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CONSTRUCTION WASTE MANAGEMENT PLAN

MURWILLUMBAH EDUCATION CAMPUS

STATE SIGNIFICANT DEVELOPMENT APPLICATION (SSD-16848913)



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DISCLAIMER

This report is based on information provided by Built.

To that extent, this report relies on the accuracy of the information provided to the consultant. This report is not a substitute for legal advice on the relevant environmental related legislation, which applies to businesses, contractors or other bodies. Accordingly, EcCell Environmental will not be liable for any loss or damage that may arise out of this project.

DOCUMENT CONTROL

ISSUE NUMBER	DATE	AUTHOR	REVIEW	APPROVED BY
DRAFT	15/10/2021	Jo Drummond	Jo Drummond	Paul Nelson
Version 1	16/03/2022	Jo Drummond	Patrick Nolan	Paul Nelson

1 INTRODUCTION

The NSW Department of Education - School Infrastructure have proposed the development of an education campus, including a primary school and high school, at the Murwillumbah High School site. The Murwillumbah Education Campus will bring together students from Murwillumbah Primary School, Murwillumbah East Primary School, Murwillumbah High School, and Wollumbin High School.

The Murwillumbah Education Campus development, involves the co-location of Murwillumbah Primary School, Murwillumbah East Primary School, Murwillumbah High School, and Wollumbin High School, to establish a new primary school and a new high school as part of the same education campus.

This Construction Waste Management Plan (CWMP) accompanies an Environmental Impact Statement (EIS) pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act) in support of a State Significant Development Application (SSD-16848913). The project will include the following scope of works within the SSD application:

- Demolition of Building E
- All inground slabs, pathways, hardstands and footings including those to buildings B, C, D, G, H, M, P, S, AW and AZ
- Associated ground works required to facilitate the construction of new buildings and landscaped areas
- Construction of new Buildings 1, 2, 3 and 4:
 - Building 1 – New public school building comprising general learning spaces, administration, canteen, School Support Unit (SSU) and library;
 - Building 2 – Hall building including a public school hall, out of school hours care (OSHC) facilities, high school hall/gymnasium and other spaces for physical education and creative and performing arts (CAPA);
 - Building 3 – New high school building including the following facilities; general and specialist learning spaces, SSU, and library.
 - Building 4 - New high school building including the following facilities; science, support, administration and canteen;
- Refurbish Building A for DoE offices and school community health facilities along with associated access requirements. Building A is a locally listed heritage building and will be retained and refurbished;
- Refurbishment of Building F to provide learning space for agricultural education;
- Retention of existing AY.
- Creation of new public school and high school outdoor learning spaces to support future focused learning outcomes;
- New landscaping and embellishment of outdoor playgrounds;
- Civil and infrastructure works; and
- Kiss n drop and parking off Nullum Street

1.1 SITE AND LOCATION

The Murwillumbah High School is located at 86 Riverview St, Murwillumbah and is legally defined as Lot 2 in DP 578679 and Lots 5 and 6 in DP 820602. The school site is located within the Tweed Shire Council Local Government Area (LGA) and the land is owned by the NSW Department of Education (DoE).

Figure 1 identifies the proposed site and the four schools which are proposed to come together to create the Murwillumbah Education Campus. Figure 2 identifies the existing site boundary and site layout.



Figure 1: Site location (Source: Google Maps)



Figure 2: Aerial view of the subject site (Source: SIX Maps)

1.2 SITE DESCRIPTION

The school site is irregular in shape and has a total area of approximately 11.7ha. It is located approximately 1km from the Murwillumbah town centre and to the south of a well-established suburban area with residential properties. The site is bordered on the east, south and west by open rural landscape and is approximately 500 metres from the Tweed River. The school is bound by Riverview Street, High School Lane, Nullum Street and residential structures to the north; grassland/farmland to the west and south; and sports fields to the east.

The school currently comprises eleven (11) permanent buildings, as well as an off-street staff car park, various playgrounds, sports ovals, sport courts and green space.

1.3 TOPOGRAPHY

This school site slopes from the entrance at Riverview Street to the lower playing fields adjacent to the agricultural land and a levy bank system to the south.

1.4 ANCILLARY WORKS:

The Murwillumbah Education Campus project will include the following ancillary items:

- On-site parking
- A covered outdoor learning area
- Interpretive Nature Play area

1.5 SEARS REQUIREMENT

This report addresses the relevant Secretary’s Environmental Assessment Requirements (SEARs), specifically Item 5.14 Construction and Operational Impacts.

Table 1: SEARs Requirement & CWMP Report Reference

SEARs Item 5.14 Waste Management	Report Reference
Identify, quantify and classify the likely waste streams to be generated during construction and operation.	Construction and Demolition Waste Classification Waste Classification Guidelines (EPA, 2014) Section 7 Project Phase
Provide the measures to be implemented to manage, reuse, recycle and safely dispose of this waste.	Section 7 Project Phase
Identify appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site.	Appendix A

2 OBJECTIVES OF THE CWMP

The objectives of the CWMP include:

- a) Identify, quantify and classify waste streams to be generated during demolition, excavation and construction to address the Waste Classification Guidelines (EPA, 2014);
- b) Identify appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site;
- c) To describe measures to be implemented to manage, reuse, and recycle and safely dispose of the waste;
- d) To maximise reuse and recycling of construction materials and materials from the school;
- e) To encourage building design techniques in general which minimise waste generation; and
- f) To minimise the amount of waste being deposited to landfill with targets to reuse or recycle at least 90% of construction and demolition waste as per the EFSG DG02 2.7.1 Construction and demolition waste requirements.

3 NSW LEGISLATIVE REQUIREMENTS AND GUIDELINES

Relevant key legislation and guidelines applicable to the project include:

- *NSW Environmental Planning and Assessment Act 1979 (EP&A Act)*
- *Protection of the Environment Operations Act 1997;*

- *Protection of the Environment (General) Operations Act 1998;*
- *Waste Avoidance and Resource Recovery Act 2014;*
- *Protection of the Environment Operations (Waste) Regulation 2014;*
- *Waste Classification Guidelines (EPA, 2014);*
- *NSW Department of Planning and Environment, Secretary’s Environmental Assessment Requirements (SEARs); and*
- *Tweed Shire Development Control Plan 2008 (DCP, 2008) – Section A15 Waste Minimisation and Management.*

4 WASTE CONTRACTOR REQUIREMENTS

The current legislation determines that the generator of waste is the owner of the waste until the waste crosses a calibrated weighbridge into a licensed facility. Waste and demolition contractors to construction contractors are the primary transporters of waste off-site, accordingly, waste contractors will be required to provide verifiable monthly reports on waste reused, reprocessed or recycled (diverted from landfill) or waste sent to landfill. These reports have a direct bearing on the generator’s compliance with the relevant regulations.

The CWMP will be implemented on-site throughout including, singularly or collectively, the demolition, excavation and construction phases.

A Waste Data File must be maintained on-site and all entries are to include:

- The classification of the waste;
- The time and date of material removed;
- A description of and the volume of waste collected;
- The location and name of the licensed waste facility that the waste is transferred to; and
- The vehicle registration and the name of the waste contractor’s company.

The Waste Data File will be made available for inspection to any authorised officer at any time during the life of the site works. At the conclusion of site works, the designated person will retain all waste documentation and make this validating documentation available for inspection.

Arrangements will be made with the waste contractor to increase bin supply if there is an unexpected increase in waste generation.

4.1 CONSTRUCTION WASTE MANAGEMENT EQUIPMENT, BIN SIZES AND COLLECTION FREQUENCY

All waste will be removed by a licensed waste contractor using appropriately sized construction bins in an area allocated by the builder. The construction waste will be removed when bins are full and within the construction site hours to reduce disturbance of the neighbours and disruption to the school.

5 WASTE MANAGEMENT STRATEGIES

The waste management strategy for the project will operate over the design, procurement and construction including fit out of the project and is detailed in Table 2.

Table 2 - Breakdown of Tasks and Responsibilities

Management Strategies	Responsibilities
Design	
<ul style="list-style-type: none"> • Use of modular components in design • Use of prefabricated components in design • Design for materials to standard sizes • Design for operational waste minimisation 	<ul style="list-style-type: none"> • Architect & Engineer • Architect, Builder & Subcontractors • Architect & Subcontractors • Architect & Builder
Procurement	
<ul style="list-style-type: none"> • Select recycled and reprocessed materials • Select components that can be reused after deconstruction 	<ul style="list-style-type: none"> • Architect, Engineer, Builder & Subcontractors • Architect, Engineer & Builder
Pre-construction	
<ul style="list-style-type: none"> • Construction Waste Management Plan to be reviewed & approved prior to construction • Contract a Waste Contractor that takes waste to a licensed facility 	<ul style="list-style-type: none"> • Builder • Waste Contractor
Construction on-site	
<ul style="list-style-type: none"> • Use the avoid, reuse, reduce, recycle principles • Minimisation of recurring packaging materials • Returning packaging to the supplier • Separation of recycling of materials off-site • Audit & monitor the correct usage of bins • Audit & monitor the Waste Contractor to ensure demolition and construction waste is recycled and taken to a licensed facility 	<ul style="list-style-type: none"> • Builder & Waste Contractor • Subcontractors • Builder & Subcontractor • Waste Contractor • Builder & Waste Contractor • Builder

5.1 ON-SITE WASTE MANAGEMENT AND STORAGE REQUIREMENTS

There will be a designated waste storage area for the disposal and storage of demolition, excavation and construction waste prior to collection. This area will be located conveniently for the work team to use the bins as well as for waste contractors to collect. An indicative location has been provided in Appendix A, requirements include:

- Construction waste storage is contained wholly within the site identified in Appendix A
- The routes for movement of waste between work site and waste storage area are to be kept obstruction-free;

- The routes for movement of bins and waste between storage and collection points are marked in the site drawing, and will be kept obstruction-free (if waste is moved between the waste storage area(s));
- The waste bin collection point provided will be accessible for waste collection vehicles. There are no obstructions to pulling up vehicles, turning or reversing and lifting bins;
- Access for waste collection vehicles will not be compromised by construction-related activities vehicles or other consequences of construction staging;
- All waste not being reused on-site will be removed during, or at the completion of, the construction stage;
- No waste will be left on-site unless it is part of valid reuse on-site, which is integral to and in place in the design;
- In order to manage noise levels, collection of waste from the construction site will only occur during hours approved for construction work;
- All vehicles entering or leaving the site must have their loads covered;
- All vehicles, before leaving the site, to be cleaned of dirt, sand and other materials, to avoid tracking these materials onto public roads; and
- At the completion of the works, the work site is left clear of waste and debris.

5.2 REUSE OF CONSTRUCTION MATERIALS

Construction Materials and off-cuts can be reused on-site. An allocated area in the materials lay-down area can be allocated for the storage of materials to be reused.

These items include:

- Plastic buckets
- Timber crates
- Timber off cuts
- Paint brushers and rollers (Wrapped in plastic to maintain moisture)
- Plasterboard offcuts
- Cardboard boxes

Clean fill will be reused on-site after verification by soil testing and Waste Classification.

The Waste Data File will be made available for inspection to any authorised officer at any time during the life of the site works. At the conclusion of site works, the designated person will retain all waste documentation and make this validating documentation available for inspection.

5.3 UNEXPECTED FINDS PROTOCOL

An unexpected find can be defined as:

- Any unanticipated archaeological discovery e.g. aboriginal relics, items of significance, etc.;
- Buried or surface asbestos containing materials (Bonded, Friable or other);

- Buried waste materials e.g. medical waste, contaminated waste, etc.;
- Septic or underground storage tanks;
- Animal burial pits; or
- Discoloured and odorous soils and groundwater/seepage.

Should an unexpected find of potential contamination be encountered during the works, the following procedure should be followed:

- Identified finding by worker;
- Cease work as soon as safe to do so and move clear of the finding;
- Do not tamper or attempt to remove the finding;
- Contact Construction Management immediately;
- Site Management to delineate an exclusion or quarantine zone around the area using fencing and or appropriate barriers and signage;
- Preliminary assessment of the find and need for immediate management controls;
- Further assessment and/or remediation works are required and how such works are to be undertaken in accordance with contaminated site regulations and guidelines;

6 WASTE MANAGEMENT PLAN APPLICATION

Project

The Murwillumbah Education Campus

Address

Located at: 86 Riverview St, Murwillumbah, Tweed Shire (LGA)

Applicant

Department of Education -School Infrastructure NSW
Level 8, 259 George Street, Sydney NSW 2000

Document Acceptance

The purpose of this CWMP is to meet the key waste requirements issues of the Secretary's Environmental Assessment Requirements (SEARs).

Details of Application / Brief Description of Proposal

The Murwillumbah Education Campus development, involves the co-location of Murwillumbah Primary School, Murwillumbah East Primary School, Murwillumbah High School, and Wollumbin High School, to establish a new primary school and a new high school as part of the same education campus.

Description of Works

The project will include the following scope of works within the SSD application:

- Demolition of Building E
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- Associated ground works required to facilitate the construction of new buildings and landscaped areas
- Construction of new Buildings 1, 2, 3 and 4:
 - Building 1 – New public school building comprising general learning spaces, administration, canteen, School Support Unit (SSU) and library;
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 - Building 3 – New high school building including the following facilities; general and specialist learning spaces, SSU, and library.
 - Building 4 - New high school building including the following facilities; science, support, administration and canteen;
- Refurbish Building A for DoE offices and school community health facilities along with associated access requirements. Building A is a locally listed heritage building and will be retained and refurbished;
- Refurbishment of Building F to provide learning space for agricultural education;
- Retention of existing AY.
- Creation of new public school and high school outdoor learning spaces to support future focused learning outcomes;
- New landscaping and embellishment of outdoor playgrounds;
- Civil and infrastructure works; and
- Kiss n drop and parking off Nullum Street

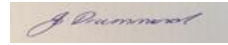
If Materials / Waste is Reused On-site or Off-site, how will it be re-used?

Construction Materials and off-cuts can be reused on-site. An allocated area in the materials lay-down area can be allocated for the storage of materials to be reused.

These items include:

- Plastic buckets
- Timber crates
- Timber off cuts
- Paint brushes and rollers (Wrapped in plastic to maintain moisture)
- Plasterboard offcuts
- Cardboard boxes

Clean fill will be reused on-site after verification by soil testing and Waste Classification

Prepared by:	
Name:	Jo Drummond
Signed:	
Contact Number:	0412 214 233
Date:	15/03/2022

7 PROJECT PHASE

7.1 DEMOLITION

MATERIAL TYPE ON-SITE Waste Classification Construction and Demolition	ESTIMATED VOLUME (m ³) or WEIGHT (t) (Most Favourable → Least)			ON-SITE TREATMENT	OFF-SITE TREATMENT	
	Reuse	Recycling	Disposal	Proposed Reuse and/or Recycling Collection Methods	Disposal / Transport Contractor	Licensed Waste Depot, Recycling Outlet or Landfill Site
Brick and Concrete		140m ³		Comingled	TBA	TBA
Asphalt			4m ³	Comingled	TBA	TBA
Roof Solar panels	35 units			Comingled	TBA	TBA
Glass		7m ³		Comingled	TBA	TBA
Metals		35m ³		Comingled	TBA	TBA
Plasterboard		45m ³		Comingled	TBA	TBA
Timber		35m ³		Comingled	TBA	TBA
Recovered Doors & Windows	120 Units			Taken off for reusing in on-site containers	TBA	TBA
Tree Timber		4m ³		Comingled	TBA	TBA
Asbestos: Plasterboard			35m ³	Comingled	TBA	TBA
Sub Total	155 Units	266 m ³	39m ³			
Total		305m³				

Narrative: The contract for the demolition of the project has not been transacted however, once completed a more detailed examination of the building being demolished and breakdown of the waste streams will be undertaken. Similarly, the asbestos affected plasterboard and yet unidentified asbestos, either unsighted or hidden inground, isn't as yet available. Neither is the final recycling or disposal locations, their final recycling rates, nor the market for items of potential reuse used by the contractor.

7.2 EXCAVATION

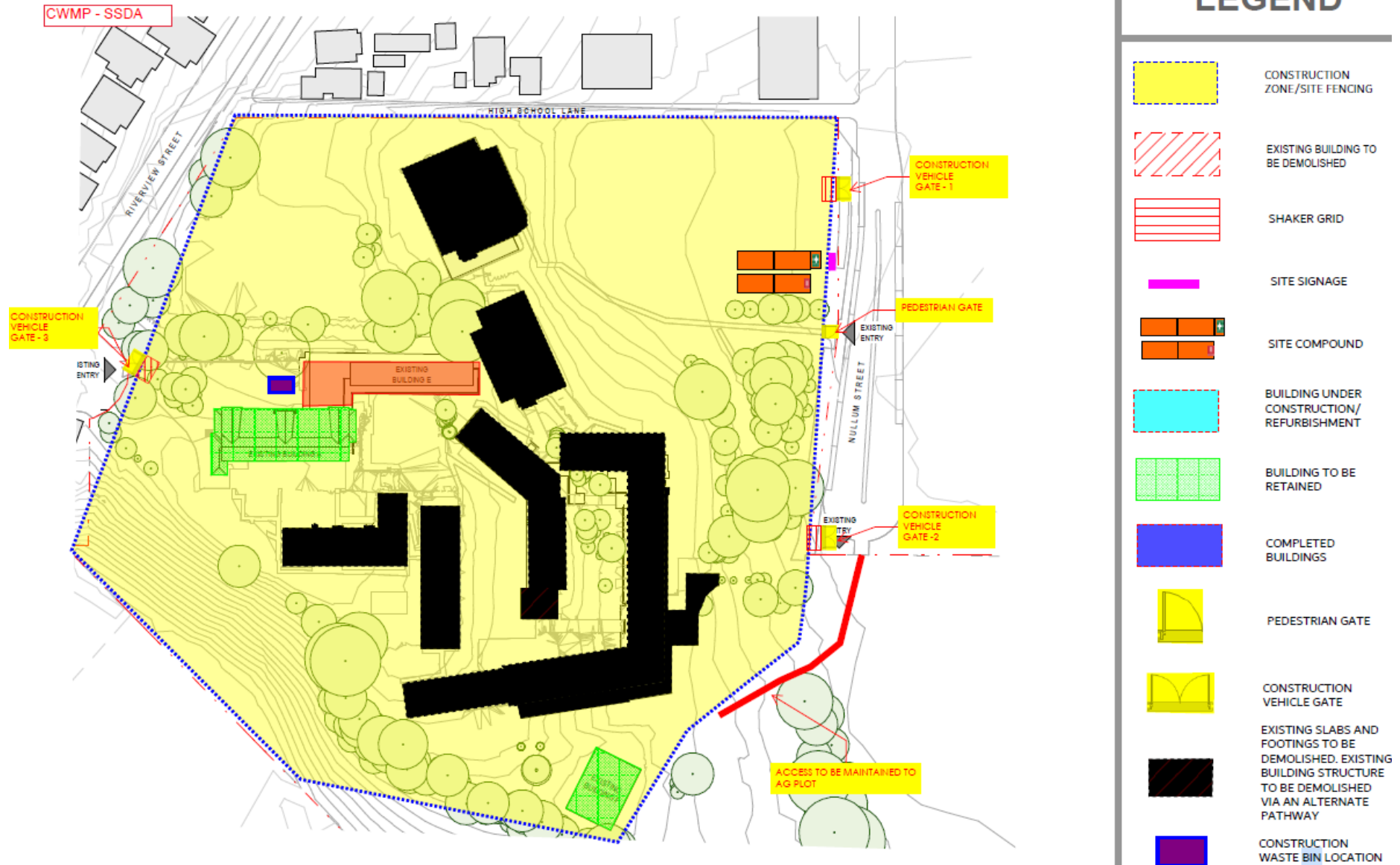
MATERIAL TYPE ON-SITE	ESTIMATED VOLUME (m ³) or WEIGHT (t) (Most Favourable → Least)			ON-SITE TREATMENT	OFF-SITE TREATMENT	
	Reuse	Recycling	Disposal	Proposed Reuse and/or Recycling Collection Methods	Disposal / Transport Contractor	Licensed Waste Depot, Recycling Outlet Or Landfill Site
Organic Waste Trees & Shrubs		10m3		Separated to a designated Bin	TBA	Recycled
Removal of Clean Fill	43m3			Removed from site and Recycled	TBA	Recycled
Excavation Existing kerb and Pavement		12m3		Removed from site and Recycled	TBA	Recycled
Remove existing road surface		5m3		Removed from site and Reused	TBA	Recycled
Concrete footings		413m3				
Subtotal	43m3	440m3				
Total		483m3				

Narrative: The proposal involves excavation, associated with a new staff carpark to the north east corner of Nullum Street, New Buildings and the removal of hardstand areas and landscaping. A Detailed Site Investigation by Douglas Partners noted the potential for acid Sulphate soils. The Detailed Site Investigation (DSI) did not indicate the presence of soil contamination.







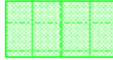





7.3 CONSTRUCTION

CLASSIFICATION MATERIAL TYPE ON-SITE Waste Classification Construction and Demolition Liquid Waste	ESTIMATED WEIGHT (t) or VOLUME (m ³)			ON-SITE TREATMENT	OFF-SITE TREATMENT	
	Reuse	Recycling	Landfill Disposal	Proposed Reuse and/or Recycling Collection Methods	Disposal / Transport Contractor	Licensed Recycling Outlet or Landfill Site
Concrete, Brick, Block Work, Render, Tiles & Stonework.		140 m ³		Co-mingled Bins	TBA	Crushed for road base
Metals		220 m ³		Co-mingled Bins	TBA	Scrap Metal Dealer for smelting
Timber Off-Cuts		480 m ³		Co-mingled Bins	TBA	Recycled for woodchips & mulch
Cardboard		240 m ³		Co-mingled Bins	TBA	Recycled to cardboard packaging
Plasterboard		150 m ³		Co-mingled Bins	TBA	Recycled as soil conditioner
Containers, Plastics, Plastic Packaging		100 m ³		Co-mingled Bins	TBA	Recycled into further plastic
Pallets and Reels	220 Units			Co-mingled Bins	TBA	Returned to the supplier
Liquid Waste			200 litres	Separated Container/Bin	TBA	Transferred to licenced landfill
General Waste			450 m ³	Co-mingled Bins	TBA	Transferred to licenced landfill
Floor Finishes; Off-cuts, Carpet, Vinyl, Rubber, Timber			30 m ³	Co-mingled Bins	TBA	Transferred to licenced landfill
Paint Tins		25 m ³		Co-mingled Bins	TBA	Scrap Metal Dealer for smelting
Sub Total	220 Units	1,355 m³	480 m³	200 litres liquid waste		
TOTAL	1,835 m³			NB: An additional 190 pallets & reels (single units returned to suppliers for reuse).		
<p>Narrative: There are four buildings and one heritage refurbishment: Building: 1 - 3 stories Building: 2 – 2 stories Building: 3a & 3b – 3 stories Building: 4 Refurbishment. Including Building F: refurbishment and heritage Building A</p> <p>All recycling and waste will be co-mingled and taken for separation off site. Material will then be taken to a licensed recyclers or licensed landfill.</p>						

APPENDIX A: CONSTRUCTION WASTE BIN LOCATION (PURPLE BOX) – Stage 1A



LEGEND

-  CONSTRUCTION ZONE/SITE FENCING
-  EXISTING BUILDING TO BE DEMOLISHED
-  SHAKER GRID
-  SITE SIGNAGE
-  SITE COMPOUND
-  BUILDING UNDER CONSTRUCTION/REFURBISHMENT
-  BUILDING TO BE RETAINED
-  COMPLETED BUILDINGS
-  PEDESTRIAN GATE
-  CONSTRUCTION VEHICLE GATE
-  EXISTING SLABS AND FOOTINGS TO BE DEMOLISHED. EXISTING BUILDING STRUCTURE TO BE DEMOLISHED VIA AN ALTERNATE PATHWAY
-  CONSTRUCTION WASTE BIN LOCATION

APPENDIX A: CONSTRUCTION WASTE BIN LOCATION (PURPLE BOX) – STAGE 1B

