

Project

HH0049

New Park House Development

Document

Waste Management Plan
(Resource Efficiency Management Plan)
REMP

Revision 3

Document Control**Issue / Revision
Description:**

For Acceptance

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Approved:				
3rd Party Approved: (If Applicable)	Client / 3 rd Party			

Revision History

This document, together with any associated documents, should be reviewed at regular intervals during the project and whenever there is a significant change to the site conditions such as a change in scope, site area, construction methods being used.

This document should be reviewed at least every 3 months in order to maintain its effectiveness.

Record the details of any changes made as a result of these reviews in the table below.

Rev:	Date:	Reason for Review:	Nature of Changes:	Prepared by:	Checked by:
1	05-11-20	Initial Issue	N/A	JB	
2			Added waste minimising decisions to 5.1 and site management	JB	
3	28-01-21	BREEAM compliance	Diversion from landfill target changed.	JB	

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1. Introduction

The Waste Management Plan (REMP) aims to take a whole-life approach to material selection and waste management by addressing the environmental and social implications of different construction materials through their life cycle. It will ensure that from design through procurement to on site construction; that embodied carbon, recycled content, responsible and local sourcing and the full range of disposal options are considered and appropriate measures implemented on the project.

1.1 Project Requirements & Guidance

1.1.1 VINCI Construction UK Building Division

- DES 1 Environmental Management
- DES 2 Management of Excavated Material
- DES 3 Waste Management
- DES 4 Sustainable Timber
- Green Office Policy
- Sustainability Policy
- Supply Chain and Procurement Policy
- CL:aire Definition of Waste Guidance Note
- VINCI Code of Ethics and Conduct

1.1.2 Client & Contractual

Achieve BREEAM 'Excellent' rating including the following credits:

Man 03 Responsible Construction Practices

Mat 03 Responsible Sourcing of Materials

Wst 01 Construction Waste Management

1.1.3 Statutory

United Kingdom Legislation & Guidance

- Environmental Protection Act 1990
- Control of Pollution Act 1974
- The Environment Act 1995
- Clean Neighbourhoods and Environment Act 2005
- The Hazardous Waste (England and Wales) Regulations 2005
- The Environmental Permitting Regulations (England and Wales) 2016
- Waste (England and Wales) Regulations 2011
- The Water Supply (Water Fittings) Regulations 1999
- CL:aire Code of Practice

- UKCG Responsible Sourced Products List
- Net waste tool wrap.org.uk
- ISO 14001:2015
- ISO 15686-5:2017 – Life Cycle Costing

1.2 Roles & Responsibility

Specific roles with environmental responsibilities are described below contact details can be found in the project directory.

All roles will be formally allocated prior to starting works on site.

1.2.1 RACI Table

R – Responsible A – Accountable (Approver) C – Consulted I – Informed	Project Director	Project Manager	Contractor's Engineering /Design Managers	Project Environment Champion	Project Supervisors/ Foreman
Preparation of REMP		A	C	R	
Review of REMP		R			
Issue of REMP to client and subcontractors	I	R	R	C	C
Briefing REMP to workforce		I		A	R
Ensuring REMP is considered during design		A	R	C	
Ensuring REMP is considered during construction		A	R	R	R
Identify Material & Waste Training needs of project	A	R		C	
Delivery of Material & Waste Training needs on project	I	A		R	
Collection of compliance information for inclusion in plan		A		R	
Identification of Permit/Consents requirements		A		R	C
Delivery of Permit/Consents Requirements		A		R	C
Reporting of waste data		A I	I	R	I

2. Purpose

The purpose of the Plan is to provide:

- A mechanism for managing waste and materials and minimising associated costs
- A tool to help fulfil the requirements of the VINCI Construction UK Building Division DESs
- Compliance with contractual requirements

- A mechanism for tracking and improving the recycled content and responsible sourcing of all materials
- A system to help identify cost savings, enable better management of materials supply, materials storage and handling, reduction in waste production and increase re-use and recycling rates.
- A whole-life approach to material selection and waste management

The Plan will outline:

- The types and quantities of key materials (aggregates, metals, timber, and concrete) that will be used and will endeavour to maximise the recycled content of these products and ensure they are procured from responsible sources
- Areas of the design that can be improved through value-engineering, that will benefit the environment and sustainability of the project as well as the cost.

The implementation of this Plan will ensure VINCI Construction UK, Building Division satisfies its legal and contractual obligations towards waste management and material sourcing. Furthermore, it aims to ensure the final project is delivered in the most sustainable manner as possible.

3. Project Objectives & Targets

The waste and resourcing objectives and targets will be set at the point construction starts so that the most current targets will be applied on this project. The targets will be in line with the company targets and achieve the required BREEAM credits:

- The amount of non-hazardous construction (excluding demolition and excavation) waste ($\text{m}^3/100\text{m}^2$ or tonnes 100m^2) generated on site by the development will be less than 7.5m^3 (or 6.5 tonnes) per 100m^2 (GIFA).
- The non-hazardous construction waste diversion from landfill will be 80% by volume or 90% by weight.
- The non-hazardous demolition waste diversion from landfill will be 80% by volume or 90% by weight.

4. Scope

The new Park House development consists of a split level 150 bed mental health facility within North Manchester Hospital. The construction is a one and two storey steel frame, clad with brick and render and a standing seam roof.

Courtyards and roof gardens will provide accessible outdoor space.

5. Materials Management

5.1 Minimisation of Waste & Material during Design

This section records efforts made by the design/construction team during value engineering to affect how the scheme is designed in order to maximise the efficient management of materials and waste.

Table 1: Material & Waste Design Minimisation Actions

Project element	Action	Intended result	Environmental Benefit	Cost saving
Excavation	Cut/fill analysis	Minimise materials removed from site	Reduction in traffic and reduced volumes of material imported	TBC
Demolition	Carry out a pre-demolition audit of existing buildings, structures and hardstanding due for demolition	Consider materials for reuse and set targets for waste management	Reduction in waste and increase in reuse of materials	TBC
Excavation	Removed underslab insulation	Reduce dig for slab construction	Reduction in materials removed from site and vehicular traffic	TBC
Structure	Use of pre-cast concrete retaining wall and lift shafts	Reduction in waste from formwork and concrete pours	Reduction in waste	TBC

5.2 Material Forecast

The table below will be completed to record all information about the key materials and provide a potential forecast to where they could be sourced e.g. whether from certified sustainable sources or local sources.. Examples of key materials are below.

Table 2: Material Forecast

Key Material	Material Source	Responsibly Certified	Distance to site (km)	Forecast Tonnage	Embodied Carbon	Recycled Content (%)
Concrete						
Steel						
Timber						
Ducting						
Aggregate						

5.3 Material Approval Process

The project material approval process will ensure that recycled content and responsible sourcing are included. This Section will be completed prior to subcontract engagement.

5.4 Reusing Material on Site

If the project plans to reuse material on site, whether through retention of materials in the design or through the reuse of aggregates such as earthworks Cut/Fill balance, Top soil, crushed concrete etc. Refer to the CLAIRE Code of Practice if necessary. Ensure that the correct permits/exemptions are held on the project.

5.5 Importing Reused/Recycled Materials to Site

This section will be used to record materials which have been imported to site from another VINCI Construction UK, Building Division project or third party location. Examples of this can include reused hoarding from a recently finished project to a new project, excess excavation material from finished or currently running project or crushed demolition material that is reused as aggregate or fill.

A file will be established on site to maintain physical evidence of the reuse nature of the material. In the example to hoarding this could take the form of previous chain of custody information for the original purchase. With Demolition material, the project will need to obtain a copy of the exemption (T7) for crushing of the material on the original site and have their own exemption (U1) for the reuse of the material on the receiving site these exemptions /permits will be recorded.

Table 3: Imported Reused/Recycled Material

Material type	Reused or Recycled	Supplier Location	Distance to Site (km)	Method of Transport	Cost savings

5.6 Responsible Material Sourcing

VINCI's Supply Chain and Procurement policy includes a commitment to both our Customers and our Supply Chain. We have a social responsibility commitment which requires us to work closely with our customers, the supply chain and key stakeholders. We encourage the use of local resources and labour whilst continuing to promote the principles of equality, inclusion and diversity.

As a company we aim to develop mutually beneficial relationships with those with whom we do business with and through responsible purchasing, to actively reduce our impact on the environment. VINCI Construction UK, Building Division will carefully consider the sustainable credentials of suppliers and give preference to those that meet our minimum requirements.

VINCI Construction UK, Building Divisions buyers are encouraged to consider the whole life cycle of the product so that all stages of production, transport, use and disposal are considered as part of the sourcing strategy. This may include any of the following considerations:

- Local suppliers delivering to site in an economic and commercially efficient manner;
- Reducing packaging and where possible allowing suppliers to take back and recycle the packaging;
- Reduce waste, either through early consideration of design or by recycling;
- Procure of aggregates and steel through certified sustainable sources such as BES 6001 and CARES.

All timber and timber based products procured will be legal and sustainable timber. All timber and timber based products will be covered by a third party, independent forest certification scheme –

Category A (e.g. Forest Stewardship Council (FSC) and/or Programme for the Endorsement of Forest Certification (PEFC))

The site Sustainable Procurement Plan details the procedures to be followed to ensure our responsible sourcing targets are met.

6. Waste Management

6.1 Waste Management Options & Forecasts

The waste management strategy will employ the accepted waste hierarchy:

Prevent → Minimise → Reuse → Recycle → Recover → Landfill

The tables below will be populated to forecast waste streams as the design is finalised. Future revisions will be updated with actuals.

Table 4: Waste Management Options

Waste Stream Identified	EWC	Activities	Forecast Tonnes	Recycling, Reuse, Recovery options	Disposal/Recycling Destination
Brickwork	17 09 04	Demolition	tbc	To be used to form site haulage roads and hardstanding	

Table 5: Hazardous Waste Management Options

Hazardous Waste Stream Identified	EWC	Activities	Forecast Tonnes	Recycling, Reuse, Recovery options	Disposal/Recycling Destination
Contaminated made ground	17 05 03	Excavation	tbc	none	Landfill

Table 6: Waste Forecast vs Actual

Waste Category	Forecast	Actual	Diverted from Landfill	
			Forecast	Actual
Construction			90%	
Demolition	4015m ³		90%	
Excavation	1500m ³			

Commercial				
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Table 7: Onsite reuse of materials

Material type	Reused or Recycled	Volume/Weight Reused/Recycled	Cost savings
6F2	Recycled from demolition material	6000m ³	
Stone from under existing car park surfacing	Reused	tbc	

6.2 Waste Minimisation

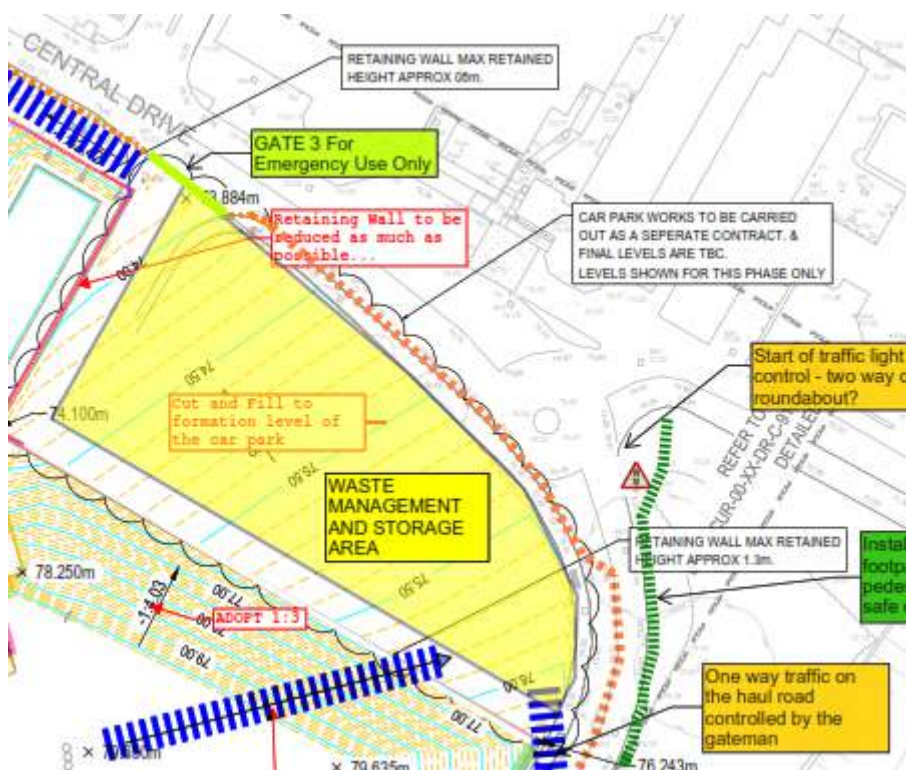
The focus will be on the higher end options in the waste hierarchy where practicable – Avoid, Reduce, Reuse and Recycle.

Where possible materials for construction activities shall be ordered as to allow minimum storage time on site, and kept in specified storage areas before release to site for use, to minimise potential exposure to damage or wastage. Measures to protect the materials stored on site will include storing on pallets or similar, keeping in original packaging, protecting from rain damage or collision by plant. Materials can be salvaged or reclaimed for re-use on other sites. Prefabrication of materials off site can reduce waste. Pallets and packing can also be reduced and taken back.

6.3 Site Waste Management

This section covers both on site and off site sorting/reuse or recycling through a licensed external contractor, identifying the procedures to segregate. The procedures for managing all waste streams will be prepared by the site team prior to construction starting on site and once a licenced waste contractor has been employed.

The skips and other waste containers will be positioned in the storage area in the north of the site. Access to this area will be via Gate 1 on Crescent Drive. Full details are included in the Logistics Plan.



6.3.1 Commercial (Office & Welfare Waste)

The waste from the office compound and the gatehouse will be collected separately and sent to the waste management company.

In the offices paper recycling will be set up and glass/tins/plastic recycling in the canteen and kitchen. A collection area for recycling used PPE will also be set up.

6.3.2 Construction Waste

General construction waste will be collected and taken to be sorted off site by the waste management contractor.

A plastic lined skip will be used as a concrete washout.

Plasterboard will be collected in a separate skip.

Paint tins will be returned to the suppliers.

6.3.3 Excavated Waste

Excavated waste will be stockpiled on site if required and tested for Waste Acceptance Criteria (WAC) if it is made ground. The materials will then be removed from site by the groundworker.

6.3.4 Demolition Waste

The management of the demolition waste will be controlled by the demolition contractor. Demolition waste will be separated into metal and other waste. The metals will be sent for recycling and the concrete and brick waste sent for crushing or crushed on site.

6.3.5 Hazardous Waste

Hazardous waste will be collected separately from all other waste and the waste management contractor will arrange separate collection and disposal in line with legal requirements.

The Materials Management Plan will detail the procedures for disposal of the contaminated made ground.

6.4 Compliance

All waste will be treated, kept, carried or disposed of in accordance with the requirements of relevant legislation, including environmental permitting.

6.4.1 Hazardous Waste Producers

The site will generate a Hazardous Waste Consignment Note (HWCN) codes using Environmental Agency guidance

6.4.2 Permits and Exemptions

Sites storing, treating or using waste will ensure that they are working under registered exemptions and/or approved waste treatment permits. Permits will be listed below as appropriate.

6.4.3 Waste Management Contractors

VINCI Construction UK, Building Division will use registered waste carriers for the removal of wastes.

All waste haulage subcontractors working on behalf of VINCI Construction UK, Building Division will provide their waste carrier registration certificate and the full environmental permits for the disposal facilities to be used.

Details of all waste contractors will be entered in to FOOTPRINT.

6.4.4 Waste Duty of Care

Waste Transfer Notes (WTNs) will be completed for every assignment of inert and non-hazardous waste removed from site, and a Hazardous Waste Consignment Note (HWCN) for any hazardous waste loads.

WTNs used will have provisions for recording specific items including date, times, vehicle registration, number and name of carrier, load volume, EWC, destination, SIC codes, declaration of the waste hierarchy and signatures. These tickets will be issued in triplicate, and held by each party to whom the waste is transferred for not less than two years for WTNs and 3 for HWCN. One copy will be kept on site.

The information of the transfer will be entered in to the relevant section on FOOTPRINT

6.4.5 Hazardous Property Assessment, Waste Acceptance Criteria testing and contaminated material

Where relevant, a Hazardous Properties Assessment (HPA) will be conducted for any potentially contaminated soils to be removed from site.

Waste Acceptance Criteria (WAC) testing will also be undertaken for all granular wastes being disposed of at landfill, to ascertain the category of landfill. The results of the testing will be provided to the waste contractor to ensure correct disposal. WAC testing is not required where the waste can be proved to be inert, or where it is not going to landfill.

The waste contractor/s will be provided with a list of any hazardous wastes to be removed from site to ensure handling and transportation etc. is managed effectively and safely.

7. Training

Training on the efficient and legal management of materials and waste will be provided to all staff, including sub-contractors on the REMP. Training will be given on the following topics:

- Material and Waste Management on site
- Designing out waste workshops with designers
- Material and Waste Roles and Responsibilities
- Waste procedures
- Hazardous Wastes
- Duty of Care
- Material & Waste Storage
- Housekeeping
- Contractual, legal or permit requirements

Training will be provided during site induction, through tool-box talks and briefing sessions. In some cases, external training will also be delivered.

Training on Duty of Care and waste transfer notes specifically will be given by the HSEQ Team or CIWM trained personnel. It will be delivered to key operatives on site, works managers, supervisors and traffic marshals who will be designated as responsible for signing Waste Transfer Notes. A record of their names and signatures will be kept on site.

8. Measuring & Monitoring

A weekly inspection of the site shall include focus on site waste and material management.

Waste disposal facilities will provide monthly reports of volumes and types of waste materials received from site, including records of the individual loads received and how they were disposed, e.g. recycled, recovered, reused or sent to landfill.

Subcontractors will also provide monthly reports of volumes and types of materials brought to site. Including where they have been sourced and their recycled content.

Waste volumes, type and recycling rate will be recorded each month/period and inputted into VCUK Footprint system with an aim to achieve the targets. Graphs of the results will be incorporated into client reports and displayed on site.

Material volumes, type, recycling rate and carbon footprint shall be recorded each month/period and records retained on site for use in reporting business and project KPIs.

9. Waste Management/REMP Review

This Waste Management Plan (REMP) will be reviewed on a 3 month basis, or whenever significant changes occur.

Monitoring of objectives and targets will be monthly.

During the final review, any final estimated/ quantified cost savings will be identified.

