UNIVERSITY OF CAMBRIDGE

North West Cambridge

Future Phases of Eddington

September 2025

Outline Site Waste Management Plan

NORTH-WEST CAMBRIDGE MASTERPLAN

OUTLINE SITE WASTE MANAGEMENT PLAN

PROJECT NO. 24/145 DOC NO. D013

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1.1 PROJECT INTRODUCTION

1.1.1 This Outline Site Waste Management Plan (SWMP) has been prepared by Velocity Transport Planning, on behalf of The University of Cambridge (UoC) (hereafter referred to as 'the Applicant') to support an Outline Planning Application for the redevelopment of the North-West Cambridge Masterplan (NWCM) site (hereafter referred to as the 'Proposed Development') in Eddington, Cambridge.

1.1.2 This Outline SWMP details how overarching waste management processes and practices will be undertaken during the remediation, site preparation, enabling works and construction phases of the Proposed Development. The principles of this report will require updating with further details by the relevant contractors once they are on site.

1.2 PROJECT BACKGROUND

1.2.1 Eddington is the University of Cambridge's response to the need to provide affordable housing for its staff so it can attract and retain top talent to maintain its global competitiveness. By housing staff in a purpose-built, high-quality neighbourhood, the University also reduces the demand on the wider housing market in the city.

1.2.2 By providing 50% of housing for staff and the remainder contributing to increasing the overall supply of housing in the city, the Eddington development supports the highly successful Cambridge eco-system which provides long-term growth and prosperity for the local, regional and national economy.

1.2.3 Importantly however, Eddington is open to all. Eddington combines all the community infrastructure that is needed for a new, growing neighbourhood. The University's investment in the community is evident in the school, nursery, post-doc centre, hotel, supermarket, community centre, sports facilities and parklands as well as homes delivered in Phase 1. The Site will remain under the University's long-term stewardship.

1.2.4 Outline Planning Permission for Eddington was originally granted (application references 11/1114/OUT and S/1886/11) in February 2013 for a residential led mixed use development. The full description of development for that Outline Planning Permission is as follows:

> *'Proposed development comprising up to 3,000 dwellings; Up to 2,000 student bedspaces; 100,000 sq.m. employment floorspace, of which: up to 40,000 sq.m. commercial floorspace (Class B1(b) and sui generis research uses) and at least 60,000 sq.m. academic floorspace (Class D1); up to 5,300 sq.m. gross retail floorspace (Use Classes A1 to A5) (of which the supermarket is 2,000 sq.m. net floorspace); Senior Living, up to 6,500sq.m. (Class C2); Community Centre; Indoor Sports Provision; Police; Primary Health Care; Primary School; Nurseries (Class D1); Hotel (130 rooms); Energy Centre; and associated infrastructure including roads (including adaptions to Madingley Rd and Huntingdon Rd), pedestrian, cycle and vehicle routes, parking, drainage, open spaces and earthworks.'*

1.2.5 Details of the consented development and what has been delivered so far or is under construction is set out in **Table 1-1** below.

Table 1-1 Previous Outline Planning Permission

Use	Quantum Approved	Delivered in Phase 1
Residential	3,000 units (50% affordable housing to meet the needs of Cambridge University key workers, 50% market housing)	Total homes to come forward in Phase 1 = 1,848. 1,121 occupied of these: 686 for University key workers and 435 market homes.
Student Accommodation	2,000 units	325
Employment/Academic Floorspace	100,000 sqm	
Retail	5,300sqm	New Local Centre including supermarket, additional retail units and market square
Senior Living	6,500sqm	
Hotel	130 rooms	Delivered
Primary School	-	Delivered (University of Cambridge Primary School)
Community Centre	-	Delivered (Storey's Field Centre)

1.2.6 The ability to bring forward further residential dwellings under the Outline Planning Permission (through Reserved Matters Applications) expired in 2023. As a result, the University needs to bring forward a new planning application for the Future Phases of the North-West Cambridge Masterplan.

1.3 SITE DESCRIPTION

1.3.1 The NWCM Site ("the Site") is located approximately 2km north-west of Cambridge city centre. The Site is roughly triangular in shape and comprises land between Huntington Road (A1307), Madingley Road (A1303) and the M11. The Site forms part of the emerging settlement of Eddington.

1.3.2 The Site covers a total area of approximately 114 hectares ('ha') and is located across the administrative boundary of South Cambridgeshire District Council ("SCDC") and Cambridge City Council ('CCC') which are therefore the Local Planning Authorities ('LPAs') for the site. The Greater Cambridge Shared Planning Service ('GCSPS') manages planning services on behalf of SCDC and CCC.

1.3.3 The Site predominantly comprises grassland fields, construction areas, and sections of Huntingdon Road (A1307) and Madingley Road (A1303). Barcroft Centre and associated buildings are located within the most northerly extent of the Site, along Huntingdon Road. The Site contains areas of hard standing, including an area utilised for parking to the south of the Site. There are a variety of amenity and green spaces on the Site including swales, ponds, grassland, areas of woodland, hedgerows and individual trees. A storm water recycling system pond, which has never been commissioned, is located along the western edge of the Site.

1.3.4 Traveller's Rest Pit Site of Special Scientific Interest ('SSSI') is located within the eastern extent of the Site.

1.3.5 The Washpit Brook is the closest watercourse to the Site which runs through the Site from southeast to the northwest

1.3.6 Much of the Site comprises topsoil and clay that emerged as a result of development undertaken pursuant to the 2013 OPP at North West Cambridge.

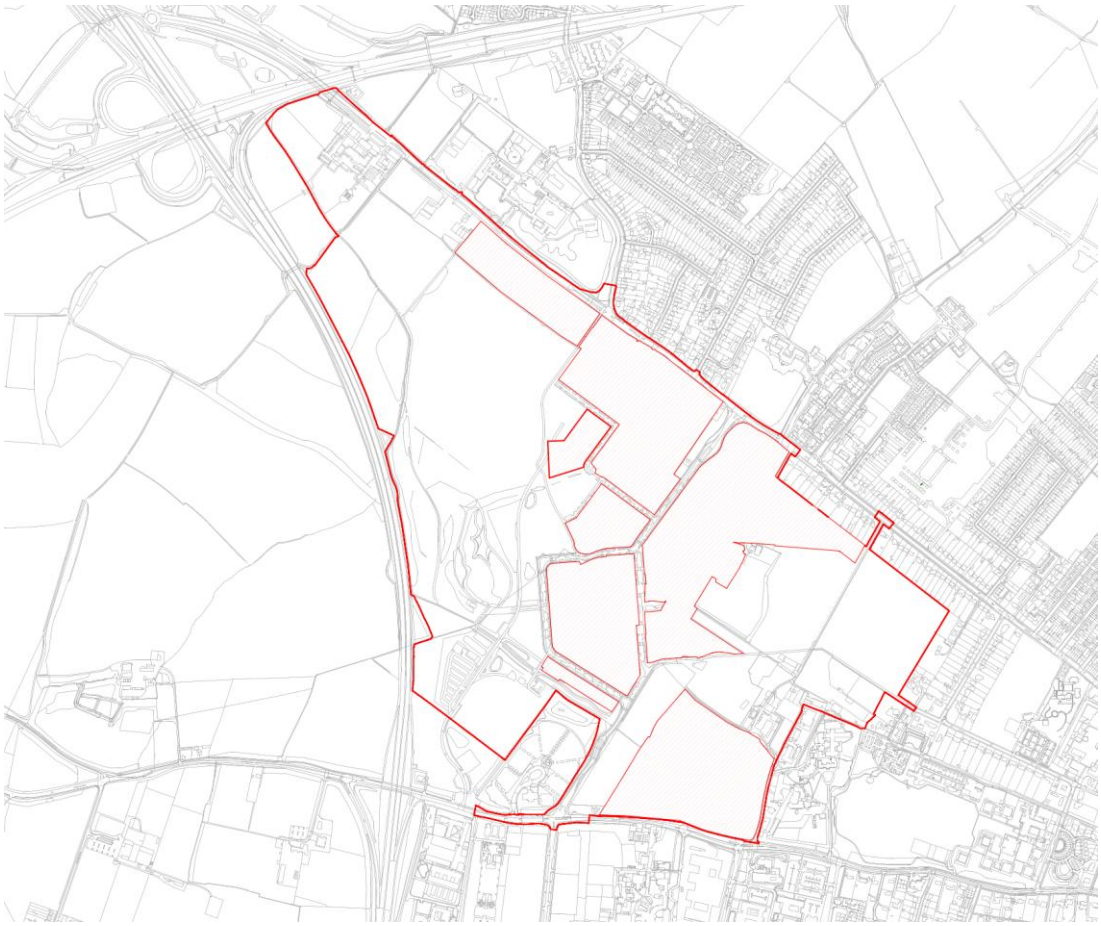
1.3.7 Vehicular access to the site can be gained via either Huntingdon Road to the north or Madingley Road to the south of the Site. Huntingdon Road and Madingley Road are linked via Eddington Avenue, which traverses the south-eastern extent of the site. Pedestrian access can be gained via the same routes. Pedestrian and cycle access can also be gained via Horse Chestnut Avenue and Bunkers Hill (from Huntingdon Road), as well as Storeys Way and Madingley Rise to the east of the site. A Public Rights of Way (Footpath 99/5) crosses the site in the north-west corner, running between Huntingdon Road to Cambridge Road, and crossing beneath the M11.

1.3.8 The Site is bound by:

- A small portion of the A14 to the north, and Girton College, residential properties and agricultural fields which front onto Huntingdon Road (A1307) to the north and north-east;
- Residential properties located along Huntingdon Road, Ascension Parish Burial Ground, Trinity Hall (University of Cambridge student accommodation) and Trinity Hall sports grounds to the east of the Site;
- Madingley Road Park and Ride, Madingley Road (A1303), and residential properties and buildings associated with the University of Cambridge to the south; and
- The M11 motorway to the west, beyond which lies agricultural fields.

1.3.9 The Site location is shown outlined in **Figure 1-1** below.

Figure 1-1 Site Location



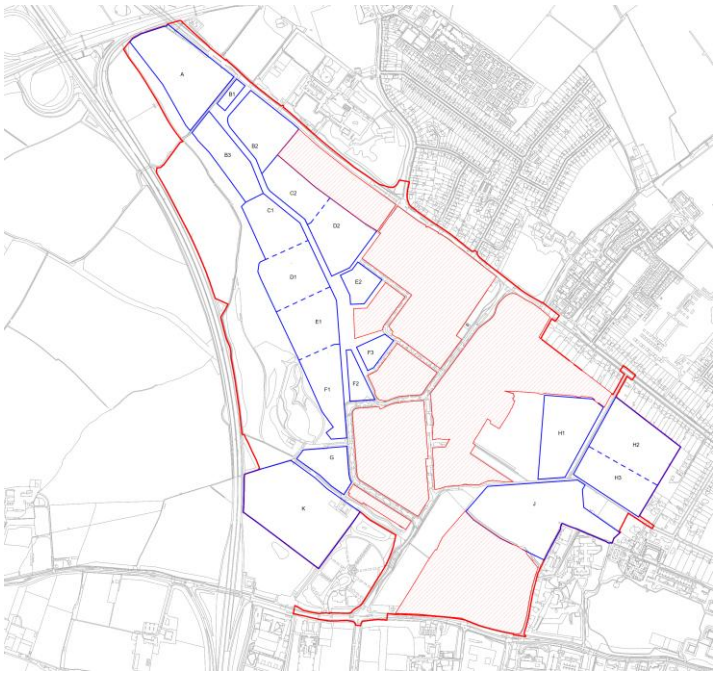
1.4 DEVELOPMENT PROPOSALS

1.4.1 The Applicant is seeking Outline Planning Permission ('OPP') for the future phases of the NWCM. The Outline Planning Application ('OPA') seeks planning permission for:

> *'Outline planning application (all matters reserved except for means of access to the public highway) for a phased mixed use development, including demolition of existing buildings and structures, such development comprising*
>
> - *Living Uses, comprising residential floorspace (Class C3/C4, up to 3,800 dwellings), student accommodation (Sui Generis), Co-living (Sui Generis) and Senior Living (Class C2);*
> - *Flexible Employment Floorspace (Class E(g) / Sui Generis research uses);*
> - *Academic Floorspace (Class F1); and*
> - *Floorspace for supporting retail, nursery, health and indoor sports and recreation uses (Class E (a) – E (f)).*
> - *Public open space, public realm, sports facilities, amenity space, outdoor play, allotments and hard and soft landscaping works alongside supporting facilities;*
> - *Car and cycle parking, formation of new pedestrian, cyclist and vehicular accesses and means of access and circulation routes within the site;*
> - *Highway works;*
> - *Site clearance, preparation and enabling works;*
> - *Supporting infrastructure, plant, drainage, utility, earthworks and engineering works.'*

1.4.2 The configuration of the Proposed Development is shown in **Figure 1-2** below.

Figure 1-2 Proposed Development Configuration (Gateway 3 Plot Boundaries)



1.5 PROPOSED DEVELOPMENT

1.5.1 The Proposed Development comprises an OPA with all matters reserved.

1.5.2 The OPA includes three Control Documents which define the Specified Parameters for the Proposed Development. These Control Documents are – (1) the Development Specification; (2) the Parameter Plans; and (3) the Design Code.

1.5.3 The Parameter Plans indicate which Development Zones may be suitable for which use and therefore manage where the proposed uses could arrive on the OPA Site. The Parameter Plans also identify features such as maximum building heights; areas of green infrastructure; and access and circulation routes. The Parameter Plans are set up to provide a level of flexibility for the detailed design of the scheme at a later date which will need to be approved by the local planning authority through subsequent Reserved Matters Applications ("RMAs").

1.5.4 **Table 1-2** below summarises the components of the application.

Table 1-2 Application Components

Purpose	Document	Description
Controlling Document	Development Specification	Summarises the quantum and uses of the Proposed Development
	Parameter Plans	Controls the physical parameters of future RMAs
	Design Code	Controls the form and detailed design of future RMAs. Includes Design Compliance Checklist
Explanatory Document	Design and Access Statement	Explains the rationale for the design of the masterplan

1.5.5 Future RMA submissions may cover multiple plots and public realm areas or single plots.

1.5.6 The development of NWCM will need to come forward in compliance with this OPA and in particular the Controlling Documents, which include the Parameter Plans, the Development Specification, and the Design Code.

1.5.7 The NWCM Design Code sets out a series of rules and standards which will guide the future phases of the development of the site.

1.5.8 The Parameter Plans submitted as part of the OPA address the limitations and interpretation of the framework for the future detailed design. These plans set out the maximum parameters of the development for which planning permission is sought. The Development Specification defines and describes the principal components of the development, including the minimum and maximum development quantum and uses which is sought for approval.

1.6 NWCM DESIGN CODE

1.6.1 The Design Code (DC) has been prepared in support of the NWCM OPA to provide guiding principles and mandatory design requirements for the future development of the site. The DC should be read in conjunction with the Parameter Plans and Development Specification. Together they provide the primary design requirements for future RMAs.

1.6.2 The DC has been prepared to ensure that the highest standard of design is delivered across the site as individual development parcels are brought forward through a process of phased development. It aims to ensure a consistent and coherent design approach between different parcels, maintaining the overall design ethos for the neighbourhood. The DC should be read together with the supporting Design and Access Statement.

1.6.3 By setting out required levels of design quality, the document aims to provide certainty for the planning authority and other key stakeholders.

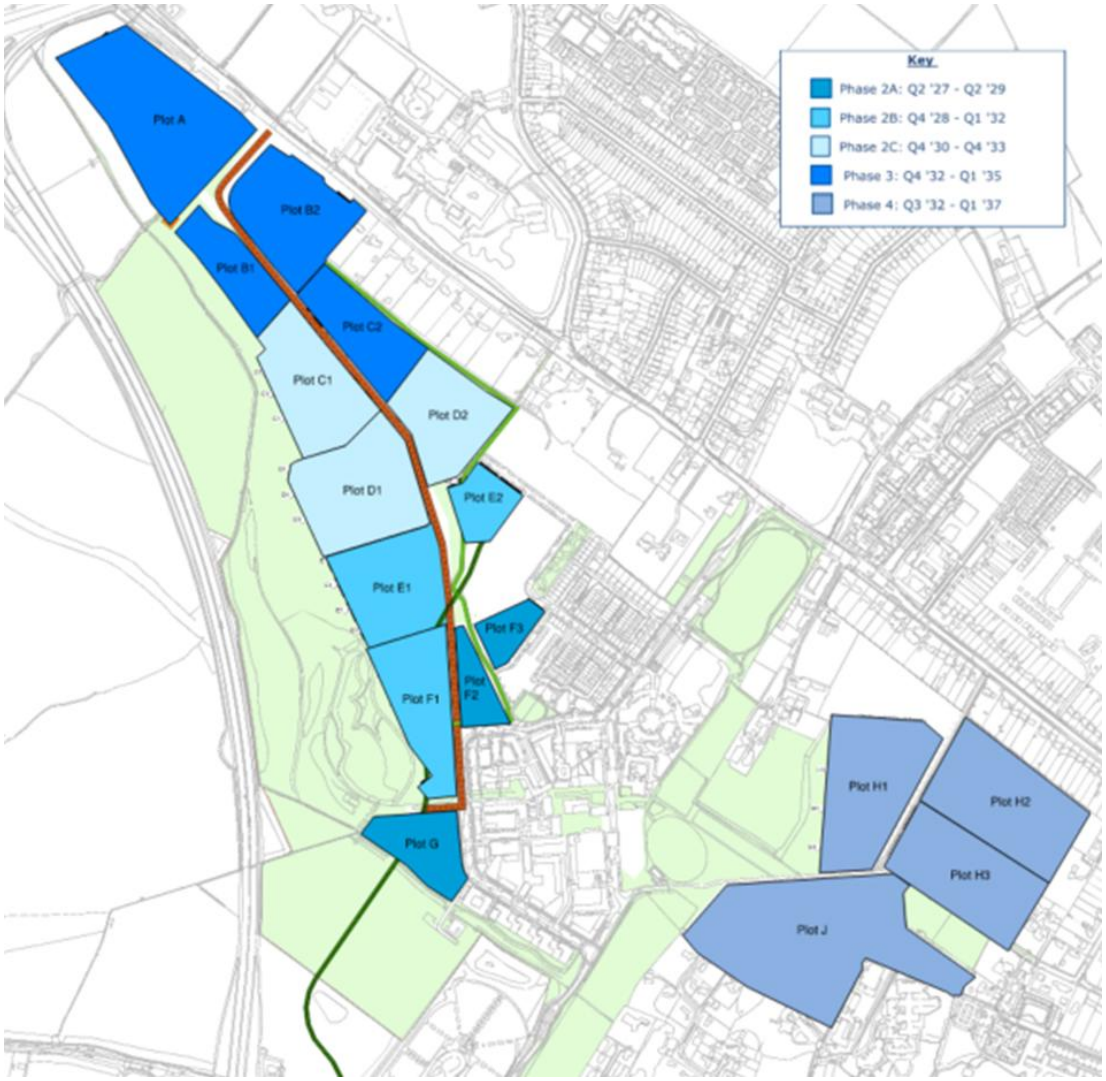
1.6.4 All future RMAs should comply with the relevant elements of the design guidance in this document.

1.7 ANTICIPATED WORKS AND PROGRAMME

SUMMARY OF ANTICIPATED WORKS

1.7.1 It is likely that the Proposed Development will be constructed across three main development phases which are shown in **Figure 1-3** below.

Figure 1-3 Main Development Phases



1.7.2 Each phase is expected to comprise the following key activities:

- Enabling and groundworks;
- Demolition of buildings on site where required;
- Site preparation and construction of infrastructure;
- Construction of buildings and structures including (depending on the phase) residential, sports pitches, and mixed-use non-residential land use; and
- Fit out of properties and landscaping.

1.7.3 The Proposed Development forms part of a wider North West Cambridge Development Masterplan, Phase 1 of which has been constructed as part of a separate planning application and assessment and will be completed by commencement of works associated with this planning application. Therefore, the phasing numbering commences from Phase 2. Phase 2 to 4 are split to reflect the required infrastructure (pumping statement catchment areas) with Phase 2 further subdivided to allow for a more manageable delivery strategy.

PROGRAMME

1.7.4 Enabling, demolition and construction works are anticipated to be delivered in phases over a 10-year period from commencement of construction anticipated to be in 2027 (Year 1) until 2037 (Year 10). Each phase is anticipated to be built in line with the development trajectory shown in **Table 1-3** below.

Table 1-3 Construction Phases

Phase	Plots	Duration (Months)	Start Date	End Date
2A	G, F2 and F3	26	Q2 2027	Q2 2029
2B	F1, E1 and E2	39	Q4 2028	Q1 2032
2C	C1, D1 and D2	36	Q4 2030	Q4 2033
3	A, B1, B2 and C2	28	Q4 2032	Q1 2035
4	H1, H2, H3 and J	56	Q3 2032	Q1 2037

SITE EXCAVATION

1.7.5 The exact method proposed for site excavation will be determined by the Principal Contractor, once appointed, ahead of any works being undertaken on site. It is anticipated that the excavation will be carried out using different types and sizes of excavators, including but not limited to backactors, bulldozers and graders. The works will be closely monitored by a surveyor to ensure that the required formation level is reached and no over excavation occurs.

1.8 SITE CONTROL AND MANAGEMENT PROCEDURES

1.8.1 The proposed development will be brought forward in a number of parcels either individually or concurrently and with one or more contractor's undertaking the works.

1.8.2 Regardless of contract, duration or nature of work, all contractors will be encouraged to minimise waste and maximise recovery and to promote this aspect to all levels of the workforce.

1.8.3 To facilitate this, it is suggested that all contractors include within their site inductions the details for waste management on the site. These inductions may then be further enhanced by tool-box talks.

1.9 CIRCULAR ECONOMY CONSIDERATIONS

1.9.1 This report includes details of the project objectives that have been set based on industry targets informed by prevailing policy.

1.9.2 While the Proposed Development site is not within a London borough and therefore does not need to have direct cognisance of London Plan policies, the Applicant recognises the significance of these documents and wishes to apply those parts relating to waste management wherever possible.

1.9.3 The London Plan Policy SI 7 target will be targeted, which involves 95% reuse/recycling/recovery of construction and demolition waste material streams, and 95% of excavation waste sent for beneficial use.

1.9.4 The University requires that at least 95% of waste be diverted from landfill, with an aspiration of achieving 97%. Of the 95-97% diverted, no more than 30% should be incinerated, with an aspiration of reducing this to no more than 25%.

1.9.5 The University has a zero waste to landfill policy for all wastes they administer. This aspiration may not always be possible with demolition, excavation or construction wastes so accordingly it is confirmed that no more than 5% of demolition, excavation or construction waste will be sent to landfill.

1.9.6 The developer will be contractually responsible for all site waste reporting for the Proposed Development. Specific waste quantification and monitoring will assist in determining the success of waste management initiatives employed on site and progress against targets set should be relayed back to the appropriate stakeholders.

1.10 DOCUMENT STRUCTURE

1.10.1 This report is set out in the following sections:

- **Section 2**: Demolition and Excavation Waste;
- **Section 3**: Construction Waste; and
- **Section 4**: Summary and Conclusion.

2 DEMOLITION AND EXCAVATION WASTE

2.1 INTRODUCTION

2.1.1 This section outlines the estimated waste anticipated to be generated by the site of the Proposed Development during the following stages:

- Enabling works;
- Site preparation;
- Demolition of existing structures; and
- Groundworks.

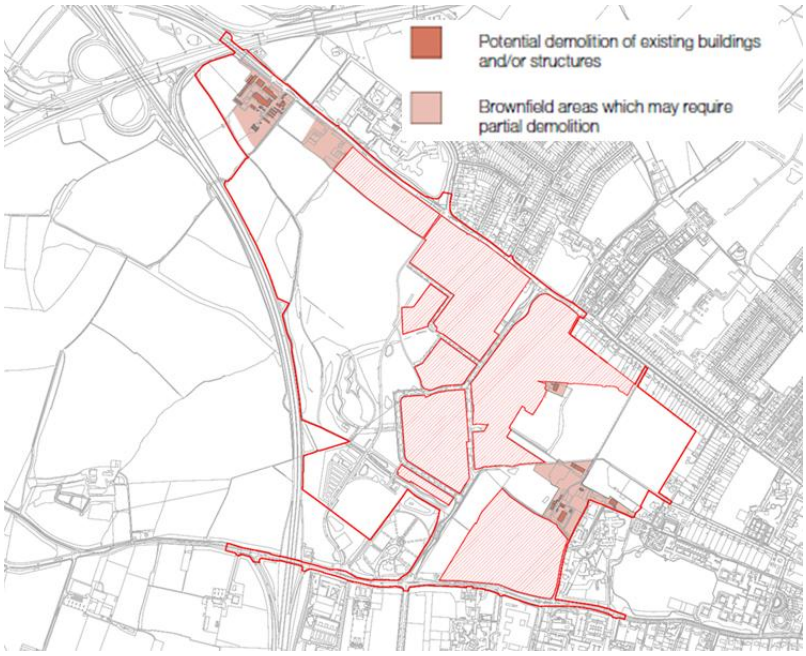
2.1.2 This section has been informed by Chapter 5 of the Environmental Statement.

2.1.3 All estimates should be considered indicative and will require updating by the relevant contractors upon appointment on site.

2.2 ESTIMATION OF DEMOLITION WASTE

2.2.1 There are three main areas of demolition in Phase 3 and Phase 4 as shown in **Figure 2-1** below.

Figure 2-1 Extent of Demolition



2.2.2 **Table 2-1** below provides an estimate of the quantities of material likely to be generated as a result of the demolition works. These quantities are to be considered indicative at this stage.

Table 2-1 Indicative Demolition Quantities

Demolition Material	Demolition Quantities (Tonnes)
Concrete	24,657.9
Mixed Metals	818.1
Bricks	513.6
Bituminous Material	9,286.4
Glass	3.7
Gypsum Based Materials	7.3
Tiles and Ceramics	7.3
Textiles	3.7
Timber	14.7
Plastics	3.7
Asbestos	Not recorded
TOTAL	**35,316.2**

2.3 ESTIMATION OF EXCAVATION WASTE

2.3.1 A site wide cut and fill assessment has been undertaken, which has indicated 172,000m^3 of topsoil material will be removed from site. There will be a further 24,893m^3 of material to be removed for the provision of attenuation tanks for the plots. The material will be removed to storage bunds in the north-west of the site (near to Plot B1)

2.3.2 The excavation and deposition of clay type materials has been designed to balance such that no material of this type is required to be removed from site.

2.3.3 **Figure 2-2** below shows the indicative areas of excavation and infill across the site.

Figure 2-2 Sitewide Cut and Fill Strategy

2.3.4 **Table 2-2** below extracted from Chapter 5 of the Environmental Statement provides an estimate of the excavation waste generated by the Proposed Development.

Table 2-2 Estimated Excavation Waste

Material Source	Excavated Material (m^3)
Cut and Fill	172,000
Attenuation Tanks	25,000
Plot Foundations	170,000
Total	**367,000**

2.3.5 Assuming a conversion rate of 2 tonnes per $1m^3$ material, this equates to **734,000 tonnes** of material in total.

2.3.6 To apply best practice, it is expected that the London Plan Policy SI 7 target will be targeted, which involves 95% reuse/recycling/recovery of construction and demolition waste material streams, and 95% of excavation waste sent for beneficial use.

2.3.7 The intention for the beneficial use of the excavated material is to provide the overall development levels of the development and for screening facilities.

2.3.8 **Table 2-3** below summarises the estimated material generated by the excavation process sent for beneficial reuse.

Table 2-3 Excavated Material Recycling and Disposal

Recycling Targets		Excavated Material	
		Volume (m^3)	Tonnage
% Recycled	95%	348,650	697,300
% Residual	5%	18,350	36,700

2.3.9 It is anticipated that the volume of material will significantly decrease as part of material management works across the site and the structural proposals are refined:

- Methods for optimising foundations will be explored;
- Subject to geotechnical assessment and design non-bored piling methods (silent driven piles / screw piles etc.) will be considered where these do not have adverse environmental impacts; and
- Excavated waste will be reduced by encouraging Plot to Plot re-use to create final platform levels

2.4 MANAGEMENT OF EXCAVATION WASTE

2.4.1 Waste arising from site clearance is expected to comprise of vegetation, bushes and small trees. Where possible, this vegetation will be cut and passed through a chipper for landscaping or composting on site.

2.4.2 Waste arising from the primary infrastructure works and preliminary bulk earthworks will be predominantly subsoil and natural materials including gravels and clay.

2.4.3 It is proposed that any concrete or tarmac excavated on site will be crushed for reuse as secondary aggregate subject to obtaining the necessary permits or sent to an off-site facility for processing.

2.4.4 The Principal Contractor is expected to keep signed waste transfer notes (WTN) or consignment notes to document all the waste disposed of or transferred from the Site, retained for a period in accordance with all prevailing legislation.

2.4.5 Detailed cut and fill investigations and proposals will form part of the future RMAs, and it is expected that the excavated material will not be categorised as waste. This will likely be exported to other nearby development sites where there is a need for 'fill' material, when the materials are physically and chemically suitable for reuse on the receiving site. The material will be offered to the Environment Agency in the first instance for the purpose of constructing or reinforcing flood defences in the area.

2.4.6 Site-wide excavation would be required to re-grade the site, as well as to construct service trenches within the various phases. Substructure works will be carried out on a plot-by-plot basis in line with the phasing programme.

2.4.7 There is potential for unexpected contamination to be encountered during construction works. Should this occur then further Site Investigation works (SIs) may be required to delineate the contamination and any already developed Remediation Strategy would be updated in consultation with Greater Cambridge Shared Planning (GCSP) and the Environment Agency (EA), as relevant. Remediation works would then be undertaken in accordance with the updated Remediation Strategy and the results would be reported within an updated Verification Report.

2.4.8 **Table 2-4** below details the estimated number of vehicles required to remove the material generated during the excavation phases.

Table 2-4 Excavation Material Generation and Vehicle Movements

On-Site Activity	Reused On-Site*	Material Removed from Site	Volume of Material (m^3)	Number of Vehicle Loads if Required **
Removal of cut material to form desired contours and that associated with foundations and pile arisings	No	Yes*	367,000	36,700

** Until chemical and physical properties are established through appropriate testing methods, it is assumed all excavated material is suitable for beneficial reuse elsewhere unless contamination is found.*

*** Assumes 10m^3 volume HGVs carrying 20 tonnes of material*

2.4.9 The excavation process will be undertaken in accordance with environmental best practice, including the management of any contaminants. The exportation of the material for re-use will be assessed in accordance with the CL:AIRE Code of Practice (CoP). In this regard, the objective is to ensure that the excavation process and end use of the material is sustainable. The re-use of the excavated material will be further assessed prior to the commencement of development and will require the preparation of a detailed Materials Management Plan (MMP) for the site. In this regard, it is expected that the MMP will be subject to a planning condition which requires approval from the Local Planning Authority (LPA) prior to the commencement of development.

2.4.10 An investigation into potential contaminated land will take place on-site, followed by a site remediation plan if appropriate. it is assumed that all contaminated ground will be unsuitable for reuse on site and will be removed. Any contaminated material found that requires removal from the Site will be collected by suitable waste carriers and sent for disposal or treatment at appropriately licensed waste facilities.

2.4.11 It is anticipated that a standard condition would be applied to any planning permission that deals with undertaking investigations for contaminated land, site remediation measures, verification, and approval of a remediation plan, as well as informing the LPA of any unexpected contamination discovered.

3 CONSTRUCTION WASTE

3.1 CONSIDERATE CONSTRUCTORS SCHEME

3.1.1 It is expected that the Principal Contractor(s), once appointed, will register their site with the 'Considerate Constructors Scheme'. 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.

3.1.2 The scheme 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 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 Waste Management Plan/Strategy and how this is monitored; and
- The type of feedback received (if any) as to how much waste on-site is diverted from landfill.

3.1.3 It is expected that registered construction sites work in an environmentally conscious, sustainable manner.

3.2 SITE WASTE MANAGEMENT PLAN

3.2.1 As part of a drive to cut red tape, the Government revoked the requirement for Site Waste Management Plans (SWMPs) for construction projects costing over £300,000 as of 1 December 2013 and they are no longer statutory.

3.2.2 However, SWMPs remain good practice during construction and allow waste credits to be achieved under certification schemes such as BREEAM; one will be prepared by the Principal Contractor(s) once appointed, post planning consent.

3.3 ESTIMATED CONSTRUCTION WASTE

3.3.1 During each stage of the construction process there is the potential to generate waste from a variety of means, including the over-ordering or on-site damage of raw materials and construction process waste, such as material off-cuts, packaging, and chemical residues.

3.3.2 Opportunities for minimising construction waste are discussed in this section, considering issues such as reducing waste through selection of more sustainable raw materials and the implementation of effective on-site waste management practices.

3.3.3 The Building Research Establishment (BRE) have produced benchmarks from which to base performance credit allocation construction waste arisings. The Site Waste Reduction Performance metric measures tonnes of waste/100m^2 of floor area.

3.3.4 **Table 3-1** shows the relevant metric for the Proposed Development, chosen as the median value for the range.

Table 3-1 Environmental Performance Indicator

Project Type	Tonnes/100m² GIA	Source
Site Waste Produced from New Build Projects	≤6.5	BRE

3.3.5 **Table 3-2** shows the estimated construction waste arisings for all elements of the Proposed Development, based on the GIA for the Illustrative Masterplan and applied metrics from above.

Table 3-2 Estimated Construction Waste Arisings (Illustrative Masterplan – Schedule 16)

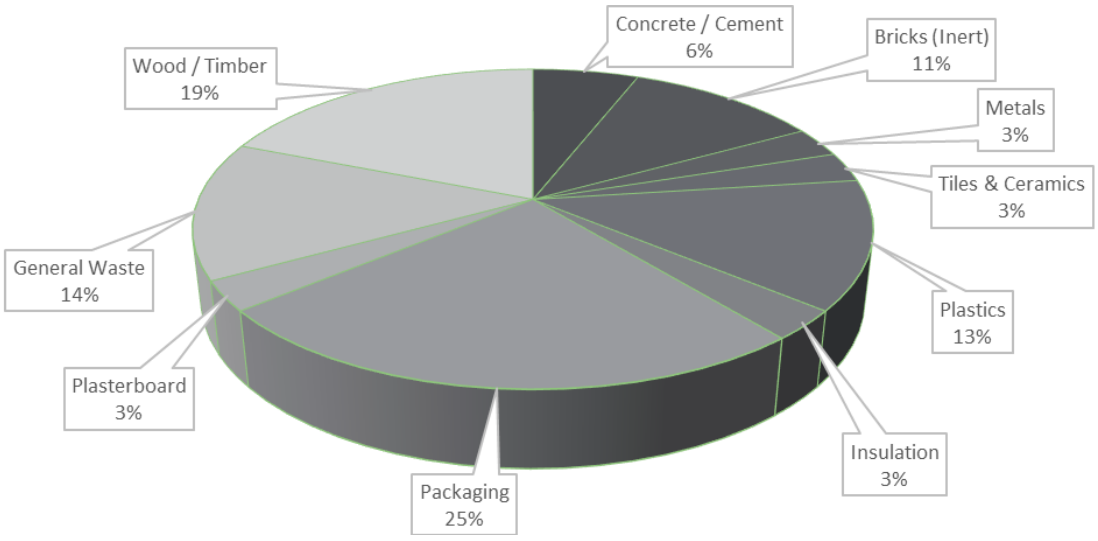
GIA (m²)	Construction Waste (Tonnes)
Up to 524,500	34,094

3.3.6 It is estimated that approximately **34,094** tonnes of waste may arise from the construction phase of the Proposed Development.

3.3.7 It should be noted that the estimated total figure also does not include waste from infrastructure development, such as utilities and pavements, which will add to the total construction waste volume. This is due to the fact that infrastructure development cannot be easily calculated using benchmarking data; and the BRE have no applicable information on this area of construction.

Figure 3-1 illustrates the estimated composition of construction waste arisings for the Proposed Development, based on data from UK construction projects of a similar nature.

Figure 3-1 Estimated Construction Waste Composition (Source: SmartWaste)



3.3.8 **Table 3-3** shows the typical recovery rate of construction materials.

Table 3-3 Recovery Rate of Construction Materials

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	95	100
Inert	75	95	100
Plastics	60	80	95
Miscellaneous	12	50	95
Electrical equipment	Limited information	70 **	95
Furniture	0-15	25	50
Insulation	12	50	95
Cement	Limited information	75	95
Liquids and oils	100	100	100
Hazardous	50	Limited information ***	Limited information ***

** Proposed waste management actions 'reuse' and 'recycling' are forms of waste recovery but excludes energy recovery from waste or other similar disposal methods.*

*** 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.*

3.3.9 Applying best practice, it is anticipated that the Proposed Development would target London Plan Policy of 95% reuse/recycling/recovery of construction and demolition waste, along with 95% beneficial use of excavation waste. The reuse/recycling/recovery of construction and demolition waste focuses on using this waste in a beneficial manner and excludes it from energy recovery or other similar disposal methods.

3.3.10 **Table 3-4** shows the type and volume of waste generated during construction based on the percentages provided in **Figure 3-1**.

3.3.11 The *Best Practice Recovery* values in **Table 3-3** were used to determine the percentage recovered from the construction materials.

Table 3-4 Type and Volume of Waste to be Generated During Construction

Material	Estimated Quantity (Tonnes)		
	Total	Recovered	Disposal
Concrete / Cement	2,046	2,046	-
Bricks (Inert)	3,750	3,750	-
Metals	1,023	1,023	-
Tiles & Ceramics	1,023	1,023	-
Plastics	4,432	4,210	222
Insulation	1,023	972	51
Packaging	8,523	8,097	426
Plasterboard	1,023	972	51
Miscellaneous	4,773	4,534	239
Wood/Timber	6,478	6,154	324
Total	**34,094**	**32,781**	**1,313**

3.3.12 Based on the indicative quantities summarised in **Table 3-4**, the recovery rate for construction waste is estimated to be approximately **96%**.

3.3.13 Construction waste arising will be investigated to determine its reuse potential on-site.

3.3.14 Where reuse on site is not possible, materials will be sent off-site for recycling as summarised in **Table 3-4**.

3.3.15 It is assumed that where it is not possible to reuse or recycle construction waste, contractors will use alternative routes that divert material from landfill, such as reprocessing to feedstock for other industries. This will exclude energy recovery from waste or other similar disposal methods.

3.3.16 It should be noted that typical hazardous materials from construction sites that fall within the Hazardous Waste Regulations include:

- Treated wood, glass, plastic (alone or in mixture) containing dangerous substances;
- Bituminous mixture containing coal tar and other dangerous substances;
- Metals containing oil, coal tar and other dangerous substances;
- Cables containing oil, coal tar and other dangerous substance;
- Rubble or hardcore containing dangerous substances;
- Soil, stones and dredging spoil containing dangerous substances;
- Gypsum materials such as plasterboard containing hazardous materials;
- Unused or unset cement;
- Paints and varnishes containing organic solvents or other dangerous substances;
- Paint or varnish remover;
- Adhesives and sealants containing organic solvent or other dangerous substances; and
- Empty packaging contaminated with residues of dangerous substances e.g. paint cans.

3.3.17 Hazardous waste materials (not including soils) will be stored in secure bunded compounds in appropriate containers which are clearly labelled to identify their hazardous properties and are accompanied by the appropriate assessment sheets.

3.3.18 Any fuels, oils and chemicals that are used will 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 spillage of any fuel, oil or grease will be treated as an emergency with appropriate action being taken to contain the spillage, with clean-up enacted, as per the site's emergency plan.

SUSTAINABLE SELECTION OF CONSTRUCTION MATERIALS

3.3.19 A sustainable materials selection strategy will be prepared prior to the construction of the Proposed Development. Measures will be taken, such as face-to-face 'toolbox talks' and provision of clear operational instructions, to ensure that contractors are committed to the operation of good practice measures on-site with emphasis on continual improvement and identifying appropriate opportunities to reduce waste, promote recycling and use recyclable materials. The ordering of appropriate, minimum amounts of building materials will be part of the materials selection strategy. Prefabricated materials will also be used wherever possible, with further details included within the Circular Economy Statement, for example Cross Laminated Timber (CLT).

SETTING TARGETS FOR REDUCING CONSTRUCTION WASTE

3.3.20 Appropriate targets and objectives will be set in relation to the minimisation, reuse, and recycling of any waste materials during earth works and construction. This will ensure that a clear action plan is generated for the management of specified types and quantities of materials identified for each of the construction stages. These targets will be agreed at the inaugural meeting between the Principal Contractors, the contractors and GCSPS.

3.3.21 The Applicant is committed to the following targets:

- Achieving zero avoidable waste from direct operations by 2030;
- Aim to reuse or recycle 98% of waste by 2025; and
- Reduce construction waste intensity year on year and achieve a 50% reduction by 2026 and an 80% reduction by 2030, compared to a 2023 baseline.

3.3.22 To ensure that the system of waste prevention, minimisation, reuse and recycling is effective, consideration will be given to the setting of on-site waste targets and a suitable programme of monitoring at regular intervals to focus upon:

- Quantifying raw material wastage;
- Quantifying the generation of each waste stream;
- Any improvements in current working practices;
- All persons charged with handling or controlling the waste will be checked to ensure they are Registered Waste Carriers or brokers under the Duty of Care Regulations;
- Methods by which the waste streams are being handled and stored; and
- The available waste disposal routes used, e.g. processors, waste transfer stations.

3.3.23 The Principal Contractors will be responsible for the setting and review of waste targets from the outset of the development process to ensure that high standards are maintained with the emphasis being on continual improvement. Specific waste quantification and monitoring will assist in determining the success of waste management initiatives employed on each construction site and progress against these targets should be relayed back to the appropriate stakeholders.

ACHIEVING REDUCTIONS IN CONSTRUCTION WASTE - PROMOTION OF BEST PRACTICE

3.3.24 As part of the encouragement of on-site best practice, there will also be a need to ensure that suppliers of raw materials to the Proposed Development are committed to reducing any surplus packaging associated with the supply of any raw materials. This includes the reduction of plastics (i.e. shrink wrap and bubble wrap), cardboard and wooden pallets. This may involve improved procurement and consultation with selected suppliers regarding commitments to waste minimisation, recycling, and the emphasis on continual improvement in environmental performance.

3.3.25 **Table 3-5** below summarises the most important mitigation measures to minimise the potential waste of on-site materials during construction. It is important to note, however, that not all construction materials will be provided by local suppliers.

Table 3-5 Measures to Reduce Waste of On-Site Construction Materials

Ordering	Delivery
Avoid: • Over-ordering (order 'just in time') • Ordering standard lengths rather than lengths required • Ordering for delivery at the wrong time (update programme regularly)	Avoid: • Damage during unloading • Delivery to inappropriate areas of the site • Accepting incorrect deliveries, specification or quantity
Storage	**Handling**
Avoid: • Damage to materials from incorrect storage • Loss, theft or vandalism through secure storage and on-site security	Avoid: • Damage or spillage through incorrect or repetitive handling

3.3.26 Where practicable, waste streams that have the potential to be reused on-site or transported off-site for recycling will need to be segregated. Although every effort will be made to retain all suitable materials on-site, it is possible that some of these materials cannot be reused or recycled during the construction process. In these situations, the Site Managers will work to identify a nearby Transfer Station or suitably licensed facility in order for material to be redistributed as fill on other suitable sites. This represents the most sustainable alternative to landfill disposal.

CONSTRUCTION MATERIALS AND WASTE STORAGE

3.3.27 Emphasis will be placed on the provision of appropriate storage conditions for raw materials and key waste streams relating to each development. This will include the segregation of material for reuse or recycling on-site. Where this is not practicable, materials will be segregated for off-site recycling.

3.3.28 The location of the waste storage areas will be clearly labelled, identifying the materials that can be received. Provisions that will be made include:

- Temporary offices and work compounds on-site will retain all details relating to the waste strategy for the site, health and safety and monitoring and reporting details;
- Storage areas for raw materials and assembly areas for construction components will be located away from sensitive receptors;
- Clearly identified containers for segregated waste streams for reuse and recycling; and
- Dedicated skips will be provided for any construction waste that requires off-site disposal.

3.3.29 All waste collected within the waste storage areas should be covered or protected to prevent the ingress of water or the release of dust. The site should be aware of the potential for dust release and should undertake regular monitoring to assess the effectiveness of air and dust control measures undertaken. Any releases of dust should be investigated and rectification measures implemented.

3.3.30 The waste storage area should be constructed on an impermeable base with measures to control the run-off or release of water or liquids from the waste stores. This run-off should be treated as a potentially harmful liquid and disposed of accordingly. It should not be allowed to enter surface water courses or surface drainage systems.

3.3.31 In addition, the provision of effective and secure storage areas for construction materials is important to ensure that potential loss of material from damage, vandalism or theft is avoided. These measures will be supported by ensuring well-timed deliveries to the site, providing on-site security, and installing temporary site security fencing.

3.3.32 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.

TAKE-BACK SCHEMES

3.3.33 Where re-use is not possible, contractors can identify opportunities and encourage on-site teams to use 'take-back' schemes. 'Take-back' schemes (also referred to as 'closed loop') return products and materials directly back to manufacturers for reuse or specialist recycling otherwise unavailable on site.

3.3.34 Returning excess materials to suppliers in this manner maintains materials further up the waste hierarchy.

3.3.35 Identifying opportunities to use a 'take back' scheme will require consideration for site specific constraints, including geographic location and overall footprint.

3.3.36 Packaging materials (particularly during the construction phase) can provide opportunities to use take-back schemes, including:

- Oversized packaging;
- Oversized void fillers; and
- Unnecessary transport protection and strapping.

3.3.37 Take back schemes should only be used if the product/material will be disposed of, or recycled by the manufacturer in a way that is as good as or better (environmentally) than the way the appointed waste contractor for the site would manage the disposal route for the items.

3.3.38 A number of contractors are signed up to use The Pallet LOOP[1] which promotes the reuse of pallets from deliveries to construction sites.

MANAGING TRANSPORT AND TRAFFIC IMPACTS FROM CONSTRUCTION

3.3.39 The logistics associated with construction waste are affected by a wide range of factors. The quantity and types of waste materials generated will fluctuate during the construction phases and the resulting number of waste collections will be dictated by a range of variables, including the amount of storage space for waste, the capacity of waste containers used, the materials segregated for recycling and whether any on-site processes are used for reducing the volume of waste (compactors / balers / shredders etc.).

3.3.40 The Principal Contractors will be expected to provide construction waste logistics forecasts, which will be discussed with waste contractors and GCSPS following appointment of relevant parties.

3.3.41 The impact of traffic associated with the movement of construction and waste materials on surrounding neighbourhoods and the local road network will be minimised by a combination of factors. These include reducing the need to import / export materials; and minimising off-site removal of waste to landfill. Dedicated haulage routes will be agreed with GCSPS to minimise disturbance to local communities.

3.3.42 The Applicant is committed to implementing throughout the construction works to either eliminate or reduce the significant of any likely environmental effects.

3.3.43 The environmental management and mitigation measures will form the basis of the Construction Environmental Management Plan (CEMP) that will be implemented over the duration of the works. The CEMP will likely comprise a number of supporting management plans / documents, for example a Construction Logistics Plan (CLP).

[1] *The Pallet Loop* https://www.thepalletloop.com/

4 SUMMARY & CONCLUSION

4.1 SUMMARY

CONSTRUCTION WASTE

4.1.1 During each stage of the construction process there is the potential to generate waste from a variety of means, including the over-ordering or on-site damage of raw materials and construction process waste, such as material off-cuts, packaging, and chemical residues.

4.1.2 BRE metrics have been used to estimate the tonnage of construction waste produced from the new-build elements of the Proposed Development. The site waste reduction performance target measures tonnes of waste/100m^2 of floor area.

4.1.3 It is estimated that approximately 34,094 tonnes of waste may arise from the construction of the Proposed Development, assuming best practice performance is realised.

4.1.4 It should be noted that the estimated total figure does not include waste from infrastructure development, such as utilities and pavements, which will add to the total construction waste volume. This is due to the fact that infrastructure development cannot be easily calculated using benchmarking data; and the BRE have no applicable information on this area of construction.

4.1.5 Where it is not possible to reuse or recycle construction waste, contractors will be expected to seek routes that divert material from landfill, such as take back schemes and re-processors. Beneficial use of the removed material should always be the highest priority.

4.1.6 Hazardous waste materials (not including soils) will be stored in secure bunded compounds in appropriate containers which are clearly labelled to identify their hazardous properties and are accompanied by the appropriate assessment sheets.

4.1.7 Any fuels, oils and chemicals that are used will be stored in appropriate containers within secure bunded compounds in accordance with good site practice and regulatory guidelines and located away from sensitive receptors.

4.1.8 Appropriate targets and objectives will be set in relation to the minimisation, reuse, and recycling of any waste materials during earth works and construction. This will ensure that a clear action plan is generated for the management of specified types and quantities of materials identified for each of the construction stages. These targets will be agreed at the inaugural meeting between the Principal Contractors, the contractors and GCSPS.

4.1.9 The Principal Contractors will be responsible for the setting and review of waste targets from the outset of the development process to ensure that high standards are maintained with the emphasis being on continual improvement. Specific waste quantification and monitoring will assist in determining the success of waste management initiatives employed on each construction site and progress against these targets should be relayed back to the appropriate stakeholders.

4.1.10 Emphasis will be placed on the provision of appropriate storage conditions for raw materials and key waste streams relating to each development. This will include the segregation of material for reuse or recycling on-site. Where this is not practicable, materials will be segregated for off-site recycling.

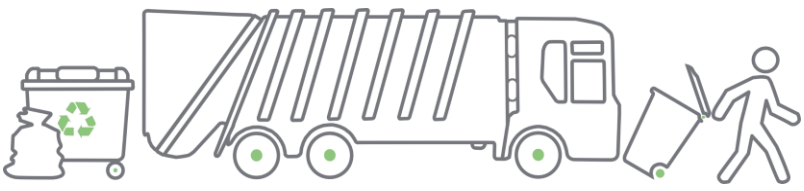
4.1.11 The Principal Contractors will be expected to provide construction waste logistics forecasts, which will be discussed with waste contractors and GCSPS following appointment of relevant parties.

4.1.12 The impact of traffic associated with the movement of construction and waste materials on surrounding neighbourhoods and the local road network will be minimised by a combination of factors. These include reducing the need to import / export materials; and minimising off-site removal of waste to landfill. Dedicated haulage routes will be agreed with GCSPS to minimise disturbance to local communities.

CONCLUSION

4.1.13 This Outline SWMP has considered the need to lessen the overall impact of waste generation through recycling of materials from the construction phase of the Proposed Development.

4.1.14 The proposals set out in this strategy meet the requirements of relevant waste policy and follow applicable guidance.



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