Site Waste Management Plan

Exeter Deaf Academy (eRADE)

Project Name	Exeter Deaf Academy (eRADE)
Project Location	Topsham Road, Exeter, EX2 4NF
Customer	CCD
Scope	61 Assisted Living Apartments and 68 Bed Care Home

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1.0 Introduction

Between April 2008 and December 2013 there was a legal requirement have comprehensive site waste management plans in place. Although this legal requirement has gone, at Castleoak we are committed to implement the SWMP as good practice so that it is effective, accurate and economical. We are expending time and a lot of effort to ensure that the procedures are working and maintained. Key commitments are:

- Reduce the amount of waste generated on site / Cut and Fill to reduce pre-con waste
- Segregate: mixed, timber, plasterboard, haz, inert, packaging and decorator waste
- Recycle packaging (Pallets, Cable Drums and CTF bearers)
- Safe removal of waste and recycling at all times

Once completed, the buildings may be equipped with recycling facilities for staff and residents to use which will ensure that, recycling will be more accessible and abundant. We aim to provide adequate space in the new buildings for: Storing and recycling waste; Composting; Safe access by collection vehicles

1.1 Project Information

Project Name:	Exeter Deaf Academy
Project Location:	Topsham Road, Exeter, EX2 4NF
Client:	Anchor Trust
Scope:	61 Extra Care Apartments and 68 Bed Care Home
Gross Internal Floor Area:	10,570 m^2
Anticipated Start date:	Q1 2019
Anticipated End date:	Q1 2021

1.2 Nature of project

Demolition of existing building and construction of 61 apartments built to current building regulations and 68 bed care home with an aspiration to be built to BREEAM Excellent Standard.

1.3 Summary of targets

We have developed a waste monitoring strategy over the last 4 years and have set all sites construction waste targets that should be met. Targets are based on M3 of construction waste per 100M2 of Gross Internal Floor Area (GIFA). In 2017 our current company-wide waste target will be:

- Circa 17 m3 waste per 100 m2 GIFA
- The above target equates to 1797 m3
- 6.5t per 100m2 BREEAM Target for Care Home – 230 tonnes

2.0 Responsibilities

Our Contracts or Projects Manager is the environmental co-ordinator of the project and as such is responsible for instructing workers, overseeing and documenting results of the SWMP.

Our Construction Managers are the environmental champion on our sites and as such, shall be responsible for:

- Ensuring construction waste is reduced on projects,
- Ensuring waste management policies and procedures are adhered to,
- Completing waste transfer notes and data collection forms for waste movements,
- Providing Tool Box Talks to Site Operatives on good site waste management,
- Arranging for the correct segregation of materials for collection and recycling,
- Ensuring no contractor without licence removes construction waste from site.

The Environmental Team will monitor the effectiveness and accuracy of the documentation during the routine site visits.

Item	Name	Company	Company Type
Who is responsible for drafting the SWMP?	Miles Thomas	Castleoak	Principal Contractor
Who is responsible for implementing the SWMP?	TBC	Castleoak	Principal Contractor
Who are the waste champions?	TBC	Castleoak	Principal Contractor
Who is the person in charge of the project?	TBC	Castleoak	Principal Contractor

3.0 Waste Reduction Decisions Taken at Design Stage

The architectural design promotes the introduction of standardised components and prefabrication of structural systems. Use of prefabricated timber frame reduces waste generation on site.

Type	Waste minimisation decision taken	By whom	Intended results
Design	Timber Frame Construction	CCD	Reduction in on-site wastage. (TBC m3)
None.			
None.			
None.			
None.			

During groundwork stage, waste generated will be dealt with by our groundwork contractor. Each groundwork contractor is also assessed on environmental credentials to ensure that as much waste is diverted from landfill where possible. In addition, it may be agreed that excavated material shall be kept on site for use later in the project and to reduce vehicle movements to and from site. We monitor this and at the end of groundwork stage, our contractor will provide us with a waste streams report detailing materials crushed, recycled or sent to landfill as a last resort. Waste will be segregated at source into several waste streams and the site will be kept tidy through the continual clearing of debris as the groundwork takes place.

At the construction stage, site management processes will avoid over ordering materials and prefabrication off-site will take place where possible to reduce waste generation.

The site team will ensure storage is adequate to avoid material damage and waste. In particular ensure that:

- **Items such as plasterboard and insulation are stored undercover, within the building**
- **Materials are placed on a hard standing and covered with tarpaulin to avoid rain damage *(If materials can't be stored inside building)***
- **Timber trusses are stacked correctly on a level surface to avoid twisting/damage**
- **Any oil/diesel storage tanks are double bunded (or has adequate external bunding)**

At all times materials such as timber used in the construction of the building will be obtained from sustainable sources with chain of custody confirmed. External materials will be sourced locally to minimise transport journeys and fuel waste. Segregation of waste materials will take place on-site to aid recovery through good site management practices.

4.0 Construction Waste Minimisation

4.1 Groundwork stage

- Reuse of materials on site where practicable.
- Selection of waste contractor who ensures groundwork waste is responsibly removed from site by licensed contractors
- No excavated material to be kept on site
- Diversion of groundwork waste from landfill
- On-going review of materials leaving site or being reused across the project

4.2 Construction stage

- Avoid over ordering materials
- Set up segregation scheme for waste materials on site
- Ensure waste management contractors are correctly licensed and that Duty of Care is met
- Ensure materials are correctly stored on site to avoid damage and wastage
    - *Plasterboard and insulation are stored undercover, within the building*
    - *Materials are placed on a hard standing and covered with tarpaulin to avoid rain damage (If materials can't be stored inside building)*
    - *Timber items are stacked correctly on a level surface to avoid twisting/damage*
    - *Oil/diesel storage tanks are double bunded (or has adequate external bunding)*

4.5 Other issues

Our site at Exeter is not registered under Hazardous Waste Regulations as regulations have recently changed. When potentially hazardous wastes (such nail gun canisters, paint tins, aerosols etc) are generated it will be managed and disposed of under the Hazardous Waste Regulations. We will keep consignment notes for all these waste movements.

Where possible materials such as timber used in the construction of the building will be obtained from sustainable sources with a chain of custody confirmed. External materials will be sourced locally to minimise transport journeys, and fuel waste. Segregation of waste materials will take place on-site to aid recovery through good site management practices.

5.0 Estimated Construction Waste Generation

The estimated waste figures listed below are generated from previous Castleoak projects and by using BRE's SMARTWaste online waste footprint tool. These figures will be closely tracked by the site team by visually inspecting the skips before they leave site and completing a CE46-02 Site Waste Data Collection Form for each skip.

This form details type of waste placed in the skips, size of skip and compaction levels. It is the responsibility of the site manager to complete. Copies of these forms, along with copies of Waste Transfer Notes for each load leaving site, are kept in site office.

Work package	Type of waste (EWC)	Estimate (M3)	Actual (M3)
External and site works	Asphalt and tar (1703**)	18	
Construction	Binders	7	
Superstructure	Bricks (170102)	113	
Not specified	Canteen/office/adhoc (200301)	103	
Groundworks & excavation	Concrete (170101)	105	
Superstructure	Floor coverings (soft)	36	
Superstructure	Gypsum (170802)	271	
Construction	Hazardous (Various)	7	
Groundworks & excavation	Inert (170504)	64	
Substructure	Insulation (170604)	109	
Construction	Metals (1704**)	37	
Construction	Mixed (170904)	216	
Construction	Packaging (1501**)	235	
Construction	Plastics (170203)	155	
Superstructure	Tiles and Ceramics (170103)	23	
Construction	Timber (170201)	299	
TOTAL		**1797**	

Castleoak will track monthly waste generation against this project estimate

6.0 Construction Waste Management Summary

6.1 Waste Management Options

Waste segregation carried out on-site:

- Segregate and recycle all waste timber (Set up timber reuse store also)
- Reuse bricks and blocks around site instead of placing in inert or mixed skips
- Segregate and recycle all waste plasterboard
- Segregate and recycle hazardous waste streams (Nail gun canisters and aerosols)
- Store all inert waste, bricks and concrete in designated 'store' area on site to give contractors and sub-contractors the opportunity to reuse as much materials as possible.
- Ensure painting and decorating waste is removed by decorating contractor

Waste taken and segregated off-site:

- Ensure that when mixed waste is sent to a fit and proper waste management company, they are able to recover and recycle a large percentage of waste instead of it going to landfill.

6.2 Key Aims

- Segregate of bricks and blocks and concrete – 113 m3 diverted from landfill
- Recycle all timber waste – 299 m3 timber waste diverted from landfill
- Recycle all waste plasterboard – 271 m3 plasterboard diverted from landfill
- Investigate further opportunity to segregate packaging on site and directly recycle 235 m3 cardboard and plastic packaging on site
- Segregate hazardous waste including nail gun canisters, aerosols and expanding foam
- Send mixed waste to local waste transfer station with overall landfill diversion rate of 90%

Waste Stream	Estimated (m3)	Skip Number/Size	Estimated Cost per unit
Mixed	872 m3	142Nr x 8 cu yd	£280
Plasterboard	271 m3	29Nr x 12 cu yd	£350
Timber	299 m3	32Nr x 12 cu yd	£180
Bricks/Blocks	113 m3	25Nr x 6 cu yd	£200
Hazardous	7 m3	200L drum	£400
Packaging	235 m3	TBC 40 cu yd	TBC
TOTALS	**1797 m3**		

6.3 Overall diversion information

- Est. Waste Generation = 1797 m3
- Est. Direct Recycle = 925 m3
- Est. Transfer Station Diversion = 749 m3 (= 872 m3 – 90%)
- **Est. Landfill Diversion = 1674 m3**
- **Est. Landfill = 123 m3**
- **Est. Diversion Rate for Project= 94%**

7.0 Duty of Care and Communication Requirements

7.1 Duty of Care

Through our SWMP, we will ensure that the following information is held on all our waste carriers / management companies. Details of these can be found in our Exeter Environmental File (9) which is kept on site and our Waste Contractor Documentation Folder (Managed by Environmental Manager at Raglan House).

Envisaged Waste Management Companies for Exeter:

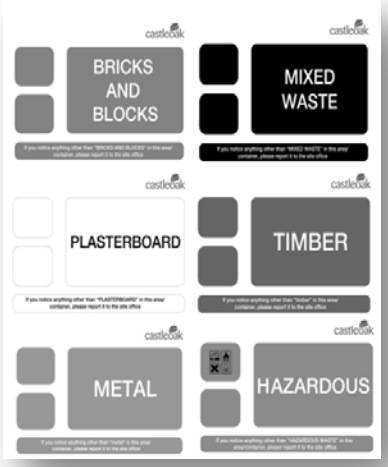
Waste Management Contractor Name	Waste Carrier Number / Waste Management	Issue Date	Expiry Date	Waste Transfer Notes Storage and Location
TBC	TBC	TBC	TBC	Waste Folder, Section 8
Wood Recycling Programme	Various	TBC	TBC	Waste Folder, Section 8
Scott Pallets	N/A	N/A	N/A	Waste Folder, Section 10
TBC – Plasterboard Waste	TBC	TBC	TBC	Waste Folder, Section 9

- Collect all permit details for the waste companies we intend to use,
- Are aware which end facility our waste goes to,
- Keep copies of waste transfer notes on site,
- Ensure we keep legal documentation for the required period,
- Hazardous waste is correctly stored and disposed of – consignment note.

7.2 Communication

The Environment is a key aspect of our tendering process, encompassing supplier questionnaires and sub-contractor pre-start meetings. This ensures that all sub-contractors who wish to partner with us on a project are aware of our environmental requirements and must confirm that they wish to work with us to enhance our projects environmental credentials. In addition all Sub-contractors and Employees receive induction training. In addition to this training the following communication channels should be adopted by the project team:

- Site cleanliness is promoted and checks are made
- Waste management (reduce/reuse/recycle)
- Spillage prevention and pollution control
- Awareness of our Group Environmental Policy
- Displaying our Site Environmental Policy
- Ensuring copy of SWMP is on site
- Hazardous waste document on site
- Site Signage ' Castleoak Recycling Point'
- Implementation of colour coded container/skip system*



8.0 On-Going Work

Throughout the project, we intend to monitor, measure and audit our waste streams to ensure we are meeting our SWMP obligations. This will be achieved with the use of the SMARTWaste website (i.e. data collected in the Site Waste Data Collection Forms will be continually inputted on to this website).

A SITE WASTE DATA COLLECTION FORM MUST BE COMPLETED FOR EACH SKIP LEAVING SITE. THIS PROVIDES MORE INFORMATION ON THE MAKE-UP OF THE WASTE, WHERE AND HOW IT IS GENERATED ON SITE. THE CE46-02 SITE WASTE DATA COLLECTION FORM CAN BE FOUND IN SECTION 6 OF THE SITE ENVIRONMENTAL FOLDER AND ELECTRONICALLY ON THE ENVIRONMENTAL SECTION OF SOPS. SEE APPENDIX ONE FOR AN EXAMPLE.

In addition to this we will review the SWMP regularly, *(monthly waste and environmental updates provided to Contracts Manager and Construction Manager)* provide our client with formal SWMP periodically and prepare a completed SWMP report within 3 months of project completion. This final report will be kept for 2 years by Castleoak at Raglan House.

9.0 Site Practice

Construction activities will always have an impact on the surrounding environment and neighbours. Good environmental practice ensures that these impacts are correctly managed and reduced accordingly. Impacts can take one of many different forms, including water, air or noise pollution. Castleoak, our contractors and the whole construction supply chain all have responsibilities for good environmental management.

The nature of environmental legislation is changing and this in itself, together with changes in good practice make it essential that Castleoak does all it can to ensure compliance.

10.0 Site Set-Up Incl. Skip Compound

TBC