

December 16

Site Waste Management Plan

Land South of Newmarket Road, Royston

Countryside Properties (UK) Ltd



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This Site Waste Management Plan has been prepared by **Turley Sustainability** on behalf of **Countryside Properties (UK) Ltd** for the proposed development at Land South of Newmarket Road, Royston.

Client

Countryside Properties (UK) Ltd

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This Site Waste Management Plan sets a framework to mitigate construction and operational waste for the proposed development.

1. Introduction

This Site Waste Management Plan has been prepared for the proposed development at Land South of Newmarket Road, Royston in order to create a framework to mitigate construction and operational waste.

Introduction

The UK Construction Industry is one of the largest consumers of resources, requiring more than 400 million tonnes of material a year. 32% of landfill waste comes from the construction and demolition of buildings and 13% of products delivered to construction sites are sent directly to landfill without being used. Site Waste Management Plans (SWMPs) are therefore very important tools that help to mitigate and manage waste in projects.

This Plan will guide the proposed development in how materials will be managed efficiently and disposed of responsibly during the construction and operational phase of development.

The likely waste streams produced during the construction stage of the proposed development will be identified within this plan.

This Plan shall be retained on site ready for inspection at any time.



Project Information

Countryside Properties (the Applicant) seek planning permission for the proposed development of approximately 325 residential dwellings with associated open space and green infrastructure at Land South of Newmarket Road, Royston. This is a hybrid application with the site wide infrastructure included as detailed.

SWMP Context & Background

A SWMP is used to plan, implement, monitor and review waste minimisation and waste management on construction sites. It is a live document that is regularly updated as new waste data is provided by site and waste contractors.

SWMPs aim to improve resource efficiency within the construction industry in order to reduce the amount of waste produced and recover as much as possible of the remainder. They will achieve this in two ways:

- by requiring those responsible for projects to forecast how much of each type of waste they will produce and to record how much will be reused or recycled;
- by building on the savings in material and disposal costs already secured, to promote the opportunities of preventing or minimising waste at source, i.e. through resource efficient design and construction methods.

Following a comprehensive government review, Site Waste Management Plans are no longer compulsory for construction projects in England (from 1 December 2013). However, a SWMP has been developed to support the Hybrid Application as part of good practice that Countryside Properties are keen to promote on this site.

Given the outline nature of the residential aspect of the application, the full detail of waste amounts within the different streams are unlikely to be available at this stage. The contractor will be therefore be required to update the SWMP at regular stages during the construction process.

The aim of this SWMP is therefore to present a site wide approach to address the key issues associated with sustainable management of waste, throughout the stages of site clearance, design and construction.

Methodology

The development of this SWMP has involved a number of tasks including:

- Policy Review: Review North Hertfordshire District Council and Hertfordshire County Council waste management requirements and policy guidance; and
- Desk-top review that demonstrates management of Construction Waste Management.

Policy Review

A desk top policy review was carried out for this SWMP. The policy review highlights that the following policies should be considered during the proposed development. This can be seen in Appendix 1.

It should be noted that the saved policies under the North Hertfordshire District Local Plan No. 2 with alterations, April 1996 Saved Policies from September 2007 does not refer to waste management.

A review of the Hertfordshire Waste Development Framework (Waste Core Strategy & Development Management Policies Development Plan Document 2011-2026) was also carried out. Adopted in 2012, the Waste Core Strategy sets out the vision, objectives and spatial strategy for waste planning in Hertfordshire up to 2026. In particular:

- Policy 2: Waste Prevention and Reduction
- Policy 12: Sustainable Design, Construction and Demolition.

2. Waste Management

Sustainable waste management can be actively addressed through the planning and design process.

The Waste Core Strategy & Development Management Policies DPD highlights the importance of the waste hierarchy. The waste hierarchy provides a framework where waste management options are set out in priority. Applicable to all waste streams, this enables correct choices to be made when assessing how to deal with waste. In the hierarchy, waste prevention is the most environmentally friendly and disposal the least.

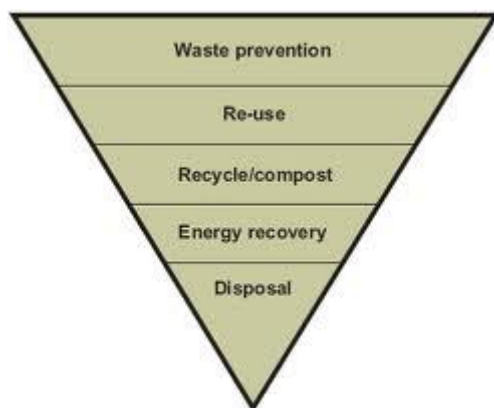


Figure 1: Waste Hierarchy employed in Hertfordshire



The Hertfordshire initiative: Building Futures promotes use of the hierarchy for developments in the county. It promotes:

Waste reduction

By preventing waste before it occurs, money can be saved on the collection, treatment or disposals costs of waste. It also reduced the environmental impact and costs of extracting more raw materials, production and use.

Materials reuse

Reusing products and materials for the same (or alternative) purpose is the next preference. Before a material can be reused it should be assessed for its quality as it may be necessary to make minor repairs or additions before the product can reach the required standard.

Recycling and composting

Recycling involves the collection, separation and processing of wastes to make new products, e.g. newspapers are regularly recycled either to make new newspapers or eco-friendly home insulation. Composting is the same process but

with organic wastes. The aim should be to recycle construction wastes as close to their source as possible as they are typically heavy and bulky to transport.

Energy recovery

Energy from waste incineration recovers a proportion of energy from the waste stream; however, usually much less than by recycling/composting, reusing or reducing the waste generated in the first instance.

Landfill disposal

Disposal is the last option in the waste hierarchy and therefore the aim is to divert waste from this end destination. The only landfill in Hertfordshire currently accepting waste (Westmill in Ware) has permission to continue receiving waste until 2017.

Designing Out Waste

At Newmarket Road, waste management will be incorporated into the design. Where appropriate, materials with a recycled content will be used. Consideration by the design team will also be given to the use of reclaimed materials.

Within the homes, there will be appropriate allocation of recycling storage facilities. Although the details are still to be finalised, recycling will be facilitated by providing sufficient space for waste / recycling storage.

In particular, full consideration by the design team will be given to:

- the location and design of facilities to ensure minimal visual impact and full integration into the scheme design
- access to ensure waste containers can be easily accessed (and moved) by residents and local authority / private waste contractors
- safety to ensure that bins do not obstruct pedestrian, cyclist or driver sight lines

- provision of facilities for composting household waste if appropriate.



Figure 2: Typical recycling bin for residents that may be installed in the new homes

In addition, the welcome packs for the new residents are likely to include local waste collection / recycling details and also that Hertfordshire County Council offers discounted home compost bins to Hertfordshire residents.

North Hertfordshire operates a domestic refuse recycling scheme requiring householder's to separate their waste into the following:

- 180 litre purple wheeled refuse bin for recyclable (residual) rubbish waste;
- 240 litre brown wheeled bin for organic waste;
- 240 litre grey bin for mixed recyclables, such glass, cans etc.;
- 55 litre blue box for Paper.

The layout of the development and properties will have regard to the need to accommodate these refuse store containers within the properties and their curtilages.

Furthermore, provision will be made within the layout to ensure that the Council's refuse lorry will be able to service the development in the normal manner with appropriate servicing bin collection points within the adoptable highways.

3. Construction Waste Management

The following section details the waste management principles that can be adopted during the design and construction stages.



General Good Practice Recommendations

This SWMP should incorporate as many good practice measures as possible to help ensure waste is managed effectively during construction.

During the construction phase of the development, the Principal Contractor should update the SWMP on a regular basis. The contractor should record how waste is actually managed during the course of the construction project.

It is suggested that contractors on site use the BRE Smartwaste Tool or an equivalent, monitoring tool to help to drive good and best practice with regard to resources efficiency and management of waste.

The Principal Contractor should keep the SWMP for two years after the completion of the project at the Principal Contractor's principal place of business or at the site.

The SWMP should:

- Comply with statutory and policy requirements;
- Outline processes to control risks relating to materials and waste on-site;
- Establish a system to help make cost savings by better management of material supplies, storage and handling and better management of the recovery and disposal of waste;
- Deal with queries from environmental regulatory bodies regarding the disposal of waste generated by the project; and
- Enable the Principal Contractor to demonstrate how it manages waste and minimises cost and risks.

The following table outlines the details to be required within the SWMP.

Table 1: Summary of the details required in the SWMP

Actions	Areas
Responsibilities	1. The Client 2. Principal Contractor 3. Consultant drafting SWMP
Description of Construction Works	4. The location of the Construction Site 5. Estimated Cost
Materials Resource Efficiency	6. Decisions before SWMP that minimise amount of waste produced on-site
Waste Management	7. Description of Waste Type 8. Estimation of quantity (where possible) 9. Waste Management Actions
Waste controls & Handling	10. Declaration that all waste produced on site is dealt with in accordance with Local / National policy and Regulations (For e.g Section 34 of the Environmental Protection Act 1990 and the Duty of Care Regulations 1991) 11. Declaration that materials will be handled efficiently and waste managed appropriately.

Updates to SWMP

The SWMP should be updated as often as necessary during the construction stage of the proposed development to give an accurate record of how work is progressing against the waste quantity estimates.

For waste that is reused or recycled on-site, the SWMP should be updated to describe how much of the estimated volume or tonnage has been processed.

For waste that is removed from the proposed development, the SWMP should be updated to record the identity of the person removing the waste; the type (and quantity) of waste; and the site to which it has been taken.

At the end of the project the completed SWMP, containing records of all waste management actions, should be reconciled against what was planned before the work commenced. Regular updating during the proposed works phase should make this a relatively straightforward process.

This Principal Contractor is responsible for the following:

- Promoting awareness of the SWMP among the work force;
- Waste planning including identification of types and European Waste Catalogue (EWC) codes of waste anticipated;
- Monitoring and reporting site waste;
- Monitoring and possibly enforcing waste segregation on-site;
- Monitoring the effectiveness of the building level SWMP;
- Forming a good working relationship with the waste management contractor(s);
- Encouraging suggestions for better waste management on-site; and
- Reviewing and regularly updating SWMP.

The following table outlines some of the roles and responsibilities which different team members should adopt, as part of the SWMP development process.

Table 2: Roles and Responsibilities of Team during the development of the SWMP at Royston

Team Member	Key Roles	Main Responsibility	Other Roles
Applicant	- Promote waste minimisation - Insist on good practice from all other team members - Ensure that all hazardous waste has been identified prior to construction	Duty of care Insistence on good practice	Identification of waste reduction opportunities
Architect	- Consider design options - Promote use of reclaimed elements - Reduce 'bespoking'	Duty of Care Reducing waste production by design	Identification of waste reduction opportunities
Principal Contractor – Site Manager	- Develop site specific waste strategy, implement and communicate to all parties. Monitor implementation - Work with design team - Drive segregation of waste arising's - Facilitate on-site storage compounds/treatment of segregated materials - Designation of working area for waste activities - Reduce waste being brought onto site as packaging etc. - Ensure appropriate storage of waste and containers on-site - Keep proper records of all waste produce/reused/sent off-site - Ensure appropriate off-site transport in line with local regulatory requirements - Identify and confirm all destinations for waste leaving the site	Health and Safety Development of the waste strategy Management of onsite processes and programme Record keeping and Duty of Care	Hazardous waste identification and management
Sub-Contractors	- Development method statements for activities on-site - Liaise with Principal / Main Contractor and agree way forward	Duty of Care Production of Method Statements Ensure all activities under their direct control are managed appropriately	Assist in ensuring on-site practices are safe and would not impact negatively on the environment Ensure that waste area is properly maintained

Site Operations	• Question unsatisfactory practices on-site	Duty of Care	Assist in ensuring on-site practices are safe and would not impact the environment
	• Follow instructions as provided	Ensure all activities under their direct control are managed appropriately	Ensure that waste is segregated as appropriate

Construction Activities Recommendations

Considerate Constructors Scheme

In the first instance, it is recommended that each Principal Contractor registers with the 'Considerate Constructors Scheme' (CCS). This is a national initiative, set up by the construction industry. Sites that register with the Scheme sign up and are monitored against a Code of Considerate Practice, designed to encourage best practice beyond statutory requirements.

The CCS is concerned about any area of construction activity that may have a direct or indirect impact on the image of the industry as a whole. The main areas of concern fall into three main categories: the environment, the workforce and the general public. Waste management is a key area of focus and on-site considerations may include:

- How waste is avoided, reduced, reused, and/or recycled;
- Whether there is a SWMP and how this is monitored; and
- What type of feedback is received (if any) as to how much waste on-site is diverted from landfill.
- It is expected that registered construction sites work in an environmentally conscious, sustainable manner.

Site Preparation and Earthworks

A Construction Management Strategy / Construction Environmental Management Plan should be prepared by the main contractor before work commences for the proposed development. This should outline a

series of strategies, standards, best practice techniques and procedures that will be observed through the construction process in order to ensure compliance with environmental legislation and regulations.

This will help ensure minimal disruption and nuisance from the construction process to the existing communities / workforce in the surrounding area.

Waste arising from site clearance, primary infrastructure and earthworks is likely to comprise at least some of the following: vegetation, topsoil, gravel and clay material.

The SWMP should establish the process for removal of any clean excavated material that cannot be reused on-site. It should stipulate that such material should be removed by licensed waste carriers and sent for reuse at another development site or sent for disposal at appropriately licensed facilities (these are expected to be inert waste landfill sites).

Management of Contaminated Material

Given the greenfield nature of the site, it is unlikely that contamination is present. However during the production of the SWMP the contractor should refer to the Contamination Report submitted with the application.

The SWMP should ensure that contaminated material, if present, that would require removal from the site, is collected by suitable waste carriers and sent for disposal at appropriately licensed hazardous waste facilities.

Raw Materials and Waste

The contractor will need to ensure that the following recommendations of the SWMP are incorporated into their activities. The Contractor should ensure that the location and provision of raw materials and waste storage onsite is clearly labelled, identifying the materials that can be received.

The Contractor should ensure the following measures are implemented on site:

- Files are kept which retain all details relating to the SWMP, health and safety and waste management monitoring and reporting details;
- Storage areas for raw materials and assembly areas for construction components should be located away from sensitive receptors;
- Colour-coded skips/containers should be provided for segregated waste streams for reuse and recycling;
- Dedicated skips should be provided for any waste that requires off-site disposal;
- Hazardous waste materials should be stored in secure bunded compounds in appropriate containers which are clearly labelled to identify their hazardous properties and are accompanied by the appropriate Control of Substances Hazardous to Health (COSHH) assessment sheets; and
- Any fuels, oils and chemicals should be stored in appropriate containers within secure bunded compounds in accordance with good site practice and regulatory guidelines and located away from sensitive receptors.

The Contractor should ensure that effective and secure storage areas for raw materials are provided onsite. This is important as it will help ensure that potential loss of material from damage, vandalism or theft is avoided. These measures should be supported by:

- Ensuring deliveries to the site are, as far as reasonably practicable, on a 'just in time' basis;

- Providing on-site security; and
- Installing temporary security fencing.

The Contractor will, if appropriate, identify temporary site waste segregation areas. These should be provided to ensure construction waste materials are securely stored prior to recycling or disposal. Once appointed, the Contractor should identify and advise on on-site / off-site segregation and or separation of materials as appropriate for the development at Royston.

Implementation of good practice measures in terms of on-site storage and security practices will assist in reducing unnecessary wastage of material and ensure that high standards are maintained throughout the development process.

Construction Waste Arisings

Appropriate targets and objectives should be set by the Contractor in relation to the minimisation of waste and maximising of recycling of any waste materials. This would ensure that a clear action plan is generated for the management of specified types and quantities of materials identified.

The BRE Smartwaste tool has set benchmarks for standard, good and best practice (tonnes of waste / 100sqm) as follows:

Table 3: BRE Smartwaste Tool Benchmarks

	Best Practice	Good Practice	Standard Practice
Residential	<4.2	4.2 – 8.2	>8.2

The benchmarks shown are derived from data from completed projects on the BRE SMARTWaste Plan and measure tonnes of waste/100sqm of floor area. They are based on completed new build construction projects and based on the construction phase only.

These benchmarks or Environmental Performance Indicators (EPI's) can be used to estimate the likely construction waste arisings for the residential elements of the proposed development. Please note

these are estimates only at this stage and will need to be updated by the Contractor at appropriate stages during the construction.

The standard practise benchmark has been used to estimate waste totals in this case: 8.2 tonnes of waste/100sqm of floor area. This estimated volume identified can be lowered through on-site good waste management practice. Opportunities to prevent and reduce the generation of construction waste are detailed in the following sub-sections.

The estimated total waste from all phases of the residential development is estimated below. These waste totals indicate the likely maximum construction waste that could be produced for the residential

aspect of the proposed development. As mentioned, construction waste arisings will be refined within each update of the SWMP by the contractor.

Table 4: Likely maximum estimated Construction Waste Arisings for the proposed development

Units	Total Waste (Standard Practise)
325	2,600 tonnes*

*Please note this estimate is indicative only at this stage due to the outline nature of the application.

Setting Construction Waste Recycling Targets

The contractor will need to ensure that waste minimisation, reuse and recycling is encouraged at all stages on site. Good practise among the contractor will help ensure that waste recycling targets are reached. The contractor will need to confirm the waste recycling target. Currently good practise indicates that contractors should be able to achieve a recycling target of over 70% on site.

This can be achieved by aiming to incorporate some of the following recovery targets on site. The following table provides an overview of the government's Waste and Resources Action Programme (WRAP) Standard, Good and Best Practice recovery rates by material.

Table 5: WRAP Standard, Good and Best Practice recovery rates by material

Material	Standard Recovery * (%)	Good Practice Recovery* (Quick Win) (%)	Best Practice Recovery* (%)
Timber	57	90	95
Metals	95	100	100
Plasterboard	30	90	95
Packaging	60	85	95
Ceramics	75	85	100
Concrete	75	92	100
Inert	75	95	100
Plastics	60	80	95
Misc.	12	50	75
Electrical Equipment	Limited data	70**	95
Furniture	0-15	25	50
Insulation	12	50	75

Cement	Limited data	75	95
Liquids and Oils	100	100	100
Hazardous	50	Limited data***	Limited data***

- * Proposed waste management actions 'Reuse' and 'recycling' are forms of waste recovery.
- ** This is a required recovery target for the type of Waste Electrical and Electronic Equipment (WEEE) likely to be produced from construction sites, e.g. lighting (the WEEE Regulations).
- ***This cannot be 100% as most hazardous waste streams (e.g. asbestos) must be landfilled.

The findings of any site audits would assist in the development of suitable building and or material-specific targets and these should be agreed at the inaugural meetings with the contractors.

To ensure that the system of waste minimisation, reuse and recycling is effective, the Contractor should consider setting on-site waste targets once appointed. These targets along with a suitable programme of monitoring at regular intervals can be set out the updated SWMP and can include:

- Quantification of raw material wastage;
- Waste stream quantities;
- Any improvements in current working practices;
- Methods by which the waste streams are being handled and stored; and
- The available waste disposal routes used, e.g. landfill, waste transfer stations.

Such waste targets will help ensure that high standards are maintained with the emphasis being on continual improvement during the course of the development.

Specific waste quantification and monitoring would assist in determining the success of waste management initiatives employed. Progress against these targets should be relayed back to the Project Team.

The persons responsible for on-site waste management for the development are listed in the table below. This will need to be kept up to date by the Contractor.

Table 6: Likely Responsible Persons for Waste Management at Newmarket Road, Royston

Name	Position	Company

Declaration

The Client and Principal Contractor in charge of the project will take all reasonable steps to ensure that:

1. All construction waste from the site is dealt with in accordance with the waste Duty of Care in section 34 of the Environmental Protection Act 1990(a) and the Environmental Protection (Duty of Care) Regulations 1991(b) and;
2. Materials will be handled efficiently and waste managed appropriately.

Table 7: Signed Newmarket Road, Royston Construction SWMP Declaration

Signed on behalf of the client		Signed on behalf of the Principal Contractor	
Signature		Signature	
Print Name		Print Name	
Date		Date	

Appendix 1: Policy Review

The following list the national and local policy requirements that the proposed development should take into account.

National Planning Policy Framework (2011)

This Framework does not contain specific waste policies, will be included in the national waste planning policy published as part of the National Waste Management Plan for England.

However, local authorities preparing waste plans and taking decisions on waste applications should have regard to policies in this Framework so far as relevant.

Site Waste Management Plans

Following a comprehensive government review of 21,000 regulations on different themes, Site Waste Management Plans (SWMPs) are no longer compulsory for construction projects in England (as of 1 December 2013).¹

They may still be required for BREEAM assessments (albeit – not relevant in this case) or by the local planning authority, and may be considered an environmentally responsible initiative by the main contractor or by the client.

Local Policy

The local documents of relevance to the site are as follows:

- North Hertfordshire District Local Plan No.2 with Alterations (saved policies);

- North Hertfordshire District Council Local Plan 2011-2031 Preferred Options Consultation Paper;
- Hertfordshire Waste Development Framework (Waste Core Strategy & Development Management Policies Development Plan Document 2011-2026.

The Hertfordshire Waste Core Strategy and Development Management Policies require applications to consider waste management and this is addressed below in two parts: Management of waste during the construction phase, and the handling of waste post occupation through the following policies:

- Policy 2: Waste Prevention and Reduction
- Policy 12: Sustainable Design, Construction and Demolition.

The implications of this will be that the contractor will need to minimize the amount of construction waste taken to landfill during the construction phase. For the term of the construction phase a rigorous/positive re-cycling regime will need to be instigated to segregate various materials for recycling.

In relation to post occupancy, the layout of the development and properties will have regard to the need to accommodate the appropriate number and type of refuse store containers within the properties and their curtilages. Furthermore, provision will be made within the layout to ensure that the Council's refuse lorry will be able to service the development in the normal manner.

¹ The Environmental Noise, Site Waste Management Plans and Spreadable Fats etc. (Revocations and Amendments) Regulations 2013.

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