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Waste Management Plan

General Housing

34-36 Light St & 42 Walker St Avenue, Casino

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2 Waste Management Plan

2.1 Construction Waste Management

NOTE: The existing buildings will be demolished and clearance certificates provided under a separate application. The information below supports the application for the proposed new development.

The waste management principles of the DCP relevant to construction are:

Demolition and construction

Objectives:

- Ensure the adoption of efficient waste management strategies which include waste minimisation, re-use and recycling for demolition materials and construction waste.
- Encourage demolition, building design and construction techniques which will avoid and minimise waste generation.
- Maximise reuse and recycling of building and construction materials and minimise disposal of materials to landfill.

Controls

All materials that arise from demolition and construction shall comply with a Waste Management Plan (WMP) before recycling or disposal.

Note: The WMP shall provide details of on-site storage, volume or area estimates and information about reuse, recycling and disposal options for all waste produced on-site, including excavation materials.

The WMP is a plan that provides Council with details of the following:

- the volume and type of waste to be generated;
- how the waste is to be stored and treated on-site;
- how the waste is to be disposed of; and
- how ongoing waste management will function.

The applicant should also consider the following additional criteria when planning and undertaking demolition:

- does the site require a contaminated land assessment?
- what type of waste is going to be produced from the site?
- is the waste to be produced hazardous (e.g. does it contain lead paint or asbestos)?
- will special arrangements need to be made for the removal and disposal of hazardous material and it will need to be separately handled and stored on-site?
- can packaging be reduced or recycled by:
 - returning packaging to the supplier?
 - seeking cardboard or metal drums instead of plastic?

- seeking metal straps rather than shrink wrap?
- returning packaging such as delivery storage pallets and reels?
- All waste streams to be separated on site.
- Waste materials are to be recycled.

This can be achieved with the following strategies and example:

| Examples of Building Material Reuse | |
|--|---|
| Materials On-site | Reuse/Recycling Potential |
| Concrete | Filling, levelling materials and/or road base |
| Bricks | Cleaned and/or rendered over for reuse |
| Roof-tile | Crushed as landscaping and driveways |
| Hardwood beams | Floorboards, fencing and/or furniture |
| Other timber | Formwork, bridging, blocking and propping |
| Doors, windows, fittings | Second hand building materials |
| Glass | Aggregate for concrete production |
| Synthetic and recycled rubber (e.g. under carpets) | Used for safety barriers and/or speed humps |
| Significant trees | Relocated on-site |
| Garden organics | Mulching, composting, for reuse as landscaping/fertiliser |
| Overburden | Power screened for topsoil |

The control of building waste arising from the construction works will be managed by way of detailed procedures set out in a Waste Management Plan (WMP) prepared by the Construction Contractor specific for the project.

Generally, the construction works will create a range of waste management issues across the following key areas:

- Demolition: building material waste
- Excavation: ground material waste (soil and sand)
- Building: excess materials waste (concrete)
- Building: materials and equipment packaging

For each of the above, the waste should be controlled during construction using the principles of recycling and re-use to minimize waste in the following manner:

- Demolition – Building Waste
 - All waste disposal will be to approved waste management centres.
 - Concrete waste will be packaged to concrete recycling centres.
 - Building rubble will be separated by type – masonry, steel and plastics.

- Timber windows/doors and fittings – specialist re-sale merchant.
- Excavation – Ground Materials
 - All waste disposal will be to approved waste management centres.
 - Excavated top soil, sand and loam will be separated by type.
 - Rock material will be kept separate.
- Building – Excess Material
 - The primary material waste will be concrete, mortar and render material.
 - All excess concrete, mortar and render will be deposited into water proof banded plastic containment areas.
- Building – Materials Packaging
 - All pallets will be returned to sender.
 - All cardboard, plastic and metal will be pre-sorted and separately disposed of to an approved waste management centre.
- Building – Waste Water
 - All waste water will be retained and held in metal drums to settle sediment.
 - Sediment free waste water could be re-used on site.
 - Sediment will be re-used as local fill.
- Asbestos
 - Allow for all removal of all asbestos and any hazardous materials on site. Dispose hazardous material in-accordance with EPA and local Council's requirement. Pay for fees associated with removal & disposal of waste.

2.1.1 Sediment & Erosion Control

All sediment and erosion control is to follow the Civil Engineer's details.

- The contractor shall implement all soil erosion and sediment control measures relating to a particular upstream catchment prior to stripping of topsoil from that catchment. Where it is necessary to undertake stripping in order to construct a sediment control device only sufficient ground shall be stripped to allow construction.
- The contractor shall regularly maintain sediment and erosion control structures and desilt such structures. The sediment shall be disposed in a manner approved by the local Authority.
- The contractor shall provide inlet sediment traps at all pits during construction.
- Vehicular traffic shall be controlled during construction confining access where possible to proposed or existing road alignments.

2.2 Garbage & Recycling

As the Richmond Valley Council DCP does not outline waste management controls for multi-unit dwellings, calculations regarding waste generation rates were made using Appendix F of the NSW Environmental Protection Authority's (EPA) 'Better practice guide for resource recovery in residential developments'.

| EPA Better practice guide for resource recovery in residential developments - waste generation rate: | |
|--|--------------------|
| 1-Bed Units | |
| Garbage | 80L / unit / week |
| Comingled Recycling | 80L / unit / week |
| Organics | 25L / unit / week |
| 2-Bed Units | |
| Garbage | 100L / unit / week |
| Comingled | 100L / unit / week |
| Organics | 25L / unit / week |
| 3-Bed Units | |
| Garbage | 120L / unit / week |
| Comingled Recycling | 120L / unit / week |
| Organics | 50L / unit / week |

| Richmond Valley Council collection schedule | |
|---|-------------|
| Red Residual Garbage Bin | Fortnightly |
| Yellow Comingled Recycling Bin | Fortnightly |
| Green Organic Waste Bin | Weekly |
| Red Bulk Bin | N/A |
| Yellow Bulk Bin | N/A |

Comment was sought from Richmond Valley Council on the preference for provision and location of the bins. Response was received from Chad Borgeest (Coordinator Environment & Health) that storage areas are to be located behind the building line, screened, and that the co-mingled recycling bins may be 360L with the remainder to be 240L. Reference was made to the Lismore DCP waste generation rates, which are similar to the EPA.

The 240L and 360L bin sizes can be moved easily by a single person and picked up from the kerbside.

Based on the above information, the following provision of bins is proposed:

| Required No. of bins (EPA Better practice guide) | | |
|--|--|--|
| Waste Type | Calculation (per week) | Required |
| Garbage | One bed units: 6 x 80L = 480L Two bed units: 8 x 100L = 800L Total: 1280L per week / 2560L per fortnight | 10.6 (11) x 240L bins (collected fortnightly) |
| Comingled Recycling | One bed units: 6 x 80L = 480L Two bed units: 8 x 100L = 800L Total: 1280L per week / 2560L per fortnight | 12 x 240L bins (collected fortnightly) Or 7.1 (8) x 360 L bins (collected fortnightly) |
| Organic Waste | One bed units: 6 x 25L = 150L Two bed units: 8 x 25L = 200L Total: 350L per week | 1.5 (2) x 240L bins (collected weekly) |

All waste bins will be stored at all times within the boundaries of the bin storage areas only, unless required on the street for collection purposes. To allow ease of cleaning, a hose tap and a waste outlet will be provided to each bin area.

The bins will be presented on the street frontage for Council collection.

A composting bin may be provided in a common garden area of the development.

The proposed bin storage areas will fully comply with the BCA and will include a hose tap and concrete floor graded to a drain. The drain will have a valve that drains to sewer during cleaning.

The proposed bin areas are adequately sized to allow storage of the bins each side plus at least 1550mm clear in between for accessibility.

Each individual unit will include space within the kitchen cabinets for waste and recycling bins sized for minimum two days of domestic waste. The common bin storage areas are located on each of the main pedestrian entryways at the front allowing convenient access from all units.

Bulky waste should generally only be moved to the street frontage on the day of Council collection.

For special types of waste not collected by Council, signage is to be provided advising how to correctly dispose e.g. e-waste drop-off.

Appendix A – Bin Sizes

| Dimensions - Weights - Standards | | Dimensions - Weight - Standards | |
|----------------------------------|--------------|---------------------------------|--------------|
| ■ Nominal volume: | 240 litres | ■ Nominal volume: | 360 litres |
| ■ Net weight: | approx 13 kg | ■ Net weight: | approx 17 kg |
| ■ Max load: | 96 kg | ■ Max load: | 144 kg |
| ■ Permitted total weight: | 110 kg | ■ Permitted total weight: | 159 kg |
| ■ A 1060 mm | ■ D 730 mm | ■ G 550 mm | |
| ■ B 990mm | ■ E 585 mm | | |
| ■ C 660 mm | ■ F 400 mm | | |

Measurements to be used as a guide only - variations will occur

| Dimensions - Weight - Standards | | Dimensions - Weight - Standards | |
|---------------------------------|--------------|---------------------------------|--------------|
| ■ Nominal volume: | 360 litres | ■ Nominal volume: | 360 litres |
| ■ Net weight: | approx 17 kg | ■ Net weight: | approx 17 kg |
| ■ Max load: | 144 kg | ■ Max load: | 144 kg |
| ■ Permitted total weight: | 159 kg | ■ Permitted total weight: | 159 kg |
| ■ A 1100 mm | ■ D 848 mm | ■ G 650 mm | |
| ■ B 1028 mm | ■ E 680 mm | | |
| ■ C 770 mm | ■ F 520 mm | | |

Measurements to be used as a guide only - variations will occur