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**NEW WARRINGAH GOLF & COMMUNITY CLUB CUBHOUSE -
433 PITTWATER ROAD NORTH MANLY NSW 2100
WASTE MANAGEMENT PLAN
For DA Submission to Northern Beaches Council**

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Introduction

AusWide Consulting was commissioned by Warringah Golf Club Ltd (WGC) to prepare a Waste Management Plan (WMP) for approval of a proposed new club house at 433 Pittwater Road, Manly NSW. The proposed development consists of the construction of a two-storey club house consisting of bar and function facilities, golf pro shop and office space.

In the course of preparing this WMP, the subject site and its environs have been inspected, plans of the development examined, and all relevant council requirements and documentation collected and analysed.

This WMP has been prepared based on the following information:

- Architectural Plans provided by Group Architects.
- Northern Beaches Council's Waste Management Guidelines. Specifically - Chapter 5 – Ongoing Waste management for non-residential developments.

Background and Existing Conditions

The subject site is located at 433 Pittwater Road North Manly NSW on the northwest corner of Pittwater Road and Kentwell Road. The nearby land use is primarily residential. The golf club has a long and proud history originally being established in 1939 and consists of a picturesque 18-hole course.

Figure 1 provides an overview of the area and its surrounding land uses whilst **Figure 2** provides an aerial view of the subject site and immediate area surrounding the site.

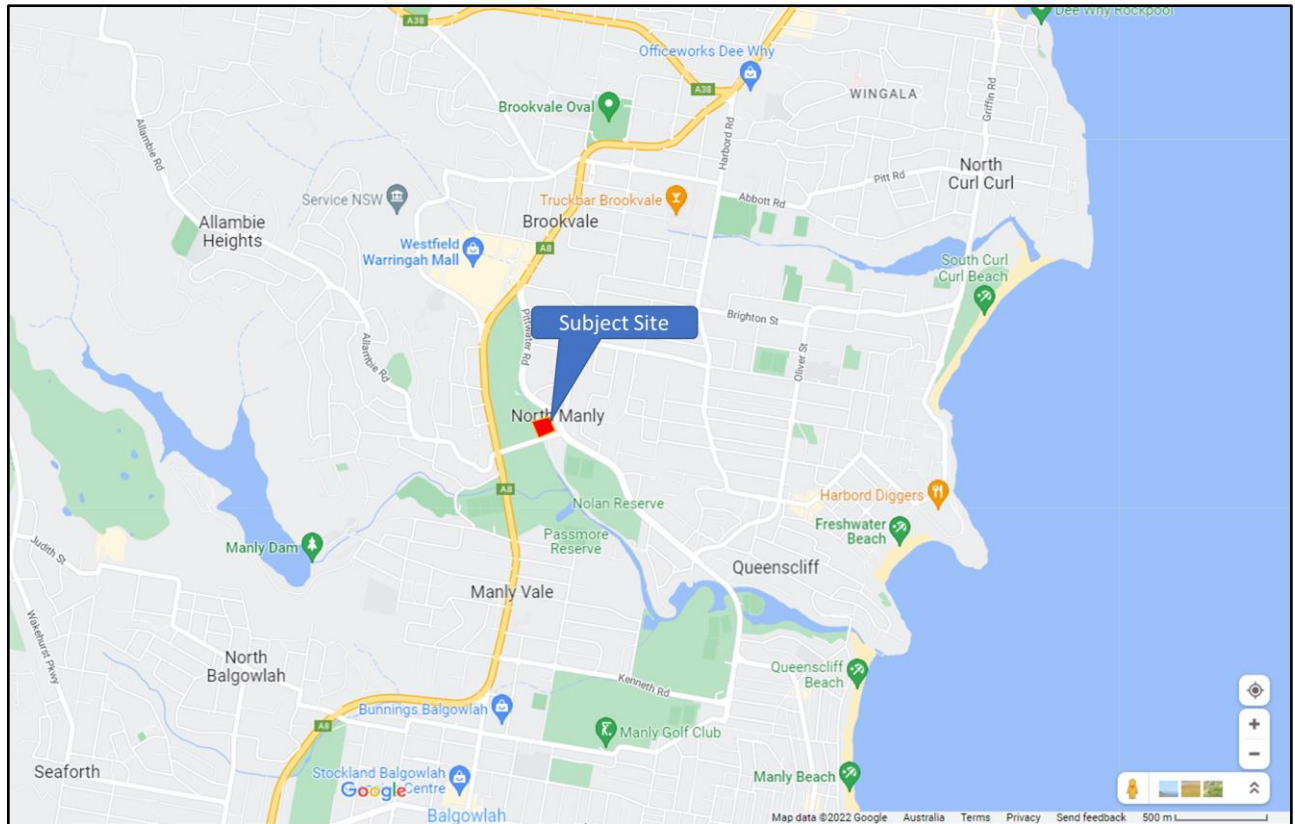


Figure 1: Location of the Subject Site



Figure 2: Aerial View of the Subject Site

Proposed Development

The proposed development is for the construction of a new club house for the Warringah Golf Club. The development will be a two-storey building consisting of bar and kitchen facilities, function space, golf pro retail space and office space. Vehicular and walkway access to the proposed development will be provided via Kentwell Road to the south of the subject site.

Anticipated Waste Generation, Storage and Collection

The waste collection service will be provided by a private contractor.

Waste Generation – Demolition and Construction

The quantities in **Table 1** have been taken from one of the demolition tenderer's methodologies and are considered to be reasonably accurate for the purpose of the waste management plan.

Table 1: Estimated Demolition Waste Types and Disposal Destination

Demolition Material	Estimated Weight (tonnes)	Reuse and Recycle	Destination
Bricks and Concrete	450	Yes	Greenwood Contracting St Ives Brandown, Kemps Creek
Wall and Floor Tiles	1	Yes	Greenwood Contracting St Ives Brandown, Kemps Creek
Timber	28	Yes	Greenwood Contracting St Ives Brandown, Kemps Creek
Plasterboard	1	Yes	Greenwood Contracting St Ives Brandown, Kemps Creek
Metals	30	Yes	Sell and Parker Kimbriki Resource Recovery Centre, Ingleside
Asbestos	2	No	Bingo, Eastern Creek Veolia, Horsley Park
Tennis Court Synthetic Grass, Carpet	100	Yes	Kimbriki Resource Recovery Centre, Ingleside Cleanaway Kemps Creek
Tree & Stump Removal	90m ³ (volume)	Yes	Spread tree mulch on site, or at other Council Sites or transport to ANL, Terry Hills
Turf, Top Soil, Vegetation, Other Waste (General Site Clearing Activities)	300	Landfill	Veolia Horsley Park

The volumes of waste generated during the construction phase will be limited (<10 tonnes). Recyclable wastes such as plasterboard offcuts, timber and metals should be separated for recycling, and the remaining building waste should go to a processor such as Bingo that will achieve >80% recovery rate. Waste should be checked and tracked according to the checklist in **Appendix A**.

Waste Generation - Operation

As per The Northern Beaches Council Waste Management Guidelines, the following table illustrates the typical garbage and recycling generation rates.

Table 2: Typical General and Recycling Generation Rates for Non-Residential Developments.

Type of Premises	General Landfill Waste	Comingled Recycling Waste
Retail	50L/100m ² floor/area/day	50L/100m ² floor/area/day
Office	10L/100m ² floor/area/day	10L/100m ² floor/area/day
Licenced Club	50L/100m ² floor/area/day	50L/100m ² floor/area/day

Waste within Overall Development

Using the garbage and recycling generation rates above, the following can be calculated:

Gross Floor Area by Use

The following table shows the gross floor area (GFA) of the separate spaces within the proposed development.

Table 3: Gross Floor Area

Item	Area (m ²)	Waste Generation Category		
		Retail	Office	Licensed Club
GROUND FLOOR				
Back of House	93			93
Administration	58		58	
Toilets	66			
GF Bar	33			33
Stairs	22			
Meeting and Council Room	61		61	
PRO shop	134	134		
Public Toilets	12			
Foyer	31			31
Garden Bar/Lounge	127			127
Corridor	20			
Passenger Lift	6.5			
Goods Lift	2.7			
TOTAL GROUND FLOOR	666.2			
EXTERNAL AREAS				
Loading Bay	467			
External Covered Walkway	332			
External Covered Entry	99			
Outdoor Garden Terrace Area	148			
TOTAL EXTERNAL AREA	1046			
FIRST FLOOR				
Dining Room	179			179
Function Room	113			113
Sports Bar	130			130
Bar	24			24
Kitchen	52			52
Stairs	22			
Toilets	49			
Store	31			31
Corridor	18			
TOTAL FIRST FLOOR	618			
TOTAL AREA BY CATEGORY		134	119	813

Total Waste Generation

Office (119m²)

- 10L/100m² of floor area per day general waste = 60L per week (uncompacted)
- 10L/100m² of floor area per day recycling waste = 60L per week (uncompacted)

Licensed Club (813m²)

- 50L/100m² of floor area per day general waste = 2,845L per week (uncompacted)
- 50L/100m² of floor area per day recycling waste = 2,845L per week (uncompacted)

Retail (134m²)

- 50L/100m² of floor area per day general waste = 469L per week (uncompacted)
- 50L/100m² of floor area per day recycling waste = 469L per week (uncompacted)

Total Waste Generation

- General Waste = 3,374L per week (uncompacted)
- Recycling Waste = 3,374L per week (uncompacted)

Waste Storage Areas

Based on the total waste generated by the development, the following combination of bins should be provided:

- 1 x 1100L General Waste MGB – collected and emptied twice a week.
- 1 x 660L General Waste MGB – collected and emptied twice a week.
- 1 x 1100L Recycling Waste MGB – collected and emptied twice a week.
- 1 x 1100L Paper and Cardboard MGB – collected and emptied once a week.

NB: Client has indicated that food MGBs will be located in the Back of House (BOH). A 660L MGB has been designated for this purpose. This will be disposed of with the general waste but can be separated if organics waste collection is required at a later date in the Northern Beaches Council. The clubhouse currently has a paper waste collection, so the recycling stream is split into paper and cardboard and other comingled recycling.

The following Table illustrates the typical dimensions of 660L & 1100L MGBs mentioned above.

Table 4: Typical Measurements for MGB's.

Size	Height (mm)	Width (mm)	Depth (mm)
660L	1,250	1,370	850
1100L	1390	1360	1090

Waste Storage Area Design Requirements

The location of the waste storage area and the design considers the Northern Beaches Council Waste Management Guidelines. The considerations are that it is:

- a) incorporated entirely within the site boundary, not visible to the public and landscaped to reduce visual impact and clutter.
- b) no closer than 3m from any dwelling openings.
- c) clear of any stormwater system and prevents wastewater from entering the system.
- d) designated area to accommodate waste, recycling containers, crates, pallets and other reusable items.
- e) a minimum floor space capable of managing the proposed commercial development's waste generation rate.
- f) in accordance with the BCA, relevant AS and other relevant legislation.
- g) graded and drained to a Sydney Water approved drainage system.
- h) easily kept clean and tidy at all times.

In addition to the above requirements, the waste storage area for the proposed development will be located in the loading area at the BOH outside of the main building. The MGBs will be housed in an easily accessible, screened structure ensuring the following is met:

- 1. roofed with the downpipe directed to the stormwater and
- 2. graded to divert stormwater away from the waste area

An example of the structure to be constructed is below.



Figure 3: Waste Storage Area Example

Signage

Appropriate colour coded signage will be provided in the bin storage room. These will be displayed in a prominent position to assist residents when depositing their waste. In particular, signage will include educational material from Council and address items that are acceptable or not acceptable based on Council's requirements.

Recycling	Garbage
<ul style="list-style-type: none"> ✓ All recycling. ✓ Steel, tin, aluminium cans, empty aerosols. ✓ Clear, brown, green glass bottles / jars (rinsed, no lids). ✓ Plastic bottles, soft drink bottles, containers (rinsed, no lids). ✓ Carboard boxes, milk, juice cartons. ✓ Newspapers, magazines, office paper, junk mail, window envelopes. ✓ Council provided compostable caddy liner. 	<ul style="list-style-type: none"> ✓ General waste. ✓ Plastic bags. ✓ Packets, wrappers, cling wrap, bubble wrap. ✓ Nappies, sanitary waste, (wrapped tightly, stored in a well-sealed bag). ✓ Animal faeces, bedding, and kitty litter. ✓ Foam, polythene, and polystyrene. ✓ Light bulbs, mirrors, ceramics, cookware, drinking glasses. ✓ Contents of your vacuum cleaner, cotton wool, buds and cigarette ends.
<ul style="list-style-type: none"> ✗ Plastic bags, light bulbs, mirrors, drinking glasses, general and food waste, ceramics, crockery, foam, ovenware, polystyrene, waxed cardboard boxes. 	<ul style="list-style-type: none"> ✗ Building materials, syringes, oil or paint, gas bottles, hazardous or chemical waste. ✗ Medical waste: (speak to your doctor / pharmacy).

Figure 5: General Guide for use of MGBs

The following figures illustrates the scaled diagrams of the MGB's within the commercial waste storage area.

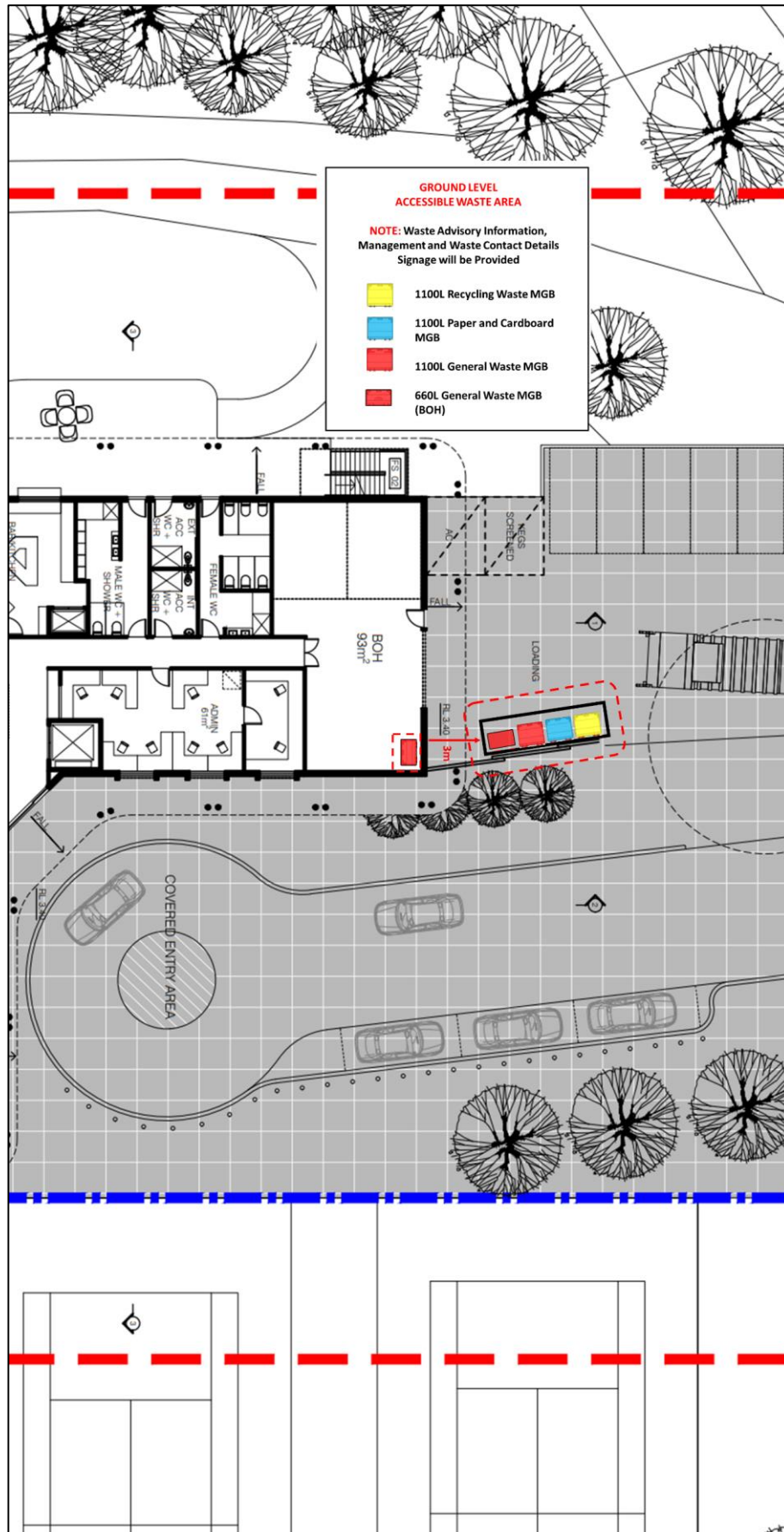


Figure 5: Scaled Diagram of the proposed area

Waste Collection

The waste collection service will be provided by a private contractor.

The waste collection vehicle will enter the proposed development via Kentwell Road on the loading bay vehicle turnstile and position the turnstile to conveniently empty the MGBs. Once all the MGBs have been emptied and returned to the waste storage areas, the waste vehicle will then leave in a forward motion.

Amenity

Noise

The only noise generated from the waste management at the property will be that of the MGBs being wheeled to/from the waste vehicle and emptied. Any other noise related to the waste management will be kept to a minimum.

Security/Communication Strategy

All MGBs will be secured within the ground level waste storage areas behind the screened doors.

All staff will receive detailed documentation detailing all necessary requirements for safe waste management and handling including all relevant contact information.

Ventilation

The waste storage area is located outside in a screened structure so specific ventilation will not be required.

Cleaning Facilities

Management will be responsible for keeping the MGBs clean.

NOTE: It is recommended that waste enclosure should consist of: **(1)** Impervious coated/treated walls and ground surface, ensuring the ground is graded to the sewer (100 mm diameter) floor drain outlet within the enclosure. **(2)** Tap and hose (hose cock must be protected from the waste containers) for use of cleaning the MGBs and waste area. **(3)** Self closing lockable double doors or electric roller door allowing easy removal of the MGBs.

Prevention of Vermin

Staff will be advised to not overfill the bins so that the lids are closed at all times.

Miscellaneous

Composting Facility

No consideration has been given to a composting facility at this time.

Waste Storage (Internal)

It is recommended that sufficient space be provided in each commercial space for interim storage of at least one days' worth of garbage and recyclables.

Green/Food Waste

Any green waste will be managed by a private contractor.

A 660L MGB has been allocated in the BOH for food waste however this will need to be monitored by management. The Northern Beaches Council Waste Management Guideline states that 'where waste generated contains either 20% by weight or volume of seafood, poultry or meat, or generates 50L of seafood, poultry or meat in total per day, the applicant must ensure the waste is collected daily or refrigerated until it is collected.'

It is intended to have the food waste disposed of with the general waste however the separate food bin will allow an easy transition to FOGO collection if this is required by the Northern Beaches Council.

Bulky Hard Waste

Bulky hard Waste will be handled by a private contractor.

E-Waste

Recyclable electronic goods include batteries, equipment containing printed circuit boards, computers, televisions, fluorescent tubes, and smoke detectors. E-Waste will be placed in impermeable surface containers and collected by a registered E-Waste Re-Processor as required.

Appendix A: Protection of the Environment Operations Act Checklist – Transport and Disposal of Waste on behalf of Council

Note: This checklist must be completed (each Step ticked) prior to transport of any waste loads on behalf of Council (e.g., by a contractor), other than standard domestic waste collections by URM or standard street sweeping debris collection by AllSweeper/SPS

Date of transport:

Location of pick up:

Name of Council officer:

Name of Contractor:

Location of drop off:

Step	Description	Tick Once Completed	Next Action
1	<p>Classify the type of waste, as either:</p> <ul style="list-style-type: none"> • Special waste (including asbestos waste, waste tyres and clinical and related waste) • Liquid waste • Hazardous waste • Restricted solid waste • General solid waste (putrescible) • General solid waste (non-putrescible) <p>See details about each of these definitions at https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/wasteregulation/140796-classify-waste.pdf Must follow the steps and processes for classification prescribed by EPA at https://www.epa.nsw.gov.au/your-environment/waste/classifying-waste Keep any records of waste classification and any reports</p>	<input type="checkbox"/>	<p>If General solid waste (putrescible) or General Solid waste (non-putrescible) skip to Step 5</p> <p>For all other waste classifications go to step 2</p>
2	<p>Check whether need a licence to transport the waste.</p> <p>Transportation will require a licence if it involves transporting more than 200kg of a particular "trackable waste" (except for tyres).</p> <p>Trackable waste includes waste chemicals, acids, clinical waste, waste oils/liquids, explosive materials or contaminated soils. If transporting interstate, additional wastes such as waste tyres and asbestos also need to be licensed (consult with Cleansing manager prior to transporting any waste interstate).</p> <p>Substances will be "trackable waste" if they are listed in Schedule 1 (Part 1 or 2) and display any of the characteristics in Schedule 1 Part 3 of the POEO Waste Regulation See list here: https://legislation.nsw.gov.au/view/html/inforce/current/sl-2014-0666#sch.1</p>	<input type="checkbox"/>	<p>For trackable waste go to step 3</p> <p>For all other waste, go to Step 5, or Step 4 (if asbestos)</p>
3	<p>If a licence is required to transport, ensure:</p> <ul style="list-style-type: none"> • contractor has the necessary EPA licence to transport (licence must be SIGHTED – see list of licences here: https://app.epa.nsw.gov.au/prpoeoapp/), and can lawfully transport the TYPE and QUANTITY of waste as classified in Step 1 • You have checked that the Contractor complies with the conditions of the licence (note common conditions may include needing to provide 	<input type="checkbox"/>	<p>If a licence is required and Contractor does have a licence and tracking is set up, go to step 5.</p>

	<p>information to the EPA about the waste or complying with an environmental waste management plan)</p> <ul style="list-style-type: none"> Contractor tracks the waste according to EPA requirements if a licence is required for materials, but for any weight/volume of these materials (see https://www.epa.nsw.gov.au/your-environment/waste/tracking-transporting-hazardous-waste) – Contractor to confirm it tracks the waste in accordance with those requirements in writing <p>Note: There are special requirements for tracking asbestos waste, liquid waste and tyres (see below). Some chemicals and chemical wastes are covered by a chemical control order (CCO) – see https://www.epa.nsw.gov.au/your-environment/chemicals/chemical-control-orders. Anyone dealing with a chemical or chemical waste that is covered by a CCO must comply with the CCO requirements.</p>		<p>If a licence is required and Contractor does not have a licence, do not proceed until licence is obtained and sighted – or choose another licensed contractor</p>
4	<p>If waste contains any asbestos:</p> <ul style="list-style-type: none"> Ensure contractor is a licensed asbestos removalist (see list here https://www.asbestos.nsw.gov.au/find-a-licensed-asbestos-removalist) SafeWork NSW may require written notification of asbestos removal work by a licensed asbestos removalist. You may need a clearance certificate under work, health and safety laws to verify that the site is safe for normal use and can be re-occupied. <p>If transporting asbestos waste >100kg or 10 square metres and being transported in NSW, the consignment must be tracked in WasteLocate – you must SIGHT evidence that asbestos load is being tracked in WasteLocate (See https://wastelocate.epa.nsw.gov.au/).</p> <p>For transport of any asbestos waste:</p> <ul style="list-style-type: none"> bonded asbestos material must be securely packaged during transportation. friable asbestos material must be kept in a sealed container during transportation. asbestos sheets must be wrapped. soils contaminated with asbestos waste must be wetted down and covered. loads must be covered during transport. 	<input type="checkbox"/>	Go to step 5
5	<p>For transport of any waste, ensure you check the vehicle transporting the waste meets the following requirements:</p> <ul style="list-style-type: none"> the vehicle used to transport the waste must be constructed and maintained so as to avoid the waste spilling, leaking or otherwise escaping from the motor vehicle or trailer. the top of the vehicle must be covered (unless transporting tyres and/or scrap metal) containers being used to transport the waste must be secured to the vehicle. if any waste is being transported interstate, first seek guidance from Council's Cleansing Manager on any reporting requirements and follow instructions. <p>For more than 200 kilograms, or 20 or more WASTE TYRES, the consignment must be tracked in WasteLocate – you must SIGHT evidence that tyre load is being tracked in WasteLocate. (See https://wastelocate.epa.nsw.gov.au/)</p>	<input type="checkbox"/>	Go to step 6

6	<p>If contractor transporting waste to any site, including waste or any council facilities:</p> <ul style="list-style-type: none"> You MUST sight the environment protection licence (EPL) held by the facility to which the contractor is transporting waste (EPLs are publicly available and can be found here: https://app.epa.nsw.gov.au/prpoeoapp/). Check to see that the site can receive the TYPE and QUANTITY of waste the contractor is transporting (as classified under Step 1). If the facility does not have an EPL, ask contractor to show you the development consent (to determine if they can lawfully receive waste). <p>Note: the owner of the waste AND the transporter are each guilty of an offence when waste is transported to a place that cannot lawfully be used as a waste facility.</p> <p>EPLs are required for the following waste disposal and treatment activities:</p> <ul style="list-style-type: none"> Waste disposal (application to land) Waste disposal (thermal treatment) Waste processing (non-thermal treatment) Waste storage Mobile waste processing <p>Note: In general:</p> <ul style="list-style-type: none"> All landfills need to be licensed (EPL). All waste storage/processing facilities need to be licensed (EPL) if they store or process over 1,000 tonnes at any time or over 6,000 tonne per year. For tyre facilities, a licence (EPL) is needed if 5 tonnes of waste tyres or 500 waste tyres stored on-site at any one time; or more than 5000 tonnes of waste tyres processed per year. Licences (EPL) are also needed for storage of over 5 tonnes of hazardous, restricted solid and/or liquid waste – see definitions in https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/wasteregulation/140796-classify-waste.pdf. Sometimes higher limits apply to certain facilities. Contact Council's Cleansing Manager if you anticipate needing to transport more than 5 tonnes. 	<input type="checkbox"/>	<p>Go to step 7</p> <p>If a licence is required by the waste facility and the contractor has not shown you the licence which permits receipt of the waste, contact Manager Cleansing Services prior to allowing any transport</p>
7	<p>Ensure the transporter maintains and provides written records of:</p> <ul style="list-style-type: none"> details of the waste (classification, name and address of its origin and quantity); and copies of waste dockets/receipts for the waste facility (date, time of delivery, name and address of the facility, its ABN, contact person). <p>TRIM this form in folder C004364 – with the following naming convention:</p> <ul style="list-style-type: none"> POEO Checklist – Contractor – “Department” – “Contractor Name” – “Date” 	<input type="checkbox"/>	<p>Ensure all documentation, including this form, is in TRIM</p>

Need Help: Any questions or clarification should be forwarded to Manager Cleansing Services