

Sustainability and Energy Statement: Discharge of Condition 19 and 20 of the Outline Planning Permission 21/00504/OP

Land at Talbot Way, Letchworth Garden City

October 2025



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1. Introduction

This Sustainability and Energy Statement has been prepared to demonstrate the sustainability performance of the consented development at Land at Talbot Way and discharge condition 19 and 20 of the Outline Planning Permission.

1.1 Introduction

This Sustainability and Energy Statement has been prepared by Turley Sustainability & ESG, on behalf of Barratt David Wilson ('the Applicant') to support a Reserved Matters Application to North Herts District Council ('NHDC') for the development of up to 120 dwellings at Land at Talbot Way, Letchworth Garden City ('the Site').

An Outline Planning Application (OPP) was submitted to NHDC in February 2021 (reference number: 21/00504/OP). Planning permission was granted for the development in April 2025, subject to a number of conditions. This statement relates to **Condition 19** and **20** which require the following:

Condition 19: "Prior the commencement of works above ground, a pre-construction energy and sustainability statement shall be submitted and to and approved in writing by the Local Planning Authority. The development shall thereafter be implemented in accordance with the approved measures, which shall be retained thereafter."

Reason: To ensure that the development is energy efficient and minimises carbon emissions in accordance with policies SP9 and D1 of the North Hertfordshire Local Plan 2011-2031."

Condition 20: "Prior to occupation, each of the proposed new dwellings shall incorporate an Electric Vehicle (EV) charging point. Details of which shall be submitted to and approved in writing by the Local Planning Authority. Proposals should also be made for the provision of EV charging within other public parking areas of the proposed development. The charging points shall be retained thereafter."

Reason: To contribute to the objective of providing a sustainable transport network and to provide the necessary infrastructure to help off-set the adverse impact of the operational phase of the development on local air quality in accordance with Strategic Objective ENV4 and Policy SP9 of the North Hertfordshire Local Plan 2011-2031."

This statement provides a summary of the sustainable design measures incorporated into the development to ensure suitable levels of sustainability performance in accordance with local and national planning policy and the requirements of Condition 19 and 20.

1.2 Site Context

The Site, c.5.5 Ha, is located on the northeastern edge of Letchworth. It is a greenfield site currently used as grazing land.

The Site is bounded by hedgerows to the north and west, and young woodland planting to the east and south.

It lies to the east of 2 and 3 storey housing on Talbot Way and the Flint Road allotment site and south of 2-storey senior living accommodation at Norton Hall Farm. St Nicholas Church of England Church and

Primary School also lie to the north of the Site within the Norton Conservation Area. Open agricultural land within the green belt lies to the east with an area of mixed light industry, including a recycling centre, on Flint Road to the south.

1.3 The Consented Development

The description of development on the outline planning permission is as follows:

“Residential development comprising of up to 120 dwellings with vehicular access via Flint Road (all matters reserved except means of access.)”.

The Illustrative Masterplan is shown in **Figure 1** overleaf.

1.4 The Reserved Matters Application

The proposals seek Reserved Matters (RM) permission for a residential development comprising 120 residential units (40% affordable) including the detailed appearance, landscaping, layout and scale in line with the approved outline application (ref. 21/00504/OP) and the design principles within the LGCHF LG3 Design Framework.

1.5 Document Structure

Chapter 2 of this report provides an overview of relevant national and local legislation, planning policy, and guidance.

Chapter 3 provides detail of the sustainability and energy strategy of the proposed development.

Please note, the terms “carbon”, carbon dioxide (CO₂)” and “greenhouse gas (GHG)” are used interchangeably in this statement depending on the terminology of referenced documents.



Figure 1: Illustrative Masterplan (Source: HTA)

2. Policy and Context

This chapter provides an overview of the relevant sustainability planning policy and guidance from a national and local perspective.

2.1 National Policy

This section sets out a summary of current national guidance and policy in relation to sustainable development.

2.1.1 National Planning Policy Framework

The National Planning Policy Framework¹ (NPPF December 2024) provides a framework for the development of locally prepared plans and the government's planning policies for England and how these are expected to be applied.

Chapter 2 of the NPPF sets out details on sustainable development, and how the planning system must perform three distinct objectives, aligned to the three pillars of sustainability (economic, social, and environmental) which should be pursued jointly.

Paragraph 8 outlines the environmental objective of the Framework which includes mitigating and adapting to climate change and moving to a low carbon economy.

Paragraph 161 similarly confirms that the planning system should support the transition to a low carbon future in a changing climate, including providing support to proposals which contribute to radical reductions in greenhouse gas emissions and

encourage the reuse of existing resources, as well as the development of low carbon energy.

Paragraph 164 expects new development to be planned for in ways that avoid increased vulnerability to the range of impacts arising from climate change, ensuring that suitable adaptation measures are provided where development is located in a vulnerable area.

Paragraph 166 of the Framework states that new development should:

- Comply with adopted Local Plan policies on local requirements for decentralised energy supply unless it can be demonstrated by the applicant, having regard to the type of development involved and its design, that this is not feasible or viable; and
- Take account of landform, layout, building orientation, massing and landscaping to minimise energy consumption.

Paragraph 167 states that LPAs should prioritise supporting energy efficiency and low-carbon heating improvements, such as installing heat pumps and solar panels, for both domestic and non-domestic buildings.

The NPPF recognises the role planning has to play in support of the UK's pursuit of the United Nations Sustainable Development Goals (UNSDGs) which address social progress, economic wellbeing and environmental protection. Example UNSDGs are presented in **Figure 2**.

¹ [UK Government | NPPF](#)



Figure 2: Example UN Sustainable Development Goals

2.1.2 Planning Practice Guidance

Planning Practice Guidance (PPG) provides further advice on various planning issues associated with development, including those linked to sustainability and renewable energy and underpins the policies within the NPPF.

PPG is a material consideration in planning decisions and should generally be followed unless there are clear reasons not to. It sets out how local authorities should include policies that protect the local environment and strategies to mitigate and adapt to climate change and supports developments that are functional and adaptable for the future.

2.1.3 National Design Guide

The National Design Guide published in October 2019 and is based on the national planning policy practice guidance and objective for good design as set out in the NPPF. The Guide introduces ten characteristics of well-designed places which work together to create developments Character and Community, while positively addressing environmental issues affecting climate.

2.1.4 Building Regulations

Whilst not planning policy, the Building Regulations (and specifically Approved Document Part L: Conservation of Fuel and Power) set out the requirements for energy and carbon performance in new buildings. Periodic updates to these national regulations will drive energy efficiency and carbon reduction improvements.

Part L, Conservation of Fuel and Power (2021) - On 15th June 2022, the Building Regulations were updated as an interim step towards part of the roadmap to the 'full' FHS. The regulations aim to

deliver buildings that are of a higher quality, with lower energy bills and reduce GHG emissions by around 30% for new homes.

In December 2023 the Government published the FHS consultation. The FHS, which is expected to come into force in 2025, will require homes to achieve a c.75% reduction in carbon emissions beyond Part L 2013. Homes will be 'zero-carbon ready', meaning that they will need no retrofitting to produce zero carbon emissions as the electricity grid decarbonises. On June 6th 2025, the Government published a press release; [Rooftop solar for new builds to save people money - GOV.UK](https://www.gov.uk/government/press-releases/2025/06/06/rooftop-solar-for-new-builds-to-save-people-money) stating that the FHS will require Solar PV.. This is not a formal policy statement however provides a clear indication of the content of the final standard due to be published later this year.

Part S, Infrastructure for Charging Electric Vehicles - Approved document Part S came into force in June 2022 and sets out requirements for the provision of electric vehicle (EV) charging infrastructure. EV charge points must be provided for each new residential building with associated parking, and any remaining spaces must have cable routes for charge points to be installed.

Part O, Overheating - Part O came into force in June 2022, and sets out requirements for mitigating overheating. Residential developments must limit unwanted solar gains in the summer and provide means to remove heat. Compliance with Part O can be demonstrated using two methods to demonstrate the risk of overheating from rising summer temperatures has been mitigated by following a simplified prescribed glazing and free area ratio or use of Dynamic Simulation Modelling.

2.1.5 The Environment Act

The Environment Act aims to protect the environment through improving air and water quality, protecting wildlife, and ensuring the sustainable management of waste. As of February 2024, The Environment Act requires new development to deliver at least 10% Biodiversity Net Gain (BNG), as measured by the statutory biodiversity metric.

2.2 Local Planning Policy – North Herts District Council

2.2.1 NHDC Local Plan 2011-2031

NHDC's Local Plan², adopted in 2022, sets out the long-term vision for the district by identifying how and where new homes, jobs and infrastructure will be delivered, while encouraging high-quality sustainable design and consideration for the natural environment.

Condition 19 and 20 of the outline planning permission require the development to accord with Local Plan Policies SP9 and D1, as well as the Strategic Objective ENV4.

Strategic Objective ENV4: States the Council aims to mitigate the effects of climate change by encouraging the use of sustainable construction techniques, the appropriate use of renewable energy technologies and reducing the risk of flooding.

Policy SP9 Design and Sustainability: The Council considers good design to be a key aspect of sustainable development. The Council will:

- Support new development where it is well designed and located and responds positively to its local context.
- Require Strategic Masterplans to be produced for Strategic Housing Sites and other significant development.
- Require Strategic Masterplans to:
 - create buildings, spaces and streets which positively reflect and respond to the local landscape, townscape and historic character;
 - create integrated, accessible and sustainable transport systems with walking, cycling and public transport designed to be the most attractive forms of transport and effectively linking into the surrounding areas;

- provide a clear structure and hierarchy of pedestrian friendly streets and well-connected footpaths and cycleways integrate with the wider built and natural environment and communities;
 - plan for integrated and mixed-use communities with walkable locally accessible community, employment and retail facilities;
 - positively integrate with adjacent rural and urban communities and positively contribute to their character and the way the area functions, including addressing cumulative, cross boundary planning and infrastructure matters;
 - create an accessible multi-functional green infrastructure network;
 - ensure the effective use of sustainable urban drainage and sustainable water management;
 - ensure a hierarchy of linked, high quality and attractive public spaces and public realm that is safe, attractive and supports social interaction for all age groups; and
 - design to last with a clear stewardship, management and maintenance strategy.
- Ensure Strategic Masterplans are informed by a technical and design evidence base and include the following for Strategic Housing Sites:
 - Site specific vision and place-making principles;
 - Masterplan setting out the quantum, scale, type, mix and distribution of land uses, housing and community facilities;
 - Green Infrastructure Framework identifying the scale, distribution, type and design of green spaces, biodiversity net gain, strategic drainage and on and off-site linkages;
 - Movement Framework setting out the key access points, strategic highways, street

² [NHDC Local Plan \(2011 -2031\)](#)

- hierarchy and footways and cycleways (on and off site);
- Urban Design Framework and design principles identifying how the site responds to local character and context and key structuring elements and layout principles (including heights and densities);
- Sustainability & Energy Framework identifying site-wide and building scale opportunities for low and zero carbon;
-
- Infrastructure Delivery, Phasing & Management Strategy.
- Assess proposals against detailed policy requirements set out in the Local Plan, and have regard to the Design SPD; and
- Adopt the Government's additional technical standards for the size of new homes, water efficiency and, in specified circumstances, accessibility.

Some of the requirements of Policy S9 are design and not sustainability related and so will be addressed in other parts of the RM application such as the Design Code (Condition 16).

Policy D1 Sustainable design: Planning permission will be granted provided that development proposals:

- Respond positively to the site's local context;
- Take all reasonable opportunities, consistent with the nature and scale of the scheme, to:
 - create or enhance public realm;
 - optimise the potential of the site by incorporating Sustainable Drainage Systems (SuDS);
 - reduce energy consumption and waste;
 - retain existing vegetation and propose appropriate new planting;
 - maximise accessibility, legibility and physical and social connectivity both internally and with neighbouring areas;
 - future proof for changes in technology and lifestyle;

- design-out opportunities for crime and anti-social behaviour; and
- minimise the visual impact of street furniture and parking provision;
- Have regard to the Design SPD, and any other relevant guidance; and
- For residential schemes, meet or exceed the nationally described space standards and optional water efficiency standards.

2.2.2 Climate Emergency & Sustainability SPD

NHDC declared a Climate Emergency in 2019 and set a target to achieve Carbon Neutrality for the Council's own operations by 2030, and to become a Net Zero Carbon District by 2040.

In support of these aims the Council have prepared a Sustainability Supplementary Planning Document (SPD) in 2024 which sets out best practice sustainability guidance for new development in the district.

The SPD covers numerous sustainability topics broadly split into the following eight themes:

- Optimising Passive Design & Fabric Performance
- Achieving Low Carbon Energy
- Minimising Carbon Footprint
- Healthy Placemaking
- Promoting Biodiversity
- Sustainable Travel
- Conserving Water
- Incorporating Sustainable Drainage

Each theme includes a checklist of recommendations with benchmarks for that particular theme, grouped into 'Bronze', 'Silver', and 'Gold' levels. Applicants are expected to select several sustainability themes on which to achieve higher sustainability levels (silver/ gold).

The SPD does not form part of the Development Plan and so cannot introduce new planning policies

or add unnecessary financial burdens on development, however the SPD is a material consideration in the determination of planning decisions and sets out the 'direction of travel' to support current adopted policies.

The full completed checklist can be found in **Appendix A** of this report.

2.3 Design Principles for New Housing Development (2019) – Letchworth Garden City Heritage Foundation³

The Design Principles for New Housing Development published in 2019 is part of the town's planning framework to preserve its unique garden city identity and to guide new housing proposals. This document provides guidance on what can be included in a sustainability statement, the points are listed below;

- How non-car transport modes are encouraged; Pedestrian and cycle links to local facilities, public transport links and employment areas;
- All new dwellings should comply to a minimum criteria of Building Regulations M4(2); 10% of all dwellings should comply with M4(3) standards across tenures;
- The performance of the building fabric shall meet Zero Carbon Standards of apartment/mid terrace - 39 kwh/m²/year and end terrace/semi-detached/detached – 46 kwh/m²/year;
- PV and solar panels are encouraged, where they accord with the Foundation's Design Principles. All panels should be set into the roof;
- In terms of conservation of fuel and power, a 19% improvement against the Target Emission Rate (TER) included in Part L of the Building Regulations 2013 (with 2016 amendments) is sought;

- Air Tightness compliance with the Building Regulations should be demonstrated by on site testing;
- We will welcome external wall treatments that consider changes in climate – for example extreme heat events;
- Provision should be made for electric car charging points, particularly in larger development sites. These should be sited in the most inconspicuous locations possible. Where this is not possible, the appropriate cabling for future installations should be provided to serve garages and other parking areas;
- Where appropriate, combined Heat and Power or Biomass boilers will be encouraged, particularly on larger development sites. Communal heating for apartment blocks should be considered;
- All dwellings should seek to attain an Energy Performance Certificate rating of A, but B is considered as a minimum requirement;
- Developments should include details of heat recovery, ventilation and night cooling to serve new dwellings, with a preference for low energy, natural strategies;
- Sustainable urban drainage systems (SUDs) should be included as part of any development proposals and non-permeable hard surfacing is to be avoided where possible;
- A strategy to reduce water demand to serve the development. This should include consideration of water recycling, re-use, storage and water use minimisation measures in order to meet a maximum water usage of 105 litres per person per day;
- All development proposals should provide evidence through an ecology assessment and achieve a net gain in biodiversity;
- Landscaping schemes will be integral to the design of any scheme and proposals should demonstrate that they encourage biodiversity

³ [Design Principles for New Housing Development \(2019\)](#)

and provide native tree and wild-flower planting. This should also be linked to SUDs, to create interesting environments and new habitats;

- All new residential developments must incorporate bird boxes, preferably integrated into the building;
- All new dwellings should have cable television and high speed internet broadband connection, where practical;
- All materials should be from certified sustainable sources and recycled materials are encouraged;
- If domestic appliances are included with new homes, they should have a minimum energy rating of A, although a higher rating is encouraged;
- All new dwellings shall have covered secure cycle parking, which should preferably be provided on each plot and may be part of an appropriately sized garage (3m x 6m);
- Opportunities to incorporate allotments or community gardens within housing layouts will be sought on developments with more than 20 dwellings;
- Where technologies are used, these should be understandable for all occupiers and not so complex that they are rendered unusable;
- Clear user instructions of all technologies incorporated, should be provided to all new homeowners, with information retained for future occupiers; and
- As new technology, government legislation and scientific views and recommendations evolve, these requirements will be subject to periodic reviews.

2.4 Validation Requirements: LG3 Reserved Matters.

The Council's validation checklist for reserved matters applications requires an overview of sustainability strategy to be taken for site.

2.5 Planning Policy Summary

Both local and national policy aim to ensure the delivery of sustainable and well-designed homes and other buildings which mitigate and adapt to the impacts of climate change.

Latest national planning policy and guidance confirms the Government's approach to sustainable development is being driven through updates to the Building Regulations in the form of the FHS, to ensure that new buildings reduce emissions in line with the UK's national carbon targets.

At the time of submission of the OPA (2021), Part L 2013 was in place and was not fully replaced by Part L (2021) until June 2023. Therefore during the determination of the planning application there was a significant change in the Building regulations as a result of the introduction of Part L 2021. This has ensured that the requirements of Condition 19 and 20 are met through the provision of renewable energy and greater carbon savings required through the updated Building Regulations. It is noted however that the FHS is due to be released within the next year or so, presenting another uplift in policy.

NHDC's Local Plan contains a number of requirements in relation to sustainability including sustainable drainage, energy, waste, water use, landscaping, accessibility, futureproofing, and crime. The Council's Sustainability SPD provides further best practice guidance on sustainability-related topics such as passive design, renewable energy, embodied carbon, waste and circular economy, biodiversity, sustainable transport, and SuDS. The Local Plan does not set any energy efficiency or renewable energy targets above the Building Regulations.

It is noted that due to Land off Talbot Way's location within a character areas of Letchworth Garden City, the sustainability elements of the Design Principles have been aligned to, where possible/appropriate. It is noted that the Design Principles are Guidance rather than policy, however the importance of maintaining Letchworth Garden City's Heritage is understood by the Client.

The following sections of this Sustainability and Energy Strategy set out the measures proposed to

ensure the delivery of a sustainable development in line with the requirements of Condition 19 and 20. .

3. Sustainability at BDW

The following section summarises BDW's corporate Sustainability Strategy and ESG priorities, which will shape the development at Land at Talbot Way.

Key targets which they aim to achieve across their developments are summarised in the table below. These targets demonstrate how BDW's ambitious sustainability strategy influences the delivery of their projects onsite.

3.1 Building Sustainably Framework

BDW's 'Building Sustainably Framework' aims to bring together sustainability ambitions, targets, activities, and metrics to ensure that sustainability is embedded in every business decision. The Framework is based around three key themes of Nature, Places and People.

Theme	Target	Progress (FY2024)
Biodiversity & nature	Demonstrate a minimum biodiversity net gain (BNG) of 10% across all development designs submitted for planning from January 2023.	100% of sites (16 sites excluding JVs) with 10% minimum BNG submitted for planning : 22% for area habitats; 41% for hedgerow habitats 125% for river habitats.
Waste & Circular Economy	Reduce construction waste intensity by 20% by 2025 vs. 2015.	49% reduction.
	Maintain 95% diversion of construction waste from landfill.	97%.
Modern Methods of Construction	Apply offsite based products and systems in 30% of homes by 2025.	33%.
Deforestation	100% of timber certified for net zero deforestation (for all timber procured via Group agreements, BD Living, Oregon and sub- contractor fencing).	98.78%.

Table 1: BDW's key development-related targets and performance

3.2 Net Zero Targets

BDW were also the first national housebuilder to set a near-term greenhouse gas (GHG) emissions reduction target, aligned with the Science Based Target Initiative (SBTi), in September 2020. As part of their net zero transition, BDW have identified six

principal ‘decarbonisation’ levers that will have the most material impact on achieving their transition towards net zero. **Figure 3** shows the principal levers identified, which include reducing embodied carbon emission from materials and reducing operational emissions from homes.

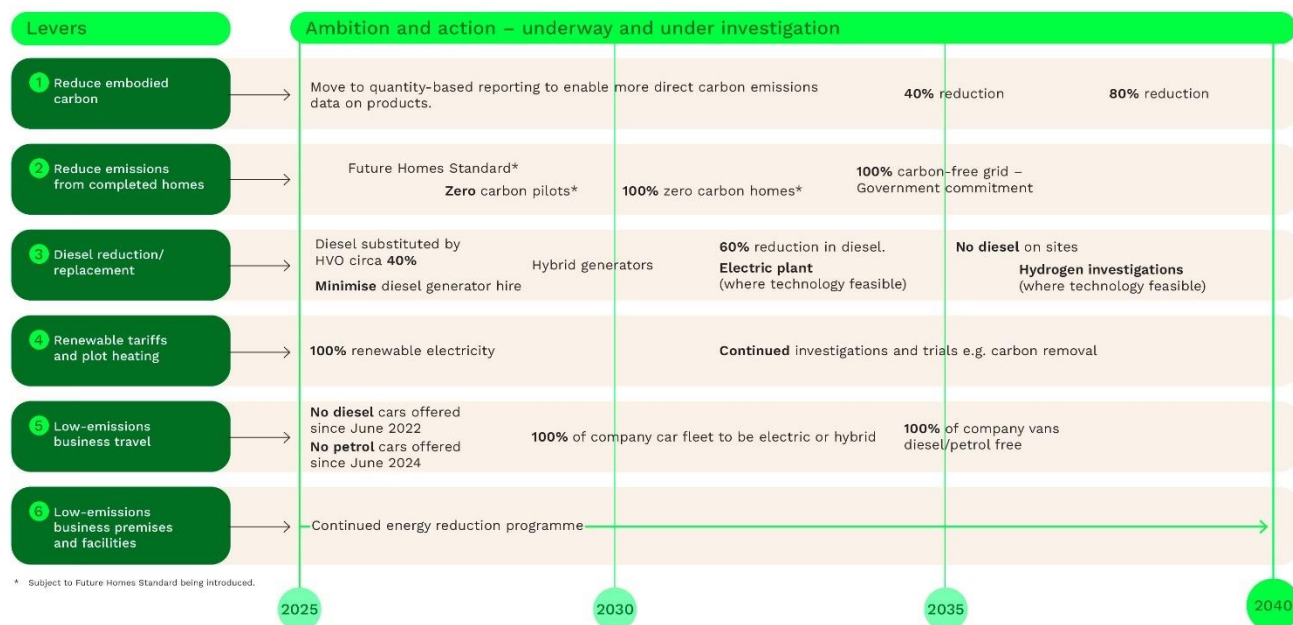


Figure 3: Barratts principal ‘decarbonisation’ levers

3.3 Timber Frame Construction

One of the key decarbonisation steps BDW are taking is increasing the number of homes built using panelised timber frame construction.

BDW are a leading developer in open-panel and closed-panel timber frame construction and in 2019 acquired Oregon, the UK's largest timber frame manufacturer, demonstrating their commitment to this building method.

A study by Verco (of houses developed by Barratt, SMG, and L&Q) shows that the whole life carbon impact of a typical timber-framed 4-bed semi-detached house is reduced by 5 tonnes CO₂e compared to typical masonry construction. This is due to:

- The lower embodied emissions of materials,
- Lower emissions from transport to site,
- Less energy and time spent on site, and
- The benefits of carbon sequestration during the life cycle of the building.

As operational emissions are predicted to reduce with the implementation of the Future Homes Standard, continued decarbonisation of the electricity grid, and increased electrification, the benefits of timber frame over masonry construction will become increasingly significant, as will focus on reducing the embodied emissions from cementitious products.

4. Sustainability at Land at Talbot Way

This section summarises the sustainability and energy strategy for the consented development at Land at Talbot Way.

This section of the report outlines the sustainability and energy strategy for the development at Land at Talbot Way, demonstrating how it responds to both national and local planning policy, including the NPPF and the requirements of Condition 19 and 20.

In this context, the sustainable design measures incorporated into the development and design of homes at this stage are set out under the following headings which reflect the themes of SPD, with Section 4.1-4.3 addressing Condition 19, Section 4.6 addressing Condition 20 and the remaining sections covering wider sustainability requirements.

The key Sustainability Design Principles as set out in the Heritage Foundation Document are reflected in the relevant section as appropriate, with a full response list in **Appendix 1**.

4.1 Optimising Passive Design & Fabric Performance

4.2 Achieving Low Carbon Energy

4.3 Minimising Carbon Footprint

4.4 Healthy Placemaking

4.5 Promoting Biodiversity

4.6 Sustainable Travel

4.7 Conserving Water

4.8 Incorporating Sustainable Drainage

4.1 Optimising Passive Design & Fabric Performance

Developing energy efficient, low carbon buildings is a key objective of national policy and the recent updates to the Building Regulations to support the reduction of energy demand through efficient building design to reduce carbon emissions. The Council's Local Plan **Policy D1** promotes increasing the energy efficiency of homes.

The Government's net zero trajectory for new development is set through updates to the Building Regulations and the implementation of the FHS. The aim of these updates is to achieve a c.75% carbon reduction beyond Part L 2013 and deliver buildings which are Zero Carbon Ready, requiring no future renovations to be net zero, and allowing building occupants to operate fully net zero through the purchase of certified renewable electricity.

The development aims to meet the requirements of the FHS, going beyond current Building Regulations requirements to deliver Net Zero Ready homes.

To meet the requirements of the FHS, homes at Land at Talbot Way have been designed in accordance with the energy hierarchy, as shown in **Figure 4**, which aims to reduce energy demand through passive design measures and a fabric first approach before utilising low carbon energy and the production of on-site renewable energy.

The **Heritage Foundation** Design Document includes a number of energy and carbon design points to be integrated into the development's energy strategy, where possible. The Design Document is clear on the importance of highly energy efficient new homes that reduce carbon and include renewable energy sources. The following section picks up the key themes of the design

document and responses to each point are set out in **Appendix 1**.

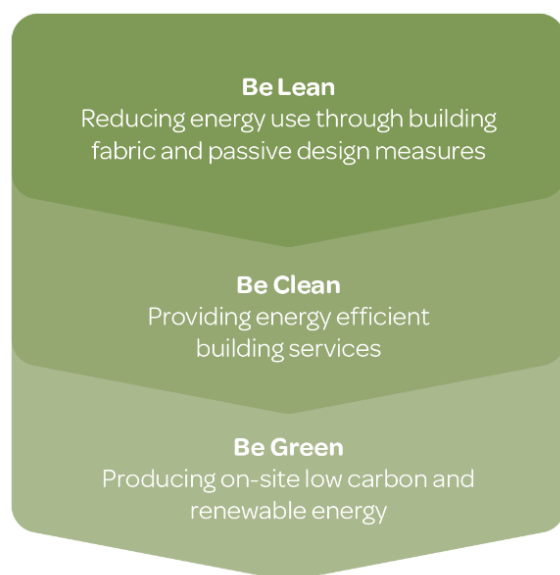


Figure 4: The Energy Hierarchy

This section sets out the measures included to deliver an energy efficient, low carbon development.

Be Lean – Reducing Energy Use

Building orientation and form is an important consideration in reducing building energy demand through optimising solar gain and associated heat gains/ losses. Orientation and form were considered in the creation of the masterplan to promote passive solar gains, maximise natural daylight, sunlight and ventilation with the aim of optimising energy efficiency, whilst accounting for wider considerations such as transport, green infrastructure, and design.

Central to the delivery of low carbon and energy efficient buildings is the ‘Fabric First’ principle which recognises the most effective way of minimising carbon emissions is to reduce the demand for heat and power through a well-insulated, energy efficient building fabric and services.

Reducing the primary energy demand of a building through the use of an efficient fabric and services is widely regarded as best practice and is therefore the first and most important step to reducing carbon emissions.

This ‘fabric first’ approach has a number of distinct benefits including:

- Carbon savings delivered are ‘locked-in’ for the lifetime of the building (60 years or more);
- Virtually no maintenance and/or replacement costs to maintain carbon reductions through improved fabric;
- No reliance on an occupier’s behaviour to deliver carbon reductions. Achieving carbon savings from renewable energy technologies require education, awareness and often, behavioural changes from occupants.

Fabric Efficiency Measures – The design of new buildings will reduce thermal energy demand by targeting improved air leakage and fabric u-values. These are likely to be in line with the proposed values set out in the Government’s December 2023 consultation, as shown in the table below compared to the Part L 2021 backstop values.

Building element	Part L 2021	FHS	% Reduction
Wall (W/m ² K)	0.26	0.18	31%
Roof (W/m ² K)	0.16	0.11	31%
Floor (W/m ² K)	0.18	0.13	28%
Windows (W/m ² K)	1.6	1.2	40%
Airtightness (m ³ /h. m ² @50Pa)	8	4 - 5	38-50%

Table 2: Proposed FHS air leakage and fabric u-values

In addition to an enhanced u-values and air tightness, a range of other measures to reduce energy use and carbon emissions will be incorporated, including:

- Designing of building joints to reduce thermal bridging to help reduce air tightness, following the principles of Passive House design;

- Optimising natural daylight in habitable spaces via suitable window sizes relative to living spaces and bedrooms whilst limiting overheating risk through appropriate glazing specification;
- Prioritise passive cooling options such as external shading.

4.2 Achieving Low Carbon Energy

Be Clean – Efficient Energy

The next stage of the Energy Hierarchy is the efficient supply of heat and energy. This means connecting into an existing District Heating Network (referred to as “DHN” hereafter) where possible or providing an on-site communal heat network or individual systems.

District Heating Networks (DHN) comprise a centralised heat generator, typically a gas fired Combined Heat and Power (CHP) engine. The continued decarbonisation of the national electricity network and changes to the Building Regulations mean that the carbon emission benefits of traditional CHP systems will diminish during their life cycle.

DHNs are suited to development with high thermal demand, typically provided by sufficient density or a large anchor load, i.e. high-density flats, leisure centres and industrial process. Due to the high thermal efficiency and the relatively low heating and hot water demand at Land at Talbot Way, individual heat pumps are considered to be a more efficient and lower carbon option for the development.

Be Green – Low Carbon Renewable Energy

The final stage of the Energy Hierarchy is the generation of low carbon and/or renewable energy. The following section provides a review of the low carbon renewable energy technologies considered suitable for the development.

Solar Photovoltaics (PV) - Solar photovoltaic (PV) systems generate zero carbon electricity from sunlight and are well suited to dwellings with unobstructed southeast to southwest facing roof

space. Excess power is exported to the grid or can be harnessed using battery storage. Maintenance requirements are typically minimal. The 2023 FHS consultation anticipates the potential for Solar PV to be incorporated into new homes once implemented.

Solar Thermal - Solar thermal systems generate zero carbon hot water from sunlight in a similar manner to Solar PV. They require insulated tanks to store the hot water and have greater maintenance demands than solar PV given the need to ensure anti-freeze in the pipework is topped up every few years. They can be a highly cost-effective technology particularly where mains gas supplies are not available, however in energy efficient new homes, their benefit can be limited, and they are not anticipated to be considered further in the design.

Heat Pumps - Heat pumps provide low carbon heat sourced either from the ground (Ground Source Heat Pumps) or air (Air Source Heat Pumps). This type of system is suited to thermally efficient buildings. They require main electricity to operate but typically generate at around three units of heat for every unit of electricity that is consumed. Because the heat generated is at a lower temperature than that produced by a gas boiler, heat pumps typically require underfloor heating or large radiators to ensure the heat is distributed efficiently. Heat pumps require ongoing and fairly frequent maintenance. The 2023 FHS consultation indicates that heat pumps will be the primary choice for delivering low carbon heat.

Biomass - Biomass provides useable heat from a range of solid fuels including wood and straw. The installation of a biomass boiler, flue and associated fuel store require significant space. Biomass burning can also have significant impacts on local air quality, so is not considered appropriate for the development.

The suitable technologies considered for individual homes in conjunction with future changes to the Building Regulations include Solar PV and Heat Pumps. These are noted within the FHS consultation

as the most likely technologies to be used to meet the Building Regulations carbon targets. Where required in line with FHS requirements, PVs will be located on the most preferential slope of any roof, facing east, south or west, depending on roof configuration.

Operational Energy Strategy Summary

The proposed dwellings at Land at Talbot Way Road have been designed to exceed the requirements of Part L 2021, targeting the requirements of the FHS, or relevant regulations at the time of construction, through a range of fabric and energy efficiency measures, as well as low carbon renewable energy technology. This will be achieved through:

- Design to optimise passive solar gain through orientation and form where feasible.
- Enhanced building u-values and air tightness;
- Use of a range of energy efficiency measures including low energy lighting;
- Use of low carbon/renewable energy such as ASHP and Solar PV.

This strategy will deliver homes which are all-electric and 'Net Zero Ready', meaning they will require no further work to achieve net zero as the electricity grid decarbonises. The UK government is aiming to "fully decarbonise" Great Britain's electricity grid by 2035. Residents will also be able to purchase certified renewable electricity and operate as net zero from the outset. **Table 3** shows the estimated operational carbon emission reduction that will be achieved by homes compared to current Part 2021 regulations.

Carbon emissions (kg CO ₂ /yr)	
Part L 2021	80,045
Proposed Buildings	29,617
Emissions reduction	50,428
% reduction	63%

Table 3: Estimated reduction* in operational carbon emissions compared to Part L 2021.

**The calculations are indicative at this stage and based on house types provided by DWH and the expected FHS requirements.*

The final specification of homes, including details of fabric specification, energy efficiency measures and low carbon renewable energy installed will be subject to the detailed design of individual homes. The 'Home Energy Model' (HEM) which will confirm the technical requirements for the FHS is not yet available. Further modelling will be completed as part of detailed design work.

Solar PV Panels will be considered on a plot by plot basis subject to FHS requirements. **Figure 5** overleaf shows illustrative potential positions for Solar PV across the development.



**Figure 5: Illustrative Location of Solar PV: Source
HTA**

4.3 Minimising Carbon Footprint

Minimising carbon emissions is key to mitigating the effects of development on climate change. **Policy SP9** requires development to provide a Sustainability & Energy Framework which identifies opportunities for low and zero carbon, **Policy D1** requires new development to take all reasonable opportunities to reduce energy consumption, while the SPD sets out other best practice carbon reduction recommendations.

This section outlines strategies to minimise carbon footprint by reducing whole life carbon and applying circular economy principles.

4.3.1 Whole Life Cycle Carbon

As the operational efficiency of buildings continues to increase, the relative proportion of embodied carbon within a building's lifetime emissions increases. The embodied carbon associated with materials and construction can represent 40-70% of whole-life carbon impact of a new building. Reducing embodied carbon is not a requirement of adopted Sustainability Planning Policy nor the planning condition but is recognised by NHDC's Sustainability SPD, which encourages developers to consider whole life carbon and to set targets for embodied carbon performance.

The **Heritage Foundation** requests that *'all materials should be from certified sustainable sources and recycled materials are encouraged'*.

Embodied carbon is a key focus area for BDW's as part of their net zero transition. BDW's Sustainable procurement policy⁴ confirms the procurement of only legally traded timber and confirms that preference will be given to materials that are recycled, low embodied carbon and minimise waste.

Research by the Target Zero group in 2012 assessed the whole life carbon of a range of building types, including homes and typical non-residential development.

A selection of the results shown in **Figure 6** demonstrate that the carbon emissions from the 'Product', the embodied carbon of materials' makes up a significant proportion of a buildings carbon emissions, for homes almost half of the embodied carbon is emitted through construction.

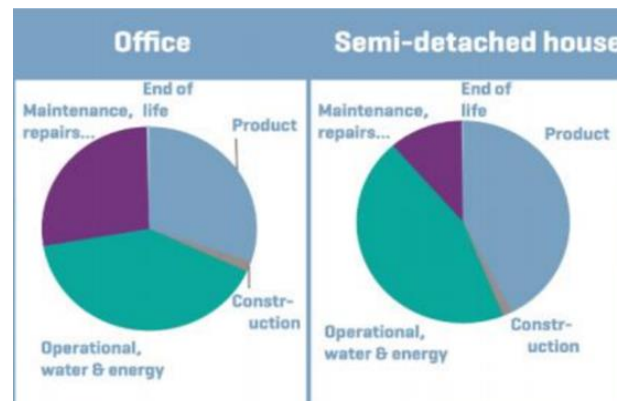


Figure 6: Carbon emissions breakdown

Construction stage emissions include:

- GHG emissions associated with the construction of buildings;
- The embodied carbon of materials used in the construction of buildings; and
- Emissions associated with the transportation of construction stage waste.

As part of the detailed design process consideration will be given to measures to reduce the upfront embodied carbon of the development. This will include consideration of:

- Lean design to minimise materials use;
- Use of natural materials which sequester carbon such as timber;
- Specification of low carbon materials, for example steel and concrete with recycled materials content;
- Use of local supplies and labour where feasible; and
- The use of Modern Methods of Construction (MMC) including off-site prefabrication of building elements.

The use of MMC and prefabricated building elements can have a significant impact on reducing

⁴ [BDW Sustainable Procurement Policy](#)

embodied carbon, with studies suggesting that MMC can reduce carbon by 45% compared to traditional methods of construction.

4.3.2 Circular Economy

Land at Talbot Way will also incorporate a number of measures to support a circular economy throughout construction and operation.

Waste will be managed in accordance with waste hierarchy, which prioritises waste prevention, followed by re-use, recycling, then energy recovery and disposal as a last resort (as set out in **Figure 7**).



Figure 7: The Waste Hierarchy

Construction Waste Management -

Prior to the construction phase a Construction Environmental Management Plan (CEMP) will be developed to ensure the use of measures to minimise waste during the construction phases of the development, including the use of a scheme for recycling/disposing of waste arising from construction works.

The reduction, reuse and recycling of construction waste is to be prioritised through measures such as avoidance of over-ordering, supervision of deliveries, use of secure materials storage facilities and reuse of materials onsite where feasible.

In addition, the development will be registered with the Considerate Constructors Scheme and achieve certification against the Code of Considerate Practice.

Operational Waste Management -

In accordance with the principles of the waste hierarchy the development will make provision for the storage of non-recyclable waste and recyclable waste including dedicated storage for waste in new homes to encourage residents to recycle waste materials.

Full consideration will be given to the Council's waste management infrastructure and services to ensure that the occupiers have the necessary infrastructure to participate in any kerbside recycling services.

4.4 Healthy Placemaking

Creating a high-quality development that promotes health and wellbeing and community cohesion for residents and local people is a key aim of the scheme.

The Letchworth Garden City **Heritage Foundation** 'Design Principles for New Housing Developments' includes a request for all new dwellings should comply to a minimum criteria of Building Regulations M4(2); 10% of all dwellings should comply with M4(3) standards across tenures. All dwellings are aligned with M4(2) and 10 units are aligned with M4(3) or are wheelchair accessible.

It also supports opportunities to incorporate allotments or community gardens within housing layouts. Norton Allotments are already present on the Western edge of the development. Areas as part of the masterplan including the Gateway Green and Village Green will provide community gardens and open space for residents and visitors to enjoy.

The development includes a number of measures to support the wellbeing of residents and surrounding communities in line with **Policy SP9 and D1**, including:

- Location within close proximity to a range of services and facilities, accessible on foot, by bike, or by bus, and design of a walkable neighbourhood with a permeable, well-connected street network, helping to promote healthy and active travel.

- Location adjacent to existing allotments, supporting opportunities for sustainable food production and promoting healthy lifestyles.
- Provision of our principal open green spaces, play spaces in the form of Local Area of Play (LAP) and a Local Equipped Area of Play (LEAP), and a woodland play route providing opportunities for exercise, play, and social interaction.
- Public realm delivered with a focus on inclusive design, incorporating natural surveillance to create a safe and welcoming environment which designs-out opportunities for crime and anti-social behaviour.

The Landscape component plan is shown in **Figure 8**. In addition to the green infrastructure provision the design of new homes will promote health and wellbeing through:

- Ensuring good levels of ventilation through the use of decentralised Mechanical Ventilation Extract systems.
- Prioritising natural light and views of nature.
- Utilisation of materials and services that have low emission rates and pollutants to ensure indoor air quality.
- An Overheating Assessment in line with the requirements of Part O of the Building Regulations will be undertaken as part of the detailed design of individual homes to reduce potential overheating risks.
- A noise impact assessment undertaken demonstrating noise levels can be appropriately controlled with the use of appropriate layout / screening considerations and building fabric design.



Figure 8: Landscape Component Plan, Source HTA

4.5 Promoting Biodiversity

The development will incorporate a range of measures to conserve and enhance the natural environment through the consideration of existing site ecology and delivering net gains in biodiversity, in accordance with **Policy SP9**.

The Letchworth Garden City Heritage Foundation ‘**Design Principles for New Housing Developments**’ includes a request for a number of biodiversity targets to be present in the design, including net gain and biodiversity features. A response to each of these points is set out in **Appendix 1**. A visual for the landscape vision of the development is shown in **Figure 9**.

A Preliminary Ecological Appraisal (PEA) was prepared by CSA Environmental for the RMA to confirm current ecological conditions, identify constraints to development and highlight opportunities for ecological enhancement.

The assessment confirmed the Site consists of predominantly modified grassland of low ecological value, with small areas of mixed scrub, broad-leaved plantation woodland, and line of trees, which are considered to have the potential to support species including birds, bats, mammals such as brown hares, hedgehogs, and invertebrates.

The design of the development has been informed by the results of PEA, aiming to avoid impacts on ecological features and provide enhancement opportunities where possible. Mitigation and enhancement measures included within the proposal are:

- Existing woodlands and scrub are to be retained and enhanced where possible;
- Sustainable Drainage Systems (SuDS) features designed to include a combination of periodically wet and dry habitats on ecological interest, including grasslands;
- A range of native plants and those of wildlife importance have been included within the landscaping scheme to provide foraging opportunities for birds, invertebrates and bats;

- The following are proposed to be integrated within new dwellings: (40 bat boxes (Sergovia Build-In Woodstone Boxes)
- 40 bird boxes (Swift S-bricks)
- Provision of hedgehog gaps in new fencing to promote habitat connectivity across and within the Site.

A Design-Stage Biodiversity Net Gain Assessment calculation has been undertaken by CSA Environmental, confirming that based on the above assessment and proposed measures, the development would result in a +2.17 habitat units which is net gain of 15.07%.



Formal greenspaces



Circular walks through natural spaces



SuDS used to enhance streets



Informal play

Figure 9: Landscape Vision. Source: HTA

4.6 Sustainable Travel

Carbon emissions from vehicular transport currently account for c.33% of all emissions within Hertfordshire⁵, therefore, one of the single biggest impacts new developments can make to reducing carbon emissions is to ensure it is in a sustainable location and provides the infrastructure for residents to use an alternative to a private car. As well as reducing emissions a sustainable transport strategy can deliver numerous co-benefits such as promoting physical activity, improving mental wellbeing, and reducing air pollution.

A Transport Assessment was prepared by Steer for the outline application, summarising the existing conditions in the vicinity of the Site, the accessibility of the site relative to local facilities, and the public transport proposals for the development. This section of the report provides a summary of sustainable transport accessibility and measures proposed for the development.

4.6.1 Existing Site

Local Services and Amenities – It is widely accepted that walking has the greatest potential to replace car journeys for distances < 2km, while cycling can substitute for short car trips, particularly those under 5km cycling. A summary of key local amenities and their distance to the site is provided below:

- Norton St Nicholas CofE Primary School - 120m
- Triangle Stores – convenience store – 800m
- The Three Horseshoes Public House - 140m away
- Norton Bowls Club - 180m away
- Bickerdikes Gardening Centre - 350m away

Walking/Cycling Infrastructure – The site benefits from a number of routes for pedestrians which are typically set back from existing highways. There are a number of Public Rights of Way (PROW) in the vicinity of the Site.

There is currently no cycle lane or segregated cycle infrastructure provided on roads nearby the Site, although Letchworth's roads are generally suitable for cycling.

Bus Services – The Site is located within the vicinity of several bus stops, as follows:

- Blackhorse Road bus stops, located on Green Lane north of Blackhorse Road junction and to the south-west of the Site;
- Three Horseshoes bus stops, located on Norton Road north of the Site;
- Church Lane bus stop to the north-east of the Site; and
- Norton Road bus stops, located on Green Lane between the junctions with Norton Road and North Avenue, to the Site's west.

The stops are served by the 96 and 96A services, which offer services between Letchworth, Arlesey and Stotfold. The routes serve the railway stations at Letchworth Garden City and Arlesey and connect to Letchworth's town centre.

Rail Services – The nearest railway station is Baldock Railway Station, located approximately 1.3km (c. 21-minute walk or 6-minute cycle) to the east of the Site. Letchworth Garden City Railway Station is located approximately 2km to the south-west of the Site (c.31-minute walk or 9-minute cycle). Both stations are on the Cambridge Line, offering services to Cambridge, Brighton via Gatwick and London King's Cross.

4.6.2 Sustainable Transport Proposals

The development includes a number of measures to improve connectivity and support the uptake of sustainable transport modes in line with Local **Policy SP9, Policy D1** and NHDC's Sustainability SPD.

The development includes creation of a Pedestrian and Cycle Movement and Play Network, encouraging everyday active travel by making walking, cycling and wheeling convenient and attractive through careful design of safe and

⁵ [active-travel-strategy.pdf](#)

pleasant routes between attractive destinations. The Site provides new pedestrian access points, connecting to existing PRoW and further infrastructure.

The Letchworth Garden City **Heritage Foundation** 'Design Principles for New Housing Developments' includes a request for *'How non-car transport modes are encouraged; Pedestrian and cycle links to local facilities, public transport links and employment areas'*

The design of the proposed development at Land at Talbot Way supports this principle in a number of ways as set out below;

- **Everyday Active Travel and Play**
 - Design encourages active travel through convenient, safe and pleasant routes through the site;
 - Routes appropriate for walking, cycling and wheeling.
- **Green link to local facilities**
 - Green link planned along the Northern edge of the site which would the site to Norton Village, Radwell Country Park and open countryside.
- **Shared routes**
 - Shared routes to the existing allotments west of the site and to the employment area to the south.

The above features as shown in **Figure 10** the design aligns well with the Foundation Principles in regards to transport.

Electric Vehicle Charging Points - The Heritage Foundation also includes a request for **provision of electric car charging points**. It is noted that this Principle has been superseded by Building Regulations Part S which requires an EV charging point to be required per dwelling. This is also required by Condition 20.

It is noted that an EV charging point will be provided on each on-Plot allocated Space and each allocated Space in Courtyard behind Apartments.

A Framework Travel Plan was developed at Outline Stage by Steer to support and encourage the uptake

of active and public transport modes as part of the outline application. Measures include promoting local car share scheme and providing financial incentives to residents. A Travel Plan Co-ordinator will be identified to ensure the measures are taken forward in operation.

Secure Cycle Parking – The Heritage Foundation also includes a request for **all new dwellings shall have covered secure cycle parking**, which should preferably be provided on each plot and may be part of an appropriately sized garage.

From a review of the drawings developed by HTA it is noted that secure cycle parking will be provided for each dwelling. It is anticipated that this will be divided in the following way, as appropriate, and therefore will align with the Foundation's principles;

- Secure Storage in Garage
- Secure Store in Garden where no garage
- Secure Shared Store for Apartment Blocks

4.6.3 Sustainable Transport Summary

Land at Talbot Way benefits from being in a highly sustainable location, with foot and cycle connections to a range of local services and amenities, and good access to public transport connections including bus and rail services. The development includes provision of enhanced walking and cycling infrastructure to improve general accessibility and permeability of the site for future residents and visitors, promoting sustainable transport.

Further detailed information on transportation issues and targets can be found in the Transport Assessment and Travel Plan which accompanied the outline planning application.

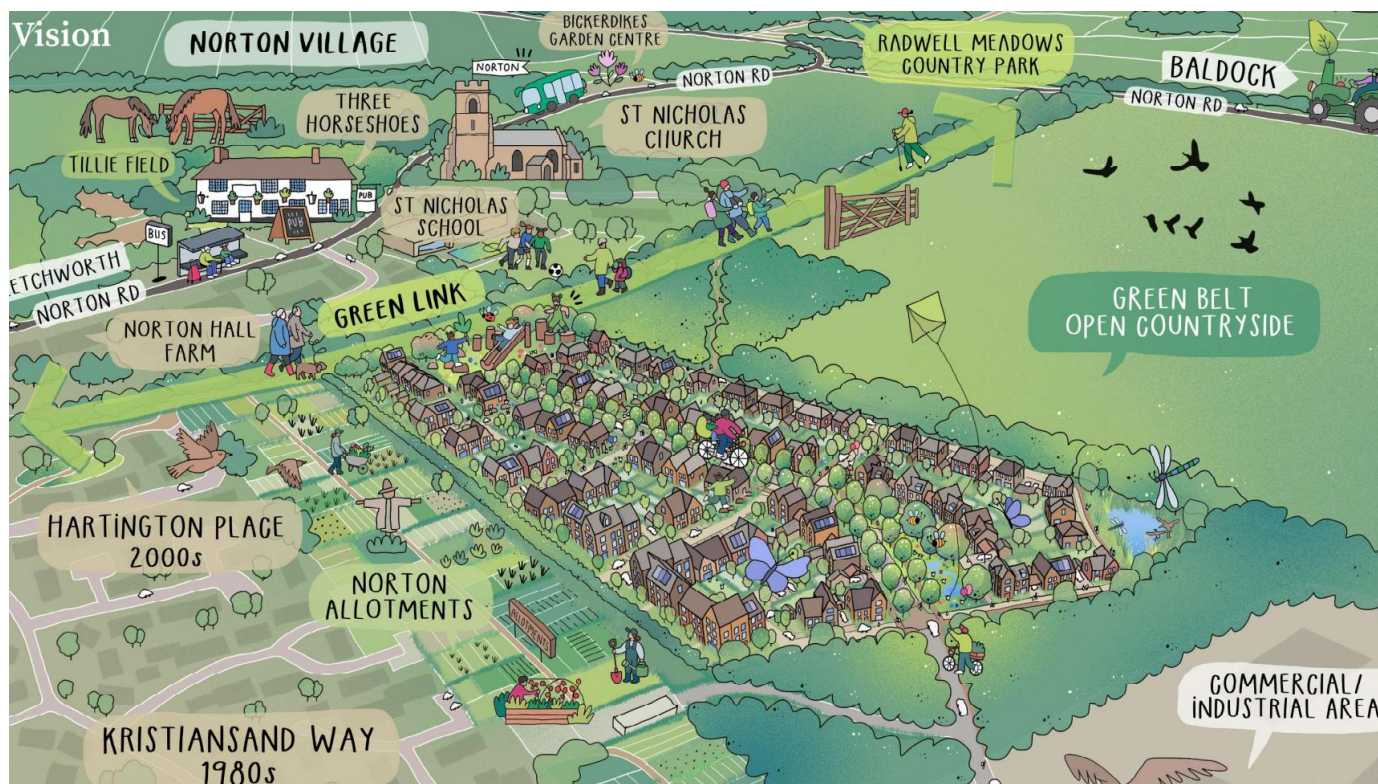


Figure 10 Vision Connectivity Source HTA

4.7 Conserving Water

Potable water is an increasingly important natural resource. Land at Talbot Way is served by Affinity Water, which is classed as being in an area of serious water stress⁶. This is recognised by **Policy SP9 and D1** which require residential developments to meet or exceed nationally described water efficiency standards.

The **Heritage Foundation** also includes a request to include a strategy to reduce water demand to serve the development. The Guidance notes that this should include consideration of water recycling, re-use, storage and water use minimisation measures. Homes will be designed to reduce water consumption, and will target a minimum of the governments higher water efficiency rate of 110 litres/person/day, which is significantly lower than the Building Regulations requirement of 125 l/p/d. This will support the Heritage Foundation target. This will be achieved through use of a range of water efficiency measures such as:

- Dual flush WCs;
- Water meters;
- Low flow fittings; and
- Where appropriate, water efficient equipment.

4.8 Incorporate Sustainable Drainage

A Drainage Strategy is produced by Ardent, supporting the RMA, in line with the principles set out in the Flood Risk Assessment (FRA) & Drainage Strategy prepared by EPG for the outline application.

The Site is within Flood Zone 1, indicating the low overall flood risk from rivers and the sea. According to the FRA, the flood risks from other sources including surface water, groundwater, sewer and other artificial sources are all assessed to be low.

A surface water management strategy has been developed following the drainage hierarchy. As the

Site is considered to have limited infiltration soakage capacity, and there are no existing watercourses/waterbodies in the vicinity, it is proposed that surface water runoff is discharged into existing public sewers to the south of the Site, at a restricted rate of 8.0l/s, lower than the greenfield runoff rates. This has been agreed with Anglia Water.

The proposed drainage network manages the Site through three catchments, with attenuation provided by two detention basins and an offline cellular tank. Surface water is conveyed via swales and pipework, supplemented by bioretention features. The system has been designed to cater for all events up to and including the 1 in 100-year + 40% climate change event.

It is considered that with above measures, any residual flood risk associated with climate change can be effectively mitigated. Further information on the flood risk and the surface water management system can be viewed in the Drainage Statement accompanying the RMA.

The **Heritage Foundation** also includes a request for SUDs be included as part of any development proposals and non-permeable hard surfacing is to be avoided where possible. The SUDs proposed as part of the concept Drainage strategy include the following;

- Swales and Bio-retention area;
- SuDs basins for drainage and biodiversity benefits;
- Attenuation tank.

It is deemed that permeable hard surfacing is less robust than traditional hard surfacing as it often becomes blocked which limits filtration. The SUDs proposed will enhance the drainage of the area where also supporting the biodiversity of the site.

⁶ [Water stressed areas – 2021 classification - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/544212/Water_stressed_areas_-_2021_classification_-_GOV.UK.pdf)

5. Conclusion

This Sustainability and Energy Statement has been prepared to demonstrate how the development at Land at Talbot Way responds to the requirements of Condition 19 and 20.

This sustainability statement has been prepared in accordance with the requirement of Condition, setting out the measures to ensure the development is energy efficient and minimises carbon emissions, in accordance with **Policies SP9 and D1**. These have been discussed in Section 4.1 and 4.3 and are summarised below.

Optimising Passive Design & Fabric Performance – Homes will be designed in line with the energy hierarchy, prioritising enhanced fabric and passive design measures to reduce energy demand.

Achieving Low Carbon Energy – Homes designed to be all-electric, incorporating on-site renewable energy generation in the form of Solar PV and Air Source Heat Pumps, targeting the requirements of FHS.

Minimising Carbon Footprint - Homes designed to reduce embodied carbon through the use of sustainable building techniques and materials with a lower embodied carbon impact.

Healthy Placemaking – A site plan designed to encourage outdoor activity through the provision of extensive open space, active travel routes, play areas and high quality landscaping; and homes designed to create healthy living environments.

Promoting Biodiversity - Provision of measures to protect on-site ecology and enhancement measures to deliver a c.15.07% biodiversity net gain.

Sustainable Transport - A sustainable transport strategy which aims to reduce emissions associated with private car travel, for example through delivering improvements to walking and cycling infrastructure, secure cycle parking, and EV charging infrastructure.

Conserving Water - Specification of water efficient fittings to reduce water consumption, aiming to limit water consumption to 110 litres per person per day.

Incorporating Sustainable Drainage - A surface water drainage strategy designed to accommodate stormwater for all storm events up to the 1 in 100-year event plus a 40% allowance for climate change.

A variety of SuDS features in the form of attenuation basins, swales, and bioretention systems which aim to mimic the natural processes of surface water drainage and provide water treatment, biodiversity, and amenity benefits.

BDW are committed to the delivery of sustainable homes which protect and enhance the natural environment, support health and wellbeing, as well as mitigate and adapt to the long-term effects of climate change.

6. Appendix 1

Appendix 1: Letchworth Garden City Heritage Foundation: Design Principles for new housing developments - Sustainability

Energy and Carbon	Response
The performance of the building fabric shall meet Zero Carbon Standards of apartment/mid terrace - 39 kwh/m2/year and end terrace/semi-detached/detached – 46 kwh/m2/year.	The development will meet the requirements of the proposed FHS achieving a 75% carbon reduction beyond Part L 2013, and 63% beyond Part L 2021. Through enhanced fabric performance and energy efficiency measures homes will reduce space heating and total energy demand. Final energy modelling will be required to determine the performance achieved once the FHS has been finalised. See Section 4.2 for further detail.
PV and solar panels are encouraged, where they accord with the Foundation's Design Principles. All panels should be set into the roof.	Solar PV Panels will be considered on a plot by plot basis subject to FHS requirements. See Section 4.2 above and Figure 5 .
In terms of conservation of fuel and power, a 19% improvement against the Target Emission Rate (TER) included in Part L of the Building Regulations 2013 (with 2016 amendments) is sought.	This will be achieved through alignment with the FHS, a 75% reduction beyond Part L 2013 will be achieved. See Section 4.2 for further detail.
Air Tightness compliance with the Building Regulations should be demonstrated by on site testing.	This will be achieved as part of Part L requirements. See Section 4.2 for further detail.
We will welcome external wall treatments that consider changes in climate – for example extreme heat events.	The design of the development has taken into account the impacts of climate change. See Section 4.2 for further detail.
Where appropriate, combined Heat and Power or Biomass boilers will be encouraged, particularly on larger development sites. Communal heating for apartment blocks should be considered.	The all-electric, high fabric efficiency energy strategy mean CHP and Biomass boilers not appropriate for this development. See Section 4.2 for further detail.
All dwellings should seek to attain an Energy Performance Certificate rating of A, but B is considered as a minimum requirement.	Alignment with the FHS is expected to achieve EPC B as a minimum. See Section 4.2 for further detail.

Developments should include details of heat recovery, ventilation and night cooling to serve new dwellings, with a preference for low energy, natural strategies.	The homes are designed in accordance with the FHS which will consider Heat Recovery, Ventilation, and cooling. See Section 4.2 for further detail.
If domestic appliances are included with new homes, they should have a minimum energy rating of A, although a higher rating is encouraged.	Where appliances are provided these will be A rated or higher.
Transport	Response
How non-car transport modes are encouraged; Pedestrian and cycle links to local facilities, public transport links and employment areas.	As set out in Section 4.6.2, non-car transport modes are encouraged through the following; Creation of convenient, safe and pleasant routes through the site; A Green link along the Northern edge of the site connecting to the wider area including Radwell Country Park; and Shared routes to the existing allotments west of the site and to the employment area to the south.
Provision should be made for electric car charging points, particularly in larger development sites. These should be sited in the most inconspicuous locations possible. Where this is not possible, the appropriate cabling for future installations should be provided to serve garages and other parking areas.	It is noted that this Principle has been superseded by Building Regulations Part S which requires an EV charging point to be required per dwelling. This is also required by Condition 20. Section 4.6.2 sets out further details on EV Charging provision.
All new dwellings shall have covered secure cycle parking, which should preferably be provided on each plot and may be part of an appropriately sized garage (3m x 6m).	Secure cycle parking will be provided for each dwelling. It is anticipated that this will be divided in the following way, as appropriate, and therefore will align with the Foundation's principles; • Secure Storage in Garage • Secure Store in Garden where no garage • Secure Shared Store for Apartment Blocks For further detail see the HTA Parking and Cycle Strategy Drawing that accompanies the application. See Section 4.6.2.

Health & Wellbeing	Response
All new dwellings should comply to a minimum criteria of Building Regulations M4(2); 10% of all dwellings should comply with M4(3) standards across tenures.	As set out in Section 4.4 all dwellings are aligned with M4(2) and 10 units are aligned with M4(3) or are wheelchair accessible.
Water and Drainage	Response
Sustainable urban drainage systems (SUDs) should be included as part of any development proposals and non-permeable hard surfacing is to be avoided where possible.	The SUDs proposed as part of the concept Drainage strategy completed by Ardent include the following; • Swales and Bio-retention area; • SuDs basins for drainage and biodiversity benefits; • Attenuation tank. It is deemed that permeable hard surfacing is less robust than traditional hard surfacing as it often becomes blocked which limits filtration. The SUDs proposed will enhance the drainage of the area where also supporting the biodiversity of the site. See Section 4.8
A strategy to reduce water demand to serve the development. This should include consideration of water recycling, re-use, storage and water use minimisation measures in order to meet a maximum water usage of 105 litres per person per day.	• Homes will be designed to reduce water consumption, and will target a minimum of the governments higher water efficiency rate of 110 litres/person/day, which is significantly lower than the Building Regulations requirement of 125 l/p/d. This will support the Heritage Foundation target. See Section 4.7.
Biodiversity	Response
All development proposals should provide evidence through an ecology assessment and achieve a net gain in biodiversity.	The Design Stage Assessment prepared by CSA Environmental confirms an expected net gain of 15% achieved through a range of ecological enhancements including native wildflower planting, bird boxes and hedgehog gaps. See Section 4.7 .
Landscaping schemes will be integral to the design of any scheme and proposals should demonstrate that they encourage biodiversity and provide native tree and wild-flower planting. This should also be linked to SUDs, to create interesting environments and new habitats.	The Design Aspirations Document completed by HTA details the landscaping scheme including the biodiversity and SUDs elements. (Visual shown in Figure 8)

All new residential developments must incorporate bird boxes, preferably integrated into the building.	As noted in section 4.5 , 40 bird boxes are proposed to be integrated.
Materials	Response
All materials should be from certified sustainable sources and recycled materials are encouraged.	BDW's Sustainable procurement policy ⁷ confirms the procurement of only legally traded timber and confirms that preference will be given to materials that are recycled, low embodied carbon and minimise waste. See Section 4.3.1 .
Healthy Placemaking	Response
Opportunities to incorporate allotments or community gardens within housing layouts will be sought on developments with more than 20 dwellings.	Norton Allotments are already present on the Western edge of the development and a connection will be provided from the South Eastern edge of the site Areas as part of the masterplan including the Gateway Green and Village Green will provide community gardens and open space for residents and visitors to enjoy. See Section 4.4 .
All new dwellings should have cable television and high speed internet broadband connection, where practical.	High speed broadband will be provided.
Where technologies are used, these should be understandable for all occupiers and not so complex that they are rendered unusable.	A Home User Guide will be provided detailing optimum use of technologies installed in the homes.
Clear user instructions of all technologies incorporated, should be provided to all new homeowners, with information retained for future occupiers.	A Home User Guide will be provided detailing optimum use of technologies installed in the homes.

⁷ [BDW Sustainable Procurement Policy](#)