SITE WASTE MANAGEMENT PLAN (SWMP)

Pymble Ladies College Grey House Precinct



Avon Rd, Pymble NSW 2073



E-PLAN-01 (Rev 0 June 2021) | Amended by: Steve Ziaziaris Approved by Andrew Andreou Uncontrolled copy once printed



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1. INTRODUCTION

1.1 PROJECT INFORMATION TABLE

PROJECT INFORMATION TABLE								
PROJECT NAME	ymble Ladies College							
LOCATION	Avon Rd, Pymble NSW 2073							
CLIENT	ymble Ladies College							
DURATION OF CONTRACT	110 weeks	110 weeks						
TAYLOR CONTACT INFORMATION								
COMPANY NAME	Taylor Construction Group Pty	aylor Construction Group Pty Ltd						
ABN	25 067 428 344							
ADDRESS	Level 13, 157 Walker Street, N	orth Sydney 2060						
TELEPHONE & FAX	Ph.: 02 8736 9000 Fax: 02 8	736 9090						
POSITION	CONTACT NAME		PHONE NUMBERS					
CHIEF OPERATING OFFICER	George Bardas		02 8736 9000					
GENERAL MANAGER	Tim Christie		02 8736 9000					
CONSTRUCTION MANAGER	Chris Bellemore		02 8736 9000					
PROJECT MANAGER	Steve Ziaziaris		0413 182 641					
SITE MANAGER	David Pereira		0415 241 170					
HSE MANAGER	Andrew Andreou		0404 492 614					
SAFETY ADVISOR	твс		ТВС					
QUALITY MANAGER	Stephen Player		02 8736 9000					
CONTRACT MANAGER	Scott Dobson		0414 984 567					
CONTRACT ADMINISTRATOR	твс		ТВС					
PROJECT COORDINATOR	твс		ТВС					
SITE ENGINEER	твс		ТВС					
FOREMAN/ LEADING HAND	ТВС		ТВС					
CADET								
DOCUMENT CONTROL	NAME & POSITION		SIGNATURE & DATE					
PREPARED BY:	Steve Ziaziaris – Senior Projec	et Manager	ب: 17.6.21					
REVIEWED BY:			1					
REVIEWED BY:								
REVIEWED BY:								
REVISED BY	REV. No.	DATE	CHANGES MADE					

1.2 PROJECT OVERVIEW AND SITE DESCRIPTION

The Grey House Precinct will provide a new home for girls in Years 5 and 6, a dance academy with six new studios, Out of School Hours Care and an Early Learning Centre.

The existing Health demountable buildings will be removed, and a new purpose-built health and wellbeing centre will be created within the development. The Years 5 and 6 Junior School component will provide high quality general and specialist learning, with a focus on STEM (Science, Technology, Engineering and Mathematics).



1.3 PURPOSE OF THE SITE WASTE MANAGEMENT PLAN

Taylor Construction Group is committed to improving sustainability on all of its projects. We aim to reduce the environmental impact of our operations and enable the integration of sustainability principles and practices to all activities carried out on site. Our goal on this project is to maximise the re-use of waste products, therefore minimising the amount of waste going to landfill. The Site Waste Management Plan (SWMP) incorporates the processes that will assist the project team in achieving this goal, whilst providing the necessary means to ensure waste management is efficient, cost-effective and compliant to NSW waste regulations.

This plan will outline the following:

- Identify, quantify volumes and classify the likely sources of waste to be generated during the construction phase and operation of the building.
- Provide measures to be implemented to manage, reuse, recycle and safely dispose of this waste.
- Identify appropriate servicing arrangements (including but not limited to waste management, loading zones, mechanical plant) for the site.

For the record, the project does not require an environment protection licence under the Protection of the Environment Operations Act 1997.

2. WASTE MANAGEMENT RESPONSIBILITIES

The site manager is the SWMP coordinator of the project and, as such, is responsible for ensuring the instruction of workers and for implementing and overseeing the SWMP.

The site manager will monitor the effectiveness and accuracy of the SWMP during the routine site visits. Independent audits will also be completed by the HSE manger via site inspections. Copies of these reports will be forwarded to the HSE manager for monitoring.

3. DISTRIBUTION

This SWMP will be communicated to the whole project team by the Contracts Administrator, who shall also distribute copies to the relevant authorities, client, project/site manager and each subcontractor where relevant/applicable. This will be undertaken every time the plan is updated.

4. INSTRUCTION AND TRAINING

The site manager shall provide on-site briefing via induction of appropriate separation, handling, recycling, re-use and return methods to be adopted by all parties and at appropriate stages of the project. Toolbox talks will be carried out regularly on waste issues and all subcontractors will be expected to attend. These toolbox talks are aimed at providing employees and subcontractors with the necessary information and instruction regarding waste management so that they understand the importance of the role they play and feel motivated to work together toward the same goals.

5. WASTE MANAGEMENT ON SITE

5.1 CATEGORIES

Waste materials fall into four categories for management. These are:

- 1. Reuse. If surplus materials can be used in future operations, they are classified as materials that can be reused.
- 2. **Recycling**. If surplus materials cannot be reused in their present form, they will be sent to recycling.
- 3. **Residual waste**. Residual waste can come in several forms, including waste that cannot be disposed of due to their nature (i.e. metals, contaminated waste), unused machinery, spare parts or discarded parts.
- 4. Landfill. If the above options cannot be satisfied, materials will be sent to landfill. The project team must make all the necessary efforts to reuse and recycle materials generated on site. Landfill must be avoided and will only be used as a last resort.

5.2 WASTE REGULATIONS IN NSW

Acts and regulations govern waste management in NSW. According to EPA, those ho handle, store, transport, process, recycle and dispose of waste must follow these rules to minimize harm to human health and to the environment. The waste legislation in NSW is as follows:

- EPA's Waste Classification Guidelines (EPA, 2014)
- Waste Avoidance and Resource Recovery Act 2001
- Protection of the Environment Operations Act 1997

EPA's Waste Classification Guidelines (EPA, 2014)

The NSW Environment Protection Authority (EPA) has developed Waste Classification Guidelines which are a step-bystep process for classifying waste. The guidelines are designed to help waste generators classify the wastes they produce

Protection of the Environment Operations (Waste) Regulation 2014

The Waste Regulation allows the EPA to protect human health and the environment and provides a platform for a modern and fair waste industry. It includes strict thresholds for environment protection licenses and outlines the waste levy system.

The act is the principal environmental protection legislation for NSW. The purpose of the act:

- Defines 'waste' for regulatory purposes;
- Establishes management and licensing requirements for waste;
- Defines offences relating to waste and sets penalties;
- Establishes the ability to set various waste management requirements via the Protection of the Environment Operations (Waste) Regulation 2014 (Waste Regulation).

Waste Avoidance and Resource Recovery Act 2001

The Waste Avoidance and Resource Recovery Act 2001 (WARR Act) promotes waste reduction and better use of our resources in NSW. It includes provisions for waste strategies and programs and for industry actions to reduce waste.

5.3 WAYS OF MINIMISING WASTE

Daily activities on this project will generate a wide range of residues such as general waste, obsolete infrastructure and/ or contaminated/ hazardous materials. With a view to maximizing waste management, the following waste hierarchy principles must be followed:

1. Reduce

Minimise waste production and over-consumption of materials by:

- Incorporating design and building practices that minimise waste production;
- Not over-ordering products or materials;
- Specifying project requirements and planning ahead to avoid over-consumption of products and materials;
- Minimising rework from errors and poor workmanship;
- Ensuring storage areas are safe and secure;
- Arranging deliveries to match work stages to avoid materials being stored on site longer than necessary.

2. Reuse

Wherever possible, reuse surplus or salvaged materials on site, off-site or on other projects:

- Establish a system whereby all products that can be reused (for the same purpose or for a new one) are identified and stored;
- Repair items so they can be reused or returned to the supplier.

3. Recycle

All materials that can be recycled must be separated and sent to a recycling facility.

5.3.1 ACTIONS TABLE

Actions for minimising waste will be updated into the following table:

Current actions table		
Action	Responsibility	Notified on

5.4 DISPOSAL OF HAZARDOUS WASTES

All hazardous or dangerous materials found or to be used during the demolition and construction phases must be handled and disposed of by competent persons only, in accordance with the EPA NSW guidelines. These materials can include:

- Dangerous or hazardous liquids;
- Asbestos waste;
- Waste lead acid batteries;
- Contaminated soil;
- Fluorescent tubes and HID lamps, etc.

5.5 SITE WASTE MANAGEMENT PLAN CHECKLIST

Item description	Yes	No
Have the recycling and waste contractors been identified?		
Have terms and commercial rates been agreed with contractors?		
Has each material to be used on site been identified?		
Have all hazardous and toxic materials (e.g. asbestos) been identified and do they comply with SafeWork NSW requirements?		
For off-site or disposal, have all the waste destination details been verified?		
Has a waste segregation/ collection area been prepared?		
Has the waste area been adequately signposted?		
Has the quantity of general waste to be produced on site been estimated? Is this estimation realistic?		
Has the person responsible ensured not to over order on materials?		
Has the SWMP been approved by the contract manager?		
Is returning waste to the supplier an option (e.g. plasterboard)?		
Has the SWMP been communicated to the whole team and to the contractors?		
Have all the SWMP training/ induction procedures for staff been met?		
Have all the SWMP training/ induction procedures for contractors been met?		
Comments/ further actions		

5.6 WASTE CLASSIFICATION, QUANTITIES AND MANAGEMENT PRACTICES

5.6.1 COMPANY WASTER PROFILE

TCG receives monthly waste statistics reports from its waste management contractor and can forecast waste generation estimates for other similar projects from this historical data. The table below summarises waste statistics from five recently completed education projects undertaken by TCG in Sydney, having a project value up to \$40M in value.

Project	Pendle Hill High School	Willoughby Girls High School	Greenwich Public School	Breenwich Public Knox Grammar Yagoona School Scho		All Project Average
Status	Completed	Completed	Completed	Complete	Completed	
Waste Record Period (Mths)	12	11	12	7	6	
Total Waste Collected (T)	302.49	281.84	294.6	495.62	21.26	279.16
Total Waste Recycled (T)	298.54	278.12	2 291.84 486.59 20.54		275.13	
Total Waste Recycled (%)	98.70%	98.68%	99.07%	98.18%	96.65%	98.25%
Total Waste Landfill (T)	3.94	3.71	2.75	9.0261	0.7162	4.03
Total Waste Landfill (%)	1.30%	1.32%	0.93%	1.82%	3.37%	1.75%
Vegetation waste	9.14%	6.78%	5.5%	0.11%	13.33%	6.97%
Concrete, Brick, Tiles	30.99%	36.91%	41.41%	20.87%	23.33%	30.70%
Fill/VENM	9.76%	0.92%	3.76%	0.00%	0.00%	2.89%
Asphalt	2.17%	1.37%	1.69%	0.00%	0.00%	1.05%
Timber	18.03%	19.13%	19.40%	37.22%	20.00%	22.76%
Glass	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Paper & Cupboard	5.95%	10.79%	1.70%	15.32%	23.33%	13.22%
Plastic	3.7%	2.39%	2.49%	0.00%	0.00%	1.72%
Plasterboard	11.03%	6.36%	4.28%	15.23%	0.00%	7.38%
Steel / Iron	6.51%	11.24%	8.93%	7.82%	13.33%	9.57%
Non -Ferrous Metal	0.73%	0.00%	0.00%	0.00% 0.00% 0.00%		0.15%
Food – Organics	0.07%	0.15%	0.18%	0.00%	0.00%	0.08%
Other	0.29%	0.33%	0.27%	0.00%	0.00%	.0.18%
Other-Mixed	1.63%	3.63%	1.38%	3.44%	6.67%	3.35%

This data indicates that the Grey House Precinct project could generate a greater than 85% recyclable waste by volume of total construction waste generated, and less than 15% landfill waste. This estimated amount of recyclable waste is above TCG's corporate target of 85%.

5.6.2 ESTIMATED PROJECT WASTE SCHEDULE

The following schedule provides a breakdown of the expected waste for the project based on a comparable project with actual waste records.

Waste Categories	Estimate Total %	Estimated Tonnes
Total Waste Recycled (%)	98.70%	388.12
Total Waste Landfill (%)	1.30%	5.12
Vegetation Waste	9.14%	35.93
Concrete, Brick, Tiles	30.99%	121.88
Fill/VENM	9.76%	38.36
Asphalt	2.17%	8.55
Timber	18.03%	70.92
Glass	0.00%	0.00
Paper & Cupboard	5.95%	23.40
Plastic	3.70%	14.55
Plasterboard	11.03%	43.36
Steel / Iron	6.51%	25.60
Non-Ferrous Metal	0.73%	2.86
Food - Organics	0.07%	0.27
Other	0.29%	1.13
Other - Mixed	1.63%	6.42

5.6.3 SERVICING ARRANGEMENTS

TCG has preferred suppliers for our waste management. For the Grey House Precinct, Bingo Industries will be engaged as our waste collection provider.

Bingo's services include the collection, transportation and delivery of waste to the post-collection process which includes the recycling and disposal of any residual waste. Bingo Industries take all their mixed waste skip bins directly to EPA Licensed Recycling Centres. From there the waste is sorted and separated into the following material classes for processing and recycling.

Bingo Recycling Centre's combine bin storage, waste collection, waste recycling and waste transfer to service the building and construction industry and domestic waste management needs in New South Wales. Wastes collected by Bingo Bins are taken directly to one of these facilities where approximately 90% of wastes are converted to recovered resources.

As can be expected waste materials inwards vary considerably and are delivered to the Recycling Centres in tipping and nontipping vehicles or in skip bins. Of the wastes inwards approximately 90% is recovered and recycled as materials outwards and the balance 10% to landfill. Waste materials inwards are processed to achieve the maximum recovery of resources and the minimum of un-recoverable material for offsite disposal.

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Bingo Recycling Centres

- Bingo Recycling Centre Alexandria
- Bingo Recycling Centre Artarmon
- Bingo Recycling Centre Auburn
- Bingo Recycling Centre Eastern Creek (Genesis)
- Bingo Recycling Centre Greenacre
- Bingo Recycling Centre Kembla Grange
- Bingo Recycling Centre Mortdale
- Bingo Recycling Centre Revesby
- Bingo Recycling Centre Tomago

Environmental Protection License No.

EPL No. 4679 EPL No. 20763 EPL No. 10935 EPL No. 20121 EPL No. 20847 EPL No. 20601 EPL No. 20602 EPL No. 20607 EPL No. 20585

Bingo Recycling – Waste Transfer and Materials Recovery Facility Flow Diagram



Material, Waste Facility and Recycling Process

Type of Material	Where Processed/ Recycled	How Processed/ Recycled
Heavy Recyclable Materials (soil, dirt, sand, rubble, concrete, brick, tiles, asphalt, stone)	Bingo Recycling Centres	Re-processed into recycled products (such as recycled soil, fill sand, aggregates, roadbase) by crushing and screening.
Timber/ Green Waste	Clean & Green Organics/ Genesis	Re-processed into woodchip and mulch by shredding.
Metal/ Steel	Sell & Parker/ CMI/ SIMS/ Sydney Copper Scraps	Re-processed into new metal and steel products by shearing, baling and re-smeltering.
Brick/ Concrete	Boral/ Genesis	Re-processed into recycled products (such as fill sand, aggregates, roadbase) by crushing and screening.
Cardboard/ Paper/ Plastic	Polytrade Recycling/ J.J. Richards/ Orora	Re-processed into new cardboard, paper and plastic products by breaking down the material into a form for re-use.
Plasterboard	ReGyp	Re-processed into gypsum products by shredding and screening.
General Waste	SUEZ Landfill/ Horsley Park Landfill/ Genesis Landfill	n/a

Waste Facilities

Bingo Recycling Centres 76-82 Burrows Road, Alexandria NSW 2015 10 Mclachlan Ave, Artarmon NSW 2064 3-5 Duck Street, Auburn NSW 2144 Honeycomb Drive, Eastern Creek NSW 2766 35 Wentworth St, Greenacre NSW 2190 50 Wyllie Road, Kembla Grange NSW 2526 20 Hearne Street, Mortdale NSW 2223 37-51 Violet Street, Revesby NSW 2212 29 Laverick Avenue, Tomago NSW 2322

<u>Clean & Green Organics</u> 769 The Northern Rd, Bringelly NSW 2566

Sell & Parker 45 Tattersall Road, Blacktown NSW 2148

<u>CMI</u> 38 York Road, Ingleburn NSW 2565

<u>SIMS</u> 43 Ashford Ave, Milperra NSW 2214 76 Christie St, St Marys NSW 2760

<u>Sydney Copper Scraps</u> 130 Adderley St, Auburn NSW 2760 Boral 6-10 Burrows Road South, St Peters NSW 2044

Polytrade Recycling 32 South St, Rydalmere NSW 2116 40 Madeline St, South Strathfield NSW 2136

<u>J.J. Richards</u> 12 Heald Rd, Ingleburn NSW 1890 8 Kommer PI, St Marys NSW 2760

<u>Orora</u> 1891 Botany Rd, Matraville NSW 2036

<u>ReGyp</u> 330 Captain Cook Drive, Kurnell NSW 2231

<u>SUEZ Landfill</u> Elizabeth Drive, Kemps Creek NSW 2178

<u>Horsley Park Landfill</u> Wallgrove Road, Horsley Park NSW 2164

<u>Genesis Landfill</u> Honeycomb Drive, Eastern Creek NSW 2766

5.6.4 MONITORING

Monitoring must take place to ensure contamination of segregated skips does not occur. The type of surplus materials being produced must be continually reviewed and site set-up modified where possible to maximise reuse and recycling. The use of landfill will be the last resort.

Our waste collection provider will ensure all handling of waste meets all statutory regulations and provide monthly registers that record the recycling each month of current projects.

An example of a Environmental Management Report issued monthly to the project team shown below.

	Monthly Waste Report Ironmark/Taylor Construction Group Site: 30a Jacobson Ave, Kyeemagh								RONMARK					
Waste Type (tonnes)	2020 Total	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Totals
Recyclable Bricks/ Tiles	1.176	2.160	4.320	9.072	6.480	3.624								26.832
Recyclable Concrete	18.720	2.700	5.400	9.720	8.100	6.795								51.435
Recyclable Soil / Sand / Rubble Fines	10.682	2.520	5.040	12.096	7.560	6.342								44.240
Recyclable Metals (ferrous)	3.350	1.350	2.700	2.700	2.700	3.775								16.575
Recyclable Metals (non-ferrous)	0.910	0.450	0.360	1.350	0.540	1.888								5.498
Recyclable Timber	10.266	1.620	3.240	6.480	6.480	7.701								35.787
Recyclable Green Waste	0.000	0.540	0.432	0.000	0.000	4.530								5.502
Recyclable Cardboard / Paper	2.006	0.720	1.440	1.620	2.160	3.020								10.966
Recyclable Plastic	1.797	0.540	1.080	1.188	1.620	2.265								8.490
Recyclable Plasterboard	0.352	0.000	0.864	1.728	1.728	1.510								6.182
General Waste (landfill)	2.572	0.720	1.440	2.160	2.160	3.020								12.072
Total Recycled Waste (tonnes)	49.259	12.600	24.876	45.954	37.368	41.450	0.000	0.000	0.000	0.000	0.000	0.000	0.000	211.507
Total Landfill Waste (tonnes)	2.572	0.720	1.440	2.160	2.160	3.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	12.072
Total Waste (tonnes)	51.831	13.320	26.316	48.114	39.528	44.470	0.000	0.000	0.000	0.000	0.000	0.000	0.000	223.579
Total Waste (cubic metres)	125	36	72	108	108	151								600.000
Total Recycled Waste (percentage) By Month	95.04%	94.59%	94.53%	95.51%	94.54%	93.21%	#DIV/0!							
Total Recycled Waste (percentage) To Date														94.60%

5.6.4 SITE SPECIFIC WASTE MANAGEMENT

The construction site is located deep into the school and away from its main entries. Therefore, no works zones or loading zones are relevant to this project. This makes it a challenging site to control access for workers whilst maintaining clear delineation with the school population. This is overcome with agreement with the school on the location of all hoardings and gates, areas where there will be shared access and areas where no access is permissible for workers. All vehicular movements in and out of the site compound must adhere to the Traffic Management Plan / Site Plan shown below.



Waste removal will be undertaken using trucks carrying empty bins and replacing them with full bins upon exit. To complete this safely and to ensure no contamination of bins, individual bins for specific waste will have designated areas and be signposted if needed. Bin locations will vary throughout the multi-level complex but be lifted by crane to the entry gate for changeover with empty bins as shown below. Truck loads will be covered before leaving the site compound and drive safely through each gate.





6. RELEVANT SIGNATURES

Contract manager (name and signature)	Date	
Project/ site manager (name and signature)	Date	

Taylor Construction Group Pty LtdABN 25 067 428 344

Level 13, 157 Walker St, North Sydney NSW 2060 7 02 8736 9000 F 02 8736 9090

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