

Seven Sisters / Eade Road

Circular Economy Statement



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Issue	Reason for Issue	Author	Approved by	Date
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Introduction

This section provides a brief description of the Seven Sisters / Eade Road development, summarises the methodology used in this Statement, introduces the key principles that a circular built environment project should adopt and outlines this project’s circular economy aspirations.

Introduction to the statement

Business as usual in the built environment is based on a linear economy where materials are extracted, manufactured, used over a certain period of time and finally disposed of as waste. In a circular economy, waste is no longer disposed of, as it becomes the resource for future production processes. Waste as such ceases to exist as a by-product, ending the current unsustainable practice of exploiting the natural resources of our planet without replenishment. As one of the most resource intensive industries, construction has a responsibility to address this issue.

The Seven Sisters / Eade Road development is located within the Harringay Warehouse District, for which a Framework for new development has been created. The Framework sets four principles for sustainable living, which have guided the overall project aspirations for the masterplan and the design and development process so far. “Materials & Circular Economy” (Figure 1) is one of the four principles applied to the masterplan; it focuses on retaining structures and materials, designing in flexibility and future proofing and reducing upfront and lifecycle material impacts. Therefore, the circular economy is a key consideration integrated into the sustainable design of the masterplan.

Document statement

This Circular Economy Statement has been prepared by Expedition Engineering, on behalf of Provewell (the applicant), to support the application for planning for the Seven Sisters / Eade Road development within the Harringay Warehouse District.

This Statement interrogates the design for the proposed development with a circular economy lens. It will outline how circularity has already been considered throughout the design process and provide key opportunities to implement further circularity initiatives as the project develops.

Team engagement

In October 2022, Expedition Engineering held a circular economy workshop with design teams to gain their insights. After the workshop, attendees were provided with a table to provide any additional comments to feed into the statement. Therefore the outcomes in this Statement are the product of the wider design and construction team. Parties contributing to this study include: Morris and Company (Architects), Ingenium (MEP consultants) and London Structures Lab (Structural engineers).

Report structure

This Statement is structured in accordance with GLA’s Circular Statement Guidance into the following three studies:

- 1 / Resource conservation
- 2 / Waste elimination
- 3 / Sustainable waste management

Principles for Sustainable Living:	Energy & Carbon	Materials & Circular Economy	Environmental Resilience	Wellbeing
Masterplan Framework Objective:	Plot a pathway to net-zero carbon including energy in use, embodied carbon and lifestyle emissions	Reuse existing buildings and materials. Design principles for future proofing and flexibility. Reduce upfront and lifecycle material impacts (in accordance with GLA guidance)	Ensure long term resilience for the development in terms of utilities provision, flood risk, designing for sustainable urban water management and identifying ways to achieve significant net biodiversity gain	Design for a comfortable microclimate. Target emerging policy on overheating, daylight and sunlight standards
Project Objective:	Provide low carbon, affordable and reliable energy to occupants. Support sustainable transport and mobility	Apply circular economy principles to minimise waste. Use low carbon materials that are responsibly and ethically sourced	Reduce surface water run off. Provide a net gain in biodiversity	Create a space that is beautiful and provides healthy and comfortable spaces to live and work in
Building Strategy:	- Energy & carbon - Transport	- Waste - Construction	- Flood risk - Water - Biodiversity	- Changing Climate - Pollution

Figure 1. Principles for sustainable living extracted from Harringay Warehouse District Sustainability Statement.

Description of the development

Site context

The Harringay Warehouse District is located between the New River to the south, Seven Sisters Road to the east and the Gospel Oak to Barking branch of the London Overground to the north (Figure 2.A). The surrounding area is a mix of warehouse and industrial buildings, built across the 20th century. The buildings have been re-purposed for warehouse living, with changes made to the façades over time to suit the users needs.

Site summary

The Seven Sisters site is located on the south-east corner of Harringay Warehouse District (Figure 2.B). The re-development includes the construction of two new large buildings (blocks A and B) as well as workshop units at the eastern boundary of the site.

The scope of this Circular Economy Statement is limited to the new build-only and therefore it does not include an analysis of Cara House.

Development summary

The proposed development comprises the construction of two new buildings to provide new warehouse living accommodation (Sui Generis (warehouse living)), ground floor café/ workspace (Use Class E) and associated waste collection and cycle parking. Erection of 10 stacked shipping containers (two storeys) to provide workspace/ artist studios (Use Class E), toilet facilities and associated waste collection and cycle parking. Landscape and public realm enhancements including the widening of and works to an existing alleyway that connects Seven Sisters and Tewkesbury Road, works to Tewkesbury Road, the creation of rain gardens, greening, seating, signage and artworks and all other associated infrastructure works, including the removal of an existing and the construction of a new substation to service the new development.

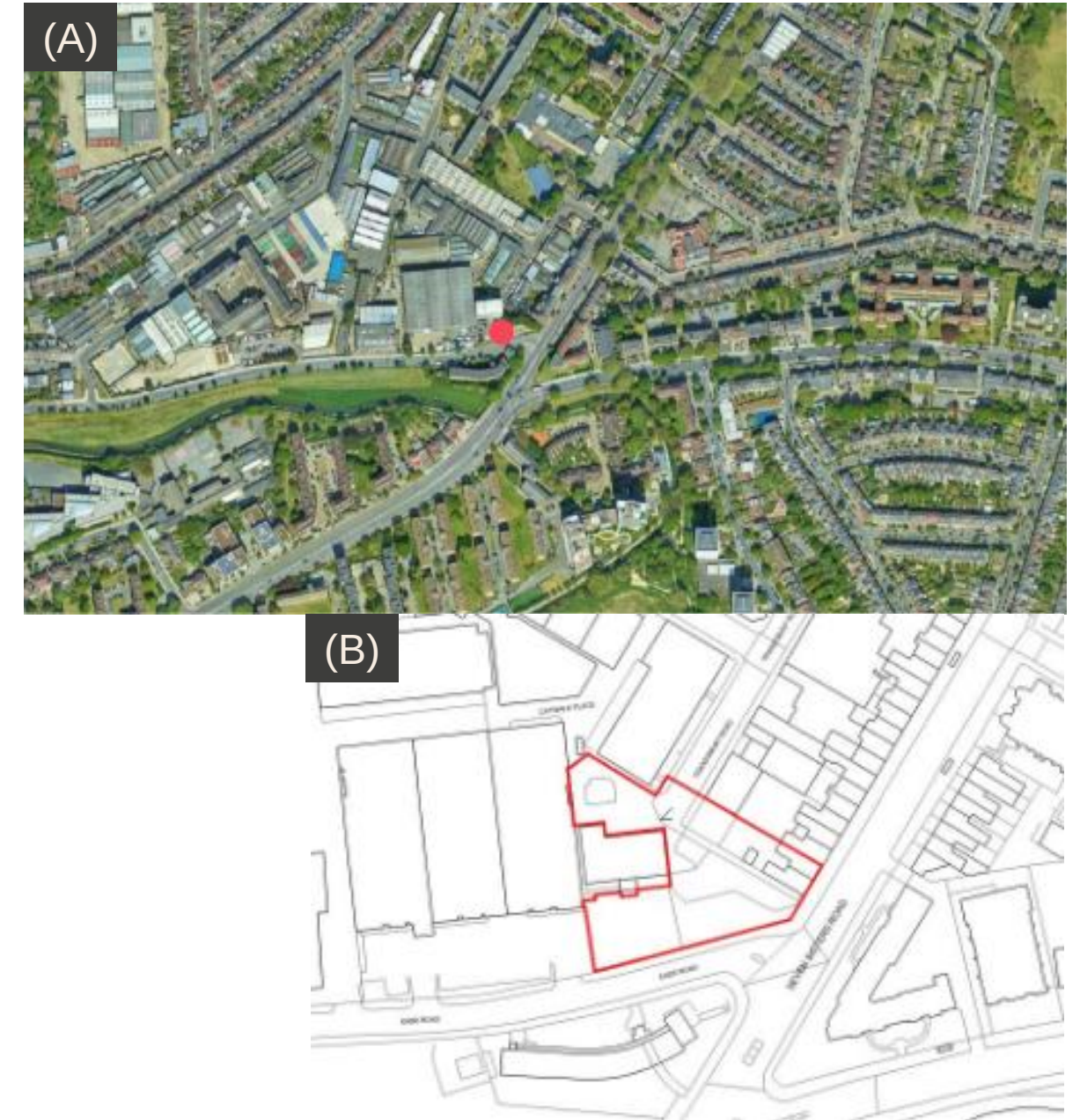


Figure 2. Proposed site location. (A) Aerial view of Harringay Warehouse District with the Seven Sisters / Eade Road site highlighted in red (B) Location plan for Seven Sisters development with site boundary outlined in red.

Method statement

The structure, context and content of this Statement has been informed by government guidance, industry-leading standards and circular principles. This section outlines the key resources and how they were used throughout this Statement.

Government guidance – GLA

The London Plan 2021 policy requires all applications for development to submit a Circular Economy Statement to the Mayor; specifically Policy SI requires all applications to promote circular economy outcomes and aim to be net zero waste. Hence, being located in London borough of Haringey, the Seven Sisters new development must seriously consider the circular economy through design and submit a summary statement to the GLA.

The GLA have provided supplementary guidance to inform those completing the circular economy statements. The guidance outlines the six circular economy principles that are fundamental to all building design processes, which are explored following a set structure where the principles are addressed, as detailed in Table 1.

		Circular Economy Principle					
		Building in layers	Designing out waste	Designing for longevity	Designing for adaptability	Designing for disassembly	Maximising reused and recycled materials
Section of report	Resource conservation	✓					✓
	Waste elimination	✓		✓	✓	✓	
	Sustainable waste management		✓			✓	

Table 1. Circular economy statement structure, showing in which section of the report each principle is explored

Method statement

Industry-leading standards - BREEAM

Furthermore, Seven Sisters has an aspiration to achieve leading sustainability standards. The development has targeted the achievement of BREEAM Excellent for New Construction. Therefore, the Design Team have set stringent targets to minimise waste in construction, operation and end-of-life, as well as addressing material choices and uses. The BREEAM credits addressed in this statement include the following:

- 1 / Resource conservation: (Mat 03, Mat 06, Wst 02)
- 2 / Waste elimination: (Wst 06)
- 3 / Sustainable waste management: (Wst 01, Wst 03).

Circular principles - building in layers (Figure 3)

The building in layers concept presents buildings as a collection of components with different life-spans. It argues that an adaptive building must allow slippage between the differently-paced systems of Site, Structure, Skin, Services, Space and Stuff. Otherwise slow systems block the flow of quick ones, and quick ones tear up slow ones with their constant change (Brand, 1994). Understanding the layer logic of the building enables us to take circular design choices from the start.

By understanding how the building in layers concept relates to the Seven Sisters development, it helps to separate out each design decision and address them on an individual basis and ensure a circular model is delivered.

- **Site:** The geographical location, orientation and topography, which will never change. It has an eternal lifespan.
- **Structure:** The foundations and load-bearing structures, unlikely to be replaced without full demolition of the building, with lifespans of +100 years.
- **Skin:** The facades, roof and external spaces, which may change due to building use, climate change or building regulations, with a flexible lifespan up-until 100 years.
- **Services:** The “working-guts” including ventilation, plumbing, wiring, lifts, etc, wear out every 7-15 years. Therefore they should be designed to be easily accessible and replicable to avoid disruption to other layers.
- **Space:** The interior lay-out including walls, doors, floors etc, is a turbulent layer which may be replaced every 3-5 years based on tenant’s changeable preferences. It should be designed to be adaptable and materials should be reusable and recyclable.
- **Stuff:** The things which exist in the building including chairs, tables, tvs, whiteboards etc with the shortest lifespan due to every changing technology and fashion. These should be easily movable, reusable and recyclable to minimise their waste.

This Statement will apply the building in layers lens to the following sections:

- 1 / Resource conservation
- 2 / Waste elimination

In order to thoroughly assess the interventions required to enable a circular design model.

Summary

This Circular Economy Statement uses the GLA’s [Circular Economy Statement Guidance \(2022\)](#) as the main resource to inform the structure and key topics to address throughout the study. BREEAM credits are referenced where relevant and the Building in Layers concept is used to identify interventions at different levels.

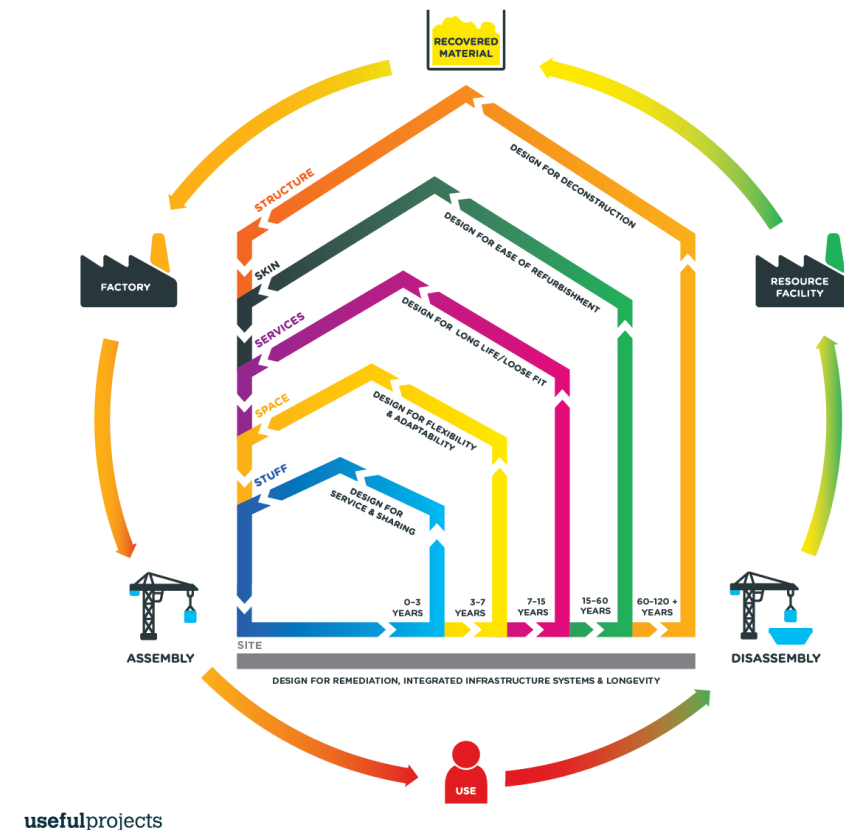


Figure 3. Building in layers

Circular economy aspirations

The Seven Sisters/Eade Road development's circular economy targets are highlighted in the table below, alongside the relevant chapter for discussion and target source. The targets highlight the environment that the Seven Sisters development must work within and requirements that it must adhere to.

CHAPTER	CIRCULAR PRINCIPLE	SOURCE	TARGET
1/ Resource conservation	Material efficiency	Project brief	Consider potential routes for MMC.
	Responsible material choices	BREEAM	Develop and follow a sustainable procurement plan to guide specification towards sustainable construction products.
	Responsible material choices	BREEAM	100% timber to be FSC.
	Responsible material choices	Harringay Warehouse District Masterplan Framework	Prioritise construction materials from reused, secondary or recycled sources, targeting 20% of materials and elements that are reused.
2/ Waste elimination	Design for adaptability and disassembly	London Plan	Designing for deconstruction or flexibility.
	Minimise residual waste	London Plan	Aim to be net zero waste.
3/ Sustainable waste management	Construction waste	Masterplan Framework / London Plan	Target 95% of construction, demolition and excavation waste diverted from landfill.
	Recycling rate	London Plan	Zero biodegradable or recyclable waste to landfill.
	Operation waste	London Plan	75% minimum business waste recycling rate by 2030.
		London Plan	65% municipal waste recycled.
	End of life material conservation	Harringay Warehouse District Masterplan Framework	Design for disassembly and re-use, target 50% of materials and elements for reuse at the buildings end of life.

Table 2. Circular targets relevant to the Seven Sisters development.

Circular Economy Statement

This section provides a detailed description of how circular economy principles will be implemented at Seven Sisters; this includes specific measures to conserve resources, eliminate waste and manage waste sustainably.

Circular Economy Statement

1/ Resource conservation

The first step in reducing material use and eventual waste is to critically assess and ensure that the quantities and choice materials are appropriate for the development and that they will add value over long term. There are two main concepts to include in this assessment, they are:

- Material efficiency though building design: Ensuring plans explores routes to design in layers, closely considers the material efficiency of each layer and maximises offsite prefabrication.
- Responsible sourcing of materials: Prioritise the re-use of existing materials in specifications and reporting against material use clearly.

Circular economy statement

1/ Resource conservation

Context

Material efficiency is the process of undertaking a building project to enable the most efficient use of materials over the life cycle of the building and its components. This includes using fewer materials, reusing existing demolition/strip-out materials and, where appropriate, procuring materials with higher levels of recycled content. It may also include the adoption of alternative means of design/construction that result in lower materials usage and lower wastage levels. This section outlines key features that the design team have put in place to maximise material efficiency, and presents some additional actions which should be considered in attempts to achieve best practice targets.

Key objectives

- The Harringay Warehouse District Sustainability Framework sets out the principle to prioritise construction materials from reused, secondary or recycled sources, with a **target 20% of materials and elements that are reused**.
- The design team will consider modern methods of construction (MMC) and alternative material typologies to increase material efficiencies.

Our approach

The development will continuously review material efficiency strategies across design stages to ensure a lean design that reduces material quantities without inhibiting future flexibility. At RIBA Stage 2, the construction approach has been closely considered addressing material efficiency, flexibility and embodied carbon. Below outlines the key considerations from the design team for the new development, presented against each building layer:

Site

- We advise that the material from the existing floor slab should be reused / recycled as aggregate after excavation to maximise material recovery and recycling levels.

Structure

- The team has applied a general philosophy of minimising the number of layers of building components.
- The structural frame has been designed for a design life of at least 50 years, which is likely to exceed other fabric layers. Therefore, the structural frame aims to facilitate the repair, refurbishment and replacement of secondary fabric elements during its lifespan.

Structure (cont.)

- Best practice analysis approaches will be employed to ensure the structure is not over-designed. Methods such as imposed load reduction will be considered in order to improve material efficiency from the structure.
- The team has employed the following measures to reduce material use and the associated embodied carbon of the structure: consistent and efficient grid spacings, elimination of load transfers where feasible, carefully consideration of post-tensioning of RC slabs, reduction of reinforcement rates of floor slabs where possible and careful design of the number and diameter of piles to minimise material volume.
- The team has addressed material efficiency when deciding upon the structural approach. A steel frame solution was investigated due to its programme and cost savings; however, reinforced concrete has been employed, with main benefits being its inherent fire protection and acoustic performance which minimises the need for additional non-structural systems and therefore follows the philosophy of minimising layers (Figures 4 and 5).
- The new workshops located at the east boundary of the has opened the opportunity to repurpose containerhips rather than erecting new structures (Figures 6 and 7).
- The reinforced concrete used in the structure of the buildings will use 100% recycled scrap steel as its feedstock. The structural concrete specification will require the use of reinforcement derived from recycled material. While the preferred option is for reinforced concrete construction, studies into a steel reuse scheme are being progressed in parallel.
- The architectural plans and Bill of Materials, supplied by Hennessy Godden (Figure 9), indicate that a significant amount of the structure will be concrete. Therefore, the use of lower carbon concrete options and optimising the use of the material will deliver a lower embodied carbon structure. We are exploring the use of offsite columns with 50% GGBS to avoid impact on programme through longer curing times.
- The team has made choices to ensure the façade materials are robust and ensure low maintenance and longevity.
- Considerations for standard product sizing has influenced the design outcomes. Efforts are being made at every stage to optimised building elements and reduce wastage / offcuts

Circular economy statement

1/ Resource conservation

Skin (building envelope)

- Eternit fibre cement board has been chosen for the façade. It has good sustainability and circular credentials, achieving A+ rating in the Green Guide. It is 100% recyclable, low maintenance, naturally non-combustible, no additional treatment is required for fireproofing. It's also prefabricated in a quality controlled environment and doesn't require wet trades on site to assemble or install.
- Access to all layers has been priorities by frequency of replacement.
- The team has chosen to use Rockwool insulation which minimises waste from cut-offs because leftover Rockwool stone wool insulation and off-cuts can be recycled and transformed into new Rockwool insulation.

Services

- The RC frame approach has enabled service accessibility as these are surface fixed and therefore easy to replace as required.
- A plant replacement strategy has been produced (Figure 8) to clarify the replacement rate of different kit. Recommendations are divided into three tiers as a useful guide to ensure equipment will not be replaced before its end-of-life and increases the longevity of the installed kit.

Space

- The structural engineers clarify that if a flat soffit is requested in Eade Block A, then it could be employed through a slim-floor beam system (e.g. Deltabeam). The design is aiming to avoid the provision of soffit for ease of maintenance.

Stuff

- Fit out is minimal to enable tenants to occupy spaces in a manner that suits their needs and preferences and limit waste. Only the essential level of internal fit out will be designed-in. This will provide the tenants with more flexibility on the design of their spaces and avoid any unnecessary stripping out material at the start of a tenancy.

BREEAM alignment

The BREEAM credit relevant to this section is Material Efficiency (Mat 06), with the client aiming for one credit (the full allocation for this section). To achieve this credit, the project must undertake the following steps:

1. Set targets and report on opportunities and methods to optimise the use of materials. These must be done for each of the following stages: preparation and brief, concept design, developed design, technical design and construction.
2. Develop and record the implementation of material efficiency at the following stages: developed design, technical design, construction.
3. Report the targets and actual material efficiencies achieved.

So far, the team has set the following material efficiency targets:

- Target 20% of materials and elements that are reused.

Next steps

In the Circular Economy Workshop on 18th October 2022, the design team discussed the existing work done on material efficiency. To ensure best practice in terms of resource conservation the following steps will be further explored during the detailed design of the development:

- Development of a procurement strategy which has a particular focus on procuring responsible materials with high proportions of recycled material.
- Prioritisation of standard materials dimensions to reduce off-cuts.
- Engagement with manufacturers to participate in take-back schemes for packaging and surplus materials.
- Rationalisation of structural design to reduce the volume of structural materials.
- Avoidance of over specification.
- Optimisation of foundation design.
- Specification of pre-assembled / pre-fabricated elements and/or off-site manufacture, where feasible.

Circular economy statement

1/ Resource conservation

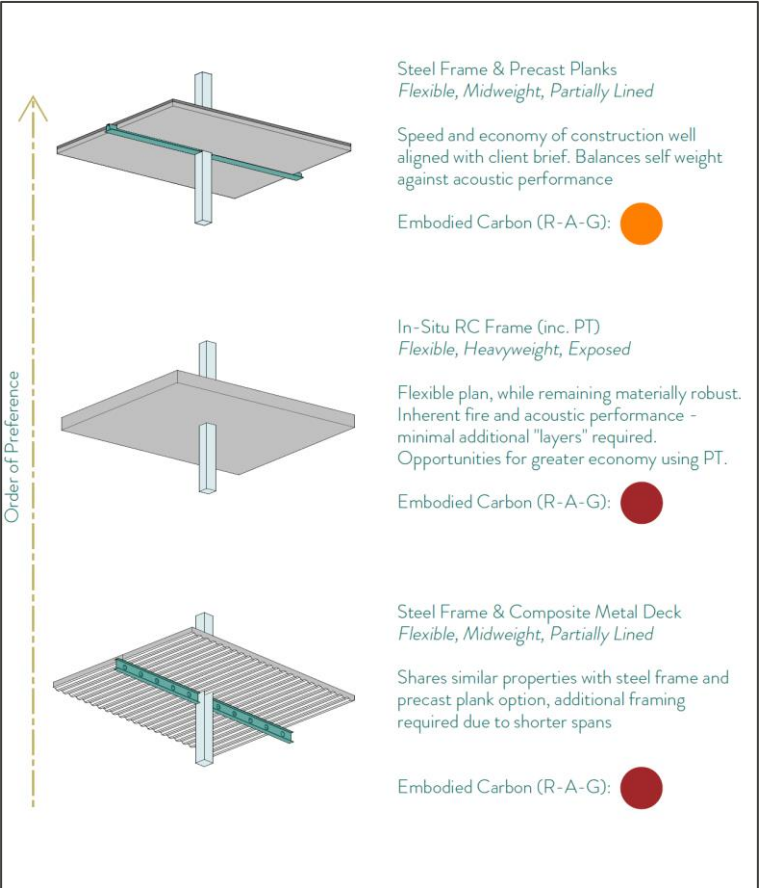


Figure 4. Structural options explored by the structural engineers.

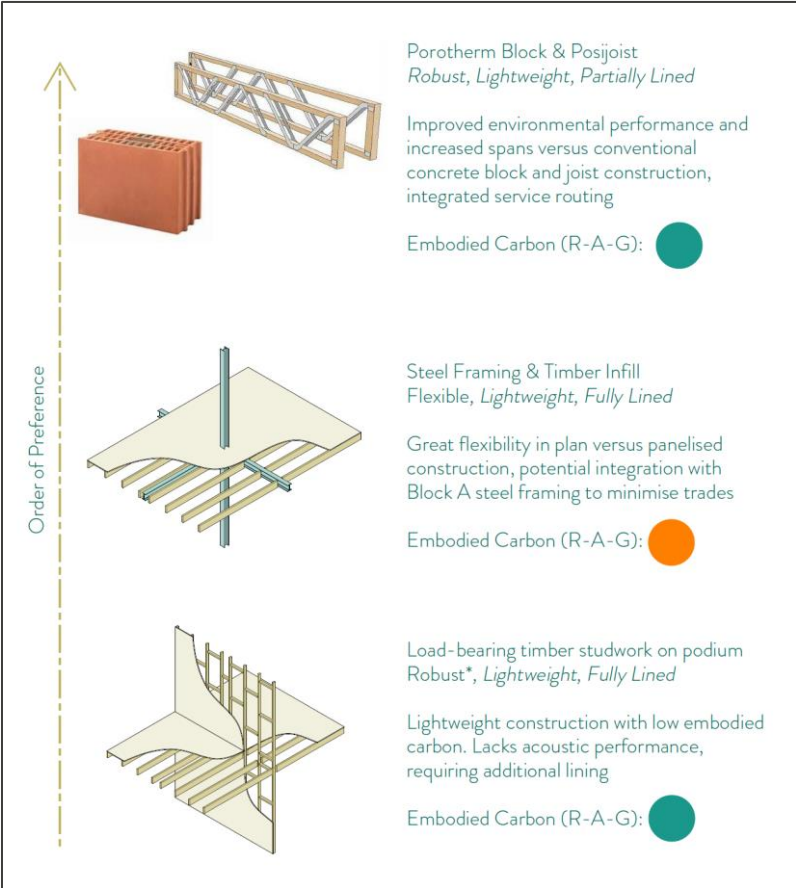


Figure 5. Structural options explored by the structural engineers.

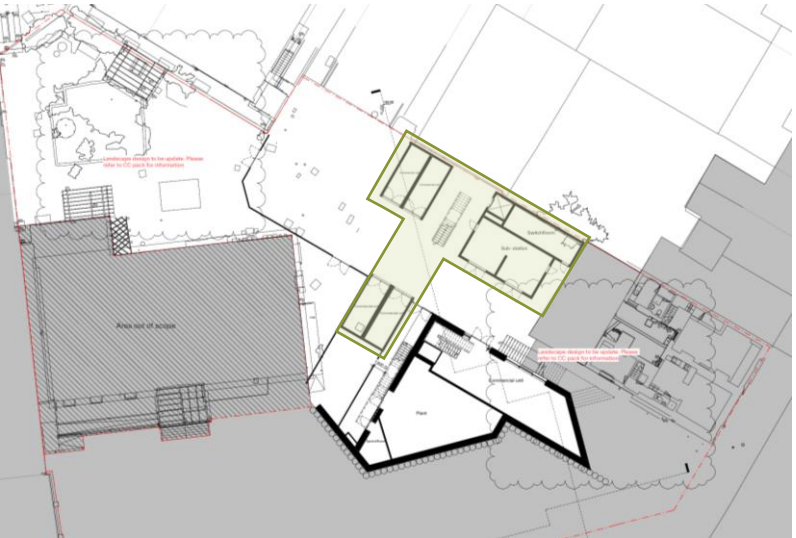


Figure 6. Tewkesbury ground floor plan highlighting the standalone workshops at the east boundary.



Figure 7. Tewkesbury mezzanine plan highlighting the standalone workshops at the east boundary.

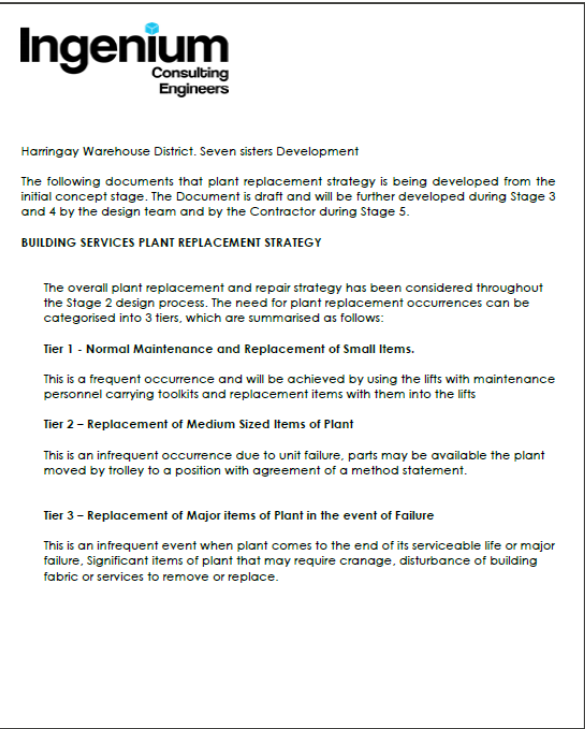


Figure 8. Building services plant replacement strategy.

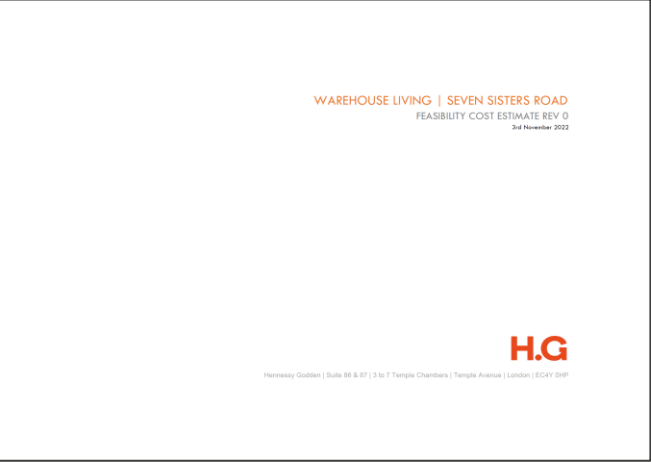


Figure 9. Feasibility Cost Estimate document containing an estimated bill of materials.

Circular Economy Statement

2/ Waste elimination

In a linear model, new buildings are designed and constructed for a single, pre-determined, function. In a circular economy, it is important to ensure that all developments are built to be adaptable and to have a long-life. This section presents the approach to ensuring flexibility and adaptability at Seven Sisters. This includes short studies into the following:

- Designing for adaptability: Buildings components and layers are designed to be flexible in terms of future change of use and expansion
- Designing for disassembly: Buildings components and layers are designed with a view to their future removal and reuse

Circular economy statement

2/ Waste elimination – designing for adaptability

Context

Many of our most successful buildings and spaces are repurposed heritage assets. Designing for adaptability is about ensuring that new buildings are resilient to changes in environmental and social circumstances, constructed from durable components, but also flexible enough to allow for future changes of use and possible expansion. This section demonstrates how the buildings have been designed with adaptability and expansion in mind, and how this approach will be taken forward through the detailed design stage.

Key objectives

- To create buildings with well defined long term needs, and that require little modification due to their 'loose fit', generous proportions and readiness for alternative uses and technologies.
- To meet the needs of the present, but with consideration of how those needs might change in the future, and to enable change through frequent reconfiguration of non-structural parts and periodic remodelling and reconfiguration of structural elements.
- To ensure all materials with a planned short life span have an agreed recycling/reuse route with the manufacturer to take back or that they are procured through a service agreement

Our approach

The design considers adaptability, flexibility and potential for expansion, with reference to the six layers.

Site

- Other assets within Haringay Warehouse District have been identified as readily adaptable. If required in future development phases, these buildings could be refurbished to expand the scope of the Seven Sisters site.
- The architects undertook an analysis of the Seven Sisters site when planning for the new buildings. A key factor in the re-development was ensuring space was used efficiently while maintaining permeability. Due to challenging ground conditions and the highly constrained site, future lateral expandability of the planned buildings is limited.

Structure

- The design aims to minimise the number of additional fabric layers, through the likes of inherent fire protection, to avoid frequent "shearing" between layers and enable future adaptability. This means that the structural typology is well suited to internal alteration to the architectural plan, without compromising the likes of structural fire protection.

Structure (cont.)

- The RC frame construction approach across Eade Road A and B has been implemented to ensure consistency across the two structures and therefore to enable future flexibility for architectural plans and potential expandability between the two new structures.
- Buildings have been designed for loadings against a 1-in-50 year probability of exceedance, against current Eurocode guidance.
- Large floor to ceiling heights enable the building to be adapted to a variety of uses in the future, including office spaces/ light industrial uses.
- Whilst vertical expansion is possible, especially for the lower rise of Block B, this would be an invasive process, as the roof houses both blue and green roofs.

Skin (building envelope)

- The use of standardised panel sizes and components (e.g. cladding) enables elements to be reused at scale, in the future at their end of life in this building.

Services

- M&E plant has been designed for current building load, but if functionality of the building changes there is available space on the roof (subject to planning). In the case of a change-of-use, the plant strategy would need to be reviewed.
- Services requiring regular access including lighting and ventilation are surface mounted, therefore made accessible throughout the design.
- Services provision is through a central plant with ambient water loop and heat pumps in each unit providing domestic hot water and heating. This enables flexibility as the distribution pipework is adaptable to different layouts and heating is provided through underfloor heating throughout adaptable areas.
- A plant access and replacement statement has been developed to support owners/occupiers to access the services through planned routes, which reduces any unnecessary invasive interventions.

Circular economy statement

2/ Waste elimination – designing for adaptability

Space

- Design uses blockwork internal partitions which allow for ease of change of layout. Lime mortar has been proposed to enable the easy disassembly of internal partitions.

Stuff

- The warehouse design aesthetic lends itself to exposed structural components and minimum use of wet trades and unnecessary additional finishes, e.g. paint, and carpet.

Next steps:

The design team will adopt the following approaches to embed design for adaptability and expansion in the detailed design and construction stages:

- Engage early with potential contractors to bring forward ideas for innovative approaches and materials and test their feasibility at the site.
- Consider how internal spaces are separated, and the location of any access or service cores to facilitate changes to layouts
- Design M&E services for ease of maintenance, repair and future upgrades
- Explore how modern methods of construction can facilitate flexibility, for example prefabricated bathroom and kitchen modules that can be reconfigured within the building envelope with minimum disruption
- Design a robust frame to enable changes in building use, for example design loads.
- Select materials from manufacturers offering take-back schemes and leasing, to avoid 'lock in' to redundant technologies
- Minimise the need for wet trades during construction. For example, choose exposed structural finishes instead of painted plasterboard.

Circular economy statement

2/ Waste elimination – designing for disassembly

Context

Historically, most buildings have been designed as if they will never be taken down. Designing for disassembly required a shift in thinking so that all of a buildings components and layers are designed with a view to their future removal and reuse. This section demonstrates how the buildings have been designed to facilitate future disassembly, and how this approach will be taken forward through the detailed design stage.

Key objectives

- Products and services are designed to be assembled, deconstructed and reused or recycled on a part-by-part basis.
- The Haringey Warehouse District Sustainability Framework sets the target that 50% of materials and elements can be reused at the buildings' end of life. Achieving this target will require creative approaches to material specification and configuration.

Our approach

The proposals consider the (re)use of former shipping containers on the third smaller plot on the east of the slide to create temporary structures which can be easily disassembled and erected elsewhere. Therefore, this block should be designed with disassembly very much in mind as change will likely occur within a decade.

Whereas the Eade Road Block A and Block B are designed for a longer lifespan, though still considering their eventual reconfiguration and deconstruction. This section sets out principles to maximise the potential for high-value reuse of construction materials and elements at the end of the buildings' life. We present this with specific reference to the six building layers – a key approach is facilitating disassembly is to design the building systems and components in layers so that the removal, adjustment or replacement of elements is feasible, especially when different components have different life spans and maintenance needs.

Site:

- Landscaping will be designed to be simple and flexible so that can be used for many different activities. Ideas for the space include street parties, orchards on wheels, space for sport, space for relaxing.

Structure:

- There are opportunities for recycling rebar at end of life, and concrete can be reused as hardcore or in new concrete as aggregate.
- Although the RC frame structural solution minimises the potential for disassembly, it has a longer design life than other fabric layers, allowing for ease of secondary fabric disassembly and replacement.

Skin:

- The chosen blockwork is robust but demountable by using lime mortar, and therefore could be diverted for use in a second life. Additionally, by using exposed blockwork without additional finishes, demounting is made easier and waste is minimised.

Services:

Consideration will be given to modular components and consider leasing rather than ownership models of procurement for building services products and equipment. This will place onus on manufacturer to take responsibility for end of life disposal and material reuse.

Space:

- The use of mechanical fixings rather than glue improves the ease of removal and replacement.
- There will be effort to avoid permanent fixing of products. Efforts have been made to ensure internal fixings are easy to access to enable disassembly.
- Lime mortar has been proposed to enable the easy disassembly of internal partitions and salvage of building elements.

Stuff:

- The team will ensure unnecessary toxic treatments and finishes are avoided. Some finishes can contaminate the substrate in a way that they are no longer reusable or recyclable. This should be avoided unless finishes serve a specific purpose.
- All materials with a planned short life span will aim to set a procedure with the manufacturer to take back materials at the end of life or seek procurement through a service agreement.
- The team will specify loose / demountable furniture and fittings, where possible.

Circular economy statement

2/ Waste elimination – designing for disassembly

BREEAM alignment

The BREEAM credit relevant to this section is Wst6 designing for disassembly and adaptability. The project is currently targeting the full 2 credits in this area, which requires the following:

- Conduct a study to explore the ease of disassembly and functional adaptation potential of different design scenarios by RIBA Stage 2 and develop recommendations
- Update the study during RIBA Stage 4 to include revised and adopted recommendations and produce a guide for tenants.

At this stage, design for disassembly was discussed as part of the wider circular economy workshop 18th October 2022. Specific opportunities for maximising potential for recoverability and disassembly were discussed:

- Use of blockwork with limewater mortar for ease of disassembly of partitions.
- Use of rainscreen, facilitating the process of panel replacement.
- Use of mechanical fixings wherever possible, to ensure ease of disassembly.
- Set up buildings as material banks by creating a catalogue of materials for ease of identification and recovery at the end of life.

These will be explored in more detail during the next stage of the design.

Next steps:

The design team will adopt the following approaches to embed design for disassembly in the detailed design and construction stages:

- Review detailed material specification / bill of quantities to identify which materials and/or components can be recovered at end of their life.
- Report potential for disassembly against 50% target from sustainability brief, and continue to review and monitor progress against the target throughout the detailed design and construction stage.
- Embed requirement for disassembly within the procurement process and weight accordingly with sustainability process.
- Review design with contractors to ensure approach understood.
- Develop a 'disassembly guide' for the client and building owners / users.
- Create a material inventory for whole building, and integrate with BIM model, if used.
- Engage with the design team to address the end of life strategy for the material. The future of disassembled materials could be planned through a contractual agreement.
- Make information available via material passports.
- Put in place a risk and reward contract with the demolition contractor.

Circular economy statement

2/ Waste elimination – climate change resilience

Climate resilience

To ensure the longevity of the building and all components, the design team has considered resilience to a changing weather due to climate change impacts, so elements will not be required to be replaced or upgraded before their end of life. These measures include:

- Structural design has been carried out in accordance with all current guidance and best practice, with the potential to sustain additional loads due to increase snowfall and wind speeds.
- The building envelope has been designed with passive house principles, achieving high levels of insulation thus reducing the need for active heating.
- A thermal model of the building has been produced and loads calculated in accordance with current CIBSE recommended indoor and outdoor design conditions, ensuring the building services have been sized to deal with future changes to the climate.
- An overheating study has been undertaken to assess the resilience to overheating under climate change scenarios. The study concluded that the provision of horizontal shading devices in addition to operable windows allows indoor temperatures in occupied spaces largely track the outdoor air temperatures when windows are open, confirming that the spaces make best use of natural ventilation for heat rejection.
- To increase resilience to water scarcity, water saving fixtures and low flow fittings will be specified; in addition, planting that relies on precipitation only have been specified, and irrigation will be required only during the landscaping establishment period only
- Flood risk – in accordance with the LA of Haringey's policies, the development has been designed to achieve greenfield run-off rates, reducing the risk of flooding on- and off-site. The SuDS strategy, which includes green and blue roofs, permeable paving and rain gardens, also contribute to lowering pollution and achieve the required water quality of run-off.

Circular Economy Statement

3/ Sustainable waste management

For any unavoidable residual waste from construction and operation, it is important to plan its route for re-use and recycling and minimise the quantity going to landfill. This section outlines the stretching waste minimisation targets and identifies the actions taken at design-stage to ensure waste is minimised both in construction and in operation.

Circular economy statement

3/ Sustainable waste management - Demolition, excavation and construction waste (WST 01 – BREEAM)

Context

The development seeks to reduce construction waste by encouraging reuse, recovery and best practice waste management practices to minimise waste going to landfill.

Key objective

- The target for the development is to ensure **95% of construction, demolition and excavation waste diverted from landfill.**

Our ambitions

Managing demolition waste

Due to the lack of existing buildings or significant structures on site, a site-specific pre-demolition audit has not yet been carried out; however, a study will be conducted post-planning approval to identify the potential of the reuse or recycling. The developed area of the site is currently made up of hardstanding. This is likely to be crushed and reused as aggregate.

Through good demolition management, the proposed works are expected to at a minimum meet the diversion from landfill rate of 95%, in line with BREEAM standards and policies of the London Plan. No waste will be disposed in landfill. However, the Applicant is aware that once actual waste volumes and materials are available, a small fraction may not be recoverable. Endeavours will be made to avoid any need for landfill disposal.

Managing excavation waste

Potential for reuse of the excavated soil on site will be reviewed further as the landscape design is resolved to a greater level of detail. Where no suitable use can be identified within the project site, opportunities will be sought for excavation materials to be used in other local construction projects, or other beneficial uses before they are sent to landfill. This approach will result in at least 95% of non-hazardous excavation materials being put to beneficial use.

Managing construction waste

The contractor will be required to promote sustainable development, and where possible, reuse, reclaim or recycle as much deconstruction and construction material as possible. All reclaimed materials will be sorted and stored in clearly labelled containers and/or in properly signed areas.

Similarly, contractors will be required to adopt Considerate Constructors Scheme to minimise construction impact, including waste generation. A Resource Management Plan (RMP) will be developed before the commencement of construction. The production of the RMP will utilise documents such as the sustainable procurement plan and the pre-demolition audit, to ensure that the project's waste management targets are met. Waste management routes will be recorded for construction and demolition waste. Construction waste targets will be included in the contractor tender. Efforts will be made to keep the construction waste below 7.5m³/100m² of GIA, in line with the BREEAM credit requirements to achieve at least two credits under Wst01 Construction Waste Management. Possibility of greater reduction in waste quantity will be reviewed after the appointment of the main contractor with an aspiration to achieve an additional credit. In addition to such waste reduction targets, at least 95% of the non-hazardous recyclable waste will be diverted to recycling and away from the landfill.

During the construction stage, all contractors engaged for the works will be provided with the identified construction waste targets and will be educated to ensure that all measures are taken to reduce waste.

Pre-demolition audit

Due to the absence of existing buildings within the proposed site, only hardstanding materials will be required to be demolished within the scope of the proposed development. As the scope for demolition is limited, a pre-demolition audit has not yet been carried out; this will be commissioned to be carried out prior to any site works by a suitable member of the design team.

Circular economy statement

3/ Sustainable waste management - Operational waste (WST 03 – BREEAM)

Context

In-use operational waste must be properly planned for to ensure there is appropriate waste stream capacity, to actively encourage recycling and food compost and avoid cross contamination.

Key objectives:

- Ensure appropriate capacity is designed into small scale and building-wide waste stores.
- Ensure all waste stores are easily accessible and well labelled.
- Enable 75% minimum business waste recycling rate by 2030.

Our approach:

Velocity has produced an Operational Waste and Management Strategy in support of the Proposed Development. The Strategy analyses current waste services, undertakes modelling for the Proposed Development and ensures alignment with Waste Management in Buildings – Code of Practice (BS5906:2005 standards). The outcome is an informed Residential and Commercial Waste Management Strategy. Clear efforts have been made in the Strategy to manage and reduce operational waste from the Proposed Development, these are outlined below:

Internal residential waste storage

Each residential property will be provided with a segregated waste bin, which will be fixed into an appropriate kitchen unit. The segregated waste bin provides three capacities for (1) residual waste - 10 litres, (2) recyclables – 20 litres, and (3) food waste – 10 litres (Figure 10). This segregation system enables and encourages residents to recycle and dispose of food waste properly and discourages the over-use of the residual waste bin.

Residential waste management

Sufficient residential waste stores have been estimated through well-established waste metrics. Estimating and installing the correct volume of waste stores for each segregated waste stream is important to ensure residents are able to dispose of their waste in the correct store, avoiding cross contamination and maximising rates of recycling.

Since residents will transport the waste from their property directly to the nearest residential waste store, the bins will be clearly labelled to ensure waste is segregated into the appropriately labelled bins, again avoiding cross contamination and maximising rates of recycling.

Commercial Waste Management

For a robust commercial waste strategy, the restaurant waste metrics applied as the worst-case scenario in terms of storage required. This should provide ample provision for the commercial space in the proposed development therefore ensuring appropriate segregation of waste streams in operation.

Waste composition has been designated in accordance with the GLA target of achieving a 75% minimum business waste recycling rate by 2030. This is actively encouraging occupiers to use recycling routes, through limiting unnecessary residual waste storage.



Figure 10: Operational waste resources: (A) Haringey Warehouse District – Operational waste management system report, released on October 2022. (B) Segmented waste storage for integral residential units.

Circular economy statement

3/ Sustainable waste management – Circular partnership mapping

Context

In order to ensure materials can be re-used, re-purposed or recycled at their end of life, it is important to carry-out a circular partnership mapping exercise as early as in design. This is done to identify local and national opportunities to engage with stakeholders that promote circularity to ensure we are choosing the materials that can be fed back into the resource system at their end of life. This exercise has identified the following initiatives, which will be further explored in the following stages of the development.

Local ideas

- The design intent is to collaborate with local business where possible, to instil a sense of community participation in the development of the proposals.

Nation-wide initiatives

- **Rockwool Insulation – Stone wool insulation recycling ([link](#))**
The development is using Rockwool insulation, which has good circular credentials. Leftover Rockwool stone wool insulation and off-cuts can be recycled and transformed into new Rockwool insulation. This would be a positive mechanism to reduce waste.
- **Interface Carpets - ReEntry: ReUse, ReCycle, RePurpose ([link](#))**
Interface takes used carpet tiles and puts them to good use – by donating them to local businesses, recycling the fabric or as a last resort converting to energy, so nothing goes to landfill.
- **Enviromate - Community Projects ([link](#))**
Donating materials to developing projects and charitable causes through Enviromate, who connects the dots between projects with surplus materials and projects on low budgets who are in need of materials, with requests ranging from screws, to doors, to panelling and so on.
- **Collecteco ([link](#))**
Collecteco's mission is to help organisations donate furniture, equipment, and materials to good causes. All collections are then donated to good causes free of charge.

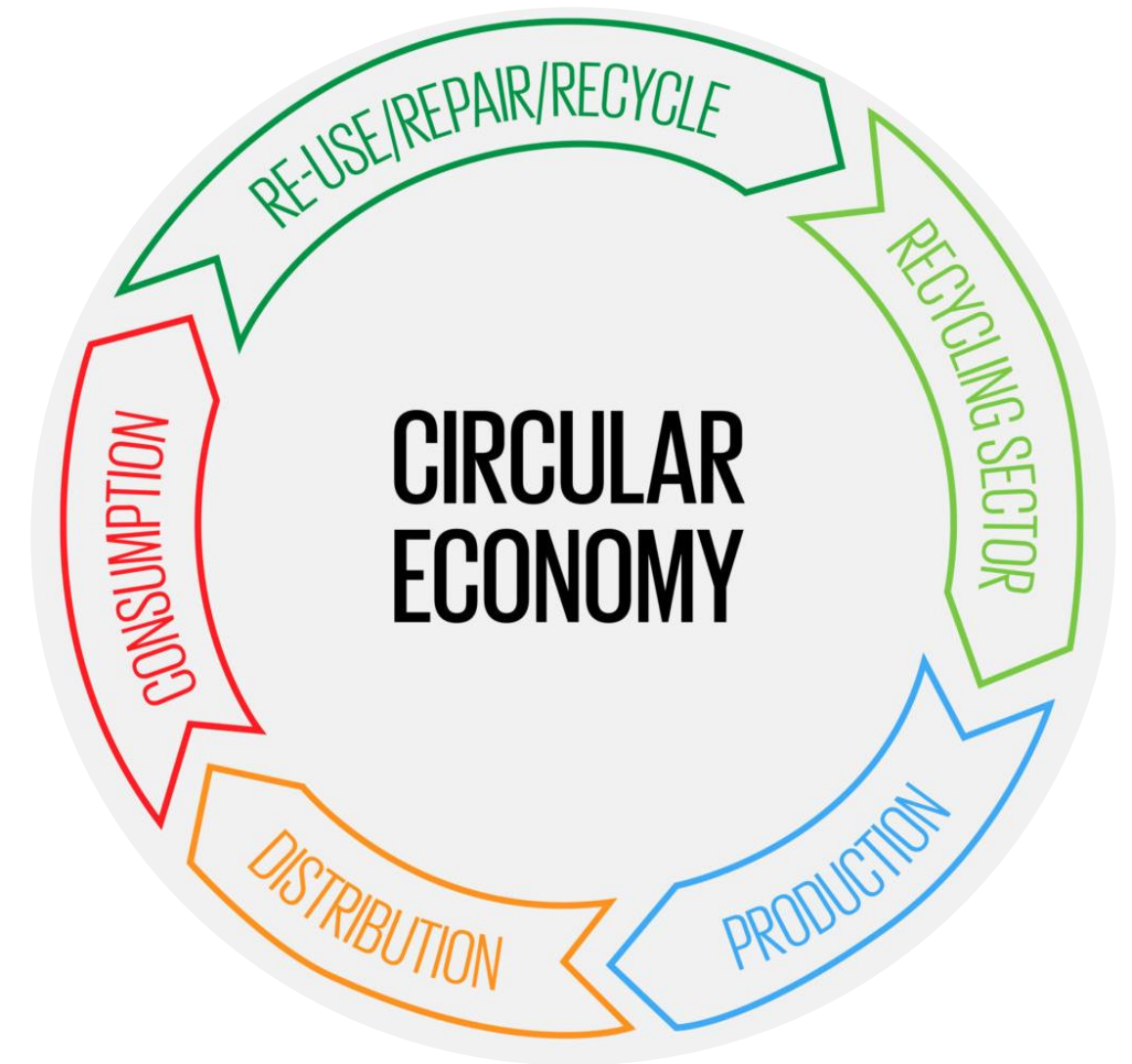


Figure 11: Circular economy diagram

Circular economy statement

3/ Sustainable waste management

BREEAM alignment

This section addresses two areas of the BREEAM framework: Construction Waste Management (Wst 01) aiming for four out of the five credits on offer and Operational Waste (Wst 03) aiming for one.

Construction Waste Management (Wst 01) – the proposed development is targeting a total of 4 out of 5 available credits; these include:

- Production of a pre-demolition audit prior to demolition works.
- Construction waste efficiency, aiming to generate less than 7.5m³/6.5tonnes of waste per 100m² GIA.
- Targeting the diversion from landfill of 80% of demolition and 70% of non-demolition waste (by volume).

For the Operational Waste (Wst 03) credit, currently we are in alignment due to the thorough approach set out in the Operational Waste Strategy. The next step will be to ensure that the plans come into reality. Ensuring that the bins are properly labelled and segregation of waste is active encouraged in operation.

Next steps

The design team will adopt the following approaches to sustainable waste management in the detailed design and construction stages:

- Undertake pre-demolition audit prior to commencement of site works.
- Measure and report against excavation process; BREEAM exemplary credit targets to be considered.
- Produce a resource/site waste management plan, setting out the targets for efficiency and reuse/recycling of materials on- and off-site.

Summary

Overview

This Circular Economy Statement provides an overview of how the proposed development has set strategic measures to both design and construction phases to support a circular economy, in line with London Plan targets.

A range of design measures and commitment have been proposed, including:

- Resource conservation – the design team will continuously review material efficiency strategies across design stages to ensure a lean design that reduces material quantities without inhibiting future flexibility. At RIBA Stage 2, the construction approach has been closely considered addressing material efficiency, flexibility and embodied carbon.
- Design for adaptability and flexibility – the design considers adaptability, flexibility and potential for expansion, with reference to and strategies focused on all six building layers: site, structure, skin, services, space and stuff.
- Design for disassembly – The proposals consider the (re)use of former shipping containers on the third smaller plot on the east of the slide to create temporary structures which can be easily disassembled and erected elsewhere. Whilst Block A and Block B are designed for a longer lifespan, these still consider their eventual reconfiguration and deconstruction through principles to maximise the potential for high-value reuse of construction materials and elements at the end of the buildings' life.
- Climate change resilience – the development has considered the potential for increasingly severe weather events, in line with climate change projections, and responds to increased risks to overheating, flooding and water scarcity.
- Construction waste management - the development is targeting the diversion of 95% of construction, demolition and excavation waste from landfill. This will be achieved through management of demolition and excavation waste, as well as the production of a site waste management plan setting out the targets for efficiency and reuse/recycling of materials on- and off-site.

Summary

Next steps

1/ Resource conservation

- Review detailed material specification / bill of quantities to identify which materials and/or components can be recovered at end of their life.
- Review design with contractors to ensure approach understood.
- Create material inventory for whole building, and integrate with BIM model, if used.
- Bring circular principles into detailed design.
- Carry out value engineering reviews to remove any unnecessary materials.
- Review design to ensure material optimisation.

2/ Waste elimination

- Report potential for disassembly rates.
- Embed requirement for disassembly within procurement process.
- Develop a 'disassembly guide' for the client and building owners / users.
- Develop 'end of life strategy' for the buildings, during the technical design and detailed design stages, setting out the specific features that will enable future disassembly.

3/ Sustainable waste management

- Carry out a pre-demolition audit to determine the pool of resources available for reuse, reuse with modification, repurpose, refurbishment or recycle.
- Prepare and implement a construction waste management plan.
- Form circular partnerships following mapping and develop long term contracts.

Overarching actions

- Continue to review and monitor progress against principles and targets.
- Carry out early engagement with contractors to ensure clarity of measures being proposed.
- Ensure CE principles and requirements embedded in all procurement documents, including appointment of contractors (and any subsequent subcontractors).

Appendix – Cost Plan

WAREHOUSE LIVING | SEVEN SISTERS ROAD

STAGE 2 COST ESTIMATE REV 1

9th December 2022

H.G

Hennessy Godden | 46 Gresham Street | London | EC2V 7AY

WAREHOUSE LIVING | SEVEN SISTERS ROAD
STAGE 2 COST ESTIMATE REV 1

Issue Sheet



Cost Plan Ref	Date Issued	Prepared by	Checked by	Authorised
Rev 1	09-Dec-22	CPL	JG	



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1.0 INTRODUCTION

1.1 This Stage 2 cost estimate has been prepared for the proposed Warehouse Living development on the Eade Road & Seven Sisters Road corner plot, based on the general arrangements and design statement by the design team.

1.2 The outline scope requirements for this project includes:

- Construction of new block A & B living accommodations with new lower ground floor to Block A opening onto Tewksbury Road
- New ground floor retail commercial units constructed to shell & core
- New public realm works to the corner plot including 'Spanish steps' leading onto Tewksbury Road
- External services including provision for connections of incoming services and new substation works

1.3 **The following are not included within this cost estimate, refer to the exclusion lists for full details:**

- Internal fit out to retail and workshop accommodation
- Provision for external container retail units
- Works to Cara House
- External furniture and soft landscaping
- Loose furniture & equipment

2.0 SUMMARY OF CONSTRUCTION COSTS

		Basement Cost /m2			Block A Cost /m2			Block B Cost /m2			Ext works & infrastructure		Total amount		Cost /m2		
GIA		310 m²			2,831 m²			730 m²					3,871 m²				
1.0	Substructure	£	959,000	£	3,094	£	312,000	£	110	£	199,000	£	273	£	1,470,000	£	380
2.0	Shell and core (frame & upper floors)				£	1,897,000	£	670	£	380,000	£	521	£	2,277,000	£	588	
3.0	Shell and core (External façade and roof)				£	1,744,000	£	616	£	539,000	£	738	£	2,283,000	£	590	
4.0	Common part fit out including services installation	£	72,000	£	232	£	1,863,000	£	658	£	551,000	£	755	£	2,486,000	£	642
5.0	Living & bathroom fit out				£	1,871,000	£	661	£	407,000	£	558	£	2,278,000	£	588	
6.0	External roof terraces											£	198,000	£	198,000	£	51
7.0	External landscaping											£	791,000	£	791,000	£	204
8.0	External services & infrastructure											£	354,000	£	354,000	£	91
9.0	Sustainability measures											£	100,000	£	100,000	£	26
10.0	Main contractor's Preliminaries	16% £	165,000	£	532	£	1,230,000	£	434	£	332,000	£	455	£	188,000	£	495
11.0	Main contractor's OH&P	6% £	72,000	£	232	£	535,000	£	189	£	144,000	£	197	£	98,000	£	219
12.0	Contingency	5% £	63,000	£	203	£	473,000	£	167	£	128,000	£	175	£	86,000	£	194
TOTAL CONSTRUCTION COSTS EXCLUDING VAT		£	1,331,000	£	4,294	£	9,925,000	£3,506	£	2,680,000	£3,671	£	1,815,000	£15,751,000	£	4,069	

- 2.1 The estimated cost of the construction works is currently at £15,751,000. This includes an contingency allowance, and excludes the costs of consultant's fees and VAT.
- 2.2 The contingency allowance is 5% of the total construction costs. The contingency is a provisional allowance included to cover potential design development that may arise during the upcoming design stages.
- 2.3 This estimate is subject to a series of assumptions and exclusions provided.

WAREHOUSE LIVING | SEVEN SISTERS ROAD
STAGE 2 COST ESTIMATE REV 1



2.0 SUMMARY OF CONSTRUCTION COSTS (CONT'D)

Inflation concerns

- 2.4 It needs to be stressed that we are currently going through a period of uncertain fluctuation in the price of materials and above average inflation increases, this is leading to higher tender prices that are rapidly changing compared to previous years.
- 2.5 Since the start of 2022, labour availability has remained tight due to strong demand and overall availability. In addition, recent events including COVID and the Ukraine conflict have tightened supply issues, resulting in uncertain fluctuation and the ability of the supply chain to fix their costs.
- 2.6 We have not allowed for any future inflation impact within our cost estimate but will continue to closely monitor the construction market and political events as they emerge.

Cost movement from Stage 1

- 2.7 The current estimated cost has increased by £527,000 from the cost estimate issued during Stage 1. A summary of the cost movement is shown below with key changes. This cost increase is largely driven by the GIA increase for Block A and additional area of the public realm works to what had been previously assumed.

No. of accommodation	STAGE 2				STAGE 1				Difference			
	100				102				-2			
Warehouse Living Construction	Costs	GIA	Living	Cost /m2 GIA	Costs	GIA	Living	Cost /m2 GIA	Costs	GIA	Living	Cost /m2 GIA
1 Tewksbury Workshop incl mezzanine	£1,331,000	310 m²	n/a	£4,294	£1,458,000	309 m²	n/a	£4,718	-£127,000	1 m²	n/a	-£425
2 Block A	£9,925,000	2,831 m²	2,127 m²	£3,506	£9,553,000	2,561 m²	1,860 m²	£3,730	£372,000	270 m²	267 m²	-£224
3 Block B	£2,680,000	730 m²	444 m²	£3,671	£2,487,000	805 m²	468 m²	£3,089	£193,000	-75 m²	-24 m²	£582
4 Rooftop, public realm & infrastructure	£1,815,000				£1,726,000				£89,000			
5 Total construction costs	£15,751,000	3,871 m²	2,571 m²	£4,069	£15,224,000	3,675 m²	2,328 m²	£4,143	£527,000	196 m²	243 m²	-£74

Key Changes from Stage 1

- Construct proposed retaining wall around existing slope to reduce excavation works for lower ground
- Increase in Block A GIA for fire corridor & circulation route (external deck fire circulation is omitted)
- Proposed facade material (Eternit cement board)
- Added lift core and lift to Block B
- Added external balcony to Block B
- Roof level plant room enclosures
- Hard landscaping work now includes public & communal yard adjacent Tewksbury road

3.0 BASIS OF ESTIMATE

3.1 The following information has been used as reference in the preparation of this estimate:-

- Floor plans for proposed scheme by Morris+Company dated 16th November 2022
- Pre-application design pack by Morris+Company dated 16th November 2022
- Block A & B structural layouts sketch by London Structure Lab dated 3rd November 2022
- Initial fire safety assessment by Astute Fire dated 22nd May 2022
- Stage 2 Outline design mechanical, electrical and public health specification by Ingenium dated 7th October 2022
- Seven Sisters road public realm & landscape drawings by Campbell Cadley dated 17th October 2022

The design information from the following design discipline are to be confirmed

- Interior fit out design concept
- Sustainability strategy

4.0 ASSUMPTION & EXCLUSION

Assumptions

- 1** This cost estimate has been prepared on a elemental unit quantities basis based on the design information available. In the absence of design details, drawn information or specifications, key assumptions are made which is subject to design validation.
- 2** The works will be procured as a single contract, on a Traditional procurement route competitively tendered with selected main contractors.
- 3** We have included main contractor's preliminaries at 16% of the construction cost, on the assumption that site office areas can be set up in accommodation provided by the Employer.
- 4** All retail & workshop areas will be constructed to shell only with power & plumbing supply & fire alarms.
- 5** All living accommodation will be completed with fitted bathrooms, kitchens and white goods, Subject to a fit out specification, an indicative cost model has been prepared to inform the fit out cost.
- 6** The cost estimate includes an allowance for providing a new substation and decommissioning the existing as per the quotation provided by UKPN dated 12th October 2022.
- 7** Subject to further confirmation, capacity of incoming utilities (water & drainage) are sufficient and reinforcements are not necessary.
- 8** Subject to further risk analysis the contingency allowance within the estimated costs is 5% of the total construction costs.
- 9** Floor finish level to soffit finish height is 3.100m
- 10** This cost estimate is based on the GIA provided within Section 5.

4.0 ASSUMPTION & EXCLUSION (CONT'D)

Exclusions

- 1 Value Added Tax
- 2 Inflation costs beyond Q2 2022 (please refer to our statement concerning inflation)
- 3 All professional and design team fees
- 4 Pre-Construction Services Agreement fee
- 5 Costs associated with Planning and Building Regulations fees
- 6 Currency fluctuations
- 7 All works in connection with unknown ground conditions including removal of contaminated land
- 8 Artwork & sculptures
- 9 Loose furniture, audio visual, IT equipment, fitted blinds to apartments.
- 10 Fitted wardrobes, shelving and sleeping decks
- 11 Carpentry work and furniture for public realm and roof terraces
- 12 Soft landscaping
- 13 Decorative lighting
- 14 Works outside the site (red line) boundary
- 15 Façade cleaning system
- 16 Data and security systems
- 17 BMS system
- 18 Planning conditions/ Section 106 or 278 contributions / Community Infrastructure Levy
- 19 Marketing suites, show floors, mock ups or samples
- 20 Fees or costs associated with rights of light agreement, party wall awards, oversailing agreements etc
- 21 Exploration for / and removal of unexploded ordinance (UXO)
- 22 Unknown services diversions or infrastructure upgrade
- 23 Working outside of normal working hours
- 24 Major services diversions or upgrade (except for a UKPN substation)
- 25 Sustainability requirements that may be required over and above expectations
- 26 Extensive substructure or piling works
- 27 Standby generators (subject to design)
- 28 Gas installation
- 29 Retail containers and associated services infrastructure adjacent Tewksbury road

5.0 SCHEDULE OF AREAS

BLOCK A

Floor area	Bedrooms	GIA m2	Living	Bathroom	Workshop	Bins	Cycle	Core & lobby	Retail	Plant
Lower ground		155 m ²			81 m ²					74 m ²
Basement -1		155 m ²			81 m ²					74 m ²
Ground Floor	4	385 m ²	119 m ²	8 m ²		62 m ²		94 m ²	102 m ²	
First Floor	12	376 m ²	296 m ²	20 m ²				60 m ²		
Second Floor	12	363 m ²	283 m ²	20 m ²				60 m ²		
Third Floor	12	376 m ²	296 m ²	20 m ²				60 m ²		
Fourth Floor	12	363 m ²	283 m ²	20 m ²				60 m ²		
Fifth Floor	12	376 m ²	296 m ²	20 m ²				60 m ²		
Sixth Floor	12	363 m ²	283 m ²	20 m ²				60 m ²		
Seventh Floor	6	229 m ²	135 m ²	8 m ²				86 m ²		
Total	82	3,141 m²	1,991 m²	136 m²	162 m²	62 m²	0 m²	540 m²	102 m²	148 m²

BLOCK B

Floor area	Bedrooms	GIA m2	Living	Bathroom	Workshop	Bins	Cycle	Core & lobby	Retail	Plant
Ground Floor		187 m ²				44 m ²	41 m ²	66 m ²	27 m ²	9 m ²
First Floor	6	181 m ²	137 m ²	11 m ²				33 m ²		
Second Floor	6	181 m ²	137 m ²	11 m ²				33 m ²		
Third Floor	6	181 m ²	137 m ²	11 m ²				33 m ²		
Roof								16 m ²		
Total	18	730 m²	411 m²	33 m²	0 m²	44 m²	41 m²	181 m²	27 m²	9 m²

WAREHOUSE LIVING | SEVEN SISTERS ROAD

STAGE 2 COST ESTIMATE REV 1



LOWER GROUND SHELL & CORE

Category	Work Items	Description	Quantity	Unit	Rate	Amount
Structure & Shell & core	Site clearance	1.1 Remove existing trees, vegetation slope and retaining walls	1	item	£30,000	£30,000
		1.2 Breakout and excavate existing ground slab	154	m2	£50	£7,700
		1.3 Excavate and remove existing fill	210	m3	£180	£37,800
	Piling & substructure	2.1 Mobilisation costs	1	item	£15,000	£15,000
		2.2 Piling mat; 300mm thick, type granular material; (footprint of building)	155	m2	£30	£4,650
		2.3 Allowance to excavate and remove piling mat		m2		Included
		2.4 Allowance for RC pile caps 2.0 x 2.0 x 1.0 dp	4	no.	£3,500	£14,000
		2.5 Allowance for linear pile caps to RC perimeter wall	24	m	£1,000	£24,000
		2.6 Bored piling beneath core & columns; including drilling, filling to pile bore & testing & disposal of spoil; assume depth 20m; 450mm diameter	23	nr	£3,000	£69,000
		2.7 Allowance for contiguous piled wall; 750mm dia; depth of wall 10m	360	m2	£550	£198,000
		2.8 Temporary works, propping and bracing to piled wall	252	m2	£150	£37,800
		2.9 Delta waterproofing vertically to internal face of secant piled wall	252	m2	£45	£11,340
		2.10 RC capping beam to top of wall	36	m	£800	£28,800
		2.11 RC liner wall; 250mm thick	252	m2	£260	£65,520
		2.12 Allowance for breaking out obstructions	1	item	£5,000	£5,000
		2.13 Allowance for pile integrity and load testing	1	item	£2,000	£2,000
		2.14 Allowance for ground penetration radar survey	1	item	£1,500	£1,500
		2.15 Vibration monitoring of adjacent buildings	1	item	£5,000	£5,000
		2.16 Provision for non negligence insurance	1	item	£5,000	£5,000
		2.17 250mm thick RC suspended raft slab	155	m2	£200	£31,000
		2.18 Delta damp proof membrane to basement slab	155	m2	£45	£6,975
		2.19 Allowance for cavity drainage mat	155	m2	£55	£8,525
		2.20 Allowance for heave protection to suspended basement slab	155	m2	£70	£10,850
		2.21 Underground drainage system	155	m2	£100	£15,500
		2.22 50mm Levelling screeds				Excluded
		2.23 Allowance for lift pit & pile cap	1	item	£7,000	£7,000

WAREHOUSE LIVING | SEVEN SISTERS ROAD

STAGE 2 COST ESTIMATE REV 1



LOWER GROUND SHELL & CORE

Category	Work Items	Description	Quantity	Unit	Rate	Amount
Structure	Frame & core	3.1 RC core walls 250mm	74	m2	£270	£19,980
		3.2 Allowance for 275mm RC perimeter walls	182	m2	£300	£54,600
		3.3 225mm suspended RC slab (LGF & ground level)	310	m2	£240	£74,400
		3.4 Allowance for structural columns	28	m	£400	£11,200
		3.5 50mm Levelling screeds				Excluded
	Façade & External doors	4.1 Allowance for front elevation stick system glazing	85	m2	£800	£68,000
		4.2 Cavity blockwork façade to GF, with rockwool insulation; coloured to external face and parge coat internally	181	m2	£340	£61,540
		4.3 Allowance for external plant doors	2	nr	£5,000	£10,000
	Stairs	5.1 Staircase basement to LGF (external)	1	nr	£13,000	£13,000
		5.2 Internal scaffold staircase	1	nr	£4,000	£4,000
TOTAL TO SUMMARY OF COSTS (BASEMENT SHELL & CORE)						£959,000

WAREHOUSE LIVING | SEVEN SISTERS ROAD

STAGE 2 COST ESTIMATE REV 1



LOWER GROUND SHELL & CORE

Category	Work Items	Description	Quantity	Unit	Rate	Amount
Fit out of common parts	Stair cores, lobbies and BOH	Internal walls and doors				
		1.1 Internal blockwork walls to common parts	82	m2	£100	£8,160
		1.2 New riser doors	2	nr	£1,800	£3,600
		Internal finishes				
		2.1 Balustrade & handrail to communal stairs				Excluded
	Mechanical infrastructure	2.2 Finishes to stair treads and risers				Excluded
		2.3 Allowance for decorating internal walls				Excluded
		2.4 Ceiling finish				Excluded
		2.5 Floor finish				Excluded
		3.1 Air sourced heat pumps including space heating distribution				Excluded
		3.2 Local ventilation louvres to plant room only	148	m2	£25	£3,700
		3.3 Submains, primary distribution cable riser serving distribution boards, landlords power and lighting	310	m2	£80	£24,800
		3.4 Power to landlord services including lifts, mechanical/PH plant	310	m2	£25	£7,750
		3.5 Lighting to cores & lobbies, plant and cycle stores (excluding retail)	148	m2	£40	£5,920
	Fire Protection	4.1 Smoke detection and fire alarm system to common parts including commercial space	310	m2	£20	£6,200
		4.2 Sprinklers system including tanks and pumps to common parts excluding commercial space	148	m2	£80	£11,840
	Lifts	5.1 Platform lift serving BF & LGF (assumed as tenant installation)	1	nr		Excluded
TOTAL TO SUMMARY OF COSTS (BASEMENT FIT OUT)						£72,000

WAREHOUSE LIVING | SEVEN SISTERS ROAD

STAGE 2 COST ESTIMATE REV 1



SHELL & CORE SUPERSTRUCTURE & FIT OUT OF COMMON PARTS (BLOCK A)

Category	Work Items	Description	Quantity	Unit	Rate	Amount
Substructure	Piling & substructure	1.1 Mobilisation costs	1	item		Included
		1.2 Breakout and excavate existing ground slab	230	m2	£50	£11,500
		1.3 Piling mat; 300mm thick, type granular material (footprint of building)	230	m2	£30	£6,900
		1.4 Allowance to excavate and remove piling mat		m2		Included
		1.5 Allowance for RC pile caps 2.0 x 2.0 x 1.0 dp	7	no.	£3,500	£24,500
		1.6 Allowance for linear pile caps 1.0 w x 1.0 dp	28	m	£1,800	£50,400
		1.7 Bored piling beneath core & columns; including drilling, filling to pile bore & testing & disposal of spoil; assume depth 20m; 450mm diameter	45	nr	£3,000	£135,000
		1.8 Allowance for lift pit & pile cap	1	item	£15,000	£15,000
		1.9 Underground drainage system	230	m2	£100	£23,000
		1.10 225mm thick RC suspended raft slab (GF)	230	m2	£200	£46,000
		1.11 Allowance for heave protection to GF slab				not required
TOTAL TO SUMMARY OF COSTS (SUBSTRUCTURE)						£312,000
Structure	Frame & core	2.1 RC core walls 250mm (exposed finish)	1,212	m2	£300	£363,600
		2.2 Allowance for RC 250mm shear walls	300	m2	£300	£89,993
		2.3 Allowance for diagonal bracing to double height void	1	item	£20,000	£20,000
		2.4 200mm PT slab - 1F to roof	2,831	m2	£240	£679,440
		2.5 RC transfer beams to underside of GF slab	33	m	£370	£12,210
		2.6 RC beam to slab edge; typically 300 x 600mm	104	m	£250	£26,000
		2.7 RC column - 350 x 600mm	380	m	£250	£95,000
		2.8 Allowance for acoustic insulation layer	2,831	m2	£25	£70,775
		2.9 75mm Structural screed	2,831	m2	£60	£169,860
	Stairs	3.1 RC staircases to stair cores	7	nr	£12,000	£84,000
		3.2 Internal staircases to living area (3F to 7F)	4	nr	£13,000	£52,000
		3.3 Metal balustrade to internal voids (3F to 7F)	60	m	£400	£24,000
		3.4 Allowance for external escape stairs	7	nr	£30,000	£210,000
TOTAL TO SUMMARY OF COSTS (STRUCTURE)						£1,897,000

WAREHOUSE LIVING | SEVEN SISTERS ROAD

STAGE 2 COST ESTIMATE REV 1



SHELL & CORE SUPERSTRUCTURE & FIT OUT OF COMMON PARTS (BLOCK A)

Category	Work Items	Description	Quantity	Unit	Rate	Amount
External Envelope	Roof	4.1 Roofing installation	410	m2	£200	£82,000
		4.2 Man safe system	80	m	£120	£9,600
		4.3 Façade cleaning system				Excluded
		4.4 Allowance for rooftop cat ladder	1	item	£3,500	£3,500
	Façade & External doors	5.1 General façade; Eternit profile 6 cement board including fixings, 250mm duo slab rainscreen and breather membrane	788	m2	£330	£260,061
5.2 Ditto; with fluted pattern cement board		788	m2	£370	£291,583	
5.3 Blockwork inner leaf		1,576	m2	£100	£157,613	
5.4 Cavity blockwork façade to GF, with rockwool insulation; coloured to external face and parge coat internally		323	m2	£340	£109,956	
5.5 New stick system glazing to retail		42	m2	£740	£31,080	
5.6 Stick system window units		216	m2	£670	£144,720	
5.7 Circular window pane		14	no	£1,200	£16,800	
5.8 General façade; stick system hinged doors (facing Seven sister road)		294	m2	£740	£217,560	
5.9 700mm wide aluminium mesh sheet sun shading to windows		125	m	£300	£37,440	
5.10 Pressed aluminium sheet to window surround and jamb with rockwool insulation		756	m	£70	£52,920	
5.11 Louvred enclosure to roof plant including steel frame		1	item	£50,000	£50,000	
5.12 Aluminium cladding façade to escape staircore		343	m2	£250	£85,738	
5.13 175mm RC balcony slab with 75mm structural screed and sealed finish (facing Seven sister road)		151	m2	£400	£60,400	
5.14 Allowance for balcony thermal break connection		130	m	£300	£39,000	
5.15 Blockwork wall to balconies cladded in cement board (facing Seven sister road)		130	m	£330	£42,900	
5.16 Allowance for balcony drainage		130	m	£120	£15,600	
5.17 Allowance for galvanised metal linkbridge with balustrade to Block A & B access corridor		15	m	£2,400	£36,000	
TOTAL TO SUMMARY OF COSTS (EXTERNAL FAÇADE AND ROOF)						£1,744,000

WAREHOUSE LIVING | SEVEN SISTERS ROAD

STAGE 2 COST ESTIMATE REV 1



SHELL & CORE SUPERSTRUCTURE & FIT OUT OF COMMON PARTS (BLOCK A)

Category	Work Items	Description	Quantity	Unit	Rate	Amount
Fit out of common parts	Stair cores, lobbies and BOH	Internal walls and doors				
		6.1 Internal Porotherm blockwork walls to common parts and apartment dividing walls	2,888	m2	£100	£288,790
		6.2 Plasterboard lining to perimeter wall				Excluded
		6.3 Allowance for plasterboard to core walls				Excluded
		6.4 Internal communal doors with vision panel	67	nr	£1,300	£87,100
		6.5 New riser doors	16	nr	£1,200	£19,200
		Internal finishes				
		6.6 Balustrade & handrail to communal stair core	7	nr	£4,000	£28,000
		6.7 Finishes to stair treads and risers	7	nr	£2,000	£14,000
		6.8 Allowance for decorating internal walls				Excluded
		6.9 Suspended ceiling finish to lobbies				Excluded
M&E infrastructure	Drainage	6.10 Floor finish to lobbies (2 coat dust sealer to concrete floor)	602	m2	£10	£6,020
		6.11 Cycle racks, bin stores, fittings and signage	1	item	£15,000	£15,000
	Water	7.1 Foul drainage soil/waste/vent pipework	3,141	m2	£25	£78,525
		7.2 Rainwater disposal pipework and connection to outlets	3,141	m2	£15	£47,115
	Gas	8.1 Water installation; cold water storage and booster set and riser pipework	3,141	m2	£40	£125,640
		8.2 Water treatment	3,141	m2	£10	£31,410
	Mechanical infrastructure	9.1 Gas connection				Excluded
		10.1 Air sourced heat pumps including space heating distribution to common parts excluding commercial space	2,357	m2	£70	£164,990
		10.2 Corridor smoke ventilation system & staircase AOV	1	no	£35,000	£35,000
		10.3 Allowance for ventilation louvres to stores and BoH space	1	item	£15,000	£15,000
		10.4 BMS	1	item		Excluded

WAREHOUSE LIVING | SEVEN SISTERS ROAD
STAGE 2 COST ESTIMATE REV 1



SHELL & CORE SUPERSTRUCTURE & FIT OUT OF COMMON PARTS (BLOCK A)

Category	Work Items	Description	Quantity	Unit	Rate	Amount
M&E infrastructure (Cont'd)	Electrical infrastructure	11.1 Main LV switchboard	1	item	£120,000	£120,000
		11.2 Submains, primary distribution cable riser serving distribution boards, landlords power and lighting	2,831	m2	£90	£254,790
		11.3 Battery life safety stand-by system (UPS)	1	item	£20,000	£20,000
		11.4 Power to landlord services including lifts, mechanical plant	2,831	m2	£25	£70,775
		11.5 Lighting to cores & lobbies, plant and cycle stores (excluding retail)	602	m2	£40	£24,080
		11.6 Allowance for trace heating to external staircase	1	item	£10,000	£10,000
		11.7 Allowance for emergency lighting	1	item	£10,000	£10,000
	BWIC & T&C	12.1 BWIC	5.0%			£50,366
		12.2 Testing & Commissioning	1	item	£30,000	£30,000
	Communications	13.1 Disabled refuge alarm	1	item	£10,000	£10,000
		13.2 Telephone and comms (fibre) connection	1	item		Excluded
		13.3 CCTV Allowance	1	item	£15,000	£15,000
	Fire Protection	14.1 Smoke detection and fire alarm system to common parts including commercial space	704	m2	£20	£14,080
		14.2 Sprinklers system including tanks and pumps to common parts excluding commercial space	602	m2	£80	£48,160
		14.3 Dry risers	1	item	£20,000	£20,000
		14.4 Lightning protection	1	item	£20,000	£20,000
	Lifts	15.1 Passenger lift including fit out	1	nr	£90,000	£90,000
		15.2 Fire fighting lift	1	nr	£100,000	£100,000
TOTAL TO SUMMARY OF COSTS (COMMON PARTS & SERVICES INSTALLATION)						£1,863,000

TOTAL TO SUMMARY OF COSTS (BLOCK A SHELL & CORE & COMMON PARTS)	£5,816,000
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WAREHOUSE LIVING | SEVEN SISTERS ROAD

STAGE 2 COST ESTIMATE REV 1



SHELL & CORE SUPERSTRUCTURE & FIT OUT OF COMMON PARTS (BLOCK B)

Category	Work Items	Description	Quantity	Unit	Rate	Amount
Substructure	Piling & substructure	1.1 Allowance for RC pile caps 2.0 x 2.0 x 1.0 dp	3	no.	£3,500	£10,500
		1.2 Allowance for linear pile caps 1.0 w x 1.0 dp	28	m	£1,800	£50,400
		1.3 Bored piling beneath core & columns; including drilling, filling to pile bore & testing & disposal of spoil; assume depth 10m; 450mm diameter	32	no	£2,000	£64,000
		1.4 Allowance for lift pit & pile cap	1	item	£7,000	£7,000
		1.5 225mm thick RC ground slab	209	m2	£180	£37,620
		1.6 50mm Levelling screeds	209	m2	£40	£8,360
		1.7 Allowance for underground drainage	209	m2	£100	£20,900
		1.8 Allowance for heave protection to suspended basement slab				not required
TOTAL TO SUMMARY OF COSTS (SUB)						£199,000
Structure	Frame & core	2.1 RC core walls 200mm (exposed finish)	296	m2	£240	£70,920
		2.2 200mm PT slab - 1F to roof	730	m2	£240	£175,200
		2.3 RC column - 200 x 800mm	105	m	£275	£28,875
		2.4 RC beam to slab edge; typically 200 x 600mm	32	m	£200	£6,400
		2.5 Allowance for acoustic insulation layer	730	m2	£25	£18,250
		2.6 75mm Structural screed	733	m2	£60	£43,980
	Stairs	3.1 RC staircases to stair cores	3	nr	£12,000	£36,000
TOTAL TO SUMMARY OF COSTS (STRUCTURE)						£380,000

WAREHOUSE LIVING | SEVEN SISTERS ROAD
STAGE 2 COST ESTIMATE REV 1



SHELL & CORE SUPERSTRUCTURE & FIT OUT OF COMMON PARTS (BLOCK B)

Category	Work Items	Description	Quantity	Unit	Rate	Amount
External Envelope	Roof	4.1 Roofing installation	202	m2	£200	£40,400
		4.2 Man safe system	60	m	£120	£7,200
		4.3 Façade cleaning system				Excluded
	Façade & External doors	5.1 General façade; Eternit profile 6 cement board including fixings, 250mm duo slab rainscreen and breather membrane	265	m2	£330	£87,566
5.2 Ditto; with fluted pattern cement board		265	m2	£370	£98,180	
5.3 Blockwork inner leaf		531	m2	£100	£53,070	
5.4 Cavity blockwork façade to GF, with rockwool insulation; coloured to external face and parge coat internally		228	m2	£340	£77,520	
5.5 700mm wide aluminium mesh sheet sun shading to windows		32	m	£300	£9,720	
5.6 Pressed aluminium sheet to window surround and jamb with rockwool insulation		227	m	£70	£15,876	
5.7 General façade; stick system window units		65	m2	£670	£43,416	
5.8 General façade; stick system hinged doors		45	m2	£740	£33,300	
5.9 General façade; stick system sliding doors (GF workshop)		16	m2	£850	£13,600	
5.10 Louvred enclosure to roof plant including steel frame		1	item	£25,000	£25,000	
5.11 175mm RC balcony slab with 75mm structural screed and sealed finish		33	m2	£400	£13,200	
5.12 Allowance for balcony thermal break connection		24	m	£300	£7,200	
5.13 Blockwork wall to balconies cladded in cement board (facing Seven sister road)		24	m	£450	£10,800	
5.14 Allowance for balcony drainage		24	m	£120	£2,880	
TOTAL TO SUMMARY OF COSTS (EXTERNAL FAÇADE AND ROOF)						£539,000

WAREHOUSE LIVING | SEVEN SISTERS ROAD
STAGE 2 COST ESTIMATE REV 1



SHELL & CORE SUPERSTRUCTURE & FIT OUT OF COMMON PARTS (BLOCK B)

Category	Work Items	Description	Quantity	Unit	Rate	Amount
Fit out of common parts	Stair cores, lobbies and BOH	Internal walls and doors				
		6.1 Internal Porotherm blockwork walls to common parts and apartment dividing walls	766	m2	£100	£76,610
		6.2 Plasterboard lining to perimeter wall		m2		Excluded
		6.3 Allowance for plasterboard to core walls		m2		Excluded
		6.4 Internal communal doors with vision panel	15	nr	£1,300	£19,500
		6.5 New riser doors	4	nr	£1,800	£7,200
		Internal finishes				
		6.6 Balustrade & handrail to communal staircore	3	nr	£4,000	£12,000
		6.7 Finishes to stair treads and risers	3	nr	£2,000	£6,000
		6.8 Allowance for decorating internal walls				Excluded
		6.9 Suspended ceiling finish to lobbies				Excluded
M&E infrastructure	Drainage	6.10 Floor finish to lobbies (2 coat dust sealer to concrete floor)	266	m2	£10	£2,660
		6.11 Cycle racks, bin stores, fittings and signage	1	item	£5,000	£5,000
	Water	7.1 Foul drainage soil/waste/vent pipework	730	m2	£25	£18,250
		7.2 Rainwater disposal pipework and connection to outlets	730	m2	£15	£10,950
	Gas	8.1 Water installation; cold water storage and booster set and riser pipework	730	m2	£40	£29,200
		8.2 Water treatment	730	m2	£10	£7,300
	Mechanical infrastructure	9.1 Gas connection				Excluded
		10.1 Air sourced heat pumps including space heating distribution to common parts excluding commercial space	730	m2	£70	£51,100
		10.2 Corridor smoke ventilation system & staircase AOV	1	no	£15,000	£15,000
		10.3 Allowance for ventilation louvres to stores and BoH space	1	item	£10,000	£10,000
		10.4 BMS	1	item		Excluded

WAREHOUSE LIVING | SEVEN SISTERS ROAD
STAGE 2 COST ESTIMATE REV 1



SHELL & CORE SUPERSTRUCTURE & FIT OUT OF COMMON PARTS (BLOCK B)

Category	Work Items	Description	Quantity	Unit	Rate	Amount
M&E infrastructure (Cont'd)	Electrical infrastructure	11.1 Main LV switchboard	1	item	£40,000	£40,000
		11.2 Submains, primary distribution cable riser serving distribution boards, landlords power and lighting	730	m2	£90	£65,700
		11.3 Life safety stand-by generator				Included
		11.4 Power to landlord services including mechanical plant	730	m2	£10	£7,300
		11.5 Lighting to cores & lobbies, plant and cycle stores	266	m2	£40	£10,640
		11.6 Allowance for emergency lighting	1	item	£2,000	£2,000
	BWIC & T&C	12.1 BWIC				5.0% £13,372
		12.2 Testing & Commissioning	1	item	£12,000	£12,000
	Communications	13.1 Disabled refuge alarm	1	item	£5,000	£5,000
		13.2 CCTV Allowance	1	item	£5,000	£5,000
	Fire Protection	14.1 Smoke detection and fire alarm system; to common parts including commercial space	302	m2	£20	£6,040
		14.2 Sprinklers system including tanks and pumps; to common parts excluding commercial space	275	m2	£80	£22,000
		14.3 Dry risers	1	item	£6,000	£6,000
		14.4 Lightning protection	1	item	£10,000	£10,000
	Lifts	15.1 Passenger lift including fit out	1	nr	£75,000	£75,000
TOTAL TO SUMMARY OF COSTS (COMMON PARTS & SERVICES INSTALLATION)						£551,000
TOTAL TO SUMMARY OF COSTS (BLOCK B SHELL & CORE & COMMON PARTS)						£1,669,000

WAREHOUSE LIVING | SEVEN SISTERS ROAD

STAGE 2 COST ESTIMATE REV 1



SHARED LIVING FIT OUT (BLOCK A)

Category	Work Items	Description	Quantity	Unit	Rate	Amount
Shared living fit out	Internal Partitions	1.1 Porotherm blockwork internal partitions (bathrooms)	394	m2	£90	£35,433
		1.2 Plasterboard lining to blockwork perimeter wall				Excluded
	Internal Doors	2.1 Internal doors	117	nr	£550	£64,350
		2.2 Ironmongery	117	nr	£150	£17,550
		2.3 Double doors to storage/utility	13	nr	£700	£9,100
	Floor Finish	3.1 Sealed concrete floor (epoxy resin)	1,991	m2	£35	£69,685
		3.2 Tile flooring	136	m2	£110	£14,960
		3.3 Tanking to bathrooms	136	m2	£80	£10,880
		3.4 Skirtings	1,560	m		Excluded
	Walls Finish	4.1 Tiling to bathroom walls	2,008	m2	£110	£220,934
		4.2 Painted finish to walls				Excluded
	Ceiling Finish	5.1 Exposed soffits				N/A
	Fixture & Fittings	6.1 Fitted wardrobes & joinery				Excluded
		6.2 Bathroom vanity bench, mirror & cabinets	29	nr	£700	£20,300
		6.3 Kitchen and utility - inc white goods	8	nr	£15,000	£120,000
	Sanitary	7.1 Towel rails & bathroom fittings	35	nr	£200	£7,000
		7.2 Basin & taps	35	nr	£500	£17,500
		7.3 WC	35	nr	£600	£21,000
		7.4 Shower tray, head, handset and controls	29	nr	£1,500	£43,500

WAREHOUSE LIVING | SEVEN SISTERS ROAD

STAGE 2 COST ESTIMATE REV 1



SHARED LIVING FIT OUT (BLOCK A)

Category	Work Items	Description	Quantity	Unit	Rate	Amount
Residential fit out (Cont'd)	Mechanical Installation	8.1 Foul drainage above ground	39	nr	£300	£11,700
		8.2 Hot and cold water pipework and install	2,127	m2	£55	£116,985
		8.3 Heat pump unit hot water and UFH (2 no units per accomodation unit)	2,127	m2	£120	£255,240
		8.4 Ventilation extracts (Kitchen cooker hood)	8	nr	£3,000	£24,000
		8.5 MVHR units at high level; duty : 140 l/s including fresh & exhaust air intake ductwork, grilles, supply air distribution to FCU/diffusers	2,127	m2	£120	£255,240
		8.6 Comfort cooling				Excluded
		8.7 Controls local	2,127	m2	£20	£42,540
	Electrical	9.1 Lighting (excluding pendants and lamp shades)	2,127	m2	£60	£127,620
		9.2 Small power & power to mechanical	2,127	m2	£50	£106,350
		9.3 Data and security				Excluded
	Fire Protection	10.1 Fire detection	2,127	m2	£15	£31,905
		10.2 Sprinklers system	2,127	m2	£80	£170,160
	BWIC	11.1 BWIC	5%			£57,087
		11.2 Testing & Commissioning		1	item	
TOTAL TO SUMMARY OF COSTS (SHARED LIVING FIT OUT BLOCK A)						£1,871,000

WAREHOUSE LIVING | SEVEN SISTERS ROAD

STAGE 2 COST ESTIMATE REV 1



SHARED LIVING FIT OUT (BLOCK B)

Category	Work Items	Description	Quantity	Unit	Rate	Amount
Shared living fit out	Internal Partitions	1.1 Porotherm blockwork internal partitions (bathrooms)	56	m2	£90	£5,022
		1.2 Plasterboard lining to blockwork perimeter wall				Excluded
	Internal Doors	2.1 Internal doors	24	nr	£550	£13,200
		2.2 Ironmongery	27	nr	£130	£3,510
		2.3 Double doors to storage/utility	3	nr	£700	£2,100
	Floor Finish	3.1 Sealed concrete floor (epoxy resin)	411	m2	£35	£14,385
		3.2 Tile flooring	33	m2	£110	£3,630
		3.3 Tanking to bathrooms	33	m2	£80	£2,640
		3.4 Skirtings				Excluded
	Walls Finish	4.1 Tiling to bathroom walls	461	m2	£110	£50,741
		4.2 Painted finish to walls				Excluded
	Ceiling Finish	5.1 Exposed soffits				N/A
	Fixture & Fittings	6.1 Fitted wardrobes & joinery				Excluded
		6.2 Bathroom vanity bench, mirror & cabinets	6	nr	£700	£4,200
		6.3 Kitchen and utility - inc white goods	3	nr	£12,000	£36,000
	Sanitary	7.1 Towel rails & bathroom fittings	6	nr	£200	£1,200
		7.2 Basin & taps	6	nr	£500	£3,000
		7.3 WC	6	nr	£600	£3,600
		7.4 Shower tray, head, handset and controls	6	nr	£1,500	£9,000

WAREHOUSE LIVING | SEVEN SISTERS ROAD

STAGE 2 COST ESTIMATE REV 1



SHARED LIVING FIT OUT (BLOCK B)

Category	Work Items	Description	Quantity	Unit	Rate	Amount
Residential fit out (Cont'd)	Mechanical Installation	8.1 Foul drainage above ground	9	nr	£300	£2,700
		8.2 Hot and cold water; cold water storage and booster set and pipework	444	m2	£55	£24,420
		8.3 Heat pump unit and UFH (2 no units per accomodation unit)	444	m2	£120	£53,280
		8.4 Ventilation extracts (Kitchen cooker hood)	3	nr	£3,000	£9,000
		8.5 MVHR units at high level; duty : 140 l/s including fresh & exhaust air intake ductwork, grilles, supply air distribution to FCU/diffusers	444	m2	£120	£53,280
		8.6 Comfort cooling				Excluded
		8.7 Controls	444	m2	£20	£8,880
	Electrical	9.1 Lighting	444	m2	£60	£26,640
		9.2 Small power & power to mechanical	444	m2	£50	£22,200
		9.3 Data and security	444	m2	£20	Excluded
	Fire Protection	10.1 Fire detection	444	m2	£15	£6,660
		10.2 Sprinklers system	444	m2	£80	£35,520
	BWIC	11.1 BWIC	5%			£12,129
		11.2 Testing & Commissioning		1	item	
TOTAL TO SUMMARY OF COSTS (SHARED LIVING FIT OUT BLOCK B)						£407,000

WAREHOUSE LIVING | SEVEN SISTERS ROAD

STAGE 2 COST ESTIMATE REV 1



EXTERNAL ROOF TERRACES & LANDSCAPING WORKS

Category	Work Items	Description	Quantity	Unit	Rate	Amount
Roof terraces	Roof terrace Block A	1.1 Permeable paving	156	m2	£120	£18,720
		1.2 External balustrade to terraces	87	m	£450	£39,150
		1.3 Green roof finish	146	m2	£120	£17,520
		1.4 Benches and furniture				Excluded
		1.5 Shrubs and soft planting				Excluded
		1.6 Allowance for external lighting				Excluded
		1.7 150mm Blue roof sustainable drainage and connection to outlets and attenuation	302	m2	£120	£36,240
		1.8 Decorative lighting				Excluded
	Roof terrace Block B	2.1 Green roof finish	184	m2	£120	£22,080
		2.2 External balustrade to terraces	68	m	£450	£30,600
		2.3 Benches and furniture				Excluded
		2.4 Shrubs and soft planting				Excluded
		2.5 Allowance for external lighting				Excluded
		2.6 New trees & tree pits				Excluded
		2.7 150mm Blue roof sustainable drainage and connection to outlets and attenuation	184	m2	£120	£22,080
		2.8 Decorative lighting				Excluded
		2.9 Allowance for steel planterline (planter walls); 900mm high	30	m	£400	£12,000
TOTAL TO SUMMARY OF COSTS (EXTERNAL ROOF TERRACES)						£198,000

WAREHOUSE LIVING | SEVEN SISTERS ROAD

STAGE 2 COST ESTIMATE REV 1



EXTERNAL ROOF TERRACES & LANDSCAPING WORKS

Category	Work Items	Description	Quantity	Unit	Rate	Amount	
External Landscaping	Site preparation	3.1 Breaking out existing hardstanding; assumed removed off site	1263	m2	£60	£75,780	
		3.2 Allowance for re-grading site levels with off site material	1263	m2	£25	£31,575	
		3.3 Remove perimeter fencing & stairs to Tewksbury Road	1	item	£10,000	£10,000	
	External landscaping	4.1 Allowance for topsoiling for soft landscaping	439	m2	£30	£13,170	
		4.2 Allowance for kerbing and paving	824	m2	£150	£123,600	
		4.3 150mm sustainable drainage and connection to outlets and attenuation	439	m2	£120	£52,680	
		4.4 New staircases	1	item	£400,000	£400,000	
		4.5 Precast concrete planters adjacent staircase	1	item	£10,000	£10,000	
		4.6 Allowance for external lighting	1	item	£20,000	£20,000	
		4.7 Decorative lighting				Excluded	
		4.8 Slot drains	1	item	£25,000	£25,000	
		4.9 Allowance for steel planterline (planter walls); 900mm high	60	m	£400	£24,000	
		4.10 Allowance for external cycle racks	1	item	£5,000	£5,000	
	Soft Landscaping	5.1 New trees & tree pits				Excluded	
		5.2 New hedging				Excluded	
		5.3 New benches				Excluded	
	Section 278 works	6.1 Allowance for kerbing & pavement work to Eade road		1	item		Excluded
	TOTAL TO SUMMARY OF COSTS (EXTERNAL LANDSCAPING WORKS)						£791,000

WAREHOUSE LIVING | SEVEN SISTERS ROAD
STAGE 2 COST ESTIMATE REV 1



EXTERNAL SERVICES & INFRASTRUCTURE

Category	Work Items	Description	Quantity	Unit	Rate	Amount
Site Infrastructure	Sub-Station	1.1 New substation by UKPN as per UKPN quotation dated 12th October 2022; The two LV feeders from the existing substation will be transferred to the new 1MVA substation and the existing substation decommissioned.	1	item	£223,995	£223,995
		1.2 Allowance for brick built substation house approx. 9m x 5m	1	item	£60,000	£60,000
	Utility Connections	2.1 Drainage (Foul & Surface) connections to statutory provider	1	nr	£20,000	£20,000
		2.2 Allowance for water connections	1	item	£20,000	£20,000
		2.3 Allowance for gas connection	1	item		Excluded
		2.4 Allowance for BT Openreach connection (Fibre)	1	item	£30,000	£30,000
TOTAL TO SUMMARY OF COSTS (EXTERNAL SERVICES & INFRASTRUCTURE)						£354,000
	Sustainability	3.1 Allowance for PV 31 no PV panels	1	nr	£70,000	£70,000
		3.2 Allowance for rainwater attenuation	1	nr	£30,000	£30,000
TOTAL TO SUMMARY OF COSTS (EXTERNAL SERVICES & INFRASTRUCTURE)						£100,000



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