



ELEMENT
SUSTAINABILITY

DIECAST

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ELEMENT
SUSTAINABILITY

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1. INTRODUCTION

Element Sustainability has been commissioned by Diecast Ltd to review the sustainability and energy performance of Diecast, a mixed-use entertainment-led venue located off Ducie Street in Manchester, in order to support the planning application for a for continued use of Diecast as an entertainment and leisure venue.

This technical note summarises the relevant policy background and requirements of Manchester City Council and to demonstrate the ways in which the developer has addressed these aims through their proposals.

Details of the design attributes, specifications and characteristics of the scheme are appraised in order to demonstrate how the proposals contribute to sustainable development in Manchester and seek to mitigate the environmental impacts of the scheme, providing a sustainability appraisal in support of the planning application.

This report is intended to support the planning application for this development and therefore, establish an approach to the delivery of this scheme which meet the criteria outlined by the council that the developer commits to implement at the site.



2. DEVELOPMENT PROPOSALS

2.1 Development Site Description

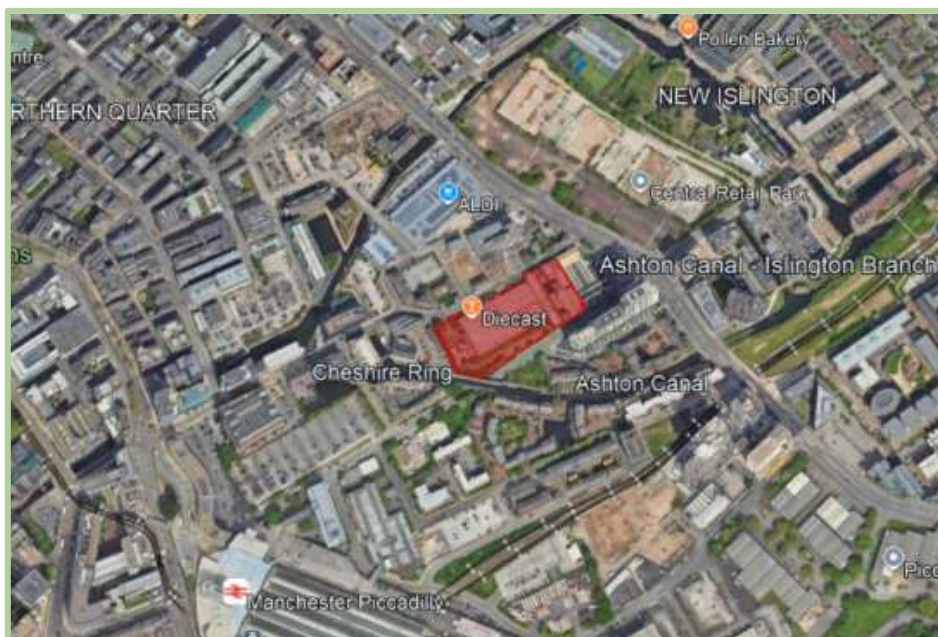
The building is situated off Ducie Street in the Picadilly Basin area of Manchester. Diecast took on the space in 2022 and it has since been utilised as a beer hall and a mixed-use enterprise venue, comprising of a brewery, bar, restaurant, music and theatre spaces and retails areas as well as offices and a technical hub. A car park and areas of soft landscaping are located in the southwestern portion of the site in addition to an external seating area and planters in the western section.

The site is not classed as a listed building, but the design team have prioritised the retention of specific features of the original foundry, such as the brick walls and timber trusses. The recently constructed warehouse differs from the original foundry, with external steel cladding and block work. Up until 2021 the buildings were utilised as an aluminium diecast factory.

The site is bounded by Ducie Street to the north, Store Street to the south, Ashton Canal to the south-west and Greater Ancoats Street to the north- east. The Site adjoins Stocktons and Timothy Oulton's furniture store to the immediate north-east.

The site is presented in Figure 2.1 below.

Figure 2.1 – Site Location Plan



2.2 Development Proposals

In 2022, Diecast was granted planning permission (ref. 133523/FO/2022) for three years for the change of use of the building from an industrial foundry to a mixed-use development with retail, leisure and offices. External alterations were also made to the building, including the creation of new entrances,



over-cladding of the roof, as well as the installation of cycle storage spaces. Planning approval is now sought for permanent consent.

Figures 2.2 to 2.5 present the site layout and elevations and floor plans for the development as approved in 2022.

Figure 2.2 – Site Plan

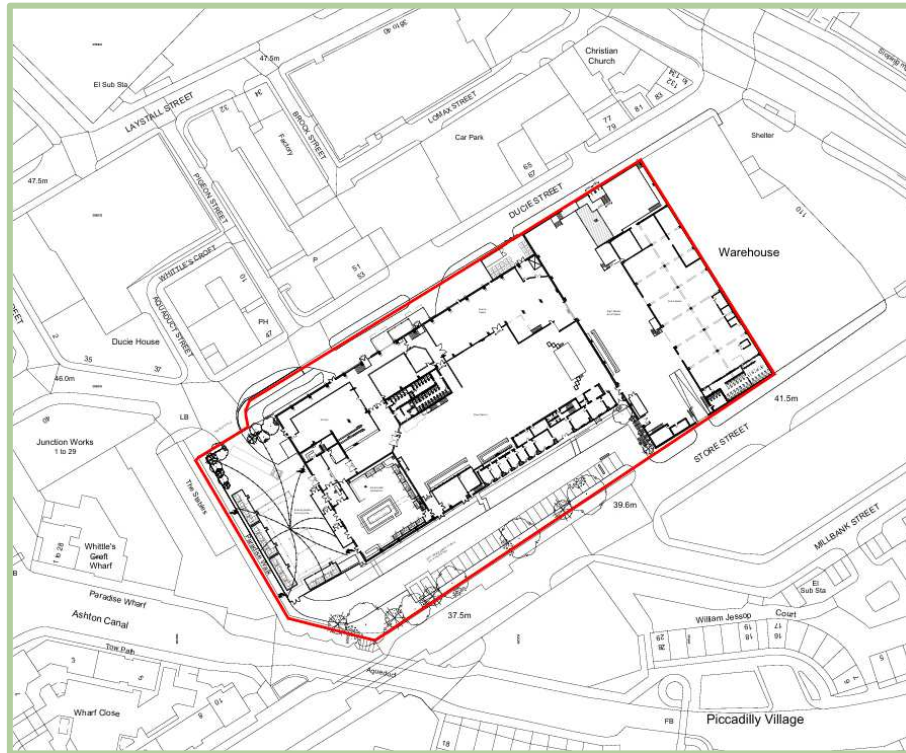


Figure 2.3 – Site Elevations

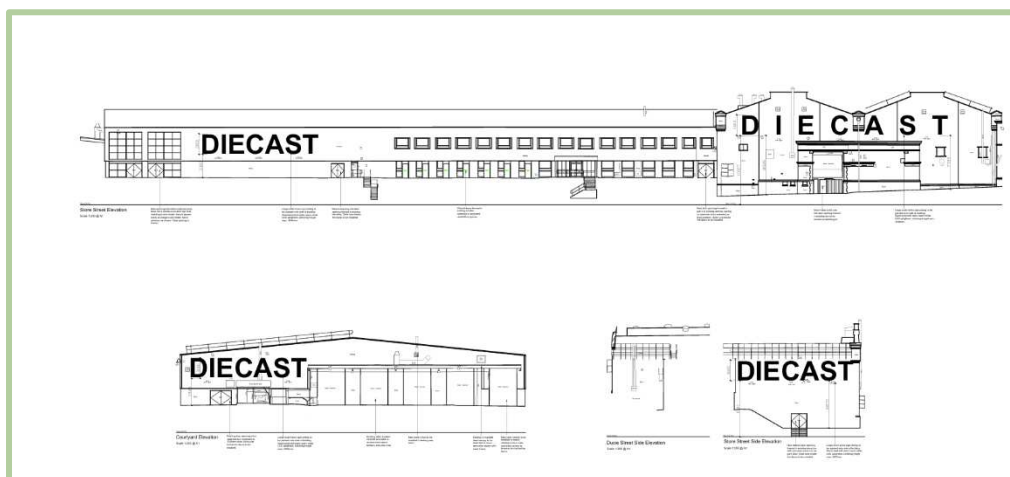


Figure 2.4 – Ground Floor Plan

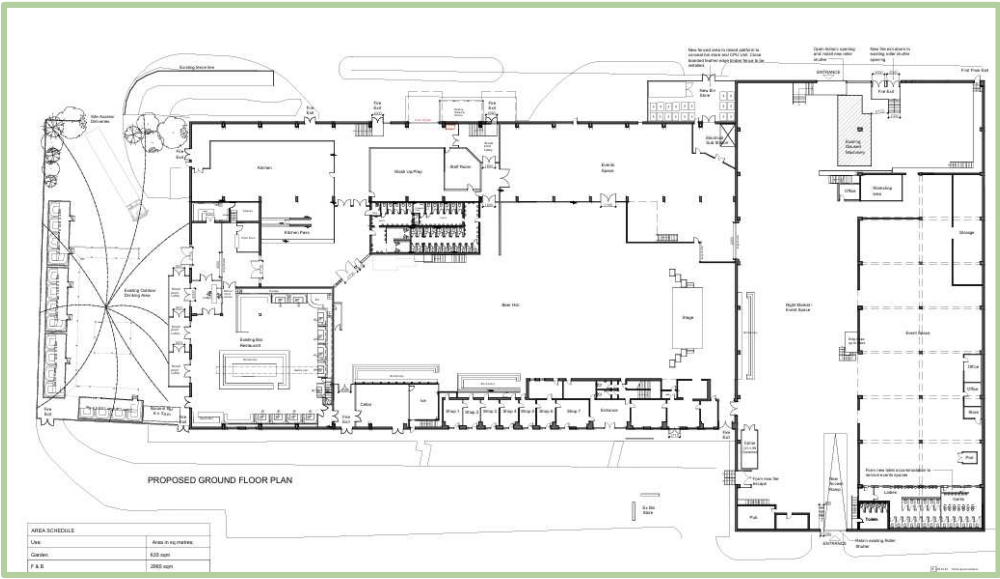
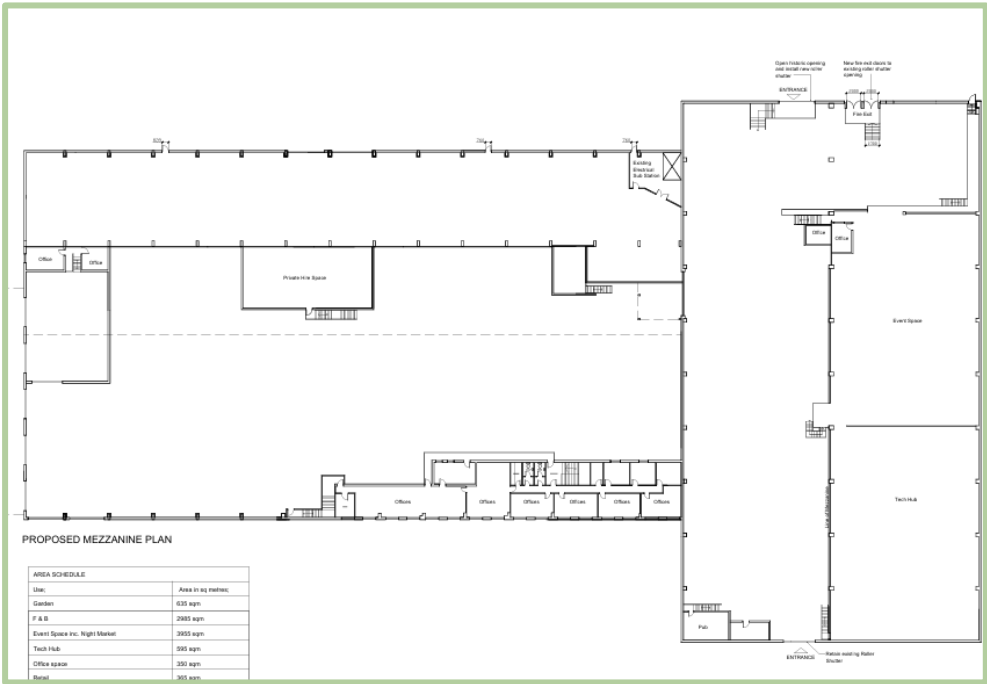


Figure 2.5 – Mezzanine Floor Plan



3. POLICY REVIEW

3.1 National Planning Policy

The National Planning Policy Framework was revised in response to the Levelling-up and Regeneration Bill: reforms to national planning policy consultation on 12th December 2024 and sets out the government's planning policies for England and how these are expected to be applied.

The purpose of the planning system is to contribute to achieving sustainable development. The planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways, as set out below:

An economic role – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;

A social role – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations, and by fostering well-designed, beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and

An environmental role – to protect and enhance our natural, built and historic environment, including effectively using land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low-carbon economy.

These objectives should be delivered through the preparation and implementation of plans and the application of the policies in this Framework. Planning policies and decisions should play an active role in guiding development towards sustainable solutions, but in doing so should take local circumstances into account, to reflect the character, needs and opportunities of each area.

3.2 Local Planning Policy

3.2.1 Manchester Core Strategy

Manchester's Core Strategy was adopted on the 11th July 2012 and remains the key document in the adopted Manchester Local Plan. It sets the out the long-term strategic policies for Manchester's future development and will form the framework that planning applications will be assessed against.

Policy EN 4 - Reducing CO₂ Emissions by Enabling Low and Zero Carbon Development: The council will seek to reduce fuel poverty and decouple growth in the economy, growth in CO₂ emissions, and rising fossil fuel prices, through the following actions:

Where possible new development and retrofit projects will be used as a mechanism to help improve energy efficiency and provide low and zero carbon energy supplies to existing buildings.

Where appropriate new development and retrofit projects will be required to connect to and / or make contributions to low or zero carbon energy schemes and / or to incorporate provision to enable future connection to any existing / potential decentralised energy schemes.



The use of building materials with low embodied carbon in new development and refurbishment schemes

Policy EN 5 - Strategic Areas for Low and Zero Carbon Decentralised Energy Infrastructure: Within Manchester it is considered that the following strategic areas, will have a major role to play in achieving an increase in the level of decentralised, low and zero carbon energy supplies available:

- The Regional Centre, which also includes the Oxford Road Corridor and Eastlands;
- District Centres and associated major development sites;
- Airport Strategic site;
- Strategic housing location; and,
- Strategic employment locations.

Within these areas new development, regeneration and retrofit projects will be expected to take place in the context of more detailed proposals for decentralised low and zero carbon energy infrastructure in the form of energy proposals plans.

Policy EN 8 – Adaption to Climate Change requires all new development to be adaptable to climate change in terms of the design, layout, siting and function of both buildings and associated external spaces. In achieving developments which are adaptable to climate change developers should have regard to the following, although this is not an exhaustive list:

- Reduction in urban heat island effect using green infrastructure such as green roofs, green walls, increased tree cover and waterways; and,
- The need to control overheating of buildings through passive design; and

Developers will be permitted to use green infrastructure elements such as green roofs, green walls, street trees and waterways to contribute to compliance with CO₂ mitigation under Policy EN6, subject to sufficient evidence to quantify their contribution to compliance.

Policy EN9 - Green Infrastructure: New development will be expected to maintain existing green infrastructure in terms of its quantity, quality and multiple function. Where the opportunity arises, and in accordance with current green infrastructure strategies, the council will encourage developers to enhance the quality and quantity of green infrastructure, improve the performance of its functions and create and improve linkages to and between areas of green infrastructure. Where the benefits of a proposed development are considered to outweigh the loss of an existing element of green infrastructure, the developer will be required to demonstrate how this loss will be mitigated in terms of quantity, quality, function and future management.

Policy EN14 – Flood Risk: The council requires developments to:

- Be directed away from sites at the greatest risk of flooding, and towards sites with little or no risk of flooding; this should take account of all sources of flooding identified in the Manchester-Salford-Trafford Strategic Flood Risk Assessment (SFRA).

Policy EN15 – Biodiversity and Geological Conservation: The council will seek to maintain or enhance sites of biodiversity and geological value throughout the city.

Developers will be expected to identify and implement reasonable opportunities to enhance, restore or create new biodiversity, either on-site or adjacent to the site, contributing to linkages between valuable or potentially valuable habitat areas where appropriate, with reference to:



- The Manchester Biodiversity Strategy, which provides further details of priority habitats within Manchester and opportunities for biodiversity enhancement including corridors such as the Mersey, Medlock and Irk River valleys, the canals and disused railway lines, and areas of managed greenspace particularly in parks;
- The Green Infrastructure Framework for Greater Manchester, which encompasses an ecological framework that seeks to guide and inform habitat creation and repair, including identifying large 'biodiversity opportunity areas' including the Moston Brook Corridor and Nutsford Vale;
 - Manchester's Climate Change Action Plan;
 - The Strategic Flood Risk Assessment (SFRA) for Manchester;
 - The River Basin Management Plan for the North West; and,
 - The Manchester Tree Strategy.

Any adverse impacts on biodiversity will need to be justified against the wider benefits of the proposal, assessed against other Local Development Framework policies. Where adverse impacts are unavoidable, developers will be required to provide appropriate mitigation and / or compensation. Development should, wherever possible, seek to maintain, enhance or restore existing geology.

Policy EN16 – Air Quality: The council will seek to improve the air quality within Manchester, and particularly within Air Quality Management Areas. Developers will be expected to take measures to minimise and mitigate the local impact of emissions from traffic generated by the development, as well as emissions created by the use of the development itself.

Policy EN17 – Water Quality: The council require:

- New developments to avoid any adverse impact on water quality, including during the construction phase, and wherever possible should seek to enhance water quality, both chemical and ecological.

Policy EN19 – Waste: The council will:

- Require all developers, including those of new waste management facilities within the district, to demonstrate the proposal's consistency with the principles of the waste hierarchy (prevention, reduction, re-use, recycling/composting, energy recovery, final disposal);
- Require all developers to submit a waste management plan to demonstrate how both construction and demolition waste will be minimised, and recycled on site wherever possible, and how the sustainable waste management needs of the end user will be met; and,
- Encourage communities to take responsibility for the waste they create through the provision of accessible facilities.

Policy DM1 – Development Management: All development should have regard to the following specific issues, for which more detailed guidance may be given within a supplementary planning document:

- Accessibility: buildings and neighbourhoods fully accessible to disabled people, access to new development by sustainable transport modes;
- Community safety and crime prevention;
- Design for health;



- Adequacy of internal accommodation and external amenity space;
- Refuse storage and collection;
- Effects relating to biodiversity, landscape, archaeological or built heritage;
- Green infrastructure including open space, both public and private;
- The use of alternatives to peat-based products in landscaping/gardens within development schemes;
- Flood risk and drainage and,
- Subject to scheme viability, developers will be required to demonstrate that new development incorporates sustainable construction techniques (In terms of energy targets this policy should be read alongside policy EN6 and the higher target will apply).

Policy T1 – Sustainable Transport: To deliver a sustainable, high quality, integrated transport system to encourage modal shift away from car travel to public transport, cycling and walking, to support the needs of residents and businesses and to prepare for carbon free modes of transport, the council will support proposals that:

- Improve choice by developing alternatives to the car;
- Facilitate modes of transport that reduce carbon emissions e.g by incorporating charging points for electric vehicles, subject to their appropriate design and location;
- Would reduce the negative impacts of road traffic, for example, congestion, air pollution and road accident casualties; and,
- Take account of the needs of road users according to a broad hierarchy consisting of, in order of priority:
 1. pedestrians and disabled people,
 2. cyclists, public transport,
 3. commercial access,
 4. general off peak traffic,
 5. general peak time traffic.

3.2.2 PFE - Addendum to Manchester Core Strategy

Following the adoption of the PfE document, the subsequent Core Strategy (CS) policies have been partially replaced by Places for Everyone (PFE) policies. Any part of the policy that is not replaced remains part of Manchester's Core Strategy.

CS Policy T1 Sustainable Transport: The following bullet point is what has been replaced:

- Take account of the needs of road users according to a broad hierarchy consisting of, in order of priority:
 - Pedestrians and disabled people
 - Cyclists, public transport,
 - Commercial access,
 - General off-peak traffic,
 - General peak time traffic.

This policy was replaced by PFE Policy JP-CA1.

CS Policy EN4 Reducing CO₂ Emissions by Enabling Low and Zero Carbon Development: The following bullet point is what has been replaced:



- All development must follow the principle of the Energy Hierarchy.

This policy was replaced by PFE Policy JP-S2.

CS Policy EN6 Target Framework for CO₂ Reductions from Low or Zero Carbon Energy Supplies: The following aspects of the policy have been replaced:

- The CO₂ emissions reduction targets and the target framework development locations

This policy was replaced by PFE Policy JP-S2.

CS Policy EN8 Adaption to Climate Change: The following bullet point is what has been replaced:

- Minimisation of flood risk by appropriate siting, drainage, and treatment of surface areas to ensure rainwater permeability; and,
- The opportunity to provide linked and diverse green space to enhance natural habitats which will assist species adaptation.

This policy was replaced by PFE Policies JP-S2, JP-S4 and JP-G8.

CS Policy EN14 Flood Risk: The following bullet point is what has been replaced:

- All new development should minimise surface water run-off, including through Sustainable Drainage Systems (SUDS) and the appropriate use of Green Infrastructure. Developers should have regard to the surface water run-off rates in the SFRA User Guide. In CDAs, evidence to justify the surface water run-off approach / rates will be required.

This policy was replaced by PFE Policy JP-S4.

CS Policy EN15 Biodiversity and Geological Conservation: The following aspects of the policy have been replaced:

Development should wherever possible seek to maintain, enhance or restore existing geology.

This policy was replaced by PFE Policy JP-G8.

CS Policy EN17 Water Quality: The following bullet point is what has been replaced:

- Development should minimise surface water run-off from development and associated roads, and maximise the use of appropriate sustainable drainage systems, to minimise groundwater contamination, and to avoid pollutants reaching watercourses.

Replaced by PFE Policy JP-S4

These elements of the above policies have therefore been removed from the previous Local Planning Policy section.



3.3 Regional Planning Policy

3.3.1 Places For Everyone

Places for Everyone is the joint development plan of nine Greater Manchester local authorities (Bolton, Bury, **Manchester**, Oldham, Rochdale, Salford, Tameside, Trafford, and Wigan) dealing with strategic planning issues including jobs, homes, transport, and the natural environment.

All nine authorities adopted the PfE Plan on 21st March 2024. Therefore, this is now part of the statutory development plan for each of the nine PfE authorities.

As a result, the following policies have been considered as part of the proposed development:

Policy JP-S1: Sustainable Development: To help tackle climate change, development should aim to maximise its economic, social and environmental benefits simultaneously, minimise its adverse impacts, utilise sustainable construction techniques and actively seek opportunities to secure net gains across each of the different objectives.

In bringing forward previously developed sites for development, particular attention will be paid to tackling land contamination and stability issues, ensuring that appropriate mitigation and remediation is implemented to enable sites to be brought back into use effectively.

Addressing Climate Change

Greater Manchester's Vision is to be at the forefront of action on climate change and to make its fair contribution to international commitments by becoming a carbon neutral city region by 2038.

To meet the carbon commitments, the following will be required:

- Be carbon neutral by 2038;
- Hold cumulative carbon dioxide emissions to within the council's carbon budget; and,
- Initiate a programme of mitigation to reduce emissions including by:
 - Significantly upscaling solar photovoltaic energy;
 - Reducing heat demand in homes;
 - Moving away from carbon intensive gas as the primary source of heat; and,
 - Increasing biofuel use.
- In supporting Greater Manchester's ambitions, climate change is a key theme running throughout the plan, rather than being reduced to a single policy, and it is only through this combination of actions that it can be properly addressed. In particular:
 - Methods to de-carbonise the city region through new and existing development, effective land management and through the provision of infrastructure and new technologies Policy JP-S2 'Carbon and Energy'; and,
 - The delivery of renewable and low carbon energy schemes Policy JP-S3 'Heat and Energy Networks'.



Carbon and Energy

- Meeting the 2038 carbon neutrality target will require a radical transformation across a range of sectors to drive carbon reduction. Within this, new development will have a critical role to play and all new homes and commercial/industrial buildings will need to achieve net zero carbon by 2028.
- It is expected that development in the plan area will apply a net zero carbon approach to operational emissions up until 2028, thereafter emissions in construction should be considered. Minimum carbon reduction targets will be set in line with the Future Homes Standard of 80% or until such a time this is superseded.
- From 2025, applicants will need to demonstrate carbon reductions have been maximised with an opportunity to offset any residual carbon to a carbon offset fund. The approach will be reviewed in line with future standards as they are introduced.
- By following the energy hierarchy, new development will need to achieve net zero carbon through the maximisation of on-site measures first. However, circumstances where a development has demonstrated that the hierarchy has been followed and there are no reasonable alternatives to meet the minimum carbon reductions, then payment to offset remaining emissions will also be required. Such payments should be expected to fund other carbon saving programmes within Greater Manchester to help meet the 5 Year Environment Plan targets.

Policy JP-S 2 – Carbon and Energy: The aim of delivering a carbon neutral Greater Manchester no later than 2038, with a dramatic reduction in greenhouse gas emissions, will be supported through a range of measures including:

- Promoting the use of life cycle cost and carbon assessment tools to ensure the long-term impacts from development can be captured;
- Taking a positive approach to renewable and low carbon energy schemes, particularly schemes that are led by, or meet the needs of local communities;
- An expectation that new development will, unless it can be demonstrated that it is not practicable or financially viable;
 - Be net zero carbon which applies:
 - From adoption – to regulated operational carbon emissions;
 - From 2025 development should also calculate and minimise carbon emissions from unregulated emissions alongside regulated emissions.
 - Development proposals should set out how this has been achieved in an energy statement in accordance with the energy hierarchy, which in order of importance seeks to:
 - Minimise energy demand;
 - Maximise energy efficiency;
 - Use renewable energy;



- Use low carbon energy; and
 - Utilise other energy sources.
- From 2025 any residual carbon emissions that cannot be fully mitigated onsite should be offset, in agreement with the relevant local planning authority, through a financial contribution to a carbon offset fund;
- As an interim measure, development should be consistent with the 2021 Part L Building Regulations unless superseded by changes to building regulations and/or national or local planning policies.
 - Where practicable, prioritise connection to a renewable energy/heating/cooling network in the first instance or a low carbon energy/heating/cooling network that is adaptable to non-fossil fuels at a later date; and,
- For renewable energy generation priority should be given to PV installation where technically feasible, alternative technologies will be appropriate where the equivalent generation is evidenced;
- For non-residential developments, achieve at least BREEAM excellent standard (or equivalent) for the 'Ene 01 – reduction of energy use and carbon emissions' category rising to 'BREEAM outstanding' equivalent for ENE 01 from 2028;
- Include a detailed energy statement to demonstrate via site relevant evidence how the development has sought to maximize reductions in carbon emissions in line with relevant policy targets, including the minimisation of overheating risks and appropriate measures for post occupancy evaluation. Whole life cycle emissions should be considered where possible.
- Districts Local Plans may set out specific carbon emission reduction and energy demand targets within Local Plans.

Policy JP-STRAT14 - A Sustainable and Integrated Transport Network: New development will have a significant role in delivering a sustainable and integrated transport network in order to reduce car dependency and increase levels of walking, cycling and public transport.

Policy JP-S3 – Heat and Energy Networks: The provision of decentralised energy infrastructure is critical to the delivery of our objectives for low carbon growth, carbon reductions and an increase in local energy generation. The following measures will help to achieve this:

1. Delivery of renewable and low carbon energy schemes will be supported with particular emphasis on the use of decentralised energy networks in areas identified as “Heat and Energy Network Opportunity Areas”. These have been identified where:
 - a. Existing heat/energy networks are operational or have been commissioned;
 - b. Sufficient density of existing heat demand occurs; and,
 - c. Significant future development is proposed at the strategic development locations.
2. Within the identified “Heat and Energy Network Opportunity Areas”, unless it can be demonstrated that there are more effective alternatives for minimising carbon emissions or such connection is not practicable or financially viable.



Policy JP-S4 - Flood Risk and the Water Environment: An integrated catchment-based approach will be taken to protect the quantity and quality of water bodies with reference to the North West River Basin Management Plan and managing flood risk, by:

- Working with natural processes and adopting a natural flood management approach to slow the speed of water drainage and intercept water pollutants;
- Locating and designing development so as to minimise the impacts of current and future flood risk, including retrofitting or relocating existing developments, infrastructure and places to increase resilience to flooding;
- Expecting developments to manage surface water runoff through sustainable drainage systems and as close to source as possible;
- Development should achieve greenfield run-off rates unless it is demonstrated to be impracticable; and,
- Ensuring that sustainable drainage systems:
 - Are designed to provide multifunctional benefits wherever possible, including for water quality, nature conservation and recreation;
 - Avoid adverse impacts on water quality and any possibility of discharging hazardous substances to ground;
 - Are delivered in a holistic and integrated manner, including on larger sites split into different phases; and
 - Are managed and maintained appropriately to ensure their proper functioning over the lifetime of the development.
- As a minimum, residential development should meet the mandatory water efficiency standard of 125 litres/person/day as set out in Building Regulations. District local plans may and should consider setting a tighter water efficiency standard of 110 litres/person/day where there is a clear local need with reference to national guidance on housing optional technical standards.

Policy JP-S6 - Resource Efficiency: The achievement of a circular economy and a zero-waste economy will play a key role in meeting Greater Manchester's ambition of becoming a leading green city region by 2038. The following measures will help achieve this:

- Development and implementation of the Zero Waste Strategy for Greater Manchester which promotes overall reduction in the level of waste produced and supports resource efficiency within the Plan area in order to gain the maximum value from the things we produce;
- Recognition of the role of existing infrastructure in managing our waste and protecting such facilities to ensure adequate waste management capacity is maintained; and
- Using sustainable design and construction techniques to reduce carbon emissions, adapt and future proof to the impact of climate change, reduce and recycle waste and minimise water use.

Policy JP-G2 – Green Infrastructure Network: A strategic approach will be taken to the protection, management and enhancement of Greater Manchester's Green Infrastructure in order to protect and enhance the ecosystem services which the Green Infrastructure Network provides, including flood management, climate change mitigation and adaptation.

Wherever practicable, opportunities to integrate new and existing green infrastructure into new development will be taken to protect, enhance and expand the green infrastructure network.



Policy JP-G6: Urban Green Space: To ensure there is an appropriate scale, type, quality and distribution of accessible urban green space that can support a high quality of life and other important green infrastructure functions:

- Existing urban green space will be protected and enhanced in balance with other considerations; and
- Developers and other stakeholders will be required to deliver new high quality urban green spaces.

Development should be designed to support the positive use of nearby green spaces, such as by offering a high-quality setting, providing natural surveillance, and facilitating easy access by walking and cycling.

Policy JP-G7 - Trees and Woodland: the aims and objectives of the Greater Manchester Tree and Woodland Strategy, aiming to significantly increase tree cover, protect and enhance woodland, and connect people to the trees and woodland around them.

This will be done through local planning and associated activities such as:

- Where development would result in the loss of existing trees, requiring replacement on the basis of two new trees for each tree lost, or other measures that would also result in a net enhancement in the character and quality of the treescape and biodiversity value in the local area, with a preference for on-site provision; and
- Protecting trees and woodland during the construction phase of development.

Policy JP-G8: A Net Enhancement of Biodiversity and Geodiversity: Through local planning and associated activities a net enhancement of biodiversity resources will be sought, including, where relevant, by:

- Increasing the quality, quantity, extent and diversity of habitats, particularly priority habitats identified in national or local biodiversity action plans and those that support priority species;
- Improving connections between habitats, to protect and enhance the provision of corridors, ecological networks (including Nature Recovery Networks) and steppingstones that enable the movement of species, especially as the climate changes;
- Enhancing the management of existing habitats, including through habitat restoration, avoiding habitat fragmentation and combating invasive species;
- Protecting sites designated for their nature conservation and/or geological importance, with the highest level of protection given to international and then national designations;
- Facilitating greater access to nature, particularly within urban areas;
- Supporting the development and implementation of the Great Manchester Wetlands Nature Recovery Network; and
- Safeguarding, restoring and sustainably managing our most valuable soil resources, tackling soil degradation/erosion and recovering soil fertility.

Development will be expected to:

- Follow the mitigation hierarchy of:
 - Avoiding significant harm to biodiversity, particularly where it is irreplaceable, through consideration of alternative sites with less harmful impacts, then
 - Adequately mitigating any harm to biodiversity, then
 - Adequately compensating for any remaining harm to biodiversity.



- Achieve a measurable net gain in biodiversity of no less than 10%; and,
- Development proposals should be informed by the findings and recommendations of the appropriate biodiversity/ecological assessment(s) in the PfE evidence base and/or any updated or appropriate biodiversity/ecological assessments submitted as part of the planning application process.

Policy JP-P1 - Sustainable Places: The aim is to become one of the most liveable city regions in the world, consisting of a series of beautiful, healthy and varied places, each having the following key attributes that all development, wherever appropriate, should be consistent with:

- Distinctive, with a clear identity that:
 - Conserves and enhances the natural environment, landscape features, historic environment and local history and culture;
 - Enables a clear understanding of how the place has developed; and
 - Respects and acknowledges the character and identity of the locality in terms of design, siting, size, scale and materials used.
- Resilient, capable of dealing with major environmental events;
- Adaptable, able to respond easily to varied and changing needs and technologies;
- Durable, being built to last and using robust materials that reflect local character, weather well and are easily maintained;
- Resource-efficient with:
 - A low carbon footprint;
 - Efficient use of land;
 - Minimised use of new materials; and,
 - High levels of recycling,
- Supported by critical infrastructure, such as energy, water and drainage and green spaces; and,
- Functional and convenient, enabling people and uses to act efficiently with minimal effort, and responding to needs relating to servicing, recycling facilities, refuse collection and storage.

3.4 Manchester's Great Outdoors

The Green and Blue Infrastructure Strategy for Manchester aims to invest in the city's green and blue infrastructure over the next ten years (by 2025). Four objectives have been established to enable the vision to be achieved:

1. Improve the quality and function of existing green and blue Infrastructure, to maximise the benefits it delivers.
2. Use appropriate green and blue infrastructure as a key component of new developments to help create successful neighbourhoods and support the city's growth.
3. Improve connectivity and accessibility to green and blue infrastructure within the city and beyond.



4. Improve and promote a wider understanding and awareness of the benefits that green and blue infrastructure provides to residents, the economy and the local environment.

3.5 Climate Emergency

On 10th July 2019, a motion asking Manchester City Council (MCC) to formally declare a climate emergency was unanimously agreed. The motion declares that climate change is a serious risk to Manchester's future. Manchester is committed to embedding the issue as an integral part of council decision-making – making sure that all key decisions are taken with the city's target of becoming zero-carbon by 2038 in mind. The council has agreed the following:

- To deliver the 2038 zero carbon target and determine if an earlier target can be possible;
- Make climate breakdown and the environment an integral part of activity throughout the council, including all decision making, ensuring key decisions take into account the impact on achieving the zero-carbon target;
- Investigate and introduce measures to help reach domestic zero carbon levels, including addressing fuel poverty and retrofitting existing homes; and
- Investigate ways to ensure that future local plans place a mandatory requirement for all new development to be net zero carbon by the earliest possible date.

In March 2020 the Executive adopted the Manchester Climate Change Framework 2020-2025. The five-year framework sets out measures that MCC will take in order to reduce carbon emissions from its buildings, energy use and transport. Measures include retrofitting buildings to improve energy efficiency, increasing the use of electric vehicles, and seeking 100% renewable energy. Whilst this has also not been formally adopted into planning policy, it is a key consideration for future development proposals.

3.6 Regulatory Framework

Building Regulations, Part L - Conservation of Fuel and Power sets the compliance standards for energy demand and carbon dioxide emissions from buildings. Guidance on how to meet the requirements of this regulation is provided within a number of approved documents. The relevant document is referenced below:

Approved Document L - Volume 2: Buildings other than dwellings provides guidance on how to comply with Part L of Schedule 1 to the Building Regulations and the energy efficiency requirements for buildings other than dwellings.

Approved Document Volume 2 addresses the conservation of fuel and power in existing and change of use buildings and extensions, providing guidance in relation to:

- Limiting heat gains and losses
- Building services
- New elements in existing buildings, including replacing a fabric element and constructing an extension
- Existing elements in existing buildings, including renovating or retaining a thermal element, material change of use and change to energy status



3.7 Applicable Targets

Based upon a review of relevant planning policy requirements, legislative drivers, and client priorities, the following list provides a brief precis of the key criteria that should be targeted for this development:

Places for Everyone

- **Policy JP-S1:** Sustainable Development
- **Policy JP-S2:** Carbon & Energy
- **Policy JP-STRAT14:** A Sustainable and Integrated Transport Network
- **Policy JP-S3:** Heat and Energy Networks
- **Policy JP-S4:** Flood Risk and the Water Environment
- **Policy JP-S6:** Resource Efficiency
- **Policy JP-G2:** Green Infrastructure Network
- **Policy JP-G6:** Urban Green Space
- **Policy JP-G7:** Trees and Woodland
- **Policy JP-G8:** A Net Enhancement of Biodiversity and Geodiversity
- **Policy JP-P1** Sustainable Places

Manchester Core Strategy

- **Policy EN 4** - Reducing CO₂ Emissions by Enabling Low and Zero Carbon Development
- **Policy EN 5** - Strategic Areas for low and zero carbon decentralised energy infrastructure
- **Policy EN 6** - Target Framework for CO₂ Reductions from Low or Zero
- **Policy EN 8** – Adaption to Climate Change
- **Policy EN9** - Green Infrastructure
- **Policy EN14** – Flood Risk
- **Policy EN15** – Biodiversity and Geological Conservation
- **Policy EN16** – Air Quality
- **Policy EN19** – Waste
- **Policy DM1** – Development Management
- **Policy T1** - Sustainable Transport

Guide to Development in Manchester, Supplementary Planning Document

Manchester City Council Climate Emergency Declaration

Building Regulations, Part L

- **Approved Document Volume 2:** Buildings other than Dwellings (2021 edition)



4. RIBA SUSTAINABLE OUTCOMES

The fundamental aim of the RIBA Sustainable Outcomes is to distil the complexity of sustainable design into a set of measurable and manageable outcomes that can be used on a daily basis, on projects of all scales. In addition to building environmental sustainability outcomes, they also include social sustainability in terms of health and wellbeing, and economic sustainability in terms of operational cost.

The RIBA Sustainable Outcomes can be broken down into eight Sustainable Development Goals. This section provides an overview of how the building in its current use aligns with each of these.

4.1 Net Zero Carbon

4.1.1 Operational

The building is predominantly served by an all-electric energy strategy, which utilises grid mix electricity. Consequently, as the UK electricity grid's CO₂ footprint continues to improve, so too would the carbon dioxide emissions associated with the operational phase of the proposed scheme.

Further details on decarbonisation of the grid and the impact this will have on the development in terms of a positive shift towards zero carbon operations are illustrated in section 5 of the report.

4.1.2 Embodied Carbon

At the time of the original change of use consent this development benefitted from refurbishment and fit out of the industrial warehouse building into a beer hall and enterprise venue, which will have contributed towards making more efficient use of non-renewable material resources.

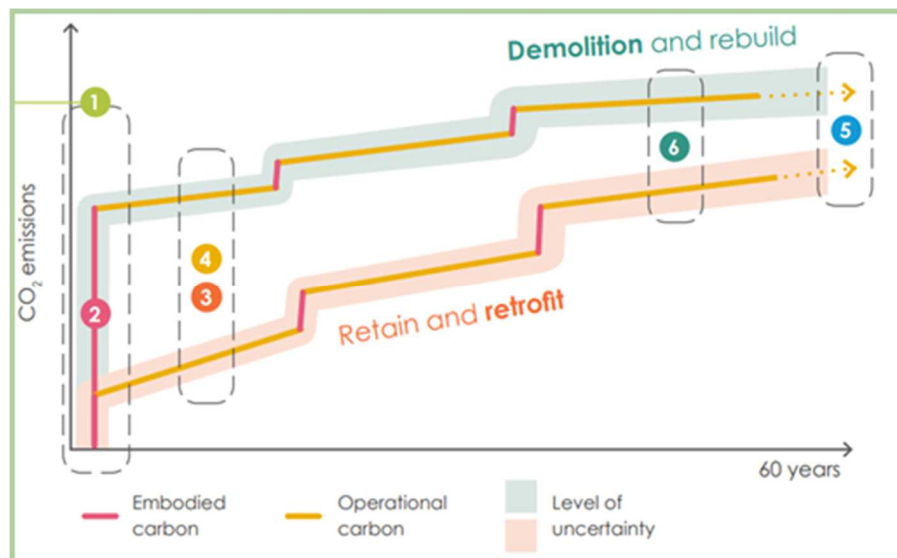
This reduced the lifecycle impact of the scheme by:

- Reusing the existing structures and walls associated with the building, this will have helped to minimise the upfront embodied carbon levels associated with the proposed scheme
- Less energy intensive virgin materials have been consumed, which are typically associated with substructure and framework construction methods required for new construction projects.

Figure 4.1 demonstrates the carbon emission savings associated with typical retain and retrofit projects compared to demolition and rebuild scenarios.



Figure 4.1 – Carbon Emissions Associated with Retain/ Retrofit vs Demolition/ Rebuild



Due to this scheme having involved the change of use of the industrial warehouse space to a beer hall and enterprise-led venue, materials will have been re-used on site as part of the refurbishment and fit out works, therefore aligning with **Policy WM1 – Waste**.

A waste management plan was also produced prior to the refurbishment of the building in accordance with **EN19 – Waste**.

Several EPDs have also been incorporated into the refurbishment and fit out of the building including rockwool within the roof and plasterboard for heat insulation.

4.2 Sustainable Water Cycle

The refurbishment of the building involved the incorporation of efficient water fittings including push taps and blenders as well as non concussive taps and flow restrictors to minimise water waste. Toilets are also fitted with a dual flush 4/6 litre cisterns.

4.3 Sustainable Connectivity and Transport

A Transport Statement and Travel Plan was produced by SK Limited prior to the building's refurbishment and fitout. These reports reviewed the most appropriate and sustainable modes of transport in order to assess the feasibility of each transport option available to the building-users.

The conclusions that can be drawn are as follows:

- The nearest bus stops are located on Piccadilly and Great Ancoats Street, both of which are less than a five-minute walk from the site.
- The nearest Metrolink stop is Picadilly Gardens located a five-minute walk from the site.
- Manchester Piccadilly train station can also be accessed within a five minute walk.



- The main pedestrian entrance to the building will be provided from the Ducie Street frontage, with pedestrians using the main gate into the arrival space on the historic service yard. This area will also be available for use by people accessing by cycle, as the cycle storage area is conveniently located close to the main building entrance.
- Store Street to the south of the site is part of Route 66 of the National Cycle Network, as well as a Bee Line on the Bee Network.
- A connection can also be gained to Route 86 of the National Cycle Network that routes along the Ashton Canal providing connections to areas to the north of the site. Access can also be gained to the remainder of the city centre using advisory routes to the south of the site.

As part of the refurbishment and fit out of the building, cycle storage spaces for both normal and electric bikes were installed within the forecourt area.

As part of the new application for the continued use of the space by Diecast as an entertainment and leisure venue, an updated travel plan will be submitted alongside the application.

In accordance with Policy T1 the scheme **promotes access to sustainable modes of transport** which will contribute towards creating a highly connected and sustainable development at this site.

4.4 Sustainable Land Use and Biodiversity

The Diecast development utilises a predeveloped brownfield site that is highly connected by public transport links.

During the initial planning application for the refurbishment and fit out of the building, a screening letter was issued to Manchester City Council on 25th February 2022, which assessed the proposals of the refurbishment of the existing building against the environmental impact assessment (EIA) screening criteria of potential effects, with regards to schedule three of EIA regulations. The screening assessment concluded that the proposals and characteristics of the development would not require an EIA and Manchester City Council agreed that once was not necessary.

The original refurbishment of the building from a warehouse to entertainment space maintained the ecological value of the site. The permanent consent would therefore not result in a reduction of the ecological value of the site.

In accordance with Policy JP-P1 the scheme respects and acknowledges the character and identity of the locality in terms of design, siting, size, scale and materials used

4.5 Good Health and Wellbeing

With the space being used as a beer hall and comprising of enterprise spaces such as a brewery, night market and music and theatre space, the area needs to be well ventilated to ensure the comfort of building users. The general ventilation to all customer areas has been designed to achieve two air changes per hour through installing extract systems at high levels, and passive wall mounted ambient air replacement units.



Toilets have been designed to provide approximately ten air changes per hour. For acoustic purposes, a silencer is included into the design. A higher rate of air changes per hour would also be provided in the bakery areas of the building at thirty air changes per hour. The air supply system would consist of a wall louvre G4 filter housing, silencer & fan, with bell mouth air supply plenum into bakery.

The area of the site previously utilised as a yard has been converted to an external seating area for building users and therefore allowing physical contact to the outside.

4.6 Sustainable Communities and Social Value

The purpose of this sustainable development goal is to measure the positive impacts of good place making on a local community.

4.6.1 Sustainable Transport

The development is located in the city centre of Manchester and is therefore well connected to public transport facilities enabling access to, and integration of the site.

The nearest metro-link and bust stop are both within a five-minute walk from site and all surroundings roads are fully pedestrianised. Additionally, cycle storage facilities are present in the forecourt area of the development.

4.6.2 Outside Space

As part of the change of use of the building from an industrial use to a beer hall and enterprise-led venue, an external courtyard was developed in the space previously occupied as a yard. This space is surrounded by planters and trees, allowing building users to interact with nature. Additionally, the new use of the space will create a local community, enabling users of this facility to socialise and improving community engagement.

4.6.3 Flood Risk

Data obtained from the Environment Agency was used to determine which flood zone the site is located within and the potential flood risk to the proposed development. The site is located within Flood Zone 1, demonstrating a low probability of flooding from rivers.

In accordance with **Policy EN14** the proposed development is not considered to be in an area at high risk of flooding.

4.7 Sustainable Life Cycle Cost

The building was previously utilised as an industrial space before being converted into an entertainment-led venue by Diecast in 2022. Should permanent consent for the space be granted, materials utilised in the original refurbishment and fit-out will remain in place, contributing to good life cycle costing.

During the refurbishment and fit-out of the building, materials were also incorporated to contribute to sustainable life cycle costing.



- The roof of the building was insulated using rock wool which will preserve heat within the building as well as the life of the roof.
- Plasterboard was implemented into the building which provides heat insulation as well as being soundproof.
- All lighting installed in the building is LED and therefore emits low energy.
- New external doors which are fire rated and insulated have been included within the building refurbishment.



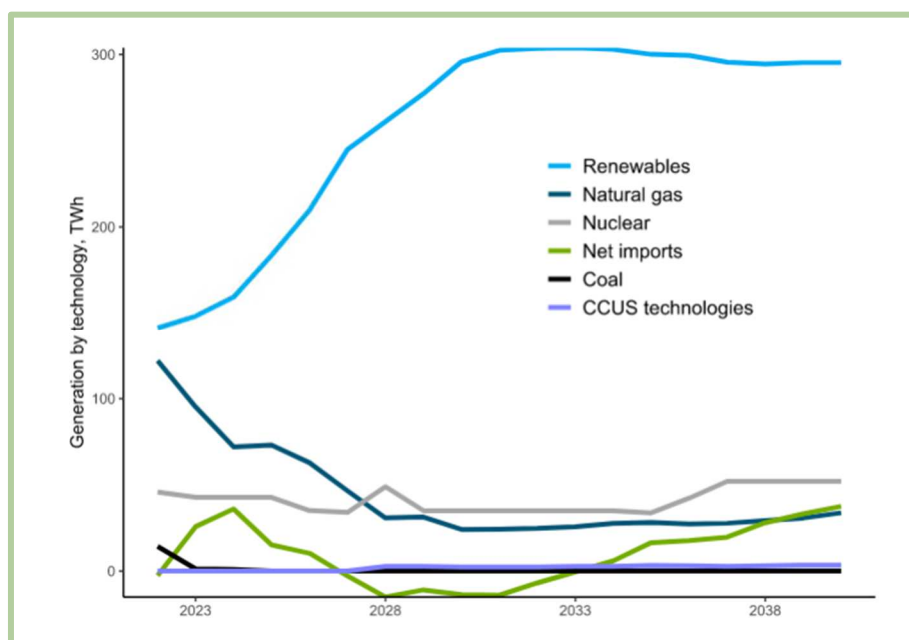
5. ENERGY PERFORMANCE

The building currently operates as a beer hall and enterprise led venue following its refurbishment in 2022 and has been awarded an EPC 'C' rating with a building emission rate of 45.16 kgCO₂/m² per year and a primary energy use of 267 kWh/m² per year.

The building is mainly heated by grid mix electricity. As the UK electricity grid's CO₂ footprint continues to improve, so too would the carbon dioxide emissions associated with the operational phase of the proposed scheme.

UK grid mix electricity carbon emissions will decrease significantly by 2035, with the carbon intensity of electricity generation falling by 93% between 2020 and 2035. This is due to the progressive shift away from fossil fuels as demonstrated in Figure 6.1.

Figure 5.1 - Electricity generation by Fuel Source, TWh



Source – BEIS, Energy and Emissions Projections (2022)

Electricity is now recognised as a less carbon-intensive fuel source than mains gas and other fossil fuels, which is only likely to improve as the percentage of electricity generation from renewable technologies increases.

In customer areas, space heating is provided by means of suspended gas fired heaters, supported off the structural steels and mounted approximately three to four meters off the customer floor area.



6. PLACES FOR EVERYONE

Manchester City Council has adopted the Places for Everyone Policies, which includes **Policy JP-S1-Sustainable Development and Policy JP-S 2 – Carbon and Energy**.

In support of this, the scheme currently utilises an electric energy strategy as its main heating fuel. As the UK electricity grid's CO₂ footprint continues to improve, so too would the carbon dioxide emissions associated with the operational phase of the proposed scheme.

Additionally, the building was refurbished from an industrial warehouse into the now enterprise led-venue. The reuse of the existing structure and materials will have significantly lowered the embodied carbon levels of the scheme when compared to a new construction alternative.

Policy JPS2 aims to deliver a carbon neutral Greater Manchester no later than 2038. The proposed scheme will therefore support a shift towards net zero carbon during operation. This will be achieved through:

1. A predominantly all electric energy strategy which will benefit further from the decarbonisation of the grid, which is expected to improve as the percentage of electricity generation from renewable technologies increases (see Figure 5.2).
2. Therefore, the operational CO₂ emissions associated with the proposed scheme are anticipated to decrease in line with these improvements.

CS Policy T1 Sustainable Transport

The nearest bus stops are located on Piccadilly and Great Ancoats Street, both of which are less than a five-minute walk from the site. Picadilly Gardens metro-link stop and Manchester Picadilly train station are also located within a five minute walk from the site.

As part of the refurbishment and fit out of the building, cycle storage spaces for both normal and electric bikes were installed within the forecourt area.



7. CLIMATE CHANGE EMERGENCY

On 10th July 2019, a motion asking Manchester City Council (MCC) to formally declare a **climate emergency** was unanimously agreed. In support of this, the developer wishes to highlight the following measures that will form part of the specification of this development:

- A site waste management plan (SWMP) was produced prior to the refurbishment and fit out of the building to limit the on and off-site environmental impacts of construction waste.
- The development has been designed to incorporate features that will serve to reduce energy demand, and in turn, carbon emissions arising from access to the building.
- The site is well located to encourage trips to be made on foot, by bike or via public transport. This is facilitated by:
 - The nearest bus stops are located on Piccadilly and Great Ancoats Street, both of which are less than a five minute walk from the site.
 - The nearest Metrolink stop is Picadilly Gardens located a five minute walk from the site. Manchester Picadilly train station can also be accessed within a five minute walk.
 - A mobility hub was developed during the refurbishment of the building from an industrial space to beer hall and enterprise-led venue. This mobility hub includes cycle storage spaces for both normal and electric bikes.

These commitments, in combination, seek to work towards the carbon reduction target of no more than 1.5°C global temperature increase and assist the council in meeting their Climate Change Emergency objectives.



8. CONCLUSION

This Statement has reviewed the sustainability performance of the operation of the building in its current use against the local and regional planning policies and the RIBA Sustainable Outcomes. The conclusions that may be drawn from the review are as per the following:

Sustainability Performance –

- This scheme **promotes access to sustainable modes of transport** which will contribute towards creating a highly connected and sustainable development in accordance with **Policy T1**.
- The site is in an area at low risk from flooding, with it being **located within a Flood Risk Zone 1** in accordance with **Policy EN14**.
- A Site Waste Management Plan (SWMP) was produced prior to the refurbishment and fit out of the building **in accordance with Policy EN19**. The SWMP has been used to ensure that there is adequate management, and that storage of construction waste takes place in line with the Council's policies.

Energy Performance –

The building currently operates as a beer hall and enterprise led-venue following its refurbishment in 2022 and has been awarded an EPC C rating.

The scheme utilises displaced grid electricity as its main heating fuel. As the UK electricity grid's CO₂ footprint continues to improve, so too would the carbon dioxide emissions associated with the operational phase of the proposed scheme.

The proposed scheme is compliant with building regulation Part L Volume 2 (2021).

Furthermore, the proposals accord with the aims of the National Planning Policy Framework, as follows:

- The **re-use of the piece of land** will provide a development that inherently supports **sustainable space with access to local amenities and sustainable modes of transport**. The reuse of the site is also an efficient use of land and resources;

In conclusion, the proposed development will deliver a quality development that accords with the guidance provided within Manchester Core Strategy as well as national planning and regulatory standards.

