

Site Waste Management Plan

Enderby Place, Greenwich

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Prepared for
Maritime View Ltd.



Prepared for:
Maritime View Ltd.

Prepared by:
Markides Associates
2nd Floor, The Bridge
73 – 81 Southwark Bridge Road
London SE1 0NQ
United Kingdom

T: +44 (0)20 7442 2225
E: info@markidesassociates.co.uk
W: markidesassociates.co.uk

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1. Introduction

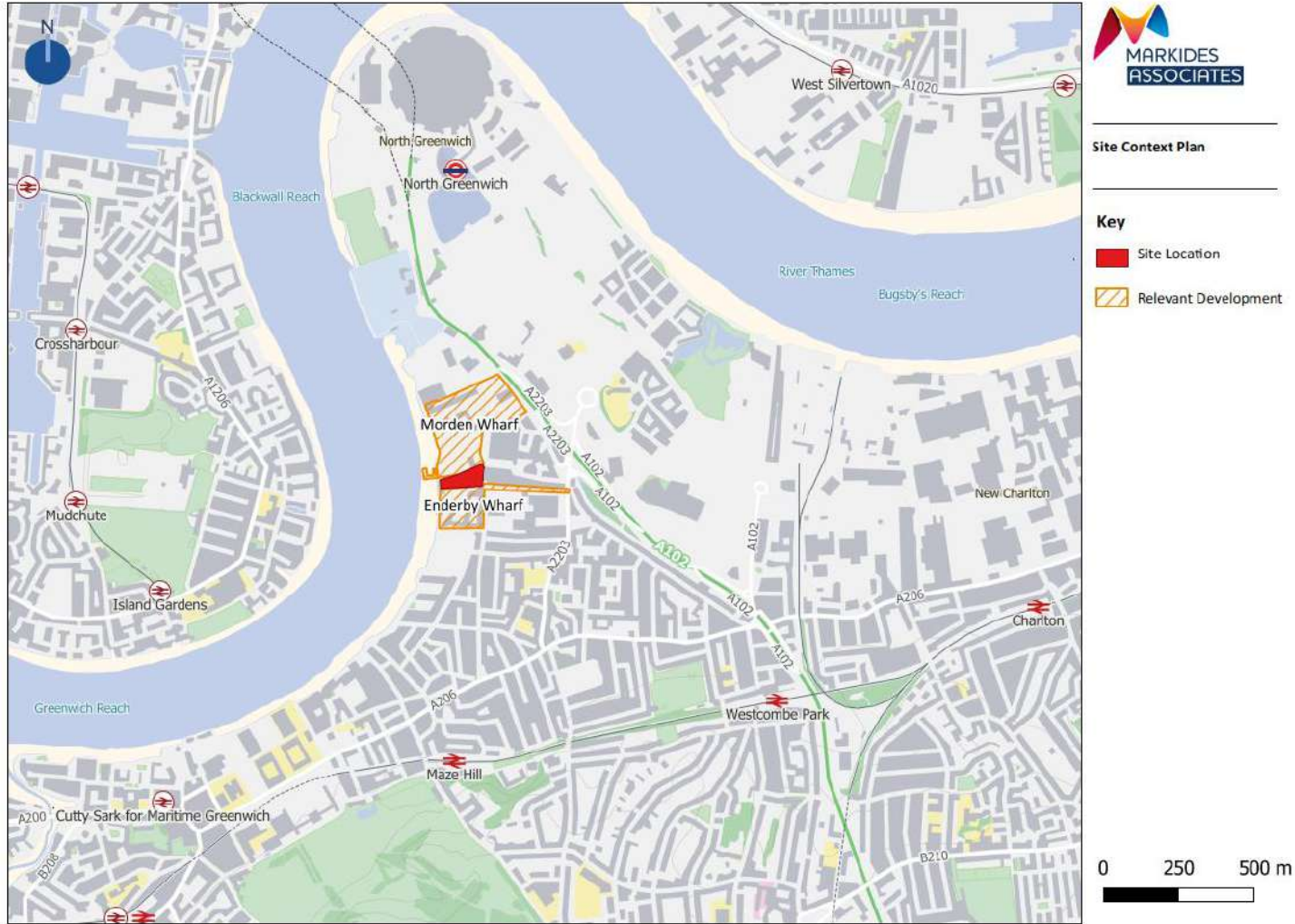
1.1 Overview

- 1.1.1 This Site Waste Management Plan (SWMP) has been prepared by Markides Associates (MA) Maritime View Ltd. ('the applicant') in support of an application for re-development of Enderby Place ('the site'), adjacent to Morden Wharf in the Royal Borough of Greenwich (RBG). RBG are both the planning and highways authority.
- 1.1.2 The proposals comprise the erection of part-3, part-23, part-35 storey buildings, providing up to 564 residential apartments (Class C3), light industrial (Class E(g)(iii)) and community / café use (Sui Generis), and associated highways, landscaping and public realm works.

1.2 Site and Planning Context

- 1.2.1 The site is currently unoccupied, formerly occupied by the now-demolished Submarine Cable Works. As such it currently has no formal land use status but could otherwise be considered B2/B8 industrial.
- 1.2.2 The site has planning permission (planning ref: 15/0973/F) for some 477 homes, a cruise line terminal with commercial floorspace, retail uses and associated works. This scheme has been implemented and could be built out.
- 1.2.3 It is bound to the north by land which has planning permission for a development known as Morden Wharf, separated by a Historical Retaining Wall and light Industrial warehouses to the northeast. The river Thames bounds the site to the west along with the Thames Path walking and cycling route. The site is bound to the south by Telegraph Avenue and Telcon Way, which form the main access for all modes to the site.
- 1.2.4 South of Telegraph Avenue is a completed mixed-use development identified as Enderby Wharf, with the grade listed Enderby Public House retained and situated at the western end of Telegraph Avenue. Telegraph Avenue itself forms a non-vehicular cul-de-sac, providing pedestrian and cycle access to the Thames. The site context is shown diagrammatically in **Figure 1.1** overleaf.

Figure 1.1 Site Context Plan



- 1.2.5 As shown in the figure above, there are two relevant developments neighbouring the site which are summarised in **Table 1.1**.

Table 1.1 Local Planning Context

Site	Description of development	Status
Morden Wharf GLA Ref: 2020/6043/S1 LPA Ref: 20/1730/O	Outline permission for demolition of most structure and phased mixed-use redevelopment comprising: up to 1,500 residential dwellings; up to 17,311sqm GIA commercial floorspace (Class A1/A2/A3/A4/B1/B1c/ B2/B8/D1/D2); Full planning permission for change of use of part of the Southern Warehouse from Class B1c/B2/B8 to B1c/B2/B8/A3/A4; refurbishment (including mezzanines) and external alterations to part of the Southern Warehouse; change of use of the Jetty to public realm and installation on the Jetty of Gloriana Boathouse (use class D1/D2); access; landscaping and public realm works including new river wall and upgraded Thames Path	Granted 16/12/2020, not implemented
Enderby Wharf 10/3063/F	Originally: Redevelopment of the site comprising a new jetty for cruise liners and the Thames Clipper, a Cruise Liner Terminal, a 251 room hotel with conference, restaurant ancillary facilities (Use Class C1); skills academy (Use Class D1); 770 residential units (Use Class C3); commercial (Use Class B1); a crèche (Use Class D1) a gymnasium (Use Class D2); conversion and extension of Enderby House to provide tourist, community and retail facilities (Use Classes A1, A3, A4, B1, D1 and D2); and associated works.	Originally Granted 30/04/2012 Built

- 1.2.6 The Enderby Wharf proposals were revised twice in 2014 (13/3025/NMA) and 2015 (15/0973/F) respectively. The changes comprised of reductions in parking, changes to the residential mix, and increasing the size of the cruise liner terminal building.
- 1.2.7 The Enderby Wharf Application also included the land to which this report and new application relates to. The land was subsequently sold and is now wholly separate to the Enderby Wharf development. Enderby Wharf has implemented planning permission for 477 residential units (increasing from 93) (Use Class C3), retail, restaurants and cafes and drinking establishments (Use Classes A1, A3 and A4), vehicular access with associated servicing facilities, car parking, landscaping, public realm (including improvements to the Thames Path), play spaces, infrastructure and associated parking.

1.3 Purpose of Report

- 1.3.1 The proposals are at the application stage and therefore this report forms a **framework document**. This is a 'live' document and will be subject to update following any planning

approval and the appointment of a Main Contractor. It is expected that this SWMP will be secured through condition.

1.3.2 This Site Waste Management Plan deals with waste management for the demolition and construction phases associated with the development. This SWMP demonstrates how the construction impacts of the development will seek to minimise waste.

1.3.3 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 the 1st of December 2013 and they are no longer statutory. 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.

1.4 Associated Reports

1.4.1 The following Transport Reports have also been prepared as part of this application:

- A Transport Statement (Document ref: 22181-MA-DR-TA01).
- A Framework Workplace Travel Plan (Document ref: 22181-MA-DR-TP01).
- A Framework Delivery and Servicing Management Plan (Document ref: 22181-MA-DR-DSMP01).
- A Framework Construction Logistics Management Plan (Document ref: 22181-MA-DR-CLP01).

1.4.2 These documents should be consulted in tandem with this report.

1.5 Structure of the Report

1.5.1 The remainder of this SWMP, for which this chapter has provided an introduction, is structured as follows:

- **Chapter 2** – estimate of the forecast waste inasmuch as can be determined at the time of writing this Framework.
- **Chapter 3** – details the proposed waste management techniques.
- **Chapter 4** – outlines the duties and responsibilities of adhering to this SWMP.
- **Chapter 5** – provides details of other measures for the management, monitoring and control of waste associated with the development.

2. Expected Waste Streams

2.1 Preamble

2.1.1 This section sets out an estimate of the forecast waste inasmuch as can be determined at the time of writing this Framework. As stated, this is a 'Live' document and estimates will be updated in due course following the appointment of a Main Contractor and more detailed information on the build method is available.

2.2 Demolition Waste

2.2.1 The previously standard WRAP tool is no longer operational and there is no other publicly available alternative.

2.2.2 The exact volume of structure to be demolished, the quantum and type of waste to be removed and the rate of recovery/recycling will be calculated at a later stage, following appointment of a Main Contractor and determination of a Demolition Method and associated Build Method.

2.3 Excavation Waste

2.3.1 There is no existing basement on the site; however, a small basement is proposed. The exact volume of basement and associated excavation will be calculated at a later stage, following appointment of a Main Contractor and determination of a Demolition Method and associated Build Method.

2.4 Construction Waste

2.4.1 The Building Research Establishment (BRE) has developed indicators to aid in the calculation of construction waste arisings at the design of a new development. The Environmental Performance Indicator (EPI) measures tonnes of waste/100sqm of floor area. **Table 2.1** shows the relevant EPI for the Proposed Development, sourced from the BRE Waste Benchmark Data (issued June 2012).

Table 2.1 EPI Factors

Use	Tonnes per 100sqm GIA
Industrial	14.0
Residential	16.8

2.4.2 The estimated construction waste arisings for the development are therefore based on indicative gross internal area (GIA) and the applicable BRE waste benchmark. It should be noted that only one benchmark is applied per floor and these figures will be subject to further refinement. The estimates are given in **Table 2.2**.

Table 2.2 Estimated Construction Waste

Floor	GIA (sqm)	BRE Benchmark	Construction Waste (Tonnes)
Industrial	1,445	14	202
Residential	51,160	16.8	8,595
Total	52,605		8,797

2.4.3 It is estimated that approximately 8,797 tonnes of waste may arise from the construction of the Proposed Development.

2.4.4 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.

2.4.5 The granular composition and expected recovery rate of waste will be determined at a later stage, following the appointment of a Main Contractor and confirmation of the build method.

2.5 Hazardous Waste

2.5.1 Hazardous waste is to be placed in the correct Hazardous waste receptacle, for disposal by relevant companies. The Site Manager will check items of waste prior to collection to confirm whether the waste is hazardous, and wherever possible render it non-hazardous for removal in general waste skips.

2.5.2 Hazardous waste produced by the Contactors and their subcontractors is to be removed off site by the contractor and his supply chain in accordance with the hazardous waste regulations. Their procedure for complying with these regulations, including details of carriers and disposers, is to be submitted to waste coordinator for inclusion within the SWMP prior to removal.

2.5.3 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. Waste Management Techniques

3.1 Designing Out Waste

3.1.1 At the design stage there is a great deal that can be done to design out waste. WRAP have released detailed guidance on this approach to waste management and it is summarised below.

3.1.2 The scheme will seek to design out waste at source using the following measures:

- **Reuse and Recovery** - Demolition waste should where possible be reused in the design. An obvious example here might be the use of recycled concrete aggregate (RCA) for hardcore where it is of sufficient quality. Where possible, components and products that have are reclaimed would be a favorable choice. Materials should be re-used where possible at their highest value, for example use of reclaimed blocks or bricks in their higher value form is preferable to using them crushed as part of imported RCA. Excavation materials where possible should be used on site, whether this is in landscaping or other fill activities.
- **Potential for Off-Site Construction** - The benefits of off-site factory production in the construction industry are well documented and include the potential to considerably reduce waste especially when factory manufactured elements and components are used extensively. To that end the design team should explore the possibility of any parts of the design that may lend itself to off-site construction. In this instance it may be useful to view site activities as assembly rather than construction. This recommendation will be taken forward at the detailed design stage.
- **Materials Optimisation** - The form and layout of the building should be simplified as far as is practical without compromising the design concept. The design should be coordinated to avoid excess cutting and jointing of materials. Off-cuts create waste, where possible designed to standardized material dimensions. This would also apply to bespoke structural elements such as form work, where repetition of measurements should be encouraged where possible.
- **Waste Efficient Procurement** - The design team should employ principles underpinning Waste Efficient Procurement. It is understood that the WRAP Net Waste Tool has now been superseded; however, consideration should still be given to the principle and to any tool which has now taken the WRAP tool's place.

3.2 Waste Prevention

3.2.1 The scheme will seek to prevent waste using the following measures:

- **Avoiding Excessive Packaging** - Avoid excessively packaged materials and supplies. However, be sure packaging is adequate to prevent damage and waste. If the contractor is unhappy with the amount of packaging on delivered goods it should be sent back in the lorry to the merchants / suppliers. Pallets, for example where practical should be returned to the supplier or preferentially sourced through a green Loop system.
- **Cutting Materials** - Construction Site Staff should be trained in these waste reduction techniques, the old adage “measure twice cut once” is often overlooked in a pressurised construction environment but can help reduce wasted materials. Large plasterboard scraps can be set aside during hanging for use as filler pieces in areas such as closets.
- **Just in Time Delivery** - Just in Time Delivery can be used to minimize the over ordering of materials, ordering large volumes of unitized construction materials such as bricks, blocks, and tiles can lead to wastage. Having large volumes of materials lying dormant on site can lead to damage from traffic movements (forklifts and tele-handlers) and spoiling from weather. The building method should seek to minimise the need to store materials on site as much as feasible.
- **Arrangements with Suppliers** - Make arrangements / agreements with suppliers that unused items can be returned.
- **Care of materials** - Cover over materials that are susceptible to damage from rainwater. Make sure someone is there to receive deliveries and make sure they are covered properly. Order cement in waterproof bags to reduce spoilage, building sand should be covered to avoid spoilage from animal fouling, and excessive moisture content when used in mortar.

3.3 Waste Reduction

3.3.1 The scheme will seek to reduce waste using the following measures:

- **Setup Cut Area** - By having trade men / contractors cut all materials in one place they will be able to see and use off-cuts, this avoids useable off-cuts being left in discrete locations (i.e., rooms) out of view.
- **Divert reusable material to reclamation** - Bricks, Blocks, Paving Slabs, Slates, Tiles will have a commercial value to a local reclamation merchant, contact such individuals and try to negotiate the diversion of your waste stream to them.
- **Reuse of fill material** - Aggregates are bulky and costly to dispose of, where possible stockpile aggregates sources from demolition for reuse as subbase for roads etc.

3.4 Segregation and Recovery

3.4.1 The scheme will seek to enable the recovery of waste either on or off-site using the following measures:

- **Waste Segregation** - Segregation of wastes should be encouraged by site management. Bins and skips should be clearly labeled.
- **Off-Site recovery** - There are various activities which can be classed as recovery, landscaping, bunds, etc. Careful records of waste dispatched to activities claimed as recovery should be kept. Waste that cannot be proven as being sent for recovery will ultimately count as disposal.

4. Duties and Responsibilities

4.1 Overseeing Waste

- 4.1.1 All waste leaving site should be accompanied by a waste transfer note. Similarly, all waste arriving on site should come with a waste transfer note. Contractors should check if the person can take it and ask them to produce evidence that they are authorised to carry waste. If they cannot do this, then the contractor should not give them their waste and should contact the Environment Agency.
- 4.1.2 Alternatively, the contractor can check if a company is registered as a waste carrier on the Environment Agency "Public Access" Database. Transfer notes must include a description of the waste and be signed by both site management and the recipient of the waste, with copies of transfer notes retained for a minimum of two years. The recipient and contractor declaration are signed on the transfer note to indicate that the waste management hierarchy of options has been applied. Where recovery or reusing proof (diversion from landfill for example) is required, evidence should be requested of the waste's end destination.

4.2 Key Stakeholders

- 4.2.1 It is important that key stakeholders within the project take responsibility for the adoption of this plan. Main Contractor will be responsible for identifying one or more named individuals whose contact details (name, role, contact telephone number and email address) will be added to this report in time for issue to LBE.
- 4.2.2 The Main Contractor will appoint at a minimum a Site Manager who, in the absence of any other delegated role, will assume the responsibility for the SWMP and act as Construction Environmental Manager. These duties are summarised below:

Site Management in relation to this SWMP

- Ensure that all procedures within the SWMP are followed.
- Ensure contractors are suitably trained and qualified in dealing with the SWMP and environmental issues.
- Ensure that all legal and contractual requirements relating to the SWMP, and environment are met by ensuring adequate plans/procedures, licenses and certificates are in place, and that they can be achieved.

Construction Environment Manager Duties

- Liaise with statutory and non-statutory consultees and interested parties as required.
- Report to the Site Manager (where a separate body) to ensure that any actions taken for contractual reasons do not have environmental implications prior to instruction.
- Liaise with the Site Manager (where a separate body) to ensure that all legal and contractual requirements relating to this SWMP, and the environment are met by

ensuring adequate plans/procedures, licenses and certificates are in place, and that they can be achieved.

- Carry out regular reviews of the main contractor's Quality Management Systems audit findings. The main contractor is required as part of the contractual arrangements to establish procedures for the regular review and recording of the quality of the works.
- Maintain a good relationship with neighbouring residents, businesses and the local authorities on all issues relating to the SWMP and environment.
- Ensure that all members of staff and employees have received appropriate training to enable them to meet their environmental management obligations, by reviewing all staff (Main contractor) training records.
- Monitor the quality of the work carried out by all other staff members, including landscape architects and ecologists, to fulfill the environmental requirements of the contract.
- Report compliance with the SWMP.
- Maintain records relevant to this SWMP.

5. Updating, Monitoring, and Declaration

5.1 Updating

5.1.1 This plan is a Live document and will be subject to revision and update throughout the life of the project. It is expected that it will be secured by condition to any planning approval. Following the appointment of a Main Contractor following approval, this SWMP will be reviewed against the detailed construction management plan, the industry specialist tools presently in use, and all figures and estimates within the report updated. Additional details will be provided pertaining to the following, not exhaustive list:

- The type of waste produced;
- How waste will be disposed of;
- The name of the waste carrier is and their registration number; and
- The address and environmental permit or exemption number of the site where waste will be taken.

5.1.2 In addition, the following actions are necessary to maintain the plans validity (taken from (Repealed) The Site Waste Management Plans Regulations 2008);

- When any waste is removed the principal contractor must record on the plan:
 - (a) the identity of the person removing the waste;
 - (b) the waste carrier registration number of the carrier;
 - (c) a copy of, or reference to, the written description of the waste required by section 34 of the Environmental Protection Act 1990; and
 - (d) the site that the waste is being taken to and whether the operator of that site holds a permit under the Environmental Permitting (England and Wales) Regulations 2007 or is registered under those Regulations as a waste operation exempt from the need for such a permit.
- As often as necessary to ensure that the plan accurately reflects the progress of the project, and in any event not less than every six months, the principal contractor must:
 - (a) review the plan;
 - (b) record the types and quantities of waste produced;
 - (c) record the types and quantities of waste that have been—
 - (i) re-used (and whether this was on or off site);
 - (ii) recycled (and whether this was on or off site);
 - (iii) sent for another form of recovery (and whether this was on or off site);
 - (iv) sent to landfill; or
 - (v) otherwise disposed of; and
 - (d) update the plan to reflect the progress of the project.

- Within three months of the work being completed the principal contractor must add to the plan:
 - (a) confirmation that the plan has been monitored on a regular basis to ensure that work is progressing according to the plan and that the plan was updated in accordance with this regulation;
 - (b) a comparison of the estimated quantities of each waste type against the actual quantities of each waste type;
 - (c) an explanation of any deviation from the plan; and
 - (d) an estimate of the cost savings that have been achieved by completing and implementing the plan.

5.2 Availability

- 5.2.1 An up-to-date copy of this plan must be kept in the site office at all times. If there is no site office, it must be kept on site and made accessible to contractors and site workers.
- 5.2.2 The concepts introduced within this document should be included within any site induction alongside environmental and health and safety content. It is recommended that the tendering process for subcontractors include performance terms in line with benchmarks set out in the SWMP.

5.3 Declaration


- 5.3.1 This SWMP or one prepared by the Contractor will need to be signed on appointment prior to the start of construction by both Contractor and Client, agreeing that:
- All waste from the site is dealt with in accordance with the waste duty of care in section 34 of the Environmental Protection Act 1990 and the Environmental Protection (Duty of Care) Regulations 1991; and
 - Materials will be handled efficiently, and waste managed appropriately.
- 5.3.2 Responsibility for the maintenance / updating of this report lies with the client and principal contractor. This report is produced for the commissioners only and no liability can be accepted from third parties who may rely on it as part or whole. The report should not be relied upon for any judgments made with regards to property value and / or works cost forecasting.

FIGURES

Figure 1.1 Site Context Plan

Site Context Plan

Key

 Site Location

 Relevant Development

0 250 500 m

