CONSTRUCTION WASTE MANAGEMENT PLAN

` 5 SKYLINE PLACE, FRENCHS FOREST

PURPOSE

To ensure that resources are conserved and waste is processed responsibly by minimising waste generation and maximising the recycling of materials.

SCOPE

To address the waste management procedures to be undertaken during the construction of the proposed development, as well as the procedures associated with the ongoing use of the premises.

MAJOR MEASURES

Materials Selection And Ordering:

- Selection of all materials will be undertaken by architectural designers;
- Materials requirements are to be accurately calculated to minimise waste from over-ordering;
- Materials ordering is to aim at minimising materials packaging; and
- Material Safety Data Sheets are to accompany all materials delivered to site, where required, to ensure that safe handling and storage procedures are implemented.

Waste Recycling:

- Waste generation from construction activities on the site will be minimised, reused or recycled (where applicable);
- Dedicated and secure containers will be provided on site by an approved waste handling company for non-recyclable waste;
- Waste that can be recycled will be separated into specific bins. This will typically include:
    - Concrete, Bricks, Timber, Steel, Plasterboard, PVC
- Mixed waste will be transported off site to a recycling depot where it will be further sorted for re-use and / or recycling.
- The waste contractor will assist waste performance by reporting to The Builder.

WASTE MANAGEMENT PRINCIPLES

Educational / Training / Awareness

a) Awareness and knowledge of the Waste Management Plan (WMP)

- Avoid - reuse - recycle - dispose

The Builder is aiming to reduce the amount of waste to land fill by adopting the waste management hierarchy of *avoid* > *reuse* > *recycle* > *dispose* in the construction processes. The following document outlines waste management procedures to be carried out to assist in reducing waste.

The first step is to ensure that all people involved are aware of the WMP and understand its importance. It is, therefore, necessary architects, interior designers, site managers, foreman, leading hands and labourers working for The Builder, are prepared to assist in managing waste minimisation.

- Inductions

To ensure all persons on the site are aware of the WMP, including The Builder's employees and subcontractors, the WMP procedures will be incorporated into the site-specific induction, which all workers must undertake prior to their commencement on site. The Builder's employees will complete a specific induction outlining their duties in enforcing WMP procedures.

- Colour-coding
  Recycling bins (only the smaller wheelie bins – no skips) will be colour-coded or signposted to assist in the identification of bins.

b) Signage
All bins will have signage fixed stating what type of materials are to be placed in the bin (e.g. steel, concrete, bricks, general rubbish, etc.). Signage will be erected for dumping procedures at rubbish chutes, areas where bins are to be stored, any stockpiling areas (if applicable), waste collection procedures and the responsibilities of persons on site in regards to the WMP.

c) Procedures of the WMP
The following approach will be adopted to waste management planning:

1. Issue this WMP to architects, interior designers and site management, ensuring all parties are aware of the construction and ongoing waste management procedures of the building.
2. Create an induction to be incorporated in the site-specific induction.
3. Include conditions in subcontracts for compliance with the WMP.
4. Engage a suitable waste removal contractor.
5. Obtain Work Method Statements (WMS) from subcontractors, which are to include compliance with the WMP.
6. The Builder to supply adequate bins and removal methods.
7. The Builder's site team to monitor and ensure compliance with the WMP by subcontractors.
8. Monitor feedback reports from the waste removal contractor.
9. Upon completion, remove all bins and temporary signage from site.

d) Incentives / repercussions
Incentives are to be provided to The Builder's employees and subcontractors to achieve best practices in waste management. The following will be implemented:

1. Provide site barbecues if waste targets are achieved.
2. If contractors are caught mixing waste and not separating for recycling – labour will be employed to separate the waste and back-charged to the subcontractor.
3. If employees refuse to cooperate with the WMP, they will be removed from the site.

2. Details of Waste Management - DEMOLITION

MATERIALS ON SITE			DESTINTATION		
	Estimated		Reuse and Recycling		Disposal
Type of materials	**Vol (m^3)**	**Wt (t)**	**ON SITE Proposed Methods**	**OFF SITE Proposed Methods**	**Landfill Site**
CONCRETE Footings / paving / stair landings	**300**	**-**		Recycling plant Damaged items to be placed with general waste for recycling	Nil
ROOF TILES / METAL SHEETING	**30**	**-**		Recycling plant Damaged items to be placed with general waste for recycling	Nil
TIMBER Bearers / joists / rafters Flooring Stairs Windows Doors Cupboards / vanities / shelves	**10**	**-**		Sell / recycling plant Damaged items to be placed with general waste for recycling	Nil Nil Nil Nil Nil Nil
BRICKS Brick / render / paint (lead based) Clean brick rubble	**30**	**-**	Included in concrete quantities	Recycling plant Damaged items to be placed with general waste for recycling	Nil
STEEL Reinforcement Plumbing	**2**	**-**		Sell / recycling plant Damaged items to be placed with general waste for recycling	Nil
PLASTERBOARD Ceilings / walls	**5**	**-**			TBA by subcontractor
ASBESTOS	**Nil**	**-**			TBA by subcontractor
GENERAL WASTE	**20**	**-**		Recycling plant	TBA by subcontractor
GREEN WASTE	**10**	**-**		Chipped and used as soil stabilisation	DA approved landfill site

Details of Waste Management - EXCAVATION

MATERIALS ON SITE			DESTINTATION		
	Estimated		Reuse and Recycling		Disposal
Type of materials	Vol (m^3)	Wt (t)	ON SITE Proposed Methods	OFF SITE Proposed Methods	Landfill Site
OTHER THAN SANDSTONE	8908	-	Method as proposed by subcontractor WMS	-	TBA by subcontractor
SANDSTONE	17816	-	-	-	TBA by subcontractor

3. Details of Waste Management - CONSTRUCTION

MATERIALS ON SITE			DESTINTATION		
	Estimated		Reuse and Recycling		Disposal
Type of materials	**Vol (m^3)**	**Wt (t)**	**ON SITE Proposed Methods**	**OFF SITE Proposed Methods**	**Contractor / Landfill Site**
CONCRETE	**4**				
Excess	**-**	**-**		Waste removal contractor crushing plant	Nil
Slurry		**-**			
TIMBER					
Formwork	**10**	**-**	Small pieces used as required on the job	Wood chip clean material	Nil
Architraves / skirting		**-**		Wood chip clean material	Nil
Doors		**-**		Return to supplier / The Builder's yard	Nil
Cupboards / vanities / shelves		**-**		Return to supplier if can be reused	General waste
General		**-**		Wood chip clean material	General waste
BRICKS	**4**	**-**		Crushing plant / return unused bricks to supplier	Nil
STEEL					
Reinforcement		**-**	Stockpile decent lengths on site – reuse	Small lengths to be recycled	Nil
Plumbing		**-**	in hobs	Left over – recycled	Nil
Door frames	**2**	**-**	Off cuts kept to be reused at junctions	If unused return to supplier, recycle	Nil
Ducting		**-**	Keep on site for design changes	Recycle	Nil
General		**-**		Recycle	Nil
PLASTERBOARD					
Ceilings / walls	**6**	-	Large off cuts reused in small spaces	Recycling plant	Nil
TILES	**4**	-	Keep excess tiles for body corporate for repairs in years to come	Return undamaged tiles to supplier Damaged tiles to crushing plant	Nil
GENERAL WASTE	**10**	-	Not applicable	Sort by waste contractor	General waste – sort by waste contractor for recycling
GRANITE / STONE / PAVERS	**0.5**	-		Crushing plant	Nil
GLASS	**0**	-		Return to window / balustrade supplier or recycle	Nil

GREEN WASTE - LANDSCAPE	**0**	**-**		Mulching	Nil
POLYSTRENE / PVC	**0.5**	**-**			To be recycled

4. Details of Waste Management - ONGOING

RESIDENTIAL WASTE MANAGEMENT

During the operation of the building, it is the responsibility of the Building Manager to monitor the number of bins required for the development. Waste and recycling volumes may change according to residents' attitudes to waste disposal and recycling, building occupancy levels and/or the development's management.

Any requirements for adjusting the capacity of the waste facilities can be achieved by changing the number of bins, the bin sizes or collection frequencies. Building management will be required to negotiate any changes to bins or collections with the collection service provider.

BIN SUMMARY

The Northern Beaches Council specify the following bin requirements for developments of 3 or more dwellings:

No. of Dwellings	Garbage Bins	Paper Bins	Bottle Bins	Vegetation Bins
8	3	2	2	2
100	34	21	21	2

The proposed development incorporates 108 dwellings. On this basis, there will be **37 x 240L Garbage Bins, 23 x Paper Bins, 23 x Bottle Bins, and 3 x Vegetation Bins.**

WASTE DISPOSAL PROCEDURES

Each dwelling will have waste and recycling bins built in the kitchen. They will transport their waste to the waste storage area located in the lobby of each level, placing the general waste in the garbage chute and the remainder in the appropriate paper or bottle bin. Vegetation and bulky waste will be deposited in their respective areas located in the basement.

COMMUNAL AREAS

Receptacles for general waste and recyclables will be located next to each other in the communal areas for residents to use. All bins must be labelled appropriately to encourage proper segregation.

Each day or as required, the Building Manager or contracted cleaners will transport the general waste and recyclables from communal areas to the waste storage area located in the basement.

WASTE COLLECTION PROCEDURES

On collection day, the Building Manager will transport the bins from the waste room to the garbage holding bay on Skyline Place. After collections, the bins will be transferred back to the waste room.

Quantities, sizes, and servicing of bins may be modified according to actual waste generation rates by residents.

COMMERCIAL WASTE MANAGEMENT

BIN SUMMARY

The Northern Beaches Council specify the following waste generation rates for non-residential uses:

Type of Premises	Garbage Generation Rate	Recycling Generation Rate
Office	10L/100m2 floor area / day	19L/100m2 floor area / day

The proposed development incorporates 971m2 of office space. Accordingly, the anticipated waste generation is 668L for Garbage and 1,269L for Recycling. On this basis, there will be **3 x 240L Garbage Bins and 6 x 240L Recycling Bins.**

WASTE DISPOSAL PROCEDURES

Tenants operating in the commercial area will be responsible for their own storage of garbage and recycling back-of-house (BOH).

Bulky waste is not a major component of the waste generated by offices. As such, in the event the tenant requires disposal of bulky waste, they will be required to arrange this with a private contractor. All cardboard should be flattened (to save bin space) and transferred directly to the waste room where it is to be deposited into one of the recycling bins.

As required, nominated staff will transport their garbage and recycling to the waste room and place it into the corresponding bins.

CONSTRUCTION REQUIREMENTS

Waste storage construction must comply with the minimum standards as outlined in Council's DCP in order to minimise odours, deter vermin, protect surrounding areas, and make it a user-friendly and safe area.

The *NSW Better Practice Guide for Resource Recovery in Residential Developments (2019)* also states that better practice bin storage areas should achieve more than the minimum compliance requirements, which are as follows:

- Ensuring BCA compliance
- Ensuring storage areas are well lit (sensor lighting preferred) and have lighting available 24 hours a day
- Provision of bin washing facilities, including taps for hot and cold water provided through a centralised mixing valve. The taps must be protected from bins and be located where they can be easily accessed even when the area is at bin capacity
- Floor constructed of concrete at least 75mm thick
- Floor graded so that any water is directed to a sewer authority approved drainage connection to ensure washing bins and/or waste storage areas do not discharge flow into the stormwater drain
- Provision of smooth, cleanable and durable floor and wall surfaces that extend up the wall to a height equivalent to any bins held in the area