Rowden Park, Chippenham
Site Waste Management Plan
(Pre-Construction Stage)

On behalf of Crest Strategic Projects and Redcliffe Homes
Document Control Sheet

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<th>Position</th>
<th>Initials</th>
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Executive Summary

This Pre-construction Site Waste Management Plan (SWMP) supports the outline planning application for the proposed development at Rowden Park, Chippenham. The proposed development consists of the provision of up to 1000 homes and a local centre including a community building (380m²), a food store (400m²), 3-4 smaller shops (300m²) and a 1 form entry Primary School. In addition, there will also be the creation of a Riverside Park in the east of the site, with areas of soft landscaping and public open space.

This SWMP has been prepared considering the key principles set out in the “Site Waste Management Plans Guidance for Construction Contractors and Clients – Voluntary Code of Practice” (DTI, 2004).

This waste strategy considers waste elements arising from the construction of all planned dwellings, public and commercial buildings.

The majority of the site is agricultural land and woodland and therefore quantities of demolition waste will be limited.

Local regrading of the existing ground levels, excavation of trenches and ditches and construction of containment bunds and attenuation ponds will be required for the construction of site infrastructure. It is anticipated that a construction method statement will be elaborated to detail the cut and fill balance and excavation material handling.

Construction waste volumes have been estimated for the proposed scheme, based on published SmartWaste benchmark data for schemes of typical build construction. As further information about construction methods and building design becomes available, this information can be updated.

Overall 35,900 tonnes of waste are estimated to arise from the construction of the proposed development.

Of the waste streams identified, the majority of the waste is able to be reused or recycled allowing for management of such materials so as to prevent waste to landfill.

This pre-construction Waste Strategy presents a framework for managing waste arising during the construction phase of the development and provides possible solutions for managing waste generated on site whilst meeting regulatory requirements.

Waste is a key consideration for the development, as it has environmental, social and economic impacts both in terms of the type of waste generated on the site as well as the physical infrastructure required to deal with the waste.
1 Introduction

1.1 Context

1.1.1 Peter Brett Associates LLP (PBA) has been commissioned by Crest Strategic Projects and Redcliffe Homes to prepare a Pre-construction Site Waste Management Plan (SWMP) in support of the outline planning application to be submitted to Wiltshire County Council for the proposed development at Rowden Park, Chippenham.

1.1.2 This SWMP has been prepared considering the key principles set out in the “Site Waste Management Plans Guidance for Construction Contractors and Clients – Voluntary Code of Practice” (DTI, 2004).

1.2 Site Description

1.2.1 The site comprises approximately 126 hectares and is located approximately 1.6 kilometres to the south west of Chippenham town centre, within the county of Wiltshire. The site is bordered by Chippenham to the north, the B4528 Patterdown Road to the west and the River Avon to the east. See Figure 1.1 below for the site location plan.

Figure 1.1: Site Location
1.2.2 The site is currently occupied by agricultural land, comprising open fields for arable uses and for pasture land with some woodland areas. There are a number of farm buildings to the south west of the site at Milborne Farm.

1.3 The Proposed Development

1.3.1 The proposed redevelopment of the site involves the retention of buildings at Milborne Farm, the provision of up to 1000 homes and a local centre including a community building (380m$^2$), a food store (400m$^2$), 3-4 smaller shops (300m$^2$) and a 1 form entry Primary School. In addition, a riverside park will be created in the east of the site, and areas of soft landscaping and public open space will be provided.

1.3.2 The dwelling mix is not yet fixed, however, will include the following types of dwellings as outlined in the Design and Access Statement$^1$:

- Terraced units;
- Semi-detached units;
- Detached units; and
- Apartment buildings.

1.3.3 Assumptions have therefore been made regarding the mix of dwellings and the floor areas of the dwellings. These assumptions are the same as those used within the Energy Statement. The floor areas for these units have been based upon typical dwelling sizes and guidelines on minimum space standards for dwellings$^2$. It should be noted that one bedroomed dwellings have not been discounted from the masterplan and could be included. The waste calculations are therefore conservative estimates as they have assumed larger dwellings in general.

1.3.4 Table 1.1 details the type of dwellings and internal floor areas used to calculate waste volumes.

Table 1.1: Assumed Dwelling Schedule for Waste Volume Calculations

<table>
<thead>
<tr>
<th>Use Class</th>
<th>Description</th>
<th>Net Internal Area m$^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>C3</td>
<td>2 Bedroom flat</td>
<td>70</td>
</tr>
<tr>
<td>First Floor</td>
<td>3 Bedroom flat</td>
<td>100</td>
</tr>
<tr>
<td>C3</td>
<td>2 Bedroom Terrace House</td>
<td>100</td>
</tr>
<tr>
<td>C3</td>
<td>3 Bedroom Terrace House</td>
<td>150</td>
</tr>
<tr>
<td>C3</td>
<td>4+ Bedroom Terrace House</td>
<td>350</td>
</tr>
<tr>
<td>C3</td>
<td>2 Bedroom Semi House</td>
<td>100</td>
</tr>
<tr>
<td>C3</td>
<td>3 Bedroom Semi House</td>
<td>150</td>
</tr>
</tbody>
</table>

---

$^1$ Rowden Park Garden Village Design and Access Statement (2014)


Site Waste Management Plan (Pre-Construction Stage)
Rowden Park, Chippenham

<table>
<thead>
<tr>
<th>Use Class</th>
<th>Description</th>
<th>Net Internal Area m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>C3</td>
<td>4+ Bedroom Semi House</td>
<td>350</td>
</tr>
<tr>
<td>C3</td>
<td>2 Bedroom Detached House</td>
<td>150</td>
</tr>
<tr>
<td>C3</td>
<td>3 Bedroom Detached House</td>
<td>300</td>
</tr>
<tr>
<td>C3</td>
<td>4+ Bedroom Detached House</td>
<td>400</td>
</tr>
<tr>
<td>D1</td>
<td>Primary School</td>
<td>1500</td>
</tr>
<tr>
<td>A1</td>
<td>Local Centre retail</td>
<td>700</td>
</tr>
<tr>
<td>D1</td>
<td>Community Building</td>
<td>380</td>
</tr>
</tbody>
</table>

1.3.5 The masterplan is enclosed in Appendix A.

1.4 Purpose of this Document

1.4.1 This document responds to the requirement in the Wiltshire Waste Core Strategy 2006-2026 (2009) to provide a waste audit for new developments of over 10 dwellings. This is in accordance with national policy drivers including the Department of Trade and Waste (DTI, 2004) Code of Practice. This waste audit is in line with Policy WCS6 of the Wiltshire Waste Core Strategy 2006-2026:

“Policy WCS6 encourages the reduction and re-use of waste as part of the construction and the operation of new housing and employment developments. Waste management plans and audits are required if the development is over the stated threshold. These plans must include the measures taken to minimise waste and re-use any materials already on site during the construction of the development.”

1.4.2 This SWMP has been prepared at pre-construction stage (Stage 1, see Figure 1.2) prior to the appointment of a principal contractor. Its purpose is to provide guidance in terms of the objectives and waste management methods to be expanded by the Principal Contractor at construction stage (Stage 2). With the site characteristics and the development proposals in mind, the following steps in formulating a SWMP have been undertaken at this stage:

- **Section 2**: Formulate a Waste Minimisation Statement including Waste Management Targets for the proposed development under consideration of the relevant local Policy Context;
- **Section 3**: Identifying Responsibilities in producing and implementation a SWMP;
- **Section 4**: Identification of likely types and quantities of waste that will be produced during the development of the proposed scheme;
- **Section 5**: Identification of Waste Management Options;
- **Section 6**: Next Steps for implementing the SWMP in Stages 2 & 3.
**Figure 1.2: The Site Waste Management Process**

**STAGE ONE – PRE CONSTRUCTION**
- Define project objectives
- Define responsibilities
- Provide template for SWMP working document
- Identify waste management options
- Provide waste minimisation statement

**STAGE TWO - CONSTRUCTION**
- Identify sites and contractors, set up contracts and audit facilities
- Train staff
- Plan for efficient materials and waste handling
- Implement Duty of Care Procedures
- Signed declaration that all reasonable steps were taken to meet EPA 1990 (Section 34) and materials will be handled efficiently and waste managed appropriately.
- Measure and record waste types and quantities
- Save all waste removal records
- Audit regularly
- Keep SWMP on site and allow access at all times and inform all staff of requirements and location

**STAGE THREE - POST CONSTRUCTION**
- Provide documentation, preferably within 3 months of project completion.
- Compilation of verification report.
- Sign off SWMP confirmation.
2 Waste Management Targets

2.1 Introduction

2.1.1 This section establishes the requirement for a SWMP, general waste management principles as well as the waste management targets as relevant for the proposed development.

2.1.2 Duty of Care and responsibilities of complying with the applicable waste legislation are outlined in Section 3.

2.2 Policy Context and Benefits of the SWMP

2.2.1 The production of a SWMP is no longer a legislative requirement since the Site Waste Management Plan (SWMP) Regulations were revoked on 1st December 2013, however it is still considered best practice to manage construction waste for any large development project as it has been proven to reduce waste to landfill and manage waste costs.

2.2.2 Policy WCS6: Waste Reduction and Auditing in the Wiltshire Waste Core Strategy (2009) requires a waste audit. It is considered that a SWMP will be the most appropriate way of outlining all of the requirements of a waste audit for Rowden Park as outlined in Section 1.4. Further, the implementation of a SWMP for construction sites provides an opportunity to gain Code for Sustainable Home (CfSH) credits.

2.2.3 A key concept for managing waste presented in the above mentioned European and UK legislation documents is the Waste Hierarchy. This concept is set out at Article 4 of the revised Waste Framework (Directive 2008/98/EC) and in the Waste (England and Wales) Regulations 2011. An adoption of the waste hierarchy is depicted in Figure 2.1.

Figure 2.1: The Waste Hierarchy (Government Review of Waste Policy (Defra, 2011)

<table>
<thead>
<tr>
<th>The Waste Hierarchy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stages</strong></td>
</tr>
<tr>
<td>Prevention</td>
</tr>
<tr>
<td>Preparing for re-use</td>
</tr>
<tr>
<td>Recycling</td>
</tr>
<tr>
<td>Other recovery</td>
</tr>
<tr>
<td>Disposal</td>
</tr>
<tr>
<td><strong>Includes</strong></td>
</tr>
<tr>
<td>Using less material in design and manufacture.</td>
</tr>
<tr>
<td>Keeping products for longer; re-use.</td>
</tr>
<tr>
<td>Using less hazardous material.</td>
</tr>
<tr>
<td>Checking, cleaning, repairing, refurbishing, repair, whole items or spare parts.</td>
</tr>
<tr>
<td>Turning waste into a new substance or product including composting if it meets quality protocols.</td>
</tr>
<tr>
<td>Including anaerobic digestion, incineration with energy recovery, gasification and pyrolysis which produce energy (fuels, heat and power) and materials from waste; some backfilling operations.</td>
</tr>
<tr>
<td>Landfill and incineration without energy recovery.</td>
</tr>
</tbody>
</table>
2.3 Waste Management Targets

2.3.1 In line with current national policy and the Waste Management Plan for England (2013), the targets for construction and demolition waste are 70% recovery of waste:

“The United Kingdom is committed to meeting its target under the Waste Framework Directive of recovering at least 70% by weight, of construction and demolition waste by 2020.

This is construction and demolition waste, excluding hazardous waste and naturally occurring material falling within code 17 05 04 in Schedule 1 to the List of Wastes (England) Regulations 2005 (SI 2005/895).”

2.3.2 The Waste Core Strategy for Wiltshire and Swindon proposes a set of monitoring indicators and targets, which have been derived from national policy advice (the Core Output Indicators) and Wiltshire and Swindon’s Annual Monitoring Reports (the local/contextual/significant effects indicators). The relevant policies for the Rowden Park development include the following:

WCS5: The Wiltshire and Swindon Waste Hierarchy and Sustainable Waste Management

2.3.3 This outlines that developers should demonstrate the most sustainable option for waste management in Wiltshire and Swindon in line with the Waste Hierarchy set out above. The related targets for the waste authorities are:

- 30% of waste recovered (including the recycling and composting of household waste);
- 100% approved proposals that maximise the recovery of resources from waste.

2.3.4 This SWMP will align with WCS5 by reducing the creation of waste during development, managing and re-using any such wastes onsite wherever possible and seeking the sustainable management of all waste materials that must be taken off site.

WCS6: Waste Reduction and Auditing

2.3.5 As discussed earlier, the WCS6 requires proposals for developments of over 10 dwellings to provide a waste audit, and the related targets/indicators for the waste authorities are:

- 100% of major new developments making provision for waste segregation and recycling;
- 100% of approved developments that carry out waste audits as required and maximise the recovery of resources from waste.

2.3.6 This SMWP is therefore in line with the above targets and carries out an appropriate waste audit for the construction of the development. Provision for waste segregation and recycling will be made during the detailed design stage.

2.4 Waste Minimisation Statement

2.4.1 In accordance with the objectives and targets identified in Section 2.1 of this document, waste arising from the development of Rowden Park will be managed following the principles of the waste hierarchy, i.e. where possible, waste materials will be re-used on site.

2.4.2 Where waste materials cannot be re-used or recycled on site the nearest waste management facilities will be preferred in order to reduce environmental impacts as a result of road transportation and to maximize resource efficiency.

2.4.3 The Construction Phase SWMP (to be prepared by the Principal Contractor) will identify how decisions on use of waste management facilities have been taken, and demonstrate compliance with the waste hierarchy and relevant waste regulations.
3 Roles and Responsibilities

3.1 Introduction

3.1.1 In order to achieve success in waste minimisation and management practises a clearly defined list of responsibilities is required. By defining responsibilities across all levels of the project management team a common goal can be sought, with individuals named to deliver all aspects of the SWMP.

3.1.2 The overall responsibility for the SWMP is therefore retained by the developer, with full cooperation and delivery by the Principal Contractor. The following sections detail the relevant responsibility held by each project team member.

The Developer

3.1.3 The Clients are Crest Strategic Projects and Redcliffe Homes. The overall responsibility for construction waste management should be assumed by the developer. The developer should make sure that all contractors engaged in the project have an obligation to reduce the quantity of construction waste likely to be produced. The developer is responsible therefore for providing reasonable direction to any contractor, so far as necessary to enable the principal contractor to comply with these Regulations.

3.1.4 The developer is also responsible, with the principal contractor, for the review, revision and refinement of the SWMP as necessary. Any changes in respective roles and responsibilities should be clearly communicated. This also includes the responsibility for ensuring, with the principal contractor, that reasonable steps to ensure sufficient security measures are in place to prevent illegal disposal of waste.

Architect and Design Team

3.1.5 The architect and design team coordinator is LDA Design. The architect and design team should take responsibility for “designing out” waste in the design of the development. During the design phase the design team should adopt the waste hierarchy to optimise reuse and recycling options so as to minimise ultimate disposal to landfill.

3.1.6 Detailed estimates of material specification and purchase volumes should be undertaken under responsibility of the quantity surveyor to ensure reduction of waste from over ordering and incorrect procurement.

Materials Procurement Manager

3.1.7 The materials procurement manager should take responsibility for defining materials for purchase that contain recycled content, have low or no packaging and for purchasing materials from those suppliers that have a “buy–back” strategy for unused materials, where possible, or use returnable packaging. Where appropriate, contracts should be set up to provide “just in time” deliveries and where materials are delivered damaged, they are returned to source and not disposed of on-site as waste. All material suppliers should where possible have certified environmental standards.

3.1.8 The materials procurement manager should also take responsibility for appointing appropriate waste management contractors, ensuring they are suitably licensed and approved and that they are aware of, and in compliance with, and their duty of care obligations.
Principal Contractor

3.1.9 The principal contractor for this project has not yet been appointed. This role may be undertaken by different organisations for infrastructure and buildings construction and as a consequence of phasing of the development.

3.1.10 There will be a principal contractor who will be charged with responsibility for management and co-ordination of all waste streams during demolition and construction. This will involve responsibility for the waste segregation, storage and collection regime on-site, ensuring all sub-contractors are aware of the SWMP specification and for monitoring and auditing of the SWMP process.

3.1.11 The responsibility for all waste issues lies with the principal contractor including (but not exclusively) meeting the targets set out in Section 2 and basic tasks listed in Figure 1.1. It is important that all waste management documentation is recorded and monitored appropriately in line with best practice procedures duty of care regulations. This should be managed by the principal contractor, updated on a regular basis and verified at the end of the project.

3.1.12 The principal contractor is required to keep details of all waste management and duty of care documentation. Typically waste will be recorded in a similar format to the templates provided in Appendix B.

3.1.13 The principal contractor should control matters such as waste disposal and chain of custody documentation. The principal contractor, waste transfer company and the receiving waste disposal site will be fully responsible for waste classification, retaining legal responsibilities for fulfilling waste management duty of care requirements and ensuring that waste is deposited lawfully. Waste arisings for off-site disposal or any other discarded materials require classification as “Directive Waste”. The following records should be maintained in this regard for regulatory compliance and for the purpose of the validation:

- Source and origin of the waste;
- Information on the process producing the waste;
- European Waste Catalogue code and characteristics of material;
- For hazardous waste, definition of the relevant properties according to the Hazardous Waste Directive (Annex III 91/689/EC);
- Confirmation that waste is not prohibited waste;
- Appearance of the waste;
- Landfill class;
- Duty of Care records including full and completed chain of custody documentation.

3.1.14 The onsite operations management team should also ensure that all employees and subcontract staff are provided with appropriate training (e.g. tool box talks) so that everyone understands the requirements of this SWMP. To ensure all aspects of this SWMP are complied with, regular checks shall be made by a responsible person (e.g. the Environmental Clerk of Works), as appointed by the principal contractor.

3.1.15 The principal contractor must ensure, so far as reasonably practicable, that waste produced during construction is reused, recycled or recovered.
Sub-contractors

3.1.16 Sub-contractors are responsible for compliance with the SWMP in use, for adoption of good practice in waste management and efficient materials storage and use. The responsibilities of the sub-contractors include:

- Read through, familiarise and understand this SWMP;
- Produce their own waste documentation and management plan; and
- Comply with the requirements set out in this SWMP.

Local Authority

3.1.17 In order for waste management to be effective, agreement of this SWMP should be sought from the Wiltshire County Council planning or building control departments prior to construction.
4 Waste Assessment

4.1 Removal of Topsoil and Excavation

4.1.1 It is expected that the proposed development will largely be constructed at grade on the existing gently sloping ground profile. However, local regrading of the existing ground levels, excavation of trenches and ditches and construction of containment bunds to attenuation ponds will be required associated with the construction of the site infrastructure. The near-surface soils comprise sandy clays locally underlain by clayey sand and gravel. These materials should readily be excavated using conventional plant and equipment.

4.1.2 To limit the volume of excavated soils to be disposed of off-site it is expected that the excavated soils will be used, where required, to raise and regulate the ground level to form the required development platform and allow construction of the site infrastructure.

4.1.3 In addition, as part of a 'level-for-level' flood compensation scheme, in accordance with EA requirements, there will be an area of ground raising associated with the access road, and provision of a compensatory flood storage area through ground lowering to the immediate east.

4.1.4 It is anticipated that a construction method statement will be elaborated to detail the cut and fill balance and excavation material handling.

4.2 Demolition waste

4.2.1 The majority of the site is agricultural land and woodland and therefore quantities of demolition waste will be limited.

4.2.2 The existing buildings on site at Milborne Farm will be retained, and therefore it is anticipated that there will not be any significant quantities of waste associated with demolition on site. Ground soil will be excavated for the foundations and utility supply for the proposed buildings. It is anticipated that a construction method statement will be elaborated to detail the cut and fill balance and excavation material handling.

4.3 Construction Waste

4.3.1 Waste volumes arising from construction of the proposed scheme have been calculated using the information summarised in the development description in Section 1.3, as well as typical construction waste volumes and composition ratios from the Building Research Establishment's (BRE) SmartWaste benchmark data (2012).

4.3.2 Table 4.1 shows a breakdown of the estimated waste arisings per material type. It should be noted that these values are for waste generation over the entire build duration, which is dependent upon future market conditions and detailed planning applications. Overall 35,900 tonnes of waste are estimated to arise from the construction of the proposed development.

Table 4.1: Estimated Construction Waste per Material Type.
<table>
<thead>
<tr>
<th>Material</th>
<th>Typical Composition (%)&lt;sup&gt;5&lt;/sup&gt;</th>
<th>Volume (m&lt;sup&gt;3&lt;/sup&gt;)</th>
<th>Weight (T/m&lt;sup&gt;3&lt;/sup&gt;)</th>
<th>Tonnes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timber</td>
<td>19%</td>
<td>5,879</td>
<td>0.50</td>
<td>2,940</td>
</tr>
<tr>
<td>Concrete</td>
<td>6%</td>
<td>1,857</td>
<td>2.20</td>
<td>4,085</td>
</tr>
<tr>
<td>Inert</td>
<td>11%</td>
<td>3,404</td>
<td>1.92</td>
<td>6,542</td>
</tr>
<tr>
<td>Ceramic</td>
<td>3%</td>
<td>928</td>
<td>1.60</td>
<td>1,487</td>
</tr>
<tr>
<td>Insulation</td>
<td>3%</td>
<td>928</td>
<td>0.03</td>
<td>28</td>
</tr>
<tr>
<td>Plastic</td>
<td>13%</td>
<td>4,023</td>
<td>1.20</td>
<td>4,831</td>
</tr>
<tr>
<td>Packaging</td>
<td>25%</td>
<td>7,736</td>
<td>0.85</td>
<td>6,580</td>
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<tr>
<td>Metal</td>
<td>3%</td>
<td>928</td>
<td>5.25</td>
<td>4,874</td>
</tr>
<tr>
<td>Plaster and Cement</td>
<td>3%</td>
<td>928</td>
<td>0.90</td>
<td>835</td>
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<tr>
<td>Miscellaneous</td>
<td>14%</td>
<td>4,332</td>
<td>0.85</td>
<td>3,682</td>
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<tr>
<td><strong>SUB-TOTAL</strong></td>
<td><strong>100</strong></td>
<td><strong>30,944</strong></td>
<td></td>
<td><strong>35,884</strong></td>
</tr>
</tbody>
</table>

4.3.3 All the above waste streams, aside from the inert (which is unclassified general waste) and the miscellaneous fractions (non-hazardous waste, which is not inert), have the potential to be recycled. Management options for construction waste are considered further in Section 5.

<sup>5</sup> Based on data provided by [www.smartwaste.co.uk](http://www.smartwaste.co.uk)
## 5 Waste Management Options

### 5.1 Waste Minimisation and Off-site Disposal

5.1.1 Waste arising from construction and excavation works on site will be managed following the principles of the waste hierarchy described in Section 2. Any construction waste that cannot be re-used or recycled on site will be transported to an adequate waste management facility for further recovery or disposal through a licensed facility. The principal contractor will identify suitably licensed waste contractors as close to the site within a distance of 5 km of the site for ex-situ treatment of waste materials that cannot be treated on site.

5.1.2 Recovery options for the most commonly arising construction waste types are outlined in the following section.

### 5.2 Excavation Materials

5.2.1 Earthworks (enabling works) will be required to allow for the provision of foundations and for the sub-base for the access road and hardstanding. A remediation strategy, materials management plan or similar, could be used to manage the balance of cut and fill on-site in accordance with the CL:AIRE definition of waste. CIRIA guides, as referenced earlier, offer best practice guidance for the storage and reuse of materials arising from earthworks.

5.2.2 There is a need to obtain agreement from the Environment Agency that materials are only normally regarded as waste when they leave the site of production or if they require on-site treatment. Consideration should therefore be given to engaging with the Environment Agency to obtain a local area agreement. Obtaining such an agreement will mean excess materials on site may not become subject to regulatory controls and therefore vastly broadening options for managing the materials.

### 5.3 Masonry, Concrete, Tarmac

5.3.1 Waste streams such as masonry, concrete and tarmac can be reused in some circumstances on site if they are of high quality. Alternatively they can be recycled into rubble and road base materials, as well as clean, wet and mixed fill products.

### 5.4 Timber

5.4.1 All waste timber should be segregated and recycled. If large amounts of timber can be recycled on site, setting up of a timber reuse store should be considered.

### 5.5 Hazardous Waste

5.5.1 An intrusive ground investigation has been carried out to provide information on the ground conditions and the potential for contamination to be present on the Site.

5.5.2 Geochemical testing for a range of potential contaminants was carried out on 27 samples of soil recovered as part of the investigation for a range of general industrial contaminants; together with speciated determination of polynuclear aromatic hydrocarbons (PAH) and carbon banding of total petroleum hydrocarbons; and a range of pesticides and acid herbicides. The Ground Investigation report summarises that any potential contaminants in the ground or groundwater do not by themselves represent an unacceptable risk to human health, controlled waters or ecology and wildlife, associated with the development of the Site as currently proposed. On this basis, no specific remediation and/or mitigation measures will, in general, be required to limit the potential risks associated with land contamination.
5.5.3 For the soil samples analysed, the measured concentrations of potential contaminants are generally below the assessment values appropriate for land uses as residential with plant uptake and allotments. As such, the natural soils on the Site are not likely to contain significant concentrations of contaminants and in accordance with the criteria set in Part 3, of the Landfill (England and Wales) Amendment Regulations 2004, the natural soils at the Site are likely to be classified as inert waste.

5.5.4 If hazardous materials are identified at a later stage, measures will be taken to avoid risks to human and environmental health. Waste materials that cannot be dealt with for reuse on site will be removed by a suitably licenced contractor to be appointed by the principal contractor.
6 Next Steps

6.1 Stage 1 (Pre-Construction)

6.1.1 The following actions are recommended prior to commencement of construction:

- A construction method statement will be prepared, detailing cut and fill and excavation waste quantities and handling procedures.
- Prior to commencement of works, both the developer and the principal contractor will sign a declaration committing that all reasonable steps were taken to meet Environmental Protection Act 1990(a) (as amended in 2011) and materials will be handled efficiently and waste managed appropriately.
- Liaison with the Environment Agency to obtain agreement on the classification of waste materials on the site.
- Identify waste management site and contractor for all waste that require them and ensure that the contracts are in place.
- Consideration will be given to the appointment of a ‘waste champion’, to manage waste during construction.

6.2 Stages 2 and 3 (Construction and Post-Construction)

6.2.1 The SWMP will be implemented by the Principal Contractor for the construction phase in accordance with good practice and regulatory requirements. Templates for stage 2 (construction) of the SWMP are enclosed in Appendix B.

6.2.2 During construction the following actions are required:

- the SWMP needs to be accessible on-site & all staff will be briefed of its requirements and location;
- the project will be monitored against the objectives set out in the SWMP and to make sure all site staff are undertaking obligations;
- the SWMP will be updated as required;
- Waste removal records will be saved in SWMP portfolio.

6.2.3 After completion of the development the SWMP should be verified through the following steps:

- Provide documentation within 3 months of project completion;
- Compilation of verification report including a comparison of the estimated quantities of each waste type against the actual quantities of each waste and estimate of the cost savings that have been achieved.
References


Appendix A  Masterplan
Appendix B   SWMP Monitoring Template (Working Document)
## Basic Duty of Care Documentation

<table>
<thead>
<tr>
<th>Waste Type in skip</th>
<th>EWC Code</th>
<th>Inert/non-hazardous/hazardous</th>
<th>Waste Carrier Name (and/or broker name)</th>
<th>Waste Carrier License Number</th>
<th>License Expiry Date</th>
<th>Name of End Destination</th>
<th>Landfill Licence or waste transfer station registration details</th>
<th>Volume Sent</th>
<th>Confirmation that Registered Landfill received Waste and date</th>
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<table>
<thead>
<tr>
<th>Waste Activity Licence/Exception</th>
<th>Details of Licence/Exemption (including expiry date and limitations to license)</th>
<th>Comments</th>
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### Waste Collation Data Information:

<table>
<thead>
<tr>
<th>Material Use on-site</th>
<th>Quantity Ordered (if known)</th>
<th>Estimate Wasted (5% of materials ordered for example)</th>
<th>Quantity Wasted (m³)</th>
<th>Volume Reuse on-site (m³)</th>
<th>Volume Reused off-site (m³)</th>
<th>Volume recycled on-site (m³)</th>
<th>Volume recycled off-site (m³)</th>
<th>Volume Landfill (m³)</th>
<th>Final % of materials ordered disposed to landfill</th>
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Useful Waste Catalogue Codes

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<thead>
<tr>
<th>Waste Material</th>
<th>EWC</th>
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<tbody>
<tr>
<td>Bricks</td>
<td>17-01-02</td>
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<tr>
<td>Concrete</td>
<td>07-01-01</td>
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<tr>
<td>Contaminated rags/cloths/wipes</td>
<td>15-02-02*</td>
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<tr>
<td>Contaminated spill materials</td>
<td>15-02-02*</td>
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<tr>
<td>Fluorescent Tubes (FT)</td>
<td>20-01-21*</td>
</tr>
<tr>
<td>Mixed Municipal Waste</td>
<td>20-03-01</td>
</tr>
<tr>
<td>Glass</td>
<td>17-02-02</td>
</tr>
<tr>
<td>Mixed Metals</td>
<td>17-04-07</td>
</tr>
<tr>
<td>Paper and Cardboard</td>
<td>20-01-01</td>
</tr>
<tr>
<td>Plasterboard</td>
<td>17-08-02</td>
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<tr>
<td>Plastics</td>
<td>17-02-03</td>
</tr>
<tr>
<td>Soil &amp; stones not containing dangerous substances</td>
<td>17-05-04</td>
</tr>
<tr>
<td>Wood</td>
<td>17-02-01</td>
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</tbody>
</table>