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Former Particular Baptist Church

35 Rochdale Road, Manchester

Circular Economy Statement



Document Ref: L6278/17/06

Document History:

Issue	01	02
Date	20/11/2024	10/12/2024
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Date of Issue	20/11/2024	10/12/2024



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Section 1 – Executive Summary

This Circular Economy Statement addresses the planning requirements of Manchester City Council as set out in Manchester's Local Plan, in which the new development falls, adopted 12th July 2012 and Guide to Development in Manchester Supplementary Planning Document (April 2007) and Places for Everyone Joint Development Plan document adopted March 2024.

This Circular Economy Statement has been prepared to illustrate the circular economy principles of the proposed development highlighting the materials, design and waste management in accordance with Manchester City Council's policies and guidelines.

A number of planning policies, both national and local that apply to the proposed development, have been reviewed.

In conjunction with the client, stakeholder and design team a monitoring framework has been developed which outlines the objectives that this Circular Economy Statement has established.

Section 2 – Introduction

Futureserv have been commissioned by City Point Developments Ltd to develop a Circular Economy Statement for the new proposed residential-led mixed use scheme at the site of the Particular Baptist Church, Rochdale Road, M4 4HT.

This Circular Economy statement has been prepared to illustrate the circular economy strategies of the proposed development in accordance with Manchester City Council's policies and guidelines.

Futureserv Consulting Engineers have collaborated with the client, stakeholder and design team in order to provide options to be considered as part of the economy strategies.

Section 3 – Development Proposals

The development consists of a partial demolition of the existing building, and erection of a 23-storey residential building comprising 133 modern dwelling. The ground floor also features a commercial unit (Class E) with associated works.



Typical residential floor plan

Section 4 – Policy and Guidance

4.1 Local Planning Policy

4.1.1 Manchester Core Strategy

Manchester's Core Strategy was adopted on 11th July 2012. The strategy sets out the long term strategic policies for Manchester's future development and will form the framework that planning applications will be assessed against. Although there is no specific policy on Circular Economy within the Core Strategy, the following policies have been reviewed to ensure that the intent behind the principles of circular economy, namely resource conservation and climate change mitigation, have been captured within the design of the development. These policies, that have been considered relevant for the purpose of developing this statement are:

- **Policy EN4** – Reducing CO2 Emissions by Enabling Low and Zero Carbon Development calls for the use of sustainable building materials with low embedded carbon.
- **Policy EN19** – Waste calls for proposals to demonstrate their alignment with the Waste Hierarchy principles. In addition, the policy requires the provision of sustainable waste management measures that promote a close-loop system.

4.1.2 Greater Manchester Joint Waste Development Plan (2012)

The Plan's objective is for the movement of waste up the waste hierarchy in order to maximise the diversion of waste from landfills. In addition, the Plan recognises the need to adapt to climate change through measures that seek to improve energy efficiency and reduce carbon dioxide (CO2) emissions.

4.1.3 Places for Everyone Joint Development Plan Document

The Places for Everyone Plan adopted 21st March 2024 is a new long-term plan of nine Greater Manchester districts (Bolton, Bury, Manchester, Oldham,

Rochdale, Salford, Tameside, Trafford and Wigan) for jobs, new homes, and sustainable growth. It has been prepared by the GMCA on behalf of these nine districts.

The Places for Everyone Plan reinforces the ambition to bring forward brownfield land, it reduces the net loss of Green Belt further from previous versions of the GMSF by reducing the number of sites being allocated, and provides stronger protection for our important environmental assets. It enables greater Manchester to meet local housing requirements, supports increased provision of affordable housing, promotes a new approach to town centres, supports wider strategies around clean air, walking and cycling and underpins the ambition to be a carbon neutral city-region by 2038.

Climate change is a key theme running throughout the plan which sets out:

- Methods to de-carbonise the city region through new and existing development, effective land management and through the provision of infrastructure and new technologies Policy JP-S2 'Carbon and Energy';
- The delivery of renewable and low carbon energy schemes Policy JP-S3 'Heat and Energy Networks';
- Water based measures to adapt and reduce the impacts of climate change Policy JP-S4 'Flood Risk and the Water Environment'; and
- Measures to help achieve a circular and zero-waste economy Policy JP-S6 'Resource Efficiency'.

One of the Plan's ambitious targets is to create a circular and zero waste economy through its Policy JP – S76 Resource Efficiency, which sets out:

The move towards a circular economy will significantly reduce the amount of waste produced in Greater Manchester which in turn will enable delivery of higher recycling across all waste sectors, put more resources back into the economy and reduce our carbon footprint. Utilising sustainable design and construction techniques at all stages of a development's life cycle can help deliver this ambition.

4.2.1 The Waste Hierarchy

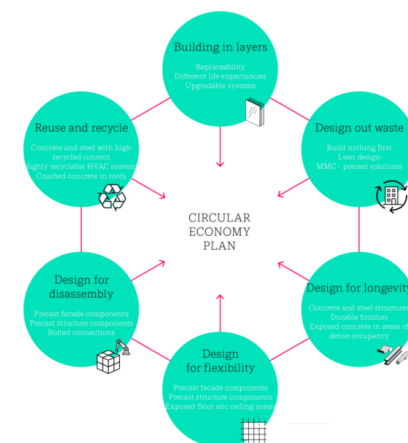
The Waste Hierarchy gives top priority to preventing waste in the first place. When waste is created, it gives priority to preparing it for re-use, then recycling, then recovery, and last of all disposal (landfill).

Stages	Include
Prevention	Using less material in design and manufacture. Keeping products for longer; re use. Using less hazardous materials
Preparing for re-use	Checking, cleaning, repairing, refurbishing, whole items or spare parts
Recycling	Turning waste into a new substance or product. Includes composting if it meets quality protocols
Other recovery	Includes anaerobic digestion, incineration with energy recovery, gasification and pyrolysis which produce energy (fuels, heat and power) and materials from waste; some backfilling
Disposal	Landfill and incineration without energy recovery

The European Commission issued the Circular Economy – Principles for Building Design guidance in 2020 to present a set of principles for stakeholders within the built environment sector. The objective of these principles was to help design sustainable buildings with the aim to create less waste during the lifecycle of the development and facilitate the reuse and recycling of materials.

- Durability: buildings to be better designed and improved construction systems that can extend the longevity of the materials;
- Adaptability: buildings to be adaptable for future transformations where the buildings and their components can be re-used and recycled; and
- Management of Waste: buildings to encourage occupants to be able to reuse, reduce, recycle and recover products where possible and using recycled products in construction.

Figure 4.2 - Principles of Circular Economy



4.2.3 Mayor of London Circular Economy Guidance

The London Plan 2021, through its policy S1 17 Reducing Waste and Supporting the Circular Economy, requires all new developments to submit a Circular Economy Statement in their planning applications on a bid to transition to zero carbon city by 2030. To support this requirement, a guidance document has been developed to help developers outline their circular economy commitments as well as structure their circular economy statements for planning approval. Whilst this residential scheme is not located within the Greater London area, the guidance set out within this document is currently the industry best practice relating to circular economy and as such will be used to inform the circular economy proposals considered for this development.

4.3 Key Objectives

This Statement has drawn from the guidance provided and has applied the following key objectives that underpin and support the principles of circular economy:

- Conserve resources, increase efficiency and source sustainably;
- Design to eliminate waste (including design for adaptability); and
- Manage waste sustainably (all streams of waste).

Section 5 – Circular Economy Principles

Circular Economy is typically defined as a closed-loop system where resources are retained for as long as possible and re-used and recycled continuously so that there is minimal or zero waste sent to landfill.

Often the by-product of one material becomes the raw material for another activity, so that there is a reduced demand for additional resource inputs, and as a result a smaller carbon footprint.

The six circular economy principles are:

- Building in layers
- Designing out waste
- Designing for longevity
- Designing for adaptability or flexibility
- Designing for disassembly
- Using systems, element or materials that can be re-used and recycled

5.1 Principles for this Project

5.1.1 Building in layers

Different parts of the building which have different life expectancies shall be designed to be maintained and replaced where necessary. This principle is applied to the façade of the building, floor, ceiling finishes and mechanical and electrical systems.

5.1.2 Designing out waste

Waste reduction is planned from project inception to completion. The proposed strategy is based on a lean design which includes retaining and re-using elements of the existing building to design out waste and off site manufacturing of bathrooms and utility cupboards will be considered.

Demolition Waste

Part of the existing building shall be retained and part demolished, through use of a demolition audit, where possible, existing materials from the derelict building will be re-cycled for re-use at an appropriate recycling facility.

Excavation and Construction Waste

Prior to commencement of the construction phase, a site waste management plan will be produced to limit and manage the on and off-site waste produced through development construction to detail:

- Recycled and secondary material
- Waste reduction
- Waste segregation
- Waste recovery and disposal

This scheme will promote the minimisation of waste arising and seek to maximise the use of recycled materials in construction. The site waste management plan will identify opportunities and divert any unusable construction waste away from landfill to a waste transfer station, where it will be segregated into:

- Recyclable materials
- Metal
- General waste and debris
- Hazardous waste

On-site excavation will be required to allow for the development's foundations to be constructed. Spoil from the excavation (such as soil) will be reused on site where feasible and diverted away from landfill to a waste transfer station where unfeasible.

Operational Waste

The operational waste strategy for the scheme focuses on the segregation of waste at source, in order to maximise the potential for residents and visitors to recycle in accordance with Manchester City Council Core Strategy Policy EN19.

The proposed strategy has been developed in compliance with the above policy:

- Waste will be segregated at source with the help of segregated bins. It is expected that there will be multiple streams of waste – general, recyclables and compost / green waste.
- Residents will be required to take their waste (via lifts) to the refuse store on the ground floor.
- The number of bins and subsequently the size of the refuse store is based on waste generation figures for each apartment.
- Signage will be utilised to indicate the location of the bins and information on recycling will be provided to all occupants of the scheme.
- The management company will be responsible for transferring the waste from the refuse store to a hardstanding service area on the day of collection by refuse operators and following collection, the bins will be returned to the refuse store.

5.1.3 Designing for longevity

Concrete is inherently durable which is proposed for the frame and cores. Robust materials will be utilised for hard landscaping therefore, minimising the frequency of replacement and maximising materials optimisation and extending replacement intervals.

5.1.4 Designing for adaptability or flexibility

Mechanical and Electrical components shall be designed to be easily replaced and adapted to changes of use and technology advancements. Exposed floor and ceiling zones defined in shell and core areas to facilitate changes of use and layouts. A proportion of the apartments shall be designed to be easily adapted to accessible apartment bathrooms.

5.1.5 Designing for disassembly

Facade components which can be disassembled at the end of life cycle shall be considered.

5.1.6 Using Systems, Elements or Materials that can be re-used and recycled.

- All metal components in the MEP systems (Steel, aluminium, copper) have a high recyclability rate.
- Implementing the waste management system plan during construction to segregate and maximise recycling of construction waste.
- Review utilising recycled aggregates within the concrete specification in accordance with BS8500, upto a maximum of 20%.

5.1.7 Reduce Demand for the Quantity of other resources

The below details an appraisal of the specific approach, design features and specifications which will contribute to reducing the demand for various resources. Key specifications, site characteristics and design measures of the proposed development are considered below. These will help to reduce the demand for the quantity of non-material resources throughout the development's operational lifecycle.

Reduced Demand for Energy

The energy strategy for the proposed development looks at a number of improvements in the building fabric, as well as the installation of energy efficient systems that will contribute to the reduced demand for energy.

The below energy hierarchy has been adopted for the proposed development.

- Be Lean – **Fabric First Approach** - Reduce demand wherever possible utilising passive measures.
- Be Clean - Where energy is used, then it should be optimised to operate at the highest efficiencies practical.
- Be Green - Take advantage of renewable options to reduce fossil fuel energy sources.

The following measures shall be utilised:

- Betterment to Fabric Values compared to Part L.
- Low air permeability.
- Increased Hot Water Generating Efficiencies.
- Reduced Standing Losses from Pipes and Cylinders.
- Energy Efficient LED Lighting.
- Improved Lighting Controls.
- Low Energy Motors in Pumps and Fans
- Efficient Heat Recovery in relevant systems
- Combined natural and mechanical ventilation systems

Reduced Demand for Water

The proposed development will be designed to reduce potable water consumption and will include the following water efficient design and equipment:

- In order to reduce water demand, the sanitary fixtures will be specified to achieve a calculated daily consumption of <110

litres/person/day by utilising low flow sanitaryware which is a 12% reduction on the building regulations 125L target.

Reduced Demand for Other Resources

The development makes use of previously developed land and will be car-free, with secure cycle provision being provided. This in conjunction with the site being located within an urban centre, in a highly sustainable location; particularly in relation to distance to amenities, key pedestrian routes, rail, and bus transport nodes, will mean that there will be a reduced need for residents to own cars. These factors will result in lower carbon emissions being produced from the development's operation.

5.1.8 Source Materials Responsibly and Sustainably

This development will contribute towards the responsible and sustainable sourcing of materials in the following ways:

- Materials will be responsibly sourced from suppliers operating an Environmental Management System or procuring timber verified by either the Forest Stewardship Council (FSC) or Programme for the Endorsement of Forest Certification standard (PEFC).
- Maximise the use of local labour force, where possible, via a Local Labour Agreement; and,
- Construction materials will be sourced locally where feasible and viable, which will minimise the impact of carbon dioxide emissions associated with the transportation of materials.

Section 6 – Circular Economy Monitoring Framework

A monitoring framework has been developed which outlines the objectives that this Circular Economy Statement has established. A number of key activities have been proposed which will be benchmarked against each objective. The person(s) responsible for delivering the evidence supporting the activities and the project's lifecycle stage in which these activities will be carried out has also been assigned in the table below.

Table 6 – Monitoring Framework for Park Place Development

Objective	Activity	Responsibility	Timeline
Reduce demand for materials and minimise quantities used	Issue a PQQ to check compliance of suppliers with the project Circular Economy commitments. Bill of materials to benchmark quantity of recycled content and re-used materials.	Main Contactor	Pre-Construction to Post Completion
Source materials responsibly and sustainably	Request for environmental Product Declarations for recycled products and products with low embodied carbon	Main Contactor	Pre-Construction to Construction Phase

Reduce the amount of construction waste	Construction Environmental Management Plan with Construction Waste Management Strategy to maximise diversion of construction waste to landfill	Main Contactor	Construction Phase
Reduce the amount of operational waste	Operational Waste Management Plan, recycling facilities	Operator	Occupied Stage
Reduce the quantity of other resources	Record progress of sustainability measures and commitments	Main Contactor	Pre-Construction to Post Completion

Section 7 – Conclusion

The design proposed for the development has been assessed against the key principles of Circular Economy, which have been influenced by national guidance and local planning policy framework. These principles were based around the following criteria:

Materials:

- Reduce demand for materials and minimise quantities used
- Reduce demand for the quantity of other resources – energy, water etc.
- Source materials responsibly and sustainably

Design:

- Design for longevity, adaptability or flexibility and reusability or recoverability

Waste Management:

- Reduce (and manage) the amount of waste generated, from:
 - Demolition
 - Excavation and construction activities; and
 - Operational activities

The development will meet the above criteria through the following measures:

- Materials with a low environmental impact, which are responsibly and locally sourced will be prioritised during development. Where possible, existing materials from the existing building to be demolished will be reused/recycled to reduce the demand for new materials.
- The enhanced fabric and efficient building services with the installation of water efficient systems will ensure that the proposed development

has a smaller carbon footprint due to reduced operational resource consumption.

- The development has been designed for longevity, flexibility and adaptability through use of detachable and durability standard materials.
- Waste arising during demolition, construction, and excavation will be minimised through the implementation of a Waste Management Plan. The Waste Management Plan will be used to ensure that there is adequate management and storage of demolition/construction waste takes place. Opportunities for the possible recycling of construction from excavation works will also be considered in line with best practice.
- The implementation of the operational waste strategy has been designed to encourage the occupants to segregate their waste at source and maximise the potential for recycling.

In conclusion, the development is aligned with the principles of Circular Economy, accords with national best practice and supports the vision for Manchester City to become a zero-waste city in the near future.