Site Waste Minimisation and Management Plan (SWMMP)

NOTE: The level of detail required for the Site Waste Minimisation and Management Plan (SWMMP) will vary with the size and complexity of the proposed development. For example, a DA seeking consent for a single dwelling house would normally require a very simple SWMMP, while a DA seeking consent for a large commercial or industrial complex is likely to require an extensive SWMMP that documents full details of proposed waste generation, management, recycling, storage and disposal measures.

This SWMMP relates to a mixed use commercial and residential development at 119-123 Jonson St, Byron Bay, NSW. It is for the demolition, construction and operational phase of the new development.

Applicant and Project Details (All Developments)	
Applicant Details	
Application No.	N/A
Name	JD Property Group
Address	PO Box 558, Byron Bay NSW 2481
Phone number(s)	0411 025 631
Email	anthony.dunn@jdpropertygroup.com.au
Project Details	
Address of development	119-123 Jonson St, Byron Bay, NSW.
Existing buildings and other structures currently on the site	1 x commercial building with garden shed and awning, 1 x residential dwelling with carport and garden shed.
Description of proposed development	Three-storey multi-unit complex with open rooftop terrace, thirteen (13) commercial retail shops, one (1) food and beverage tenancy, twenty-one (21) residential apartments & one underground level for car parking.

This development achieves the waste objectives set out in the DCP. The details on this form are the provisions and intentions for minimising waste relating to the operational phase of the redevelopment under construction.

Name	Craig Helbig – Principal Environmental Scientist
Signature	
Date	28/11/2023

Plans and Drawings (All Developments)

The following checklists are designed to help ensure SWMMPs are accompanied by sufficient information to allow assessment of the application. Drawings are to be submitted to scale, clearly indicating the location of and provisions for the storage and collection of waste and recyclables during:

- Demolition
- Construction
- Ongoing operation.

Demolition *Refer to Section F3.1 of the DCP for specific objectives and measures.* *Do the site plans detail/indicate:*	*Select Yes or No*
Size and location(s) of waste storage area(s)	Yes
Access for waste collection vehicles	Yes
Areas to be excavated	Yes
Types and numbers of storage bins likely to be required	Yes
Signage required to facilitate correct use of storage facilities	Yes
Construction *Refer to Section F3.2 of the DCP for specific objectives and measures. Do the site plans detail/indicate:*	*Select Yes or No*
Size and location(s) of waste storage area(s)	Yes
Access for waste collection vehicles	Yes
Areas to be excavated	Yes
Types and numbers of storage bins likely to be required	Yes
Signage required to facilitate correct use of storage facilities	No refer to comments *
Ongoing Operation *Refer to Section F4 of the DCP for specific objectives and measures. Do the site plans detail/indicate:*	*Select Yes or No*
Space	
Size and location(s) of waste storage areas	Yes
Recycling bins placed next to residual waste bins	Yes
Space provided for access to and the manoeuvring of bins/equipment	Yes
Any additional facilities	N/A
Access	
Access route(s) to deposit waste in storage room/area	Yes
Access route(s) to collect waste from storage room/area	Yes
Bin carting grade (flat)	Yes
Location of final collection point	Yes

Clearance, geometric design and strength of internal access driveways and roads	Yes	
Direction of traffic flow for internal access driveways and roads	Yes	
Amenity		
Aesthetic design of waste storage areas	Yes	
Signage – type and location	Yes	
Construction details of storage rooms/areas (including floor, walls, doors, ceiling design, sewer connection, lighting, ventilation, security, wash down provisions etc)	Yes	

*Described in relevant sections of this SWMMP.

Demolition

	Reuse	Recycling	Disposal	
Type of waste generated	**Estimate Volume (m^3) or Weight (t)**	**Estimate Volume (m^3) or Weight (t)**	**Estimate Volume (m^3) or Weight (t)**	**Method of onsite reuse, contractor and recycling outlet and/or waste depot to be used**
Excavation material				Soil is not expected to be excavated during demolition.
Timber (frame, cladding and roof truss)		<5 t	<5 t	Recycle at nearby recycling timber yard (e.g. North Coast Recycled Materials, Mullumbimby). Damaged or rotten timber to be disposed at Myocum waste facility.
Concrete		10 - 20 t		Recycle at nearby concrete recyclers (e.g. North Coast Recycling, Wollongbar) or classify as Recovered Aggregate and beneficially re-use off-site.
Bitumen			<10 t	Dispose to Myocum waste facility.
Bricks			<5 t	Dispose at Myocum waste facility.
Tiles (roof, kitchen and bathrooms)			<5 t	Dispose at Myocum waste facility.
Metal (framework, screws, nails, piping)		<5 t		Recycle (North Coast Recycling or Richmond Waste)
Glass			<5 t	Recycle (North Coast Recycling Richmond Waste).
Plasterboard			<5 t	Recycle (North Coast Recycling or Richmond Waste).
Fixtures and fittings			<1 t	Dispose at Myocum waste facility.
Floor coverings			<2 t	Dispose to Myocum landfill. Ensure any vinyl tiles are cleared for asbestos.
Packaging (used pallets, pallet wrap)				None expected during demolition. If encountered, recycle pallets at North Coast Recycled Materials. Pallet wrapping is to be disposed at Myocum waste facility.
Garden organics			30 m^3	Mulch trees for organics disposal.
Containers (cans, plastic, glass)		<1 t		Recycle at Myocum waste facility.
Paper/cardboard		<1 t		Recycle at Myocum waste facility.
Residual waste (e.g. general refuse from site activities and			<5 t	Dispose at Myocum waste facility.

workers)				
PVC (Down pipes and plumbing)			<1 t	Dispose at Myocum waste facility.
Asbestos			<2 t	Asbestos is to be removed by registered asbestos removalist and sent to a suitably licensed facility.
Hazardous/special waste				None expected. See the unexpected finds protocol at the rear of this report for managing unexpected waste.

Additional Notes:

- All demolition wastes to be either direct loaded onto trucks (minimising stockpiling), placed directly into skip bins or be stockpiled in a manner which effectively segregates different material types for later pick up. Figure 1 (p 7) presents the proposed location for waste (skip) bins during the demolition program. Any stockpiling of materials, if required, will occur on the northern portion of existing Lot 1, with ready access for trucks to enter the site from Kingsley Street and exit from Jonson Street. Figure 1 (p 7) illustrates this location. The locations of the skip bins may change during the demolition as the demolition progresses however entry into the site will remain from Kingsley Street and exit to Jonson Street.

- In consideration of the material types created by demolition (principally concrete, metals, plasterboard and timber), it is likely that only metal pieces and timber would be stockpiled pending truck pick up. Other materials will be placed directly into skip bins (or be direct loaded into trucks).

- Materials likely to be stockpiled (metals and timber) have a negligible potential to cause adverse environmental effects while stockpiled. Notwithstanding, any stockpiles of materials created will be effectively prevented from causing run-off to external areas, generating fugitive dust and causing offensive odours. These preventative measures must be detailed in the Demolition Contractor's Environmental Management Plan (EMP) – refer below. Measures considered should include, as a minimum; effective bunding around stockpiled material which prevents run-off from the materials onto adjacent land (and run-on) and covering of the materials if they contain any inclusions with the potential to be windborne.

- Planning should be undertaken by the Demolition Contractor to ensure that clear truck and plant access routes to work areas are maintained to Kingsley Street during demolition activities. This will be effectively undertaken by erecting signs on site which warn site workers not to park vehicles and machinery within or close to the truck and plant access routes to and from the site. This information should be reinforced at daily site (toolbox) meetings. Designated vehicle parking areas will also be established by the Demolition Contractor. These areas will be clearly signed.

- Skip bins will be available within the storage area during the demolition program (refer to Figure A). A total of 3 bins will be available, for recyclables created by the construction activities (steel and concrete – 2 x bins) and mixed waste created from the construction activities (including refuse created by workers on-site) – 1 x bin, as follows:
    - One (1) x 10 m3 bin: for concrete pieces = collection as required (estimated 2-3 collections in total).
    - One (1) x 10 m3 bin: for metal pieces = collection as required (estimated 1-2 collections in total).
    - One (1) x 10 m3 bin: for mixed wastes = collection as required (estimated 2-3 collections in total).

- The skip bins will be accessible for emptying via the main entrance driveway from Kingsley Street.

- General refuse and recyclables created by on-site workers during the demolition program are

expected to be small, relative to demolition waste quantities, given the short duration of the demolition program. The waste materials and recyclables will be placed by workers into the mixed waste skip provided within the waste storage area.

- Signs/stickers are to be placed on all bins to reinforce materials which are appropriate to be placed in certain waste bins, and those which should be excluded. The signs will include a picture and description of wastes which can be placed into the bins and those materials which should be excluded. The signs will be large enough to be read easily by all on-site staff. Information relating to appropriate waste deposition by on-site workers should be reinforced regularly at on-site (toolbox) meetings. Examples of stickers are presented as Attachment 2.

- The Demolition contractor will retain all records demonstrating lawful disposal of waste and keep them readily accessible for inspection by regulatory and planning authorities such as Council, SafeWork NSW and the NSW EPA.

- The Demolition contractor will work in accordance with a Demolition EMP. The EMP will provide the following details, as a minimum:
    - Location of waste storage areas (refer also to Figure 1).
    - Environmental controls for stockpiling of materials (if required). Refer also to above discussion points.
    - Environmental controls for dust emissions, stormwater runoff and noise, as a minimum.
    - Environmental controls to prevent refuse from leaving site (wind-blown, stormwater run-off, etc).

- The EMP should be prepared by a suitably qualified environmental professional.

- The Demolition contractor will conduct regular inspections of the site perimeter and all on-site surfaces, to ensure that waste materials are not leaving the designated waste storage area(s) and entering adjacent land.

- The asbestos removal will occur before any other demolition works begin. Asbestos will be removed by suitably qualified professionals and all potentially containing asbestos material will be placed a skip bin lined with plastic wrapping and sealed for transport to a suitably licensed facility.

Figure 1: Location of Bin Storage During Demolition

Construction

	Reuse	Recycling	Disposal	
Type of waste generated	**Estimate Volume (m^3) or Weight (t)**	**Estimate Volume (m^3) or Weight (t)**	**Estimate Volume (m^3) or Weight (t)**	**Method of onsite reuse, contractor and recycling outlet and/or waste depot to be used**
Excavation material			18,000 m^3	Soil is to be managed in accordance with the Acid Sulphate Soil Management Plan and the Remediation Action Plan.
Timber (specify)	<5t	<5 t		Timber offcuts are to be reused within the development and other construction sites as much as possible. Timber unsuitable for reuse will be placed in a skip bin to be recycled at nearby recycling timber yard (e.g. North Coast Recycled Materials).
Concrete		<10 m^3		Crush and re-use as fill on-site, if possible. Alternatively, recycle at nearby concrete recyclers (e.g. North Coast Recycling, Wollongbar) or classify as Recovered Aggregate and beneficially re-use off-site. Unsuitable concrete will be disposed at a suitable licenced facility.
Concrete waste washout		<5t		Washed onto LDPE plastic and allowed to set. Recycled once solid by North Coast Recycling.
Masonry Bricks	<2 t		<2 t	Reuse on site and on future projects if possible. Alternatively, dispose at Myocum waste facility.
Face Bricks	<2 t		<2 t	Reuse on site and on future projects if possible. Alternatively, dispose at Myocum waste facility.
Tiles	<2 t	<5 t	<2 t	Reuse on site and on future projects if possible. Alternatively, dispose at Myocum waste facility.
Steel reinforcing		<5 t		Recycled at a suitable facility (e.g. Richmond Waste).
Aluminium balustrading	<1 t	<1 t		Reuse on site and on future projects if possible. Metal unsuitable for reuse will be recycled at a suitable facility (e.g. Richmond Waste).
Glass	<2 t		<2 t	Reuse on site or future projects if possible or dispose at Myocum waste facility.
Plasterboard (offcuts)			<5 t	Picked up for disposal at Myocum by Richmond Waste.
Fixtures and fittings	Nil			Fixtures and fittings ordered to suit design.
Floor coverings	<1		<1	Re-use tiles if possible. All other cut offs are to be disposed at Myocum waste facility.

Packaging (used pallets, pallet wrap)	<1t		<1t	Reuse pallets at other sites or send back to purchaser for reuse. Pallet wrapping is to be disposed at Myocum waste facility.
Garden organics	Nil			Landscaping requirements ordered to suit landscape plan.
Containers (cans, plastic, glass)			1-2 t	Picked up for disposal at Myocum by Richmond Waste.
Paper/cardboard		<2 t		Recycle at Myocum by Richmond Waste.
Residual waste			<5 t	Picked up for disposal at Myocum by Richmond Waste.
Asbestos	Nil			No asbestos used in construction.
Hazardous/special waste	Nil			No hazardous/special waste generated from construction.

Construction Design (All Types of Developments) – Additional Notes

Outline how measures for waste avoidance have been incorporated into the design, material purchasing and construction techniques of the development (refer to Section B8.3.2 of the DCP):

Materials and Site Activities

Architectural Design: The architect will incorporate the use of recycled & prefabricated components into the design where possible. Examples of these components include the pre-fabricated steel cages for footing construction and pre-fabricated steel frames.

Building Requirements: The Builder will be required to estimate material volumes to the correct quantities (as far as is reasonably practicable) in its purchasing schedule & will identify reuse & recycling opportunities. The following will apply to all subcontractors associated with the construction phase:

- Materials will be ordered to size.
- All reasonable efforts will be made not to over-order materials.
- Pre-cut or prefabricated materials will be ordered where possible.
- Materials that come with minimal packaging will be ordered to produce less waste.
- Arrange for delivery of materials to site 'as needed', to prevent the degradation of materials due to weathering and moisture damage, or store them undercover when/where there is availability. Materials that arrive wrapped will be left wrapped (and therefore protected from environmental conditions) until they are required. If necessary, material storage may occur within the underground carpark beneath the building during the later stages of development where fixtures, fittings, plasterboard and appliances are required to be stored onsite. Bulk waste bins within the early stage of development is limited to the northern boundary fronting Kingsley Street, as illustrated in Figure 2.
- The area utilised for waste bin storage is on public owned land and this footpath will be closed during construction for the public's safety. Traffic control will be required to facilitate the drop off and pickup of the bulk waste bins as required.
- Material within the early stages of development must be mobilised to site and installed as required.

All construction activities will occur in accordance with a Construction Environmental Management Plan (EMP). The EMP will be prepared by an environmental professional with experience in the preparation of Construction EMPs. The EMP will include, as a minimum, the following information:

- Location of waste storage areas (refer also to Figure 2).
- Environmental controls for stockpiling of materials, if required. These must include the stockpiling of excavated soil and liming treatment for ASS (including construction of an appropriately designed treatment pad, in accordance with the requirements of the ASS

Management Plan).
- Environmental controls for dust emissions, stormwater runoff and noise, as a minimum. These must include moisture control and/or covering of soils to mitigate fugitive dust emissions, silt fencing at the site perimeter to prevent sediment transport off-site and screening of perimeter fencing to prevent transport of wind-blown materials off-site.

The Construction EMP should be revised, as required, during the construction program to take account of changes in construction methodology and/or material types, changes in site conditions, changes in weather conditions and any complaints received from project stakeholders or nearby land users.

The principal building Contractor will have a designated compound for office location meetings and storage of containers, accessible via the main entrance driveway from Kingsley Street. The compound and storage areas are likely to be in the north portion of the development site fronting Kingsley Street but may change with the sequencing and location of on-site works once the basement has been completed.

Skip bins will be available within the storage area during the construction program (refer to Figure 2). A total of 3 bins will be available, for the deposition of refuse created by workers on-site, recyclables created by the construction activities (steel and concrete) and general refuse created from the construction activities; as follows:

- One (1) x 10 m^3 bin: for concrete pieces and washout waste = collection as required (estimated only 2-4 collections in total).
- One (1) x 10 m^3 bin: for metal pieces = collection as required (estimated 1-2 collections in total).
- One (1) x 10 m^3 bin: for mixed wastes = collection as required (estimated 3 collections in total).

The skip bins will be accessible for emptying via Kingsley Street (refer to Figure 2).

Reusable and recyclable materials will be separated from waste by ensuring that the correct materials are placed in the designated bins. Signs will be erected or stickered onto all bins to minimise waste mixing. The signs will include pictures and detailed descriptions of materials which can be placed into the bins and those materials which should be excluded. The signs will be large enough to be read easily by all on-site staff. Information relating to appropriate waste deposition by on-site workers should be reinforced regularly at on-site (toolbox) meetings during the construction program. Examples of stickers are presented in Attachment 2.

The bins will be inspected regularly by the principal building Contractor to ensure waste types are not being mixed. If required, waste management requirements will be further reinforced at site (toolbox) meetings (refer also to below).

Planning will be undertaken by the principal building Contractor to ensure that clear truck and plant access routes to work areas are maintained to Jonson Street. This will be effectively undertaken by erecting signs on site which warn site workers not to park vehicles and machinery within or close to the truck and plant access routes to and from the site. This information should be reinforced at daily site (toolbox) meetings or otherwise communicated regularly to site workers. Designated vehicle parking areas will also be established by the principal building Contractor. These areas will be clearly signed.

No rubbish is to be buried or burned on site.

The principal building Contractor will retain all records demonstrating lawful disposal of waste and keep them readily accessible for inspection by regulatory and planning authorities such as Council, SafeWork NSW and the NSW EPA.

The principal building Contractor will conduct regular inspections of the site perimeter and all on-site surfaces, to ensure that waste materials are not leaving the designated waste storage area.

Lifecycle

Tiles will be used and roofing materials will be of an appropriate rating for near-coastal environments, to ensure as long a life as possible.

Hardwood timber may be considered for construction, which has a long life and could be recycled at the end of its use in the proposed development. Other recyclable materials used in indoor applications (metals, untreated wood) may also be recycled at the end of their use in the proposed development.

Figure 2: Location of Bin Storage During Construction

LEGEND

- Site Boundary (Approximate)
- Concrete Skip Bin
- Mixed Waste Skip Bin
- Metals Skip Bin
- Approximate Excavation Area During Construction
- Truck Entry and Exit Path

0 10 20 m

ENV Solutions
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Figure 2 – Site Construction Waste Plan
119-123 Jonson Street, Byron Bay, 2481

Project: Preliminary Site Investigation
Client: JD Property Group Pty Ltd
ENV Project Number: 216646

Image source: Coffs Harbour Online Mapping Tool (2022)

BYRON SHIRE COUNCIL
Development Application
APPROVED PLAN
DA No. 10.2023.235.1
Date: 18 April 2024

Waste Generation (Residential)

RESIDENTIAL APARTMENTS

	Recyclables			*Compostables*	*Residual waste*
	Paper	*Cardboard*	*Metals/ plastics/glass*		
Amount generated (L per development per week)[1]	840			672	1,680
Any reduction due to on-site compacting equipment[2]	N/A			N/A	N/A
Frequency of collections (per week)	1			2	2
Number and size of storage bins required	1 x 1,100 L* trade waste bins			2 x 240 L wheelie bins (MGBs)	1 x 1,100 L* trade waste bins
Floor area required for storage bins (m^2)	1.33			0.82	1.33
Floor area required for manoeuvrability/accessibility (m^2) [3]	2.66			1.64	2.66
Total floor area required (m^2)	**6.96**				
Floor area provided (m^2) (refer to Figure 3)	**7**				
Height required for manoeuvrability (m) – MRV	3.7			3.7	3.7
Provision for the temporary storage of bulky goods	Floor area of 4m^2, to be used as a bulky goods storage room, situated adjacent to the residential bin storage area (refer to Figure 3).				

1 Waste generation rates have been drawn from Chapter B8 of the Byron Shire Council Development Control Plan (DCP; 2014) for "Multi Dwelling Housing, Residential Flat Buildings and Attached Dwellings" (Appendix B8.2).

2 No on-site compaction (compaction will occur in the pick-up truck).

3 Manoeuvrability room calculated at 100% of the bin floor area.

* Richmond Waste supplies 1,100 L mobile trade waste bins (on wheels), which can be loaded by a rear-loading SRV or MRV.

Waste Generation (Commercial)

GROUND FLOOR COMMERCIAL (ALL TENANCIES)

	Recyclables			*Compostables*	*Residual waste*
	Paper	*Cardboard*	*Metals/ plastics/glass*		
Amount generated (L per development per week)[1]	3,798			3,178	11,737
Any reduction due to on-site compacting equipment[2]	No			No	No
Frequency of collections (per week)	4 x times per week			4 x times per week	4 x times per week
Number and size of storage bins required	1 x 1,100 L* trade waste bins			4 x 240 L wheelie bins	3 x 1,100 L* trade waste bins
Floor area required for storage bins (m^2)	1.33			1.64	3.99
Floor area required for manoeuvrability/accessibility (m^2) [3]	2.66			3.28	7.98
Total floor area required (m^2)	**13.92**				
Floor area provided (refer to Figure 3)	**16**				
Height required for manoeuvrability (m) – MRV	3.7			3.7	3.7

1 Waste generation rates have been drawn from Chapter B8 of the Byron Shire Council Development Control Plan (DCP; 2014) for "Shop greater than 100m^2" for 2 commercial tenancies, "Shop less than 100 m^2" for 12 commercial tenancies and restaurant/café waste generation for the food and beverage tenancy (Appendix B8.2). Refer to Attachment 1 for waste generation calculations.

2 No on-site compaction (compaction will occur in the pick-up truck).

3 Manoeuvrability room calculated at 100% of the bin floor area.

*Richmond Waste supplies 1,100 L mobile trade waste bins (on wheels), which can be loaded by a rear-loading SRV or MRV.

Rear Loading MRV Collection (On-site in Loading Bay)

RESIDENTIAL APARTMENTS

Lifecycle

Detail the arrangements that would be appropriate for the ongoing use of waste facilities as provided in the development. Identify each stage of waste transfer between residents' units/commercial tenancies and loading into the collection vehicle, detailing the responsibility for and location and frequency of, transfer and collection.

- 2 x wheelie bins required in total for organics (compostables) collection. This number of bins satisfies the total calculated waste output for the residential apartments (672 L per week). Organics will be collected twice per week. Organics calculation is not included in the Byron DCP, however, discussions with a Byron Shire Council Resource Recovery Contracts Management Officer advises an organics generation of 40% of the general refuse rate is suitable for residential organics generation.
- 1 x 1,100 L trade waste bin will be required for recyclables. This bin satisfies the total calculated recycling output for the residential apartments (840 L per week). Recycling is to be collected once per week.
- 1 x 1,100 L trade waste bin will be required for residual waste. This bin satisfies the total calculated residual waste output for the residential apartments (1,680 L per week), based on a collection frequency of twice per week.
- All bins will be stored in a designated storage area in close proximity to the loading area off Middleton Lane (refer to ground floor development plans, with excerpt Figure 3 (DA103) provided on page 15 of this Plan.
- Because the development is mixed use, the residential bins (wheelie bins and trade waste bins) will be separated from the commercial bins within the storage area. Signs will be erected to effectively segregate the separate storage areas. The storage area will be well lit such that residents can deposit waste into the bins after hours (at night). The storage area is also gated (roller door) for security purposes.
- Residents will be responsible for depositing general waste and recycling into the waste chutes, which will be available on both floors of residential apartments (north-east corner adjacent the elevators). The relative location of the waste chutes within the bin storage area is indicated on Figure 5 & 6 (DA104 & DA105, p 16). Alternatively, residents may access the bin storage area directly, via the service lifts. Organics waste is to be deposited directly into the organics bin in the waste room (there will be no chute available).
- For the waste chute system to operate effectively, the Site Manager will be required to position the correct storage bins beneath the chute exits within the storage area, periodically monitor the level of waste in the bins and replace the bins as necessary.
- The wheelie bins and trade waste bins will be transported on a weekly basis for recycling and organics; and twice weekly for general waste by the Site Manager from the residential storage area to the western end of the loading area for collection by the rear loading MRV (refer to Figure 3 (DA103).
- Because of the small size of the bins, movement will be manually by hand (trade waste bins are mobile, with wheels).
- Bin collection may be organised such that pick up occurs on different week days for each waste type, or on the same day of the week (with different collection runs per waste type). The organics collection will occur as the last pick up each week, to prevent the contamination of recyclable waste, if the same truck is used. The truck would be washed out following completion of the organics collection prior to collection of other waste streams from the development.
- At the time of collection, the pick-up truck (rear loading MRV) will drive forwards up Middleton Lane, and back into the loading bay for bin collection – refer to Figure 4 (Planit Drawing # 0330) for MRV swept paths.
- During the collection process, the Site Manager will manoeuvre the wheelie bins and trade waste bins in turn behind the MRV for collection. The rear loading MRV is capable of loading both 1,100 L trade waste bins and 240 L wheelie bins (MGBs).
- Once collection has been completed in the loading bay, the bins will be transported back to the residential storage area by the Site Manager, the MRV will drive out into Middleton Lane and then onto Kingsley Street and then move off forwards (south) along Jonson Street.

Figure 3: Excerpt showing Location of Bin Storage Areas and Collection Detail

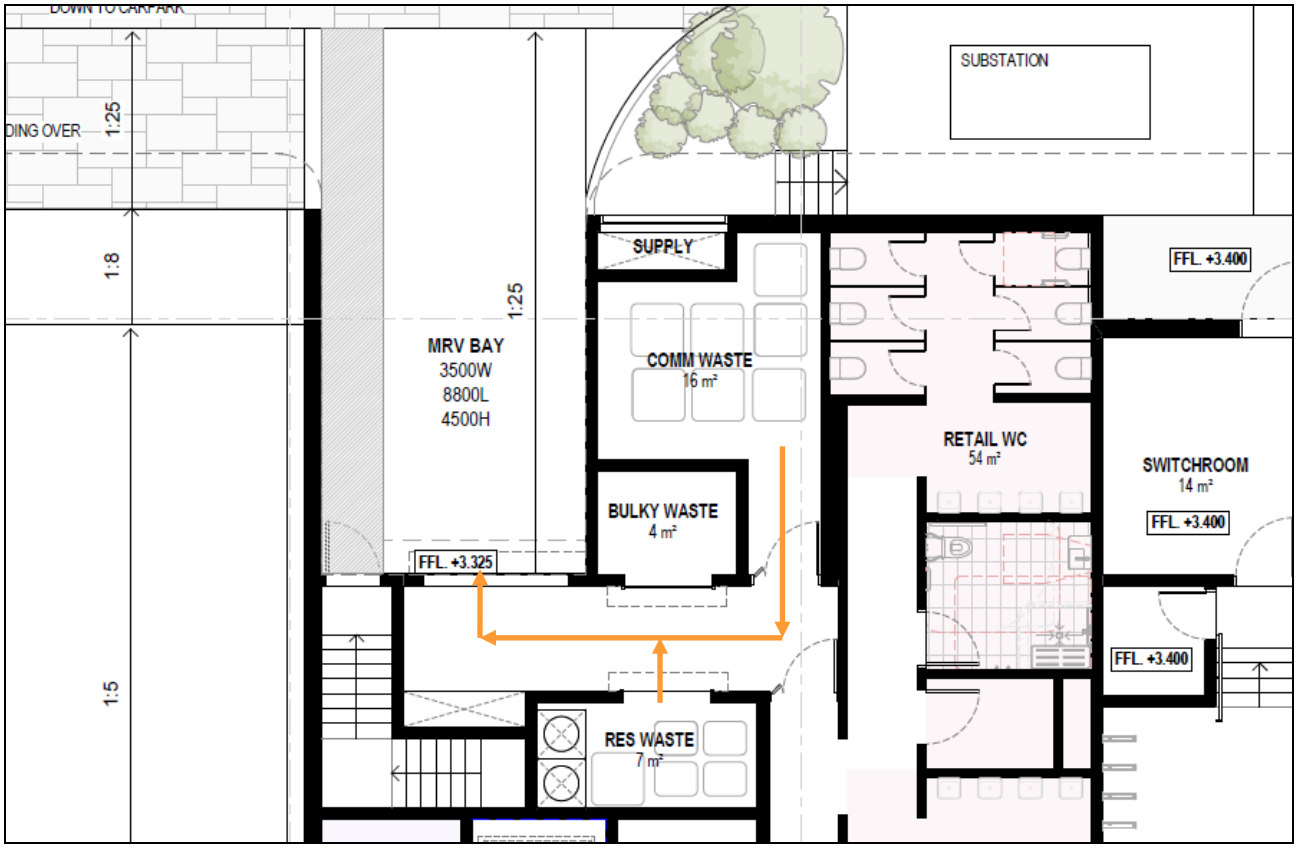


Figure 4: Swept Paths for MRV Waste Collection

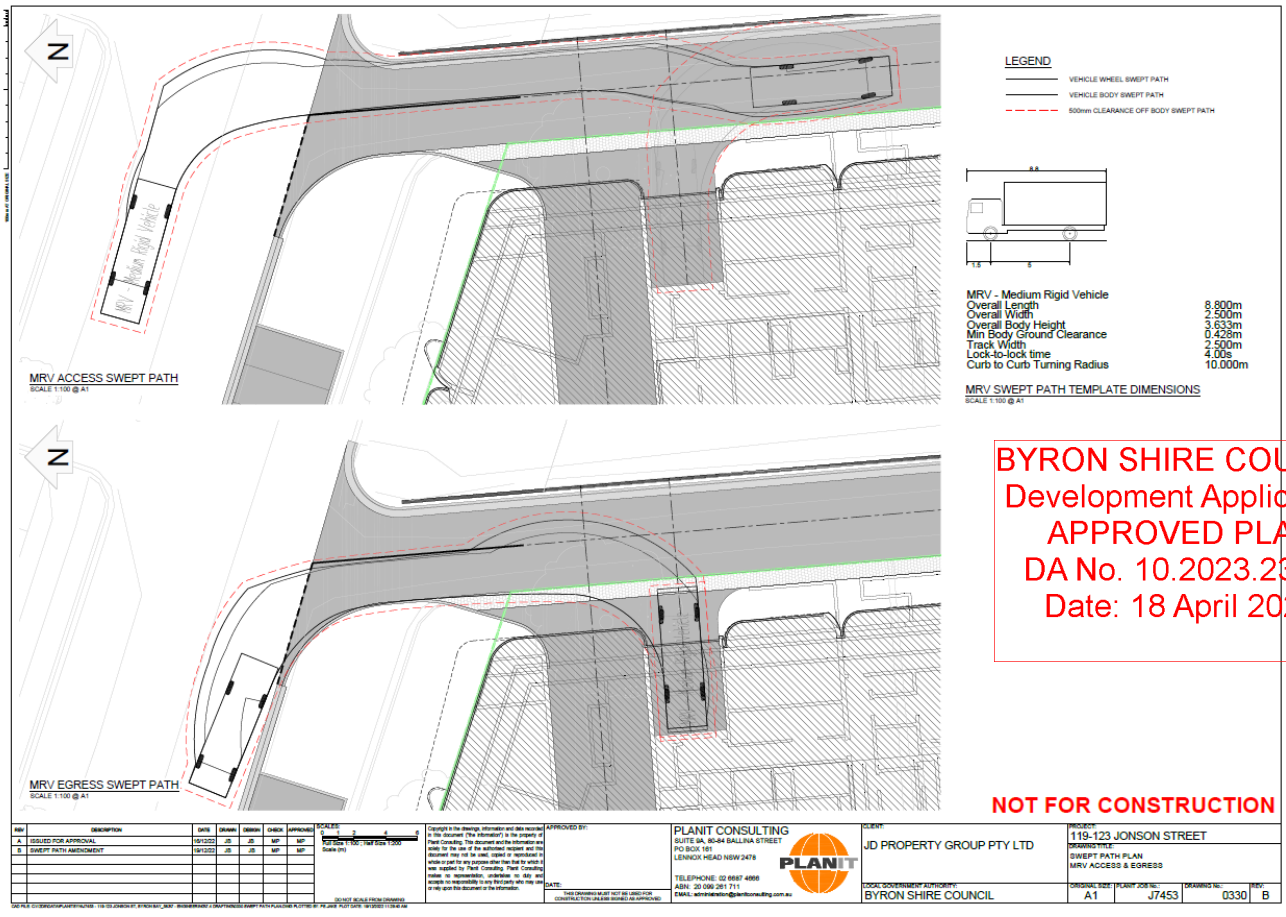


Figure 5: Excerpt showing Residential Waste Chute Locations – First Floor

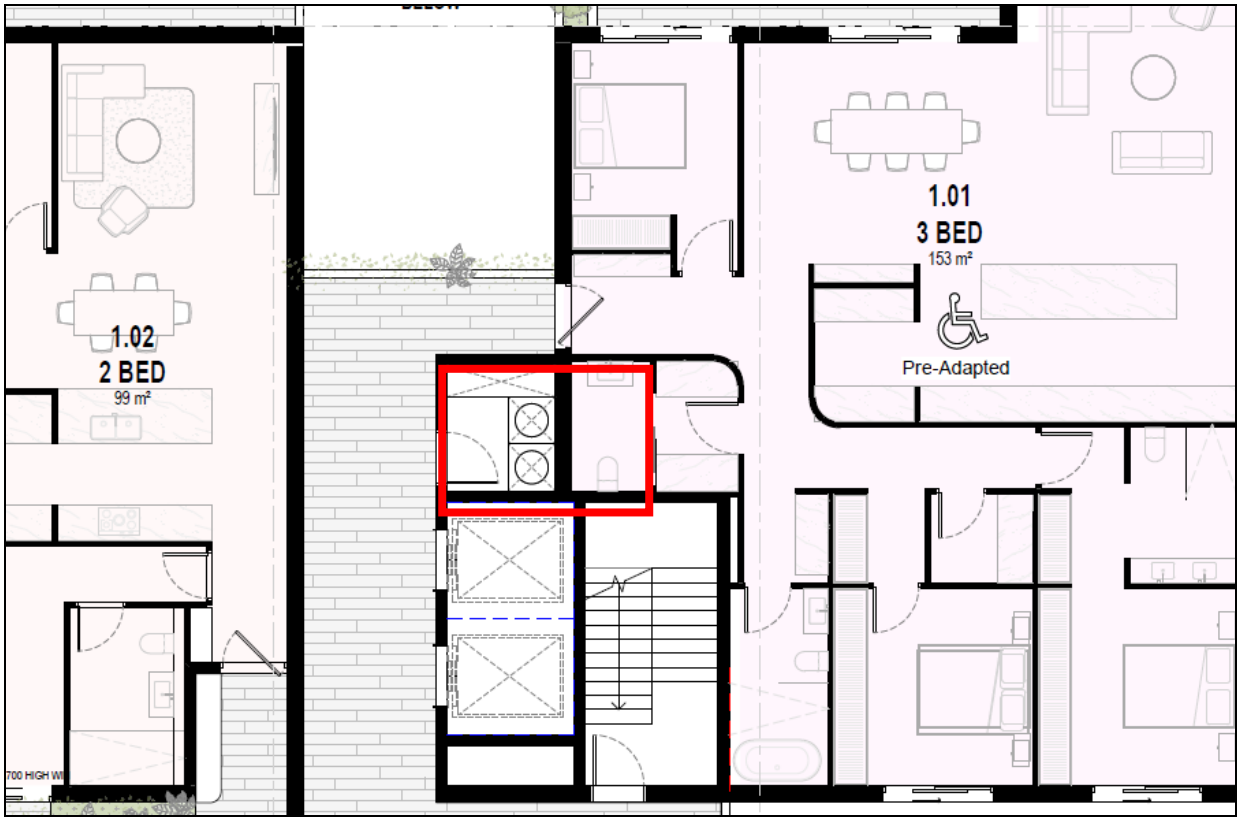
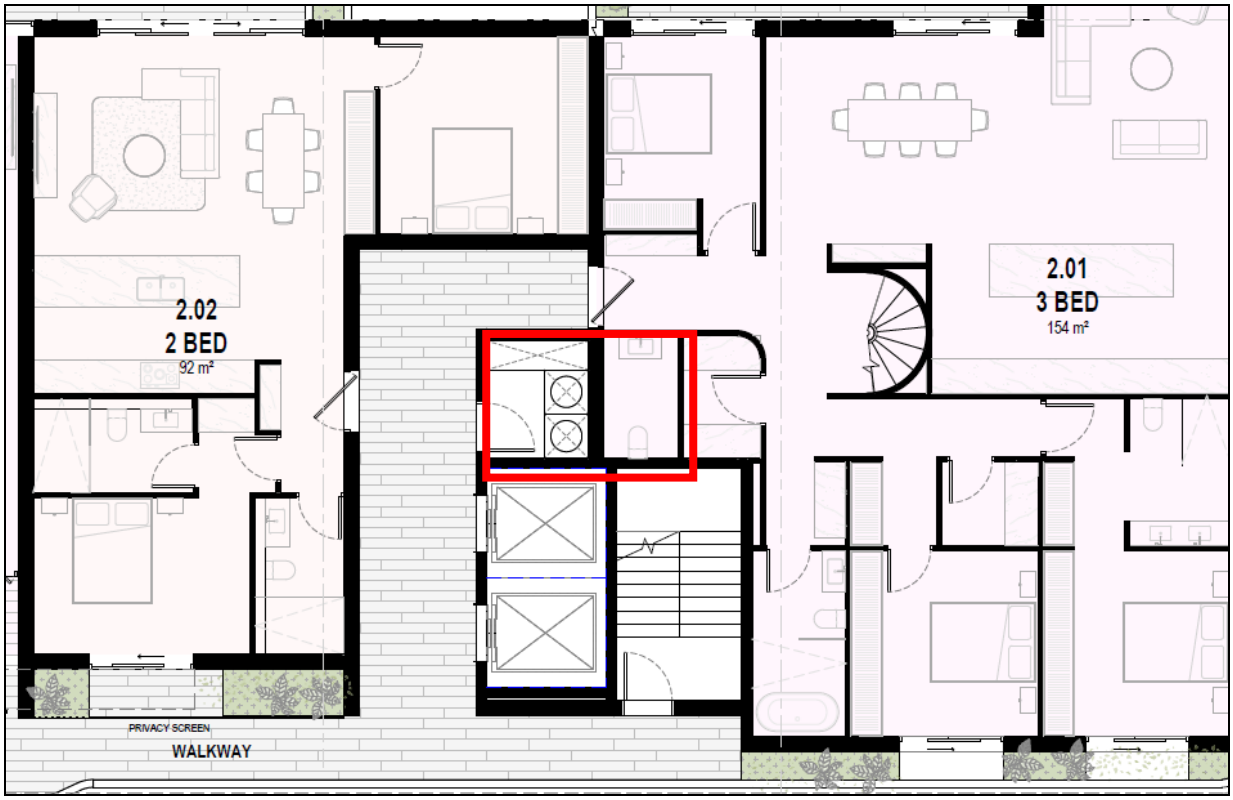


Figure 6: Excerpt showing Residential Waste Chute Locations – Second Floor



BYRON SHIRE COUNCIL
Development Application
APPROVED PLAN
DA No. 10.2023.235.1
Date: 18 April 2024

Rear Loading MRV Pick-Up (On-site in Loading Bay)

GROUND FLOOR COMMERCIAL (RETAIL/SHOPS & RESTURANT/CAFE)

Lifecycle

Detail the arrangements that would be appropriate for the ongoing use of waste facilities as provided in the development. Identify each stage of waste transfer between residents' units/commercial tenancies and loading into the collection vehicle, detailing the responsibility for, and location and frequency of, transfer and collection.

- There is secure bin storage area located off the loading area (Middleton Lane) for the storage of commercial trade waste and wheelie bins. Refer to the ground floor development plan, with excerpt (Figure 3, DA103) provided on page 15 of this Plan.
- 4 x wheelie bins required in total for organics (compostables) collection. This number of bins satisfies the total calculated waste output for the commercial tenancies (3,178 L per week), assuming 4 x collections per week. The generation rate used for organics is not listed in the Byron Shire DCP. Discussions with a Byron Shire Council Resource Recovery Contracts Management Officer advises an organics generation rate of 30% of the refuse rate for the café/restaurant and 20% of the refuse rate for the shop/retail areas is suitable.
- A total of 3 x 1,100 L trade waste bins will be required for general refuse collection, with 4 collections per week. This number of bins satisfies the total calculated waste output for the commercial tenancies (11,737 L per week).
- A total of 1 x 1,100 L trade waste bins will be required for mixed recycling. This number of bins satisfies the total calculated waste output for the commercial tenancies (3,798 L per week), assuming 4 x collections per week.
- Because the development is mixed use, the commercial bins will be separated from the residential bins within the storage area. Signs will be erected to effectively segregate the separate storage areas. There is separate roller door and pedestrian door entry to each of the storage areas.
- The retail and commercial occupants will use the ramp to access the bin storage area for deposition of larger or heavier volumes of waste. They will also be able to walk around to the storage areas to deposit smaller/lighter volumes of waste.
- The wheelie bins and trade waste bins will be transported by the Site Manager from the commercial storage area to the western end of the loading area for collection by the rear loading MRV (refer to Figure 3, page 15) for collection.
- Because of the small size of the bins, movement will be manually by hand.
- Bin collection may be organised such that pick up occurs on different weekdays for each waste type, or on the same day of the week (with different collection runs per waste type). As noted above, collection of the commercial bins will be required up to 4 x times per week.
- At the time of collection, the pick-up truck (rear loading MRV) will drive forwards up Middleton Lane, and back into the loading bay for bin collection – refer to Figure 4 (Planit Drawing #0330, page 15) for MRV swept paths.
- During the collection process, the Site Manager will manoeuvre the trade waste and wheelie bins in turn behind the MRV for collection. The rear loading MRV is capable of loading both 1,100 L trade waste bins and 240 L wheelie bins.
- Once collection has been completed in the loading bay, the bins will be transported back to the residential storage area by the Site Manager, the MRV will drive out into Middleton Lane and then onto Kingsley Street and then move off forwards (south) along Jonson Street.

Summary of Collection Frequencies

- *Residential Collection*: Up to 2 collections week. General waste and organics are to be collected twice weekly. Recycling is to be collected once weekly.
- *Commercial Collection*: 4 x collections per week for all waste streams.

Number of Truck Movements

- *Residential Collection*: 5 per week (2 x general waste, 2 x organics, 1 x recycling)
- *Commercial Collection*: 7 additional movements per week beyond the residential collection (2 x organics, 3 x recycling, 2 x general waste).
- TOTAL of 12 truck movements per week.

Required Ongoing Site Management Commitments

- *Residential Collection*: Movement of correct bins in line with chute exit(s) and replacement of bins as necessary beneath chute(s). Movement of trade waste and wheelie bins into western end of loading bay behind MRV twice per week for collection. Movement of bins back into residential storage area following pick up.
- *Commercial Collection*: Movement of trade waste and wheelie bins into western end of loading bay behind the MRV up to four times per week for each waste stream. Movement of bins back into commercial storage area following pick up.
- TOTAL ESTIMATED TIME REQUIREMENT: Up to a total of 12 movements. 12 x 30-minute periods (6 hours per week) for 12 separate waste collection times during the week. An additional 30 minutes per week for wash out of organics bins and replacement of bins beneath waste chutes (residential only). Total of approximately 6.5 hours per week.

Attachments:

1. Waste Generation Calculations
2. Bin Sticker Examples

Attachment 1 – Waste Calculations

Building Type	Number	Floor Area (m2)	From Byron DCP					
			Waste Generation Rate - Waste per Week (L)	Waste Generation Rate - Recycling per Week(L)	Waste Generation Rate - Organics per week (L)*	Total Waste Generated - (L) per week	Total Recycling Generated - (L) per week	Total Organics Generated - (L) per week
Units	21	N/A	80	40	32	1680	840	672
					TOTALS:	1680	840	672

*Organics waste generation rates adopted by advice from Byron Shire Council. All uses to adopt 40% of refuse.

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General Refuse			Byron DCP Rates	Conversion From DCP rates to L Waste Week/m2		
Building Type	Number	TOTAL Floor Area (m2)	Waste Generation Rate - Waste per Week (L)	Waste Generation	Waste Per Week Floor Area	Waste Generation Rate - L waste a week/m2
Ground Floor Shop (Fashion Retail) <-100	12	739	350 per 100 m2	350	100	3.5
Ground Floor Shop (Fashion Retail) >-100	2	241	350 per 100 m2	350	100	3.5
Café/Restaurant	1	178	70 per 1.5m2	70	1.5	46.67

Recycling			Byron DCP Rates	Conversion From DCP rates to L Waste Week/m2		
Building Type	Number	TOTAL Floor Area (m2)	Waste Generation Rate - Recycling per Week(L)	Waste Per Week Floor Area	Waste Generation Rate - L waste a week/m2	Waste Generation Rate - L waste a week/m2
Ground Floor Shop (Fashion Retail) <-100	12	739	175 per 100 m2	175	100	1.75
Ground Floor Shop (Fashion Retail) >-100	2	241	350 per 100 m2	350	100	3.5
Café/Restaurant	1	178	14 per 1.5m2	14	1.5	9.33

Green Waste			Byron DCP Rates	Conversion From DCP rates to L Waste Week/m2		
Building Type	Number	TOTAL Floor Area (m2)	Waste Generation Rate - Organics per Week (L)*	Waste Per Week Floor Area	Waste Generation Rate - L waste a week/m2	Waste Generation Rate - L waste a week/m2
Ground Floor Shop (Fashion Retail) <-100	12	739	70 per 100 m2	70	100	0.7
Ground Floor Shop (Fashon Retail) >-100	2	241	70 per 100 m2	70	100	0.7
Café/Restaurant	1	178	21 per 1.5 m2	21	1.5	14.00

Totals (Litres)		
Total Waste Generated - (L) per week	Total Recycling Generated - (L) per week	Total Organics Generated - (L) per week
2587	1293.25	517
844	844	169
8307	1661	2492
11737	**3798**	**3178**

*Organics waste generation rates adopted by advice from Byron Shire Council. Retail stores = 20% of refuse, café/restaurant = 30% of refuse.

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WASTE CALCULATIONS - BIN SIZES AND PROJECT REQUIREMENTS

Richmond Waste Bin Sizes

Bin Type (L)	Height	Depth	Width	Area m^2	Plus 100% for Manouvreing Room
240	1063	713	575	0.41	0.82
1100	1330	1070	1240	1.33	2.65

Project Requirements (L/week)			
	General	Recycling	Green
Residential	1680	840	672
Commercial	11737	3798	3178

Project Requirements (L/day)			
	General	Recycling	Green
Residential	240	120	96
Commercial	1677	543	454

Bin Type	Bin Combination	Quantity of Bins	Pickup Frequency	Litres/Week
Commercial	1100	3	4	13200
Commercial	240			0
Commercial	1100	1	4	4400
Commercial	240	4	4	3840

Bin Type	Bin Combination	Quantity of Bins	Pickup Frequency	Litres/Week
Residential	1100	1	2	2200
Residential	1100	1	1	1100
Residential	240	2	2	960

Commercial

Bin Size	No.of Bins	Area Per Bin	Area Required m^2	Area Available m2
1100	4	2.66	**10.64**	
240	4	0.82	**3.28**	
Total			**13.92**	**16**

Residential

Bin Size	No.of Bins	Area Per Bin	Area Required m^2	Area Available m2
1100	2	2.66	**5.32**	
240	2	0.82	**1.64**	
Total			**6.96**	**7**

Attachment 2 – Bin Stickers

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