



PROJECT:

Hoyland West

DOCUMENT TITLE:

Sustainability Statement

PREPARED FOR:

Newlands Developments Ltd.



Fernwood Business Park, 14 Halifax Court, Newark, Nottinghamshire, NG24 3JP.

t: +44 (0) 1636 850500

www.bedesign.co.uk

19/02/2020

Document Details

Project Ref:	NWK 200022 – Hoyland West
Revision:	V.3
Written by:	Charlotte Booth
Reviewed by:	Anna Tsartsari
Date:	16th June 2020

Revision	Date	By	Description
V.1	22.05.20	CB	Sustainability Statement – DRAFT
V.2	10.06.20	CB	Sustainability Statement – FINAL
V.3	16.06.20	CB	Sustainability Statement – SUBMISSION

This document has been prepared by BE Design at the instruction of, and for use by, our Client in connection with the project. No other party may copy, make use of or reproduce the contents of this document other than for the purpose for which it was originally commissioned and prepared. The report may not be copied or used without the prior written agreement of BE Design.

Any information supplied by the Client or third parties and used in this document has not been verified by BE Design and BE Design has no responsibility or liability for it.

EXECUTIVE SUMMARY

This Sustainability Statement has been prepared by BE Design as instructed by Newland Development Ltd. in support of the hybrid planning application which will be submitted for the proposed Hoyland West development in Barnsley Metropolitan Borough Council (BMBC).

The proposed development will comprise:

'Hybrid planning application for a development of employment uses (B1, B2 and B8), new link road, associated works including provision of internal access roads, drainage and landscaping:

- a) *Outline with all matter reserved apart from means of access for up to 71,515 sq.m of employment uses (B1, B2, B8);*
- b) *Full application for 31,571 sq.m of B8, new link road including new roundabout to link with Hoyland south Masterplan Area (Local Plan references HS68, HS65, HS61, HS58, HS6, SL5)'.*

The Sustainability Strategy for the development not only conforms to all national and local planning policies, it also aims to achieve the highest viable levels of sustainable design and construction, whilst minimising environmental impacts. The key sustainability features outlined in this Sustainability Statement are listed below:

- To provide a high-quality development that is **adaptable and resilient to future climate change**, with all units built to achieve a BREEAM 'Very Good' rating under the New Construction 2018 scheme;
- To support the move towards a **circular economy**, by reducing embodied carbon emissions, considering carbon offsetting and eliminating waste to landfill;
- To create a safe and friendly environment that will be flexible to the needs of its occupants, encourages active travel and creates a sense of **wellbeing**;
- To have a positive impact on the **local community** by connecting the development with local residents and natural settings through sustainable modes of transport and green spaces, whilst being considerate of local residents during construction;
- To future-proofing the development for the **transition to zero carbon**, whilst achieving viable reductions in CO₂ emissions with a deliverable and technically appropriate strategy;
- To prioritise **biophilic design** and nature-based solutions in order to maximise biodiversity net gain, absorb pollutants such as oxides of nitrogen and particulate matter, and provide a sense of wellbeing around the site;
- To create a development that adds significant **social value** to the area.

Contents

EXECUTIVE SUMMARY	3
1.0 INTRODUCTION.....	7
2.0 DEVELOPMENT DESCRIPTION	8
Site Location	8
Proposed Development.....	9
3.0 PLANNING POLICY AND GUIDANCE.....	10
National Planning Policy: NPPF	10
Local Planning Policy: Local Plan	10
Local Planning Policy: Energy Strategy 2015-2025	11
Local Planning Policy: Sustainable Travel SPD	12
Barnsley Zero45.....	12
Hoyland West Masterplan Framework	13
Building Regulations Part L.....	13
4.0 HERMES SUSTAINABILITY ACTION.....	15
5.0 HOYLAND WEST SUSTAINABILITY STRATEGY	16
A Holistic Approach.....	16
BREEAM	17
6.0 LOW OPERATIONAL CARBON	18
Defining Zero Carbon	18
Low Energy Use (Figure 6: 1, 2)	18
Measurement and Verification (Figure 6: 3)	20
Reducing Construction Impacts (Figure 6: 4)	21
Low Carbon Energy Supply (Figure 6: 5, 6, 7, 8).....	21
Zero Carbon Balance (Figure 6: 9, 10).....	22
Decarbonised Travel.....	23
7.0 CIRCULAR ECONOMY AND EMBODIED CARBON	25
Waste Management	26
Management of Construction Waste.....	26
Commercial Waste.....	27
8.0 WELLBEING.....	28
Active Travel and Exercise.....	28

Travel Plan	28
Green and Amenity Space	29
Daylight	29
Noise	29
External Air Quality	30
Internal Air Quality	30
9.0 CLIMATE RESILIENCE	32
Adaptation to Climate Change	32
Internal Water Efficiency	32
Leak Detection and Prevention	33
Water Metering	33
External Water Efficiency	33
Flood Risk	33
Sustainable Drainage Systems (SuDS)	34
Local and Responsible Sourcing	35
Hard Landscaping and Boundary Protection	35
Designing for Durability and Resilience	35
10.0 COMMUNITY	36
Connecting with the Community	36
Public Transport	36
Responsible Construction Management	36
Considerate Constructors Scheme	36
Monitoring Construction Site Impacts	37
Reduction of Light Pollution	37
11.0 BIOPHILIC DESIGN AND BIODIVERSITY	38
Biophilic Design	38
Protection of Ecological Value	38
Enhancement of Ecological Value	39
Biodiversity	39
12.0 VALUE AND COST	40
Public Consultation	40
Capital Cost Reporting	41
Social Value	41

Security	41
Inclusive Design	41
Commissioning and Handover	41
13.0 SUMMARY AND CONCLUSION	43
APPENDIX A1: Hoyland West Red Line Boundary Plan	44
APPENDIX A2: Hoyland Hermes (Plot 01) Detailed Site Plan	45
APPENDIX B: Rolec EV Charging Specification	46

1.0 INTRODUCTION

- 1.1 This Sustainability Statement has been prepared by BE Design and sets out the sustainable design and construction measures included the hybrid planning application for the proposed Hoyland West development in Barnsley Metropolitan Borough Council (BMBC).
- 1.2 This Sustainability Statement does not duplicate the work of the technical reports prepared in support of the application, but presents the findings in the overall context of sustainability.
- 1.3 Section 2 provides an introduction to the site and the proposed development.
- 1.4 Sections 3 and 4 sets out the relevant national and local policy and guidance documents, as well as customer drivers, which have been used to guide and inform the sustainability strategy for the proposed development.
- 1.5 Sections 5 to 12 outlines the sustainability strategy for the proposed development.
- 1.6 Finally, Section 13 provides a summary of the key sustainability features associated with the proposed development.

2.0 DEVELOPMENT DESCRIPTION

Site Location

- 2.1 The Hoyland West development area sits within the Hoyland West Masterplan Framework (ES13) area, which is located to the west of Hoyland, adjacent to the M1 motorway, which runs along the western boundary of the site (Figure 1). Junction 36 of the M1 is to the north-west of the masterplan area and Barnsley town centre is located approximately 6.5km directly north of the site.



Figure 1: Hoyland West Site Location

- 2.2 The existing site comprises mainly agricultural fields although there are some small-scale commercial uses located within the land identified for future housing development adjacent to Sheffield Road. On the area of land to the north of Tankersley Lane there is the Rockingham Sports Facility and cricket ground. A small area to the north of the allocation boundary comprises of Green Lane Farm.
- 2.3 The Site is predominantly surrounded by woodland. The southern edge of the development is bounded by Bell Ground Wood whilst the western edge consists of a woodland buffer to the M1. The Eastern and Northern edges of the Site currently defines the settlement edge of Hoyland. Field boundaries within the Site are currently loosely defined by a series of semi-mature scattered hedgerows with the eastern boundary along Sheffield Road comprising of stone walls.

Proposed Development

- 2.4 The proposed development is described as follows:
'Hybrid planning application for a development of employment uses (B1, B2 and B8), new link road, associated works including provision of internal access roads, drainage and landscaping:
- Outline with all matters reserved apart from means of access for up to 71,515 sq.m of employment uses (B1, B2, B8);*
 - Full application for 31,571 sq.m of B8, new link road including new roundabout to link with Hoyland south Masterplan Area (Local Plan references HS68, HS65, HS61, HS58, HS6, SL5)'.*
- 2.5 The employment led development will deliver offices, light industry, warehousing and distribution units, with associated infrastructure. The proposed spine road will connect Hoyland West to the strategic road network, while providing additional benefit to existing Hoyland residents and businesses by reducing traffic along Sheffield Road.
- 2.6 Figure 2 below illustrates the proposed site layout for the hybrid planning application (also see Appendix A1):

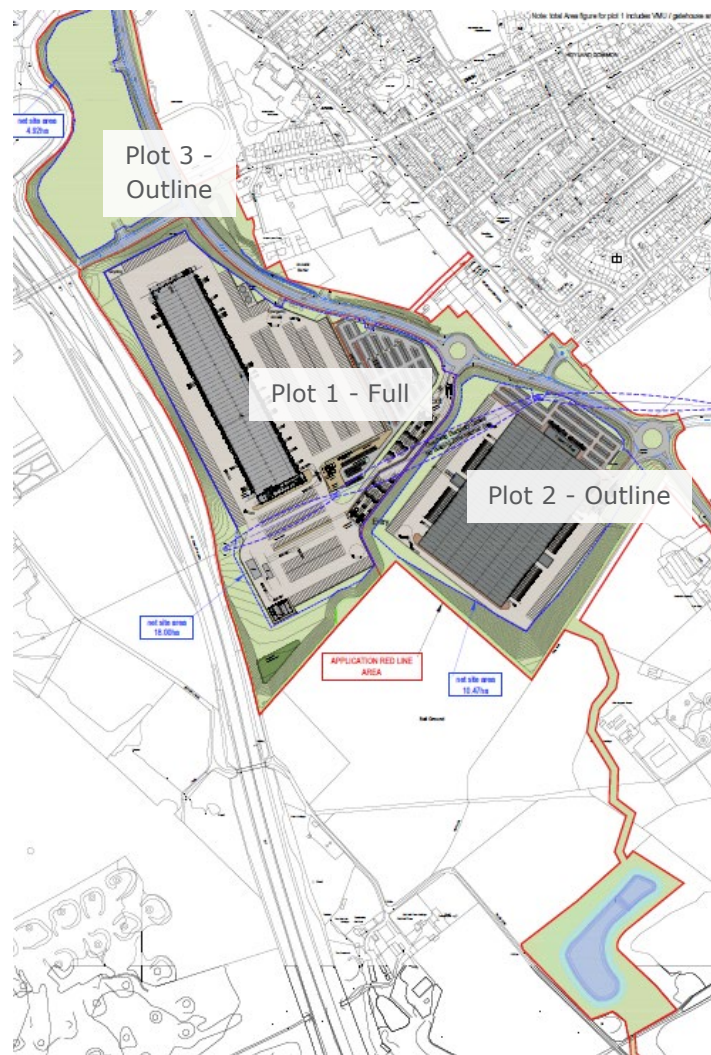
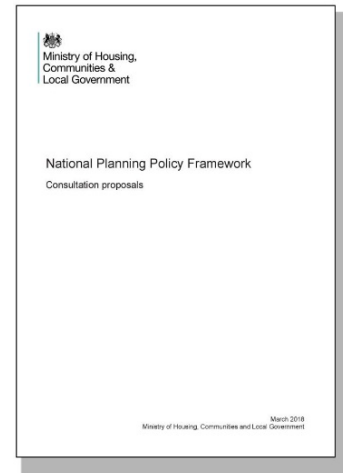


Figure 2: Hoyland West Planning Application Red Line Boundary
 (also shown in Appendix A1)

3.0 PLANNING POLICY AND GUIDANCE

National Planning Policy: NPPF

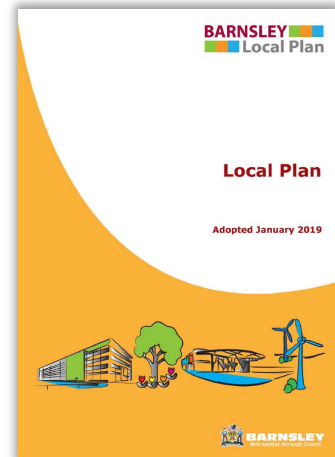
- 3.1 The revised National Planning Policy Framework (NPPF) was published on the 19th February 2019 and sets out the Government's planning policies for England.
- 3.2 The NPPF provides a framework for achieving sustainable development, which has been summarised as "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (Resolution 42/187 of the United National General Assembly). At the heart of the Framework is a presumption in favour of sustainable development.
- 3.3 The document states that the planning system has three overarching objectives which are interdependent and need to be pursued in mutually supportive ways:
- An economic objective** – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;
 - A social objective** – to support strong, vibrant and healthy communities; and by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and
 - An environmental objective** – to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.



Local Planning Policy: Local Plan

- 3.4 The **Barnsley Metropolitan Borough Council Local Plan (January 2019)** sets out some key policies relating to climate change and sustainability. These are summarised below:
- Policy CC1 Climate Change:** Promotion of previously developed sites, sustainable design and construction, reducing the risk of flooding, SuDS, renewable and low carbon energy, Green Infrastructure and biodiversity gain.

- **Policy CC2 Sustainable Design and Construction:** Minimum BREEAM 'Very Good', sustainable design and construction features where feasible and viable.
- **Policy CC3 Flood Risk:** Requiring site-specific Flood Risk Assessments (FRAs) for proposals over 1 hectare in Flood Zone 1 and to demonstrate how the proposal will make a positive contribution to reducing or managing flood risk.
- **Policy CC4 SuDs:** All major development will be expected to use Sustainable Drainage Systems (SuDS) to manage surface water drainage, unless it can be demonstrated that all types of SuDS are inappropriate.
- **Policy CC5 Water Resource Management:** Make positive progress towards water efficiency and water quality through water conservation techniques, including rainwater harvesting and grey-water recycling.
- **Policy RE1:** to incorporate initially appropriate design measures, and thereafter decentralised, renewable or low carbon energy sources in order to reduce carbon dioxide emissions and should at least achieve the appropriate carbon compliance targets as defined in the Building Regulations.
- **Policy Poll1:** Pollution Control and Protection demonstrate that it is not likely to result, directly or indirectly, in an increase in air, surface water and groundwater, noise, smell, dust, vibration, light or other pollution which would unacceptably affect or cause a nuisance to the natural and built environment or to people.
- **Policy AQ1 Development in Air Quality Management Areas:** Development which impacts on areas sensitive to air pollution(13)in air quality management areas will be expected to demonstrate that it will not have a harmful effect on the health or living conditions of any future users of the development in terms of air quality.



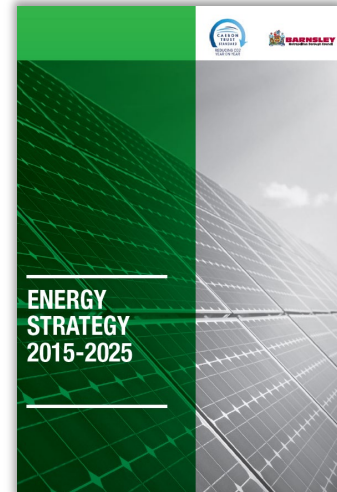
Local Planning Policy: Energy Strategy 2015-2025

- 3.5 The **BMBC Energy Strategy: 2015-2025** sets out the case for greater investment in energy. It speaks directly to challenges that the Council is facing but is also aimed at an external audience in the guise of other public and private sector organisations as well as community and voluntary groups who similarly are confronted by a range of energy-related issues.
- 3.6 The BMBC Energy Strategy sets out four key steps for achieving their strategic aims and ambitions, including:
- i. Deliver Phase 2 of the Barnsley MBC Carbon Management Programme;

- ii. Develop a **Sustainable Energy Action Plan (SEAP)**;
- iii. Implement the Sustainable Energy Projects for Barnsley; and
- iv. Monitor and Report Progress.

3.7 BMBC's strategic energy objectives are to:

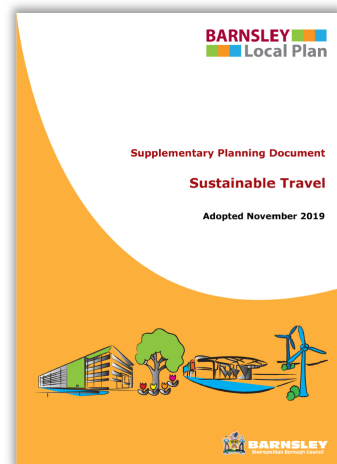
- i. Create a green economy with the use of projects that promote low-carbon building materials and solar PV installations;
- ii. Improve Energy Efficiency through a number of schemes and initiatives to reduce energy demand so that we do not need to consume as much energy from conventional (dirty) high-carbon sources;
- iii. Have more low-carbon energy by actively promoting and increasing the production and use of more low carbon/renewable energy in Barnsley;
- iv. Reduce carbon emissions through a number of schemes such as electric vehicle charging points and electric bike leasing scheme;
- v. Create resilient and sustainable communities to establish smaller scale local energy projects.



Local Planning Policy: Sustainable Travel SPD

3.8 The **BMBC Supplementary Planning Document on Sustainable Travel (Nov 2019)** includes policies on:

- **Policy T3 New Development and Sustainable Travel:** Be located and designed to reduce the need to travel, be accessible to public transport and meet the needs of pedestrians and cyclists, provide at least the minimum levels of parking for cycles, provide a travel plan statement or a travel plan.
- **Electric Vehicle Charging Points:** As a minimum, 10% of parking spaces to have EV charging (guidance).



Barnsley Zero45

3.9 Having declared a Climate Emergency, Barnsley Metropolitan Borough Council (BMBC) have set their approach for the transition of the Borough to Zero Carbon by 2045 (Zero45). Zero45 will have five broad themes; the key actions from each of these themes that will impact Hoyland North are:

3.10 Energy efficiency:

- Setting new zero carbon in construction and operation targets;
- Implementing new technologies for monitoring energy in buildings;

- Behaviour change will be an important component of this programme.

3.11 Resource Efficiency:

- Zero waste projects and evaluating opportunities for capturing waste heat and power;
- Promoting circular economy;
- Engaging with organisations in reuse and repair activities in town.

3.12 Sustainable Transport:

- Encourage active and decarbonising travel – Active Travel Action Plan;
- Other initiatives: working with large employers to set travel targets; promoting Green Fleet Health checks; working with a town Car Club;
- Publishing an electric vehicle strategy.

3.13 Renewables:

- Aim to increase the use of renewables in domestic and nondomestic buildings;
- Encourage innovation in adopting new technologies;
- Assessing opportunities for renewables projects such as biodiesel, solar PV and microhydro.

3.14 Decentralised Heating:

- A key objective of the Strategic Energy Action Plans (SEAPs) is to increase decentralised heating and geothermal such as mine water;
- Intent to publish a District Heating Strategy and heat maps, providing guidance for developers.

Hoyland West Masterplan Framework

3.15 In parallel to this application, the Hoyland West Masterplan is being developed. Its vision is "To create a sustainable, high-quality development on the western edge of Hoyland, providing a pleasant environment in which to live and work".

Building Regulations Part L

3.16 Whilst not in planning policy, Building Regulations Approved Document Part L: Conservation of Fuel and Power has relevance to the requirements for energy efficiency and carbon emissions of new buildings. A minimum requirement for the reduction in carbon emissions to be delivered by new buildings' is set within the Building Regulations, with each update requiring lower carbon emissions than the previous version to achieve compliance.

3.17 The UK has legislated to bring all its greenhouse gas emissions to Net Zero by 2050. As part of the journey to 2050 the Government has committed to introducing the Future Homes Standard in 2025, requiring an average home to emit 75- 80% less carbon than one built today, with similar requirements for non-domestic buildings expected to follow.

3.18 An uplift to energy efficiency standards is also expected this year (2020) under the new Part L, and will act as a steppingstone to more onerous

standards in 2025. As part of this we will see a significant drop in the carbon factor associated with electricity (Figure 3). This change will have a significant effect on the source of heat for achieving Part L compliance. This is important when considering future-proofing for zero carbon.

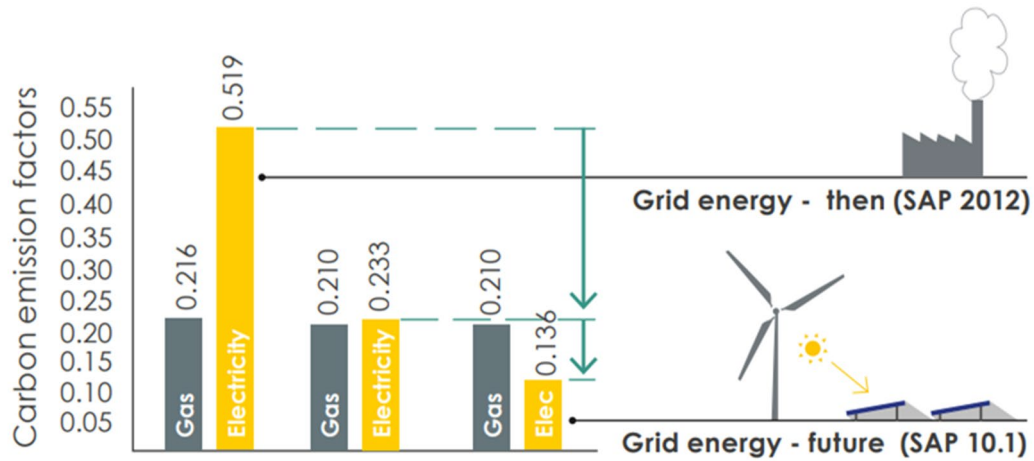


Figure 3: Carbon Emissions Factors for Part L1A: 2012, 2020, 2025
(similar expected for Part L2A)

4.0 HERMES SUSTAINABILITY ACTION

- 4.1 As part of the application in full, Plot 01 (Figure 2) will be occupied by Hermes who have a number of progressive policies. The proposed Hoyland West development will honour the Hermes sustainability philosophy by demonstrating best practice levels of sustainability.
- 4.2 Hermes key fields of action are:
- Reducing CO₂, noise and pollutant emissions in delivery;
 - Climate-friendly, low-emission / zero-emission technologies, including the gradual conversion to emission-free battery-powered deliveries on the final mile;
 - Fair and attractive working conditions for employees; and
 - Making a positive contribution to society and politics.
- 4.3 On existing Hermes sites, examples of climate and environment protection measures have included:
- A good working climate and environmentally compatible site planning (e.g. insect protection, bird-friendly areas);
 - Focus on Certified Environmental Management, e.g. DGNB (Germany), ISO 14001, BREEAM;
 - Certified green electricity;
 - E-charging stations in order support the transition to an electric vehicle fleet;
 - Colonies of bees on roof of Haldensleben logistics centre; and
 - Insect hotels that serve as a haven and nesting place for bumblebees, wild bees, green lacewings and ladybirds at Haldensleben and Ohrdruf (Figure 4).



Figure 4: Insect Hotel at Hermes, Haldensleben

- 4.4 Transport accounts for a large proportion of Hermes carbon emissions. Consequently, Hermes encourage staff awareness of environmentally-friendly travel and promote climate-friendly mobility through a number of initiatives including, making new electric vehicles available to employees for business trips and providing company bicycles to staff for shorter journeys.

5.0 HOYLAND WEST SUSTAINABILITY STRATEGY

- 5.1 This Sustainability Strategy has been prepared to demonstrate how Newlands Developments will deliver a development at Hoyland West that is sustainable, climate resilient and future-proofed for the transition to Net Zero Carbon.
- 5.2 Newlands Developments are constantly evolving their approach to sustainability in light of changes to UK climate change legislation, Building Regulations, the BREEAM standard, customer aspirations, feedback from their completed buildings and a desire to continually improve the sustainability of their business.
- 5.3 The impact of design proposals on the sustainable credentials of the development, including the transition to Net Zero Carbon, has been key to design decisions from an early stage, and will continue throughout the technical design and construction process.

A Holistic Approach

- 5.4 In December 2019, RIBA identified eight sustainable outcomes from the 17 UN Sustainable Development Goals that all buildings contribute to (RIBA, Dec 2019). Figure 5 below illustrates how these sustainable outcomes align with the Hoyland West 'Holistic Sustainability Approach'.

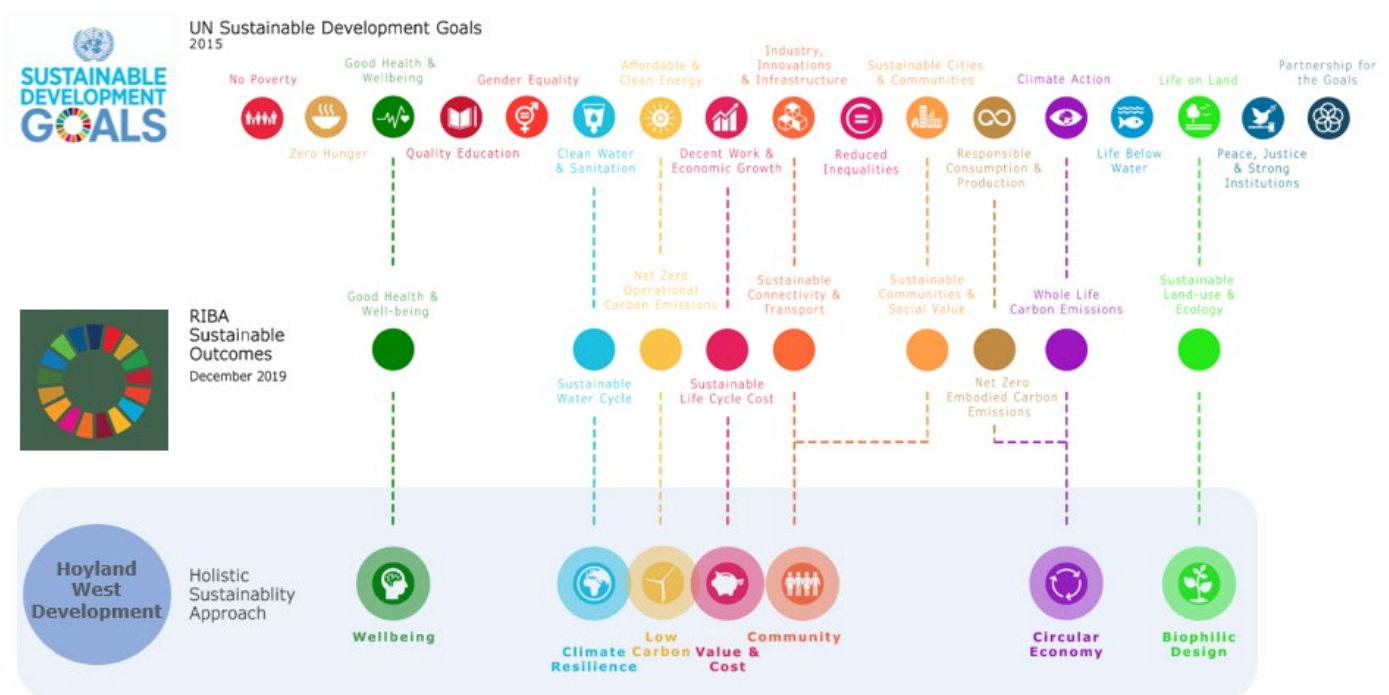


Figure 5: Hoyland West Holistic Sustainability Approach

- 5.5 Sections 6 to 13 of this report details how the Hoyland West 'Holistic Sustainability Approach' is being implemented.

BREEAM

- 5.6 In accordance with Policy CC2 Sustainable Design and Construction BMBC Local Plan, all buildings (B1, B2 and B8) on the Hoyland West Development will be assessed under BREEAM New Construction 2018 assessment with a target of achieving the required 'Very Good' rating.
- 5.7 A full BREEAM Pre-Assessment for the Hermes Building (Industrial Unit with Office) is presented in a separate planning document by CPW and provides an illustrative route to achieving a score of 55.4%, which surpasses the required score for 'Very Good'. This represents a high level of sustainable design and construction.
- 5.8 The principles and requirements of many of the individual credits feature throughout this Sustainability Statement. However, a summary of the mandatory credits for BREEAM 'Very Good' are listed as follows:
- **Man 04: Commissioning and Handover** – to encourage a properly planned handover and commissioning process that reflects the needs of the building occupants;
 - **Ene 02: Energy monitoring** - energy metering systems will be installed so that at least 90% of the estimated annual energy consumption of each fuel can be monitored in operation, thus enabling actual performance to be compared with targets;
 - **Wat 01: Water consumption** – the consumption of potable water for sanitary use will be reduced through the use of water efficient components and water recycling systems;
 - **Wat 02: Water Monitoring** - a water meter provided on the mains water supply with a pulsed output connected to a Building Management System (BMS) aims to reduce the consumption of potable water in new buildings through the effective management and monitoring of water consumption;
 - **Mat 03: Responsible Sourcing** - All timber used on the project must be sourced in accordance with the UK Government's Timber Procurement Policy.



6.0 LOW OPERATIONAL CARBON

6.1 Having declared a Climate Emergency, BMBC have set their approach for the transition of the Borough to Zero Carbon by 2045 (Zero45). Newlands Developments are committed to supporting the Council in achieving this goal and propose a series of measures to ensure the development is future-proofed for zero carbon.

Defining Zero Carbon

6.2 Industry consensus has been established on the key features of 'Net Zero Operational Carbon' for buildings. Figure 6 illustrates this definition which was launched by LETI in December 2019 and is been backed by UK Green Building Council (UKGBC), RIBA, Better Buildings Partnership and CIBSE.

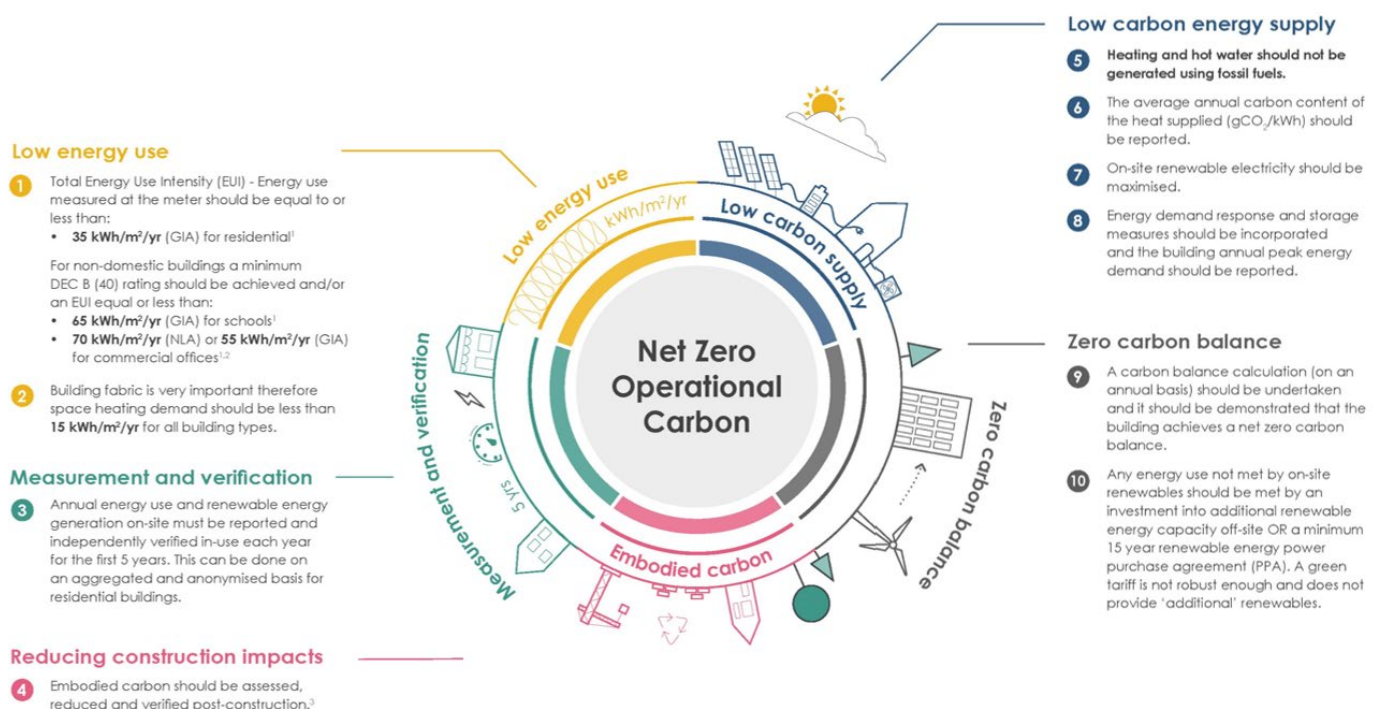


Figure 6: Latest Industry Guidance on Net Zero Operational Carbon (Source: LETI, Dec 2019)

6.3 In order to achieve the ambitious BMBC Zero45 target, consideration of all these elements must be considered, as discussed within this Section (Section 6 of this report).

Low Energy Use (Figure 6: 1, 2)

6.4 It is crucial that all new buildings prioritise high energy efficiency standards so as to avoid the need for expensive retrofit in the future.

6.5 Figure 6 above outlines the energy use intensity (EUI) targets for specific building types. The EUI is the annual in-use measure of the total energy consumed in a building. As distribution and storage (warehouse) buildings are generally unheated, as is the case for the Hoyland Hermes unit, an EUI

target is not stipulated for them. However, the Development has prioritised a series of energy efficiency measures for the offices in order to reduce energy use as far as possible.

- 6.6 Figure 7 illustrates the opportunities to reduce energy consumption in a new commercial office development.

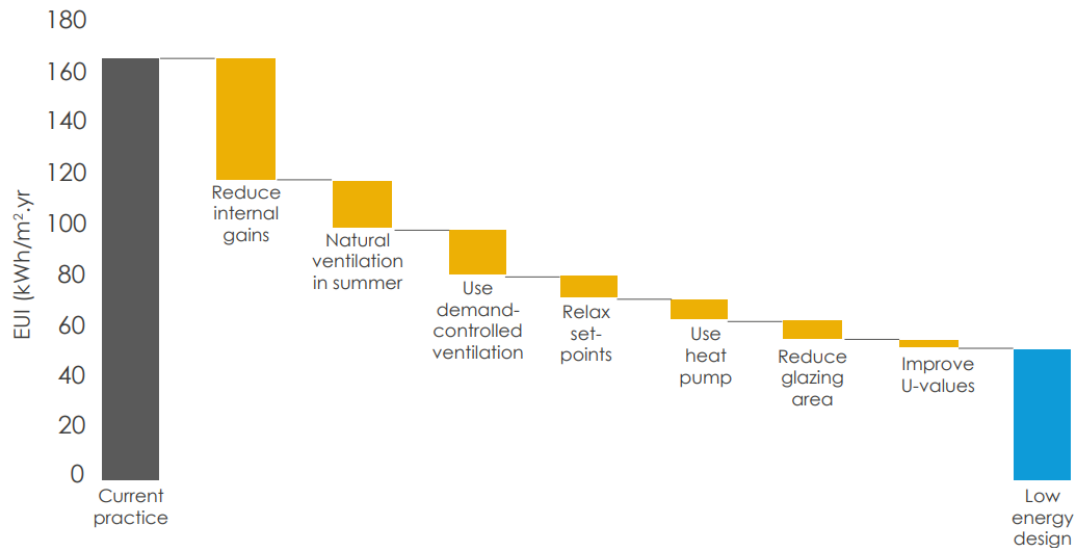


Figure 7: Opportunities to reduce energy consumption in a new commercial office development (LETI, 2019)

- 6.7 The Hermes office building reduces internal gains through effective ventilation. It also takes advantage of solar gain by prioritising glazing on the south-facing façade. Natural and demand-controlled ventilation, as well as glazing g-value of 0.37, means that the summertime cooling demand will be minimal, as confirmed preliminary energy modelling. Air source heat pumps will provide space heating to the office spaces and a considered glazing-to-wall ratio has been applied for office spaces to reduce winter heat losses and summertime cooling demand. Finally, fabric improvements have been made in order to minimise heat loss.
- 6.8 Table 1 describes the fabric improvement measures proposed by the Hoyland West development for office spaces. These measures are considered best practice for a building of this type and should avoid the need for retrofit in near future.

Table 1: Fabric Improvement Measures for Office (Heated) Spaces

Element	Part L Limiting Value	Hoyland West
Wall U-value	0.35 W/m²K	0.21 W/m²K
Roof U-value	0.25 W/m²K	0.18 W/m²K
Floor U-value	0.25 W/m²K	0.25 W/m²K
Window U-value	2.2 W/m²K	1.80 W/m²K
Air Permeability (m³/m².hr @50Pa)	10	2.5

- 6.9 Furthermore, in an unheated warehouse building (frost protected only) lighting is the dominant energy load. Energy efficient lighting at 100 lamp lumens per circuit Watt (lm/W) has therefore been specified to the warehouse area and 80lm/W within the offices. All lighting, including external and security lighting, will also be energy efficient and adequately controlled using PIR sensors, daylight cut-off sensors or time switches where possible. This will ensure the conservation of energy when the lighting is not in use.
- 6.10 A full Energy Statement has been prepared by CPW for the Hermes Building and is submitted as part of this planning application. It confirms that the CO₂ savings from these energy efficiency measures are 13.3%, reflecting best practice measures to reduce energy use.
- 6.11 A similar approach will be applied to the remainder of the Outline development and will be confirmed by detailed energy modelling as part of the Reserved Matters Applications.

Measurement and Verification (Figure 6: 3)

- 6.12 In order to ensure buildings operate as they are designed to, we need to be able to effectively understand and monitor their energy consumption.
- 6.13 The Energy Use Intensity (EUI) is an annual measure of the total energy consumed in a building. Setting an EUI requirement for new buildings is fundamental to meeting our climate change targets. It is a good indicator for building performance as the metric is solely dependent on how the building performs in-use; rather than carbon emissions, which also reflect the carbon intensity of the grid.
- 6.14 By understanding and reducing the UK's building EUI, renewable energy production can eventually be balanced with the EUI and provide a net zero carbon electricity supply (Figure 8).

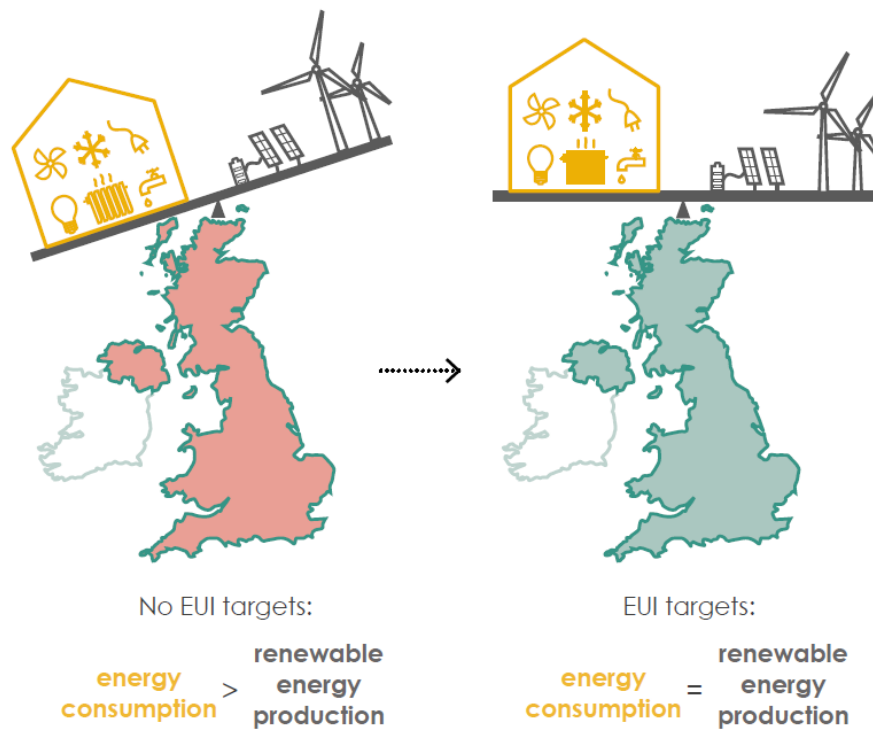


Figure 8: Net Zero Operational Balance at UK Scale

- 6.15 Energy metering systems will be installed in every building under the requirements of BREEAM to facilitate the monitoring of operational energy consumption. This will enable actual performance to be compared to targets in order to inform ongoing management and help in reducing the performance gap.
- 6.16 Any energy monitoring will also be undertaken in line with BMBC Sustainable Energy Action Plan (SEAP), so that useful in-use energy consumption data can be monitored and reported on to BMBC in future.

Reducing Construction Impacts (Figure 6: 4)

- 6.17 While there is currently no mandatory requirement to mitigate embodied carbon, Newlands Developments take a proactive approach to sustainable development and aims to reduce the environmental impacts from construction products through circular economy principles and waste management, as outlined in Section 7 of this report.

Low Carbon Energy Supply (Figure 6: 5, 6, 7, 8)

- 6.18 The UK national strategy is to 'decarbonise' the electricity grid by introducing more renewable energy sources. This has already had a significant impact and the current emission factor for grid electricity of 0.519KgCO₂/kWh is set to reduce to 0.233KgCO₂/kWh from 2020. This almost equates to the emission factor for natural gas of 0.210KgCO₂/kWh.
- 6.19 As the national grid continues to decarbonise over time, critical to the transition to Zero Carbon will be the move away from fossil fuels as a source

of heat. In addition, on-site renewable electricity should be maximised. These points are being addressed on the Hoyland West development as follows:

- **Solar PV** installed on the roof of the Hermes building will generate 57,400kWh/yr and achieve a further 10% CO₂ saving over energy efficiency measures.
- The remainder of the building roofs will be made '**solar-ready**', ensuring they have the required structural loading for the future installation of solar PV to enable Zero Operational Carbon to be achieved.
- **Air Source Heat Pumps (ASHPs)**, with seasonal efficiencies of over 300%, will supply the offices, reducing electricity consumption for heating and hot water by at least half compared to direct electric, and providing a cost-effective source of heat. Furthermore, as the electricity grid continues to decarbonise over time, so will the Hoyland West development.
- **20m² of solar thermal** evacuated tube will be installed to contribute towards space heating and hot water requirements and achieve a further 0.5% CO₂ reduction.



6.20 Finally, energy demand response and storage measures (e.g. battery storage) have been considered for future inclusion. In order to understand the battery storage requirements, the building annual peak energy demand should be reported.

Zero Carbon Balance (Figure 6: 9, 10)

- 6.21 By making the roof 'solar-ready' it may be that Zero Operational Carbon can be achieved with no Zero Carbon Balance remaining.
- 6.22 However, any energy use not met by on-site renewables should be met by an investment into *additional* renewable energy off-site for a minimum 15-year Power Purchase Agreement (PPA). This could be made by in due course to achieve Net Zero Carbon, in alignment with Barnsley's Zero45. Note that a 'green tariff' is not robust enough and does not provide 'additional' renewables.
- 6.23 A PPA is a contractual agreement to purchase an amount of energy at an agreed price, for a certain time, in advance of producing the energy. PPA contracts thus enable renewable investment by providing revenue certainty to investors and lenders in unsubsidised markets.

Decarbonised Travel

- 6.24 As shown on the detailed site plan for the Hermes plot (Plot 01), provision of 34 dedicated Rolec 3.6kW electric vehicles (EVs) charging points have been allocated (see Appendix A2 car park for allocation and Appendix B for details of charging points) equating to 5% of the total car parking spaces. Cable ducting for an additional 130 EVs in future has also been provided, accounting for 20% of the total number of allocated parking spaces for the Hermes site. Since the number of allocated car parking spaces on the Hermes site is around three times the maximum car parking standards, due to the needs of the site, the installation of more than 5% 'active' EV charging points at this stage would not be possible in terms of electrical capacity on site.
- 6.25 The same % EV provision will be provided to the remainder of the Hoyland West development.
- 6.26 In addition to EV charging points, 73 car sharing spaces (10%) will be provided on the Hermes site to encourage building users to share journeys.
- 6.27 The rest of the Hoyland West development will provide priority spaces for car sharers for at least 5% of the total car parking capacity. The Employee Travel Guide, provided to all occupiers on the site, will promote car sharing using www.liftshare.com.
- 6.28 Within the Occupier Travel Plans it is recommended that employees should be able to adjust working hours in order to find a car share match, and where possible recruit from the local area.



Summary of Zero Carbon Future-Proofing Measures

- 6.29 The design of the development will be future-proofed by embracing a number of key measures including:
- Prioritising fabric energy efficiency and air tightness to reduce energy demand as far as possible and therefore negating the need for retrofit measures in the future which are expensive;
 - Optimising the form of buildings to maximise passive design through natural daylight and solar gain, whilst minimising summertime cooling demands;

- Move away from fossil fuels and install air source heat pumps to provide low carbon and efficient heat and hot water;
- Installing 10% solar PV to the Hermes building;
- Designing roofs to be 'solar-ready' to enable to 'Zero Carbon' to be met on-site in future;
- Install active Electric Vehicle charging points to parking spaces, with ducting installed for future cabling to further spaces;
- Implement a sub-metering strategy, in line with BMBC Sustainable Energy Action Plan (SEAP), so that useful in-use energy consumption data can be monitored and reported on in future.

7.0 CIRCULAR ECONOMY AND EMBODIED CARBON

- 7.1 The circular economy moves away from the traditional linear economy (make, use, dispose) in order to keep resources in use for as long as possible. The circular economy aims to extract the maximum value from products and materials whilst in use, then recover and regenerate them at the end of each service life.
- 7.2 Figure 9 describes the principles of the circular economy.

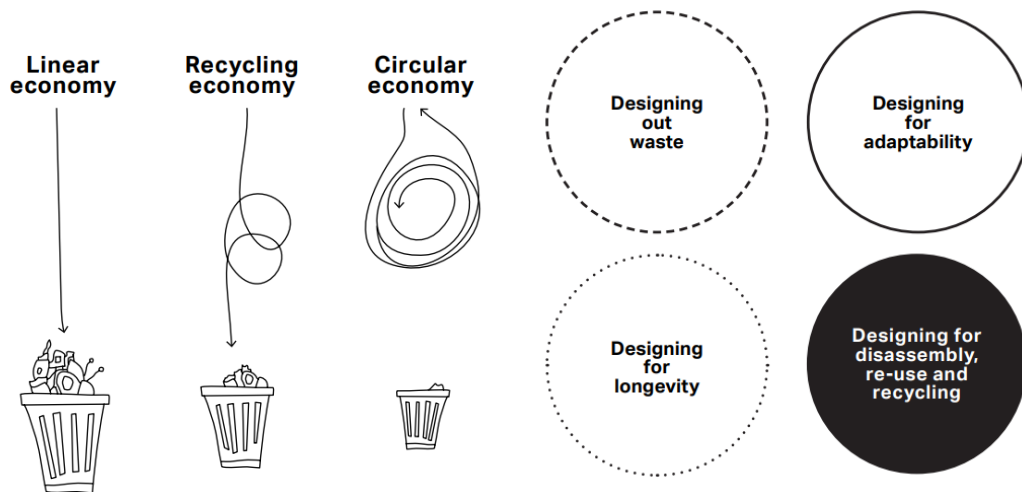


Figure 9: Principles of a Circular Economy

- 7.3 In order to design for deconstruction, flexibility and adaptability, the 'building in layers' principle (Figure 10) will be applied to enable ease in adapting or replacing building elements, especially where a building or element's life are shorter than 30 years.

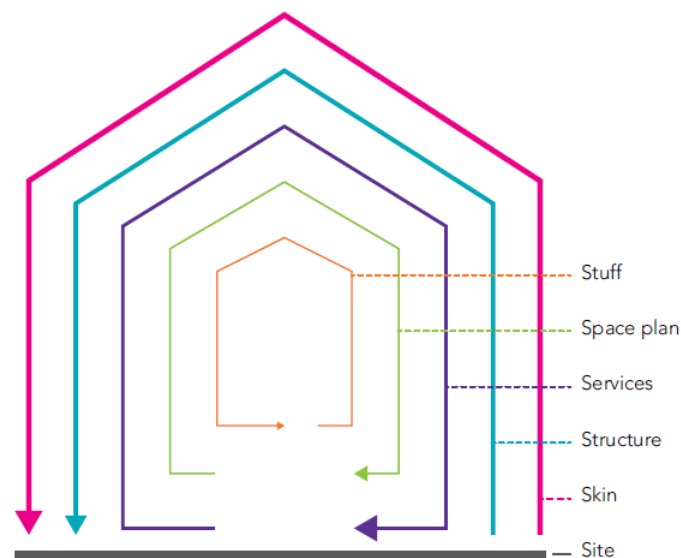


Figure 10: Building in Layers Principle

Waste Management

- 7.4 Waste reduction and recycling is another key challenge of sustainable development. The waste hierarchy, illustrated in Figure 11 below, prioritises those waste management options which are best for the environment shown under 'circular practice', which is typically the reverse of current practice.

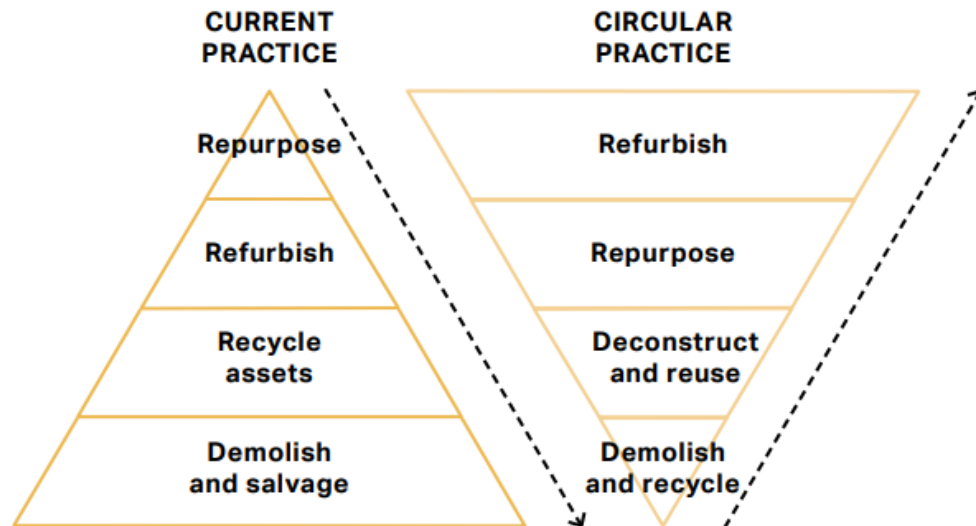


Figure 11: Waste Hierarchy

- 7.5 The waste hierarchy establishes waste management options according to what is best for the environment. It places great importance on preventing waste in the first place. When waste is created it prioritises preparing if for re-use, then recycling, recovery and lastly disposal (e.g. landfill).

Management of Construction Waste

- 7.6 The reduction of construction waste not only minimises environmental impacts by ensuring the responsible use of resources and waste disposal, but it can also significantly reduce construction costs for the developer.
- 7.7 Prior to construction, the contractor will develop a Site Waste Management Plan (SWMP) which will establish ways of minimising waste at source, assess the use, reuse and recycling of materials on and off-site and prevent illegal waste activities. This plan will then be disseminated to all relevant personnel on and off-site.
- 7.8 Waste minimisation actions that will be considered are:
- Consider opportunities for zero cut and fill to avoid waste from excavation or groundworks;
 - Design for standardisation of components and the use of fewer materials;
 - Design for off-site or modular build;
 - Return packaging for reuse;
 - Consider community reuse of surplus materials or offcuts; and

- Engage with supply chains and include waste minimisation initiatives and targets in tenders and contracts.

Commercial Waste

7.9 Adequate space for the segregation and storage of commercial waste and recycling will be provided in designated areas on site and communal stores. These spaces are shown on the Masterplan and will meet the following BREEAM requirements:

- Bins will be clearly labelled to assist with waste segregation, storage and collection;
- The stores will be accessible to building occupants and facilities operators; and
- The storage will be of a capacity that is appropriate to the building's type, size and predicted volumes of waste.

8.0 WELLBEING

- 8.1 The development will be designed to encourage a safe internal and external environment that promotes a sense of wellbeing.

Active Travel and Exercise

- 8.2 Sustainable transport links are central to the sustainability debate. They provide a positive contribution to environmental, societal and economic sustainability of the places they serve. The provision of alternative sustainable transport options and associated facilities reduces dependency on traditionally fuelled cars and has the following benefits:

- Encourages active travel and helps improve people's health and wellbeing;
- Reduces congestion and encourages clean travel which helps to improve the air quality of the local area; and
- Provides cost savings compared with maintaining and running traditionally fuelled cars.

- 8.3 Dedicated and safe cycle and pedestrian routes penetrate the Hoyland West development, linking employment buildings with green spaces, such as Bell Ground, new council sports pitches, surrounding woodland, local cycling networks and public accessible pedestrian routes. This will encourage activity to and from work, as well as during lunchtime and breaks.



- 8.4 Located outside the entrance to the Hermes building (Plot 01) are 60 secure and weatherproof bicycles parking spaces. The prominent location aims to promote cycling to work. Inside the building is a dedicated shower room and lockers for employees choosing to exercise on their way to work or during breaks.

Travel Plan

- 8.5 A Travel Plan which sets out how sustainable travel measures will be implemented, monitored and reviewed over an agreed period has been produced by Fore Consulting.
- 8.6 Travel Plan targets will be set in the Occupier Travel Plans for a maximum car driver mode share. Over time, these will seek to achieve a reduction in journeys made by car as an indicator that the development is supporting journeys by sustainable modes.
- 8.7 Key measures included in the travel plan to encourage and promote walking and cycling include:
- Communication of the benefits of walking and cycling through the Employee Travel Guide, along with maps of walking and cycling routes;

- Provision of adequate cycle parking as per BMBC Parking SPD;
- Information to building occupiers on the benefits of providing showers for employees, i.e. that they encourage people to walk, run or cycle to work, therefore improving the health of employees;
- Occupier Travel Plans that include measures to encourage walking and cycling, for example providing pool umbrellas on site for staff that commute on foot and free attack alarms for staff that regularly walk to work;
- Promotion of the Cycle to Work scheme at each of the premises.

Green and Amenity Space

- 8.8 Human wellbeing and ecological sustainability complement each other. Access to natural settings in the course of people's daily routines is proven to improve and maintain mental health and wellbeing. A strong focus on wellbeing therefore leads naturally to more pro-social thinking and behavior, reduced crime, stronger communities, and increased biodiversity.
- 8.9 The Hoyland West site is set within comprehensive Green Infrastructure, comprising of retained vegetation, proposed areas of open space, amenity, recreation and drainage attenuation.
- 8.10 Amenity space is also allocated on the Hermes site for employees. Proposals and maintenance for this space to promote wellbeing and biodiversity are being discussed with Hermes.

Daylight

- 8.11 The promotion of good natural daylighting levels contributes to sustainability through improving the occupant's quality of life and reducing the building's energy consumption by minimising the need for artificial lighting.



- 8.12 Provision of roof lights to cover 15% roof space for warehouse and industrial units will mean that natural daylight can penetrate into the buildings. 15% provision is deemed optimal; any more will reduce the space for solar PV, might lead to excessive solar gain in summer and will increase heat loss in winter.

Noise

- 8.13 The assessment of operational noise indicates that without mitigation during the day, the predicted rating level from the proposed development would not exceed the background sound level at most of the modelled locations and therefore no adverse effects are expected. During the night, the predicted rating levels at most of the modelled locations are also below the background sound level, indicating that no adverse effects are expected.

- 8.14 Mitigation in the form of bunding and a closed board acoustic barrier is proposed to be installed next the new link road on the masterplan site. The combination of mitigation will form a 4m high wall between the nearest receptor and Plot 1.
- 8.15 This barrier reduces the impact of noise from both the operational and road traffic noise assessment values at the nearest noise sensitive receptor by up to 5dB. This reduction changes the magnitude of impact for operational noise at the nearest noise sensitive receptor from a moderate increase to a negligible decrease. The mitigation also reduces the maximum noise level impact by 5dB reducing it below the 60dB threshold set out in the WHO guidelines for community noise.
- 8.16 The proposed mitigation reduces the noise level during the night-time operational assessment and when considering the context of the operational level at night it is expected that over the night period, with the mitigation in place, there would be little to no adverse effect from the overall operational noise.
- 8.17 It is concluded that the operation of the proposed development is unlikely to result in any significant adverse noise effects at the assessment receptors and this complies with all relevant national and local planning policy requirements regarding noise.

External Air Quality

- 8.18 Poor air quality is the greatest environmental risk to public health in the UK and is known to exacerbate the impact of pre-existing health conditions. It is not only a major risk to human health, but it also has significant damaging impacts on both plants and animals.
- 8.19 Newlands Developments are committed to reducing the proposed development's negative impact on air quality during construction and operation.
- 8.20 An Air Quality Assessment has been undertaken by Vanguardia as part of the planning application. The change in predicted Nitrogen Dioxide (NO₂), PM₁₀ and PM_{2.5} concentrations at existing human receptors in 2029 following completion of the Proposed Development results in operational impacts ranging from 'moderate (beneficial) to slight (adverse)' and not significant. As such, no additional mitigation is considered necessary, but some have been proposed as part of the development proposals.

Internal Air Quality

- 8.21 An Indoor Air Quality Plan will be produced to encourage a healthy internal environment which will consider the following:
- Removal of contaminant sources;
 - Dilution and control of contaminant sources;
 - Procedures for pre-occupancy flush out;
 - Third party testing and analysis; and
 - Maintaining indoor air quality in-use.

8.22 A suitable ventilation strategy will be adopted in order to minimise the concentration and recirculation of pollutants in the building.

8.23 In addition, all of the following products will be specified to meet the recognised international standards for Volatile Organic Compounds (VOCs):

- Paints and varnishes;
- Wood panels (including particle board, fibreboard, OSB, cement bonded particle board, plywood and acoustic board);
- Timber structures;
- Wood flooring;
- Resilient textiles and laminated flooring;
- Suspended ceiling tiles;
- Flooring adhesives; and
- Wall coverings.



9.0 CLIMATE RESILIENCE

Adaptation to Climate Change

- 9.1 To identify the vulnerable building elements by extreme weather resulting from climate change, the design team is committed to develop a Climate Adaptation Strategy, identifying the future risks and hazards for occupants and to avoid the need of future replacement or reparation works.
- 9.2 The study will assess the expected conditions rising from climate change over its projected life cycle, addressing the following aspects:
- Hazard identification;
 - Hazard assessment;
 - Risk estimation;
 - Risk evaluation;
 - Risk management.
- 9.3 Relevant findings and recommendations from this study will be incorporated to the building design.

Internal Water Efficiency

- 9.4 Increased frequency of drought across Europe lines up with climate change projections and water companies in the UK capture much less rain for our use than people assume. As of February 2019, 12 out of the 23 water companies operating in areas of England were classified as being under 'serious' stress (Energy Saving Trust, 2019).
- 9.5 Each individual in the UK currently uses on average 140 litres/person/day and total UK demand for water in the 2080s is projected to increase by between 4-18% (CCRA2, 2015).
- 9.6 Reducing water consumption will not only help to preserve our water sources but will also save energy.
- 9.7 The internal water consumption will be significantly reduced through the use of water efficient fixtures and fittings in line with the Wat 01 requirements of the BREEAM assessment. Table 2 below provides an indication of the types of sanitaryware and appliances that could be installed to meet the required performance level.



Table 2: Sanitaryware Water Reduction Measures

Installation Type	Water Capacity/Flow Rate
WC	4 litres effective flush volume
Basin tap	4.5 litres/minute flow rate
Shower	6 litres/minute flow rate
Urinals (2 or more)	1.5 litres/bowl/hour
Urinal (1 only)	2 litres/bowl/hour
Kitchen tap	5 litres/minute flow rate
Dishwasher (domestic size)	12 litres/cycle
Washing machine (domestic size)	40 litres/use
Dishwasher (commercial size)	5 litres/rack
Washing machine (commercial size)	7.5 litres/kg

Leak Detection and Prevention

- 9.8 Another method of reducing water consumption is to ensure that water leaks do not go undetected. As such a leak detection system may be installed which will be capable of detecting a major water leak on the mains water supply within the building and between the building and the utilities water meter.

Water Metering

- 9.9 A water meter with a pulsed output will also be installed on the mains supply. This will allow the water consumption of the development to be monitored and managed and therefore encourage reductions.

External Water Efficiency

- 9.10 A rainwater harvesting tank will located adjacent to office to reduce the demand on potable water and promote effective use of water supplies. It will be appropriately sized to reduce surface water runoff and capable of harvesting rainwater for vehicle washing.

Flood Risk

- 9.11 Developments in low flood risk areas are promoted as they, not only protect buildings and local communities and reduce the cost implications if flooding occurs, but they also protect the environment from the transfer of pollutants during flooding events.
- 9.12 According to the Flood Risk Assessment by RPS (report reference RCEF76268) and the Environment Agency's Flood Map shown in Figure 12, the proposed development lies in a low risk flood zone (Flood Zone 1), indicating a low probability of flooding (1 in 1000 years).

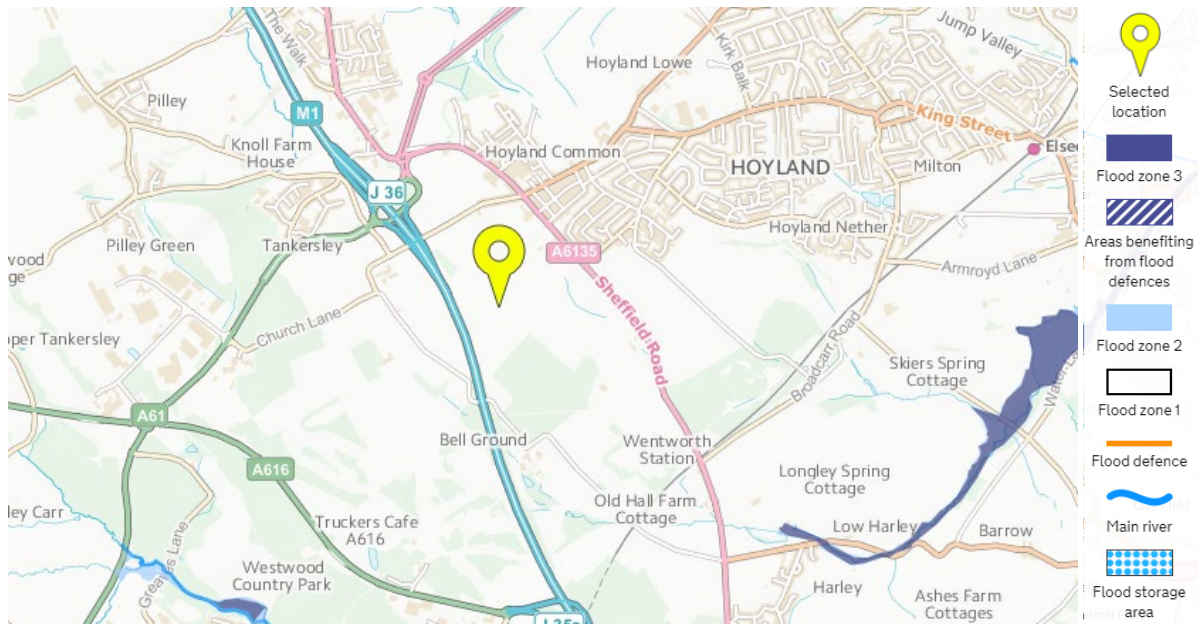


Figure 12: Environment Agency Flood Map

Sustainable Drainage Systems (SuDS)

9.13 Long term environmental and social factors must be included in decisions regarding sustainable drainage. Sustainable drainage systems (SuDS) can deliver multiple benefits including the reducing water runoff, improving water quality, creating amenity space and enhancing biodiversity (see Figure 13).

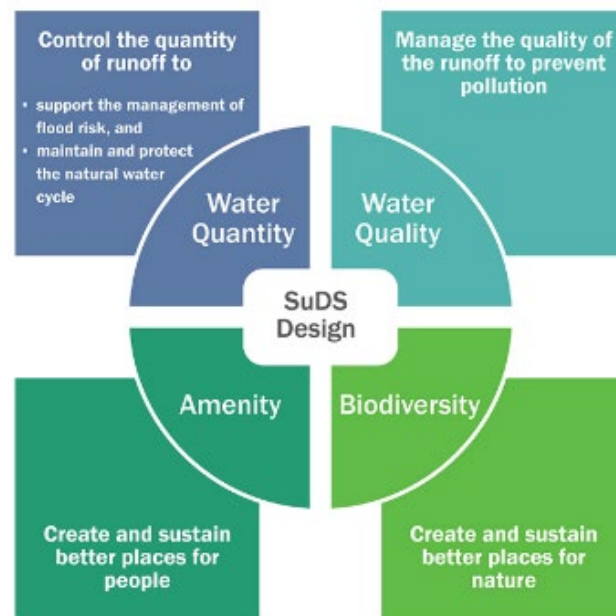


Figure 13: The Four 'Pillars' of SuDS – CIRIA SuDS Manual (2015)

9.14 Surface water attenuation will be provided for events up to 1 in 100 year plus 30% allowance for climate change as required by BMBC.

9.15 The following listed SuDS are proposed:

- A large attenuation pond located to the south of the site will store surface water and act as water treatment using bacteria and sunlight to break down pollutants before the water eventually flows into downstream watercourses;
- A rainwater harvesting system located adjacent to the office of the Hermes building will store runoff from roofs and hard surfaces in a holding tank which can then be used for external irrigation and car washing; and
- Green areas, including low maintenance shrubs, are incorporated into the car park.



Local and Responsible Sourcing

9.16 The main building materials will be responsibly and legally sourced from manufacturers with environmental management systems and/or responsible sourcing credentials, such as BES 6001.

9.17 Timber used on site, including timber used in the construction phase, such as hoarding, fencing and scaffolding, will be sourced from sustainable forestry sources (e.g. PEFC and FSC) where possible.



Hard Landscaping and Boundary Protection

9.18 The specification of materials for boundary protection and external hard surfaces will consider those with low environmental impact. At least 80% of these materials (by area) will achieve an 'A+' or 'A' rating under the BRE Green Guide to Specification.

Designing for Durability and Resilience

9.19 Appropriate durability and protection measures will be incorporated in vulnerable parts of the internal and external building so as to minimise the frequency of replacing materials and therefore optimising material use. These measures are likely to include:

- A fire-rated façade;
- Bollards and barriers to delivery areas;
- Hard-wearing floor finishes;
- Protection rails to corridor walls; and
- Kick plates on doors.

10.0 COMMUNITY

Connecting with the Community

10.1 The Hoyland West development heavily promotes active and decarbonised travel. Cycling and walking is encouraged through dedicated and safe pedestrian and cycle routes that penetrate the site and connect employment buildings with the local residents of Hoyland. This will enable local residents to travel to work safely.

Public Transport

10.2 There are frequent bus services operating from various bus stops surrounding the site. These are within walking distance of the development sites and offer services to Barnsley Town Centre (via Birdwell), Hoyland Town Centre, Chapeltown, Elsecar, Broomhill and Manvers (via Cortonwood).



10.3 Elsecar Rail Station is located approximately 3km east of the site. Rail services operate half hourly between Leeds (via Barnsley) and Nottingham (via Sheffield) Monday to Saturday with a reduced service on Sunday. This allows people to travel to and from the site via rail as part of a combined journey.

10.4 Barnsley Bus Partnership is being consulted throughout the development of the Masterplan Framework to establish the preferred means of the site being served by public transport. Direct, safe and attractive walking routes to bus stops will be provided to encourage the use of public transport for residents, employees and visitors.

Responsible Construction Management

10.5 Sustainable construction involves the prudent use of existing and new resources and the efficient management of the construction process. This includes the following measures:

- Reducing waste during construction and demolition and sorting waste on site where practical;
- Reducing the risk of statutory nuisance to neighbouring properties as much as possible through effective site management;
- Controlling dust and emissions from demolition and construction; and
- Complying with protected species legislation.

Considerate Constructors Scheme

10.6 The development contractor will be responsible for registering the site under the Considerate Constructors Scheme. This is designed to encourage environmentally and socially considerate ways of working, to reduce any

adverse impacts arising from the construction process. As commonly known, the Considerate Constructors Scheme aims are as follows:

- Enhancing the appearance;
- Respecting the community;
- Protecting the environment;
- Securing everyone's safety;
- Caring for the workforce.

10.7 The site will target 'Beyond Best Practice' certification, achieving a score of at least 35 out of 50.

Monitoring Construction Site Impacts

10.8 During the construction processes, control procedures will be put in place to minimise noise and dust pollution and roads will be kept clean. The management systems will generally comprise procedures and working methods that are approved by the development team together with commercial arrangements to ensure compliance.



10.9 A construction dust assessment has been undertaken by Vanguardia for the construction phase associated with the proposed development and in accordance with IAQM (2014) guidance on the assessment of dust from construction.

10.10 Further to the above, additional measures will be adopted to minimise the impact on the local area. This will include recording, monitoring and displaying of energy and water use from site activities during construction.

10.11 Construction traffic will be minimised by restricting deliveries and arrival times in order to manage potential impacts on existing and future occupants. Work will be limited to appropriate hours to be agreed with the Council, and suppressors will be used to reduce noise from machinery.

Reduction of Light Pollution

10.12 A detailed external lighting report has been produced for the Hermes site. The scheme has been developed to reduce the impact that the external lighting would have on the surrounding areas, based around a low pollution, low energy and low maintenance strategy. Considerations were also given to low energy products which have excellent light control optics such that their efficiencies are maximised, and carbon footprint minimised.

10.13 For the remainder of the site, lighting will operate in all external areas and will comply with the recommendations given in Guidance Notes for the Reduction of Obtrusive Light for Environmental Zone E2 (Rural - Low district brightness - Sparsely inhabited rural areas, village or relatively dark outer suburban locations). Luminaires will be LED that emit light downwards.

11.0 BIOPHILIC DESIGN AND BIODIVERSITY

Biophilic Design

11.1 Biophilic Design describes the relationships between nature, human biology and the design of the built environment. By consciously including nature in placemaking and architectural design, we are unconsciously reconnecting; bringing the outdoors into our manmade world.



11.2 Offices within the development will be set within a landscaped setting, with ornamental planting around parking areas, and opportunity for external seating areas. Significant areas of structural landscaping will be provided around the perimeter of larger units, to help them assimilate with their surroundings. Tree planting will provide a robust Green Belt buffer to the southern edge of the Masterplan Framework area.

Protection of Ecological Value

11.3 As part of the application/masterplan Framework process, a number of ecological surveys will be carried out to identify areas of significant value. A Phase One Habitat survey is currently under way. The areas of the site surveyed to date are considered to be low value habitat for wildlife as it is heavily made up of cultivated arable fields.

11.4 To protect existing biodiversity, a series of measures will be implemented to reduce any impact on local wildlife. These include the following:

- Retainment of as many areas of significant ecological value as possible;
- Protected species surveys to protect species such as Great Crested Newts, reptiles, bats, badgers and breeding birds;
- All site operatives to be made aware of current legislation, including the protection of certain species;
- Site clearance works to be timed to avoid the main bird nesting season. If this is not possible, a check should be carried out prior to the works to determine the presence of any active nests;
- Suitable fencing should be erected to reduce the possibility of any damage to established vegetation; and
- Native species, or species of known wildlife value, will be used for the proposed new planting.



Enhancement of Ecological Value

11.5 Enhancing a site's ecological value not only helps to reduce a development's environmental impact but improves the health and wellbeing of the occupants through their interaction with the natural environment.



11.6 The strategy for the new planting will include the following:

- A "Biodiversity Zone" and insect hotel within the Hermes site (see Appendix A1 – south of Plot 01);
- Green areas within the car parks, such as low maintenance shrubs;
- Promotion of local ecology through the use of native seed and fruit bearing species;
- Planting of flowering, nectar rich species to attract pollinators such as bees and butterflies;
- Natural and ornamental species to enrich the planting mix and promote local biodiversity;
- Creation of new habitats to attract local fauna; and
- Interconnection of existing and proposed habitats of the site and its surroundings where possible.



Biodiversity

11.7 The Hoyland West Masterplan Framework will deliver a Net Biodiversity Gain (improve the current ecological value of the site). On-site mitigation will be prioritised, such as the creation of new habitats and features. However, off-site compensation measures, , helping to improve local wildlife sites around Hoyland, may also be an option where total on-site mitigation is not possible.

12.0 VALUE AND COST

The Value of BREEAM

- 12.1 The Hoyland West development will target BREEAM 'Very Good' for all non-residential buildings.
- 12.2 BREEAM builds value and confidence in a project by providing independent certification that demonstrates the wider benefits to individuals, business, society and the environment. This means BREEAM rated developments are more sustainable environments that enhance the wellbeing of the people who live and work in them, help protect natural resources and make for more attractive property investments.
- 12.3 Figure 14 illustrates the co-benefits and added value of BREEAM to Developer, Tenant and Owner.

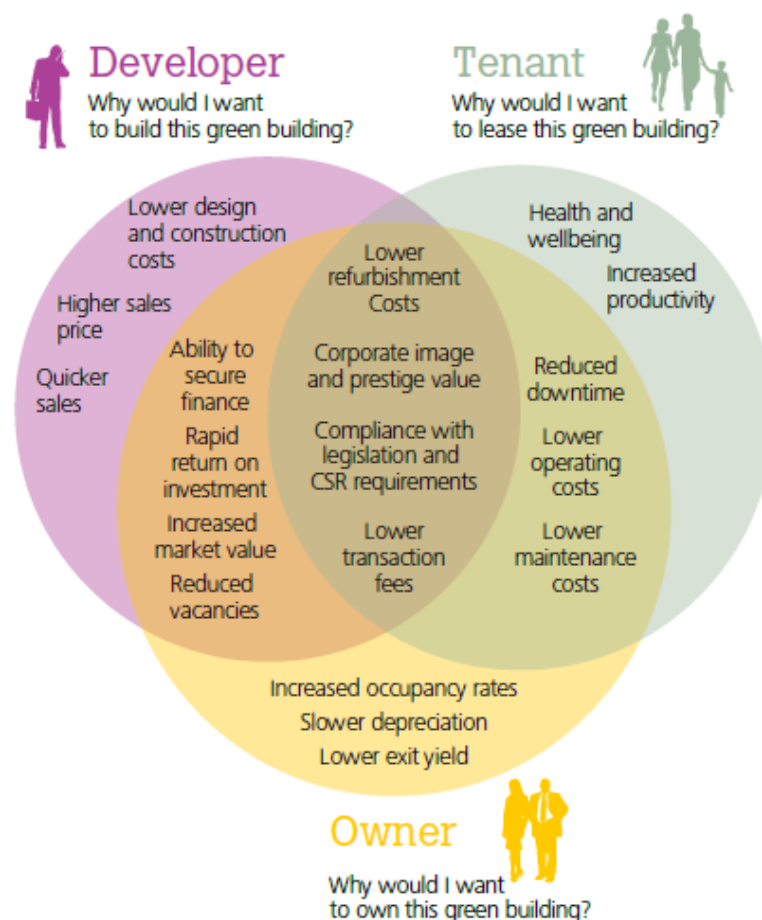


Figure 14: Co-Benefits and Added Value of BREEAM

(Source: The value of BREEAM, BRE Global Ltd.)

Public Consultation

- 12.4 Newlands Developments believe that engaging and consulting with the local community is vital to ensuring the development brings optimum value to the community that delivers genuine benefits to local people.
- 12.5 The Hoyland West Masterplan Framework is currently being consulted on with a number of community groups and local stakeholders to provide important feedback and assistance in understanding what local people

would like to see come forward on the site. The public consultation on the Masterplan Framework is being carried out online for a period of 6 weeks from the 7th May – 18th June 2020.

- 12.6 A meeting with BMBC Group Leader for Housing and Energy, David Malsom, was also held on 25th March 2020 to discuss the Hoyland West Energy and Sustainability Strategy. Feedback from BMBC on the proposed strategy to ensure the development is future-proofed for Zero Carbon was well received and all comments have been covered by this report.

Capital Cost Reporting

- 12.7 As part of the holistic approach, it is vital that the scheme considers financial sustainability over the lifetime of the development to ensure a successful and deliverable scheme.
- 12.8 As part of the BREEAM Assessment, confidential capital cost reporting will be made to the BRE. This data is anonymised by the BRE and used to inform performance benchmarking to promote the business case for sustainable buildings and to deliver whole life value.

Social Value

- 12.9 The development will provide significant employment benefits, new links and green spaces to the local area.

Security

- 12.10 The development will prioritise safety and security for the occupants, reducing the risks and costs associated with crime.

Inclusive Design

- 12.11 The scheme design will incorporate the requirements of the Equality Act (2010), making reasonable adjustments to enable disabled access, regularly reviewing whether the buildings are accessible and effective, and providing necessary design adjustments where it is practical to do so.
- 12.12 The development has been designed to ensure that potential users and visitors, regardless of age, gender or any disabilities are able to access and navigate unimpeded between and through buildings. Appropriate tactile paving, wide footways without obstacles, signage and street lighting will be provided to ensure an attractive pedestrian environment is provided.

Commissioning and Handover

- 12.13 To ensure the highest build quality standards, a schedule of commissioning will be developed to include a suitable timescale for commissioning and re-commissioning of all complex and non-complex building services, control systems and building fabric. This will be carried out in accordance with current Building Regulations, BSRIA and CIBSE guidelines, where applicable.
- 12.14 A specialist Commissioning Manager will be appointed during the design stage with responsibility for the following activities:

- Undertaking design reviews and giving advice on suitability for ease of commissioning;
- Providing commissioning management input to the construction programme and during installation stages; and
- Management of commissioning, performance testing and handover/post hand-over stages.

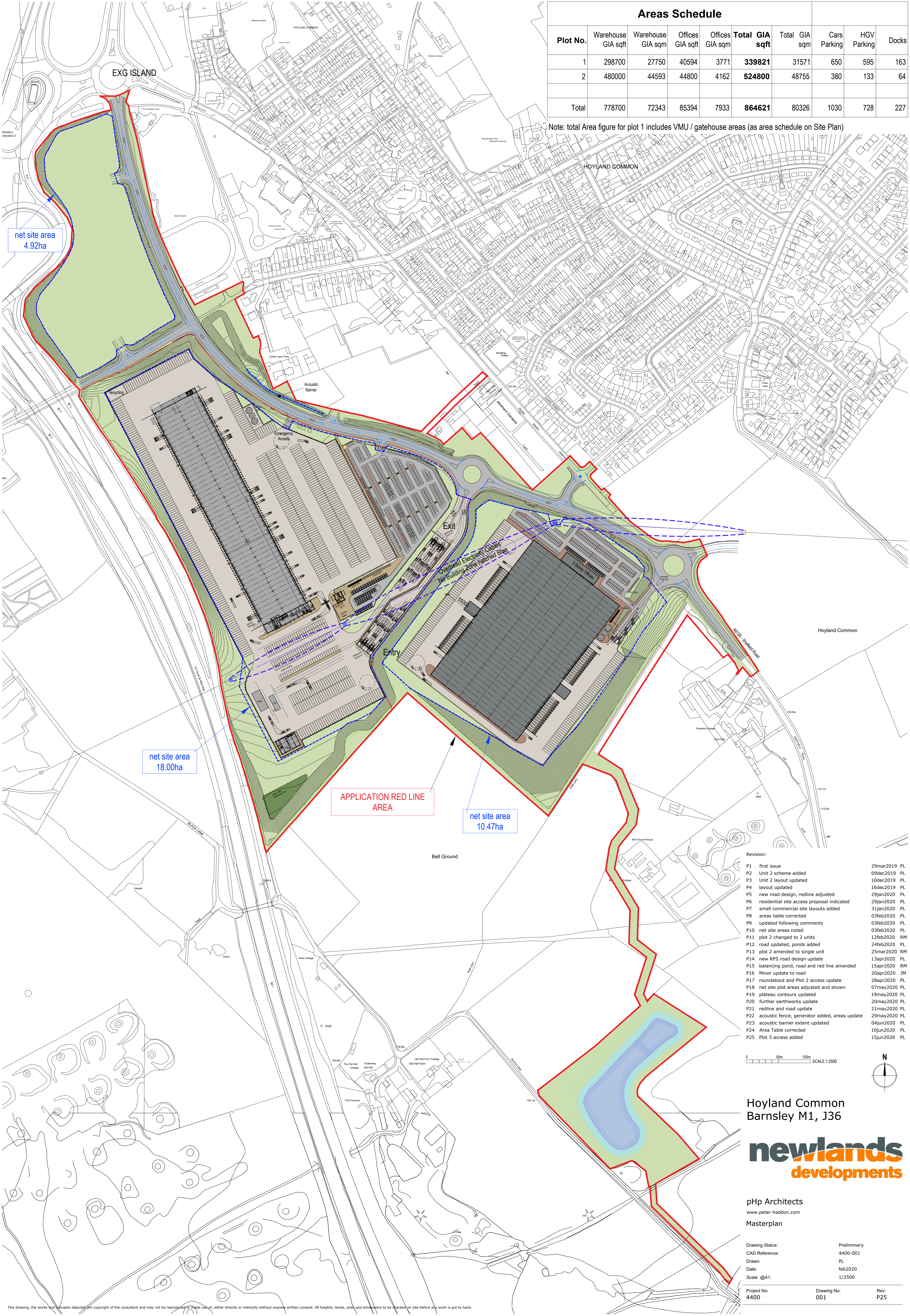
12.15 Prior to handover, a Building User Guide will be provided to the staff and management of the units. The guide will provide advice and information on how to operate the building efficiently and in a manner that is in keeping with the original design intent. The Guide will likely include the following information:

- An overview of the energy, water and waste efficiency strategy;
- The building's services and access to controls;
- Pre-arrival information for visitors (e.g. access and security procedures);
- Details on the shared facilities and how to access them;
- Safety and emergency instructions;
- Building related operational procedures and maintenance arrangements;
- Incident reporting and feedback arrangements;
- Building related training information;
- Access to transport facilities; and
- Provision and access to local amenities.

13.0 SUMMARY AND CONCLUSION

- 13.1 The issue of sustainable development has been carefully considered throughout the design of the proposed development at Hoyland West by Newlands Developments in Barnsley Metropolitan Brough Council.
- 13.2 In particular, the incorporation of sustainable design and construction methods, energy and water saving measures, waste reduction techniques as well as measures to enhance the ecological value of the site, a good quality and sustainable development is proposed.
- 13.3 The Sustainability Strategy for the development not only conforms to all national and local planning policies, it also aims to achieve the highest viable levels of sustainable design and construction, whilst minimising environmental impacts.
- 13.4 The key sustainability features outlined in this Sustainability Statement are listed below:
 - To provide a high-quality development that is **adaptable and resilient to future climate change**, with all units built to achieve a BREEAM 'Very Good' rating under the New Construction 2018 scheme;
 - To support the move towards a **circular economy**, by reducing embodied carbon emissions, considering carbon offsetting and eliminating waste to landfill;
 - To create a safe and friendly environment that will be flexible to the needs of its occupants, encourages active travel and creates a sense of **wellbeing**;
 - To have a positive impact on the **local community** by connecting the development with local residents and natural settings through sustainable modes of transport and green spaces, whilst being considerate of local residents during construction;
 - To future-proofing the development for the **transition to zero carbon**, whilst achieving viable reductions in CO₂ emissions with a deliverable and technically appropriate strategy;
 - To prioritise **biophilic design** and nature-based solutions in order to maximise biodiversity net gain, absorb pollutants such as oxides of nitrogen and particulate matter, and provide a sense of wellbeing around the site;
 - To create a development that adds significant **social value** to the area.

APPENDIX A1: Hoyland West Red Line Boundary Plan

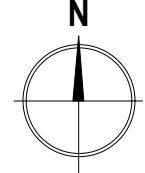


Areas Schedule									
Plot No.	Warehouse GIA sqft	Warehouse GIA sqm	Offices GIA sqft	Offices GIA sqm	Total GIA sqft	Total GIA sqm	Cars Parking	HGV Parking	Docks
1	298700	27750	40594	3771	339821	31571	650	595	163
2	480000	44593	44800	4162	524800	48755	380	133	64
Total	778700	72343	85394	7933	864621	80326	1030	728	227

Note: total Area figure for plot 1 includes VMU / gatehouse areas (as area schedule on Site Plan)

Revision:	
P1	first issue
P2	Unit 2 scheme added
P3	Unit 2 layout updated
P4	layout updated
P5	new road design, redline adjusted
P6	residential site access proposal indicated
P7	small commercial site layouts added
P8	areas table corrected
P9	updated following comments
P10	net site areas noted
P11	plot 2 changed to 2 units
P12	road updated, ponds added
P13	plot 2 amended to single unit
P14	new RPS road design update
P15	balancing pond, road and red line amended
P16	Minor update to road
P17	roundabout and Plot 2 access update
P18	net site plot areas adjusted and shown
P19	plateau contours updated
P20	further earthworks update
P21	redline and road update
P22	acoustic fence, generator added, areas update
P23	acoustic barrier extent updated
P24	Area Table corrected
P25	Plot 5 access added

0 50m 100m SCALE 1:2500



Hoyland Common
Barnsley M1, J36

newlands
developments

pHp Architects
www.peter-haddon.com
Masterplan

Drawing Status:	Preliminary
CAD Reference:	4400-001
Drawn:	PL
Date:	feb2020
Scale @A1:	1/2500

Project No:	Drawing No:	Rev:
4400	001	P25

APPENDIX A2: Hoyland Hermes (Plot 01) Detailed Site Plan



SCHEDULE OF ACCOMODATION GIA

	m ²	ft ²
Warehouse	27,750	298,700
Office (ground)	1,164	12,529
Office (first)	1,164	12,529
Office (2nd fl, viewing etc)	465	5,000
Toilets/Comms (north end)	80	861
VMU	703	7,565
Gatehouse Type A	147	1,582
Gatehouse Type B x4	98	1054
TOTAL	31,571	339,821

Car Parking total including; 650 spaces

- 42 accessible spaces
- 73 car share spaces
- 13 additional enlarged spaces
- 34 Electric Vehicle charging spaces
- ducting for future potential 130 ev

HGV Parking (excl doors) 595 spaces
Tractor Parking 150 spaces
(inc Rigid Lorry 7.5t Parking, Shunter Parking, Recycle, Collection Trailers)

Motorcycle Parking 30 spaces
Bicycle Parking 60 spaces

Haunch Height 12.5 m

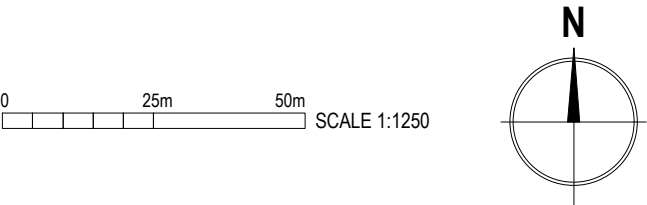
Dock Levellers 163 No.
Compactors 3 No.
Level Access Doors (Unit) 4 No.
Level Access (VMU) 4 No.

Exit

Overhead Electricity Cables
No Building Zone hatched Blue

Entry

Revision:			
P1	first issue	30mar2020	PL
P2	Red line and road updated	16Apr2020	JM
P3	Minor update to road	20Apr2020	JM
P4	fence added around car park	01may2020	PL
P5	car park / biodiversity updates	04may2020	PL
P6	road and contours updated	20may2020	PL
P7	redline and acoustic barrier update	04jun2020	PL
P8	Plot 5 access added	15jun2020	PL



newlands
developments

The Old Rectory Rectory Lane Milton Malsor
NORTHAMPTON NN7 3AQ
t: +44 (0)1604 858916 f: +44 (0)1604 859123
www.peter-haddon.com

pHp
architects

pHp Architects
Hermes Plot 1
Hoyland Common, Barnsley.

Site Plan

Status

Drawn PL Checked RM

Date mar2020

Project Number:

HOY-PHP-1A-00-DR-A-4400-101-P08

Scale@ A1
1:1250

Copyright reserved. Dimensions to be checked on site.
Discrepancies to be reported before proceeding.

APPENDIX B: Rolec EV Charging Specification

BASICCHARGE:EV

FREE-TO-USE

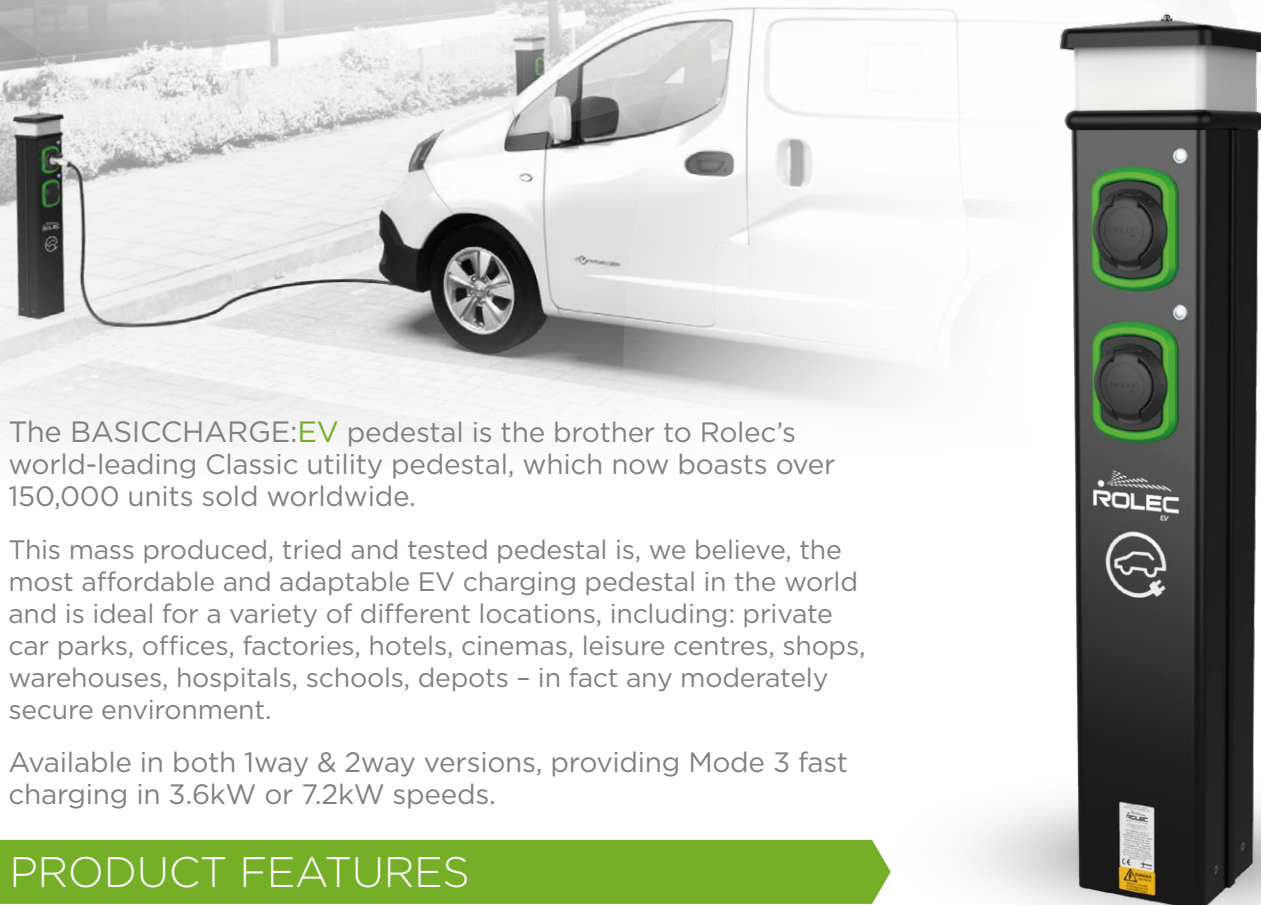
Type 2, Mode 3 Charging Socket(s)

3.6kW or 7.2kW

ROLEC

EV

MANUFACTURED IN THE UK



The BASICCHARGE:EV pedestal is the brother to Rolec's world-leading Classic utility pedestal, which now boasts over 150,000 units sold worldwide.

This mass produced, tried and tested pedestal is, we believe, the most affordable and adaptable EV charging pedestal in the world and is ideal for a variety of different locations, including: private car parks, offices, factories, hotels, cinemas, leisure centres, shops, warehouses, hospitals, schools, depots – in fact any moderately secure environment.

Available in both 1way & 2way versions, providing Mode 3 fast charging in 3.6kW or 7.2kW speeds.

Unit shown: BASICCHARGE:EV
2way Socket (Type 2) Charging Pedestal

PRODUCT FEATURES

- IEC 61851-1 Mode 3 fast charging
- Available in 1way and 2way versions
- Charging speeds - 3.6kW (16A) & 7.2kW (32A)
- IEC 62196 (Type 2) charging socket(s) c/w security hatchlock(s)
- Photocell controlled LED amenity lighting head
- Surface or roof mountable
- Built-in overload and fault current protection (RCBO)
- Built-in LED charging status indicator
- OLEV Grant Fundable under the Workplace Charging Scheme
- Easy to install and maintain
- IP65 British Standard Institute (BSI) certified
- Corrosion resistant & UV stabilised
- CE certified



Grant
Fundable



Branding & Colour
Options Available



LED Amenity
Lighting



IP65
Weather Proof



UV
Stabilised

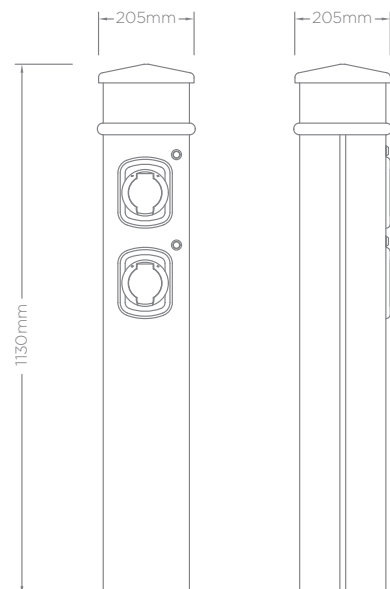


CE
Certified

SPECIFICATIONS

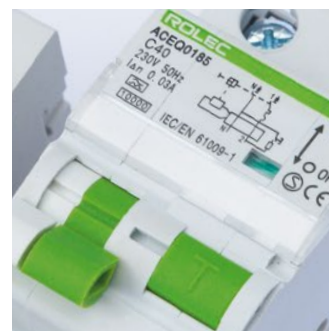
PHYSICAL

Dimensions	205mm x 1130mm x 205mm (W x H x D)
Standard Body Colour	Black (Other colours available upon request)
Standard Pod Colour	Green (Other colours available upon request)
Pedestal Material	High impact resistant aluminium composite outer shell
Internal Chassis	Heavy duty, hot dipped galvanised steel
Operating Temperature	-30°C to +50°C
Certifications & Compliances	Wiring Regulations - BS 7671 (18th Edition) IET EV Regulations, Glow Wire Testing - IEC 60695-2-13 EMC Compliance - EN 61000-6-3:2007, EN 61000-6-2:2005 Safety Compliance - EN 60950-1:2006, EN 60950-22:2006, Low Voltage Directive (LVD) 2014/35/EU Environmental Protection - IP65 (Category 1) Weatherproof BS EN 60529, UL94 Flame Rating at V2 for 1.5mm and 3.0mm



ELECTRICAL

Product Code	EVCL2005	EVCL2006	EVCL2015	EVCL2016
Charging Socket(s)	1x IEC 62196 (Type 2)		2x IEC 62196 (Type 2)	
Rated Output	3.6kW	7.2kW	3.6kW	7.2kW
Rated Current	16A	32A	16A	32A
Charge Protocol	Mode 3			
EV Charging Compliance	EN 61851-1:2001, EN 61851-21:2002, EN 61851-22:2002			
Input Voltage	230V AC/50Hz (Single Phase)			
Overload & Fault Current Protection	Built-in 30mA Type A RCBO & 6mA DC Sensitive Device			
	1x 20A	1x 40A	2x 20A	2x 40A
Incoming Cable Terminals	3 x 35mm			



OPTIONS & ACCESSORIES

- Key switch control charging
- Available with powder coated aluminium outer shell
- Available with powder coated stainless steel outer shell
- IP65 protected 13A domestic socket (Mode 2 charging or maintenance)
- Built-in class 1 MID compliant kWh meter
- Built-in time clock providing charge time management
- Corporate branding (colours, logo badge, etc.)
- Galvanised steel ground mounting base
- Protection barriers
- Charge point signage
- EV charging cables (Type 1 to Type 2 or Type 2 to Type 2)



Images are for marketing purposes only and are not contractual © 2018



Head office contact:
t: +44 (0) 1205 724754
f: +44 (0) 1205 724876
rolec@rolecserv.co.uk

Rolec Services Ltd
Ralphs Lane, Frampton West
Boston, Lincolnshire
UK. PE20 1QU

EVBCD-02
@RolecEV
www.rolecserv.com