

BRE SMARTWaste Plan - DRAFT to be developed prior to construction

Kier will ensure that maximum resource efficiency and minimal waste production are achieved for the project. Although the Site Waste Management Plan Regulations 2008 have now been withdrawn, Kier will develop the Site Waste Management Plan (SWMP) prior to construction commencing to drive improvement in the site waste management planning process.

In the early stages of the project, Kier will capture the relevant information for inclusion in the SWMP, for example decisions taken during design that will reduce the amount of waste produced on site. The waste hierarchy will be applied to all stages of the project (prevent, reduce, reuse, recycle) to ensure maximum resource efficiency.

Kier uses SMARTWaste, which is a tool that has been developed by BRE to help the industry prepare, implement and review SWMPs. It is also used to meet the BREEAM mandatory requirements for waste. This plan forms a draft for uploading onto the SMARTWaste website.

Kier is a signatory to the Halving Waste to Landfill Commitment and although this completed at the end of 2012, we continue to monitor and improve diversion from landfill. We will implement this site waste management plan to manage waste reduction and diversion from landfill. We work closely with organisations such as the National Community Wood Recycling Project to maximise recycling opportunities.

Kier Construction, Southern 2014 Targets:

- New build projects - to produce <7.5m³/£100k project turnover
- To divert greater than 90% of all construction, demolition and excavation waste from landfill

The site waste management plan will be reviewed and updated regularly and waste data will be collated for reporting to Kier Group on a quarterly basis. The quarterly figures will be reported to Halving Waste to Landfill Reporting Portal. The online site waste management plan will form the repository for all electronic waste information (including permits, licences and exemption certificates). Paper copies of waste transfer notes will be held on site and will be kept for two years (three years for hazardous waste consignment notes).

BRE SMARTWaste Plan - DRAFT to be developed prior to construction

Project information

Project name	Cornfield School, Littlehampton.		
Project location	Cornfield Close, Littlehampton.		
Project cost (estimated)*	~£640,000		
Floor area (m2)	226m ²		
Project start date	Date 28	Month July	Year 2014
Project end date	Date 23	Month January	Year 2015
Site location & description	The project involves the construction of a new SEN building with a link corridor to the existing school with services from the school being taken for the new build.		
Client	WSCC		
Principal Contractor	Kier Construction, Southern		
Version Number and Date	Draft - for tender. April 2014.		

* The cost should be the price of the accepted tender, if there is no tender then it should be the estimated cost of labour, plant, materials, overhead and profit but exclude VAT.

BRE SMARTWaste Plan - DRAFT to be developed prior to construction

1. Responsibilities

	Name	Company	Company Type (e.g. Client, Designer, Principal Contractor)	Contact details
Who has drafted the SWMP?	Environmental manager & estimating team	Kier Construction - Southern	Principal Contractor	
Who is responsible for implementing the SWMP?	Project Manager	Kier Construction - Southern	Principal Contractor	
Who is the waste champion?	TBC	Kier Construction - Southern	Principal Contractor	
Who is the person in charge of the project?	Steve Turner - Contract Manager	Kier Construction - Southern	Principal Contractor	
Who is the client?	Sarah Crocker	WSCC	County Council	

Where will this SWMP be kept? (a copy should be on site)

Electronic based document

SMARTWaste website - accessible on site

Paper based document

Back up hard copy on site (printed monthly)

Declaration statement: We agree that the Client and the Principal Contractor will take reasonable steps to ensure waste duty of care is complied with, materials are handled efficiently and waste is managed appropriately.

Signature

The declaration will be confirmed prior to starting construction works

Print name

Date

BRE SMARTWaste Plan - DRAFT to be developed prior to construction

2. Waste minimisation

The table below records decisions taken before the plan was drafted on the nature of the project, design, construction methods and materials to plan waste minimisation i.e. reducing the amount of waste produced

Type	Waste Minimisation decision taken	By whom	Intended results
Logistics	Provide a secure materials storage area (on site in container).	Kier	To prevent damage & double-handling.
Logistics	Materials will be 'called off' in a timely fashion to implement the materials delivery strategy, e.g. call-off orders. Surveyors / Site Managers to check each other's calculations to avoid over-ordering.	Kier and Subcontractors	To reduce materials stored on site therefore reducing likelihood of damage / wastage.
Construction method	Implement quality management systems including Inspection & Test Plans.	Kier	To reduce defects and poor workmanship resulting in waste.
Design	Rationalise design for use of standard size products where applicable.	Designer	Reduce need for cutting materials on site resulting in waste.
Procurement	To reduce packaging on site by working with suppliers (minimise packaging, implement take-back schemes).	Kier	Avoid creating packaging waste on site.
Waste management option	Consider implementation of the CL:AIRE 'Definition of waste, development industry code of practice' to maximise the beneficial reuse of suitable soils on site.	Kier	The material can be signed off by a 'Qualified Person' under the CoP so that it ceases to be waste and is beneficially reused.
Design	Reuse all suitable soils and demolition material on site.	Client / Kier	Prevent reusable soils / demolition waste leaving site.
Further waste minimisation decisions taken during the design development will be recorded in this section prior to works commencing.			

BRE SMARTWaste Plan - DRAFT to be developed prior to construction

3. Forecast

Estimated types and amounts of waste expected for this project.

Construction waste type	Notes	Waste Volume (m ³)
Bricks	<i>Consider the % rejects of new bricks, off-cuts etc</i>	2
Concrete	<i>Surplus concrete from new pours (not existing concrete from demo or underground obstructions).</i>	1.5
Insulation	<i>Includes off-cuts of rigid and rolls of insulation.</i>	1.5
Metals	<i>Consider off-cuts from secondary steelwork, metal pipework etc.</i>	1.5
Packaging	<i>Includes timber pallets that are not returned, plastic wrapping, stillages, boxes, polystyrene packing material etc.</i>	4
Gypsum	<i>Plasterboard and plaster.</i>	1.5
Plastics	<i>Trunking, pipework, Correx protection etc, not packaging.</i>	1
Timber	<i>Consider timber from specific packages and ancillary uses - we often generate more than the benchmark.</i>	7
Canteen/office/ad hoc waste	<i>Usually about 1m³ / week depending on site numbers. Not counted as 'construction' waste, but recorded.</i>	5
	Total	20m³

**canteen / office waste excluded from total*

The forecast will be reviewed and updated prior to works commencing on site and will also include excavation waste estimates.

BRE SMARTWaste Plan - DRAFT to be developed prior to construction

4. Waste Management options

Where there is an environmental or commercial benefit (and site logistics allow), wastes will be segregated on site.

Waste type	Recycle (%)	Recover (%)	Dispose (%)	Container / equipment required	Waste contractor
Bricks	100			Segregated 'inert' skip sent for recycling	TBC
Concrete	100			Segregated 'inert' skip sent for recycling	TBC
Insulation		100		Mixed construction waste skip sent for recovery / recycling off site or take-back scheme if appropriate	TBC
Metals	100			Segregated metal skip sent for direct recycling	TBC
Packaging	100			Segregated packaging skip (large volume, low weight)	TBC
Gypsum	100			Segregated containers (skips / bags) sent for recycling	TBC
Plastics		100		Mixed construction waste skip sent for recovery / recycling off site	TBC
Timber	100			Segregated stockpile for National Community Wood Recycling Project	NCWRP
Canteen / office waste	100			Segregated on site in wheelie bins for recovery / recycling	TBC
Non-hazardous soils	100			Segregated for reuse / recycling at suitable site possibly under CL:AIRE CoP	TBC
Hazardous soils				Route TBC - may be suitable for recycling at soil treatment facility	TBC

Wastes shown as 'recycle' will be segregated on site for off-site recycling. Wastes shown as 'recovery' will be sent to permitted waste transfer stations for recovery and recycling (details of recycling rates will be included in this plan). Wastes shown as 'disposal' will be sent to permitted landfill sites.

Sections 1-4 are completed before construction work commences onsite.

BRE SMARTWaste Plan - DRAFT to be developed prior to construction

The following sections of the SWMP will be completed as construction works commence on site:

- 5. Duty of care - to be completed before any waste is removed from site - will include details of all waste carrier and waste facilities including waste carrier registration certificates, environmental permits and licences**

All waste contractor and waste facilities (including waste transfer stations, materials recycling facilities, waste treatment facilities, landfill sites and sites holding exemptions from environmental permitting) will be vetted prior to any waste being sent off site. Details of waste carriers and waste facilities will be held on the SMARTWaste system, including copies of certificates and permits. Recovery and recycling rates for facilities will be obtained and entered onto the SMARTWaste system.

Subcontractors will not be permitted to arrange waste disposal unless all the above details are forwarded to Kier for vetting prior to waste removal.

- 6. Waste Records - details of all waste collections from site will be recorded in the site waste management plan including carrier and waste facility**

All waste movements will be recorded in the SMARTWaste site waste management plan. Waste data entries include details of waste carrier, waste destination, date, type of waste(s), quantity, details of segregation, and whether material is being sent for recovery, recycling or disposal. Waste data will be entered into the SMARTWaste site waste management plan on an ongoing basis for the duration of the project. Waste transfer notes will be kept for two years and hazardous waste consignment notes for three.

20/01/2013	210912	Thames Waste Services Ltd	Two Chimneys Caravan Park (G&L Environmental Ltd)	GSE	Groundworks & excavation	Construction	1 x 15cu metre truck (19.62cu yd)	✓ Reuse offsite	Soils (17 05 04)	100 %
20/01/2013	210433	Thames Waste Services Ltd	Two Chimneys Caravan Park (G&L Environmental Ltd)	GSE	Groundworks & excavation	Construction	1 x 15cu metre truck (19.62cu yd)	✓ Reuse offsite	Soils (17 05 04)	100 %
20/01/2013	209703	Thames Waste Services Ltd	Two Chimneys Caravan Park (G&L Environmental Ltd)	GSE	Groundworks & excavation	Construction	1 x 15cu metre truck (19.62cu yd)	✓ Reuse offsite	Soils (17 05 04)	100 %

- 7. Waste Log - provides details of all waste movements**

The waste data entries will produce the waste log showing all the information recorded under section 6 (above). An example of how this appears on SMARTWaste is shown here.

Waste data is audited monthly to ensure data entries are correct and waste contractor information is up to date.

BRE SMARTWaste Plan - DRAFT to be developed prior to construction

8. Training / communication - all subcontractors will be briefed regarding waste management requirements

Initial briefings regarding the site waste facilities and waste management plan will be included in the Site Induction. This will ensure that all subcontractors are aware of the plan and the key requirements for segregating waste on site. Where relevant, the site waste management plan will be discussed in subcontractor meetings.

9. Ongoing review of implementation - undertaken every three months to record progress against the plan, this will include checks of waste data / auditing

Ongoing reviews of the site waste management plan will be recorded every three months as a minimum. This will provide an opportunity to review progress against the initial waste forecast, check that waste data is being entered correctly and identify options for improving waste management on site.

The project waste data will be checked monthly by the company SHE Co-ordinator and business unit performance will be reported in the Monthly SHE Progress Report. Business unit data for reporting under the Halving Waste to Landfill Commitment will be collated and issued to Kier Group on a quarterly basis.

10. Actual versus forecast waste - shows details of waste generated against the initial forecast

As waste data is added to the SMARTWaste site waste management plan, volumes will be summed and compared to the initial forecast. This is displayed in the site waste management plan as shown.

11. Completion review (to be completed within 3 months of project close)

The post-completion review of the site waste management plan will be undertaken as early as possible, but not less than three months following project completion. The review will assess the success of the site waste management plan in managing waste and will compare forecast to actual. Any lessons learned will be recorded in the review and used to inform the development of site waste management plan on future projects.

Waste Type	Forecast quantity (ton)	Actual (ton)
Asphalt and tar (17 03 03)	1.0	0.0
Bricks (17 01 03)	85.0	0.0
Carpet/office/fabric waste (20 03 01)	120.0	0.0
Concrete (17 01 01)	120.0	0.0
Floor coverings (soft) (20 01 13)	24.0	0.0
Glass (20 01 03)	60.0	0.0
Gypsum (17 08 03)	75.0	0.0
Hazardous (17 09 03*)	2.0	0.0
Insulation (17 06 04)	70.0	0.0
Metals (17 04 07)	55.0	0.0
Packaging (15 01 06)	100.0	0.0
Plastics (17 02 03)	15.0	0.0
Soils (17 05 04)	10,000.0	6,368.1
Tile and Ceramics (17 01 03)	7.0	0.0
Timber (17 02 01)	222.0	0.0

The plan will be kept at either the Principal Contractor's place of business or at the site of the project for 2 years.