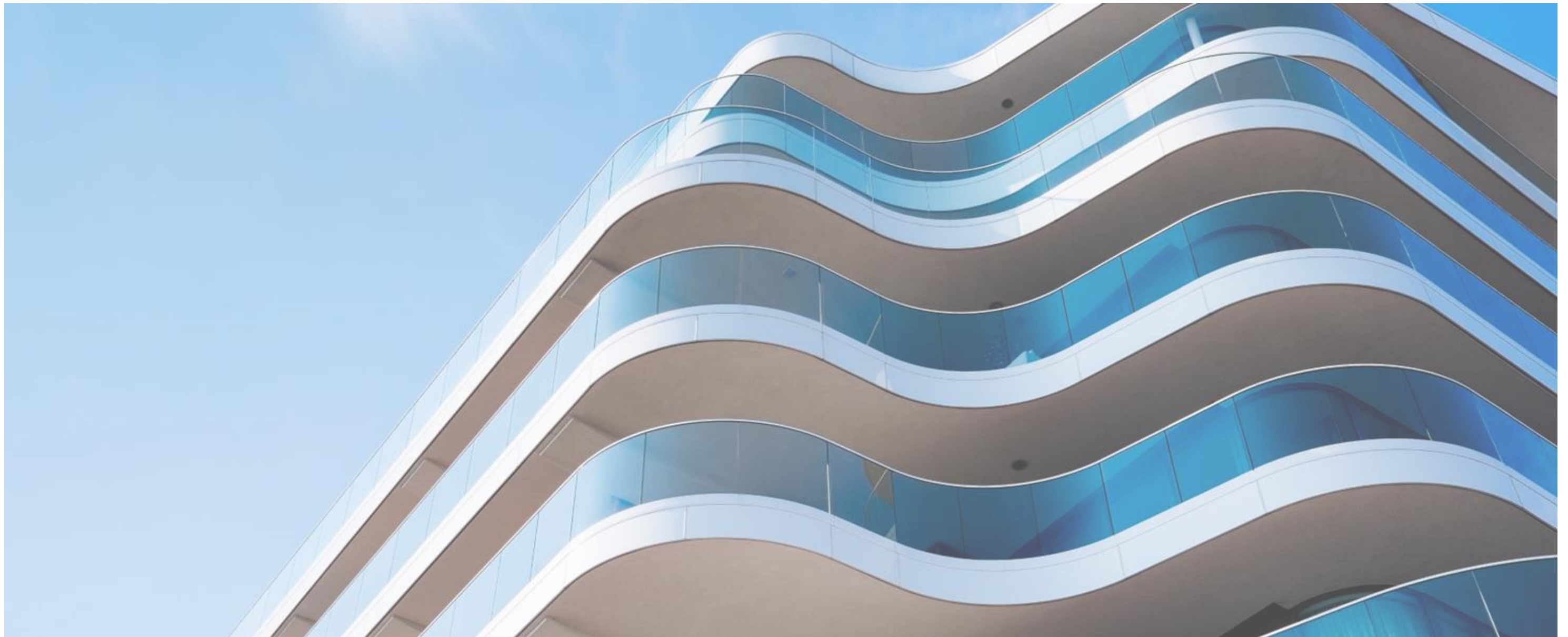


Jones Lang LaSalle Incorporated

Room2 Homotel Piccadilly Manchester

Circular Economy Statement

JLL | Sustainable Asset Services
May 2024



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Record of Revisions

Revision	Issue	Issue Date	Prepared By	Reviewed By
1.0	Draft for comments	19/05/2023	Antonia Matthews	Areti Makantasi
2.0	Final incorporating comments	08/06/2023	Antonia Matthews	Areti Makantasi
3.0	Final incorporating design updates	22/05/2024	Antonia Matthews	Areti Makantasi

Executive Summary

This Circular Economy Statement has been prepared by JLL’s Sustainable Asset Services team on behalf of Northside (Manchester) Ltd (trading name – Lamington Group) to support a full planning application and Listed Building Consent for an aparthotel development (hereafter referred to as the ‘Proposed Development’) at 12-16 Manchester Piccadilly, Manchester M1 3AN (hereafter referred to as ‘the Site’).

This Circular Economy Statement presents the circular design and construction principles for the Proposed Development. This Circular Economy Statement should be read alongside the Design and Access Statement.

Description of the Applicant

Lamington Group are the developer behind the Room2 Homotel provider. Room2 Homotel strive to create places to live, not just to stay. They are committed to delivering a landmark building, which will achieve a whole of life, net-zero carbon development, and to deliver the UK’s first net zero tower. Room2 Homotel, are a hotel provider who have hotels in London (Chiswick, Hammersmith), Southampton and Belfast and are looking to expand into the north of England with their first northern hotel to be located in Manchester.

Description of the Site

The site is located within the Manchester City Centre on the west side of Piccadilly, to the south of Piccadilly Gardens and north of Piccadilly train station.

The site encompasses the vacant Grade II Listed former Union Bank building and adjacent vacant land; the Waldorf Public House and Indemnity House (no, 7 Chatham St) immediately adjoin the site but do not form part of the proposal. The site itself is bound by Piccadilly, Gore Street and Chatham Street.

The land adjacent to the Listed Building is currently a vacant and derelict site, offering adverse visual impacts to the urban block and has an adverse impact on the streetscape given the lack of enclosure. The site is in a key, prominent, city centre location. In addition, the setting of the Listed Building is adversely affected by the presence of a gap site immediately adjacent to it.

Description of the Proposed Development

Erection of a 34 storey building (land at no. 14-16 Piccadilly) and conversion of adjacent building (no.12 Piccadilly) (basement to fourth floor) to create an aparthotel, including a ground floor cafe (Use Class E (b), first floor exhibition hall (Use Class F1) and a rooftop bar and restaurant (Use Class E (b)), and associated works.

Summary of Circular Economy Approach

The aim of conducting a Circular Economy (CE) Statement is to aid in the transition towards a circular built environment through the implementation of strategies for greater efficiencies that facilitate savings in resources, materials and financial costs. Additionally, by setting and reporting against numerical targets, allowing waste and recycling the monitoring records to become more extensive.

The Proposed Development relates to the refurbishment of the existing 5-storey Union Bank building on the Site and the construction of a new connecting 34-storey building.

The strategic approach to implement CE principles is outlined below in Table 1.

Table 1: Circular economy design approach

	Circular Economy Design Approach	Phase/ Building/Area/Layer	Strategic Response
Circular Economy Principles of the Proposed Scheme	Refurbish	Shell/Skin	<ul style="list-style-type: none">The existing building will be refurbished, contributing to material and resource efficiency.
	Repurpose	Shell/Skin, Services, Space	<ul style="list-style-type: none">The existing building will be repurposed from a bank to a hotel, preserving its architectural character.Reduction of resources other than materials, such as energy, water and land, are achieved as the Proposed Development is located on a pre-developed site.
	Disassemble / Deconstruct and Reuse	Shell/Skin	Where possible, materials will be reclaimed and reused.
	Demolish / Deconstruct and Recycle	n/a	n/a
	Component or material for reuse	Superstructure, Shell/Skin, Space	<ul style="list-style-type: none">The design team have prioritised materials with high recyclability.Material efficiency has been optimised using structural analysis to inform the design of the structural frame.Use of prefabricated elements (such as the unitised curtain walling system at the facades) will enable potential reuse in the future.The Proposed Development aims to manage demolition, construction and municipal waste in a sustainable manner and at the highest value.
	Adaptability	MEP equipment	<ul style="list-style-type: none">Access has been designed to allow for servicing and replacing MEP equipment.MEP equipment has been sized for future conditions.Effective control of solar gains will be achieved through the specification of high-performance glazing and shading.
		Building fabric	
	Flexibility	Pre-fabrication	<ul style="list-style-type: none">Prefabricated elements are a modern method of construction and have been specified to enable material efficiency and lower construction impacts. They also offer higher level of flexibility, as they can be moved, replaced and maintained without creating waste.The façade is independent from the structure to allow it to be changed without impacting the superstructure.
		Façade	
	Replaceability	Specified materials /equipment	<ul style="list-style-type: none">To reduce whole life carbon impacts, durable materials will be specified to reduce the need for frequent replacement and maintenance.Accessibility for easier replacement of MEP equipment has been designed and a plant replacement strategy will be produced.
	Disassembly	Substructure, Superstructure, Shell/Skin	The design team aims to assess the feasibility of disassembly at the next design stage (RIBA 3)
	Longevity	All areas	Durability allowing for maximising life-time use of building elements and materials have been prioritised. The building has been designed to have a life span of 60-years.

Introduction

This Circular Economy Statement has been prepared by JLL’s Sustainable Asset Services team on behalf of Northside (Manchester) Ltd (trading name – Lamington Group) to support a full planning application and Listed Building Consent for an aparthotel development (hereafter referred to as the ‘Proposed Development’) at 12-16 Manchester Piccadilly, Manchester M1 3AN (hereafter referred to as ‘the Site’).

This Circular Economy Statement presents the circular economy principles integrated in the design and proposed for the construction of the Proposed Development. This Circular Economy Statement should be read alongside the Design and Access Statement produced by Bennetts Associates.

Description of the Site

The site is located within the Manchester City Centre on the west side of Piccadilly, to the south of Piccadilly Gardens and north of Piccadilly train station.

The site encompasses the vacant Grade II Listed former Union Bank building and adjacent vacant land; the Waldorf Public House and Indemnity House (no, 7 Chatham St) immediately adjoin the site but do not form part of the proposal. The site itself is bound by Piccadilly, Gore Street and Chatham Street.

The land adjacent to the Listed Building is currently a vacant and derelict site, offering adverse visual impacts to the urban block and has an adverse impact on the streetscape given the lack of enclosure. The site is in a key, prominent, city centre location. In addition, the setting of the Listed Building is adversely affected by the presence of a gap site immediately adjacent to it.

The site is within close proximity to Piccadilly Railway Station and has a frontage onto Piccadilly, which is an important city centre street and key gateway pedestrian pathway for those entering or exiting the railway station and wishing to connect to Manchester primary retailing and central commercial areas in particular. Market Street, which is at the heart of Manchester’s Primary Retail Area, merges with Piccadilly at its western end. Just to the south of Market Street is Manchester’s established commercial core. Stevenson Square Conservation Area runs parallel to the Site along the east side of Piccadilly.

The site has high levels of accessibility in terms of its location, boasting immediate access to a variety of public and private transport modes. In location terms, the site is situated within easy walking and cycling

distance to a number of key services and facilities within Manchester City Centre. The site is located in the heart of the city and is well connected to surrounding areas by a comprehensive network of illuminated pedestrian routes.

There is a major bus interchange hub located at Piccadilly Gardens, approximately 330m from the Site, which is served by more than 85 bus services connecting the majority of the Greater Manchester area. The nearest bus stops are located adjacent to the proposed development along A6 Piccadilly, approximately 40 meters from the Site.

The redline boundary of the Proposed Development is shown in Figure 1.

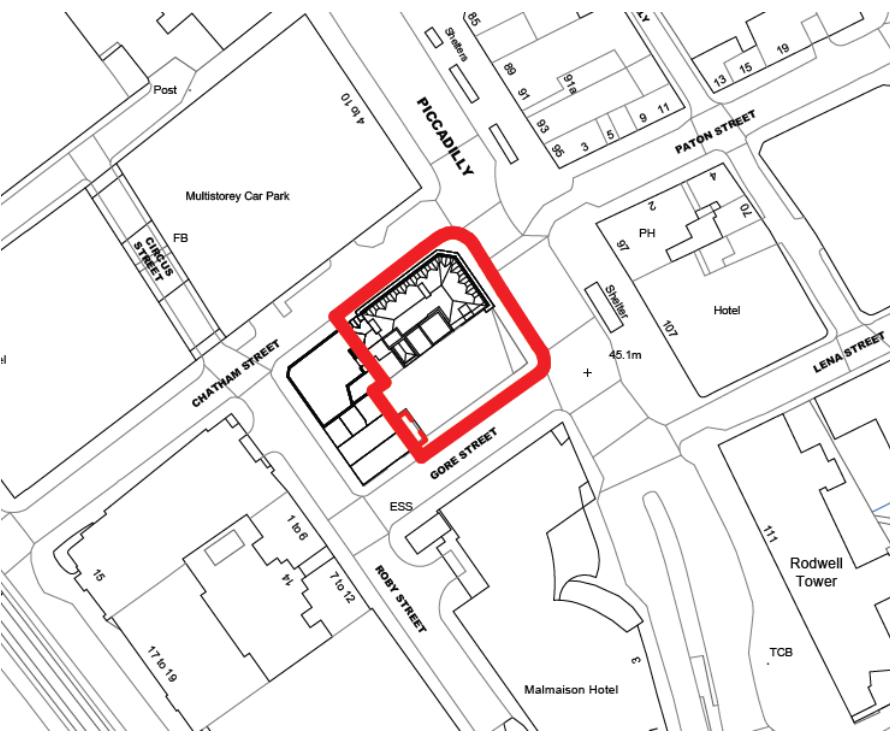


Figure 1: Site redline boundary, including oversail

Description of the Proposed Development

Erection of a 34 storey building (land at no. 14-16 Piccadilly) and conversion of adjacent building (no.12 Piccadilly) (basement to fourth floor) to create an aparthotel, including a ground floor cafe (Use Class E (b)), first floor exhibition hall (Use Class F1) and a rooftop bar and restaurant (Use Class E (b)), and associated works.

Description of the Proposal

The proposal comprises the conversion of the Grade II Listed Building Union Bank, including internal alterations, and the construction of a new 34 storey building on the ‘gap site’ which adjoins the Listed Building to form a 251- bedroom aparthotel and associated ancillary spaces including ground floor café, first floor exhibition space, restaurant and rooftop amenities.

Room2 Hometel will be a landmark building, achieving Whole Life Net Zero Carbon. The scheme will integrate a range of sustainable design features and demonstrate leadership and inspiring action to create a sustainable future.

New public amenities will be included as part of the scheme, including a Net Zero Exhibition, Events Spaces, Fair Cost Café, Rooftop Bar, Restaurant and terraces; creating a new destination and offering something back to the city and the local community.

The proposal will bring the former Grade II listed Union Bank building back into active use. A heritage led design strategy has been incorporated into the scheme including a balanced approach to refurbishment, restoration and strategic removal of low significance existing fabric. The unique new development will showcase the original listed building, with sensitive connection to the new tower.

A unique feature of the Proposed Development is a glass strip dissecting the centre of the south-façade of the new building for a vertical farm / garden from Level 1 to Level 27.

The proposed plan for the different floor levels of the Proposed Development is:

- Basement: Plantrooms
- Ground floor: Entrance, reception and café
- Mezzanine: Back of house, gym and meeting areas
- Level 1: Exhibition areas
- Levels 2-26: Hotel accommodation
- Level 27: Plant and service
- Level 28: Restaurant
- Level 29: Bar
- Level 30: Roof terrace
- Levels 31-32: Maintenance levels

Method Statement

Sustainability has been a key aspect of the proposed Development and has been integrated in the design process, to meet the client's aspiration to deliver a building that achieves net zero carbon (NZC) for operational energy, embodied carbon and minimise its whole life cycle impacts.

As such, the Circular Economy strategy for the Proposed Development has been developed in parallel with the Whole Life Cycle Assessment (WLCA). Material quantities and specifications were explored in collaboration with the design team, during RIBA stage 2 and a series of options were tested to identify those that reduce whole life carbon impacts.

Regular meetings were held with the relevant design team members, on a weekly basis.

Circular Economy Aspirations

The Proposed Development aims to be an exemplar building, achieving high sustainability credentials, including low whole life carbon impacts. Therefore, integrating Circular Economy principles into the design strategy for the Proposed Development from the early stages was critical, to maximise opportunities for design for longevity, adaptability and flexibility and successfully integrating the new and existing elements of the Site.

The key pillars of the design development which demonstrate the Circular Economy aspirations of the Proposed Development are outlined below:

- The existing Union Bank building will be retained and refurbished so that it can be successfully integrated into the overall development, preserving not only its architectural character but also contributing to material and resource efficiency.
- The design aims for material efficiency through structural analysis to inform the design. A detailed site survey was conducted to assess the condition of the ground and help inform the design of the new foundations to avoid oversizing. It should be also noted that the area of new basement is relatively small, resulting in material efficiency.
- The Proposed Development aims to reduce the volume of materials used by utilising modern methods of construction (i.e., off-site manufacturing).
- The proposed scheme reduces resources other than materials, including energy, water and land, as the Proposed Development is proposed on a pre-developed site.

- The design principles aim for longevity, adaptability and flexibility, so that the lifespan of building elements and materials can be extended, resulting in resource efficiencies.
- The design will aim to prioritise materials that are responsibly and sustainably sourced. This will be explored further in the next design stages when materials specifications will be developed in further detail.
- The Proposed Development will aim to manage waste in a sustainable manner and at the highest value, including demolition, construction and municipal waste.

Planning Policy Requirements

This section summarises the main planning policy requirements that focus on CE principles or that relate to opportunities that facilitate the transition towards a circular built environment. At a national level, the National Planning Policy Framework have been considered and at a local level, the planning policy requirements for Manchester City Council Core Strategy and the Greater Manchester Combined Authority joint development plan have been taken into account.

National Planning Policy

National Planning Policy Framework (2021)

The revised National Planning Policy Framework (NPPF) sets out the government's planning policies for England and how these can be expected to be applied. There are no specific policies within the NPPF relating to CE within the NPPF. The following policies relate to environmental sustainability more widely, however, there are synergies between the below policies and CE, hence they are outlined here for reference:

- **Chapter 2 – Achieving sustainable development**
An environmental objective for achieving sustainable development is to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.
- **Chapter 14 – Meeting the challenge of climate change, flooding and coastal change**
The planning system should help to encourage the reuse of existing resources, including the conversion of existing buildings.

Local Planning Policy

Manchester's Core Strategy (2012)

Manchester City Council's Core Strategy was adopted in July 2012 and covers a 15-year period from 2012 to 2027. This document outlines the planning policies required to achieve the Council's vision for Manchester in 2027.

There are no policies specifically focused on CE within the Core Strategy, however, the following policies focus upon the principles of CE.

- **Policy EN4 – Reducing CO₂ Emissions by Enabling Low and Zero Carbon Development**

The use of building materials with low embodied carbon in new development and refurbishment schemes.

- **Policy EN19 – Waste**

All developers are required to submit a waste management plan to demonstrate how both construction and demolition waste will be minimised and recycled on site wherever possible and how the sustainable waste management needs of the end user will be met.

- **Policy L6 – Waste**

All developers are required to adopt best practice techniques to prevent and minimise waste during the design and construction phases of development and, where necessary, produce site waste management plans.

Greater Manchester Joint Waste Plan (2012)

The Joint Waste Plan was produced by the Greater Manchester Geological Unit on behalf of the Association of Greater Manchester Authorities and was adopted in 2012 and is valid until 2027.

The objectives of the plan that are most relevant to CE are outlined below:

- **Objective 2:**
To promote the movement of waste up the waste hierarchy, assuming minimisation at source, increasing reuse, recycling and recovery, whilst recognising there may still be a need for additional landfill capacity for residual wastes.
- **Objective 3:**
To assist in reducing greenhouse gas emissions and assist in adaption/mitigation of climate change, including resource efficiency and minimising the need for energy in accordance with targets at national, regional and local level.

The Waste Hierarchy formed the fundamental basis of the plan and was identified as a key driver of waste management through sustainable consumption and production. The Waste Hierarchy is discussed further in the Best Practice Guidance Section below.

Places for Everyone

The Places for Everyone Plan is a joint development long-term plan being produced by the Greater Manchester Combined Authority on behalf of nine of Greater Manchester's Councils, including Manchester City Council. The plan, which has not formally been adopted yet, it has been submitted to the Secretary of State for Levelling Up, Housing and Communities and an independent examination of the plan is taking place with three appointed inspectors.

- **Policy JP-P 1 – Sustainable Places:**
Resources-efficient with a low carbon footprint, minimised use of new materials and high levels of recycling.
- **Policy JP-S 2 – Carbon and Energy:**
Promoting the use of life cycle cost and carbon assessment tools to ensure the long-term impacts from development can be captured.
- **Policy JP-S 7 – Resource Efficiency:**
The achievement of a CE and a zero-waste economy. Use sustainable design and construction techniques to reduce carbon emissions, adapt and future proof to the impact of climate change, reduce and recycle waste and minimise water use.
- **Policy JP-J 1 – Supporting Long-Term Economic Growth:**
Seeking a thriving, inclusive and productive economy with an emphasis on low-carbon goods and services.

Best Practice Guidance

As the National and Local Planning Policy framework does not stipulate specific requirements for CE, as detailed previously, this CE Statement has been developed in line with the GLA's (Greater London Authority's) Guidance on Circular economy Statement.

Mayor of London: Circular Economy Statement Guidance (2022)

Policy SI 7 'Reducing waste and supporting the CE', of the London Plan 2021 sets out requirements that a compliant Circular Economy Statement must be produced as part of planning applications. The Greater London Authority (GLA) has produced the Circular Economy Statement Guidance document to provide guidance on how to meet the requirements of Policy SI 7 by setting out CE principles, appropriate design approaches and the concept of building in layers. The six CE principles are defined as:

1. Building in layers
2. Designing out waste
3. Designing for longevity
4. Designing for adaptability or flexibility
5. Designing for disassembly
6. Using systems, elements or materials than can be reused and recycled

The above principles support the Waste Hierarchy by prioritising the prevention or reduction of waste, as discussed below.

DEFRA: The Waste Hierarchy

The Waste Hierarchy produced by the Department for Environment, Food and Rural Affairs (DEFRA) was adopted in 2011 and sets out a framework for how to prioritise waste management options when considering what is best for the environment. The five stages of the Waste Hierarchy from top priority to the least desirable is as follows:

1. Prevention
2. Preparing for re-use
3. Recycling
4. Other recovery
5. Disposal

This hierarchy aligns with the six CE principles and the aim of CE statements for facilitating the transition to a circular built environment.

EC: Circular Economy – Principles for Building Design (2020)

This guidance document was produced by the European Commission (EC) in alignment with the second macro-objective, '2. Resource efficient and circular material life cycles', of the voluntary reporting framework Level(s). The macro-objective focuses on the reduction of waste and materials and designing for adaptability and deconstruction, reuse and recycling. The CE guidance document summarises the aims of the macro-objective into three principles for the circular design of buildings:

- **Durability**
Durability of buildings depends on better design, improved performance of construction products and information sharing.
- **Adaptability**
Prevent premature building demolition by developing a new design culture.
- **Reduce waste and facilitate high-quality waste management**
Design products and systems so that they can be easily reused, repaired, recycled or recovered.

UKGBC: Circular Economy Guidance for Construction Clients (2020)

This UKGBC guidance document describes strategic approaches that construction clients can use to approach circular economy. The UKGBC describes circular economy as being based on three principles:

1. Maximise reuse (including refurbish and repurpose)
2. Design buildings for optimisation
3. Use standardisation or modularisation
4. Servitisation and leasing
5. Minimise impact and waste

These principles have a similar theme to the GLA principles but include servitisation and leasing, which has the aim to explore the potential for leasing services within the building, e.g., MEP equipment or façade.

BITC: Measuring and Reporting Circular Economy in Business (2022)

This guidance document by the Business in the Community (BITC) focuses on ESG and provides a set of circular economy KPIs for the themes of material flows, governance strategy and processes, and carbon equivalence. The KPIs are then further split into two categories, starting point, and higher maturity. One of the aims of this guidance document is to provide recommendations that companies can adopt to create better organisational CE measurement and reporting consistency.

Circular Economy Design Approach

The strategic approach for the Proposed Development is to retain and refurbish the existing building and to construct a low carbon, resource efficient and adaptable new 34-storey connecting building, while aiming to prioritise the prevention of waste by utilising existing resources and diverting waste from landfill.

The existing Union Bank building is proposed to be retained and refurbished as the building is Grade II listed, and so must be retained as demolition is not an option. However, as the building was designed to be a bank and not a hotel, refurbishment of the building will need to occur. The CE design approaches for the existing building are summarised in Table 2.

Table 2: Circular economy design approaches for existing structures/buildings

Circular Economy Design Approach	Phase/Building/ Area/Layer	Strategic Response
Refurbish	Shell/Skin	The existing building will be refurbished and integrated into the overall development, contributing to material and resource efficiency.
Repurpose	Shell/Skin, Services, Space	The existing building will be repurposed from a bank to a hotel, preserving its architectural character. Reduction of resources other than materials, such as energy, water and land, are achieved as the Proposed Development is located on a pre-developed site.
Disassemble / Deconstruct and Reuse	Shell/Skin	Where possible, materials will be reclaimed and reused.
Demolish / Deconstruct and Recycle	n/a	n/a

For the new construction, the main principles involve design for longevity, flexibility and adaptability. Following the GLA’s Circular Economy Guidance decision tree for new buildings, a ‘layer of the building’ CE design approach is required and will be explored in the Circular Economy Design Principles Section below. Each layer of the building should be designed for disassembly and adaptability, material reuse on-site and/or recycling should be maximised.

The CE design approaches for the new building have been outlined in Table 3.

Table 3: Circular economy design approaches for new buildings over the lifetime of the Proposed Development

Circular Economy Design Approach	Phase/Building/ Area/Layer	Strategic Response
Building relocation	n/a	n/a
Component or material reuse – Material efficiency	Superstructure, Shell/Skin, Space	<ul style="list-style-type: none">Materials with high recyclability have been specified, such as concrete, which can be reused as recycled aggregates, aluminium and steel.During the next design stages, when the design will be developed in further detail, design for disassembly will be explored further to enable reuse of material and component in the future.Prefabricated elements will be utilised which will allow future reuse.Material efficiency will be optimised by using structural analysis to inform the design.The Proposed Development aims to manage demolition, construction and municipal waste in a sustainable manner and at the highest value.
Adaptability	MEP equipment	<ul style="list-style-type: none">The internal space configuration and structural frame have been designed toAccess has been designed to allow for servicing and replacing MEP equipment.MEP equipment has been sized for future conditions.
	Building fabric	
Flexibility	Pre-fabrication	<ul style="list-style-type: none">Prefabricated elements are a modern method of construction and have been specified to reduce the volume of materials used.The façade is independent from the structure to allow it to be changed without impacting the superstructure.The design will aim to explore utilising additional prefabricated elements, beyond the facades, in the next stages when the design will be developed in further detail.
	Façade	
Replaceability	Specified materials/ equipment	<ul style="list-style-type: none">From a whole life carbon point of view the design aims to minimise the frequency of replacement of materials and equipment and identifies durable materials and equipment.Accessibility for easier replacement of MEP equipment has been designed and a plant replacement strategy will be produced.
Disassembly	Substructure, Superstructure, Shell/Skin	<ul style="list-style-type: none">The design team aims to assess the feasibility of disassembly at the next design stage (RIBA 3).
Longevity	All areas	<ul style="list-style-type: none">The design will aim to maximise durability allowing for maximising life-time use of building elements and materials have been prioritised.

Circular Economy Design Principles

CE Design Principles

As discussed in the CE Design Approaches Section, the design principles of the new construction should be explored for each layer of the building. The layers and their typical lifespan are illustrated in Figure 2.

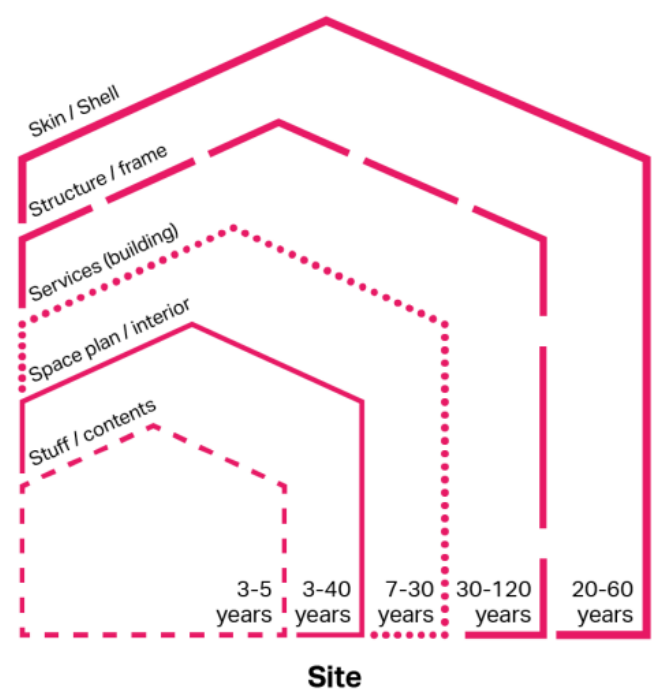


Figure 2: Building layers and their indicative lifespans (Greater London Authority, 2021)

The GLA’s Circular Economy Guidance definitions for the CE design approaches for new buildings are:

- **COMPONENT OR MATERIAL REUSE:** The use of a product in its original form with minimal reprocessing. Preparation for reuse involves checking, cleaning or repairing materials so that they can be used again for their original purpose. Materials can be reused as a whole; redeployed as modules; or reused as a kit of parts on one or more different sites.
- **ADAPTABILITY:** A building that has been designed with the thought of how it might be easily altered to prolong its life, for instance by alteration, addition, or contraction, to suit new uses or patterns of use. Often used interchangeably with flexibility; however, it relates more to building structural changes.
- **FLEXIBILITY:** A building that has been designed to allow easy rearrangement of its internal fit-out and arrangement to suit the changing needs of occupants. Often relates to floorplates rather than structural changes.
- **REPLACEABILITY:** Designing to facilitate easy removal and upgrade, and ideally to be reused, remanufactured or recycled on a part-by-part basis.
- **DISASSEMBLY:** Designed to allow the building and its components to be taken apart with minimal damage to facilitate reuse or recycling. If designed well, it should be possible to replace any component.
- **LONGEVITY:** Designing to avoid a premature end of life for all components through considering maintenance and durability.

The preferred strategies for each building layer have been selected using the filtering out selection boxes in the GLA’s Circular Economy Statements excel template. The designing out waste modules A-D in Table 4 refer to the four life cycle stages of Whole Life Carbon (WLC) provided by BS EN 15978 and RICS. By employing the use of CE approaches, the WLC of a development should be reduced.

Table 4: Circular economy design principles by building layer

Design Principles		Site n/a	Substructure ADAPTABILITY	Superstructure ADAPTABILITY	Shell / skin ADAPTABILITY	Services FLEXIBILITY	Space FLEXIBILITY	Stuff FLEXIBILITY
Designing out waste /material efficiency	Module A - Product Sourcing and Construction Stage	Redevelopment of the existing site.	Resource efficiency through structural analysis for the new building. Existing foundations used for the existing building. New basement area has been kept to a minimum.	Structural frame: steel and concrete with high recycled content. Areas of the building constructed using cross-laminated timber (CLT).	Prefabricated elements specified. Design for façade to be separate to the superstructure.	Achieve material efficiency through the specification of heat pumps that provide both heating and cooling. Design size capacity for future conditions to prevent replacement.	Internal space configuration maximises daylighting. High-performance glazing and shading control solar gains to reduce overheating. Prefabrication of additional elements will be explored in in the next design stage.	Designing for the brand standards of the developer / occupier so reduced risk of changes. Aim to specify materials with high recycled content.
	Module B - In-Use Stage	n/a	n/a	Use flexible and adaptable floor plates, allowing replacement and adaptability to be easier.	Façade separate from superstructure for easier maintenance. Energy demand reduced by high performance building envelope.	Maintenance of equipment. Design size capacity for future conditions. Efficient sanitary fittings and leak detection installed.	Provide sufficient space for general and recyclable waste. Choose durable products to reduce the need for replacement / maintenance.	Provide sufficient space for general and recyclable waste. Choose durable products to reduce the need for replacement / maintenance.

	Module C - End-of-Life Stage	n/a	Recycle and reuse materials such as concrete and steel.	Potential to reuse concrete for landscaping and foundation mats.	Façade has a shorter design life than the superstructure, so it is designed to be separate to allow for it to be replaced without impacting the superstructure.	Recycle and reuse equipment where possible. Aim to specify manufacturers who offer services take-back schemes.	Potential for reusing and recycling.	Repurpose, recycle and reuse stuff where possible.
	Module D - Benefits and Loads Beyond the System Boundary	n/a	n/a	Carbon benefits resulting from sequestration.	n/a	n/a	n/a	n/a
Designing for longevity		n/a	Substructure and superstructure designed to enable change of use in the building without the need for major demolition, maximising lifespan.		Materials specified to maximise durability, be weather resistant and to account for future climate scenarios.	Specify durable equipment and ensure regular maintenance to maximise the lifespan.	Specify durable products that need less frequent replacement / maintenance. Specify appropriate materials/products to protect vulnerable areas in the space.	Specify durable products that need less frequent replacement / maintenance.
Designing for adaptability or flexibility		n/a	n/a	Use flexible and adaptable floor plates. The configuration of the structural frame-to-flooring height will enable future change of use of the building.	Façade designed to be separate from superstructure to allow for adaptability, maintenance or replacement.	Aim to specify manufacturers who offer services take-back schemes.	Some of the internal partitions (where acoustic conditions allow) will be lightweight and will allow for different space configurations.	Aim to specify manufacturers who offer product take-back schemes. Elements not fixed where appropriate to allow for different space needs.
Designing for disassembly		n/a	n/a	The design has prioritised designing for longevity, and so a concrete frame has been for the majority of the building areas. A concrete frame does not provide an opportunity for disassembly, but will provide flexibility for different internal space conditions in the future. CLT was not considered appropriate for the main hotel areas due to fire risk. A steel structure has not been proposed due to high embodied carbon impacts.	Curtain walling façade created from prefabricated elements constructed off-site and easily disassembled.	A plant services replacement strategy will be produced.	Some of the internal partitions (where acoustic conditions allow) will be lightweight and will allow for disassembly.	Elements not fixed where appropriate to allow for disassembly.
Using systems, elements or materials that can be re-used and recycled		n/a	Recycle and reuse substructure materials. Crushed concrete used in landscaping and foundation mats. Steel can be recycled.	Repurposing, reusing and recycling of materials will be prioritised and will be specified where feasible in the next design stage.		Services equipment can be broken down and the elements recycled.	Repurposing, reusing and recycling of materials will be prioritised and will be specified where feasible in the next design stage.	

Operational Waste Management Plan

The Proposed Development will aim to minimise waste generation during operation and manage waste sustainably, in line with the Manchester City Council Core Strategy Policy EN19.

Sustainable waste management during operation is key for Lamington Group and a relevant Policy is being developed. This Policy will apply to the Proposed Development, and it will aim towards Lamington's overall target towards zero waste.

- Waste will be segregated at source. Recyclable waste will be segregated separately from general waste.
- Lamington Group utilises bespoke 3-to-1 bins (general waste-recyclable waste-food).
- Organic waste composters will be incorporated.
- Dedicated refuse storage space has been proposed. The space will be of appropriate size and clearly labelled to separate general waste and recyclable waste streams.
- Appropriate signage will be posted across the Proposed Development to help with occupant engagement and encourage recycling.
- During operation, a sustainable waste management company will be employed to support the 'zero waste' to landfill aspiration.

Implementation Framework

This section outlines the plans for implementation of the CE principles presented in this report. According to the GLA's Circular Economy Guidance, the plans have been grouped into short/medium- and long-term ones, as shown in Table 5 and Table 6, respectively.

Table 5: Implementation framework – short and medium-term goals

Action	Responsible Party	Timeframe	Monitoring/ Verification Mechanism
Undertake a pre-refurbishment audit at the existing Union Bank Building	Specialist contractor	RIBA Stage 2	Compliance with BREEAM RFO 2014, Wst 01
Undertake a pre-demolition audit of the site	Specialist contractor	RIBA Stage 2	Compliance with BREEAM NC V6, Wst 01
Produce a Functional Adaptability Report	Architects	RIBA Stage 2 and 4	Compliance with BREEAM RFO 2014, Wst 06 and BREEAM NC V6, Wst 06. Provide updated report at Technical Design.
Liaise with specialist contractors to sustainably manage excavation waste if on-site reuse is not possible.	Contractor	RIBA Stage 5	On-going liaison with the Sustainability Guardian on the project (JLL).
Engage with the supply chain to identify materials with responsible sourcing certificates.	Architects Structural Engineers MEP Engineers	RIBA Stage 3 and 4	On-going liaison with the Sustainability Guardian on the project (JLL). Compliance with the targets of the BREEAM NC V6 Assessment, Mat 03 and BREEAM RFO 2014, Mat 03.

Engage with the supply chain to identify materials with recyclable content	Architects Structural Engineers	RIBA Stage 3 and 4	On-going liaison with the Sustainability Guardian on the project (JLL).
Explore options for maximising the employment of off-site manufacturing and prefabrication.	Architects Structural Engineers MEP Engineers	RIBA Stage 3 and 4	On-going liaison with the Sustainability Guardian on the project (JLL).
Engage with the supply chain to identify manufacturers who offer take-back schemes.	Architects MEP Engineers	RIBA Stage 3 and 4	On-going liaison with the Sustainability Guardian on the project (JLL).

Table 6: Implementation framework – long-term goals

Action	Responsible Party	Timeframe	Monitoring/ Verification Mechanism
Produce a Site Waste Management Plan.	Contractor	RIBA Stage 5	Compliance with BREEAM RFO 2014, Wst 01 and BREEAM NC V6, Wst 01.
Divert demolition waste from landfill, in line with the output of the pre-refurbishment audit	Contractor	RIBA Stage 5	On-going liaison with the Sustainability Guardian on the project (JLL).
Achieve the targets set for waste generation during construction and diversion of waste from landfill.	Contractor	RIBA Stage 5	On-going liaison with the Sustainability Guardian on the project (JLL). Compliance with BREEAM NC V6, Wst01 and BREEAM RFO 2014, Wst 01.
Engage with the supply chain to identify materials with responsible sourcing certificates.	Architects Structural Engineers MEP Engineers	RIBA Stage 3 and 4	On-going liaison with the Sustainability Guardian on the project (JLL). Compliance with the targets of the BREEAM NC V6 Assessment, Mat 03 and BREEAM RFO 2014, Mat 03.

Conclusion

This Circular Economy Statement was produced in support of the planning application submitted to the Manchester City Council for the redevelopment of 12-16 Piccadilly, Manchester, on behalf of the Lamington Group.

This report presented the Circular Economy principles proposed for the scheme and describes how these have been embedded in the design strategy for the Proposed Development.

The Proposed Development aims to be an exemplar sustainable development, achieving NZC for operational energy and embodied carbon, and reducing its whole life carbon impacts. Therefore, circular economy principles were integrated in the design philosophy from the early stages, to maximise opportunities for designing for longevity, adaptability and flexibility, and reducing the whole life carbon impacts of the Proposed Development.

The key circular economy principles of the Proposed Development are summarised below:

- Reduce the amount of materials and resources used by repurposing the existing Union Bank building, which is proposed to be refurbished and be part of the proposed hotel development.
- Reduce the amount of materials used by utilising modern methods of construction (i.e., off-site manufacturing) for the building facades. Prefabrication of additional elements will be explored in the next stages when the design and specifications will be developed in further detail.
- Reduce resources other than materials, including energy, water and land, as the proposed scheme utilises a pre-developed site.
- Design for longevity, adaptability and flexibility to keep building components and materials in use for longer and enable flexible internal space arrangement without significant alterations and waste generation.
- Prioritise materials that are responsibly and sustainably sourced.
- Manage waste sustainably and at the highest value, including demolition, construction and operational waste.

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