One Museum Street

GLA CE Statement Template
APPENDIX C

DSDHA GXN BC PARTNERS simten DEVELOPMENTS

GREATER LONDON AUTHORITY

Detailed Application Stage - Circular Economy Statement

Project Details	
Project name	Selkirk House, 1 Museum Street, 10-12 Museum Street, 35-41 New Oxford Street and 16a-18 West Central Street, London, WC1A 1JR
Planning application reference number (if applicable)	
Applicant	Lab Selkirk House Ltd
London Borough	Camden
Brief description of the project	Comprises: - new build 19 storeys - office and flexible town centre use; - new build 6 storeys - residential and flexible town centre use; - new build 5 storeys - market residential units and flexible town centre use; - a series of new and refurbished buildings 6 storeys - residential accommodation and flexible town centre uses
Authors	Scotch Partners, updated by GXN
Date of assessment	21.10.2024
Number of Use Types	4
Use Class / Type	Floor Area by use type (m2)
Use Class E(g)(i)	24758
Use Class E	2667
Use Class C3	4704
Unassigned	452
Overall GIA (m2)	30680.00

Circular Economy Design Approaches

Circular Economy Design Approaches for Existing Structures / Buildings	Applicant Response
Is there an existing building on the site?	Yes
Is it technically feasible to retain the building(s) in whole or in part?	Yes
Is the existing building, or parts of the building, suited to the requirements for the site?	Yes, in part
The preferred strategy is:	PARTIAL RETENTION and REFURBISHMENT

Circular Economy Design Approach	Phase/Building/Area/Layer	Strategic Response
Retain and Retrofit	substructure, superstructure, shell/skin	The development philosophy is to work with as much of the existing structure as possible to minimise the amount of demolition and new structure required. As such,almost all of 35-41 New Oxford Street, and 10-12 Museum Street (WCS) shall be retained as far as practically possible, with retrofit/demolition implemented where necessary. The basement of 1 Museum Street and 16a-18 will also be retained. Facade brick work to be cleaned for reuse to assist in refurbishment of existing façade (retained). Coping stones, ridge and other roofing materials may be considered for reuse where refurbishment is considered. Roofing materials may be recovered for resale. Paving slabs, kerbs, cills will be protected in deconstruction of the buildings and considered for reuse in maintaining the materials within the new design, especially in refurbishment of existing facades and roadways etc. The Retention Report submitted with this application provides further details on the extensive retention review of the development.
Partial Retention and Refurbishment	All layers	Pre-demolition and indicative pre-reclamation audits have been produced for the development and submitted with this application. Investigate the use of materials to be reused from existing site. Maximise material recovery from the existing site in line with the waste hierarchy. Goal to recycle 95% of the material. Fixtures and fittings, especially brickwork will be considered for reuse within the existing site. Where the fixtures and fittings can be reused, those not used on site will be sold for use elsewhere such as in the community (door closers; doors; trunking; kitchen units etc for community projects or refurbishment of community facilities). Where fixtures and fittings are unsuitable for reuse, they will be considered for repurposing or recycling. Where recycling is considered the best option, the materials will be separated off site into their constituent materials and recycled accordingly. The Retention Report submitted with this application provides further details on the extensive retention review of the development.
Disassemble and Reuse	substructure, superstructure, shell/skin	The pre-demolition audit and indicative HTS pre-reclamation audits investigate the use of materials to be reused from the existing site. This includes how the development aims to go above and beyond standard practice considering reuse options for structural elements of the existing 16a-18 West Central Street buildings including steel columns and beams, timber joist beams and studs, beam and block floor and masonry wall. Reuse of concrete on the existing Museum Street building is also considered, including columns, wall panels, recast slabs, and reinforced concrete slab panels and how these can be applied to the proposed development.
Demolish and Recycle	substructure, superstructure, shell/skin	Aim to seek reuse of demolition materials at the highest value as outlined in the Pre-Demolition Audit (to be explored further at the next stage of design). Aim to convert demolished elements into new materials or objects to be used on the site or at another site. Storage space and collection systems should be provided to support recycling and reuse.

Circular Economy Design Approaches for New Buildings, Infrastructure and Layers On...	Applicant Response
Is the whole building designed to have a short life on its current site? (e.g. less than 10 yrs)	No
Is it foreseeable that the building will need to change use/function within its design life?	No
All developments should apply the 6 Circular Economy principles, including:	Designing for DISASSEMBLY and ADAPTABILITY, MATERIAL REUSE ON SITE and/or RECYCLING should be maximised

Circular Economy Design Approach	Phase/Building/Area/Layer	Strategic Response
Building relocation	N/A	Not applicable according to decision tree (CE statement guidance figure 5) because the proposed development is expected to have a long life.
Component or material reuse	N/A	Not applicable according to decision tree (CE statement guidance figure 5) because the proposed development is expected to have a long life.
Adaptability	substructure, superstructure, shell/skin, services	... able to be altered for future periodic remodelling. Such remodelling is likely to involve planning, building control and wet trades. Development has also been designed to be adaptable to future changes to climate in line with BREEAM Wst05 Adaptation to Climate Change as follows: 1MS: All façade component fixings to be specified to suitable wind loading to suit predicted downdraughting scenarios. Movement allowances are to be incorporated into the design, including for greater temperature extremes than currently experienced. Sealants and gaskets are key potential points of failure. Allow for expansion under high temperatures and detail between unitised façade junctions. Durability of façade materials to account for potential overheating and allow for increased UV exposure. In addition Commercial Structures designed to have geometry to accommodate multiple uses and users, and capacity that could support several use cases. Facade designed to be independent of primary structure, and passive-first ensuring adaptability to changing climate. Services designed to accommodate spatial flexibility while minimising waste, and with capacity to adapt to changing use patterns and climate. Residential Material choices in structure, façade, and finishes that focus on durability and ...
Flexibility	substructure, superstructure, shell/skin, services, space	High level services routes to be further developed to ensure flexibility for future cellularisation. Ductwork distribution routes and VAV box locations to be further tested for maximum flexibility. In addition to approach under "adaptability": Commercial Space plan designed to accommodate a range of uses and users. Residential Where possible (noting the listed buildings), regular layouts are proposed to enable potential adaptation in the future.
Replaceability	shell/skin, services	Ensuring different parts of the development are accessible and can be maintained and replaced where necessary. High level services routes to be further developed to ensure flexibility for future replaceability requirements. In addition Commercial A building in layers approach is adopted. Facade design considers different lifespans of components, and can independently replaced. Services maintenance and replacement is considered to minimise disruption and waste. Residential Where possible, façade design considers different lifespans of components, and can independently replaced.
Disassembly	superstructure, shell/skin, services, space	Achieve maximum Wst06 Design for Disassembly and Adaptability credits. The development design must consider future changes and reconfigurations. Such reconfigurations are likely to be pre-agreed. The Client and wider team commit to studies exploring material choices to increase the disassembly of the proposed development. This will follow guidance on end-of-life/ disassembly from the BRE Material Resource efficiency in Construction document. Soft spots to be permissible to allow tenants to knock through floor plates for internal circulation, if desired. In addition Commercial Structural steel will be designed to facilitate disassembly for reuse. Facade design uses mechanical fasteners enables disassembly of the facade units, as well as from the superstructure. Services maintenance and replacement is considered to minimise disruption and waste. Space planning will prioritise mechanical connections in lieu of adhesives for key systems where possible. Residential Where steel framing is used in the superstructure, connections will be detailed to ensure it can be recovered for reuse or recycling. For the new-build facades, the designs generally use modular components. It is anticipated that mechanical fixings will be used as far as possible, to enable future disassembly of the facade components and materials.
Longevity	All layers	Long-term needs of the development must be considered at all stages of design. This includes ensuring durability and resilience of the development, making sure it can be adaptable to future changes and technologies. In addition Commercial Structural materials are long-lasting and durable, and geometry to accommodate multiple uses and users, and capacity that could support several use cases. Facade design considers different lifespans of components, material selections consider durability, standard grids could support flexibility. Services design has capacity for adaptation to future changes, and focuses on maintenance and replaceability to enable longevity. Space planning material selections there will be an enhanced focus on robust and durable materials. Residential Structural materials are long-lasting and durable. For all facades, the material palette uses, simple, robust, and long-lasting materials. Where relevant, space planning material selections there will be an enhanced focus on robust and durable materials.

Circular Economy Design Principles by Building Layer

The Circular Economy Design Principles by Building Layer table should consider where the Applicant seeks to go beyond standard practice. If there are multiple phases / buildings / areas with different measures / strategies, please specify these separately within the table below.

	Site	Substructure	Superstructure	Shell/Skin	Services	Space	Stuff	Construction Stuff
Is it likely the layer (or components within it) will need to be moved or otherwise modified within 5-15 years, e.g. due to changing use patterns or user requirements?	N/A	No	No	No	No	No	No	N/A
Is it likely the layer (or components within it) will need to be changed, upgraded or replaced within 5-15 years, e.g. for improved performance, aesthetics	N/A	No	No	No	Yes	No	Yes	N/A
The preferred strategy is:	-	Design for ADAPTABILITY	Design for ADAPTABILITY	Design for ADAPTABILITY	Design for REPLACEABILITY	Design for ADAPTABILITY	Design for REPLACEABILITY	-

All developments should apply the 6 circular economy principles, including designing for DISASSEMBLY and ADAPTABILITY, MATERIAL REUSE ON-SITE and/or RECYCLING should be maximised.

Design Principles		Site	Substructure	Superstructure	Shell/Skin	Services	Space	Stuff	Construction Stuff	Summary	Challenges	Actions & Counter-Actions, Who and When	Plan to Prove and Quantify
Designing out waste	Module A - Product Sourcing and Construction Stage	Site wide: Sourcing majority of materials with Responsible sourcing certification and locally sourced where possible.	Site Wide: Potential for concrete reuse being explored. Piling specifications will be optimised for low embodied environmental impact (e.g., incorporating recycled material) and durability. ...	...	Modular facade and standardised elements reduces waste from cut offs. ...	The scheme considers plant replacement as part of the access and maintenance strategy ...	1MS: A number of tenancy split scenarios are to be outlined in the stage 2 report ...	N/A	A Construction Management Plan (CMP) has been prepared to help minimise construction impacts. A Resource Management Plan (RMP) will be prepared to set resource efficiency targets in line with BREEAM Wst 01.	Product Sourcing: Implement a Sustainable Procurement Plan. Construction Stage: Target 2 BREEAM Wst 01 Construction Resource Efficiency credits. ... Prioritise more circular products through design and procurement. Design out waste of materials.	Lead-in times to / availability of procuring sustainable materials.	...	...
	Module B - In-Use Stage	N/A	N/A	1MS: Soft spots to be permissible to allow tenants to knock through floor plates for internal circulation, if desired. ...	Commercial: Standardised facade components will aid in use upgrades and potential reuse. ...	Commercial: Power and data is distributed in an accessible, raised access floor ...	Site Wide: Suitably sized, dedicated, and labelled space for storing/segregating recyclable waste within the scheme. ...	Site Wide: Suitably sized, dedicated, and labelled space for storing/segregating recyclable waste within the scheme. ...	N/A	Dedicated waste and recycling facilities.In addition Mo...	Ensuring waste collection with local authority.	Please refer to the Design and Access Statement and the Operational Waste Management Plan ...	Please refer to the Design and Access Statement and the Operational Waste Management Plan ...
	Module C - End-of-Life Stage	N/A	Site Wide: Building materials, components and products should be chosen to enable disassembly and re-use at the end of their useful life. ...	Site Wide: ...	Site Wide: ...	Site Wide: ...	Site Wide: ...	Site Wide: Building materials, components and products should be chosen to enable disassembly and re-use at the end of their useful life	Site Wide: Building materials, components and products should be chosen to enable disassembly and re-use at the end of their useful life	Thorough records will be kept detailing the design and construction stages of the development. ...	Availability of procuring materials that allow for sustainable end-of-life treatment and re-use. ...	Specific end-of-life strategies for key materials ...	Alignment with LETI Design Guide Materials Guide recommendations ...
	Module D - Benefits and Loads Beyond the System Boundary	N/A	Commercial: The foundation and basement in the redevelopment are expected to last beyond the lifespan of the Proposed Development. ...	Commercial: Steel frame will be recoverable at end of life, to feed the reused steel market, providing benefits beyond the system boundary.	Commercial: Façade design incorporates aluminium frames, aluminium cladding, and glass ...	N/A	N/A	Site Wide: Building materials, components and products should be chosen to enable disassembly and re-use at the end of their useful life	N/A	Optimise potential for reuse and recycling throughout...	As per comments under "end of life".	As per comments under "end of life".	As per comments under "end of life".
Designing for longevity		Site Wide: Durability of materials used to be considered at outline specification stage.	Site Wide: Durability of materials used to be considered at outline specification stage. ...	...	...	...	Commercial: As per comments under "superstructure" ...	Under Consideration	Under Consideration	Designing to avoid a premature end of life for all components through considering maintenance and durability ...	Lead-in times to / availability of procuring sustainable materials. ...	Long-term needs of the development must be considered at all stages of design. ...	Expected life span of the products chosen (see below bill of materials) ...
Designing for adaptability or flexibility		N/A	Site Wide: Limited adaptability applicable to substructure. However, this will be reviewed further in later design stages.	1MS: ...	...	...	1MS: ...	Under Consideration	Under Consideration	Utilise pre-fabrication or standardised components where possible ...	Under consideration	Align the design with the Wst06 BREEAM Design for Disassembly and Functional Adaptability Study ...	...
Designing for disassembly		N/A	N/A	Site Wide: Under Consideration ...	Site Wide: Under Consideration ...	1MS: ...	1MS: ...	Site Wide: Metal architectural details (e.g. handles, banisters rail, etc) will be demounted and sold as they are for reuse	Under Consideration	Design for Disassembly and Functional Adaptability stu...	Embodied carbon impact to be balanced with disassem...	Align the design with the Wst06 BREEAM Design for Disassembly and Functional Adaptability Study ...	...
Using systems, elements or materials that can be re-used and recycled		N/A	Site Wide: Utilise pre-fabrication or standardised components where possible. Reuse of concrete and rebar used on the development.	Site Wide: Roofing materials will be available for reuse ...	Site Wide: Face brick work to be cleaned for reuse at end of life. Glass / glazing solutions will be recyclable. ...	Under Consideration ...	Commercial: ...	Site Wide: Furniture products within the finished development can be carefully removed from site and either offered to local charities, or community groups or sold on directly ...	Under Consideration	Follow the re-use and recycling potential of all fabric and materials used on the project. In addition: To be considered during procurement.	Under ConsiderationIn addition:Availability of supply for...	Using more recycled materials and mainstream products containing higher levels of recycled material ...	Follow guidance on end-of-life efficiency/embodied reduction from BRE Material Resource efficiency in Construction document. ...

Bill of Materials

Please click the + symbol to the left hand side of the Bill of Materials table to view or hide the input rows for each Building Element Category. The rows for substructure and frame have been unhidden to highlight this. A fixed number of rows has been provided for each Building Element Category based on a sub-set of typical WLCA submissions. Should the number of rows provided not be sufficient to allow input of all materials for a given Building Element Category, Applicants should prioritise the inclusion of the materials with the highest quantity.

	Building Element Category	Material quantity (Module A) (kg)	Material Intensity (Module A) (kg/m² GIA)
0.1	Demolition: Toxic/Hazardous/Contaminated Material Treatment	0	0
0.2	Major Demolition Works	0	0
0.3	Temporary Support to Adjacent Structures	0	0
0.4	Specialist Ground Works	0	0
1	Substructure	42,357,205	1,367
2.1	Superstructure: Frame	15,395,079	497
2.2	Superstructure: Upper Floors	13,404,370	433
2.3	Superstructure: Roof	705,314	23
2.4	Superstructure: Stairs and Ramps	519,096	17
2.5	Superstructure: External Walls	2,132,786	69
2.6	Superstructure: Windows and External Doors	34,756	1
2.7	Superstructure: Internal Walls and Partitions	535,929	17
2.8	Superstructure: Internal Doors	20,731	1
3	Finishes	1,608,180	52
4	Fittings, furnishings & equipment (FFE)	39,175	1
5	Services (MEP)	571,644	18
6	Prefabricated Buildings and Building Units	0	0
7	Work to Existing Building	0	0
8	External works	1,444,508	47
	Overall	78,768,773	2,543

Recycling and Waste Reporting table

The light green-coloured cells should be completed to achieve 'pioneering' status.

	Type of Waste	Source of Information	Overall Waste (tonnes)	Overall Waste (tonnes/m² GIA)	Performance Indicator	Reuse Onsite (%)	Reuse Offsite (%)	Recycle Onsite(%)	Recycle Offsite (%)	To Landfill (%)	To Other Management (%)	Total Reuse (%)	Total Recycle (%)	Total Reuse and Recycle (%)	Total Waste Reported (%)
	PRODUCT AND CONSTRUCTION STAGE (MODULE A)														
1	Demolition Waste	Pre-Demolition Audit	19609	0.633	3rd Quartile	0%	0%	0%	99%	1%	0%	0%	99%	99%	100%
2	Excavation Waste	HTS - Structural Engineer	7642	0.247	2nd Quartile	0%	0%	0%	100%	0%	0%	0%	100%	100%	100%
3	Construction Waste	Calculated sum based on London Plan Guidance	3,120	0.101	3rd Quartile	0%	0%	0%	95%	0%	5%	0%	95%	95%	100%
	USE STAGE (MODULE B)														
3	Demolition / Strip-out Waste	Not currently known	2,953	0.095									0%	0%	0%
4	Construction Waste	Not currently known	155	0.005									0%	0%	0%
			Overall Waste (tonnes/annum)	Overall Waste (tonnes/annum m²)	Performance Indicator (LPG Appendix 1)										
5	Municipal Waste	Arup - Operational Waste Management Plan	1690.9074	0.055	3rd Quartile	0%	0%	0%	75%	25%	0%	0%	75%	75%	100%
6	Industrial Waste (if applicable)	N/A											0%	0%	0%
	MODULE A - MODULE C		Overall Materials (tonnes)	Overall Materials (Modules A-C) (tonnes/m²)											
7	Total Materials		84,874	2.740	-							0%	0%	0%	0%

Circular Economy Targets

Circular economy targets for existing and new development	Policy Requirement	Target Aiming For (%)	Policy Met?	Explanation (How will performance against this metric be secured through design, implementation and monitoring?)
Demolition waste materials (non-hazardous)	Minimum of 95% diverted from landfill for reuse, recycling or recovery.	99%	Exceeds Policy	Maximise reuse of existing material components on-site or off-site. Maximise recycling, without downcycling, where possible. In line with Table 4 of the latest Pre-Demolition Audit, the anticipated diversion from landfill rate of demolition waste is 99.9%. The Principal Contractor will include information on the pre-demolition audit in the final SWMP. The demolition contractor will put procedures in place for segregating and storing demolition waste prior to collection by a licenced waste contractor.
Excavation waste materials	Minimum of 95% diverted from landfill for beneficial reuse.	95%	Yes	95% landfill diversion of non-hazardous excavation waste generated on site for beneficial reuse/recycling. Consider opportunities for zero cut and fill. Any topsoil for...
Construction waste materials	Minimum of 95% diverted from landfill for reuse, recycling or recovery.	95%	Yes	In terms of reducing wastage on site, elements of the building have been designed to suit specific material sizes to minimise off cuts etc. Construction waste will be separated into recyclable waste streams before removal from site for reuse or disposal. A range of measures will be investigated to facilitate the minimisation of waste generation. The volume/tonnage of waste generated (or sent off site) as well as the percentage or volume/tonnage reused, recycled or disposed will be recorded throughout the construction phase. The Principal Contractor will provide a monthly report to the applicant on the progress of the Waste Management Strategy. Monthly reporting of all construction waste data throughout the project checked against what would be expected based on the stage of the project, invoices, etc., to validate completeness of waste reporting data.
Municipal waste	Minimum 65% recycling rate by 2030.	75%	Exceeds Policy	The design as set out in the OWMP supports tenants by providing adequate facilities and space to achieve the 75% recycling target. The development now commits...
Recycled content	Minimum 20% of the building material elements to be comprised of recycled or reused content.	24%	Exceeds Policy	The commitment as stated in the CES provided ensures that the Design Team and procurement process will comply with the requirement for all materials to achieve the 20% recycled/reused content per material element. The current target is for 23.7% of the building material elements to be comprised of recycled or reused content as per the bill of materials outlined in this template. New materials to be tracked as part of BREEAM sustainable procurement process and embodied carbon reporting process.

Additional requirements	Policy Requirement	Please acknowledge acceptance for a planning condition	Please set out an indicative timescale and responsible party for the provision of this information
Post-Construction Report	A CE Statement is required at post-construction (i.e. upon commencement of RIBA Stage 6 and prior to the building being handed over, if applicable. Generally, it would be expected that the assessment would be received no more than three months post-construction)	It is accepted that the Post Construction Reporting will be conditioned	Lab Selkirk House Ltd will assign a qualified professional to carry out the Post Construction Reporting. This will be completed within 3 months of PC.

One Museum Street

Recycled Content by Value Calcs
APPENDIX D

DSDHA GXN BC PARTNERS simten DEVELOPMENTS

1 Museum Street

Date: 25/10/2024

Rev: B

Circular Economy Recycled Content By Value Calculations

Component	Quantity (kg)	Material rate (excluding labour)	Material value	Recycled content % (by mass)	Recycled content by mass (kg)	Recycled content by value
Substructure						
Reinforcement rebar	1,008,637	£ 0.85	£ 857,341.55	97%	978,378.01	£ 831,621.31
Readymix concrete C32/40	19,205,422	£ 0.05	£ 1,002,022.00	20%	3,841,084.34	£ 200,404.40
Readymix concrete C40/50	21,747,017	£ 0.05	£ 1,144,082.20	20%	4,349,403.40	£ 228,816.44
Waterproofing membrane	1,886		£ -	0%	0.00	£ -
Plastic film for damp proofing	414		£ -	0%	0.00	£ -
Asphalt binding	342,700	£ 7.13	£ 2,442,080.20	0%	0.00	£ -
Crushed rock	8,400		£ -	0%	0.00	£ -
Fibre Cement Boards	8,026		£ -	0%	0.00	£ -
Double skin wall from bricks	32,327		£ -	0%	0.00	£ -
Structural steel profiles	2,376	£ 1.00	£ 2,375.90	20%	475.18	£ 475.18
Superstructure: Frame						
Readymix concrete C32/40	322,608	£ 0.05	£ 16,831.72	20%	64,521.60	£ 3,366.34
Structural steel profiles	40,172	£ 1.00	£ 40,172.33	20%	8,034.47	£ 8,034.47
Readymix concrete C40/50	835,236	£ 0.05	£ 43,940.70	20%	167,047.30	£ 8,788.14
Readymix concrete C30/37	1,338,106	£ 0.05	£ 66,905.28	20%	267,621.12	£ 13,381.06
Reinforcement rebar	950,389	£ 0.85	£ 807,830.40	97%	921,877.04	£ 783,595.48
Waterborne acrylic intumescent	40,448		£ -	0%	0.00	£ -
Structural sawn timber	19,011		£ -	0%	0.00	£ -
Readymix concrete C32/40	8,998,080	£ 0.05	£ 469,465.04	20%	1,799,616.00	£ 93,893.01
Readymix concrete C40/50	883,584	£ 0.05	£ 46,484.20	20%	176,716.80	£ 9,296.84
Structural steel profiles	1,967,445	£ 1.00	£ 1,967,444.57	20%	393,488.91	£ 393,488.91
Superstructure: Upper Floors						
Precast concrete slab	3,994,807	£ 0.05	£ 199,740.35	0%	0.00	£ -
Flooring screed	175,070	£ 0.05	£ 8,753.49	0%	0.00	£ -
Readymix concrete C32/40	2,985,565	£ 0.05	£ 155,768.63	20%	597,113.09	£ 31,153.73
Reinforcement rebar	557,548	£ 0.85	£ 473,916.03	97%	540,821.82	£ 459,698.55
Glassfibre reinforced concrete panel	49,457	£ 0.06	£ 3,010.44	0%	0.00	£ -
Hollow core concrete slabs	123,200	£ 0.06	£ 7,499.13	20%	24,640.00	£ 1,499.83
Intumescent coating	110		£ -	0%	0.00	£ -
Steel balcony	12,959	£ 1.00	£ 12,959.10	20%	2,591.82	£ 2,591.82
Readymix concrete C30/37	68,390	£ 0.05	£ 3,419.52	20%	13,678.08	£ 683.90
Galvanized steel sheets	394	£ 3.30	£ 1,299.38	0%	0.00	£ -
Plywood	6,186		£ -	0%	0.00	£ -
Readymix concrete C40/50	33,097	£ 0.05	£ 1,741.19	20%	6,619.39	£ 348.24
Hardwood floorboards	2,322		£ -	0%	0.00	£ -
Rockwool insulation panels	31,360		£ -	0%	0.00	£ -
Readymix concrete C32/40	5,363,904	£ 0.05	£ 279,855.86	20%	1,072,780.80	£ 55,971.17
Superstructure: Roof						
Concrete paving	226,994	£ 0.06	£ 13,619.67	0%	0.00	£ -
Precast solid concrete slab	129,712	£ 0.06	£ 7,782.71	0%	0.00	£ -
Structural steel profiles	31,788	£ 1.00	£ 31,788.01	20%	6,357.60	£ 6,357.60
EPS hard foam insulation	1,732		£ -	0%	0.00	£ -
Polyurethane waterproofing	1,667		£ -	0%	0.00	£ -
Aggregate (crushed gravel)	67,760		£ -	0%	0.00	£ -
Glasswool insulation	6,190		£ -	0%	0.00	£ -
Reinforcement rebar	62,517	£ 0.85	£ 53,139.29	97%	60,641.31	£ 51,545.11
Green roof system	8,883		£ -	0%	0.00	£ -
Painted aluminium louvres	3,416		£ -	0%	0.00	£ -
Hollow core concrete slabs	160,020	£ 0.06	£ 9,601.20	20%	32,004.00	£ 1,920.24
Aluminium sheet	705	£ 3.00	£ 2,115.93	35%	246.86	£ 740.58
Rockwool insulation panels	3,931		£ -	0%	0.00	£ -
Superstructure: Stairs and Ramps						
Galvanized steel staircase	1,323		£ -	0%	0.00	£ -
Stainless steel bicycle rack	472	£ 3.00	£ 1,415.10	0%	0.00	£ -
Precast concrete stairs	506,746	£ 0.05	£ 25,337.30	0%	0.00	£ -
Stainless steel handrail	380	£ 3.00	£ 1,138.65	0%	0.00	£ -
PIR insulation boards	8,000	£ 3.68	£ 29,410.63	0%	0.00	£ -
Spiral staircase	1,104	£ 1.50	£ 1,655.42	0%	0.00	£ -
Reinforcement rebar	201	£ 0.85	£ 171.11	97%	195.27	£ 165.98
Wooden stairs	870		£ -	0%	0.00	£ -
Superstructure: External Walls						
Aluminium framed curtain wall	581,124	£ 2.80	£ 1,627,147.76	0%	0.00	£ -
Glassfibre reinforced concrete	57,915	£ 0.06	£ 3,474.90	0%	0.00	£ -
Glass wool insulation	1,148		£ -	0%	0.00	£ -
Masonry mortar	33,053	£ 0.05	£ 1,652.66	0%	0.00	£ -
Gypsum plaster	6,002		£ -	0%	0.00	£ -
Perforated lightweight aggregate	30,792		£ -	0%	0.00	£ -
Single skin wall from bricks	124,667	£ 0.08	£ 9,973.39	0%	0.00	£ -
Plastic vapour control layer	39		£ -	0%	0.00	£ -
Planed timber	2,702		£ -	0%	0.00	£ -
Readymix concrete	552,196	£ 0.05	£ 27,609.82	20%	110,439.26	£ 5,521.96
Precast concrete external wall	390,240	£ 0.05	£ 19,512.00	0%	0.00	£ -
Brick	23,307		£ -	0%	0.00	£ -
Lightweight concrete block	121,639	£ 0.06	£ 7,298.35	0%	0.00	£ -
Rock wool insulation panels	16,284		£ -	0%	0.00	£ -
Reinforcement rebar	9,729	£ 0.85	£ 8,269.68	97%	9,437.16	£ 8,021.59
Single leaf concrete cladding panels	151,305	£ 0.06	£ 9,078.30	0%	0.00	£ -
Flexible tile adhesive	3,655		£ -	0%	0.00	£ -
Render	24,871		£ -	0%	0.00	£ -
Emulsion paint	5		£ -	35%	1.85	£ -
MDF board	2,111		£ -	0%	0.00	£ -
Superstructure: Windows and External Doors						
Automatic revolving door	2,727		£ -	0%	0.00	£ -
Extruded aluminium profiles	444		£ -	60%	266.24	£ -
Aluminium entrance doors	3,381		£ -	0%	0.00	£ -
Aluminium frame sliding windows	1,189		£ -	0%	0.00	£ -
Aluminium door	552		£ -	0%	0.00	£ -
Aluminium framed glazed door	6,004		£ -	0%	0.00	£ -
Triple glazing	3,522		£ -	0%	0.00	£ -
Aluminium profiles	114	£ 2.80	£ 318.00	35%	39.75	£ 111.30
Electromagnetic door holders	62		£ -	0%	0.00	£ -
Triple glazing window with wooden	6,177		£ -	0%	0.00	£ -
Steel frame glass door	268		£ -	0%	0.00	£ -
Triple glazed window with aluminium	5,817		£ -	0%	0.00	£ -
Multifunctional steel door	2,480		£ -	0%	0.00	£ -
External wooden door	2,019		£ -	0%	0.00	£ -
Superstructure: Internal Walls and Partitions						
Aluminium framed double glazed	20,864		£ -	0%	0.00	£ -
PIR Insulation boards	3,060	£ 3.68	£ 11,250.23	0%	0.00	£ -
Gypsum plasterboard	55,865	£ 1.36	£ 76,116.73	0%	0.00	£ -
Masonry mortar	46,816	£ 0.05	£ 2,340.80	0%	0.00	£ -
Finishing wall mortar	62,457	£ 0.05	£ 3,122.87	0%	0.00	£ -
Perforated light weight aggregate	169,731	£ 0.02	£ 3,394.61	0%	0.00	£ -
Water-borne interior paint	746		£ -	0%	0.00	£ -
Rockwool insulation	8,213		£ -	0%	0.00	£ -
Glasswool insulation panels	10,573		£ -	0%	0.00	£ -
Concrete block wall	112,455	£ 0.06	£ 6,747.30	0%	0.00	£ -
Steel profiles	1,524	£ 1.00	£ 1,524.05	0%	0.00	£ -
Expanded clay concrete block	43,625		£ -	0%	0.00	£ -
Superstructure: Internal Doors						

1 Museum Street

Date: 25/10/2024

Rev: B

Circular Economy Recycled Content By Value Calculations

Component	Quantity (kg)	Material rate (excluding labour)	Material value	Recycled content % (by mass)	Recycled content by mass (kg)	Recycled content by value
Wooden door with wooden frame	20,731		£ -	0%	0.00	£ -
Finishes						
Levelling screed	696,964	£ 0.05	£ 34,848.19	0%	0.00	£ -
Granite	21,861		£ -	0%	0.00	£ -
PIR insulation board	9,312	£ 3.68	£ 34,231.89	0%	0.00	£ -
Suspended aluminium ceiling system	3,172		£ -	0%	0.00	£ -
Waterproofing membrane	3,380		£ -	0%	0.00	£ -
Raised access flooring panel	593,670	£ 1.81	£ 1,074,542.70	0%	0.00	£ -
Emulsion for interior use	4,118		£ -	0%	0.00	£ -
Ceramic floor tile	35,180		£ -	0%	0.00	£ -
Solidwood flooring	7,515		£ -	0%	0.00	£ -
Satin sheen paint	344		£ -	0%	0.00	£ -
Gypsum plasterboard	172,836	£ 1.36	£ 235,489.41	0%	0.00	£ -
Gypsum finish plaster	36,472		£ -	0%	0.00	£ -
Finishing wall mortars	2,420		£ -	0%	0.00	£ -
Carpet tiles	291		£ -	0%	0.00	£ -
Water-borne interior paint	1,984		£ -	0%	0.00	£ -
Foam backed vinyl	1,511		£ -	0%	0.00	£ -
MDF board	17,151		£ -	0%	0.00	£ -
FFE						
Sheet metal lockers	15,327	£ 2.00	£ 30,654.62	0%	0.00	£ -
Kitchen cabinet	5,034		£ -	0%	0.00	£ -
Four seat bench	1,773		£ -	34%	602.89	£ -
Porcelain sink	5,950		£ -	0%	0.00	£ -
Porcelain WC kit	7,667		£ -	0%	0.00	£ -
Shower tray	1,288		£ -	0%	0.00	£ -
Sink faucet brass	239		£ -	0%	0.00	£ -
Electric heated towel rail	583		£ -	0%	0.00	£ -
Brass faucets	83		£ -	0%	0.00	£ -
Acrylic washbasin faucets	66		£ -	0%	0.00	£ -
Bath and shower faucets	75		£ -	0%	0.00	£ -
Acrylic bathtub	936		£ -	0%	0.00	£ -
Stainless steel sink	106	£ 3.00	£ 317.49	0%	0.00	£ -
Kitchen faucets	49		£ -	0%	0.00	£ -
Services (MEP)						
Polyethylene water tank	11,722		£ -	0%	0.00	£ -
Elevator components	44,907		£ -	0%	0.00	£ -
Air/ air heat pump	25,797		£ -	0%	0.00	£ -
Air/ water heat pump	18,149		£ -	0%	0.00	£ -
Underfloor heating system	118,613		£ -	0%	0.00	£ -
Pre-insulated round ductwork system	67,782		£ -	0%	0.00	£ -
Electricity distrubution system	111,949		£ -	0%	0.00	£ -
Fan coil unit	40,488		£ -	0%	0.00	£ -
Sewage water drainage piping	6,249		£ -	0%	0.00	£ -
Air handling unit	5,155		£ -	0%	0.00	£ -
Smoke detector	2,617		£ -	0%	0.00	£ -
LED lighting	34,288		£ -	0%	0.00	£ -
Sprinkler system	37,072		£ -	0%	0.00	£ -
Pipesystem hot and cold water supply	4,169		£ -	0%	0.00	£ -
Fire detection system	7,557		£ -	0%	0.00	£ -
Hot water heater	5,799		£ -	0%	0.00	£ -
Rainwater storage tank	82		£ -	0%	0.00	£ -
Mechanical ventilation system	543		£ -	0%	0.00	£ -
Electricity distribution system	28,705		£ -	0%	0.00	£ -
External Works						
Soil	745,750	£ 0.04	£ 27,965.63	10%	74,575.00	£ 2,796.56
Wide planter	23		£ -	0%	0.00	£ -
Wooden furniture	187		£ -	0%	0.00	£ -
Aggregate	17,920		£ -	0%	0.00	£ -
Ready-mix concrete C30/37	19,968	£ 0.05	£ 998.40	0%	0.00	£ -
Seed and mulch	54		£ -	0%	0.00	£ -
Facing bricks	11,995		£ -	0%	0.00	£ -
Stainless steel products	5,322	£ 3.00	£ 15,966.96	20%	1,064.46	£ 3,193.39
Natural portland limestone	292,386	£ 0.07	£ 20,467.00	0%	0.00	£ -
Sand	285,704	£ 0.02	£ 5,714.08	0%	0.00	£ -
Granite	4,994		£ -	0%	0.00	£ -
Geotextile	545		£ -	0%	0.00	£ -
Paving products	25,920		£ -	0%	0.00	£ -
Glass wool insulation	625		£ -	0%	0.00	£ -
Glue laminated timber	10,050		£ -	0%	0.00	£ -
Self levelling mortar	21,425		£ -	0%	0.00	£ -
Glass fibre reinforcement	35		£ -	0%	0.00	£ -
Plywood board	1,603		£ -	0%	0.00	£ -
TOTALS	**78,768,773**	-	**£ 13,532,142**	-	**15,522,381**	**£ 3,207,483**
				RECYCLED CONTENT BY VALUE		**23.70%**

One Museum Street

OWMP

APPENDIX E

DSDHA GXN BC PARTNERS simten DEVELOPMENTS

ARUP

Lab Selkirk House Ltd

Selkirk House, 166 High Holborn and 1 Museum Street, 10-12 Museum Street, 35-41 New Oxford Street and 16A-18 West Central Street, London, WC1A 1JR

Operational Waste Management Plan

Reference: 1MS OWMP

Issue 3 | 5 November 2024

Job number 271284-07

Ove Arup & Partners Limited
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Contents

Tables

Figures

1. Introduction

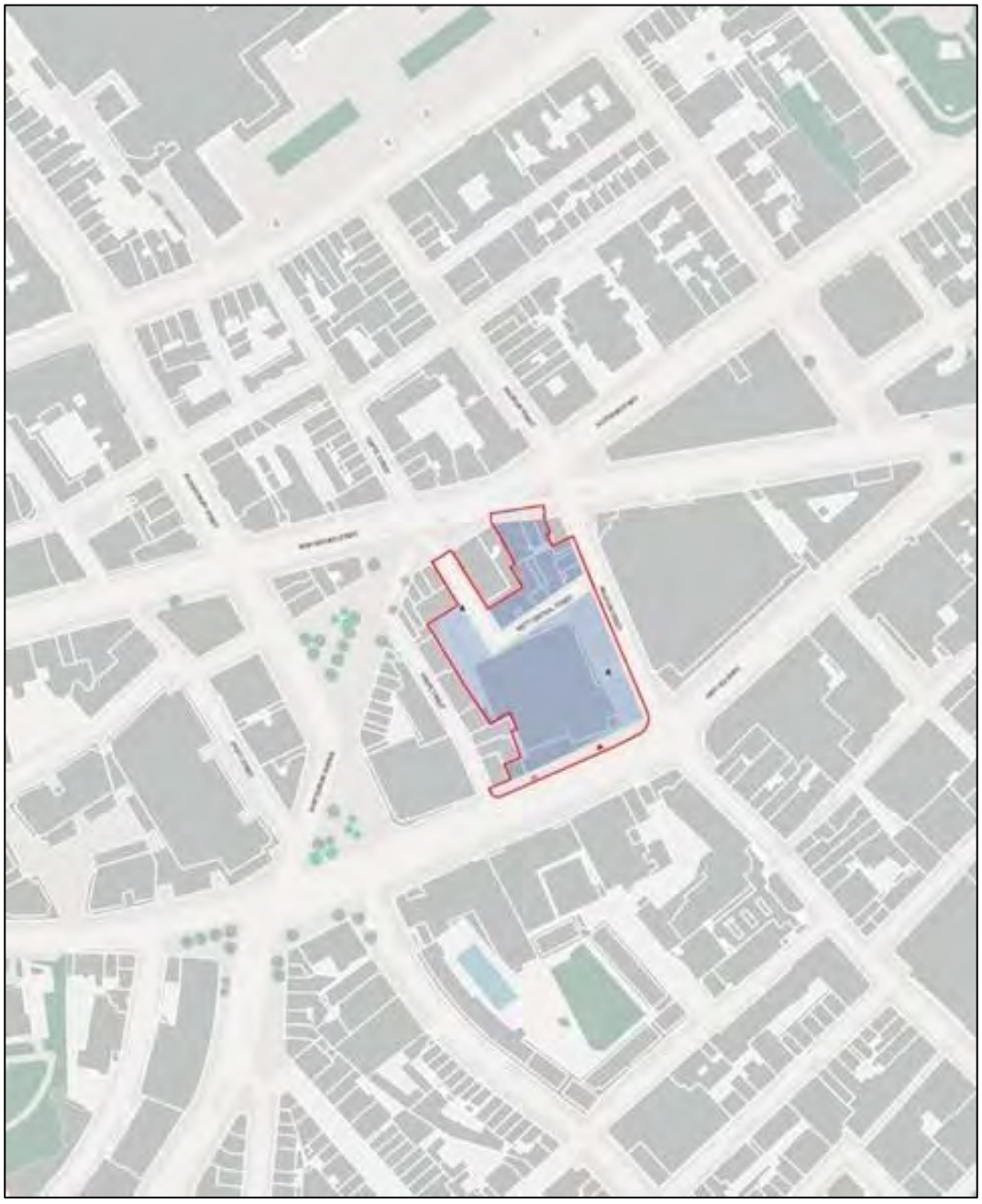
1.1 Background

This Operational Waste Management Plan (OWMP) has been prepared by Ove Arup & Partners Ltd. ('Arup') as part of the 'Circular Economy Statement' (CES). The requirements for the report are set out in the 'Greater London Authority' (GLA) London Plan Guidance on Circular Economy Statements (2022).

The development is located within the London Borough of Camden ('the Local Authority') and the site concerns the redevelopment of the land at Selkirk House, 166 High Holborn and 1 Museum Street, 10-12 Museum Street, 35-41 New Oxford Street and 16A-18 West Central Street, London, WC1A 1JR ('the site').

The location of the site in relation to its wider surroundings is shown in Figure 1

Figure 1 Site location

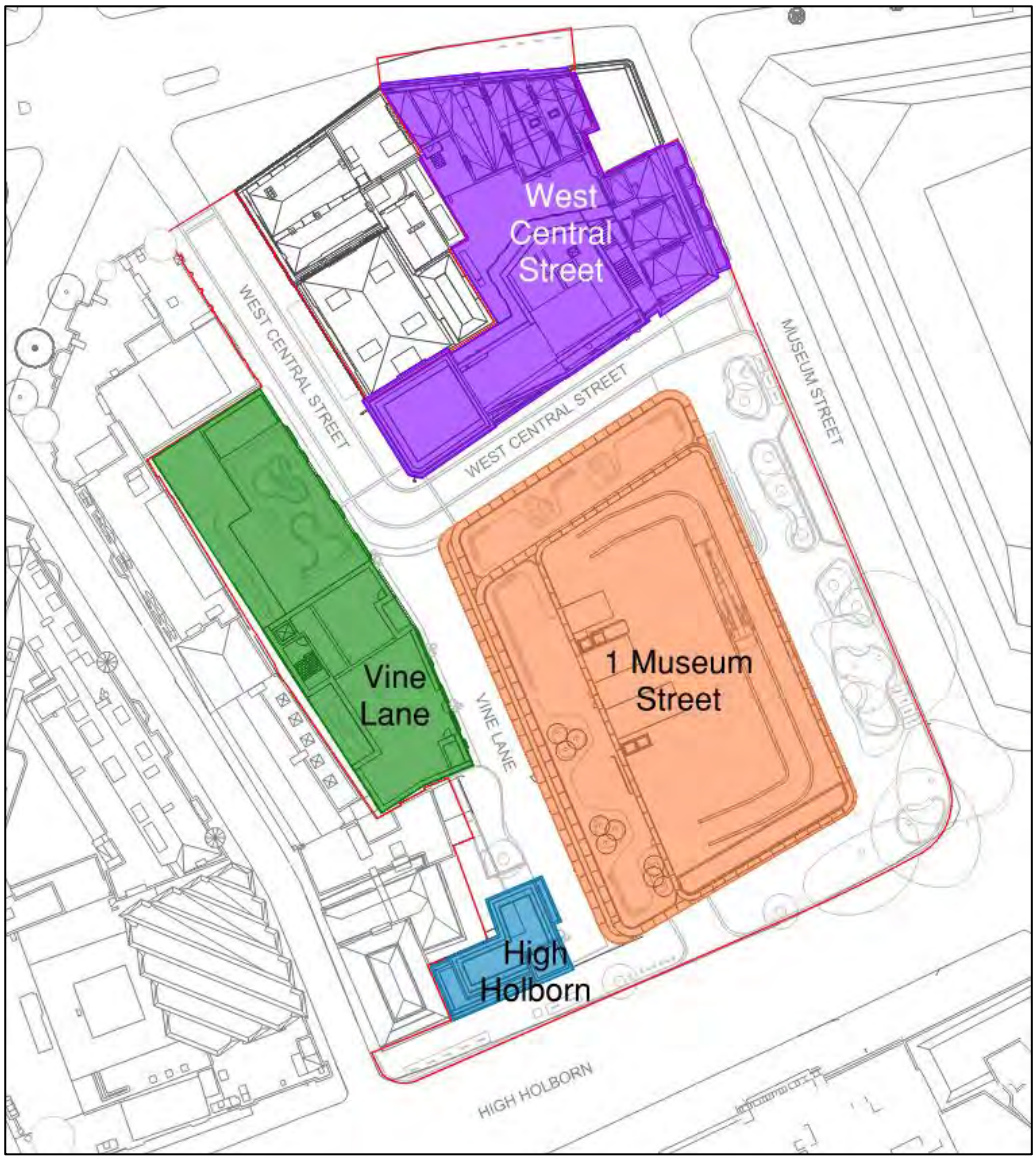


The proposed development comprises the following:

- Museum Street - a single new building rising to 19 storeys, providing office (Class E(g)(i)) accommodation on upper levels and a range of flexible town centre uses (Class E) at ground level.
- High Holborn - a single new building rising to 6 storeys, providing residential (Class C3) accommodation on upper levels and a flexible town centre use (Class E) at ground level.
- Vine Lane - a single new building rising to 5 storeys, providing market residential units with a flexible town centre use (Class E) at ground level.
- West Central Street - a series of new and refurbished buildings rising to ground plus 5 storeys, providing residential accommodation (market, Low-cost rent and Intermediate rent) on upper levels (Class C3) and flexible town centre uses (Class E) at ground level. This development takes account of the recent Grade II listing of 10-12 Museum Street and 35-37 New Oxford Street, both of which sit within the application boundary.

These are shown in Figure 2.

Figure 2 Proposed development with sections breakdown for references.



1.2 Reference publications

The following planning policy and best practice guidance documents have been considered when developing this OWMP:

National policy documents:

- Revised National Planning Policy Framework, 2021;
- The Waste (England and Wales) Regulations, 2011;
- DEFRA Government Review of Waste Policy in England, 2011; and
- BS5906 Waste Management in Buildings – Code of Practice, 2005.

Regional policy documents:

- The London Plan, 2021;
- London Plan Guidance Circular Economy Statements, 2022

Key local policy:

- Camden Planning Guidance – Design, 2021; and
- Camden's Environment Service technical guidance for recycling and waste.

1.3 Scope

This OWMP will include the following key elements as per The London Plan (2021) Circular Economy Statement requirements:

- Expected operational and municipal waste generation and storage requirements;
- The segregation of waste streams and how and where (on-site vs offsite) operational waste will be disposed of;

  Collection points and frequency;
- The various responsibilities of 'facilities management' (FM) team and future occupants;
- How operational performance will be monitored and reported;
- That measures such as consolidated, smart logistics and community-led waste minimisation schemes have been explored.

The required elements will be covered in the following sections:

- Section 2: Waste generation and storage:
  - Including waste stream separation, storage and operational waste generation
- Section 3: Waste disposal and collection strategy
  - Including operational and municipal waste management
- Section 4: Operational waste reduction measures:
  - Including exploration of measures such as consolidated, smart logistics and community-led waste minimisation schemes
- Section 5: OWMP review process
  - Including operational waste monitoring and reporting

1.4 Area schedule and residential unit mix

Table 1 shows the area schedule for the development; balcony and terrace areas are excluded, and due to lack of clarification retail space is assumed to be 50% food retail and 50% non-food retail to give robust delivery and servicing data that reflects the likely mix of future retail uses.

Table 1 Area schedule

Building	Use Class	GIA (m²)	NIA (m²)	Units
Museum Street	Office E(g)i	22,650	15,707	-
	Retail (Non-Food)	317	289	-
	Retail (Food)	317	289	-
	Subtotal	23,284	16,285	-
Vine Lane	Market residential (C3)	1,579	1,078	19
	Retail (Non-Food)	160	152	-
	Retail (Food)	160	152	-
	Subtotal	1,899	1,382	19
High Holborn	Retail (Non-Food)	12	11	-
	Retail (Food)	12	11	-
	Residential (Private)	426	290	4
	Subtotal	450	312	4
West Central Street	Retail (Non-Food)	346	323	-
	Retail (Food)	346	323	-
	Residential	1,987	1,482	21
	Subtotal	2,679	2,128	21
Total		28,312	20,107	44

Table 2 Residential unit mix

Residential unit Mix				
Block	**Affordable**		**Private**	**Total**
	Low-Cost Rent	**Intermediate**		
High Holborn	-	-	4	**4**
West Central Street	11	8	2	**21**
Vine Lane	-	-	19	**19**
Total	**11**	**8**	**25**	**44**

2. Waste policy & guidance

This document sets out the Operational Waste Management Plan (OWMP) for the development. It is noted that the information provided in this OWMP is based on the design as it has been submitted to the Local Authority for planning approval. Currently there has been no involvement in any formal pre-application process with the Council's waste management team.[1]

2.1 Guidance and policy requirements

2.1.1 British Standard and Camden Planning Guidance Requirements

The requirements for waste storage and management below relate to those set out in 'BS5906:2005 Waste management in buildings' and the Council's document 'Camden Planning Guidance - Design':

- All waste containers will be accessible to the waste collector with unimpeded access to each individual container;
- The waste collector will not be required to pull full containers more than 10m to the collection vehicle;
- Containers will be stored or presented within 10 metres of vehicle access with unhindered access to each individual bin;
- A minimum clear space of 150 mm will be allowed between each bin and the walls on each side;
- The waste room walls will be constructed of, or lined with, hard impervious material with a smooth finish suitable for washing down. The floor will not be less than 100 mm thick, and formed of hard impervious material with a smooth finish, and there will not be steps and projections at the entrance;
- If a gate or door is added to the enclosure or chamber it should be metal, hardwood or softwood clad with metal;
- Ideally it should have a fire resistance of 30 minutes when tested to BS 476-22. The door frame should allow clearance of 150 mm either side of the bin, when it is being pulled out for collection;
- The door frame should be rebated into the reveals of the opening. There should be a latch or clasp to hold the door open while the collection process takes place;
- If the chambers are inside the building, they should have a light. The lighting should be a sealed bulkhead fitting (housings rated to IP65 in BS EN 60529:1992);
- Drainage and hose-down facilities will be provided to allow cleansing of waste storage rooms;
- Waste collection vehicles will not be required to reverse more than 12 metres;
- Access roads for waste vehicles will have a minimum clear width of 3.5 metres, the gradient will not exceed 1:12;
- Internal bin chambers should have appropriate passive ventilators to allow air flow and prevent unpleasant odours. The ventilation must be fly, and vermin proofed and near to either the roof or floor, but away from the windows of dwellings; and
- The ground between the storage location for bulk bins and the loading position will be level, smooth, hard surfaced and provide a drop kerb should a container be required to be brought to ground level. The ground may have a maximum gradient of 1:20 if the ground slopes down towards the collection vehicle.

[1] The Council's waste officer Linda Hall-Brunton was contacted by Arup on April 18th by email and April 19th by telephone, but we did not, and have not since, received any response.

2.1.2 The London Plan (2021) waste policies

The London Plan (2021) waste related policies have the following requirements which the OWMP plan should demonstrate:

- Policy SI 7 A (1) Promote a more circular economy that improves resource efficiency and innovation to keep products and materials at their highest use for as long as possible;
- Policy SI 7 A (3) ensure that there is zero biodegradable or recyclable waste to landfill by 2026;
- Policy SI 7 A (4) meet or exceed the municipal waste recycling target of 65 per cent by 2030; and
- Policy SI 7 A (6) and Policy D6 design developments with adequate, flexible, and easily accessible storage space and collection systems that support, as a minimum, the separate collection of dry recyclables (at least card, paper, mixed plastics, metals, glass) and food.

2.2 Alignment with circular economy requirements

The proposed OWMP aligns with the following policies and requirements required for the circular economy statement as detailed in Table 3.

Table 3 The London Plan (2021) policies and other requirements

The London Plan (2021) policies and other requirements	
Target/ Requirements	**Demonstration/ evidence**
Policy SI 7 A (1) Promote a more circular economy that improves resource efficiency and innovation to keep products and materials at their highest use for as long as possible	This is addressed in Section 7. Relevant reuse schemes have been evaluated with schemes such as Globechain and Warp it being chosen.
Policy SI 7 A (3) ensure that there is zero biodegradable or recyclable waste to landfill by 2026	Commercial waste is to be collected by a single contractor and the waste contractor appointed will be required to demonstrate that no waste is sent to landfill
Policy SI 7 A (4) meet or exceed the municipal waste recycling target of 65 per cent by 2030	Across the development the site is aiming to achieve 65% of waste to be recycled and the waste generation is shown in Section 6.1.3
Policy SI 7 A (6) and Policy D6 design developments with adequate, flexible, and easily accessible storage space and collection systems that support, as a minimum, the separate collection of dry recyclables (at least card, paper, mixed plastics, metals, glass) and food	Commercial waste from 1 Museum Street and Vine Lane waste streams will be residual, paper, card, plastic, metal, glass and food waste. Due to the relatively small quantities of waste at the other commercial units and the requirements of the Local Authority in relation to residential waste, all other waste across the site will be separated into residual, mixed dry recycling (MDR) and food waste. The MDR will be sorted off-site at a mixed recycling facility. Sections 3, 4, 5, and 6 explain the waste collection process, routes, generation calculations and storage containers that demonstrate the space is adequate and accessible for all users.
GLA requirement: how operational performance will be monitored and reported	This is shown in Section 7 and 8. Guidance will be provided to tenants to encourage the correct use of waste facilities and minimise the risk of

	contamination. Data on waste collected will be collected and communicated to tenants.
GLA requirement: that measures such as consolidated, smart logistics and community-led waste minimisation schemes have been explored.	This is shown in Section 7. Relevant schemes have been evaluated with community lead circular economic reuse schemes such as Globechain and Warp it being chosen.

2.3 Response to GLA feedback

Feedback was provided on Issue 2 of this OWMP by the GLA and this has been addressed below to ensure it is clear where the requested information is provided.

Table 4 Arup response to GLA comments

GLA Feedback	Arup Response
Provide estimated waste arisings, number of bins and floor plans to demonstrate adequate, flexible, and easily accessible and shared storage space and collection systems. -The Applicant should demonstrate that there is sufficient space within the WCS commercial units to store operational waste.	Residential waste generation is set out in Table 5, Table 6, and Table 7 of this OWMP. The residential storage requirements are set out in Table 9, Table 10, and Table 11 of this OWMP. Commercial waste generation is set out in Table 12, Table 13, and Table 14 of this OWMP. Commercial waste storage requirements are set out in Table 16 of this OWMP. Waste store layouts are provided in Figure 3, Figure 4, Figure 5 and Figure 11. Due to the small amount of commercial waste generated in the High Holborn block and the West Central Street block, this will be stored within the tenants' demise and taken directly to the waste collection location, immediately prior to collection. As a result, there is no commercial waste store for these blocks, and tenants will be required to keep a small amount of space free for the storage of waste. Within West Central Street, there will be 2.55m³ of waste generated each day (5.1m³ per two days). This daily quantity equates to 11 no. 240L bins (five for residual, three for recycling, one for glass and two for food waste) which would have a footprint of 11m². The area of the retail units is 692m² which demonstrates there is sufficient space within the units for waste storage. Within High Holborn there will be 0.085m³ of waste generated each day (0.17m³ per two days). This equates to just one 30L sack, or one small 120L bin. As we are collecting four separate waste streams, this unit would require 4 x 30L sacks, one each for refuse, recycling and food. These sacks would likely be stored in internal bins until they are placed outside for collection. A bin containing four containers of this size would require approximately 0.5m² of floor space, in a unit that is 24m² which demonstrates there is sufficient space within the units for waste storage.
Provide evidence to demonstrate that the development supports the separate collection of dry recyclable streams (at least card, paper, mixed plastics, metals and glass), food waste and other waste. - Where the collection of mixed dry recyclables (MDR) is proposed, the Applicant should clarify which individual waste streams this is expected to accommodate. This should include at least card, paper, mixed plastics, metals and glass where these are not already to be collected separately.	Within the residential waste stores, waste is segregated into Residual, MDR (Cardboard, Paper, Plastic, Aluminium & Glass), and Food Waste. This aligns with the guidance from the local authority as they do not collect separate streams of waste within the MDR category. The Museum Street and Vine Lane commercial waste stores segregate waste by the following streams: Residual, Paper, Cardboard, Plastic, Aluminium, Glass, and Food. The West Central Street and High Holborn blocks will segregate commercial waste by the following streams: Residual, MDR (Paper, Cardboard, Plastic, Aluminium), Glass, and Food. This is due to the small quantities of waste being

GLA Feedback	Arup Response
	generated and it not being efficient spatially to separately collect the streams within the MDR category.
The Applicant has provided a commitment to the London Plan Policy SI 7 municipal waste recycling target of 65% (by weight/tonnage) by 2030 in the Circular Economy Targets table, which is welcomed. However, the Applicant should also provide a commitment to the London Environment Strategy business waste recycling target of 75% (by weight/tonnage) by 2030.	The strategy below shows that we are achieving 74% recycling for commercial tenants at the development. The design as set out in the OWMP supports tenants by providing adequate facilities and space to achieve the 75% recycling target. The development now commits to the London Environment Strategy business waste recycling target of 75% (by weight/tonnage) by 2030.

2.4 Municipal waste generation overview

Achieving The London Plan (2021) target of 65% of municipal waste to be reused, recycled or composted by 2030 will be promoted by the provision of a suitably sized, dedicated, and labelled space for storing/segregating recyclable waste within the scheme. These will be provided centrally and locally and will be in accordance with The London Plan (2021) and Local Authority requirements.

The use of smart waste minimisation schemes is being explored for implementation. Exploration of the schemes, Globe Chain and Community Wood have been considered for the Development. Current exploration suggests Globe Chain is most appropriate for operational waste minimisation on this scheme.

In support of the target of 65% of municipal waste to be reused, recycled or composted by 2030, an estimation of municipal waste generation and treatment has been completed. The site is estimated to reuse, recycle or compost 65% of municipal waste, and achieve the GLA targeted 65%. The detailed breakdown and calculations are in Sections 3.2.4, 4.3.4 and 6.1.1 to 6.1.4.

3. Residential waste

3.1 Assumptions

Waste generation and storage requirements have been calculated in accordance with the Local Authority's technical guidance documents, supplemented by the British Standard for Waste Management in Buildings - Code of practice (BS5906:2005). This assessment has been based on the following key assumptions:

- Recycling – 140 litres of storage space per dwelling;
- Refuse – 120 litres of storage space per dwelling;
- Food Waste – 23 litres of storage per dwelling;
- Residual waste will be stored in 1100 litre bins (and 240 litre bins where needed);
- MDR will be stored in 1100 litre bins (and 660 litre bins where needed);
- Food Waste will be stored in 140 litre bins; and
- Waste will be collected weekly by the Council's nominated Local Authority contractor.

3.2 Residential waste generation

3.2.1 High Holborn - waste generation

As shown in Table 2, the High Holborn block contains four private residential units. The amount of waste generated for the High Holborn market units is shown in Table 5.

Table 5 High Holborn residential waste generation

High Holborn – Residential waste generation per week		
Waste Stream	**Private (L)**	**Total (L)**
Residual	480	480
MDR	560	560
Food	92	92
Total	**1132**	**1132**

3.2.2 West Central Street –waste generation

As shown in Table 2, the West Central Street block contains 11 low cost rent units, eight intermediate cost units and two private residential units The amount of waste generated for the West Central Street residential waste is shown in Table 6.

Table 6 West Central Street residential waste generation

West Central Street – Residential waste generation per week				
Waste Stream	**Affordable**		**Private (L)**	**Total (L)**
	Social (L)	**Intermediate (L)**		
Residual	1320	960	240	**2520**
MDR	1540	1120	280	**2940**
Food	253	184	46	**483**
Total	**3113**	**2264**	**566**	**5943**

3.2.3 Vine lane – waste generation

As shown in Table 2, the Vine Lane block contains 19 private residential units. The amount of waste generated for the Vine Lane residential units is shown in Table 7.

Table 7 Vine Lane residential waste generation

Vine Lane – Residential waste generation per week		
Waste Stream	**Private (L)**	**Total (L)**
Residual	2280	2280
MDR	2660	2660
Food	437	437
Total	**5377**	**5377**

3.2.4 Total residential waste generation estimate

The waste generation data inputted used to complete estimation was obtained from the following locations, residential waste generation: Table 5, Table 6 and Table 7.

The sitewide residential waste generation is summarised in Table 8.

Table 8 Sitewide residential waste generation

Residential waste generation per week					
	High Holborn (L)	**West Central Street (L)**	**Vine Lane (L)**	**Total (L)**	**Total (m3)**
Residual	480	2520	2280	5280	5.28
MDR	560	2940	2660	6160	6.16
Food	92	483	437	1012	1.01
Total	1132	5943	5377	12452	12.45

3.3 Residential waste storage

There are three residential waste stores with one located in each block: High Holborn, West Central Street and Vine Lane. Located at ground floor near block cores and near lifts were relevant to minimise waste transfer distances for residents.

3.3.1 High Holborn – waste storage

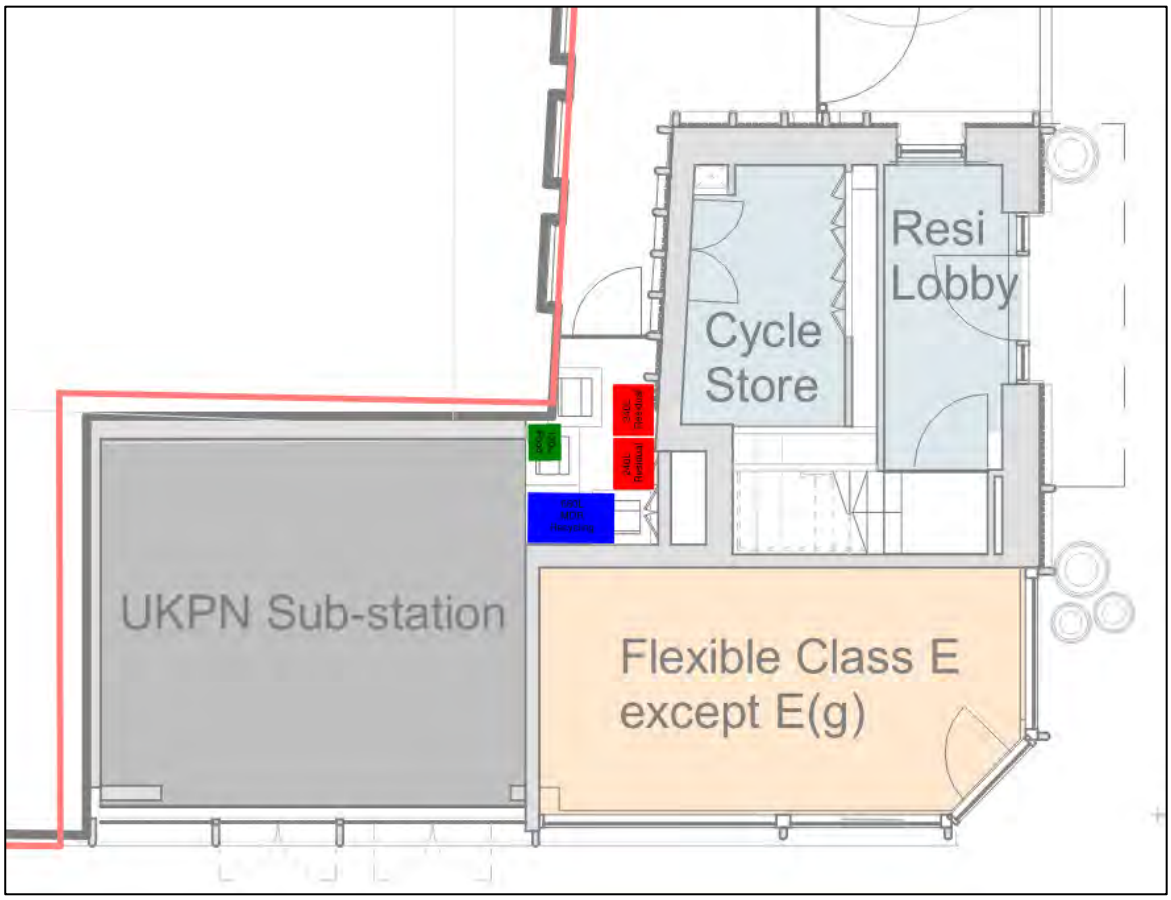
The estimated number of bins to store the waste generated for the High Holborn market units is shown in Table 9.

Table 9 High Holborn waste storage requirements

High Holborn Market Units Waste Storage Requirements			
Waste type	**Waste (L)**	**Waste Storage (rounded)**	
		Container	**Number**
Refuse	480	240 litre Eurobins	2
Recycling	560	660 litre Eurobins	1
Food waste	92	120 litre Eurobins	1
Total	1132	-	4

The layout of the residential bin store is shown in Figure 3.

Figure 3 High Holborn block residential waste storage



A waste store approximately sized 6.20m^2 has been provided and sufficiently holds the following:

- 2 No. 240 litre Eurobins for residual waste;
- 1 No. 660 litre Eurobins for MDR recycling waste;
- 1 No. 120 litre Eurobins for organic (food) waste.

The waste store will require 2.4m clear headroom and the Facilities Management (FM) team will be responsible for the wash-down and cleaning of the waste store, providing spill kits where necessary.

3.3.2 West Central Street – waste storage

The West Central Street block will have communal collections from the shared bin store provided (shared between the market residential unit tenants and the affordable residential unit tenants). The shared bin store is shown in Figure 4.

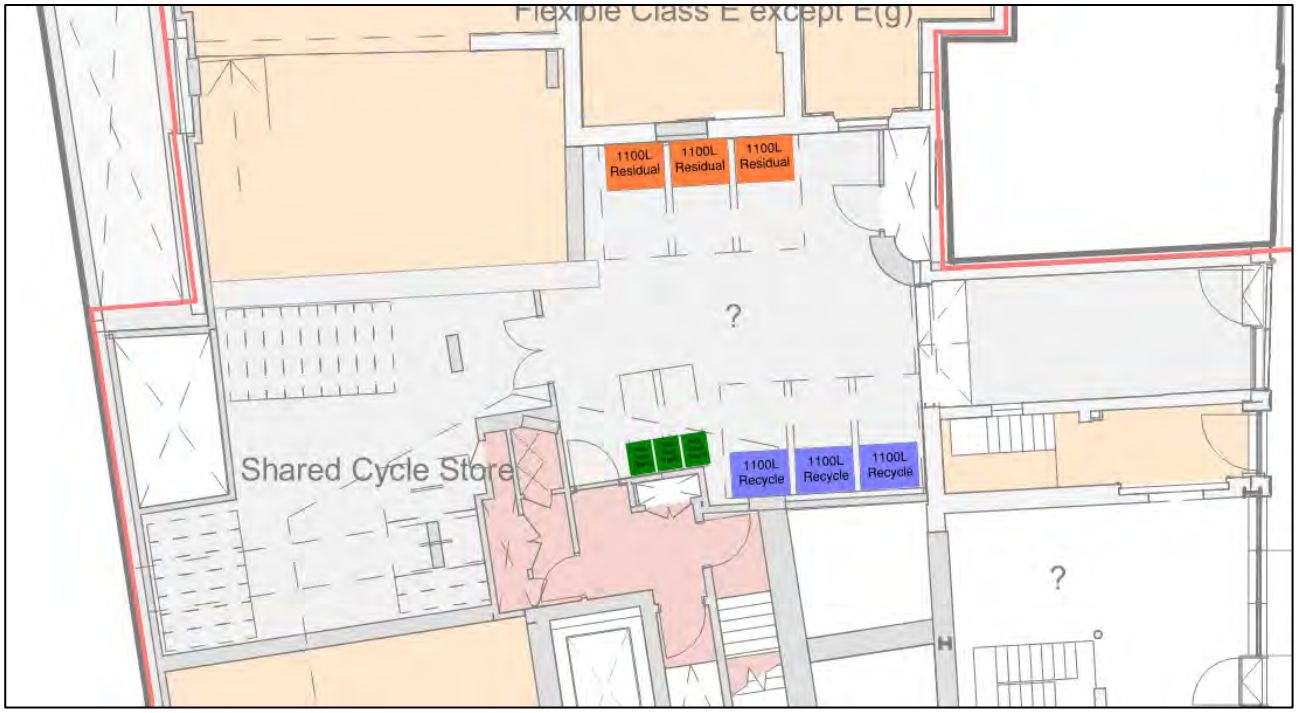
The estimated number of bins to store the waste generated for the West Central Street residential units is shown in Table 10.

Table 10 West Central Street residential waste storage requirements

West Central Street Residential Waste Storage Requirements			
Waste type	Waste (L)	Waste Storage (rounded)	
		Container	Number
Refuse	2520	1,100 litre Eurobins	3
Recycling	2940	1,100 litre Eurobins	3
Food waste	483	240 litre Eurobins	3
Total	5943	-	9

The layout of the shared residential waste store is shown in Figure 4.

Figure 4 West Central Street residential waste store



A waste store approximately sized 57.35m^2 has been provided and sufficiently holds the following:

- 3 No. 1,100 litre Eurobins for residual waste;
- 3 No. 1,100 litre Eurobins for MDR recycling waste;
- 3 No. 240 litre Eurobins for organic (food) waste.

The waste store will provide 2.4m clear headroom and the Facilities Management (FM) team will be responsible for the wash-down and cleaning of the waste store, providing spill kits where necessary.

3.3.3 Vine Lane - waste storage

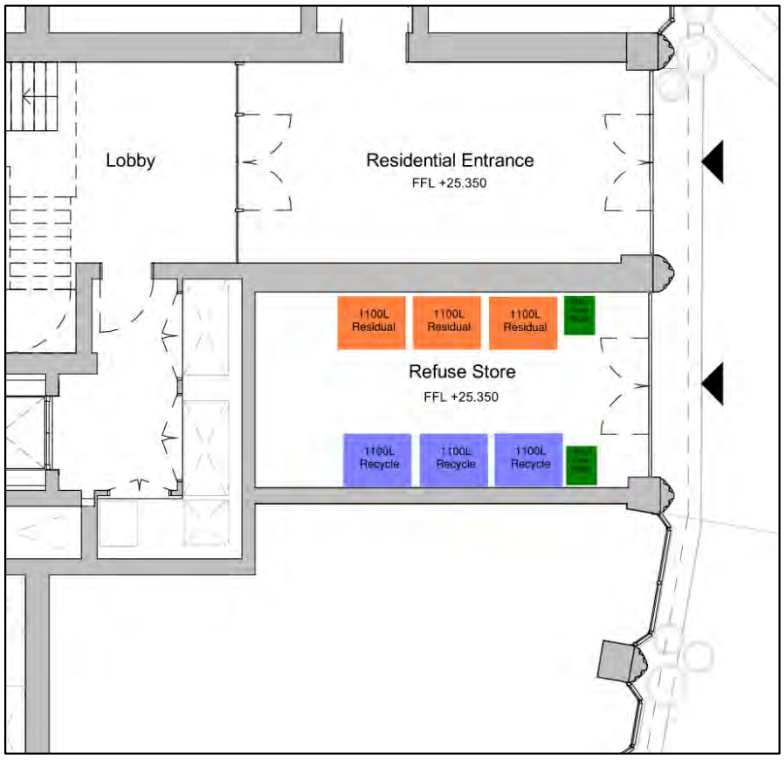
The estimated number of bins to store the waste generated for the Vine Lane residential units is shown in Table 11.

Table 11 Vine Lane residential waste storage requirements

Vine Lane Residential Waste Storage Requirements			
Waste type	**Waste (L)**	**Waste Storage (rounded)**	
		Container	**Number**
Refuse	2,280	1,100 litre Eurobins	3
Recycling	2,660	1,100 litre Eurobins	3
Food waste	437	240 litre wheelie bins	2
Total	5,377	-	8

The layout of the Vine Lane residential waste store is shown in Figure 5.

Figure 5 Vine Lane residential bin store



A waste store approximately sized 27.52m^2 has been provided and sufficiently holds the following:

- 3 No. 1,100 litre Eurobins for residual waste;
- 3 No. 1,100 litre Eurobins for MDR recycling waste;
- 2 No. 240 litre Eurobins for organic (food) waste.

The waste store will require 2.4m clear headroom and the Facilities Management (FM) team will be responsible for the wash-down and cleaning of the waste store, providing spill kits where necessary.

3.3.4 Bulky waste and in-unit storage

Refuse and recycling

A bin storage area is identified within the kitchen of each residential unit for internal temporary storage of refuse and recycling.

Bulky / non-standard waste items

Due to the constrained nature of the site, it is not possible to provide a residential bulky waste store for residents.

The bulky waste collection protocols are detailed as follows. All residents will be made formally aware of the bulky waste collection protocols by the building management team prior to the beginning of their tenancy to ensure non-standard household waste items are managed correctly. Additionally, schemes such as Globechain and Warp It as detailed in Section 7.6 will be implemented to encourage reuse of bulky waste within the site between residents, in line with circular economic principals.

The majority of larger or non-standard household waste items such as bulky waste, builders waste, chemicals (i.e. paints) should be taken by the resident to the Reuse and Recycling Centre located at Regis Road, Kentish Town NW5 3EW (refer to https://www.camden.gov.uk/reuse-and-recycling-centre) or other appropriate location.

Typically, suppliers will remove old items when delivering new goods. Other large or bulky items not suitable for car travel will be temporarily stored in the waste room to be collected by the Council at the request of the residents. Information on booking bulky waste collection is available at the following website: https://www.camden.gov.uk/bulky-waste-collection.

No bulky items shall be presented or stored outside the demise of the site unless being immediately collected. Furthermore, residents shall report any observance of fly-tipping activity within the immediate area of the site to the appropriate authority (refer to https://www.camden.gov.uk/fly-tipping-street-obstructions).

3.4 Residential Waste Strategy

Residents are required to manually dispose of bagged residual and dry mixed recyclable waste at their respective block's residential waste store. Residents will have convenient access to the waste stores which are located at ground floor level of the development.

A high-level summary of the residential waste process is as follows: waste will be taken by the residents to their respective block's residential waste store using the lifts and internal service corridors. Immediately prior to collection Council operatives will collect the bins directly from the store and transfer them to the collection vehicle which will stop on the highway to carry out this collection.

Residential waste will be collected weekly by the nominated Local Authority contractor. The distance travelled by the operatives from the waste store to the waste collection vehicle must not exceed 10m therefore the onsite FM team will be required to transfer the bins directly from Vine Lane and High Holborn residential bin stores to their refuse collection vehicles. Bins will then be returned to the relevant waste stores by the FM team once they have been emptied.

3.4.1 High Holborn - waste process and collection

The High Holborn residential waste process and collection will operate as follows: residents will transfer their waste from their units to the allocated waste store and deposit it within the correct allocated waste stream bins (Residual, MDR, food waste). Immediately prior to collection the FM team transfer the bins to the nearby RCV location for collection by the Council waste operatives. Once empty the FM team will transfer the bins back to the store. Figure 6 shows this process of the internal waste disposal route from the upper floors to the residential waste store at ground floor level.

Figure 6 High Holborn ground floor residential waste collection

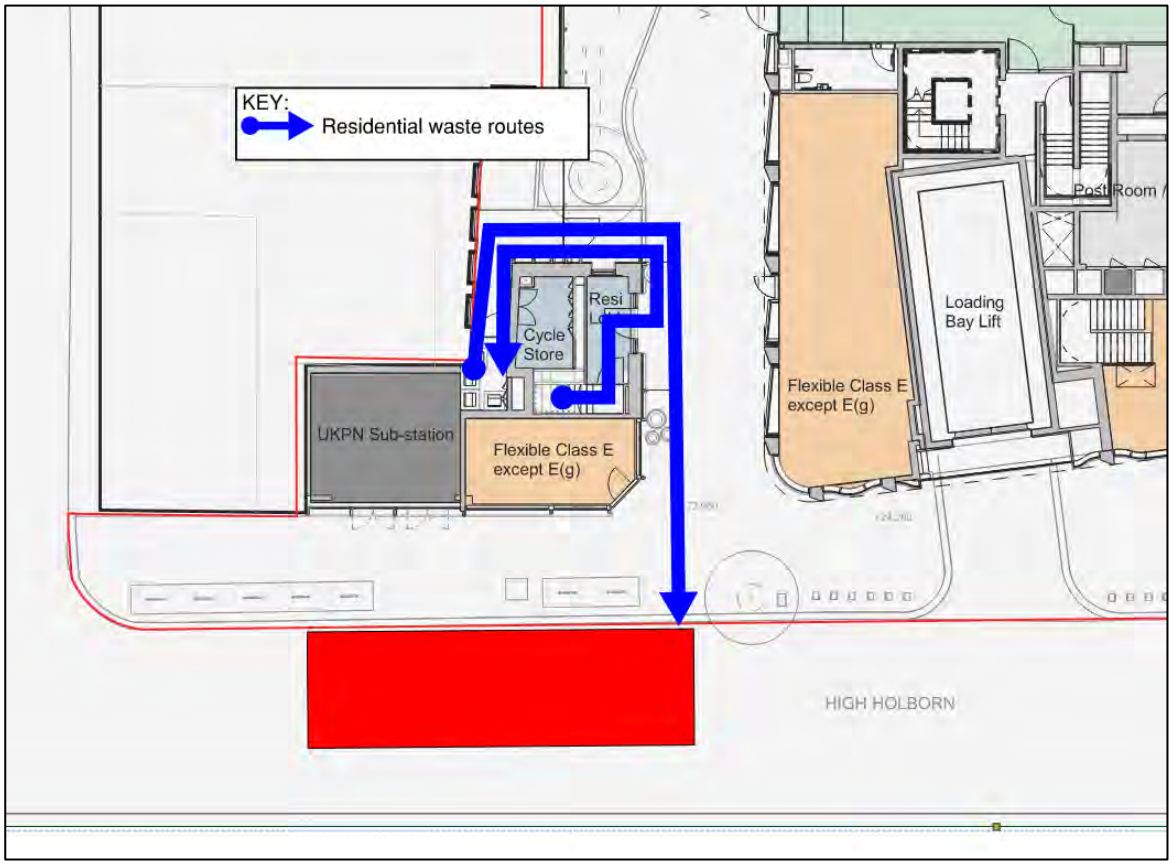
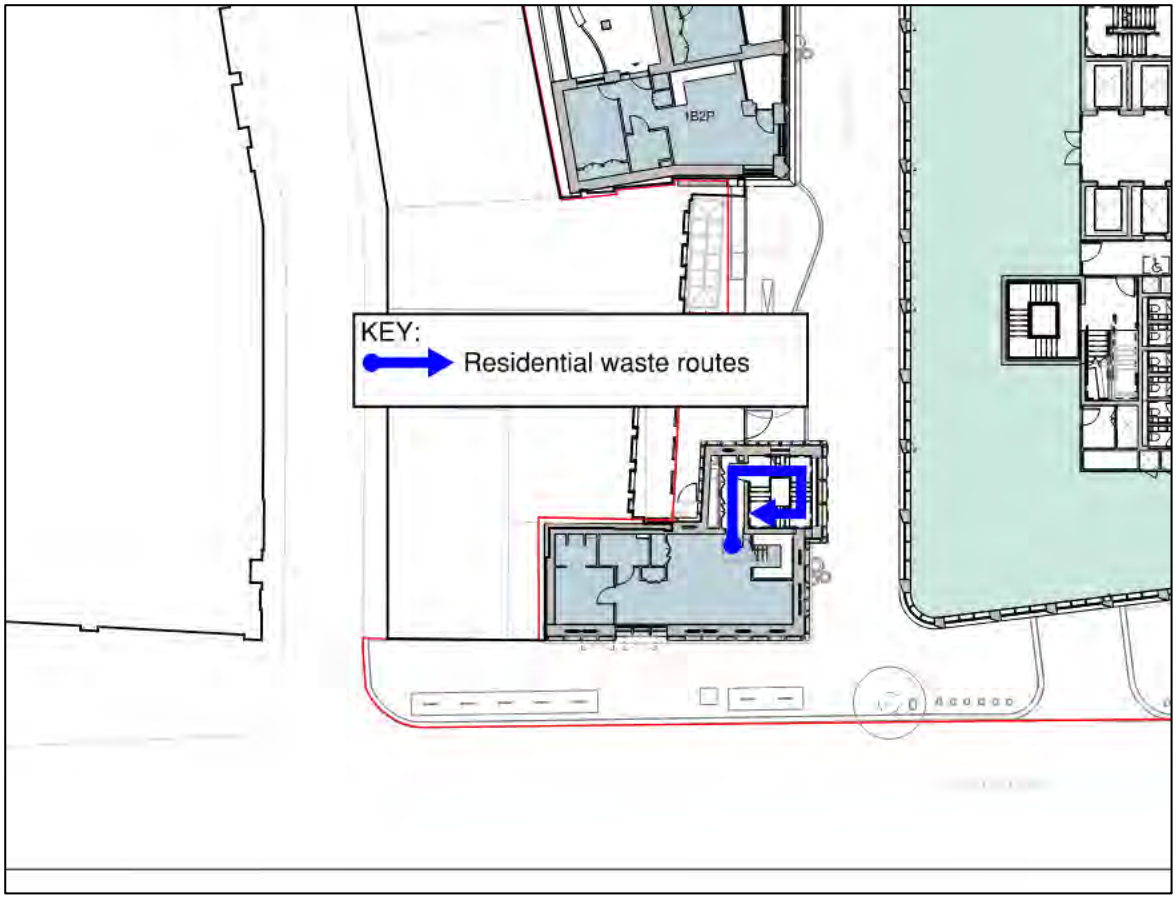


Figure 7 High Holborn upper floors residential waste routes



3.4.2 West Central Street - waste process and collection

West Central Street residential waste process and collection will operate as follows: residents will transfer their waste from their units to the allocated waste store via the provided lift and deposit it within the correct allocated waste stream bins (Residual, MDR, food waste).

Local Authority operatives will collect the bins directly from the store and transfer them to the collection vehicle. Figure 8 and Figure 9 show this process of the internal waste disposal route from the upper floors to the residential waste store at ground floor level. Residents will use the lifts to access the ground floor level.

In some instances, the distance for residents transferring bins to their waste store exceeds the 30m required maximum as per Camden Planning Guidance – Design, 2021. This additional distance is unavoidable due to there being various listed buildings within the site so there are limited options for bin store locations.

A summary of explored potential options to avoid the 30m distance being exceeded, before justifying it as necessary, is detailed below:

Option 1: Locating the bin store in the basement

- This solution was not feasible due to being unable to add a goods lift into the relevant areas of site to get the bins up to grade

Option 2: Adding bin stores to the façade along New Oxford Street

- The solution was deemed not possible due to the listed building status of the buildings in this location.

Option 3: Utilising the adjacent street to put bagged waste immediately prior to collection.

- This solution is indicated by Camden policy to be only acceptable in a last resort situation. The site has a secure residential bin store therefore it was deemed overall preferable to utilise it, despite the longer distances for residents, as opposed to the last resort of a street bagged waste strategy.

Figure 8 West Central Street upper floors residential waste routes

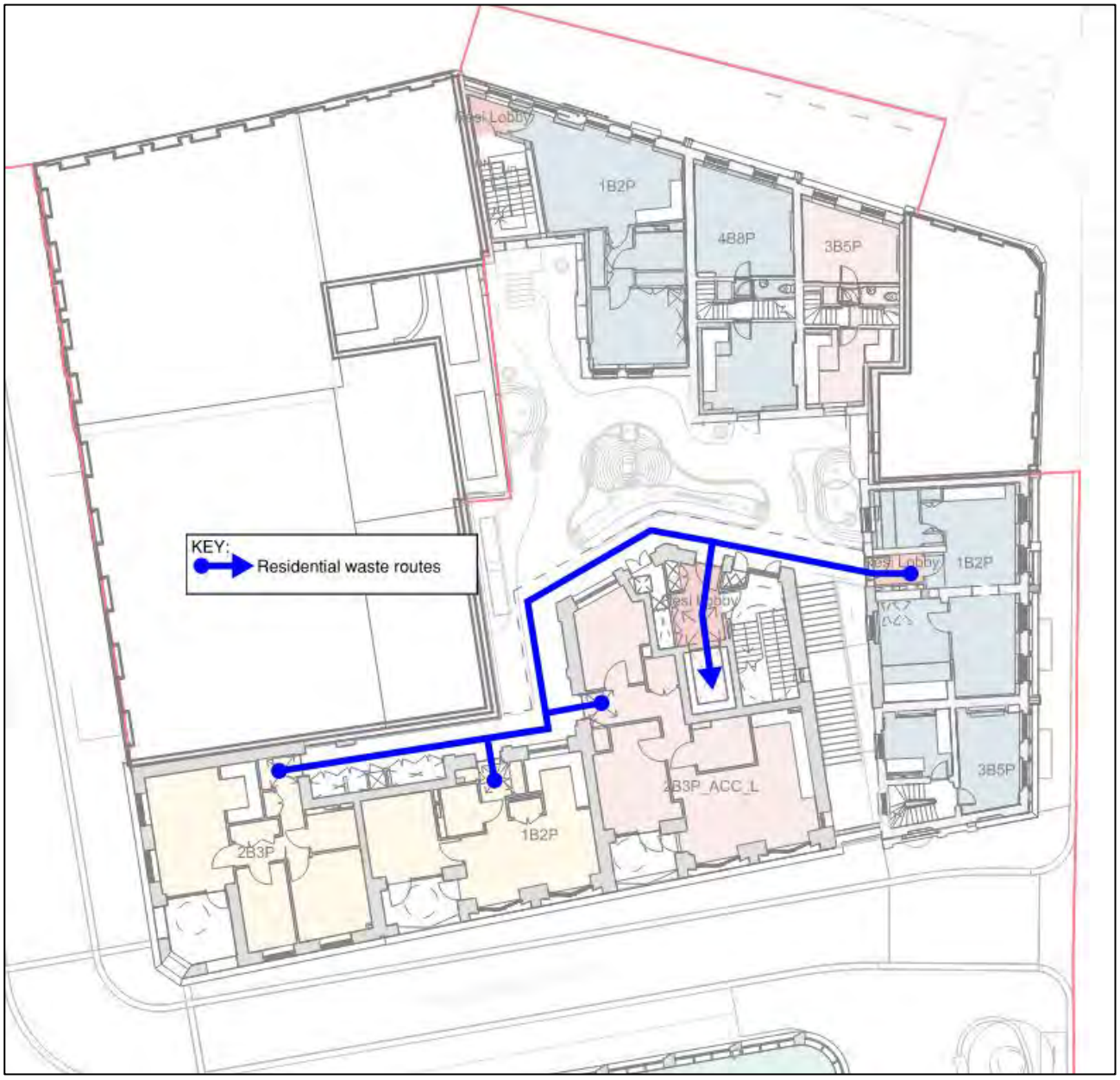
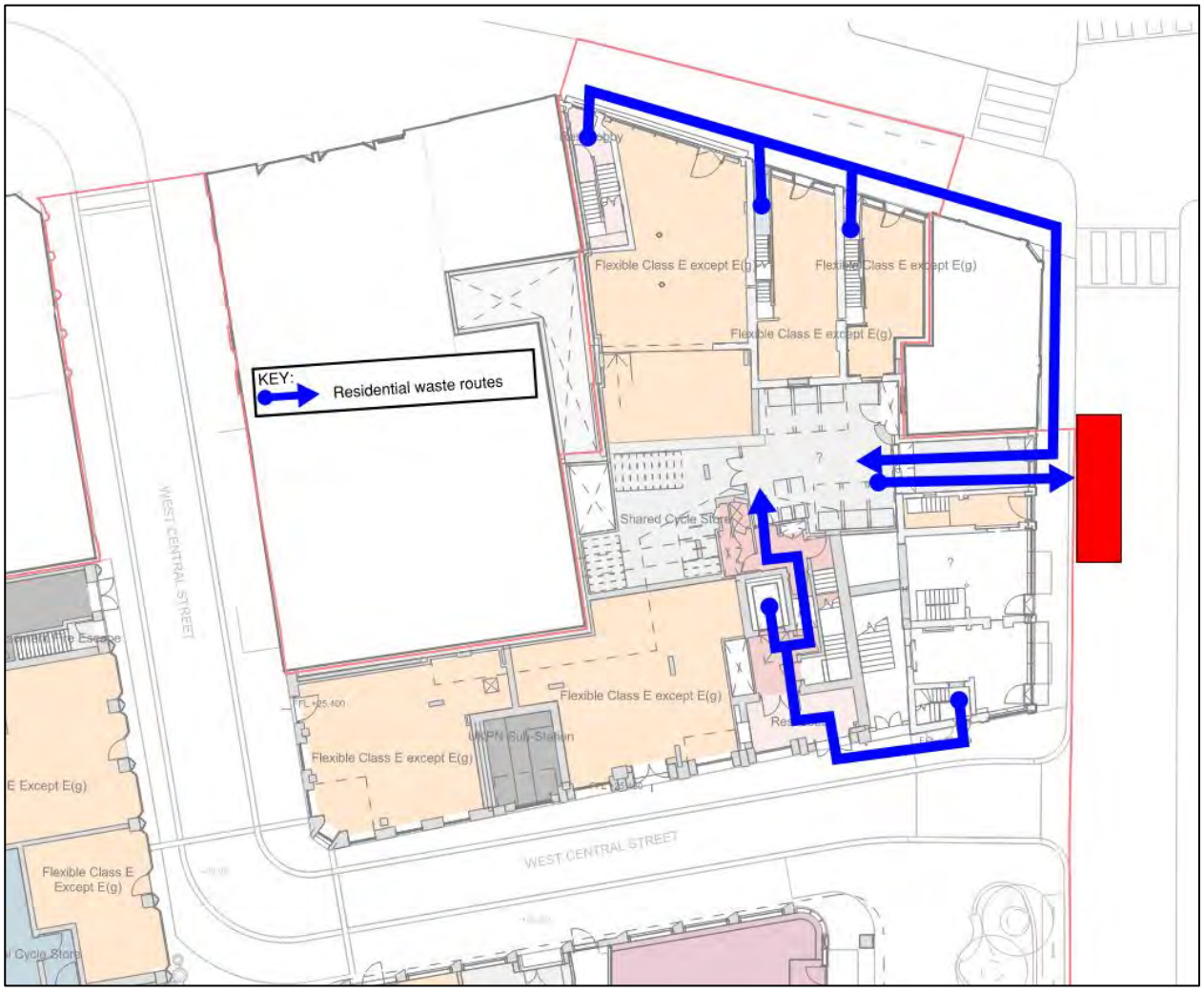


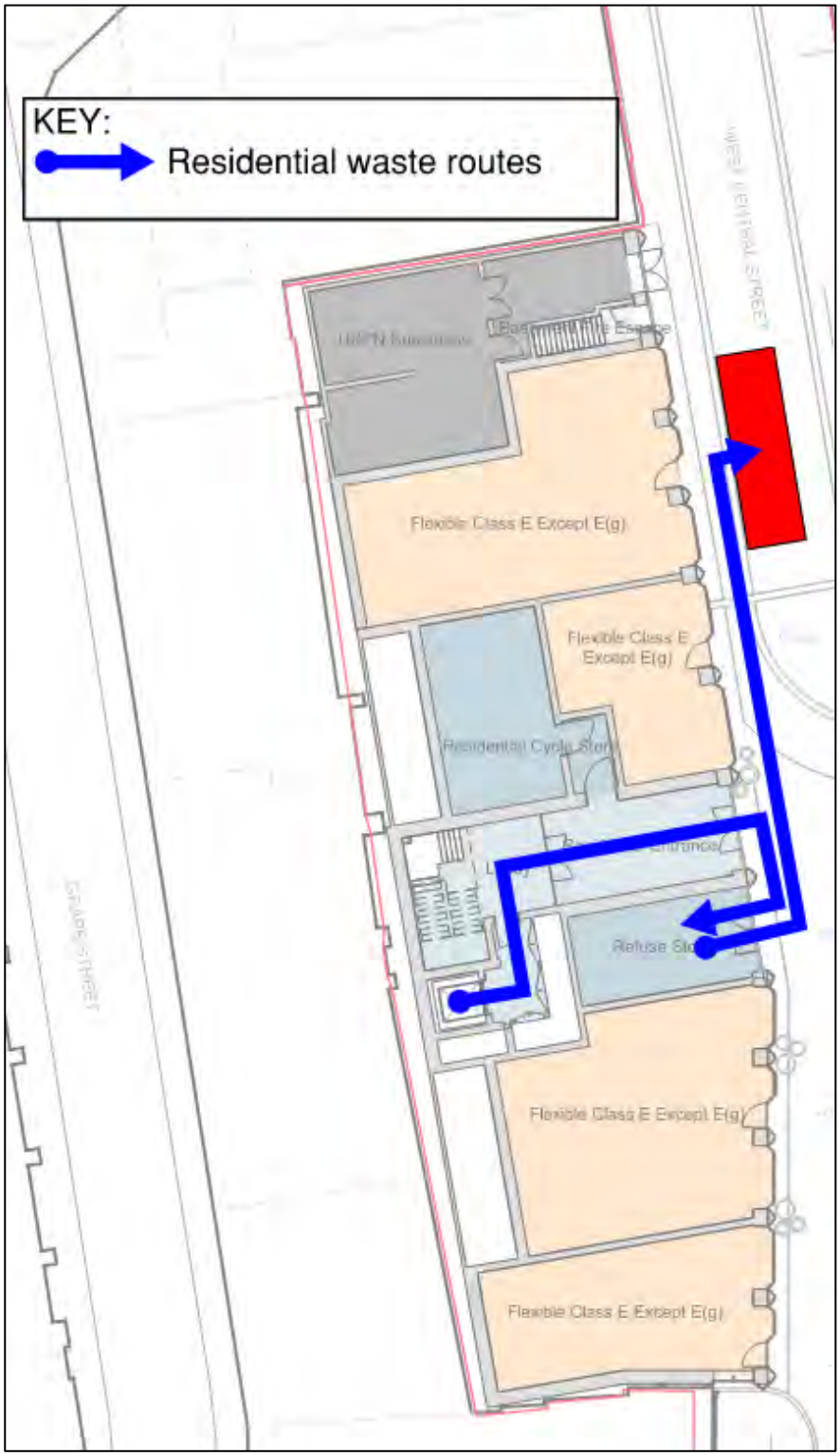
Figure 9 West Central Street residential waste collection



3.4.3 Vine Lane – waste process and collection

The Vine Lane residential waste process and collection will operate as follows. Residents will transfer their waste from their units to the allocated waste store via the provided lift and deposit it within the correct allocated waste stream bins (Residual, MDR, food waste). Immediately prior to collection the FM team transfer the bins to the nearby RCV location for collection by the Council waste operatives. Once empty the FM team will transfer the bins back to the store. Figure 10 shows this process of the internal waste disposal route from the upper floors to the residential waste store at ground floor level.

Figure 10 Vine Lane residential waste collection



4. Commercial waste

4.1 Assumptions

Waste generation and storage requirements for commercial waste have been calculated in accordance with Camden Council guidance documents, supplemented by the British Standard for Waste Management in Buildings - Code of practice (BS5906:2005). This assessment has been based on the following key assumptions:

- Waste from the retail units in West Central Street block will be stored within and collected directly from the retail units;
- Waste from the retail unit in the High Holborn block will be stored within and collected directly from the retail unit;
- Waste from the commercial units (offices and retail) in the Museum Street block and the retail units in the Vine Lane block will be stored in and collected from a central commercial waste store;
- One employee per 8m^2 NIA of office floor space (80% occupancy), with one employee working five days a week, generating 50 litres of waste;
- Commercial waste rooms have been sized for two days of waste storage – collections to be undertaken daily;
- Commercial waste collections will be undertaken by a nominated waste contractor using a waste collection vehicle up to 8 metres in length;
- Retail units are assumed to be 50% A1 Retail (non-restaurant/café) and 50% A3 retail (restaurant/café)
- The following splits have been applied:
  - Retail (A1): 12 % residual and 88% recyclable (27% paper, 40% cardboard, 13% plastic, 0% aluminium, 3% glass and 5% organic);
  - Retail (A3): 60% residual and 40% recyclable (5% cardboard, 3% plastic, 3% aluminium, 5% glass and 24% organic); and
  - Office (B1): 20% residual and 80% recyclable (65% paper, 7% cardboard, 6% plastic and 2% aluminium).
- In the main waste store:
  - Cardboard, paper and plastics will be processed using a baler producing 300kg bales. One 300kg bale can be stored on a 1,000mm x 1,200mm pallet;
  - Pre-baled cardboard will be stored in 660 litre Eurobins;
  - Glass waste and aluminium will be stored in 360 litre Eurobins; and
  - Food waste will be stored in 240 litre Eurobins.

4.2 Commercial waste streams and processes

For commercial waste the following process will be followed for waste streams.

4.2.1 General waste

Non-recoverable waste streams will be colour coded and clearly labelled to help waste producers and the FM team responsible for transferring the waste to the waste room to ensure that they place waste in the correct storage units.

Any waste related signage must use the iconography and style developed by the 'Waste and Resources Programme' (WRAP) for continuity with any Local Authority communications.

4.2.2 Dry recyclables

Dry recyclables will be segregated from other waste. Bins and bags will be colour coded and clearly labelled to help waste producers and the FM team responsible for transferring the waste to the waste room to ensure all recyclable waste is placed in the correct waste storage units.

Any waste related signage must use the iconography and style developed by WRAP for continuity with any Local Authority communications.

4.2.3 Specialist waste stream disposal

4.2.3.1 Waste Electrical and Electronic Equipment (WEEE)

WEEE and other specialist waste are to be stored, alongside bulky waste, in an allocated area and will be collected by the producer was per the Waste Electrical and Electronic Equipment Directive is the European Community Directive 2012/19/EU.

4.2.3.2 Confidential Paper Waste

Confidential waste must be collected in secure bins located around the buildings. To be fully compliant with the Data Protection Act, a written contract with a certified confidential waste company is required. This waste stream will be collected in situ by a specialist contractor and shredded and disposed of off-site.

4.2.3.3 Batteries

Batteries will be collected in pots (separate for lithium and alkaline types) located by the photocopiers, which will be periodically collected by the FM team for storage in the general waste store prior to collection by a waste contractor.

The terminals of lithium batteries will require covering with an insulating, non-conductive material e.g., using electrical tape, to prevent the risk of fire. The FM team will ensure this is completed, though staff disposing of the batteries will be expected to complete this where possible.

4.2.3.4 Photocopier cartridges

Photocopier and printer cartridges will be collected in boxes located by the photocopiers, which will be periodically collected by the FM team for storage prior to collection by a waste contractor.

4.2.3.5 LED Fluorescent Tubes and Light Bulbs

A specific request should be sent to the FM team for the collection of fluorescent tubes and light bulb waste. Upon collection, the FM team will take it to the general waste store prior to collection by a waste contractor. This waste will then be stored in the same area of the waste room as the WEE and bulky waste.

Waste streams such as florescent tubes and batteries will be required to be collected by a licensed specialist contractor as they are designated as hazardous waste. The FM team will be required to register the site for a Hazardous Waste Licence to permit this waste to be collected safely and reprocessed.

4.3 Commercial waste generation

The development includes 19 retail units and office areas located on and between the first and 18th floor, the office units are located within the upper levels of the 1 Museum Street block. The retail units are located as follows,

- Five at 1 Museum Street ground floor level (1 unit with stairs connecting to 1 B1 level unit)

- Five in West Central Street ground floor (2 units featuring stairs connecting to 2 B1 level units)
    - 1 in the West Central Street B1 level accessed from ground floor level.
- Five at Vine Lane block ground floor level
- One at High Holborn block ground floor level

4.3.1 1 Museum Street and Vine Lane blocks - waste generation

Based on the area schedule in Table 1, the estimated two-day waste generation for the commercial users at the Museum Street and Vine Lane blocks is 53.14m³ as shown in Table 12.

Table 12 Two-day commercial Museum Street and Vine Lane waste generation

Museum Street and Vine Lane Commercial Two-Day Waste Generation (m³)				
Waste stream	**50% Class E (Non-Food Retail)**	**50% Class E (Food Retail)**	**Class E(g)(i) (Office/Business)**	**Total (m³)**
Residual	0.14	2.31	9.63	12.08
Paper	0.31	0.00	31.29	31.60
Cardboard	0.46	0.19	3.37	4.02
Plastic	0.15	0.12	2.89	3.15
Aluminium	0.00	0.12	0.96	1.08
Glass	0.03	0.19	0.00	0.23
Food Waste	0.06	0.92	0.00	0.98
Total	**1.16**	**3.85**	**48.13**	**53.14**

4.3.2 West Central Street - waste generation

Based on the area schedule in Table 1, the estimated two-day waste generation for the commercial tenants in the West Central Street block is 5.10m³ as shown in Table 13.

Table 13 Two-day West Central Street commercial waste generation

Commercial West Central Street Two-Day Waste Generation (m³)			
Waste stream	**50% Class E (Non-Food Retail)**	**50% Class E (Food Retail)**	**Total (m³)**
Residual	0.14	2.35	2.49
Mixed Dry Recycling (Paper, Card, Plastic, Aluminium)	0.94	0.43	1.37
Glass	0.04	0.20	0.24
Food Waste	0.06	0.94	1.00
Total	1.18	3.92	5.10

4.3.3 High Holborn block - waste generation

Based on the area schedule in Table 1, the estimated two-day waste generation for the commercial tenant in the High Holborn block is 0.17m³ as shown in Table 14.

Table 14 Two-day High Holborn commercial waste generation

Commercial West Central Street Two-Day Waste Generation (m³)			
Waste stream	**50% Class E (Non-Food Retail)**	**50% Class E (Food Retail)**	**Total (m³)**
Residual	0.00	0.08	0.08
Mixed Dry Recycling (Paper, Card, Plastic, Aluminium)	0.04	0.01	0.05
Glass	0.00	0.01	0.01
Food Waste	0.00	0.03	0.03
Total	0.04	0.13	0.17

4.3.4 Commercial total waste generation

The waste generation data inputted used to complete estimation was obtained from the following locations Table 12, Table 13 and Table 14.

The sitewide commercial waste generation is summarised in Table 15.

Table 15 Sitewide commercial waste generation

Commercial waste generation (m³)				
Waste stream	**High Holborn (m³)**	**West Central Street (m³)**	**1 Museum Street and Vine Lane (m³)**	**Total (m³)**
Residual	0.08	2.49	12.08	14.65
Paper	0.01	0.34	31.60	31.96
Cardboard	0.01	0.34	4.02	4.38
Plastic	0.01	0.34	3.15	3.51
Aluminium	0.01	0.34	1.08	1.44
Glass	0.01	0.24	0.23	0.48
Food Waste	0.03	1.00	0.98	2.01
Total	0.17	5.10	53.14	58.41

4.4 Commercial waste storage

The section below sets out the storage facilities required to accommodate two days' worth of waste. Retail units within West Central Street and High Holborn blocks will store their waste within their unit demise. The commercial units located within 1 Museum Street and Vine Lane have been provided with a dedicated shared commercial bin store at B2 level as shown in Figure 11.

4.4.1 1 Museum Street and Vine Lane blocks - waste storage

The 1 Museum Street and Vine Lane blocks require a waste store containing the equipment shown in Table 16.

Table 16 Commercial Museum Street and Vine Lane waste storage equipment

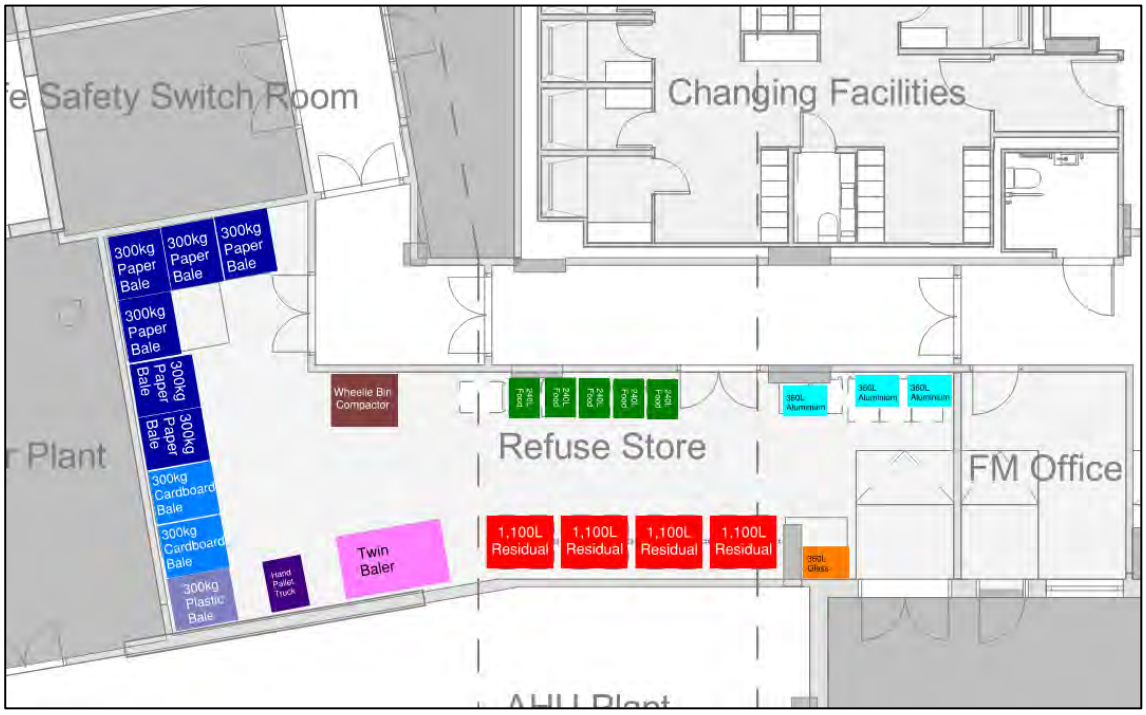
Museum Street and Vine Lane Commercial Waste Storage Equipment			
Waste type	**Compacted Waste (m^3)**	**Waste Container**	**Number Required**
-	-	Baler/Compactor	1
-	-	Wheelie Bin Compactor	1
Residual	4.03	1,100 Litre Bin	4
Paper	15.80	300kg Bale	6
Cardboard	1.34	300kg Bale	2
Plastic	1.05	300kg Bale	1
Aluminium	1.08	360 litre Bin	3
Glass	0.23	360 litre Bin	1
Food Waste	0.98	240 litre Bin	5
Total	**24.51**	**-**	**22**

A waste store sized at 50.70m^2 has been provided to hold the following:

- 1 No. Twin cardboard baler;
- 1 No. Wheelie Bin compactor;
- 1 No. Hand pallet truck;
- 4 No. 1,100 litre Eurobins for residual waste;
- 6 No. 300kg bale for paper waste
- 2 No. 300kg bale for cardboard waste
- 1 No. 300kg bale for plastic waste
- 3 No. 360 litre Eurobins for aluminium;
- 1 No. 360 litre Eurobins for glass; and
- 5 No. 240 litre Eurobins for organic (food) waste.

The waste store layout is shown in Figure 11.

Figure 11 Museum Street and Vine Lane waste store layout



4.4.2 West Central Street – waste storage

The West Central Street waste will be stored within the unit's demise and taken in bins or bags to the kerb outside once a day immediately prior to collection. This procedure and potential vehicle stopping locations on the highway are shown in Section 4.5.2.

4.4.3 High Holborn block

This waste will be stored within the unit and taken in bins or bags to the kerb outside once a day immediately prior to collection. This procedure and the potential vehicle stopping location on the highway is shown in Section 4.5.3.

4.5 Commercial waste strategy

The FM team will be responsible for communicating with commercial tenants on the requirements for transferring waste and recycling to the storage facility, including the requirements for bulky and non-standard waste. The waste store and individual zones within the store shall be clearly labelled at all times. Commercial tenants must be aware of and follow their responsibilities under the waste duty of care: Code of Practice (2016) i.e.:

- Waste collections will be undertaken by a nominated waste contractor. Collections are usually out of hours between, 05:00 and 08:00 and after closing, between 19:00 and 22:00.
- As it is proposed to present full waste bins, issues associated with fly tipping will be minimised as members of the public will not have general access to the waste bins.
- In the event of a missed collection, full waste bins will be returned to the waste store. Storage has been provided to accommodate two days' waste generation, therefore, missing a single waste collection will not have a detrimental impact on waste storage.

4.5.1 1 Museum Street and Vine Lane blocks - waste process and collection

The site FM team will be responsible for managing communal services such as waste. Commercial tenant's staff will have the responsibility to transfer their waste from their unit demise to the B2 waste store.

The commercial units located within 1 Museum Street and Vine Lane have been provided with a dedicated shared commercial bin store at B2 level as shown in Figure 11. At the end of each day the commercial unit's

respective staff will transfer the waste down to the B2 level commercial waste store and deposit the waste in the appropriate stream's waste container.

The FM staff will be responsible for operating the baler and in-bin compactor. Immediately prior to collection the bins or pallets will be moved directly from the store to near the collection vehicle by the FM team and collected in the refuse collection vehicle by the Council waste operatives. The collection vehicle will be parked correctly in loading bay which is accessed via the vehicle lift connected to High Holborn. The floor surface between the waste store and the collection point will be a suitable material to drag bins across. The described process is shown in Figure 12 and Figure 13. Once empty the bins will be returned to the waste store by the FM team.

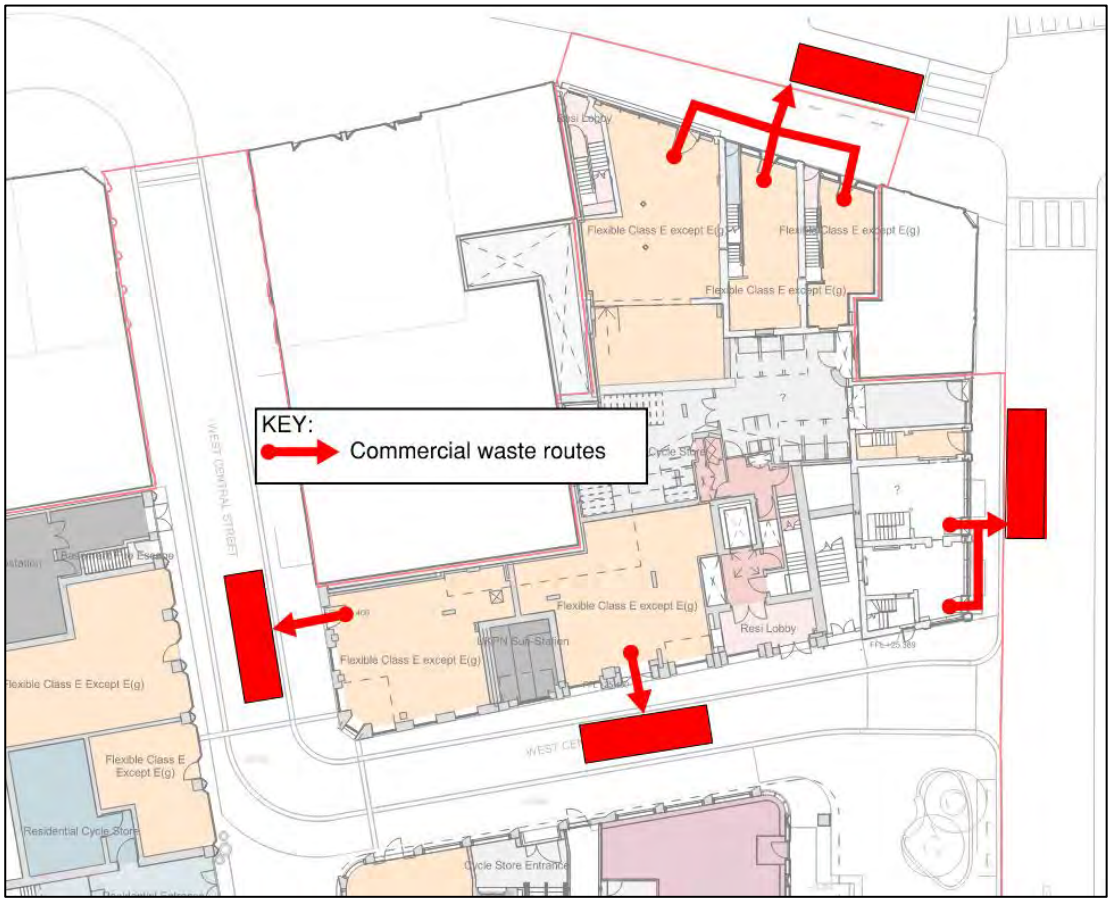
Figure 12 Museum Street and Vine Lane waste collection procedure ground floor

Figure 13 Museum Street and Vine Lane waste collection procedure B2

4.5.2 West Central street - waste process and collection

This waste will be stored within the units and taken in bins or bags to the kerb outside once a day immediately prior to collection by the respective commercial units' staff. This procedure and potential vehicle stopping locations on the highway are shown in Figure 14. Due to the narrowness of West Central Street, an 8-metre-long waste collection vehicle will be used for these collections.

Figure 14 West Central Street commercial waste collection procedure



4.5.3 High Holborn – waste process and collection

This waste will be stored within the unit and taken in bins or bags to the kerb outside once a day immediately prior to collection by the respective commercial unit's staff. This procedure and the potential vehicle stopping location on the highway is shown in Figure 15.

Figure 15 High Holborn commercial waste collection procedure

5. Other waste

5.1 General public waste

Waste will be collected from any public bins provided within the site by the FM team. Public areas such as seating, stairways and pathways will be monitored throughout the day and cleaned by the FM team.

5.2 Litter picking

Litter picking will be conducted by the FM team throughout the day to allow for both a safe and clean environment.

5.3 External/surrounding areas

The cleaning of external areas will follow the programme set out in .

Table 17 Cleaning schedule

Activity	Frequency
Clear debris, litter from entrances and public areas	Daily
Empty waste bins	Daily
Clear leaves from all entrances and fire exits	Weekly
Clean and wash down external signs	Weekly

5.4 Cleaning and Maintenance

The FM team will be responsible for the cleaning (including spillages) of the following:

- Commercial and residential refuse stores; and
- Waste storage containers within these refuse stores.

Waste stores will be washed down and refuse bins cleaned by FM team a minimum of once per quarter.

6. Municipal waste summary

The calculated annual waste tonnage has been calculated with the following assumptions:

- Residential: 7-day waste working week
- Commercial: 5-day waste working week
- The tonnage per annum has been calculated utilising WRAP conversion rates.

6.1.1 Residential municipal waste

Table 18 uses data from Table 8 to detail the sitewide residential municipal waste 'reuse/ recycle/ compost' ('RRC') percentage. Due to being required to follow Local Authority guidance on to residential waste generation it is not possible to achieve a residential RRC percentage of 65%; the site's residential RRC percentage is 56%.

However, actions can be taken to encourage residents to recycle more and therefore have residential municipal waste reach the target of 65%. Methods to achieve this could be increased signage such as the signage detailed in Section 7.2, frequent communications on what is recyclable, waste audits conducted by the FM team and including recycling requirements in the terms of leases and tenant handbooks.

Table 18 Sitewide residential waste tonnage and waste reuse, recycle, compost percentage

Sitewide residential waste reuse, recycle, compost percentage							
Waste stream	**Total per week (7-day week) (m^3)**	**Total per year (52 weeks) (m^3)**	**WRAP conversion rates (tonnes/m^3)**	**Tonnes per annum**	**Recyclable?**	**% of total waste**	**Total reuse/ recycle/ compost %**
Residual	5.28	274.56	0.21	57.6576	No	44%	-
MDR	6.16	320.32	0.2	64.064	Yes	48%	56%
Food Waste	1.01	52.62	0.2	10.5248	Yes	8%	
Total	12.45	647.50	-	132.2464		100%	56%

6.1.2 Commercial municipal waste

Table 19 uses data from Table 15 to detail the sitewide commercial municipal waste RRC percentage. The site's commercial RRC percentage is 74% which is above the GLA CES 2030 target of 65%.

Table 19 Sitewide commercial waste reuse, recycle, compost percentage

Sitewide commercial waste reuse, recycle, compost percentage								
Waste stream	**Waste per 2 days (m^3)**	**Total per week (5-day week) (m^3)**	**Total per year (52 weeks) (m^3)**	**WRAP conversion rates (tonnes/m^3)**	**Tonnes per annum**	**Recyclable?**	**% of total waste**	**Total reuse/ recycle/ compost %**
Residual	14.65	36.63	1904.50	0.21	399.945	No	26%	-
Paper	31.96	79.89	4154.15	0.2	830.83	Yes	53%	74%
Cardboard	4.38	10.94	568.75	0.2	113.75	Yes	7%	
Plastic	3.51	8.76	455.65	0.22	100.243	Yes	6%	
Aluminium	1.44	3.59	186.55	0.22	41.041	Yes	3%	
Glass	0.48	1.20	62.40	0.33	20.592	Yes	1%	
Food Waste	2.01	5.03	261.30	0.2	52.26	Yes	3%	
Total	58.41	146.03	7593.30	-	1558.661		100%	

6.1.3 Total municipal waste

Table 20 combines the results concerning residential and commercial municipal waste amounts from Table 18 and Table 19. The overall sitewide RRC percentage is 65% which successfully meets the 2030 target. Despite the sitewide RRC percentage meeting the target, as mentioned above it is not possible to achieve a residential RRC percentage of 65% due to being required to follow Local Authority guidance on to residential waste generation. Therefore, actions such as increased signage, frequent communications on what is recyclable, waste audits conducted by the FM team and including recycling requirements in the terms of leases and tenant handbooks will be completed in order to encourage residents to reach the 65% target.

Table 20 Overall sitewide reuse, recycle, compost percentage

Overall sitewide reuse, recycle, compost percentage			
	Residential total	**Commercial waste**	**Total**
Non-reusable/ non- recyclable/ non-compostable	44%	26%	35%
Reusable/ recyclable, compostable	56%	74%	65%
Total	100%	100%	100%

Not included within the estimate is bulky waste such as furniture, white goods etc. residents will be encouraged to either reuse or mend them through utilisation of schemes such as Globechain and Warp It as detailed in Section 7.6.

6.1.4 Municipal waste management routes

The GLA CES requires an estimate of the waste management routes of all municipal waste within the site to be completed. However, residential waste is managed by the Local Authority and so is outside of the control of this report. Therefore, the estimate of municipal waste management routes below related exclusively to commercial waste. The proposed commercial municipal waste management estimate is below:

Residual waste will be treating with circular economic values and therefore not be sent to landfill, instead all residual waste will be taken to a local offsite to a waste-to-energy plant, such as Edmonton EcoPark.

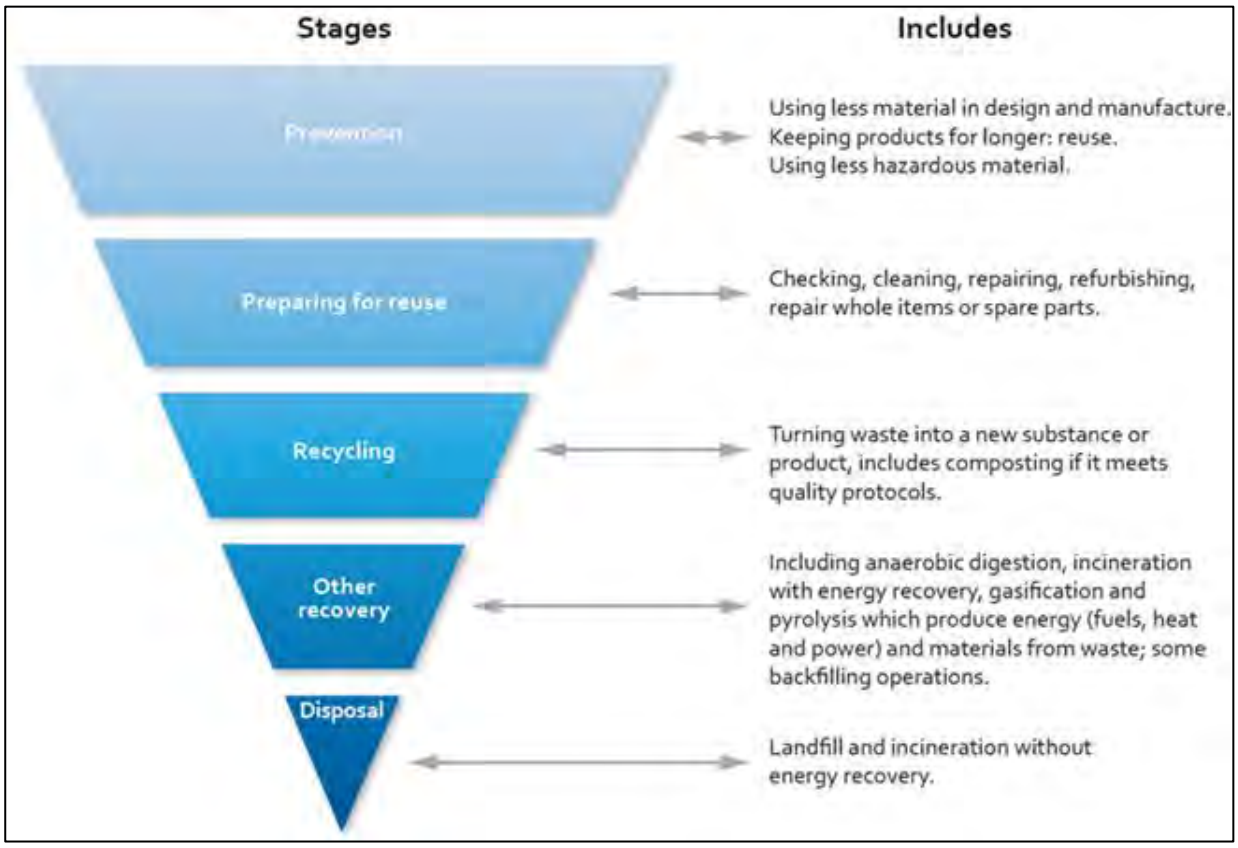
All recycling waste will be taken to the respective recycling stream's offsite recycling centre. All food waste will be taken offsite and composted at an appropriate facility. Finally, where possible bulky waste will be reused in line with the Globechain and Warp It schemes; as per Section 7.6. Due to the scheme's sporadic current usage within pilot schemes, it is currently not possible to estimate the percentage of bulky waste that will be reused on site. However, in future as the site operates these levels will be monitored and relevant reasonable actions taken to ensure a good reuse percentage.

7. Operational waste reduction and improvement measures

7.1 Waste hierarchy

When considering waste reduction methods, the waste hierarchy pyramid provides a useful guide to the order in which waste reduction measures should be considered, from most to least effective as shown in Figure 16.

Figure 16 Waste hierarchy (adopted from the EU WFD7)



Preventing the generation of waste is considered the most effective way of improving recycling rates, followed by reuse of materials, and then moving into recycling, recover and, eventually, disposal in landfill.

7.2 Waste segregation

Since January 2015, UK regulations require the separate collection of paper, plastic, metals and glass for recycling from all waste producers including commercial waste. There is often confusion for people around what is and is not recyclable. In order to improve the amount of waste to be recycled and reduce contamination of waste streams, the items that are recyclable should carry obvious visual clues about which bin they should be placed into and the bins themselves should be clearly labelled. Some examples of how this can be achieved is shown in Figure 17.

Figure 17 Waste signage

7.3 Behaviour change

People often attach a low priority to pro-environmental behaviour. To encourage such behaviour and drive a move towards reusing and recycling materials, the FM team should address both the physical and the psychological environment.

The goal should be to create an environment that guides decision making, and helps people act out those decisions. Some examples on how this could be achieved are as follows:

- Collect data on current waste generation and splits between waste streams will be communicated to tenants to encourage them to strive for improvement. This is particularly relevant to commercial tenants who may have their own commitments on recycling rates and continuous improvement and may find the data useful;
- Gather feedback from residents and tenants on the waste infrastructure and processes to understand users' experience of waste infrastructure and how it could be improved;
- Ensure container design, signage and colour coding is consistent across all waste bins and encourage commercial tenants to use the same colour coding and signage in their demise; and
- Bins to be located within stores to be easily accessible by all users, including the provision of accessible bins for residents.

Figure 18 Accessible residential bin

7.4 Training and education

The FM Team and any other on-site staff handling and segregating waste will need full training on how to properly dispose of different types of waste and the procedures will be included in any tenant/resident handbook and portals available to occupiers.

Waste audits should be carried out to check on contamination levels or any issues with certain types of waste being incorrectly disposed of. Further training with relevant tenants can then be provided.

Any newsletters or other communications sent to residents and tenants should include any updates or reminders on the waste management procedures to help residents and tenants properly dispose of their waste. Any reuse or special recycling schemes that the development is part of should be promoted through any communications sent to residents and tenants and should be included in the handbook and portal.

7.5 Procurement

The FM team should endeavour to procure items for use in the common parts of the estate that align with the following principles:

- Reusable items instead of disposable items;
- Recycled materials;
- Hired items such as furniture, artwork or equipment that can be returned to the hire company;
- Items that are recyclable;
- Items that are made of single, recyclable materials or if they are made of multiple materials they can be easily taken apart to recycle;
- Working with suppliers to minimise amount of packaging used and ensure any packaging is recyclable; and
- Using a recyclable pallet system for larger deliveries.

7.6 Community waste

This section describes two potential ways in which waste generated within the development could be reduced by introducing the following:

- Re-use of furniture and household items

- Make and mend clinics.

Companies such as Warp It and Globechain are reuse marketplaces which allow businesses, charities and individuals to dispose of unwanted items to those in need of that item through a cloud-based platform.

Overall, the system works by the organisation/individual wishing to dispose of an item, posting it onto the portal. This becomes available for those with a need to search the portal for that item. The key benefits for these schemes are presented in Figure 19 and Figure 20.

Figure 19 Warp It re-use scheme (source: warp it Daniel O'Conner 16th June 2022)

Figure 20 Warp It benefits (source: warp it Daniel O'Conner 16th June 2022)

These schemes have the potential to develop into a scheme that could allow residents to offer unwanted items to their neighbours through a managed portal. In this way, residents would have the opportunity to

avoid using the bulky waste route to dispose of unwanted but perfectly usable household or furniture items. The scheme will need to be organised through the building management team for the development, using a third-party host if required.

Make and mend schemes allow residents to meet those able to conduct minor repairs to small electrical items or other pieces of equipment. Often held in local community spaces, these clinics allow items that would end up in landfill to be mended and so extend their operational life. An adaptation to the make and mend clinic is the sustainable market, such as the Buck Street Market, Camden. This hosts a place where sustainable makers promote up-cycling through mend and re-work through open workshops.

8. OWMP review process

8.1 Monitoring

Using the information provided from the waste contractor (weight of waste collected) for residual and recyclable waste streams, the on-site FM team would record the level of recycling achieved by the commercial tenants within the development.

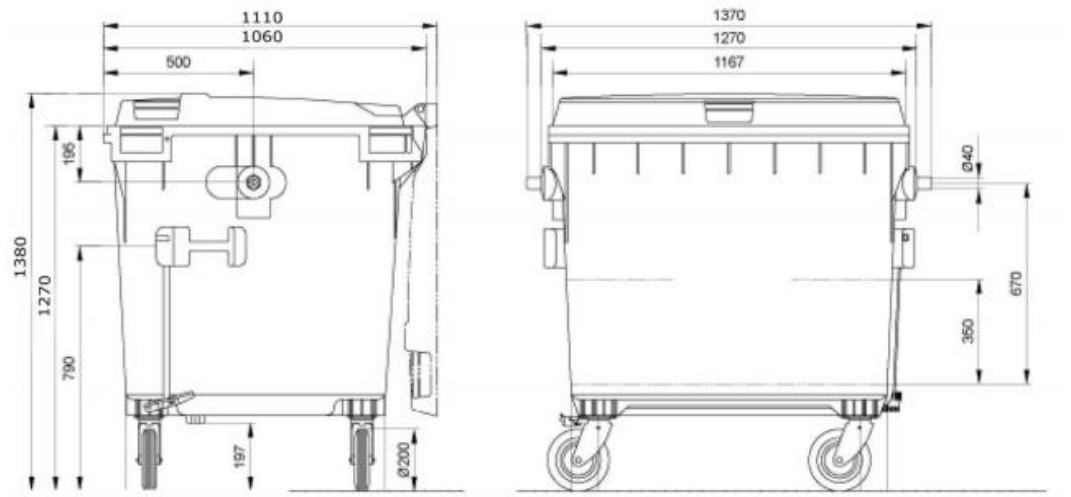
Where the level of recycling falls below an agreed level, then the on-site FM team will work with the commercial tenants to agree measures to increase the level of recycling within the commercial areas within the development. Additionally, the Globechain and Warp It bulky waste reuse schemes will have their utilisation and engagement monitored by the FM team. An initial survey of waste activity will be undertaken following 12 months of occupation.

8.2 Review process

The success of the strategy as detailed above will be closely monitored by the FM team. Feedback from tenants, suppliers, and residents will be provided as a minimum monthly and as and when required where immediate action is required and dealt with in accordance with this strategy. The strategy will be updated and amended as appropriate to ensure the development is within the perimeters of what is deemed necessary to maintain a clean and safe environment all year round.

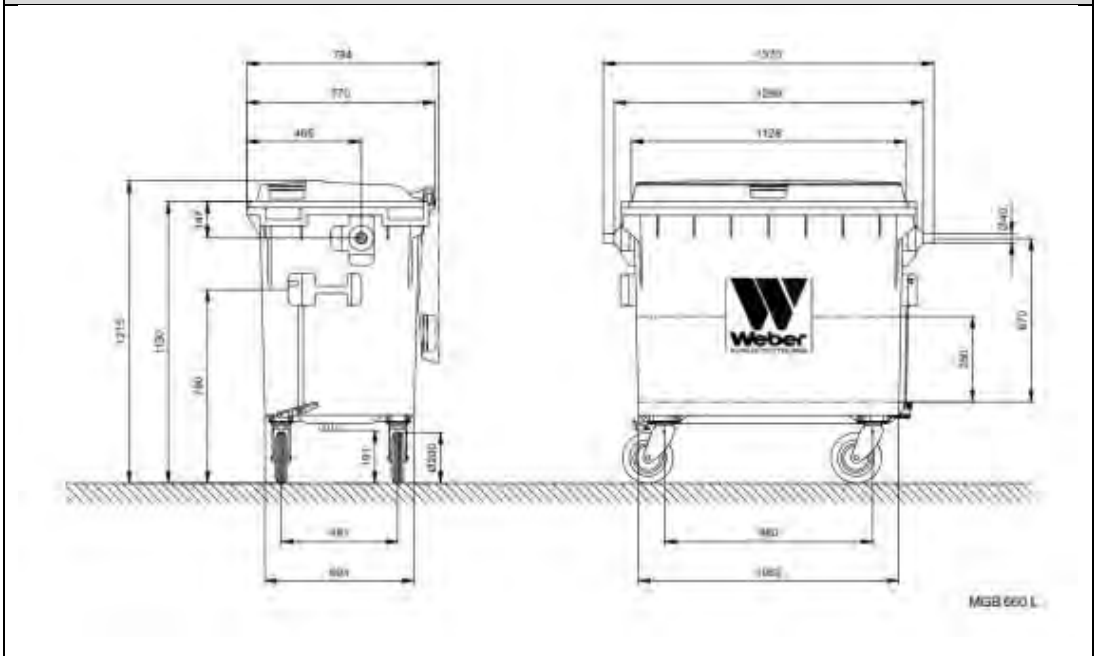
9. Waste equipment

1,100 Litre Eurobin

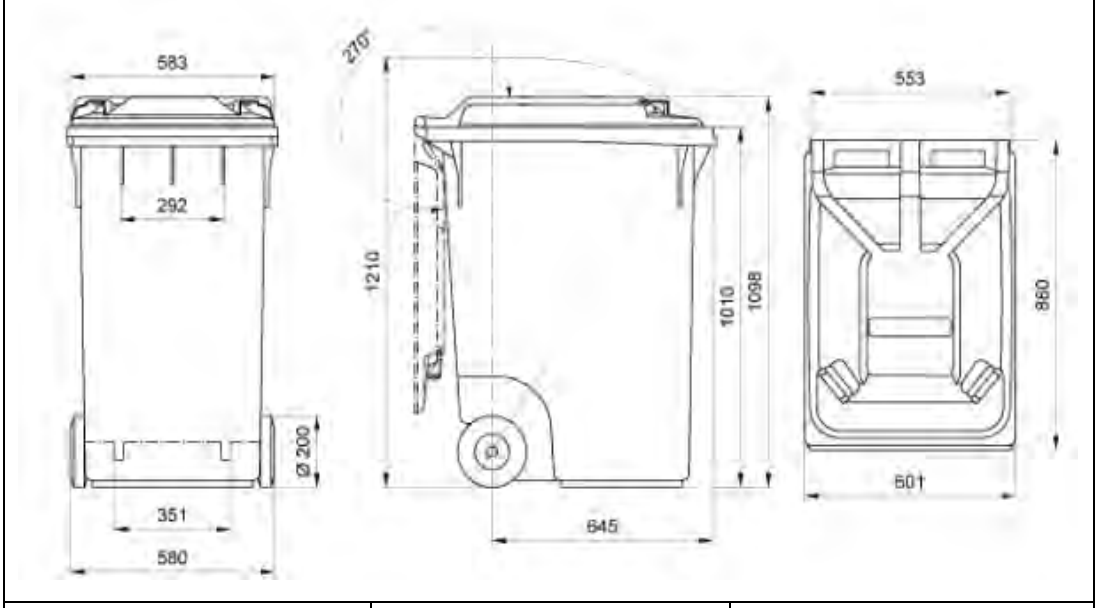


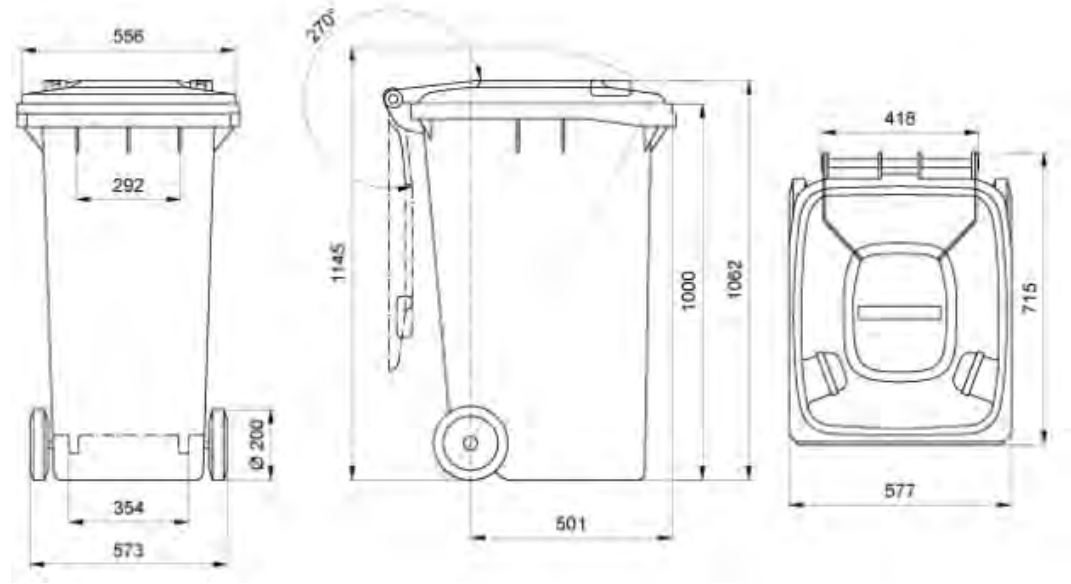
Length: 1.37m	Width: 1.11m	Height: 1.38m

660 Litre Eurobin



Length: 1.26m	Width: 0.78m	Height: 1.20m

360 Litre Wheelie Bin		
		
Length: 0.88m	Width: 0.53m	Height: 1.21m

240 Litre Wheelie Bin		
		
Length: 0.72m	Width: 0.55m	Height: 1.15m

In-bin compactor		
		
Length: 1.15m	Width: 1.15m	Height: 2.1m

Baler		
		
Length: 1.03m	Width: 1.56m	Height: 2.63m

One Museum Street

SWMP
APPENDIX F

DSDHA GXN BC PARTNERS simten DEVELOPMENTS

Site Waste Management Plan

Museum Street - SGQ

John F Hunt Ltd

Contents

Client	Simten
Principal Contractor	John F Hunt
Name of person in charge of project	Irfan Quraishi
Author of SWMP	Tom Seath
Waste Champion name	Irfan Quraishi
Project title / reference	Museum Street
Project location	Museum St, London WC1A 1EP
Project cost (estimated)	TBC
Building footprint (m2)	3419m2
Start date	February 25
Completion date	TBC
Description of project scope	Soft strip and Demolition
Person responsible for SWMP	Irfan Quraishi

Revision No	Prepared by	Checked	Issue date	Issued to
01	Tom Seath	Irfan Quraishi	13/11/24	G&T / GXN
02	Daniel Sweeney	Irfan Quraishi	15/11/24	G&T / GXN

This document is required and aims at providing the information required for planning condition 44 Reuse and Recycling of Material.

1. Responsibilities

The Senior Project Manager is the environmental co-ordinator for the project and as such is responsible for instructing workers, overseeing and documenting results of the SWMP. The Environmental Department will monitor the effectiveness and accuracy of the documentation during the routine site visits. The principal contractor shall distribute copies of this plan to the Principal Designer, Client, Site Manager and each Subcontractor. This will be undertaken every time the plan is updated.

2. Materials resource efficiency

We have looked at how we can minimise the waste produced, thereby reducing the amount of waste to be removed from the project. Trade Contractors, Design Team and Suppliers are all being encouraged to look at ways to minimise the amount of waste produced at the work face. The aim is to maximise the use of reclaimed or recycled material throughout the design where feasible, to reuse material on site in line with the waste hierarchy and reuse and recycling of material offsite where re-use is not practical. Furthermore, the logistics plan for the project will go hand in hand with this document to ensure that due thought is given to material requirements. This will enable efficient management of the delivery and storage of material and will ensure that the most effective logistic methods are adopted.

Waste minimisation statement
The use of the waste hierarchy shall be adopted wherever possible to re-use, recycle waste generated on site other than final disposal. A ground level processing area will be created where we separate all waste streams. Further segregation of the waste streams on site will reduce lorry movements and allow potential for further re-cycling.

3. Procedures for minimising hazardous waste

The waste hierarchy will be used on all projects where possible. The identification of hazardous waste on a project will result in the segregation of the hazardous waste. Hazardous waste (England and Wales) Regulations 2005 (as amended) set out the requirements for controlling and tracking the movement of hazardous waste and bans the mixing of different types of waste. Waste duty of care will also apply to all hazardousness waste before it is collected, disposed of or recovered, including all Hazardous Waste Consignment Notes. All hazardous waste will be stored separately in a designated COSHH area. The use of Technical Guidance WM3: Waste Classification - Guidance on the classification and assessment of waste will be

used to assess hazardous waste. Inert, non-hazardous and hazardous wastes destined to landfilled will be pre-treated prior to disposal in accordance with the EU Landfill Directive (1999/31/EC). Treatment can comprise physical, thermal, chemical or biological processes providing that they change the characteristics of the waste in order to reduce its volume or hazardous nature or to facilitate its handling or recovery.

Actions taken to reduce the amount of waste arising are recorded in the table below:

Planning waste minimisation during	Waste minimisation decisions taken	Resource Saving (quantify if possible)	Responsibility	Date action commenced
Demolition	The segregation of different waste streams for recycling. Where possible circular economy principles will be used throughout the job to either reduce, reuse and recycle. John F Hunt will aim for 95% waste diverted from landfill.		Project Manager	

All the above act to reduce the amount of waste and surplus materials, which traditionally would be skipped and sent to landfill. We are continually identifying waste minimisation actions and these will be updated in the above table.

4. Procedures for monitoring, measuring and reporting hazardous and non-hazardous site waste

All waste that leaves the site will be recorded by the relevantly trained personal in the Good out Report (GoR). This will include:

- Date
- Hazardous Waste Consignment Notes (HWCN) and Waste Transfer Number (WTN) numbers
- Weight
- Hauliers name and destination
- Vehicle registration
- If it is a hazardous or non-hazardous waste
- EWC code

The site will confirm that all WTN and HWCN are applying to the waste hierarchy when transferring waste. All Transfer notes must also have the Standard Industrial Classification (SIC) code of the person transferring the waste. All WTN and HWCN will be kept during the duration of the project. After which, all WTN will be kept for two years and HWCN will be kept for three years.

Weight Information from the WTN or HWCN will be entered onto the John F Hunt Site Waste Quantities spreadsheet which includes types of waste and quantities generated onsite. All estimates of waste production will be compared to actuals on completion of the project. The site will produce and communicate regular Monthly Environmental Reports which records the types and quantities of waste produced (Waste Data Sheet) on-site and the CO2 emissions arising from site operations such as fuel, electricity, vehicle movements and water consumption. If applicable, the project will also report how much water has been discharged/used on site. A copy of the discharge license plus the schedule of conditions will be kept in the site filing system. On completion of the project, the SWMP and all associated documentation will be forwarded to the Client and the newly appointed Principal Contractor. A copy of the documents will be archived electronically. The site will obtain full environmental permits, exemptions or other evidence will be obtained and checked to ensure that disposal locations can accept the waste type to be sent there, and in the quantity required.

5. Waste – minimisation target and waste minimisation actions

A target has been set to reuse, recycle or recover 98% of overall non-hazardous demolition waste generated by Museum Street (St Giles Quarter) Project. John F Hunt will fully comply to the Environmental protection Act 1990 and Hazardous Waste (England & Wales) Regulations 2005, furthermore, John F Hunt will look at waste reduction through re-recycling and reuse on waste onsite or off-site. All associated works will be carried out in such a way that will, so far as is reasonably practicable, reduce the amount of waste leaving site and amount of waste being disposed of. John F Hunt will adopt certain waste minimisation practices that would ensure that the overall quantities of materials not beneficially used onsite is kept to a minimum. This includes:

- Decrease the need for temporary work
- Crushing inert waste onsite and using for backfill
- Just in time delivery of materials to prevent spoilage
- Ordering the correct materials and in bulk if appropriate
- Recording material delivered onsite and dispatched

- Not over-ordering materials
- Where possible packaging would be kept on until the last moment, material suppliers will be asked to collect packaging for reuses

6. Waste Management

Surplus or waste materials arise from either the materials imported to site or from those generated onsite. Imported materials are those, which are brought to the project for inclusion into the permanent works. Generated materials are those, which exist on the project such as topsoil, sub-soil, trees and materials from demolition works etc. However, there are other considerations to waste management such as waste reduction, segregation of waste, disposal of waste, financial impacts of waste disposal and recording, monitoring, education and reviewing. This plan outlines the procedures that have been put into place and demonstrate how they benefit the environment, how we can measure the effects and how these procedures and practices are sustainable.

6.1 Sorting, reusing and recycling construction waste into defined waste groups, either on site or through a licensed external contractor.

6.1.1 Onsite waste management

John F Hunt will manage the onsite waste by:

- John F Hunt will segregate waste at the source were reasonably practical.
- All waste will be segregated into different waste streams using skips or containers for both hazardous and non-hazardous use.
- Where reasonably practical all waste will be clearly labelled, colour coded and signposted to reduce risk of cross-contamination, this will promote effective segregation of waste onsite.
- Ideally, labels should contain images or material icons to assist staff and sub-contractors who maybe not have English as their first language.
- There will be training of staff though Toot Box Talk (TBT) of practical ways to manage and handle materials to maximise their re-use, recycling, and recovery potential.
- Waste containers will be covered where reasonably practical to present littler and dust from escaping and rain waste from accumulating.
- Regular inspection of waste containers will happen onsite, and replacement of containers when full.
- There will be no burning of waste or unwanted material onsite.
- All waste generated will be stored in designated areas isolated from surface

drainage

- All liquids and soils of a potentially hazardous nature are to be stored in designated location within specific measure content include.
- Appropriate handling and disposal of pile arising, concert, pastes and / or grouts during the laying of foundations will be undertaken.
- Ensure imported soil in soft landscaped area meet appropriate physical and chemical criteria as set out within the remediation strategy

6.1.2 Segregation

Management of separate waste streams onsite will require consideration of storage space of waste which is usually in skip form. Specific areas will be used as the demolition and construction progresses these will be within the demolition and construction working area within these specific areas 40/20/10 yard skips will be placed. Recycling and waste bins are to be kept clean and clearly marked to avoid contamination of materials. If the skips are clearly identified the bulk of the workforce will deposit the correct materials into the correct skip. This process will be constantly monitored by the site management team. Skips for segregation of waste identified currently are:

- Wood
- Ferrous Metal
- Non-ferrous metal
- Canteen waste
- Asbestos (notifiable)
- Asbestos (non-notifiable)
- Demolition waste (soft strip)
- Plasterboard.
- Concrete
- Brick Rubble
- Plant/Machinery

All Inert waste arising from the demolition phase of the project will be stored in a designated stockpile area. This will be reused and recovered through the process of crushing on site.

6.2 Off-site Waste Management

All off-site waste recycling, treatment and disposal would be undertaken by a suitable waste management contractor who has the necessary permits, licences and facility to facilitate the recovery, recycling, reuse and disposal of the waste. The transportation of the material resources and waste arising would take place by road from material suppliers and waste

management facilities. John F Hunt will be responsible for identifying and procuring one or more waste management companies to provide the container (skips), collect, transportation and management of the waste.

The following BREEAM targets have been set out in document *SQQ-GXN-WSC-XX-SP-Y-10902* and summarised below.

John F Hunt will meet or exceed the following benchmarks for non-hazardous construction waste (excluding demolition and excavation waste):

- ≤ 7.5 m3 waste generated per 100m2 GIA, and
- ≤ 6.5 tonnes waste generated per 100m2 GIA.

John F hunt will meet or exceed the following diversion from landfill benchmarks for non0hazardous construction waste and demolition and excavation waste generated:

- Non-demolition at least 70% (by volume) and 80% (by mass)
- Demolition at least 80% (by volume) and 90% (by mass)
- Excavation n/a

BREEAM credits	Amount of waste generated per 100m² (gross internal floor area)	
	m³	tonnes
One credit	≤ 13.3	≤ 11.1
Two credits	≤ 7.5	≤ 6.5
Three credits	≤ 3.4	≤ 3.2
Exemplary level	≤ 1.6	≤ 1.9

The below targets have also been set by the Client team and will be adhered to on the project:

Circular Economy Targets	Policy Requirement	Project Target
Demolition waste materials (non-hazardous)	95% diversion from landfill	98% diversion from landfill
Excavation waste materials	95% diversion to beneficial use	95% diversion to beneficial use
Construction waste materials	95% diversion from landfill	95% diversion from landfill
Recycled content	20% (by value)	23.7%

Example Waste Description:	Example Potential Reuse / Recycling Route
Timber/ Wood	Aim to recycle 100% using Community Wood Recycling.
Hardcore	Aim to recycle via Waste Collection services
Non-ferrous metals	100% recycled.
Ferrous	Steel not reused will be recycled.
Concrete	Aim to recycle/reuse via Waste Collection services
Glass	Aim to recycle 100% using UMR Recycling. Globechain can be used for intact windows.
Brick Masonry	Brick unused will be recycled. Potential for Brick Reuse study to go ahead.
Plasterboard	95% recycled into new plasterboard.
Mixed Waste	Aim for 100% suitable material to be reused using Globechain. Other material will be recycled.
Carpet tiles, ceiling tiles and raised flooring	Aim for 50% to be reused using Globechain. Carpet will be recycled using Carpet Recycling UK.
Florescent lights	50% recycled.

6.3 Waste Controls and Handling

Declaration

The client and principal contractor will take all reasonable steps to ensure that:

All waste from the site is dealt with in accordance with the waste duty of care in section 34 of the Environmental Protection Act 1990 and the Environmental Protection (Duty of Care) regulations 1991; and Materials will be handled efficiently and waste managed appropriately.	
Signatures (Client & Principal Contractor)	

6.4 Responsibility for waste management

Site Activity / Sub-contractor Work Package	Primary Waste Streams	Who is responsible for waste management
Demolition & Site Clearance	Hard-core, Concrete, Timber, Plastics, Glass, Plasterboard, Asbestos, Ferrous and Non-Ferrous Metals	Site Project Manager

6.5 Site Security

Both client and principal contractor must take reasonable steps to ensure site security measures are in place to prevent the illegal disposal of waste at the site.

7. Sustainability

7.1 Sustainable procurement

Where possible, the use of packaging should be minimised when delivering materials to John F Hunt sites and preferably made from reused, recycled or recovered materials. It is encouraged that suppliers and sub-contractors offer a take-back and collection services for material and packaging. Suppliers and sub-contractors will make sure all packaging is in accordance with Packaging Waste Regulations, with all associated information given to John F Hunt, if required. If any non-compliancy is found or there is an unnecessary amount of packaging, supplier and sub-contractors will take back the packaging at their own expense.

A “just-in-time” material delivery system will be in place to avoid material being stockpiled and spoiling during bad weather. All material ordered will be meet the needs and quality for the job that it is intended for; this will help over-ordering and generating extra waste. All new material order will be segregated and stored in a designated storage area.

7.2 The Proximate Principle

The Proximity Principle states that most waste should be treated and managed within the region in which it is generated provided. There should be no unacceptable adverse effects on people, the environment or transportation system. The principle of regional self-sufficiency cannot always be strictly applied as commercial consideration may override boundary issues. Treating certain waste like special or hazardous waste might mean it will not be feasible or practical to treat close to its source of arising or with the region which it is generated. The figure below shows the waste recycling and recovery facility that the project will use during the demolition. Other will be used for example disposal of hazardous waste, however due to the nature of the waste it is not feasible or practical to treat/dispose of close to its source of arising.

8. Implementation of the Site Waste Management Plan

8.1 Register of Waste Carrier Licences and Permits

With respect to the waste management companies that will be removing waste from the project, the table below outlines the waste management contractors, their waste management licenses, waste carrier licenses and exempt site licenses that have been checked and verified for use on this project:

Waste Description:	EWC	Origin (Who produces the waste?)	Waste Carrier			Disposal Site		
			Name	Licence Number	Expiry Date	Name/Address	Licence Number / Exemption Ref.	Distance from site (miles)
Timber/ Wood	17.02.01	John F Hunt	5ES	CBDU239769	28/05/2027	Wandsworth Transfer Station, British Rail Goods Yard, Pensbury Place, SW8 4TR	AB3700GY/V006	3.8
Mixed waste	17.09.04	John F Hunt	5ES	CBDU239769	28/05/2027	Wandsworth Transfer Station, British Rail Goods Yard, Pensbury Place, SW8 4TR	AB3700GY/V006	3.8
Asbestos (non-notifiable)	17.06.05	John F Hunt	G. J Bowmer	CBDU98031	01/04/2025	Fairview, Magpie Lane, Brentwood, Essex, CM13 3DT	SP3294NT/A001	28.5
Non-ferrous metals	17.04.07	John F Hunt	5ES	CBDU239769	28/05/2027	Bidder Street, Canning Town, E16 4SZ	QP3796NY/V002	7.0
Ferrous	17.04.05	John F Hunt	5ES	CBDU239769	28/05/2027	Bidder Street, Canning Town, E16 4SZ	QP3796NY/V002	7.0
Hard-core	17.01.07	John F Hunt	RMS	CBDU149396	09/01/2026	Recycled Material Supplies Sunshine Wharf Bradfield Road Silvertown LondonE16 2AX	EPR/KB3136AM	7.5
Concrete	17.01.01	John F Hunt	SRC	CBDU202785	24/10/2026	Barking Riverside Main Entrance, Infrastructure Way, Off Choats Road, Barking, IG11	EPR/HB3109CX/A001	17.9

9. Training & Communication

The contractor will provide on-site instruction of appropriate separation, handling, recycling, reuse and return methods to be used by all parties at all appropriate stages of the Project. The SWMP will also be mentioned in the site induction process. This will ensure that everyone feels they are included and that their participation is meaningful.

10. Monitoring

The skips need to be monitored to ensure that contamination of segregated skips does not occur. Therefore, we will hold regular tool box talks on how the waste management system is working and point out the extra costs associated with contamination.

We will continually review the type of surplus materials being produced and change the site set up to maximise on reuse or recycling and the use of landfill will be the last option.

This plan will be included as an agenda item at the weekly construction meetings. In addition, the plan will be communicated to the whole project team (including the client) at the monthly meetings. This will include any updates from the last version.

The plan will be reviewed at quarterly intervals by the Environmental Department during their audits and they will be responsible for transferring any best practice and solutions throughout the company.

11. Summary of generated quantities of waste by groupings according to European Waste Catalogue

11.1 The total amount and proportion of generated waste arising that was either reused, recycled and diverted from landfill as per targets set out in section 6.2

Waste Management Routes	Tonnes	(%) of Total Waste
Recycled		
Reused on-site		
Energy From Waste		
Landfill		
Total diverted from landfill		

12. Total generated amount of wastes quantities

Categories	The total generated amount (Tonnes)
Non-Hazardous construction waste	
Hazardous construction waste	
Demolition waste	
Excavation waste	

13. Estimated versus actual waste quantities

13.1 Demolition Waste

Waste type	Waste Materials	Re-use on-site	Re-use off-site	Recycling on-site	Recycling off-site	Recovery off-site	Sent to landfill	Other disposal
Inert	Concrete		4823.67		13667			
	Brick		433.441					
	Glass		8.091		1.238			
Non-hazardous	Mixed Metal		213.092		162.431			
	Gypsum Plasterboard				303.8		6.2	
	Carpet Tiles				28.245			
	Timber		117.08				5.335	
	Ceramic		9.62		31.091			
	Plastics		1.598		4.28		0.653	
	Marble				0.16			
	Bitumen		1.813		0.341		4.224	

13.2 Estimated versus actual waste management routes

Waste type	Waste Materials	Re-use on-site	Re-use off-site	Recycling on-site	Recycling off-site	Recovery off-site	Sent to landfill	Other disposal
Inert	Concrete							
	Brick							
	Glass							
Non-hazardous	Mixed Metal							
	Gypsum Plasterboard							
	Carpet Tiles							
	Timber							
	Ceramic							
	Plastics							
	Marble							
	Bitumen							

14. Post completion

This section is to be completed by the JFH person responsible for waste on site within one month of the works being completed. This plan has been monitored on a regular basis to ensure that work is progressing according to the plan and has been updated to record details of the actual waste management actions and waste transfers that have taken place.					
The following person(s) had the responsibility for implementing this plan:					
Name		Signed		Date	

14.1 Deviations

Issue	Details
Waste forecasts – exceeded	
Waste forecasts – not met	
Other	

14.2 Estimate of cost savings

Relevant signatures

Principal Contractor: John F Hunt Ltd Date:

Client: Date:

SWMP Author: Tom Seath Date:

Circular Economy Statement

Museum Street - SGQ

John F Hunt Ltd

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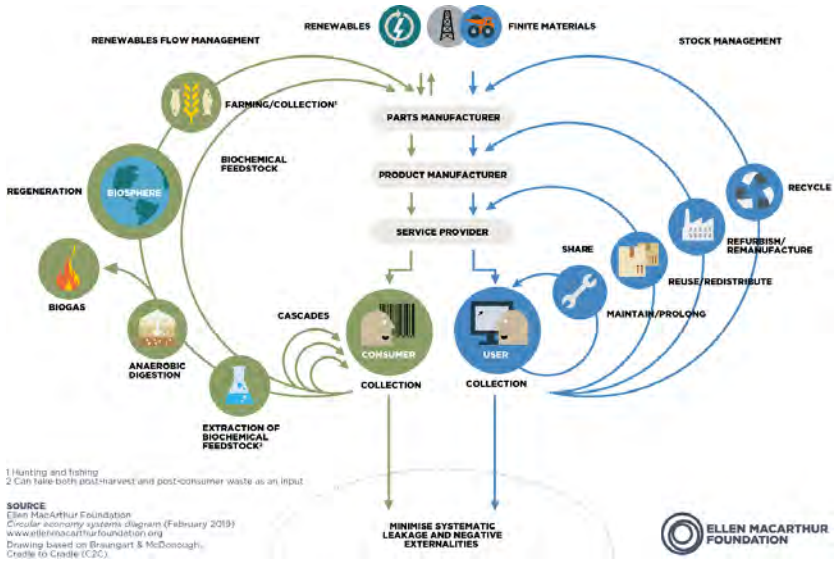
Revision No	Prepared by	Checked	Issue date	Issued to
01	Tom Seath	Irfan Quraishi	13/11/24	G&T / GXN
02	Daniel Sweeney	Irfan Quraishi	15/11/24	G&T / GXN

Introduction

This report outlines the strategic approach to embed principles of Circular Economy in the John F Hunt works on the Museum Street (St Giles quarter), aligned to London Plan 2021 policies relating to the topic. This document is required and should address Condition 39 Circular Economy Report.

The circular economy is an alternative economic model that aims to decouple economic growth from resource consumption and environmental degradation. It is a systemic approach that seeks to redefine how we produce, consume, and dispose of goods and services. In contrast to the traditional linear economy, which follows a "take-make-dispose" model, the circular economy focuses on creating a closed-loop system where resources are kept in use for as long as possible, their value is maximized, and waste is minimized.



The key principles of the circular economy include:

- Designing out Waste and Pollution: Products are designed to be durable, repairable, and recyclable. The focus is on eliminating waste and pollution at the design stage by considering the entire lifecycle of a product.

- Keeping Products and Materials in Use: The circular economy emphasizes extending the life of products through repair, refurbishment, and remanufacturing. It encourages sharing, leasing, and product-as-a-service models to maximize utilization and minimize the need for new production.

- Regenerating Natural Systems: The circular economy aims to restore and regenerate natural systems by promoting sustainable practices, such as regenerative agriculture, reforestation, and ecosystem restoration. It seeks to minimize the extraction of virgin resources and prioritize the use of renewable resources.

- Closing the Loop on Materials: Emphasis is placed on recycling, reusing, and recovering materials from products at the end of their life. This involves implementing effective waste management systems, promoting recycling infrastructure, and developing innovative technologies for material recovery.

Project Description

The site comprises several individual different buildings, which includes Selkirk House, 166 High Holborn and 1 Museum Street, 10-12 Museum Street, 35-41 New Oxford Street, and 16A-18 West Central Street, London, WC1A 1JR.

The site is bounded by High Holborn to the south, Museum Street to the east and New Oxford Street to the north, with the rear of the properties fronting Grape Street forming the western boundary. West Central Street dissects the site and separates out Selkirk House from the New Oxford Street and West Central Street block (known as the West Central Street component of the site). Selkirk House comprises a 17-storey building, which includes two basement levels, and a further partial basement level. Selkirk House is occupied by the former Travelodge hotel building and car park. At lower levels there is a car park set across basement to second floor level. The West Central Street buildings are predominantly in retail use at ground floor level fronting New Oxford Street. The basement, first and second floors of No. 39 – 41 are office uses with the upper floors of 35 – 37 being residential uses. No's 16a, 16b and 18 West Central Street were previously in use as a nightclub at basement level with offices above. The West Central Street component of the site falls within the Bloomsbury Conservation Area. There are two Grade II listed buildings within the application boundary: 10-12 Museum Street and 35-37 New Oxford Street. Additionally, Grade II listed buildings adjoin the site boundary at 43-45 New Oxford Street and 16 West Central Street. No. 33, 39 & 41 New Oxford Street and 16A-18 West Central Street are each identified as 'positive contributors' in the Conservation Area Appraisal. Selkirk House sits outside of the Conservation Area boundary which runs along West Central Street.

Selkirk House:

The building consists of a car park located on the north part of the block, occupying three levels of basement and four levels above ground. The car park utilises a spiralling floor plate arrangement to provide car parking. Access to the car park is via Museum Street. The proposed works involve the demolition of the existing superstructure and re-use of the existing foundation raft to construct a new commercial development, One Museum Street. The existing building was originally built in 1962.

West Central Street Works:

In summary, the 16a,16b-18 West Central Street structure will be demolished and redeveloped. The Grade II listed buidlings, 10-12 Museum Street and 35-37 New Oxford Street will be sensitvely stripped out with building facades protected during works.

Prior to deconsturction works within the sturcutre, all windows and removable strucutres will be removed and maintained off stie for protection. On completion of the clearance the façade to be braced prior to internal seperation. Only when all survey are reviewed and witnessed will any hard demoltion of the property begin behind the façade.

John F Hunt – Scope of Works

- Strip out and Demolition of the aforementioned properties
- Piling works
- Removal of material

Reuse and Best Practice Overview

Each key reusable products and demolition materials are described in subsequent sections with detailed options for
reuse and recycling.

Generally, it is advised that a long lead-in time as possible and maximum exposure are required to enable the reuse
of products and components. The best chances for reuse, with the associated environmental and economic benefits,
are as near to site as possible:

- Used by the same client locally
- Sold or given away locally

The following recommendations may assist in maximising the reclamation potential of the items identified:

- Consult the client on the findings of this report and consider any options for closed-loop re-use in a similar
- project (or within the further development/refurbishment).
- Where feasible, consider setting aside storage on site for segregation of salvaged items.

There are a few organisations that may be able to assist with the reuse of items, in addition to EME, which are listed
below in London:

Excess Material Exchange – A reuse exchange that connects stakeholders within the construction industry.
Globechain: https://globechain.com/; A reuse marketplace that donates to charities, schools and small businesses.
Reuse Network: https://reuse-network.org.uk/donate-items/#/

For items that may have some architectural salvage value, specific salvage items can be advertised for free on www.salvo.co.uk or low value materials on www.salvomie.co.uk. Salvo also operates a demolition/refurbishment alert service on their website which serves to bring forthcoming demolition products to the attention of potential buyers or users. Local architectural salvage merchants about specific items can also be contacted.

All figures shown in this document refer back to tender stage figures agreed with the Client. All figures can be found within the document, these figures are indicative of what could potentially be reused by JFH and subcontractors.

John F Hunt is committed to exploring reuse within all of it's projects, the sections following in this document outline this and highlight opportunities for reuse.

Material Quantities – Potential Waste Management Routes

Waste type	Waste Materials	Re-use on-site	Re-use off-site	Recycling on-site	Recycling off-site	Recovery off-site	Sent to landfill	Other disposal
Inert	Concrete		4823.67		13667			
	Brick		433.441					
	Glass		8.091		1.238			
Non-hazardous	Mixed Metal		213.092		162.431			
	Gypsum Plasterboard				303.8		6.2	
	Carpet Tiles				28.245			
	Timber		117.08				5.335	
	Ceramic		9.62		31.091			
	Plastics		1.598		4.28		0.653	
	Marble				0.16			
	Bitumen		1.813		0.341		4.224	

Concrete

Material Summary

Total Tonnage: 18490.67

Potential Reuse Tonnage: 4823.67

Composition: Concrete Slabs and Finishes

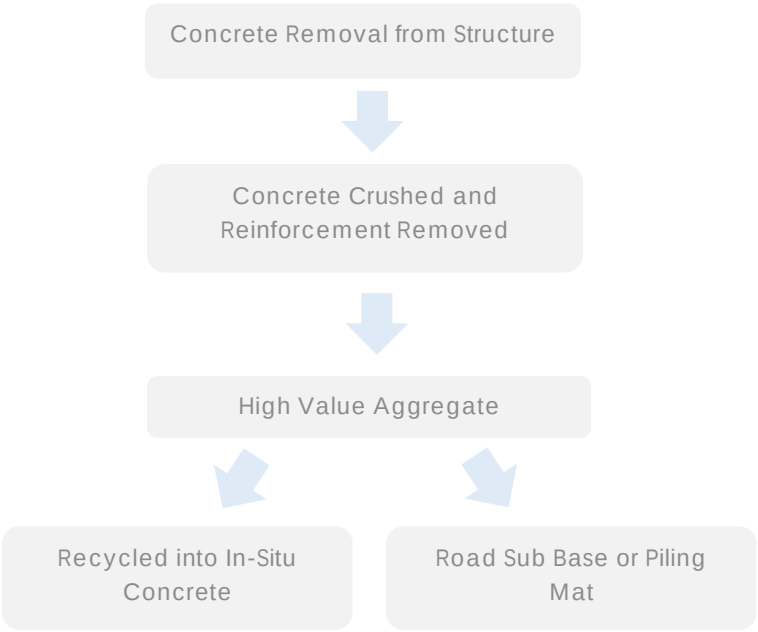
Material Location: Flooring, Columns

Most of the structural concrete and blockwork is unsuitable for reuse, as they are not in precast sections, and the blockwork is unlikely to be able to be separated without significant damage.

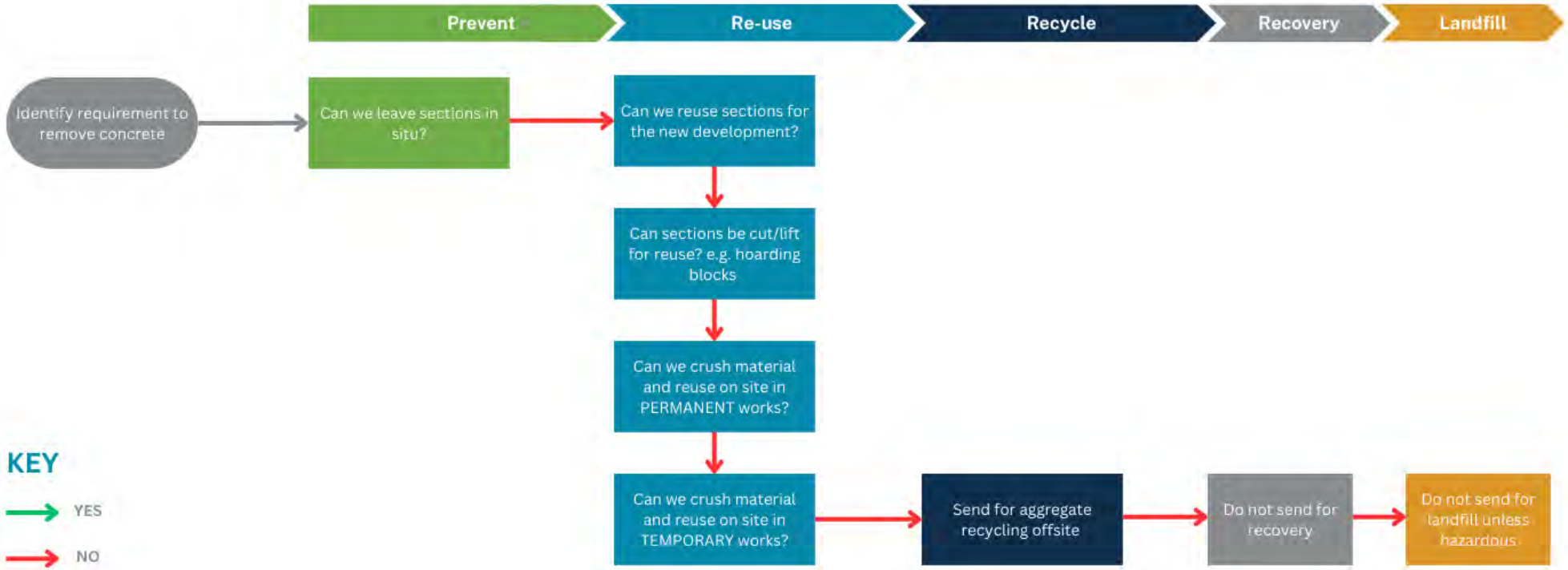
Concrete is in theory 100% recyclable. It can be segregated and crushed for reuse as hard core, fill or in landscaping or used as recycled aggregate in new concrete. Although recycled and secondary aggregates can be used in some concrete applications, other lower grade end uses (e.g. in unbound materials as fill and hardcore) may sometimes be more resource efficient due to reduced processing demands and transportation.

Often such waste does not even leave the demolition site, being used for the site's redevelopment, as shown by the NFDC figures with nearly half of inert waste (over 9 million tonnes) treated this way. Otherwise, it is used on other sites as fill to offset the need for primary raw materials. Very little concrete waste therefore tends to go to landfill.

All waste management routes will be investigated and the most efficient and least carbon intensive route will be chosen for every material leaving site.



Concrete Reuse Procedure



Steel and Metal

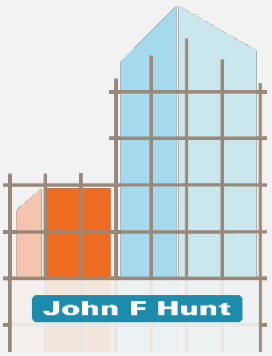
Material Summary

Total Tonnage: 375.523

Potential Reuse Tonnage: 213.092

Composition: Rebar, Metal Fittings, Metal Fixtures

Material Location: Flooring, Walls, Columns



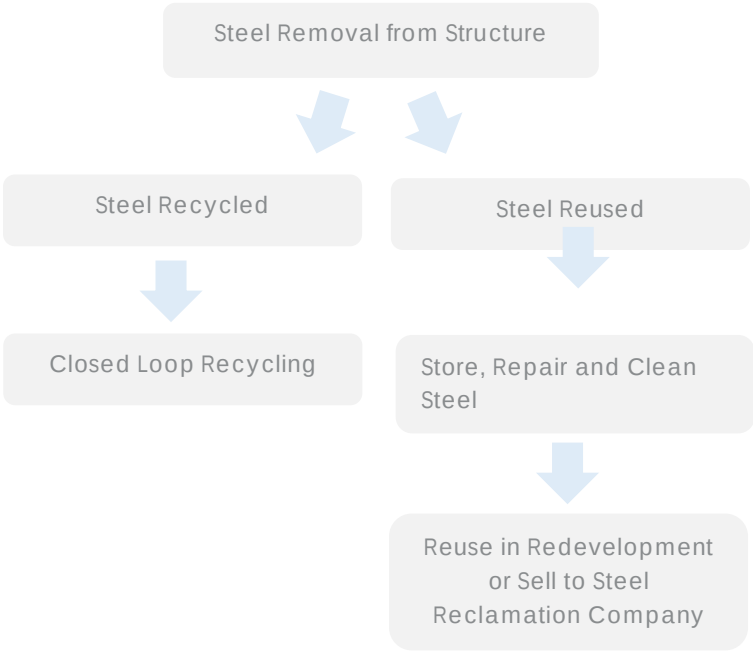
Steel and metal have multiple waste management routes it can go down when being removed from an existing development.

In theory metal is 100% recyclable and can be used again in structures if it is examined and is to an acceptable strength.

Traditionally Steel and metal is taken from demolition projects and then melted down and recycled into new steel products. The excess steel scrap is then melted down by a furnace that runs at a temperature of nearly 3,000 degrees, and purified to rid the scrap of any contaminants. Then, the melted steel is solidified into sheets and prepped for shipping.

There are options now to Reuse Steel and metal whether that be through Steel reclamation companies or through actual Reuse on the redevelopment itself.

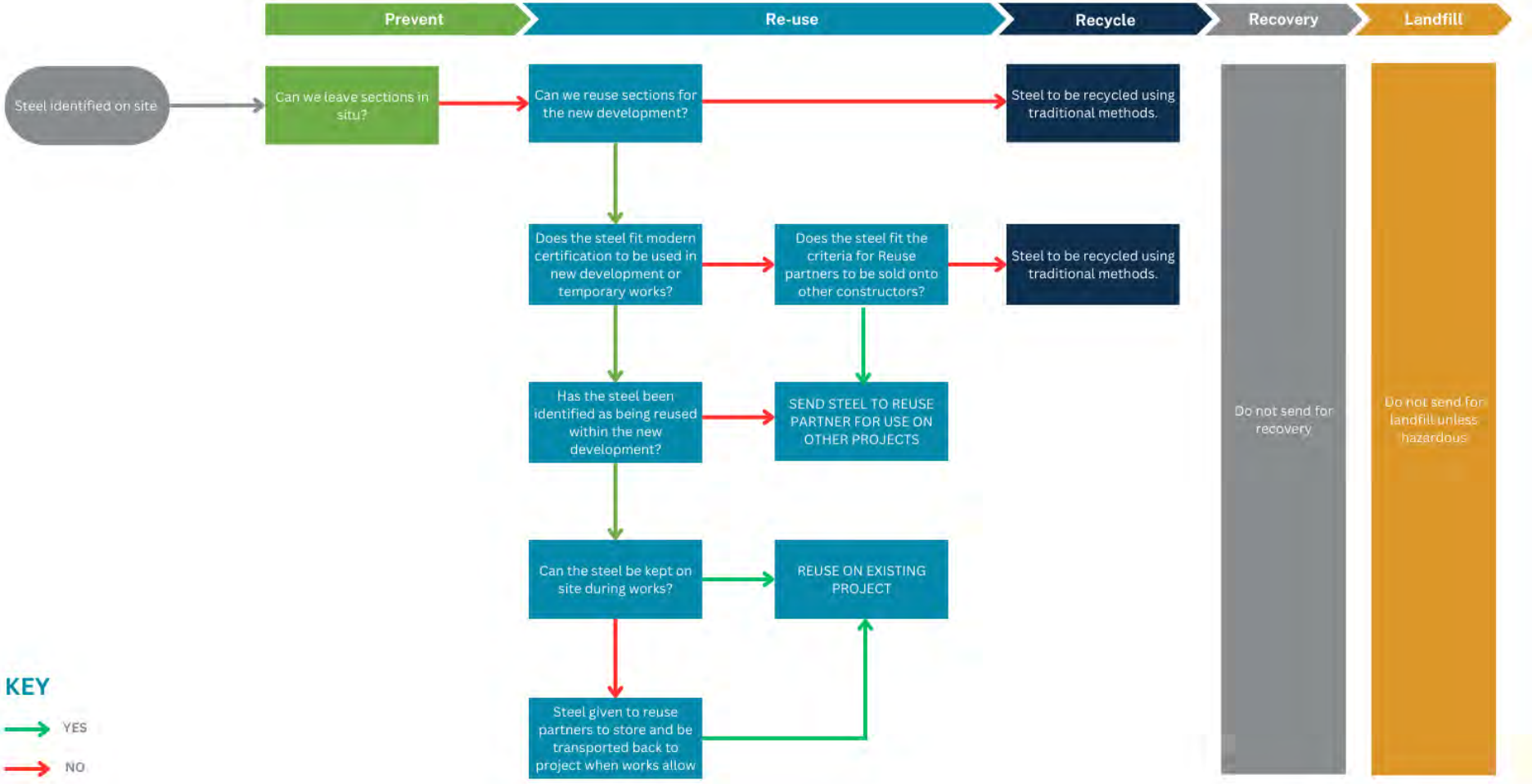
All steel being Reused will need to be graded and certified before any permanent works can be carried out.



Potential Reuse Partners:

Cleveland Steel (For Steel Reuse) EMR (For Steel Reuse) Celsa Steel (For Steel Reuse)

Steel Reuse Procedure



Bricks

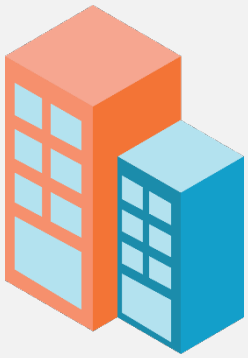
Material Summary

Total Tonnage: 433.41

Potential ReUse Tonnage: 433.41

Composition: External Walls

Material Location: External Walls

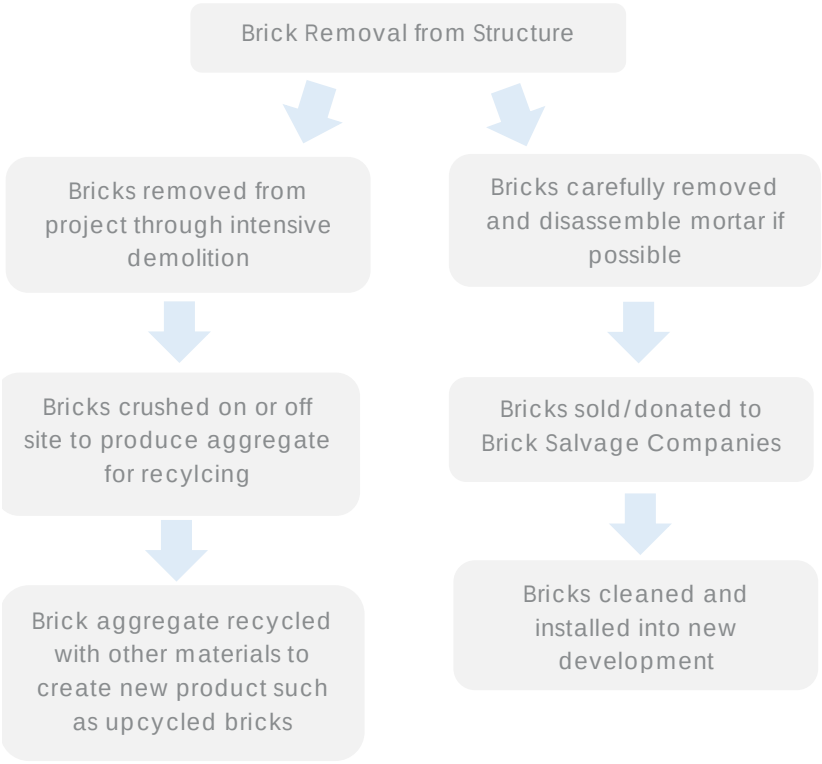


Bricks can potentially be recovered and reused, but most often they are crushed and recycled into fill materials or recycled aggregate. Although there is a market for recovered clay bricks, it is not always done, commonly due to the inability to remove mortar from the bricks.

Traditional lime-based mortars are generally weaker than cement-based mortars and hence easier to remove. The more recent use of strong mortars with a high cement content can increase the time and effort required to remove the mortar and/ or lead to subsequent damage to the bricks. These mortars may be chosen to improve longevity in use and reduce maintenance requirements from repointing for instance.

It is recommended that bricks that are unable to be reused are segregated either onsite or at a waste facility and
crushed to produce recycled aggregate (RA).

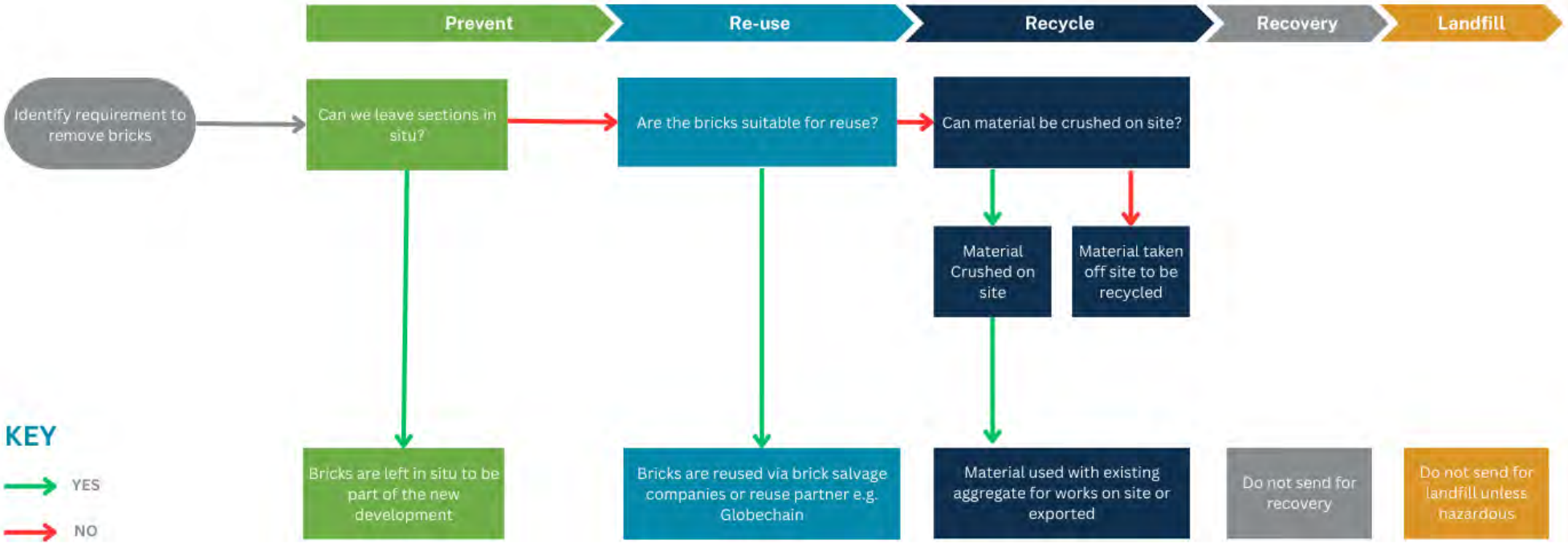
Bricks can also be reused through Brick Salvage companies. There has also been interesting developments in Brick reuse research into turning bricks into aggregates for new concrete, something John F Hunt has assisted with in order to broaden the market for brick reuse.



Potential ReUse Partners:

Globechain (For Brick ReUse)
ReUse Network (For Brick ReUse)
London Reclaimed Brick Merchants (For Brick ReUse)
Potential Research options such as Brunel University Collaboration

Bricks Reuse Procedure



Timber

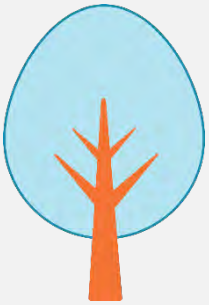
Material Summary

Total Tonnage: 122.415

Potential ReUse Tonnage: 117.08

Composition: Internal fixtures, Office Fixtures and Fittings

Material Location: Throughout Structure



Timber is one of the most versatile materials with a construction project. If offers the ability to recycle easily but also be reused on the initial project or off site.

Products within the project that are composed of timber should be segregated and then reused. Materials such as doors and fittings can be offered on ReUse platforms such as Globechain. Items that need to be broken down or damaged to remove can be given to partners, such as Community Wood Recycling, to save them from direct recycle. This also means materials coming off site have a positive social aspect.

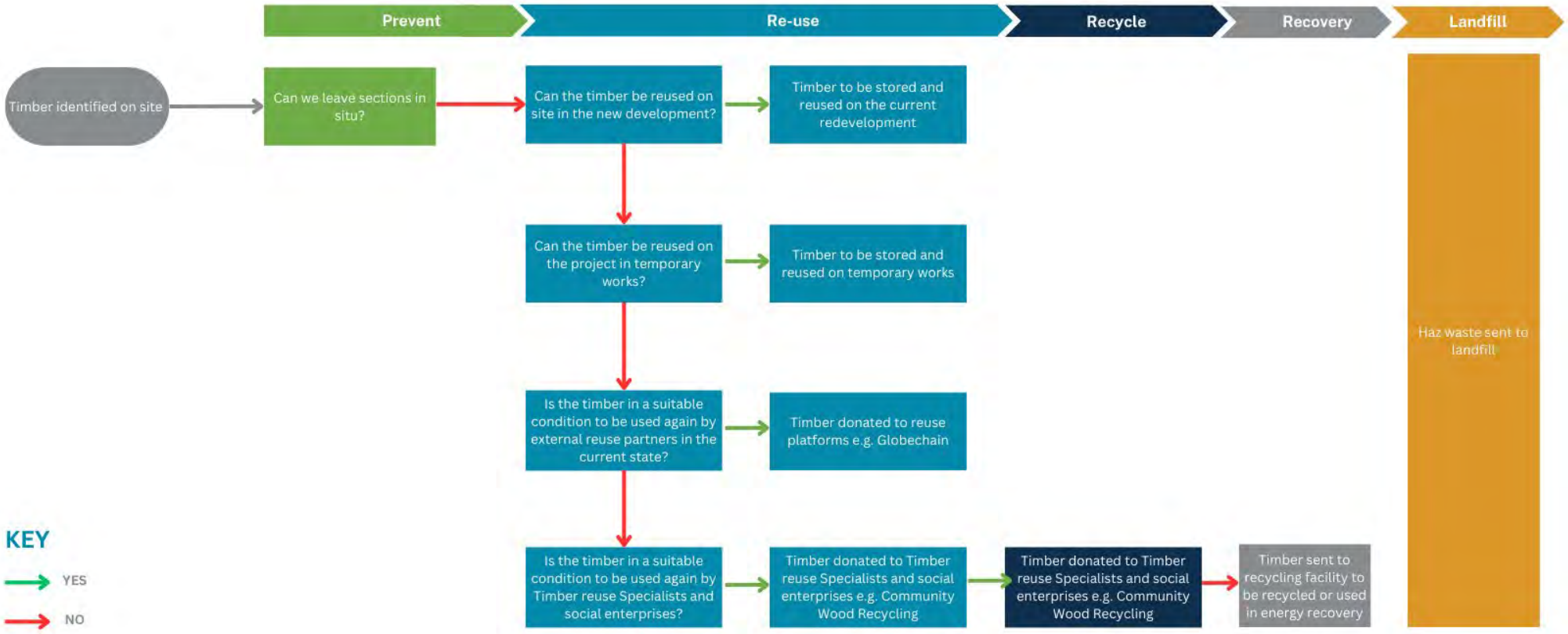
Recycling timber is now a bare minimum throughout any project. Material can be broken down on site and then sent to a contacted waste carrier. If reuse is not viable, most of the solid timber can be recycled, usually into chipboard. Guidance has been issued for consideration of potentially hazardous treatments. Timber should be segregated on site, if space permits, to improve level of reuse or recycling. If sent offsite to a licensed waste management contractor, this will typically result in recycling for chipboard (if well segregated) or as an energy feedstock (especially where mixed with other materials).

Potential ReUse Partners:

Community Wood Recycling Globechain (For Internal Items) ReUse Netowrk (For Internal Items)

Forresso – Remade Materials and Products

Timber Reuse Procedure



Glass

Material Summary

Total Tonnage: 9.329

Potential ReUse Tonnage: 8.091

Composition: Internal Glass Partitions, External Glass Layers

Material Location: Throughout Structure

Glass can be collected in skips and containers for recycling. The quality of the glass in the skips will be dependent upon the awareness and training of those working on site and appropriate site management is required along with clear signage. They also need to be close to the workplace due health and safety risks from transporting glass.

One of the limiting factors in the use of post-consumer flat glass as cullet back into the float glass manufacturing process is the availability of it in the right quality and chemical compatibility as the manufacturing process is sensitive to low levels of contamination. Most of post-consumer flat glass waste produced does not go back into glass and is will be used as aggregate or landfilled. For demolition, it is more likely to be crushed into aggregate with other inert waste. For glass to be reused it needs to be collected on specialist steel A frame stillages, handled and stored carefully.

There is potential for glass to be reused in the redevelopment, but this would need to be considered in light of possible end uses/ users, alongside the H&S and cost implications of extracting without damage.

Glass identified prior to works commencing

Internal Glass partitions and other products to be segregated

Items to be reused in the redevelopment or offered to ReUse platforms

External glass crushed on site to minimis health and safety risks

External glass crushed on site to minimis health and safety risks

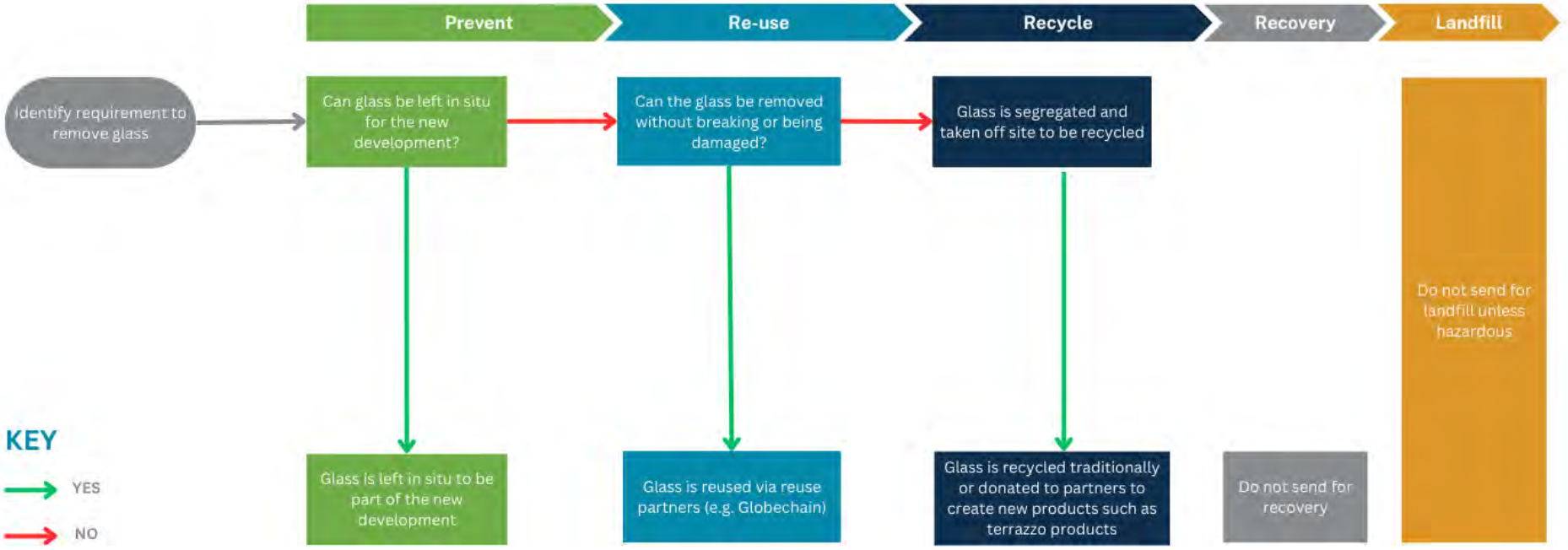
Glass is melted and recycled into new glass products

Potential ReUse Partners:

Globechain (For Internal Items) ReUse Network (For Internal Items) Optima (For Internal Partitions)

Saint Gobain (Window ReUse Partner)

Glass Reuse Procedure



Internal Materials

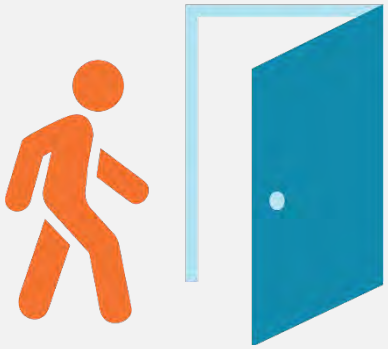
Material Summary

Total Tonnage: 75.647

Potential ReUse Tonnage: 63.616

Composition: Carpet Tiles, Plastics, Marble, Ceramic

Material Location: Throughout Structure



Internal materials that are removed during the soft strip phase of demolition provide a great opportunity to increase recycling rates and if possible to be reused by partners on future projects.

Plasterboard items can be removed and recycled. Plasterboard recycling rates vary due to the materials within the product. Plasterboard products are often shredded and then reconstituted as new plasterboard products. In some cases plasterboard needs to be crushed with other materials producing mixed recycling aggregates.

Metal products such as RAF and Ceiling tiles can be easily recycled, but have a huge potential to be reused. RAF and ceiling tiles will be taken out and separated, they can then be offered to ReUse platforms.

Carpet tiles can be recycled using traditional recycling methods. Items that are in good condition can be stored and reused using reuse platforms.

Any other materials that are within the building will be analysed and the waste management route will be determined based on difficulty and programme implications.

Internal items are collected and segregated

Internal items are offered on ReUse platforms and reused in future projects

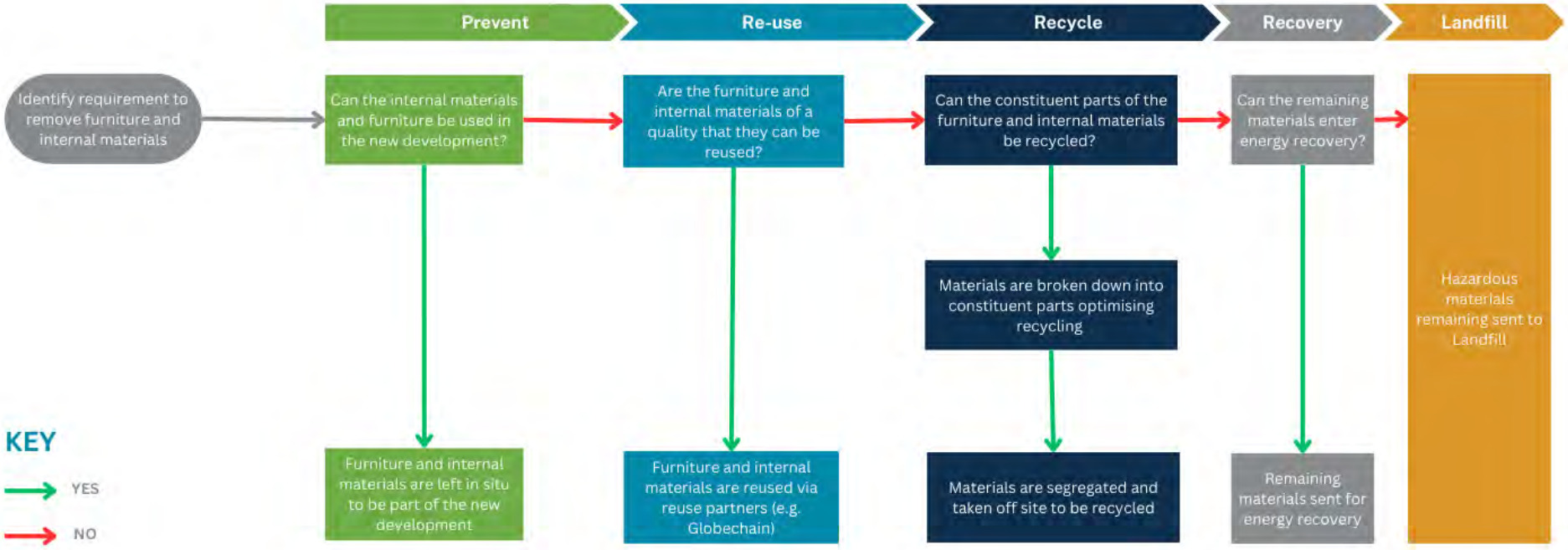
Internal items that cannot be reused will be recycled off site

Shredded materials will be reconstituted into new products

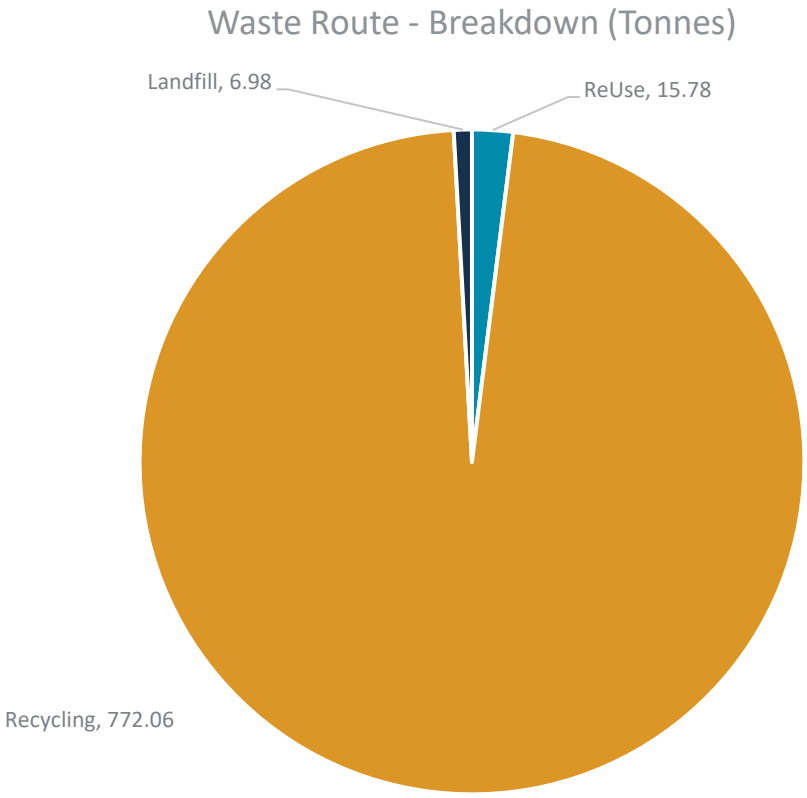
Potential ReUse Partners:

ReUse Network (For Item ReUse) Globechain (For Item ReUse) Carpet Tile Recycling (For Carpet ReUse)

Furniture & Materials Waste Procedure



Material Management Analysis



Waste Management Routes and Tonnages

Re-use on-site	Re-use off-site	Recycling on-site	Recycling off-site	Sent to landfill	Other disposal
0	5608.405	0	14198.586	16.412	0

The above figures are based from data taken from the Pre Demolition Audit produced by John F Hunt . These figures were agreed at tender stage, further details and breakdown of the waste management routes and quantities can be found within the Pre Demolition Audit.

As outlined throughout this document the key for these figures to become reality is to partner and communicate with reuse partners. In the following section reuse partners are outline d with specific material specialisms.

Circular Partnerships Database

SITE INVESTIGATIONS			
Company name	Location	Service/product description	Website/contact
Fugro	Wallingford, UK	Materials testing and structural investigations	http://www.fugro.com/our-services/land-site-characterisation/testing-monitoring/construction-materials-engineering-and-testing
CBG	Cambridgeshire, UK	Materials testing and structural investigations	http://www.gbg.co.uk/structural-investigation
Sandberg	London, UK	Materials testing and structural investigations	http://www.sandberg.co.uk/

MATERIAL REUSE STOCKISTS / SUPPLIERS			
Company name	Location	Service/product description	Website/contact
Ainscough Metals	Lancashire, UK	Steel reuse	http://www.ainscoughmetals.co.uk/
Bruggenbank – second hand bridges	The Netherlands	As major clients for infrastructure projects, the cities of Amsterdam and Rotterdam have joined forces to establish an independent platform for reusing bridges and bridge components.	http://www.nationalebruggenbank.nl/en/
Cleveland Steel & Tubes	Yorkshire, UK	Steel reuse	http://www.cleveland-steel.com/
CollectEco	Bristol, UK	Furnitures/fixtures collection service for third sector	http://www.collecteco.co.uk/
Community Wood Recycling	UK-wide	Wood – waste from construction / demolition as well as from timber mills, joinery shops and other wood product manufacturing	http://www.communitywoodrecycling.org.uk/
EMR	Warrington, UK	Steel reuse	http://www.uk.emrgroup.com/
Enfield Excess Materials Exchange	Essex, UK	Construction materials including steelwork, bricks, cladding, aggregates salvaged from Meridian Water project	http://www.enfield.excessmaterialsexchange.com/

Enviromate	UK, US, Australia, Europe	Leftover building materials – wide range from timber, rubble, doors, stairs, insulation	http://www.enviromate.co.uk/
Excess Materials Exchange	Based in Amsterdam – transport can be organised to other European cities	Any material, component or (waste) product can be exchanged on EME's digital platform	http://www.excessmaterialsexchange.com/nl/
Globechain	London, UK	Construction materials marketplace	http://www.globechain.com/
Material Reuse Portal	London, UK	One of five platforms built for the CIRCuIT project. It brings together construction materials from multiple marketplaces to create a single place where reuseable materials can be found.	https://www.materialreuseportal.com/
Opalis (run by Rotor)	UK	Resellers of: landscaping and paving, cobble stone and pavers, floors in natural stone, structure and shell, timber framing, steps in stone, steel structure, bricks, insulation, slates, roof tiles and wall covers, cladding, woodwork, windows, doors, stairs, interior finishings, floors in natural stone, parquet and wooden floors, tiles, partitions and suspended ceilings, cladding, equipment, sanitary, technical installations, radiators, lights, decoration, architectural antiques, metal work, chimneys	http://www.opalis.co.uk/en
Oxford Wood Recycling	Oxford, UK	Timber reuse and recycling	http://www.oxfordwoodrecycling.org.uk/
Salvoweb	UK, France, Germany, US, Australia	Architectural antiques, decorative antiques and furniture, architectural salvage, garden antiques, rural domestic industrial and institutional bygones, reclaimed building materials and demolition salvage.	http://www.salvoweb.com/

STRUCTURAL CIRCULAR PRODUCTS			
Company name	Location	Service/product description	Website/contact

Façade Click	Belgium	Brick façade click system	http://www.facadeclick.be/
K-Briq	Edinburgh, UK	Brick made out of 90% demolition waste	http://www.kenoteq.com/
Lindapter	Bradford, UK	Demountable steel connections	http://www.lindapter.com/

ARCHITECTURAL CIRCULAR PRODUCTS			
Company name	Location	Service/product description	Website/contact
AltRock	London, UK	Upcycled terrazzo floors	http://www.altrocksurfaces.com/
Autex	NZ with UK Offices	Acoustic products with ranges made from recycled plastic fibres	http://www.autexglobal.com/
Baux	Sweden	Biobased acoustic products	http://www.baux.com/acoustic-products/wood-wool/panels/
Crown Workspace	London, UK	Refurbished office furniture supplier	http://www.crownworkspace.com/uk/
Fagerhult	Europe	Circular lighting	http://www.fagerhult.com/about-fagerhult/sustainability/circular-solutions/
Foresso	Birmingham, UK	Timber terrazzo	http://www.foresso.co.uk/
GoodWaste	London, UK	Furniture from waste materials	http://www.goodwaste.net/
Grohe	Germany with UK offices	Brassware with Cradle to Cradle certified range	http://www.grohe.co.uk/en_gb/our-service/about-grohe/sustainability/
Honext	Spain	Biobased board for interiors	http://www.honexmaterial.com/
Interface	Global	Carpet tiles with high recycled content, adhesive-free options, take back scheme	http://www.interface.com/GB/en-GB?r=1
Mosa Façade Systems	Global	Ceramic façade cladding (Cradle to Cradle certified)	http://www.mosa.com/en
Optima	High Wycombe, UK	Reuse of glass partitions and doors	http://www.optimasystems.com/reuse-service-glass-partitions/
Orluna	Worldwide	Lighting products with 20-year repair and reuse guarantee	http://www.orluna.com/circular-product
Paint 360	Halesowen, UK	Reclaimed & recycled paint	http://www.paint360.co.uk/

Parkside Tiles	London, Leicester, UK	Tiles with high recycled content and alternative manufacturing techniques to lower carbon footprint	http://www.parkside.co.uk/
RMF	Leamington Spa, UK	Raised floor systems	http://www.rmf-services.co.uk/
Stone Cycling	The Netherlands	Brick with high recycled content	http://www.stonecycling.com/
Tarkett	Global	Carpet tiles with C2C range	http://www.commercial.tarkett.com/products/carpet/carpet-tiles-planks
TRACO UK	Portsmouth, UK	Reused office equipment and furniture	http://www.recycledassets.co.uk/
Whitecroft Lighting	Ashton-under-Lyne, UK	Vitality: refurbish, repurpose, redistribute, resell and in the end recover luminaires	http://www.whitecroftlighting.com/products/whitecroft-vitality-circular-products/
Wicona	Global	Aluminium curtain walling	http://www.wicona.com/en/int

OTHER			
Company name	Location	Service/product description	Website/contact
Building Deconstruction Institute	USA	Deconstruction and reuse of timber buildings	http://www.reuseconsulting.com/deconstruction-institute-1
Cradle to Cradle product registry	The Netherlands	All C2C products list	http://www.c2ccertified.org/
Grosvenor/UKGBC reuse network	UK	Network for material exchange	http://www.grosvenor.com/materialreuse
Unbuilders	Canada	Deconstruction and upcycling of timber buildings	http://www.unibuilders.com/

Notes:

One Museum Street

Glass Circularity Audit
APPENDIX G

DSDHA GXN BC PARTNERS simten DEVELOPMENTS

Eckersley O'Callaghan

One Museum Street

Glass Circularity Audit

Issue	P01
Issue Date	2024.02.15
Status	For Information
Prepared By	**SH**
Checked By	MT

Introduction

Scope

- Investigate, identify, and quantify existing glass on facade for recycling

Existing Facade

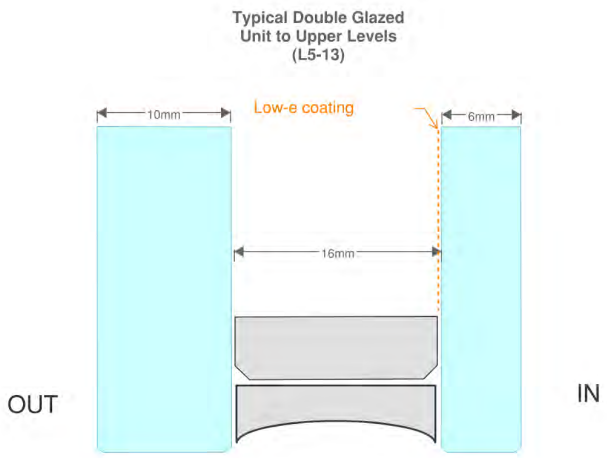
Current Proposed Facade

Eckersley O'Callaghan

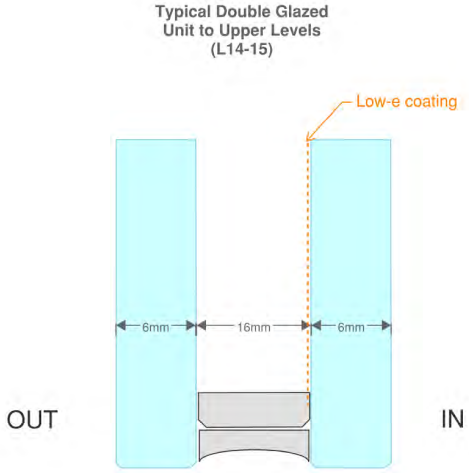
Glazing Typologies

Glazing Typologies

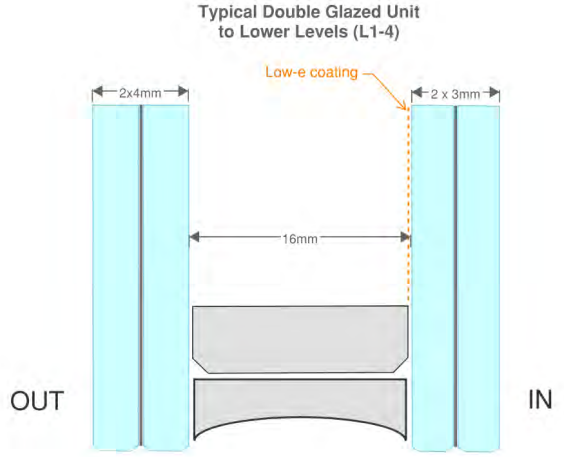
Type 1



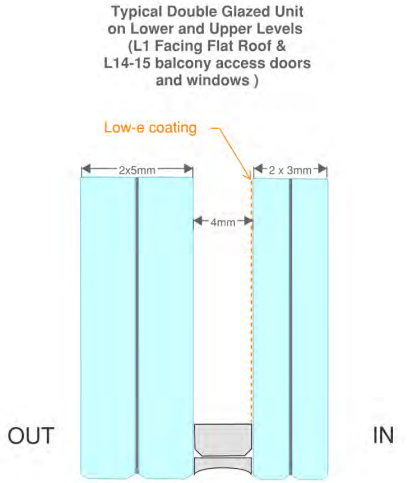
Type 2



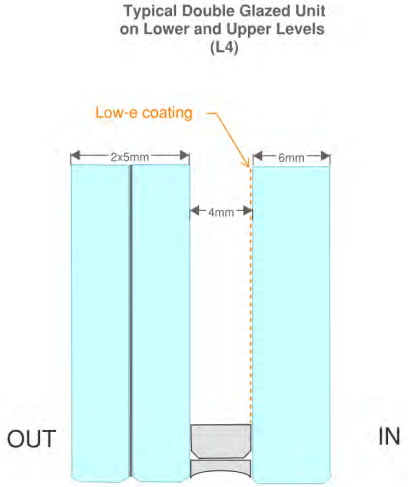
Type 3



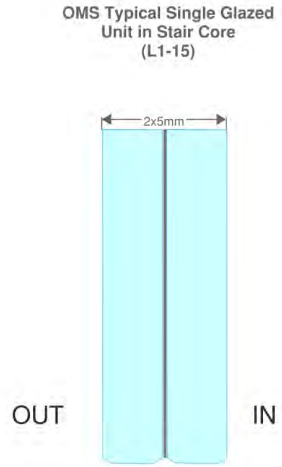
Type 4



Type 5



Type 6



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Glazing Summary

Glass Type	Build up
1	DGU 10-6
2	DGU 6-6
3	DGU 44.2 - 33.2
4	DGU 55.2 - 33.2
5	DGU 55.2 - 6
6	Single 55.2

Hatched areas are assumed based on understanding of glass application pattern

Eckersley O'Callaghan

Glazing Mark-up on Elevation

East Elevation

- Type 1 Double Glazing (10 - 6)
- Type 2 Double Glazing (6 - 6)
- Type 3 Double Glazing (44.1 - 33.1)
- Type 4 Double Glazing (55.2 - 33.1)
- Type 5 Double Glazing (55.2 - 6)
- Type 6 Single Glazing (55.2)
- Misc. Glass

Hatched areas are assumed based on understanding of glass application pattern

Eckersley O'Callaghan

West Elevation

- Type 1 Double Glazing (10 - 6)
- Type 2 Double Glazing (6 - 6)
- Type 3 Double Glazing (44.1 - 33.1)
- Type 4 Double Glazing (55.2 - 33.1)
- Type 5 Double Glazing (55.2 - 6)
- Type 6 Single Glazing (55.2)
- Misc. Glass

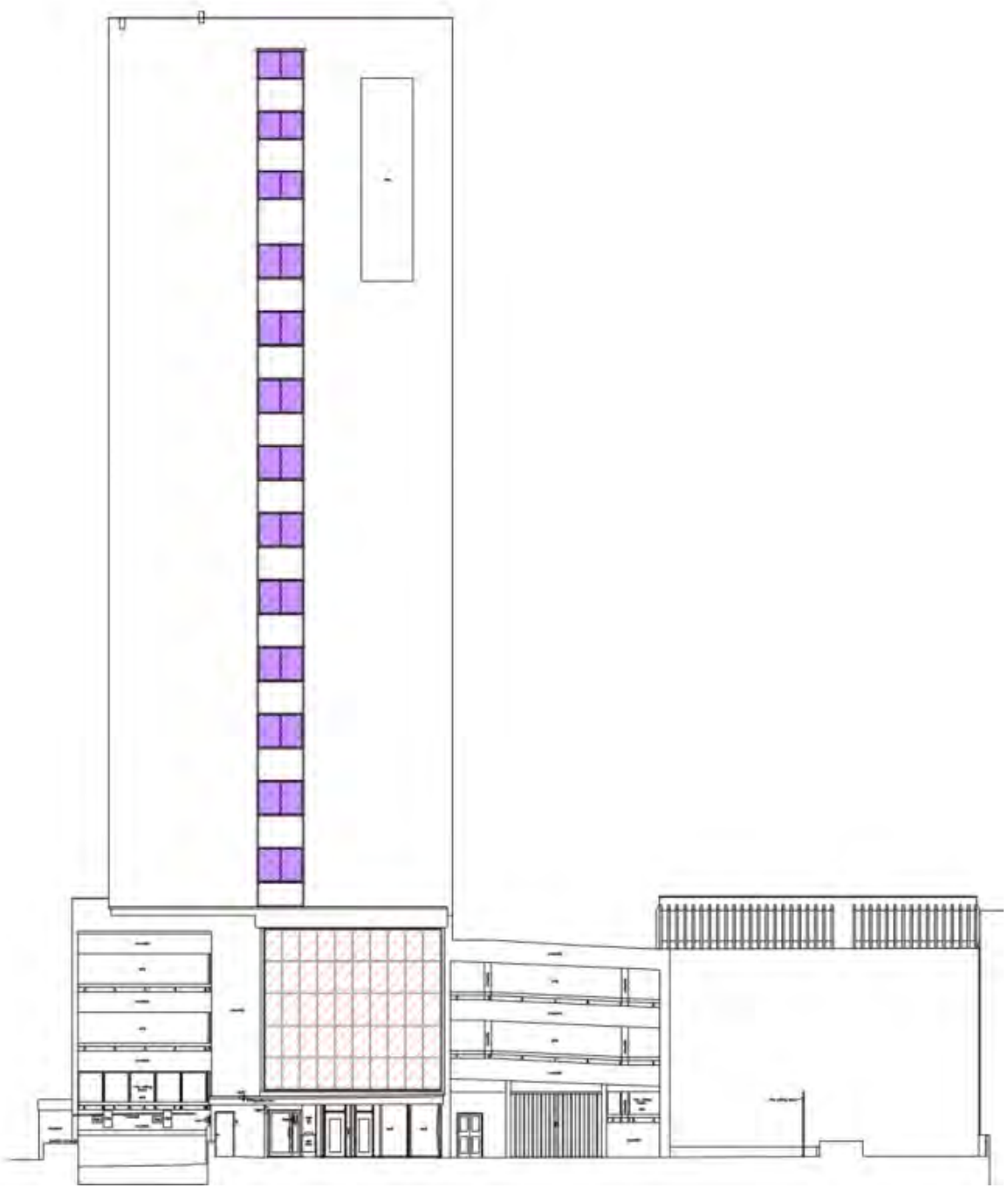
Hatched areas are assumed based on understanding of glass application pattern

Eckersley O'Callaghan

North Elevation

- Type 1 Double Glazing (10 - 6)
- Type 2 Double Glazing (6 - 6)
- Type 3 Double Glazing (44.1 - 33.1)
- Type 4 Double Glazing (55.2 - 33.1)
- Type 5 Double Glazing (55.2 - 6)
- Type 6 Single Glazing (55.2)
- Misc. Glass

Hatched areas are assumed based on understanding of glass application pattern



Eckersley O'Callaghan

South Elevation

- Type 1 Double Glazing (10 - 6)
- Type 2 Double Glazing (6 - 6)
- Type 3 Double Glazing (44.1 - 33.1)
- Type 4 Double Glazing (55.2 - 33.1)
- Type 5 Double Glazing (55.2 - 6)
- Type 6 Single Glazing (55.2)
- Misc. Glass

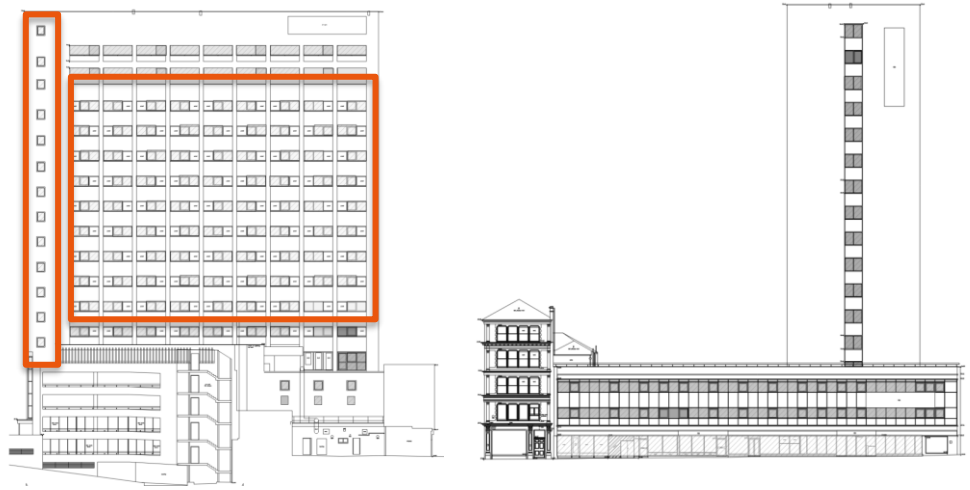
Hatched areas are assumed based on understanding of glass application pattern

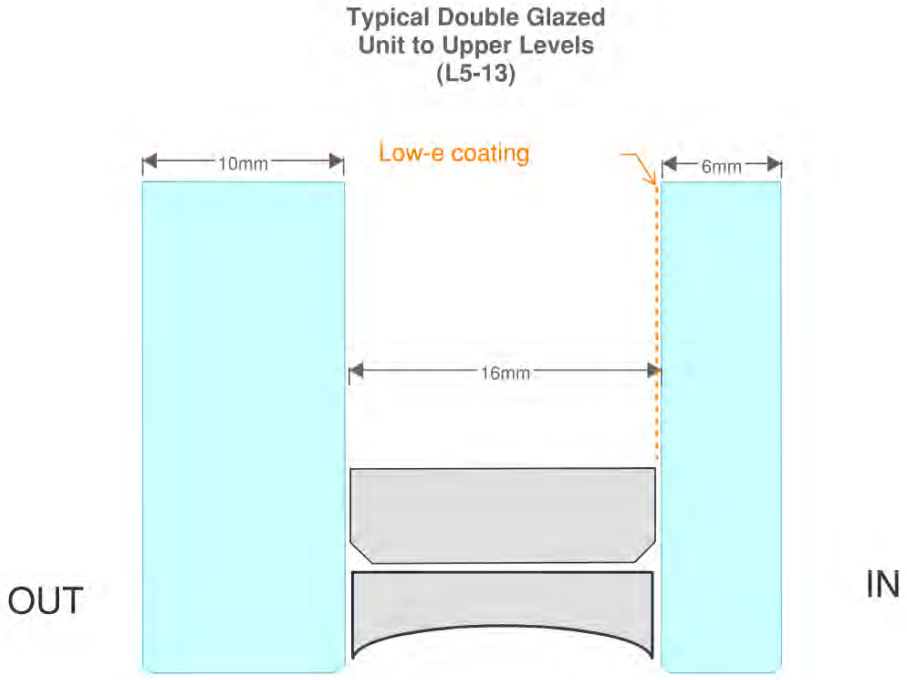
Eckersley O'Callaghan

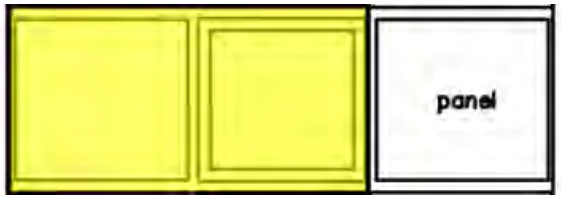
Glazing Typologies and Locations

Type 1

Typical Window & Near Stairs | East, West | Floor 5 - 13





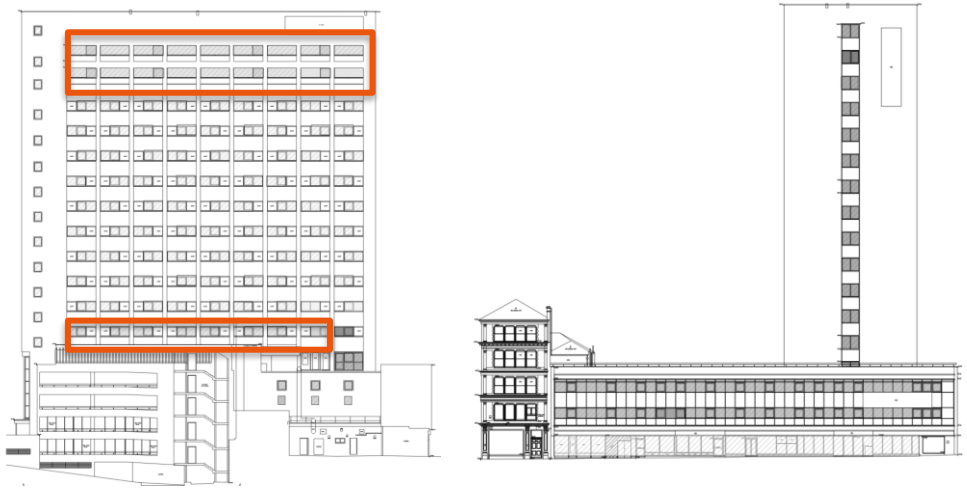


Eckersley O'Callaghan

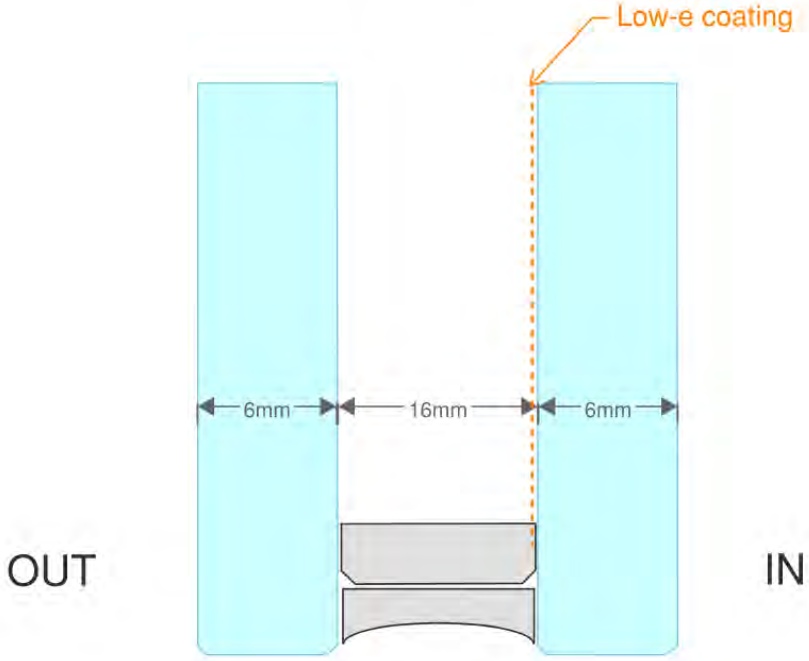
Type 2

Apartments Balcony Windows, Kitchen Windows | East, West | Floor 14 -15

Typical Window | East, West | Floor 4



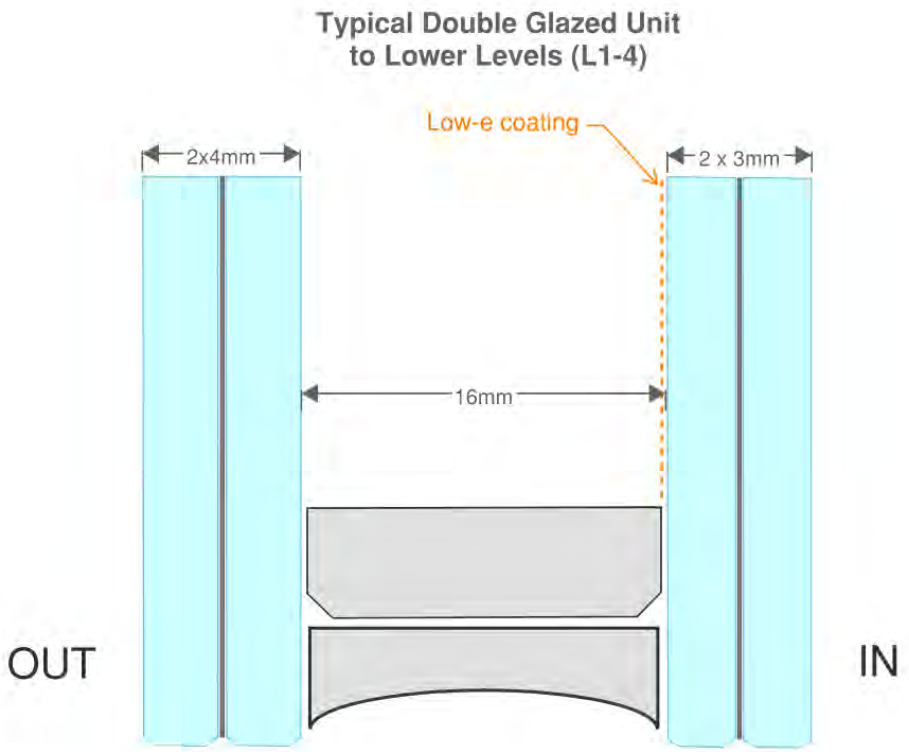
Typical Double Glazed Unit to Upper Levels (L14-15)

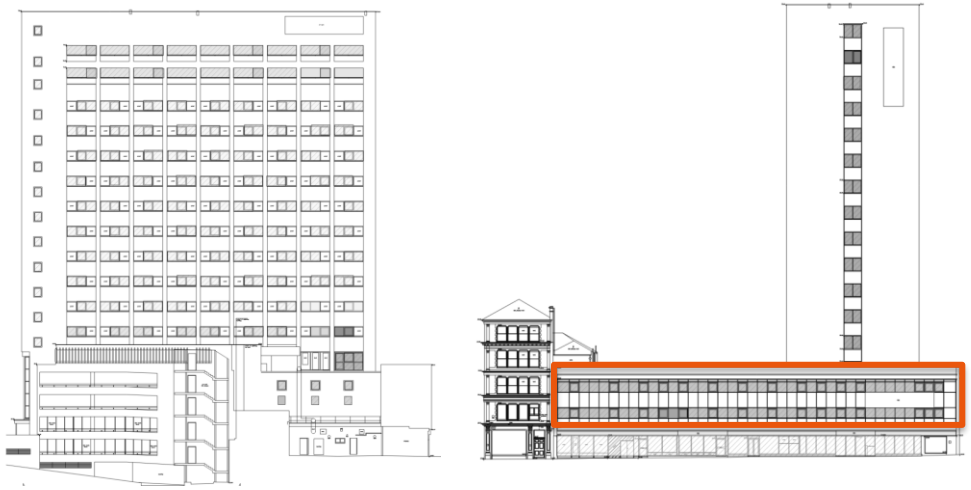


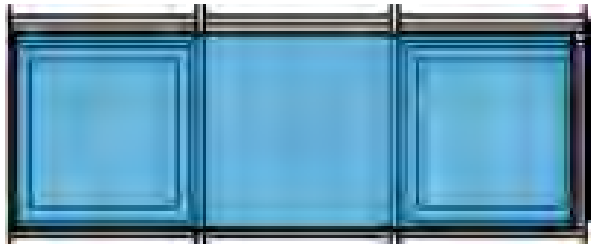
Eckersley O'Callaghan

Type 3

Fixed and Openable Windows | South | Floor 1 - 2







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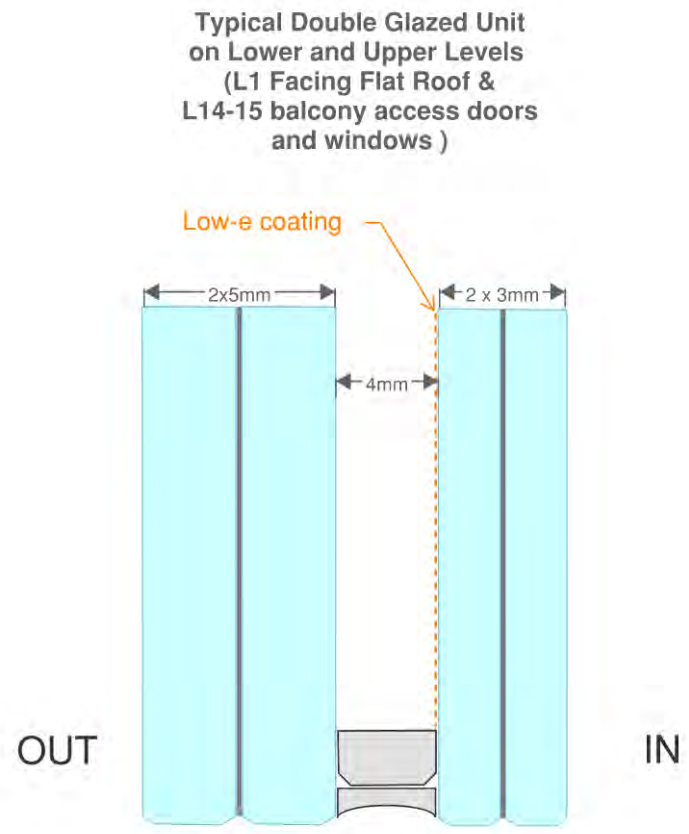
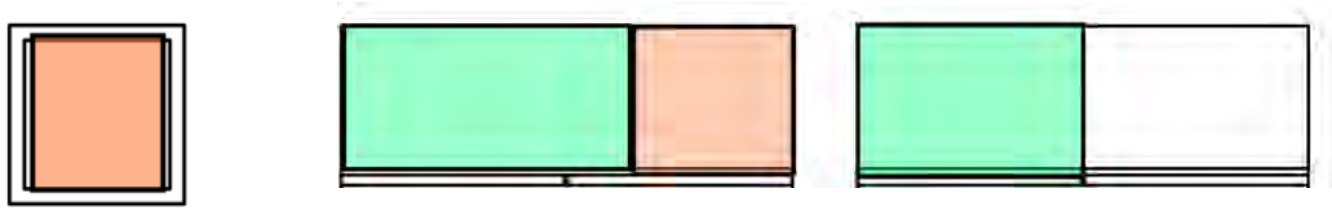
Type 4

Openable Window | West | Floor 1 -2

Apartments Balcony Doors | East, West | Floor 14 -15





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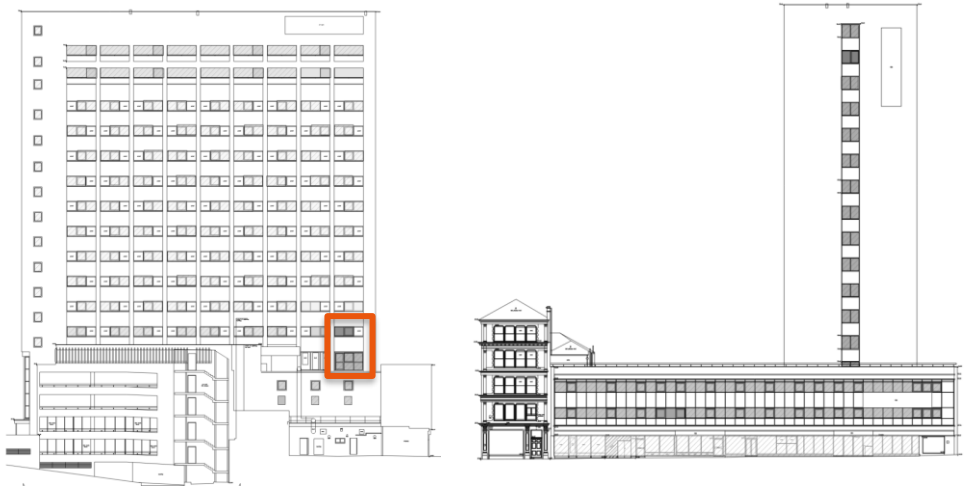
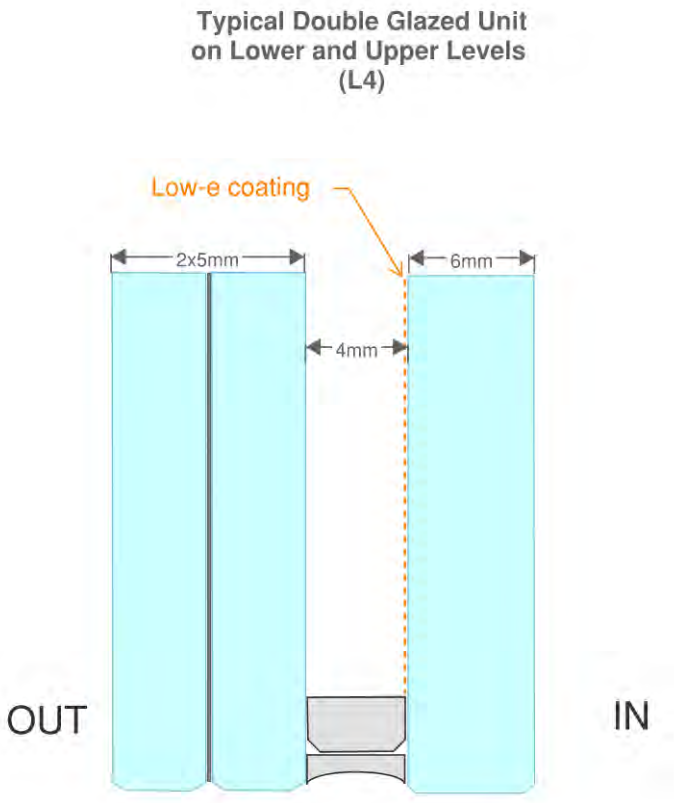
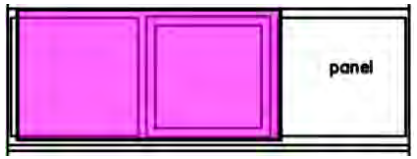
Type 5

Typical Window | East, West | Floor 4

Roof Access Windows and Doors | East, West | Floor 3







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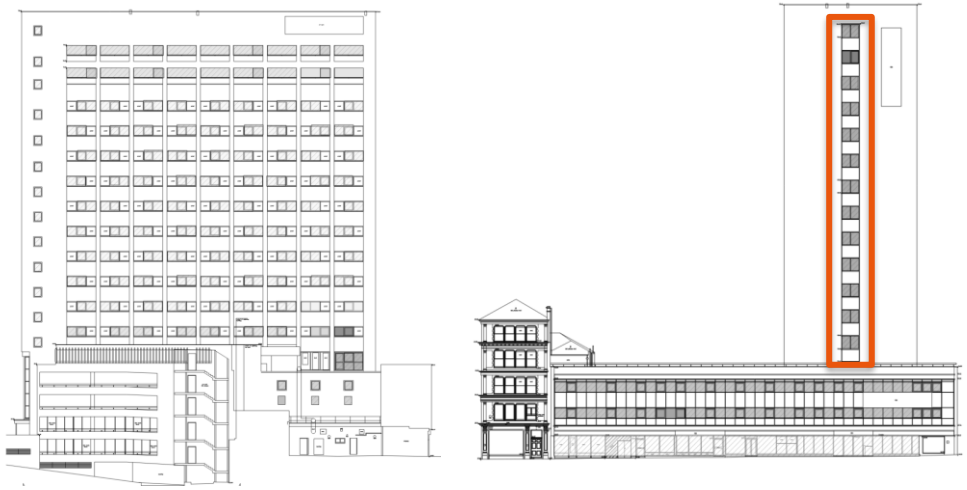
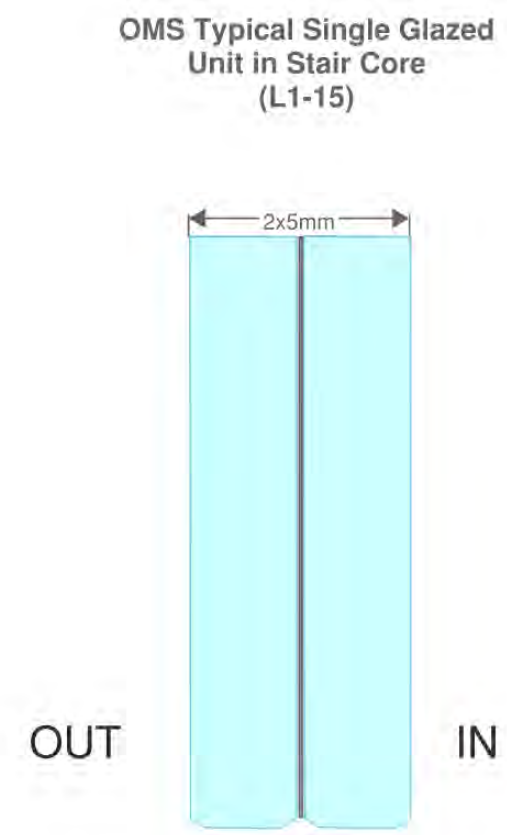
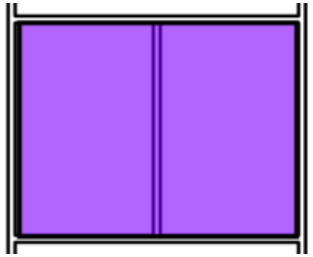
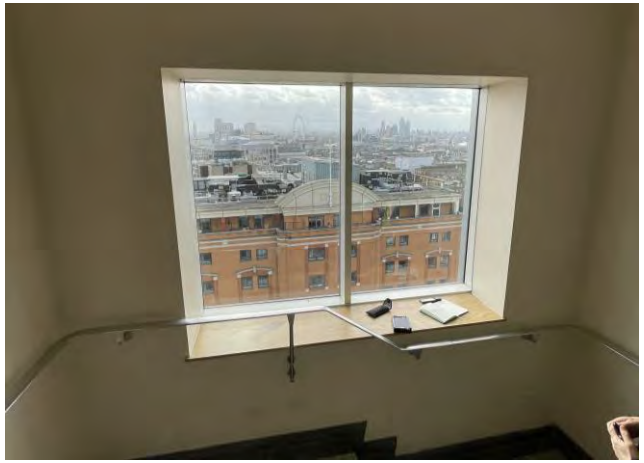
Type 6

Stairwell Windows | North, South | Floor 3 -15









Eckersley O'Callaghan

Glazing Summary

Glass Type	Build up	Total Glass Thickness (m)	Total Glazing Area (m2)	Total (kg)
1	DGU 10-6	0.016	294.6	11783
2	DGU 6-6	0.012	80.0	2399
3	DGU 44.2 - 33.2	0.014	93.2	3263
4	DGU 55.2 - 33.2	0.016	34.0	1360
5	DGU 55.2 - 6	0.016	14.5	581
6	Single 55.2	0.01	86.3	2157
SUM			**600 m2**	**21,500 kg**

Thank you
Let’s discuss…

@eocengineers

One Museum Street

Excavation Calculations
APPENDIX H

DSDHA GXN BC PARTNERS simten DEVELOPMENTS

Job SGQ		Date	29.10.2024
Title Excavation material calculation (consented scheme)		Eng.	SK
Job No. 2952	Sheet 1 of 5	Rev.	R1

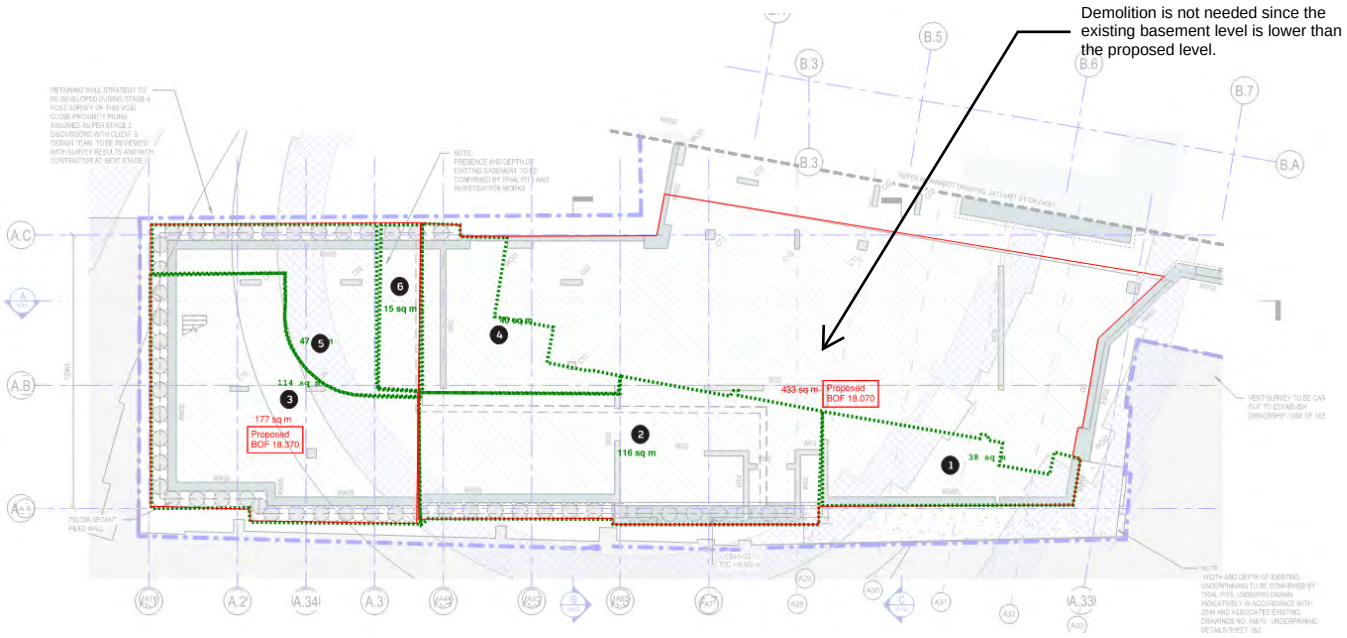
HEYNE TILLETT STEEL

Excavation waste tonnage calculation:

1. Vine Lane

The markup below highlights the area with proposed levels in red, and the green areas indicate where excavation is required based on the existing levels taken from measured survey.

A total of seven areas require excavation, grouped according to changes in level.



The table below summarises the soil volume to be excavated in each area. Note that the existing opening beneath the ramp and the ramp's slope have been taken into account in the calculations.

VINE LANE				
Area No.	**Area (m2)**	**Existing Level**	**Proposed Lev**	**Volume (m3)**
1	38	20.23 — 20.60	18.07	89.11
2	116	20.60 — 22.00	18.07	374.68
3	114	22.66	18.37	489.06
4	40	20.63	18.07	102.4
5	47	25.45	18.37	332.76
6	15	20.63	18.37	33.9

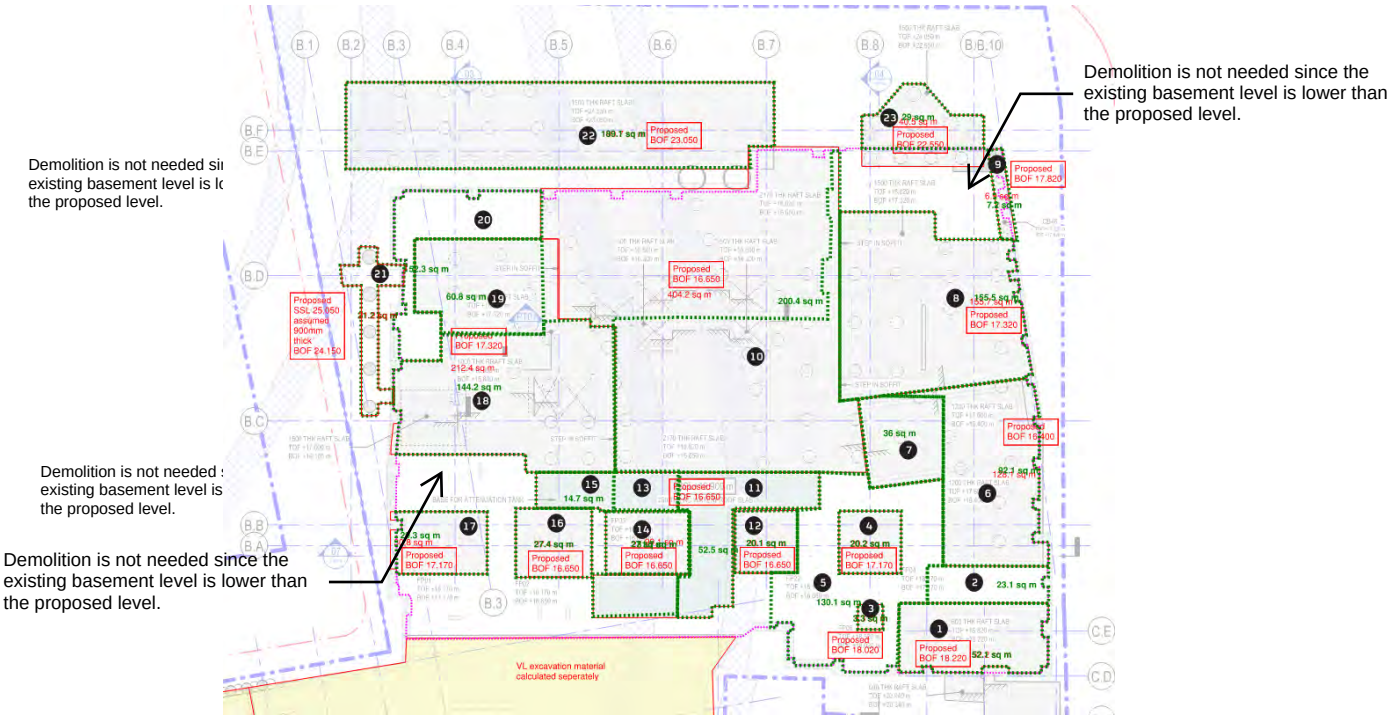
Unit weight of soil considered = 19 kN/m3
Total volume of excavation waste at VL = 1421.91 m3
Total weight = 27016.29 kN ~ **2754tonnes**

HEYNE TILLETT STEEL

1. Museum Street

The markup below highlights the area with proposed levels in red, and the green areas indicate where excavation is required based on the existing levels taken from measured survey.

A total of 23 areas require excavation, grouped according to changes in level.

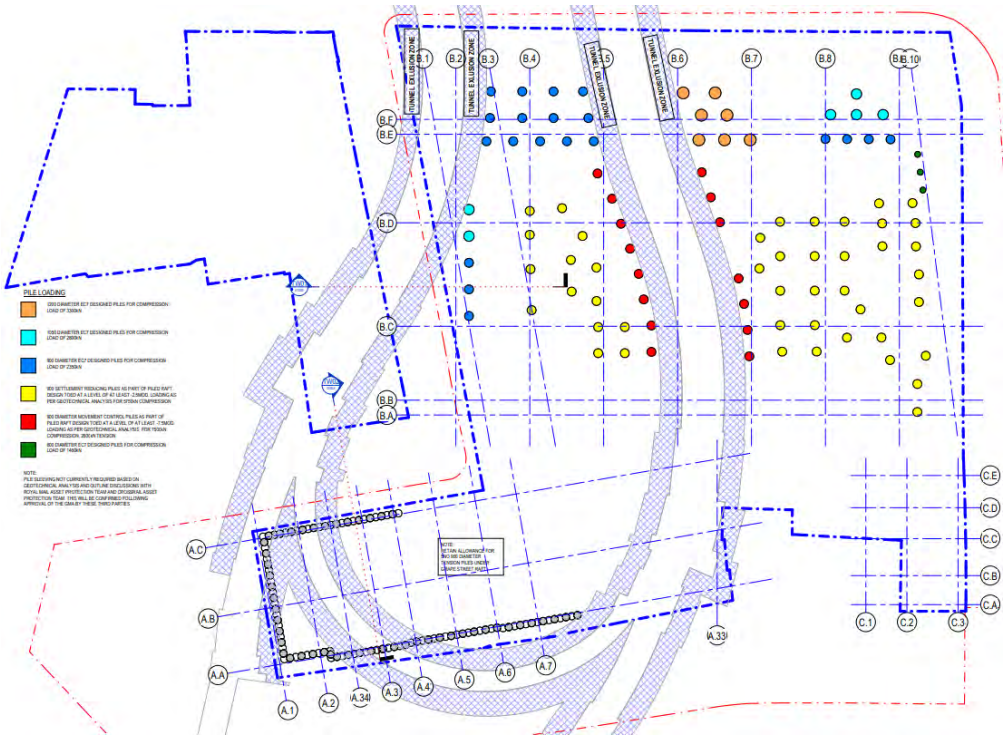


The table below summarises the soil volume to be excavated in each area.

1MS				
Area No.	**Area (m2)**	**Existing Level**	**Proposed Level**	**Volume (m3)**
1	52.1	18.54	18.22	16.67
2	23.1	18.54	18.52	0.46
3	3.3	18.62	18.02	1.98
4	20.2	18.62	17.17	29.29
5	106.6	18.62	18.52	10.66
6	92.1	18.52	16.40	195.25
7	36	18.62	16.40	79.92
8	155.5	18.52	17.32	186.60
9	7.2	18.51	17.82	4.97
10	200.4	16.65 — 17.00	16.65	35.07
11	52.5	17.00 — 17.36	16.65	27.83
12	20.1	17.38	16.65	14.67
13	31.7	17.85	16.65	38.04
14	27	17.36	16.65	19.17
15	14.7	17.86	16.65	17.79
16	27.4	17.86 — 18.08	16.65	36.17
17	29.3	17.86 — 18.08	17.17	23.44
18	144.2	18.08 — 18.67	17.32	152.13
19	60.8	18.67	17.32	82.08
20	52.3	18.67	18.52	7.85
21	21.2	25.40	24.15	26.50
* 22	189.1	25.20	23.05	220.65
23	29	24.40	22.55	53.65

*The volume also accounts for the existing petrol tank (approximately 186 m3).
Total volume of excavation material at WCS (including concrete demolished and exluding piling) = 1280.84 m3

A total number of 95 piles to be cored. Below drawing show the location and sizes of each pile located at 1MS.



The table below summarises the soil volume for piling.

1MS - Piling						
Area No	**Pile Colour**	**Pile diameter**	**No. of piles**	**Area (m2)**	**pile length(m)**	**Volume(m3)**
21	blue piles	0.9	3	0.64	26.65	50.86
21	cyan piles	1.05	2	0.87	26.65	46.15
22	blue piles	0.9	13	0.64	25.55	211.30
22	orange piles	1.2	7	1.13	25.55	202.27
23	blue piles	0.9	4	0.64	21.02	53.49
23	cyan piles	1.05	4	0.87	25.05	86.76
-	green piles	0.6	3	0.28	20.32	17.24
-	yellow piles	0.9	44	0.64	19.82	554.79
-	red piles	0.9	15	0.64	24.15	230.45

Total volume of excavation waste at 1MS - only piling = 1453.33m3

Total volume of excavation material at WCS (including concrete demolished and piling) = 2734.16 m3

Volume of existing basement slab (300mm thick considered)= 211.59 m3
Volume of existing foundations (900mm deep)= 406.08 m3

Total volume of excavation waste at WCS (including piling- excluding demolished concrete) = 2734.16 - 211.59 - 406.08 = 2116.49 m3

Unit weight of soil considered = 19 kN/m3

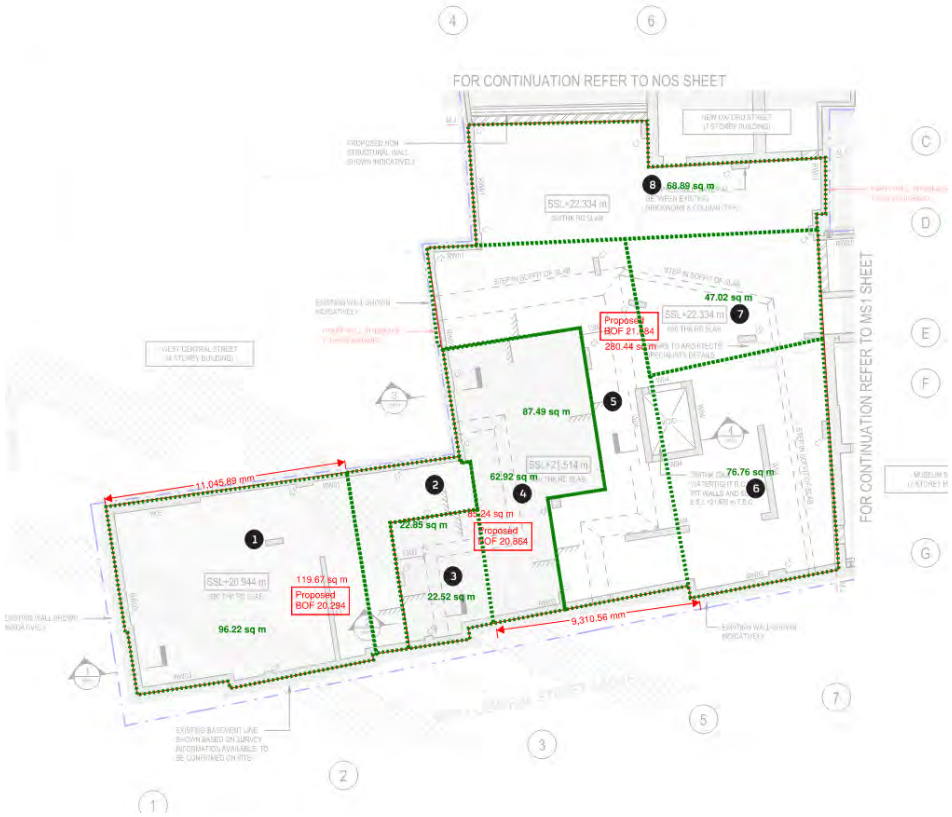
Total weight = 40213.39 kN ~ **4099 tonnes**

HEYNE TILLETT STEEL

3. West Central Street

The markup below highlights the area with proposed levels in red, and the green areas indicate where excavation is required based on the existing levels taken from measured survey.

A total of eight areas require excavation, grouped according to changes in level.



The table below summarises the soil volume to be excavated in each area.

WCS				
Area No.	**Area (m2)**	**Existing Level**	**Proposed Level**	**Volume (m3)**
1	96.22	21.23	20.294	90.06
2	22.85	22.21	20.294	43.78
3	22.52	22.21	20.864	30.31
4	62.92	22.29	20.864	89.72
5	87.49	22.29	21.684	53.02
6	76.76	22.96	21.684	97.95
7	47.02	22.4	21.684	33.67
8	68.89	22.64	21.684	65.86

The existing concrete should be taken out from the total volume above.
Thickness of the existing slab considered as 200mm.
Total area = 484.67 m2
Total Volume of concrete = 0.2 x 282.67 = 96.93 m3
Total volume of excavation material at WCS (including concrete demolished) = 504.37 m3
Total volume of excavation waste at WCS = 504.37 - 96.97 = 407.67 m3
Unit weight of soil considered = 19 kN/m3
Total weight = 7741.25 kN ~ **789 tonnes**

HEYNE TILLETT STEEL

Summary:

The total excavation material amounts to 7,642 tonnes. This value corresponds to the volume of soil that needs to be excavated.

γ_{soil} = 19 kN/m^3	Volume (m^3)	Weight (kN)	Mass (Tonnes)
1 Museum Street	2116	40213	4099
West Central Street	407	7741	789
High Holbon	0	0	0
Vine Lane	1422	27016	2754
Total	**3946**	**74971**	**7642**

One Museum Street

Residential Feasibility Study
APPENDIX I

DSDHA GXN BC PARTNERS simten DEVELOPMENTS

1 Museum Street

Residential Core at Ground Floor Options

Residential
GIA — **154 sq.m** (Option 1)
123 sq.m (Option 2)

Retail Loss
GIA — **154 sq.m** (Option 1)
86 sq.m (Option 2)

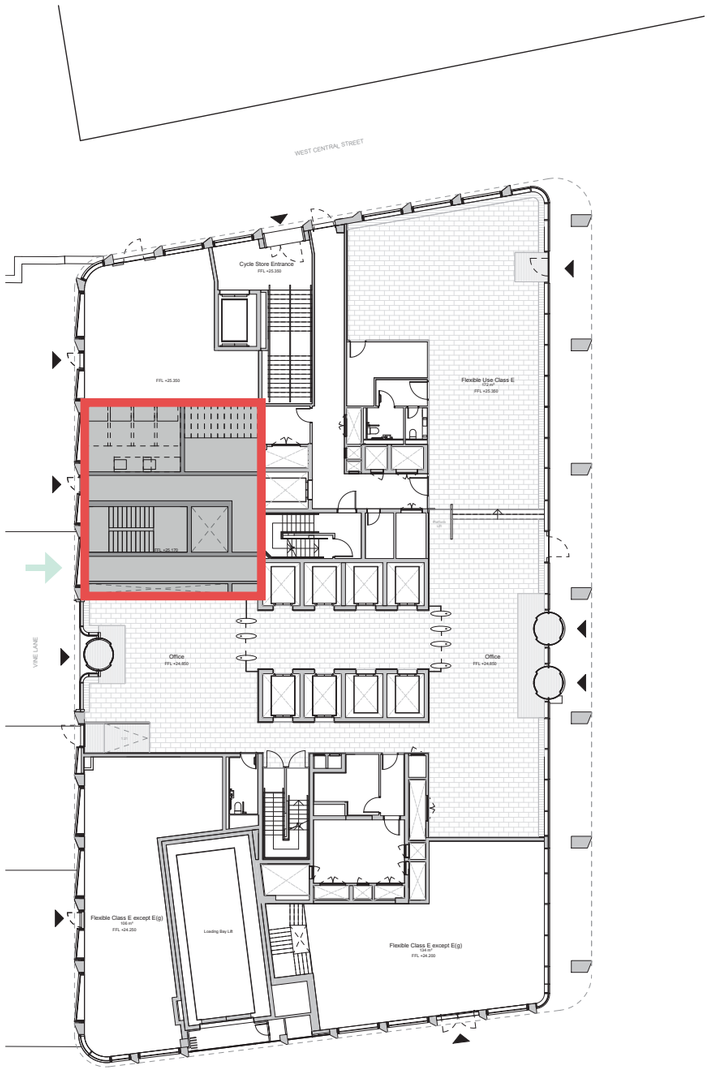
Indicative: Layouts to be further developed

THE FOLLWOING STUDY HAS BEEN CONDUCTED IN MAY 2021.

THE FINAL 2 PAGES SHOW STUDY ADAPTED TO CONSENTED SCHEME.

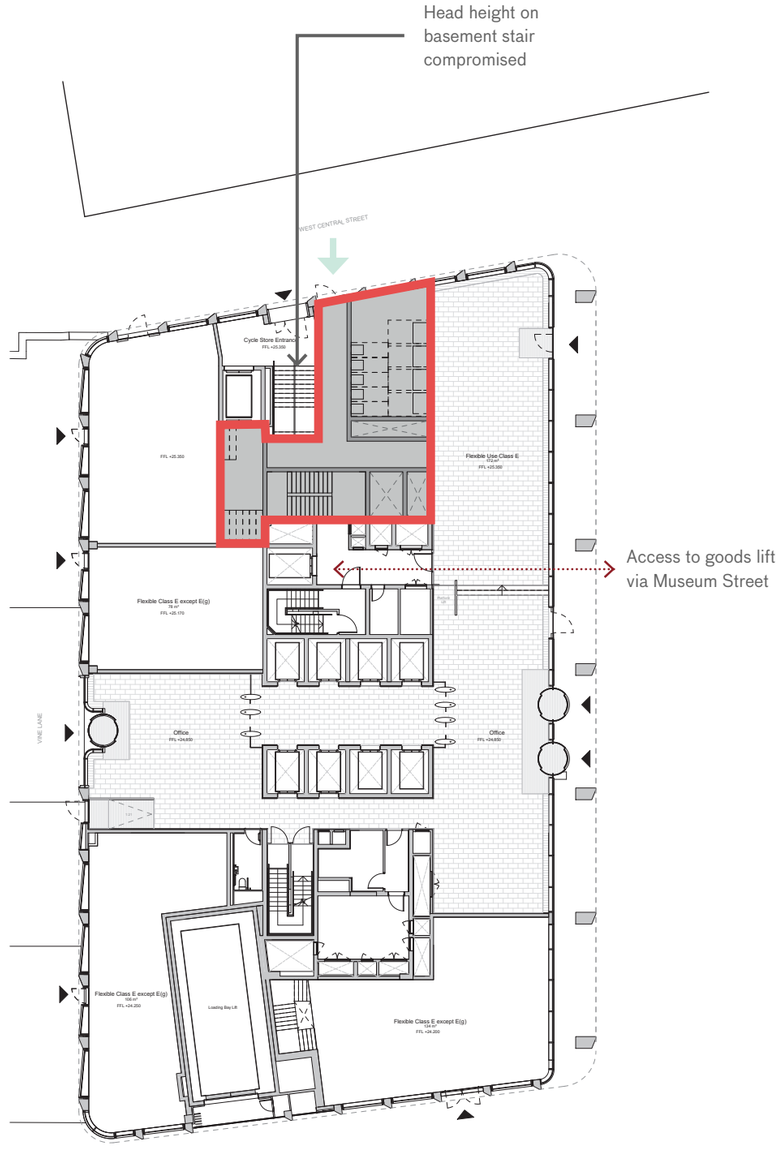
Residential Core

Residential GIA



Option 1: Entrance on Vine Lane

- Discounted: See next pages



Option 2: Entrance on WCS

- Compliments the residential entrance opposite 16b-18 West Central Street
- Access to goods lift via Museum Street

1 Museum Street

Option 1: Residential on Level 01 Only

No. Homes	**11**
of which	
Dual Aspect	**4**
Single Aspect	**7**

Residential

GIA	**1223 sq.m*** **(-99sq.m)**
NIA	**892 sq.m**
NIA:GIA	**72.9%**

Commercial Loss

GIA	**1100sq.m**

** Includes GIA at Ground floor*

	UNIT MIX
1B	5 - 45%
2B	4 - 36%
3B	2 - 18%
TOTAL	11

Comments:

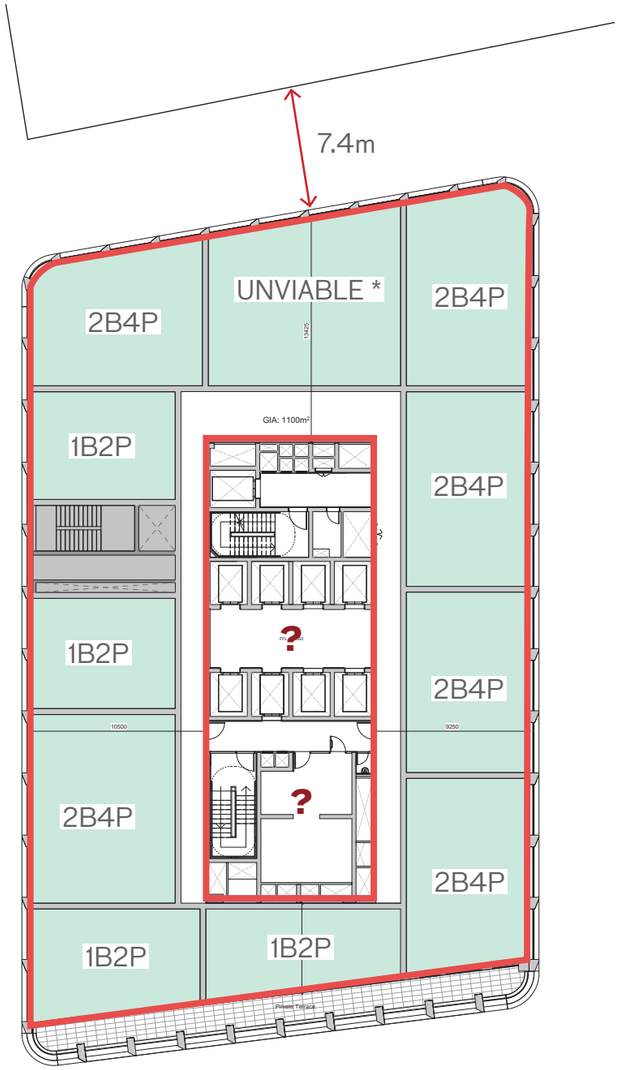
- GIA target not achieved on single floor. Further accomodation needed on L2 to meet target of 1322sq.m
- Underprovision of 99 sq.m
- Facade will require redesign
- Additional 48 sq.m could be gained from loosing the south terraces + 40 sq.m gained from removing the WCs and offsetting services

Residential NIA

Commercial GIA

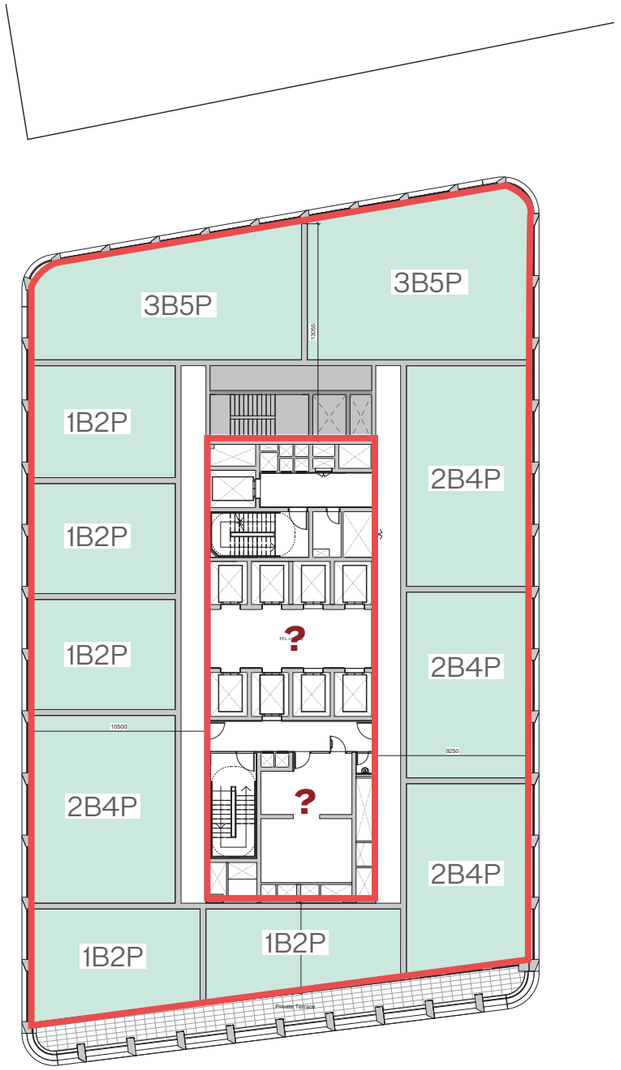
Residential Stair and lift Core

Residential GIA



Option 1A: Core to the West Side - DISCOUNTED

- *North facing single aspect home
- Exceeds 8 homes per core as per London Plan Guidance
- 3 x 1BX2P homes on the West facade will have poor daylight, outlook and privacy



Option 1B: Core to the North

- Exceeds 8 homes per core as per London Plan Guidance
- 4 x 1BX2P homes on the West facade will have poor daylight, outlook and privacy

1 Museum Street

Option 2: Residential on Levels 01, 02 & 03

No. Homes	**11**
of which	
Dual Aspect	**6**
Single Aspect	**5**

Residential

GIA	**1326 sq.m*** **(+3 sq.m)**
NIA	**926 sq.m**
NIA:GIA	**70%**

Commercial Loss

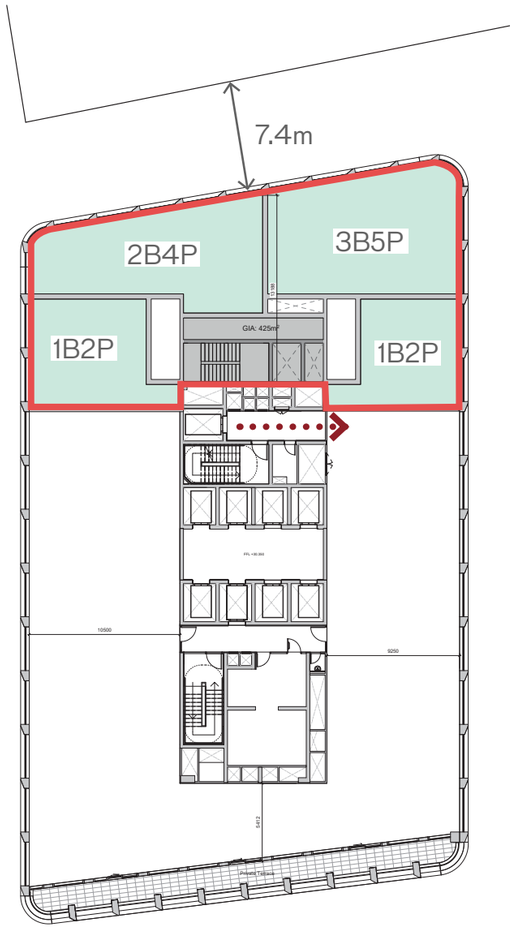
GIA	**1203sq.m**

** Includes GIA at Ground floor*

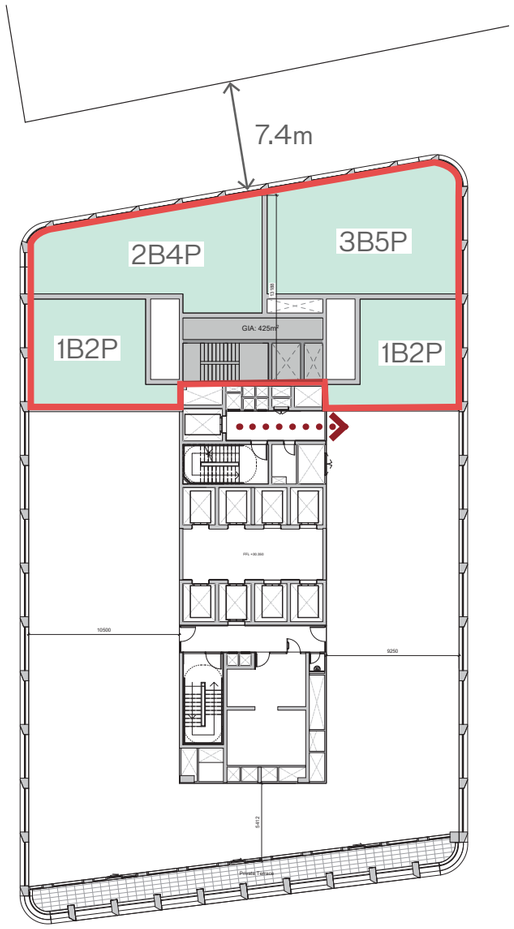
	UNIT MIX
1B	5 - 45%
2B	3 - 27%
3B	3 - 27%
TOTAL	11

Comments:

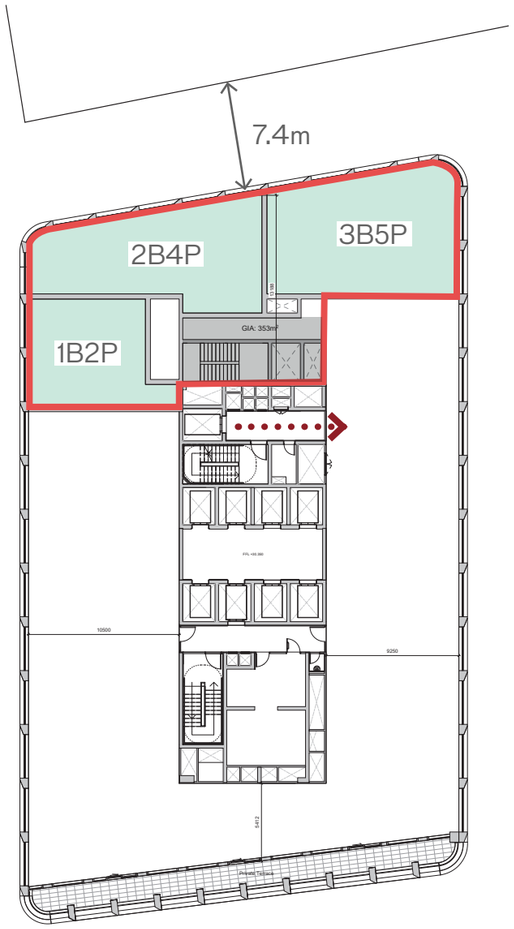
- Option developed to maintain existing position of goods lift and connection to office plate
- Split of uses on the facade may be difficult to incorporate



Level 01



Level 02



Level 03

Residential NIA

Commercial GIA

Residential Stair and lift Core

Residential GIA

1 Museum Street

Option 3: Residential on Levels 01, 02

No. Homes	**12**
of which	
Dual Aspect	**4**
Single Aspect	**8**

Residential

GIA	**1323 sq.m*** **(+1 sq.m)**
NIA	**909 sq.m**
NIA:GIA	**68.7%**

Commercial Loss

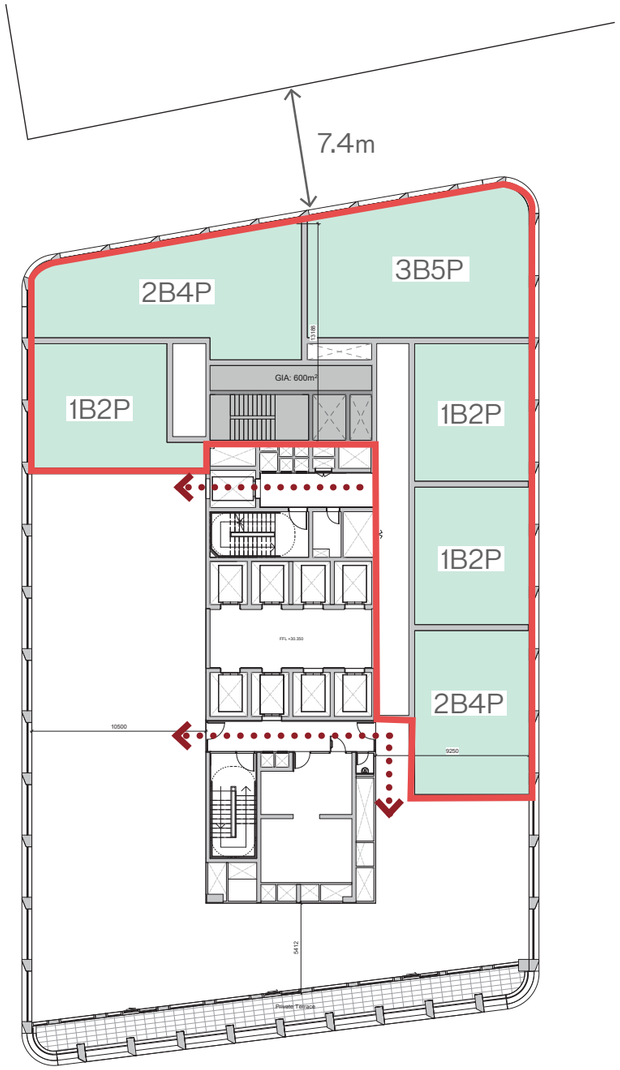
GIA	**1200sq.m**

** Includes GIA at Ground floor*

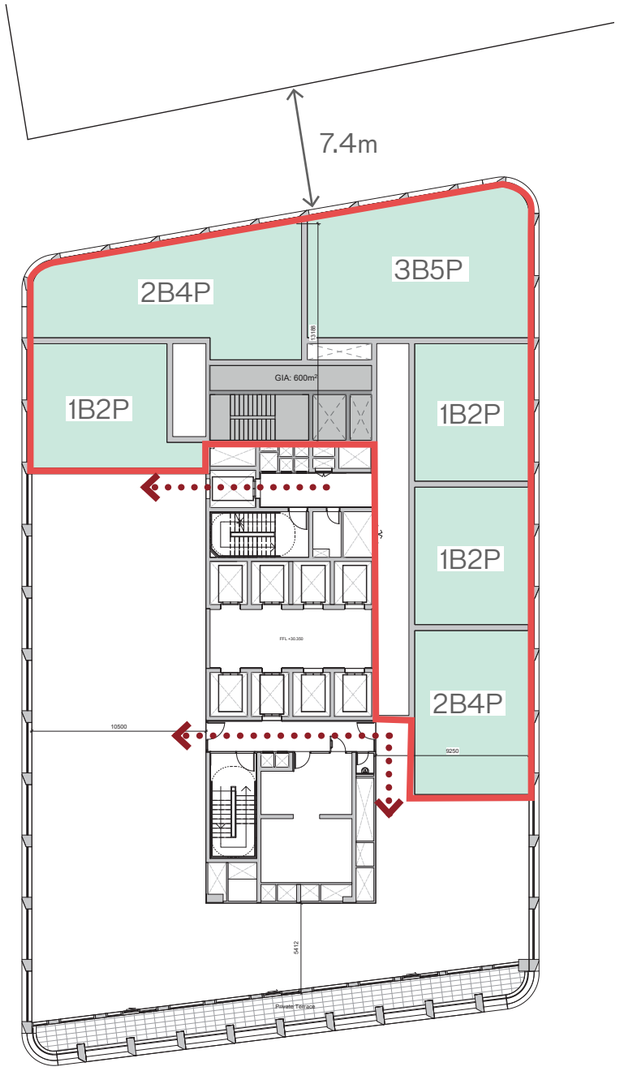
	UNIT MIX
1B	6 - 50%
2B	4 - 33%
3B	2 - 16%
TOTAL	12

Comments:

- Residential GIA provided over two floors
- Two-sided goods lift to allow access to office plate
- Split of uses on the facade may be difficult to incorporate



Level 01



Level 02

Residential NIA

Commercial GIA

Residential Stair and lift Core

Residential GIA

1 Museum Street

Option 4: Residential to the Top Floors

No. Homes	**13**
of which	
Dual Aspect	**6**
Single Aspect	**7**

Residential

GIA	**1373 sq.m* (+51 sq.m)**
NIA	**965 sq.m**
NIA:GIA	**71%**

Commercial Loss

GIA	**2042sq.m**

** Includes GIA at Ground floor*

	UNIT MIX
1B	6 - 46%
2B	5 - 38%
3B	2 - 15%
TOTAL	13

Comments:

- GIA over provided
- Office riser transfers required at L19-Roof
- Goods lift and BOH stair to continue to L20
- Higher number of units due to increased proportion of 1 bed flats
- Commercial services would require offsetting at Level 18

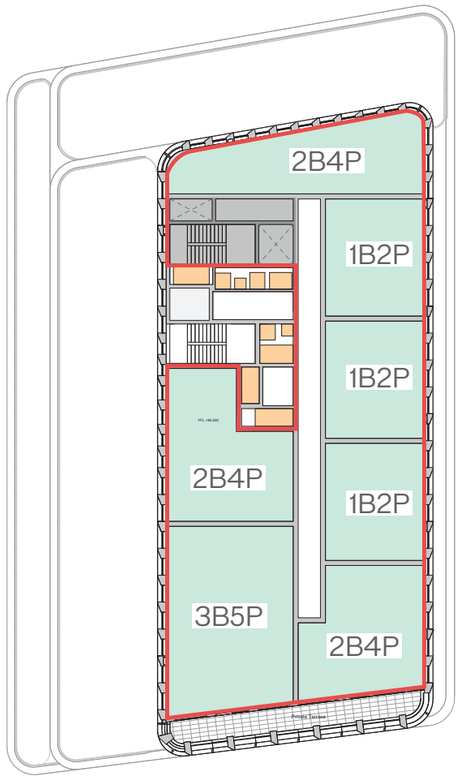
Office Risers

Residential NIA

Commercial GIA

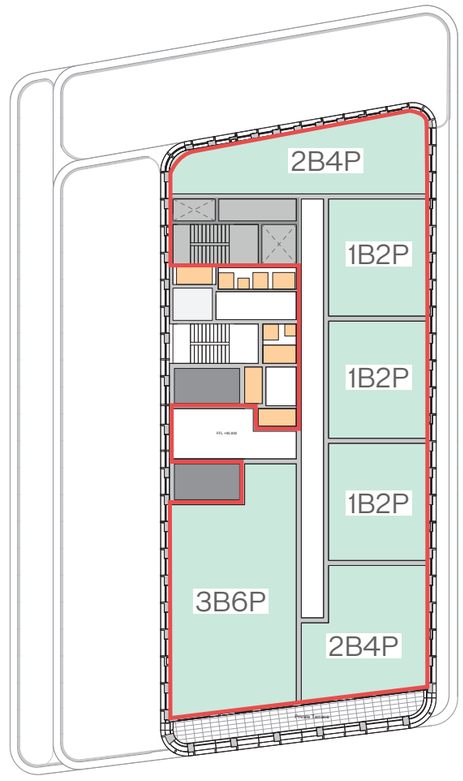
Residential Stair and lift Core

Residential GIA



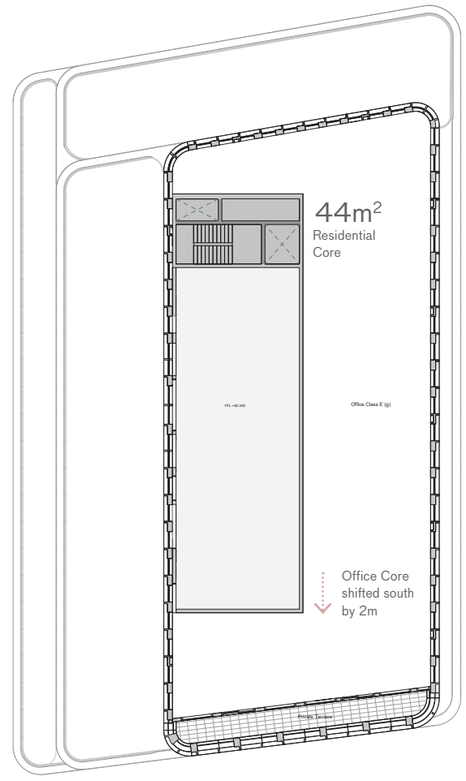
Level 20

- 10 office core risers needed to continue to roof which comprimises available residential space



Level 19

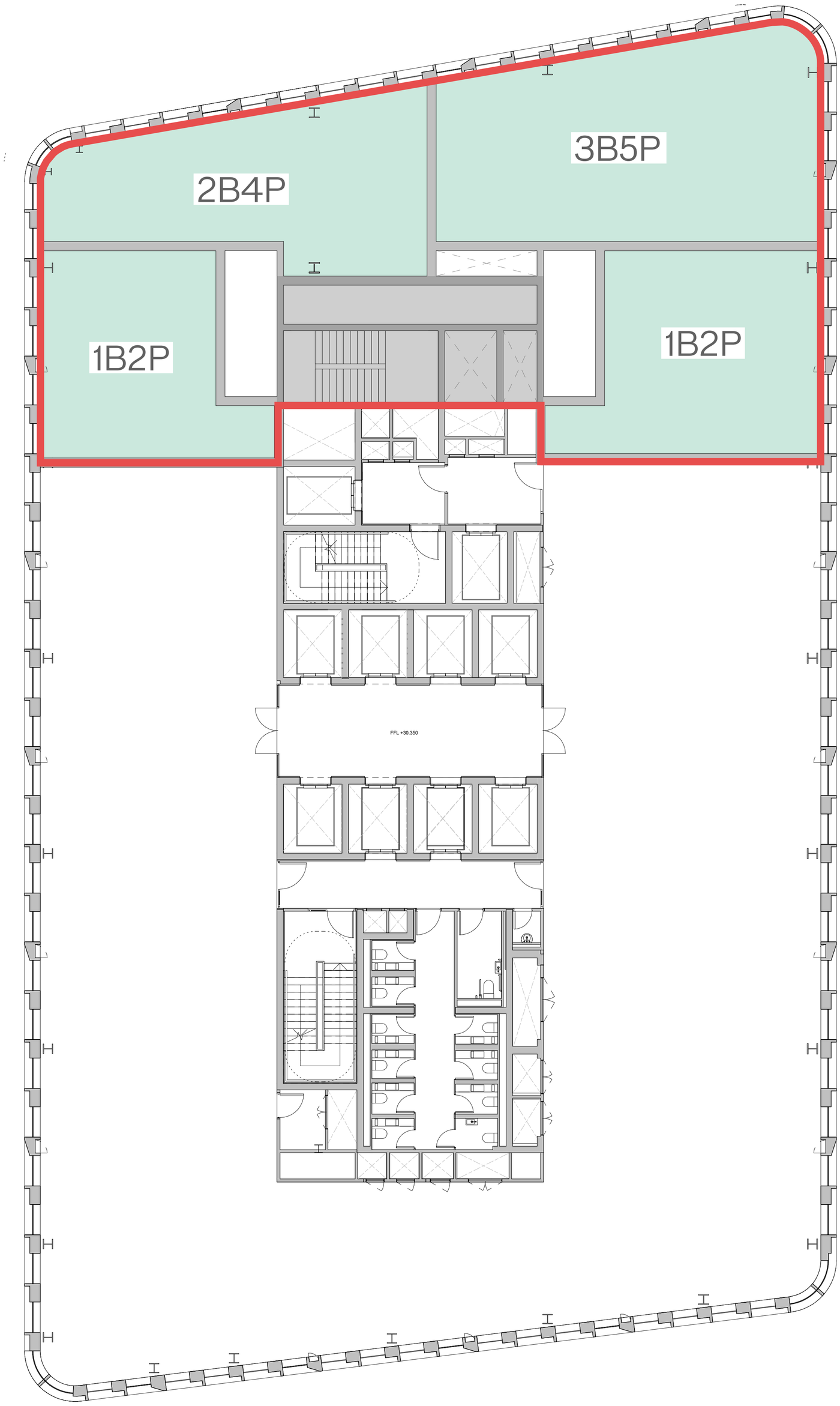
- Lift overruns reduce usable space to L19
- 3B6P flat oversized for potential prime penthouse accmmodation



Typical office floor

- 44sq.m area loss at every office floor to accommodate residential core
- Office core to shift down 2m to allow apartment on NW corner

CONSENTED SCHEME



KEY

- Residential NIA
- Commercial GIA
- Residential Stair and lift Core
- Residential GIA

1MS Proposed Second Floor Plan

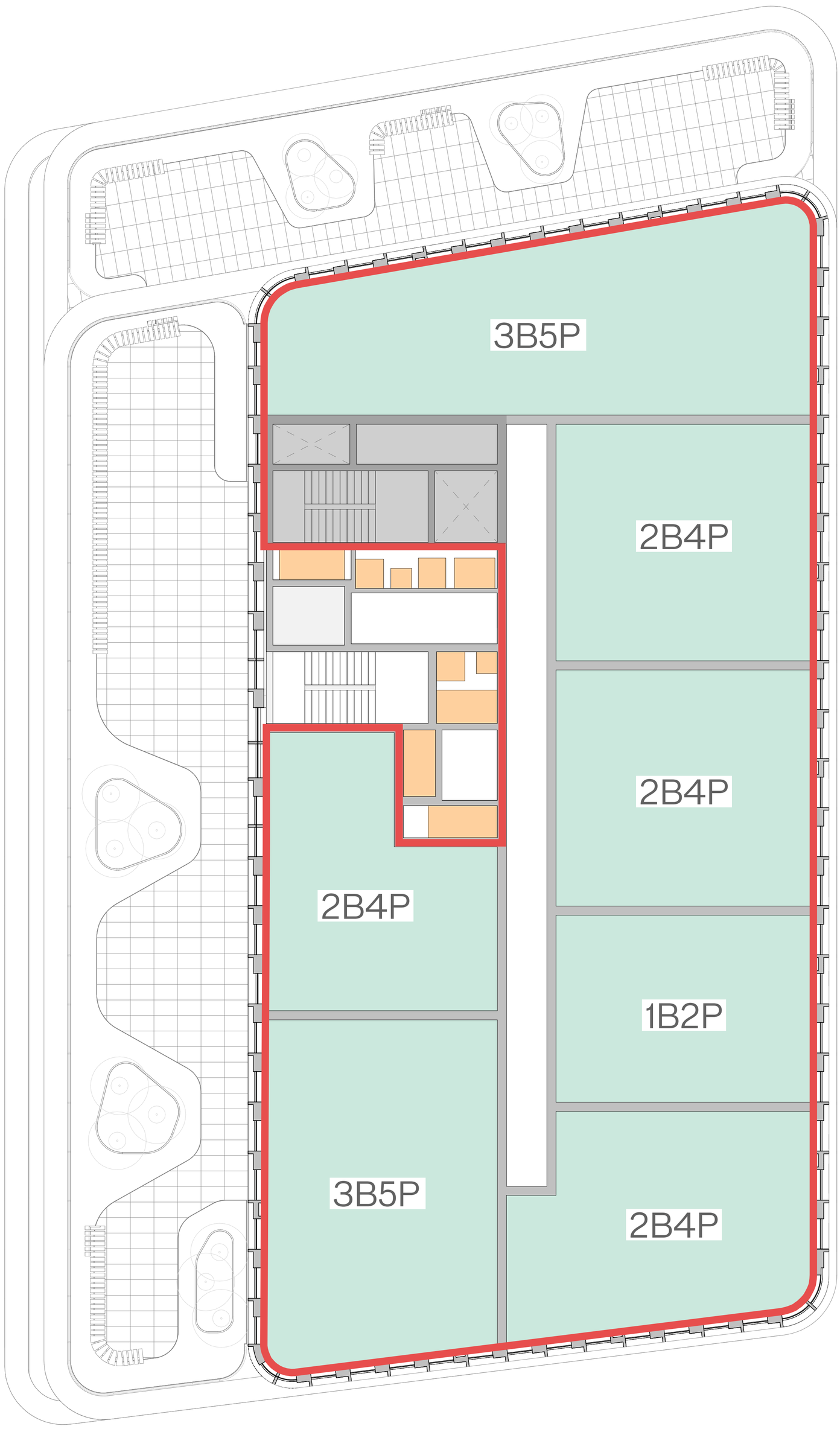
1 to 100 @A1

0 1 2 4m

N

295A_1MS Residential Feasibility Study

CONSENTED SCHEME



1MS Proposed Seventeenth Floor Plan

1 to 100 @A1

0 1 2 4m

N