



Fulford Heath | Tidbury, Solihull

Vision Statement

A framework for a sustainable development

December 2020



In the wake of the Covid-19 pandemic, much has been made of the need to 'build back better'. We therefore need to ensure a plan is in place to create the right conditions for Solihull to recover and build on its reputation as an attractive and aspirational place to live, learn, invest, work and play.

Careful consideration of the design, scale and distribution of new growth is required, providing homes within new communities which are fit for the future and that take advantage of the unique opportunities the Borough has to offer. Development ready to achieve Solihull's aspirations for a 2041 net zero carbon economy should be prioritised to ensure we're building settlements that are adaptable to climate change, decoupling growth from carbon dioxide emissions and providing a positive response to the climate emergency.

This document responds to Solihull Metropolitan Borough Council's (SMBC) Local Plan Review and aspirations for a zero carbon Solihull. The document sets out a series of design interventions and aspirations for development at Fulford Heath based on established sustainable development principles that will encourage sustainable behaviour and allow new residents to adopt new ways of living. The Draft Local Plan has identified the

challenges the Borough faces and the objectives that should be prioritised in addressing these challenges. We support the Borough's ambitions, but, it would be incorrect to assume that all these challenges are of similar status and have the same weighting; it is clear that the highest priority for the Borough should be climate change. SMBC are ambitious and have embraced the mitigation and adaption targets needed

to respond to the climate emergency. The Borough have placed a focus on the agenda through the adoption of a Climate Change Declaration in 2019, which is now being followed by setting out a statutory framework for the Borough. The Vision for Fulford Heath will show how SMBC can move from declaration to a proactive framework, supporting projects which contribute to achieving these ambitious targets.

The Vision Document and accompanying framework acknowledges and anticipates changing lifestyles and the implications this will have on the built environment in the coming decades. This approach embraces environmental, climatic, technological, social and economic resilience, aiming to future proof the development and provide flexibility to accommodate design changes from new ways of living, working and playing and go beyond the aspirations within the SMBC draft Local Plan.



00 Executive summary

Based upon initial masterplanning and design analysis, the proposed development at Fulford Heath has the potential to accommodate:

- 1,200 dwellings;
- A primary school;
- One primary local centre; and
- Two secondary local centres.

The proposed new neighbourhood will aim to deliver a net zero carbon masterplan, considering emissions from new buildings and transportation, in keeping with Solihull Metropolitan Borough Council's zero carbon targets. The scheme offers a unique opportunity to deliver zero carbon development through:

- The provision of a new neighbourhood incorporating a mix of uses, to provide new residents access to day-to-day amenities, including schools and local centres;
- The planting of 34,500 trees;
- The sites positioning within walking distance of two train stations.

These features will facilitate a sustainable, zero carbon masterplan through;

- Zero carbon buildings
- Low carbon transportation
- Carbon sequestration through tree planting.

The new neighbourhood will encourage sustainable living through intelligent and flexible design interventions, ensuring the development works from day one, right through to completion.



01 Introduction

This Vision document has been prepared by Icen Projects on behalf of Summix Ltd.

This document sets out a series of design interventions and aspirations for the development and provision of new homes based on established sustainable development principles that will encourage sustainable behaviour for new residents, aiming to deliver not just zero carbon homes, but a zero carbon masterplan.

The masterplan has been developed taking account of Solihull's aspirations as a Borough and their vision detailed with the draft Local Plan including providing sustainable new homes within the Borough. Summix support and commend the Borough for their ambition but acknowledge that tackling climate change should be acknowledged as the highest importance for the long-term resilience of the Borough.

This masterplan places climate change at its centre, specifically addressing the requirements and challenges noted within draft Local Plan Policy P9 whilst ensuring the highest design quality detailed within draft Local Plan Policy P15. The vision document demonstrates that the sustainable location of the proposed development, combined with design interventions to reduce carbon emissions are achievable on this site in line with the proposed policies.

The approach for Fulford Heath embraces environmental, climatic, technological, social and economic resilience, aiming to futureproof the development and provide flexibility to accommodate design changes resulting from new ways of living, working and playing. This concept provides a high-level vision for the planning, design and delivery framework required for the project. This is reinforced by carbon dioxide emissions calculations across the site, including emissions from buildings and transport as well as mitigation carbon potential from solar panels and tree planting.



01 Introduction

As part of the submission to the Local Plan consultation, this Vision Document therefore demonstrates how Summix can create a new neighbourhood that responds to the Council's targets for the Borough, contributing a significant number of homes in line with draft Policy P5 whilst acknowledging the highest importance of addressing zero carbon aspirations for Solihull detailed in draft Policy P9. This will provide detailed evidence to reinforce Summix's intent to develop an exemplar approach in not only delivering zero carbon homes, but also addressing wider emissions from the lifestyles of new residents through their day-to-day activities.

The following sections provides a summary of the design principles to create a new sustainable community at Fulford Heath and how opportunities can be unlocked in which to create a new community based around high quality placemaking and a zero carbon economy.

01 Introduction

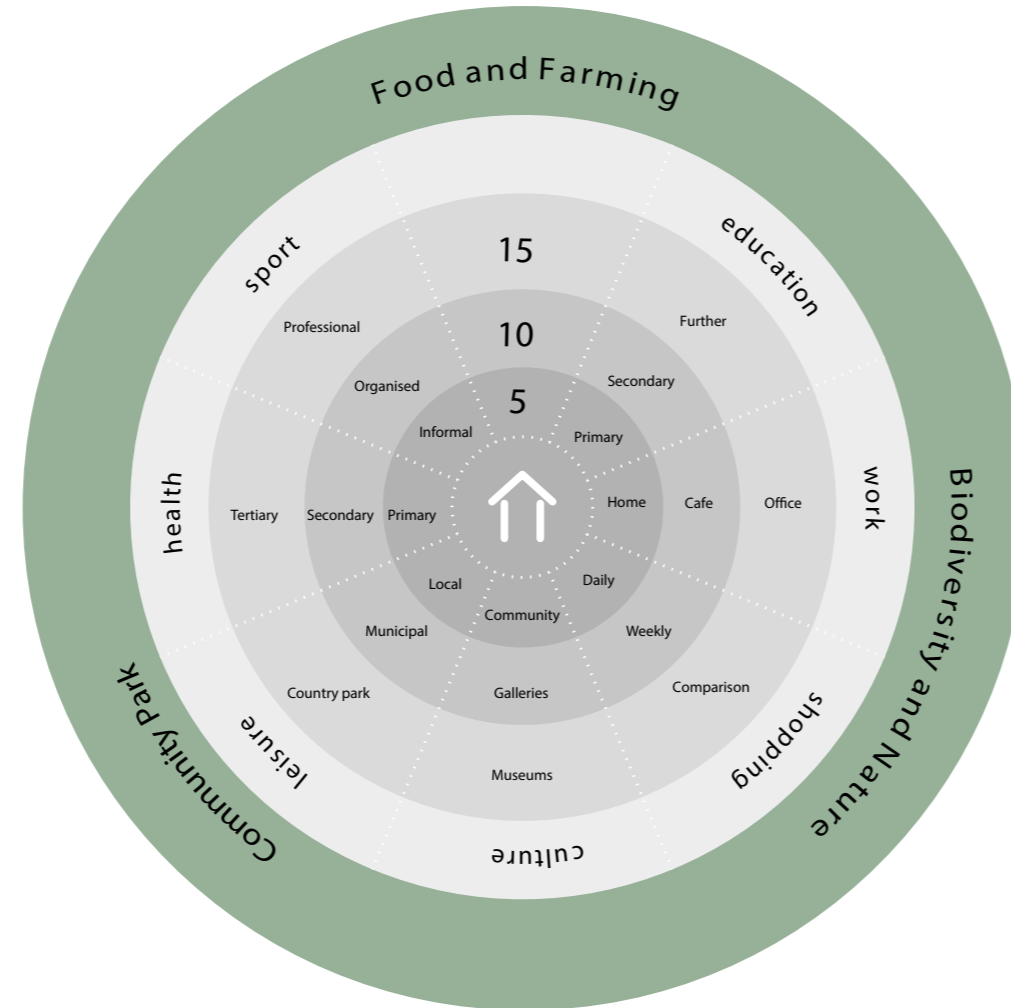


Building a sustainable community

Taking into account the constraints across the site, the masterplan has the potential to deliver c 1200 homes, with a mix that allows for family housing as a priority.

Central to the principle of the new neighbourhoods will be a balanced sustainable community with access to a mix of ancillary uses locally or within easy reach. The sustainable neighbourhoods will not just include homes, but other day-to-day activities that people need within a short distance. The neighbourhoods will be designed so that the car is the last choice and instead walking and cycling are the easiest options for accessing local services and amenities, therefore creating low car dependency, and enhancing social and economic benefits for the new community.

In order to ensure the most efficient use of land, the development will consider a range of densities with higher densities towards the stations, community/work hubs and local centres.



Tree planting for carbon capture

Alongside a walkable mixed-use neighbourhood and two local rail stations, other benefits will be realised due to the planting of new trees across the site.

A total of 9.2 hectares has been set aside for the planting of new trees. Typical planting of woodland and tree belts can produce a coverage of new trees every 2sq.m at 75% coverage across several hectares, leading to a significant carbon benefit. Once established and at around 15 years, the first generation of trees will have reached maturity and will be pollarded under a management regime. The addition of new stock will then follow.

The area will allow for approximately 34,500 new trees, which will absorb nearly 1,900 tonnes of carbon dioxide each year.

The new areas of planting will also provide amenity to new and neighbouring residents, reduce the impact of the development on the landscape and provide significant biodiversity benefits.

As part of the development, an onsite tree nursery will be provided to nurture young saplings for future planting elsewhere on the site. This will provide employment and a meanwhile use during construction.

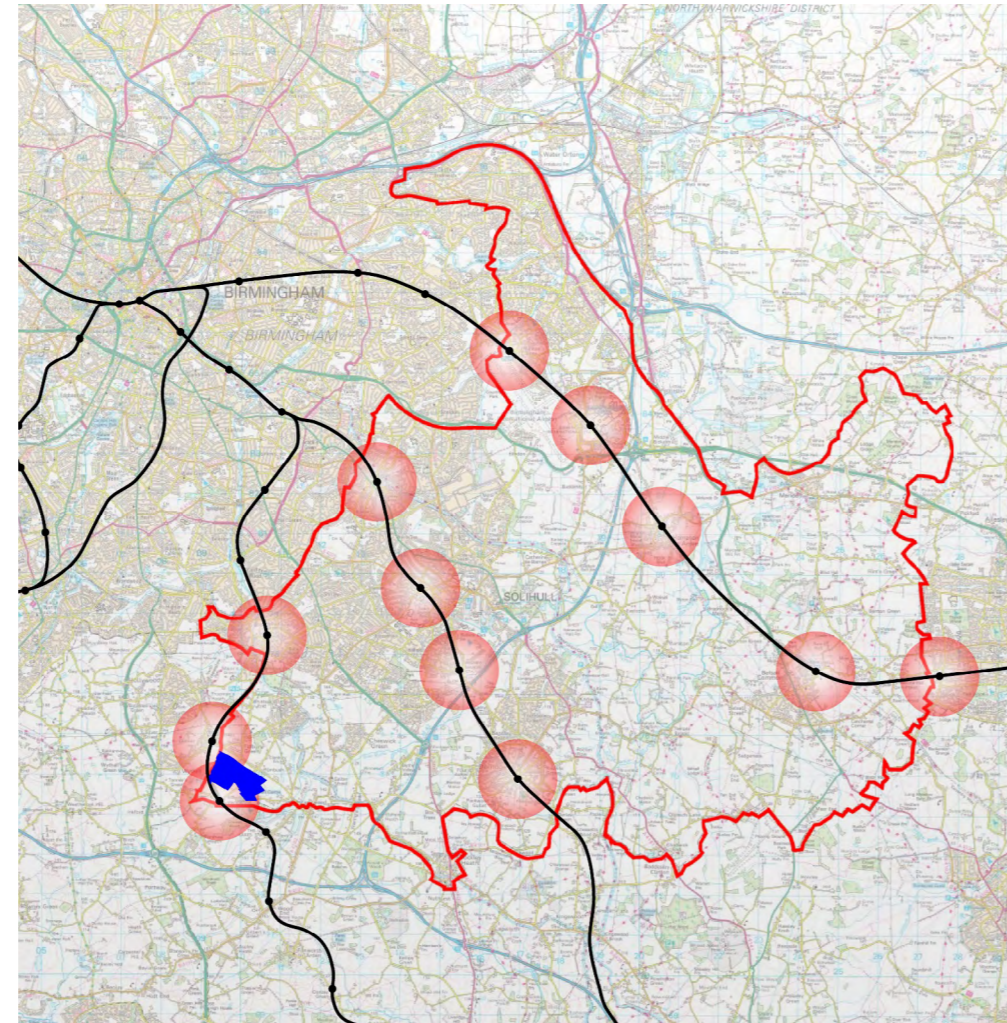


02 Designing a Zero Carbon New Neighbourhood

Making the most of public transport infrastructure

Access and connectivity across the region remain one of the most important issues in determining the sustainability of new development. All modes of movement will therefore be accounted for at the outset and enhanced over the duration of development. Recent innovations in movement technology, such as autonomous vehicles, electric bikes and scooters, have shown us that the modes of transport we use can change very quickly. The transport infrastructure proposed therefore needs to be adaptable to enable future modes of travel to be accommodated.

The sustainable movement strategy needs will be robust enough to balance a number of initiatives, as set out in the accompanying Mobility and Transport Strategy. The scheme will promote the early introduction of mixed uses to aid internalised trips. Due to the proximity to two stations, it is also inevitable that several strategic initiatives to increase the use of the rail connections will need to be made, improving active travel connections for new residents. Low car usage in the area will allow for neighbourhood 'place making' and will facilitate a network of well-connected streets, and high-quality bus and rail links.



02 Designing a Zero Carbon New Neighbourhood



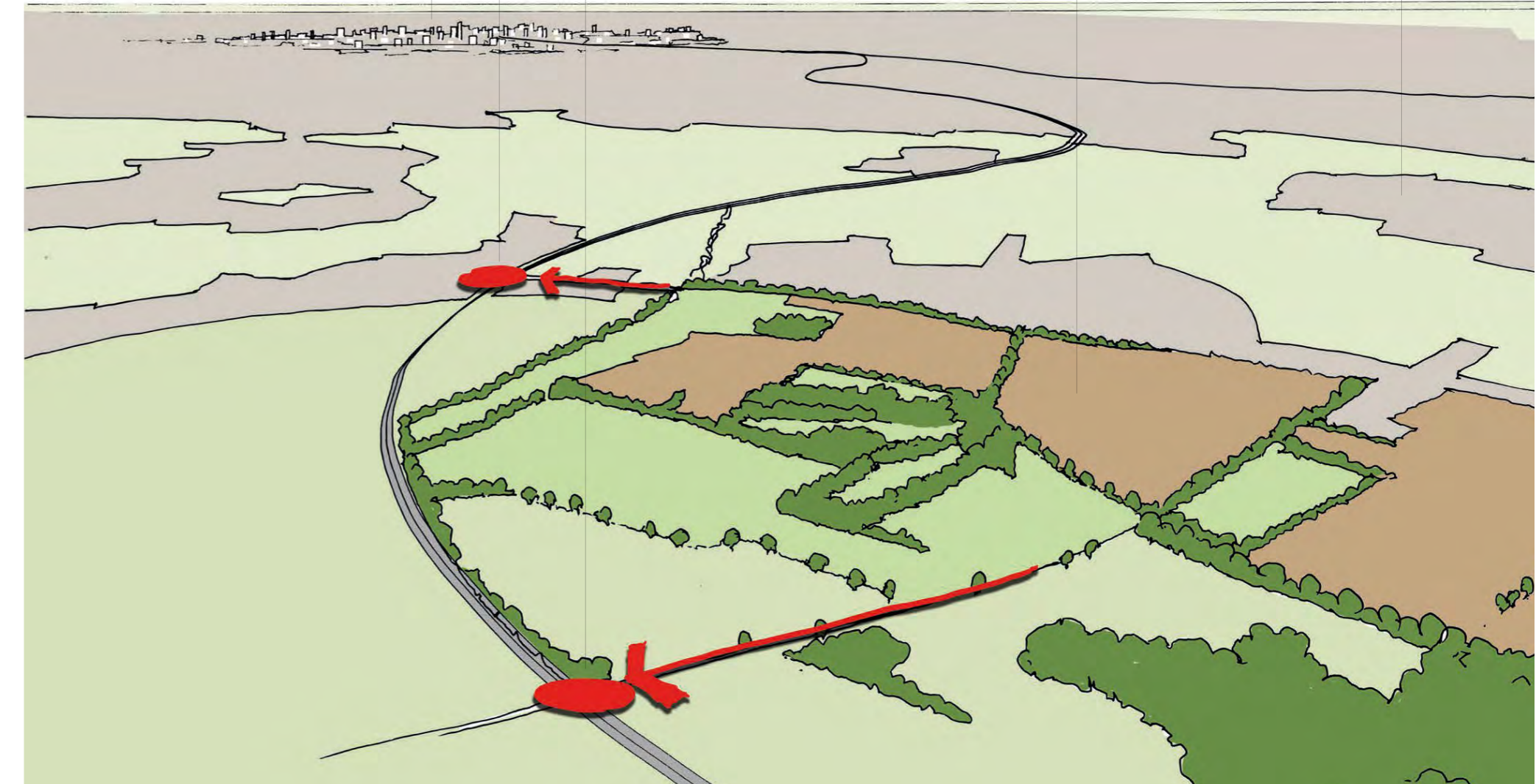
Business District

Fulford Heath
Zero Carbon
Village

Dicken's
Heath

Wythall
Station

Earlswood
Station



Integrating the landscape with the community

The growing post-Covid health and well-being agenda shows that communities want to have access to the natural environment. The natural environment not only encourages a healthy lifestyle, but also contributes to sustainability through flood management, carbon sequestration and biodiversity.

The natural corridors of the area will ensure that the neighbourhoods are designed to connect people with the landscape and biodiversity. Natural, sustainable drainage will be integrated throughout to replicate existing surface water runoff patterns. This includes the opportunity to create spaces for natural infiltration and rainwater harvesting.

The network of open spaces will allow all residents to have a close association with nature by providing walking and cycling connections through natural landscapes.



Achieving a balance between homes and jobs

The neighbourhoods will be designed with different lifestyle choices in mind, ensuring the right density and types of homes in the right place. This will encourage a sustainable community by developing a lifetime neighbourhood that provides access, services and amenities, usable built and natural environments, and opportunities for health and well-being activities in addition to ensuring a range of house types for all ages.



Local work hubs - providing workspace for changing lifestyles



It is critical to get the employment balance right by providing employment areas in key sustainable locations. In a post-Covid setting it is evident that there is an increased demand to work from home and that people are increasingly seeking more of a life/work balance as part of a healthy lifestyle. The creation of employment hubs that are easily accessible to the community within each neighbourhood is important to cater to these changing lifestyles. The provision of superfast broadband and 5G networks will also provide flexibility for those choosing to work without commuting into Birmingham.



Amenities and shops provided for early

02 Designing a Zero Carbon New Neighbourhood

Addressing climate change

We are in the midst of a climate emergency. Solihull have rightly responded to this by targeting zero carbon new homes by 2025 and by becoming a net zero carbon borough by 2041.

An awareness of climate change and a need to provide solutions which contribute positively to reducing carbon is therefore an essential part of futureproofing the development. As the wider population are now more aware of the impacts of climate change than ever before, there is a growing need for future development proposals to show innovative approaches to reducing carbon, both at a building scale and across the wider masterplan.

The new neighbourhoods will be designed to achieve a net zero carbon target. The masterplan will take a holistic approach to building design and landscape, reducing the need to travel by car, which all will which will not only minimise carbon dioxide emissions at source, through reduced vehicle and building emissions, but will also generate zero carbon electricity from renewable technologies and plant new trees to absorb carbon dioxide from the atmosphere.

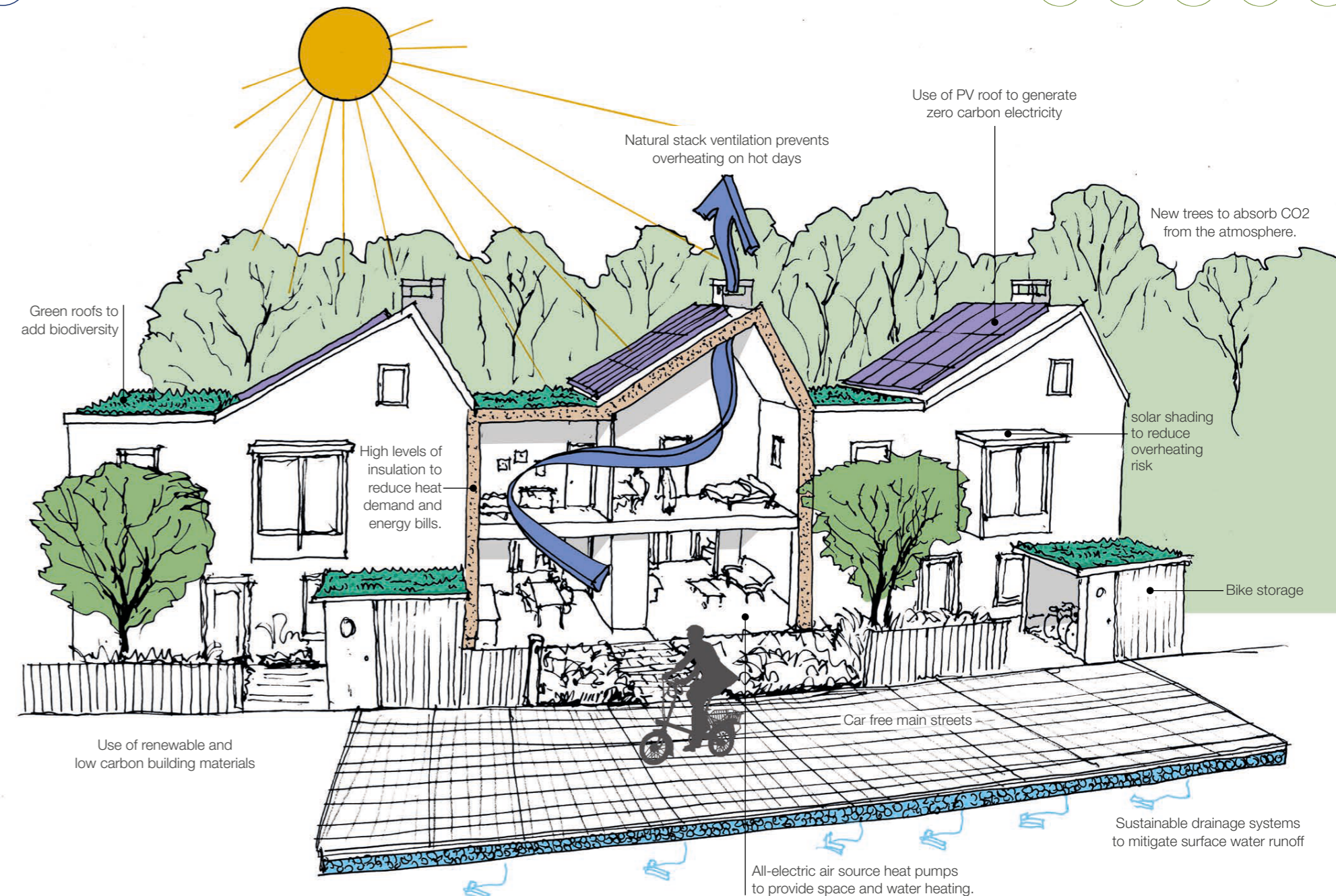


Example of PV panels integrated into roofscape

All buildings will incorporate a 'fossil fuel free' requirement, meaning that the development will be ready for the 2050 net zero carbon economy. This will be achieved using the tried and tested Energy Hierarchy method; using good building design and insulation to reduce demand; using high efficiency systems to reduce energy consumption; and using low and zero carbon technologies to minimise emissions. Detailed sitewide carbon analysis will include assessment of the carbon sequestration potential of the planting within the landscape and tree avenues.

In undertaking a comprehensive range of initiatives, a stewardship plan could allow new community benefits for residents, as community energy traders and as stakeholders.

02 Designing a Zero Carbon New Neighbourhood



02 Designing a Zero Carbon New Neighbourhood

Bringing it all together

All the influences listed above will form the foundations of the design principles to create a new sustainable community. Based on the themes identified; the area will unlock opportunities for new neighbourhoods based around high quality placemaking.

The masterplan will epitomise all the concepts set out in this report, to provide places for people to live, work and socialise, adopting sustainable lifestyles through good design principles, intelligent masterplanning and appropriate use of innovative technology.

The Illustrative Masterplan

The Illustrative Masterplan has the potential to deliver:

- 1,200 dwellings
- A primary school
- 1 primary local centre; and
- 2 secondary local centres

The new masterplan will enable a collective identity of low impact lifestyles. The interventions will encourage the community and residents to not only adopt more sustainable lifestyles but will allow them to monitor their impacts. As such, this approach has the potential to act as a 'pathfinder' project for Solihull Metropolitan Borough Council, demonstrating how their zero carbon intent can be delivered more widely across the borough.

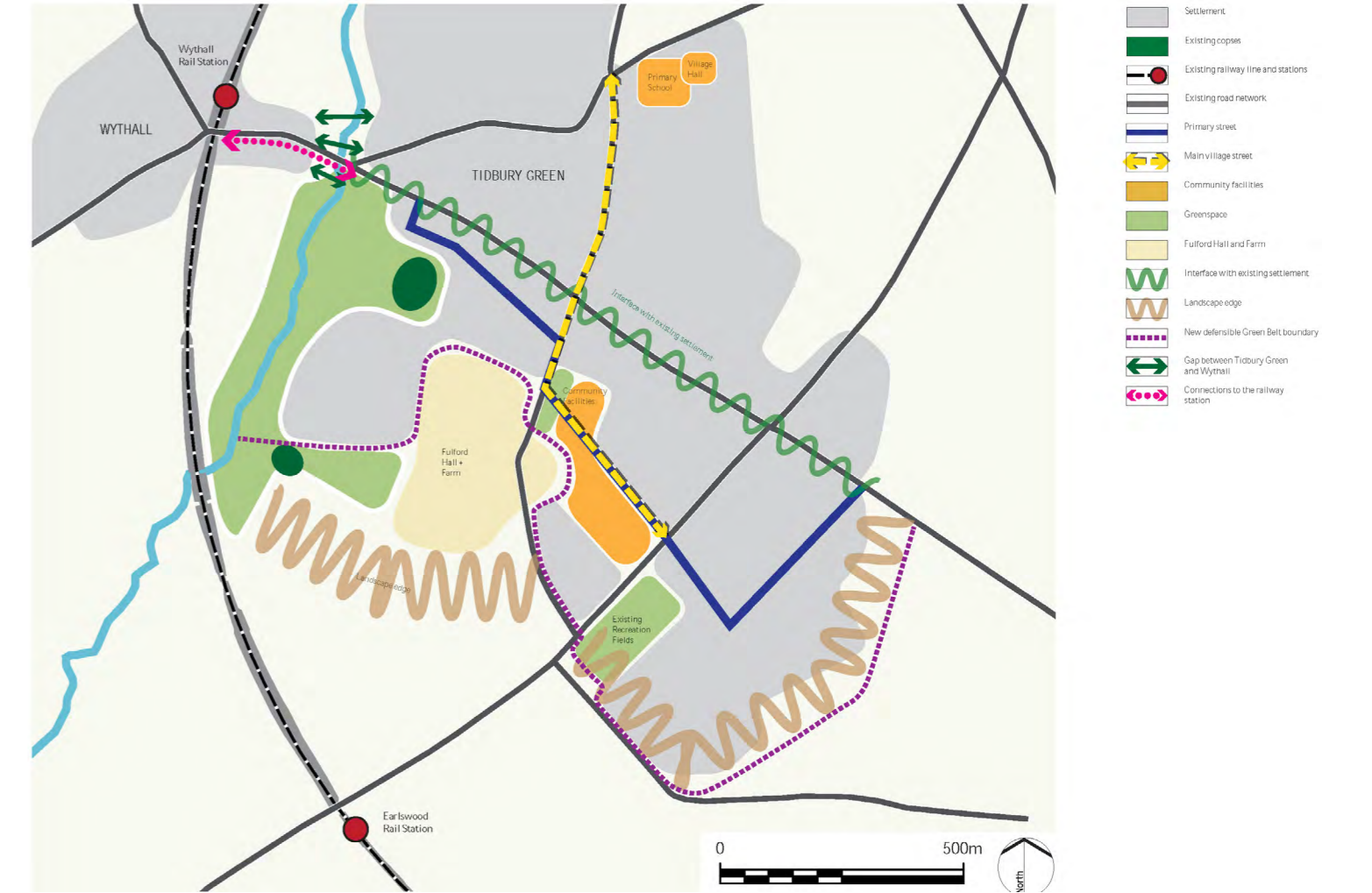
02 Designing a Zero Carbon New Neighbourhood



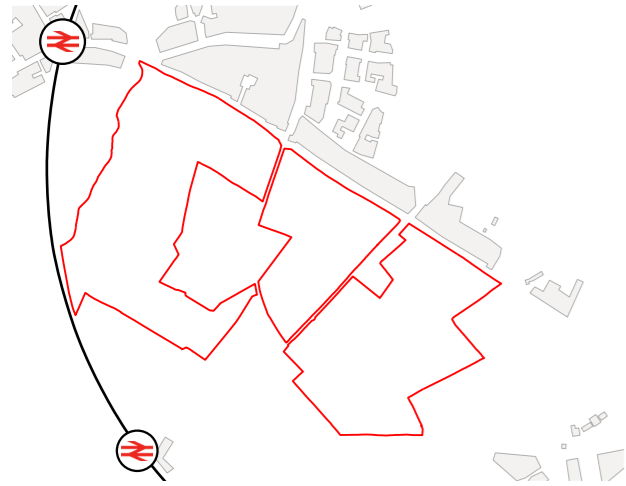
Evolving the Masterplan - The Original Concept (LDA)

The Original Masterplan was prepared by LDA Design to support the written representations as part of the Solihull Local Plan Review.

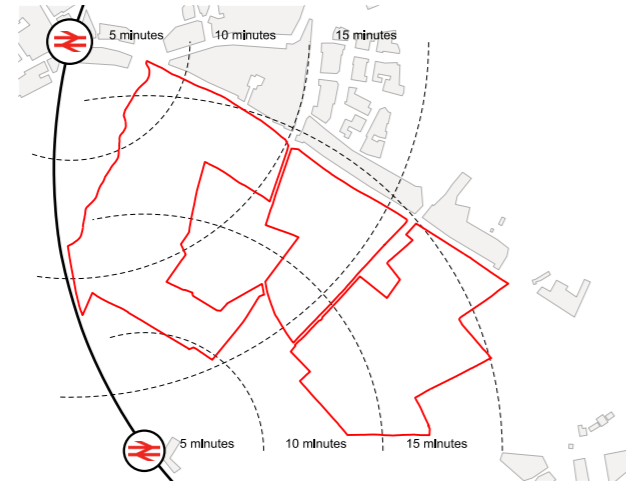
This document was part of other written representations submitted including the Green Belt and Landscape and Visual Appraisal report which has informed the framework plan for the site.



02 Designing a Zero Carbon New Neighbourhood



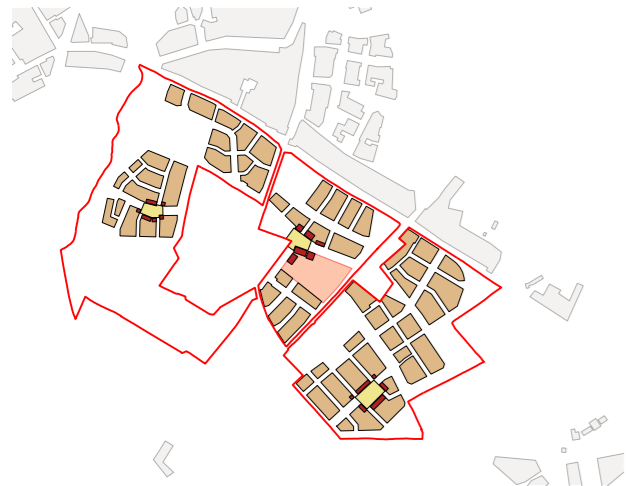
1. The site is uniquely located close to two existing railway stations with connections into Birmingham City Centre in under 30 minutes.



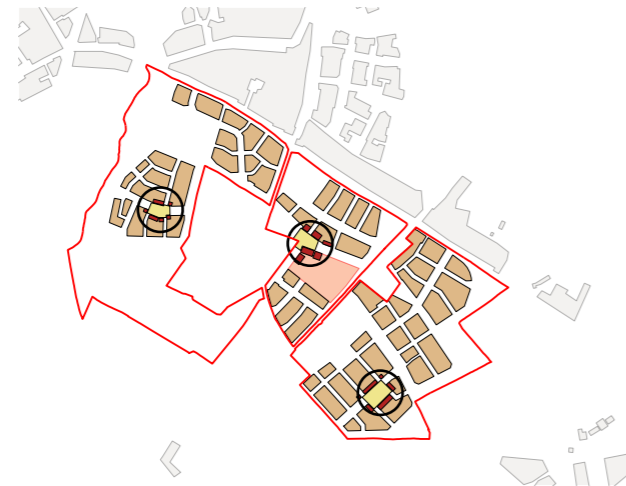
2. The vast majority of the site is connected to the stations in under a 15 minute walk.



3. Siting residential uses in these areas will encourage future residents to walk or cycle to train stations instead of commuting by car.



4. Local hubs will also help to internalise trips, reducing car use.



5. Clustering community uses together will develop a sense of place around local centres.



6. If the vast majority of day-to-day amenities are available within a 15 minute walk or cycle, future and neighbouring residents will not need to use private cars.

02 Designing a Zero Carbon New Neighbourhood



02 Designing a Zero Carbon New Neighbourhood



Community hub sketch

02 Designing a Zero Carbon New Neighbourhood



03 Climate Change and emerging lifestyles

Low carbon living should not be difficult for new residents. Through good design principles, low carbon lifestyles will be integrated throughout, responding directly to the climate emergency and providing a new development ready for the 2050 net zero carbon economy.

03 Climate Change and emerging lifestyles



"I always thought I'd need to establish my business within Birmingham or Solihull centre with faster and more reliable digital infrastructure. Having strong Wi-Fi connections and the ability to connect to 5G means I don't need to pay for city centre rents but have been able to locate my business in a more rural setting with all the benefits of the local neighbourhood centre"

"I never saw myself as a habitual cyclist. I'd always been nervous of cycling down busy streets and worried about the security of my bike when I popped to the shop. Having clear cycle paths and secure cycle parking across the neighbourhood now means I feel confident enough to cycle into the centre to pick up my shopping or cycle with the kids to the football pitches"



" Having community allotment space so close to home has given me the opportunity to take up growing my own vegetables and has also helped me find a new social group. Not only does it feel great to know exactly where my food has come from, getting my children involved means I have been able to share the sense of achievement with them"



"Switching to a car-free school run since moving here has been a blessing! Our mornings are much more relaxed knowing the school is only a short walk from home. Knowing how safe the roads are around the school, I'm looking to let my kids walk to school without me a couple of days a week – I never would have dreamt of doing that where we lived before!"



"I keep finding I'm always at the community hub. It's great that the hub can be hired out by anyone. One day I can take part in a yoga or spin class, the next visit the food market and cafe and in the evenings make the most of the pop-up restaurants and live bands. It provides the facilities I'd normally travel for all in one place"



" I didn't think I could afford to live in a rural and accessible location. I always thought I'd have to compensate in some way, probably living on the outskirts of Birmingham or within Solihull. My firsttime home has met all my expectations, I've the benefits of a greener neighbourhood, a mixed community and with excellent public transport links back into the city centre"



03 Climate Change and emerging lifestyles

"Being able to retain my independence has been hugely important to me. I've been able to down-size and live close to the local shops, parks, doctors and community centre. The bus connections are regular and allow me to move across the neighbourhood unaided"



"As we grew up we thought we'd become trapped in the neighbourhood, reliant on our parents to drive us into Birmingham centre and to see our friends. We actually have the benefit of both worlds; on weekday evenings we can hang out in the neighbourhood centre and weekends we walk to the train station at Wythall without having to rely on our parents"



03 Climate Change and emerging lifestyles

"Before the neighbourhood was developed, my friends and I used to drive into Birmingham every weekend to go to the coffee shops and restaurants. Now the neighbourhood centre has a modern café and places to eat and drink. We save so much time (and money) by having the option of catching up in the neighbourhood instead now"



"Whilst many of my neighbours are embracing the new ways of living and working, I still need to be in the office each day. I've always preferred living further out of the city centre and used to rely heavily on the car in order to get into the office. Our new home is far more equipped for the commuter. I can do the short journey on my scooter or bike to the train station, and it takes less than 30 minutes to get into Birmingham centre"



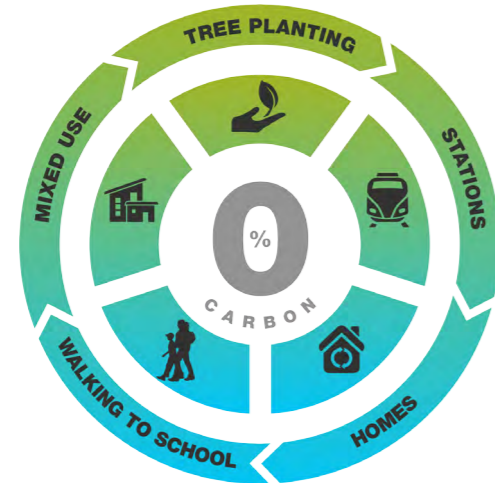
04 A Solihull Future

The major overarching objectives which are at the core of the delivery of this project are:

Zero carbon

Creating a zero carbon community will be essential to meet Solihull's zero carbon targets:

- New homes zero carbon by 2025
- Zero carbon borough by 2041



Health and Well Being

This will be at the forefront of the new community.

Solihull's draft Local Plan

Solihull's draft local plan policy captures aspirations around the climate change agenda and is directed towards incorporating meaningful change across the borough.



05 Addressing the Solihull 'Challenges'



Of the 15 Solihull Challenges that the Local Plan has set itself, the Development will address 11 Challenges.

Addressing the Solihull Challenges			
<p>1 Mitigating and adapting to Climate Change</p>	<p>2 Meeting housing needs across the Borough</p>	<p>3 Sustaining the attractiveness of the Borough</p>	
<p>4 Protecting key gaps between urban areas and settlements</p>	<p>5 Reducing inequalities in the Borough</p>	<p>6 Increasing accessibility and encouraging sustainable travel</p>	<p>7 Securing sustainable economic growth</p>
<p>8 Protecting and enhancing our natural assets</p>	<p>9 Improving water quality and flood risk</p>	<p>10 Improving health and well being</p>	<p>11 Providing infrastructure and securing developer contributions</p>

06 The National Design Policy Context

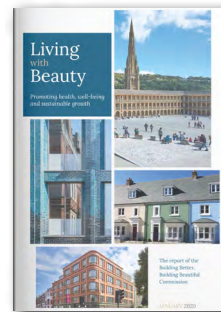
Adopting to National Design Policy will be the key to ensuring an integrated approach. Future designs will comply with:



2018:
Letwin



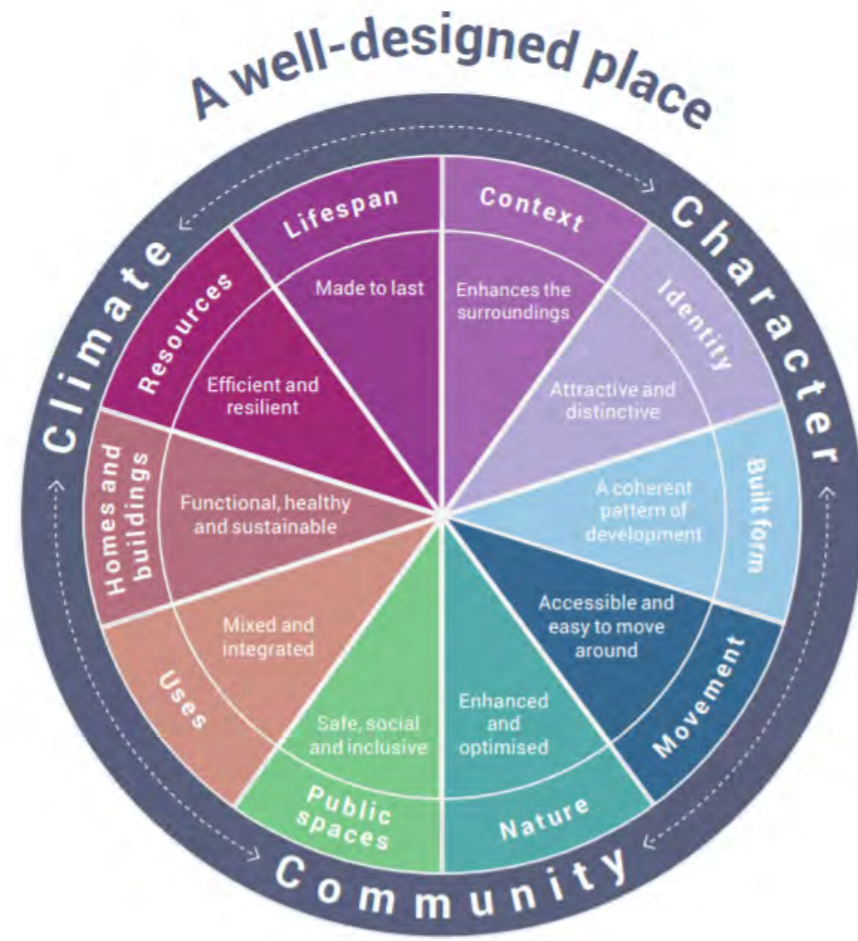
2019:
National Design Guide



2020:
Living with Beauty



2020:
White Paper

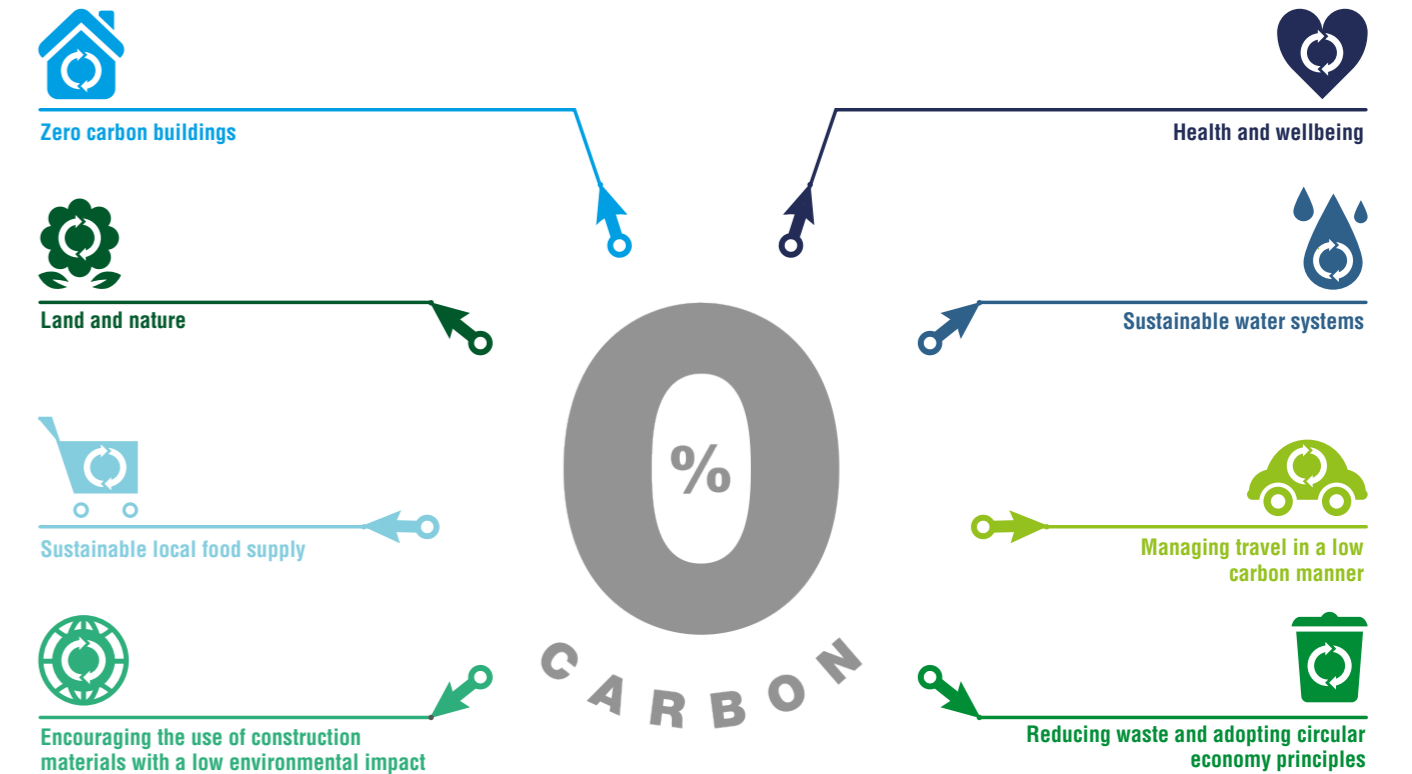


07 The sustainability framework



To assist in the establishment of a Vision for Fulford Heath, a sustainability framework will be developed. It will be based on 8 high level categories.

More detail on the Sustainability Framework is provided as an Appendix to this document.



08 Assessing sitewide carbon emissions

Sustainable transport interventions

Through collaborative work with Transport Consultants Vectos, the carbon dioxide emissions that will result from the proposed development have been determined. The provision of a sustainable new settlement at Tidbury Green hinges upon the adoption of sustainable transport measures to reduce reliance on petrol and diesel private cars, and to encourage healthy lifestyles and active travel by foot or by bike.

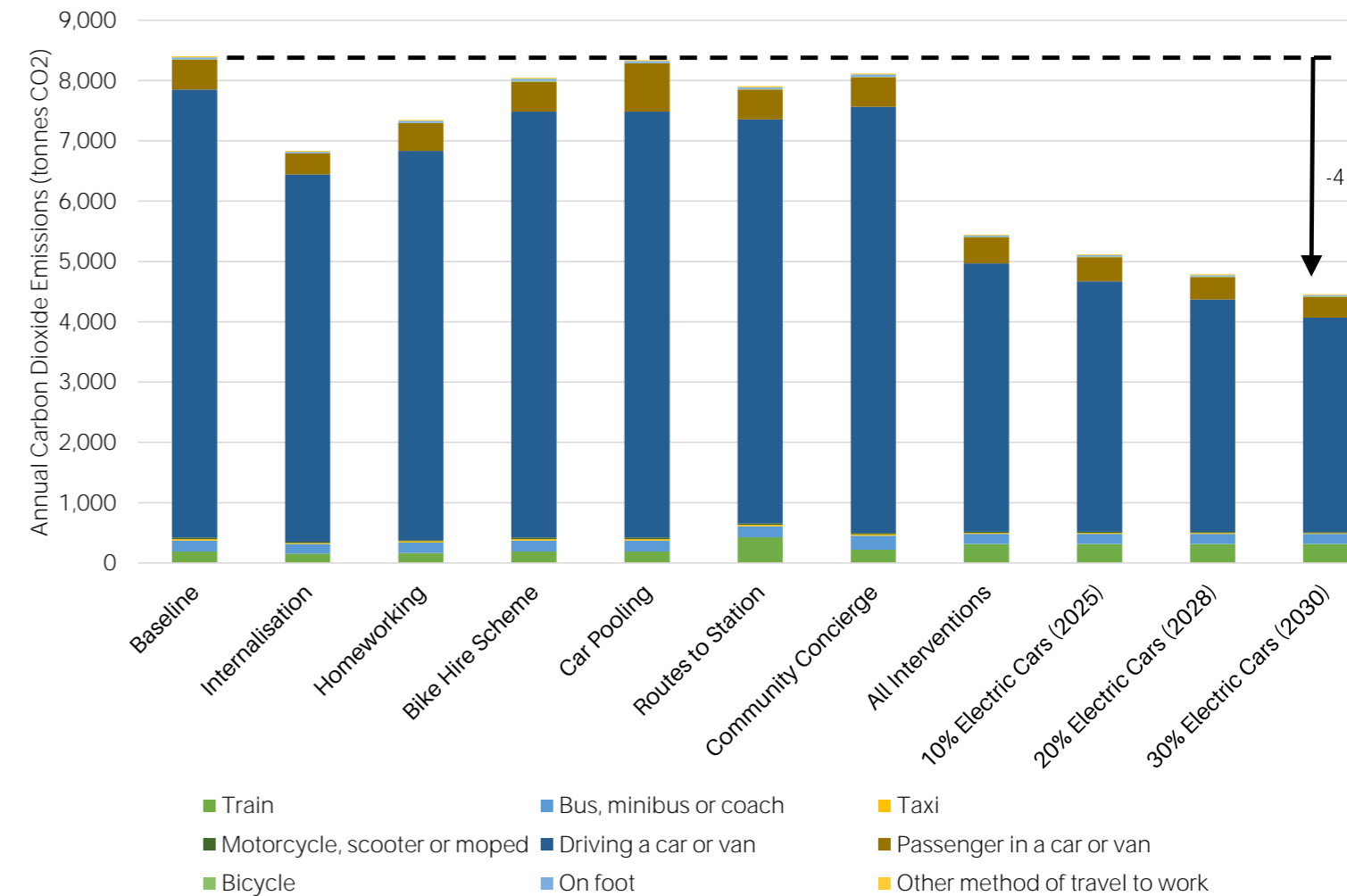
This has consequential effects of improving air quality, improving resident's health and wellbeing, improving neighbourhood social interaction and community building, reducing carbon dioxide emissions, improving road safety, placemaking and freeing up of road space for other uses.

As can be seen in the accompanying graph, a wide range of measures are proposed which will aid in reducing vehicular emissions. The majority of emissions reduction will be achieved through the internalisation of trips. The provision of a mixed-use community located in three separate hubs, will provide residents with the opportunity to walk or cycle for the majority of their day-to-day activities. Superfast broadband, workspace hubs and home offices will offer commute free working, which has seen a significant increase during the coronavirus pandemic and will continue to be widely adopted in the future.

Other measures, such as bike hire schemes, carpooling initiatives, community concierges and improved routes to the two train stations will also aid in reducing the need to travel by car.

When combined with the increasing electrification of vehicles, which will be accelerated given the Government's recent bringing forward of the petrol/diesel car ban to 2030, analysis shows that the proposed measures will reduce transport related carbon dioxide emissions by 47% when compared with the baseline scenario.

08 Assessing sitewide carbon emissions



08 Assessing sitewide carbon emissions

Evaluating the Masterplan's potential

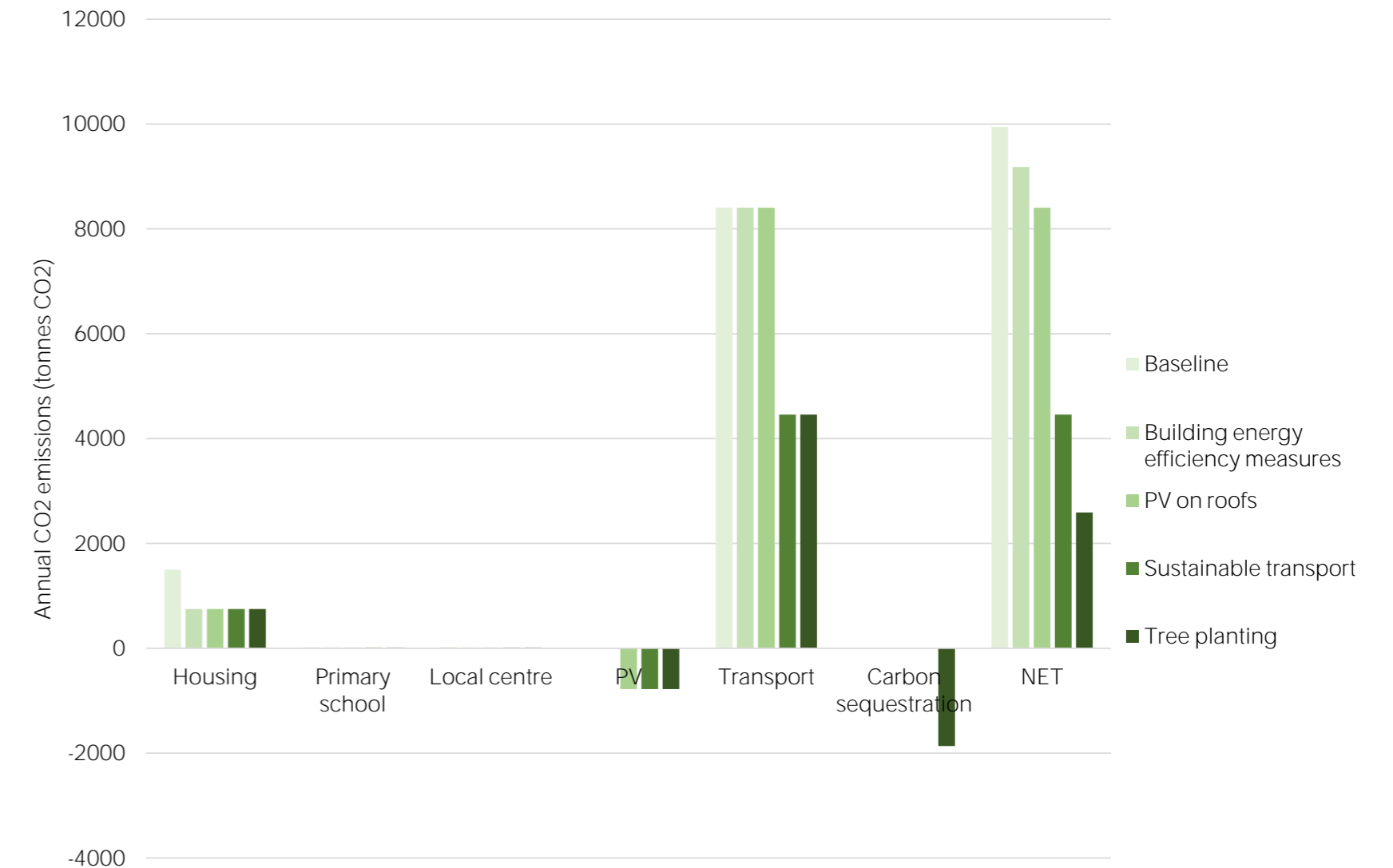
From a scientific perspective, the new development can be seen as a series of carbon sources (buildings and transportation) and carbon sinks (PV panels and sequestration from tree planting). In order to achieve a net zero carbon masterplan, the sources and sinks need to be balanced.

At a building level, this is easily done through the provision of all electric heat pumps and PV panels. This means that not only are the new buildings zero carbon today, but they are also futureproofed, fossil fuel free and ready for the 2050 net zero carbon economy.

At a broader masterplan scale, the biggest source of emissions is due to transport. To achieve a zero carbon masterplan, these first need to be reduced by incorporating the sustainable transport measures described above, and then balanced through tree planting and additional PV

panels. The introduction of sustainable transport measures is estimated to reduce carbon dioxide emissions by 47%. The 34,500 trees proposed will go some way to offsetting the remaining carbon dioxide emitted through transport activities. As the masterplan progresses, the scheme will seek to reduce transport emissions further still by accounting for benefits that would accrue to neighbouring residents, additional planting and additional provision of PV panels.

08 Assessing sitewide carbon emissions



Enabling Sustainable Lifestyles Through Good Design

The Sustainability Framework will provide a means by which good design decisions can be tracked and monitored as the masterplan develops. It contains the key design interventions necessary to facilitate a zero carbon development in operation.

The Framework will consist of a 'living document' which will be constantly updated by all members of the design team to ensure sustainable design principles are thoroughly engrained in the emerging masterplan and associated building design.

The current thinking on key sustainability interventions is outlined on the following pages.



The Sustainability Framework

Zero Carbon Buildings

Strategy

- Aims to reduce carbon dioxide emissions in operation through addressing demand and supply issues
- Impacting on design and operation
- Aiming for zero carbon new buildings by 2025

Objective

Target

1. Maximise building fabric energy efficiency	→	U-Values Thermal Bridging Air permeability
2. Maximise building systems efficiency	→	100% low energy lighting throughout Mechanical ventilation with heat recovery Fossil fuel free development
3. Incorporate renewables	→	Undertake LZC feasibility study and incorporate recommendations
4. Minimise CO2 emissions	→	Achieve a minimum 100% improvement over building regulations Part L for all buildings
5. Minimising fuel poverty	→	Consideration given to operational energy costs
6. Minimising operational emissions	→	Highly efficient white goods Drying spaces Green energy supplier Smart meters and simple user controls

The Sustainability Framework

Zero Waste

Strategy

- Reduce construction waste sent to landfill
- Strategy developed in partnership with stakeholders to promote a long-term vision for a zero waste community
- Strategy developed in conjunction with SMBC waste collection requirements

Objective

Target

1. Minimising construction waste	→	Site waste management plan Construction waste targets Use of BIM Use of offsite construction
2. Minimising operational waste in line with waste hierarchy	→	Internal three/two compartment storage (LPA requirements dependent) External three/two stream collection (LPA requirements dependent) Waste separation and recycling to be made easy for residents and businesses Waste composting facilities Library of things
3. Design for deconstruction, bricks, concrete	→	Building end of life considerations



The Sustainability Framework

Health and Wellbeing

Strategy

- Developing a long-term vision for a healthy and happy community
- Minimising pollution to land, air, water, light and noise
- Maximising daylight penetration
- Offering opportunities to keep physically active, socialise with neighbours and eat healthily

Objective

Target

1. Minimising impact of construction activities	→	Considerate Constructors Scheme Construction noise levels minimised Construction LTIs and RIDDORs minimised
2. Buildings, public realm and infrastructure designed to promote wellbeing	→	Air quality neutral Noise pollution minimised to new residents Zero impact on watercourse pollution All land contamination issues investigated and remediated where necessary External lighting designed in accordance with ILP guidance Good internal daylight levels Minimised use of unhealthy materials (PVC, MDF, high VOC coatings, sealants adhesives) Risk of overheating minimised Passive surveillance principles adopted
3. Enabling physical health and ensuring healthy and happy minds	→	Design considers ways to enable healthy living and eating Design encourages active lifestyle (signage, encouraging walking, cycling, trim trail) Outdoor areas for relaxation, food growing Communal gardens with attractive mix of food and flowers Car-free areas and play facilities for children Outdoor gym, trim trail Accessibility for all

The Sustainability Framework

Sustainable Transport

Strategy

- Developing a strategy which supports a long-term vision to minimise the impacts of transport
- Promoting healthy transportation alternatives
- Minimising private car use

Objective

Target

1. Minimising private car use	→	Car clubs/ car sharing Access to public transport Car parking strategy Car free areas
2. Reducing the need to travel	→	Mixed use development Commute-free working options Garage office conversions Broadband infrastructure Proximity of community facilities - 15 minute neighbourhood
3. Promoting walking and cycling	→	Cycle storage Access to pedestrian / cycling networks Showering & changing facilities in workspaces
4. Minimising impact of private cars	→	Electric vehicle charging points Impact of deliveries - consolidation points
5. Promoting access	→	Accessible travel (wayfinding, access points, accessible parking spaces)



The Sustainability Framework

Land and Nature

Strategy

- Developing a strategy which supports a long-term vision to optimise ecological value within the site
- Enhancing the provision of outdoor space and mitigating the effects of the urban heat island effect

Objective

Target

1. Mitigating development contribution to urban heat island effect	→	Incorporation of green space
2. Protect existing ecological features	→	Ecological consultation and assessment of existing site Trees of merit being retained
3. Provide net gains in biodiversity value	→	Landscaping designed to attract biodiversity Incorporation of native species Providing or enhancing green infrastructure networks, including those outside the site Green roofs Onsite tree nursery
4. Carbon sequestration	→	Tree / hedgerow planting to offset carbon dioxide emissions from transportation
5. External spaces for recreational use	→	Landscaping provide external space for recreational use by local community
6. Promoting habitats for priority or protected species	→	Create or significantly enhance locally-identified priority habitats / species Avoid damage to national / internationally designed wildlife sites

The Sustainability Framework

Sustainable Materials

Strategy

- Developing a strategy which supports a long-term vision to minimise material lifecycle impacts
- Minimising resource consumption
- Designing for flexibility and adaptability

Objective

1. Minimising the embodied energy of construction materials



Target

Locally sourced materials
 Reused and recycled materials
 Reducing need for raw materials
 Timber/CLT structures
 Low cement concrete

2. Resource efficiency



Use of BIM
 Use of MMC and offsite construction
 Adaptability / flexibility of buildings to change of use

3. Use of sustainable materials



Products with low ODP/GDP
 Sustainable timber



The Sustainability Framework

Local and Sustainable Food

Strategy

- Developing a strategy which supports a long-term vision to reduce the environmental impact of consumed produce

Objective

1. Reduce food transport distances and promote seasonal, locally grown food consumption



Target

Food growing opportunities, on and offsite
 Edible landscaping
 Local farmers networks
 Food box schemes



The Sustainability Framework

Sustainable Water

Strategy

- Developing a strategy which supports a long-term vision to minimise development impact on water resources
- Reducing surface water runoff
- Ensuring development minimises risk to flooding within and outside the site

Objective

Target

1. Minimising potable water consumption	→	Residential water consumption <105 litres per person per day Greywater harvesting Rainwater harvesting
2. Minimising water used for irrigation	→	Drought resistant planting
3. Flood risk analysis	→	FRA conducted FRA accounts for impacts of climate change
4. Sustainable urban drainage	→	SUDs strategy SUDs strategy accounts for climate change



Delivery | Design | Engagement | Heritage | Impact Management | Planning
Sustainable Development | Townscape | Transport

Glasgow : 177 West George Street | Glasgow | G2 2LB

London : Da Vinci House | 44 Saffron Hill | London | EC1N 8FH

Manchester : This is The Space | 68 Quay Street | Manchester | M3 3EJ

www.iceniprojects.com | [■ iceni-projects](#) | [■ iceniprojects](#) | [@ iceniprojects](#)