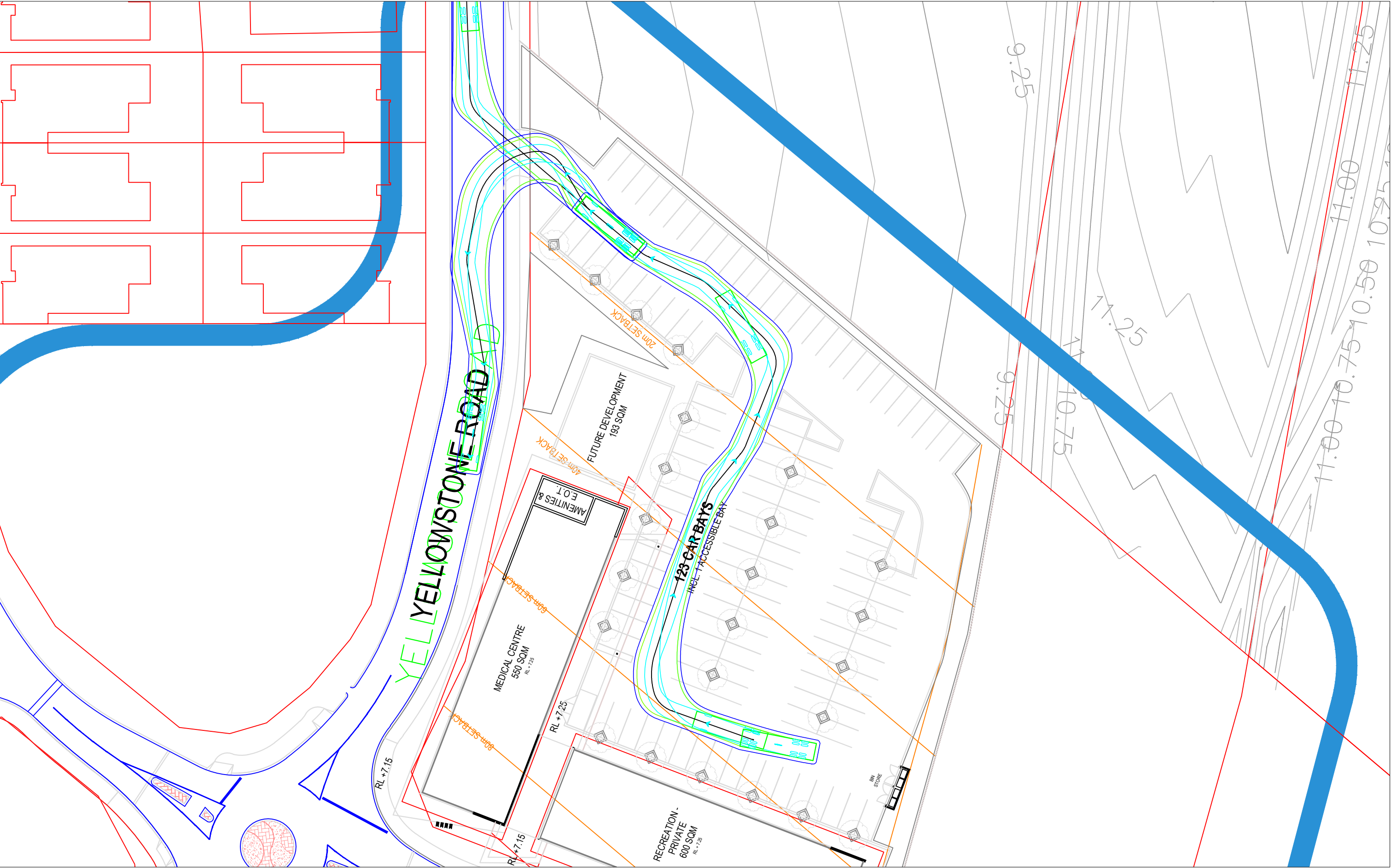
LEGEND

Vehicle Body
 Wheel Path
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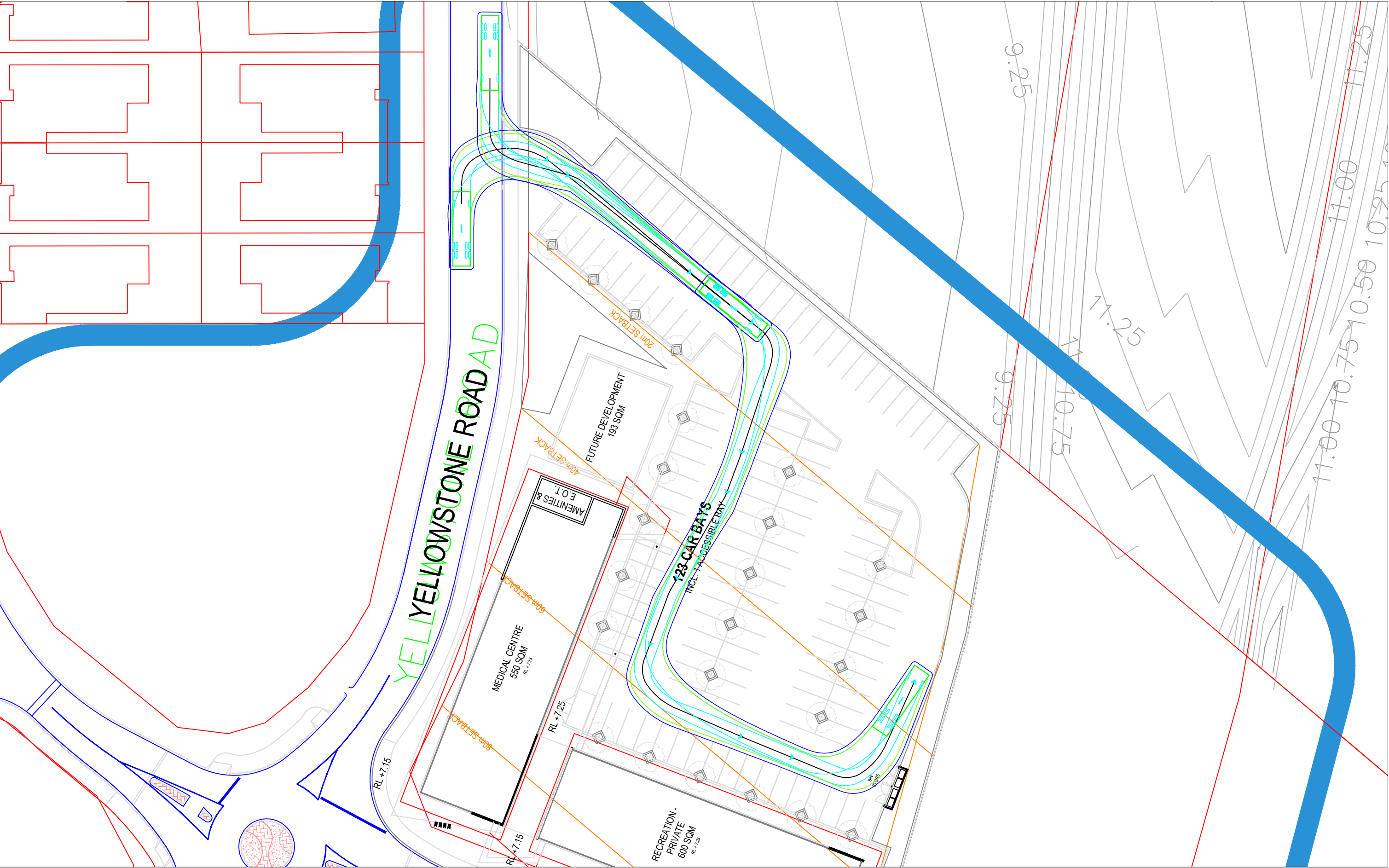
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10.7m Remondis Rear Loader Waste Truck
Waste Truck Exit - Option 1

LEGEND
Vehicle Body
Wheel Path
500mm Clearance



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Scale: 1:500 @ A3





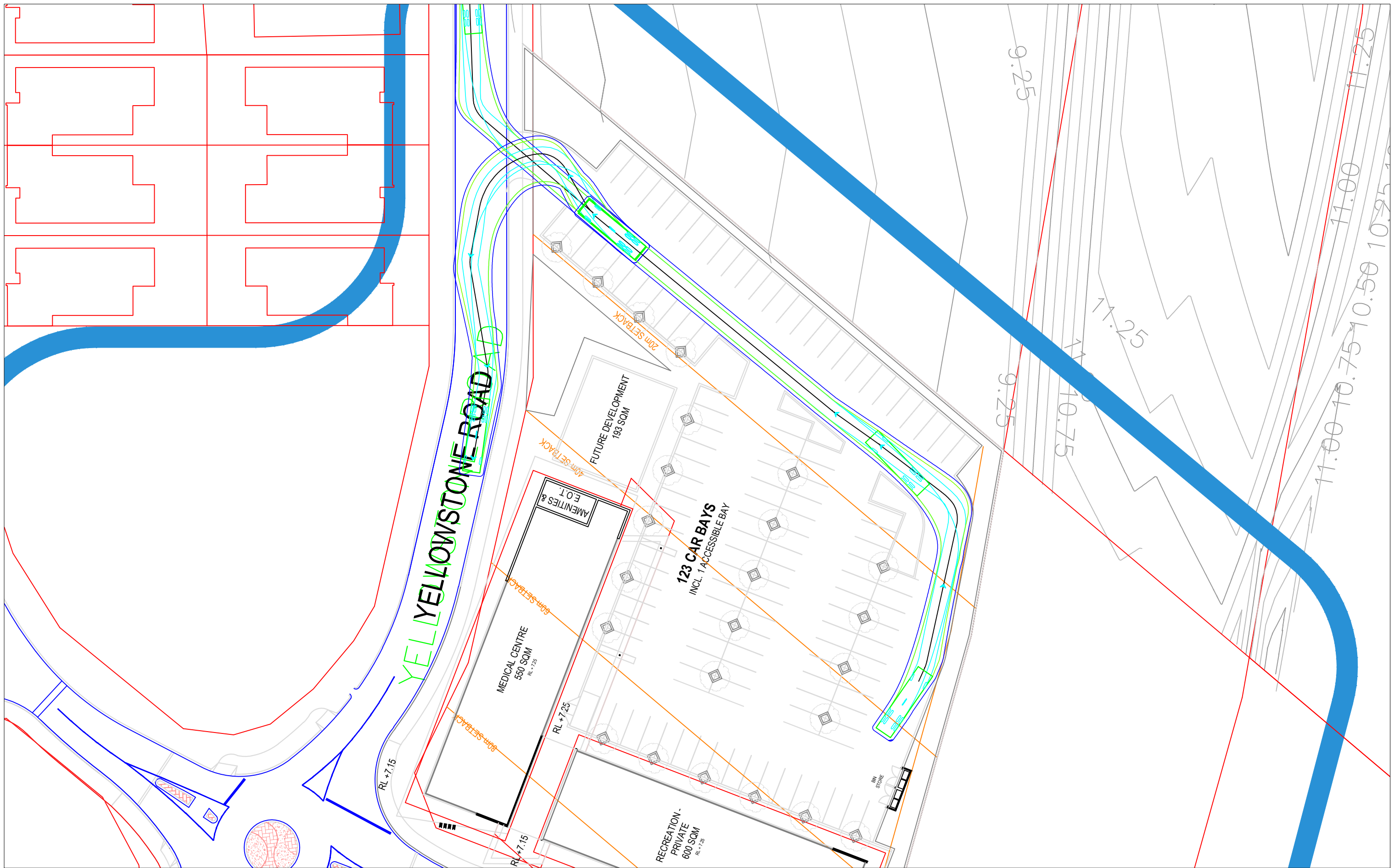
Spires Commercial, Nairn Drive, Baldivis
10.7m Remondis Rear Loader Waste Truck
Waste Truck Entry - Option 2

LEGEND
Vehicle Body
Wheel Path
500mm Clearance



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12/08/2021
Scale: 1:500 @ A3

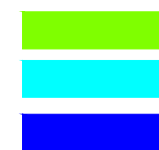




Spires Commercial, Nairn Drive, Baldivis
 10.7m Remondis Rear Loader Waste Truck
 Waste Truck Exit - Option 2

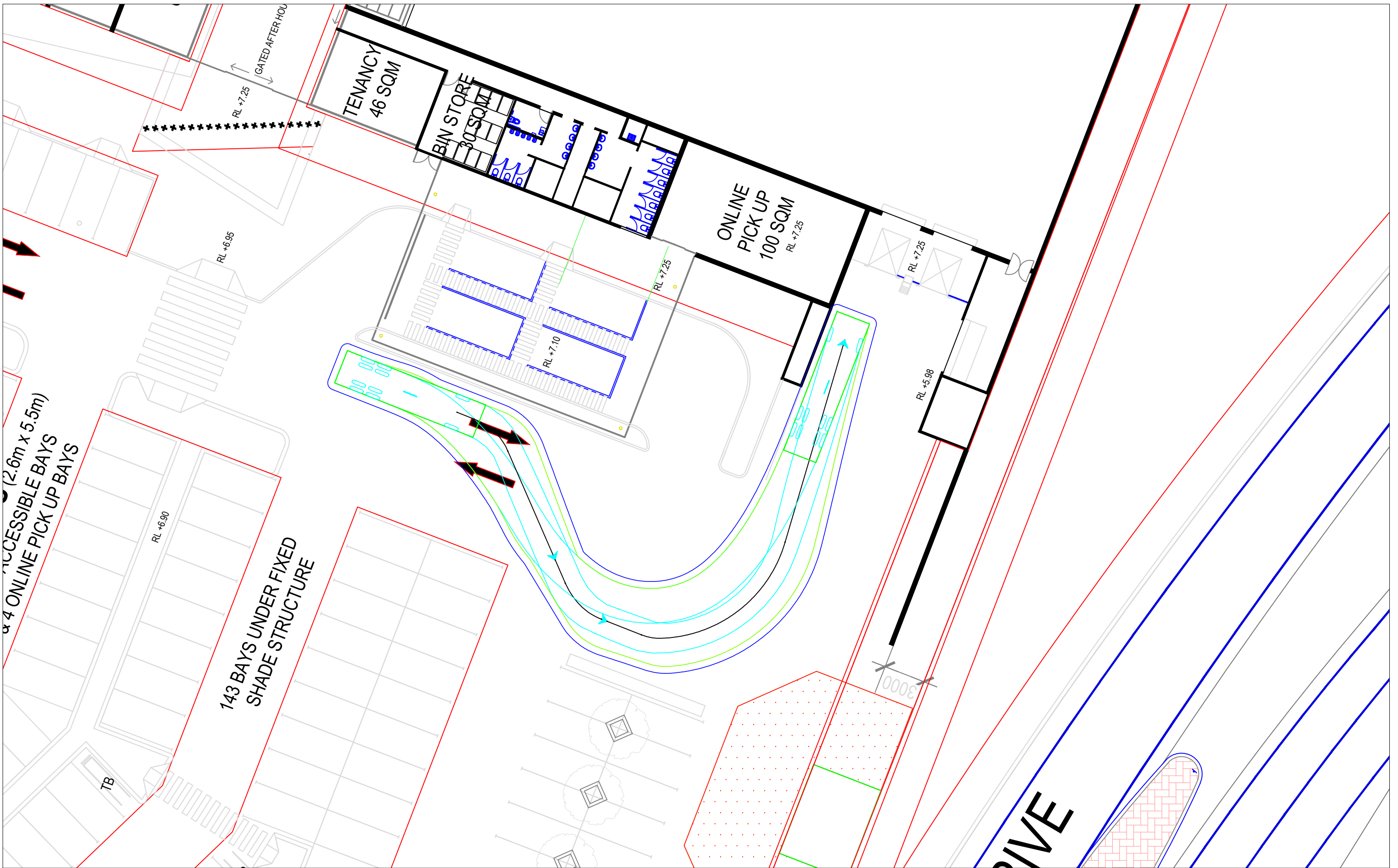
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Vehicle Body
 Wheel Path
 500mm Clearance



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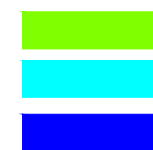




Spires Commercial, Nairn Drive, Baldivis
 10.7m Remondis Rear Loader Waste Truck
 Waste Truck Entry

LEGEND

Vehicle Body
 Wheel Path
 500mm Clearance

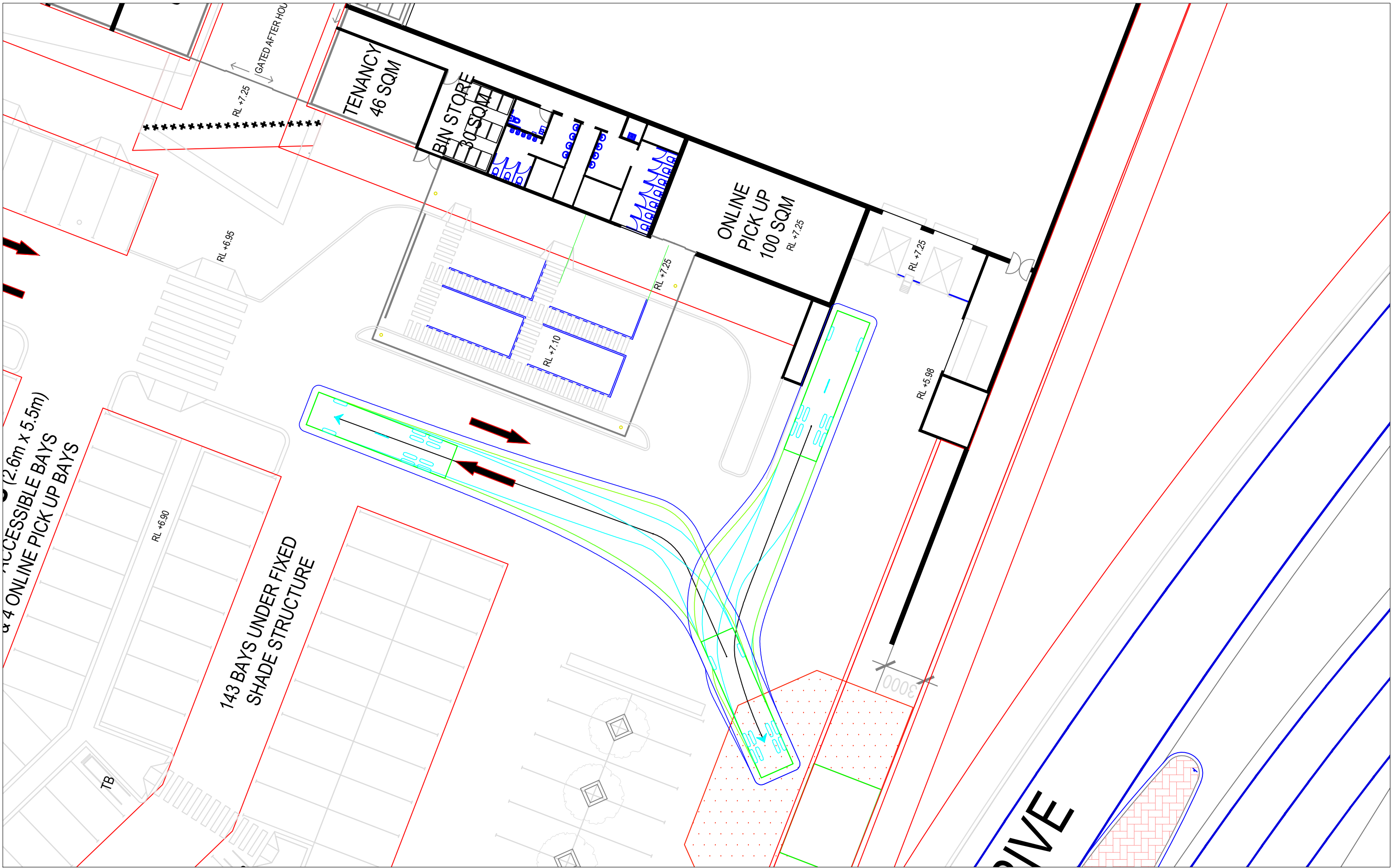


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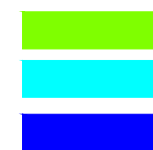




Spires Commercial, Nairn Drive, Baldivis
 10.7m Remondis Rear Loader Waste Truck
 Waste Truck Exit

LEGEND

Vehicle Body
 Wheel Path
 500mm Clearance

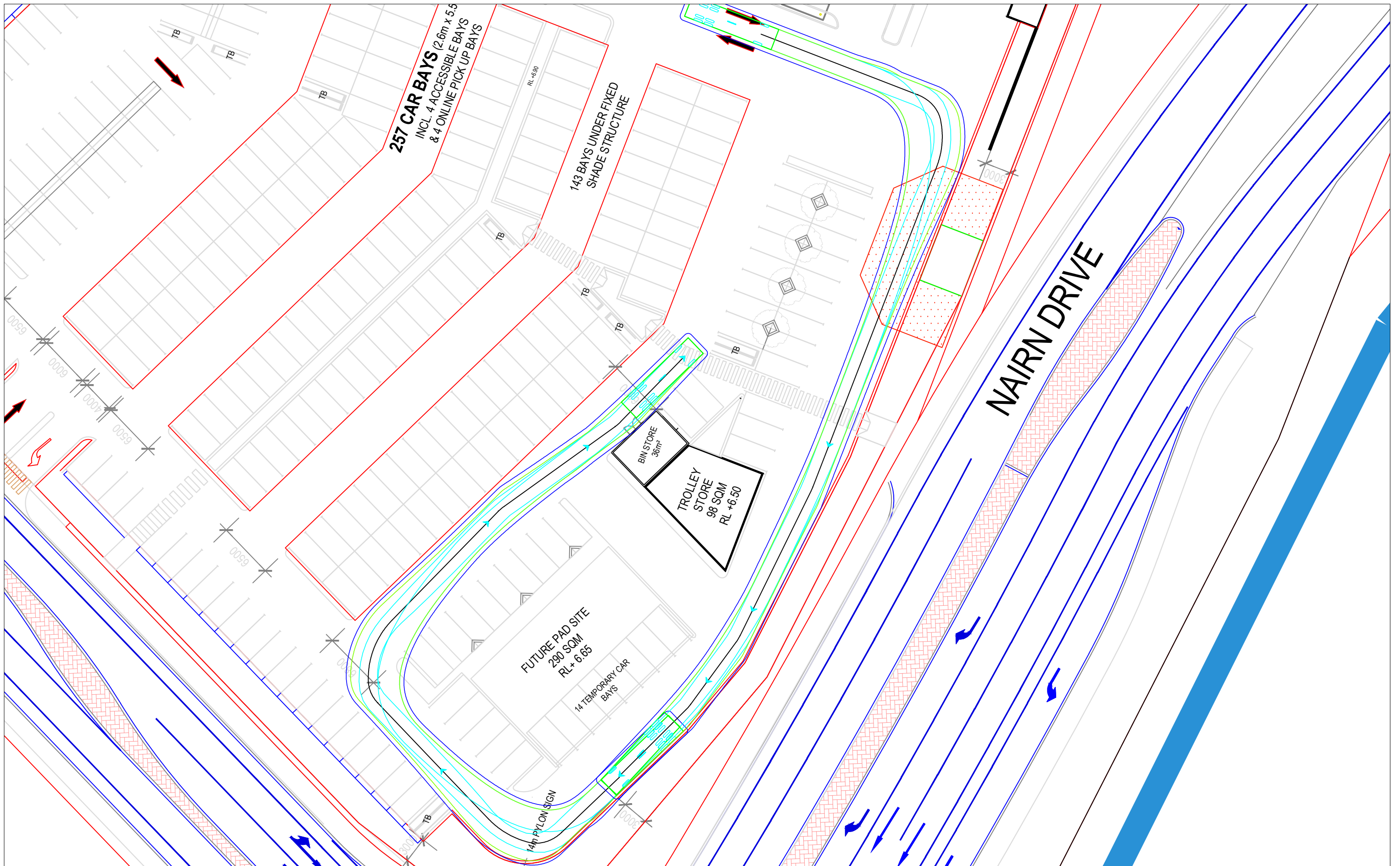


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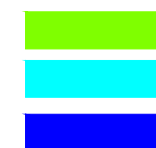




Spires Commercial, Nairn Drive, Baldivis
 10.7m Remondis Rear Loader Waste Truck
 Option 1 - Waste Truck Entry

LEGEND

Vehicle Body
 Wheel Path
 500mm Clearance

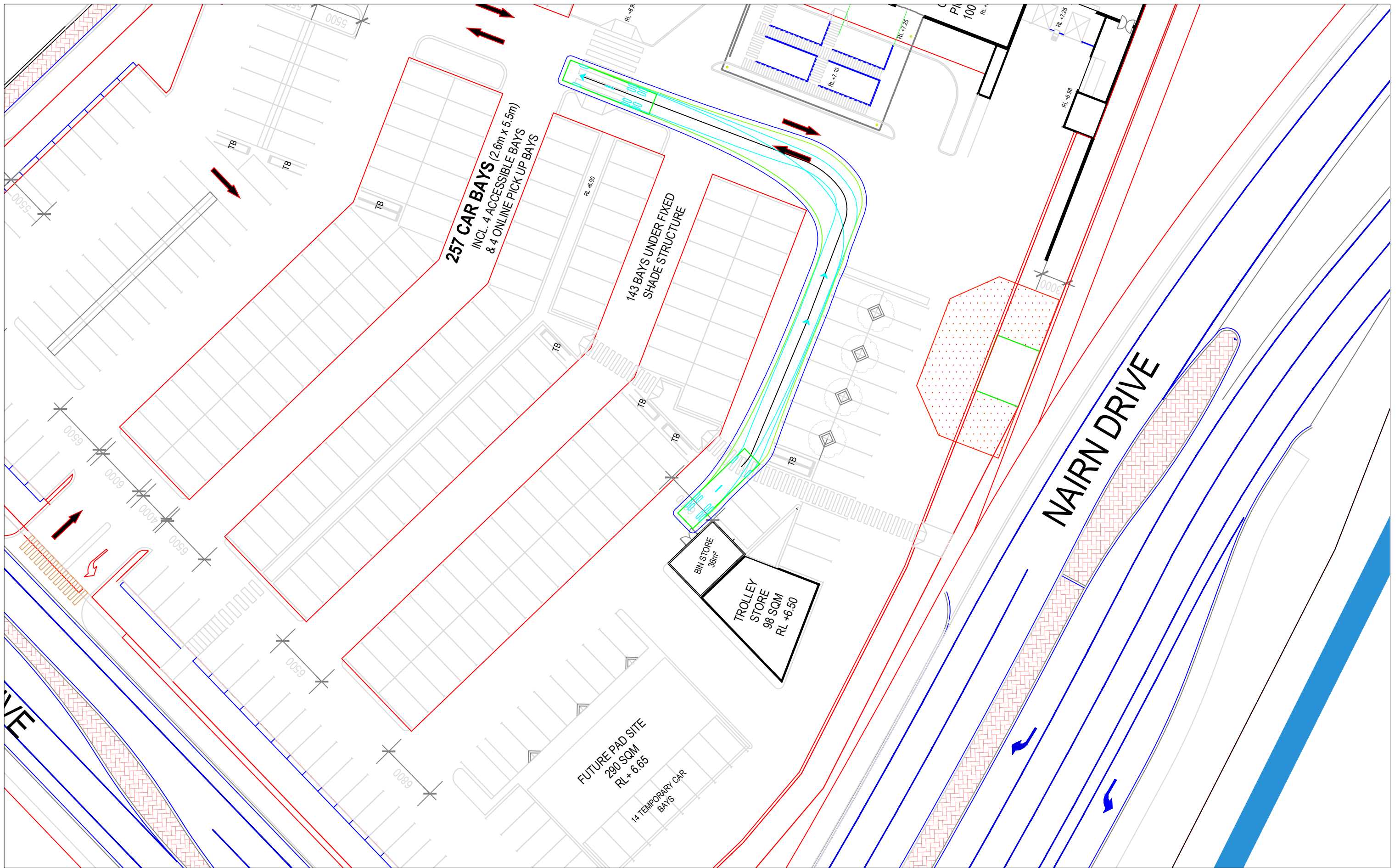


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Spires Commercial, Nairn Drive, Baldivis
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 Option 1 - Waste Truck Exit

LEGEND

Vehicle Body
 Wheel Path
 500mm Clearance

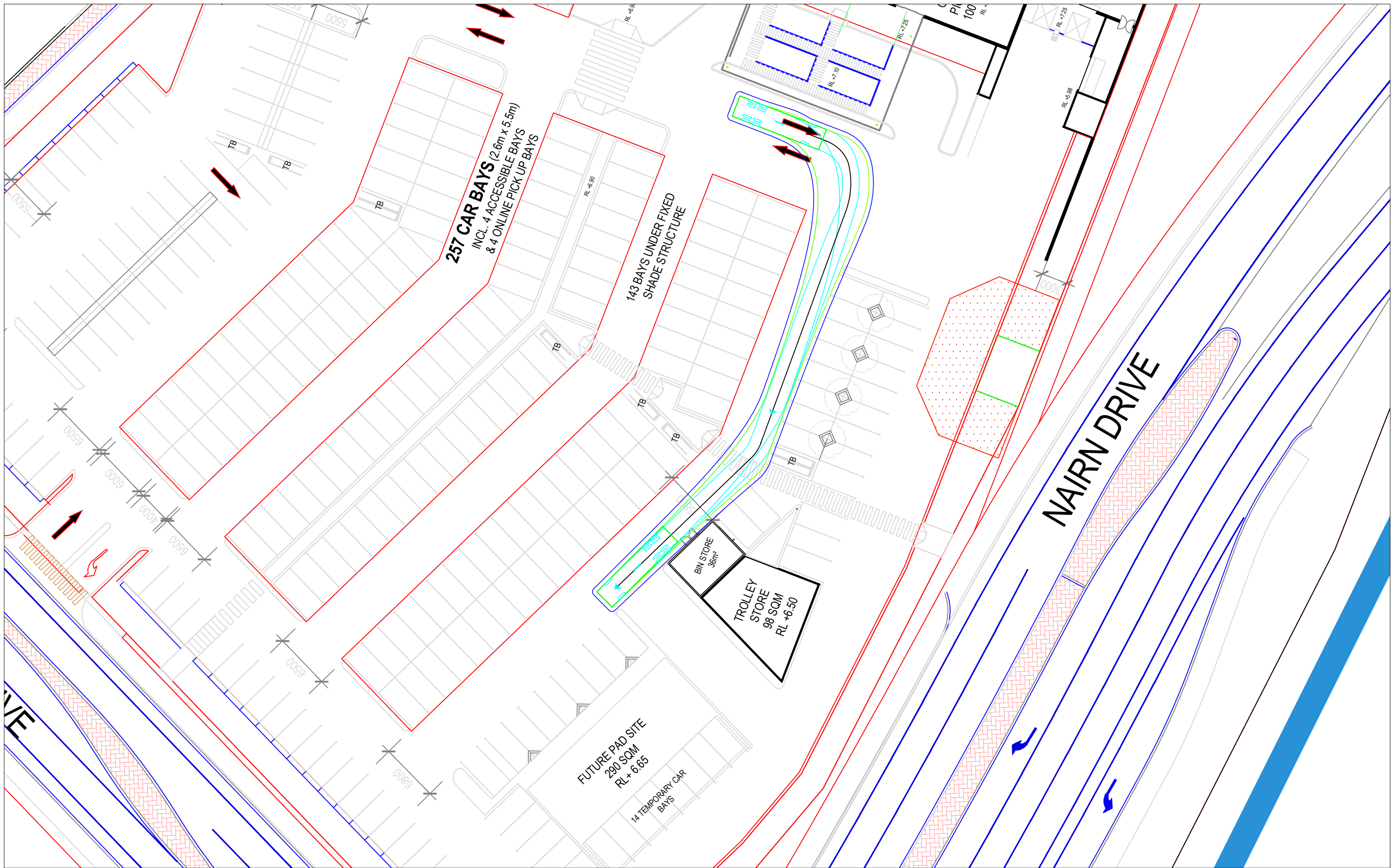


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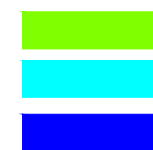




Spires Commercial, Nairn Drive, Baldivis
 10.7m Remondis Rear Loader Waste Truck
 Option 2 - Waste Truck Entry

LEGEND

Vehicle Body
 Wheel Path
 500mm Clearance

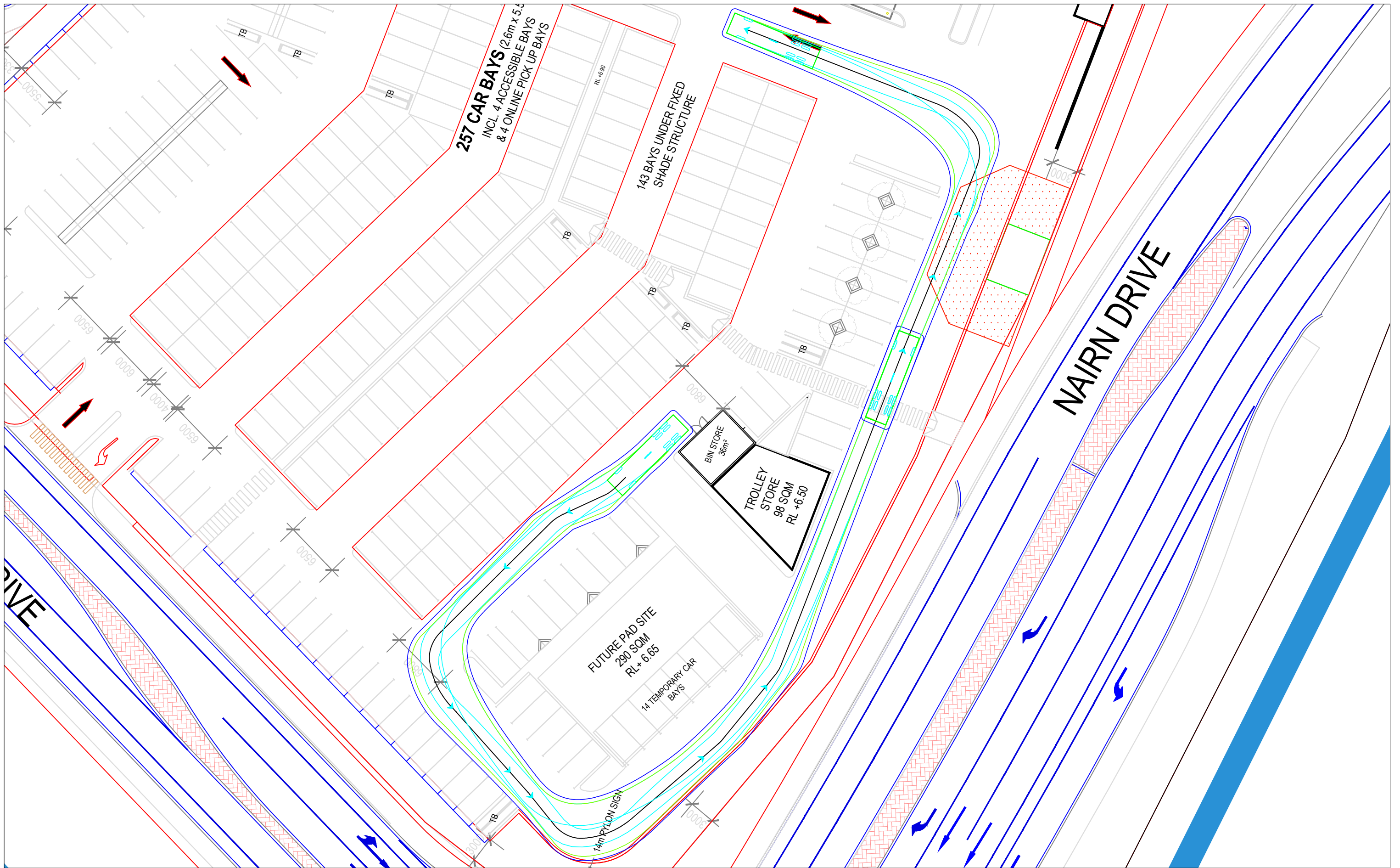


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Scale: 1:400 @ A3





Spires Commercial, Nairn Drive, Baldivis
10.7m Remondis Rear Loader Waste Truck
Option 2 - Waste Truck Exit

LEGEND
Vehicle Body
Wheel Path
500mm Clearance



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12/08/2021
Scale: 1:400 @ A3



Bushfire Management Plan:
Development Application: Lot 9005 Nairn Drive,
Baldivis

Planning Solutions

DOCUMENT TRACKING

Project Name	Bushfire Management Plan: Development Application: Lot 9005 Nairn Drive, Baldivis
Project Number	21PER-18667
Project Manager	James Leonard
Prepared by	Maitland Ely
Reviewed by	James Leonard and Daniel Panickar (BPAD Level 3 – 37802)
Approved by	Daniel Panickar (BPAD Level 3 – 37802)
Status	Final
Version Number	v4
Last saved on	12 August 2021

This report should be cited as 'Eco Logical Australia 2021. *Bushfire Management Plan: Development Application: Lot 9005 Nairn Drive, Baldivis.* Prepared for Planning Solutions.

ACKNOWLEDGEMENTS

This document has been prepared by Eco Logical Australia Pty Ltd with support from Planning Solutions (the client).

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Template 2.8.1

Version control	
Version	Purpose
v1	Draft – Submission to client
v2	Final Draft
v3	Final – Submission to City of Rockingham
v4	Final – Modified in response to comments from the City of Rockingham

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1. Introduction

1.1 Proposal details

Eco Logical Australia (ELA) was commissioned by Planning Solutions to prepare a Bushfire Management Plan (BMP) to support a Development Application (DA) for Lot 9005 Nairn Drive, Baldivis (hereafter referred to as the subject site, Figure 1). The proposed development is for a neighbourhood centre commercial development which will comprise a supermarket, retail tenancies, car parking and associated infrastructure. The development area is depicted in Figure 2.

The subject site is within a designated bushfire prone area as per the *Western Australia State Map of Bush Fire Prone Areas* (DFES 2019; Figure 3), which triggers bushfire planning requirements *under State Planning Policy 3.7 Planning in Bushfire Prone Areas* (SPP 3.7; Western Australian Planning Commission [WAPC] 2015) and reporting to accompany submission of the development application in accordance with the associated *Guidelines for Planning in Bushfire Prone Areas v 1.3* (the Guidelines; WAPC 2017).

The subject site is within the City of Rockingham and is neighboured by residential dwellings to the southeast and northwest and bushland on the remaining northeast and southwest sides. The subject site is also a part of the Spires Estate, Baldivis and is zoned 'Development' under the City of Rockingham Town Planning Scheme No. 2 (TPS 2).

This assessment has been prepared by ELA Bushfire Consultant Maitland Ely with quality assurance undertaken by Senior Bushfire Consultant James Leonard and Principal Bushfire Consultant Daniel Panickar (FPAA BPAD Level 3 Certified Practitioner No. BPAD37802).

1.2 Purpose and application of the plan

The primary purpose of this BMP is to act as a technical supporting document to inform planning assessment. This BMP is also designed to provide guidance on how to plan for and manage the bushfire risk to the subject site through implementation of a range of bushfire management measures in accordance with the Guidelines.

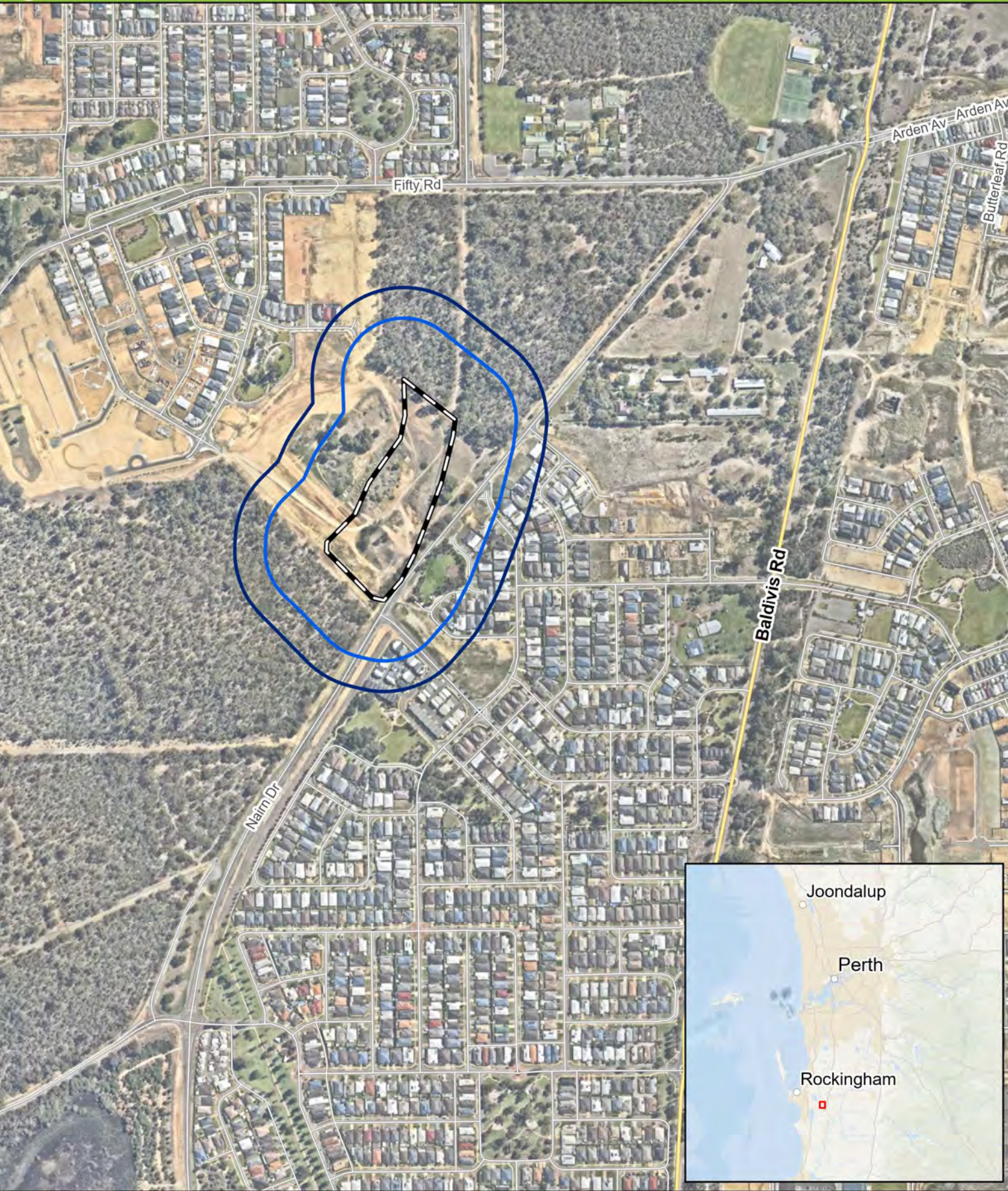
1.3 Environmental considerations

SPP 3.7 policy objective 5.4 recognises the need to consider bushfire risk management measures alongside environmental, biodiversity and conservation values.

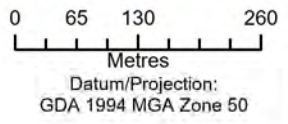
The subject site has been previously cleared, with only a small amount of vegetation remaining in centre of lot. ELA is not aware of any environmental approvals required to clear this vegetation.

No revegetation is proposed within the development and landscaping will be maintained in a low-threat state or to Asset Protection Zone standards as discussed in sections 2.3 and 3.

Figure 1: Site Overview



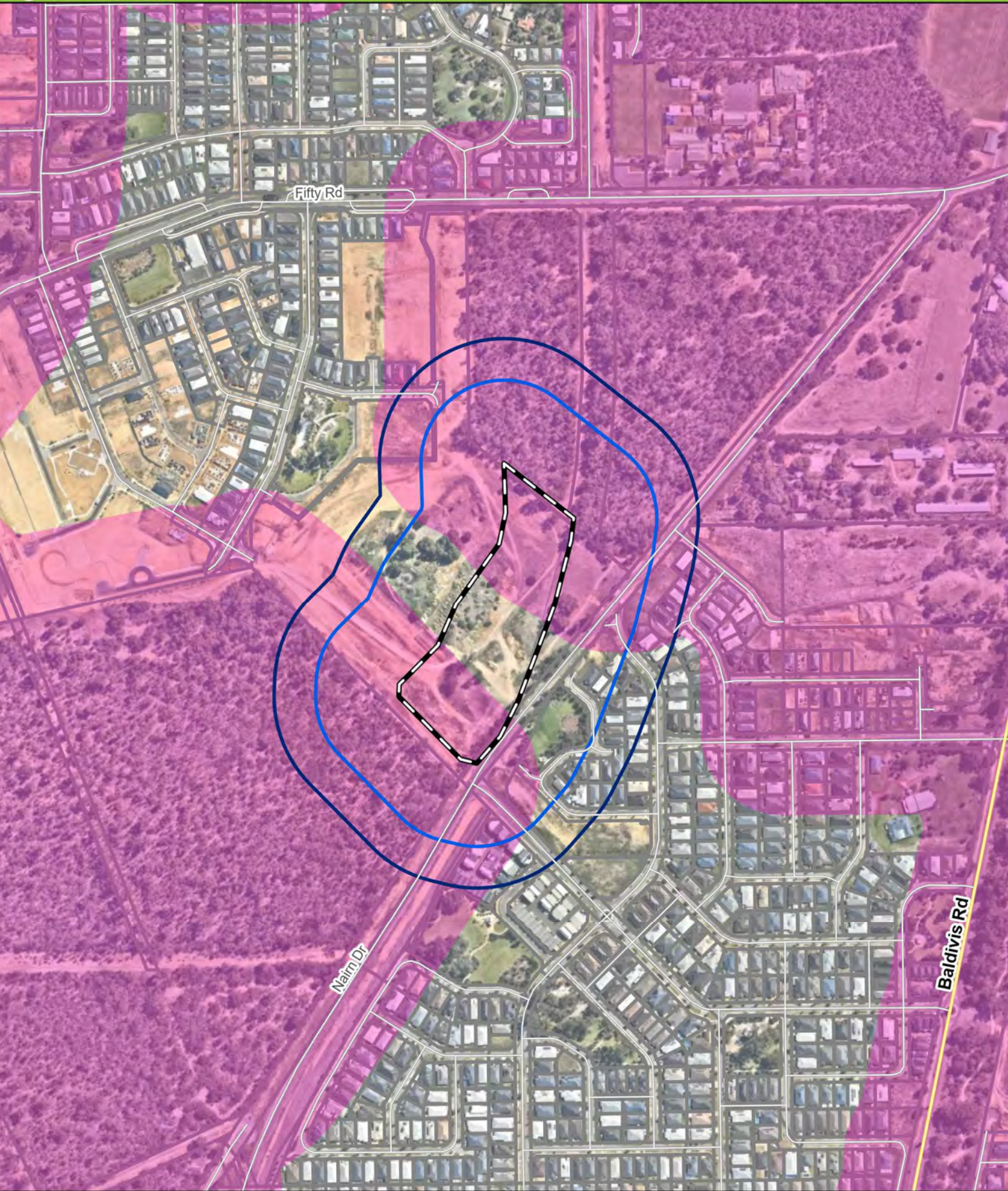
- Legend**
- Subject site
 - 100m site assessment
 - 150m site assessment



Masterplan - 1:1000 @ A3
Spires Commercial



Figure 3: Bushfire Prone Areas



Legend

- Subject site
- 100m site assessment
- 150m site assessment
- Bushfire Prone Mapping (DFES 2019)

0 50 100 200
Metres

Datum/Projection:
GDA 1994 MGA Zone 50

N

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AUSTRALIA
A TETRA TECH COMPANY

Prepared by: SM Date: 19/05/2021

2. Bushfire assessment results

2.1 Bushfire assessment inputs

The following section is a consideration of spatial bushfire risk and has been used to inform the bushfire assessment in this report.

2.1.1 Fire Danger Index

A blanket Fire Danger Index (FDI) of FDI 80 is adopted for Western Australia, as outlined in Standard AS 3959: 2018 *Construction of Buildings in Bushfire Prone Areas* (SA 2018) and endorsed by Australasian Fire and Emergency Service Authorities Council (AFAC).

2.1.2 Vegetation classification and slope under vegetation

Vegetation and effective slope (i.e. slope under vegetation) within the subject site and surrounding 150 m (the assessment area) were assessed in accordance with the Guidelines and AS 3959:2018 with regard given to the *Visual guide for bushfire risk assessment in Western Australia* (DoP 2016). Site assessment was undertaken on 14 April 2021.

Classified vegetation and effective slope for the proposed development from each of the identified vegetation plots are identified below, Table 1 and Figure 4.

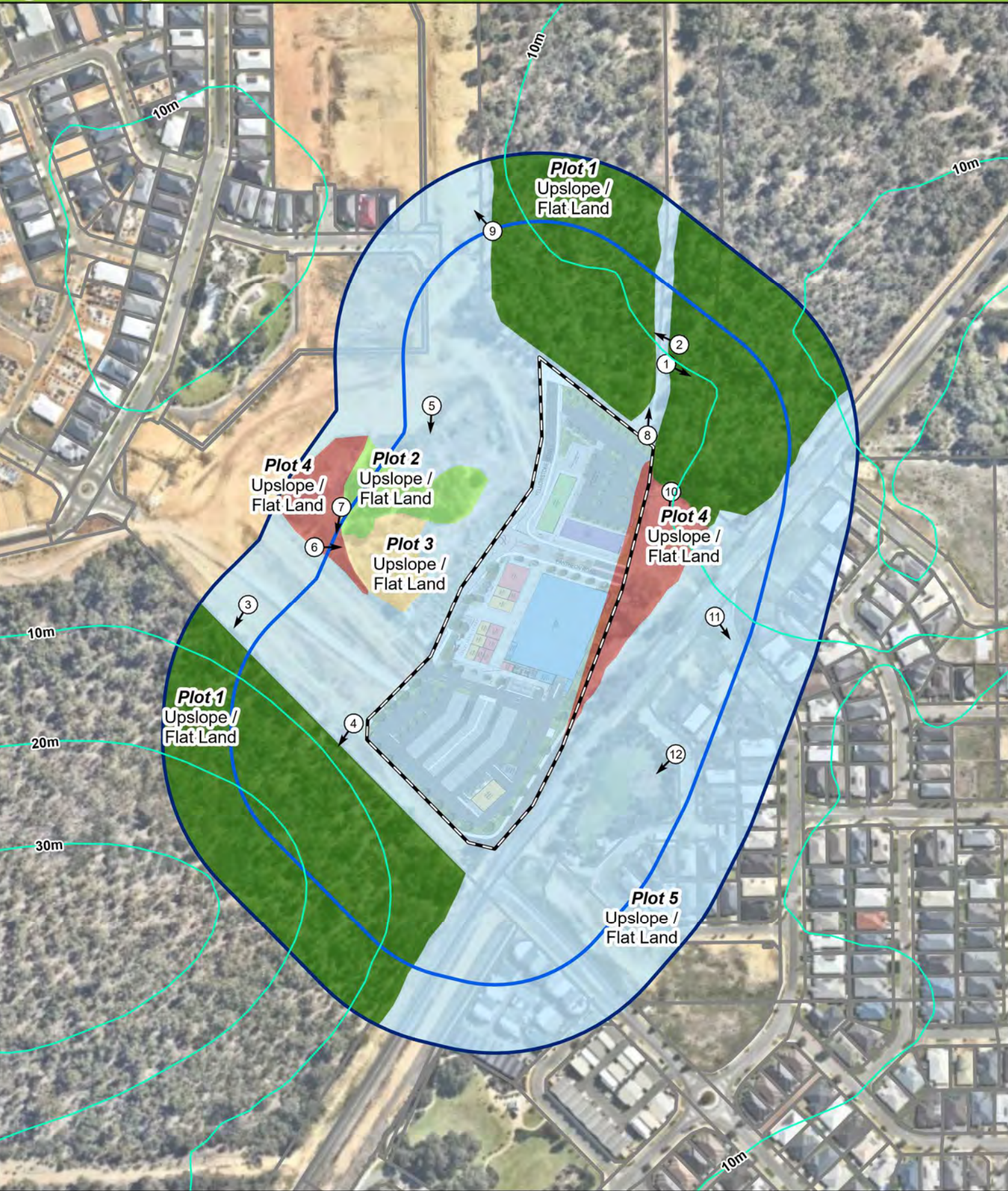
Table 1: Classified vegetation as per AS 3959: 2018

Plot	Vegetation Classification	Effective Slope
1	Class A Forest	All upslopes and flat land (0 degrees)
2	Class B Woodland	All upslopes and flat land (0 degrees)
3	Class C Shrubland	All upslopes and flat land (0 degrees)
4	Class G Grassland	All upslopes and flat land (0 degrees)
5	Excluded AS 3959-2009 2.2.3.2 (e) & (f)	All upslopes and flat land (0 degrees)

Photographs relating to each area and vegetation type are included in Appendix A.

Vegetation that is within the approved subdivision (WAPC 156452) will be cleared and/ or maintained as excluded vegetation in accordance with clause 2.2.3.2 of AS 3959-2018 as part of the landscaping for the surrounding Development. A 'post-development' vegetation classification map is provided in Figure 5.

Figure 4: Vegetation Classification



Legend

- Subject site
- 100m site assessment
- 150m site assessment
- Photo location
- Contour

Vegetation classification

- Class A forest
- Class B woodland
- Class C shrubland
- Class G grassland
- Excluded as per clause 2.2.3.2 (e) and (f)

0 30 60 120
Metres
Datum/Projection:
GDA 1994 MGA Zone 50

N
eco logical
AUSTRALIA
A TETRA TECH COMPANY
Prepared by: SM Date: 19/05/2021

Figure 5: Vegetation Classification Post-Development



Legend

Subject site

100m site assessment

150m site assessment

Photo location

Contour

Vegetation classification

Class A forest

Excluded as per clause 2.2.3.2 (e) and (f)

N

0 30 60 120
Metres
Datum/Projection:
GDA 1994 MGA Zone 50

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A TETRA TECH COMPANY

Prepared by: SM Date: 19/05/2021

2.2 Bushfire assessment outputs

A Bushfire Attack Level (BAL) assessment has been undertaken in accordance with SPP 3.7, the Guidelines, AS 3959: 2018 and the bushfire assessment inputs in Section 2.1.

2.2.1 BAL assessment

All land located within 100 m of the classified vegetation depicted in Figure 4 considered bushfire prone and is subject to a BAL assessment in accordance with AS 3959:2018.

A Method 1 BAL assessment (as outlined in AS 3959:2018) has been completed for the proposed development and incorporates the following factors:

- Fire Danger Index (FDI) rating;
- Vegetation class;
- Slope under classified vegetation; and
- Distance between proposed development area and the classified vegetation.

Based on the identified BAL, construction requirements for proposed buildings can then be assigned. The BAL rating gives an indication of the expected level of bushfire attack (i.e. radiant heat flux, flame contact and ember penetration) that may be received by proposed buildings and subsequently informs the standard of construction required to increase building survivability.

2.2.2 Method 1 BAL assessment

Table 2 and Figure 6 display the Method 1 BAL assessment (in the form of BAL contours) that has been completed for the proposed development in accordance with AS 3959:2018 methodology.

The BAL assessment factors in clearing and management of vegetation on the property and within the 100 m assessment area as depicted in Figure 6. Consequently, only one of the plots (Plot 1) in Table 1 has been assessed in Table 2 as all other plots will either: be cleared and maintained as per an exclusion under clause 2.2.3.2 of AS 3959: 2018; are already excluded under the same clause; or are outside of the 100 m assessment area.

Table 2: Method 1 BAL calculation (BAL contours)

Plot and vegetation classification	Effective slope	Hazard separation distance	BAL rating	Post-vegetation management
Plot 1 Class A Forest	All upslopes and flat land (0 degrees)	0-<16	BAL-FZ	No development proposed in this area
		16-<21	BAL-40	No development proposed in this area
		21-<31	BAL-29	No development proposed in this area
		31-<42	BAL-19	Development proposed in this area
		42-<100	BAL-12.5	Development proposed in this area

ALL OTHER PLOTS ARE EITHER EXCLUDED UNDER CLAUSE 2.2.3.2 OR GREATER THAN 100 M FROM THE SUBJECT SITE

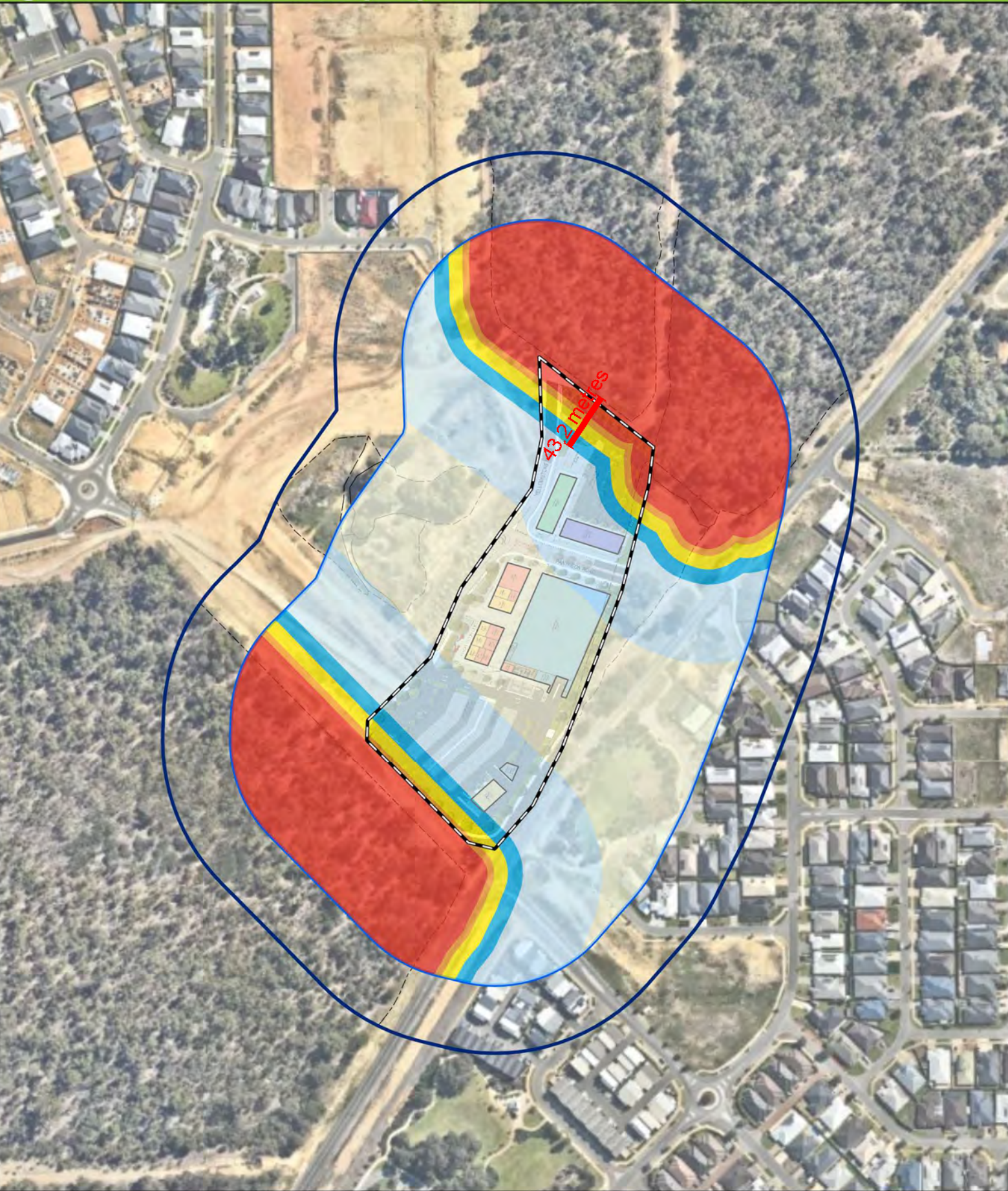
Based on the site assessment inputs and BAL assessment undertaken, the proposed North Baldivis Commercial Centre within the subject site has all buildings within the subject site are located in areas subject to BAL ratings of BAL-19 or lower.

2.3 Identification of issues arising from the BAL assessment

Vegetation within 100 m of the subject site, that also occurs within the bounds of the subdivision approval will be landscaped and maintained as excluded vegetation in accordance with clause 2.2.3.2 of AS 3959:2018 or to Asset Protection Zone (APZ) standards as discussed in section 3. Following this management, all buildings within the DA will be exposed to BAL ratings of \leq BAL-19.

Should there be any changes in development design or vegetation/hazard extent that requires a modified bushfire management response, then the above BAL ratings will need to be reassessed for the affected areas and documented in a brief addendum to this BMP.

Figure 6: Bushfire Attack Level (BAL) Contours Post-Development



Legend

- Subject site
- Buildings
- 100m site assessment
- 150m site assessment
- Bushfire Hazard Interface

Bushfire Attack Level (BAL)

- BAL - FZ
- BAL - 40
- BAL - 29
- BAL - 19
- BAL - 12.5
- BAL - LOW

0 30 60 120
Metres

Datum/Projection:
GDA 1994 MGA Zone 50

N

eco logical
AUSTRALIA
A TETRA TECH COMPANY

Prepared by: SM Date: 19/05/2021

3. Assessment against the Bushfire Protection Criteria

3.1 Compliance

The proposed development is required to comply with policy measures 6.2 and 6.5 of SPP 3.7 and the Guidelines. Implementation of this BMP is expected to meet objectives 5.1-5.4 of SPP 3.7.

In response to the above requirements of SPP 3.7 and the Guidelines, bushfire risk management measures, as outlined, have been devised for the proposed development in accordance with Guideline acceptable solutions to meet compliance with bushfire protection criteria.

Table 3 outlines the Acceptable Solutions (AS) that are relevant to the proposal and summaries how the intent of each Bushfire Protection Criteria has been achieved. No Performance Solutions (PS) have been proposed for this proposal. These management measures are depicted in Figure 7 where relevant.

Table 3: Summary of solutions used to achieve bushfire protection criteria

Bushfire Protection Criteria	AS	PS	N/A	Comment
Element 1: Location				
A1.1 Development location	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All proposed buildings within the subject site will be located in an area subject to BAL ratings of ≤BAL-19 or below (Figure 6; Figure 7). The proposed development is considered to be compliant with A1.1.
Element 2: Siting and design of development				
A2.1 Asset Protection Zone (APZ)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The proposed development has an APZ sufficient for the potential radiant heat flux to not exceed 29kW/m ² and will be managed in accordance with the requirements of 'Standards for Asset Protection Zones' (WAPC 2017; Appendix B). The APZ can be contained within the boundaries of the lot or managed in perpetuity in a low fuel state. The proposed development is considered to be compliant with A2.1.
Element 3: Vehicular access				
A3.1 Two access routes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are five proposed vehicular access points from the subject site that join onto the existing road network (Figure 7). All roads are public roads and comply with requirements outlined in the Guidelines (Appendix C). The proposed development is considered to be compliant with A3.1.
A3.2 Public road	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	One public road is proposed as part of this development (Pantheon Rd; Figure 7). This road complies with requirements outlined in the Guidelines (Appendix C). The proposed development is considered to be compliant with A3.2.
A3.3 Cul-de-sac	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No cul-de-sacs are proposed as part of this subdivision.
A3.4 Battle-axe	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No battle axe lots are proposed.

Bushfire Protection Criteria	AS	PS	N/A	Comment
A3.5 Private Driveway longer than 50 m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The proposed internal road network for the carparks is considered a private driveway. This network complies with the requirements outlined in the Guidelines (Appendix C). The proposed development is considered to be compliant with A3.5.
A3.6 Emergency Access way	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No emergency access way is required.
A3.7 Fire-service access routes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No fire service access routes are required or proposed.
A3.8 Firebreak width	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No fire breaks are required or proposed as the subject site area will be cleared and replaced with permanent structures, despite the area being larger than the required size for a firebreak as per the City of Rockingham Fire Control Notice (CoR, 2020).
Element 4: Water				The subject site will be connected to a reticulated water supply.
A4.1 Reticulated areas	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The proposed development is considered to be compliant with A4.1. A4.2 and A4.3 are not applicable to this proposed development.
A4.2 Non-Reticulated areas	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Reticulated water is present within the area.
A4.3 Individual Lots within non-reticulated areas	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Reticulated water is present within the area.
NOTE – AS- ACCEPTABLE SOLUTION, PS- PERFORMANCE SOLUTION, N/A- NOT APPLICABLE				

3.2 Additional Bushfire Requirements

The Guidelines state:

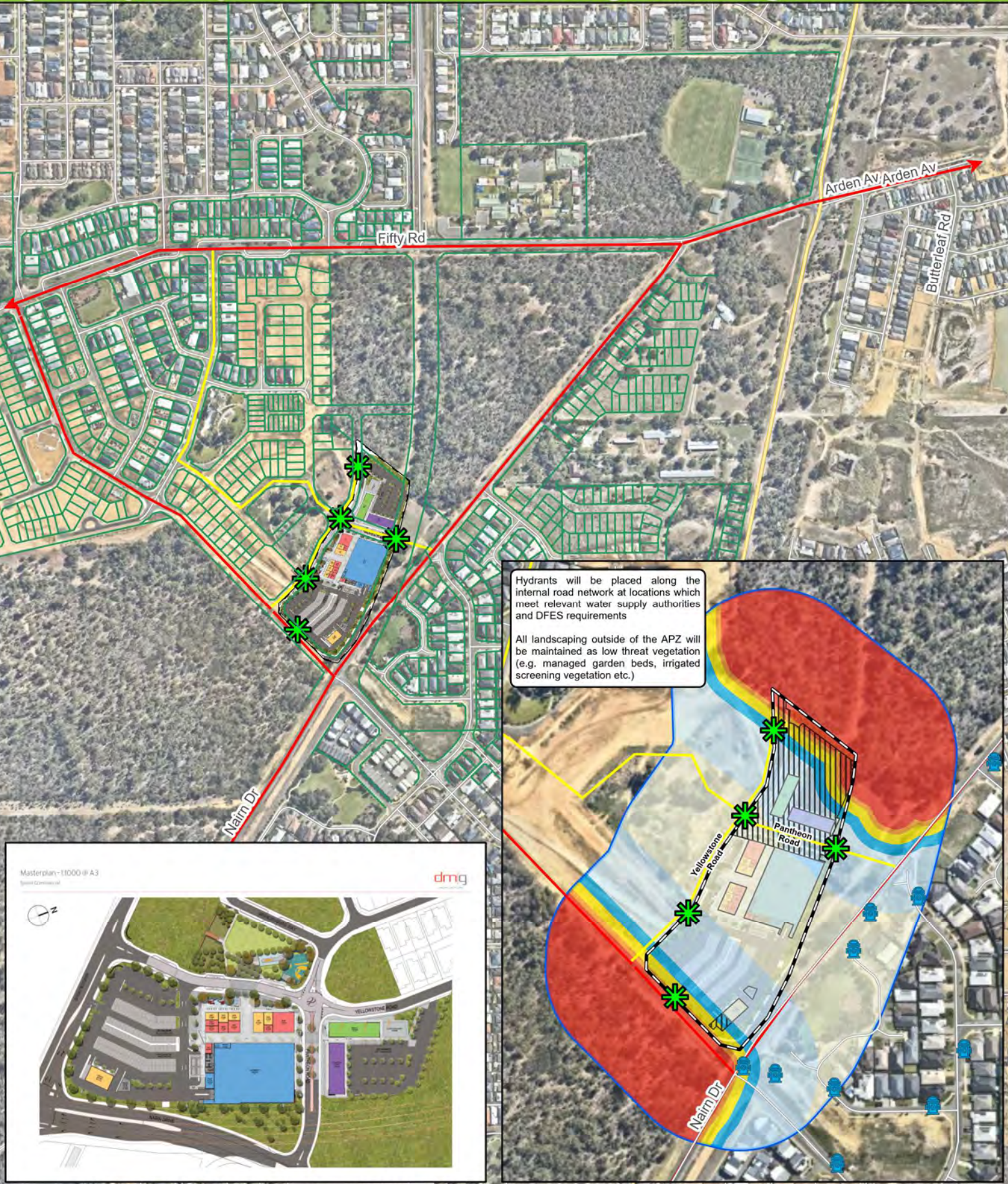
The bushfire construction requirements of the Building Code of Australia only apply to certain types of residential buildings (being Class 1, 2 or 3 buildings and/or Class 10a buildings or decks associated with a Class 1, 2 or 3 building) in designated bushfire prone areas. As such, AS 3959 does not apply to all buildings. Only vulnerable or high-risk land uses that fall within the relevant classes of buildings as set out in the Building Code of Australia will be required to comply with the bushfire construction requirements of the Building Code of Australia. As such, the planning process focuses on the location and siting of vulnerable and high-risk land uses rather than the application of bushfire construction requirements.

As none of the proposed structures is a Class 1, 2 or 3 building and/or Class 10a building or deck associated with a Class 1, 2 or 3 building, construction to AS 3959: 2018 is not required for this proposal.

The general fire safety construction provisions within the National Construction Code (NCC) are considered suitable for bushfire construction measures, however ember protection measures in sections 3 and 5 of AS 3959: 2018 are recommended to be incorporated where applicable.

All landscaping areas within the subject site will be maintained as low threat vegetation as per clause 2.2.3.2 (f) of AS 3959: 2018 or in accordance with Standards for Asset Protection Zones (Appendix B) as shown in Figure 7.

Figure 7: Spatial representation of the bushfire management strategies



Legend

- Subject site
- 100m site assessment
- Hydrant
- Access point
- APZ
- Proposed Cadastral Boundaries
- Access / egress route
- Future Access / egress route

Bushfire Attack Level (BAL)

- BAL - FZ
- BAL - 40
- BAL - 29
- BAL - 19
- BAL - 12.5
- BAL - LOW

0 65 130 260
Metres

Datum/Projection:
GDA 1994 MGA Zone 50

N

eco logical AUSTRALIA
A TETRA TECH COMPANY

Prepared by: SM Date: 12/08/2021

4. Implementation and enforcement

Implementation of the BMP applies to the developer, future owners within the subject site and the local government to ensure bushfire management measures are adopted and implemented on an ongoing basis. A summary of the bushfire management measures described in **Section 3**, as well as a works program, is provided in **Table 4**. These measures will be implemented to ensure the ongoing protection of life and property assets is achieved. Timing and responsibilities are also defined to assist with implementation of each measure.

Table 4: Proposed work program

No	Bushfire management measure	Responsibility
Prior to issue of titles		
1	Construct internal road network as per plan in Figure 7 .	Developer
2	Provide reticulated water supply to all lots and hydrants in accordance with Water Corporation Standard 'No. 63 Water Reticulation Standard' or other relevant standard if appropriate.	Developer
Prior to issue of Building Permit		
3	Ensure building is located outside BAL-FZ and BAL-40 as per the design in Figure 7 .	Developer
Prior to occupancy		
4	Ensure APZs are cleared and maintained around the development site depicted in Figure 7 .	Developer
5	Construct proposed building to relevant construction standard in AS 3959: 2018.	Owners
6	Ensure landscaping areas within the subject site outside of APZs are planted and maintained as low threat vegetation as per clause 2.2.3.2 (f) of AS 3959: 2018.	Developer
Ongoing management		
7	Maintain APZs to the standard in the Guidelines.	Owners

5. Conclusion

In the author's professional opinion, the bushfire protection requirements listed in this assessment provide an adequate standard of bushfire protection for the proposed development. As such, the proposed development is consistent with the aim and objectives of SPP 3.7 and associated guidelines and is recommended for approval.

6. References

City of Rockingham, Fire Control Notice, 2020. Fire Control Notice. Available from Fire control - City of Rockingham Prone Areas, [Online], Government of Western Australia, available from: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/Pages/default.aspx>

Department of Planning (DoP), 2016, *Visual guide for bushfire risk assessment in Western Australia*. DoP, Perth.

Standards Australia, 2018, *Construction of buildings in bushfire-prone areas, AS 3959:-2018* SAI Global, Sydney.

Western Australian Planning Commission, 2015, *State Planning Policy 3.7 Planning in Bushfire Prone Areas*. WAPC, Perth.

Western Australian Planning Commission, 2017, *Guidelines for Planning in Bushfire Prone Areas Version 1.3 (including appendices)*, WAPC, Perth.

Western Australian Planning Commission, 2019, *A guide to developing a Bushfire Emergency Evacuation Plan, October 2019*.

Appendix A – Classified Vegetation Photos

Plot	1	Classification or Exclusion Clause	Class A Forest
		Photo Point 1	
		Classified vegetation within this plot is comprised of trees to 30 m high with 30%-70% foliage cover, with an understory containing low trees and tall shrubs. This is an area of vegetation under Clause 2.2.3.1 of AS 3959: 2018 table 2.3 this plot is classified as Forest (A).	
Plot	1	Classification or Exclusion Clause	Class A Forest
		Photo Point 2	
		Classified vegetation within this plot is comprised of trees 30m high with 30%-70% foliage cover, with an understory containing low trees and tall shrubs. This is an area of vegetation under Clause 2.2.3.1 of AS 3959: 2018 table 2.3 and is classified as Forest (A).	
Plot	1	Classification or Exclusion Clause	Class A Forest
		Photo Point 3	
		Classified vegetation within this plot is comprised of trees 30m high with 30%-70% foliage cover, with an understory containing low trees and tall shrubs. This is an area of vegetation under Clause 2.2.3.1 of AS 3959: 2018 table 2.3 and is classified as Forest (A).	
Plot	1	Classification or Exclusion Clause	Class A Forest
		Photo Point 4	
		Classified vegetation within this plot is comprised of trees 30m high with 30%-70% foliage cover, with an understory containing low trees and tall shrubs. This is an area of vegetation under Clause 2.2.3.1 of AS 3959: 2018 table 2.3 and is classified as Forest (A).	

Plot	2	Classification or Exclusion Clause	Class B Woodland
------	---	------------------------------------	------------------

Photo Point 5

Classified vegetation within this plot is comprised of trees 10-30m tall with foliage cover of 10%-30% and an understory containing isolated shrubs. This plot is an area of vegetation under Clause 2.2.3.1 of AS 3959: 2018 table 2.3 and is classified as Woodland (B).



Plot	3	Classification or Exclusion Clause	Class C Shrubland
------	---	------------------------------------	-------------------

Photo Point 6

Classified vegetation within this plot is comprised of shrubs <2m high with >30% foliage cover. This is an area of vegetation under Clause 2.2.3.1 of AS 3959: 2018 table 2.3 and is classified as Shrubland (C).



Plot	4	Classification or Exclusion Clause	Class G Grassland
------	---	------------------------------------	-------------------

Photo Point 7

Classified vegetation within this plot is comprised of shrubs and grasses. This is an area of vegetation under Clause 2.2.3.1 of AS 3959: 2018 table 2.3 and is classified as Grassland (G).



Plot	5	Classification or Exclusion Clause	Excluded AS 3959: 2018 2.2.3.2 (e) & (f)
------	---	------------------------------------	--

Photo Point 8

Non-vegetated area that is permanently cleared of vegetation. This area also has plan to potentially become a road in the future. This plot has been excluded under Clause 2.2.3.2 (e) and (f) of AS 3959: 2018.



Plot	5	Classification or Exclusion Clause	Excluded AS 3959: 2018 2.2.3.2 (e) & (f)
------	---	------------------------------------	--

Photo Point 9

Non-vegetated area that is permanently cleared of vegetation. This area has future develop plans. This plot has been excluded under Clause 2.2.3.2 (e) of AS 3959: 2018.



Plot	5	Classification or Exclusion Clause	Excluded AS 3959: 2018 2.2.3.2 (e) & (f)
------	---	------------------------------------	--

Photo Point 10

Vegetation present is regarded as low threat due to factors such as flammability, moisture content and fuel load. Due to future landscaping plans for this area it has been excluded under Clause 2.2.3.2 (e) and (f) of AS 3959: 2018.



Plot	5	Classification or Exclusion Clause	Excluded AS 3959:- 018 2.2.3.2 (e) & (f)
------	---	------------------------------------	--

Photo Point 11

Non-vegetated area that is permanently cleared of vegetation, containing roads and buildings. This plot has been excluded under Clause 2.2.3.2 (e) and (f) of AS 3959: 2018.



Plot	5	Classification or Exclusion Clause	Excluded AS 3959: 2018 2.2.3.2 (e) & (f)
------	---	------------------------------------	--

Photo Point 12

Vegetation present is regarded as low threat due to factors such as flammability, moisture content and fuel load as it is parkland. This plot has been excluded under Clause 2.2.3.2 (e) and (f) of AS 3959: 2018.



Appendix B – Standards for Asset Protection Zones

The following standards have been extracted from the *Guidelines for Planning in Bushfire Prone Areas v 1.3* (WAPC 2017).

Every habitable building is to be surrounded by, and every proposed lot can achieve, an APZ depicted on submitted plans, which meets the following requirements:

a. Width: Measured from any external wall or supporting post or column of the proposed building, and of sufficient size to ensure the potential radiant heat impact of a fire does not exceed 29kW/m^2 (BAL-29) in all circumstances.

b. Location: the APZ should be contained solely within the boundaries of the lot on which a building is situated, except in instances where the neighbouring lot or lots will be managed in a low-fuel state on an ongoing basis, in perpetuity (see explanatory notes).

c. Management: the APZ is managed in accordance with the requirements of 'Standards for Asset Protection Zones' (below):

- Fences: within the APZ are constructed from non-combustible materials (e.g. iron, brick, limestone, metal post and wire). It is recommended that solid or slatted non-combustible perimeter fences are used
- Objects: within 10 metres of a building, combustible objects must not be located close to the vulnerable parts of the building i.e. windows and doors
- Fine Fuel load: combustible dead vegetation matter less than 6 millimetres in thickness reduced to and maintained at an average of two tonnes per hectare
- Trees (> 5 metres in height): trunks at maturity should be a minimum distance of 6 metres from all elevations of the building, branches at maturity should not touch or overhang the building, lower branches should be removed to a height of 2 metres above the ground and or surface vegetation, canopy cover should be less than 15% with tree canopies at maturity well spread to at least 5 metres apart as to not form a continuous canopy (**Figure 8**).

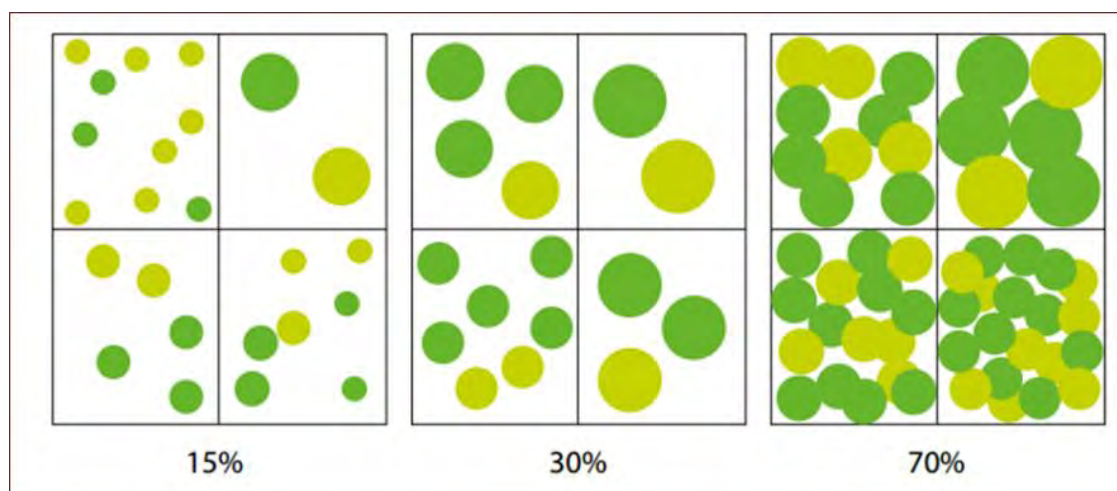


Figure 8: Illustrated tree canopy cover projection (WAPC 2017)

- **Shrubs (0.5 metres to 5 metres in height):** should not be located under trees or within 3 metres of buildings, should not be planted in clumps greater than 5m² in area, clumps of shrubs should be separated from each other and any exposed window or door by at least 10 metres. Shrubs greater than 5 metres in height are to be treated as trees
- **Ground covers (<0.5 metres in height):** can be planted under trees but must be properly maintained to remove dead plant material and any parts within 2 metres of a structure, but 3 metres from windows or doors if greater than 100 millimetres in height. Ground covers greater than 0.5 metres in height are to be treated as shrubs
- **Grass:** should be managed to maintain a height of 100 millimetres or less.

Additional notes

The Asset Protection Zone (APZ) is an area surrounding a building that is managed to reduce the bushfire hazard to an acceptable level. Hazard separation in the form of using subdivision design elements or excluded and low threat vegetation adjacent to the lot may be used to reduce the dimensions of the APZ within the lot.

The APZ should be contained solely within the boundaries of the lot on which the building is situated, except in instances where the neighbouring lot or lots will be managed in a low-fuel state on an ongoing basis, in perpetuity. The APZ may include public roads, waterways, footpaths, buildings, rocky outcrops, golf courses, maintained parkland as well as cultivated gardens in an urban context, but does not include grassland or vegetation on a neighbouring rural lot, farmland, wetland reserves and unmanaged public reserves.

Appendix C - Vehicular access technical requirements (WAPC 2017)

Technical requirements	Public road	Cul-de-sac	Private driveway	Emergency access way	Fire service access route
Minimum trafficable surface (m)	6*	6	4	6*	6*
Horizontal distance (m)	6	6	6	6	6
Vertical clearance (m)	4.5	N/A	4.5	4.5	4.5
Maximum grade <50 m	1 in 10	1 in 10	1 in 10	1 in 10	1 in 10
Minimum weight capacity (t)	15	15	15	15	15
Maximum crossfall	1 in 33	1 in 33	1 in 33	1 in 33	1 in 33
Curves minimum inner radius	8.5	8.5	8.5	8.5	8.5
* Refer to E3.2 Public roads: Trafficable surface					

Appendix D – Local Government Firebreak Notice

Firebreak specifications for the City of Rockingham under the Fire Control Notice, 2020. The six specifications for firebreaks in the City of Rockingham have requirements including width and height of fire break as well as the surface structure of the firebreak. All requirements can be found in the link below under the Fire Control Notice tab. For the subject site due to it being less than an area of 4047m² no firebreak is required.

[Fire control - City of Rockingham](#)



Road: Eighty Rd south of Fifty Rd
Direction: Combined
Vehicles: All Vehicles
Date: 7/12/2020 - 13/12/2020

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday - Friday	Monday - Sunday
0:00	13	11	12	16	12	27	41	13	19
1:00	5	2	8	3	8	20	17	5	9
2:00	8	6	8	7	5	10	20	7	9
3:00	8	4	13	10	9	7	9	9	9
4:00	29	34	30	30	29	13	7	30	25
5:00	94	109	113	114	100	35	20	106	84
6:00	159	165	159	171	159	64	43	163	131
7:00	226	219	204	210	214	142	79	215	185
8:00	483	533	528	517	518	266	140	516	426
9:00	253	253	294	281	292	318	222	275	273
10:00	257	257	277	259	328	384	305	276	295
11:00	283	279	261	270	306	357	403	280	308
12:00	267	259	247	242	326	371	285	268	285
13:00	244	269	259	284	318	353	344	275	296
14:00	385	379	379	389	383	338	350	383	372
15:00	561	586	558	531	576	277	300	562	484
16:00	475	485	481	492	464	317	290	479	429
17:00	513	494	474	474	441	253	286	479	419
18:00	343	363	334	352	348	222	215	348	311
19:00	220	243	275	286	285	243	207	262	251
20:00	184	203	161	198	254	217	172	200	198
21:00	90	89	94	125	146	145	95	109	112
22:00	49	35	45	56	63	85	43	50	54
23:00	13	28	25	27	55	49	15	30	30
Total	5162	5305	5239	5344	5639	4513	3908	5338	5016

Road: Eighty Rd south of Fifty Rd
Direction: Northbound
Vehicles: All Vehicles
Date: 7/12/2020 - 13/12/2020

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday - Friday	Monday - Sunday
0:00	6	3	6	7	7	9	19	6	8
1:00	4	1	4	1	3	8	9	3	4
2:00	3	3	4	4	1	4	10	3	4
3:00	4	0	9	4	7	4	6	5	5
4:00	21	25	24	24	20	6	3	23	18
5:00	75	82	88	87	75	25	12	81	63
6:00	119	121	117	118	105	39	26	116	92
7:00	137	141	132	125	126	71	43	132	111
8:00	237	260	257	258	250	127	76	252	209
9:00	137	118	140	130	138	161	110	133	133
10:00	119	142	143	143	174	203	161	144	155
11:00	137	131	140	127	165	172	194	140	152
12:00	145	125	119	126	151	197	125	133	141
13:00	109	137	123	143	149	149	166	132	139
14:00	218	213	218	197	206	164	164	210	197
15:00	181	186	164	153	210	127	156	179	168
16:00	157	160	160	157	146	149	148	156	154
17:00	206	186	186	176	174	119	144	186	170
18:00	139	150	148	155	157	114	104	150	138
19:00	99	119	125	134	135	129	107	122	121
20:00	107	100	78	101	121	102	82	101	99
21:00	46	50	44	64	72	69	46	55	56
22:00	22	20	15	27	27	40	15	22	24
23:00	6	14	9	9	23	22	9	12	13
Total	2434	2487	2453	2470	2642	2210	1935	2497	2376

Road: Eighty Rd south of Fifty Rd
Direction: Southbound
Vehicles: All Vehicles
Date: 7/12/2020 - 13/12/2020

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday - Friday	Monday - Sunday
0:00	7	8	6	9	5	18	22	7	11
1:00	1	1	4	2	5	12	8	3	5
2:00	5	3	4	3	4	6	10	4	5
3:00	4	4	4	6	2	3	3	4	4
4:00	8	9	6	6	9	7	4	8	7
5:00	19	27	25	27	25	10	8	25	20
6:00	40	44	42	53	54	25	17	47	39
7:00	89	78	72	85	88	71	36	82	74
8:00	246	273	271	259	268	139	64	263	217
9:00	116	135	154	151	154	157	112	142	140
10:00	138	115	134	116	154	181	144	131	140
11:00	146	148	121	143	141	185	209	140	156
12:00	122	134	128	116	175	174	160	135	144
13:00	135	132	136	141	169	204	178	143	156
14:00	167	166	161	192	177	174	186	173	175
15:00	380	400	394	378	366	150	144	384	316
16:00	318	325	321	335	318	168	142	323	275
17:00	307	308	288	298	267	134	142	294	249
18:00	204	213	186	197	191	108	111	198	173
19:00	121	124	150	152	150	114	100	139	130
20:00	77	103	83	97	133	115	90	99	100
21:00	44	39	50	61	74	76	49	54	56
22:00	27	15	30	29	36	45	28	27	30
23:00	7	14	16	18	32	27	6	17	17
Total	2728	2818	2786	2874	2997	2303	1973	2841	2640

The background of the entire page is a photograph of a stone wall. A large, dark, rectangular sign is mounted on the wall, featuring the word "spires" in a light-colored, lowercase, serif font. The sign is secured with several screws. To the right of the sign, a portion of a red, curved architectural element is visible. The overall image is dimmed to serve as a background for the text.

spires

SPIRES ESTATE TOWN CENTRE

LANDSCAPE DA REPORT

AUGUST 2021



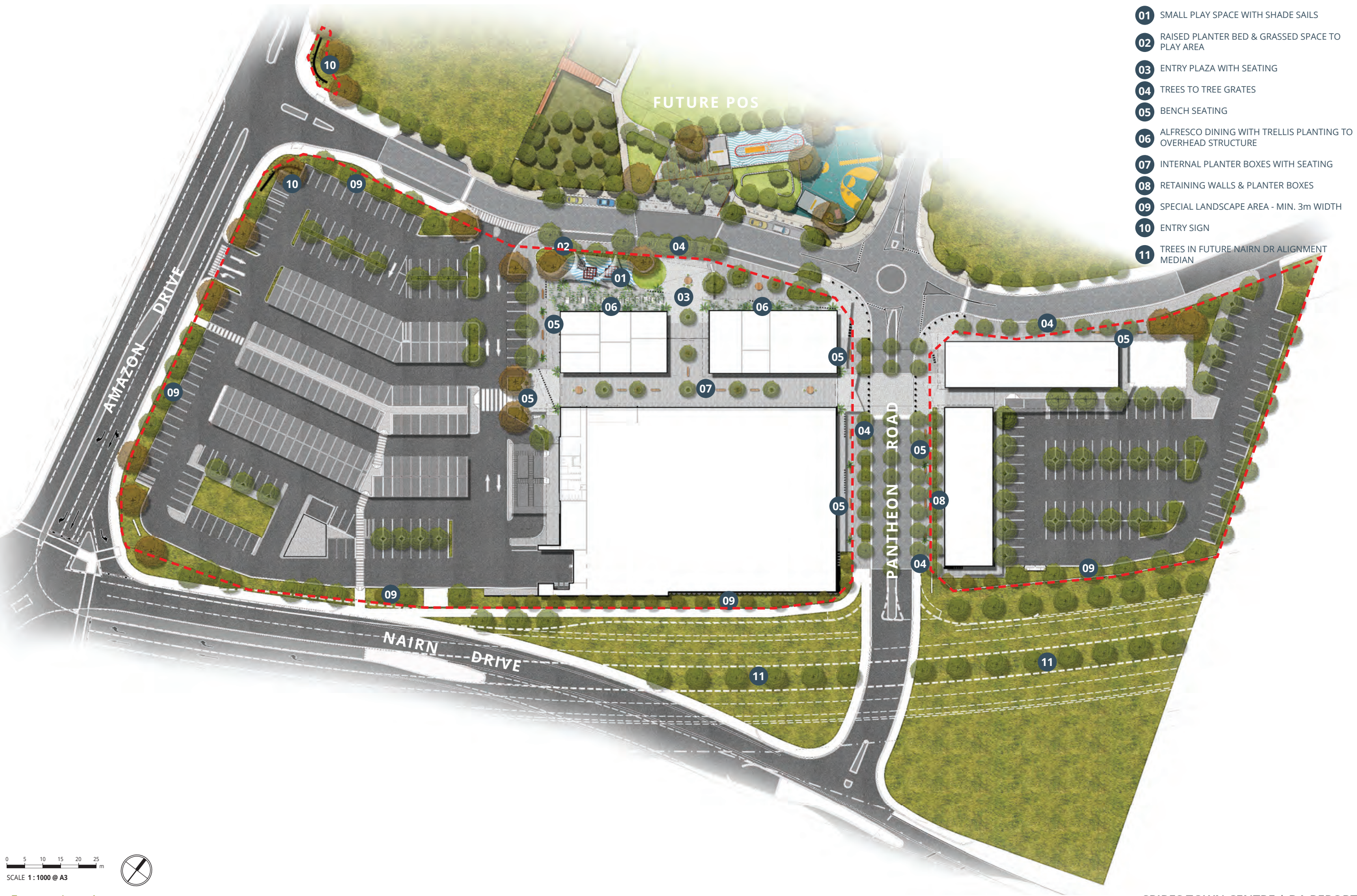


Contents

- 1.0 Landscape Masterplan 4
- 2.0 Character Images 5
- 3.0 Detailed Landscape Plan - Alfresco 6
- 4.0 Alfresco Sections 7
- 5.0 Paving Treatments 8
- 6.0 Material Palette10
- 7.0 Furniture Palette11
- 8.0 Planting Palette12

REVISION	DATE	ISSUE OR AMENDMENT	BY	REVIEWED
A	28/04/2021	ISSUE FOR DEVELOPMENT APPLICATION	MM	SC
B	04/06/2021	ROAD PAVING AMENDMENT	MM	SC
C	13/08/2021	COUNCIL COMMENTS AMENDMENT	MM	SC

1.0 Landscape Masterplan



2.0 Character Images



3.0 Detailed Landscape Plan - Alfresco



4.0 Alfresco Sections



SECTION A
1:100

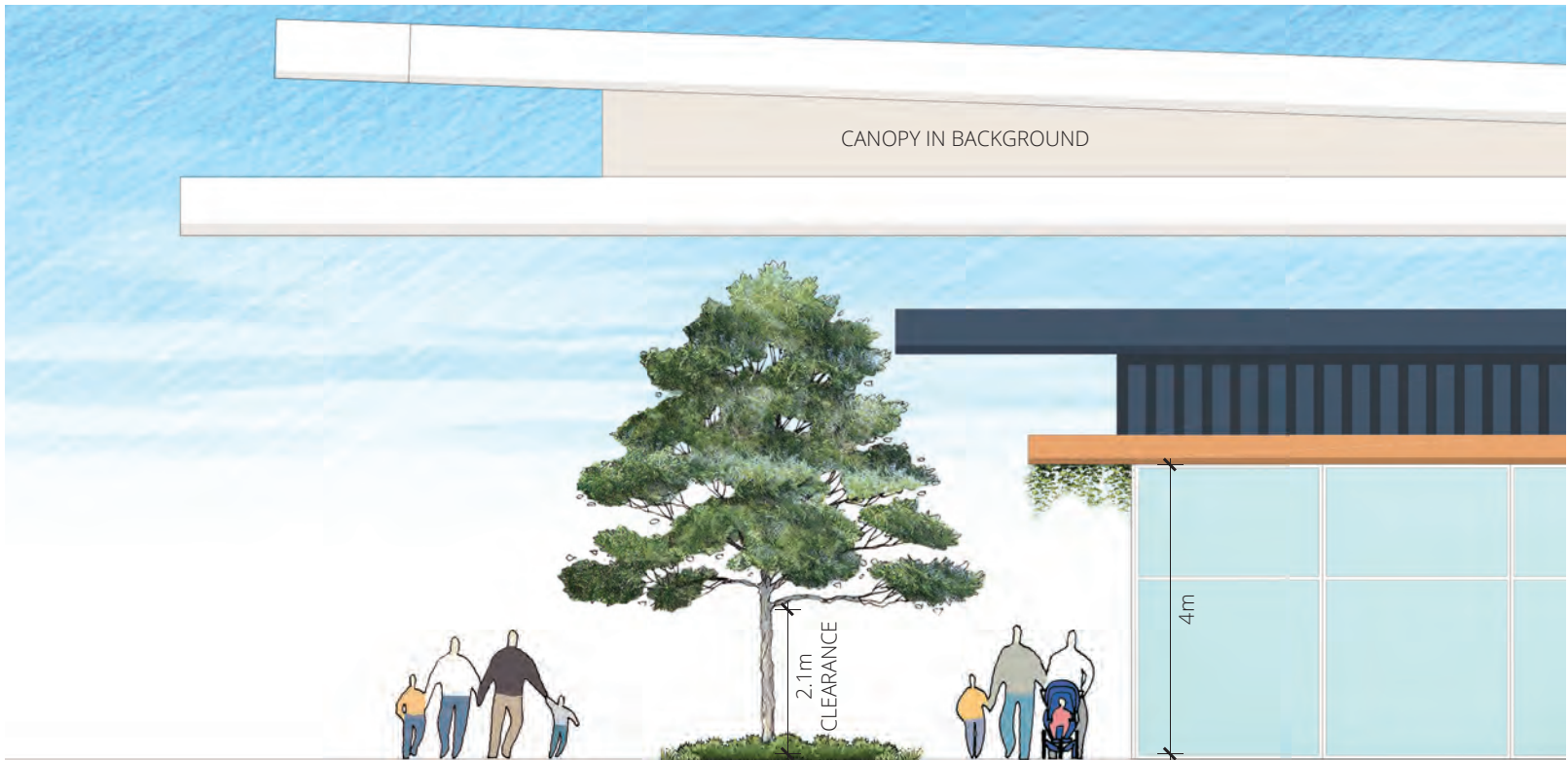
PLAYGROUND
DESIGN INDICATIVE ONLY

MIN 2.1m
WALKWAY

ALFRESCO

MIN 2.1m
WALKWAY

TENANCIES



SECTION B
1:100

PLAZA AREA

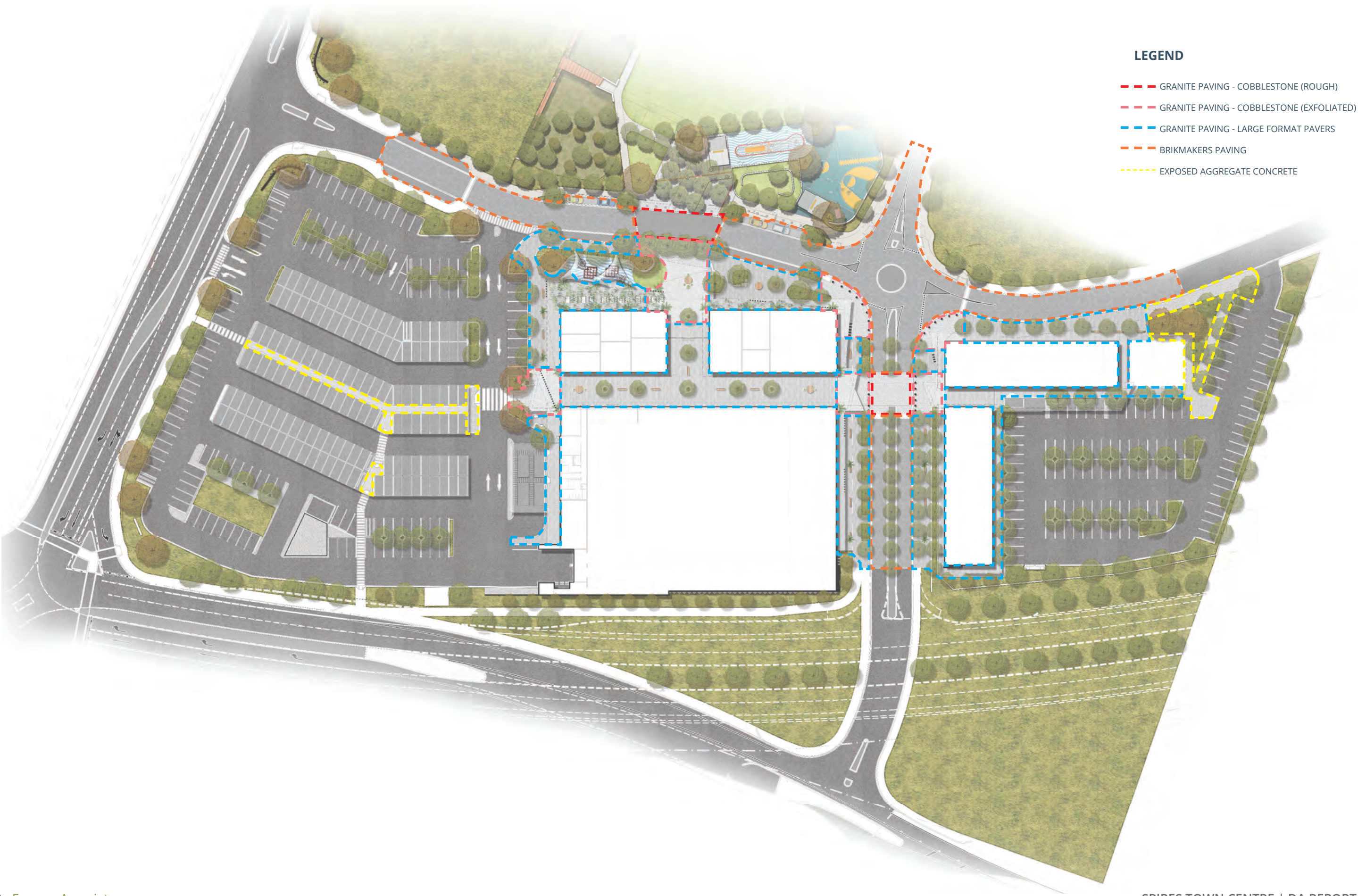
GARDEN BEDS & SEATING

2.1m
CLEARANCE

MIN 2.1m
WALKWAY

TENANCIES

5.0 Paving Treatments



GRANITE PAVING ROAD & PEDESTRIAN TREATMENT



CHARCOAL EXFOLIATED GRAPHITE EXFOLIATED LAKESIDE EXFOLIATED

BRICKMAKERS PAVING ROAD TREATMENT



BRICKMAKERS STONEWASH CHARCOAL BRICKMAKERS STONEWASH GREY BRICKMAKERS SILVER

EXPOSED AGGREGATE CONCRETE TREATMENT



HOLCIM 'JARRAH'



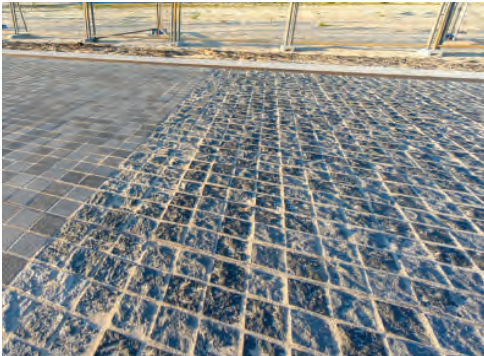
EXFOLIATED ROUGH CUT



6.0 Material Palette



FEATURE GRANITE PAVING
Granite Paving to Pedestrian Areas
Size: 600x300x40mm Finish: Exfoliated



FEATURE GRANITE COBBLESTONE PAVING
Granite Cobblestone to Feature Areas
Size: 100 x 100x 80mm Finish: Exfoliated



EXPOSED AGGREGATE
Colour: Jarrah. Supplier: Holcim
Finish: Honed



SEATING WALL
Gabion Wall with Recycled Infill



SEATING WALL
Precast Concrete Wall

OPTIONAL MATERIALS (SUBJECT TO FURTHER DETAILED DESIGN) TO TIE INTO ADJACENT POS MATERIAL PALETTE



RUBBER SOFTFALL
Patterned Rubber Softfall to Australian Standards



CRUSHED GRAVEL
Summerstone Fines to informal seating areas



SEATING WALL
Recycled Red Brick



DECKING & TIMBER FURNITURE
Spo. ed Gum Timber. Finish: Natural Oiled



FEATURE PAVING
Recycled Red Brick Paving
Finish: Cleaned Recycled

7.0 Furniture Palette



DECO by QUATRO DESIGN
2200 Deco Bench Seat & 750mm Planter
L 2200 mm x H 450 mm



TWIG by QUATRO DESIGN
L 2370 mm x H 460 mm



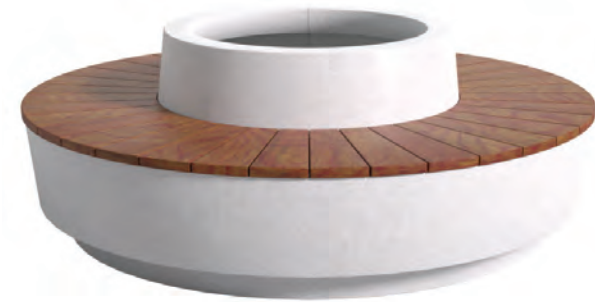
POD MODULAR SEATING by QUATRO DESIGN
1200 Pod Cylindrical Seat
D 1200 mm x H 450 mm



POD MODULAR SEATING by QUATRO DESIGN
500 Pod Cylindrical Seat / Bollard
D 500 mm x H 450 mm



DECO by QUATRO DESIGN
3200 Deco Bench & Timber
L 3200 mm x H 450 mm



SOUL SEATING & PLANTERS by QUATRO DESIGN
2200 Soul Seat, Timber Top & Centre Planter
D 2200 mm x H 500 mm



SOUL SEATING & PLANTERS by QUATRO DESIGN
2200 Soul Seat & Timber Top
D 2200 mm x H 500 mm



SOUL SEATING & PLANTERS by QUATRO DESIGN
2200 Soul Seat & Centre Planter
D 2200 mm x H 500 mm



CRUSTAL BINS by MMCITE
CS330 - CS331
Triple li. er bin for recycling



CUSTOM LASERCUT CORTEN STEEL TREE GRATE
1200mm x 1200mm
Final Design TBC



BIKE RACKS by MMCITE
ELK110 Bicylce Stands



SLIM BOLLARDS by STREET FURNITURE AUSTRALIA
Slim Bollards

8.0 Planting Palette

TREES



Delonix regia
'Royal Poinciana'



Lagerstroemia indica x *L. fauriei*
'Natchez'



Pyrus calleryana
'Bradford'



Bauhinia blakeana
'Hong Kong Orchid Tree'



Agonis flexuosa
'WA Peppermint'



Eucalyptus torquata
'Coral Gum'

GROUNDCOVERS



Dichondra repens
'Silver Falls'



Trachelospermum jasminoides
'Chinese Star Jasmine'



Senecio mandraliscae
'Blue Chalk Sticks'



Casuarina glauca
'Cousin It'



Myoporum parvifolium
'Creeping Boobialla'



Hibbertia scandens
'Golden Guinea Vine'

SHADE PLANTING



Alpinia caerulea
'Na. ve Ginger'



Alocasia
'Elephant Ears'



Rhaps excelsa
'Rhaps Palm'



Philodendron
'Xanadu'



Asplenium nidus
'Bird's Nest Fern'



Zamia furfuracea
'Cardboard Palm'

FEATURE

SHRUBS



Lomandra confertifolia
'Seascape'



Lomandra longifolia
'Tanika'



Pl. osporum
'Miss Muffet'



Strelitzia reginae
'Bird of Paradise'



Leucospermum cordifolium
Nodding Pincushion



Syzygium australe
'Big Red'



Viburnum odoratissimum
'Sweet Viburnum'



Banksia ashbyi dwarf
'Ashby's Banksia'



Syzygium
'Tiny Trev'



Westringia fruticosa
'Coastal Rosemary'



Olearia lanuginosa
'Ghost Town'



Melaleuca incana
'Nana'

SCREENING PLANTS TO *SPECIAL LANDSCAPING ZONE*



Raphiolepis indica
'Oriental Pearl'



Westringia fruticosa
'Coastal Rosemary'



Raphiolepis indica
'Cosmic White'



Rinocarpus pinifolius
'Wedding Bush'



Grevillea olivacea



Adenanthos sericeus
'Woolly Bush'



Spires Commercial

Lot 9005, Future Lot 461 Nairn Drive & Lot 462 Eighty Road



Friday 16h August 2021

dm|g

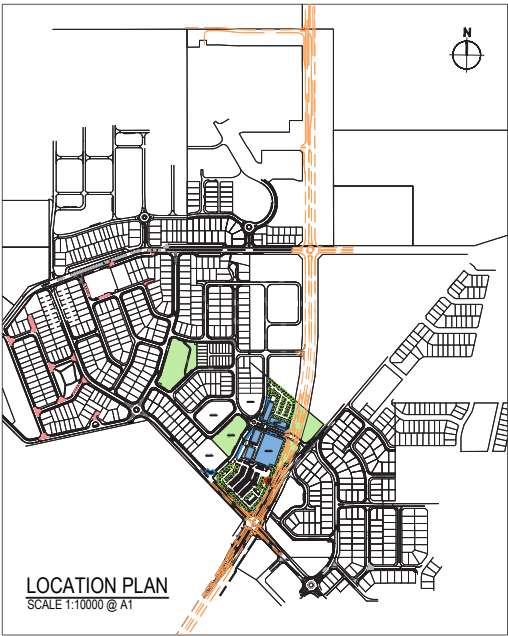
Subdivision Plan - 1:2000 @ A3

Spires Commercial



SUBJECT SITE
BOUNDARY

N
LOCATION PLAN
SCALE 1:1000 @ A1



Lot Boundaries and Topography - 1:2000 @ A3

Spires Commercial





List of changes

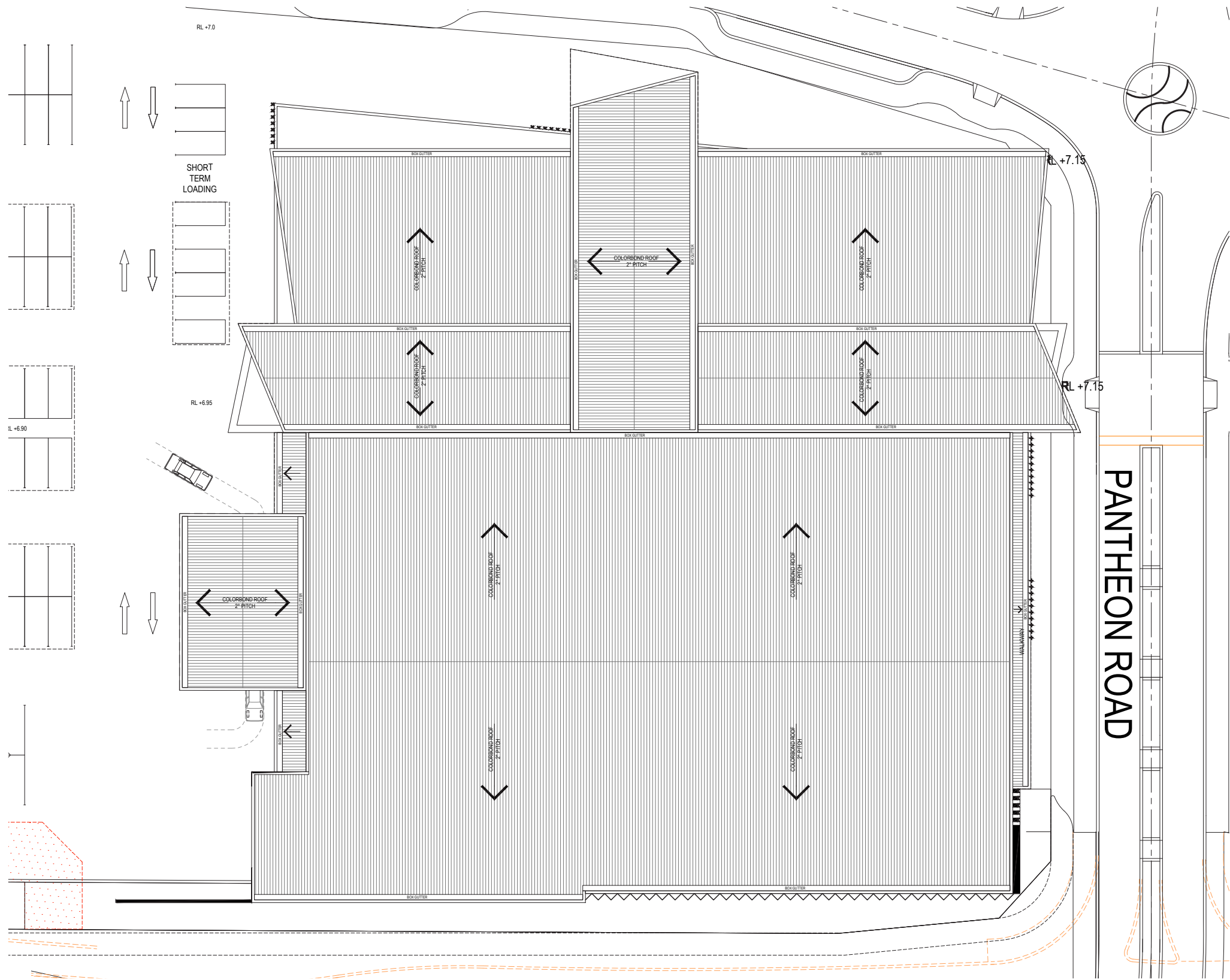
Spires Commercial



2. The external carpark bin store has been retained in the original position shown. We have also shown a bin store adjacent to the supermarket parcel pick up/ amenities. This is to allow retailers (other than the supermarket) to temporarily store waste during the normal course of the day prior to transfer to the external waste point in the carpark after hours.
• Note that waste collection for the supermarket is stored & collected in a dedicated waste area within the supermarket loading area. We understand Talis are preparing a supermarket specific WMP to describe this in detail (per next point below).
4. Medical centre floor area is 550m². The previous difference was the area occupied by the amenities & end of trip facility.
5. The pad site area now has landscaping & carparking provided until the pad mount site is developed.
7. Kerb shapes at corners have been adjusted and the width of the aisle increased to 6800mm from the previous 6500mm at the waste collection area to alleviate this swept path. Waste collection would take place outside of hours to minimise the very short term impact to parking traffic flows at times of collection.
9. Dedicated service area provided for the supermarket as this is the primary waste generator.
10. Bin store position for the northern site is considered appropriate for for the proposed tenancy uses minimal impact collection and low waste generation. Refer comments above regarding bin store to southern site.
11. A separate entry (6.0m wide) & exit (4.0m wide) has been provided for both sites. The car parking bays located to the south of the shopping centre have a low kerb & no obstruction so are shown as 4800mm spaces. (AS2890.1 2.4.1 where a vehicle may overhang the end of a space, e.g. at a kerb, provided the first 600mm immediately behind it is unobstructed, is not another parking space and is not required as a footway or for some similar purpose, space lengths measured parallel to the parked vehicle may be reduced by 600mm.). The bin store dimension has been adjusted to suit 300mm width however the aisle of the car parking adjacent to the bin store is already wider than AS2890.1 requires.
17. Short term loading has been relocated to the front of the retail rather than across the roadway. This is intended for van deliveries for small tenancies.
18. Previous issue had some spot levels that were incorrect. Compliance with AS1428 is mandatory and will be provided throughout.
19. Additional trolley bays have been provided on the revised plans. Note that these are well over and above the actual supermarket brief requirements.
31. The supermarket corner is the only exception. We believe this reduction is justified as this is an important 'landmark' junction with architectural emphasis for wayfinding. Truncation is an undesirable compromise to the architectural importance of this prominent entry corner of the development.
34. Pedestrian movement between shopfront and alfresco dining area are fully covered and unobstructed. This integrated pedestrian movement adds to the vibrancy and activation of these street frontages.
38. We have added a pedestrian connection from Nairn Drive that provides access to the central pedestrian spine & future fast food pad site. A 2nd Nairn Drive pedestrian access point was considered but created conflict with the loading areas.
39. Levels have been modified based on civil engineering input. Universal access will be provided throughout. This will be further detailed in the BP issue. The minor level change between the proposed shopping centre and recreation centre was intentional however we reworked levels with civil engineering input to include a retaining wall to the Nairn Drive frontage to lower the floor level of the recreation centre and medical to align with the supermarket. The minor level change between the medical centre and recreation was intentional and accommodated within shop frontages and paving however have now been adjusted based on civil engineering input.
40. The proposed Fast Food outlet area has been paved & landscaped for stage 1 and will be the subject of a future development application once the final operator requirements are confirmed.
42. Screen/ gate will be provided at each entry point to allow the central spine of the mall to be secured after hours. Lighting to be provided in accordance with CEPTD principles.

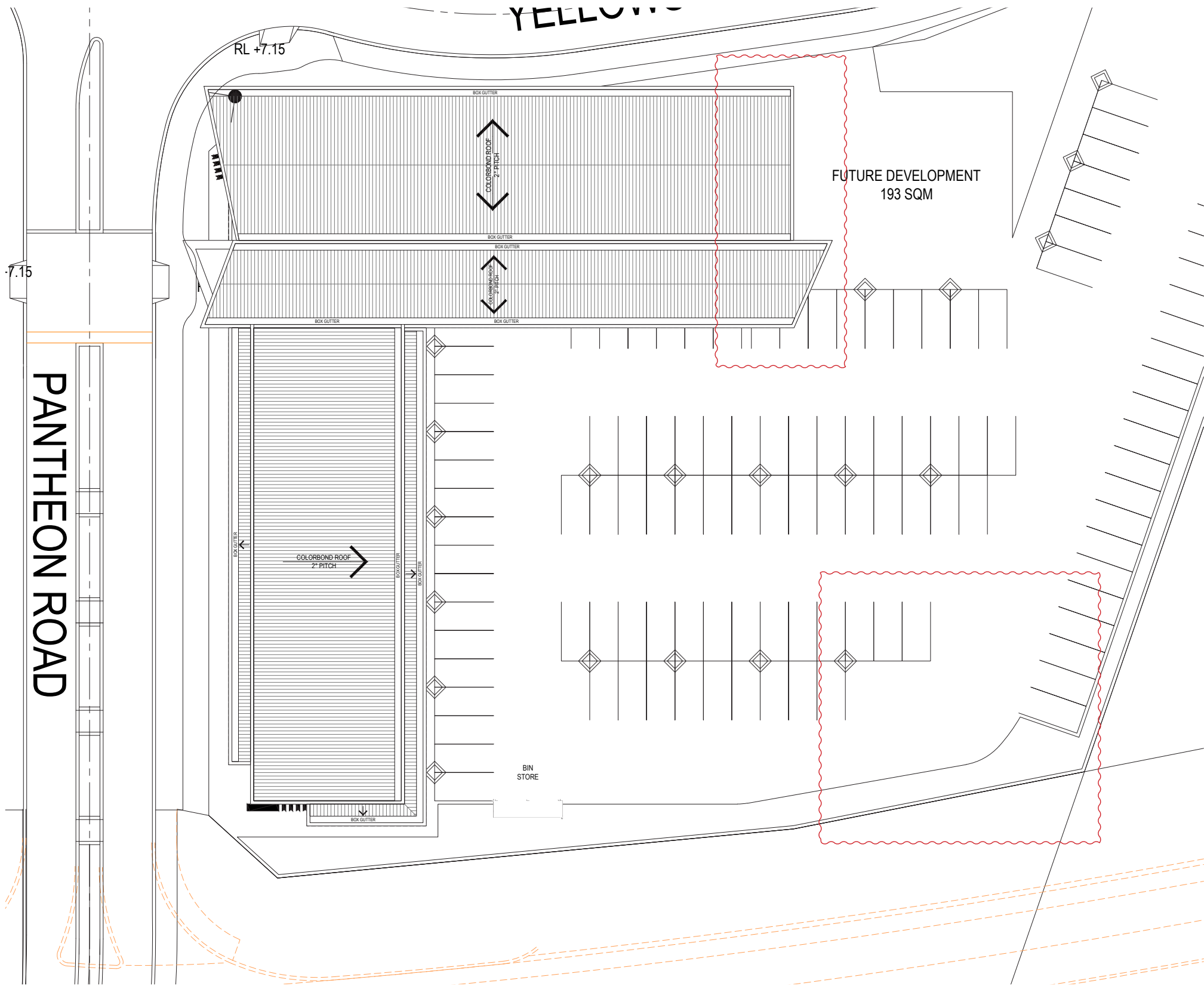
Shopping Centre Roof Plan - 1:500 @ A3

Spires Commercial



Commercial Centre Roof Plan - 1:500 @ A3

Spires Commercial



Shopping Centre Elevations - 1:400 @ A3

Spires Commercial



Project Palette

Spires Commercial



Timber Cladding



Folded Perforated Metal Cladding



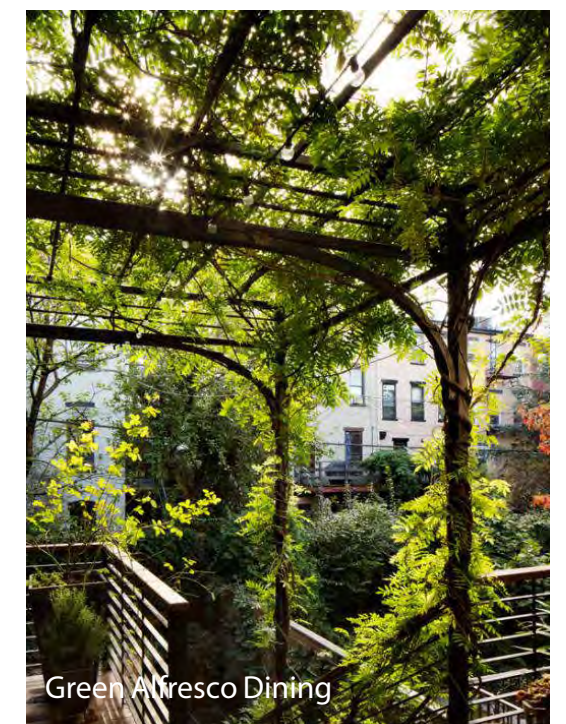
Profiled Metal Cladding



Timber Battened Ceiling



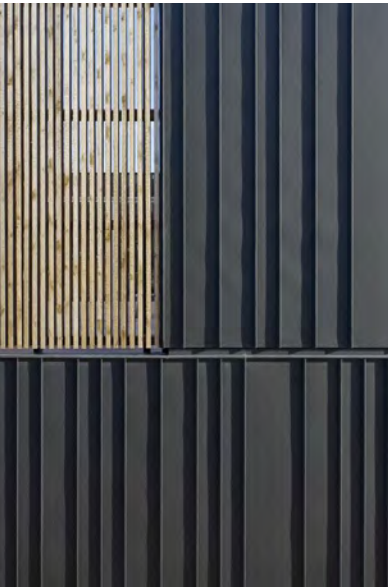
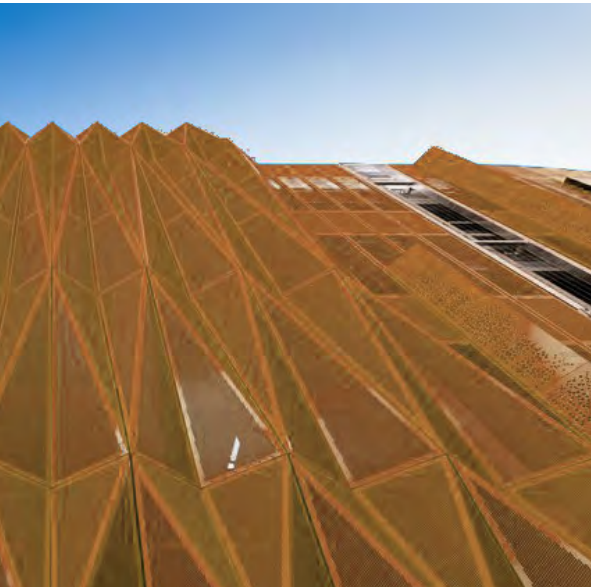
Corten



Green Alfresco Dining

Shopping Centre Elevations - 1:400 @ A3

Spires Commercial



Project Palette

Spires Commercial



Corten Mesh



Feature Canopy



Feature Basalt Paving



Granite Paving



Commissioned Local Artwork (Example Only)



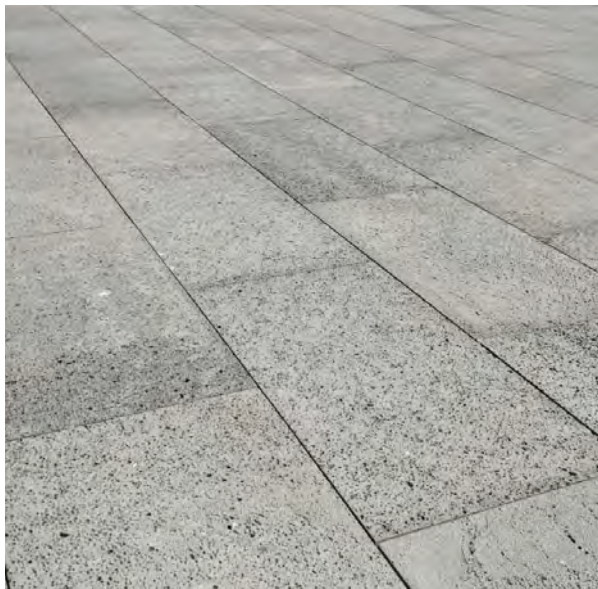
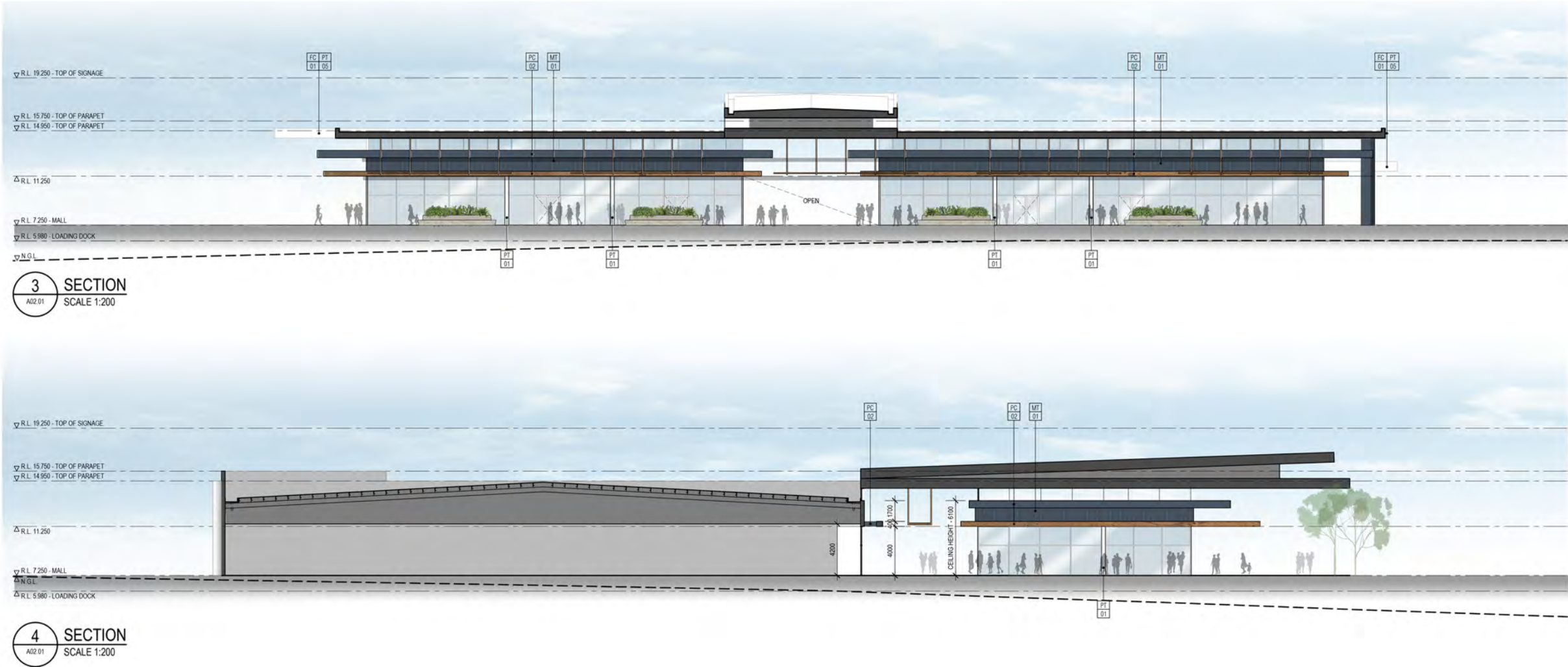
Shopping Centre Sections - 1:400 @ A3

Spires Commercial



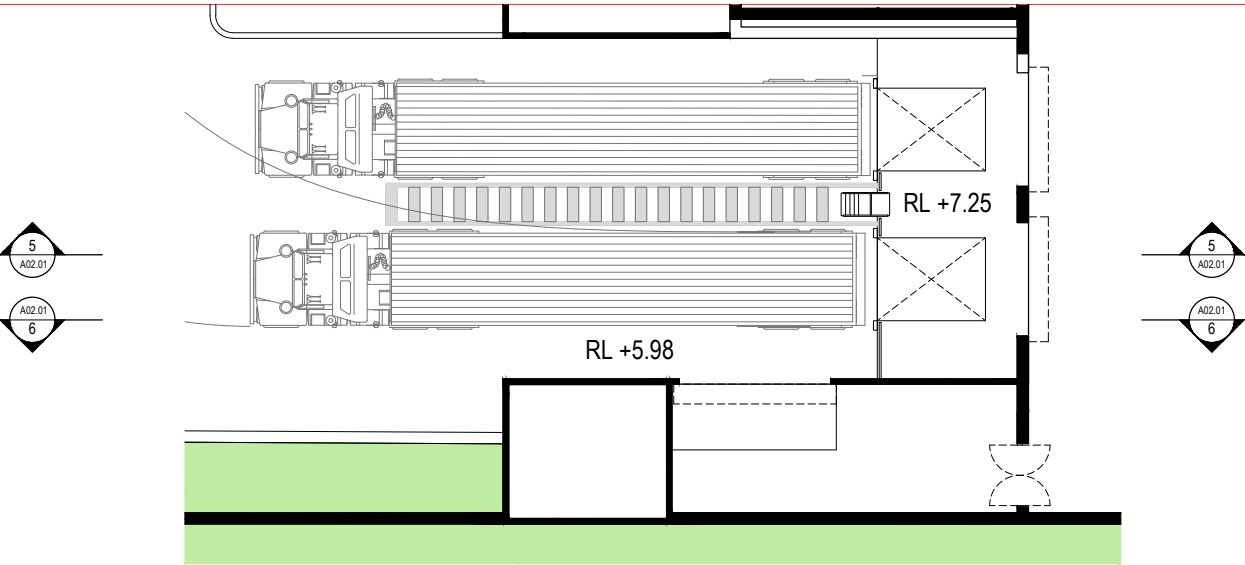
Shopping Centre Sections - 1:400 @ A3

Spires Commercial

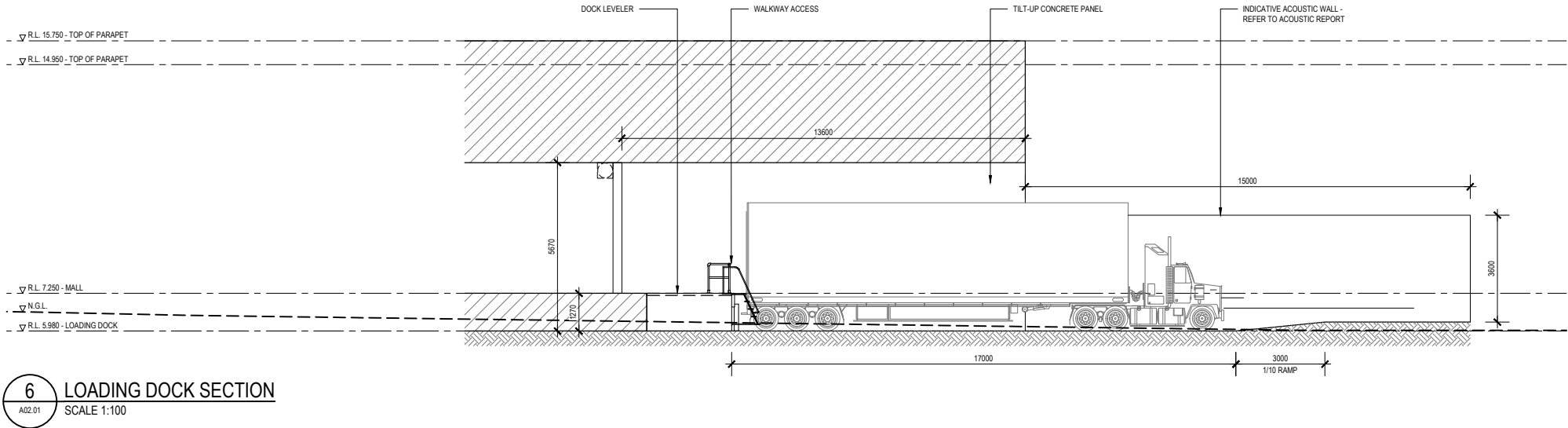
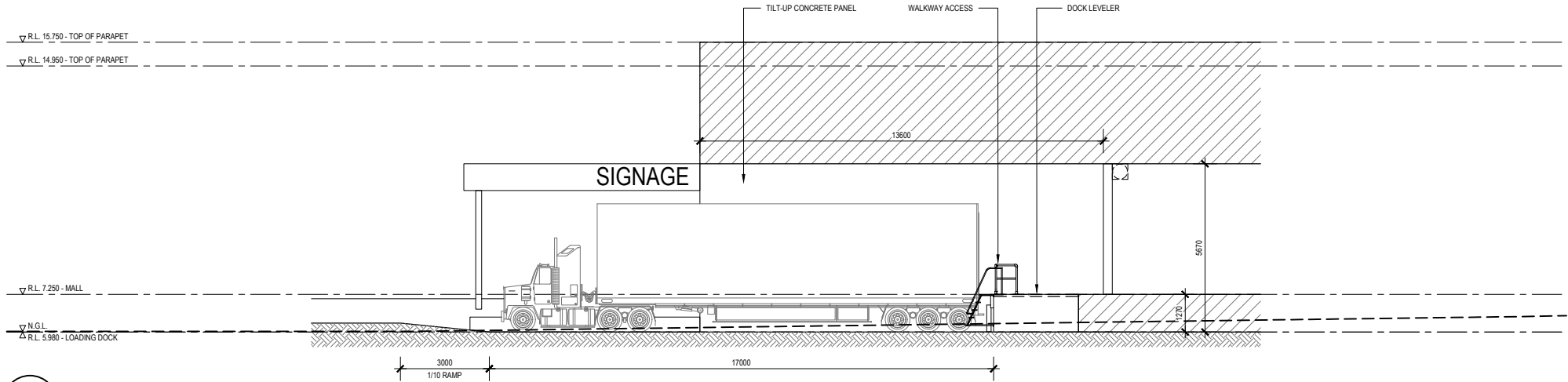


Loading Dock Sections - 1:200 @ A3

Spires Commercial



LOADING DOCK PLAN
SCALE 1:100





Commercial Centre Sections - 1:400 @ A3

Spires Commercial



Materials Palette Legend

Spires Commercial



FC-01	MT-01	MT-02	MT-03	MT-04	PT-01/PC-01	PT-02/PC-02	PT-03/PC-03	PT-04/PC-04	PT-05	CE-01	CE-01
TIMBER CLADDING	PROFILED METAL CLADDING	DECORATIVE MESH	MIRRORED METAL PANEL	CORTEN	PAINT/ POWDERCOAT	PAINT/ POWDERCOAT	PAINT/ POWDERCOAT	PAINT/ POWDERCOAT	PAINT/ POWDERCOAT	PATTERNED CONCRETE	PATTERNED CONCRETE

Shopping Centre - Western Entrance

Spires Commercial



Shopping Centre - Western Entrance

Spires Commercial



Shopping Centre - Southern East Elevation

Spires Commercial



Shopping Centre - Southern Entrance

Spires Commercial



Shopping Centre - F&B View to Park

Spires Commercial



Shopping Centre - Mall View to Medical Centre

Spires Commercial



Shopping Centre - Pantheon Road Entrance

Spires Commercial



Shopping Centre - Pantheon Road East

Spires Commercial



Shopping Centre - Aerial

Spires Commercial

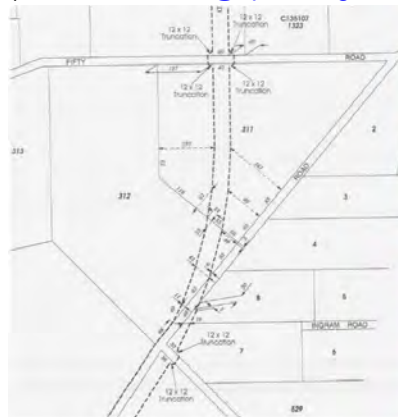



Amazon Gateway Entrance Statement

Spires Commercial




Schedule of Submissions
Proposed Neighbourhood Shopping Centre (JDAP) - Lot 9005 Fifty Road, Baldivis (20.2021.167.1)

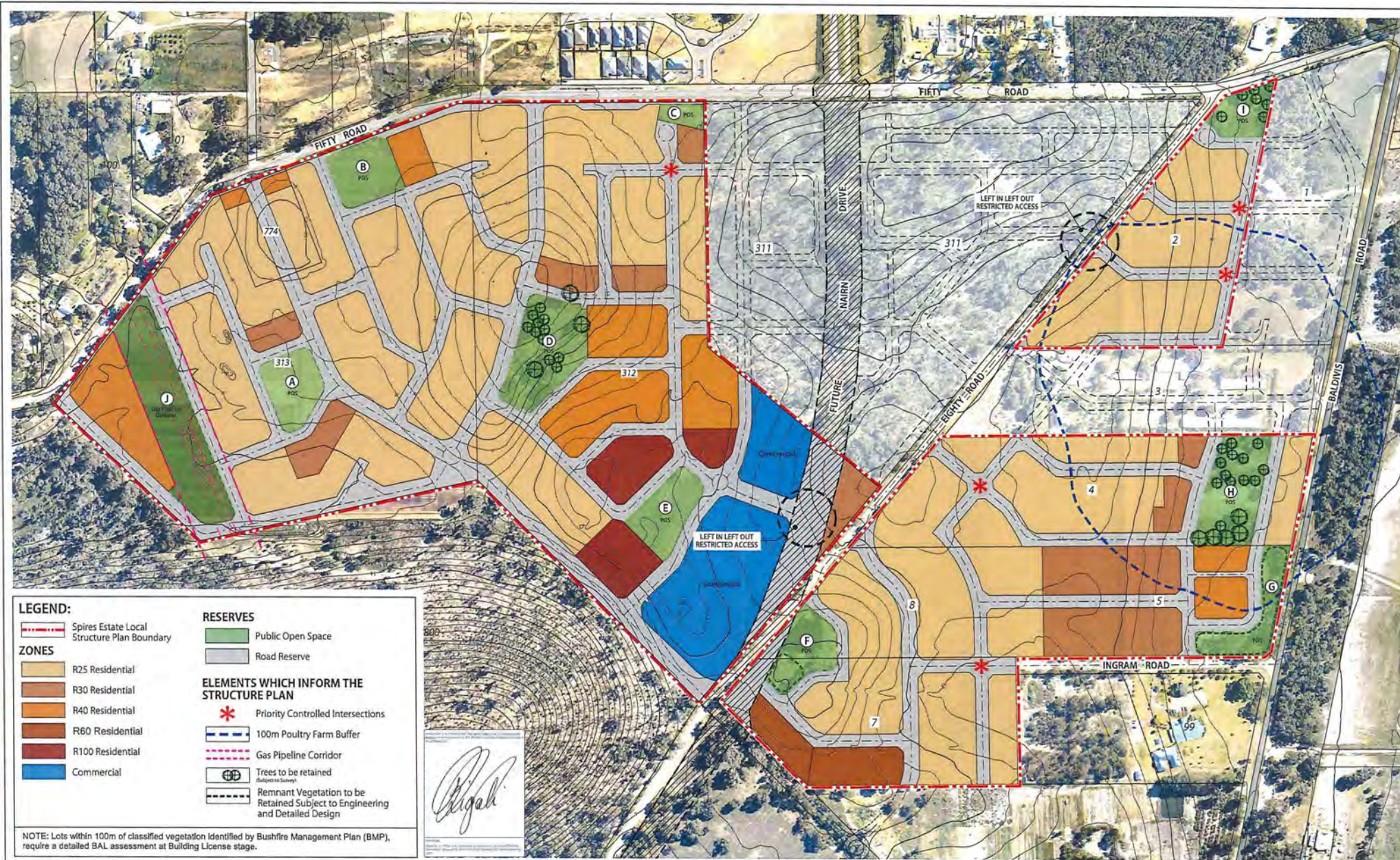
SERVICING AUTHORITY SCHEDULE OF SUBMISSIONS		
Name	Address	Comment
1. Mr Simon Luscombe Department of Planning, Lands and Heritage	Locked Bag 2506 PERTH WA 6001 Simon.luscombe@dplh.wa.gov.au	<p>I refer to your correspondence dated 25 June 2021. In accordance with the Western Australian Planning Commission (WAPC) Instrument of Delegation dated 30 May 2017, the following comments are provided. This proposal seeks approval for a neighbourhood shopping centre.</p> <p>The development comprises a supermarket, which includes commercial floorspace of 3,608m² and an additional 12 commercial tenancies, comprising 6,558m² gross floor area in total.</p> <p>Land Requirements</p> <p>The site abuts (future) Nairn Drive which is reserved as an Other Regional Road (ORR) within the Metropolitan Region Scheme and Category 2 per Plan No. SP 694/4. The site is not affected by the ORR reservation per Land Requirement Plan No. 1.2909/2.</p> <p>Transport Impact Assessment</p> <p>The above report, prepared by Transcore dated June 2021, states that the proposal is in accordance with the Spires Estate Structure Plan area which shows restricted left in/left out access for the Nairn Drive / Pantheon Road intersection (WAPC Reference SPN/0522M-2).</p> <p>Signalisation is proposed in future at the Nairn Drive / Amazon Drive intersection. This is in accordance with condition 37 of the subdivision approval over the site (WAPC reference: 160788, 21 September 2018). Condition 43 of this approval states that Amazon Drive is to have a minimum width of 23 metres. Condition 45 precludes direct vehicular access to Fifty Road / Baldivis Road and Nairn Drive.</p> <p>SIDRA intersection analysis shows acceptable performance for the Nairn Drive / Amazon Drive intersection (2013, Saturday PM peak hour). Additional DISRA analysis provided shows a high level of service for other minor intersections. The report states that the proposal will generate 700 vehicles per hour during Thursday PM peak hour periods with 797 vehicles per hour during Saturday peak hour periods which is broadly in accordance with Institute of Transportation Engineers common trip generation rates for similar land uses.</p> <p>Recommendation</p> <p>The Department of Planning, Lands and Heritage has no objection to the proposal on ORR planning grounds.</p> <p>Thank you for your correspondence. Should you have any queries, please contact me on 6551 9307 or via email (simon.luscombe@dplh.wa.gov.au)</p> <div style="display: flex; justify-content: space-around; align-items: flex-end;">   </div> <p>Land Requirement Plan No. 1.2909/2</p>

Schedule of Submissions
Proposed Neighbourhood Shopping Centre (JDAP) - Lot 9005 Fifty Road, Baldvis (20.2021.167.1)

SERVICING AUTHORITY SCHEDULE OF SUBMISSIONS		
Name	Address	Comment
2. Mr Chas Sabato Water Corporation	Charles.Sabato@watercorporation.com.au	<p><u>Water</u></p> <p>Reticulated water is currently available to the subject area. All water main extensions, if required for the development site, must be laid within the existing and proposed road reserves, on the correct alignment and in accordance with the Utility Providers Code of Practice.</p> <p>The Developer's consulting engineer should continue liaising with the Corporation's Development Services Branch based on the timing of the project and potential demands and flows required. This will inform the delivery of required headworks and reticulation upgrades that may be required. The proposed servicing strategy outlined in the report will need to be further refined by the developer's consultant engineers at the development/subdivision stage of the proposal. This has been identified in the servicing report and is an ongoing issue in the broader development of the area.</p> <p><u>Wastewater</u></p> <p>Reticulated sewer is currently available to the subject area. All sewer main extensions, if required for the development site, must be laid within the existing and proposed road reserves, on the correct alignment and in accordance with the Utility Providers Code of Practice.</p> <p>The Developer's consulting engineer should continue liaising with the Corporation's Development Services Branch based on the timing of the project and potential demands and flows required. This will inform the delivery of required headworks and reticulation upgrades that may be required. The proposed servicing strategy outlined in the report will need to be further refined by the developer's consultant engineers at the development /subdivision stage of the proposal. This has been identified in the servicing report and is an ongoing issue in the broader development of the area.</p> <p><u>Note:</u></p> <p>The 450DN sewer pressure main traversing the site is in the process of being located in the road reserve (sketch attached).</p> <p><u>General</u></p> <p>This proposal will require approval by our Building Services section prior to commencement of works. Infrastructure contributions and fees may be required to be paid prior to approval being issued.</p> <p>The developer is expected to provide all water and sewerage reticulation if required. A contribution for Water, Sewerage and Drainage headworks may also be required. In addition the developer may be required to fund new works or the upgrading of existing works and protection of all works. Water Corporation may also require land being ceded free of cost for works.</p> <p>Should you have any queries or require further clarification on any of the above issues, please do not hesitate to contact the Enquiries Officer.</p>

Schedule of Submissions
Proposed Neighbourhood Shopping Centre (JDAP) - Lot 9005 Fifty Road, Baldivis (20.2021.167.1)

SERVICING AUTHORITY SCHEDULE OF SUBMISSIONS		
Name	Address	Comment
No.2 – cont...		



PLAN 1 - Spires Estate Structure Plan (Phase 2)

Various Lots Fifty and Eighty Road, BALDIVIS

for: Spatial Property Group
ROCK/2016/...



SPATIAL
Property Group



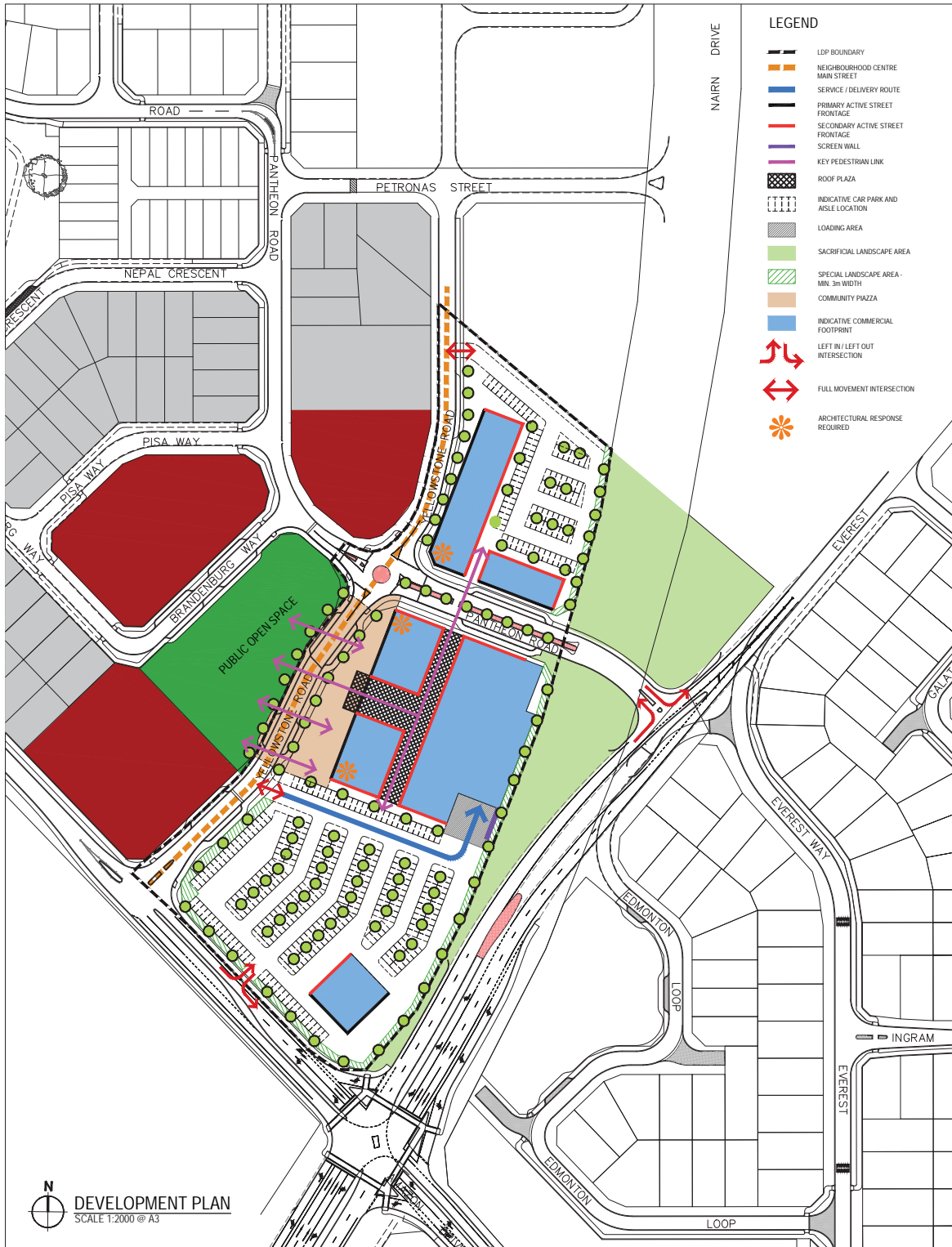
Scale 1:4000 @ A3

DATE:	10/09/2015	DRAFTER:	BK
REVISED:	21/03/2017	PLANNER:	TV
PROJECTION:	MGA 50	CHECK:	TV
DATUM:	AHD	PLAN NUMBER:	CARB-2-001m

A 28 Brown St, East Perth WA 6004
P (08) 9325 0200
E Info@creativedp.com.au
W creativedp.com.au



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LDP PROVISIONS

SPIRES NEIGHBOURHOOD CENTRE DEVELOPMENT:
LOT 9005, FUTURE LOT 461 NAIRN DRIVE & LOT 462 EIGHTY ROAD

APPLICATION OF LOCAL DEVELOPMENT PLAN

The provisions of this Local Development Plan (LDP) are in addition to any requirements under Local Planning Scheme No. 2 (LPS2) and any development control provisions prescribed under a Local Structure Plan.

OBJECTIVES

- i. Establish a 'Main Street' based Neighbourhood Activity Centre, of a scale appropriate to its role as a focal point for the local community.
- ii. Provide context for higher-density residential development that capitalises on proximity to local services.
- iii. Provide an entry statement to the surrounding development.

DEVELOPMENT STANDARDS

All development in the LDP area should be consistent with the LDP and the following standards:

Structure

1. The street annotated as 'Yellowstone Road' must be the main street for the neighbourhood centre.

Main Street

2. The main street shall be designed as a low-speed traffic environment that prioritises pedestrian movement over vehicles. Traffic-calming measures should be incorporated into the design with pedestrian crossings provided that generally align with entrance points to buildings.
3. The main street shall accommodate on-street parking as well as loading zones for service vehicles, where practical and safe.
4. The main street shall be designed for a high-level of pedestrian amenity and incorporate features such as street furniture, low planting, street trees and lighting where practical and safe.

Street Interface

5. All buildings must provide passive surveillance of adjacent street reserves by means of active frontage.
6. Delivery, loading and storage areas must be located and screened to minimise the visual impact on the public realm.
7. Street elevations to be designed to create visual interest through building form, articulation of walls & openings, architectural features, texture & colour, with particular interest given to ground floor level.

Primary Active Street Frontages

Where identified, primary active street frontages shall:

8. Have a nil setback to the footpath.
9. Have a continuous frontage with a minimum building facade height of 5.5m.
10. Comprise a minimum of 60% glazing for the length of the ground floor facade.
11. Provide continuous pedestrian shelter that extends over the width of the adjoining footpath to the extent they do not pose a hazard for passing vehicles (e.g. delivery and service trucks). Final design of pedestrian shelter to be designed to incorporate street tree canopies.

Secondary Active Frontage

12. Where identified, secondary active frontages are to be designed to provide visual interest through an architectural response.
13. Secondary building edges shall have a nil setback to the adjoining footpath, have a continuous frontage with continuous pedestrian shelter and a minimum of 60% glazing. Final design of pedestrian shelter to be designed to incorporate street tree canopies.
14. Secondary Building Edges shall have a minimum height of 5.5m with additional height where architectural responses are required.

Other Building Facades

15. With the exception of 'Primary Active Street Frontages', 'Secondary Active Street Frontages' and walls adjoining loading areas, building facades should avoid blank walls to enhance visual presentation through the use of features such as glazing (where conducive to the floor plan and use), alternative colours, finishes and textures and/or intrusions and extrusions in the wall.

Community Plaza

16. The 'Community Plaza' should be designed to provide landscaping, shade, public bench seating/casual seating opportunities, alfresco style dining, and children's play space.

NOTES

- The LDP depicts indicative building footprints only for the purpose of spatial site planning. The buildings are subject to more detailed design which will be refined as part of the Development Application but shall be generally consistent with the LDP.
- The car park designs, and locations depicted on the LDP are indicative only for the purpose of spatial site planning. The exact configuration and location of car parks is to be refined as part of the Development Application but shall be generally consistent with the LDP.
- The indicative Main Street Cross Section depicted on the LDP has been prepared for illustrative purposes only and is subject to refinement at the Development Application stage. Widths and dimensions may vary from those shown on the indicative cross section as part of the detailed design process.
- All stormwater generated by the development must be managed in accordance with the City of Rockingham's Local Planning Policy 3.4.3 - Urban Water Management to the satisfaction of the City.
- Building truncations to maintain appropriate visual sightlines at the corners of intersections. Truncations are to be demonstrated at the Development Application stage.
- The location and number of on-street parking bays is indicative only and subject to more detailed design at the Development Application stage.
- The location and alignment of pedestrian crossings are indicative only and subject to change at the detailed Development Application stage.
- Design details for intersection treatments are to be provided at the development application stage.
- Landscape drawings submitted with development applications are to include details of landscaping within verge areas.
- The provision for signage is to be incorporated into the design of the built form at the development application stage.
- The location of short term bicycle facilities are to be provided at the development application stage.

17. Cafe/restaurant business opportunities are to be designed to interface with the 'Community Plaza' to support amenity for residents.

Vehicle Access

18. Intersection treatments for vehicle access points to the Neighbourhood Centre are to be provided in accordance with the LDP.
19. Alternative intersection treatments may be considered where a Transport Impact Assessment is provided to the satisfaction of the City of Rockingham.

Pedestrian Access

20. For buildings abutting the main street, primary pedestrian access to building entries is to be provided from the main street.

Landscaping

21. The paving material used for the footpath must be carried across driveways to maintain visual continuity of the pedestrian network & aid pedestrian legibility.
22. Where landscaping strips adjoin car parking areas, loading areas and buildings facades, the Landscape Plan that accompanies the Development Application is to provide details demonstrating screening of the areas through the use of shrubs and tree planting.
23. A minimum of 10% of the site area should be provided as landscaping. This may include shade trees and landscaping areas within car parks.
24. Car parking areas are to include shade trees/shade devices at a minimum rate of 1 tree per 6 car bays.
25. Street trees are to be planted at a rate of one tree every 10 metres where vehicle access, parking, and sightlines permit.
26. The 'Special Landscape Areas' noted on the LDP shall be landscaped to provide screening to the adjacent car park area, as seen from Nairn Drive and Amazon Drive, to the satisfaction of the City of Rockingham.

Robustness

27. The ground floor of all buildings in the commercial area must be designed with a minimum floor to ceiling height of 3.2 metres.
28. The ground level of all buildings in the commercial area must be designed for disabled access regardless of the initial use.

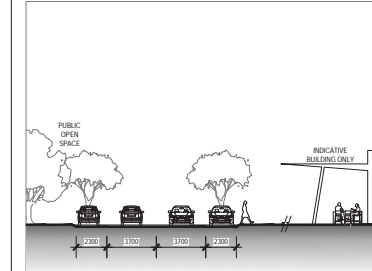
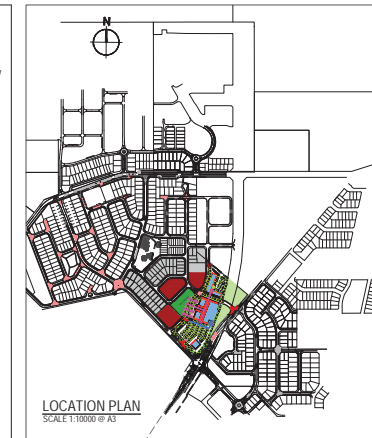
Noise Management

29. A Development Application that includes either of the 'Loading Areas' depicted on the LDP is to be accompanied by an Acoustic Assessment prepared by a suitably qualified Acoustic Consultant that outlines strategies to mitigate and manage the potential impacts of noise from delivery vehicles and activities on surrounding sensitive land uses.

DEFINITIONS


For the purposes of this LDP the following definitions will apply:

30. Active (street or building) frontage: An active frontage shall incorporate shopfronts (to retail, office or other commercial uses) with a minimum of 60% of the ground floor street frontage as transparent glazing that allows connectivity between the inside and outside of the building.
31. Architectural response: An architectural response shall consist of a prominent feature that provides visual emphasis. It may consist of a raised and/or projecting building element, significant roof form, a differentiation of material or a significant opening(s) or balcony/verandah structure.



ISSUE FOR APPROVAL

APPROVAL
This LDP has been approved by the City of Rockingham pursuant to clause 52(a) of the Deemed Provisions



10 / 3 / 2021

Manager, Statutory Planning

Date

J	09.03.21	ISSUE FOR INFORMATION	YN	GE
I	14.03.21	ISSUE FOR INFORMATION	YN	LA
H	05.01.20	ISSUE FOR INFORMATION	YN	LA
G	17.11.20	ISSUE FOR INFORMATION	YN	LA
F	18.11.20	ISSUE FOR INFORMATION	YN	LA
E	10.11.20	ISSUE FOR INFORMATION	YN	LA
ISSUE DATE DESCRIPTION			DRN APP	



DESIGN MANAGEMENT GROUP
Suite 14 123 Railway Road Suburb 8000 8 telephone +61 8 9212 8888
info@designmanagement.com.au | www.designmanagement.com.au

PROJECT

SPIRES COMMERCIAL
LOT 9005, FUTURE LOT 461 NAIRN DR
& LOT 462 EIGHT RD

TITLE

LOCAL DEVELOPMENT PLAN

SCALE

DRAWN YN CHECKED LA

PROJECT

20022 LDP 1.0 J

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Attachment 6 – SPP7.0 Assessment

Design Principle	Design Outcome	Complies?
1. Context and character – <i>Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.</i>	The development proposes a ‘main street’ based neighbourhood activity centre that caters for the needs of an emerging community through the provision of suitably scaled, distinctive architectural built form and landscaped public spaces that is compatible with the predominantly single storey surrounding (future) residential context.	Yes
2. Landscape quality – <i>Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.</i>	<p>Hard and soft landscaping elements integrate with the proposed building form to optimise the external amenity of the ‘main street’ and secondary streets; the community ‘piazza’ and the car parking areas.</p> <p>While there is potential for bushfire mitigation (APZ) to adversely impact on landscape quality, this can be effectively managed through an appropriate condition in the event approval is granted.</p>	Yes
3. Built form and scale – <i>Good design ensures that the massing and height of development is appropriate to its setting and successfully negotiates between existing built form and the intended future character of the local area.</i>	<p>The topography slopes gently down towards the north-west.</p> <p>The proposed built form responds to site topography by positioning the higher building elements and larger building mass adjacent to Nairn Drive, while lower height building forms project towards the pedestrianised street frontages, such as the ‘main street’ (Yellowstone Road) and Pantheon Road.</p> <p>The proposed building scale and form is compatible with the predominantly single storey (future) surrounding residential precinct.</p>	Yes
4. Functionality and build quality – <i>Good design meets the needs of users efficiently and effectively, balancing functional requirements</i>	The development provides generally well design functional spaces that are suited to their intended uses, and which relate well to adjoining public spaces of the community ‘piazza’ and Yellowstone Road, being the centre ‘main street’.	Yes, subject to recommended

<p><i>to perform well and deliver optimum benefit over the full life cycle.</i></p>	<p>However, good design provides flexible and adaptive spaces to maximise their utilisation and accommodate appropriate future requirements without the need for major modifications. In this regard it is noted that the Medical Centre building does not have a front door directly facing Yellowstone Road, being the 'main street' for the BNNC.</p> <p>The City considers a front door is required to provide adequate activation of the Medical Centre building given it's context on a 'main street'; to provide for pedestrian amenity and adaptability for the tenancy to be used in the future for a different use without the need for major modification. A condition is recommended to require the provision of a front door to the Medical Centre, in the event approval is granted.</p> <p>Also, good design accommodates services in an integrated manner, without detriment to the appearance, functionality and serviceability of the final outcome. There are structures proposed within the shopping centre car park, specifically, the dedicated bin store and trolley store, which provide for the servicing needs for the development.</p> <p>The City is concerned with the location of the stand-alone bin store within the car park; and is concerned that waste vehicles will block the vehicle circulation aisle within the car park when servicing the bin store.</p> <p>The City's preference is to integrate the bin store within the supermarket building form, or for it to be appropriately screened from view rather than provide it as a free standing structure in the middle of the car park. Conditions that require amendments to the Site Plan and Waste Management Plan are recommended in order to address this matter, in the event approval is granted.</p>	<p>conditions of approval.</p>
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<p>5. Sustainability – <i>Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.</i></p>	<p>The proposed development includes passive solar design measures such as optimising building orientation in response to local climate, and providing shading to open spaces on the north-western side. The central retail mall is naturally ventilated, with the roof to the central spine raised to allow natural light to illuminate the main pedestrian thoroughfares in the shopping centre. The roof spaces have provision for the addition of solar panels.</p> <p>The provision of bicycle parking and end-of-trip facilities promotes alternative forms of travel to the centre, reducing vehicle traffic and emissions.</p> <p>A condition is recommended to ensure that storm-water from the development is managed in accordance with water sensitive urban design principles.</p>	<p>Yes</p>
<p>6. Amenity – <i>Good design provides successful places that offer a variety of uses and activities while optimising internal and external amenity for occupants, visitors and neighbours, providing environments that are comfortable, productive and healthy.</i></p>	<p>The proposed development provides for activated street frontages through the provision of openings and substantial glazing to the tenancies. Overhanging roof structures provide shelter and shade for the amenity of the public, shoppers, pedestrians and diners.</p> <p>The development incorporates a mix of land uses that will contribute to the vitality of the neighbourhood centre at different times of the day, and provide choices for shopping, employment and entertainment.</p> <p>End of trip facilities are provided which will promote alternative modes of transport to/from the site.</p>	<p>Yes</p>
<p>7. Legibility – <i>Good design results in buildings and places that are legible, with clear connections and easily identifiable elements to help people find their way around.</i></p>	<p>The proposed layout of the buildings and pedestrian pathways provide for good lines of sight, both within and between the two development sites, and where pedestrian pathways connect to the surrounding proposed road and path networks.</p> <p>Wayfinding is promoted through the use of prominent vertical architectural elements at key entry points to the buildings in the development, and where entry statements are proposed (in the</p>	<p>Yes</p>

	form of distinctive wooden 'fin' structures) at the intersection of Yellowstone Road and Amazon Drive.	
8. Safety – <i>Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.</i>	<p>Passive surveillance is provided to the community 'Piazza'; pedestrian access ways; the adjacent street reserves and car parking areas through glazed, articulated building frontages.</p> <p>Well-lit pedestrian access ways are provided with clear lines of sight, both within and between the two development sites.</p> <p>Security for the shopping centre is proposed through the provision of transparent roller shutters in three locations for use after hours.</p> <p>Lighting will be provided to the development in accordance with CPTED principles.</p>	Yes
9. Community – <i>Good design responds to local community needs as well as the wider social context, providing environments that support a diverse range of people and facilitate social interaction.</i>	The proposed development encourages social engagement and provides physical activity opportunities for the surrounding community through the proposed range of land uses, generous alfresco areas and the community 'Piazza'.	Yes
10. Aesthetics – <i>Good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses.</i>	The application proposes a well-considered and elegant built form within a logical, coherent site plan layout that is easy to navigate for visitors and the local community.	Yes



Attachment 7 - Local Development Plan Assessment

Provisions	Provided	Compliance
Structure		
1. The street annotated as 'Yellowstone Road' must be the main street for neighbourhood centre.	The development addresses Yellowstone Road with active frontages, which is designed as the centre 'main street'. While the plans show no pedestrian entry to the Medical Centre provided from Yellowstone Road, this is considered necessary and addressed through a recommended condition of approval.	Yes, subject to a condition requiring that the Medical Centre be provided with a pedestrian entry from the street.
2. The main street shall be designed as a low-speed traffic environment that prioritises pedestrian movement over vehicles. Traffic-calming measures should be incorporated into the design with pedestrian crossings provided that generally align with entrance points to buildings.	Yellowstone Road has been designed to incorporate suitable road treatments to ensure a low-speed pedestrian friendly environment.	Yes
3. The main street shall accommodate on-street parking as well as loading zones for service vehicles, where practical and safe.	16 on street parking bays are provided along Yellowstone Road, while maintaining a safe environment. Service vehicle parking was not practical.	Yes
4. The main street shall be designed for a high-level of pedestrian amenity and incorporate features such as street furniture, low planting, street trees and lighting where practical and safe.	The landscape treatment of Yellowstone Road provides bench seating, street trees, planter beds and pavement treatments, which provide high levels of amenity and a safe pedestrian environment. Refer to the Landscape DA Report (August 2021)	Yes
Street Interface		
5. All buildings must provide passive surveillance of adjacent street reserves by means of active frontage.	Suitable glazing is provided to allow for passive surveillance of the adjacent streets. Tenancies also address the car parking areas to the rear of buildings with glazed frontages, providing passive surveillance.	Yes
6. Delivery, loading and storage areas must be located and screened to minimise the visual impact on the public realm.	The supermarket loading dock is accessed from the car park, and is adequately screened from view of the main street and Nairn Drive by either landscaping or built form. The Commercial tenancy bin store proposed within the Shopping Centre car park is a concern for the City in that: <ul style="list-style-type: none"> The bin store may be subject to general rubbish dumping and graffiti; 	No, however a condition is recommended that the bin store is relocated into the building form of the Supermarket.

	<ul style="list-style-type: none"> Being a stand-alone structure, the bin store detracts from the amenity of the neighbourhood centre; In order to service the bin store, waste vehicles will block the vehicle circulation aisle within the car park, creating delays for customer's parking their vehicles. 	
7. Street elevations to be designed to create visual interest through building form, articulation of walls and openings, architectural features, texture and colour, with particular interest given to ground floor level.	The proposed development provides well-articulated building facades, cantilevered entry statements, a variety of cladding materials and extensive glass on street elevations which create visually interesting and engaging buildings.	Yes
Primary Active Street Frontages		
Where identified, primary active street frontages shall:		
8. Have a nil setback to the footpath.	Nil setback provided for all Primary Active Street Frontages. Built form extends to the back of the footpaths.	Yes
9. Have a continuous frontage with a minimum building façade height of 5.5m.	Continuous frontages have been provided with façade heights above 5.5 metres.	Yes
10. Comprise a minimum of 60% glazing for the length of the ground floor façade.	At least 60% of the ground floor façades is provided in glazing.	Yes
11. Provide continuous pedestrian shelter that extends over the width of the adjoining footpath to the extent they do not pose a hazard for passing vehicles (e.g. delivery and service trucks). Final design of pedestrian shelter to be designed to incorporate street tree canopies.	Continuous pedestrian shelter has been provided either by cantilevered roof structure, or awnings over the adjoining footpaths in the road reserves.	Yes
Secondary Active Frontage		
12. Where identified, secondary active frontages are to be designed to provide visual interest through an architectural response.	Secondary Active Street Frontages are provided through glazing and the uses of elevated façade treatments, feature timber, and variations in wall elements.	Yes
13. Secondary building edges shall have a nil setback to the adjoining footpath, have a continuous frontage with continuous pedestrian shelter and a minimum of 60% glazing. Final design of pedestrian shelter to be designed to incorporate street tree canopies.	<p>Nil setbacks and continuous pedestrian shelter have been provided for all Secondary Active Street Frontages where they adjoin the streets.</p> <p>At least 60% of the facades have been provided in glazing, including</p>	Minor variation is required and is considered acceptable, as passive surveillance of the pedestrian

	glazed facades addressing the car parking areas. No glazing is provided on the western elevation of the Gymnasium building where the building adjoins a pedestrian access way adjacent the Medical Centre.	access way is not compromised and can be achieved via sight lines through the development from the north and south.
14. Secondary Building Edges shall have a minimum height of 5.5m with additional height where architectural responses are required.	All Secondary Active Street Frontages provide building heights above 5.5 metres. Additional height has been provided where architectural responses are required.	Yes
Other Building Facades		
15. With the exception of 'Primary Active Street Frontages', 'Secondary Active Street Frontages' and walls adjoining loading areas, building facades should avoid blank walls to enhance visual presentation through the use of features such as glazing (where conducive to the floor plan and use), alternative colours, finishes and textures and/or intrusions and extrusions in the wall.	Façade articulation is provided through the use of a range building materials, such as timber cladding, profiled metal cladding, decorative mesh, patterned concrete, which collectively provide for visually engaging frontages.	Yes
Community Piazza		
16. The 'Community Piazza' should be designed to provide landscaping, shade, public bench seating/casual seating opportunities, alfresco style dining, and children's play space.	The proposed 'Community Piazza' provides for a children's play space, raised planter beds, grassed space, bench seating, pause benches within the entry plaza, and alfresco dining with trellis planting to provide a high quality public space for residents.	Yes
17. Café/restaurant business opportunities are to be designed to interface with the 'Community Piazza' to support amenity for residents.	The proposed development allows the tenancies adjacent to the 'Community Piazza' to be utilised for Restaurant/Café land uses. Full height glazing along the entire building frontage with building entries, will allow for interface between the tenancies and the Piazza.	Yes
Vehicle Access		
18. Intersection treatments for vehicle access points to the Neighbourhood Centre are to be provided in accordance with the LDP.	Intersection treatments and vehicle access points are provided in accordance with the LDP. A condition is recommended to ensure compliance.	Yes
19. Alternative intersection treatments may be considered where a Transport Impact Assessment is provided to the satisfaction of the City of Rockingham.	No alternate intersection treatments proposed.	N/A
Pedestrian Access		

20. For buildings abutting the main street, primary pedestrian access to building entries is to be provided from the main street.	<p>Most tenancies have direct pedestrian access from the 'main street'.</p> <p>There is no direct pedestrian access from Yellowstone Road to the proposed Medical Centre on the commercial centre site.</p> <p>A front door is required to provide adequate activation of this building given it's context on a 'main street'; to provide for pedestrian amenity and adaptability for the tenancy to be used in the future for a different use without the need for major modification.</p>	No, however a condition is recommended that requires a pedestrian entry to the Medical Centre from Yellowstone Road.
Landscaping		
21. The paving material used for the footpath must be carried across driveways to maintain visual continuity of the pedestrian network and aid pedestrian legibility.	The footpath paving materials have not been carried across the driveways, which appear on the site plan as asphalt.	No, however this has been addressed in a recommended condition.
22. Where landscaping strips adjoin car parking area, loading areas and buildings facades, the Landscape Plan that accompanies the Development Application is to provide details demonstrating screening of the areas through the use of shrubs and tree planting.	The Landscape DA report submitted with the DA shows a variety of shrubs and small trees, intended to provide screening within a 3m wide Special Landscape Zone.	Yes
23. A minimum of 10% of the site area should be provided as landscaping. This may include shade trees and landscaping areas with car parks.	10.3% of the site is provided as landscaping.	Yes
24. Car parking areas are to include shade trees/shade devices at a minimum rate of 1 tree per 6 car bays.	<p>143 car parking bays in the Shopping Centre car park will be under fixed shade structures.</p> <p>Shade trees will be provided at suitable rates for all other bays.</p>	Yes.
25. Street Trees are to be planted at a rate of one tree every 10 metres where vehicle access, parking and sightlines permit.	Street trees are provided at suitable intervals, with tree-to-tree grates where possible.	Yes
26. The 'Special Landscape Areas' notated on the LDP shall be landscaped to provide screening to the adjacent car park area, as seen from Nairn Drive and Amazon Drive, to the satisfaction of the City of Rockingham.	<p>Details of the proposed screen for the 'Special Landscape Areas' is provided in the Landscape DA Report dated August 2021.</p> <p>A variety of native plant species up to 2m high is proposed to provide screening of the car parks.</p>	Yes
Robustness		
27. The ground floor of all building in the commercial area must be designed	Minimum floor to ceiling height of 3.75 metres provided.	Yes

with a minimum 'floor to ceiling' height of 3.2 metres.		
28. The ground level of all buildings in the commercial area must be designed for disabled access regardless of the initial use.	Provided, however, to ensure that disability access can be provided to the Medical Centre from the 'main street', a condition is recommended requiring the provision of a pedestrian entry from Yellowstone Road.	Yes
Noise Management		
29. A Development Application that includes either of the 'Loading Areas' depicted on the LDP is to be accompanied by an Acoustic Assessment prepared by a suitably qualified Acoustic Consultant that outlines strategies to mitigate and manage the potential impacts of noise from delivery vehicles and activities on surrounding sensitive land uses.	An Environmental Noise Assessment (ENA) was prepared by Lloyd George Acoustics, and included with the application. The ENA outlines noise mitigation measures required for the proposed development, including an acoustic wall at the loading dock.	Yes. Conditions are recommended requiring acoustic reports that address compliance with the Noise Regulations.
Additional Structures not Shown on LDP		
<p>The LDP depicts indicative building footprints, which within the southern car park, include a future pad site.</p> 	<p>The site plan submitted with the Development Application proposes a waste bin store and trolley store within the southern car park, adjacent to the future pad site.</p> 	<p>No. There are functional and amenity concerns about the provision of a waste bin store in this location. A condition recommends the relocation of the waste bin store to within the shopping centre built form.</p>