PROPOSED COMMERCIAL DEVELOPMENT

75-87 DUNHEVED CIRCUIT, ST MARYS

WASTE MANAGEMENT PLAN

PROPOSED COMMERCIAL DEVELOPMENT, 75-87 DUNHEVED CIRCUIT, ST MARYS
Client: Concrete Estates Pty Ltd
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EXECUTIVE SUMMARY

SALT has been engaged by Concrete Estates Pty Ltd to prepare a Waste Management Plan (WMP) for a proposed commercial development located at 75-87 Dunheved Circuit, St Marys.

SALT understands that the proposal involves the development of a warehouse, consisting of 500m^2 office spaces and 4,800m^2 warehouse area.

Waste would be stored on-site in the bin area located at ground level.

Waste would be collected by private contractor, with:

- 1 x 3m^3 garbage bin collected once per week; and
- 1 x 3m^3 recycle bin collected once per week.

Waste vehicles would prop adjacent to the bin area. Vehicle operators would ferry waste bins from the bin area to the collection vehicle and return upon emptying.

In the opinion of SALT, the enclosed Waste Management Plan would provide efficient waste management for the proposed development. This report must be read in detail prior to implementation of the waste management strategy.

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1 INTRODUCTION

SALT has been requested by Concrete Estates Pty Ltd to prepare a Waste Management Plan for a proposed commercial development located at 75-87 Dunheved Circuit, St Marys.

This Waste Management Plan (WMP) has been prepared based on industry best practice and the Penrith City Council *Industrial, Commercial and Mixed-use Waste Management Guidelines, and the waste generation rates enclosed therein.*

In the circumstance that the development plans are amended or new legal requirements are introduced, a revision of the enclosed WMP may be required by the Responsible Authority. The developer would be responsible in engaging with a waste consultant or engineer to prepare the updated report accordingly.

Construction waste generation rates have been adopted from *The Hills Shire Council Development Control Plan* Appendix A (2012).

2 INCLUDED IN THIS REPORT

Enclosed is the Waste Management Plan for the proposed development at 75-87 Dunheved Circuit, St Marys. Included are details regarding:

- Land use;
- Waste generation;
- Waste systems;
- Bin quantity, size and colour;
- Collection frequency;
- Bin storage area;
- Signage;
- Waste collection;
- Responsibilities;
- Ventilation, washing and vermin-prevention;
- Noise reduction;
- DDA compliance;
- Supplier contact information; and
- Scaled waste management drawings.

3 LAND USE

Planning application number: to be allocated

Land Zone: General Industrial

Land use type: Commercial

Number of levels: 2

Commercial Space:

- 500m^2 office space; and
- 4,800m^2 Warehouse space.

4 CONSTRUCTION WASTE RESPONSIBILITIES

This Waste Management Plan must be adhered to during the construction and ongoing management of the proposed development.

During site inductions for the construction phase, all contractors must be made aware of the waste management obligations provided in this plan.

It is the responsibility of the Site Supervisor to ensure waste disposal is adequately tracked in a Waste Data File. Any associated receipt/invoices, waste classification and site validation certificate should be logged within this file.

All entries in the Waste Data File must include the following;

- Time and date;
- Description and size of waste;
- Waste facility used; and
- Vehicle registrations and company name.

Waste Data Files may be requested by Penrith City Council during the demolition and construction stages.

5 CONSTRUCTION WASTE MANAGEMENT PLAN

5.1 CONSTRUCTION WASTE GENERATION

As discussed in section 1 above, construction waste generation rates have also been adopted from *The Hills Shire Council Development Control Plan* Appendix A (2012) due to the lack of rates in Penrith City Council waste management guidelines and other relevant documentation.

Waste generation quantities for construction materials are shown in Table 1. The construction waste generation rates for blocks of flats (per 1000m^2) have been adopted as these are found to be the most suitable rates for the proposed use of the subject site. These generation rates are shown in Table 1.

Table 1 Estimate Waste Generation Rates for Construction Materials

Building Material	Waste Quantity (tonnes per 1000m^2)
Timber	0.70
Concrete	6.70
Bricks	3.20
Gyprock	1.30
Sand/Soil	28.70
Metal	1.30
Other	0.60

The total gross floor area of the proposed development is 5,300m^2.

It is estimated that all building materials presented in Table 2 will be used on each floor, thus construction waste quantities are the product of the estimated waste generation rates presented in Table 1 and the gross floor area.

Estimated waste quantity volumes and management strategies for construction works are presented in Table 2.

The assessment below assumes that most of the construction waste generated will be recycled at the respective local recycling facility.

Table 2 Estimated Construction Waste Generation Volumes and Management Options

Type of Waste Generated	Most to Least Favorable			Specify method of onsite reuse, contractor and recycling outlet and /or waste depot to be used
	Reuse Estimate Volume Weight (t)	Recycle Estimate Volume Weight (t)	Disposal Estimate Volume Weight (t)	
Timber	-	4	-	Delivered to the off-site recycler listed below. Chip remainder may be used in landscaping.
Concrete	36	36	-	To be used as hardstand during construction, then as base under pavements. Any unused concrete would be returned to batch plant for re-use.
Bricks	-	17	-	Clean and reuse lime mortar bricks for footings. Delivered to the off-site recycler listed below. Noted: it should not be mixed with other materials from construction and demolition waste and reinforced concrete.
Gyprock	-	-	7	Disposed of in a designated general waste skip. Should asbestos be present, the waste must be removed and disposed of in accordance with the requirements of Work Cover.
Sand/Soil	-	152	-	Delivered to the off-site recycler listed below.
Metal	-	7	-	Clean metal (i.e. without presence of other materials) will be delivered to the off-site recycler listed below. Any contaminated metal should be separated to be landfilled.
General waste (including residual waste and dust)	-	TBA	TBA	Disposed into a general waste skip.
Other	-	-	3	Sorted accordingly based on recycling potential of each material

5.2 CONSTRUCTION WASTE STORAGE AND COLLECTION

Construction waste material generated during the construction of the proposed development will be recycled where possible. Recyclable material will be sorted and stored onsite in an appropriately labelled skip.

It is anticipated that garbage will be generated on the subject site during the construction phase. Any garbage generated shall be sorted and store onsite in waste skips.

Construction waste will be sorted and stored on-site in skips.

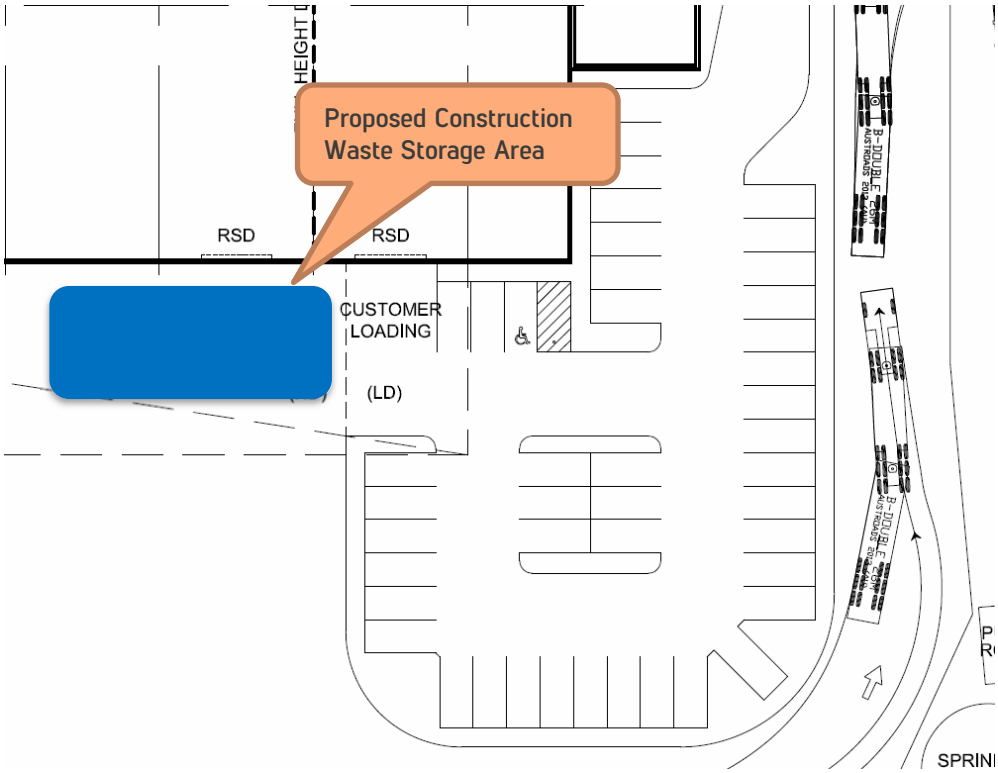
Note: the capacities of the following centres in accepting and recycling the specified materials may differ upon the time of construction hence it is recommended that they are contacted prior to transfers of waste to the site. Waste skips should be provided for the following:

- 1 or more general waste skips for products including sand and soil not classified as VENM, gyprock, treated timber, residual waste and dust, to be delivered to SUEZ Seven Hills Resource Recovery Centre, 1300 651 116;
- Recycling skips with one skip per material type for bricks, sandstone and concrete to be delivered to SUEZ Seven Hills Resource Recovery Centre, 1300 651 116;
- 1 recycling skip for clean metal to be delivered to SUEZ Seven Hills Resource Recovery Centre, 1300 651 116;
- 1 organics waste skip for untreated timber and VENM that is not reused on site including garden vegetation and untreated timber, to be delivered to SUEZ's Lucas Heights Resource Recovery Park, NSW 2234;
- Additional recycling skips, as required for paper & cardboard, glass, plastics and others to be delivered to SUEZ Seven Hills Resource Recovery Centre, 1300 651 116 or a suitable recycling facility.

Waste skips will be enclosed within waste bays. Waste bays will be lined with sediment fencing or shade cloth. Waste bays would be located in the same area as the demolition stockpiles, as shown in Figure 1.

Construction waste shall not be stored along footpaths, public reserves and street gutters or in areas that would lead to contamination of stormwater and waterways.

Figure 1 Proposed Construction Waste Storage Area



6 ONGOING WASTE MANAGEMENT PLAN

6.1 WASTE GENERATION

Commercial waste generation rates are shown in Table 3. Calculations are based on 5 days per week operation for the commercial space and office areas.

Generation rates have been adopted based on commercial waste generation rates enclosed in the Penrith City Council *Industrial, Commercial and Mixed-use Waste Management Guidelines*.

Table 3 Waste Generation Rates

Use	Garbage (L/100m²/week)	Commingled Recycling (L/100m²/week)
Office	50	50
Warehouse (Office)	50	50

A commercial waste generation assessment is provided in Table 4.

Table 4 Waste Generation Assessment

Use	Area	Waste Per Week	
		Garbage	Recycling
Office	500m²	250L	250L
Warehouse (Office)	4800m²	2400L	2400L
Total Waste Generated per Week		**2,650L**	**2,650L**

6.2 WASTE SYSTEMS

Waste would be sorted on-site by staff and cleaners as appropriate into the following streams:

- Garbage (General Waste); and
- Commingled Recycling.

6.2.1 GARBAGE (GENERAL WASTE)

The commercial space and offices would be furnished with plastic lined bins for the temporary holding of garbage waste, to have minimum cumulative capacity of 10 litres per 100m² of floor area. This capacity is based on the transfer of waste to the bin room occurring once per day.

Staff/cleaners would dispose of waste from these bins directly into the appropriate 3m³ steel bin provided within the ground level bin area, accessed via the external pathway (refer to APPENDIX 1).

Garbage is to be disposed of bagged.

6.2.2 COMMINGLED RECYCLING

The commercial space and offices would be furnished with unlined bins for the temporary holding of recyclable waste, to have minimum cumulative capacity of 10 litres per 100m² of floor area. This capacity is based on the transfer of waste to the bin room occurring once per day.

Staff/cleaners would dispose of waste from these bins directly into the appropriate 3m³ steel bin provided within the ground level bin area, accessed via the external pathway (refer to APPENDIX 1).

Commingled recycling would be disposed of loosely.

6.3 BIN QUANTITY, SIZE AND COLLECTION FREQUENCY

The bin quantity, size and the frequency of collection are shown below in Table 5 and Table 6.

Table 5 Bin Size and Collection Frequency

Waste Stream	Collections per Week	Bin Size	No. Bins	Weekly Capacity	Weekly Volume
Garbage	1	3m³ Steel bin	1	3,000L	2,650L
Commingled Recycling	1	3m³ Steel bin	1	3,000L	2,650L

Table 6 Typical Waste Bin Dimensions

Capacity (L)	Width (mm)	Depth (mm)	Height (mm)	Area (m²)
3000	2060	1520	1540	3.13

6.4 BIN COLOUR AND SUPPLIER

All bins would be provided by private supplier. The below bin colours are specified by Australian Standard AS4123.7-2006, however due the private nature of the collection, these are only recommendations and are not mandatory:

- Garbage (general waste) shall have red lids with dark green or black body; and
- Recycle shall have yellow lids with dark green or black body.

Note, private contractors often supply bins for collection.

6.5 WASTE STORAGE AREA

Table 7 demonstrates the cumulative space requirements and provision of waste areas in the commercial areas of the proposed development.

Please refer to scaled drawing shown in APPENDIX 1.

Table 7 Waste Area Space Requirements

Stream	Space Required (excluding circulation)	Space Provided
General Waste	3.13m²	18.00m²
Commingled Recycling	3.13m²	
TOTAL	**6.26m²**	**18.00m²**

Waste management would be overseen by Owners' corporation/staff.

6.6 WASTE COLLECTION

Commercial waste would be collected by private contractor as follows:

- 1 x 3m³ garbage steel bin collected once per week; and
- 1 x 3m³ commingled recycling steel bin collected once per week.

All waste bins would be stored on-site in the bin room provided on the ground level.

Waste collections would occur between 6:30am to 8pm on Mondays to Saturdays and between 9am to 8pm on Sundays and public holidays, in accordance with EPA Victoria *Noise Control Guidelines* 2008. This is to ensure minimal noise impacts to the neighboring properties.

General waste collections would occur via a 10.5m front lift council collection vehicle.

Waste collection vehicles would enter the subject site via a forward motion from Dunheved Circuit.

Waste collection vehicles would prop safely adjacent to the bin area.

Vehicle operators would ferry waste bins from the bin room and return upon emptying.

Waste collection vehicles would exit the site in a forwards direction, exiting the subject site onto Dunheved Circuit.

Swept paths prepared by others have been completed for a 26m truck (refer to APPENDIX 1) demonstrating access to the warehouse. This truck is significantly bigger than the 10.5m waste truck and as such access is considered to be appropriate.

Owners' corporation/staff would ensure that waste vehicle operators are able to access the bin room.

Commercial waste bins would not be presented to street kerb at any point.

7 RESPONSIBILITIES

Owners' corporation would be responsible for overseeing waste management within the development. Responsibilities would include:

- Provide commercial tenants with a waste management handbook which would include information on bin storage areas, transfer paths and waste management methods onsite;
- Inspecting waste stores;
- Reviewing contamination within bins;
- Investigating incidents of inappropriate waste storage (or aggregation).

Owners' corporation would ensure anyone found responsible for inappropriate waste disposal would be appropriately educated and made aware of correct waste disposal techniques.

It is recommended that owners' corporation conducts a waste audit if waste is found to be inappropriately deposited by users or if the bin capacities need to be reviewed.

8 SIGNAGE

Waste storage areas and bins would be clearly marked and signed with the industry standard signage approved by NSW EPA or equivalent, illustrated in Figure 2.

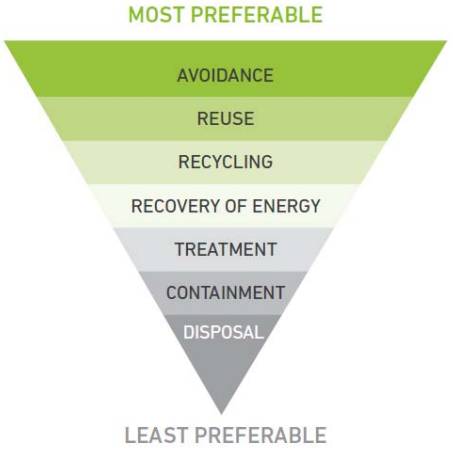
Figure 2 NSW EPA Signage

9 SUSTAINABILITY ACTION PLAN AND INITIATIVES

The importance of restructuring the institutional waste management methods in developments is becoming more apparent as we experience the adverse impacts of increasing waste volumes and declining recycling rates. Developments such as the proposed subject site can contribute towards the prevention and reduction of nationwide waste generation volumes as well as to promote a local circular economy system.

Building management should encourage users by demonstrating a commitment towards waste avoidance and minimisation initiatives. The waste hierarchy as detailed in the *Environmental Protection Act* 1970 should be observed in order of preference (refer to Figure 3).

Figure 3 Waste Hierarchy



In addition to the waste management strategy detailed in the enclosed report, building management can establish landfill diversion and recycling targets and conduct periodic waste audits to monitor contamination levels in recycling bins. The results of the audit could be shared with commercial tenants to encourage them to continue or to improve their waste separation efforts. The audit may also be beneficial from a cost perspective as it would inform building management of opportunities to reduce bin numbers or collection frequencies.

Commercial tenants should be inducted on on-site waste management practices and on the development's sustainability action plan via the provision of a handbook or in-person training, as deemed necessary.

10 WASTE AREA DESIGN REQUIREMENTS

10.1 CLEARANCE AND MATERIAL DESIGN

The following design aspects will be incorporated within the waste room design to permit a safe and efficient waste management strategy and collection service;

- The room will allow for 200mm between bins to allow adequate manoeuvraibility;
- An unobstructed clearance zone of 1,800mm would be provided between stored bins and at the entrance;
- The waste room will be equipped with dual door access with a minimum width of 1,800mm and this would be accessed by a 1,800mm wide corridor (at minimum);
- The room will be fully enclosed and walled;
- The floor will be waterproofed, non-slip and sealed in accordance with the Building Code of Australia (BCA) to permit use of washing facilities;
- A minimum height clearance of 2,700mm will be provided in the waste room, in accordance with BCA.

All other design aspects in regards to drainage are listed in sections below.

10.2 VENTILATION

Ventilation would be provided in accordance with Australian Standard AS1668.

The waste room will be equipped with tight fitting doors and impervious flooring. Any openings within the waste room will be fitted with vermin-proof mesh.

10.3 LITTER MANAGEMENT, WASHING AND STORMWATER POLLUTION PREVENTION

An appropriately drained wash down area would be provided within the bin room in which each bin is to be washed regularly by building management. Bin washing areas or bin wash bays must discharge to a litter trap. Bin wash areas should not discharge into stormwater drainage.

Alternatively, a third-party bin washing service can be engaged to perform this service. Bin washing suppliers must retain all waste water to within their washing apparatus so as to not impact on the drainage provisions of the site.

Owner's corporation and cleaners would be responsible in ensuring the following to prevent or minimise the dispersion of litter throughout the site:

- Prevent overfilling of bins by ensuring bin lids are closed at all times;
- Require waste contractor to remove any spillage that may occur during waste collections; and
- Ensure anyone found responsible for inappropriate waste disposal or dumping would be appropriately educated and made aware of correct waste disposal techniques.

10.4 NOISE REDUCTION

All waste areas would meet EPA, BCA and AS2107 acoustic requirements as appropriate within operational hours assigned to minimise acoustic impact on surrounding premises.

Waste collection timings in accordance with EPA Victoria *Noise Control Guidelines* 2008 have been stipulated in the waste collection section above.

Waste contractors should also abide by the following regulations to ensure minimal noise impacts to the neighboring properties:

- Compaction only to be carried while on the move;
- Bottles should not be broken up at the point of collection
- Routes that service entirely residential areas should be altered to reduce early morning disturbances; and
- Noisy verbal communication between operators should be avoided where possible.

10.5 DDA COMPLIANCE

All waste areas to be accessed by commercial staff would comply with AS1428.1:2009.

11 SUPPLIER CONTACT INFORMATION

Table 8 provides a list of equipment specified by this waste management plan.

Below is a complimentary listing of contractors and equipment suppliers. You are not obligated to procure goods/services from these companies. This is not, nor is it intended to be, a complete list of available suppliers.

SALT does not warrant (or make representations for) the goods/services provided by these suppliers.

Table 8 High Level Purchasing Schedule

Item	Quantity	Supplier	Notes
3m^3 Steel Bin	2	Private Supplier*	1 x 3m^3 garbage bin* 1 x 3m^3 commingled recycling bin
*Private waste collection contractors often supply their own bins for collection.			

11.1 EQUIPMENT SUPPLIERS

11.1.1 BIN SUPPLIER

- Sulo MGB Australia (wheelie bin) – 1300 364 388
- Source Separation System (wheele bin and bin stations) – 1300 739 913

11.2 WASTE COLLECTORS

11.2.1 CONSTRUCTION WASTE COLLECTOR

The principal off-site recycler and landfill site that can be used for this project is:

- SUEZ Seven Hills Resource Recovery Centre, 29 Powers Rd, Seven Hills NSW 2147 – 1300 651 116
- SUEZ's Ryde Resource Recovery Centre, 145 Wicks Road, North Ryde NSW 2113 – 1300 651 116

An additional landfill site that can be used for this project is:

- SUEZ's Lucas Heights Resource Recovery Park, Little Forest Road, Lucas Heights NSW 2234 – 13 13 35

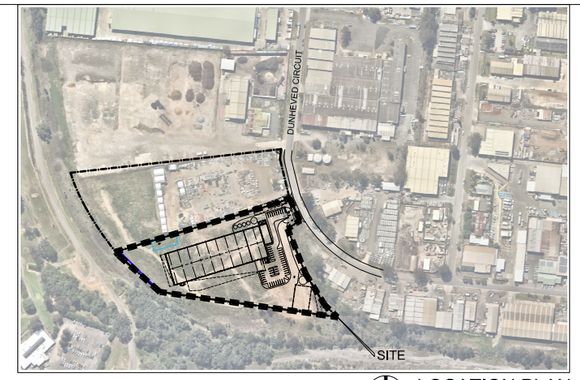
11.2.2 GARBAGE AND RECYCLING

- Penrith City Council – 02 4732 7777

11.3 BIN WASHING SERVICES

- The Bin Butler – 1300 788 123
- Calcorp Services – 1888 225 267
- WBCM Environmental – 1300 800 62

APPENDIX 1 DESIGN DRAWINGS



LOCATION PLAN

REVISIONS

A	DEVELOPMENT APPLICATION	15.12.20
B	SYDNEY WATER ASSET SURVEY OVERLAY	29.03.21
C	WAREHOUSE SHIFTED DOWN TO AVOID SEWERAGE LINE	16.04.21
D	LD PAVEMENT AREA CORRECTED	23.04.21
E	1% FLOOD EXTENT	30.04.21
F	REVISION – SITE ADDRESS, OSD TANK, RWT, SILOS	14.05.21

NOTES

TYPICAL CAR PARKING DIMENSIONS

UNLESS OTHERWISE NOTED OR DIMENSIONED, ALL CAR PARKING SHOWN ARE OF THE FOLLOWING TYPICAL DIMENSIONS:
- BOTH STANDARD & ACCESSIBLE SPACES = 2.6m X 5.5m TYPICAL
- CAR PARKING AISLE WIDTH = 6.5m TYPICAL

TYPICAL FENCE TYPES (ADJACENT GATES TO MATCH)

FN-1 1.8m HIGH BLACK GARRISON FENCE. TO STREET FRONTAGE AS SHOWN.

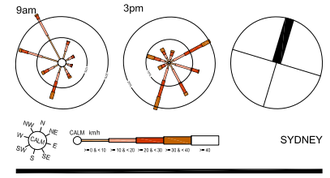
FN-2 1.8m HIGH BLACK CHAIN WIRE MESH FENCE WITH ADDITIONAL 3 ROWS OF BARBED WIRE ABOVE TO 2.1m OVERALL FENCE HEIGHT. TO SITE PERIMETER AS SHOWN.

DEVELOPMENT SUMMARY

SITE AREA	20,200 sqm
WAREHOUSE	4,800 sqm
OFFICE (2 LEVELS)	500 sqm
TOTAL BUILDING AREA	5,300 sqm
EFFICIENCY / SITE AREA	26.24 %
FUTURE WAREHOUSE	600 sqm
AWNING (6m)	240 sqm
AWNING (15m)	1420 sqm
CAR PARKING PROVIDED	53 spaces
LIGHT DUTY PAVEMENT (LD)	1,838 sqm
HEAVY DUTY PAVEMENT (HD)	10,280 sqm
* INCL. 366 sqm AREA OVER DETENTION TANK	
UNDERGROUND OSD TANK	366 sqm

LEGEND

- PROPOSED LOT BOUNDARY
- EXISTING EASEMENT / COVENANT
- PROPOSED FENCE LINE



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PROJECT

PIPE MAKERS

75 - 87 DUNHEVED CIRCUIT
ST MARYS, NSW

DRAWING TITLE

PROPOSED SITE PLAN

0 5 10 15 20 25 50m

SCALE: 1 : 1000 @ A3

CREATE DATE : 14.05.2021 PLOT DATE : 14.05.2021

LAST SAVED BY: yoonmengJoh

100285 SM DA01 002 F

FILE LOCATION: X:\Projects\100285 - Lot 2, 85 Dunheved Circuit, St Marys\Drawings\Architectural\2. Town Planning Drawings\100285 SM DA01

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