

SUSTAINABILITY STATEMENT

Great Wilsey Park – Parcel D1 Community Centre

Produced by XCO2 for HJ Pelly Settlement Trust

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XCO2
56 Kingsway Place, Sans Walk
London EC1R 0LU

+44 (0)20 7700 1000
mail@xco2.com
xco2.com



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SUSTAINABILITY STATEMENT

	01	02	03	04	05	
Remarks	Issue for comment	Issue for comment	Issue for comment	Final	Final	
Prepared by	KE	KE	KE	KE	KE	
Checked by	JS	JS	JS	JS	JS	
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EXECUTIVE SUMMARY

The sustainability strategy for the Community Centre in Parcel D1 has been developed in line with the relevant policies of the West Suffolk Council. The proposals incorporate a range of sustainable design and construction measures, primarily addressing the sustainable management of resources, the protection and enhancement of the environment and the effective adaptation and mitigation of the development to climate change.

This report presents the sustainability strategy for the proposed Community Centre development, located within the outline Planning Permission (OPP) for the Great Wilsey Park Masterplan (DC/15/2151/OUT)). It is proposed that a bespoke framework matrix will govern the delivery of this development. Confirmation of compliance with the pre-determined categories shall be submitted to the council in the form of a Post Construction Sustainability Report (PCSR).

The community centre development includes the provision of a nursery, working spaces, café, communal halls, mobility hub, parking and landscaping.

This document is divided into two parts:

1. Planning policies;
2. Proposed sustainability measures;

The Planning Policy section provides an overview of the site and planning policies applicable to this development in accordance with the adopted Core Strategy (2010) and the Joint Development Management Policies Document (2015) and other published guidance such as the West Suffolk Climate Change and Sustainability Building Planning Advice Note. The second section sets out the sustainability measures that have been adopted in response to local policy and bespoke framework.

Key sustainability features of the proposals include:

- Maximisation of energy and carbon dioxide (CO₂) emission reduction following enhanced building

fabric, low air permeability, energy efficient lighting (Passivhaus Classic certification);

- Reduction in embodied carbon emissions associated with selection of construction materials;
- Renewable energy consisting of photovoltaic panels (PV) where feasible;
- An all-electric servicing strategy based on ASHP¹, ensuring no combustion on site and contributing to good levels of air quality;
- The protection of natural features of ecological value and the increase in biodiversity on site;
- Reduction in potable water consumption by specification of low-flow fittings, and re-use of rainwater collected in water butts for external irrigation;
- The proposed landscape strategy maximises the use of soft landscaping and permeable surfaces, reducing surface water run-off whilst supporting provision of active lifestyle and increase in biodiversity;
- Effective pollution management and control: the development is not expected to have any significant adverse effects to air, noise, land or watercourses.
- Robust waste strategy for reduction of waste generated during construction and dedicated indoor provision for recycling collection based on council's waste streams.

The proposals in their entirety reflect the client and design team's aspirations in delivering a high-quality, energy and resource efficient development that underpins the sustainability of the built environment.

¹ ASHP is expected.

INTRODUCTION

The proposed development is located in West Suffolk, within the West Suffolk Council. This section presents the description of the site and of the development proposal.

SITE & PROPOSAL

The development proposal for the Great Wilsey Community Centre forms part of the reserved matters application of Parcel D1 of the approved Great Wilsey Park scheme. It is located, on the outskirts of Haverhill, approximately 18 miles southwest of Bury St. Edmunds. The proposed Community Centre includes two community halls, café, co-working space and nursery

facility with associated parkland and community orchard, carparking and mobility hub. The total GIA floor area is currently proposed to be 2233m²

The location of the proposed development site is shown in below.



Figure 1: Location of the application site

PLANNING POLICIES

The proposal responds to sustainability policies within the *adopted Core Strategy* (former *St. Edmundsbury Borough Council Area ('SEBC')* and *Joint Development Management Policies Document*.

The most relevant applicable sustainability policies in the context of the proposed development are presented below.

CORE STRATEGY (2010) (FORMER SEBC AREA)

This Core Strategy is part of the adopted Development Plan for West Suffolk Council and sets out the visions for growth of Bury St Edmunds, Haverhill and the Rural Areas will be managed;

Key policy within the framework for sustainable development is Policy CS2. Relevant aspects are summarised in the following section of this report (aspects within policy that are not directly relevant to this report have been omitted).

POLICY CS2 SUSTAINABLE DEVELOPMENT

A high quality, sustainable environment will be achieved by designing and incorporating measures appropriate to the nature and scale of development, including:

The protection and enhancement of natural resources:

B) protecting and enhancing biodiversity, wildlife and geodiversity, and avoiding impact on areas of nature conservation interest in both rural and built-up areas;

C) identifying, protecting and conserving: a network of designated sites (...); Biodiversity Action Plan (BAP) habitat and species; wildlife or green corridors, ecological networks; and other green spaces will be identified, protected and habitats created as appropriate;

E) conserving and, wherever possible, enhancing other natural resources including, air quality and the quality and local distinctiveness of soils;

F) protecting the quality and availability of water resources;

G) maximising the efficient use of water including recycling of used water and rainwater harvesting.

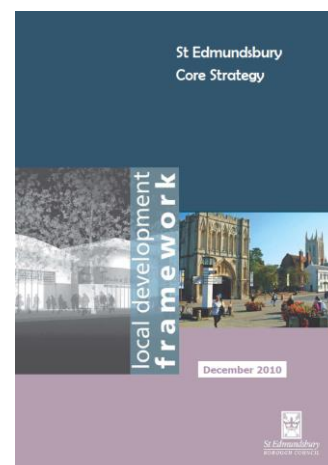
Sustainable design of the built environment:

J) incorporating the principles of sustainable design and construction in accordance with recognised appropriate national standards and codes of practice to cover the following themes:

- *Energy and CO₂ Emissions*
- *Water*
- *Materials*
- *Surface Water Run-off*
- *Waste*
- *Pollution;*
- *Transport*
- *Health and Wellbeing*
- *Ecology*

K) ensuring that developments and their occupants are capable of managing the impact of heat stress and other extreme weather events;

M) creating a safe environment which enhances the quality of the public realm;



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JOINT DEVELOPMENT MANAGEMENT POLICY DOCUMENT (2015)

The Joint Development Management Policies Document is used in day-to-day planning decisions across St Edmundsbury areas.

The most relevant applicable sustainability policies from this document are presented below.

POLICY DM6: FLOODING AND SUSTAINABLE DRAINAGE

Proposals for all new development will be required to submit schemes appropriate to the scale of the proposal detailing how on-site drainage will be managed so as not to cause or exacerbate flooding elsewhere.

POLICY DM7: SUSTAINABLE DESIGN AND CONSTRUCTION.

All proposals for new development (...) will be expected to adhere to broad principles of sustainable design and construction and optimise energy efficiency through the use of design, layout, orientation, materials, insulation and construction techniques.

“
...

All new non-residential developments over 1000 square metres will be required to achieve the BREEAM Excellent standard or equivalent unless it can be demonstrated that one or more of the following conditions apply:

(...)

The cost of achieving an Excellent rating can be demonstrated to compromise the viability of the development. In this case applicants will be expected to agree with the Council whether the target should be relaxed, or whether cost savings could be achieved in another aspect of the development.

POLICY DM8: LOW AND ZERO CARBON ENERGY GENERATION

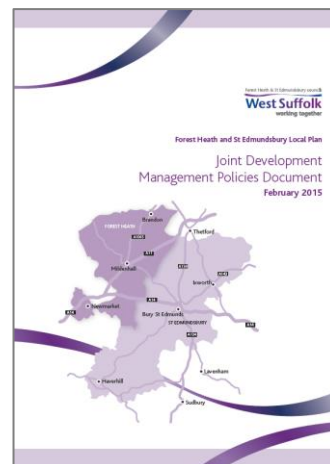
All proposals for generation or recovery of low carbon or renewable energy (...) will be encouraged (...)

POLICY DM12: MITIGATION, ENHANCEMENT, MANAGEMENT AND MONITORING OF BIODIVERSITY

(...) measures should be included, as necessary and where appropriate, in the design for all developments for the protection of biodiversity and the mitigation of any adverse impacts. Additionally, enhancement for biodiversity should be included in all proposals, commensurate with the scale of the development.

POLICY DM14: PROTECTING AND ENHANCING NATURAL RESOURCES, MINIMISING POLLUTION AND SAFEGUARDING FROM HAZARDS

Proposals for all new developments should minimise all emissions and other forms of pollution (including light and noise pollution) and ensure no deterioration to either air or water quality.



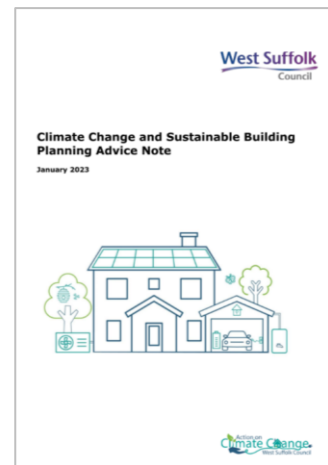
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THE CLIMATE CHANGE AND SUSTAINABLE BUILDING (PLANNING ADVICE NOTE) (2023)

The Planning Advice Note (PAN) refers to the existing policy and provides additional advice and guidance on emerging policies, albeit it is not a policy document.

New developments are to demonstrate how the proposals address the following 7 key issues, as they respond to current adopted policy:

- Energy and carbon dioxide (CO₂) emissions.
- Water efficiency.
- The environment.
- Place Making, design and materials.
- Transport and accessibility.
- Biodiversity.
- Waste.



PROPOSED SUSTAINABILITY MEASURES

This part of the report presents the key elements of the proposal that underpin environmental sustainability, demonstrates how the development complies with sustainable development policies and incorporates guidance on sustainable design and construction.

Policy DM7 states that all new non-residential development over 1,000sqm are required to achieve the BREEAM Excellent standard or **equivalent**. A bespoke sustainability strategy has been developed for the delivery of the Community Centre as agreed with West Suffolk Council (WSC) planning and sustainability officer on 18th June 2024.

The proposed framework matrix supports the Councils commitment to address the Climate Emergency, as well as the applicant's aspiration to deliver in practice a building that is resource efficient and healthy for users.

It is proposed that the bespoke sustainability strategy developed for the Great Wilsey Community Centre will govern the delivery of the building. Compliance with the pre-determined categories shall be submitted to the council in the form of a Post Construction Sustainability Report (PCSR), demonstrating that framework has been suitably implemented.

Following section of this report, sets out the proposed bespoke sustainability strategy framework.

SUSTAINABILITY STRATEGY FRAMEWORK MATRIX

The proposed sustainability strategy is a holistic framework that has been developed specifically to ensure that the Great Wilsey Community Centre will be in practice an environmentally friendly contribution to the area that consciously promotes resource efficiency and a healthy active lifestyle. The sustainability issues being addressed are set out in 9 overarching categories:

- Management
- Health & Wellbeing
- Energy
- Transport
- Water
- Material
- Waste
- Land Use & Ecology
- Pollution

At the centre of the framework, is the clear aspiration to deliver a truly energy efficient building by minimising typical issues with performance gap of new buildings (i.e. the building in reality doesn't perform as per the design). The Passivhaus rigorous methodology ensures risks are mitigated through a robust delivery process.

Passivhaus is an international voluntary energy and comfort standard, designed to deliver buildings with high levels of comfort and indoor air quality, with very low energy demand. Achieving Passivhaus Classic will demonstrate compliance with many of the key performance indicators set out in the framework.

Further resource efficiency measures are also captured in the framework. Reducing both potable water use and waste generation (during construction and when building is operational) have key performance indicators to be adhered to.

Selection of materials and the construction system will be evaluated by calculating the associated embodied carbon emissions through a life cycle assessment (LCA). A maximum target has been included in the key performance indicators. The associated emissions with the construction process will be captured within the framework as well.

A whole life carbon assessment (WLCA) of the Community Centre will report the combined impact of both operational and embodied carbon. There is no specific target for the WLCA.

Evaluating the performance of the Community Centre in use, provides opportunities to fine tune the management of the building (optimising energy efficiency) as well to evaluate user comfort.

The framework also ensures the delivery of a comfortable, fit for purpose building, addressing both indoor and outdoor environments.

A healthy and comfortable indoor environment will be evaluated by achieving the pre-set performance targets for levels of daylight, glare avoidance and thermal comfort.

The framework will also ensure the delivery of a scheme that supports and encourages an active lifestyle. Sustainable modes of transport are promoted, by provision of specific ancillary facilities. Furthermore, the circulation routes shall be safe, accessible and inviting, encouraging pedestrian and cyclist uptake. Key performance indicators have been set out.

A robust landscape strategy will be required to encourage active use of outdoor spaces, whilst promoting increased levels of biodiversity.

Aspects of pollution control and mitigation are also included in the bespoke framework.

The next sections expand on the categories and policy requirements specific to the proposals.

MANAGEMENT

Delivery

Robust management practices can ensure the delivery of a sustainable building. Although this permeates throughout the sustainability strategy as a whole, this section will focus on the strategic approach to deliver a Community Centre that is in practice as resource efficient and comfortable as intended by design. Key aspects that enable a smoother delivery are set out in the sustainability framework matrix (1.2):

Commissioning: Adequately commissioning systems will improve the buildings' performance and can help reduce maintenance and operational costs. A schedule of commissioning and testing for the building services, control systems shall be produced and implemented in line with sustainability matrix (1.2.a).

Building fabric performance: The construction process of a certified Passivhaus building is monitored and recorded throughout the build. This minimises the risk of the building envelope not performing as intended (air tightness and insulation continuity). A target of 0.6ach/hr @50Pa has been set for the scheme and insulation installation quality shall be demonstrated (sustainability matrix (1.2.c)).

Handover: Ensuring building users and facilities management understand how the building is meant to operate will secure that the Community Centre is managed at optimum performance levels. Contractor shall provide training and user guides for all building users, in line with sustainability matrix (1.2.b).

Resource efficiency: Energy and water consumed throughout the construction process and the emissions associated with transport (material delivery and waste) shall be monitored by the Contractor in accordance with sustainability matrix section 1.1.

Whole Life Carbon (WLC) reporting: To demonstrate the resource efficiency and carbon emissions of the proposals, a WLC assessment shall be carried out. This will report on the emissions associated with embodied and operational carbon, as well as accounting for emissions associated with the construction process (sustainability matrix 1.1; 1.2.d; 3.1; 6.1).

In use

Building performance evaluation (BPE) is essential to manage and evaluate the performance of a building in

use. It is an opportunity to optimise performance as well as identify potential issues that may cause discomfort to users.

Energy and water consumption are to be monitored. Indoor air quality (based on CO₂ levels) and occupant comfort (temperature and humidity) shall also be monitored, at a minimum, for the building performance evaluation period (BS40101 Standard BPE), in accordance with the sustainability matrix 1.3.

A metering and submetering strategy shall be developed to allow monitoring and building performance evaluation to take place, ensuring suitable levels of data are captured and stored and accessed from a building management system (BMS). (sustainability matrix 3.3).

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HEALTH AND WELLBEING

Inclusive Design

The development aims to prioritise the future needs of occupants by ensuring Community Centre is designed to comply with Part M of the Building Regulations.

In order to maximise inclusivity, proposal includes a changing-places-toilet facilities, accommodating people with multiple and complex disabilities (Part M Volume 2).

External features further support the delivery of an inclusive design. Four parking spaces have been allocated for 'Blue Badge' holders (5% of 77 spaces), in line with sustainability matrix. Outdoor paths are to be universally accessible, further demonstrating the design commitment for inclusivity. The sustainability matrix sets out key aspects to be adhered to (4.2.a; 4.1.b).

Safety and Security

The design team has referenced the Secured by Design principles to provide safe and secure spaces to all building staff and users.

Daylight and glare

The proposed development has been designed to ensure occupants enjoy satisfactory levels of visual comfort and beneficial effects from daylight exposure, whilst also reducing energy consumption by minimising the use of artificial lighting as far as feasible.

Spatial daylight autonomy (SDA) and useful daylight illuminance (UDI) shall be evaluated in accordance with *BRE Site layout planning for daylight and sunlight*.

Furthermore, the daylight glare probability (DGP) shall also be assessed, and suitable mitigation measures will be implemented should these be necessary. Required levels of compliance are set out in the sustainability matrix (2.1.a; 2.1b).

Physical activity

Physical activity is encouraged through provision of pedestrian and cycle routes. These routes connect the community centre to the surrounding residential areas and are designed to encourage walking/cycling rather than use of personal vehicles. The provision of cycle storage spaces and changing rooms will encourage

the use of alternative means of transportation for workers and visitors accessing the site.

Internally, the proposed layout further encourages users to keep active. Active vertical circulation is encouraged by ensuring stairs are visible, inviting and easy to access, coupled with motivational signage. The sustainability matrix sets out key aspects to be adhered to (2.2.b; 2.2.c; 4.1).

Enhancing Outdoor Spaces

Landscape proposals have been structured with a clear hierarchy of the proposed amenity spaces, considering functional requirements and their relationship with the community centre. The proposed development includes the provision of amenity areas in the form of a community orchard, cobble courtyard (informal play area for children) and parkland, as well as a linear park.

Carefully designed safe and universally accessible circulation routes connect the above-mentioned amenity spaces to the community centre, further encouraging the use of outdoor areas. The sustainability matrix sets out key aspects to be adhered to (2.2.b; 2.2.c; 4.1).

Materials for the external areas of the scheme will be selected to mitigate heat island affect, further improving the usability of the outdoor spaces. The sustainability matrix sets out key aspects to be adhered to for compliance (2.2.a).

The proposed amenity spaces will enhance the quality of the public realm and contribute to local distinctiveness through provision of attractive spaces that allow residents to gather, socialise and connect to the natural environment. This will also enhance the occupant's wellbeing as nature can significantly improve mood and happiness.



Figure 3: Landscape proposal.

Place-making

The design proposals reflect the 12-point structure of the Building for Healthy Life (2020) principles. The proposals create a distinctive local focus for the community, inspired by the local vernacular forms and materials. The landscape connects into the established OPP for the Great Wilsey Park (DC/15/2151/OUT), with an emphasis on cycling and pedestrian routes, including ensuring connectivity beyond the red line of the application boundary.

The Community Centre is easy to navigate, with a clear wayfinding both indoors and outdoors. The outdoor amenity spaces and the landscaping along the pathways and sidewalks strengthens connectivity throughout the site whilst providing the opportunity for new biodiverse habitats. High quality landscape design, wayfinding and provision for urban furniture will encourage the use of spaces as it creates a distinct character. The sustainability matrix sets out key aspects to be adhered to (4.1.b; 2.2).

The overall design reflects the need to create a neighbourhood place which allows for future flexibility of activities, to maximise the long-term sustainability of the Community Centre and associated landscape environment.

CLIMATE CHANGE ADAPTATION

Overheating

The potential risk of overheating will be mitigated by incorporating both passive and active design measures in response to Policy CS2, DM7 and PAN (*Place-making, design and materials*).

The space heating and hot water to the development will be provided by an air source heat pump (ASHP) system. All heat sources and pipe work will be sufficiently insulated to avoid excess heat loss into internal space.

Efficient lighting will be used to further minimise internal heat gains and reduce energy expenditure. Furthermore, energy efficient 'white goods' could be considered.

Appropriately sized windows will reduce solar heat gains. Glazing with low transmittance will be used where relevant to reduce solar gains and reduce the risk of overheating.

Openable windows to workspace and classrooms, and high-level openings to both halls provide means for natural ventilation. Furthermore, east and west elevations have vertical fins, which should reduce solar gains, further contributing to mitigation of risk of overheating.

As a comfort driven approach, the Passivhaus standard addresses overheating, by restricting temperatures which shall not exceed 25°C for over 10% of year. It is proposed that, beyond Passivhaus requirements, the community centre is to be modelled, using a 3D dynamic simulation software to ensure compliance with CIBSE TM52 Adaptive Comfort analysis. The outcomes should inform the technical design, with suitable strategy developed to mitigate potential risk of overheating should this be identified in line with the sustainability matrix (2.1.c).

ENERGY & CARBON DIOXIDE EMISSIONS

The Energy Strategy for the community centre will be developed in line with the Policy CS2, DM7, DM8 and PAN (*Energy and carbon dioxide (CO2) emissions*), which states that every new development will be expected to adhere to broad principles of sustainable design and construction to optimise energy efficiency.

In order to minimise issues with performance gap, and ensuring the Community Centre in use performs as intended by design, the scheme will target Passivhaus (Classic) certification in line with the sustainability matrix (3.1).

This report has adopted the Energy Hierarchy to present the breakdown of active and passive energy efficiency measures that shall be incorporated into the development.

- Reduction of energy demand through energy efficiency measures (Be Lean)
- Renewable or low-carbon energy from a local/district source (Be Clean)
- Building integrated renewable or low-carbon technologies (Be Green).

Reduction of energy consumption through energy efficiency measures (Be Lean)

The community centre will benefit from reduced energy demand through an enhanced building fabric, further minimising heat loss through reduced air infiltration beyond building regulations maximum standards; minimisation of thermal bridging specification of mechanical ventilation with heat recovery (MVHR); ensuring adequate levels of ventilation are maintained; utilising low energy lighting and reducing reliance on artificial lighting indoors and outdoors.

Daylight sensors and presence detectors shall be installed, to further improve lighting efficiency in line with sustainability matrix (3.4).

Enhanced U-Values

The heat loss of different building fabric elements is dependent upon their U-value. A building with low U-values provides better levels of insulation and reduced heating demand during the cooler months.

The proposed development, which will target Passivhaus classic, is expected to incorporate high levels of insulation and high-performance glazing beyond Part L 2021 and notional building specifications targets, in order to reduce the demand for space heating.

The table below demonstrates the improved performance of the proposed building fabric.

Table 1. Recommended U values and fabric inputs

U values (W/m ² .K)		
Element	Building regulations	Proposed (Passivhaus Classic)
Walls	0.26	0.12 - 0.15
Floors	0.18	0.1 - 0.12
Roof	0.16 Pitched 0.18 Flat	0.1 - 0.12
Windows	1.6	0.8 - 1.0 (TG)
Doors	1.6	1.0
Thermal Bridges		Thermal bridge free <0.01W/mK

Air Permeability Improvement

Heat loss may also occur due to air infiltration. Although this cannot be eliminated altogether, good construction detailing, and the use of best practice construction techniques can minimise the amount of air infiltration. The regular site visits required by the Passivhaus methodology monitor and record the relevant works, that ensure an airtight building is delivered.

The proposed development is expected to improve upon the Part L 2021 minimum standards for air tightness by targeting air permeability rate of 0.6 ach/hr @ 50 Pa, in line with Passivhaus requirements, highlighted in the sustainability matrix (3.1; 1.2.c).

Renewable or low-carbon energy from a local/district source (Be Clean)

Remaining residual energy demand should be supplied as efficiently as possible (e.g by connecting to a district energy network or developing a side-wide network).

West Suffolk have previously evaluated the feasibility for provision of district heating, focused to Bury St Edmunds. However, it doesn't appear that Haverhill is

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investigating such opportunities, therefore it is not understood to be a viable option where the proposed development is located.

Building-integrated renewable or low-carbon technologies (Be Green)

Complementing the energy efficient envelope, the site is anticipated to benefit from renewable and low-carbon technologies through an all-electric, low carbon heating strategy and on-site energy generation.

The space heating and hot water provision are expected to be via an air source heat pump. As a system these absorb heat from the outside air into a refrigerant at low temperature. Using electricity, the pump compresses the refrigerant to increase its temperature, which is then sent to the heating circuit to heat the building. This allows the system to reach high coefficients of performance and significant carbon emissions savings.

Furthermore, the proposal will incorporate photovoltaics panels which allow the development to benefit from on-site renewable energy generation.

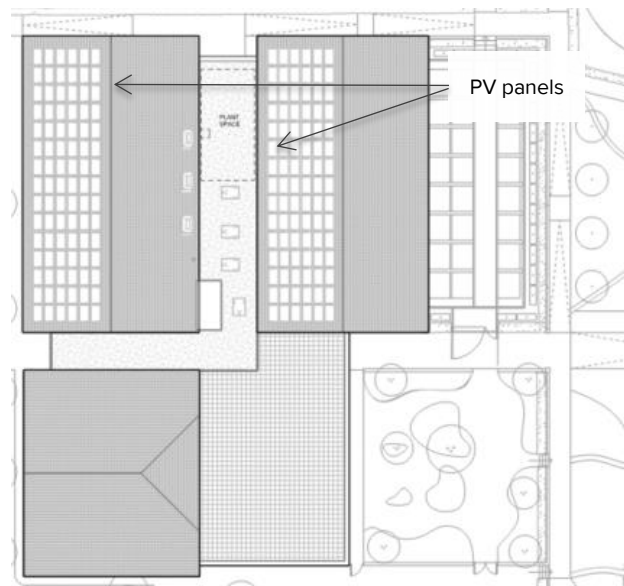


Figure 4: Proposed PV panel layout - excerpt from drawing GWP-PTE-XX-XX-DR-A-301002 rev C1.



TRANSPORT

Alternative means of transportation

A carefully designed, safe and accessible, pedestrian and cycle network permeate through the site, connecting the community centre to the surrounding neighbourhoods allowing the community to reach the proposed scheme using active travel (policy CS2 and PAN (*Transport and accessibility*) and sustainability matrix (4.1). The proposed community centre integrates with these connections by considering desire lines and provision of enhanced facilities through the mobility hub.

To encourage uptake of alternative means of transportation, 40 secure, easily accessible and weather protected cycle parking spaces will be provided in the proposed development in the mobility hub. Two changing rooms, with showers and lockers, will further encourage users to cycle, in line sustainability matrix (4.1.a). A further 6 external visitor spaces are provided close to the Community Centre for occasional use

Although active modes of transport are prioritised, 77 car parking spaces are provided. Fifteen spaces (19%) will be allocated to electrical vehicles with provision of active EV charging points (min 7.4kW), whilst 32 (41%) spaces will have passive EV charging in accordance with the sustainability matrix (4.2.b), and surpassing PAN (*The environment*).

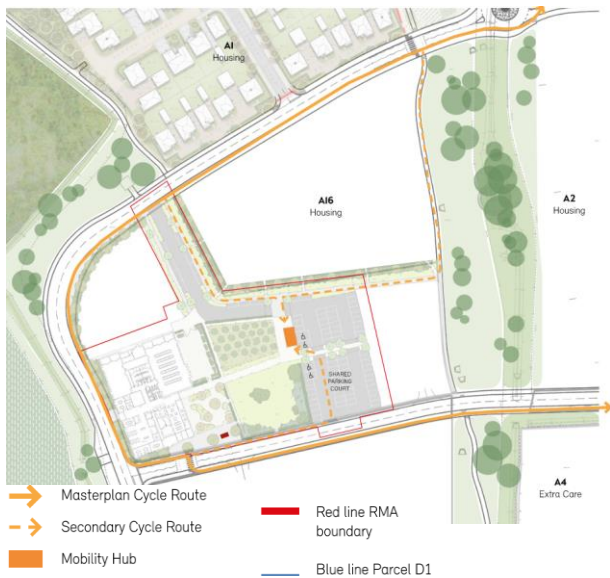


Figure 5: Excerpt from Design Access Statement highlighting cycle routes.

Public Transport Accessibility

The local bus service is approximately 300 metres from the community centre. Once the spine road has been completed, connecting Haverhill Road and Chalkstone Way, it is planned to operate a half-hourly shuttle bus service between the proposed scheme and Haverhill Bus Station providing greater accessibility to Haverhill and beyond using the existing interchange in the town to join with services to Cambridge.

Proximity to Amenities

Located on the outskirts of Haverhill, there are limited amenities in close proximity to the masterplan. The proposed communal workspaces, café, community halls and nursery are a welcome addition for the new developing community.

WATER

Water Efficiency

The development aims to reduce water consumption through the use of efficient water fittings, in line with Policy CS2, DM7 and PAN (*Water efficiency*). The proposal targets 40% reduction in water consumption in line with BREEAM V6 Wat01 category, as set out in the sustainability matrix target (5.1.a).

Ensuring leaks can easily be detected will further contribute to resource efficiency. Leak detection shall also be installed as outlined in the sustainability matrix framework (5.2).

Table 2. Low flow fitting anticipated (level 3 specification)

Fittings	BREEAM NC V6 (max consumption)
WC	3.75 l average
Shower	6 l/min
Bath	120 l
WH Basin Taps	5 l/min
Kitchenette Sink taps	6 l/min`
Kitchen/restaurant	7.3 l/min
Dishwasher	12 l/cycle
Washing machine	40 l/use

Water Reuse

Whist the development aims to reduce water demand in the first instance, consumption will also be offset through the provision of rainwater collection butts, which will enable the reduction of potable water use for irrigation purposes, as set out in the sustainability matrix target (5.1.b).

Water Efficient Landscaping

Potable water consumption reduction from irrigation can be further maximised through a combination of water reuse (as above) and use of drought resistant plant species, which after establishment, can survive with no irrigation.

MATERIALS AND WASTE

Circular Economy

Circular economy is based on three key principles: design out waste, keep products and materials in use, and regenerate natural systems. These principles will be applied during the design and construction of the proposed development by following the actions noted below:

- Design out the need for building components and materials;
- Use of reclaimed materials and remanufactured components over new whenever possible;
- Product selection considering its entire lifecycle, such as products which can be remanufactured or reused; products with high recycled content; products designed for disassembly; and recyclable or compostable materials.

Responsible Sourcing

Responsible construction practices will be managed and encouraged, whilst addressing policy CS2, DM7 and PAN (*Place-making, design and materials*).

The main contractor will be required to prioritise products holding responsible sourcing certification (EMS/ISO14001) for the key process as per minimum, to ensure economic, social and environmentally responsible practices are implemented throughout construction products supply chain.

Furthermore, 100% of the timber used during construction will be sourced from accredited Forest Stewardship Council (FSC) or Programme for the Endorsement of forestry Certification (PEFC) source.

Healthy Materials

To minimise potential sources of indoor air pollution, low VOC paints, finishes and other products will be prioritised as far as practically possible.

Embodied Carbon

To further reduce carbon emissions over the lifecycle of the building, low embodied carbon materials will be used as far as practically possible, whilst also focusing on design practices to reduce waste generation.

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An embodied carbon analysis of the Community Centre is to be carried out at stage 4, and emissions should comply RIBA (2030)² target (< 540 kgCO₂e/m² (A1-5; B1-5; C1-4) as set out in the sustainability matrix (6.1).

The impact of emissions associated with the construction works are to be monitored on site (energy and water use, as well as transport material delivery and waste disposal), in line with the sustainability matrix (1.1).

It will also be necessary to report on Whole Life Carbon of the building (i.e. embodied carbon (including construction) and operational carbon), in line with the sustainability matrix (1.2.d).

Construction Waste

A site waste management plan (SWMP) will be prepared for the development promoting resource efficiency whilst complying with Policy CS2, DM7 and PAN (*Waste*).

The SWMP will outline the methodologies for estimating waste quantities and streams generated during the construction stages of the site works and set out recommended measures required to be adopted by the Main Contractor to minimise waste generation as far as practically possible. A target of no more than 6.5t/100m² of construction waste generation has been set as well as an 95% construction and excavation waste diversion from landfill (sustainability matrix 7.1)

The SWMP will follow the waste hierarchy principals during construction stages:



Figure 7: Waste Hierarchy (www.gov.uk).

Operational Waste

An operational waste management (OWM) strategy is to be produced and implemented for the proposed development. In order to demonstrate how the development has taken into account need for waste and recycling management during its operation, the proposals will include for internal and external waste storage facilities in accordance with local authority waste stream collections.

Café and kitchenets shall have a dedicated location for internal bins (for all waste streams, including biodegradable waste). Furthermore, waste segregation opportunities should be available throughout the Community Centre (indoors and outdoors) providing opportunity for the general public using the facilities to segregate waste as well.

The sustainability Matrix (7.2) sets out a target of zero biodegradable waste to leave the site, and 75% of total waste to be recycled, demonstrating commitment to reduction of waste being sent to landfill, as well as responding to Policy CS2 , DM7 and PAN (*Waste*).

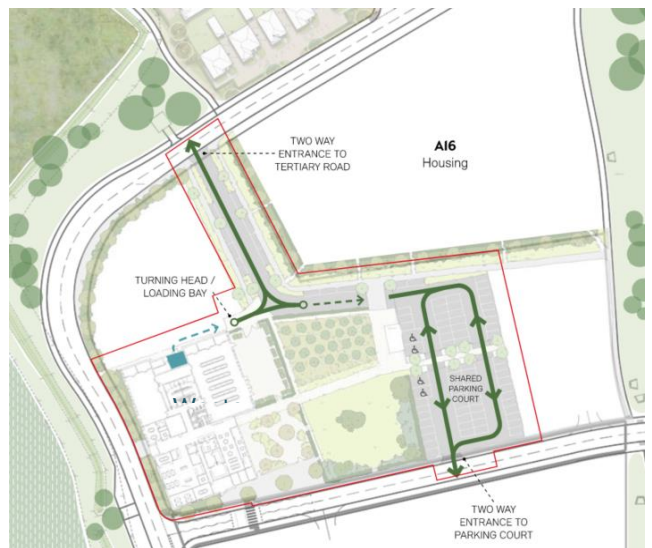


Figure 6: Excerpt from Design Access Statement - Vehicular movement strategy diagram.

² In the absence of industry benchmarks for community centres, the RIBA target for non-domestic, new schools has been used.

LAND USE & ECOLOGY

Land use

The proposed community centre is within the Parcel D1, located in the north-west of the OPP for the Great Wilsey Park Masterplan (DC/15/2151/OUT). The land for this proposal is efficiently utilised, with optimal massing and landscape that suitably integrates with the surrounding rural and historic landscape.

Land Form and Site Layout

The scheme is the first of two local centres, serving the first new residents of Great Wilsey Park and wider community. Situated south of low-rise residential areas (A1/A16 of the OPP for the Great Wilsey Park Masterplan (DC/15/2151/OUT)), and north of Primary school (B1) the proposed development carefully considers its impact on the surrounding neighbourhood. With a total height of two storeys and a traditional pitched roof, the massing and height of the proposed development has been carefully tailored to harmoniously respond to the local context.

Daylight & Sunlight Impacts

The proposed scheme has been designed allowing for daylight to relevant spaces (café, co-working, and nursery) to the east and west.

Both community halls have openable glazed areas at high level, allowing for daylight (east and west) and natural ventilation. To the North, these spaces have minimal openings, restricting heat losses, whilst still contributing to (diffused) daylight.

Classrooms on the first-floor benefit from glazed openings to the west, allowing for daylight and natural ventilation.

Impact of glare is to be further investigated and mitigated where required.

Micro-climate

The proposed scheme is not of a scale that could potentially have any significant impact on wind conditions around the site or any adverse effects on pedestrian and residents' comfort.

Land Contamination

In the event of any discovery of potentially contaminated soils or materials, this discovery will be quarantined and reported to the most senior member of site staff or the designated responsible person at the site for action. The location, type and quantity will be recorded, and the Local Authority and a competent and appropriate third-party Environmental consultant will be notified immediately. An approval from the Local Authority will be sought prior to implementing any proposed mitigation action.

Ecology

An ecological impact assessment was carried out, (OPP for Great Wilsey Park Masterplan (DC/15/2151/OUT)), identifying the majority of Parcel D1 site as supporting habitats of low diversity and negligible value. This has been complemented by a subsequent 'ecological walkover survey' of Parcel D1 carried out in February 2024, in accordance with reserved matters application and Condition 4 of the OPP. With exception of the replacement of former arable land with bare ground, no material changes in habitat typologies, abundance or distribution have been identified.

The community centre's landscape proposals contribute to local green infrastructure by introducing soft landscaped areas and enhancing the existing ones when appropriate. The proposal consists of a community orchard, parkland, playable space and event space all of which are permeated or bound by vegetation.

A Green infrastructure and biodiversity management plan (GIBMP) shall be developed and implemented to protect and enhance existing habitats as well as sustain newly created habitats in the long term. Through increased tree cover, planting of native species and creating varied habitats, a 40% net gain improvement is being targeted (sustainability matrix 8.2).

Existing dark corridors are proposed (outside the site boundary) on the east and west of the application site. These shall not be affected by construction works nor when building is in use (sustainability matrix 8.1). A Construction Environmental Management Plan (CEMP) shall be developed and implemented to manage impact on ecological features during works.

SUSTAINABILITY STATEMENT

Ecological impact and enhancement of the proposed community centre respond to Policy CS2, DM7, DM12, DM14 and PAN (*Biodiversity*).



Urban Greening

The proposed scheme will enhance the provision of green spaces by incorporating landscaped areas to the east of the Community Centre, which mediates a transition of a structured civic space to the informal new linear park. Pedestrian and cycle routes not only connect these landscaped areas, but also integrate the existing Woodland and hedgerows to the north of the site. In this way, the scheme encourages physical activity and relaxation of occupants whilst also improving the local air quality.

Please refer to the detailed landscape plans and Design Access Statement submitted in support of this RMA application for the community Centre on Parcel D1.

POLLUTION

Air Quality

An air quality assessment (AQA) has been carried out and submitted with the OPP for the Great Wilsey Park Masterplan (DC/15/2151/OUT), in response to policy CS2 and PAN (*The environment*). Both construction and operational effects were assessed. The development shall be air quality neutral in line with sustainability matrix (9.4).

The impacts from dust and stationary plant emissions during the construction period and the potential impact from traffic flows on the local road network on both on-site and off-site receptors, during and after construction have been considered. Through good site practices and implementation of suitable mitigation measures where necessary, the effect of dust and PM10 releases may be effectively mitigated and impact on air quality impact considered negligible.

During the operational phase, the specification of an electricity-led servicing strategy for the development will result in no fossil-fuel emissions. It is also proposed that an anti-idling policy (including signage) be in place, to reduce emissions from vehicles.

Furthermore, best practice design detailing and careful construction techniques will also be employed to reduce the risk of thermal bridging and condensation issues, limiting the potential for mould growth.

Noise

Operational traffic noise predictions calculations (Calculation of Road Traffic Noise (CRTN) have been carried out for the OPP for the Great Wilsey Park Masterplan (DC/15/2151/OUT), evaluating impact of noise levels resulting from proposals. It has been concluded that majority of receptors will be subject to negligible increase in noise (less than 3dB anticipated).

Light Pollution

The lighting design of the proposed development will follow the recommendations of the Institution of Lighting Professionals' Guidance Notes for the Reduction of Obtrusive Light (2021), to minimise light pollution.

SUSTAINABILITY STATEMENT

Bats have been identified in the wider OPP for the Great Wilsey Park Masterplan (DC/15/2151/OUT) during ecology survey. Dark corridors are on east and west of the application site (outside the site boundary) (Figure 6), ensuring that wildlife habitats and protected species are not affected adversely by the development. External lighting must not negatively impact bats during both operational and construction works, in line with sustainability matrix (9.3).



Figure 8: Dark corridors specified to east and west of Parcel D1 (excerpt of figure 30 appendix 4.3 in approved Environmental Statement).

The application is supported by a Lighting Strategy for bats and mitigation measures report in accordance with Condition 44.

Surface Water and Flooding

The development site falls within a Flood Zone 1 area which is at low risk of fluvial flooding and from most other sources such as ground water, sewer and artificial water bodies.

This application is to be assessed on a 1 in 100yrs + 40%. The landscape design incorporates SUDs to address this. The landscape approach, focuses on maximising soft landscaping and permeable paving, reducing surface water run-off, in line with Policy CS2 DM6 and PAN (*The environment*) and sustainability matrix (9.1).

Water pollution to surrounding watercourses is minimised by incorporating SUDs, soft landscaping and permeable paving, thereby reducing surface water runoff. Furthermore, a designated runoff route aligns with the OPP for the Great Wilsey Park Masterplan (DC/15/2151/OUT) overarching drainage strategy, should it be required.

In addition, contractors will adopt best practice policies to mitigate water pollution from construction activities on site.

Refrigerant

Refrigerants are used in building systems such as heat pumps and cooling systems. They are greenhouse gases which contribute to global warming and can be flammable as well as toxic to humans.

In order to mitigate the impact of refrigerants, the equivalent carbon emissions associated with them have been restricted to <math><1000\text{kgCO}_2\text{e/kW}</math> and it will be necessary to provide an automated, permanent leak detection system (sustainability matrix 9.2).

CONCLUSIONS

The sustainability strategy for the Great Wilsey Community Centre has been developed in line with the relevant policies of the adopted Development Plan for West Suffolk Council, including the Core Strategy and the Joint Development Management Policies Document and aims at the efficient management of resources, environmental protection and the effective adaptation and mitigation of the development to climate change.

SUSTAINABILITY

The proposed community centre development will meet the targets set out by the adopted Core Strategy and the Joint Development Management Policies Document.

Key sustainability features of the proposals include:

- Maximisation of energy and carbon dioxide emission reduction following enhanced building fabric, low air permeability, energy efficient lighting (Passivhaus Classic certification);
- Reduction in embodied carbon emissions associated with selection of construction materials;
- Renewable energy consisting of photovoltaic panels (PV) where feasible;
- An all-electric servicing strategy based on ASHP³, ensuring no combustion on site and contributing to good levels of air quality;
- The protection of natural features of ecological value and the increase in biodiversity on site;
- Reduction in potable water consumption by specification of low-flow fittings, and re-use of rainwater collected in water butts for external irrigation;
- The proposed landscape strategy maximises the use of soft landscaping and permeable surfaces, reducing surface water run-off whilst supporting provision of active lifestyle and increase in biodiversity;

- Effective pollution management and control: the development is not expected to have any significant adverse effects to air, noise, land or watercourses;
- Robust waste strategy for reduction of waste generated during construction and dedicated indoor provision for recycling collection based on council's waste streams.

It is proposed that the bespoke sustainability strategy framework developed for the Great Wilsey Community Centre will govern the delivery of the building. Compliance with the pre-determined categories shall be submitted to the council in the form of a Post Construction Sustainability Report (PCSR), demonstrating that framework has been suitably implemented.

The sustainability measures incorporated reflect the client and design team's aspirations in integrating sustainability measures and demonstrates that the project is designed to exceed the planning policy sustainability requirements.

The Sustainability Strategy proposed is therefore considered to comply with the policy requirements of the adopted Development Plan, including Policy DM7 and the guidance contained within the Planning Advice Note.

³ ASHP is expected

APPENDIX A – SUSTAINABILITY FRAMEWORK MATRIX

Great Wilsey Park - Parcel D1 Community Centre - Sustainability Framework Matrix

Great Wilsey Park - Parcel D1 Community Centre - Sustainability Framework Matrix					
CATEGORIES	ISSUES	PROJECT TARGETS		EVIDENCE OF IMPLEMENTATION	
		KPI			
1. Management	1.1 Resource efficiency (construction)	<p>The principal contractor must set energy and water consumption targets, monitor the actual energy and water use against these targets and report their performance.</p> <ul style="list-style-type: none"> - Energy use - Water Use <p>The principal contractor must monitor and record transport data for the delivery of materials to site and removal of waste from site (n.b. data for deliveries and waste removal must be reported separately).</p> <ul style="list-style-type: none"> - Transport (material delivery & waste) <p><i>Figures to be used to calculate WLC of project (section 1.2.d) (in combination with Operational energy (section 3.1) and embodied carbon (section 6.1 embodied carbon)</i></p>		<p>Monitoring report from contractor to be submitted. Final results and summary of strategy for reduction in consumption to be included in Post-construction Sustainability Report (PCSR).</p>	
	1.2 Delivery	1.2.a - Commissioning	<p>Schedule for commissioning and testing: The principal contractor to produce a schedule of commissioning and testing that identifies and includes a suitable timescale for commissioning and re-commissioning of all complex and non-complex building services and control systems and testing and inspecting building fabric.</p> <p>Principal contractor to appoint a specialist commissioning manager, with responsibility for: (a) Undertaking design reviews and giving advice on suitability for ease of commissioning (b) Providing commissioning management input to construction programming and during installation stages (c) Management of commissioning, performance testing and handover or post-handover stages</p>		<p>Submit Commissioning Schedule and formal confirmation of implementation to be included in PCSR ;</p> <ul style="list-style-type: none"> - Evidence of commissioning manager communication and design reviews (emails and team meetings) to be appended to Planning report
		1.2.b - Handover	<p>Prior to handover the contractor must issue:</p> <ul style="list-style-type: none"> (a) A non-technical user guide for distribution to the building occupiers; (b) A technical user guide for the premises facilities managers; (c) A non-technical training schedule for the building occupiers; and (d) A technical training schedule for the premises building/facilities managers. 		<p>Formal confirmation of implementation to be included in PCSR;</p> <ul style="list-style-type: none"> - Append copy of guides and evidence of training carried out
		1.2.c - Building fabric testing (Airtightness and thermal integrity)	<p>Achieve Passivhaus Classic: Air tightness: 0.6ach/hr @50Pa</p> <p>Achieve Passivhaus Classic: Demonstrate insulation continuity:</p>		<p>Passivhaus certification Formal confirmation of strategy implemented to be included in PCSR:</p> <p>Report to include: - Photographic evidence of insulation installations/ATL during construction works (contractor & designer 6-8weeks reports)</p>
		1.2.d - Whole Life Carbon (WLC)	<p>Report the developments 'on-completion' WLC figures.</p>		<p>Report 'on-completion' WLC figures in the PCSR: - Embodied carbon (A1-5; B1-5; C1-4) (including on-site measured construction energy, water and transport emissions) - Operational carbon (B6-B8)</p> <p><i>WLC figures to be calculated and reported in accordance with RICS professional standard 2nd edition</i></p>
	1.3 In use	1.3.a Building Performance evaluation (BPE)	<p>Carry out Standard BPE evaluation level study of the building in use (for a minimum period of 12 month), to verify the performance, identify performance anomalies and opportunities for optimization, in accordance with BS 40101.</p> <ul style="list-style-type: none"> - Stage 4: Develop a preliminary BPE plan setting out full scope of study to inform design development (ensure metering/submetering strategy (section 3.3) aligns with BPE and provides suitable level of data granularity). - On Completion: Implement final BPE plan, and begin data collection for BPE study <p><i>Suitable meters and sensors to be installed (including temperature, humidity and CO2 levels). Data must be stored/accessible from the Building Management System (BMS) or similar function that allows necessary granular data to be stored and accessed for BPE evaluation.</i></p>		<p>Formal confirmation of implementation to be included in PCSR;</p> <ul style="list-style-type: none"> - On-completion submit BPE plan - Subsequent submission of completed BPE study to be agreed with Local Authority.
	2. Health & Wellbeing	2.1 Indoors	2.1.a Daylight	<p>80% of occupied spaces to achieve: - Spatial daylight autonomy: sDA (300/50%)=300lux for 50% occupied hours - Useful daylight illuminance (autonomous) : UDI-a = 100-3000lux achieved for 80% of occupied hours over the working plane</p> <p><i>in line with BRE Site layout planning for daylight and sunlight</i></p>	
2.1.b Glare control			<p>Daylight glare probability: 0.35< DGP<0.4%</p> <p>Spaces that are at risk of glare ensure a glare control system that doesn't require use of energy</p> <p><i>in line with BRE Site layout planning for daylight and sunlight</i></p>		<p>Append Daylight report: - Compliant daylight and glare control assessment (in line with <i>BRE Site layout planning for daylight and sunlight</i>)</p>
2.1.c Thermal comfort			<p>TM52 assessment</p> <ul style="list-style-type: none"> - To be carried out at stage 4 - Implement mitigation measures where required 		<p>Formal confirmation that scheme complies with TM52 to be included in PCSR;</p> <p>Append TM52 report</p>
2.1.d Encourage active circulation			<p>Main circulation stairs requirement: Qualifying stairs to be located in a more visible location than escalators/lifts. Stairs shall not be enclosed behind doors, walls</p> <p>Encourage usage by implementing at least 2 of the following: - Motivational signs and/or graphics (including signs posted in all elevators call areas) - Installation of creative lighting - Painting walls, stairs and/or ceilings with bright colours (other than white) - Hanging frame artwork - Allowing access to natural daylight - adding rubber treading to stairs</p>		<p>Annotated drawings and photographs (where relevant) and formal confirmation of strategy implemented, to be included in PCSR</p>
2.1.e Inclusive design			<p>Provision of accessible building for all users, including disabled people: - Provision of accessible vertical transportation (lifts) - Provision of Changing-places toilet - Assistive technology (such as hearing loops and braille displays)</p>		<p>Annotated drawings and photographs (where relevant) and formal confirmation of strategy implemented, to be included in PCSR</p>

2. Health & Wellbeing	2.2 Outdoors	2.2.a Thermal comfort	<p>Implement heat island mitigation practice on 51% min of all structures:</p> <ul style="list-style-type: none"> - non-paved natural surfaces on pathways / walkways (such as wood, dirt, grass...) - Green roofs - Green Walls - High albedo surfaces on roofs, paved pathways, roadways and parking areas - Reflective shading devices over paved areas (car parking, sidewalks or pedestrian plaza) - Vegetation coverage on roofs and paved pathways, roadways and parking areas - Preservation or creation of green spaces - Heat resistant construction materials 	<p>Formal confirmation of strategy implemented in PCSR;</p> <p>Report to include calculation on:</p> <ul style="list-style-type: none"> - number of all structures, landscaped spaces and paved infrastructure; - number of areas where qualifying heat island mitigation practices will be implemented; <p>Annotated plans detailing all areas of the project where qualifying heat island mitigation practices have been implemented.</p>
		2.2.b Placemaking (Enhancing communal outdoor spaces)	<p>Communal outdoor spaces to be located within 800m walking from main building entrance</p> <ul style="list-style-type: none"> - Must be free of charge for all - Include way finding - Includes a min of 2 of the following: <ul style="list-style-type: none"> - Urban furniture (seating) - Accessible Pedestrian pathways - Outdoor fitness area (fitness equipment such as stationary bicycles, air walkers or setup board) 	<p>Annotated drawings and photographs (where relevant) and formal confirmation of strategy implemented to be included in PCSR.</p>
		2.2.c Placemaking (Enhancing connectivity)	<p>Reinforce site wide connections whilst supporting biodiversity. Provide landscaping on sidewalks and pathways to encourage walking and cycling.</p> <p>Proposals shall meet all of the following:</p> <ol style="list-style-type: none"> 1. Uniformly located along sidewalks and pathways leading to : <ul style="list-style-type: none"> - Building entrance - Entrances to parking areas - Common amenities and outdoor areas. 2. Include minimum of two of the following: <ul style="list-style-type: none"> - Tress - Planters - Vegetation 	<p>Annotated drawings and photographs (where relevant) and formal confirmation of strategy implemented to be included in PCSR.</p>
3. Energy	3.1 Operational energy		<p>Achieving Passivhaus Classic:</p> <ul style="list-style-type: none"> - Primary Energy Renewable (PER) <60 kWh/m2/yr - Space heating demand: < 15 kWh/m2/yr 	<p>Passivhaus certification</p> <p>Formal confirmation of strategy implemented to be included in PCSR;</p>
	3.3 Energy monitoring (metering/sub metering)		<p>Metering/submetering strategy to be developed in accordance with client requirements (including aspects monitored by BPE in section 1.3):</p> <ul style="list-style-type: none"> - Energy monitoring and management system to be installed - Separate accessible energy sub-meters with pulse or other open protocol communication outputs in relevant function (spaces to be monitored and/or operated by others such as nursery, café, co-working spaces) <p><i>Suitable meters and sensors to be installed (including temperature, humidity and CO2 levels). Data must be stored/accessible from the Building Management System (BMS) or similar function that allows necessary granular data to be stored and accessed for BPE evaluation.</i></p>	<p>M&E drawings/schematics and photographs (where relevant) and formal confirmation of strategy implemented in accordance with client requirement to be included in PCSR.</p>
	3.4 Lighting	3.4.a Indoors	<p>Lighting zoning and controls:</p> <p>Automatic control system with presence detection and daylight sensors to be installed in relevant areas (such as co-workings spaces; café, circulation, classrooms, kitchenets, offices, toilets)</p>	<p>M&E drawings/schematics and photographs (where relevant) and formal confirmation of strategy implemented to be included in PCSR.</p>
		3.4.b Outdoors	<p>The average initial luminous efficacy of all external light fittings must be greater than 70 luminaire lumens per circuit Watt. All external light fittings must be automatically controlled to prevent operation during daylight hours and have presence detection in areas with intermittent pedestrian traffic.</p> <p><i>Outdoor lighting shall not compromise dark/bat corridors</i></p>	<p>M&E drawings/schematics and photographs (where relevant) and formal confirmation of strategy implemented to be included in PCSR .</p>
4. Transport	4.1 Sustainable modes of transport	4.1.a Cycle	<p>Number of cycle stores to be in line with BREEM Tra02</p> <p>1-200 users @ 1 space per 10 users</p> <ul style="list-style-type: none"> - spaces to be suitably sized to allow ease of use cyclist - min 2 spaces for 4 staff <p>Cycle store provision:</p> <ul style="list-style-type: none"> - Free of charge - Well illuminated - Secure from theft, weather protected and accessible - Located within 100m of building entrance <p>Provision of 2 types of ancillary facilities in line with BREEM Tra02 :</p> <ul style="list-style-type: none"> - Showers (1 per 10 cycle storage spaces) - Changing facilities - Lockers (1 per cycle storage spaces) - Drying space 	<p>Annotated drawings and photographs (where relevant) and formal confirmation of strategy implemented included in PCSR.</p>
		4.1.b Pedestrian	<p>Universally accessible site:</p> <ul style="list-style-type: none"> - All sidewalks and pedestrian pathways - Street crossings within the development - Outdoor amenities and open spaces - Building access - Safe: Well illuminated (up-lighting directed at pedestrians; Street lamps that are designed to eliminate shadows and dark corners; low height street lamps that illuminate sidewalks and pathways) <p><i>Outdoor lighting shall not compromise dark/bat corridors</i></p>	<p>Annotated drawings and photographs (where relevant) and formal confirmation of strategy implemented included in PCSR.</p>
	4.2 Parking	4.2.a Inclusivity (Disable Parking provision)	<p>Blue Badge' parking spaces to account for a minimum of 5% of spaces;</p> <p><i>Level access to be ensured from allocated parking spaces to building entrance</i></p>	<p>Annotated drawings and photographs (where relevant) and formal confirmation of strategy implemented included in PCSR.</p>
		4.2.b Electrical Vehicle Charging Provision	<p>Electrical vehicle charging provision (EVC):</p> <p>Active EVC: >15% (min 7.4kW)</p> <p>Passive EVC: >40%</p>	
5. Water	5.1 Reduction of potable water use	5.1.a Indoors	<p>40% improvement over baseline water consumption (BREEM V6 - Wat 01 level 3)</p>	<p>Formal confirmation of fitting specification and calculations to be included in PCSR.</p>
		5.1.b Outdoors	<ul style="list-style-type: none"> - Reduce water usage in outdoors spaces (such as Installation of rain water collectors in proximity to landscaped areas; specifying drought proof species and avoidance of need for irrigation) - Landscape management plan 	<p>Annotated drawings and photographs (where relevant), Landscape Management Plan and formal confirmation of strategy implemented included in PCSR.</p>
	5.2 Leak detection		<p>A leak detection system must be installed which is capable of detecting water leak on the mains water supply within the building (and between the buildings if relevant) and the utilities water meter is installed.</p>	<p>M&E drawings/schematics and photographs of installed system (where relevant) and formal confirmation of strategy implemented in PCSR.</p>
6. Material	6.1 Embodied Carbon Analysis		<p>RIBA (2030) *: < 540 kgCO2e/m2 (A1-5; B1-5; C1-4)</p> <p>Life Cycle Assessment (LCA) of proposed building to include all element and component categories (in line with RICS WLCA V2). LCA to be developed for:</p> <ul style="list-style-type: none"> - Stage 3: Identify and implement opportunities for reduction in emissions - Stage 4: Developed LCA, incorporating all reduction strategies - On Completion: demonstrating compliance with targets: <p>- Present figures for WLCA (i.e. including B6-B8, refrigerant and measured construction metered energy, water and transport emissions) (see section 1.1 Management & 3.1 Energy)</p> <p>* <i>RIBA target for non domestic - new build schools selected</i></p>	<p>Formal confirmation of strategy implemented for reduction in CO₂e emissions and confirmation of target in PCSR. Present WLCA figures.</p> <p>PCSR to include:</p> <ul style="list-style-type: none"> - Stage 3 identification of emission reduction strategy (DAS) - Stage 4 report (including WLCA figures) - On completion report (including WLCA figures)

7. Waste	7.1 Construction Waste		The principal contractor must implement a Site Waste Management Plan (SWMP) to promote resource efficiency. This must include a target for the amount of construction, demolition and excavation waste that will be generated. Targets: - < 6.5 tonnes of construction waste generated per 100m ² of GIA; - 95% min construction waste to be diverted from landfill - 95% min excavation waste to be diverted from landfill	Contractor to provide SWMP and report on waste generation and diversion demonstrating targets have been achieved. Transport impact of waste also to be recorded and accounted for (see section 1.1 management) Formal confirmation of waste generation and diversion to be included in PCSR, including compliance with targets set.
	7.2 Operational waste		Develop Operational Waste Management (OWM) strategy, which must contain strategy to ensure: - Zero biodegradable waste to landfill - 75% of waste to be recycled. - Dedicated (external and internal) storage area , appropriate to the size of the building and expected waste streams (including composting), must be provided. Internal provision of dedicated bins for expected waste stream is to be provided in all relevant areas throughout the building and shall be suitably sized and located to attend multiple proposed functions of the buildings. - All bins to be clearly labelled to assist with segregation - External dedicated storage area for waste streams to have a tap for cleaning provision. - Internal segregated bins to be provided for cafe and kitchenets in dedicated location. - Segregated bin collection for general public use throughout the building and outdoors should also be provided, clearly labelled, suitably sized and easily accessible encouraging building users to use them. Motivational signage,	Annotated drawings and photographs (where relevant), OWM and formal confirmation of strategy implemented to be included in PCSR. - Include sizes of bins allocated for each waste streams in the different areas (indoors throughout the building, outdoors, kitchens/kitchenets, cafe, workspaces...); - Demonstrate location of dedicated storage areas; - OWM - Waste collection strategy (including waste stream collection and frequency)
8. Land Use & Ecology	8.1 Protection of ecological features	8.1.a Managing impact of construction works	Develop and implement a Construction Environmental Management Plan (CEMP) to manage and mitigate the impact of construction works: - On site measures to avoid and manage negative ecological impact during site preparation and construction are to be implemented (including dark/bat corridors) - Implementation of lighting mitigation strategy to avoid impact on dark/bat corridors	Annotated drawings and photographs (where relevant) CEMP, and formal confirmation of strategy implemented to manage the impact (during construction & in use) to be included in PCSR.
		8.1.b Permanent protection	Implementation of permanent protection features - Including implementation of lighting mitigation strategy to avoid impact on dark/bat corridors	
	8.2 Increase in Biodiversity		Developed an implement a Green Infrastructure and Biodiversity Management Plan (GIBMP) to ensure existing habitats are protected and enhanced and to adequately maintain newly created habitats. - 40% net gain improvement	GIBMP, relevant calculations and formal confirmation of strategy implementation to be included in the PCSR.
9. Pollution	9.1 Flood risk and surface water run-off	9.1 Sustainable Urban Drainage	SUDs strategy to be developed and implemented. Peak runoff rate: 1 in 100yrs + 40% Bespoke surface water run-off design solutions must be utilised, with justification given by an appropriate consultant where water is allowed to leave the site. Peak rate of run-off from the site to the watercourses (natural or municipal) must show a 40% improvement for the developed site compared with the pre-developed site.	Formal confirmation of SUDs strategy implementation and mitigation measures to be included in the PCSR.
	9.2 Impact of refrigerants	9.2.a Impact Refrigerant	Refrigerant Direct Effect Life Cycle CO ₂ e equivalent emissions (DELCO ₂ e) of < 1,000 kgCO₂e/kW capacity	M&E specification and formal confirmation of strategy implementation to be included in the PCSR.
		9.2.b Leak detection	All systems are hermetically sealed or only use environmentally benign refrigerants OR a permanent automated refrigerant leak detection system must be installed or an inbuilt automated diagnostic procedure for detecting leakage installed. In all instances a robust and tested refrigerant leak detection system must be installed and must be capable of continuously monitoring for leaks.	M&E schematic/specification and photographs (where relevant) and formal confirmation of strategy implementation to be included in the PCSR.
	9.3 Reduction of night time pollution		External lighting strategy to be designed in compliance with Table 2 (and its accompanying notes) of the Institution of Lighting Professionals (ILP) Guidance notes for the reduction of obtrusive light, 2011. All external lighting (except for safety and security lighting) can be automatically switched off between 23:00 and 07:00. - Implement light screening as required. - Illumination levels at defined dark/bat corridors and zones protected from lighting schemes should be retained below 1 lux, during both operational and construction phases of the Development.	M&E drawings/schematics and photographs (where relevant), Construction mitigation strategy, and formal confirmation of strategy implemented to be included in PCSR.
	9.4 Air quality		Development to be air quality neutral Anti-idling policy and signage to be implemented	Air quality assessment (AQA) and formal confirmation of strategy implemented to be included in PCSR.

XCO2
56 Kingsway Place, Sans Walk
London EC1R 0LU

+44 (0)20 7700 1000
mail@xco2.com
xco2.com

