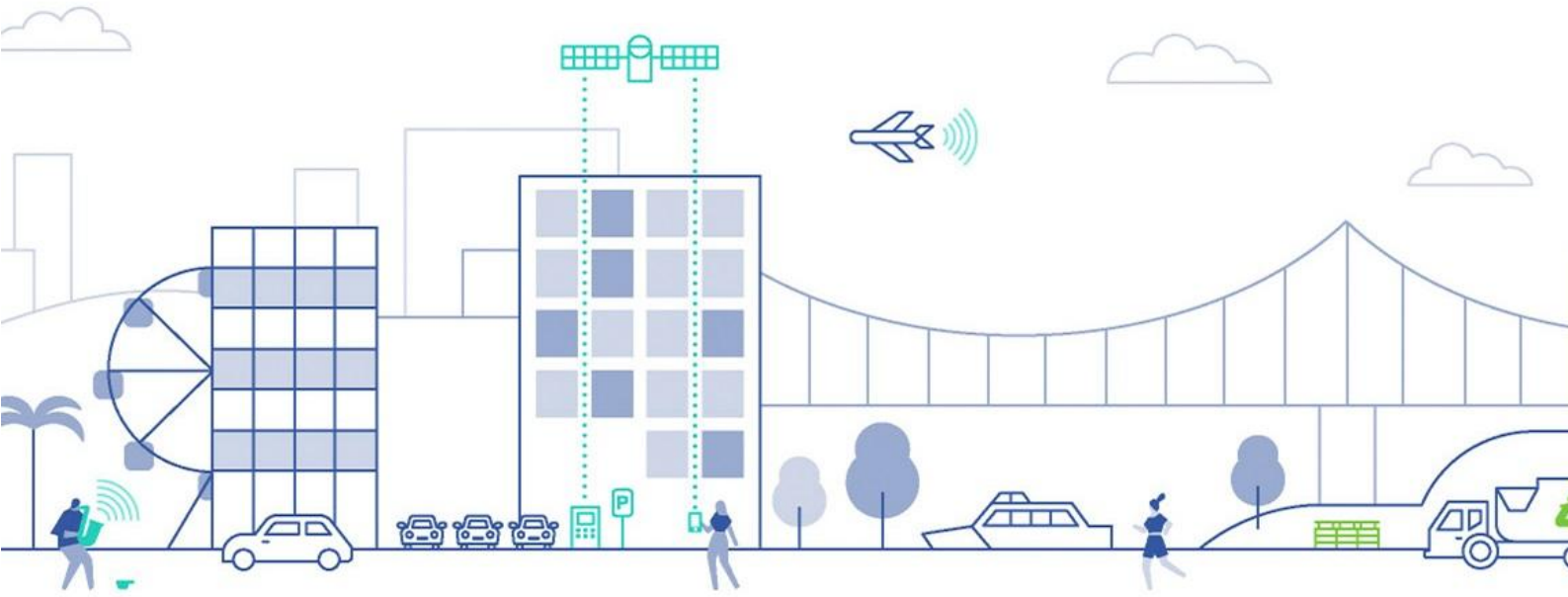
Appendix G Waste Management Plan prepared by Colliers

Operational Waste Management Plan

Proposed Residential Development

At 19 River Road, Bundamba

On Behalf of AR Developments



Disclaimer

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Revision record

Issue no.	Author	Reviewed/approved	Development stage – Revision description	Date
1.	J. Power	D. Patel	OWMP (DA) – Draft	08/10/2026
2.	J. Power	D. Patel	OWMP (DA) – Final	12/10/2026
3.				
4.				

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1. Introduction

1.1 Background

Colliers International Engineering and Design (TTMC) Pty Ltd has been engaged by AR Developments to prepare an Operational Waste Management Plan (OWMP) to support the proposed development located at 19 River Road, Bundamba It is understood that a development application will be lodged with Economic Development Queensland (EDQ).

1.2 Scope

The content of this OWMP is intended to provide information on the typical movement of waste streams from generation to collection.

Detailed information including site plans and drawings, recommended refuse management equipment and system specifications, common refuse signage as well as a list of terms and abbreviations are provided in the appendices.

The recommendations in this report relate to the operational phase of the development only. Additional requirements for refuse management during or after demolition or construction phases are not included and require a dedicated plan.

The items covered within the OWMP are described in Table 1.1.

Table 1.1: Scope items

Item	Explanation
Regulatory requirements	Identification of relevant legislative and regulatory controls.
Refuse streams	Identification of refuse streams & anticipated development refuse volumes likely to be produced.
Refuse separation	Recommendations for appropriate segregation methods for each refuse stream.
Refuse management equipment	Identification of recommended and optional refuse management systems and equipment.
Refuse disposal	Recommendations for refuse disposal within the development.
Refuse storage	Detailed analysis of refuse storage facilities and design.
Building design	Recommendations for design of refuse management facilities.
Refuse transfer	Assessment of refuse transfer between refuse storage and collections areas.
Refuse collections	Assessment of refuse collection vehicle (RCV) access and manoeuvring.
Refuse management operations	Recommendations for operational efficiency and ongoing management, including refuse minimisation, tenant education and safety.

1.3 Site analysis

The site is located at 19 River Road, Bundamba 4304 as depicted in Figure 1.1. The legal property description of the development site is Lot 3 on SP343391.

The site is located within the Ipswich City Council (ICC) Local Government Area, and was announced as part of Precinct 1 of the Land Activation Program (SEQ Tranche 2) Provisional Priority Development Area (PPDA).. The site has frontages on River Road and Bird Street, which are recognised as a Collector Road and Access Street respectively.



Figure 1.1: Site location
Source: Nearmap (2026)

1.4 Site statistics

The proposed development is an estate which comprises of 212 3-bedroom and 4-bedroom townhouses. The development summary is provided in Table 1.2.

Table 1.2: Development Summary

Area Description	Measure
3-Bedroom Townhouses	124 Dwellings
4-Bedroom Townhouses	88 Dwellings

2. Regulatory refuse management requirements

This section provides the detailed refuse information and associated calculations in addition to outlining the arrangements for the collection, storage, transfer, and disposal of refuse within the development as deemed to satisfy EDQ's current assessment benchmarks of the Draft Provisional Land Use Plan and associated guidance material including the Transport and Parking Code and Transport and Parking Planning Scheme Policy in the Ipswich City Plan 2025, and City of Ipswich Waste and Resource Recovery Service Guideline. This includes associated bin quantities, storage capacities, equipment details, collection frequencies and site access details.

2.1 Regulatory & governance considerations

This plan has been prepared to address requirements applicable to the proposed development. Colliers has referred to ICC's requirements outlined within the relevant Overlay Codes and Use and Development Codes.

Colliers has also referred to the *City of Ipswich, Waste and Resource Recovery Service Guideline, Multiple Dwellings, Mixed-use and Commercial Developments*.

Specific design measures to ensure compliance with these requirements are outlined in Appendix A.

2.2 Residential bin entitlement

An individual dwelling waste management system is proposed, whereby each townhouse will be allocated two 240L Mobile Garbage Bins (MGBs) for general waste and recycling. It is noted that households comprising four or more occupants may exchange a standard 240L bin for a larger 360L bin to support increased recycling capacity for larger households.

While ICC provides a green waste collection service as part of its standard three-bin service for residential developments, townhouse developments are classified as multiple unit developments (MUDs) and are therefore excluded from this service. This is due to the typically limited bin storage capacity within MUDs and their generally low levels of green waste generation.

In accordance with the ICC waste collection schedule, collection will occur weekly for general waste and fortnightly for commingled recycling. This provides a minimum storage capacity of seven days and fourteen days respectively.

Table 2.1 outlines the total number of bins expected across this site.

Table 2.1: Total bin requirements

Refuse Stream	Bin/storage – Size or type	Number required
General Waste	240L	212 (1 per lot)
Comingled Recycling	240L	212 (1 per lot)

2.3 Refuse disposal

The tables in this section summarise general recommended disposal arrangements for frequently generated and infrequently generated refuse for each development component. Section 2.3.1 describes the frequently generated refuse streams that are generated in high volumes for any given period and require significant capacity for storage prior to collections. Section 2.3.2 describes the infrequently generated refuse streams that are generated in relatively low volumes, and where minimal provision for storage can be easily managed by collection frequency and ad hoc storage arrangements.

2.3.1 Frequently generated refuse

Table 2.2: Disposal of frequently generated waste

Refuse stream	Disposal details
WASTE	
General waste	Residents will have receptacles within their individual dwellings for collection and storage of at least one day of general waste. Bins are typically placed under the kitchen sink. Additional bins can be placed in other areas as required. Waste bins should be accompanied by a recycling bin (commingled recycling bins for cardboard, paper, plastics, glass etc.) in order to facilitate separation of general waste and recycling. General waste bins should always be lined with bags and the bags tied before removal. Once full, residents will transfer/carry their waste to bins in refuse enclosure located near the garage for final disposal. General waste should weigh approximately 3 kg or less.

Table 2.3: Disposal of frequently generated recoverable materials

Refuse stream	Disposal details
Organic (food) waste	Separating organic or food waste from general waste may be considered to reduce the total amount of general waste produced. Residents can opt into ICC's free at organics at home program opting for either a compost bin or worm farm to reduce waste going to landfill by turning food and garden scraps into compost instead of throwing them away.
RECYCLING	
Commingled, including • Glass, • Aluminium, • Steel cans, • Tins, • Cardboard, • Semi rigid & rigid plastics.	Residents will have receptacles within their individual dwellings for collection and storage of at least one day of recycling. Recycling bins are typically placed under the kitchen sink next to the general waste bin. Additional recycling bins can be placed in other areas as required. Recycling bins will be used for all recycling materials (comingled recycling). Once full, residents will transfer/carry their recycling to the bins in the refuse enclosure located near the garage. Items for recycling must not be bagged and disposed in loose form. This can be done by decanting the materials from the individual receptacles into the recycling bin(s).
	Container deposit/refund schemes are currently in place in Queensland. Various models exist including bottle return facilities and (automated) reverse vending machines. Occupants should be encouraged to separate containers that qualify for the schemes from the waste or recycling streams and send back to a return point. Storage space or dedicated bins within the units or refuse rooms can be provided.

2.3.2 Infrequently generated refuse

Table 2.4: Disposal of infrequently generated refuse

Refuse stream	Disposal details
Garden organics refuse/green waste	Garden organics refuse, also referred to as green waste, will be generated primarily from the communal landscaped areas within the development. Due to the townhouse form and limited private open space associated with each dwelling, the generation of green waste at the individual lot level is expected to be negligible. This negligible volume will be managed by disposal directing into the general waste bin or alternatively residents may opt into ICC's organics at home program. Green waste generated from communal areas will be managed centrally by the appointed maintenance contractor, who will remove material off-site as part of routine landscaping activities. In line with this operational approach and given the low anticipated volumes of privately generated green waste, no interim on-site storage or dedicated green waste bins are proposed. The contractor will be responsible for transporting all collected green waste to an appropriate composting or resource recovery facility, ensuring diversion from landfill and adherence to best practice waste management principles. Where feasible, and subject to operational considerations, green waste may alternatively be processed through on-site composting in combination with food organics. Any resulting composted material may be reused within the site's landscaped areas, provided it is appropriately matured or pasteurised in accordance with AS 4454-2003 *Composts, soil conditioners and mulches*.
Hard waste/bulky goods	Bulky waste and hard waste items, such as furniture or large appliances, are expected to be disposed of by residents directly via ICC's on-demand hard waste collection services or by transporting items to an appropriate waste transfer or resource recovery facility. No dedicated on-site bulky waste storage or collection is required. Residents will be encouraged to arrange disposal and collection of on-demand services in a timely manner to avoid obstruction of communal areas and to ensure the visual amenity of the development is maintained.
Hazardous waste - Batteries	Batteries are highly volatile and must be disposed of separately and never in the general waste, commingled recycling or green waste bins. Colliers recommend dwelling owners be encouraged to separate batteries in materials supplied during the property leasing or move-in process.
Hazardous waste - Other (paints, chemicals etc)	Hazardous waste, including paints, chemicals, oils, and similar materials, will be the responsibility of individual residents to dispose of appropriately. Disposal should be undertaken via ICC's approved drop-off locations or other licensed facilities, as listed on local council and Queensland Government websites. No on-site storage or collection of hazardous waste is proposed to ensure safety and compliance with environmental regulations.

2.4 Refuse storage, access & rotation requirements

All townhouses will have screened storage areas located at the front or side of each lot.

Each storage area will be large enough to house 2 x 240L bins and equipped with bin washing facilities within close proximity. Residents will have access to their individual bin stores maintained at all times and will be responsible for managing their own waste.

Figure 2.1 depicts an example of the typical refuse enclosure for each dwelling.

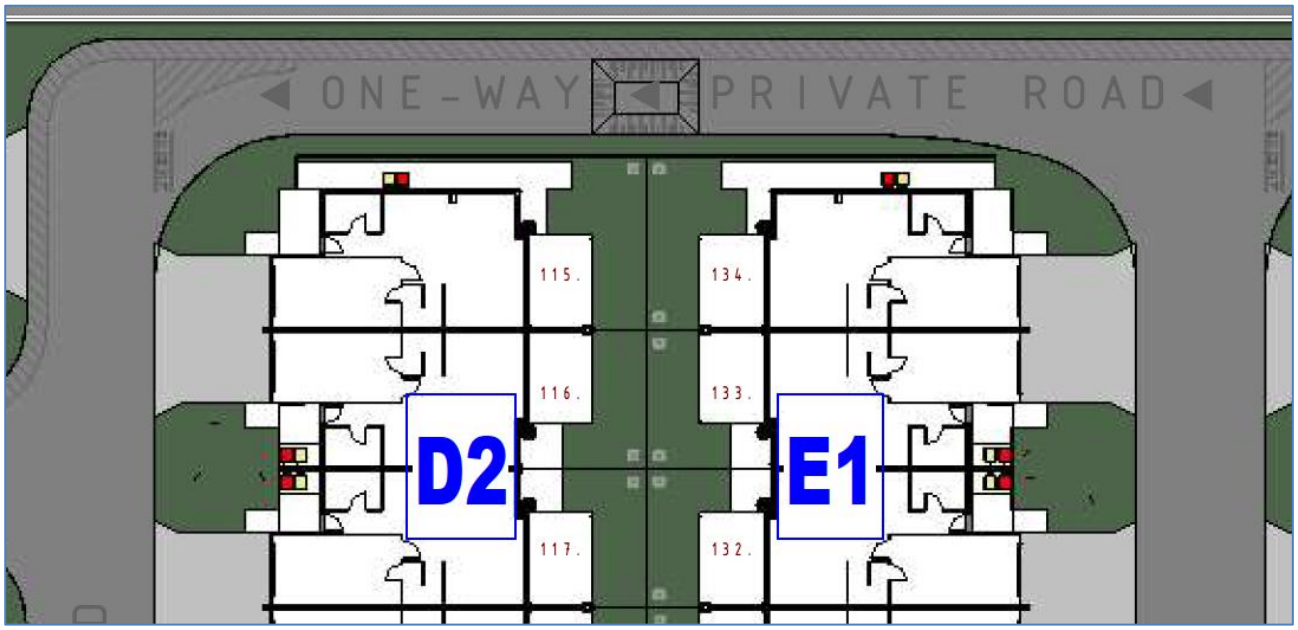


Figure 2.1: Typical refuse area
Source: Paul Ziukelis. architects, 19 River Rd, Bundamba, Masterplan, Issue No. G, Date. Sept 2026

2.4.1 Refuse storage area design requirements

Table 2.5 outlines the refuse storage area design criteria requirements for each refuse enclosure in order to minimise odours, deter vermin, protect surrounding areas, and make it a user-friendly and safe area.

Table 2.5: Refuse storage area design requirements

Positioning considerations
Is in a purpose-built storage area which is designed to be unattractive to vermin and used solely for the storage of refuse leaving the site only.
Visual amenity considerations
Is designed to minimise their visual impact on the surrounding areas.
Bins are not visible from a public place, neighbouring properties, passing vehicles or pedestrian traffic external to the site.
Functional design considerations
Is of sufficient size to accommodate the bins with sufficient clearance around the combined bin area.
Permits unobstructed access for removal of the containers to the service point.
Does not have any steps or lips where bins are required to be moved.
Bin washing and room cleaning considerations
A hose cock provided within the vicinity for cleaning bins.
The walls, floors and equipment are to be designed and constructed of impervious material with a smooth finish to allow for easy cleaning.
Drainage points connected to sewer in accordance with trade waste requirements.

2.5 Refuse transfer

Residents will be responsible for the transfer of their individual MGBs to the designated kerbside bin presentation points utilising manual transfer methods. Bins will be presented within the allocated areas on the road verge, typically in front of their subject lot, adjacent to the internal road for collection by the ICC's waste collection vehicle.

All townhouses, with the exception of lots 21-24 and 25-30, are shown to have sufficient frontage along the internal roadway at the kerbside of their respective allotments to facilitate the presentation of bins for collection.

Due to the frontage configuration, shared collection points have been provided with sufficient space for bin presentation and collection while maintaining safe and efficient operation of the road verge and waste collection service for the abovementioned lots, as illustrated in Figure 2.2.

As part of this arrangement, residents that are required to cross the road will need to exercise caution.



Figure 2.2: Shared collection points
Source: Paul Ziukelis. architects, 19 River Rd, Bundamba, Masterplan, Issue No. G, Date. Sept 2026

2.5.1 Refuse transfer path design requirements

Table 2.6 demonstrates the criteria addressed in the design of the refuse transfer path for all residents.

Table 2.6: Refuse transfer path design

Positioning considerations
The bins to be transferred via hard stand pathway.
Allows bins to be easily manoeuvred.
Does not have any lips, stairs or steps for bins to be manoeuvred easily.

2.6 RCV & bin servicing arrangements

All refuse will be collected by ICC's contractor utilising side loading RCV. Onsite servicing has been proposed as ICC's collecting contractor will be entering the site via River Road. The RCV will enter the site and in a forward gear circulate the site, stopping to service the bins and exit in a forward gear. All refuse bins will be collected directly from the kerbside presentation point. The RCV will be required to perform single reverse movements, to service both sides of the development, as depicted in the swept path analysis.

Figure 2.3 depicts the swept path analysis for ICC's specified side loading RCV.

Further details on vehicle access and on-site manoeuvring can be found in the transport report submitted with the development application.

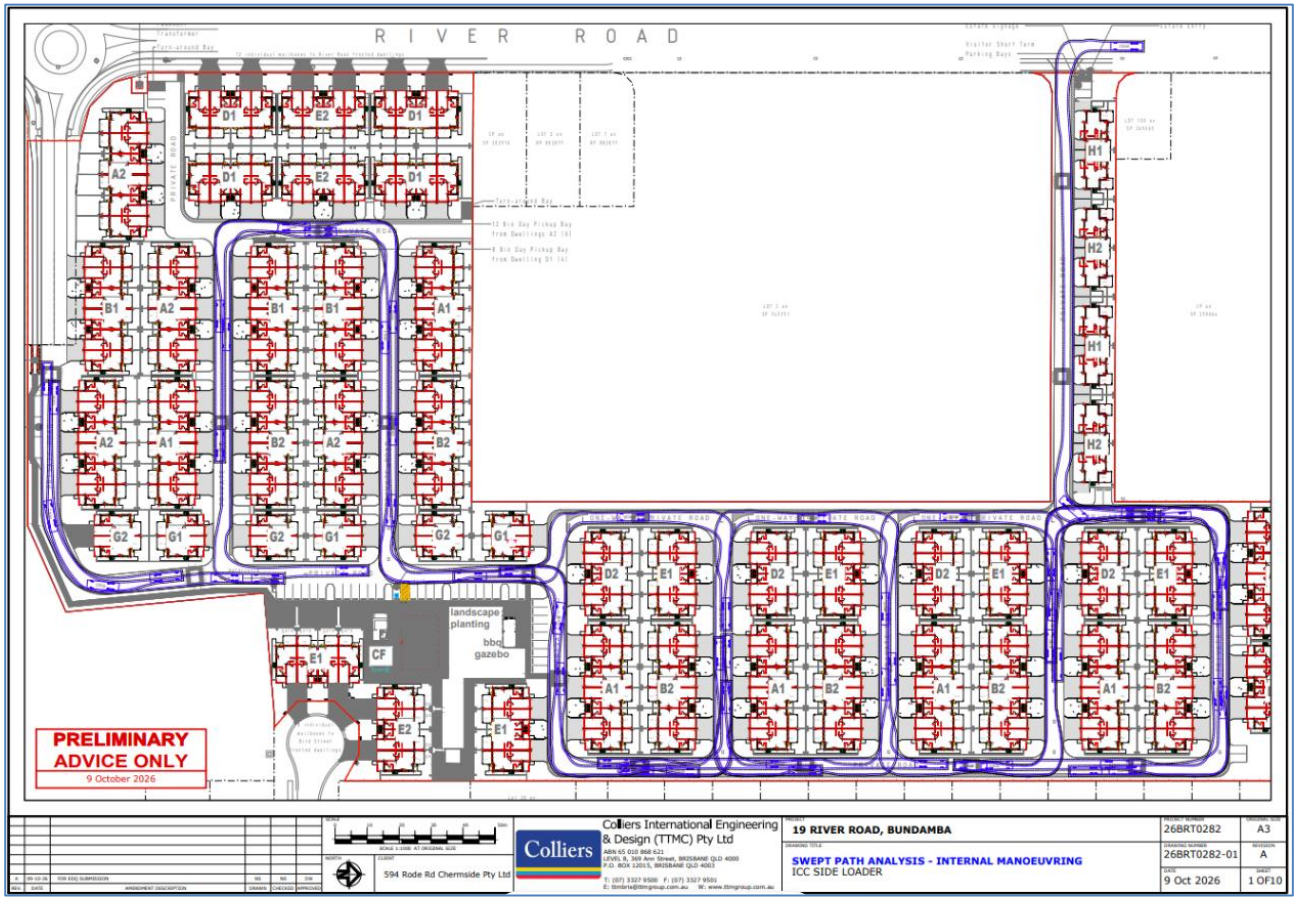


Figure 2.3: Swept path
Source: Colliers

Table 2.7 demonstrates the features of each bin servicing area.

Table 2.7: Service Area Design

Service area design requirements
Has sufficient access and clearance for the waste and recycling collection vehicles to service the bins, including no overhead obstructions.
Allows bins to be serviced safely while minimising the impediment to vehicle movements during servicing.
Is devoid of stairs, lips or ramps and allows bins to be manoeuvred easily.
Is not adjacent to a kitchen or eating area for public use.

3. Recommended operational refuse management

This section does not contain information relevant for building design assessment.

This section relates to the outcomes and waste management practices of the development during the operational phase as recommended by Colliers. It is intended for use as a live document by the end user of the development to assist with the ongoing management of the development.

3.1 On-going management

The tables below relate to a cycle of ongoing implementation, operation, review and amendment of the refuse strategy. These tables are intended to serve as a live document to be completed and updated during the operational phase of the development and therefore intentionally left blank.

Responsibilities will be assigned for all on-going refuse management related activities during the operation of the development. Colliers recommend the appointment of dedicated personnel to champion refuse management and sustainability. The following lists (Table 3.1 to Table 3.3) are designed to help manage and assign responsibilities and monitor the refuse operations. On-going management of the refuse strategy will maintain efficient services, a safe environment and improve on sustainability outcomes.

3.1.1 Implementation phase

Refuse management tasks during the implementation of the refuse strategy are required prior to and during the early stages of building occupancy. An opportunity to revisit these tasks is provided at set intervals with the review of the refuse strategy.

Table 3.1: Implementation checklist

Task	Assigned	Remarks
Appoint personnel to oversee or undertake refuse management tasks. A strata or community manager is typically appointed and oversees most refuse related operational tasks, engaging contractors for specialist tasks.		
Conduct internal safety review. An internal safety review is required to be undertaken to identify potential hazards in the implementation of the refuse strategy and risk mitigation opportunities. This includes the use of any refuse management equipment installed, as well as refuse transfer paths		
Development of policy and procedures Must be undertaken after safety review and abide by all relevant occupational health and safety legislation, regulations and guidelines to ensure site safety for visitors, staff and contractors. Also includes assessment of any manual handling risks and preparation of a manual handling control plan for waste and bin transfers.		
Engage refuse collection contractors. ICC's contractor must conduct a site visit for the purposes of risk assessing the site prior to conducting services. Contractors must ensure that a full risk assessment of equipment, surfaces and related gradients is complete and procedural documentation is provided to the appropriate personnel. RCV manoeuvrability testing and the establishment of service frequency and timing is also undertaken at this time.		
Leasing/body corporate agreements All body corporate and leasing contracts should contain clauses pertaining to waste management arrangements and use of any associated equipment.		
Consider fit out and move-in refuse. Higher volumes of waste are generated during the initial resident move-in or final fit out. This typically includes large volumes of cardboard. Additional bins or collections may be required.		

3.1.2 Occupation/operational Phase

Refuse management tasks during the occupation or operational phase of the development relate to the day to day and business as usual operational tasks that must be undertaken to execute the refuse strategy.

Table 3.2: Occupation/operation checklist

Task	Assigned	Remarks
Manage bin transfers to agreed servicing point. Bins are required to be presented to the agreed kerbside servicing point prior to the scheduled service time and ensure the area is free from obstruction. Late bin placement or servicing obstruction may lead to missed bin services.		
General cleaning. Regular cleaning and maintenance of all refuse management facilities is important to maintain a safe and hygienic environment for residents. General cleaning is required for all refuse holding and transfer areas including: • Refuse bins, rooms and storage areas • Refuse transfer areas including lifts and staircases • Any other refuse management equipment		

3.1.3 Review and amendment phase

The review and amendment refuse management tasks relate to tasks undertaken on a routine (e.g. quarterly, bi-annually or annually) or ad hoc basis. At the completion of the review and amendment phase, the cycle restarts with the implementation of the amended refuse strategy.

Table 3.3: Review and amendment checklist

Task	Assigned	Remarks
Coordination of specialised equipment contractors as required. May extend to ad hoc services requiring specialist equipment such as bulky waste removal.		
Internal safety review. Routine safety reviews are required to identify changes to the site, work practices or legislation that may impact existing policies and procedures. Reviews should include visual inspection of equipment and user PPE. Any policy or procedure updates arising from a safety review must be immediately communicated.		
Update and amend OWMP based on review outcomes. On completion of the refuse strategy review the OWMP should be updated to reflect refuse strategy amendments and to enable implantation of refuse strategy.		

As demonstrated above and in the Appendices, the proposed development satisfies the relevant guidance material, being the Transport and Parking Code and Transport and Parking Planning Scheme Policy in the Ipswich City Plan 2025, and City of Ipswich Waste and Resource Recovery Service Guideline. As such, it is consistent with the Draft Provisional Land Use Plan and should be approved by EDQ subject to the relevant conditions.

Appendix A ICC's PSP compliance checklist

Item	Requirement	Acceptable Outcome	Comment
Overlay Codes			
8.2.4 – Active Frontage Overlay Code			
PO1.1	Development fronting a street, lane or public land contributes to a high quality, safe, attractive and active frontage through the creation of a pedestrian focused environment and: a. at the street alignment, buildings are highly detailed; b. buildings are designed to be attractive; c. large expanses of blank walls are avoided, particularly in situations where such walls are likely to be visually prominent, e.g. where fronting streets or riverside areas, parkland and corner allotments; and d. facade design and detailing complement traditional proportioning and avoid the use of highly reflective materials.	**AO1.1.5** Development ensures that all air-conditioning, refrigeration and other mechanical plant, vents, exhausts, refuse and recycling storage areas: a. are located to not be visible from the street; and b. are screened from view to minimise visual impacts.	Complies.

Use and Development Codes			
9.3.7 – Dwellings Houses and Dual Occupancy Code			
9.3.7.3.1 - 6	**RO6.5** A waste storage area is provided for each Dwelling* to accommodate the permanent storage of 3 x 240-litre refuse bins in an area outside of the road boundary setback (in an area other than within the building frontage). *Note: A separate waste storage area is required for the Primary and Secondary dwelling forming a Dwelling house, or for each dwelling in a Dual occupancy.	N/A	2 x 240L proposed as townhouses are considered MUD and not automatically eligible for 3 x 240L bins.
9.3.7.3.2 – PO6.4	The design of Dwelling houses and Dual occupancies facilitates waste and delivery services	**AO6.4.1** A waste storage area is provided for each Dwelling* to accommodate the permanent storage of 3 x 240-litre refuse bins in an area outside of the road boundary setback (in an area other than within the building frontage). *Note: A separate waste storage area is required for the Primary and Secondary Dwelling forming a Dwelling house, or for each dwelling in a Dual occupancy.	Storage area provided for 2 x 240L bins as proposed.
9.3.10 – Multiple Dwellings and Accommodation Code			
9.3.10.3.2 - PO4.3	Development for services and related structures, including electricity transformers, fire hydrant and booster assemblies, air conditioning and other mechanical plant, vents, exhausts and refuse and recycling storage areas: a. are integrated into the development; b. do not dominate the site frontage; c. are compatible with the intended streetscape character; and d. ensure adverse amenity impacts to the streetscape and habitable spaces are ameliorated.	**AO4.3.1** Where services and related structures, including electricity transformers, fire hydrants and booster assemblies, air conditioning and other mechanical plant, vents, exhausts and refuse and recycling storage areas, are located within 4 metres of the front boundary: a. comprise no more than 5m or 10% of the street frontage, whichever is the lesser; b. are orientated towards the internal driveways or footpaths on-site and not towards the street frontage; and c. are located, screened or landscaped so as not to be visually obtrusive.	N/A

PO6.3	Development provides landscaping that must: a. provide shade to pedestrian pathways; b. maintained sightlines and support personal safety by allowing for the overlooking of the street and public spaces from the site and balconies; c. present an integrated landscape, neighbourhood and streetscape character; d. contribute positively to amenity and the climate of the site, streetscape and public spaces; e. reduce the appearance of building bulk and soften built form, driveways and hardstand areas from the street and adjoining properties; f. contribute to privacy between residences; and g. provide natural shade to mitigate heat island impacts	AO6.3.3 Landscaping and planting areas are exclusively for landscaping and do not contain: a. vehicle driveways, manoeuvering or hardstand areas and pedestrian paths; b. surface structures and infrastructure such as water conservation services, refuse storage areas, fire hydrants or boosters, electrical transformers or other utilities; or c. sub-surface structures or infrastructure such as piping, bioretention pits and basement car parking structures	TBC
PO7.1	Development provides refuse and recycling collection and storage facilities that: a. are located conveniently in an unobtrusive dedicated storage room or separate screened structure; b. are not located along the primary street frontage; c. are located and managed so that adverse impacts on building occupants, neighbouring properties and the public realm are minimised; d. provide for refuse and recycling including at-source separation; e. are of a design that allows low-frequency service collection; and f. minimise ongoing building management cost for occupants.	AO7.1 a. Residential development is to utilise kerbside collection where the locations for both the bin storage area and kerbside collection point can be accommodated based on the number of bins required to be serviced; b. On-site collection of bulk bins is provided for: i. development consisting of 10 or more dwellings; or ii. where the kerbside collection cannot appropriately or adequately be provided. c. refuse and recycling collection for a mixed-use development ensures residential and commercial bins are stored separately with separate access to each; d. all entry and exit points are of a width and design that allows for sufficient ingress and egress for the refuse collection vehicle including a 6.5m crossover; e. access for a refuse collection vehicle to the collection point is maintained at all times; and f. the required vertical and horizontal clearances are provided for the service to operate safely and efficiently including access and manoeuvring of waste and service vehicles	Complies. Details within this OWMP.

9.4.2 – General Works and Infrastructure Code			
PO5.5	Where refuse collection is required, driveways and private roads are designed to provide access and manoeuvring so that refuse vehicles can enter and exit the site in a forward gear.	**AO5.5** No accepted outcome provided.	Complies.
9.4.6 – Transport and Parking Code			
PO3.4	Where on-site refuse collection is required, development can be safely and efficiently serviced by waste collection vehicles.	**AO3.4** Service areas and service bays for commercial vehicles are designed in accordance with the provisions of Australian Standard AS2890.2 Part 2: Commercial Vehicle Facilities and Standard Drawings.	Complies.
Schedule 6 Planning Scheme Policies			
SC6.4 Transport and Parking Planning Scheme Policy			
6.4.12.3 – (4)	Pedestrian access does not pass through commercial or refuse vehicle reversing or loading areas.	N/A	Complies.

Appendix B Relevant development plans

R I V E R R O A D

S T R E E T

M A R Y

B I R D S T R E E T

L I T T L E F O R D C I R C U I T

Proposed Padmount Transformer

Turn-around Bay

12 individual mailboxes to River Road fronted dwellings

Estate Signage

Estate Entry

Visitor Short Term Parking Bays

Turn-around Bay

12 Bin Day Pickup Bay from Dwellings A2 (6)

8 Bin Day Pickup Bay from Dwelling D1 (4)

Coach House - 200 Mailboxes

3 Short Term Parking Bays for Mailboxes

landscape planting

bbq gazebo

pool

gazebo

8 individual mailboxes to Bird Street fronted dwellings

motorcycle park

PWD park

PRIVATE ROAD

ONE-WAY PRIVATE ROAD

LOT 503 on SP 199088

CP on SP 282910

LOT 2 on RP 882877

LOT 1 on RP 882877

LOT 3 on SP 343391

LOT 100 on SP 269663

CP on SP 259664

Lot 26 on RP 22399

Lot 27 on RP 22399

Lot 28 on RP 22399

Lot 29 on RP 22399

Lot 28 on SP 248680

Lot 27 on SP 248680

Lot 29 on SP 248680

Lot 30 on SP 248680

Lot 31 on SP 248680

Lot 32 on SP 248680

Lot 33 on SP 248680

Lot 34 on SP 248680

Lot 35 on SP 248680

Lot 58 on SP 248680

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Lot 64 on SP 248680

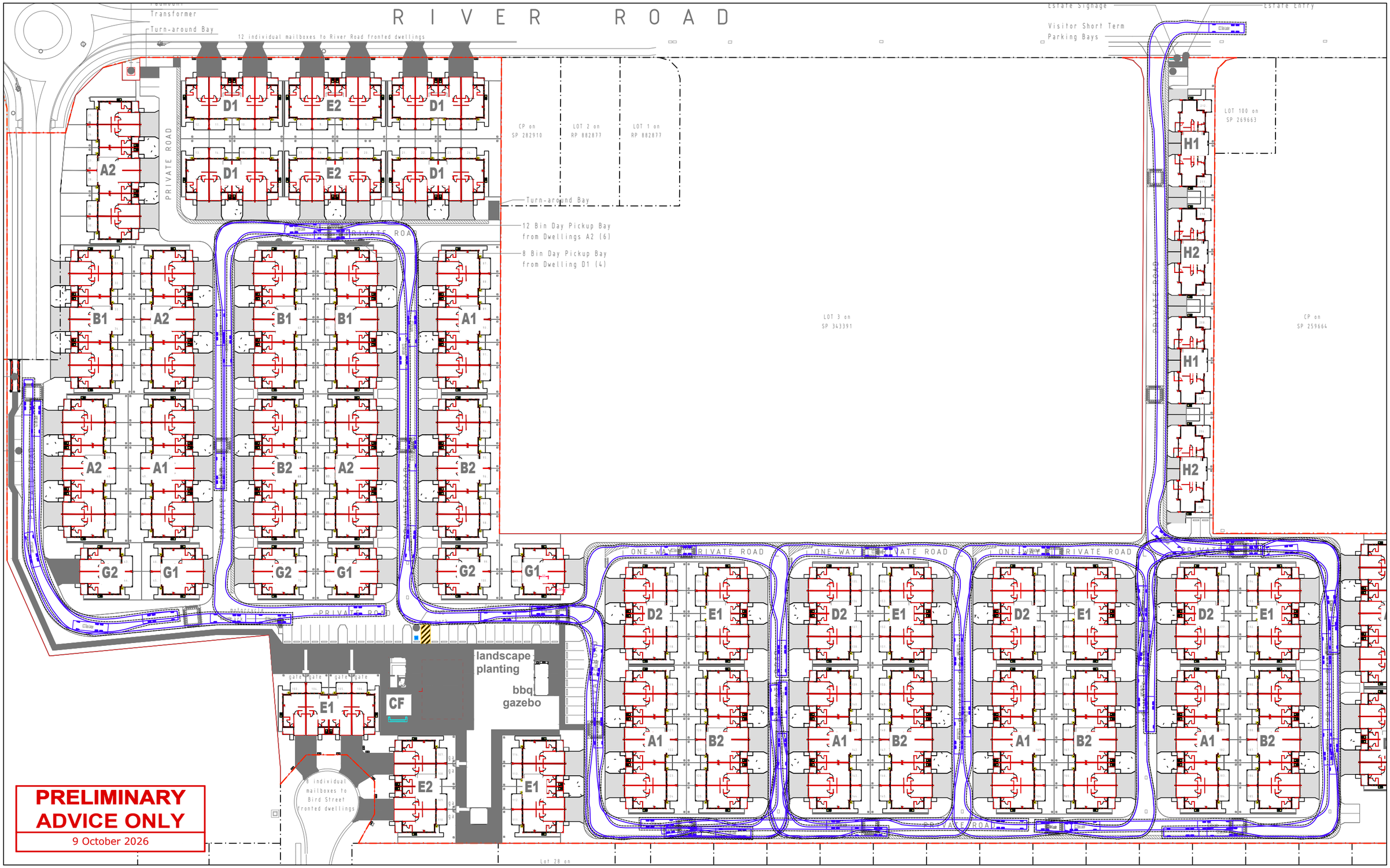
Lot 65 on SP 248680

DEVELOPMENT APPLICATION project no. **25-024** issue no. **G** date. **SEPT 2026** scale. **1 : 1250 @ A3**

19 RIVER RD, BUNDAMBA, QLD

Paul Ziukelis. architects

Appendix C RCV swept paths



PRELIMINARY ADVICE ONLY

9 October 2026

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
A	09-10-26	FOR EDQ SUBMISSION	NS	NS	DW

SCALE 0 10 20 30 40 50m

SCALE 1:1000 AT ORIGINAL SIZE

NORTH

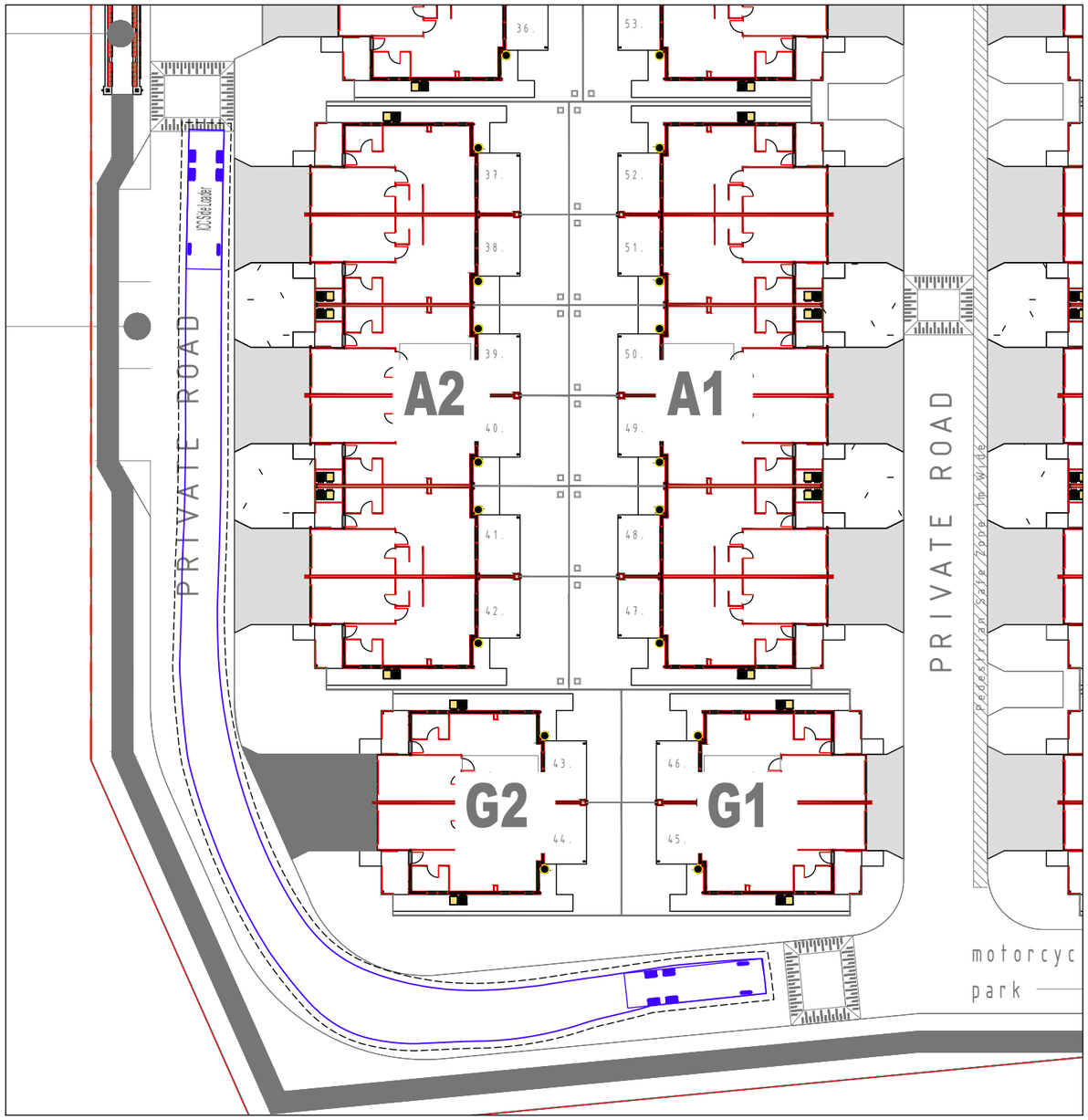
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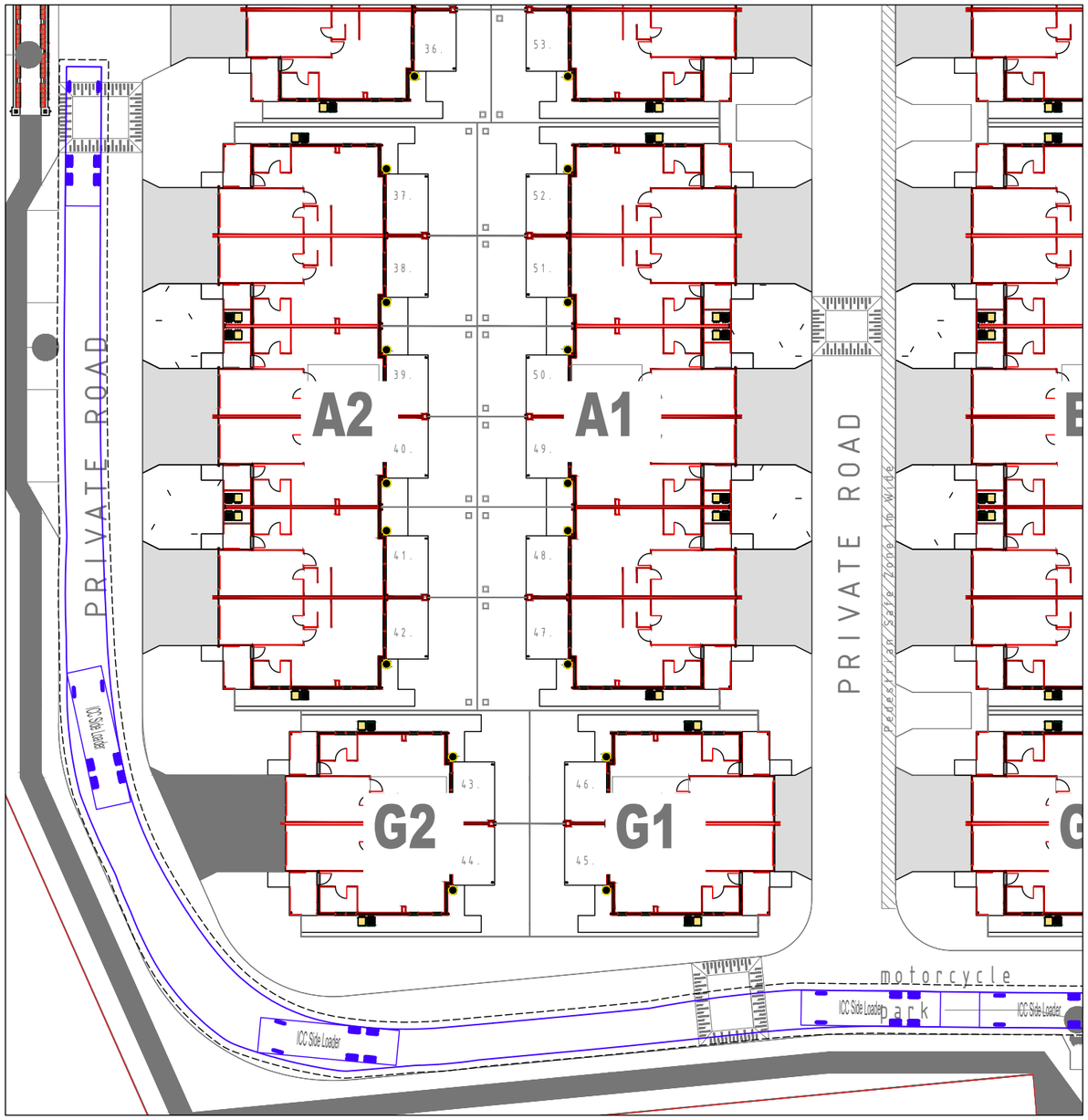
Colliers International Engineering & Design (TTMC) Pty Ltd
ABN 65 010 868 621
LEVEL 8, 369 Ann Street, BRISBANE QLD 4000
P.O. BOX 12015, BRISBANE QLD 4003
T: (07) 3327 9500 F: (07) 3327 9501
E: ttmbris@ttmgroup.com.au W: www.ttmgroup.com.au

PROJECT: **19 RIVER ROAD, BUNDAMBA**

DRAWING TITLE: **SWEPT PATH ANALYSIS - INTERNAL MANOEUVRING**
ICC SIDE LOADER

PROJECT NUMBER	ORIGINAL SIZE
26BRT0282	A3
DRAWING NUMBER	REVISION
26BRT0282-01	A
DATE	SHEET
9 Oct 2026	1 OF10





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9 October 2026

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
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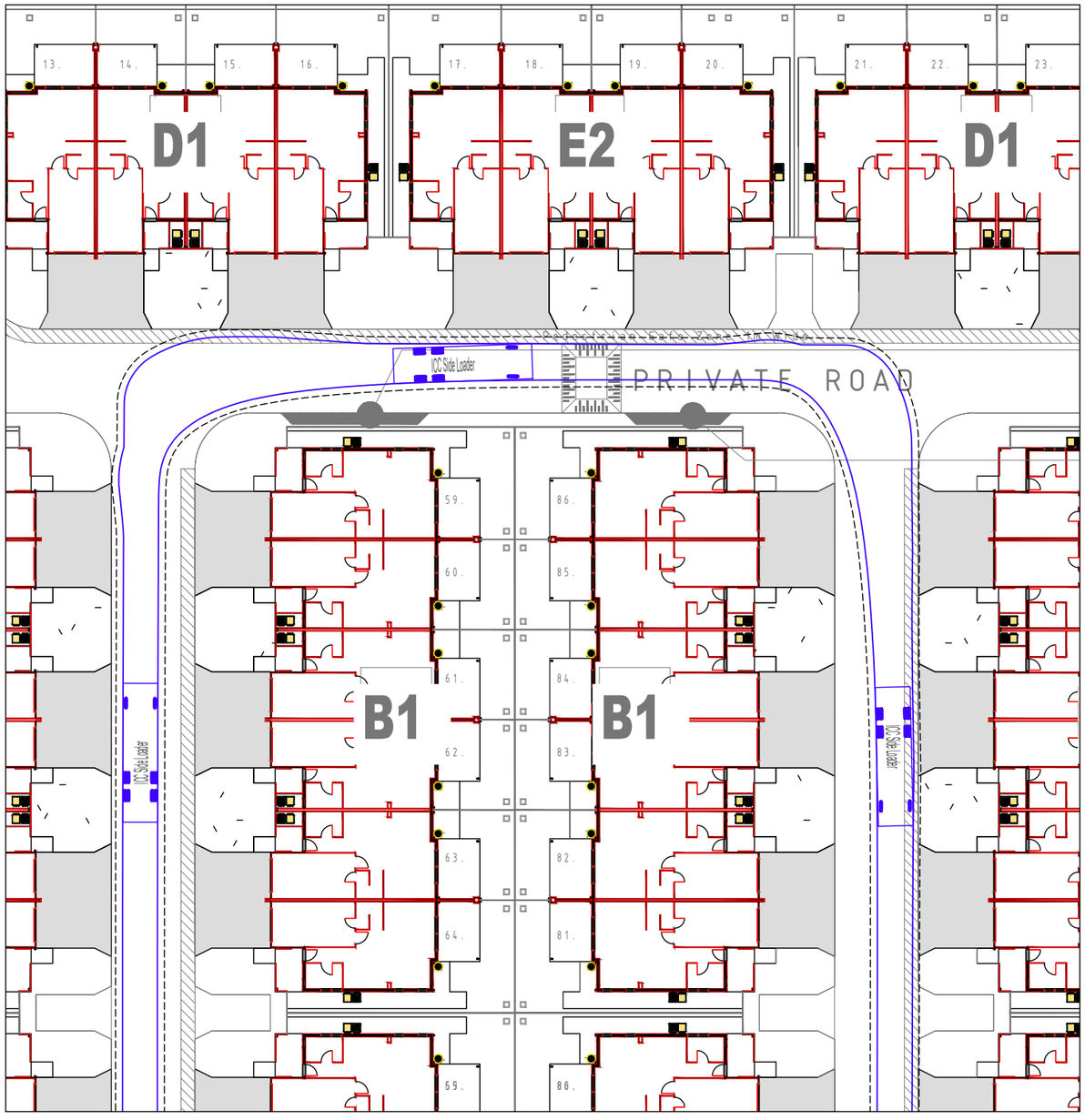
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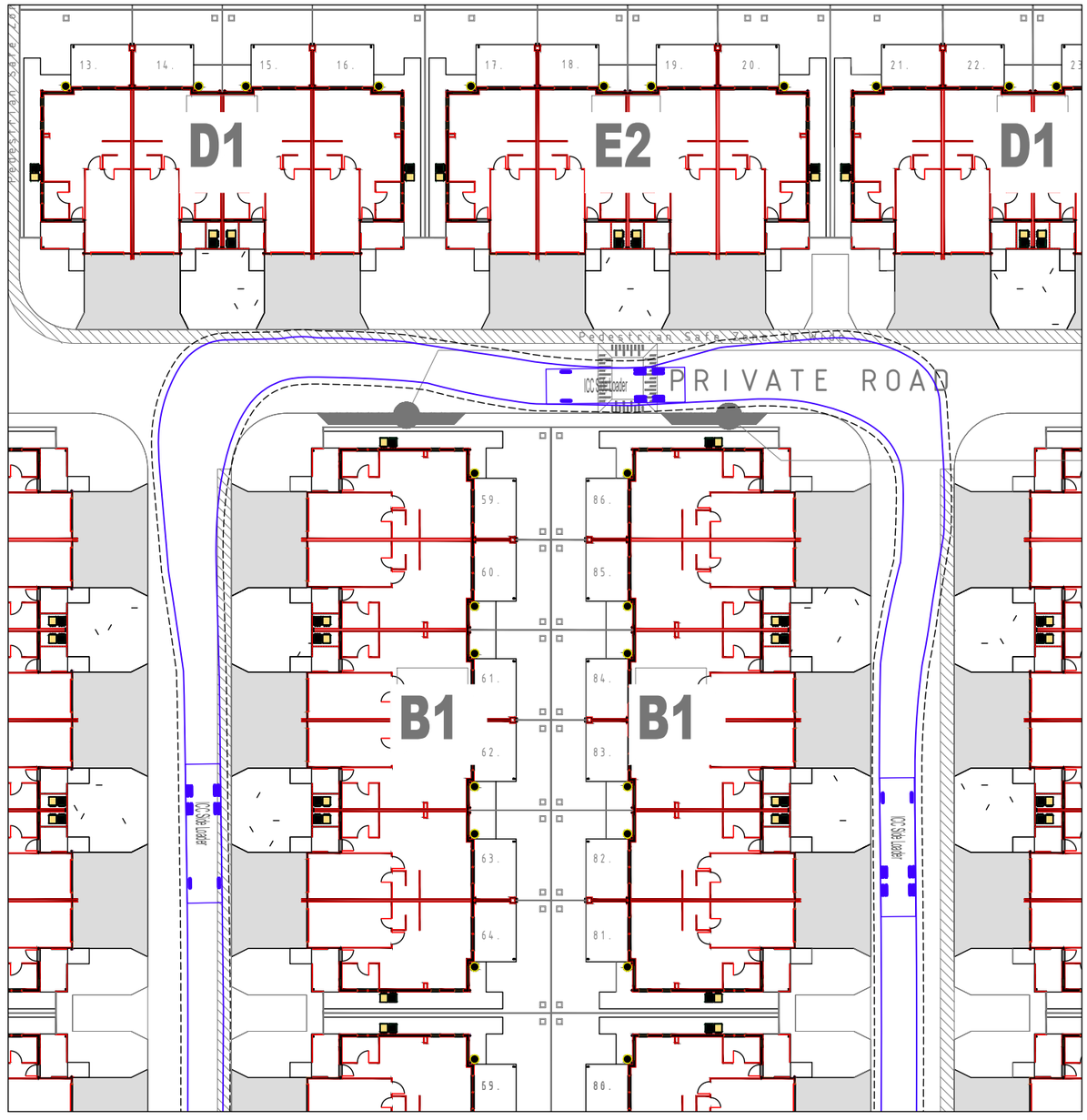
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DRAWING NUMBER	REVISION
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9 Oct 2026	2 OF10





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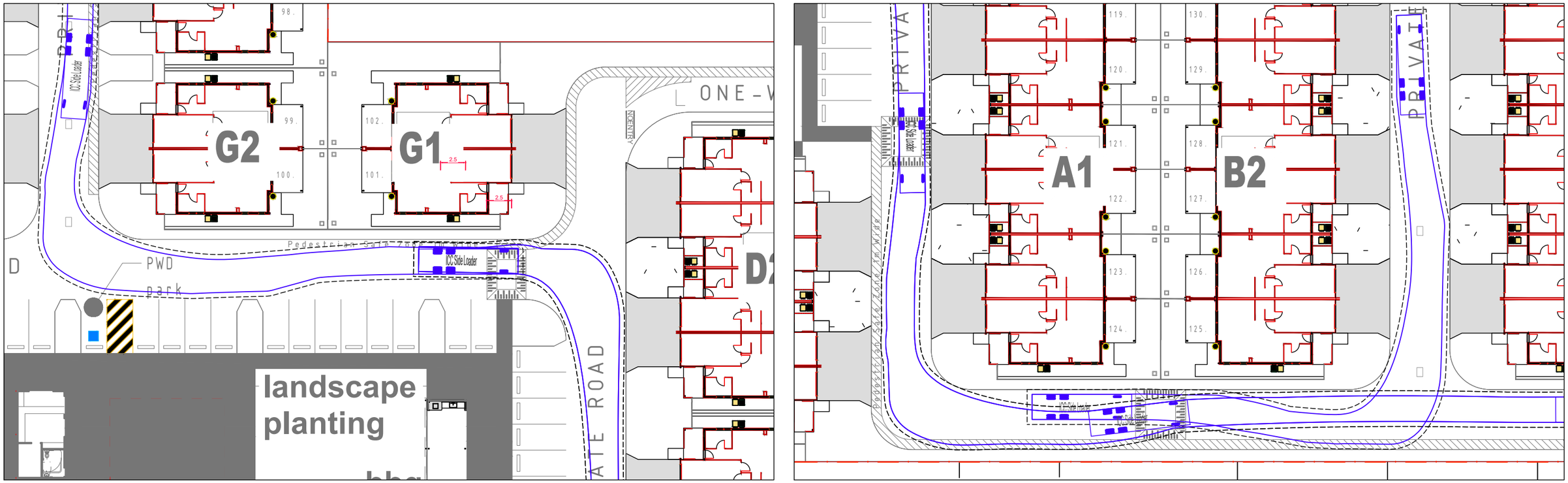
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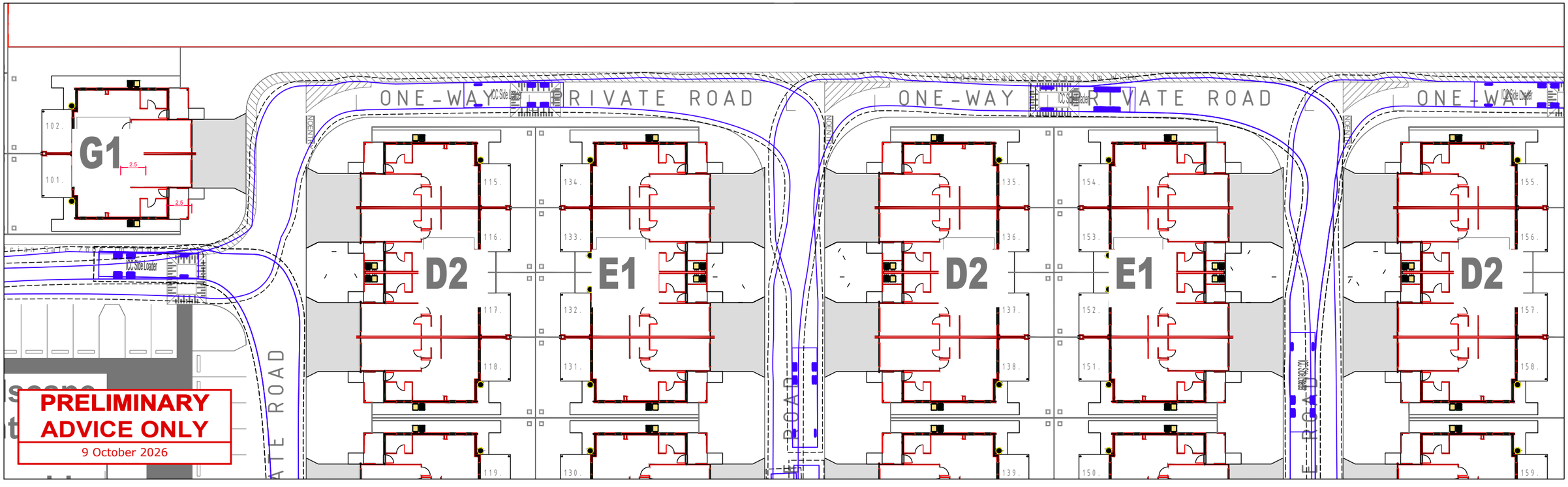
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SWEPT PATH ANALYSIS - INTERNAL MANOEUVRING
ICC SIDE LOADER

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DATE	SHEET
9 Oct 2026	3 OF10





REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
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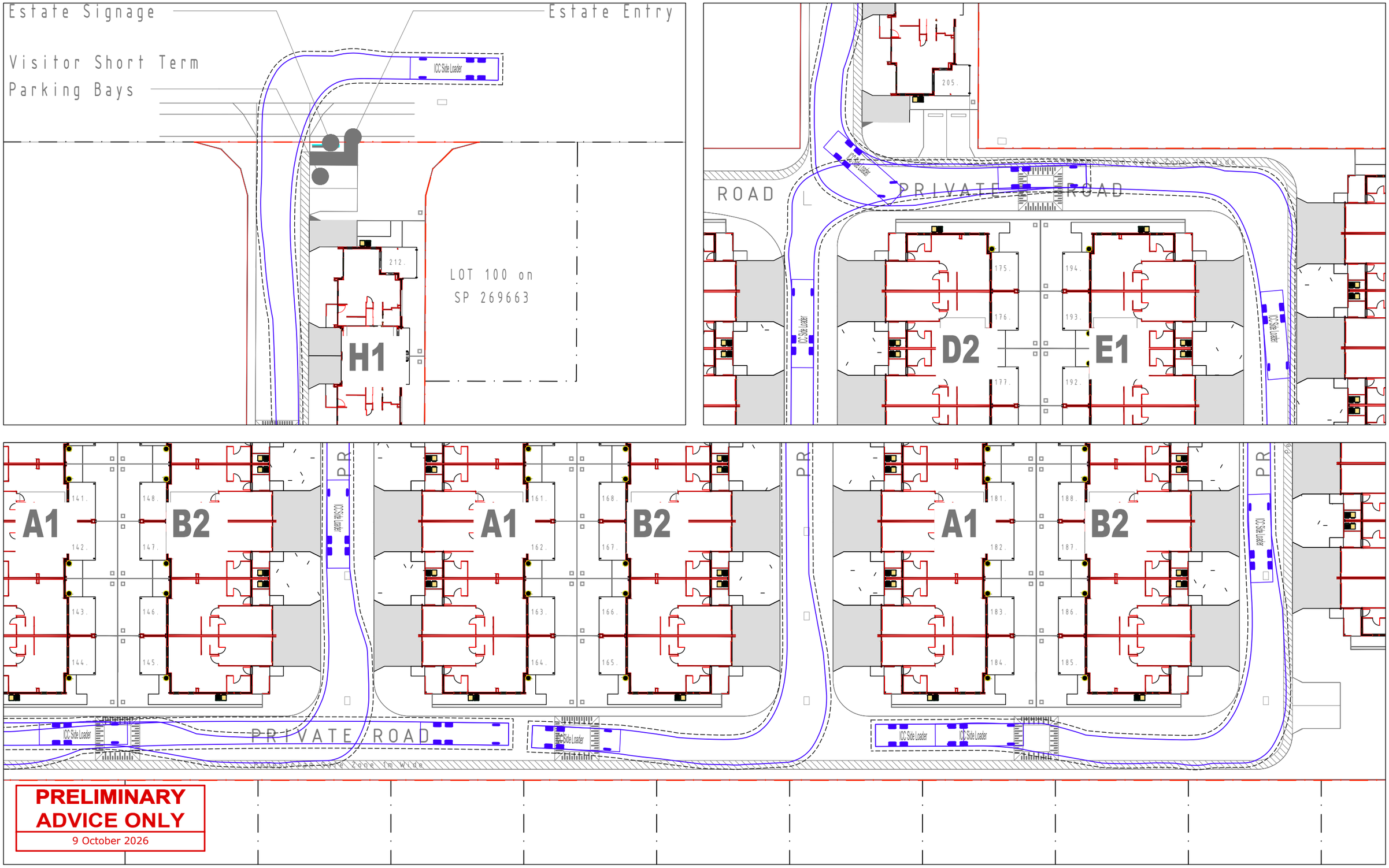
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26BRT0282-04	A
DATE	SHEET
9 Oct 2026	4 OF10



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9 October 2026

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
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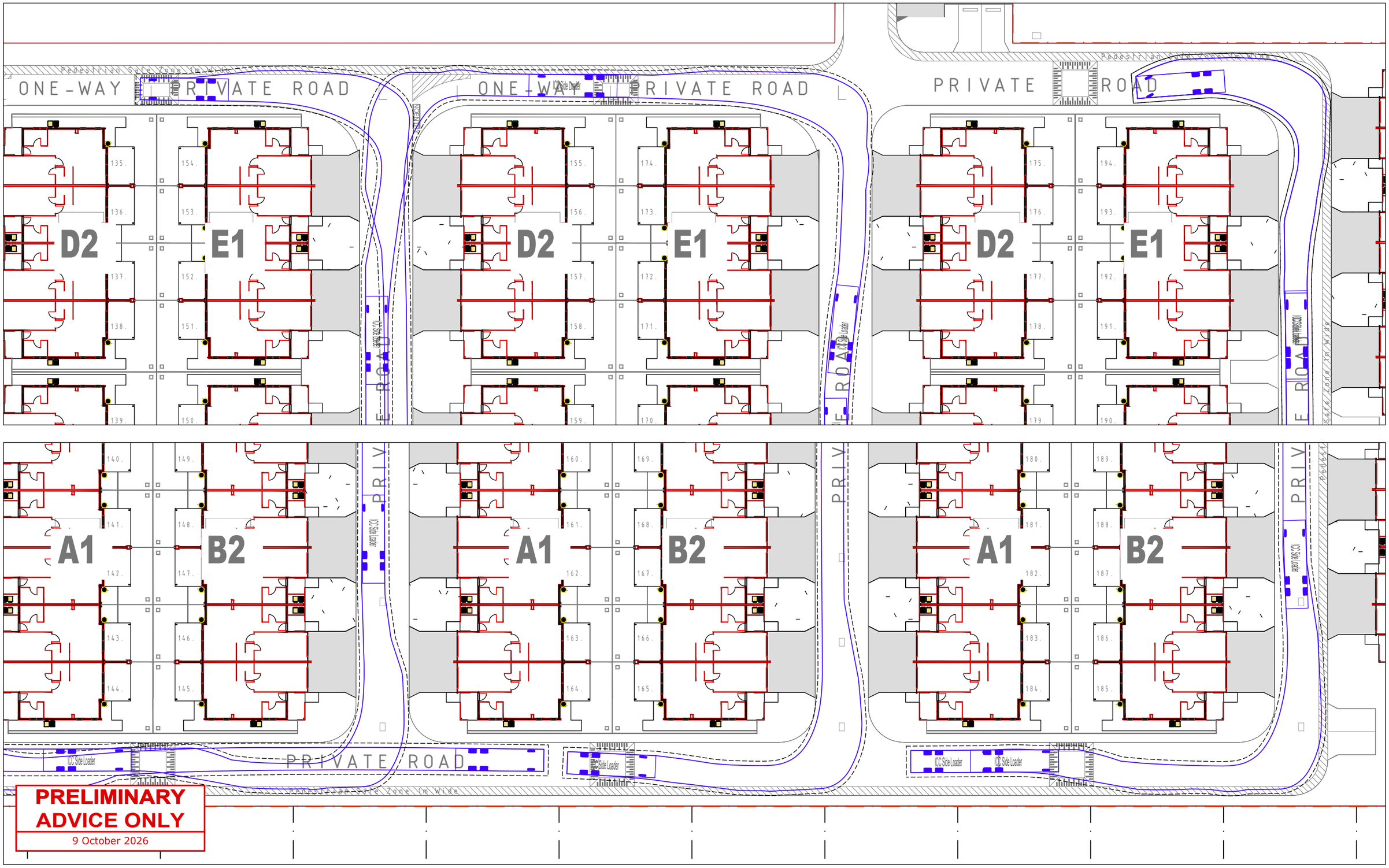
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26BRT0282	A3
DRAWING NUMBER	REVISION
26BRT0282-06	A
DATE	SHEET
9 Oct 2026	6 OF10

Appendix D Systems & specifications

The table below provides contextual examples of the specific equipment types specified in this OWMP and is not intended to provide an exhaustive list of all potential options of the required equipment.

Bin/ equipment types	Waste streams	Examples	Information
Residential unit bins	General waste and recycling	 	Various options and sizes. Built and standalone bin available. Examples: https://www.bunnings.com.au
240L bins	General waste, paper, recycling, green waste		Dimensions approx. 740 x 580 x 1080mm (L x W x H) (dimensions may depend on contractor) Examples: http://www.justwheeliebins.com.au, http://wheeliebinsonline.com.au
Caddy Bins	Food Waste		Example: https://pulpmaster.com.au/pulpmaster-caddy-system

Appendix E Refuse signage

E.1 Refuse signage

Waste signage guideline are provided by the Queensland government: https://www.qld.gov.au/environment/pollution/management/waste/recovery/recycling/signage.

General refuse signage









Other refuse signage









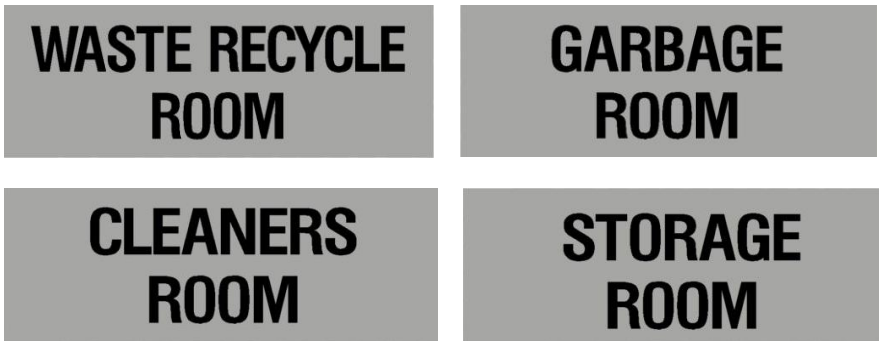
Colour coding as per AS 4123.7-2006

Mixed (Commingled) Recycling	PMS 108
General waste (landfill)	PMS 032C
Organics	PMS 15-0343
Paper and cardboard recycling	PMS Process Blue C
Soft Plastics	PMS 1655
Used Cooking Oil	Grey

E.2 Other refuse, facility and safety signage

Various signage including refuse area, safety and facility signage should be arranged through certified signage providers. Example signs can be found at http://www.signblitz.com.au, https://www.wayout.com.au or https://www.smartsign.com.

Example refuse room signage



Example facility signage



Example safety signage



Appendix F Terms & abbreviations

In this OWMP, a term or abbreviation has the following meaning unless indicated otherwise:

TERM	ABBREVIATION	DEFINITION
Equipment		
Bin (refuse bin)		A plastic or steel container for disposal and temporary storage of waste or recycling items. Various types and sizes exist for different items and purposes. Examples include residential unit bins, bulk bins, MGB, steely bins and specialised for medical waste or cigarette butts.
Bin storage area		An enclosed area designated for storing on-site refuse bins or a refuse compactor within the property.
Bulk bin		A galvanized or steel bin receptacle that is greater than 360L in capacity generally ranging from 1.00m³ to 4.50m³ used for the storage of refuse that is used for on-site refuse collection.
Bulk mobile garbage bin	Bulk MGB	A plastic (polypropylene) receptacle that is greater than 360L in capacity generally ranging from 660L to 1100L used for the storage of refuse.
Collection point		An identified position where refuse bins are stored for collection and emptying. The collection point can also be the bin storage area.
Compactor		A receptacle that provides for the mechanical compaction and temporary storage of refuse. It allows to reduce bin numbers and collection frequency.
Composter		A container or machine used for composting specific food scraps and/or organic materials.
Food waste recycling system		Defined as a vacuum or pump-based system for shredding, macerating or pulping of food waste. The food waste is transferred through pressure (service) pipes to sealed liquid storage tanks.
Green waste		All vegetated organic material such as small branches, leaves and grass clippings, tree and shrub pruning, plants and flowers.
Liquid waste		Non-hazardous liquid waste generated by commercial premises should be connected to sewer or collected for treatment and disposal by a liquid waste contractor (including grease trap waste).
Mobile garbage bin	MGB	A plastic (polypropylene) bin or bins used for the temporary storage of refuse that is up to 360L in capacity and may be used in kerbside refuse collection or on-site collection.
Putrescible waste		Putrescible waste is the component of the waste stream liable to become putrid and usually breaks down in a landfill to create landfill gases and leachate. Typically applies to food, animal and organic products.
Recycling		Recycling contains all material suitable for re-manufacture or re-use, e.g. glass bottles and jars; plastics such as PET, HDPE and PVC; aluminium aerosol and steel cans and lids; milk and juice cartons; soft drink, milk and shampoo containers; paper, cardboard, junk mail, newspapers and magazines.
Refuse		Refuse is material generated and discarded from residential and commercial buildings including general waste, recyclables, green waste and bulky items.
Refuse storage room		An area identified for storing on-site MGBs or Bulk Bins within the property.
Refuse trolley		A cart on wheels that can be used to collect smaller quantities of refuse from different areas or rooms of a building or site, and wheel the collected refuse to a (bulk) bin storage area where it is disposed. Refuse trolleys are commonly used in hotels or offices.
Regulated waste		Regulated waste is waste prescribed under legislation as regulated waste.
Transfer (manual transfer)		Manual transfer means physical transfer of refuse material and associated bulk bins or trolleys without assistance.
Waste		Waste is referred to as refuse material with the exclusion of recycling, green waste, hazardous waste, special waste, liquid waste and restricted solid waste.

TERM	ABBREVIATION	DEFINITION
Waste (general waste)		General waste is generally referred to as material free of any actual or apparent contamination such as pathological/infectious, radioactive materials and/or hazardous chemical. Reporting use is for material considered to be free of food waste.
Wheelie bin		A MGB of up to 360L, usually with 2 wheels for easy transfer. A common type is a 240L wheelie bin used for kerbside collection in many residential areas.
Measures		
Cubic metre	m3	Volume in cubic metre(s) related to refuse management equipment.
Ground floor area	GFA	The GFA of all storeys of a building is measured from the outside of the external walls or the centre of a common wall. It is commonly measured in square metres.
Kilogram	kg	Kilogram(s) related to refuse weight.
Litre	L	Litre(s) related to refuse volumes.
Square metre	m2	Square metre(s) related to refuse areas.
Ton	T	Ton(s) related to refuse weight.
Collection vehicles		
Body truck		A conventional heavy vehicle with a covered loading area. It is generally not specifically designed for emptying the content of bins into the truck during refuse collections, but can be used to carry entire (full) bins for servicing by bin swap-over.
Refuse collection Vehicle	RCV	A vehicle specifically designed for collecting and emptying refuse bins and refuse compactors.
Rear loading refuse collection vehicle	REL RCV	A truck specially designed to collect municipal solid waste and recycling, typically 240L wheelie bins to 1100L bulk bins, from rear loading mechanism and haul the collected waste to a solid waste treatment facility.
Tank truck		An RCV that is specifically designed to collect liquid wastes such as waste cooking oil and food waste pulp. The waste is typically pumped from a waste storage tank into the truck via a hose. Liquid waste management equipment is often provided by the contractor who collects the waste and operates the truck.