

DOMIS CONSTRUCTION

CONSTURCTION ENVIRONMENTAL MANGEMENT PLAN

VICTORIA HOUSE

JULY 2022

CONTENTS

Executive Summary 01

- Approach 01

- Commitments 02

Introduction 03

Circular Economy Principles and Commitments 05

Circular Economy Targets and Commitments 09

Conclusions 22

Appendix 23



EXECUTIVE SUMMARY

A circular economy is one where materials are retained in use at their highest value for as long as possible and are then re-used or recycled, leaving a minimum of residual waste. A circular economy will save resources, increase the resource efficiency of businesses, and help to reduce carbon emissions.

The development, Victoria House, Great Ancoats Street, Manchester is a part 25 part 3 storey development of 177 one- two- and three-bedroom apartments and duplexes, with amenities including gym, and rooftop terrace.

This circular economy statement has been prepared to support the discharge of Condition 3b of approved Planning Application ref. 122000/FO/2018.

This report was produced as a result of clarification from the Planning Officer at Manchester City Council that confirmed the Council expect a circular economy statement to set out the construction, operational and decommissioning impacts in terms of non-renewable material resources and reducing lifecycle impacts.

Domis on behalf of FG Victoria House Ltd have a proactive approach to sustainability with a range of corporate and project level commitments to reduce the amount of materials required, increase recycling rates and limit the amount of waste sent to landfill.

The approach to circular economy throughout the design has endeavoured to increase longevity of the building by specifying robust materials, using standard fabric sizes and consideration during design development for ease of replacement and maintenance.
As the existing building on the site is no longer fit for purpose, the building will not be refurbished or repurposed. However, the development aims to highly segregate the waste from demolition to aim for a diversion from landfill rate of 85% or better.

Domis have a centralised 'Materials Hub' to store and assemble building elements, this reduces waste as there will be less packaging on site, reduces over ordering, limits damage and replacements as well as reducing the amount of deliveries required. The majority of the Domis supply chain is based in and around Greater Manchester and we use best endeavours to use locally sourced wherever possible.

Commitments

This circular approach to development includes early assessment of design and materials at key stages with the Domis pre-construction and operations team together with the Domis partnered subcontractors in order to promote a flexible and adaptable design that also promotes longevity. Certain design decision of materials is made with the whole life carbon in mind in order to reduce emissions associated with construction.

In this context some of the key circular economy commitments incorporated into the Design and Build of the development include the following:

- Ongoing encouragement of specifications that maximises energy and resource efficiency (e.g. water efficiency) within the design.
- Ongoing investigation into the inclusion to the benefit of using alternative facade treatments to that of traditional masonry.
- Seek to specify the use of recycled materials wherever viable including steel content, aggregates, and building finishes such as carpets.
- Utilise off-site prefabrication where possible.
- Procurement of sustainable and robust/durable materials.
- Continue to investigate flexibility within the design to allow for changing and future needs of the development.
- Continue to work with suppliers to reduce packaging waste or investigate take-back schemes.
- Internal project targets and commitments will be reviewed by Domis.

Implementation

At this later stage in design, the design team will continue to investigate opportunities to increase circularity of the design of the development. While some of the principles have been or are in the process of being implemented, as part of the build phase. Domis will aim to ensure that where appropriate and viable, the principles will be carried through the remaining design and eventual construction.

INTRODUCTION

This circular economy statement has been prepared by Domis Construction on behalf of FG Victoria House Ltd. It supports the discharge of Condition 3 part (b) pursuant to planning permission ref. 122000/FO/2018 at Victoria House, Great Ancoats Street, Manchester.

Since the planning permission was issued, it was clarified with the local authority that they require a circular economy statement to act as a high-level strategy for the construction, operation and decommissioning stages of the building with respect to non-renewable material resources and reducing lifecycle impacts.

This statement builds on the principles relating to circular economy set out in the Environmental Standards and Energy Statement submitted as part of the full planning application – in particular section 4.5 covering waste management.

2.2.1 Application Site

The site comprises an existing safe deposit building which will be demolished as part of the proposed scheme. The site boundaries are formed by Great Ancoats Street to the northeast, Epworth Street to the southeast and Longacre Street to the northwest. Beyond Longacre Street, the Metrolink line runs between Piccadilly and New Islington.

2.2.2 Description of Proposed Development

The proposed development is for a part 25 part 3 storey residential tower (Use Class C3) for 177 new apartments with ground floor commercial space for 2 units and shared amenity space. The development also includes ancillary indoor and outdoor amenity space, cycle parking and hard and soft landscaping works.
The residential layout for the building has been planned as a cluster of apartments around a central core and is therefore an efficient use of space.

2.2.3 Method

The project team attended a circular economy workshop to confirm the principles, commitments and targets of the scheme.

The team have worked together to ensure principles of circularity are incorporated into the project, where possible. This input has influenced the sustainability objectives for the project design and construction.

2.2.4 Circular Economy Aspirations

The CE goals for the project have been set below. The goals are for the project to align with the:

- Waste Hierarchy
- Circular Economy Hierarchy.
- Incorporating the associated targets and commitments within materials and elements will help to ensure the principles of circularity are met.

INTRODUCTION

2.3 Proposed Development

Domis on behalf of FG Victoria House Ltd, have a proactive approach to sustainability with a range of corporate and project level commitments to reduce the amount of materials required, increase recycling rates and limit the amount of waste sent to landfill.

The approach to circular economy throughout the design has endeavoured to increase longevity of the building by specifying robust materials and using standard fabric sizes for ease of replacement and maintenance. As the existing building on the site is no longer fit for purpose, the building will not be refurbished or repurposed. However, the development aims to highly segregate the waste from demolition to aim for a diversion from landfill rate of 85% or better.

2.4 Document Structure

The content of the CE Statement is as follows:

- Chapter 1 and 2 set out the Executive Summary and Introduction.
- Chapter 3 communicates the circular economy approach listing commitments, targets, metrics and timeframes.
- Chapter 4 concludes the Statement. Appendix A includes the proposed development site plan.

This circular economy statement should be read in conjunction with other documents submitted in support of the planning application, namely the Environmental Standards and Energy Statement prepared by Element Sustainability, Domis Site Waste Management Strategy, Waste Management Strategy prepared by Vectos and Forshaw Demolition Health and Safety Management File.

CIRCULAR ECONOMY PRINCIPLES AND COMMITMENTS

A circular economy is one where materials are retained in use at their highest value for as long as possible and are then re-used or recycled, leaving a minimum of residual waste. A circular economy will save resources, increase the resource efficiency of businesses and projects, and help to reduce carbon emissions.

For circular principles to be successful, a whole building lifecycle approach is required. Therefore, the goals of the circular economy statement are closely entwined with the approach of the Environmental Standards and Energy Statement and Site Waste Management Plan developed for the proposed development.

This will incorporate a number of commitments to manage quantities of materials, resources and waste. These principles underpin the structure and content requirements of this circular economy statement.

3.1 National Policy

Planning policy is set at the national level by the National Planning Policy Framework (NPPF) and associated Planning Practice Guidance (PPG) as summarised below.

The National Planning Policy Framework was most recently updated in February 2019, the National Planning Policy Framework (NPPF) sets out the Government's planning policies for England.
The NPPF 7 states "the purpose of the planning system is to contribute to the achievement of sustainable development".

Implementation

At this later stage in design, the design team will continue to investigate opportunities to increase circularity of the design of the development. While some of the principles have been or are in the process of being implemented, as part of the pre-construction stage, Domis will aim to ensure that where appropriate and viable, the principles will be carried through the remaining design and eventual construction.

Key requirements for the environmental objective of relevance to this statement include making efficient use of land, using resources prudently, minimising waste and pollution and mitigating climate change.

3.1.1 Planning Practice Guidance

Planning Practice Guidance (PPG) underpins policies within the NPPF and provides guidance on their implementation. As such PPG is a material consideration in planning decisions and should generally be followed unless there are clear reasons not to. PPG includes a specific section on the implementation of waste planning policy. It explains how local planning authorities can help ensure waste is handled in a manner which protects human health and the environment.

Local planning authorities, to the extent appropriate to their responsibilities, should look to drive waste management up the 'waste hierarchy'.

CIRCULAR ECONOMY PRINCIPLES AND COMMITMENTS

The Strategy for England (2018) sets out Government proposals to preserve our stock of material resources by minimising waste, promoting resource efficiency and moving towards a circular economy.

The Strategy aims to make England a world leader in using resources efficiently and reducing the amount of waste created. By prolonging the lives of materials and goods, society can move away from the inefficient 'linear' economic model of 'take, make, use, throw' towards a more circular economy through which resources will be in use as long as possible so that maximum value can be extracted from them.
The Strategy is framed by natural capital thinking and guided by two overarching objectives:

- To maximise the value of resource use
- To minimise waste and its impact on the environment.

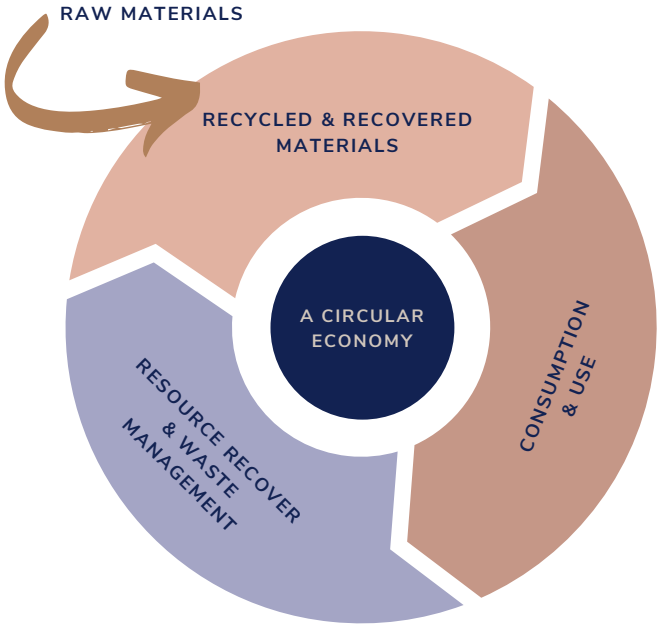


Figure 1: Circular Economy (Waste Strategy for England)

This UK Green Building Council guidance 4 is designed to enable construction clients to include more ambitious circular design and construction principles for non-domestic built assets. In general, the principles are also transferrable to domestic and infrastructure scenarios.

This is achieved by addressing the common commercial obstacles that developers may encounter, and providing practical support and evidence to assist them in setting clear circular objectives for construction projects.

In contrast to a linear "take-make-dispose" economy, a circular economy builds overall system health by decoupling economic activity from the consumption of finite resources. This should be underpinned by a transition towards renewable energy sources.

The structure of the UK GBC Guidance follows the following Circular Principles:

- Reuse
- Design Buildings for Optimisation Standardisation or Modularisation Servitisation and Leasing; and, Design and Construct Responsibly.

The guidance also aims to ensure that the construction supply chain can effectively deliver circular economy goals and that budget, project management, and timescale risks are minimised and mitigated.

CIRCULAR ECONOMY PRINCIPLES AND COMMITMENTS

The Core Strategy is the Key Development Plan which was adopted in 2012 and sets out the following policies pertaining to waste:

- Policy EN19 Waste– requires all developers to demonstrate the proposal's consistency with the principles of the waste hierarchy.

- Policy DM1 Development Management – all developments should have regard for refuse storage and collection in the design.

3.1.1 Greater Manchester Spatial Framework 2020 - 2037

The production of the Greater Manchester Spatial Framework, an update to the Core Strategy, is no longer being progressed in its current form. However the draft plan sets out the ambition for Greater Manchester to achieve a circular economy and a zero-waste economy, by implementing the following policy:
Policy GM-S 7 – Resource Efficiency - the following measures will help achieve a circular economy:

- Using sustainable design and construction techniques to reduce carbon emissions, adapt and future proof the impact of climate change
- Reduce and recycle waste and minimise water use
- Designs should incorporate storage space to facilitate recycling.

3.1 Goals

The national principles and guidance Policy EN19 and DM1 of the adopted Manchester Core Strategy, along with the development of the Greater Manchester Spatial Framework, demonstrates the ambition to move to a circular economy. The proposed development wants to demonstrate the clear commitment to designing and building a development which considers the impacts of circularity in relation to materials and waste.

The following goals have therefore been set.

Goal 1. Waste and Resource Management through adoption of principles of Waste Hierarchy

Follow the principles set out in the Waste Hierarchy with the goal to conserve sources; design to eliminate waste to landfill; and increase recycling rates. In accordance with their sustainability commitments, Domis aims to utilise optimum level of resources and minimise waste output and achieve high levels of recycling and reuse.

Domis on behalf of FG Victoria House Ltd also commit to minimising waste output and work with property managers and suppliers to improve sustainability performance in their portfolio and in products, and integrate sustainability considerations into all asset planning and decision-making.

As this is a Design and Build (D&B) contract, the future occupier will also have a large role to play in designing out waste and ensuring construction practises on site minimise waste production in the first instance as well as limit the amount of waste to landfill.

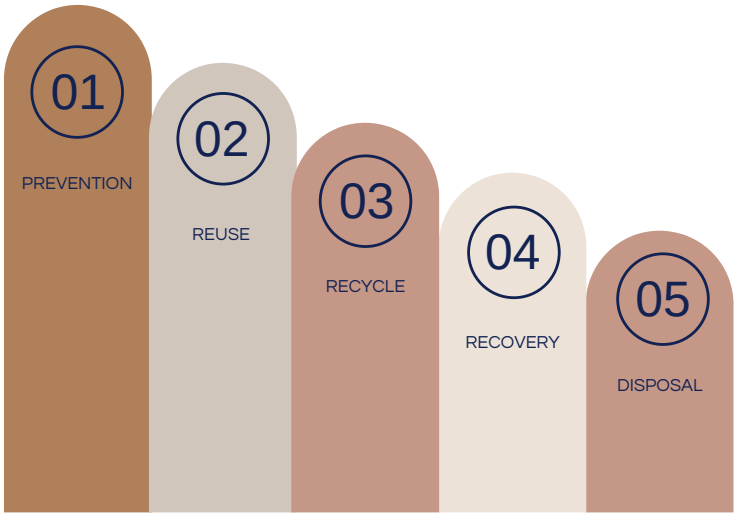


Fig 2: Waste Hierarchy

CIRCULAR ECONOMY PRINCIPLES AND COMMITMENTS

Goal 2. Adopt principles of Circular Economy Hierarchy

Deeper analysis of the Waste Hierarchy enables the circular economy hierarchy and avoidance of the linear "take-make-dispose" economy. The goal is therefore to manage waste sustainably and at the highest value. In this way, a circular economy will help to build overall system health by decoupling economic activity from the consumption of finite resources.

In order to achieve these goals, a number of principles and commitments have been developed for the project.

These are discussed in the next section.

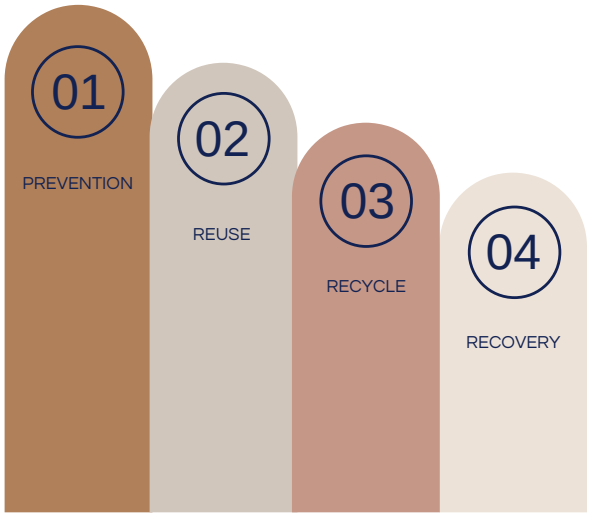


Fig 3: Circular economy hierarchy

3.1 Circular Economy Targets and Commitments

This section provides a more detailed description of how the targets and commitments will be achieved where possible.

The structure provides a response to each of the following principles of Circular Economy.
For each principle, the narrative includes a short summary of the proposed approach, along with itemised metric(s) and target(s). Commitments and measures that will be adopted where possible, are also listed along with key information about how each measure will be implemented and at what stage. Anticipated challenges and counter-actions is also included where relevant.

CIRCULAR ECONOMY TARGETS AND COMMITMENTS

This section provides a more detailed description of how the targets and commitments will be achieved where possible.

Principle1: Conserve resources, increase efficiency and source sustainably

Commitment 1.1: Minimise the quantities of materials used

Responsibility	Primary: Client. Secondary: Architect, Structural Engineer.
Timeframes	Commenced at RIBA stage 4.
Proposed Approach	The form of the building at Victoria House is simple and efficient, thereby using less materials within the design. Furthermore, the design and procurement process will aim to specify robust materials for elements that historically required regular replacement. During the design, the Client, Architect and Contractor have investigated the standardisation of key components such as windows, lighting, facade components and FF&E that will simplify maintenance, component repair and replacement for the end user FMT. The Domis project team with the Client will endeavour to: • Investigate the use of demountable elements. • Set out building elements based on standard fabric sizes. • Wherever possible adopt Domis 'Development Specification Principals'. During construction, the project team will also aim to ensure where possible, efficient materials procurement and reduced construction waste by designing for less material use and less construction waste produced by: • Off-site prefabrication, assembly and bulk delivery (via Domis logistics hub) has been promoted and maximised where possible to minimise the potential for both on-site and off-site construction waste. • Reinforced steel is developed with the RC frame subcontractor and structural engineer to ensure optimisation of material enabling material to be pre-cut off-site to minimise waste. • Early engagement between the facade subcontractor and Consultant design team will enable coordination and optimisation of materials through design prior to install on site.
Metrics	Number of high-cost elements agreed.

CIRCULAR ECONOMY TARGETS AND COMMITMENTS

Commitments & Measures	Standardisation requirements relating to internal layouts will be investigated by the team members. Facade treatment will be investigated to ensure simplified maintenance and repair.
Implementation	Designers will consider standardisation in design. Procurement models for standardised components will be reviewed by Domis. Transportation and construction details of components will be reviewed by Domis and the supply chain as early as possible to determine if low carbon solutions are available.
Challenges / Counter-Actions	Some component elements may have higher embodied carbon than regular construction due to transportation and lifting. Early input from the supply chain will be encouraged to understand the embodied carbon content.

CIRCULAR ECONOMY TARGETS AND COMMITMENTS

Principle1: Conserve resources, increase efficiency and source sustainably

Commitment 1.2: Minimise the quantities of materials used

Responsibility	Primary: Client. Secondary: Architect, MEP, Structural Engineers, Supply Chain
Timeframes	Commenced at Stage 2, refined at Stage 3 & 4.
Proposed Approach	Domis aims to mitigate the potential impact of the development by addressing key sustainability issues and incorporate a range of procedures to maximise resource efficiency and minimise waste during all stages of the development. Victoria House takes a fabric first approach in reduction of operational energy (heating/cooling/ventilation) by having a low U-Value façade, low Y-value thermal bridging, improved air tightness, use of mechanical vent heat recovery (MVHR), and a very efficient form factor and optimised glazing ratio. Use of air sourced heat pumps for areas of air conditioning to enable lower energy usage and emissions. A fabric-first and all-electric energy strategy will be adopted, resulting in a reduction of energy demand by approximately 22%, which exceeds the requirements of the current Manchester Core Strategy adopted July 2012. LED light fittings will be specified in all areas. The development will benefit from the ongoing decarbonisation of the UK electricity grid. Domis/ Salboy will assess the environmental impact associated with all the phases of the life cycle of the new building, from the manufacture of the building materials through to the operation of the building and how it will be demolished and replaced, focusing on a range of sustainability metrics. Each design and specification decision is to be measured against the impact it will have on the net of the whole life carbon of the project. The apartments will be designed to reduce water consumption and will include water efficient devices and equipment, including 'A' rated appliances. The Energy and Environmental Standards Statement concluded a daily consumption rate of 100litres / person / day, to the United Utilities latest requirements. There will be a maximum dead leg of 1 litre of hot water pipework. 'Green' Euro Water Label to be used for hot water outlets (e.g. certified 6l/min shower head). During the construction, the team will also investigate further measures to reduce use of other resources, such as packaging, as discussed below in Commitment 3.3. The use of water, electricity and fuel will be monitored to track performance throughout construction, with decisions being taken considering these KPIs.

CIRCULAR ECONOMY TARGETS AND COMMITMENTS

Metrics	t/co2 (embodied carbon) Water – l/p/d
Targets	Standardisation and modularisation requiWater – 100 l/p/d Energy as per policy requirements: 1. Residential elements to achieve 9% reduction in dwelling emission rate over Part L 2013 2. Non-domestic units to achieve 6% reduction in dwelling emissions rate over Part L 2013.
Commitments & Measures	Water Resources: the project aims to 1. minimise the use of mains water in line with the Optional Requirement of the Building Regulations (residential development), achieving mains water consumption of 100 litres or less per head per day, and will investigate betterment of this. 2. Incorporate measures such as smart metering, water saving and recycling measures, including retrofitting, to help to achieve lower water consumption rates and to maximise future-proofing. Sustainability and Energy Strategy: an energy strategy has been produced to meet the requirements of the local Plan. Supply Chain: To reduce packaging waste on site and promote closed-loop recycling of key construction products, through pro-active engagement with the supply chain. 3. Lower energy usage through the building. Light fitting replacement less frequent through the use of LED fittings. 4. All electric heating utilising the new SAP10 electrical efficiency figures is being used, this has a major benefit to the SAP calculations and the lifecycle of the mechanical installations, i.e. no gas. Therefore the building energy is not reliant on using fossil fuels. 5. Sustainable drainage solutions have been used for the scheme such as attenuation tanks and are in the process of being concluded.
Implementation	Sustainability & Energy Standards Statement has been completed and submitted as part of the Planning Application. Contractors are required to explore reusable packaging solutions with key product manufacturers at the earliest opportunity.
Challenges / Counter-actions	Solutions with key supply chain partners can lead to a significant reduction of site waste management and disposal costs. However, the supply chain is only likely to invest in reusable packaging solutions for large product orders. Scale may be helped through the implementation of a standardisation strategy including off-site/modular components. Suppliers need time to respond to requests for re-usable packaging and develop suitable solutions. / Discussions should start during the earliest phase.

CIRCULAR ECONOMY TARGETS AND COMMITMENTS

Principle1: Conserve resources, increase efficiency and source sustainably

Commitment 1.3. Specify and source materials and other resources responsibly and sustainably

Responsibility	Primary: Architect, Structural Engineer. Secondary: Main Contractor, Subcontractor, Supply Chain
Timeframes	Commenced at Stage 4, discussed at contractor meetings
Proposed Approach	Domis endeavour to reduce the reliance on raw virgin materials and procure from sustainable sources. Domis will also aim to ensure a construction specification that maximises energy and resource efficiency. To reduce the reliance on virgin materials in the construction material, Domis seeks to specify the use of recycled materials wherever viable including steel content, aggregates, blockwork and building finishes and furnishes. The procurement team will ensure use of products from certified sustainable sources, and ensure the availability of supply for the needs of the development e.g. FSC/PEFC certified timber.
Metrics	Recycled content by total material mass or cost
Targets	Design team and Domis engage with established partnered subcontractors and supply chain. Procure sustainable material, certified where possible e.g. FSC/PEFC timber.
Commitments & Measures	Design team engage with the Domis established subcontractor and supply chain on an ongoing basis as part of regular meetings and workshops. Procure sustainable material, certified where possible e.g. FSC/PEFC timber.
Implementation	Implement monitoring and reporting procedures to ensure opportunities are realised by subcontractors and their supply chain partners.
Challenges / Counter-Actions	Possible issue with recycled content not explicitly communicated to sub-contractors. / Requirements to be incorporated into specifications for subcontractors. Lead in times/ availability. / Increased recycled content is often available in mainstream products by large suppliers and does not incur a cost premium, but it does require project team awareness to ensure the correct products are selected. The design team & contractor may not be aware of products with increased recycled content, nor be familiar with including requirements in specifications. / Additional sustainability workshops may be needed to engage the design team / add circular economy and Waste to agenda.

CIRCULAR ECONOMY TARGETS AND COMMITMENTS

Principle 2: Design to eliminate waste(and for ease of maintenance)

Commitment 2.1. Design for longevity, adaptability or flexibility and reusability or recoverability

Responsibility	Primary: Architect, Structural Engineer. Secondary: Main Contractor, Subcontractor, Supply Chain
Timeframes	Commenced at Stage 4, discussed by design and build teams.
Proposed Approach	In order to ensure that circular economy principles are embedded within the construction process, the development aims to meet long term needs while being durable and resilient. It should be able to cope with change from, for example, climate change or different ways of living. The lightweight partitions and riser arrangements mean the internal arrangements can be adapted at a later date with little impact. The clear orthogonal organisation, structural strategy and adaptable floor plates allow for future flexibility so that walls between units and internal partitions can be moved without significant structural alteration. The materials have been specified to be robust and long lasting and based on standard fabric sizes. Material specifications and procurement will aim to achieve durability standards. Materials are to be demountable and recyclable where practicable. Off-site prefabrication and design for standardisation will be promoted and maximised where possible to ensure ease of maintenance and repair/replacement during operation.
Metrics	Various – see targets
Targets	Achieve durability standards (such as BS 7543:2015) All materials will also be sourced in accordance with a sustainable procurement strategy which includes the following measures: • All timber will be sourced from sustainable sources; • Recycled materials with low embodied carbon will be preferred; and, • Materials suppliers that have an established Environmental Management System.
Commitments & Measures	Implement monitoring and reporting procedures to ensure opportunities are realised by contractors and their supply chain partners.
Implementation	The design and build has and as it evolves will continue to take into account the needs of the present with consideration of how those needs might change in the future.
Challenges / Counter-actions	Designers may need to re-examine certain elements or material to reduce waste and incorporate circular economy principles. For example, consider cutting patterns for elements such as plasterboard when locating windows and doors.

CIRCULAR ECONOMY TARGETS AND COMMITMENTS

Principle 3. Manage waste sustainably and at the highest value

Commitment 3.1. Manage demolition waste

Responsibility	Primary: Architect, Structural Engineer. Secondary: Main Contractor, Waste Contractor, Demolition Contractor
Timeframes	Commenced at Stage 4, metrics and progress monitored and reported on regularly as part of monthly construction meetings.
Proposed Approach	The scheme proposes to maximise the value and quantity of materials recovered for potential reuse and recycling during demolition. The materials generated from the soft strip of the existing building will be segregated for recycling where possible: • Joinery, doors, architraves, skirtings, etc. will have nails, screws and ironmongery removed and sent to the Particle Board Industry. • Glass, where suitable, will be sent for Cullet Merchants. • Plasterboard will be sent for recycling by British Gypsum. • Ferrous and non-ferrous materials will be sent to scrap metal merchants for recycling. During the M&E strip, plant will be cut out in large sections and will be reprocessed by a larger machine with a scrap shear before being placed in bins for recycling. All waste is further segregated and sorted off site prior to recycling in order to achieve the minimum amount of material sent to landfill. Mixed waste collected from site will be segregated off site at a local transfer station, where all materials will processed through a material recycling facility. The project team will agree a benchmark for waste reclamation which will include reuse on site, reuse on other sites, salvaged for reuse & collected from site by an approved waste management contractor. During the demolition there are waste streams that are considered non-recyclable and they include asbestos waste and bitumen roofing. This is anticipated to be minimal. Monthly environmental inspections will take place and KPIs will be monitored. The KPIs will include waste generation, segregation and diversion from landfill.
Metrics	Weight / mass
Targets	Aim to divert 85% of waste from landfill. No biodegradable or recyclable waste to landfill where possible
Commitments & Measures	Additional resources required to brief contractors and monitor demolition works. • Quantity of materials recovered may differ significantly from pre-demolition estimates. • On-site reprocessing of concrete and other inert materials requires a crushing license and technical expertise. On-site reprocessing may create a dust nuisance if not carefully managed. • Regular / monthly reports from demolition contractors stating progress against the suggested targets.

CIRCULAR ECONOMY TARGETS AND COMMITMENTS

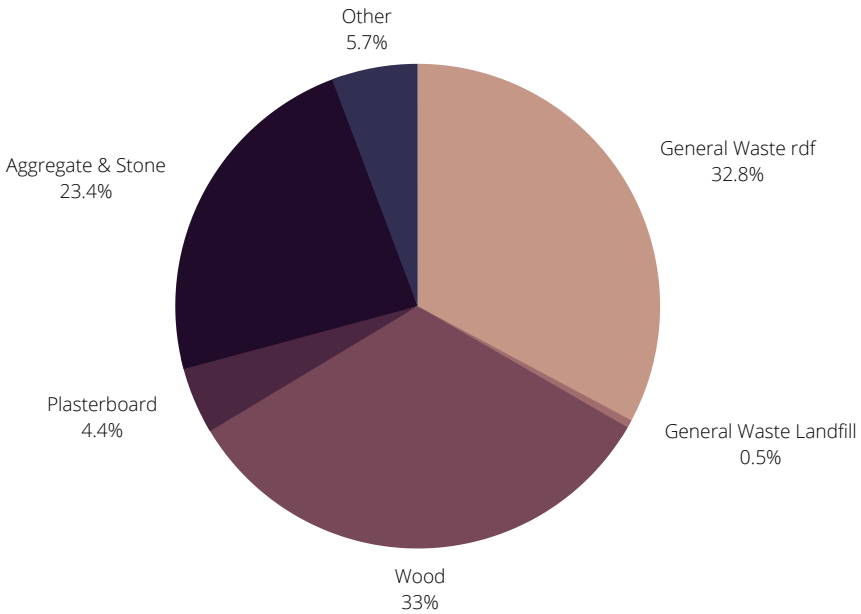
Implementation	A Site Waste Management Plan has been completed for the scheme to set out the above waste segregation streams and soft strip management to contractors. A Demolition Management Plan has been completed for the scheme.
Challenges / Counter-actions	Safe storage space for salvaged materials, particularly where materials are intended for use in future construction phases. / Additional resources and space required to brief contractors and monitor demolition works. Quantity of materials recovered may differ significantly from pre-demolition estimates. / Updates to SWMP to monitor totals. On-site reprocessing may create a dust nuisance if not carefully managed. / Site manager to ensure careful management and mitigate any issues.

CIRCULAR ECONOMY TARGETS AND COMMITMENTS

Principle 3. Manage waste sustainably and at the highest value

Commitment 3.2. Manage construction waste

Responsibility	Primary: Main Contractor. Secondary: Project Managers.
Timeframes	Commenced at Stage 4, metrics and progress monitored and reported on regularly as part of monthly construction meetings.
Proposed Approach	The proposed approach to management of construction waste is to follow the waste hierarchy and circular economy hierarchy. The proposed development will aim to minimise the total amount of construction waste produced on-site through best practice material handling procedures. Appropriate materials storage and handling onsite will help to reduce the amount of waste produced at source. Careful segregation of waste will occur where space allows on site, which enables higher quality recycled materials and encourages local reprocessing. This will help to improve the transparency of waste processing and confidence in the end use of waste materials. Domis will be tasked with maximising site segregation of construction waste to enable local reuse of waste materials and increase the quality of recyclable materials. Construction materials arriving to site on pallets will be carefully unloaded and neatly stored, where applicable materials and components will be managed and distributed via the Domis 'Central Hub'. All pallets are given back to the delivery lorry upon next delivery. During construction, the team will work with suppliers to further investigate packaging reduction measures. See below diagram which demonstrates Domis Waste Recycling between 1st January 2022 to 31st May 2022 Across all Manchester sites (16 locations). The timber shuttering off-cuts which will be used in the superstructure will be stockpiled and re-used on site. During construction, the team will work with suppliers to further investigate the recovery or reuse of remaining timber.



CIRCULAR ECONOMY TARGETS AND COMMITMENTS

Categories (Tonnes)	Jan	Feb	Mar	Apr	May	Total
GENERAL WASTE RDF	166.447	145.052	126.442	110.843	116.307	665.091
GENERAL WASTE LANDFILL	0.000	10.140	0.000	0.000	0.432	10.572
WOOD	144.312	150.452	145.960	116.763	111.987	669.474
PLASTERBOARD	8.492	6.094	18.360	27.300	29.836	90.082
AGGREGATE AND STONE	102.074	106.712	102.799	82.933	80.317	474.835
SOIL	0.000	0.000	0.000	0.000	0.000	0.000
GREEN WASTE COMPOST	0.000	0.000	0.000	0.000	0.000	0.000
METAL	0.000	0.000	0.000	2.340	0.000	2.340
FOOD	0.000	0.000	0.000	0.000	0.000	0.000
GLASS	0.000	0.000	0.000	0.000	0.000	0.000
PAPER AND CARD	0.000	0.000	0.000	0.000	0.000	0.000
PLASTIC PACKAGING	0.000	0.000	0.000	0.000	0.000	0.000
RIGID PLASTIC	0.000	0.228	0.000	0.000	0.000	0.228
HAZ	0.000	0.000	0.000	0.000	0.000	0.000
OTHER	10.700	24.160	30.920	37.900	12.802	116.482
DRY MIXED RECYCLATE	0.151	0.000	0.072	0.044	0.000	0.267
CONSTRUCTION WASTE	0.000	0.000	0.000	0.000	0.000	0.000
3RD PARTY TIPPING	0.000	0.000	0.000	0.000	0.000	0.000
Total	432.176	442.838	424.553	378.123	351.681	2029.371

Metrics	Waste generation target measures.
Targets	85% waste diverted from landfill
Commitments & Measures	Training staff in waste reduction techniques and proper segregation in order to ensure a cultural shift in attitudes towards waste. Multiple skips for segregated streams will be provided. A dedicated area for reusable material will be provided (this is likely to have a greater initial outlay and will require more space on site). A dedicated waste manager would be appointed if appropriate in order to manage the waste compound and ensure appropriate segregation of waste.

CIRCULAR ECONOMY TARGETS AND COMMITMENTS

Implementation	The project managers will identify potential space for storage of reusable materials and allocate appropriate space to allow extensive segregation of waste material. Domis will implement the accompanying Site Waste Management Plan (SWMP) and Demolition Management Plan. The SWMP details actions and initiatives to reduce construction waste and ensure the legal disposal of waste. The SWMP will detail the implementation of: • How quality management procedures will be used to accurately order materials and minimise rework; • Identification of key supply chain partners that could be approached to develop re-usable packaging solutions and supplier takeback and recycle schemes; • How key sub-contracts will be managed to incentivise waste reduction and segregation; Detail how site waste will be managed to maximise segregation at site; • Identify how reusable materials will be stored and distributed; • Detail off-site waste recycling, disposal routes and how legal waste disposal will be verified; Detail frequency of waste-related site team meetings, toolbox talks and progress reviews; Set project waste targets and KPIs; and • State the method of reporting and monitoring, including responsibilities and frequency of reporting.
Challenges / Counter-actions	Many contractors do not evaluate waste disposal further than the first-tier waste handler, the subsequent journey and final disposal or recycling site of waste is often unknown. A majority of plastic waste is shipped overseas, where it may not be recycled, even though it was segregated for recycling at the material handling facility and would have been recorded as diverted from landfill. / Research required into local waste handling facilities and their onward disposal routes to understand opportunities for legal, transparent waste disposal.

CIRCULAR ECONOMY TARGETS AND COMMITMENTS

Principle 3. Manage waste sustainably and at the highest value

Commitment 3.4. Manage municipal waste

Responsibility	Primary: Client and Architect. Secondary: Property Manager / Retail Tenant(s) and Residents.
Timeframes	Design elements commenced at Stage 2. Ongoing waste requirements commence following handover, tenant guidelines to be produced and will establish timeframes.
Proposed Approach	A Waste Management Strategy has been developed, ensuring that adequately sized bin storage areas are provided, access for collection personnel and vehicles has been established and other aspects of waste management is designed into the development at an early stage of the design. The estimated volumes can be found within the Site Waste Management Strategy prepared by Vectos. Residents would have their own internal waste bins. This will be designed for at leas three waste streams. The retail premises will have a minimum of three waste bins (General, Pulpable and Mixed Recyclables) within its own demise with additional bins depending on its operations. Residents or their cleaners will take their waste from their apartment bins to the refuse chute lobby on their floor. They will select the type of waste stream: General and Food Waste, Pulpable, Mixed Recyclables and that will be directed to a tri-separator on the ground floor. This will be collected in 1100 litre Eurobins beneath the tri-separator and when full, those bins will be swapped over for empty bins b the on-site management team. The retail occupier will store their waste within their own demise before transferring this to the retail refuse store. This waste will be transferred onto the street on collection day. On collection day, the strategy will be for the site management staff to wheel the bins out to the waste collection point off Longacre Street at the time agreed with the waste collection company. The bins will be returned to the reuse store immediately after collection. The residents gym will generate only minimal levels of waste and is considered ancillary to the residential apartments. As such, it will store waste in small bins designed to accommodate plastic bottles.
Metrics	Weight
Targets	Meet or exceed the municipal waste recycling target of 50%, updated upon review of actual rates.
Commitments & Measures	The design team will ensure that appropriate recycling and waste facilities are provided within the building to facilitate and maximise recycling opportunities.

CIRCULAR ECONOMY TARGETS AND COMMITMENTS

Implementation	At Stage 4 the design team will design the appropriate spaces required for management of waste and recycling.
Challenges / Counter-actions	Levels of recycling may be compromised by cross contamination. / Building manager to provide information on recycling and waste requirements within the common spaces and provide information as necessary.



End of LIFE

In order to promote use of materials and elements at the end the buildings' life, the Domis team will investigate the following and where possible:

- Select products and materials that can be remanufactured or reused at end of first life, largely brick, concrete and steel;
- Use materials with recycled content;
- Select products that are designed for disassembly;
- Select materials that can be recycled or composted at end of life;
- Consider leasing short-lived components;
- Avoid permanent fixing of products, such as by glue and cement mortar, to enable end of life deconstruction and salvage of building elements; and
- Ensure fixings are easy to access to enable disassembly.

When the asset is approaching obsolescence, Domis will aim to investigate the feasibility of options to extend end of life. If extending is not feasible, Domis may be in a position to consider replacement scenarios where appropriate.

CONCLUSIONS

Domis has a proactive approach to sustainable development and takes a holistic view to delivering a building that embraces the principles of the circular economy.

This circular economy statement has been prepared to demonstrate how the proposed development at Victoria House, Great Ancoats Street, Manchester has and will deliver the principles of circularity to discharge condition 3b made on the decision notice for full planning permission.
Domis has a proactive approach to sustainability to reduce the amount of materials required, increase recycling and limit the amount of waste sent to landfill. This circular approach to development includes assessment of design and materials at key stages of the development in order to promote a flexible and adaptable design that also promotes longevity.

In this context the key circular economy commitments incorporated into the proposed development include the following.

- Ongoing encouragement of specifications that maximises energy and resource efficiency (e.g. water efficiency) within the design.
- Ongoing investigation into the standardisation of materials and component.
- Seek to specify the use of recycled materials wherever viable including steel content, aggregates, and building finishes such as carpets.
- Utilise off-site prefabrication
- Procurement of sustainable and robust/durable materials.
- Continue to investigate flexibility within the design to allow for changing and future needs of the development.
- Reuse of site-won material within the on- site construction, or where possible investigate options for recovery and reuse of material to increase diversion from landfill.
- Continue to work with suppliers to reduce packaging waste or investigate take-back schemes.
- The demolition and construction waste targets and commitments will be monitored.

APPENDICES

01 Site plan

