



ELEMENT
SUSTAINABILITY

FIRST STREET
CIRCULAR ECONOMY
MONITORING FRAMEWORK
FEBRUARY 2022
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Circular Economy Monitoring Framework – First Street, Manchester

Principle 1 – Conserve resources, increase efficiency and source sustainably						
Objective	Responsibility	Timeframe	Target	Commitment	Strategy for Monitoring	Challenges
Reduce Demand for Materials and Minimise Quantities Used.	Primary: Architect & Structural Engineer	RIBA Stage 4	Aim to use modular elements where possible	The project team has fully embraced the concept of shared living through the design of compact accommodation and co-living and communal spaces. A preliminary Life Cycle Analysis (Stage 2) was undertaken at the concept stage to benchmark the development's environmental impact (particularly in relation to global warming potential) and number of iterations were carried out to identify opportunities for reducing the embodied carbon of materials such as concrete and steel, by reducing the quantities proposed or by suggesting other materials, for example timber and aluminium as alternatives. Modularisation of key components will reduce waste and aid with further maintenance aspects. Modular elements are able to be disassembled and relocated, extending the lifespan of these aspects.	A Post-Completion Monitoring Report (Planning Condition 7) will be prepared to show evidence of the project's commitment to reduce building's footprint as well as the embodied carbon of the building across its life cycle. Life Cycle Analysis (Stage 4) will be conducted to provide a more detailed assessment of the environmental impacts of the project, including operational energy and water usage of the Scheme. Bill of Materials will be used to benchmark quantity of recycled content and re-used building materials.	The UK modular supply chain can fluctuate. Early engagement will be required to avoid any delays.
Reduce the Quantity of Other Resources (energy and water for example)	Primary: MEP & Structural Engineer	Across RIBA Stages 2 to 4	Limit the use of potable water to 105 litres / day / person. Residential elements to achieve 9% reduction in dwelling emission rate over Part L 2013. Non-domestic units to achieve 6% reduction in dwelling emissions rate over Part L 2013.	Include water efficient devices included 'A' rated appliances. The design is heavily influenced by the energy hierarchy model and 'reducing the need for energy' is the first principle of the scheme's energy strategy. Priority has been given to enhancing the building fabric to limit heat loss (low U values). In addition, energy efficient systems and low carbon / renewable energy technology for space and water heating have been specified to further reduce the building's carbon emissions.	Site Visit and ESS Verification (Planning Condition 14) to record progress of the sustainability measures proposed. Results of energy calculations will be submitted to show the percentage improvement in reducing carbon emissions at the operational stage of the development.	PV systems have additional costs throughout their lifespan, including but not limited to: - Cleaning of the arrays - Replacement of the DC/AC inverter units.
Source Materials Responsibly and Sustainably.	Primary: Contractor Secondary: Developer and Design Team	RIBA Stage 4	Procure materials with increased recycled content, low levels of embodied carbon and ones which are certified. Where possible, locally procure materials	Downing's Sustainable Purchasing Policy looks at the following: - Supplier PQOs to include sustainability metrics - Audits and compliance checks - Training of contractors ISO 14001 Environmental Management System (in progress).	As per the developer's purchasing policy, suppliers will need to ensure materials such as timber are sourced from FSC-certified suppliers. They will also be required to show evidence of the distance travelled (and mode of transport used) to determine the origin of the construction materials.	Lead times and availability of materials may cause delays. Additional information may need to be shared with the design team.

				Employment of local staff to provide economic opportunities at the local / regional level. Providing opportunities for small and medium sized enterprises (SMEs) as well as collaborating with the voluntary sector. Increasing the use of social enterprises to support local employment, diversity and training. This will also help to reduce the carbon footprint associated with the transportation of staff to the site. To reduce the reliance on virgin materials, wherever viable, the contractor will seek to procure materials with increased recycled content, including steel content, aggregates and building finishes. The procurement of materials with low levels of embodied carbon and ones which are certified will also be favoured e.g. FSC/PEFC certified timber.	Environmental Product Declarations (EPD) will be used to show the sustainability performance of the materials and systems specified. Evidence of the purchase of A-rated white goods will be used to ensure the most energy efficient appliances are installed.	
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Principle 2 – Design to eliminate waste						
Design for Adaptability, Flexibility and Longevity	Primary: Architect & Structural Engineer Secondary: Main Contractor	Across RIBA Stages 2 to 4	Material decisions will be made using a sustainability procurement strategy.	Longevity and adaptability lie at the heart of the development’s vision. The scheme considers the lifestyle trends of future generations which are expected to live closer to urban centres and benefit from more shared and affordable facilities that the development proposes. The sustainable transport strategy of the site also lends itself to the use of alternative modes of transport and reduce the reliance on the private car. In addition, the flexible design of the building allows the internal spaces to transition from a single use to multiple variations in the rooms’ purpose and function. See section 4.4.4 for further details. The developer is committed to designing out waste and optimising longevity through the procurement of high quality materials.	Suppliers with established environmental management systems will be preferred to ensure the use of high quality and durable materials and practices are utilised and maintained. The detailed LCA proposed for Stage 4 will help the design team to identify materials that require less maintenance and the need for replacement, thus subsequently reducing the embodied carbon across the lifecycle of the Scheme. These options will be fully analysed during RIBA stage 4 in an option appraisal study, especially when considering the fitout and finishing elements of the building design.	Designs may need to be altered to further reduce waste.

Principle 3 – Manage waste sustainably and at the highest value						
Reduce the amount of construction and excavation waste.	Primary: Main Contractor Secondary: Developer	RIBA Stages 4 and 5 (including handover period)	Divert 80% of waste from landfill	During construction, the main contractor will aim to maximise the quantity of materials being recovered for reuse. This will include the efficient use of materials through effective design considerations, using reclaimed materials and substituting materials for more durable alternatives. All necessary measures will be taken to maximise the diversion of construction waste from landfill. Site management procedures will be followed, which will outline the strategy for collecting, storing, management and collection of construction waste. The developer will communicate the waste management procedures to staff members and subcontractors on site to ensure everyone involved in the project understands the targets, how to sort and dispose of waste and what information and paper work will be required to ensure waste is recorded correctly. This would be through the pre-let meetings, toolbox talks and training and displaying information around the site and office. Excavated material on site will be reused for levelling and crushed for creation of the piling mat. Where materials cannot be re-used they will be sent to be re-purposed elsewhere if possible. It will be ensured that the contractors will try to salvage materials such as natural stone, bricks and top soil. These can then be donated to local businesses.	Part of the scope of the ESS Verification (Planning Condition 14) will include site visits and environmental audits to verify the construction management practices on site. Post-Completion Monitoring Report (Planning Condition 7) will be used to track targets for diversion of construction waste. As part of the Construction Management Plan (CEMP), capacity building workshops will be delivered to the site staff to train them on reducing waste and / or salvaging materials for repurposing, handling of hazardous substances and the periodic reporting against targets set for waste diversion. Regular reports from demolition contractors stating progress against targets.	Deconstructing materials takes more time and space.
Reduce the amount of operational waste.	Primary: Property Management Company Secondary: Architect	RIBA Stage 2 and RIBA Stage 7 / Ongoing Measures	40% of municipal waste will be recycled at the material recycling facility (based on waste generation calculations provided by the Council).	The design team has developed a waste management strategy to ensure that multiple waste streams are segregated at source and most efficiently collected from across the multiple living and communal spaces.	The residents will be provided with waste storage facilities that are intended to minimise general waste and encourage the recycling of paper/carboard, metal and glass. Waste collection timings / frequency will be provided to all residents / tenants as part of their welcome packs, and they will be responsible for transferring their waste and recyclables to the dedicated waste storage rooms. The Property Management Company will ensure that waste from communal spaces is collected, managed and stored according to the Council's requirements.	Getting everyone involved with segregating waste. Recycling may be compromised by cross contamination.