

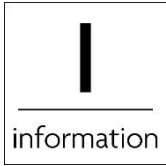
Environmental Standards Statement Alberton House

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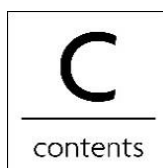
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1. Executive Summary

The Proposed Development consists of demolition of existing building and erection of a 19 storey (basement, ground including mezzanine, plus 18) building comprising ground floor food and beverage (Use Class E, Sui Generis), 16 floors of office (Class E), and two floors of wellness centre (Sui Generis) including ancillary food and beverage (Use Class E), landscaping, highways and other associated works.

In accordance with the Manchester City Council (MCC) planning requirements, the following Environmental Standards Statement (ESS) has been developed for the proposed Alberton House Project in Manchester. It aims to meet the energy and climate change requirements of the Greater Manchester Spatial Framework (GMSF) (Revised Draft January 2019) and the Manchester City Council's Core Strategy (July 2012).

The Manchester's Guide to Development Supplementary Planning Document (SPD) and Planning Guidance, adopted in April 2007, has been used as a guidance to the development of this statement. Section 4 requires that developers will be expected to submit a statement on how their proposal will achieve the environmental standards set out in the SPD.

2. Performance against Planning Policy

The MCC's statutory requirements are being addressed and/or used as guidance to the development of this statement. The following energy efficiency measures and sustainable features have been considered for the development.

2.1. Energy Hierarchy

The works for the Proposed Development are to comply with and where possible exceed Building Regulations Part L2A: 2013 Conservation of Fuel and Power in New Non-Domestic Buildings (under material change in use) and the associated Non-Domestic Building Services Compliance Guide. An Energy Performance Certificate (EPC) of A has been achieved at this stage. The final EPC rating will be subject to the fabric and system selections at a later stage.

A best practice energy monitoring system is to be provided in accordance with CIBSE TM39 to provide a cost-effective and practical approach. Whilst metering alone will not reduce energy usage, it will allow the Landlord and Tenants to analyse how much energy is being used and where in the building. Action taken because of this monitoring can achieve energy savings. In addition to this, the development is targeting NABERS 5.5* and therefore the metering strategy for the development will be further enhanced.

In addition to reducing energy at the design stage for the base build development. Bruntwood intend to implement stringent green lease agreement terms. These green leases will engage Tenants to maintain a low energy consumption building.

As part of the Energy Strategy, an energy assessment has been carried out to benchmark the proposed energy strategy and evaluate its performance against the relevant Policies. The energy strategy covers passive design elements, energy efficiency measures and low and zero carbon energy delivery systems.

The analysis indicated that the development would comply with Policy GM-S 2 of the Greater Manchester Plan. The full energy assessment can be found in a separate report (ALBH-HMM-ZZ-ZZ-RP-Y-0006_P03_EnergyStrategy) issued by Hilson Moran and a summary is presented in Section 2.1 of this report.

2.2. Whole Life Carbon

In response to the Greater Manchester Spatial Framework, a Whole Life Carbon Assessment (WLC) has been developed for the Proposed Development.

Early Carbon assessments identify the potential for the building achieving 641 kg CO₂/m² GIA (representing 20% improvement over RIBA 2030). However, due to the need for on-going detailed design development and likely changes to the final Carbon savings achievable, the proposals can only commit to targeting 800 kg CO₂/m² GIA as a maximum, which is in line with Bruntwood's maximum target and RIBA 2030.

2.3. Health, wellbeing & comfort

2.3.1. WELL

An initial WELL assessment has been undertaken to establish potential credits that are available to the site. The design is incorporating these credits where practical.

2.3.2. Air quality

Consideration has been made to the potential for impacts to occur during the construction phases of the development, and the exposure of nearby residents of the site to air pollution.

In absence of any mitigation, the Proposed Developments posed a medium risk of causing significant effects during the construction phase, where receptors within 100 m of the site boundary could be susceptible to dust effects.

However, with the implementation of appropriate mitigation measures via a Dust Management Plan/Construction and Environmental Management Plan, it was concluded that the construction effects of the Proposed Development would be not significant.

Further information can be found within the Hilson Moran Air Quality Assessment ALBH-HMM-ZZ-ZZ-RP-Y-0004.

2.3.3. Daylighting

An internal daylight assessment has been undertaken as part of design development. This analysis has informed the choice of the Visible Light Transmittance (VLT) of the glass to improve the energy efficiency of the scheme. Due to the net zero ambition of the building, the glass areas have been minimised to reduce the amount of heat loss and solar gain. The facade was developed with all three criteria at the forefront of design decisions that have been made.

2.3.4. Acoustics

Acoustic performance criteria have been set for all elements of the buildings. These are typically based upon compliance with BCO guidance and Manchester City Council planning policy.

Initial noise surveys have been carried out by Sandy Brown which has provided limiting acoustic requirement for the Proposed Development

Further information can be found within the Sandy Brown Planning Noise Report 21443-R01-C.

2.4. Circular Economy

2.4.1. Materials

- Building materials, where possible, will be sourced locally to reduce transportation pollution and support the local economy.
- All timber will be procured from responsible forest sources.

2.4.2. Waste

- The construction site will be managed in an environmentally sound manner in terms of resource use, storage, waste management, pollution.
- Recycling facilities will be provided on site for construction and operational waste.

2.4.3. Water Conservation

- Water use will be minimised by the specification of water efficient taps, dual flush toilets, and low water use appliances.
- Water metering will be installed to monitor and minimise wastage.
- Minimise surface water run-off from the site.
- Grey water will be used from the pool filter back wash water. This water will be stored on site and re-used within WC flushing. This will significantly reduce the volume of water being released into the waste system.

- Planting will be used to maximise habitats on site.
- Bird nesting will be provided.
- Bat boxes will be provided.

2.5. Sustainable Transport and Connectivity

- The site benefits from excellent transport links, reducing reliance on personal cars and local pollutants.
- No carparking will be provided on site which will encourage public transport.
- Cycling storage space and changing facilities will be allocated within the basement. The cycle facility will also incorporate workshop maintenance.
- Showers are being provided to encourage the use of cycle facilities.

2.6. Social Value

- The social value outcomes and opportunities will be considered for the development such as jobs and economic growth; health, wellbeing, and the environment; and strength of community.

Further information can be found within the ekosgen Alberton House Economic Impact Assessment (June 2022).

2.7. Certification

- Alberton House is to achieve a BREEAM 'Excellent' rating under the BREEAM 2018 New Construction Scheme.

2.8. Site Environment – Biodiversity, Land Use and Pollution

- Reduction of the impact of the development on the immediate environment.

3. Introduction

3.1. Purpose

This Environmental Standards Statement (ESS) has been prepared in support of the planning application for Alberton House located in central Manchester. It responds to the sustainable design and construction principles, and climate change adaptation requirements of the Greater Manchester's Combined Authority and Manchester's City Council.

The format of the statement is intended to reflect and respond to the issues raised in the Greater Manchester Spatial Framework (GMSF) (Revised Draft January 2019) and the Manchester City Council's Core Strategy (July 2012). The principal objectives are to reduce the site's contribution to the causes of climate change by reducing the site's needs for energy, minimising the emissions of CO₂, minimising waste generation and limiting consumption of finite resources. The statement outlines varying sustainability factors and sets out measures that will be implemented throughout the design and construction stages of the development to ensure its environmental impact is limited.

3.2. Existing Site

The site is located within the St Marys Parsonage SRF area, positioned along the River Irwell, adjacent to Trinity Bridge and the Parsonage Gardens Conservation Area (See Figure 3.1).



Figure 3.1 Site Location

Alberton House is currently located on the site which has now been vacated. The existing building is a 1970 office development which will be demolished, and a new proposed office with leisure facility incorporated.

3.3. Proposed Building Summary

The proposed scheme developed by EPR Architects, herein referred to as the Proposed Development consists of the demolition and re-development of Alberton House.

Figure 3.2 below illustrates the Proposed Development.



Figure 3.2 Alberton House proposed design

The Proposed Development consists of:

- Demolition of the existing Alberton House and erection of a highly sustainable 19-storey office building.
- The office reception, including a double height entrance space is located at the ground floor along St Mary's Parsonage, as well as back of house areas including the bin store.
- Food and beverage floorspace at the ground floor level fronting the river, with an external terrace activating the Trinity Bridge walkway.
- Mezzanine with co-working space and amenity features.
- Basement includes a cycle hub (with 120 secure cycle parking spaces), a gym, changing and showering facilities, back of house areas and plant areas.
- Floors 1 – 16 provide office accommodation, with floors 1-2 providing serviced accommodation fit out by Bruntwood Works.
- A rooftop amenity and wellness space on 17th and 18th floors, including a leisure and fitness offering such as a swimming pool and associated facilities.
- A panoramic landscaped, external rooftop terrace on 17th floor.
- Tree planting and public realm enhancements along St Mary's Parsonage and Trinity Bridge walkway
- Highways works and servicing arrangements including a loading bay along St Mary's Parsonage
- Drainage and ecological works, including the installation of blue roof
- Other ancillary works.

3.4. Proposed Building Scale and Use Class

The Proposed Development consists of the erection of a 19 storey (basement, ground including mezzanine, plus 18) building comprising ground floor food and beverage (Use Class E, Sui Generis), 16 floors of office (Class E), and two floors of wellness centre (Sui Generis) including ancillary food and beverage (Use Class E), landscaping, highways, and other associated works.

The Proposed Floorspace and Use Class can be summarised as:

- Office (Class E) – c. 26,420 sqm (GIA) including mezzanine
- Office ancillary / amenity (Class E) – c. 1,330 sqm (GIA) including mezzanine
- Retail / Café (Class E) – 1,470 sqm (GIA) at ground floor level.
- Ancillary Wellness Centre including ancillary food and beverage (Sui Generis, Use Class E– directly associated with Office use only) – 1,740 sqm (GIA) levels 17 & 18
- Overall: c.32,260 sqm (GEA) of commercial floorspace

3.5. Planning Policy

The planning policy and regulatory requirements can be split across three levels: national, regional, and local.

The following statutory requirements are being addressed and/or used as guidance to the development of this statement.

The planning policy and regulatory requirements can be split across three levels: national, regional, and local (See Table 3:1).

	Policy Reference
National	National Planning Policy Framework – February 2019
Regional	Greater Manchester's Plan for Homes, Jobs and the Environment: Greater Manchester Spatial Framework (GMSF) – Revised Draft January 2019
Local	Manchester's Local Development Framework (LDF): Core Strategy Development Plan Document (DPD) – July 2012

Table 3:1 Policy Reference

Key requirements of the Greater Manchester Plan for Homes, Jobs and the Environment: the Greater Manchester Spatial Framework (GMSF), Revised Draft 2019, include:

- Carbon neutral greater Manchester no later than 2038
- New development zero net carbon from 2028
- Electric vehicle charging
- 20% reduction in carbon emission on site through LZC technologies
- Report upon whole life CO₂.

The Manchester City Council Council's Core Strategy 2012 include sustainability policies relating to:

- Spatial Principles
- Improvement in CO₂ beyond building regulations
- Energy infrastructure opportunities
- Sustainable transport
- Green Belt
- Flood Risk
- Biodiversity and geological conservation
- Air Quality
- Waste
- Materials

3.6. Overview of Proposed Strategy

The following energy efficiency measures and sustainable features have been considered for the development and analysed in the following sections:

- Energy Hierarchy
- Whole Life Carbon
- Health, Wellbeing & Comfort
 - Circular Economy
 - Materials
 - Waste
 - Sustainable Water
- Sustainable Transport and Connectivity
- Social Value
- Certification
- Biodiversity & Land Use

4. Energy Hierarchy

In accordance with the Manchester City Council (MCC) planning requirements, the following Energy Strategy has been developed for the Proposed Development. It aims to meet the energy and climate change requirements of the Greater Manchester Spatial Framework (GMSF) (Revised Draft January 2019) and the Manchester City Council's Core Strategy (July 2012). Manchester emerging Zero Carbon framework has also referred to inform the strategy and align with Manchester's future aspirations.

4.1. Proposed Energy Strategy

An energy strategy has been developed by following the energy hierarchy; Be Lean, Be Clean and Be Green. The energy assessment is based on the current SAP 2012 emission factors in line with the building regulation emissions factors used to assess the building for Part L.

The energy strategies applied in the project are outlined below:

- The envelope of the Proposed Development will be significantly better than Building Regulations compliance standards with low U-values, g-values and low air leakage rates.
- Design for Performance principles have been embedded within the design process. Extensive analysis has been carried out to optimise the facades so that heat losses are minimised whilst the size and position of openings has been optimised to maximise the use of natural light within each space. This has led to an optimised glazing to opaque area ratio.
- Ventilation will be provided via the use of multiple Mechanical Ventilation Heat Recovery Units within each floor plate. This system allows office floor space zones to be independently operated and optimised to minimise energy consumption with both time clocks and CO₂ control. The units will provide high levels of heat recovery during the winter which will minimise the heating demand of the development.
- The Proposed Development will be energised solely from electricity which will benefit from grid decarbonisation.
- An ambient loop will circulate within the core of the building. This loop will be heated and cooled to a nominal low temperature via high efficiency externally mounted air source heat pumps. There will be water to water heat pumps within the building which will provide low grade heating and cooling to fan coil units located within each floor space.
- Energy efficient services employed in the development include high efficiency LED lighting coupled with occupancy and daylight controls to significantly reduce the lighting energy use.
- Electrical and mechanical systems within the development will be metered and controlled with a full Building Management System (BMS). This will enable energy use to be tracked and opportunities for efficiency improvements to be made.
- Smart controls will be rolled out across the building to maximise energy efficiencies.

An investigation into the feasibility of connecting to an existing or proposed district network as per the Manchester City Council's Policy EN 6 indicates that there are no available district heating networks within the vicinity of the site.

Also, the low heating demand of the development does not justify its use as an anchor load, to build out a new heat network; therefore, connecting to a district network has been discounted. However, as

part of the design, heat network connections have been allowed for future connection to a low temperature ambient loop heat network that may be considered for the whole St Marys Parsonage Regeneration area.

The inclusion of a Combined Heat and Power (CHP) unit to deliver a portion of the development's heat demand and electricity plant has also been considered. The heat load of the development is insufficient to permit effective operation of an on-site combined heat and power unit and is therefore considered to be unviable for this scheme and would not be sympathetic with the incorporation of low temperature heating and cooling systems via the ambient loop.

A study into low and zero carbon (LZC) technologies was undertaken as per the Manchester City Council Policy EN 6. Air source heat pumps are proposed to provide the local heating and cooling with high efficiency water to water heat pumps being incorporated to deliver a highly efficient heating and cooling system. Domestic Hot Water will be delivered to the scheme via water-to-water heat pumps that utilise primary energy from the ambient loop. To satisfy domestic hot water requirements, water will be stored within calorifiers within the basement and at roof level. This will also provide distribution and zoning efficiencies for the Proposed Development.

The feasibility of incorporating photovoltaic panels into the roof of the buildings has also been considered for the development. The analysis has identified that there is no viable option to incorporate PV at roof top level due to overshadowing, building maintenance unit and plant shading. This will be further reviewed as the design progresses, however, integrating PV within the façade may be considered as detrimental to the Conservation area aesthetics.

The results of the analysis have been based on two sets of carbon factors to demonstrate how the Part L 2013 carbon factors have been heavily influenced by grid decarbonisation and are now significantly lower than 2013.

The SAP 10.2 and SAP 2012 carbon factors that have been used are identified in Table 4:1.

Fuel type	Fuel Carbon Factor (kgCO ₂ /kWh)		Reduction
	SAP 2012	SAP 10.2	
Natural Gas	0.216	0.210	3%
Grid Electricity	0.519	0.136	73%

Table 4:1 SAP Carbon Factor Summary

The results of the analysis show that the Proposed Development will perform 24% better than Building Regulations 2013 which the site has been registered to achieve. When comparing the SAP 2012 notional building against an actual building that is assessed against SAP 10.2 carbon factors the building will achieve a 79% reduction in carbon emissions.

Table 4:2 summarises the energy and carbon emissions associated with Alberton House.

	Notional Building	Actual Building	Actual Building		Notional Building
	Consumption (kWh/m ²)	Consumption (kWh/m ²)	SAP 2012 Emissions (kgCO ₂ /m ²)	SAP 10.2 Emissions (kgCO ₂ /m ²)	SAP 2012 Emissions (kgCO ₂ /m ²)
Heating	0.97	1.16	0.59	0.16	0.45
Cooling	9.28	5.18	2.62	0.70	4.70
Auxiliary	9.74	10.85	5.49	1.48	4.93

Lighting	19.42	12.60	6.37	1.71	9.83
DHW	10.51	8.33	4.22	1.13	5.32
Displaced Electricity	0	0	0	0	0
Total	49.9	19.3	19.3	5.2	25.2

Table 4:2 SAP 2012 and SAP 10.2 Carbon Emissions Summary

By incorporating energy hierarchy savings within the Proposed Development, the proposed scheme will reduce CO₂ emissions by 24% over a Target Emission rate (See Figure 4.1).

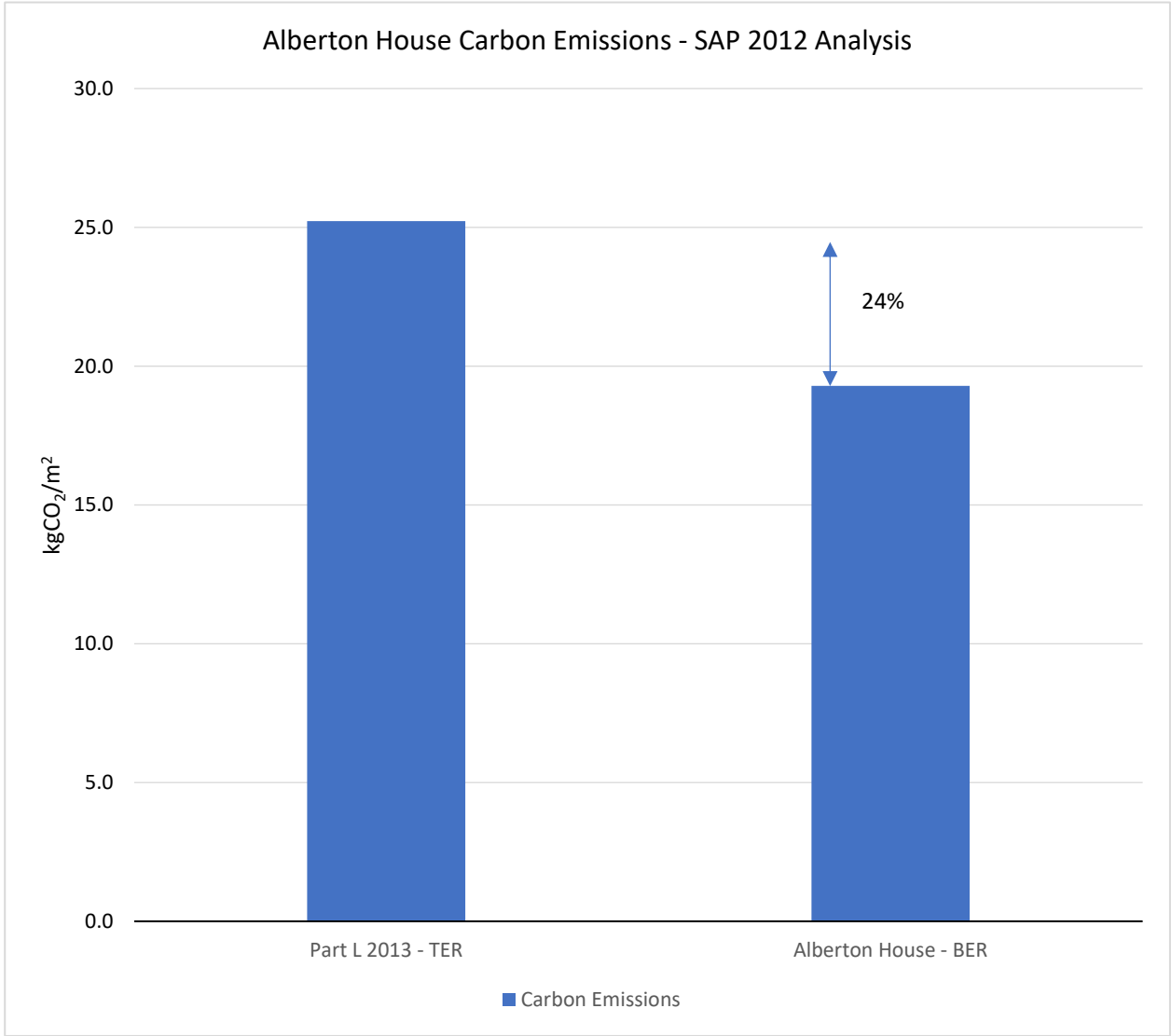


Figure 4.1 Proposed Development Carbon Emissions Summary (SAP 2012 Carbon Factors)

When assessing the Proposed Development, with SAP 10.2 carbon emission factors the results show that there is 79% reduction in carbon emissions over the current SAP 2012 carbon factors (See Figure 4.2).

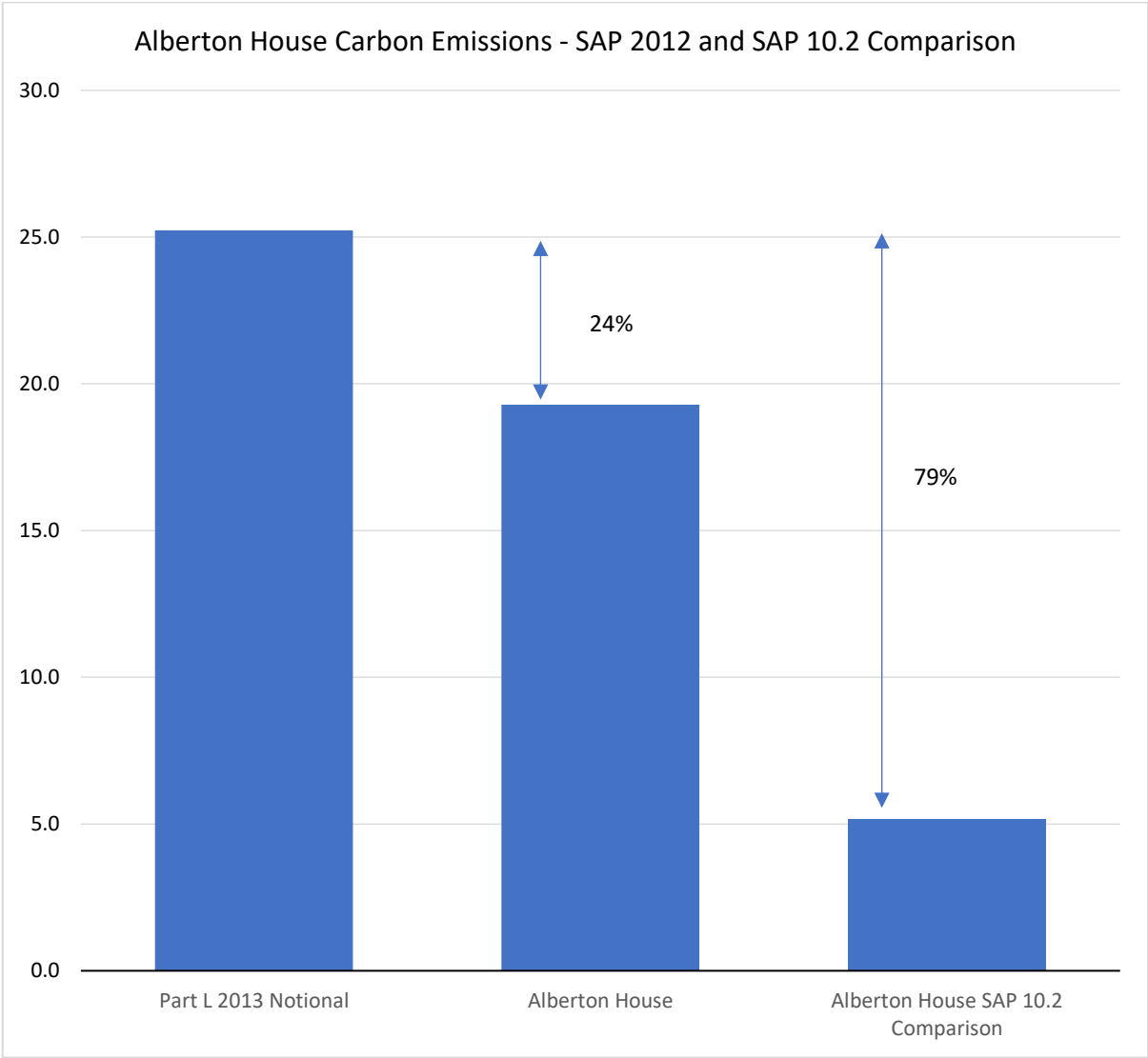


Figure 4.2 Proposed Development Carbon Emission Summary (SAP 2012 vs SAP10.2 Emission Factors)

The MCC’s statutory requirements are being addressed and/ or used as guidance to the development of this statement. In accordance with Policy GM- S 2 of the Greater Manchester Plan, the development should achieve a minimum 20% reduction in carbon emissions using on site or nearby renewable and/or low carbon technologies, which is achieved. However, the site will be heated and cooled via 100% low carbon technologies via highly efficient air source heat pumps, ambient loop, and water-to-water heat pumps.

5. Whole Life Carbon

In response to the Greater Manchester Spatial Framework requirement to report on the Whole Life Carbon of the Proposed Development, a Whole Life Carbon Assessment Statement has been issued by Hilson Moran and a summary is presented below. This summary is based on design information to date and will be amended through design development, construction development and availability of materials which have unique Environmental Product Declarations (EPDs).

For this exercise, the eTool Carbon Calculator was used to calculate the Whole Life Carbon emissions results. The results of the assessment have been verified by eTool.

The embodied carbon emissions were estimated based on:

- Generic market average values based on the eTool LCD ‘United Kingdom LCI – V17 – Life Cycle Strategies’ generic construction templates representative of the project’s constructions.
- Additional construction templates were created to account for bespoke design solutions.
- Environmental Product Declarations (EPD) were used for product specific items to provide potential reduction in carbon emissions.
- Self-declaration embodied carbon data received from manufacturers.

The total Whole Life-cycle material carbon emissions (excluding operational emission) of the Proposed Development are estimated to be 28,344 t CO₂e, with 19,578 t CO₂e (641 kg CO₂e/m² GIA) tonnes associated with the initial construction. The target for this scheme was to achieve the Bruntwood aspirational target of (800 kg CO₂e/m² GIA) which is aligned with the 2030 RIBA target, therefore achieving a 20% improvement over these standards. The scheme will continue, through design development, to limit the embodied carbon emissions to 800kg CO₂e/m₂ GIA as the basis of the target.

Table 5:1 and Figure 5.1 below summaries the emissions of the Proposed Development at the time of assessment. Further assessment will be carried out during the design development process.

Modules	Description	Impact TCO ₂ e	Impact KgCO ₂ e/m ² GIA	Percentage %
A1-A3	Production	15,407	504	54%
A4	Transport to Site	2,515	83	9%
A5	Construction	1,657	54	6%
A1-A3, A4 & A4	Practical Completion	19,578	641	69%
B1-B5	Use, Replacement, Maintenance	6,534	214	23%
C1-C4	End of Life, Disposal	2,232	73	8%
Total A1-A5, B1-B5, C1-C4	Whole Life Carbon (Excluding Operational Energy)	28,344	928	100%

Table 5:1 Whole Life-Cycle Material Carbon Emission Breakdown

Figure 5.2 identifies that following optimisation of the proposed material selection, the most carbon intensive elements of the Proposed Development are:

- Superstructure

- Substructure

Whole Life Embodied Carbon over Life Cycle (WLC-LC, 60 years)
Total = 28,344 t CO₂e

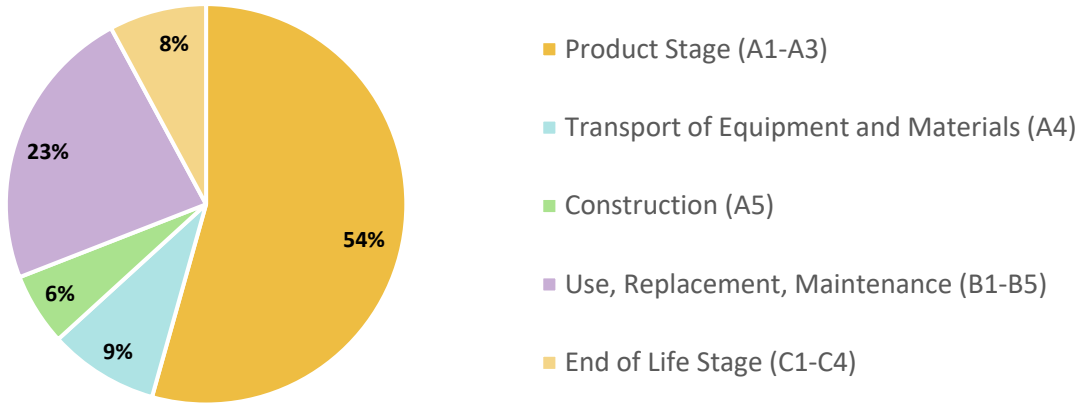


Figure 5.1 Embodied Carbon over Life Cycle (EC-LC) per life cycle stages, excluding operational energy and water use (modules B6, B7). [EN 15978 system boundary: A1-A3, A4-A5 & B1-B5, C1-C4].

Embodied Carbon at Practical Completion (EC-PC, A1-A3 & A4-A5)
Total = 19,578 t CO₂e

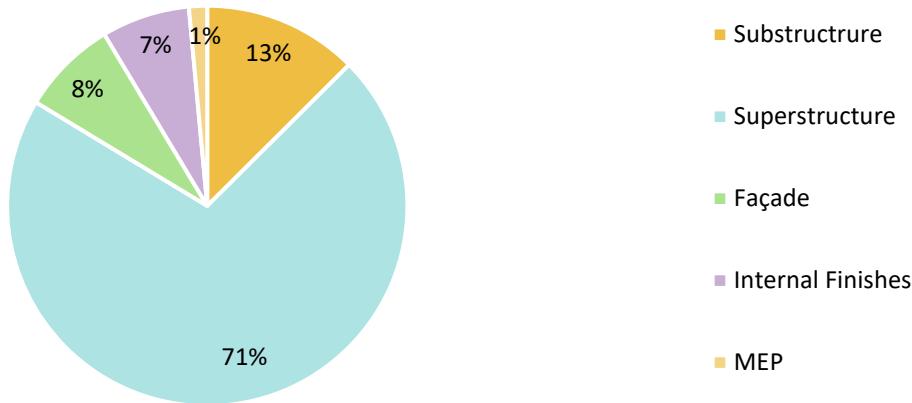


Figure 5.2 Breakdown of Embodied Carbon at Practical Completion. [EN 15978 system boundary: A1-A3 & A4-A5]

To minimise the carbon intensity of the Proposed Development the following materials have been selected:

- Incorporate cement replacement (GGBS: > 60%) where technically possible
- Screed options have been reviewed to minimise material requirements
- High recycled content steel (90%)
- Optimised structural design
- Efficient façade system that reduces the amount of fixings needed

Further iterations of the embodied carbon assessment will be carried out as part of the design process.

Operational emissions of the buildings were also calculated under the 'Design for Performance' (DfP) methodology, which will give a more precise prediction of the emissions from building operation in-use.

6. Circular Economy

The World and UK Green Building Council have stated that all new buildings will need to be net zero carbon by 2030 and all existing buildings by 2050. A circular economy approach to workplace design and construction has been developed to represent the decoupling of economic growth from increasing environmental pressures. It looks to achieve this through six sources of value creation:

- Enabling a building to endure further lives through foresight.
- Minimising material use over a product's lifespan.
- Constructing in more sustainable ways.
- Maximising the number of consecutive use cycles without the need to refit-out.
- Reaching out to smart technologies and wellbeing principles for occupants.
- Applying adaptive building reuse solutions to allow building reinvention while creating value.

6.1. Climate Resilience

Global mean temperatures have already reached 1.1°C above the pre- industrial average and are almost certain to reach the Paris Agreement aspiration limit of 1.5°C in the next decade. Yet, most UK design standards are still based on historic weather data, meaning that building and infrastructure are not fit for the current observed warming, let alone any future scenarios.

The Proposed Development has been designed with increasing temperatures at the forefront of system selection, façade optimisation and minimising global warming.

6.2. Materials

Building and construction activities worldwide consume 3 billion tonnes of raw material each year, which account for approximately 50% of total global consumption. Using green/sustainable building materials and products promotes conservation of dwindling non-renewable resources. In addition, integrating sustainable building materials into building projects can help reduce the environmental impacts associated with the extraction, transport, processing, fabrication, installation, reuse, recycling, and disposal of these source materials.

The development can reduce site-wide embodied carbon emissions through reuse of the existing site materials and structure and careful selection of new building materials. The opportunity to reuse certain elements means that CO₂ emissions associated with the procurement, manufacture and transportation of new materials can be reduced.

6.3. Environmental Impact of Materials

Materials with low overall environmental impact will be chosen and advice from the Green Guide to Specification will be taken into consideration for the selection. The Green Guide rates the environmental impact of different materials and components, considering factors like toxicity, ozone depletion, ease of recycling, and waste disposal (core issues marked with an asterisk under Environmental Issue). Where viable, at least 80% (by area) of the main elements in the building, fabric & building services insulation should be specified to achieve the best performing "A" and "A+" ratings from the Green Guide.

6.4. Sustainable Timber

All timber used for basic or finishing building elements in the scheme will be sourced from responsibly managed and sustainable forests or plantations. Such timber products are the only truly renewable construction material in common use and the responsible management of forests for timber helps to lock in CO₂. By maximising the use of timber for structural or finishing purposes the embodied carbon impact of the development can be reduced.

6.5. Recycled Materials

Scope for increased recycling will be incorporated by specifying recycled materials where possible and ensuring that even where new materials are used, as much as possible can be recycled at the end of the building's life.

Specifying materials with a high-recycled content is also another method of saving processing or manufacturing energy. The recycled content of a material can be described as either post-consumer or post-industrial to indicate at what point in the life cycle a material is reclaimed.

6.6. Ozone Depletion and Global Warming

CFCs and HCFCs, compounds commonly used in insulation materials and refrigerants, can cause long-term damage to the Earth's stratospheric ozone layer, exposing living organisms to harmful radiation from the sun. They also significantly increase global warming if they leak into the atmosphere. Following the Montreal Protocol, production and use of CFCs is no longer permitted. However, products that replaced these gases are often still potent global warming contributors.

All insulation materials specified for the proposed scheme will have zero Ozone Depleting Potential and low Global Warming Potential, (GWP<5) in either manufacture or composition. This will include insulation for building elements (ceiling, internal & external walls, and floor – including foundations) as well as insulation for hot water vessels and pipe or duct work.

6.7. Water Management

Buildings and building sites produce a significant amount of waste per year. Most of the waste produced in the UK is disposed of in landfill sites and only a small percentage of it is recycled or reused.

A Waste Management Strategy (WMS) has been prepared by the demolition contractor to consider the potential refuse and recyclable waste volumes, including potential organic waste, and for all uses of the Proposed Development. This WMS will be further developed prior to the building being demolished.

6.8. Waste Targets

Under EU legislation the UK will have to ensure that less than a third of its waste is sent for burial in landfill sites by 2020 and the figure at present is about 80%. To achieve this target several measures are implemented, including landfill tax, aiming to discourage disposal of waste to landfill. Good waste management is a key component of sustainable development and is an important means of:

- Reducing unnecessary expenditure;
- Reducing the number of natural resources for production of new materials;
- Reducing energy for waste disposal;

- Reducing levels of contamination and pollution arising from waste disposal.

6.9. Demolition and Construction

During the construction phase a large amount of waste material will be generated through the building soft strip and demolition. In building construction, the primary waste products in descending percentages are wood, asphalt/concrete/masonry, drywall, roofing, metals, and paper products.

A compliant resource management plan covering the waste arisings from the Proposed Development should be developed and implemented that complies with the requirements of current legislation and BREEAM. This plan will identify the local waste haulers and recyclers, determine the local salvage material market, identify, and clearly label site spaces for various waste material storage and require a reporting system that will quantify the results and set targets. As a minimum, the resource plan will contain:

1. A target benchmark for resource efficiency;
2. Procedures and commitments for minimising non-hazardous waste in line with the benchmark;
3. Procedures for minimising hazardous waste;
4. Procedures for monitoring, measuring, and reporting hazardous and non- hazardous site waste;
5. Procedures for sorting/ reusing/ recycling construction waste into defined waste groups either on site or through a licensed external contractor;
6. The name/ job title of the individual responsible for implementing the above.

Demolition material can be used as piling mats etc. Further investigation of recycled material on site will be reviewed and implemented as part of the demolition plan.

6.10. Waste Management and Reporting in Operation

The detailed design phases will identify the potential waste streams that the development will produce. As a minimum, plans will be formulated to handle the separation, collection, and storage of common recyclable materials such as paper, glass, plastics, and metals. The collection points will be easily accessible to all the users.

The main aim will be to recycle as much waste as possible, this will be achieved by making sure that waste recycling facilities are strategically placed in convenient locations.

Dedicated storage space for recyclable materials generated by the site during occupation, will include the following:

- Be clearly labelled for recycling;
- Be placed within accessible reach of the buildings;
- Be in a location with good vehicular access to facilitate collections.

Waste collection points – at key ground floor locations there will be several colour coded waste recycling collection points, which will be emptied on a regular basis. The split recycling streams will then be directed to an accessible refuse area, where the separate streams can be stored until collected by the Manchester City Council.

6.11. Construction Environmental Management

Construction sites are responsible for significant impacts, especially at a local level. These arise from noise, potential sources of pollution, waste, and other disturbances. Impacts such as increased energy and water use are also significant. Therefore, attention is being given to site-related parameters with the aim to protect and enhance the existing site & its ecology.

The aim is to have a construction site managed in an environmentally sound manner in terms of resource use, storage, waste management, pollution, and good neighbourliness.

6.12. Responsible Construction Practices

The Contractor shall be required to implement the following responsible construction management procedures:

- Risk evaluation and implementation
 - Vehicle movement
 - Pollution management
 - Tidiness
 - Health and wellbeing
- Training, awareness, and feedback
- Monitoring of reporting

6.13. Water Conservation

Water consumption in the UK has risen by 70% over the last 30 years. Trying to meet the increasing demand by locating new sources of water supply is both expensive and damaging to the environment. Therefore, the design team have focused on reducing the demand for water and managing the existing resources.

1) Water Demand Reduction and Water Efficiency

The aim is to minimise internal and external potable water use within the development. Good water management can contribute to reducing the overall level of water consumption maintaining a vital resource and having environmental as well as cost benefits in the life cycle of the building. The following water saving measures are being considered for a range of areas following the BREEAM guidance and will be included within the tenant's Green Fit-out Guide:

- Dual Flush Cisterns on WC's - These units can provide a single flush of 3L and/or a full flush of 6L. It is proposed that these are used throughout the development to minimise water consumption.
- Flow Restrictors to Taps - Flow restrictors reduce the volume of water discharging from the tap. Spray taps have a similar effect and are recommended to reduce both hot and cold-water consumption. Low flow taps in one of the above forms will be installed in all of areas to comply with the BREEAM mandatory requirements.
- Low Flow Showers - The average shower uses 15 litres of water a minute, by restricting the output of the showers in the development to a maximum of 9 litres/ min a 40% water saving

can be achieved. Flow rate can be reduced to 6 litres/ minute without compromising on water pressure and hence will be considered as the design develops.

- Water Meters - Water meters will be specified on the main supply and sub- metering in line with the BREEAM requirements.
- Pool backwash water will be stored at roof level and used as a secondary water use within WC flushing.

2) Water Management

The site is currently completely impermeable with hard landscaping and building areas. The main aim of the drainage strategy is to make surface water run-off no worse than it was previously.

The proposed surface water drainage strategy for the Proposed Development is to:

- Utilise blue roofs to attenuate rainwater at L17
- Localise soft landscaping within the public realm
- Utilise grey water recycling from pool back wash for WC flushing
- Provision of onsite attenuation

Surface water will be discharged into the River Irwell.

Refer to the Drainage Strategy report, issued by Curtins 26th May 2022, for more details.

3) Sustainable Urban Drainage

The Environment Agency's Flood Map indicates that the site is in Flood Zone 1 with the North boundary located within Flood Zone 3. This means that the North boundary has a 3.3% chance of fluvial flooding each year with the remaining areas considered a low risk of fluvial flooding (less than a 1% chance of flooding each year) see Figure 6.1.

Refer to the Drainage Strategy report, issued by Curtins 26th May 2022, for more details.



Figure 6.1 Flooding Risk Map

7. Health, Wellbeing and Comfort

There has been a growing awareness and interest in the importance of providing healthy and productive environments for building occupants. As design for health and wellbeing becomes increasingly prevalent and public focus on the topic grows, many business owners are increasing their focus on incorporating health and wellbeing in built environment design across all building types. Therefore, many businesses are seeing an investment in health and wellbeing initiatives as a means of demonstrating the quality of spaces and attracting the best talent.

Research demonstrates that in healthy environments, productivity increases, absenteeism reduces, and concentration improves. It is suggested that healthier buildings:

- Reduce stress levels;
- Reduced sickness;
- Improved sleep;
- Reduced occupant complaints;
- Improved performance;
- Helps to develop a community feel;
- Demonstrate industry leadership

The Proposed Development will be designed to enhance occupancy health, wellbeing, and productivity, embracing the WELL Building Standard principles.

7.1. The WELL Building Standard

There are increasing demands for buildings to achieve robust standards to support the health and wellbeing of occupiers, one example being the growing interest of the WELL Building Standard™. This standard is the world's first performance-based system for measuring, certifying, and monitoring features of the built environment that impact human health and wellbeing. The concepts addressed are air, water, nourishment, light, fitness, comfort, and mind. Some businesses are reviewing the WELL Building Standard™ as a means of demonstrating the quality of their space which potentially may attract and retain staff/students. This will have implications for the attractiveness, and consequently the investment value, of buildings in the future.

The WELL manual is made up of over 100 Health & Wellbeing features for improving occupant wellbeing. These features can often be incorporated into designs at little or no cost. Formal certification under the scheme is based on the floor area of the building and therefore can be expensive for larger developments.

There are three levels of certification; silver, gold, and platinum. Silver and Gold are both ambitious standards but can be achieved with only a modest construction cost uplift for the project (about 1%, excluding certification costs), whereas platinum is an exemplar standard with only a couple of buildings certified to that level in the world. Consequently, there is a cost premium associated with it (around 5%).

7.2. Design Considerations

Hilson Moran has carried out an initial assessment based on the Core and Shell WELL assessment for the Proposed Development.

Formal certification is not sought at this stage; however, a number of WELL features are being incorporated into the base build development. The following measures and principles will be considered as the design develops:

- 1) Air
 - Air quality testing – indoors and outdoors
 - Allow for ground contamination report
 - Installing MERV 13 filters on all AHU air intake systems
 - AHU air filtration maintenance – maintenance requirements into the O&M contract and PPM process
 - Policy banning smoking within and adjacent to the building
 - Protecting ventilation ductwork from dust-ingress
 - Using entrance lobbies or revolving doors at the main entrances
 - Providing low VOC products, materials, and finishes
 - Cleaning Plan and eco products
 - CO2 sensors in the return air ducts, connected to demand driven controls to ensure concentrations do not exceed 800ppm.
 - Continuous IEQ monitoring
 - Outdoor air supply should exceed the ASHRAE criteria by least 30%.
- 2) Water
 - Mains incoming water quality testing
 - Allow for future water filters if required
 - Legionella control plan
 - Water taste properties testing
 - Drinking water dispensers located within 30m of occupied spaces
 - Water dispenser cleaning and maintenance plan
- 3) Light
 - Adequate levels of lighting in all workstations and task lighting when required
 - Daylight modelling
 - Window sizes and glazing light transmittance optimisation
- 4) Fitness
 - Signage to encourage the use of internal stair use

- Complimentary access to an exercise space or fitness studio equipped with cardiorespiratory and muscle-strengthening exercise equipment
- Cycle facilities including cycle storage, changing rooms, showers, and storage
- 5) Comfort
 - Interior walls and partitions enclosing to be constructed for optimal performance by reducing air gaps and limiting sound transmission
 - Sound absorptive surfaces and finishes
 - Thermal comfort design in line with ASHRAE Standard
- 6) Mind
 - Flexible office spaces including meeting rooms, phone booths, private quite rooms, mothering rooms and break out areas
 - Post-occupancy surveys
- 7) Air quality

In setting the scope of assessment, consideration has been made of the potential for impacts to occur during the construction phases of the development, and the exposure of nearby residents of the site to air pollution.

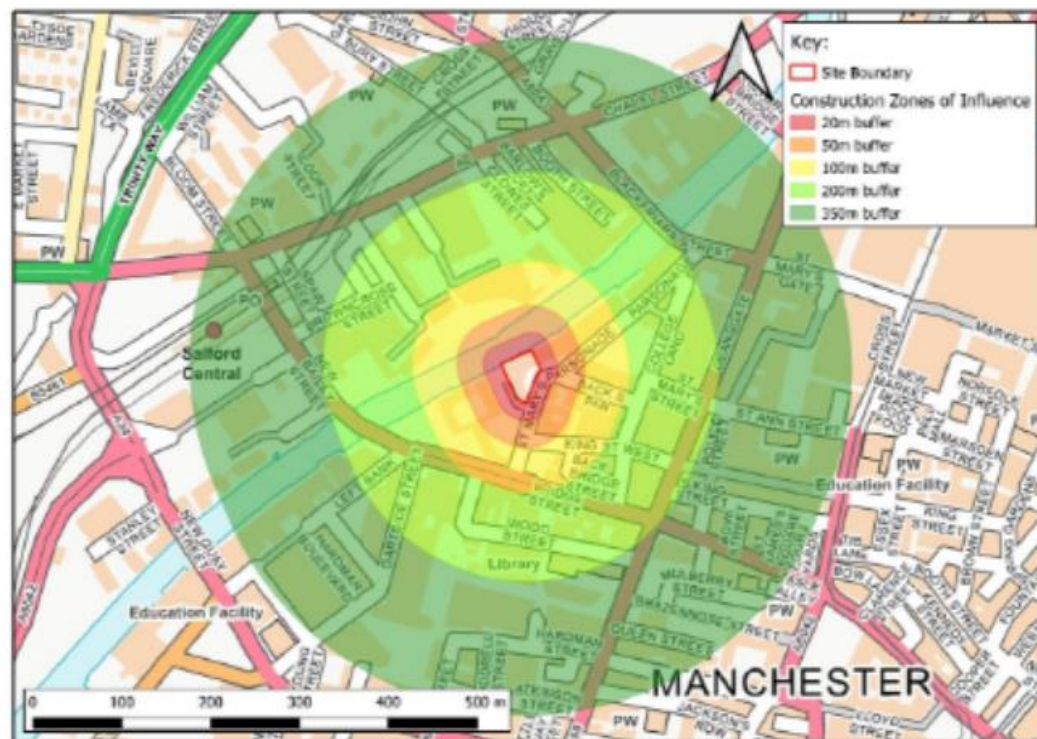


Figure 7.1 Zone of Construction Influence

Overall, the Proposed Developments posed a medium risk of causing significant effects during the construction phase, where receptors within 100 m of the site boundary could be susceptible to dust effects.

However, with the implementation of appropriate mitigation measures via a Dust Management Plan/Construction and Environmental Management Plan, it was concluded that the construction effects of the Proposed Development would be not significant.

Further information can be found within the Hilson Moran Air Quality Assessment ALBH-HMM-ZZ-ZZ-RP-Y-0004.

8) Acoustics

Acoustic performance criteria have been set for all elements of the buildings. These are typically based upon compliance with BCO guidance and Manchester City Council planning policy.

Initial noise surveys have been carried out by Sandy Brown which has allowed for a preliminary assessment of façade performance and plant noise impact to be made.

Further information can be found within the Sandy Brown Planning Noise Report 21443-R01-C.

9) Daylight

A daylight assessment has been undertaken for the Proposed Development to analyse the various proposals whilst minimising solar gain and glare. The assessment has optimised the light transmittance of the glass that has been specified.

8. Sustainable Transport and Connectivity

The transport of people between buildings is the second largest source of CO₂ emissions in the UK after energy use in buildings and remains the main source of many local pollutants. Energy use and emissions from transport are growing at 4% per year, while the effects of climate change are becoming more severe.

An Interim Travel Plan (ITP) and Transport Assessment (TA) have been prepared to assess the potential traffic and transportation impacts of the development. Refer to the Curtins ITP and TA reports, issued on 19th May 2022, for more details.

The main objectives for the ITP are:

- Objective TP1 – To increase the level of walking to and from the site
- Objective TP2 – To increase the level of cycling to and from the site
- Objective TP3 – To increase the level of public transport use to and from the site
- Objective TP4 – To reduce reliance on single occupancy car travel
- Objective TP5 – To raise awareness of the Travel Plan and the travel options available

8.1. Public Transport

The Proposed Development, benefits from good public transport links. Salford Central rail station is located within a ten-minute walk of the site (500m away), providing services to other destinations in Manchester.

The travel plan has identified that the nearest bus stops to the site are located along bridge Street. This core bus corridor is within the recommended 250m distance for city centres. Figure 8.1 identifies the service, route, and frequency.

Bus Service	Route	Peak Hourly Frequency		
		Mon – Fri	Sat	Sun/Hols
8	Shudehill – Salford – Pendlebury – Farnworth – Bolton	12 mins	30 mins	20 mins
34	Piccadilly Gardens – Salford – Leigh – Golborne – Bryn	30 mins	30 mins	Hourly
34A	Piccadilly Gardens – Salford – Pendleton – Eccles – Worsley	30 mins	30 mins	Hourly
36	Piccadilly Gardens – Salford – Peel – Great Lever – Bolton	12 mins	12 mins	30 mins
37	Piccadilly Gardens – Salford – Walkden – Farnworth – Bolton	12 mins	12 mins	30 mins
38	Piccadilly Gardens – Salford – Swinton – Logistics North	10 mins	10 mins	30 mins
50	MediaCityUK – Pendleton – Salford – Burnage – East Didsbury	10 mins	10 mins	15 mins
V1	Manchester Royal Infirmary – Salford – Tyldesley – Leigh	10 mins	30 mins	30 mins
V2	Manchester Royal Infirmary – Salford – Tyldesley – Atherton	30 mins	30 mins	30 mins
V4	Manchester Royal Infirmary – Salford – Deans – Ellenbrook	4 in the AM 5 in the PM	N/A	N/A
X39	Farnworth – Peel – Swinton – Salford – Piccadilly Gardens	2 in the AM	N/A	N/A

Figure 8.1 Bus Services

8.2. Cycling Facilities and Parking Spaces

There are no cycle hire facilities near the site. However, as part of the Bee Network, a Bike Hire Scheme is being rolled out in Manchester as part of a public trial. There is currently no docking station in the vicinity of the site, however it is envisaged that in summer 2022, there will be more than 200 stations, 1,200 pedal bikes and 300 e-bikes across Manchester, Salford, and Trafford (See Figure 8.2 for proposed locations).

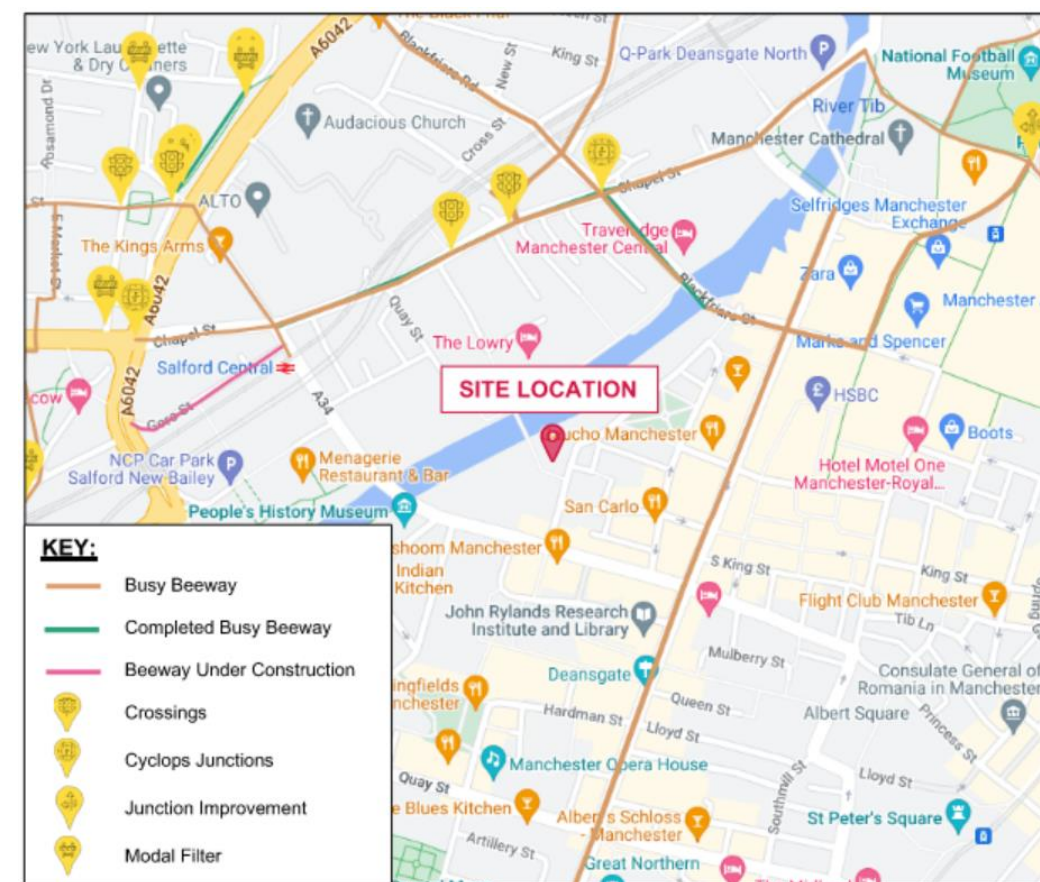


Figure 8.2 Bee Network Map

There are several national cycle networks within proximity of the site such as Route 6, 66 and 55. Route 6 runs from Watford in London to Windermere in the Lake District (more locally, Route 6 connects Manchester City Centre to Chorlton); Route 60 connects North and East Manchester, partly following the Fallowfield Loop line; Route 66 begins in Manchester, extending to Spurn Head via Bradford, Leeds, York and Kingston upon Hull; and Route 55 is still under construction but the accessible stretch runs on-road to Eccles and traffic free to Tyldesley (See Figure 8.3).

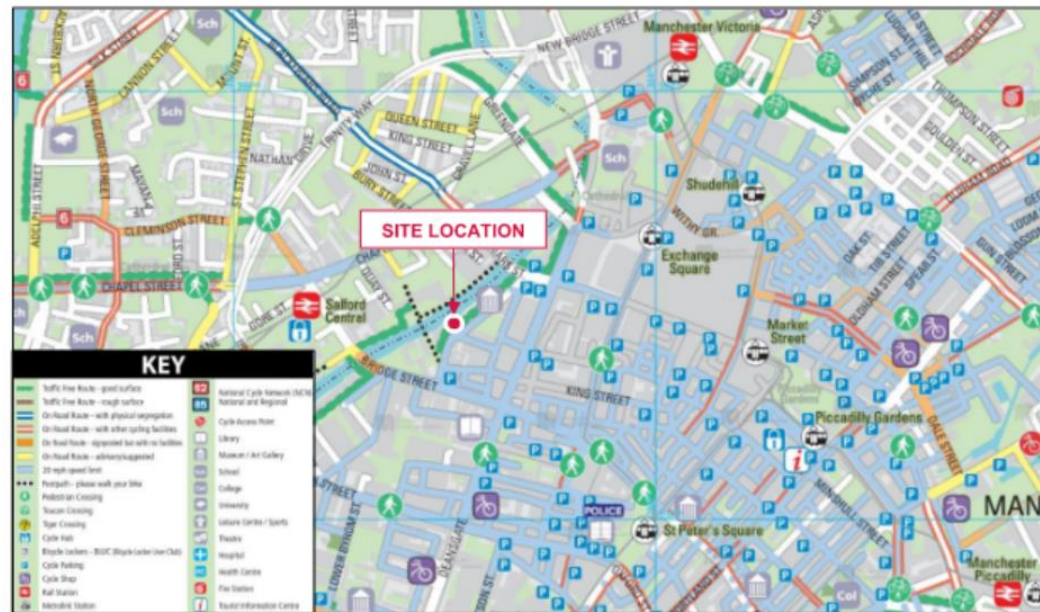


Figure 8.3 Local Cycle Network

In addition, cycle storage space and changing facilities will be allocated within a secure basement (Figure 8.4). The allocated number of cycle stores within the basement is 120 and 14 short stay spaces allocated within the ground floor landscape.

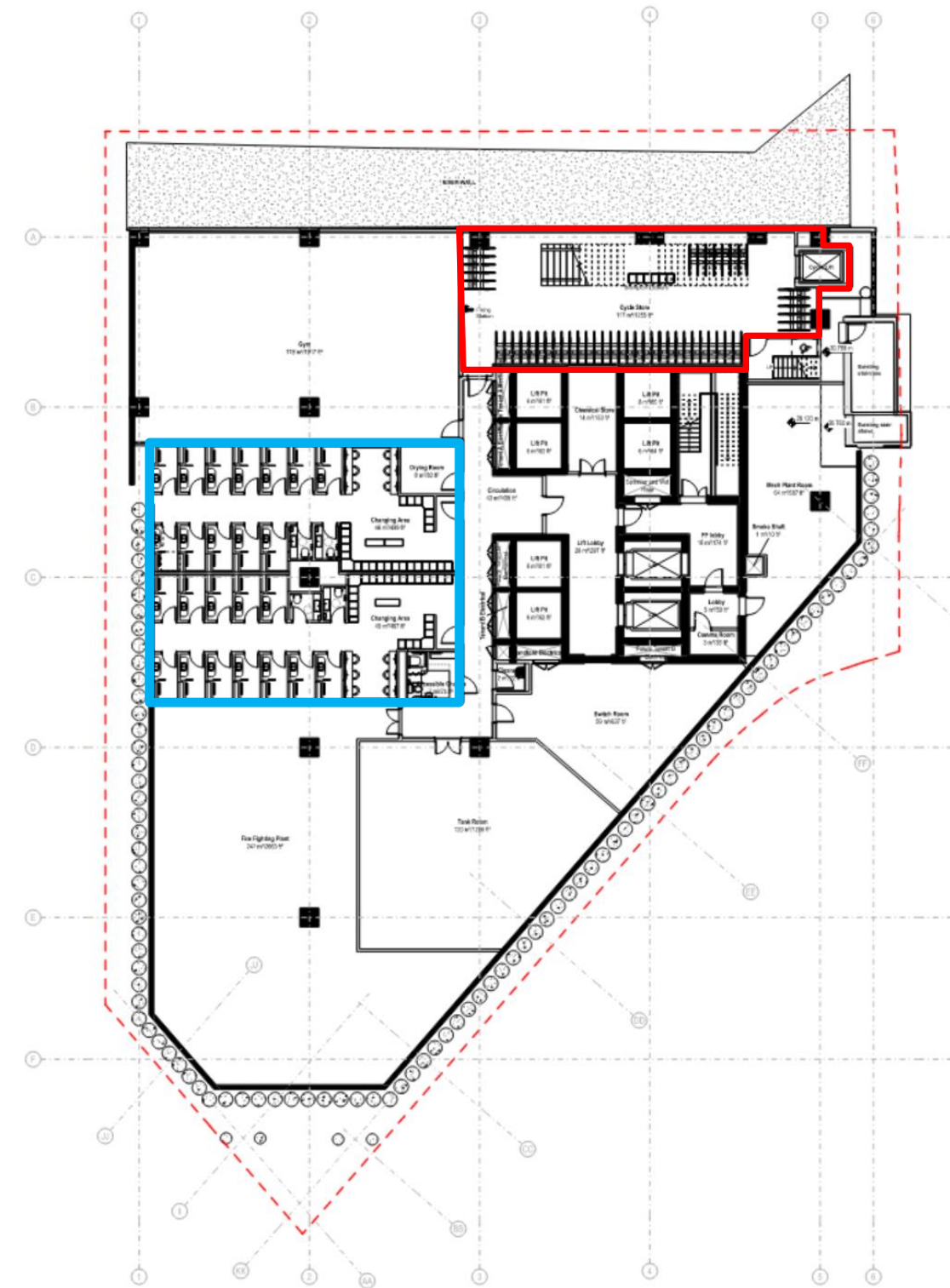


Figure 8.4 Basement Cycle Stores and Showers

9. Social Value

Design teams and Clients are trying to understand, measure and enhance the impact of their developments on their local communities. Social return on investment (SROI) is one way of doing this. SROI is an outcomes-based measurement tool that helps organisations to understand and quantify the social, environmental, and economic value they are creating.

Social value can be defined as the quantification of the positive contribution that an organisation makes to society. The Social Value defines a process whereby organisations not only meet their need for services, works and utilities in a way that achieve value for money but also generate benefits to the society and economy, whilst minimising the impact to the environment. Social value measurement identifies the impacts of an organisation on various stakeholders, such as the local community, the environment, and Clients.

Examples of social value outcomes and opportunities can include jobs and economic growth; health, wellbeing, and the environment; and strength of community.

9.1. Impact of the Development

Manchester City Centre plays a central role in driving the economic, employment and workforce growth which will transform the economic prospects of Greater Manchester.

The established Financial and Professional services sectors alongside Digital, Tech, and Media sectors are key elements of the city centres economy and are forecast to experience strong growth in the over the next 20 years. Appropriate workspace provision is needed to accommodate the sector's needs.

Strategically located next to the city centre's commercial district, within proximity to Spinningfields – the cities growing business district – the site benefits from abundant local amenities, as well as being located close to key transport links.

Significant recent and forecast employment and population growth is underpinning demand for employment space in Manchester, and although supply is increasing, it is not expected to meet demand according to several key Property Consultants. The Proposed Development would help to meet this demand.

The proposed redevelopment of Alberton House is expected to deliver significant economic benefits including:

- Supporting a temporary economic uplift during a 121 week construction phase, supporting 800 construction job years and a further 260 indirect and induced FTE job years, equivalent to an average of 460 FTEs being supported for a period of 2.3 years. The scheme is expected to deliver a total GVA contribution of circa. £78.5m through the direct, indirect and induced construction effects over the construction period.
- Accommodating around 1,960 FTEs once fully occupied, generating GVA worth £170.2m per year, with wages totalling £62.7m.
- A range of jobs, including highly-skilled roles, graduate-relevant opportunities, and entry-level roles will be accommodated helping to drive economic growth and productivity in the city and support inclusive growth objectives.

- Benefits to the public purse include £12.9m of national insurance and income tax each year and business rates of £23.5m over 10 years.

Refer to “Alberton House Economic Impact Assessment June 2022” developed by ekosgen for further detail.

10. Certification

BREEAM (Building Research Establishment's Environmental Assessment Method) is the world's leading and most widely used environmental assessment method for buildings. It sets the standard for best practice in sustainable design and has become the de facto measure used to describe a building's environmental performance.

Early awareness and implementation of the BREEAM requirements will help the project team to arrive at a consolidated approach to the environmental and sustainable aspects of a development.

The objectives of BREEAM are to visibly promote low environmental impact buildings, to set criteria and standards surpassing those by regulations and thus challenging the market to provide innovative solutions to achieving this criterion and raise the awareness of owners, occupiers, designers, and operators of the benefits of buildings with a reduced environmental impact.

In accordance with the BREEAM assessment and planning policy, the following sustainable features have been considered for the development:

- Aspiration that all insulation materials used within the Proposed Development will be selected to be CFC free both in manufacture and composition.
- Building materials, where possible, will be sourced locally to reduce transportation pollution & support the local economy.
- Aspiration that all timber will be purchased from responsible forest sources.
- Recycling facilities will be provided on site for construction and operational waste.
- Water use will be minimised by the specification of water efficient taps, shower heads, dual flush toilets and low water use appliances.
- Water metering will be installed to monitor and minimise wastage.
- The construction site will be managed in an environmentally sound manner in terms of resource use, storage, waste management, pollution. A Site Waste Management Plan (SWMP) will be produced for the works at the appropriate point in the development process.

Alberton House is targeting BREEAM Excellent with a targeted score of 75.8% (See Figure 10.1)

	Targeted
Expected BREEAM Score	75.8%
Expected BREEAM Rating	Excellent

Figure 10.1 BREEAM Score Card Summary

11. Site Environment

In response to the ecological emergency, developments should aim to increase local ecology and diversity, whilst helping create a place where people will want to work, live, and play. Native planting should be introduced in green corridors for local wildlife including pollinators such as bees. Urban agriculture and food production should be provided as part of the placemaking strategy, increasing community and social interactions.

11.1. Landscaping

Proposed Development drawings show that most of the site is likely to be surfaced in hardstanding. Limited areas of soft landscaping (comprising raised planters) are shown within the current proposals.

11.2. Site Investigation/ Ground Conditions

The site is identified as comprising industrial uses since the earliest available mapping (1850) when it was occupied by warehouses and a distillery, and more recently as a garage and a car park. In addition, the surrounding area has also been dominated by industrial land use with potentially for contamination originating both on- and off-site.

The site is not set in a particularly sensitive environmental setting, principally attributed to surrounding commercial land use although it is noted that it is underlain by both a Secondary A and a Principal Aquifer and is located c.50m south-east of the River Irwell.

Refer to Geo-Environmental & Geotechnical Preliminary Risk Assessment report, issued by Fairhurst in May 2020 for more details. Based on the this report it is recommended that intrusive ground investigation is undertaken.

11.3. Biodiversity

An ecological assessment has been conducted to present the ecological, biodiversity and nature conservation status of the Proposed Development.

The assessment has determined that the existing site is of low ecological value. There are no protected wildlife sites within proximity to the site and any proposed redevelopment would not threaten the integrity of notifiable features.

Increasing the biodiversity and enhancing the ecology of the site has been one of the keys aims of the Proposed Development. The other aim will be to prevent the loss of any further natural habitat. The proposals will improve the ecology and biodiversity of the site compared to the current situation. This can be achieved through the provision of planters and soft landscaping wherever possible.

The ecological appraisal has demonstrated that the proposed redevelopment at the site is feasible and acceptable in accordance with ecological considerations and the NPPF. Redevelopment at the site will provide an opportunity to secure ecological enhancement for fauna typically associated with urban areas such as breeding birds and roosting bats.

Below are several general considerations for enhancement measures:

- Wherever practical, native trees and shrubs should be selected in the landscape design. The design will aim to incorporate 80% native and 20% ornamental plant species.

- Where practical, bird boxes can be installed, targeted towards species currently known to utilise the site and its surrounds. The design will incorporate 6 bird boxes located on trees around the site. The bird boxes will be located for Black Redstarts.
- Provide bat boxes. The design will incorporate 2 bat boxes located on trees around the site. Lighting will be designed to minimise impacts on foraging bats.

Refer to the Alberton House, Manchester Ecological Assessment issued by Penny Anderson Associates Ltd (Consultant Ecologists) in August 2021, for more details.

11.4. Pollution

Global concern for environmental pollution has risen in recent years, as concentrations of harmful pollutants in the atmosphere are increasing. Buildings have the potential to create major pollution both from their construction and operation, largely through pollution to the air (dust emissions, NOx emissions, ozone depletion and global warming) but also through night sky pollution due to external lighting. The Proposed Development will aim to minimise the above impacts, both at the design stage and onsite.

11.5. Ozone Depletion

CFCs and HCFCs, compounds commonly used in insulation materials and refrigerants, can cause long-term damage to the Earth's stratospheric ozone layer, exposing living organisms to harmful radiation from the sun. They also significantly increase global warming if they leak into the atmosphere. Following the Montreal Protocol, production and use of CFCs is no longer permitted. However, products that replaced these gases are often still potent global warming contributors. Where refrigerants are used for air-conditioning and comfort cooling, they will be CFC and HCFC-free.

11.6. Internal Pollutants

Volatile organic compounds (VOCs) are emitted as gases (commonly referred to as off-gassing) from certain solids or liquids. VOCs include a variety of chemicals, some of which are known to have short-term and long-term adverse health effects. Concentrations of many VOCs are consistently higher indoors (up to ten times higher) than outdoors.

VOCs are emitted by a wide array of products numbering in the thousands. Examples include paints and lacquers, paint strippers, cleaning supplies, pesticides, building materials, furnishings, adhesives, Urea-formaldehyde foam insulation (UFFI), pressed wood products (hardwood plywood wall panelling, particleboard, fibreboard) and furniture made with these pressed wood products.

'No' or 'low' VOC paints are available from most standard mainstream paint manufacturers. There 'eco-friendly' paints are made from organic plant sources and powdered milk-based products.

The design team will seek to select internal finishes and fittings with low or no emissions of VOCs and comply with European best practice levels as a minimum.

An indoor air quality plan has been produced and implemented, with the objective of facilitating a process that leads to design, specification and installation decisions and actions that minimise indoor air pollution during the design, construction, and occupation of the building. Refer to Hilson Moran's IAQA report ALBH-HMM-ZZ-ZZ-RP-Y-0004.

11.7. Night Sky Pollution

External lighting encompasses vehicle and pedestrian access lighting, security lighting, facility illumination and general feature lighting. An external lighting design is being produced by Artin lighting. In summary the lighting will be designed on a site-wide basis to meet the mandatory requirements and aesthetic considerations. The strategy is to provide a balance between adequate external lighting for safe and secure operation of the site without unnecessary illumination or power consumption.

The intention is to be a good neighbour and not to introduce nuisance glare or light pollution of the night sky from miss-directed or unnecessary lighting. Feature lighting, where required, will be focussed to the task/ subject. Where necessary, luminaires will be further screened in cases where there may be an issue of proximity and light spill to the adjacent neighbouring residential areas, although the intention is to avoid this situation arising wherever possible from the outset. The external lighting design will take into consideration the relevant guidance from the British Standards and other recommended documents.