

Academy Business Park – Building 1

Draft Site Waste Management Plan

1. Project: The construction of a 10000m² Warehouse.

2. Location: Academy Business Park
Distribution Centre (Building 1)
Lees Road
Knowsley
L33 7SE

3. Nature of Project:

- Steel Frame portal building with concrete ground bearing slab
- Composite clad and brick elevations
- Aluminium windows & screens
- Internal fit out (By tenant)
- Off site waste segregation will be carried out
- Contract Period of 44 Weeks (est.)

4. Project Aim

During the project there will be a full commitment to implement the project SWMP so that it is effective, accurate and economical. Sufficient resources will be made available to ensure that the planned procedures are put into place, are carried out and are maintained in line with this SWMP.

The over riding aim for the construction team is to plan, design and procure the materials for the project in such a way that wastage is eliminated.

The major materials used for the scheme (steel, cladding, concrete, aluminium & glass) have been selected to drastically reduce site generated waste.

They will be manufactured, cut to size and fabricated in such a way that they will only require site erection or fixing. There will be minimal requirements to cut / fit or work on these elements thus nearly eliminating the production of waste.

Any packaging or protection materials produced will be segregated on site and sent to a fully equipped waste transfer station for further recycling and reuse.

5. Management

The Senior Construction Manager is the nominated environmental co-ordinator for the project and as such is responsible for instructing workers, overseeing the implementation and documenting results of the SWMP. The Environmental Department will monitor the effectiveness and accuracy of the documentation during the routine site visits.

Position	Name	Contact Details
Client	(Orbit Developments) Mark Royle	01625 588400
Project Manager	(Jones Contracts) Steve Barnett	01625 588 244
Project Environmental Co-ordinator	Jon Parker	07764 502748
Waste Management Co-ordinator	Steve Barnett	07764 662376
Document Controller	Hayley Somers	01625 588400
Site Manager	Jon Parker	07764 502748

6. Distribution

The contractor shall distribute copies of this plan to the CDM coordinator, Client, Site manager, and each subcontractor. This is to be undertaken every time the plan is updated.

7. Instruction and Training

PE Jones will provide on-site instruction, induction training and tool box talks relating to the appropriate separation, handling, recycling, reuse and return methods to be used by all parties' at all appropriate stages of the project.

Tool box talks (see sample attached) will be carried out every month on waste issues and all subcontractors will be expected to attend. The SWMP will also be discussed in the site induction process and be a full agenda item at site / project review meetings. All subcontractors will be expected to produce a specific waste reduction and recycling proposal statement for their individual element of work. This will be incorporated into the SWMP.

8. Waste Management on site

Surplus or waste materials arise from either the materials imported to site or from those generated on site.

Imported materials are those, which are brought to the project for inclusion in the permanent works. Generated materials are those, which exist on the project such as topsoil, sub-soil, trees and materials from demolition works etc.

However, there are other considerations to waste management such as waste reduction, segregation of waste, disposal of waste, financial impacts of waste disposal and recording, monitoring, education and reviewing. The plan outlines the procedures that have been put in to place and demonstrate how they benefit the environment, how we can measure the effects and how these procedures and practices are sustainable.

FORECAST VOLUMES (m3) OF POTENTIAL WASTE ON SITE

Waste Category & Types	Enabling Works (incl. Demo)		Construction Works	
	Tick	Estimated Quantity (m3)	Tick	Estimated Quantity (m3)
Inert Waste				
Rock				0
Gravel				0
Sand				0
Aggregates				10
Concrete		2500		15
Tarmac		100		15
Brick / Block		550		20
Top soil (uncontaminated)				0
Sub soil (uncontaminated)				2300
Bulk Exc. (uncontaminated)				500
Glass		3		0
Polystyrene				3
Plastics (non biodegradable)				5
Sub TOTAL		3153		2868
Active/biodegradable Waste				
Plasterboard				4
Metals – reinforcement		55		0
Metals – steel		250		0
Metals – off cuts				0.10
Timber		10		4
Cardboard				5
Paper				0.5
Biodegradable				0
Canteen waste				12
Trees				0
Vegetation (shrubs, bushes)				0
Sub TOTAL		315		25.6
Hazardous Waste				
Topsoil (contaminated)				0
Sub soil (contaminated)				0
Bulk Exc. (contaminated)				0
Asbestos		25		0
Explosive				0
Flammable				0
Toxic				0
Sub TOTAL		25		0
TOTAL VOLUMES		3493		2893.6

PRIORITISING WASTES REQUIRING WASTE MANAGEMENT CONSTRUCTION WORKS

: Waste Type, Category and Origin

Waste Types		Waste Category	Origin Of Waste
1	Concrete	Inert	Substructure
2	Tarmac	Inert	Construction
3	Brick / Block	Inert	Construction
4	Timber	Active/Bio	Construction
5	Subsoil's	Inert/Hazard	Site strip
6	Metals	Active/Bio	Construction
7	Non recyclable	Domestic waste	Construction
8	Plasterboard	Active/Bio	Construction

9. Waste Minimisation

On this project, from preplanning stage, the team has looked at how to minimise the waste produced, thereby reducing the amount of waste to be removed from the project. Trade contractors, design team and suppliers are all being encouraged to look at ways to minimise the amount of waste produced at the work face. Up to date actions are recorded in the table;

Action	Responsibility	Date Action Commenced
Selection of construction materials to eliminate site base fabrication and maximise off site manufacture, E.g. Metal cladding manufactured off site, steel frame utilised (Manufactured off site with high percentage of recycled materials), ground bearing slab to minimise excavated materials etc.	Design team / client / contractor / subcontractors	From initial concept.
All demolition materials are to be crushed and reused as aggregates on site	PECJ	During Demolition
Walls and roof to be constructed of factory manufactured and cut cladding materials	Orbit / PEJC	
Steel frame materials selected for all recycled materials	PEJC	Procurement of frame
All steel from the demolition arising's will be fully recycled.	Demolition Contractor	Day 1
Foundations will be excavated need and not shuttered to reduce wastage of timber in shuttering process	PEJC	Main Contract

All of the above act to reduce the amount of waste and surplus materials, which traditionally would be skipped and sent to landfill. We are continually identifying waste minimisation actions and these will be updated in the above table.

10. Segregation

Due to the constraints of the site, all waste (with the exception of gypsum based products) is to be placed into single skips which will then be taken and segregated off site into the following categories;

- Wood
- Metal
- Brick / rubble
- Canteen waste

- Paper, cardboard, and polystyrene

The company selected for this process is:

Disposal of waste - 1st Choice Waste
Arbour Works
Liverpool
L337XB

All surplus or waste materials fall into three categories for management, these are;

- Re-used
- Recycled
- Landfill

a) Re-used

If surplus materials can be used in the permanent works they are classified as materials, which have been **re-used**. If they are surplus to requirements and need to be removed from site and they can be removed and used in their present form, they can be removed from site for **re-use**.

Examples; Excavated aggregates reused for filling
 Materials pallets returned to the manufacturer

b) Recycling

If the surplus material cannot be re-used in its present form but could be used in a different form, it is sent for **recycling**.

Examples; Plasterboard off cuts returned to manufacturer
 Timber packaging recycled into chip board
 Metal cladding off cuts recycled into structural steel

c) Landfill

If either of the above cannot be satisfied then the only option left is to send the surplus materials to landfill. **Landfill** is the last resort.

Examples; Excavated subsoil's not reused for filling

11. Monitoring

The subcontractors will fill in a weekly log of all materials that come on to site, and JWS will provide an online database detailing the exact volumes of waste materials removed from site and the proportions that have been sent for recycling and disposal.

WEEKLY MONITORING OF WASTE MANAGEMENT PLAN – DATA COLLECTION SHEET

		Date:					
	M3	Mon	Tues	Wed	Thur	Fri	Comments
Topsoil	Imported						
	Generated On site						
Sub soil	Imported						
	Generated On site						
Brick & Concrete	Imported						
	Generated On site						
Timber	Imported						
	Generated On site						
Trees	Imported						
	Generated On site						
Paper	Imported						
	Generated On site						
Cardboard	Imported						
	Generated On site						
Metals – Reinforcement	Imported						
	Generated On site						
Metals – Steel	Imported						
	Generated On site						
Plastic	Imported						
	Generated On site						
Tarmac	Imported						
	Generated On site						
Glass – ordinary	Imported						
	Generated On site						
Glass – Glazing	Imported						
	Generated On site						
Plasterboard	Imported						

	Generated On site						
		Date:					
	M3	Mon	Tues	Wed	Thur	Fri	Comments
Canteen Waste	Imported						
	Generated On site						
Asbestos	Imported						
	Generated On site						
Explosive/ Flammable	Imported						
	Generated On site						
Toxic	Imported						
	Generated On site						
General Mixed Waste	Imported						
	Generated On site						

We will continually review the type of surplus materials being produced and change the site set up to maximise on re-use or recycling and the use of landfill will be a last option.

This plan will be included as an agenda item at the weekly construction meetings. In addition, the plan will be communicated to the whole project team at the monthly meetings. This will include any updates from the last version.

Date	Organiser	Attendance Record	Notes

The plan will also be analysed by the Environmental Department during their audits (6monthly) and they will be responsible for transferring any best practice and solutions throughout the company. The Environmental Department will also visit the waste transfer facility to ensure that we are effectively discharging our 'duty of care'

WASTE MANAGEMENT PLAN IMPLEMENTATION CHECKLIST

Checks
Have terms and commercial rates been agreed with WM contractors?
Have data reporting procedures been agreed with WM contractors?
For offsite WM or disposal are all the waste destination details verified?
Has a waste segregation / collection area been prepared/
Has the WM area been adequately sign posted?
Has a WMP planning meeting been set?
Has the WM document control / filing system been set up?
Have all necessary staff and contractors read and signed the WMP?
Have all the WM training / briefing requirements for staff been met?
Have all the WM training / briefing requirements for contractor/s been met?
Have the waste management targets been set?
Has the WMP been approved by the Project Manager?
Comments / Further Actions
1. Discuss / debate with the internal Team Members and agree quantities / values etc
2. Discuss / agree strategy with the Waste Management Subcontractors
3. Issue the Weekly Monitoring – “Data Collection Sheet” to Subcontractors
4. Include Waste Management Plan within Tender Documentation

RELEVANT SIGNATURES

Project Manager:

Date:

Site Manager:

Date:

Environmental Manager:

Date:

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Glass – ordinary	Imported						
	Generated On site						
Glass – Glazing	Imported						
	Generated On site						
Plasterboard	Imported						
	Generated On site						
		Date:					
	M3	Mon	Tues	Wed	Thur	Fri	Comments

Canteen Waste	Imported						
	Generated On site						
Asbestos	Imported						
	Generated On site						
Explosive/ Flammable	Imported						
	Generated On site						
Toxic	Imported						
	Generated On site						
General Mixed Waste	Imported						
	Generated On site						



TOOLBOX TALK

No 8 WASTE MANAGEMENT – REDUCE / RE-USE / RECYCLE

WHAT?

The construction industry generates over 70 million tonnes of waste per year and it is estimated that this total includes 13 million tonnes of construction materials thrown away unused

To minimise waste we must

- Firstly **Eliminate** the waste if we can
- secondly **Reduce** the waste we create
- then **Reuse** materials until we can't use them again and
- only then **Recycle** the waste. Only if we can't recycle can we
- finally **Dispose** of the waste to landfill.



WHY?

- ❑ **Avoid environmental harm:** Reduction, reuse and re-cycling of waste minimises the environmental impacts of disposal of waste to landfill.
- ❑ **Reduce costs:** The true cost of waste is more than just the disposal cost and is made up of
 - the original purchase price of the material
 - the cost of unloading, handling, storage and transporting the material around site
 - the cost of collecting the waste or damaged material, reloading, moving and storing waste on site
 - the cost of transporting waste to a tip, the tipping charges and landfill taxes
 - the purchase price of replacing damaged and wasted materials.

DO

- ✓ **Eliminate** unnecessary wastage by storing materials neatly on flat solid ground to avoid damage and loss
- ✓ **Reduce** the amount of waste you create on site
- ✓ Keep materials in their packaging for as long as possible to protect them from damage
- ✓ Keep significant offcuts for use elsewhere
- ✓ **Reuse** materials until no longer fit for purpose, for example, shuttering, fencing
- ✓ Then reuse materials for alternative purposes for example, use old shuttering ply for hoardings
- ✓ **Recycle** materials whenever possible
- ✓ Segregate waste on site into different types
- ✓ Store waste in the appropriate skip or container until removed from site

DON'T

- ✗ DON'T put waste materials into the wrong waste container
- ✗ DON'T open new cans or pallets before the ones in use are empty
- ✗ DON'T leave materials unprotected and where they are likely to be damaged by, for example, rain or mud.
- ✗ DON'T burn or bury waste – it's illegal
- ✗ DON'T mix different types of waste – it prevents recycling





TOOLBOX TALK

No 9

STORAGE OF WASTE

WHAT?

Allowing waste to escape into the environment not only causes nuisance to neighbours and generates a poor public image it is illegal

WHY?

- ❑ **Avoid prosecution:** It is the duty of all waste producers to prevent their waste escaping into the environment.
- ❑ **Reduce costs:** The segregation of waste into separate containers or skips can lead to lower costs by
 - reducing disposal costs and landfill tax payments through preventing the contamination of inactive wastes by active wastes
 - maximising the potential for reusing and recycling materials
 - making it easier to see how much of each type of waste is being produced and hence where efforts to reduce waste need to be targeted

DO

- ✓ Keep sites tidy and collect up any waste regularly
- ✓ Use waste containers or skips suitable for the type of waste being stored
- ✓ Use skips with lids or cover them with sheets or nets to prevent dust and litter being blown out
- ✓ Check that containers and skips are not corroded or worn out to minimize the risk of accidental spillages or leaks
- ✓ Mark waste containers clearly with their intended contents and ensure labels on containers are kept in good order
- ✓ Segregate waste before putting it into the designated containers
- ✓



DON'T

- ✗ DON'T throw materials into the wrong container
- ✗ DON'T contaminate one waste type with another
- ✗ DON'T mix hazardous with non-hazardous waste – it's illegal
- ✗ DON'T give waste away, all waste taken off site needs to be accompanied by paperwork
- ✗ DON'T damage covers over or bunds around any skips or containers
- ✗ DON'T burn or bury waste – it's illegal
- ✗





TOOLBOX TALK

No 24

SEGREGATION OF WASTE

WHAT?

Segregating wastes into hazardous, non-hazardous and inert waste types for disposal can help minimise costs and maximise the opportunities for recovery and recycling of wastes. Look out on waste containers for these standard signs, which are being introduced across the UK to encourage and improve the segregation of waste.



WHY?

- ❑ **Avoid prosecution:** It is illegal to mix hazardous waste with other waste types which are to be sent directly to landfill. You could be fined up to £20,000 and imprisoned for up to 2 years.
- ❑ **Avoid environmental harm:** Incorrectly disposing of hazardous waste could cause water pollution and damage habitats. Landfills and waste treatment centres are specially designed to be able to handle specific wastes without causing environmental harm.
- ❑ **Reduce Costs:** Segregating wastes can minimise landfill tax and can also allow certain types of waste to be recycled and reused on site.

DO

- ✓ Look out for the standard signs shown here and whenever possible segregate wastes into the different types
- ✓ Use enclosed or covered skips
- ✓ Ask your line manager for advice if you are unsure about correct waste segregation on site

DON'T

- ✗ DON'T overfill skips
- ✗ DON'T mix different types of waste
- ✗ DON'T put liquids and flammable wastes into skips

