

Knights Park, Saffron Walden, Essex

784-B050339

Site Waste Management Plan

Kier Ventures Limited

November 2023

**Document prepared on behalf of Tetra Tech Environment Planning Transport Limited.
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1.0 INTRODUCTION

- 1.0.1 This Site Waste Management Plan relates to the proposed development on Knights Park, in Saffron Walden, Essex and sets out the approach in terms of the management of waste generated from the proposed site preparation and construction works as well as ensuring that the operational phase of the development is designed to allow effective waste management and recycling. The purpose of this document is to satisfy the Local Planning Authority (LPA) at Uttlesford District Council (UDC) and Essex County Council as the waste planning authority, that waste arising from the development will be managed sustainably and responsibly in accordance with waste legislation, the Waste Hierarchy and national and local waste policy.
- 1.0.2 This Site Waste Management Plan has been prepared to support an outline planning application for development of the site for up to 56 dwellings, associated landscaping, and open space, with access from Knight Park in Saffron Walden, Essex.
- 1.0.3 This report has been written in accordance with Essex County Council's (ECC) Minerals Local Plan (2014) Policy S4: 'Reducing the use of Mineral Resources' which advocates reducing the use of mineral resources through reusing and recycling minerals (construction materials) generated in a development.
- 1.0.4 This document sets out the responsibilities of the generic roles within a site management team and those of a Principal Contractor/ housebuilder and its sub-contractors in relation to the management of waste. To ensure procedures are being followed and the desired results are being achieved, waste management training and communications between Kier Ventures Limited (Kier), as the Principal Contractor and sub-contractors would be carried out using the most appropriate means. Furthermore, waste monitoring procedures would be put in place by the appointed Principal Contractor and formally reviewed at the end of the construction phase.
- 1.0.5 The plan encourages the minimisation of construction waste as far as is practicable. However, where the generation of construction waste is unavoidable, waste will be appropriately managed in the most sustainable manner available. A key objective of this document is that all waste will be managed sustainably and responsibly in accordance with waste legislation, the Waste Hierarchy and national and local waste policy.

1.1 LEGAL REQUIREMENTS

- 1.1.1 Compliance with environmental and waste legislation is a minimum requirement when managing waste and will be a primary objective of the development. There is substantial regulation of waste in the United Kingdom that is applicable to all wastes generated by the construction and operation of the proposed development. The key (waste related) legislation of relevance to this project is the Environmental Protection Act 1990, Environment Act 1995, The Controlled Waste (England and Wales) Regulations 2012 (as amended), Revised Waste Framework Directive 2008/98/EC, The Waste (England and Wales) Regulations 2011, the Waste (England and Wales) (Amendment) Regulations 2012, Control of Pollution (Amendment) Act 1989 and The Hazardous Waste (England and Wales) Regulations 2005 (as amended).
- 1.1.2 The key waste management compliance issues from this Waste Audit Report are as follows: -
- Waste categories are identified and coded as per the List of Wastes (England) Regulations 2005;
 - Waste is segregated appropriately;
 - Waste is handled and stored safely;
 - Waste is transported appropriately and safely;
 - Waste is minimised and recycled wherever possible;
 - Waste is disposed of responsibly;

- Waste data is recorded, collated and monitored regularly; and
- Waste carrier and contractor performance is monitored regularly.

1.1.3 The site preparation and construction phases as well as the post construction phase of the development have the potential to generate a range of waste materials including some hazardous wastes, such as solvents, paint, fluorescent lighting and medical waste. Although some of the quantities may be small, the environmental impact can be significant if the wastes are not handled correctly, as are the legal penalties.

1.1.4 Correct environmental management of waste is a key objective of this report. In addition, the and the Principal Contractor for this development and will have a legal duty of care to ensure safe and proper management of all waste materials, including on-site contractors' wastes. Both the applicant and the Principal Contractor would therefore ensure that all wastes are handled and disposed of in accordance with current legislation and best practice from the time waste is generated, through to its final treatment or disposal.

1.2 PROJECT DETAILS

1.2.1 The proposed development comprises up to 56 residential dwellings and associated landscaping with areas of open public space as shown on below extract from the Sketch Site Layout.

Figure 1: Sketch Site Layout Extract



1.2.2 The site is over a total footprint of approximately 3.5 hectares (ha) and is centred at National Grid Reference (NGR) TL 55237 37404.

1.2.3 On recent previous similar projects ECC, as the minerals and waste planning authority, have confirmed that 'A Minerals Supply Audit would feed into, or be considered alongside, a Site Waste Management Plan...' Therefore, the details required by a Minerals Supply Audit have been included in this document and the specified scope of the Site Waste Management Plan, as previously provided by ECC, has also been included.

1.2.4 It should also be noted that this is an outline planning application and that information such as bill of quantities is not currently available.

2.0 WASTE POLICY AND STRATEGY

2.1 NATIONAL POLICY

- 2.1.1 The revised National Planning Policy Framework (NPPF) updated in July 2021 does not contain any specific waste policies, although part of the environmental objective (of achieving sustainable development) includes ‘minimising waste’, and paragraph 20 (Strategic Policies) states sufficient provision should be for waste management.
- 2.1.2 The waste strategy, ‘Our Waste, Our Resources: A Strategy for England’ published in December 2018 sets out a national policy framework with respect to waste. The document describes how the use of resources will be optimised through minimising waste, promoting resource efficiency, and progressing to a circular economy. The strategy provides a longer-term policy direction commensurate with the UK Governments 25 Year Plan to Improve the Environment, published in January 2018. The Government’s 25-year plan includes aims to maximise resource efficiency and minimise environmental impacts. The plan includes a commitment to achieve a target of zero avoidable waste by the end of 2050.
- 2.1.3 Paragraph 9 of the National Planning Practice Guidance (NPPG) for waste addresses the impact of non-waste development on local waste infrastructure and states that Planning Authorities must have regard to national planning policy for waste and are expected to help deliver the Waste Hierarchy. It suggests that Planning Authorities should consider, where relevant, the potential impact of proposed non-waste development on existing waste management sites and should promote sound management of waste from proposed development sites.
- 2.1.4 National waste planning policy is contained within the National Planning Policy for Waste (October 2014) (NPPW) which is to be read in conjunction with the NPPF and the national waste strategy ‘Our Waste, Our Resources’. The NPPW states that: -
- ‘Positive planning plays a pivotal role in delivering this country’s waste ambitions through: -*
- *Delivery of sustainable development and resource efficiency, including provision of modern infrastructure, local employment opportunities and wider climate change benefits, by driving waste management up the waste hierarchy; and*
 - *Helping to secure the re-use, recovery or disposal of waste without endangering human health and without harming the environment.’*
- 2.1.5 NPPW defines the Waste Hierarchy as follows: -

Figure 2: The Waste Hierarchy



- 2.1.6 The principal objective of the Waste Hierarchy is to minimise the amount of waste produced by adopting economy and efficiency in raw materials usage. Where this is not possible, the aim is to deal with the waste produced in a reasonable and sustainable way, with the least preferred option being disposal to landfill. The overall objective being to minimise the environmental impact both in the short term via prevention of pollution and in the long term, in terms of resource and land usage.

2.2 LOCAL WASTE POLICY

- 2.2.1 The Development Plan with respect to waste comprises the ECC and Southend-on-Sea Waste Local Plan (2017) and Minerals Local Plan (2014) and the Written Statements of the adopted Uttlesford District Council Local Plan (2005).
- 2.2.2 The Waste Local Plan only includes planning policies for waste developments. As described in Section 1, The Minerals Local Plan includes Policy S4: ‘Reducing the use of mineral resources’. The Policy states: -
- ‘All development proposals shall ensure that mineral waste is minimised and that minerals on development/redevelopment sites are re-used and recycled. This is to ensure both a reduction in the need for primary minerals and the amount of 46 construction, demolition, and excavation wastes going to landfill. This will be supported by joint working with strategic partners to ensure.*
- ...2. The application of national and local standards for sustainable design and construction in proposed development, 3. The application of procurement policies which promote sustainable design and construction in proposed development, and 4. The maximum possible recovery of minerals from construction, demolition and excavation wastes produced at development or redevelopment sites.*
- This will be promoted by on-site re-use/ recycling, or if not environmentally acceptable to do so, through re-use/ recycling at other nearby aggregate recycling facilities in proximity to the site.’*
- 2.2.3 Although now dated, the Uttlesford District Local Plan also includes a planning policy on site design and waste reduction. Policy GEN2 – ‘Design’ states: -
- ‘Development will not be permitted unless its design meets all the following criteria and has regard to adopted Supplementary Design Guidance and Supplementary Planning Documents. ...*
- g) It helps to reduce waste production and encourages recycling and reuse...’*
- 2.2.4 The principal aim of this document is to minimise waste and maximise recycling.
- 2.2.5 Waste arising from the development would look to be managed in accordance with the Waste Hierarchy using the most appropriate waste management options. This will help achieve higher recycling rates and produce lower quantities of residual waste, which will help towards both the developer and the Planning Authority meeting their respective targets.

3.0 CONSTRUCTION WASTE MATERIALS AND MANAGEMENT OPTIONS

3.1 IDENTIFICATION OF WASTE TYPES

- 3.1.1 The identification of the likely key construction activities and the associated waste types produced from these activities is detailed in Appendix A – Waste Data Sheet. The Waste Data Sheet includes the best practice management options that are currently available for each waste stream produced i.e. prepare for reuse, recycle and disposal, etc.
- 3.1.2 The site preparation phase is likely to involve initial cut and fill works with site levelling as well as excavating for foundations, services, and other infrastructure. This phase of the project will produce quantities of inert excavation waste, the majority of which will comprise soils which are suitable for reuse. This report has been produced in support of an outline planning application and it is not currently possible to calculate the quantity of excavation waste that will arise. However, as much soil and excavation materials as possible will look to be managed on the development site to balance level changes and to facilitate landscaping. There is therefore unlikely to be a requirement for large quantities of this material to be taken off site for further management.
- 3.1.3 Quantities of organic (green) waste will arise from site and vegetation clearance works. This waste will require removal off site. It will be sent for composting at an appropriately permitted composting facility or sent for energy recovery. No organic waste will be treated on site by burning.
- 3.1.4 The types of waste predicted to arise from the site preparation and excavation works are shown in Table 1 below.

Table 1: Predicted Excavation Wastes Types (from site preparation)

Waste type	EWG Codes
Gravel and crushed rocks other than those mentioned in 01 04 07	01 04 08
Waste sands and clays	01 04 09
Soils and stones including chalk other than those mentioned in 17 05 03	17 05 04
Soils and stones	20 02 02
Biodegradable waste	20 02 01

- 3.1.5 The site is currently greenfield land in agricultural use and there will not be any requirement to demolish buildings and structures. Consequently, there will not be any demolition wastes arising from the proposed development. However, quantities of organic green waste will arise from vegetation clearance and site preparation works, as discussed in Section 3.1.3.
- 3.1.6 The types of wastes predicted to arise from the construction of the proposed dwellings are shown in Table 2 below.

Table 2: Predicted Construction Waste types

Waste Type	EWC Codes	Typically Produced From
Waste paint and varnish containing organic solvents or other dangerous substances	08 01 11* (hazardous)	Construction (fit out).
Waste paint and varnish other than those mentioned in 08 01 11	08 01 12	Construction (fit out).
Paper and cardboard packaging	15 01 01	Construction (all stages). Associated with deliveries of construction materials and fixtures etc.
Plastic packaging	15 01 02	Construction (all stages). Associated with deliveries of construction materials and fixtures etc.
Wooden packaging	15 01 03	Construction (all stages). Associated with deliveries of construction materials and fixtures etc.
Metallic packaging	15 01 04	Construction (all stages). Associated with deliveries of construction materials and fixtures etc.
Composite packaging	15 01 05	Construction (all stages). Associated with deliveries of construction materials and fixtures etc.
Mixed packaging	15 01 06	Construction (all stages). Associated with deliveries of construction materials and fixtures etc.
Concrete	17 01 01	Construction (foundations, building fabric) (excess or damaged).
Bricks	17 01 02	Construction (excess or damaged).
Tiles and ceramics	17 01 03	Construction (excess or damaged).
Wood	17 02 01	Construction (excess or damaged).
Glass	17 02 02	Construction (excess or damaged).
Plastic	17 02 03	Construction (excess or damaged).
Bituminous mixtures other than those mentioned in 17 03 01	17 03 02	Construction (external surfacing).
Copper, bronze, brass	17 04 01	Construction (excess or damaged).
Aluminium	17 04 02	Construction (fit out).
Iron and steel	17 04 05	Construction (structural supports).
Cables other than those mentioned in 17 04 10	17 04 11	Construction (excess).
Insulation materials other than those mentioned in 17 06 01 and 17 06 03.	17 06 04	Construction (damaged, excess/off-cuts).
Paper and cardboard	20 01 01	Construction (fit out).
Biodegradable kitchen and canteen waste	20 01 08	Small quantities from construction workers within site accommodation.
Biodegradable waste	20 02 01	Site clearance (vegetation removal), tree pruning, landscaping etc.

- 3.1.7 As detailed in the table a limited number of hazardous waste types, such as paint and varnish and solvents would likely be used in the construction of the site. Hazardous waste types such as these would only be used where there is not a reasonable alternative non-hazardous product. Extra care would be taken when ordering any hazardous products to ensure that a surplus is avoided or kept to a minimum. Due to the nature of these products and how they are stored, for example, in resealable tins, it is considered likely that any excess of these products could be retained by the contractor to use in future development sites. It is therefore considered that only small quantities of hazardous waste would be generated in the construction of the development, if any at all.
- 3.1.8 The appointed Principal Contractor will calculate the likely quantities of waste arisings from the construction phase including the site preparation works. However, as this report is being prepared for an outline planning application, it is possible to estimate the quantities of waste which are likely to be produced based on waste benchmark data issued by Building Research Establishment (BRE) (June 2012). The approximate areas of built development, as shown in the Figure 1, and calculated waste tonnage estimate is set out in Table 3 below: -

Table 3: Estimated construction waste quantities (Gross Internal Areas)

Use	Approximate Gross External Area (m ²)	BRE Benchmark (tonnes per 100m ²)	Calculated waste (t)
Residential	5,400	16.8 (residential)	907.2
Total (t)			907.2

- 3.1.9 As described in Section 1 ECC requested a Minerals Supply Audit. The following template (Table 4) can be used to undertake a more detailed estimate of the waste quantities although, Kier may have their own method of calculating and recording such data which could also be used.

Table 4: Estimated Waste Arisings by Activity and Waste Type

Waste Category & Type	Site Preparation & Enabling Working		Construction Works: Building Fabric		Construction Works: Fit-out Finishes & Building Services	
	Tick	Est. Quantity (m ³)	Tick	Est. Quantity (m ³)	Tick	Est. Quantity (m ³)
Inert Waste						
Sand						
Gravel						
Bulk Excavated						
Aggregate						
Concrete						
Brick / Block						
Topsoil /Sub-soil (uncontaminated)						
Glass / ceramics						
Rockwool / Glasswool						
Mixed inerts						
Other [detail]						
Sub-total						
Active Waste						
Plasterboard / Gypsum						
Timber						
Cardboard						
Paper						
Plastic						
Vegetation						
Other [detail]						
Mixed Packaging						
Sub-total						
Metal Waste						
Ferrous (i.e. steel)						
Non-ferrous (i.e. lead, zinc copper)						
Other [detail]						
Sub-total						
Hazardous Waste						
Topsoil / Sub-soil (contaminated)						
Batteries						
Asbestos						
Paints / Solvents / Binders						
Other [detail]						
Asphalt & Tar						
Sub-total						
TOTAL						

3.1.10 Regarding the Minerals Supply Audit, ECC have described in consultation for recent previous similar applications *'some approaches have included the commitment to sustainable procurements practices as well as demonstrating how recycling and re-use targets will contribute to a reduction in primary aggregate demand.'* Information in this regard is set out the following sections.

3.2 WASTE MANAGEMENT OPTIONS

Waste Prevention and Reduction

3.2.1 All teams involved in the project will prioritise waste prevention and reduction. This will reduce the quantity of waste which needs to be managed and will reduce costs. Potential opportunities for reducing waste on the site include: -

- As far as is practicable, structures and features will be pre-fabricated off site with minimal on-site construction (i.e. assembly only); which avoids the production of waste on the development site;
- Other structures and fixtures would also be pre-fabricated where possible, such as roof structures, windows and door frames, rainwater disposal systems, facias, internal steelwork etc will be specified, where possible, to reduce the quantity of on-site waste;
- Structural repetition will be included within the design, where possible, which will reduce the amount of waste produced;
- The sustainable procurement of building materials will result in the minimisation of waste by selecting products and materials with reduced levels of packaging, reusable rather than single-use products and specifying durable and long-life construction materials;
- The implementation of 'just in time' deliveries will minimise the potential for damage to stockpiled materials from adverse weather or physical damage from mobile plant etc. Good on-site housekeeping measures will also reduce the potential for construction materials to become damaged;
- Monitoring 'over-supply' of materials particularly where this results in wastage. Reviews of 'over-supply' should inform future procurement decisions; and
- The use of supplier take-back schemes, particularly with respect to packaging waste (e.g. crates, pallets). Where possible, outer, and inner packaging and timber pallets will be returned to a supplier by prior arrangement. This may require stockpiling and bulking the pallets until sufficient numbers are available to make collection economical.

Reuse and Preparation for Re-use

3.2.2 To manage waste in accordance with the Waste Hierarchy, the re-use rates of generated wastes will be maximised as far as is practicable and economically viable. This will necessitate an understanding of how the materials may be re-used and segregating the materials in such a way whereby they may be reused with only minimal preparation and without further processing. For example, materials such as timber will be segregated at an early stage before they are placed in mixed waste containers, which will minimise the potential for damage and increase the likelihood that the material will be reused (either on-site or off-site).

3.2.3 There are several wastes likely to arise from the site preparation and construction phases of the scheme which can be reused or prepared for re-use, either on the new site or off-site. These include: -

Table 5: Materials with Potential For Reuse

Materials	Comments
Inerts - soil, sand, cement, hardcore, concrete	Use to raise levels or as fill or sub-base for areas of hardstanding or paving
Paving, stone, brick	Although could be minimal quantities for this development, any materials could be used in hard landscaping or use damaged materials as fill or sub-base.
Timber	Use as new flooring, cladding, or for low grade uses such as temporary shuttering, hoardings and battening. The proportion of timber which can be reused will be dependent on its quality.
Plasterboard	Re-use of plasterboard off-cuts in areas where smaller or non-standard sized boards are required. To facilitate this, plasterboard off-cuts will be stored separately from other waste and will be protected from damage (particularly water damage).
Insulation (loft insulation, vinyl, carpets etc)	Good quality insulation materials can be used on a 'like for like' basis. Whilst this scheme may use limited amounts, carpet reuse schemes are increasingly common and will typically collect from site.
Plastic pipe	Good quality pipework can be used on a 'like for like' basis.
Paint	Excess paint can be sent to community reuse schemes for reuse on charity and community projects within the local area.
Metals	Depend on type and quantity but on site reuse in original form should be prioritised.
Off-cuts (all materials)	Provide a dedicated storage area for material off-cuts. Remind construction staff to consider the use of off-cuts in preferences to using new materials (subject to them meeting required specifications, etc).
Other fixtures and fittings e.g. sinks, doors and gates	Re-use off site, in exchange or community schemes.

3.2.4 Schemes exist within the construction and demolition sectors which facilitate material reuse and exchange. These material exchange schemes are typically advertised online and provide national or local services to match donor and receptor projects, thereby enabling waste construction and demolition materials to be matched according to location, material type and quantity.

3.2.5 The use of exchange programmes will look to be used if and where possible to increase the proportion of construction and demolition materials that are reused. As described in the above table, any spare materials should also be considered for use in local community schemes. Materials where these schemes are often viable includes timber products, mineral fibre ceiling panels and tiles, carpet tiles and insulation materials.

3.2.6 The following sections provide suitable management methods for waste that is generated and follows the remaining steps of waste hierarchy.

Recycle or Compost

3.2.7 Where the re-use of waste is not practicable it will be sent for recycling, composting or energy recovery, thereby avoiding the need for landfill disposal. To ensure that waste recovery is maximised, the Principal Contractor will only permit waste to be managed by approved waste management subcontractors which can demonstrate a high level of waste recovery.

3.2.8 It is anticipated that the materials arising from the construction works, as identified within Table 6 below, will be recycled.

Table 6: Materials with the Potential to be Recycled

Materials	Comments
Inerts – hardcore, stone, brick, concrete	Recycle if damaged. Will typically require crushing at an aggregate treatment facility.
Timber (e.g. flooring, roofing, skirting, door frames, doors etc)	Higher prices may be paid for timber if segregated from other waste streams (depending on current markets).
Plastic (e.g. pipework, window frames)	Recycle if damaged.
Insulation (e.g. carpets, loft insulation etc)	Specialist reprocessors exist which can recycle materials such as carpet and insulation.
Metal (e.g. fencing, portal building frames, industrial doors, pipework etc)	Recycle via scrap metal reprocessors.
Glass (e.g. windows, door panels)	Recycle damaged glazing.

- 3.2.9 As far as possible, the recyclable materials, which cannot be recycled for reuse at the site, will be segregated on site and sent to specialist reprocessors where the materials will be recycled in dedicated facilities. For materials which are more difficult to segregate, mixed recyclable wastes will be stored on site in appropriate containers until sufficient quantities have been produced. They will then be collected and taken to Waste Transfer Stations or Material Recycling Facilities where they will be sorted prior to being transported to specialist reprocessors for recycling.

Energy Recovery and Landfill disposal

- 3.2.10 For residual wastes (i.e., those which cannot be recycled), energy recovery will avoid the need for waste to be sent for landfill disposal. However due to the typical nature of construction wastes with most materials being recyclable, it is anticipated that the fraction of this waste stream which is suitable for energy recovery will be relatively small.
- 3.2.11 Disposal to landfill is the least preferred option in terms of the Waste Hierarchy and will only be considered as a waste management method when all other options have been explored. A key aim of this Site Waste Management Plan is that no construction waste will be sent to landfill. However, landfill is currently the accepted management method for certain hazardous wastes.
- 3.2.12 Therefore, only a small amount of material would be required to be managed through energy recovery or landfill.
- 3.2.13 A key objective of this Site Waste Management Plan is that no construction waste will be sent to landfill unless all other management options have been explored and proven to be unfeasible due to technical or economic reasons.

4.0 DUTY OF CARE

4.1 DUTY OF CARE REQUIREMENTS

- 4.1.1 All excavation and construction waste arising from the site preparation work and construction will be handled and transported by a registered waste carrier in full compliance with the Duty of Care requirements and all other relevant environmental legislation (see Section 1.1.1).
- 4.1.2 All waste leaving the site will be taken to appropriately permitted waste management facilities in compliance with the Environmental Permitting Regulations (England and Wales) Regulations 2016. This requirement is absolute, regardless of whether the waste management site is being used to transfer the waste to an onward destination or the site is a destination for waste treatment, recycling, recovery or disposal.
- 4.1.3 During the construction phase, the Principal Contractor and all waste sub-contractors will ensure that where possible and/or practicable, legally compliant local waste re-processing, treatment or disposal sites are used to minimise the potential for adverse effects associated with transporting waste materials long distances on the public highway.
- 4.1.4 Duty of Care documentation (e.g. Waste Transfer Notes and Consignment Notes) for all waste collections from the construction site will be checked by the Site Manager and a copy retained. Waste Transfer Notes will be retained by the Principal Contractor for a minimum period of two years. Consignment Notes will be retained for a minimum period of three years.
- 4.1.5 It is also a requirement for a declaration to be signed on the Waste Transfer Note to confirm that the waste has been managed in accordance with the Waste Hierarchy (as required by Regulation 12 of the Waste (England and Wales) Regulations 2011).

5.0 CONSTRUCTION WASTE STORAGE, HANDLING AND SEGRAGATION

- 5.0.1 This Section describes the requirements for construction waste storage, handling, and segregation to demonstrate that throughout the site preparation and construction of the central infrastructure, waste would be stored, handled, and segregated safely and in full accordance with legislation and industry best practice.
- 5.0.2 Step 8 – ‘Site Design and Training’ of the Waste & Resources Action Programme guidance ‘Achieving Good Practice Waste Minimisation and Management’ (2007) sets out a number of important operational considerations in order to maximise waste recovery: -
- Layout and skip location should be considered at the design / planning stage;
 - Provision of separate containers for hazardous waste;
 - Containers optimised for segregation with clear labels and signs;
 - Segregated containers provided at workforce;
 - Use of compacters, balers to minimise waste volume and reduce transportation costs;
 - Provision of clearly located and defined storage areas for materials; and
 - Just in time delivery, secure storage areas, no double handling.

5.1 STORAGE

- 5.1.1 All construction materials that are brought onto the site will be allocated space so they may be properly stored on an even surface and protected from adverse weather conditions. Materials will be stored in a dedicated storage area that is routinely kept clean and tidy in line with good housekeeping measures (thereby preventing slips and trips from poorly stored materials). Where possible ‘just in time’ delivery measures will be implemented on site to prevent damage from poor storage and over handling of materials.
- 5.1.2 All hazardous materials will be kept safe and secure in dedicated (United Nations approved) storage receptacles of an appropriate design. Fuel or oil storage arrangements will fulfil the Environment Agency’s ‘Control of Pollution (Oil Storage) (England) Regulations 2001’ to ensure best practice is applied. The Environment Agency will be consulted where queries exist regarding the legal or regulatory requirements for the storage of hazardous materials.
- 5.1.3 All skips and waste containers will be provided by and managed by the waste management contractor. The number of skips provided will depend on the space available within the waste compound. If space allows for several different skips, they will be labelled (according to waste type) and if possible, colour coded to aid segregation. Waste stream colour coding has been identified by the construction industry as an integral part in raising waste awareness, separating waste at source, reducing the amount of construction waste sent to landfill and providing cost savings to construction companies.
- 5.1.4 The accepted colour coding scheme is as follows: -
- Gypsum - White;
 - Inert – Grey;
 - Mixed – Black;
 - Metal – Blue;
 - Wood – Green;
 - Asbestos – Red;

- Packaging – Brown; and
- Hazardous – Orange.

5.1.5 A waste compound will be identified and retained for that use throughout the construction works. The waste compound will provide secure and dedicated workspace for separate containers and skips, although smaller (portable) waste containers may be additionally provided at the work face. All waste containers will be stored in designated areas and away from thoroughfares and surface water drains.

5.1.6 Each trade contractor will be responsible for maintaining a clean and tidy work area with the prompt removal of waste and other debris. All waste containers will be stored in designated areas and away from thoroughfares and surface water drains.

5.2 HANDLING

5.2.1 Manual handling of wastes will be minimised as far as is practicable. The manual sorting of waste containers or the movement of waste from one container to another will be actively discouraged unless the appropriate Personal Protective Equipment (PPE) is used.

5.3 SEGREGATION

5.3.1 In general terms, segregation aids and improves recovery rates. In practical terms, the level of recovery varies between projects and is dependent on waste that is: -

- Produced in sufficient quantities to make the operating costs of the recovery practice economically attractive;
- Easily segregated on site;
- Significantly higher in value as a segregated waste than as a mixed waste; and
- Produced on a site where local reprocessing options for those waste streams are readily available.

5.3.2 The dedicated waste compound will accommodate a number of skips or waste containers for the key waste streams. If space allows, containers will be provided for all the waste streams set out within Section 6.1.4. However, the appointed waste management contractor will advise on the most appropriate number and labelling of the containers which will be dependent on the available space, the arrangements for collection and the destinations for each waste stream.

5.3.3 In arranging waste containers and determining segregation arrangements, the waste management contractor will ensure the following: -

- Any mixed waste containers are sorted for recycling at a waste facility (although the mixing of waste streams will be actively discouraged);
- Smaller, portable bins are used at the workforce in addition to the containers provided in the main waste compound;
- Waste containers are emptied on a regular basis to prevent overfilling, a lack of space and/or possible contamination of waste streams; and
- Colour coded waste containers (see section 6.1.4) are provided on site which are clearly labelled to illustrate the requirements for waste segregation.

5.3.4 Discussions will be held at an early stage with the appointed waste management contractor regarding their requirements for waste segregation. This will establish how the waste should be sorted, stored, and collected

from site. Once this has been established, the labels and/or colour will be assigned to each waste container to ensure the correct material is placed inside.

- 5.3.5 The location of skips is known to influence the participation of staff in the segregation of different materials. Containers will be located within safe and easy access of work areas, and it will be ensured that operatives do not have to walk long distances to the skips/containers.
- 5.3.6 The full compliance of all site operatives with the rules for segregating wastes prevents the risk of cross contamination between waste streams. The agreed segregation scheme will therefore be enforced using appropriate personnel and monitoring. For example, this may involve a designated member of staff (such as a 'Waste Champion' or the Site Manager) checking skips and other containers on a regular basis to assess and monitor whether segregation is occurring and whether sub-contractors are co-operating. This will identify if problems exist.

6.0 OPERATIONAL WASTE MANAGEMENT

6.1 WASTE TYPES AND QUANTITY

6.1.1 Upon completion of the construction phase, the development at Knights Park will generate a range of household wastes. The types of waste which are predicted to arise following occupation are presented in Table 7 below: -

Table 7: Predicted Operational Waste Types

Waste Type	EWG Code
Paper and cardboard	20 01 01
Glass	20 01 02
Biodegradable kitchen and canteen waste	20 01 08
Clothes	20 01 10
Textiles	20 01 11
Solvents	20 01 13* (hazardous)
Fluorescent tubes and other mercury containing waste	20 01 21* (hazardous)
Discarded equipment containing chlorofluorocarbons	20 01 23* (hazardous)
Edible oil and fat	20 01 25
Detergents other than those mentioned in 20 01 29	20 01 30
Medicines other than those mentioned in 20 01 31	20 01 32
Batteries and accumulators other than those mentioned in 20 01 33	20 01 34
Discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components	20 01 35* (hazardous)
Discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35	20 01 36
Plastics	20 01 39
Metals	20 01 40
Biodegradable waste	20 02 01
Soil and stones	20 02 02
Mixed municipal waste	20 03 01
Bulky waste	20 03 07

6.1.2 It is possible to estimate the amount of household waste which will arise from the completed development of 56 dwellings (maximum number of dwellings that would be built). Predicted average household waste generation rates range from 13.8 to 24.2 kilograms per household per week (kg/hh/wk). This data is backed up by information provided by the Office of National Statistics (ONS) which states that based on an average household size of 2.4 persons per household, an average household produces 1118.4kg of household waste per annum or 21.5kg/hh/wk.

6.1.3 Using the ONS figures of 1118.4kg of household waste per annum it is estimated that approximately 62,630kg of household waste would be generated per annum, which equates to around 1,204kg per week.

- 6.1.4 DEFRA estimates that each person produces 431kg of household waste per annum. Based on an average house size of 2.4 people, this equates to 1034.4kg per household per annum or 19.9kg/hh/wk. For this development, this equates to 57,926kg per annum or 1,113kg per week.
- 6.1.5 It is therefore estimated that the development will generate around 60,000kg of waste per annum.

6.2 WASTE STORAGE AND COLLECTION

- 6.2.1 Uttlesford District Council as the waste collection authority would collect household waste arising from the development. The arrangements for the storage and segregation of household waste within the proposed development would need to accord with the specific requirements of council. The Council provide a green recycling bin, a black general waste bin, a garden waste bin, and a brown food waste caddy. It should however be noted that the garden waste collections require a subscription.
- 6.2.2 The new dwellings will have sufficient internal space to enable householders to segregate their household waste in accordance with the waste contractor's requirements. Externally sufficient space should be provided to enable the storage of three waste bins.

6.3 WASTE MANAGEMENT FACILITIES

- 6.3.1 In addition to the kerbside waste collection service, householders have the option of taking a range of household waste to the local Household Waste Recycling Centre on Thaxted Road in Saffron Walden. This facility is accessed just to the south of the proposed access into the application site and accepts a range of waste and is open every day except Christmas Day, Boxing Day, and New Year's Day. The Council operates a chargeable bulky waste collection service for items such as furniture and white goods. Where items are in good condition or working order, the bring sites and bulky waste collection service will provide an opportunity for them to be sent for reuse or refurbished (prepared for reuse).
- 6.3.2 The range of options for household waste collection and recycling will enable the occupants to send their waste for reuse and recycling. The Council offers useful information on its website regarding the types of waste which are recyclable and non-recyclable. This information will help to minimise the amount of waste which is sent for energy recovery or landfill.

7.0 SUMMARY AND CONCLUSIONS

- 7.0.1 Waste from the development on Knights Park, in Saffron Walden, Essex will be generated from all phases of the project (site clearance, construction, and post-completion). There is a legal requirement to manage this waste sustainably in accordance with the Waste Hierarchy and the Duty of Care.
- 7.0.2 This Site Waste Management Plan aims to demonstrate to the Local Planning Authority at Uttlesford District Council, as well as other key stakeholders, including Essex County Council, how waste arising from the proposed development, both during the construction and post-construction phases, can be managed sustainably.
- 7.0.3 A primary objective of this Site Waste Management Plan is to ensure that all parties involved in the development of the site will manage construction waste in accordance with legislation and sustainable waste management policy and requirements.
- 7.0.4 Waste produced during the day-to-day occupation of the development will comprise household waste from residents. It is proposed that Uttlesford District Council, as the Waste Collection Authority, will collect the household waste from the development. The development will be designed to provide suitable access for refuse collection vehicles and ensure that waste can be safely collected from the kerbside collection points.
- 7.0.5 It will be necessary for the occupant to segregate their waste according to the requirements of the waste management contractor. Sufficient internal and external space will be provided to ensure that the waste produced from the development can be managed effectively and in accordance with legal requirements.
- 7.0.6 The sustainable management of waste has been given a high priority within the design of the development, both in terms of the management of construction waste and the longer-term management of operational waste.

APPENDIX A: WASTE DATA SHEET

Activity and Waste Types	Waste Management Option				
	Reuse (on-site or off-site)	Recycle	Recovery of value (e.g. energy)	Disposal to Environmental Permit exempt site or Waste Recovery Operation	Disposal to landfill
Site Preparation Phase					
Non-hazardous soil	✓			✓	
Inert waste/rubble	✓	✓			
Organic waste		Compost	✓		
Construction Phase					
Concrete (washout)	✓				
Concrete (excess)	✓				
Concrete (hardened)		✓			
Metal (rebar)		✓			
Blocks (excess)	✓				
Blocks (damaged)		✓			
Timber (shuttering)	✓	✓	✓ (biomass)		
Timber (off cuts)		✓	✓ (biomass)		
Timber (pallets)		Return to supplier			
Cement		✓			
Plaster/cement		✓			
Insulation		✓			
Cement (cement board)		✓			
Metal (ferrous off-cuts)		✓			
Metal (non ferrous off-cuts)		✓			
Inert (stone)	✓				
Glass (damaged glazing)		✓			
Fit Out					
Timber	✓	✓	✓		
Plastics (general)		✓	✓		
Plastic (ducting)		✓	✓		
Plastic (vinyl)		✓	✓		
Hazardous (paints, mastic etc)		✓	✓		
Hazardous (solvents)		✓			
Metal		✓			
Ceramic (tiles)	✓				
Inert (stone)	✓				
Plasterboard		Return to supplier			
Insulation (carpet)	✓	✓			
General					
Road sweepings		✓	✓		
Hazardous (used spill kits, asbestos)			✓		✓
Hazardous (oily water)		✓	✓		

Activity and Waste Types	Waste Management Option				
	Reuse (on-site or off-site)	Recycle	Recovery of value (e.g. energy)	Disposal to Environmental Permit exempt site or Waste Recovery Operation	Disposal to landfill
Timber (pallets)		Return to supplier			
Site accommodation/office					
Paper /cardboard	✓	✓			
Canteen oil		✓			
Plastic (cups)		✓			
Cans/glass bottles		✓			
Printer cartridges/toner	✓	✓			
Food waste (i.e. from site canteen)			✓		
Electrical/electronic equipment	✓	✓			
Bulky waste (e.g. furniture)	✓	✓			