SITE WASTE MANAGEMENT PLAN
SGN BELVEDERE
BELVEDERE, LONDON
BELLWAY HOMES LIMITED (LONDON PARTNERSHIPS)
SWMP-21912H-23-371
SEPTEMBER 2023

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		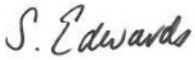	

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SECTION 1 INTRODUCTION

1.1 Bellway Homes Limited (London Partnerships) proposes to redevelop an area of land located at Sunderland Road, Belvedere, London for residential development purposes. The proposed development comprises:

i. 392 residential units and commercial space; and

ii. Landscaping (private & communal) and associated infrastructure.

1.2 The site is located at the former SGN Gas Holder Station, off Yarnton Way, Belvedere, DA18 4AR. The site occupies an area of approximately 3.49 hectares located at National Grid Reference 549225 179312 and indicated on appended drawing.

1.3 The site is bound by Yarnton Way to the north (with commercial premises beyond), residential properties to the east, a railway line to the south (with residential and commercial premises beyond) and commercial premises to the west (Allied Hygiene Systems and Yusen Logistics (UK).

1.4 IDOM Merebrook Limited (IDOM) was commissioned by Bellway Homes Limited (London Partnerships) to undertake a non-intrusive, desk-based assessment of the site and to advise on the geo-environmental implications of the redevelopment of the site for the proposed end use.

1.5 IDOM was retained by Bellway Homes Limited (London Partnerships) to produce a Site Waste Management Plan to support the planning application of the residential development. This report covers the construction phase only.

1.6 This report has been prepared for Bellway Homes Limited (London Partnerships) for the sole purpose described above and no extended duty of care to any third party is implied or offered. Third parties making reference to the report should consult Bellway Homes Limited (London Partnerships) and IDOM as to the extent to which the findings may be appropriate for their use.

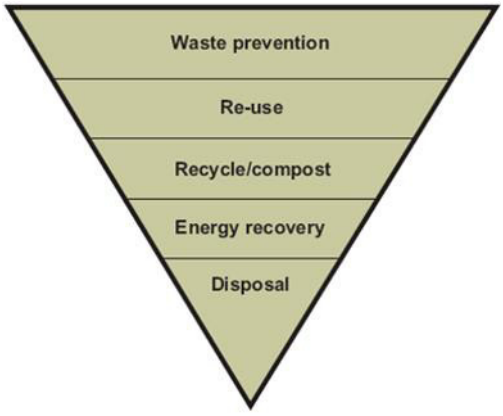
SECTION 2 INTRODUCTION TO WASTE

2.1 This report considers the key planning policies and methods used to assess the effects of waste in the context of the construction phase of the proposed development. A review has been undertaken based upon current operational waste generated by the London Borough of Bexley for municipal waste and waste capacity. The potential effects of the proposed development are discussed, together with an assessment of the residual effects following mitigation measures to prevent/minimise waste generation and divert waste from disposal to landfill as far as possible by recycling and re-use.

2.2 For the purposes of this assessment, 'waste' is defined as: "any substance or object which the holder discards or intends or is required to discard", as specified in the revised Waste Framework Directive.

2.3 The revised Waste Framework Directive introduces a changed hierarchy of options for managing wastes. It gives top priority to preventing waste in the first place. When waste is created, it gives priority to preparing it for re-use, then recycling, then other recovery such as energy recovery, and last of all disposal (for example landfill). The Waste (England and Wales) Regulations 2011 apply the requirements for the waste hierarchy, detailed in Figure 1 below:

Figure 1 The Waste Hierarchy



(source: Department for Environment, Food and Rural Affairs (DEFRA))

2.4 Supplementary to the waste hierarchy, the proximity principle advocates that waste should be disposed of (or otherwise managed) close to the point at which it is generated, thus aiming to achieve responsible self-sufficiency at a regional or sub-regional level. Where this is not possible, priority should be given to transportation by rail or water.

2.5 As part of this assessment, a review of applicable international, national, regional and local legislation and policy has been undertaken.

2.6 If waste is not managed properly during its handling, storage, transport, treatment and disposal, this can result in pollution of the environment and can impact upon human health. Hence, this document aims to ensure that all waste management measures to be employed protect both the environment and people, and comply with UK legislation.

2.7 The intention is to ensure the philosophies of the waste hierarchy and proximity principle are applied during the redevelopment of the site, with waste generation during the demolition, construction and operational phases minimised as far as possible, and where waste is generated, that it is re-used or ultimately disposed of in the most sustainable manner.

SECTION 3 WASTE LEGISLATION

3.1 PLANNING POLICY AND LEGISLATION CONTEXT SUMMARY

3.1.1 Introduction

3.1.1.1 This section outlines the key international, UK, national, regional and local wastes policies, guidance and legislation.

3.1.1.2 Following the result of the Brexit referendum in 2016 the future direction of UK planning policy is uncertain. In the short term, Brexit seems unlikely to have a major impact on policy. However, in the longer term, it is unclear what the release from the constraints of EU policy will mean.

3.1.2 International legislation

3.1.2.1 **EU revised Waste Framework Directive (2008/98/EC)** - This revised Directive provides the overarching legislative framework for the collection, transport, recovery and disposal of waste, and includes a common definition of waste. It encourages the prevention and reduction of harmful waste by requiring that Member States have control regimes in place.

3.1.2.2 **EC Landfill Directive (1999/31/EC)** - This directive aims to prevent, or reduce as far as possible, negative effects on the environment from the landfilling of waste.

3.1.2.3 **EC Industrial Emissions Directive (2010/75/EU)** – replaced the EC Directive on the Incineration of Waste (2000/76/EC) and commits EU member states to control and reduce the impact of industrial emissions on the environment. The Industrial Emissions Directive is implemented through the Environmental Permitting Regulations (SI 2013/390) in England and Wales.

3.1.2.4 **EC Directive on Integrated Pollution Prevention Control (2008/1/EC)** - This directive encouraged minimising pollution from various industrial sources throughout the EU. Operators of industrial installations undertaking activities covered by Annex I of the IPPC Directive are required to obtain an environmental permit from the

authorities in the EU countries. Directive 2008/1/EC has been repealed and replaced by the EC Directive 2010/75/EU on industrial emissions.

3.1.2.5 **Road Map to a Resource Efficient Europe** – This communication was published in September 2011 and adds to the EU policy framework seeking to achieve more sustainable use of resources.

3.1.3 UK and National Arrangements

3.1.3.1 The Environment Agency (EA) is the competent authority responsible for the enforcement of waste management controls in England and Wales, while the Department of Environment, Food and Rural Affairs (DEFRA) is responsible for recycling policy and waste regulations. Relevant UK and national waste legislation is outlined below:

3.1.3.2 **The Environmental Protection Act 1990 (S33)** - This act addresses areas of significant environmental concern including waste disposal. Waste Management issues are considered under Part II of the EPA. Controlled waste includes commercial, industrial (including agricultural waste from 2006) and household waste. Under the Act, the deposition of waste to land without a licence or breaching licence conditions is an offence. The Act is also designed to prevent environmental pollution or harm to human health by prohibiting treatment, storage and disposal of controlled wastes without a licence or in breach of a licence.

3.1.3.3 **Waste and Emissions Trading Act 2003 (Amendment etc.) Regulations 2013** - These Regulations amend Chapter 1 of Part 1 of the Waste and Emissions Trading Act 2003 ("the 2003 Act") regarding the Secretary of State's functions in England and revoke the Landfill Allowances and Trading Scheme (England) Regulations 2004 (S.I. 2004/3212). This brings the Landfill Allowances Trading Scheme to an end in England. Regulation 4 sets out obligations for waste disposal authorities in England to keep records and make returns to the Environment Agency in respect of local authority collected municipal waste.

3.1.3.4 **The Waste (England and Wales) Regulations 2012** – These regulations transpose the revised Waste Framework Directive into law in England and Wales.

3.1.3.5 **Environmental Permitting (England and Wales) Regulations (2016)** - These regulations introduced a streamlined system of environmental permitting in England and Wales for certain installations, waste operations and mobile plants. Activities under these regimes will be covered by a single form of environmental permit governed by one set of regulations. This provides a system for environmental permits and exemptions for industrial activities, mobile plant, waste operations, mining waste operations, water discharge activities, groundwater activities and radioactive substances. It also sets out the powers, functions and duties of the regulators. Notably, the requirements of the Landfill Directive and Waste Management Licensing are applied under these regulations.

3.1.3.6 **The Control of Pollution (Amendment) Act 1989** requires carriers of controlled waste to register with the EA and outlines the penalties (including seizure and disposal) for vehicles shown to have been used for illegal waste disposal, and the **Controlled Waste (England and Wales) Regulations 2012 (SI 811)** defines household, industrial and commercial waste for waste management licensing purposes.

3.1.3.7 **The Waste Management Licensing Regulations (1994 and amendments)** introduce requirements to ensure the technical competence of persons operating waste management facilities.

3.1.3.8 **The Site Waste Management Plans Regulations 2013 (SI 314)** aimed to make the construction industry more sustainable by ensuring that those responsible for development projects are aware of the waste being produced, so that it can be reduced. These regulations made it an offence to fail to prepare and implement a site waste management plan (SWMP) for certain construction projects that have an estimated cost of more than £300,000 (excluding VAT). Additional requirements were described in the Schedule for projects over £500,000. Under the Government's 'Red Tape Challenge' to reduce the regulatory burden to businesses, these regulations were repealed with effect from 1 December 2013, however, it is anticipated that many sites will maintain the use of SWMPs as a method of managing wastes.

3.1.3.9 **The Landfill (England and Wales) Regulations 2002** require a reduction of biodegradable waste sent to landfill. These regulations implement the Landfill Directive, which aim to prevent, or reduce as far as possible, negative effects on the environment from the landfilling of waste. New definitions for hazardous waste and non-hazardous waste are given by the Hazardous Waste (England and Wales) Regulations 2005 (SI 2005/894). Overall, the regulations aim to track and control hazardous waste movements. A consignment note is required prior to the removal of any waste. Notably, a waste producer who produces over 500 kg of hazardous waste a year must notify the Environment Agency.

3.1.3.10 **Contaminated Land (England) Regulations 2006 (SI 1380)** - These regulations set out provisions relating to the identification and remediation of contaminated land. It also determines sites which require regulation as special sites and adds land contaminated by radioactive substances to this classification (amended by The Contaminated Land (England) (Amendment) Regulations 2012).

3.1.3.11 **The Waste (Circular Economy) Regulations 2020** – These regulations are designed to prevent the generation of waste and to monitor and assess the implementation of these measures. Waste collection authorities are not required to ensure that wastepaper, metal, plastic or glass are collected separately if doing so does not deliver the best environmental outcome, is not technically feasible or would involve disproportionate economic costs.

3.1.3.12 The Regulations amend the following:

i. Environmental Protection Act 1990, Part 2 (waste on land);

ii. End-of-Life Vehicles Regulations 2003;

iii. Hazardous Waste (England and Wales) Regulations 2005;

iv. Waste Electrical and Electronic Equipment Regulations 2013;

v. Environmental Permitting (England and Wales) Regulations 2016; and

vi. Waste (England and Wales) Regulations 2011.

3.1.3.13 **Environment Act 2021** – The act requires the Secretary of State to set long-term legally binding environmental targets in four areas, one of which is resource efficiency and waste reduction. The major waste reforms set out in the Act will support the achievement of a 65% recycling target for municipal waste by 2035.

3.1.4 Producer Responsibility

3.1.4.1 **The Environment Act 1995 (Waste and Producer Responsibility, S92 / S93-99)** – This act requires provisions of appropriate waste disposal technologies and the prevention or reduction of waste through reuse, recycling and the use of waste as an energy source.

3.1.4.2 **The Producer Responsibility Obligations (Packaging Waste) Regulations 2007 (S1 2007/871)** - These regulations revoke and replace the Producer Responsibility Obligations (Packaging Waste) Regulations 2005, adding a new key definition for small producers (a producer that has a turnover of between £2-5 million). The regulations only apply to businesses that handle more than 50 tonnes of packaging / packaging materials a year. A producer may demonstrate their compliance with the regulations by obtaining Packaging Waste Recovery Notes (PRNs) and / or Packaging Waste Export Recovery Notes.

3.1.5 Waste Streams

3.1.5.1 **The Waste Electrical and Electronic Equipment (WEEE) Regulations 2006 (SI 2006/3289 and amendments)** - The regulations aim to reduce the volume of WEEE waste being taken to Landfill sites by allowing separate collection, recovery, treatment, recycling and safe disposal of the waste. Producers of EEE will be responsible for financing and ensuring WEEE is treated at an authorised facility. The producers and distributors of EEE are also required to make sure household WEEE products can be returned free of charge and treated in an appropriate way.

3.1.5.2 **Waste Batteries and Accumulators Regulations 2009 (SI 1890)** - These regulations set out requirements for waste battery collection, treatment, recycling and disposal for all battery types.

3.1.5.3 **Control of Pollution (Oil Storage) (England) Regulations (2001) SI 2954** –These regulations impose general requirements for preventing the pollution of controlled waters from oil storage, in particular from fixed tanks or mobile bowsers.

3.1.6 Overarching Strategies and Policies

3.1.6.1 **DEFRAs Resources and Waste Strategy 2018** - The Strategy sets out how the country will preserve material resources by minimising waste, promoting resource efficiency and moving towards a circular economy.

3.1.6.2 **25 Year Environment Plan 2018** - The government's 25 year Plan includes a commitment to minimise waste. The document states the following.

i. working to minimise waste, reuse materials as much as we can and manage materials at the end of their life to minimise the impact on the environment. We will do this by:

ii. working towards our ambition of zero avoidable waste by 2050;

iii. working to a target of eliminating avoidable plastic waste by end of 2042;

iv. meeting all existing waste targets – including those on landfill, reuse and recycling – and developing ambitious new future targets and milestones;

v. seeking to eliminate waste crime and illegal waste sites over the lifetime of this Plan, prioritising those of highest risk. Delivering a substantial reduction in litter and littering behaviour; and

vi. significantly reducing and where possible preventing all kinds of marine plastic pollution – in particular material that came originally from land.

3.1.6.3 **The Waste Strategy for England 2013** - This national strategy for waste sets out the government's views on waste management in England. The strategy commits to setting new national targets for the reduction of household waste through recycling and composting by at least 50% by 2020, in comparison to 2000 levels. In addition, new national targets are expected for the reduction of commercial /industrial waste going to landfill. Key objectives were stated as follows:

i. Decoupling waste growth from economic growth with more emphasis on waste prevention and re-use;

ii. Meeting and exceeding the Landfill Directive diversion targets for biodegradable municipal waste;

iii. Increasing diversion from landfill and securing better integration of treatment for municipal and non-municipal waste;

iv. Securing the investment in infrastructure needed to divert waste from landfill and for the management of hazardous waste; and

v. Getting the most environmental benefit from that investment, through increased recycling of resources and recovery of energy from residential waste using a mix of technologies.

3.1.6.4 **Government Review of Waste Policy in England 2011** – This sets out 13 principal commitments, with steps towards a zero waste economy. It prioritises efforts to manage waste in line with the waste hierarchy with key importance given to waste prevention, and to reduce the carbon impact of waste.

3.1.6.5 **Strategy for Sustainable Construction 2008** - The Strategy for Sustainable Construction aimed to deliver the policies set out in the UK's Sustainable Development Strategy. A joint industry and government initiative, the strategy was intended to promote leadership and behavioural change, as well as delivering benefits to both the construction industry and the wider economy. The strategy aimed to reduce construction, demolition and excavation waste to landfill by 50% by 2012, compared to 2008 levels.

3.1.7 National Planning Policy

3.1.7.1 **National Planning Policy for Waste** - This document was published on 16 October 2014 and supersedes the Planning Policy Statement 10 (PPS10): Planning for Sustainable Waste Management. This introduces the Government's Waste Management Plan for England (2013), with a focus on sustainable waste management and minimising environmental impact.

3.1.7.2 **Waste Management Plan for England** - This document was published on 27 January 2021 and supersedes the Planning Policy Statement 10 (PPS10): Planning for Sustainable Waste Management. The plan includes changes to waste management plan requirements which have been made by the Waste (Circular Economy) (Amendment) Regulations 2020.

3.1.8 Regional Policy

3.1.8.1 **London Environment Strategy (May 2018)** - The strategy includes a number of overarching aims for 2050. Aims related to waste include the following:

i. London will be a zero waste city;

ii. By 2026 no biodegradable or recyclable waste will be sent to landfill and by 2030 65% of London`s municipal waste will be recycled.

3.1.8.2 **The London Plan** - This was introduced by the Mayor and the Greater London Authority in March 2021 to replace the previous London Plan (2016) and is a strategic plan setting out an integrated social, economic and environmental framework for the future development of London. The plan states that boroughs should manage London's waste within London as far as practicable, create positive environmental impacts from waste processing. The London Plan reiterates the targets of the London Environment Strategy (2018) including:

i. zero biodegradable or recyclable waste to landfill by 2026;

ii. a target of 95% for recycling/reuse of construction and demolition waste (Policy SI 7 Reducing waste and supporting the circular economy); and

iii. 65% of municipal (household and business) waste recycled by 2030.

3.1.8.3 The London Plan includes several policies which support and reinforce the requirements of the Waste Framework Directive.

3.1.8.4 Chapter 3 relates to Design and Section 3.3.10 notes that:

'To minimise the use of new materials, the following circular economy principles (see also Figure 3.2) should be taken into account at the start of the design process…

- *designing out waste – ensuring that waste reduction is planned in from*
- *project inception to completion, including consideration of standardised components, modular build and re-use of secondary products and materials*
- *designing for longevity*
- *designing for adaptability or flexibility*
- *designing for disassembly*
- *using systems, elements or materials that can be re-used and recycled.'*

3.1.8.5 Chapter 9 relates to Sustainable Infrastructure and Policy SI 7 relates to Reducing waste and supporting the circular economy. The policy requires that

'A. Resource conservation, waste reduction, increases in material re-use and recycling, and reductions in waste going for disposal will be achieved by the Mayor, waste planning authorities and industry working in collaboration to:

1) promote a more circular economy that improves resource efficiency and innovation to keep products and materials at their highest use for as long as possible
2) encourage waste minimisation and waste prevention through the reuse of materials and using fewer resources in the production and distribution of products
3) ensure that there is zero biodegradable or recyclable waste to landfill by 2026
…
5) meet or exceed the targets for each of the following waste and material streams:
a) construction and demolition – 95 per cent reuse/recycling/recovery
b) excavation – 95 per cent beneficial use'
…"

3.1.8.6 Policy SI 8 on Waste capacity and net waste self-sufficiency requires that:

A. In order to manage London's waste sustainably:

1. the equivalent of 100 per cent of London's waste should be managed within London

…

5. environmental, social and economic benefits from waste and secondary materials management should be created.'

3.1.8.7 As the reliability of construction, demolition and excavation waste (CD&E waste) data is low, arisings and apportionments for this waste stream were not set out in the London Plan. The adoption of circular economy principles in referable applications (and promoted in local plans) is expected to help London achieve the CD&E waste and material recovery targets early in the Plan period.

3.1.8.8 **London's Wasted Resource: The Mayor's Municipal Waste Management Strategy (2011)** – This strategy sets out the Mayor's policies and proposals to minimise the quantity of municipal waste produced, increase the amount of waste reused, recycled or composted, and generate low carbon energy from residual waste. The strategy also set out how the Mayor will further develop waste management infrastructure in London.

3.1.8.9 **Making Business Sense of Waste: The Mayor's Business Waste Management Strategy (2011**) – This is the first Mayoral strategy for London's business waste and sets out initiatives to help all kinds of businesses in London to save money and reduce the possibility of harm to the environment through more effective waste management.

3.1.9 Local Policy

3.1.9.1 **Bexley Local Plan (adopted April 2023)** – Bexley's plan includes three policies on waste including:

i. strategic policy SP12: Sustainable waste management. The SP12 notes the construction industry has an important role to play in the circular economy. The construction and operation of the built environment currently accounts for 60% of UK materials consumption and one third of all waste arisings. The Council will support the development of the circular economy by encouraging the waste and construction industries to: make resource use more efficient; reduce the production of waste; maximise the recycling of waste; and identify alternative business models.

ii. non-strategic, development management policies DP25 New waste management facilities and extensions and alterations to existing facilities;

iii. non-strategic, development management policies DP26 Waste management in new development. facilitates recycling, to meet London Plan waste management targets, while protecting visual and residential amenity and public health. The policy ensures proposals for residential development include detailed consideration of waste arising, promote circular economy outcomes and net zero-waste.

3.1.9.2 Bexley safeguarded strategic waste facilities and sites suitable for waste management uses. The strategic policy sets out the pooling of apportionment requirements and safeguards strategic waste sites.

3.1.9.3 **Reduction and Recycling Plan (RRP) for the London Borough of Bexley** – Sets out key actions for cutting waste and boosting recycling for the period 2018 – 2022, in line with the Mayor of London's Environment Strategy.

3.1.10 Guidance

3.1.10.1 **Waste & Resources Action Programme (WRAP)** –This programme assists the UK government to meet national and international commitments and to support resource efficiency in the UK. This is achieved by helping businesses and individuals within the UK to benefit from reducing waste, develop sustainable products and use resources in an efficient way. Furthermore, Recycle London is a communications programme delivered in partnership by The Greater London Authority and WRAP.

3.1.10.2 **Contaminated Land Applications in Real Environments (CL:AIRE)** is an independent, non-profit organisation that aims to encourage the sustainable remediation of contaminated land and groundwater throughout the UK, for effective social and economic use. This is achieved by increasing awareness and confidence in practical, sustainable remedial solutions.

3.1.10.3 **The CL:AIRE Code of Practice (CoP)** on the Definition of Waste provides an industry- and regulator-recognised method of demonstrating that site-derived soil arisings can be legitimately used as resource rather than designated as waste. The CoP demonstrates that the necessary lines of evidence are met to show that a material is not waste, and puts in place systems to monitor and track the use of materials through the employment of a Materials Management Plan (MMP).

SECTION 4 WASTE IN BEXLEY

4.1 RESIDENTIAL/HOUSEHOLD WASTE

4.1.1 The RRP for the London Borough of Bexley sets out key actions for cutting waste and boosting recycling, in line with the Mayor of London's Environment Strategy.

4.2 BEXLEY HOUSEHOLD WASTE COLLECTION SERVICES AND RECYCLING FACILITIES

4.2.1 Countrystyle currently provides household collection in Bexley. The following is currently collected:

i. Food waste – Collected every week in a kitchen caddy or food waste bin;

ii. Glass bottles and jars, plastic food containers and bottles, food and drink cartons and cans, plastic tubs and metal tins, foil – white bin

iii. Paper and cardboard – blue bin

iv. Garden waste (chargeable) – Residents can opt-in for garden recycling collection in a wheeled bin.

4.2.2 Bulky waste collections are possible through prior arrangement with the Council.

4.2.3 A household hazardous waste and disposal service is available for residents of the London Borough of Bexley. Hazardous household waste includes items such as:

i. asbestos

ii. pesticides

iii. petrol

iv. paraffin

v. diesel

vi. creosote, and

vii. paint strippers.

4.2.4 Neighbourhood recycling sites throughout Bexley providing local facilities for recycling materials including cans, glass, plastic, textiles and paper/card. Two household waste re-use and recycling centres are present in the borough at the following sites:

i. Maidstone Road, Foots Cray, DA14 5HS; and

ii. Thames Road, Crayford, DA1 5QJ.

4.2.5 The following can be recycled at these facilities:

i. batteries (car and domestic);

ii. bric a brac;

iii. card and cardboard;

iv. gas bottles and fire extinguishers;

v. food and drinks cans;

vi. glass bottles and jars;

vii. green garden waste;

viii. lawnmowers and garden machinery;

ix. liquid food and drinks cartons;

x. carpets and mattresses – recycled where possible;

xi. paper and magazines;

xii. plastic bottles and household containers;

xiii. rigid plastics;

xiv. plasterboard;

xv. metals - all metals;

xvi. up to five tyres;

xvii. wood, chipboard and plywood;

xviii. soil and rubble;

xix. household electrical bulbs, for lighting, including fluorescent tubes;

xx. cooking oil;

xxi. engine oil and filters;

xxii. electrical items; and

xxiii. textiles.

4.2.6 Commercial waste is not accepted at these facilities.

4.3 LONDON BOROUGH OF BEXLEY MUNICIPAL WASTE VOLUMES AND TREATMENT/DISPOSAL ROUTES

4.3.1 Data from the DEFRA, presented in Table 1 below, indicates the total amount of municipal waste arising and the different treatment/disposal methods from 2020/21 to 2021/22.

Table 1: Waste Arising and Treatment/Disposal Routes (2020/21 to 2021/22)

Management Type	2020/2021 Tonnes (%)	2021/22 Tonnes (%)
Recycled/composted	53,355 (47.98%)	43,936 (40.23%)
Landfilled	181 (0.16%)	175 (0.16%)
Incineration with EfW	57,798 (51.97%)	65,017 (59.54%)
Incineration without EfW	0 (0.0%)	0 (0.0%)
Other*	-120 (-0.11%)	71 (0.07%)
Total waste disposed	111,214	109,200
Input to immediate plant	1,414	5,200

Note: *Other includes waste treated-disposed through other unspecified treatment processes as well as process and moisture loss. Incineration with EfW: EfW is energy from waste. Also included are amounts rejected for recycling, composting or reuse where incineration with EfW is reported as the final destination of these rejects. Data from: https://www.gov.uk/government/statistical-data-sets/env18-local-authority-collected-waste-annual-results-tables

4.3.2 The primary method of disposal for waste collected in the London Borough of Bexley is currently incineration (with energy recovery) with accounts for 60% of all household waste. Riverside Resource Recovery Energy from Waste facility at Belvedere is the main incineration facility in Bexley with a capacity of 741,147 tonnes. A further Energy from Waste facility was approved in April 2020 for 750,000 tonnes, plus a 40,000 tonnes anaerobic digestive plant. Cory's site is due to be operational in 2024.

4.4 LONDON BOROUGH OF BEXLEY LOCAL WASTE FACILITIES AND CAPACITY

4.4.1 The London Plan sets out strategic requirements for London boroughs to address in their local plans. Policies SI 7 (Reducing waste and supporting circular economy), SI 8 (Waste capacity and new waste self-sufficiency) and SI 9 (Safeguarded waste

sites) specifically address waste issues, to facilitate London becoming self-sufficient in managing its own waste sustainably by 2026. The waste planning technical paper prepared by Southeast London Joint Waste Planning Group (London Boroughs of Bexley, Bromley, Lewisham, Southwark, Royal Borough of Greenwich, and the City of London) in 2022 sets out how the group meets the requirements.

4.4.2 Through Policy SI 8, A1 of the London Plan, the Mayor sets a target for "the equivalent of 100 per cent of London's waste should be managed within London (i.e. net self-sufficiency) by 2026". All London boroughs are required to set aside sufficient land within their statutory planning document(s) to manage this waste. Table 9.2 of the London Plan apportions the waste to be managed in each borough. Data in Table 3 below is an extract from Table 9.2 indicating the waste (in thousand tonnes per annum) apportioned to the London Borough of Bexley.

Table 2: Forecast of household, commercial and industrial waste 2021-2041 (tonnes per annum)

2021 (tonnes)	2041 (tonnes)
225,000	241,000

From London Plan 2021

Table 3: Apportionments of household, commercial and industrial waste 2021-2041 (tonnes per annum)

Apportionment *	2021 (tonnes)	2041 (tonnes)
6.6	225,000	241,000

From London Plan 2021,* Apportionment is per cent share of London's total waste to be managed by borough.

Table 4: Actual and projected capacity from safeguarded sites (tonnes per annum)

2021 (tonnes)	2030 (tonnes)	2030 (tonnes)
1,050,456	1,795,456	1,969,056

From Southeast London joint waste planning technical paper April 2022

SECTION 5 PREDICTED WASTE

5.1 ENABLING WORKS/DEMOLITION

5.1.1 Currently a relict gas holder, small brick buildings (including an electrical substation) and areas of hardstanding remain on site. Subsurface obstructions including footings/foundations are expected and relict structures are known to exist at the eastern boundary. It has been assumed that the remaining gasholder covers an area of 1,260 m^2 and foundations beneath the gasholder comprise a concrete slab (circa 0.3 m thick) and piles.

5.1.2 The estimated volumes of demolition waste have been calculated from knowledge of the current building constructions, and professional judgement based on previous experience. Table 5 below provides estimated volumes of demolition waste arising from all demolition activities on the site.

Table 5: Estimated demolition volumes (preliminary estimate)

Material	Tonnes
Asbestos	<0.5
Concrete	4,000
Brickwork	25
Timber	0.5
Tarmac	350
Metal	3,900
Electrical wiring	0.5

5.1.3 A vegetation scrape (circa 0.1 m) will be required and this is expected to generate approximately 1,000 m^3. It is unlikely that this material could be reused on site given the high proportion of organic material.

5.1.4 Following removal of the gas holder it has been assumed that 50 m^3 of hazardous material will be generated. This material will be treated onsite if possible.

5.1.5 Concrete generated onsite would be crushed and reused on site where possible.

5.1.6 Levels across the site need to be raised in order to form the required development platforms. Arisings generated during the construction phase will be reused on site. It is intended to reuse site-won material (compliant with the requirements of an Earthworks Specification & Remediation Strategy), under the CL:AIRE Definition of Waste: Development Industry Code of Practice via the Reuse on site of origin scenario and with a Materials Management Plan approved and registered by a Qualified Person.

5.1.7 Material will need to be imported to make up any shortfall in materials and provide clean cover in gardens and landscaping.

5.2 **CONSTRUCTION**

5.2.1 Wherever possible, materials arising will be re-used on site. Where unavoidable, materials will be removed off-site and landfilling will be used only as a very last resort where no other options are available therefore little waste is predicted.

5.2.2 It is considered that the majority of construction waste will be generated through off-cuts from fitting materials and spent materials. Waste will also be produced from the packaging of construction materials and the operation of maintenance facilities. Notably, contributing factors to construction waste include over-procurement, poor waste segregation, a high finishing standard requirement and a lack of space for storage of unused materials. Waste associated with the construction phase will be directly related to the actions of the construction contractor(s). For example, careful design and ordering of materials will reduce the amount of unwanted material brought to site.

5.2.3 The BRE document, *Waste Benchmark Data (issued 26 June 2012)* includes findings from six hundred and seventy-seven housing projects that have submitted data to the Smartwaste (a waste bench marking tool). The average waste generated during these projects was 18.1 m^3 waste per 100 m^2 of floor area. If the average area of each unit in the proposed development is 68.7 m^2 (average for UK homes built after 2010 – figure from LABC Warranty), this gives an average waste generation per unit of 12.43 m^3. This would equate to 4,873 m^3 for the residential portion (392 units) of the development.

5.2.4 The BRE document also looked at leisure and commercial retail projects (71one and 123one hundred and twenty three projects respectively). The average waste generated for leisure projects was 14.4 m^3 waste per 100 m^2 of floor area The average waste generated during commercial retail projects was 20.9 m^3 waste per 100 m^2 of floor area. Therefore, for the community/retail portion of the development this would equate to a range between 14.4 and 20.9 m^3.

5.2.5 The potential disposal routes for construction and demolition waste include:

i. Bricks and concrete which cannot be re-used, or recycled and re-used as hardcore, on site will be sent to the local recycling facilities;

ii. Materials of value, such as components of structures, pipes and steel bins from the demolition/site preparation and construction works could be sold direct to the local market for re-use; and,

III. Waste with a high enough calorific value (*e.g.* non-segregated general waste) could be sent to an energy recovery facility (ERF). The nearest facility is operated by Cory at Riverside Resource Recovery Ltd, Norman Road Belvedere DA17 6JY (approximately 1.5 miles from site).

SECTION 6 MITIGATION

6.1 ENABLING WORKS/CONSTRUCTION

6.1.1 In order to reduce the environmental impact of waste arising during enabling works and the construction phase, Site Waste Management Plans (SWMPs) will be implemented.

6.1.2 SWMPs are considered to encourage more efficient waste management practices, improve environmental performance, reduce waste disposal costs (by minimising waste production and promoting re-use, recycling and recovery of waste) and reduce waste crimes (such as fly-tipping).

6.1.3 Although the Site Waste Management Regulations 2008 were repealed on 1 December 2013, the preparation and implementation of a Site Waste Management Plan (SWMP) is still considered to remain industry best practice.

6.1.4 The contractor would also ensure that:

i. All Duty of Care documentation is kept in a dedicated file and be made available for viewing if required;

ii. Systems are in place to audit all subcontractors and check that appropriate licences are held;

iii. All disposal documentation (*e.g*. transfer notes and consignment notes) are clearly marked with the time and date of collection. In addition, the final destination of the waste, a detailed description of the waste type and if appropriate the European Waste Code (EWC) would also be recorded on the document;

iv. A quantitative and qualitative estimate of worksite waste produced during construction is kept; and

v. Where necessary, the requirements for reporting under the Hazardous Waste Regulations are met (e.g. the hazard rating).

6.1.5 This strategy provides an indication of the potential waste generation during the demolition and construction phases and some guidance for waste mitigation. Further development of the waste management options should be undertaken by the principal contractor to identify potential waste generation and appropriate mitigation, including formalisation of a Site Waste Management Plan.

6.1.6 Waste should be managed effectively at all stages of the construction project including design and procurement. For example, pro-active buying schemes (including group purchasing agreements currently in place) could be established to minimise the packaging and waste wrapping of products.

6.1.7 The buyer should ensure the accurate scheduling and ordering of materials to minimise waste through over-ordering (e.g. by ensuring the correct length of handrails are ordered and the correct lengths are taken and used in the allotted position).

6.1.8 Site waste should be segregated and disposed of responsibly. It is also important that the developer and principal contractor assess the appropriate waste streams prior to construction to identify ways to minimise waste production. The Waste Resources and Action Programme (WRAP) published 'Achieving good practice Waste Minimisation and Management' which includes standard, good and best practice performance benchmarks for the recovery of waste material during construction projects (see Table 6). These provide benchmark figures against which new developments should aim to meet for their major waste streams.

Table 6: Standard, Good and Best Practice recovery rates by material – from WRAP report.

Material	Standard Recovery %	Good Practice 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	75
Electrical equipment	Limited information	70*	95
Furniture	0 - 15	25	50
Insulation	12	50	75
Cement	Limited information	75	95
Liquid and oils	100	100	100
Hazardous	50	Limited information**	Limited information**

*This is a required recovery target for the type of WEEE likely to be from construction sites. e.g. lighting (the WEEE regulations, Jan 2007).

**This cannot be 100% as much hazardous waste (e.g. asbestos) must be land filled.

6.1.9 In order to adhere to the principles of the waste hierarchy, the following principal objectives will be set:

i. Reduce the volumes of waste produced through early design consideration and specification;

ii. Where waste is generated, re-use and recycle waste materials wherever possible (For example, the re-use potential for brick and similar material would depend on local market conditions, and the condition of the materials.)

iii. Reduce volumes of waste sent to landfill; and

iv. Minimise transport requirements, particularly road vehicle movements, with the use of alternative transport means such as rail to be considered.

6.1.10 Where materials are not retained on site, these should be removed and disposed of in accordance with all relevant statutes. The main ways to achieve these objectives are to:

i. Minimise waste production;

ii. Segregate waste for re-use, recycling and recovery;

iii. Reduce vehicle movements on the road through two way trips, and investigate use of river transport;

iv. Encourage re-use of material through a Waste Inventory; and

v. Offer incentives to the contractor to achieve key goals.

6.1.11 Contractors will be required to use the CL:AIRE Code of Practice (CoP) on the Definition of Waste. This provides an industry and regulator-recognised method of demonstrating that site-derived soil arisings can be legitimately used as resource rather than designated as waste. The CoP demonstrates that the necessary lines of evidence are met to show that a material is not waste and puts in place systems to monitor and track the use of materials – the Materials Management Plan.

6.1.12 Where there is no alternative other than to dispose of materials off-site as waste, they will be removed from site in accordance with the waste duty of care in Section 34 of the Environmental Protection Act 1990, and the Waste (England and Wales) Regulations 2011.

SECTION 7 RESIDUAL EFFECTS AND CONCLUSIONS

7.1 The mitigation measures described above will assist in reducing the quantity of waste generated during the construction and operational phases, nonetheless there is likely to still be waste generated on site during these phases. This waste will consequently be dealt with accordance with the principles of the waste hierarchy and application of the proximity principle. That is, where waste generation is unavoidable and all other means have been expended, waste will be dealt with by sites as close to the development as possible and the Best Practicable Environmental Option (BPEO) will be explored.

7.2 Following mitigation, it is considered that these effects and will not affect the London Borough of Bexley`s ability to reach the various waste collection and recycling targets or the London Borough of Bexley`s overall waste capacity.

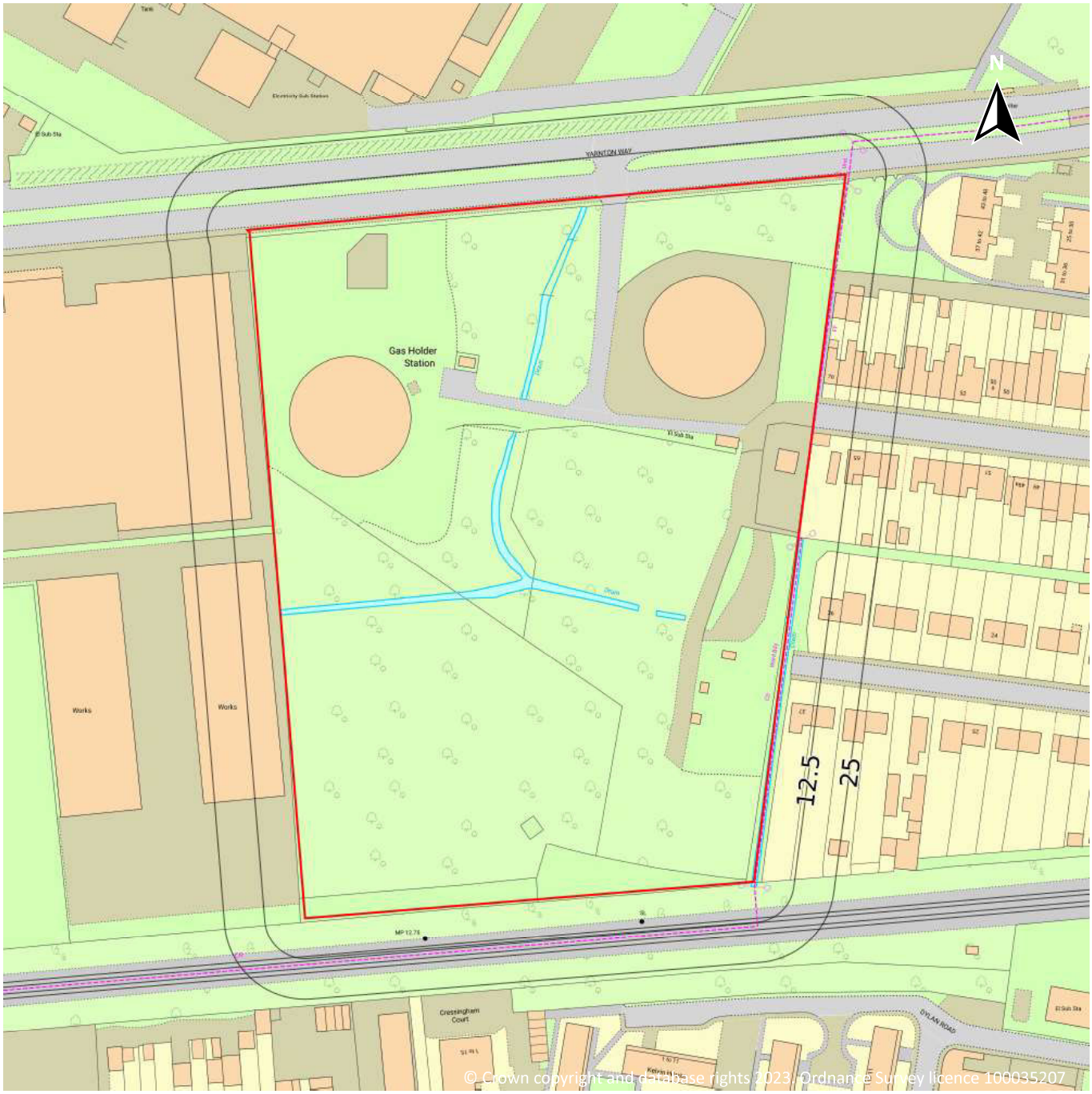
APPENDIX 1 ▪ Drawings & figures

Recent aerial photograph

Capture Date: 17/07/2021

Site Area: 3.49ha

OS MasterMap site plan



Site Area: 3.49ha

SGN - Belvedere

SEQUENCING PLANS

Bellway | Partnerships creating communities

Status:

Based upon Design Freeze Scheme of 04/08/2023

Notes:

Bellway London Partnerships
Anchor Boulevard
Crossways Business Park
Dartford
Kent
DA2 6QH

Project:

SGN Belvedere

Drawing Title:

BLOCK PLAN

Issue Date:

23/08/2023

Reference:

C0741-84/BP10/001

Rev:

0

N

ACCOMMODATION

Phase	Block	Storeys	No. Units	PD	AFF
1	A1	4	6	0	6
1	A2	4	6	6	0
3	A3	4	6	6	0
3	A4	4	6	6	0
6	A5	4	6	6	0
2	B1	4/5	32	0	32
2	B2	4/5	29	29	0
6	C1	5	20	20	0
6	C2	5	20	20	0
1	D1	3	12	10	2
1	D2	3	12	12	0
3	D3	3	10	10	0
3	D4	3	13	13	0
3	D5	3	11	11	0
5	D6	3	9	9	0
6	D7	3	8	8	0
4	E1	5	28	28	0
4	E2	5	28	28	0
4	E3	5	28	28	0
4	E4	5	28	28	0
4	E5	5	28	28	0
4	E6	5	28	28	0
5	F	4	18	18	0
		Totals:	392	352	40

Bellway | Partnerships creating communities

Status:

Based upon Design Freeze Scheme of 04/08/2023

Notes:

1. Phase 0 - S278 & Main infrastructure
2. Phase 1 - initial residential units to west of site

Key

- 1 Phase reference
- Sub-station
- Affordable
- Private development (PD)

Bellway London Partnerships
Anchor Boulevard
Crossways Business Park
Dartford
Kent
DA2 6QH

Project: SGN Belvedere

Drawing Title: **Phasing Plan**

Issue Date: 23/08/2023

Reference: C0741-84/SK10/001

Rev: 0

N

ACCOMMODATION

Phase	Block	Storeys	No. Units	PD	AFF
1	A1	4	6	0	6
1	A2	4	6	6	0
3	A3	4	6	6	0
3	A4	4	6	6	0
6	A5	4	6	6	0
2	B1	4/5	32	0	32
2	B2	4/5	29	29	0
6	C1	5	20	20	0
6	C2	5	20	20	0
1	D1	3	12	10	2
1	D2	3	12	12	0
3	D3	3	10	10	0
3	D4	3	13	13	0
3	D5	3	11	11	0
5	D6	3	9	9	0
6	D7	3	8	8	0
4	E1	5	28	28	0
4	E2	5	28	28	0
4	E3	5	28	28	0
4	E4	5	28	28	0
4	E5	5	28	28	0
4	E6	5	28	28	0
5	F	4	18	18	0
		Totals:	392	352	40

Bellway | Partnerships
creating communities

Status:

Based upon Design Freeze Scheme of 04/08/2023

Notes:

1. Revised to reflect scheme as at 02/03/2021 and build to suit continuous rate of delivery
2. All Blocks of flats are assumed to be traditional load-bearing masonry construction above a single storey RC transfer structure. Houses are assumed to be traditional LBM construction.

Key

- Build route
- 1 Phase reference
- Sub-station
- Affordable
- Private development (PD)

Bellway London Partnerships
Anchor Boulevard
Crossways Business Park
Dartford
Kent
DA2 6QH

Project:
SGN Belvedere

Drawing Title:
Block Plan

Issue Date:
23/08/2023

Reference:
C0741-84/SK10/002

Rev:
0

N

Bellway Partnerships
creating communities

Status:

Based upon Design Freeze Scheme of 04/08/2023

Notes:

1. Phase 0 - S278 & Main infrastructure
2. Phase 1 - initial residential units to west of site
3. BAPA required for any temporary works (cranes, scaffolds etc) that could potentially fall within 3m of Network Rail land

Key

- 1 Phase reference
- Sub-station
- Accommodation / welfare
- Materials storage
- Parking

Bellway London Partnerships
Anchor Boulevard
Crossways Business Park
Dartford
Kent
DA2 6QH

Project:

SGN Belvedere

Drawing Title:

Logistics Plan

Issue Date:

23/08/2023

Reference:

C0741-84/SK10/003

Rev:

0

APPENDIX 2 ▪ SWMP template

Site Waste Management Plan data sheet

Project name:

Date of sheet input:

Stage of project:

Project address / location:

Estimated cost of project:

Client:

Principal Contractor:

Manager of waste management:

Person and company completing form:

Destination of waste (permits / licence / exepmtion reference numbers):

A	B	C	D

Details of the people removing waste from your site (including their waste carrier resitration number):

A	B	C	D

Quantity (specify volume or weight eg. m3, kg, T, number of skips)

Types of waste arising:	**EWC** code**	**Reused**				**Recycled**						**Disposed of**				Relate to boxes above (ie A / B / C / D)		**WTN completed?**
		on site		off site		for use on site		for use off site		Sent to recycling or reprocessing facility		land-fill		Other than land-fill				
Target / Achieved		T	A	T	A	T	A	T	A	T	A	T	A	T	A	Waste site	Waste carrier	
Inert																		
Non-Hazardous																		
Hazardous																		
Totals (m^3, kg, T)																		
Performance score as %*																		
SWMP Target %*																		

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