Prologis UK Limited

Former MOD Document Office, Stockley Road, Hayes

Sustainability Statement

PROLOGIS™

TURLEY ASSOCIATES

Contents

Office Address:
9 Colmore Row
Birmingham
B3 2BJ

Telephone:
0121 233 0902

TA Reference:
PROL2015

Date of issue:
April 2013

Status: Draft

This **Sustainability Statement** has been prepared by **Turley Associates** on behalf of **Prologis UK Limited**

1 Introduction

This Sustainability Statement has been prepared by Turley Associates on behalf of Prologis UK Limited in support of the application for full planning permission for distribution warehouses (Use Class B8) with ancillary offices,associated car parking and landscape works within the existing Prologis Park at the former MOD Records office at Stockley Road, Hayes.

The purpose of this report is to summarise the approach to sustainability proposed by Prologis at the former MOD records offices, commonly referred to as Phase 3, at Prologis Park Heathrow which has been developed in response to its own corporate sustainability strategy and national and local policy requirements.

The Application Site

The Phase 3 development site extends to approximately 3ha and is designated as a Locally Significant Industrial Site (LSIS) through the Local Plan and a major employment area, where industrial and warehousing activities can operate. It is located approximately 2km from Heathrow Airport and 500m from Junction 4 of the M4.

The site is currently cleared for construction and has previously been used to store materials to build the other phases of the Prologis development. The site sits at the northern end of the Prologis Park, to the south of the park is a recreation park and open space. To the south east of the site are new residential dwellings, approved as part of the original outline application in 2005. Existing residential dwellings also lie to the east of the site, bordered by an existing landscaped bund which was established as part of the original outline application.

The Estate Road, off the Stockley Road roundabout, provides access to all existing units in the Prologis Park, and is maintained by the applicant.

History

The wider site area, which includes the recently developed Prologis Park, was granted outline planning permission (ref: 18399/APP/2004/2284) in August 2005 for mixed use development comprising use classes B1(a), B1 (c), B2 and B8, employment uses and C3 residential.

The first phases have now been built, however planning permission for the remaining phase, the current site, has expired, and as such a new application is being submitted.

The Proposed Development

This new application seeks planning permission for a scheme that is effectively the same as that already approved under previous applications, with some minor amendments being made to the service yard size, size of Unit C and the subdivision of Unit D, to provide new Unit G.

The application proposes:

“14,383 sq m (GEA) of commercial floorspace (B8 Use Classes) with ancillary offices, service yard areas and car parking over three units to complete the Prologis Park estate”.

Full details regarding the application site and its surroundings, history and the proposed development are provided in the Planning Statement and Design and Access Statement which accompany the planning application.

2 Prologis Approach to Sustainability

Who is Prologis?

Prologis is a leading global provider of industrial real estate, offering customers approximately 600 million square feet of distribution space in markets across the Americas, Europe and Asia. They operate over 3,500 industrial facilities in 22 countries which are leased to manufacturers, retailers, transportation companies, third party logistics providers and other enterprises with large scale distribution needs.

Prologis is one of the few real estate companies that operate on both a global and local level and therefore have an opportunity to take a leading role as a responsible developer, owner and manager of industrial property.

Prologis has recently been included in the 2013 "Global 100 Most Sustainable Corporations in the World" list at the World Economic Forum in Davos, Switzerland. Recognised as the world's most credible corporate sustainability ranking, this identifies the 100 top-performing companies worldwide based on a range of sector-specific 'sustainability' metrics.

Sustainability, energy efficiency, lower carbon emissions and functionality are key issues to Prologis customers and in response to these requirements, Prologis has invested heavily in the development of a Corporate Sustainability Strategy that is innovative, market leading and allows Prologis to mitigate and adapt to climate change on a global and local level.

The Prologis Sustainability Strategy

In the UK, Prologis is pioneering a new approach to the design, construction and operation of sustainable distribution warehouses. Working within recognised environmental assessment standards Prologis assess the potential environmental impact associated with all phases of the building life cycle from the manufacture of the building materials through to the operation of the building and how it will be demolished and replaced.

This approach is measured on three principal metrics;

a) Environmental Certification

b) Reduced operational carbon emissions

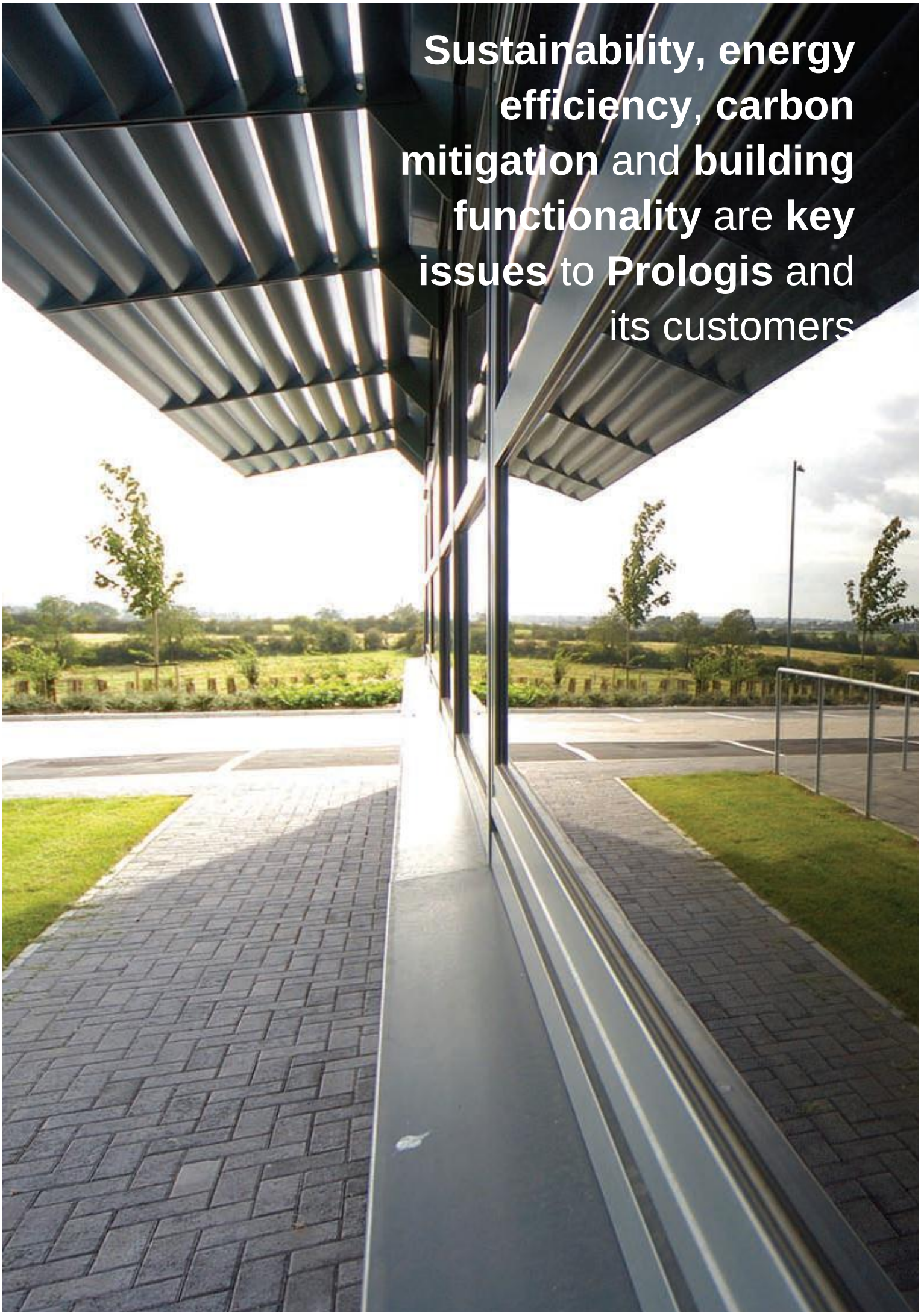
c) Mitigated embodied carbon emissions

Prologis Park Heathrow

Prologis is successfully applying their corporate sustainability strategy to their recent developments in the UK including the on-going development of Prologis Park Heathrow.

A Reserved Matters application (reference: 18399/APP/2010/545) was approved in June 2010 and subsequently to support the discharge of Condition 17 of that Reserved Matters approval Prologis agreed a sustainability strategy in accordance with the London Plan and local sustainability policies of the London Borough of Hillingdon.

This strategy was negotiated and agreed with Hillingdon sustainability officer Ian Thynne and included an Allowable Solutions contribution as part of an overall carbon reduction strategy for the development. The Sustainability Strategy put forward for this application is consistent with the approach previously agreed for the discharge of Condition 17 of the Reserved Matters application.



Sustainability, energy efficiency, **carbon mitigation** and **building functionality** are **key issues** to **Prologis** and its customers

3 Policy Context

Securing the Future: The UK Sustainable Development Strategy

In 2005, the government published an updated strategy for implementing sustainable development across the UK. This strategy acted as an overarching document from which a range of specific policies and legislation was derived.

Although published in 2005, the strategy has taken a recently renewed focus in light of the current government's attempts to define sustainable development in the National Planning Policy Framework.

One of the key aims of this strategy was to recognise the threats of climate change and ensure that the UK develops a strategy to mitigate and adapt to this event. The document established five key principles to underpin the national sustainable development strategy;

1. **Living within Environmental Limits;**
2. **Ensuring a strong, healthy and Just Society;**
3. **Achieving a Sustainable Economy;**
4. **Promoting Good Governance; and**
5. **Using sound science responsibly.**

With regards to planning and the built environment, this document set the basis for plans and policies promoting development that mitigates and adapts to climate change.

Climate Change Act

The Climate Change Act (2008) sets a legally binding target for reducing UK CO_2 emissions by at least 80% on 1990 levels by 2050. It established the Committee on Climate Change, which is responsible for setting binding interim carbon budgets for the Government over successive five year periods.

The first three carbon budgets were announced in the Budget 2009, resulting in an interim target of a 34% reduction in CO_2 equivalent emissions on 1990 levels by 2020. The UK has signed up to the EU Renewable Energy Directive which includes a UK target of 15% of its energy consumption to be delivered from renewable sources by 2020, with interim targets of, 5.4% by 2013-14, 7.5% by 2015-16 and 10.2% by 2017-18.

UK Carbon Plan

At the end of 2011, the Department of Energy and Climate Change (DECC) published an updated version of its annual carbon plan. It outlines the strategy the Government will take to secure energy supply, improve energy efficiency and reduce the country's carbon emissions.

With regards to non-residential development, the document presents the government's approach to ensuring this sector contributes to the overall energy efficiency and carbon reduction targets through reducing demand for energy in buildings, improving the heat efficiency of buildings, improving the electrical efficiency of lighting and appliances, changing behaviour to reduce demand and decarbonising heating and cooling supply.

Building Regulations

Whilst not planning policy the Building Regulations, and specifically Approved Document Part L Conservation of Fuel and Power is relevant as it determines the energy efficiency and carbon emissions of new buildings.

The primary mechanism for reducing carbon emissions in new development is through progressive changes to Part L and in 2006 the government established a policy whereby these regulations would be gradually improved in phases from 2006 to 2019.

Upon entering office the Coalition Government quickly commissioned a strategic review of the zero carbon buildings policy and Building Regulations (2013 iteration) to determine if the speed and pace of change is practical and achievable. In February, 2012, the Government released a consultation document on the proposed changes to the 2013 Regulations which proposes to reduce the targets for non-domestic development in recognition of the technical challenges that have been identified in meeting the current 2010 iteration of Part L.

The consultation on this document has closed and the government confirmed in the March 2013 Budget that a response to this will be made in May 2013. This response will also help confirm the government's position with regards to the zero carbon buildings policy. These changing national regulations will drive energy efficiency and carbon reduction improvements in new buildings forward towards ultimately delivering zero carbon standards.

National Planning Policy Framework

Following its publication on 27 March 2012, national planning policy is now provided by the National Planning Policy Framework (the Framework).

National Planning Policy does not form part of the Development Plan but is a material consideration which must be taken into account, where relevant, in making decisions on planning applications.

The Framework sets out the Government's planning policies for England and how these are expected to be applied; it also sets out the requirements for the planning system only to the extent that it is relevant, proportionate and necessary to do so.

The Government has made clear its expectation, through the Framework, that the planning system should positively embrace well-conceived development to deliver the economic growth necessary to create inclusive and mixed communities.

The Framework also states clearly that in order to deliver sustainable development the planning system must perform three distinct roles, aligned to the three pillars of sustainability, which must not be taken in isolation and should be pursued jointly:

- **An economic role –** contributing to building a strong, responsive and competitive economy, by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation; and by identifying and coordinating development requirements, including the provision of infrastructure;

- **A social role –** supporting strong, vibrant and healthy communities, by providing the supply of housing required to meet the needs of present and future generations; and by creating a high quality built environment, with accessible local services that reflect the community's needs and support its health, social and cultural well-being; and

- **An environmental role –** contributing to protecting and enhancing our natural, built and historic environment; and, as part of this, helping to improve biodiversity, use natural resources prudently, minimise waste and pollution, and mitigate and adapt to climate change including moving to a low carbon economy.

The presumption in favour of sustainable development is a key thread running through national policy for both plan making and decision taking and Paragraph 6 of The Framework states that:

"*The purpose of the planning system is to contribute to the achievement of sustainable development. The policies in paragraphs 18 to 219, taken as a whole, constitute the Government's view of what sustainable development in England means in practice for the planning system*".

The policies referred to in Paragraph 6 have been divided into 13 themes;

1. **Building a Strong Competitive Economy**
2. **Ensuring the Vitality of Town Centres**
3. **Supporting a prosperous rural economy**
4. **Promoting sustainable transport**
5. **Supporting high quality communications infrastructure**
6. **Delivering a wide choice of high quality homes**
7. **Requiring good design**
8. **Promoting healthy communities**
9. **Protecting Green Belt Land**
10. **Meeting the challenge of climate change, flooding and coastal change**
11. **Conserving and enhancing the natural environment**
12. **Conserving and enhancing the historic environment**
13. **Facilitating the sustainable use of minerals**

Should a proposed development demonstrate that it is supporting the relevant policies of the Framework then it is deemed to be 'Sustainable Development'.

Paragraph 95 of the Framework strongly promotes the development of a low carbon future and states that local authorities should:

- Plan for new development in locations and ways which reduce greenhouse gas emissions;
- Actively support energy efficiency improvements to existing buildings; and
- When setting any local requirements for a building's sustainability, do so in a way consistent with the Government's zero carbon buildings policy and adopt nationally described standards.

Paragraph 96 also states that in determining planning applications local authorities should expect new development to:

- 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.

This paragraph, and subsequent paragraphs of the Framework, gives local authorities the ability to set local sustainability targets provided these are viability tested through a robust evidence base and presented in a Development Plan Document.

The Development Plan

The Development Plan is the collective term for the policies used in the determination of planning applications.

The 'Development Plan' for the application at the former MOD document office consists of:

- **The London Plan (adopted 2011)**

- **Hillingdon Local Plan (adopted November 2012)**

- **Hillingdon UDP Saved Policies (saved 2007)**

These documents have been reviewed below for policies specifically relating to sustainable development.

The London Plan

The 2011 London Plan sets a vision of London as a city that becomes a world leader in improving the environment locally and globally. It outlines that London will take the lead in tackling climate change, reducing pollution, developing a low carbon economy, consuming fewer resources and using them more effectively.

Chapter 5 London's Response to Climate Change

This sets out a specific range of policies to underpin London's response to climate change; however, the delivery of sustainable development and combating climate change is integrated throughout the plan. Some of the key sustainability policies that form part of London's response to climate change include:

Policy 5.2 Minimising carbon dioxide emissions requires development to make the fullest contribution to minimising carbon dioxide emissions in accordance with the energy hierarchy.

Policy 5.3 Sustainable Design and Construction requires development to demonstrate that sustainable design standards are integral to the proposal, including its construction and operation, and ensure that they are considered at the beginning of the design process.

Policy 5.7 Renewable Energy states that major development should provide a reduction in expected carbon dioxide emissions through the use of on-site renewable energy generation, where

feasible.

Policy 5.13 Sustainable Urban Drainage requires development to utilise Sustainable Urban Drainage systems (SUDs) unless there are practical reasons for not doing so, and should aim to achieve Greenfield run-off rates and ensure that surface water run-off is managed as close to its source as possible.

Policy 5.15 Water Use and Supplies requires development to minimise the use of mains water by incorporating water saving measures and equipment.

Chapter 4 London's Economy

This sets out policies to ensure that London is a city that meets the challenges of economic and population growth and is an internationally competitive and successful city with a strong and diverse economy.

Chapter 6 London's Transport

This supports a city where it is easy, safe and convenient for everyone to access jobs, opportunities and facilities with an efficient and effective transport system which actively encourages more walking and cycling.

Sustainable Design and Construction: The London Plan Supplementary Planning Guidance

This SPG was produced to provide additional information to support the implementation of the Mayor's London Plan in 2006, which has now subsequently been superseded in 2011.

Whilst the SPG does not set new policy and is many ways not consistent with the latest policies of the current London Plan, the guidance therein has been given due consideration within the development of the sustainability strategy for Phase 3 of Prologis Park Heathrow.

Hillingdon Local Plan: Part 1 Strategic Policies

Policy BE1: Built Environment require all new development to improve and maintain the quality of the built environment in order to create successful and sustainable neighbourhoods, where people enjoy living and working and should:

- Achieve a high quality of design in all new buildings which enhances the local distinctiveness of the area, contributes to community cohesion and a sense of place;
- Improve areas of poorer environmental quality, including within the areas of relative disadvantage of Hayes, Yiewsley and West Drayton.
- Incorporate a clear network of routes that are easy to understand, inclusive, safe, secure and connect positively with interchanges, public transport, community facilities and services;
- Improves the quality of the public realm and provide for public and private spaces that are attractive, safe, functional, diverse, sustainable and accessible to all.
- Require all new development to achieve reductions in carbon dioxide emission in line with the London Plan targets through energy efficient design and effective use of low and zero carbon technologies. Where the required reduction from on-site renewable energy is not feasible within major developments, contributions off-site will be sought.
- The Council will seek to merge a suite of sustainable design goals, such as the use of SUDS, water efficiency, lifetime homes, and energy efficiency into a requirement measured against the Code for Sustainable Homes and BREEAM within the Hillingdon Local Plan: Part 2- Development Management Policies Local Development Document (LDD).
- All developments should be designed to make the most efficient use of natural resources whilst safeguarding historic assets, their settings and local amenity and include sustainable design and construction techniques to increase the re-use and recycling of construction, demolition and excavation waste and reduce the amount disposed to landfill.

Policy EM1: Climate Change Adaptation and Mitigation aims to ensure that climate change mitigation is addressed at every stage of the development process through a number of measures including:

- Prioritising higher density development in urban and town centres that are well served by sustainable forms of transport.

- Promoting a modal shift away from private car use and requiring new development to include innovative initiatives to reduce car dependency.

- Ensuring development meets the highest possible design standards whilst still retaining competitiveness within the market.

- Working with developers to identify the opportunities to help provide efficiency initiatives that can benefit the existing building stock.

- Promoting the use of decentralised energy within large scale development whilst improving local air quality levels.

- Targeting areas with high carbon emissions for additional reductions through low carbon strategies. These strategies will also have an objective to minimise other pollutants that impact on local air quality. Targeting areas of poor air quality for additional emissions reductions.

- Encouraging the installation of renewable energy for all new development in meeting the carbon reduction targets savings set out in the London Plan.

- Promoting new development to contribute to the upgrading of existing housing stock where appropriate.

Hillingdon UDP Saved Policies

Policy BE 25 relates to industrial and business uses, and states the LPA will seek to ensure modernisation and improvement of industrial and business areas though careful attention to the design and landscaping of buildings and external spaces and where appropriate will seek improved vehicular and pedestrian access and circulation routes through the area, and environmental improvements.

Summary of Policy and Implications

There are consistent themes emerging from the review of national and local sustainability policy which are relevant to this application.

Central to the government's and London's vision for 'Sustainable Development' is the approval of development that jointly promotes economic, social and environmental benefits.

At a regional and local level the Climate Change policies of the London Plan, which are supported by the adopted Hillingdon Local Plan Strategic Policies highlight the need to reduce energy and carbon emissions, consider low carbon and renewable energy, provide accessibility to enable sustainable travel choices, promote resource management and deliver sustainable economic growth.

In response to these policies the sustainability strategy has been discussed with Hillingdon sustainability officer Ian Thynne who has advised that a suitable Sustainability Statement must be submitted with the application and the authority expects new development to achieve a 25% reduction in carbon emissions over Part L 2010 and that the London Plan climate change policies be met where it is feasible and viable to do so.

Details of the Sustainability Strategy proposed by for Phase 3 is provided in **Section 4** of this report which clearly demonstrates how the application is supporting national and local sustainability and climate change policy.

Local policy identifies the importance of delivering **sustainable development** that is **functional** and **viable** adaptive to future climate change and **minimising carbon emissions,** achieves **high quality design** and efficient use of natural resources

4 Sustainability at Prologis Park

A Sustainability Strategy has been developed for the proposed development in accordance with the national zero carbon buildings policy and climate change policies of the London Plan to achieve positive social, environmental and economic outcomes for Hillingdon and deliver a sustainable and low carbon development.

The approach to sustainability is focused on two key priorities applicable to distribution development of **Sustainable Building Design** and **Environmental Responsibility**.

Prologis is continuously evolving their approach to sustainability in light of advances in best practice, Building Regulations and the BREEAM standard, feedback from their completed buildings and a desire to deliver more sustainable distribution warehouse buildings.

This section of the report clearly sets out how Prologis bespoke Sustainability Strategy meets, and in many cases exceeds the national and local policy requirements as set out in Section 3 and is consistent with the principles of sustainable development and latest thinking on the government's zero carbon buildings policy.

The Sustainability Strategy sets out the proposals put forward for the delivery of sustainable development for Phase 3 of Prologis Park Heathrow:

Sustainable Building Design

- **Operational Carbon Reduction**
  Investment into the fabric and services of the building to minimise energy use and associated carbon emissions during its operation and installation of suitable low carbon technologies.

- **Allowable Solutions Contribution**
  In accordance with the latest thinking on the national zero carbon buildings policy Prologis propose an Allowable Solutions contribution to meet the London Plan carbon reduction target.

- **Embodied Carbon Mitigation**
  Voluntary mitigation of 110% of the buildings embodied carbon emissions through the Planet Positive certified Cool Earth avoided deforestation project.

- **BREEAM Certification**
  The use of BREEAM as an environmental assessment mechanism to audit the sustainability performance of the buildings and mitigating the potential impact of the development and delivery of sustainable new buildings.

Environmental Responsibility

- **Building a Strong and Competitive Economy**
- **Sustainable Transportation**
- **Protecting and Enhancing the Natural Environment**
- **Water Use, Flooding and Drainage**
- **Waste and Resource Management**

This approach to creating sustainable buildings has been implemented on many other Prologis developments and is being taken forward at Prologis Park Heathrow.

This approach is reflective of the unique nature of resource consumption and energy demands of distribution warehouse development in construction and operation.

Operational Carbon Reduction

To meet the policy requirements of the London Plan and local sustainability aspirations Prologis propose a carbon mitigation strategy that reflects the unique energy demands of distribution warehouse buildings and also supports wider carbon reduction initiatives in the Borough of Hillingdon.

The strategy is focused on two key areas:

1. **Operational Carbon Mitigation Strategy**

   This includes a feasible and viable energy strategy developed in accordance with the energy hierarchy to reduce energy demand and integrate renewable energy.

2. **Local Allowable Solutions Contribution**

   A proposed Allowable Solutions contribution to meet the London Plan carbon reduction target shortfall.

3. **Embodied Carbon Mitigation Strategy**

   In addition to the requirements of the London Plan, Prologis is proposing to mitigate all embodied carbon emissions of the development through the Cool Earth avoided deforestation project.

Operational Carbon Mitigation

Policy 5.7 of the London Plan requires non-domestic development to achieve a 25% improvement on the 2010 Building Regulations.

In this context we believe that it is important to recognise how B8 development, such as that proposed, has received disproportionally greater carbon reduction targets under the 2010Part L Building Regulations in comparison to other forms of development.

We believe this is an important issue to demonstrate given that the London Plan does not recognise this fact and in requesting a 25% reduction above Part L 2010 on all forms of development is seeking disproportionately higher standards from certain types of development including the buildings proposed by the application.

In recognition of the variation in energy demand profiles in different non-domestic building types, Part L 2010 adopts an 'aggregate' approach for non-domestic buildings. Under this approach B8 development is required to contribute greater carbon emission reductions in the region of **34%.**

Evidence gathered by Prologis over the past few years has found that, on average, the 2010 Part L regulations has actually required B8 development to reduce its carbon emissions by as much as **50%**.

Acknowledging the differences associated with site layout, location and assessment methodologies this example demonstrates that the 2010 Part L regulations sets much higher carbon reduction targets for B8 development than the **34%** aggregate that was targeted by the Department for Communities and Local Government (DCLG) and the 25% set for many other types of development.

Prologis has raised this issue directly with DCLG who have acknowledged this anomaly and are anticipated to consider this in light of the proposed 2013 Part L Building Regulation amendments. This anomaly therefore sets an important context with regards to the operational carbon mitigation strategy proposed to meet the London Plan requirements.

Energy Efficient Distribution Warehouse Buildings

The buildings proposed will be a Prologis high specification, energy efficient, frost protected warehouse which will be designed to maintain the internal temperature of the building above 5 °C as a minimum. The predominant energy requirement in the main warehouse will therefore be electrical energy for lighting.

Prologis has invested heavily into the development of energy efficient buildings which utilise a number of measures to reduce and manage energy consumption.

Due to the efficiency of the building fabric, the majority of Prologis distribution buildings do not require warehouse heating and, as a result, the predominant energy consumption for these buildings is electricity for lighting.

In the event that a future customer of the building requires cooling or additional heating then Prologis will work with the customer to develop an energy strategy bespoke to that building that cost effectively reduces energy use and carbon emissions.

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

To reduce primary regulated energy use the following design measures are proposed:

Thermally Efficient and Air Tight Construction	Improved air tightness values of significantly lower than the Building Regulations standard of $10m^3/ m^2/hr$. Investing in an improved fabric and construction techniques to create a more airtight building dramatically reduces the loss of energy to the external environment, thereby reducing energy needed for heating and cooling requirements
Rooflights	The buildings at Prologis Park Heathrow will incorporate an estimated 15% rooflights which are deployed in combination with high efficiency daylight sensors to vary the lighting intensity according to the natural light penetration into the building. The rooflights will also have U-Values which exceed the minimum requirements of the Building Regulations thereby providing further efficiencies in terms of energy loss.
Energy Efficient Offices	The offices will contain a range of energy efficient measures as standard which include the zoning of office lighting combined with PIR sensors and the use of natural ventilation where possible to 'design out' the need for mechanical cooling.
Energy Monitoring	A sophisticated energy monitoring system will be installed together with a number of energy sub-meters. This system will constantly monitor the buildings energy use in a number of locations and report any excess energy use.

Low Carbon and Renewable Energy

To identify the most commercially and technically viable solutions to the London Plan targets, an assessment has been completed in accordance with the requirements of the London Plan Climate Change policies.

Meeting the policy target on-site for distribution warehousing is very commercially and technically challenging and Prologis has recently proactively engaged with sustainability officers at Hillingdon on this issue with regard to the discharge of Condition 17 of the previous Reserved Matters application (Reference: 18399/APP/2010/545) for the site prior to the expiration of the outline planning consent.

The operational energy requirements of warehouse buildings vary greatly depending on their use. As the majority of Prologis buildings are used for the storage and distribution of goods and they do not typically require heating or cooling thereby restricting the range of viable renewable energy technologies.

A Prologis distribution warehouse was recently the subject of assessment as part of the Target Zero programme, which aims to provide guidance on the design and construction of sustainable, low and zero carbon buildings in the UK. This research found that a number of Low and Zero Carbon (LZC) technologies, when applied to distribution warehouses, could actually cause an increase in carbon dioxide emissions.

In accordance with best practice the proposed development has prioritised the combination of an energy efficient building fabric and the supply of renewable energy that reflects the energy usage of distribution warehouse buildings as part of an overall operational carbon reduction strategy.
At this stage it is considered that only solar thermal hot water, Air Source Heat Pumps and PV cells are technically feasible for the proposed distribution warehouse buildings.

The inclusion of PV cells has been discounted as they would only provide power for lighting during daylight periods when the lighting demand is at its lowest. This means that the majority of the renewable energy generated would not be used onsite within the building, but exported to the local electricity distribution network. From a commercial perspective the continued dramatic reduction in the Government Feed in Tariff (FIT) has made large scale deployment of PV economically unviable for Prologis.

As a contribution toward the carbon reduction targets, Prologis proposes to install a solar thermal hot water system onto the office element of the building to provide a sustainable source of renewable heat for the domestic hot water supply.

In addition to the use of Solar Thermal Hot Water systems, Prologis propose the installation of a renewable Air Source Heat Pump system which will deliver additional renewable heating and further reduce carbon emissions.

This strategy, which was agreed with Hillingdon for the discharge of Condition 17 of the previous Reserved Matters application at Prologis Park is considered to represent the most technically and commercially viable option for on-site carbon emission reduction. It also provides Prologis with the flexibility to adapt to future advances in technology and legislation and any specific tenant requirements.

In summary the application proposes the following onsite carbon reduction strategy to meet the requirements of the London Plan:

1. **Be Lean:** The use of a range of energy efficiency measures to improve the fabric and services will result in a **7%** saving over the 2010 Part L regulations.

2. **Be Green:** The use of Solar Thermal Hot Water panels and Air Source Heat Pumps to provide an additional **7%** reduction after energy efficiency measures

Table 1: Operational Carbon Reduction

Carbon Standard	$kgCO_2/yr$	% Improvement
2006 Building Regulations TER	554,717	
2010 Building Regulations TER	369,811	33%
Prologis Park Heathrow Lean Measures	342,319	7%
Prologis Park Heathrow Green measures	317,310	7%
% Improvement on 2006 Part L2A		**43%**
% Improvement on 2010 Part L 2A		**14%**

Collectively through these lean and green measures the proposed development is estimated to exceed the 2010 Part L Regulations by **14%.**

It is important for London Borough's to recognize the differing standards and challenges faced by different types of non-residential development in achieving carbon emission reduction targets set by the London Plan and ensure that local policies and enforcement fully understand this.

Whilst it is acknowledged that this strategy does not deliver a 25% reduction over the 2010 Part L TER, it is estimated to deliver a **43%** improvement on 2006 Part L TER, and when considering with the disproportionally high targets set by the 2010 regulations on B8 development we consider this to represent the most commercially and technically viable operational carbon solution for the development.

Prologis recognise that the estimated Building Emission Rate (BER) is below the requirements of the London Plan Policy 5.2 carbon emission reduction target and propose to use an Allowable Solutions contribution in agreement with Hillingdon to mitigate the residual carbon reduction shortfall in accordance with the London Plan Policy BE1 of the adopted Local Plan and latest thinking on the national zero carbon buildings policy.

In addition Prologis propose to voluntarily mitigate the embodied emissions arising from the construction of the development.

The proposed approach to off-site carbon mitigation is explained in more detail on the following pages.

Allowable Solutions Contribution

It is anticipated that the Government's final zero carbon buildings policy is likely to include an Allowable Solutions mechanism. This mechanism is being developed in recognition of the fact that Zero Carbon targets will not be met without some form of flexible off-site carbon mitigation.

Evaluating Opportunities and Priorities

The latest report published in October 2012 by the Zero Carbon Hub; *Allowable Solutions Evaluating Opportunities and Priorities* sets out the latest thinking on Allowable Solution and how this may work in practice.

Whilst this does identify the potential for Allowable Solutions to support local projects it is by no means prescriptive in this regard. A key point is that when Local Authorities take responsibility for delivering carbon reductions, they would need to accept these as contractual and legal obligations and may therefore be liable to developers to do this.

Investment in embodied carbon mitigation initiatives is clearly identified as a potential Allowable Solution project and the report highlights the importance of verification and certification of any Allowable solutions projects to provide a transparent audit trail.

In the 2013 Budget the government reiterated its commitment to the national zero carbon buildings policy and the application of Allowable Solutions stating:

"*DCLG will publish a detailed plan, setting out its response to the 2012 consultation on the energy efficiency requirements in building regulations, by May 2013. The Government will then consult on next steps, including on the means of delivering allowable solutions, by Summer Recess*".

Allowable Solutions and the London Plan

Section E of The London Plan Policy 5.2 introduces the concept of Allowable Solutions as an alternative mechanism to meeting the London Plan carbon reduction targets, where there are restrictions to meeting this target onsite.

It is understood that Hillingdon has not yet developed a local *Allowable Solutions Framework* or *Community Energy Fund* to establish the local price of carbon and identify a range of appropriate Allowable Solution projects.

Prologis fully support the principal of Allowable Solutions provided that carbon mitigation is definitive and deliverable and preferably where this provides a corresponding environmental benefit.

Identified Carbon Shortfall

Based on the Allowable Solutions framework Prologis has calculated a lifecycle carbon shortfall of 1,200 tonnes of CO_2 over an assumed 30 year operational lifespan of the building.

Table 2: London Plan Carbon Target Shortfall

Prologis Park Heathrow carbon emissions	Annual Tonnes CO_2	Tonnes CO2 saved	% on 2010 Part L TER	30 Year Tonnes CO_2
2010 Building Regulations TER	370			
Reduction from Lean and mean measures	342	27	7%	810
Reduction from Green measures	317	25	14%	750
Residual London Plan emissions to mitigate	**277**	**40**	**25%**	**1,200**

Cost of Carbon

The cost of carbon for the purposes of Allowable Solutions is not yet fully defined and there are no agreed national details.

The latest assumptions on pricing by the Zero Carbon Hub for new homes assume a price per tonne of £46 over a lifecycle period of 30 years.

Prologis think that this price is actually higher than the likely market price cap to be set for non-domestic development with the current price of Carbon under the Carbon Reduction Commitment (CRC) at £12 per tonne and the proposed carbon price floor to be introduced from 2015 set at £16 per tonne.

In this context Prologis propose to use an average value of existing published carbon prices as the basis of its Allowable Solutions contribution to LBH and calculated as set out in **Table 3** below:

Table 3: Suggested Price of Carbon

Carbon Price	£/Tonne CO_2
Zero Carbon Hub price	£46
CRC Buy Out Price	£12
UK 2015 Carbon Price Floor	£16
EU Emission trading scheme allowances	£7
Average Carbon Price	**£20**

Allowable Solutions

Based on the Carbon Price as set out above and the calculated emissions shortfall presented in **Table 2** of **40 tonnes of CO_2** per year and **1,200 tonnes of CO_2** over a 30 year lifecycle Prologis offer an Allowable Solutions contribution equivalent to:

CO2 Lifecycle Shortfall	Carbon Price	AS Contribution
1200	£20	**£24,000**

The Allowable Solutions contribution of **£24,000** is made towards investment in local energy efficiency and carbon reduction measures within Hillingdon in order to meet the London Plan Policy 5.2 carbon emission reduction target.

Prologis propose that this Allowable Solutions contribution be set out as appropriate in the applications s106 agreement and will represent a contractual and legal obligation on the London Borough of Hillingdon to deliver the carbon emission reductions and would assume full responsibility for ensuring that the most cost effective carbon reduction solution was identified and implemented.

Local Allowable Solutions Projects

Previous consultations have identified a number of initiatives being pursued by Hillingdon to reduce carbon emissions in existing buildings and deliver new low carbon and renewable energy infrastructure.

It is recognised that at this stage that limited details will be available regarding the specific carbon reduction measures to be undertaken and the corresponding carbon likely to be saved.We request that Prologis be made aware of the progress of projects undertaken using the allowable solutions contribution to ensure that the carbon savings are achieved.

In the event that a suitable project is not undertaken within five years we reserve the right to identify an alternative project.

Phase 3 of **Prologis Park Heathrow** will deliver **energy efficient buildings,** use of **renewable heat** and an **allowable solutions** contribution to support **local carbon emission reduction** in **Hillingdon**

Embodied Carbon Mitigation

Embodied carbon emissions are those emissions associated with the manufacture of the building materials, transport of these materials to site, construction, demolition and recycling during the construction phase.

Building Regulations and planning policy have focused on regulated operational carbon emissions (such as that arising from heating and lighting) however, the embodied emissions of a building can also account for a significant percentage of its lifecycle carbon emissions.

For a typical UK distribution building the embodied carbon can equate to over 20% of the total carbon emitted from all stages of development. For a low energy a building such as that developed by Prologis, the embodied carbon will be proportionally greater.

Developing a strategy to reduce and mitigate this embodied carbon will therefore result in much greater carbon reductions than by simply focusing on operational emissions alone. When applied on a global scale, this approach has the potential to mitigate large quantities of carbon emissions.

The development and construction industry is increasingly recognising the impact of embodied carbon arising from the production of building materials and the construction process and by mitigating embodied carbon, Prologis will significantly improve the sustainability performance of their buildings.

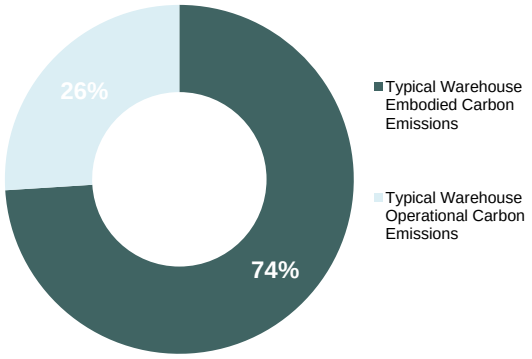
Embodied Carbon Emissions and National Zero Carbon Building Policy

The recent report published by the Zero Carbon Hub sets out the latest thinking on the evolution of the governments Zero Carbon Buildings Policy and the role of 'Allowable Solutions' in meeting this standard.

This report considers investment in Embodied Carbon as one possible eligible Allowable Solution mechanism and identifies a number of benefits to using this approach to deliver Zero Carbon buildings including:

- There is huge potential of large scale, 'actual' and immediate reductions within the UK
- The savings that are achieved stays in the built environment
- Incentivising this area through the Allowable Solutions agenda could drive UK based innovation in the area of materials, education leading to job creation and investment.

This report suggests that investments in embodied carbon initiatives are cost effective and have the potential to be deployed at a large scale highlighting that during a total building lifetime much of the lifecycle carbon is emitted even before the building is occupied, as embodied carbon and illustrated by the chart below for a typical warehouse building.



Draft Policy 8 Allowable Solutions of the emerging revised Core Strategy clearly identifies carbon mitigation as an important area of innovation and a mechanism to help developers achieve 'Carbon Neutrality'

There is currently no mandatory requirement for any organisation to calculate and mitigate embodied carbon, however, the embodied carbon emissions of the development will be calculated by undertaking a Cradle to Grave Life Cycle Assessment (LCA) of materials to calculate the carbon emitted as a result of:

1. **Manufacture of raw materials**
2. **Delivery of materials to site and use of energy during construction**
3. **Use and maintenance of the building**
4. **Energy use during the demolition and recycling of a building**

During the construction stage Prologis will undertake a detailed Cradle to Grave LCA of each building to quantify the embodied carbon.

This embodied carbon emissions will then be mitigated through the 'Cool Earth' project, which is a Planet Positive certified scheme to avoid rainforest deforestation and suitable local projects and includes:

1. Identification of suitable local projects with direct educational and/ or biodiversity benefits as part of the wider Landscaping/ Green Infrastructure strategy. Suitable projects will be identified closer to the construction stage.

2. A donation to the Cool Earth Project that will mitigate 110% of the calculated embodied carbon emissions through a donation to a project that will result in the protection of in excess of a square mile of Peruvian rainforest that would otherwise have been destroyed.

What is Cool Earth?

Cool Earth is a UK registered charity that works with local communities that live in and around the rainforests of South America.

Rainforests are critically important ecosystems and tools in the context of global climate change for a number of reasons including:

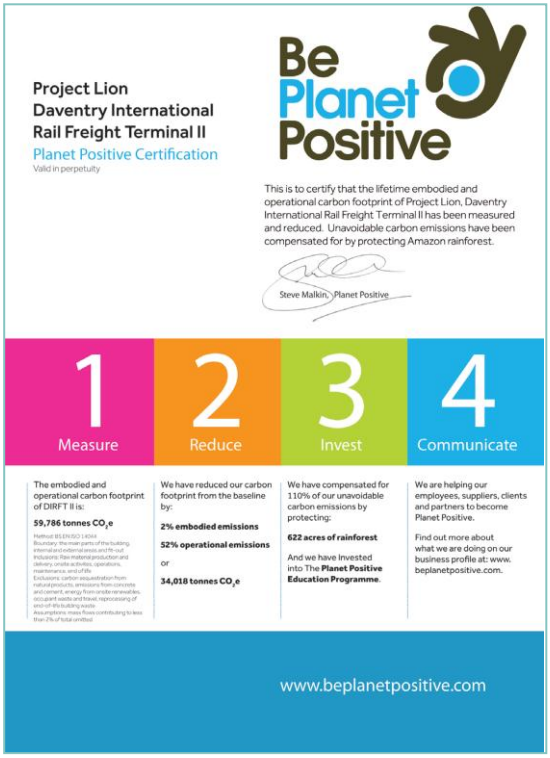
– Cool Earth estimates that rainforest destruction accounts for as many CO_2 emissions as that emitted by the USA – approximately six billion tonnes per annum.
– 1.6 billion people depend on rainforests for their welfare and livelihood with over 350 million people living within rainforest communities.

Cool Earth works directly with those communities who live in and around rainforests to invest in projects that directly prevent deforestation thereby avoiding the release of sequestered atmospheric carbon emissions.

The projects operate to strict guidelines to ensure that local communities benefit directly from the carbon mitigation projects.

Planet Positive

The embodied carbon reduction and mitigation strategy will be monitored and certified by Planet Positive who will validate the final carbon footprint reports for the building and issue a certificate confirming a Planet Positive building has been created.



This certification is an internationally recognised mark of environmental achievement that confirms that the embodied carbon footprint of a building has been measured, reduced where possible and then 110% of the remaining carbon emissions have been mitigated.

The proposed developments embodied carbon mitigation strategy will form part of Prologis overall approach to minimising carbon emissions which will exceed the local policy requirements of Wellingborough and the policies of the emerging Northamptonshire revised Core Strategy.

Carbon Mitigation Strategy Summary

It is important to recognize the challenges faced by B8 development in achieving ever increasing onsite carbon emission reduction targets.

The approach taken by Prologis, and summarised in the table below, will deliver substantial total operational and embodied carbon savings that extend beyond the base requirements of Building Regulations the London Plan and local planning policy requirements and best practice.

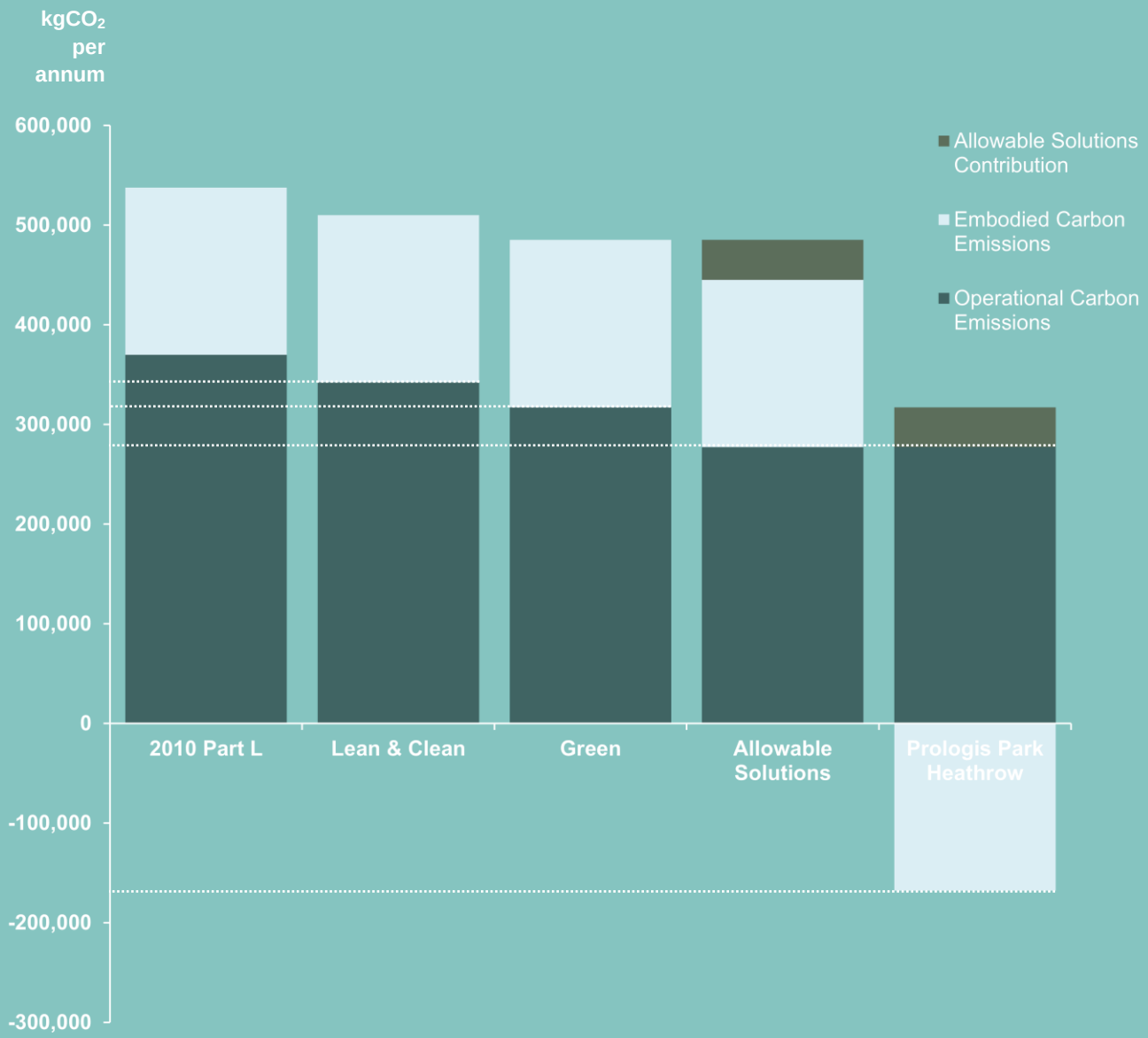
Scenario	Phase 3 Prologis Park Heathrow Carbon Emissions (TonnesCO_2e/yr)		
	Operational	Embodied	Total
2006 Part L TER	555	167	**722**
2010 Part L TER	370	167	**537**
Lean and Mean	342	167	**509**
Green	317	167	**484**
Allowable Solutions Contribution	277	167	**444**
Embodied Carbon Mitigation	277	0	**277**
% reduction on 2010 Part L2A TER			**25%**

Through the implementation of this strategy the proposed development will make a substantial positive contribution to mitigation of operational and embodied carbon emissions onsite without impacting on the effective operation and functionality of the distribution buildings as well as supporting wider emission reduction initiatives within the Borough of Hillingdon.

What is the developments carbon footprint ?

The graph below clearly demonstrates how the carbon mitigation strategy adopted by Prologis for the application will reduce carbon emissions in accordance with the requirements of the London Plan and local sustainability policies of the Borough of Hillingdon.

In summary the buildings will reduce onsite carbon emissions by **14%** over the 2010 Part L2A Target Emission Rate (TER) and make an allowable solutions contribution in accordance with Policy 5.2 of the London Plan which in combination with onsite carbon reduction measures will deliver a **25%** reduction on 2010 Part L carbon emissions. Prologis will also voluntarily mitigate all of the developments embodied carbon emissions through the cool earth avoided deforestation project.



Be Planet Positive

BREEAM

BREEAM is widely acknowledged as a key mechanism for measuring the sustainability performance of a non-domestic building in the UK and is recognised as an important sustainability metric by Prologis.

Local Policy Expectations

The London Plan sets no specific requirements for non-domestic development to achieve BREEAM certification.

The adopted Local Plan core strategic policies sets out under Policy BE1: Built Environment that the Council will seek to merge a suite of sustainable design goal into a requirement measured against BREEAM within the Hillingdon Local Plan: Part 2-Development Management Policies Local Development Document (LDD), however, at present no adopted local policy stipulates the use of BREEAM or specific standards of achievement from non-domestic development in Hillingdon.

Changes to BREEAM

Achieving a BREEAM rating requires considerable investment in a range of sustainable design features in areas such as: Energy; Water; Procurement; Waste and Construction.

the BREEAM assessment criteria is continually evolving to reflect changes in sustainability performance criteria and best practice and in 2011 was updated to reflect such changes.

This change in BREEAM Guidance has resulted in an Excellent rated building under the 2008 guidance now securing only a Very Good rating under the latest 2011 assessment criteria.

Comparing the credit scoring of Prologis buildings under the BREEAM 2008 assessment with the latest revised 2011 assessment methodology has found that development will typically achieve a BREEAM Excellent rating scoring over 75% and exceeding the minimum 70% scoring requirement.

BREEAM at Prologis Park Heathrow

As part of their corporate Sustainability Strategy, Prologis is committed to the use of BREEAM as a sustainability metric and propose that the development will achieve the BREEAM Very Good standard under the 2011 New Construction Assessment criteriaas a verified and certified demonstration of the delivery of sustainable buildings.

A BREEAM Very Good rating is considered to represent Advanced Good Practice and broadly represents performance equivalent to the top 25% of UK new non-domestic buildings.

Certification using BREEAM represents just one part of Prologis commitment to delivering sustainable development and this bespoke Sustainability Strategy delivers against a much wider scope of sustainability indicators than that addressed by BREEAM alone.

This approach is considered to be in accordance with the national objectives of delivering sustainable development and objectives of Policy BE1 of the adopted Local Plan.

Environmental Responsibility

Whilst the energy and carbon reduction strategy and use of the BREEAM environmental assessment standard addresses a number of key sustainability elements Prologis also seeks to positively influence other key sustainable development issues applicable to B8 development.

For Phase 3 of the Prologuis Park Heathrow development these include:

- **Building a Strong and Competitive Economy**
- **Sustainable Transportation**
- **Protecting and Enhancing the Natural Environment**
- **Water Use, Flooding and Drainage**
- **Waste and Resource Management**

During the outline design process, sustainability has been integrated into each of these issues as summarised below.

Building a Strong and Competitive Economy

The proposed development will result in a number of economic benefits supporting the aims of the National Planning Policy Framework, London Plan and local planning policy.

The development will secure private sector investment and deliver substantial new employment opportunities for Hillingdon. The vast majority of these will be full time, whilst the construction phase will also indirectly support the creation of new jobs.

The logistics sector provides a steady source of job growth and offers a range of well-paid employment opportunities across the occupational spectrum and it is estimated that up to [XX] direct jobs will be created by the development

There are a variety of jobs that are likely to be provided within the distribution facility including managers, professional and technical occupations, warehouse floor staff, drivers, office administration, sales and customer service positions, plant and machines operatives and IT positions. Indirect jobs are also likely to be created through an increase in the use of nearby shops and other amenities as well as the supporting supply chain both in construction and subsequently operation.

Prologis is exploring options to ensure local people benefit from the new employment opportunities that will be generated. This includes working with occupiers to consider advertising employment opportunities locally and support for training and skills programmes.

Prologis will also forge links with educational institutions with the aim of giving local students and apprentices the opportunity to learn from both the construction and logistics functions of the site.

Sustainable Transportation

A Transport Statement (TS) has been prepared by WSP and accompanies the planning application.

The application site is located approximately 0.5km north of Junction 4 of the M4 motorway, to the east of the A408 Stockley Road with access into the units directly off the estate road and access into the carpark areas is located away from the service yards in order to provide separate secure areas.

The TS has found that the traffic generated by the proposals can be accommodated by the local road network and the development will generate a significantly lower number of vehicle trips than the development proposals of the lapsed outline permission and a lower number of trips than the development proposals of the previous permission.

A number of measures are proposed to reduce vehicular trips through encouraging and improving accessibility by sustainable modes; and implementation of a Framework Travel Plan.
The area surrounding Prologis Park enjoys good pedestrian links with an established network of footways and cycleways.

Hayes town centre and both Hayes and Harlington railway station are located within one mile of Prologis Park which equates to approximately a 10 minute cycle ride or 20 minute walk. The railway stations provide frequent access from London Paddington and Reading as well as other locations.

A number of buses run along the roads surrounding Prologis Park. The nearest bus stops are located on the Prologis Park access road.

To encourage sustainable travel choices the sites outline application included a Framework Travel Plan and set an obligation to implement a Travel Plan upon each occupier at Prologis Park and it is proposed that this methodology will be followed for the Phase 3 development.

The objectives of the Travel Plan for the Application Site will be to:

- Influence and shape movement patterns and transport choice in favour of more sustainable modes;
- Ensure the maximum potential of the development proposals is realised;
- Form the function of an operational management tool to facilitate the delivery of sustainable transport objectives.

In developing and implementing a travel plan there would be benefits for both new users of the development and the existing communities in the surrounding area. These benefits would include:

- Reducing intrusion on the local community both in terms of on-street parking and congestion;
- Realising new opportunities to utilise land for other purposes;
- Enhancing the image of the development as an accessible and sustainable location;
- Improving the quality of the environment in the local area; and
- Improving the health of employees through reduced stress and an improved quality of life.

Meeting the aims of the Travel Plan will need to be undertaken through positive action by occupiers of the application site working in partnership with local authorities and local transport providers as well as other interested organisations.

The Travel Plan would essentially seek to balance a range of incentives to encourage travel by non-car modes with disincentives to car use.

Protecting and Enhancing the Natural Environment

An ecological impact assessment of the proposed development and application site has been undertaken by Applied Ecology Ltd.

This assessment has found the majority of the site to predominantly consist of cleared levelled ground and supports a mix of relatively species-poor open grassland and ephemeral vegetation, of low habitat and botanical value.

There are no statutory designations of nature conservation value within the application site and no anticipated negative effects on statutory or non-statutory wildlife site are anticipated as a consequence of Phase 3 development at the Prologis site.

In general the habitats within the application site are considered to be limited ecological interest. Two mammal holes have been identified in soil bunds in the north of the site and it has been recommended that these holes are monitored to confirm badger use prior to site clearance.

Habitat areas considered suitable for reptiles, including the northern margin adjacent to the rail-line, will be removed following a phased approach to grassland cutting during the reptile active period and in advance of full site clearance/ construction.

Given its relatively small size and urban location, the site is unlikely to be of high value for ground nesting birds, but a check for breeding birds will be completed in advance of site clearance.

Green Infrastructure will play an increasingly important role within 'climate proofing' the UK and directly supports minimising carbon emissions through carbon sequestration.

The landscape strategy prepared by Barry Chinn Associates will provide integrated green space on the site supporting future climate change adaptation and local biodiversity enhancement. The main planted areas will surround each unit and estate road consisting of tree and hedge planting with ornamental species.

The existing landscaping bunds and badger corridors outside of the application boundary were developed and consented as part of the Outline Approval and will not to be altered and be maintained as existing.

Green Infrastructure will provide shade, cooling and a thermal insulation barrier in the winter. It will also potentially mitigate risks from climate change-induced reductions in air and water quality; and can provide a buffer for habitats and species, whilst contributing to attainment of sustainable urban drainage and controlling upstream water flows to reduce flood risk.

Water Use, Flooding and Drainage

A Flood Risk Assessment has been undertaken and accompanies the planning application. This sets out a strategy for sustainably managing flood risk as most appropriate to the location and nature of development.

The surface water management strategy which has been based on the use of Sustainable Urban Drainage systems (SUDs) to replicate the existing conditions and minimise flood risk.

A rainwater harvesting system will be provided to collect 'grey' rain water from the main office roof for reuse in all non-potable facilities within the development. This will include WC and urinal flushing which typically make up over 50% of water usage within an office warehouse facility.

Prologis has a corporate sustainability target of reducing potable water usage by 50% in all new warehouse developments to conserve water and Prologis will specify water efficient appliances including dual flush toilets and PIR sensors for taps. Water meters combined with leak detection equipment will also be specified.

Waste and Resource Management

Development requires the use of land and natural resources in construction and operation. In accordance with the corporate sustainability strategy, Prologis has developed a range of procedures to maximise resource efficiency and minimise waste during all stages of the development.

The best opportunities for improving materials resource efficiency in construction projects occur during the design stage and can provide significant cost savings, reductions in waste produced and disposed to landfill, and carbon reductions.

Prologis is committed to designing out waste, recognising that the planning and design stage of development plays an important role in reducing waste in accordance with the waste hierarchy. Prior to construction a Construction Environmental Management Plan (CEMP) will be developed and will set out the strategy, standards, control measures and monitoring procedures that will be observed to manage any adverse environmental impacts associated with the construction process of development.

Prologis has invested heavily in a construction specification that maximises energy and resource efficiency. All of the main construction materials

target achieving an A rating in the Building Research Establishment's (BRE) Green Guide to Specification. An A rated material has a proven lower environmental impact.

Prologis seeks to specify the use of recycled materials wherever viable including steel content and aggregates. All materials will be sourced in accordance with a sustainable procurement strategy which includes the following measures;

- All timber will be sourced from sustainable sources.
- Recycled materials with low embodied carbon will be preferred.
- Materials suppliers that have an established Environmental Management System.

Off-site prefabrication and design for modularisation will be promoted and maximised where possible to minimise the potential for on-site construction waste and consideration will be given to use prefabricated solutions to minimise waste during the construction phase.

It is anticipated that the skeleton structure of the buildings will use steel frame design and bolted steelwork which will allow approximately 75% of the steel to be recycled at the end of the buildings life. Similarly, the cladding panels will facilitate de-construction and recycling. Off- site prefabrication of materials is utilised to minimise waste during the construction phase.

During construction, a waste management strategy will be implemented which will promote waste segregation and recycling during construction. The construction contractor will be required to implement a range of procedures to minimise waste and environmental impact during the construction phase. These measures include:

- Develop a Site Waste Management Plan (SWMP) in accordance with the Site Waste Management Regulations (2008).
- The SWMP will include procedures for maximising recycling and minimising construction waste to landfill. A target of a minimum of 50% recycling of construction waste will be set.
- Detailed records shall be kept indicating the types and quantities of materials recycled which shall include a minimum of 5 different types of construction waste.
- All timber used on site shall be responsibly sourced from either certified sources (FSC) or from reclaimed or reused sources.
- Comply with all relevant legislation, codes of practice and standards and shall adopt best practice policies for the control of air, water and noise pollution.
- Register with the Considerate Constructors Scheme and commit to 'exceed compliance' so that 2 credits are achieved under BREEAM (2011) MAN02.
- Provide and use suitable and secure methods and types of storage for all materials including those that may cause a potential environmental impact following accidental spillage (such as hydrocarbons).

During the operational phase of the development, Prologis will work with their customers to provide appropriate waste management facilities in accordance with the Waste Hierarchy that will enable segregation and recycling.

5 Conclusion

Prologis has developed an innovative Sustainability Strategy which will be implemented at Phase 3 of Prologis Park Heathrow and will ensure it provides significant benefits to the local economy and also tackles the global issue of climate change mitigation and adaptation.

As one of the **Global 100 most sustainable corporations in the world** Prologis is fully committed that the proposed new employment park will achieve high standards of design. The sustainability strategy will protect and where possible enhance the local environment, implement sustainable transportation measures and make a strong positive contribution to the implementation of national and local sustainability policy.

This report demonstrates that the carbon mitigation strategy proposed is in accordance with the climate change policies of the **London Plan** and local sustainability policies of the **Borough of Hillingdon**.

The main sustainability features of the proposed development include;

1. A positive contribution to building a strong local economy, generating **new jobs** in construction and operation.
2. A commitment to deliver sustainable buildings that will achieve the **BREEAM Very Good** environmental assessment rating under the 2011 New Construction assessment criteria.
3. Minimised carbon emissions through construction of **energy efficient distribution warehouse buildings** that are 50% less carbon intensive than equivalent buildings constructed to 2006 Building Regulations and achieves a **7%** reduction on 2010 Part L2A emissions from lean and clean measures.
4. The onsite generation of renewable heat from **Solar Thermal Hot Water** panels and **Air Source Heat Pump** systems to reduce carbon emissions by a further **7%.**
5. An **Allowable Solutions contribution** of **£24,000** equivalent to **1,200 Lifecycle tonnes of CO_2** paid to Hillingdon through s106 agreement in lieu of onsite carbon emission reduction to achieve the London Plan Carbon emission reduction target of **25%** reduction over Part L2A 2010.
6. Prologis will also voluntarily mitigate all **embodied greenhouse gas emissions** through the 'Cool Earth' project, which is a Planet Positive certified scheme to avoid rainforest deforestation further contributing to minimising the climate change impacts of development.
7. **Reduced water consumption** in operation through water efficient fittings, suitable metering and **rainwater harvesting** in accordance with Prologis corporate policy of reducing potable water usage by **50%** in all new warehouse developments and meeting BREEAM excellent standards for water efficiency.
8. **Maximise resource efficiency** and minimise waste during construction and operation of the development including committing to achieving 32 or more points under the Considerate Constructor scheme.
9. An accessible and well-designed development which encourages walking and cycling and will implement **Travel Plans** to support more sustainable travel choices.
10. **Green Infrastructure** within the landscape design which will protect the natural environment retaining existing hedgerows and trees where possible, enhance biodiversity and support climate change adaptation.

Overall the proposals will have a beneficial impact on the local economy, will conserve and where possible enhance the natural environment as well as meeting the long term challenge of future climate change.

We are a leading planning and urban design consultancy operating from offices in key development sectors across the United Kingdom.

Belfast	Glasgow
Birmingham	Leeds
Bristol	London
Cardiff	Manchester
Edinburgh	Southampton

TURLEYASSOCIATES

www.turleyassociates.co.uk