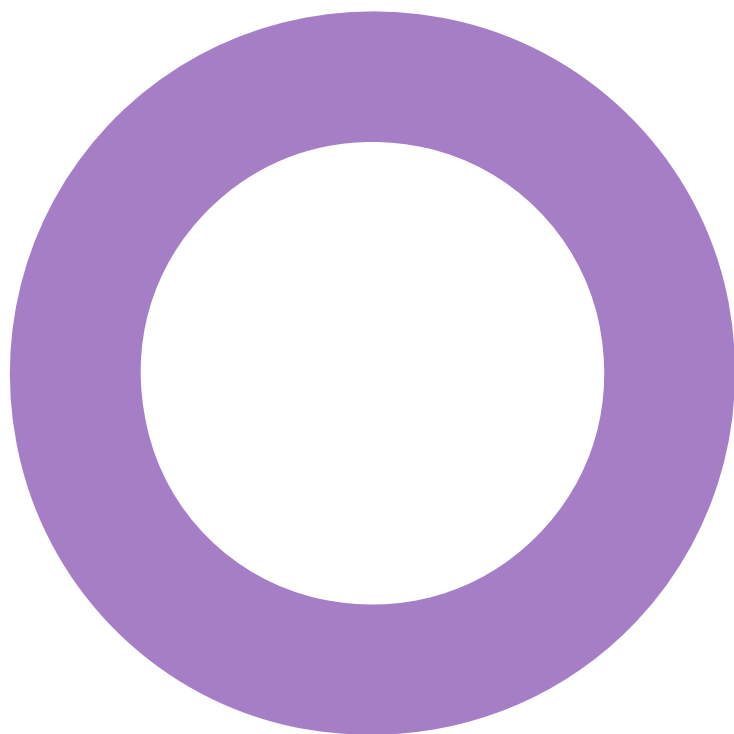


**Winnersh 810.
Wokingham.
Frasers Property UK.**

SUSTAINABILITY
ENERGY & SUSTAINABILITY STATEMENT

REVISION 02 – 13 AUGUST 2025



Audit sheet.

Rev.	Date	Description of change / purpose of issue	Prepared	Reviewed	Authorised
01	11/08/2025	Draft Energy & Sustainability Statement	S. Tuteja	C. Brierley	M. Barnes
02	13/08/2025	Issued for planning	S. Tuteja	C. Brierley	M. Barnes

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Executive summary.

Development description.

This energy and sustainability statement has been prepared on behalf of Frasers Property UK, hereafter referred to as the ‘Applicant’, in support of the planning application for the proposed ‘*demolition of existing buildings and erection of a replacement building for flexible use within Class E(g) Class B2, B8 together with access, parking and landscaping and associated works on*’ Winnersh 810 site at Winnersh Triangle Business Park, Wokingham, hereafter the ‘Proposed Development’.

The Proposed Development design includes an open-plan office located on the first floor, initially occupying approximately 15% (683 m²) of the total gross internal area (GIA) of 4,552 m². The design allows for flexibility, with the potential to expand the office accommodation to up to 30% of the GIA by utilising the undercroft space beneath the first-floor office. The ground floor area below the office is intended to remain adaptable, providing the option for future conversion to office use if required.

Policy and drivers.

A policy review has been undertaken and is outlined in Section 2 of the report. As a summary, planning policy and guidance applicable to the proposed development includes;

- National Planning Policy Framework (NPPF) (2024)
- Wokingham Borough Local Development Framework, Core Strategy (Adopted January 2010)
- Wokingham Borough Development Plan – Managing Development Delivery 2014
- Wokingham Borough Local Development Framework – Sustainable Design and Construction – SPD (2010)
- Wokingham Borough Council Climate Emergency Action Plan
- BREEAM New Construction V6.

Please refer to Appendix A for a direct response to Wokingham Borough Policies.

Sustainability strategy.

No longer simply ticking boxes, today sustainability is about making real-term impacts. Increasingly, it has become the starting point – and the heart – of ambitious projects. To capture the multi-faceted sustainability benefits and values that the Proposed Development can bring to the site, local community, surrounding businesses, and future building users, five defined factors – the people, the building, the social network, the natural environment, and the economic aspects – inform our proposed sustainability framework.

Collaboration with the Applicant and project team as well as key stakeholders has helped to inform the innovative strategies for the Proposed Development. Each strategy responds to the five elements of our framework, and we make sure we articulate it in an accessible and engaging way no matter the complexity.

Physical Capital

The Energy Strategy outlines a proposal for an electricity-led, combustion free development with minimised energy consumption and carbon emissions. It confirms the compliance with a minimum 10% reduction in carbon emissions through renewable energy or low carbon technology.

The Flood Risk Assessment has concluded that the Proposed Development will not increase the risk of flooding elsewhere and will have a positive reduction in flood risk with the inclusion of surface water attenuation in line with national policy.

Sustainable transport is being promoted within the Proposed Development, and to support this a Transport Assessment has been produced. Cycle parking is being provided on site and pedestrian access is being enhanced. The location of the site benefits from good public transport links and connection to existing cycling and pedestrian networks.

Social Capital

The Proposed Development will be a positive addition to the wider Winnersh Triangle business park and contributes to the creation of a ‘creative quarter’ to strengthen the sense of place. Occupants will benefit from the abundance of green, amenity space and facilities within the business park, as well as the continuous connection to nature through the landscaping which is to be strengthened at the borders of the site.

Economic Capital

To promote economic sustainability and boost the local economy, the Applicant has in place a Responsible Sourcing Policy, which aims to ensure that the suppliers they engage with adhere to the environmental, social and governance values and best practice consistent with the Applicant’s own commitments. The use of local workforce and local suppliers will be encouraged. The procurement strategy will promote the selection of products that reduce the negative environmental, economic and social impact across the supply chain.

In addition to employment during construction, the site will also generate employment opportunities during the operational phase associated with the desired use type. Fair operating practices will be implemented at all stages of the development.

Human Capital

The Proposed Development seeks to optimise the health and wellbeing of staff and visitors, as well as the surrounding locality. Pollution control, both from the construction and operation, is at the core of the strategy and measures to improve upon local environment and experience for occupants have been considered. The Proposed Development will also include measures to ensure the safety and security of all site users, such as CCTV, security lighting and access control.

The wider Winnersh Triangle Business Park has achieved a Fitwel rating of 2 stars, which is a demonstration of the Applicant’s ongoing commitment to ensuring the Winnersh Triangle development supports the wellbeing of its occupants and that any new development, including the Proposed Development, supports this goal.

Natural Capital

The Proposed Development largely impacts areas of negligible ecological value. However, precautionary measures have been recommended to manage the limited risk of disturbance to protected or notable species that may be supported by the landscaped areas in the existing site. Measures include minimisation of the impact of external lighting, and tree or shrub removal to take place outside of the peak nesting season or after confirmation of no nesting on site. Opportunities for increasing the ecological value of the site include use of native species, bat and bird boxes and increasing the diversity of species on site.

Climate resilience is being considered in the design of the Proposed Development to minimise the future need of adaptive works to the building to take account of more extreme weather changes resulting from climate change and changing weather patterns.

In accordance with the Applicant’s sustainability ambitions, building elements will be selected to minimise environmental impact where possible. Furthermore, resource efficiency is a key priority for the site. The Applicant has set targets for diversion from landfill for construction (70%), demolition (80%) and excavation (95%) waste. The construction waste management will align to the waste hierarchy, and the recycling and reuse of materials on site or locally will be maximised. A Waste Management Plan will be developed for the Proposed Development, to outline opportunities for waste minimisation and management, and ensure best practice is adopted for the construction phase.

Energy strategy.

The energy and sustainability strategy for the Proposed Development draws on policy and guidance from the Wokingham Local Plan, as well as national policy.

The Energy Strategy takes a holistic approach to energy demand reduction, and carbon emission reductions. Principles of the Energy Hierarchy are followed in terms of ensuring the design is energy efficient prior to incorporation of Low and Zero Carbon (LZC) energy sources.



Figure 1: The Energy Hierarchy

Calculations demonstrating the energy requirements and associated CO₂ emissions in accordance with Part L of the Building Regulations have been carried out for the Proposed Development using Building Regulations approved software. This has been used to inform the Energy Strategy for the development.

Energy Strategy Summary

The Energy Strategy is taking a ‘fabric first’ approach to energy and carbon emission reductions – reducing energy demand at the outset, prior to the implementation of low and zero-carbon technologies.

Be Lean: Passive Design and Energy Efficiency

Carbon emission reductions are proposed to be reduced at this stage of the energy hierarchy by the implementation of the following measures:

- High thermally performing building fabric, including insulation to ‘elephant doors’.
- Airtight construction.

Be Clean: Supplying Energy Efficiently

Currently, there are no known district energy networks in the local vicinity that are sited in a location that would make connection viable from a carbon reduction perspective. Further, district heating systems can result in significant distribution losses via the buried infrastructure associated with energy distribution (i.e. below ground pipework). Therefore, distributing heating energy over large distances is often less efficient in terms of carbon reduction than providing an efficient on-site energy generation strategy. District energy networks are ideally suited to urban areas with significant heat density.

For these reasons, district energy connection is not proposed for the Proposed Development.

Be Green: LZC technologies

A feasibility options appraisal has been carried out which found that Air Source Heat Pumps (ASHP) and solar Photovoltaic Panels (PVs) were the most suitable LZC technology due to the nature of the energy demand expected on site (led mostly by lighting demands, but also heating, and mechanical/electrical pumps and fans)..

- **Air Source Heat Pumps:** Heating and hot water will be delivered to the Proposed Development via ASHP. ASHPs will be employed through Variant Refrigerant Flow (VRF) and Low Temperature Hot Water (LTHW) systems for heating and cooling. Compared to a gas-fired system, ASHP will provide benefits in terms of carbon emission reductions, especially when looking to the future, taking into account the decarbonisation of the electricity grid. The estimated heating and cooling energy demand for the whole site equates to 51,285 kWh/yr, which is approximately 26.7% of the total regulated energy consumption.
- **Photovoltaic Panels:** A PV array of 450 m² is proposed for the development which will provide c. 90.40 kWhyr.

The incorporation of the ASHP and PV is expected to reduce the carbon emissions to c.3.81 kgCO₂e per year. This is equivalent to a **14.9%** reduction of carbon emissions against the notional building. This ensures the development satisfies the Wokingham local plan requirement under ‘Policy CC05: Providing 10% carbon reduction from low and zero-carbon technologies’ for a 10% carbon reduction over the Part L baseline through renewable technology.

Energy and Carbon Reduction Summary

Overall, a reduction in regulated CO₂ emissions of up to **14.9%** is currently anticipated when the ASHP and PV solutions are compared to the Part L 2021 notional building with equivalent systems.

Part L and EPC results

The performance of Proposed Development has been assessed against Part L 2021 of the Building Regulations, including both the Emission Rate (ER) and the Primary Energy Rate (PER). The subsequent results are presented in Table 1. The anticipated carbon reductions (ER) over the Part L 2021 notional building is expected to be 14.9%. It is also anticipated that the Proposed Development will achieve an Draft Energy Performance Certificate (EPC) rating of A.

Table 1: Part L and EPC Results

Building	Emission Rate			Primary Energy Rate			EPC	PV Array
	TER	BER	Performance	TPER	TBER	Performance		
	kgCO ₂ /m ² .yr	kgCO ₂ /m ² .yr	%	kWh/m ² .yr	kWh/m ² .yr	%		m ²
Winnersh 810	4.48	3.81	14.9	48.23	39.82	17.4%	A	450

1. Introduction.

1.1 Purpose of this report.

This document has been prepared on behalf of the Applicant, in support of the planning application for the Proposed Development, 'Demolition of existing buildings and erection of a replacement building for flexible use within Class E(g) Class B2, B8 together with access, parking and landscaping and associated works' on Winnersh 810 site at Winnersh Triangle Business Park, Wokingham.

The Energy and Sustainability Statement summarises the pertinent regulatory and planning policies applicable to the Proposed Development and sets out how the Proposed Development addresses the relevant policy requirements.

This report outlines the proposed approach to sustainability. In addition, please to refer to:

- Appendix A: For a review of the Wokingham Borough Council's Core Strategy Policies
- Appendix B: For responses to the Sustainable Design and Construction SPD
- Appendix C: For a summary of the BREEAM pre-assessment.

1.2 Site context and location.

The site address is Building 810, Eskdale Road, Winnersh Triangle Business Park, Winnersh, RG41 5TU. The site is currently occupied by three linked 1980's industrial buildings known as C1-C3. Demolition of the existing buildings was granted approval in February 2021. A further unit C4 was previously demolished.

The site is within the Winnersh Triangle Business Park which is made up of office and light industrial uses. The wider business park development has wellbeing and sustainability at the heart, offering many amenity and hospitality spaces to building occupants. These include a sports and wellness centre, cafes and food services, a children's nursery and outdoor gathering spaces. The business park has a current 2-star Fitwel accreditation demonstrating excellence in health and wellbeing and is also aiming to achieve net zero carbon emissions by 2040, aligned with Science Based Targets.

In recent years, the business park has carried out extensive improvements to reduce the carbon impact, and the following features have been installed across the development:

- Over 19,000 sq ft of solar PV installed,
- 100% renewable electricity procured through the grid,
- Installation of energy efficient lighting,
- Water efficient fixtures and taps,
- Promotion of cycling to reduce commuter emissions, and
- Light coloured pavements and tree shading to reduce summer temperatures.

Occupiers at Winnersh Triangle benefit from access to The Green, a public-realm green space for occupants, which can be used for exercise classes and events. Sustainable and active transport is supported across the development with walkable, pedestrian routes, cycle hubs and bicycle hire facilities, as well as connections to local cycling and walking networks offsite.

The Building 810 site has a previous planning consent for the development of a film studio unit with gross internal area of 4,515 sqm at ground floor.

1.3 Development description.

The Proposed Development consists of the demolition of the existing building and the construction of a new industrial unit incorporating a mezzanine level. The design includes an open-plan office located on the first floor, initially occupying approximately 15% (683 m²) of the total gross internal area (GIA) of 4,552 m². The design allows for flexibility, with the potential to expand the office accommodation to up to 30% of the GIA by utilising the undercroft space beneath the first-floor office. The ground floor area below the office is intended to remain adaptable, providing the option for future conversion to office use if required.

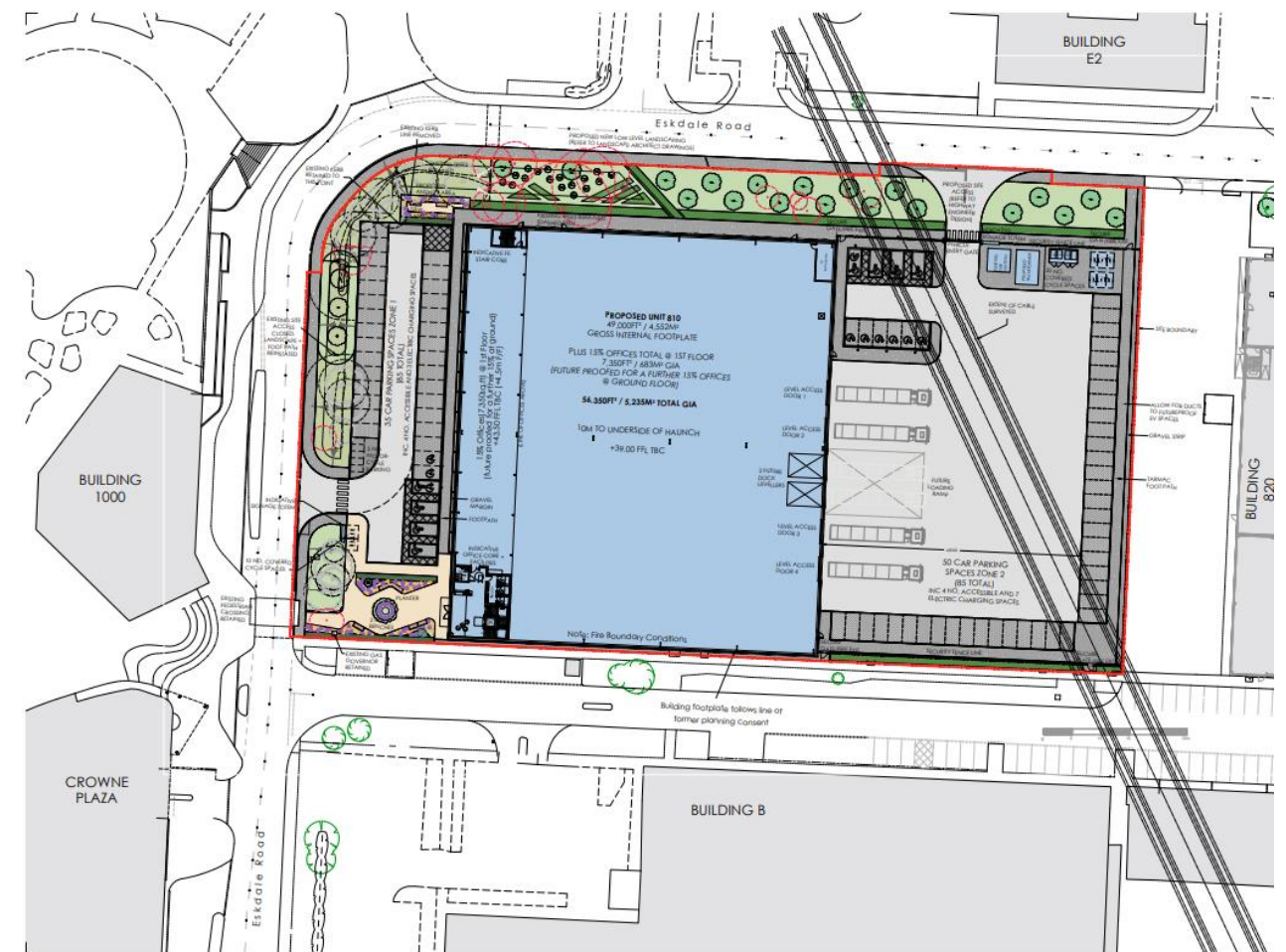


Figure 2: Proposed development site plan (Source: The Harris Partnership)

2. Overview of policy and drivers.

The strategy will respond first and foremost to the universal challenges of the climate emergency, the biodiversity crisis facing humanity, and health and wellbeing. This is addressed directly through the Applicant's aspirations and the wider Winnersh Triangle Business Park Strategy, in addition to national and local policy which will shape the baseline performance, with the UN Sustainable Development Goals alongside best practice principles of design, delivery, and operation shaping the eventual strategy.

2.1 Global challenges.

People the world over face three universal challenges to which any sustainable development must respond effectively to be successful.

These are as follows:



Climate change

In 2019, the Intergovernmental Panel on Climate Change (IPCC) confirmed via publication that, in order to mitigate the most devastating impacts of climate change, the world must demonstrate net zero carbon emissions by 2050. Reflecting this urgent call for action, the Committee on Climate Change published *Net Zero – The UK's contribution to stopping global warming*, identifying a route for the UK to achieve the net zero target. The UK government then joined a number of other nations in declaring a **Climate Emergency** and the target was ratified into law, meaning the UK has a legally binding obligation to reduce its emissions to zero by 2050 at the latest.

The built environment contributes around 40% (UKGBC) of the UK's national greenhouse gas emissions footprint, so any new development must minimise its footprint on day 1 and demonstrate a realistic route to achieving net zero carbon in future in order to align with our commitments to national decarbonisation.



Biodiversity

As a consequence of the warming climate, deforestation and habitat destruction, pollution and other human processes, the world is experiencing a **biodiversity crisis**. It is estimated that human action is causing the rate of extinction to be around 1,000 times what could be considered a natural background rate and future projections estimate that 30% to 50% of all current species could be extinct by the middle of the century.

Within the UK, the need to provide homes and amenities for an ever-growing population is putting strain on our local ecosystems. The State of Nature Report shows that the UK is one of the most nature-depleted countries in the world, and the UK Government responded to this in 2021 with the introduction of the Environment Act, which sets new, long-term environmental targets to protect and enhance the country's natural world. Sustainable development must therefore mitigate its impact on local habitats, plants, and wildlife and contribute to a net gain in local biodiversity.



Health and wellbeing

Less of a crisis and more of a revolution, the understanding of the **importance of health and wellbeing** to happiness, productivity, community, and prosperity has become increasingly well-founded in recent years. Where someone lives and works is the primary influence on whether they are healthy and well and through the design of new development, people can be motivated to embrace active, healthy lifestyles and facilitated to be sociable, community-driven, and content.

2.2 National policy.

Building Regulations: Approved Document Part L

Approved Document Part L (2021, England edition), here forward referred to as Part L 2021, is the Building Regulation relating to the conservation of fuel and power in buildings. Part L 2021 has two parts, Part L1 relates to dwellings and Part L2 relates to buildings other than dwellings. The development will be assessed under Part L2.

Part L 2021 of the Building Regulations is the mechanism by which government is driving reductions in the regulated CO₂ emissions from refurbished, change of use and new buildings. For new buildings Part L 2021 has four performance metrics as follows:

- Primary energy target
- CO₂ emissions target
- Minimum standards for fabric and fixed building services

2.3 Local policy.

Wokingham Borough Local Development Framework, Core Strategy (Adopted January 2010)

The Core Strategy details the borough's development vision to 2026. All non-residential developments greater than 100m² floorspace are required to provide a detailed sustainability statement, addressing at least:

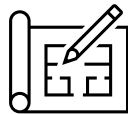
- BREEAM for non-residential buildings (see Section 2.3),
- energy efficiency (see Section 5.1),
- energy generation (see Section 5.3),
- water efficiency (see Section 4.5 – Water Consumption),
- biodiversity and habitat protection (see Section 4.5 – Ecology & Biodiversity),
- waste reduction and management (see Section 4.5 – Waste Management),
- flood risk (see Section 4.1 - Flood Risk Management and Sustainable Drainage), and
- infrastructure provision to support sustainable travel (see Section 4.1 – Sustainable Transport).

Appendix A includes a summary of some of the key Core Strategy 2010 policies and the draft Local Plan Public Consultation Plan which is yet to be adopted.

Wokingham Borough Development Plan – Managing Development Delivery 2014

The Managing Development Delivery Local Plan aims to provide additional detail to the policies set out in the Core Strategy 2010. The following is a summary of the key policies related to Sustainability.

Table 2: Key policies from Wokingham Borough Council’s Managing Development Delivery Local Plan

 Policy CC04 – Sustainable Design and Construction	Planning permission will only be granted for proposals that seek to deliver high quality sustainably designed and constructed developments by: 1. All new non-residential proposals of more than 100m² gross non-residential floorspace shall at least: a. Achieve the necessary mandatory Building Research Establishment Assessment Method (BREEAM) requirements or any future national equivalent. b. Meet or exceed statutory Requirements for water resource management. 2. All development, including conversions, alterations and extensions shall incorporate suitable waste management facilities, including on-site recycling. Point 1.a is superseded by the Local Development Framework 2010.
 Policy CC05 – Renewable energy and decentralised energy networks	1. Local opportunities to contribute towards decentralised energy supply from renewable and low carbon technologies will be encouraged. 2. Planning permission will only be granted for proposals that deliver a minimum 10% reduction in carbon emissions through renewable energy or low carbon technology where the development is for: a. Schemes of more than 10 dwellings b. Non-residential proposals or more than 1000m² gross floorspace 3. Proposals for renewable energy and decentralised energy works, including wind turbines, must demonstrate that: a. They are appropriate in scale, location, and technology type. b. Are compatible with the surrounding area, including the impact of noise and odour. c. Do not have a damaging impact on the local topography and landscape. d. There is no significant impact upon heritage assets, including views important to their setting. e. In the case of wind turbines, take account of their cumulative effect and properly reflect their increasing impact on the landscape and on local amenity.

Wokingham Borough Local Development Framework – Sustainable Design and Construction – SPD (2010)

Appendix B presents a summary of the Proposed Development’s responses to the checklist set out in the Sustainable Design and Construction SPD.

Wokingham Borough Council Climate Emergency Action Plan

The Climate Emergency Action Plan Report has been developed to set out the activities that will be undertaken in order to reach the 2030 net-zero carbon target. This is a collaborative effort supported by a consultative process since August 2019. It includes the views and ideas from our members, parish and town councils, schools, local businesses, charities, public and council staff.

The priority areas of focus for the council’s actions to reduce carbon dioxide emissions centre on, tackling emissions from transport, more efficient energy use in domestic properties, generating renewable energy, planting more trees and other green foliage, encourage more recycling and behavioural change.

2.4 Applicant’s sustainability targets.

The Applicant is committed to pursuing best practice in sustainability throughout their development portfolio through their targets, strategies, and actions. They have been supporting the 2030 Agenda for Sustainable Development and the 17 UN Sustainable Development Goals since 2017. They are a signatory to the UN Global Compact since 2016 and have been submitting portfolio environmental, social and governance data to GRESB since 2020. Additionally, they have committed to the UN Women’s Empowerment Principles and report against the GRI Core and G4 disclosures in the Group Annual Sustainability Report.

In January 2020, the Applicant joined the Better Buildings Partnership and upon joining signed the Climate Change Commitment, a commitment to achieve net zero carbon by 2050, signed by over two dozen other commercial real estate companies. In a commitment to significant carbon reduction across their portfolio, they have also established targets verified by the Science Based Targets Initiative.

3. Approach to sustainability.

The following strategy addresses a wide range of sustainability subject areas and covers various headline sustainability categories. The strategy confirms the applicable policies and the Applicant's aspirations and measures of sustainability that would be implemented at the Proposed Development.

The design of the Proposed Development is based on sustainable design and construction principles as informed by planning requirements and industry best practice. It is on this basis that we are utilising a sustainability framework based on five defined factors, i.e., the people, the buildings, the social network, the natural environment, and the economic aspects as illustrated in Figure 3 to capture the multi-faceted sustainability benefits and values that the Proposed Development could bring to the following areas: the Application Site, local community, surrounding businesses, and future building users.

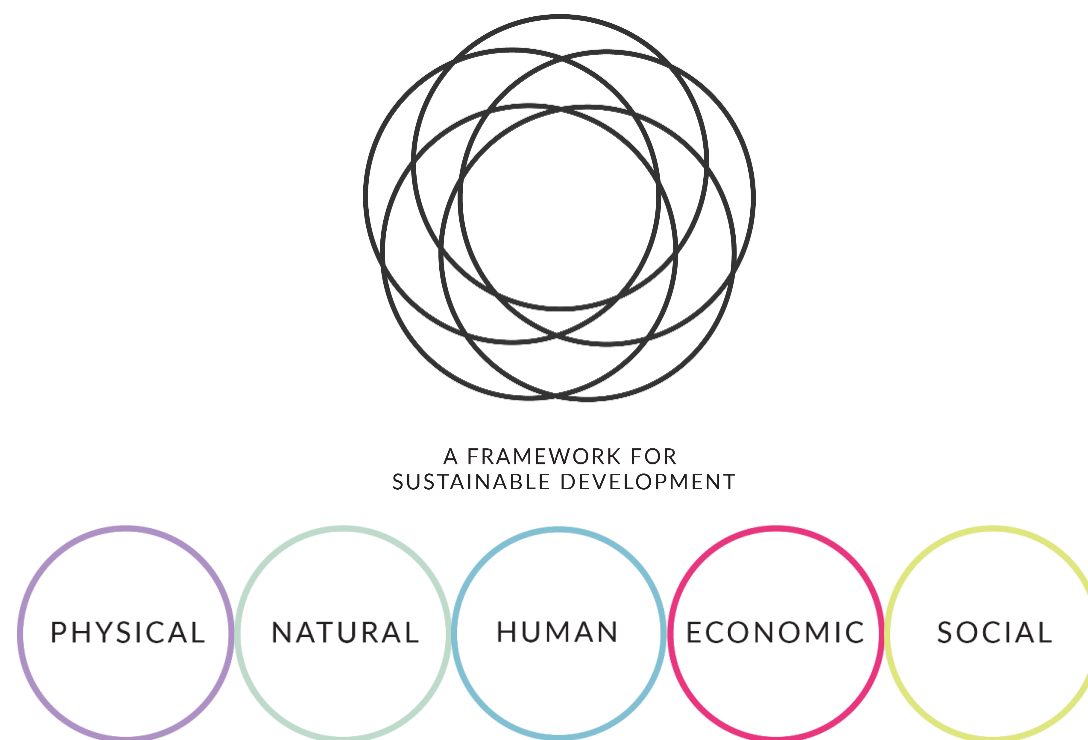


Figure 3: Framework for Sustainable Development

- **Physical: fit for the future** – buildings that are robust and equipped to navigate future environmental challenges.
- **Natural: positive impact** – integrity is maintained through design and operation through enhancement of ecological assets and responsible resource management.
- **Human: people-centred design** - putting people at the heart of the design process and ensuring that the physical and mental wellbeing of occupants and visitors is catered for.
- **Economic: enable new opportunities** - ensuring that priority is given to local small / medium enterprises and independent service providers as means of boosting the local economy.
- **Social: community engagement** – creating a destination for people to work and interact, enhancing existing communities and fostering new connections.

3.1 The delivery framework.

Working with all key stakeholders, an overall vision for the Proposed Development has been defined. Workshops have been held in collaboration with the client and project team to help set key targets and

objectives to be delivered as a result of the project. As illustrated in Figure 3 and Figure 4, the strategy responds to the five elements of our defined framework; and is intended that the agreed objectives are tracked and monitored throughout project delivery and operational phases.

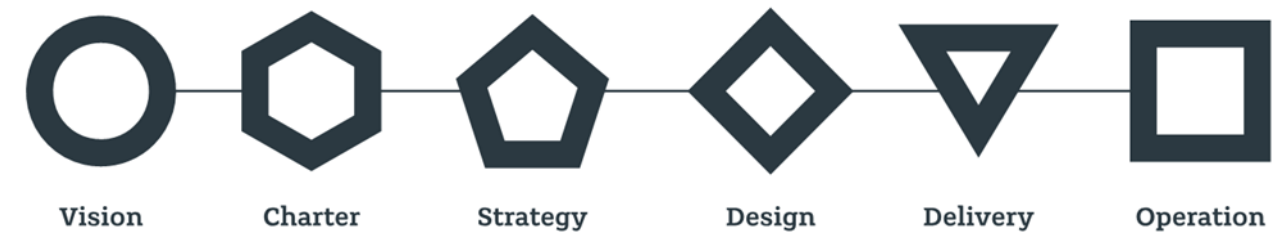


Figure 4 Sustainability strategy – Delivery phase (inception to completion).

3.2 Environmental assessment.

BREEAM New Construction V6

In line with local policy requirements, the pre-application response and the Applicant's sustainability aspirations, BREEAM will be targeted for the Proposed Development with an aspiration to achieve BREEAM 'Excellent', in line with Wokingham Borough Council's Climate Change Interim Policy Statement.

BREEAM New Construction V6.1 is the most suitable assessment type and a BREEAM pre-assessment has been conducted. Subsequently, a BREEAM workshop has been held with the design team and the appropriate appointments have been made. At this stage, early action BREEAM credits have been actioned by the team to enable a BREEAM 'Excellent' rating as a minimum.

The pre-assessment (summarised in Appendix C) currently achieves the following score which represent the desire to exceed the minimum 70% required for BREEAM 'Excellent':

- Baseline score / rating: 73.40% equivalent to a BREEAM 'Excellent' rating.

As the design develops the project team will be actively aiming to increase the baseline score to increase the margin to from the targeted rating threshold.

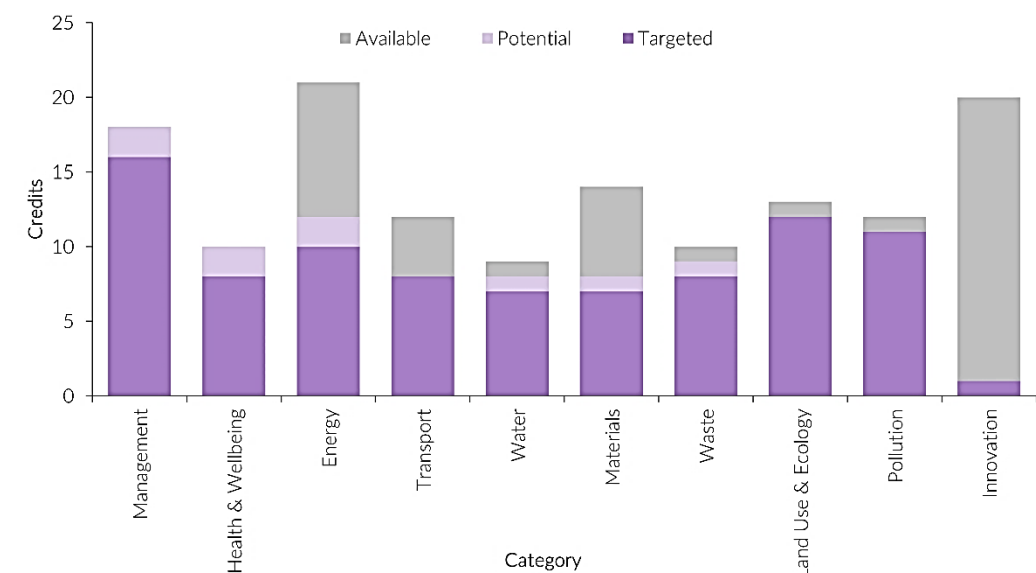


Figure 5: BREEAM Credit Overview

4. Sustainability strategy.

The design of the Proposed Development is based on the Applicant's high sustainability aspirations and is compliant with industry best practice. The strategy for the Proposed Development addresses key sustainability challenges and opportunities, responds to the requirements of the applicable policies, and implements the Applicant's sustainability targets.

It embraces the Five Capitals framework, responding to the challenges of climate, biodiversity and health and wellbeing, UN sustainable development goals and the Applicant's vision, aiming to create long-term value and generate a flow of environmental, social and economic benefits. Each Capital has been contextualised to the specific needs, challenges and opportunities arising from the Proposed Development. The characteristics and strategies of the Proposed Development are discussed under the five themes below.

4.1 Physical capital.

Energy Strategy

See Section 5 of this report.

Flood Risk Management and Sustainable Drainage

A Flood Risk Assessment has been produced by Evolve Consulting Engineers Ltd [3514-EVE-01-XX-T-C-0001] and is submitted towards the planning application. The assessment demonstrates that the site has areas in both Flood Zones 1 and 2 and has not historically been impacted by fluvial flooding. The site is not shown to be at risk of surface water flooding and as the development has no new below ground works, the risk from groundwater is also discounted. It concludes that the Proposed Development will not increase the risk of flooding elsewhere and will have a positive reduction in flood risk with the inclusion of surface water attenuation in line with national policy.

The surface water from the site currently discharges to a below ground drainage system, which outfalls in equal parts to the northern the sewer in Eskdale Rd and to the southern sewer in the access road. Priority will be given in the Proposed Development to the inclusion of Sustainable Drainage Systems (SuDS) accounting for groundwater and geological conditions. Where feasible, the post-development site will not exceed greenfield runoff rates. To achieve a meaningful reduction in runoff rates from the existing site, attenuation and flow rate restriction will be considered for surface water drainage.

The proposed drainage strategy offers significant flood risk mitigation benefits by restricting surface water discharge to greenfield runoff rates, thereby preventing any increase in downstream flood risk. The inclusion of attenuation tanks and permeable paving provides robust on-site storage for extreme rainfall events, including allowances for climate change, ensuring the site remains resilient to future weather patterns. Additionally, the integration of SuDS and proprietary treatment measures enhances water quality, reducing the risk of pollution to local watercourses. Overall, the strategy supports sustainable development by effectively managing surface water and aligning with local policy requirements.

Sustainable Transport

A Transport Assessment has been produced by Motion [R01-frwi10 - Transport Statement 25-08-08 d1.1] in support of the application. The assessment is in accordance with the National Planning Policy Framework (July 2021) and Wokingham Borough Council Local Development Plan Documents. It also follows pre-application discussions with Wokingham Borough Council Highways. It considers all aspects of movements by users of the site, servicing and delivery requirements, and high-level information associated with the construction of the Proposed Development. The site is in a desirable location to work, being located within the Winnersh Triangle Business and accessing the associated amenities but also neighbouring settings of natural beauty including Winnersh Meadows and Dinton Pastures Country Park, close to parks and trails, including walking trials and the cycling routes to Twyford.

The site has a PTAL rating of 2, counting the bus and rail services provided from Winnersh Triangle train station. The development aims to further promote active and sustainable travel for all occupants and visitors through the following measures.

Pedestrians and cyclists
A range of amenities are accessible for pedestrians and cyclists from the site. The bordering road, Eskdale Road, provides a suitable route for pedestrians with low speeds and street lighting. For cyclists, both Winnersh Triangle and Earley train stations are accessible. Additionally, the site provides linkages to the local cycle network.

Secure cycle storage will be provided at the Proposed Development to maximise the potential for sustainable transport to and from the building for staff and visitors. In total, 30 cycle spaces will be provided, which exceeds the requirement of Wokingham Borough Council (26 spaces).

Public transport

The nearest train stations are Winnersh Triangle, served by regular services to Reading and London Waterloo and is 280m south of the site. The station provides car parking and bicycle storage.

The nearest bus stop is 280m south of the site on Wharfdale Road, which is served by 500 park and ride providing 4 services an hour. A further three bus services are provided at a distance of 300m from the site.

Car parking

It is proposed that a total of 85 car parking spaces will be provided on site for use by guests and staff. A total of 8 accessible parking spaces will be provided, as per the Wokingham Borough Council's requirements.

The Proposed Development will have 10 active electric vehicle (EV) charging spaces. The use of the active EV charging spaces will be monitored and if there is sufficient demand then further EV charging can be created.

Travel Plan

A Travel Plan has been submitted in support of the planning application for the Proposed Development, setting out a long-term strategy to inform staff and visitors of the travel choices available to them and to encourage sustainable modes of travel, in particular public transport, walking and cycling.

4.2 Social capital

Inclusive Design and Accessibility

In terms of inclusive design, the scheme will be designed and specified in accordance with the relevant local and national planning guidance. Key considerations will be made including step free access, visual signage, fluid interfaces, automated systems, ease of control use will be considered throughout the scheme ensuring the building is a safe and easy to use facility for regular occupants and visitors.

As detailed above, the proposal for the Proposed Development includes 8 accessible parking spaces.

Placemaking and Community

The Proposed Development benefits from the community and amenities of the wider Winnersh Triangle Business Park which has a strong focus on fostering a positive work-life balance through enabling social interaction and create community spaces for activity and relaxation. Additionally, a childcare facility is located within the business park to serve the occupants. The design of the business park includes many elements aimed at bringing occupants together, as well as connecting people with nature. The Proposed Development fits into this wider strategy and provides easy connection from the application site to these amenities for the building's future occupants.

Additionally, the Proposed Development will contribute to the creation of a “creative quarter” at Winnersh Triangle, helping to develop a new character for the area with an attached sense of place and vibrance.

Connection to Nature

Within the wider Winnersh Triangle there are a number of accessible, green spaces, as well as connection to offsite natural areas such as a walking trial through Winnersh Meadows and a boardwalk over Winnersh

Triangle wetlands. The network of pedestrian access connects the building entrances, cycle stores, parking, recreation spaces and offsite access. Access routes are tree-lined and offer continuous connection to nature when navigating the site. New green spaces are to be created at the borders to the Proposed Development, lining the pedestrian access to the site.

Events and activities offered within The Green, an open green space in the business park, encourage occupants into the space and increase their connection to nature. All these spaces and features can encourage social interaction and a strong sense of community.

4.3 Economic capital.

Sustainable and Local Procurement

The Applicant is committed to producing and consuming responsibly and investing in the communities they serve. Key considerations will be made regarding procurement, led by the implementation of the Applicant's Responsible Sourcing Policy, which aims to ensure that the suppliers they engage with adhere to the environmental, social and governance values and best practice consistent with the Applicant's own commitments, including the impacts on their Scope 3 emissions. The Responsible Sourcing Policy must be read and acted upon by all suppliers and their supply chains. It sets out principles that the Applicant, all suppliers and their supply chains must uphold, including to:

- Act responsibly to minimise the impact of our business and supply chain on the environment.
- Endeavour to create workplaces that are fair and equitable for all.
- Respect and promote human rights and commit to eliminating human rights harm and human trafficking from our supply chain.
- Create a safe workplace for all, including that of our suppliers.
- Uphold strong business ethics with businesses conducted lawfully without bribery, corruption or any type of fraudulent behaviour.

The team will look to facilitate the selection of products that reduce the negative environmental, economic and social impacts across their supply chain including extraction, processing and manufacturing. The application of this policy will promote more economically, socially and environmentally responsible practices, and encourage the design and procurement teams to identify risks and reduce issues in the supply chain of construction products. It encourages the procurement of products and services that are third party verified with ecolabels where possible.

Alongside this, procuring a local workforce will be considered and prioritised, and local partnerships will be sought during the construction phase, and for the operational phase. In the construction phase, apprenticeships will also be offered within the project.

Fair Operating Practices

Prior to the commencement of works on site, the Applicant will take due consideration of the appointment of Principal Contractor, ensuring fair operating practices are implemented throughout the construction process, in line with the guidelines for suppliers set out in the Applicant's Responsible Sourcing Policy. The Principal Contractor will be required to maintain an ISO 14001 EMS standard, as well as ensure the site is registered with Considerate Contractor Scheme upon commencement of work.

At this stage of the design, it is unclear on the proposed operating practices the building will implement in operation. It is understood however, basic working conditions and regulations will be adhered to, as per the UK guidance.

Employment Use

The Proposed Development falls under use class E(g)(iii) and is anticipated to create additional employment in the locality. Winnersh Triangle is designated as a Major Development Location in the Core Strategy and is given as a Core Employment Area in the Managing Development Delivery Local Plan. As such, the Proposed Development is supportive of the needs identified by Wokingham Borough Council.

4.4 Human capital.

Local Air Quality

The Proposed Development will be electricity-led, combustion free and is therefore expected to have a minimal impact on local air quality. The location is well connected via active or public transport networks, therefore encouraging staff and visitors to use alternative modes of transport to and from the site.

Indoor Air Quality

The quality of the air within buildings can have a considerable effect on health due to the amount of time people spend indoors. The fabric of the building will be appropriately air tight, targeting a permeability of 3m³/(h.m²) at 50Pa. As such, air pollution will not be permitted to enter the building through the fabric, whilst the mechanical ventilation system will also filter out unwanted pollutants to provide a high standard of indoor air quality.

Construction Pollution Prevention

During the construction phase, areas of concern will be managed including waste reduction strategies, noise and dust pollution, and construction traffic. Contractors will be required to identify potential sources of dust and other air pollution, and appropriate dust control measures will be implemented. It is also intended that the Principal Contractor shall register under the Considerate Constructors Scheme and achieve a best practice score. The Principal Contractor will furthermore monitor and set targets for energy usage, water usage and construction waste related to the site for the duration of the works.

Noise

A Environmental Noise Survey has been carried out by Hoare Lea [1016236-HLE-AC-RP-Environmental Noise Survey] in accordance with the national requirements and Wokingham Borough Council's policy. It has been submitted along with the planning application. The survey quantified the existing ambient and background noise levels and proposed design constraints and limiting levels for onsite plant. The main sources of existing noise were identified to be from road and air traffic. The nearest noise sensitive residential receptor is the Crowne Plaza Hotel located 90m to the southeast the centre of the Proposed Development site.

Negative impacts as a result of the Proposed Development to the surrounding acoustic environment will be mitigated as far as practically possible. The Environmental Noise Survey sets out internal sound level targets to address the internal acoustic conditions and risk of noise ingress to sensitive receptors from the Proposed Development. The external fabric of the Proposed Development (including walls, windows and roof) have been designed such that the resultant in-situ internal noise levels, due to external noise intrusion, shall not exceed criteria set in the report. Noise generated by building services shall be engineered to not exceed the acoustic requirements. A fixed noise limit has been proposed at the boundary with commercial properties.

Building services plant atmospheric noise emission shall be engineered to ensure the acoustic requirements to all internal sound stage areas are not exceeded. They shall be controlled so as not to cause a nuisance to neighbouring properties. It should be assumed that all plant will operate twenty-four hours per day.

Safety and Security

The scheme will investigate security measures such as safety and security lighting, certified locks, CCTV and access fobs will be considered throughout the design and implemented where practical. These considerations will not only improve the overall health and wellbeing of the building occupiers but will mitigate the risk of potential crime on the scheme.

Health and Wellbeing Assessment

The wider Winnersh Triangle Business Park has achieved a Fitwel assessment of 2 stars. Fitwel is a voluntary accreditation that seeks to encourage the incorporation of health and wellbeing measures into the built environment. The development is scored against design and operational requirements under impact categories such as site composition, accessibility, management, amenities and outdoor spaces, building design, environmental policies and procedures, community relations, water access, healthy food access, site safety and emergency preparedness. The requirements of the accreditation are informed by scientific evidence.

Maintaining the Fitwel certification requires recertification every three years and therefore is a demonstration of the Applicant’s ongoing commitment to ensuring the Winnersh Triangle development supports the wellbeing of its occupants and that any new development within the masterplan supports this goal.

4.5 Natural capital.

Ecology and Biodiversity

A Preliminary Ecological Appraisal (PEA) has been produced by John Wenman Ecological Consultancy LLP in support of the application. A survey was undertaken of the site, including identifying the presence / likely absence of notable or legally protected species and the sites potential to support them, as written in the PEA report. The survey was conducted in accordance with the CIEEM Guidelines for Preliminary Ecological Appraisal 2nd Edition (CIEEM 2017).

The Proposed Development is located on a previously developed site of approx. 1.2ha which is predominantly hard, impermeable surfaces, including hardscaping and roof surface, and areas of formal landscaping of primarily modified grassland, shrub beds and trees. The existing landscaped areas are of low ecological value. The site has no designation for its wildlife importance and the closest area of importance is 1350m from the site. Four local wildlife sites are situated within 1km of the site.

The Proposed Development largely impacts areas of negligible ecological value. However, precautionary measures have been recommended to manage the limited risk of disturbance to protected or notable species that may be supported by the landscaped areas in the existing site. Measures include minimisation of the impact of external lighting, and tree or shrub removal to take place outside of the peak nesting season or after confirmation of no nesting on site. Opportunities for increasing the ecological value of the site include use of native species, bat and bird boxes and increasing the diversity of species on site.

Water Consumption

The Applicant has set out a minimum water efficiency standard for all of their new developments, including the target for a minimum of 25% water reduction compared to the BREEAM New Construction 2018 baseline consumption. The Proposed Development will be fitted with water efficient fixtures and fittings, and water submeters will be provided to enable the monitoring of water consumption for all major water uses consuming more than 10% of the building’s total water demand. Mains water metering will be incorporated in the design. Sensor controls of taps and WCs will be installed to automatically stop the flow. A leak detection system capable of detecting a major water leak will be installed on the utilities water supply to detect any major leaks within each building, as well as between the buildings and the utilities water supply.

Additionally, outdoor water demand will be reduced through a smart irrigation system or the selection of native planting species. These are to be further explored at a later design stage.

Climate Change, Resilience and Adaption

In accordance with the BREEAM credits Mat 05, Wst 05 and Wst 06, climate resilience is being considered for the Proposed Development, and the design team are assessing and designing the building in order to minimise the future need of carrying out works to adapt the building to take account of more extreme weather changes resulting from climate change and changing weather patterns.

Consideration of the buildings internal and external areas will be made throughout the design, adopting practices which reduce the need to repair and replace materials resulting from damage to exposed elements of the building and landscape. All materials will be specified to be of resilient quality suitable for the commercial use, including hardy paints, floor surfaces, contract carpets, kickplates, push plates, safety glass (subject to further design detail). This strategy will help mitigate the impact of high pedestrian traffic throughout the building. In additional to this, protection rails, highly resilient panels and resilient skirtings will be favoured throughout the scheme, in order to mitigate the potential damage from any vehicle or trolley movement which will be taking place within 1m of the internal building fabric in storage, delivery, and corridor areas.

Responsible Sourcing

Construction products and materials are responsible for a range of environmental and social impacts across the lifecycle of a built asset, through initial procurement, construction, maintenance and replacement. They account for a high significant proportion of the overall lifecycle carbon impacts of a building; in some cases, outweighing the operational impacts (such as energy consumption).

Under the BREEAM Mat 01 credit, an assessment of the lifecycle impact of the development materials within in the substructure, hardscaping and superstructure, and core MEP services has been undertaken during the concept design stage, comparing options for a number of key building elements, and the embodied carbon content of building materials of the various design options has been appraised as part of the decision-making process. An updated assessment will be undertaken at technical design.

It is assumed 100% of timber and timber-based products used on the project are 'Legal' and 'Sustainable' as per the UK Government's Timber Procurement Policy (TPP). Where considered most practical, and cost effective to the design, the materials will be sourced from locally certified suppliers.

In accordance with the Applicant’s sustainability ambitions, building elements will be selected to minimise environmental impact where possible. A full review of the materials specified for the Proposed Development will be undertaken during the detailed design development stages aiming for materials to meet the following requirements where possible:

- Products to have available responsible sourcing certificates and/or Environmental Product Declarations,
- Products to minimise Global Warming Potential (GWP), and
- All timber used at the Proposed Development aims to be FSC or PFC certified or similar.

Waste Management

Construction site waste management

In the interest of reducing consumption and encouraging sustainable waste management practices within their developments, the Applicant has developed their Minimum Waste Standard [FPUK Waste Standards_Developments_Refurbs_Existing Assets] which sets out targets for new developments to reduce excavation, demolition and construction waste by encouraging alignment with the waste hierarchy. The Applicant’s minimum targets and alignment to the BREEAM Wst 01 credit are shown in Table 3.

Table 3: Applicant’s Minimum Waste Standard Targets

Diversion from Landfill	Applicant’s Targets	BREEAM Wst 01 Targets
Non-demolition waste	70%	70%
Demolition waste	80%	80%
Excavation waste	95%	N/A

The Principal Contractor, once appointed, will develop a Waste Management Plan for the Proposed Development, to outline opportunities for waste minimisation and management, and ensure best practice is adopted for the construction phase. The Principal Contractor will be required to adopt the recommendation measures made in line with the waste hierarchy with the aim of maximising diversion from landfill. The Proposed Development will be constructed in a manner which aims to protect the environment and local community through reusing, recycling and recovering waste otherwise destined for landfill.

Operational Waste Management

The Proposed Development will include 1,100L storage bins for waste segregation and storage of recyclable and non-recyclable waste, and waste storage will be clearly labelled to ensure cross contamination of all waste streams is minimised. Waste will be collected on a dedicated waste collection day. Proposed locations where the Refuse Collection Vehicles would park when emptying bins is located within the servicing area adjacent to the collection receptacles to minimise the dragging distance for collection operatives.

Resource Efficiency

The scheme will look to avoid unnecessary materials use arising from over specification without compromising structural stability, durability or the service life of the building. In line with BS 8895 Designing for material efficiency in building projects; and WRAP Designing out Waste, the following list of key principles will be considered throughout the design in line with demonstrating material efficiency:

- Principle 1: Design for Reuse and Recovery
- Principle 2: Designing for Offsite Construction
- Principle 3: Design for Material Optimisation
- Principle 4: Designing for Waste Efficient Procurement
- Principle 5: Design for Deconstruction and Flexibility.

5. Energy strategy.

The design of the Proposed Development is based on high sustainability aspirations and is compliant with industry best practice. In addition, it also attempts to push the boundaries of conventional construction by deploying innovative methods and approaches during design and construction. The strategy for the Proposed Development addresses key sustainability challenges and opportunities, responds to the requirements of the applicable policies, and implements the Applicant's aspirations.

The Energy Strategy for the Proposed Development has been set out to meet Part L 2021 requirements and improve on them where possible. Moreover, the Energy Strategy is taking a future proofed approach to achieving carbon emission reductions for the Proposed Development, following a fabric first approach, with an addition of low and zero carbon technologies, as set out within this report.

Definitions

The following definitions should be understood throughout this strategy:

- Energy demand – the 'room-side' amount of energy which must be input to a space to achieve comfortable conditions. In the context of space heating, this is the amount of heat which is emitted by a radiator, or other heat delivery mechanism.
- Energy consumption – the 'system-side' requirement for energy (fuel). In the context of a space heating system using a gas boiler, this is the amount of energy combusted (e.g. gas) to generate useful heat (i.e. the energy demand).
- Regulated CO₂ emissions – the CO₂ emissions emitted as a result of the combustion of fuel, or 'consumption' of electricity from the grid, associated with regulated sources (those controlled by Part L of the Building Regulations).

Development Servicing Strategy

In the Proposed Development, mechanical supply and extract with heat recovery ventilation will be provided to the office space, reception, WCs and shower areas by a Mechanical Ventilation with Heat Recovery (MVHR) unit. This unit will be located in the ceiling void of the office space. Domestic hot water will be provided by an Air source heat pump (ASHP) to the WCs and showers. The office spaces will be heated and cooled by Variable Refrigerant Flow (VRF). ASHPs for the hot water and VRF will be located outside the building.

Building services to the logistics/industrial space will be provided by the future tenant. For the purpose of this Energy Strategy, to represent the equipment to be installed by the incoming tenant at a future date, the inputs for the Part L 2021 model have assumed the minimum efficiencies stated in Part L 2021.

Energy Hierarchy

The Energy Strategy takes a step-by-step approach to energy demand reduction, and carbon emission reductions. Principles of the Energy Hierarchy are followed in terms of ensuring the design is energy efficient prior to incorporation of low and zero carbon energy sources.



Figure 5: The Energy Hierarchy

The strategic approach to the design of the Proposed Development has been to reduce demand for energy prior to the consideration of integrating LZC technologies, since controlling demand is the most effective way of reducing energy requirements and CO₂ emissions.

Further reductions are ensured through the specification of high efficiency building services to limit losses in energy supply, storage, and distribution.

After the inclusion of passive design and energy efficiency measures, various options have been investigated to reduce CO₂ emissions associated with energy supply. The feasibility of LZC technologies has been investigated in line with the policy aspirations and as part of the Energy Strategy submitted in support of the application.

The following sections detail the passive design and energy efficiency measures that have been considered, and those that will be implemented at the Proposed Development.

5.1 Be Lean.



Passive design and energy efficiency measures form the basis for the reduction in overall energy demand and CO₂ emissions for the Proposed Development. This Energy Strategy aims to reduce the energy demand initially by optimising the envelope and building services within the development.

Passive Design and Energy Efficiency Features

Passive Design measures are those which reduce the demand for energy within buildings, without consuming energy in the process.

These are the most robust and effective measures for reducing CO₂ emissions as the performance of the solutions, such as wall insulation, is unlikely to deteriorate significantly with time, or be subject to change by future property owners. In this sense, it is possible to have confidence that the benefits these measures will continue at a similar level for the duration of their installation.



Fabric performance.

A 'fabric first' approach has been taken in order to reduce the energy demand and CO₂ emissions from the Proposed Development.

This means a very well-insulated thermal envelope (including 'elephant doors'), and a focus on making the buildings airtight as possible.

Thermal Insulation

The Proposed Development will benefit from an efficient thermal envelope. Heat losses and gains will be controlled by the optimisation of the fabric of the development. Reducing the thermal transmittance of the building envelope where appropriate will help to reduce both heating and cooling requirement and result in lower energy requirements.

Glazing Energy & Light Transmittance

The proposed design features continuous ribbon windows on the east façade at both the ground and first floor levels. The glazing specification will be chosen to optimize the balance between heat gain, heat loss, and natural light transmission within the office areas. High-performance double glazing to minimize heating and cooling loads while ensuring ample daylight penetration into the interior spaces.

Air Tightness

Air infiltration could significantly affect the heat losses of the building and could lead to occupant's discomfort due to cold drafts. Pursuing an airtight construction will have benefits in improving occupant's thermal comfort. The air tightness of the building will be reduced as far as practicable and the current target for every building is 3.00m³/(m² .h) at 50Pa.



Space Heating (and Cooling).

The office spaces will be heated and cooled using a VRF system. This approach is inherently reversible, allowing the same system to provide both heating and cooling as required, thereby maintaining comfortable indoor conditions throughout the year.



Mechanical Ventilation

MVHR is an important addition to the building services to maintain good indoor air quality by providing fresh air to the occupied areas of and extracting vitiated air from areas where necessary. Providing fresh air minimises the risk of stale air and limits the risk of condensation and mould growth. Coupled with a heat exchanger, the warmth in extracted air can be recovered and delivered to the supply air. Thus, mechanical ventilation with heat recovery reduces space heating demand.



Domestic Hot Water

DHW consumption across the Proposed Development is expected to be comparatively small, and it is proposed that DHW for all buildings will be provided from electric Heat Pump.



Lighting

The development will be provided with low-energy, efficient LED light fittings throughout. As well as reduced energy requirement that will be achieved by implementing these strategies, the contribution to the cooling requirements and internal heat gains will be reduced. This will further reduce the total energy requirements and CO₂ emissions of the Proposed Development.

Summary of Passive Design and Energy Efficiency Measures

The following tables summarise the passive design and energy efficiency measures that are implemented in the design of the Proposed Development.

Table 4: Proposed thermal properties

Building element	Target Performance
Floor U-value (W/m ² .K)	0.15
External wall U-value (W/m ² .K)	0.19
Roof U-value (W/m ² .K)	0.16
Roof lights U-value (W/m ² .K)	1.2
Glazing U-value (W/m ² .K)	1.2
Glazing g-value (%)	0.4
Standard Personnel door U-value (W/m ² .K)	1.60
Elephant Door U-value (W/m ² .K)	0.60
Air permeability at 50 Pa (m ³ /(h.m ²))	3.00

Table 5: HVAC & Lighting Systems

Office	
Space Heating, Cooling, and DWH	ASHP/VRF Air Distribution Fuel source: Integral Heat Pump - Efficiency: Heating SCOP: 2.50 – Cooling SCOP: 5.00 Hot water SCOP: 3.3
Ventilation	Mechanical ventilation with heat recovery Heat recovery efficiency: 75% System-specific fan power: 2.00 W/(l/s)
Lighting	Lighting installed power density 110 lm/W - No controls

5.2 Be Clean.

This stage of the energy hierarchy refers to the use of heat networks or on-site Combined Heat and Power (CHP) in order to provide energy and reducing consumption from the national grid and gas networks, through the generation of electricity, heating and cooling on-site.

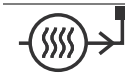


Development Demand

A meaningful proportion of the Proposed Development’s energy demand is expected to be related to lighting and the internal equipment. The ambition is to supply lighting energy from systems that will reduce energy demand and CO₂ emissions. Therefore, lighting energy and the carbon emissions associated with it would not be alleviated from connection to a centralised energy network.

Be Clean: Network and Technologies

In line with policy aspirations, the following sections summarise the considerations of the low-carbon energy supply measures that have been considered.



Heat and energy networks.



Offsite heating network

Currently, there are no known district networks in the local vicinity that are sited in a location that would make connection viable from a carbon reduction perspective.

Figure contains an extract from the Association for Decentralised Energy and shows:

- The site
- Existing district heating schemes

The site is not in the proximity of the existing district heating schemes – the nearest being the Frimley Park hospital.

District heating systems can result in significant distribution losses via the buried infrastructure associated with energy distribution (i.e. below ground pipework). Therefore, distributing heating energy over large distances is often less efficient in terms of carbon reduction than providing an efficient on-site generation strategy. District energy networks are ideally suited to urban areas with significant heat density.

Further, it is common that district energy networks include CHP, and it is therefore likely these will be less carbon efficient than the systems proposed for the Proposed Development at the outset, when taking into account the decarbonisation of the electricity grid.

Therefore, it is not proposed to connect to external district energy networks.

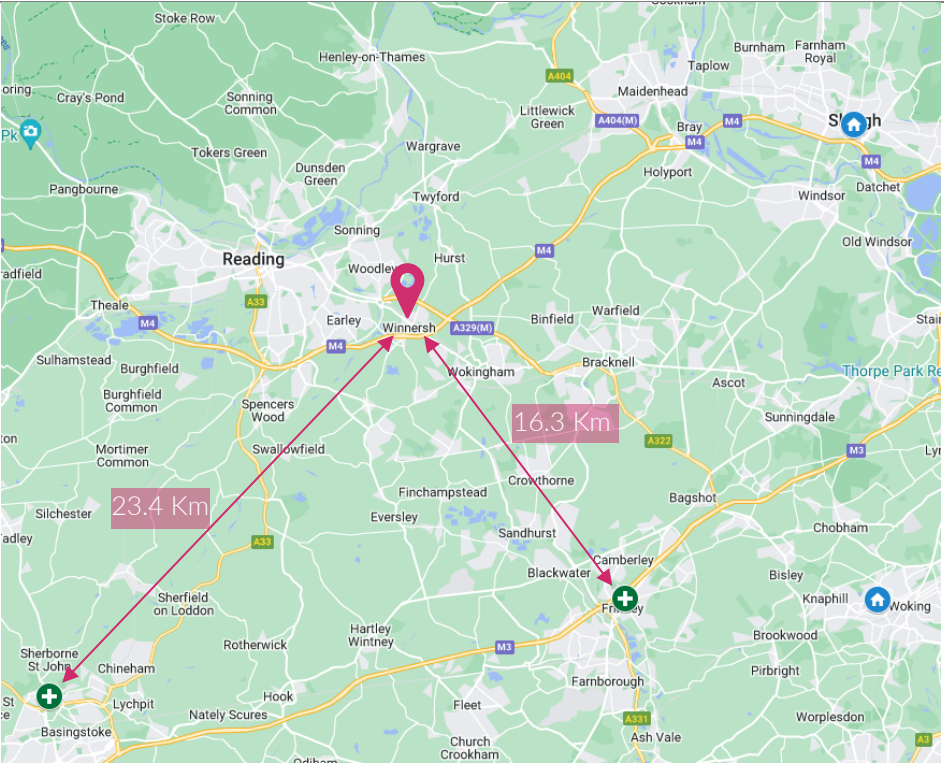
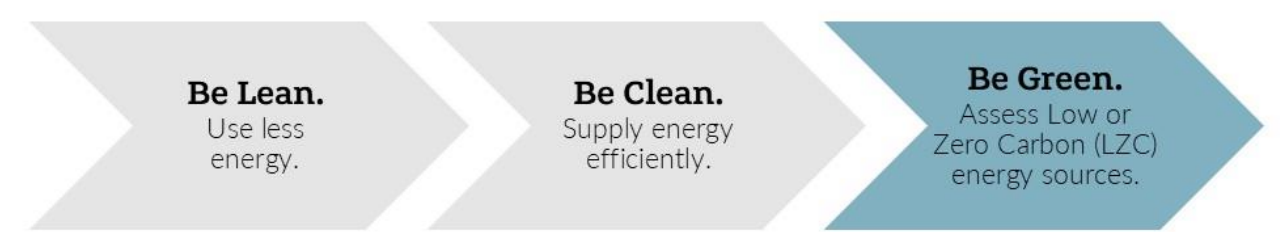


Figure 6: Extract from Association for Decentralised Energy map showing the existing district heating schemes in relation to the site of the Proposed Development.

5.3 Be Green.

The final step of the energy hierarchy explores the feasibility of LZC technologies to allow for the production of renewable energy onsite in order to offer a further reduction in carbon emissions.



LZC Technology Assessment

Renewable or zero carbon technologies harness energy from the environment and convert this to a useful form. Many renewable technologies are available, however, not all of these are commercially viable or suitable.

Discounted Technologies

	Ground Source Heat Pumps Ground Source Heat Pump (GSHP) systems would require extensive below ground works to bury and install the system on site. Given the existing building present at the site, which will be retained, GSHP are not considered a feasible option and are not proposed. Suitability to Proposed Development: GSHP are not being considered.
	Solar Thermal Available roof area is to prioritise solar PVs, since the electrical output from PV panels will be more suitable for implementation with the heat-pump led Energy Strategy and building energy usage. Suitability to Proposed Development: Heating and hot water demand at the Proposed Development is expected to be limited compared to other regulated energy uses, and the savings that could potentially be achieved are therefore also assessed to be minimal. Solar thermal systems are therefore not proposed for the Proposed Development.
	Wind Turbine Wind turbines would be likely to generate noise which may be a nuisance to neighbouring properties. Further, small wind turbines are known to provide only limited carbon reductions in reality, and this technology is best suited to large, stand-alone wind farm proposals. Suitability to Proposed Development: Considering the impacts described above and the visual impact of wind turbines on the character and appearance of the area, the use of wind turbines will not be proposed for the development.
	Biomass The carbon dioxide emitted from burning biomass is balanced by that absorbed during the fuel's production. Biomass heating therefore approaches a carbon-neutral process. However, they require a large fuel store to maintain continuous operation during the winter months. As such, area take for such plant is high. Furthermore, security of fuel supply is an important consideration. Suitability to Proposed Development: This technology would also lead to in an increase of local NOx emissions from the site, resulting in a reduction in the local air quality.

Proposed technologies

	PV Solar irradiance on the site is expected to provide a good opportunity for the deployment of solar PV technologies for onsite electricity generation.										
Table 6: Solar PV specification <table> <tr> <th></th><th>Rooftop PV system</th></tr> <tr> <td>Orientation</td><td>6 and 0 degrees from the North.</td></tr> <tr> <td>Shading Factor</td><td>1</td></tr> <tr> <td>Effective PV Area</td><td>450 m²</td></tr> <tr> <td>Predicted Annual output</td><td>90.40 kWp/yr</td></tr> </table>			Rooftop PV system	Orientation	6 and 0 degrees from the North.	Shading Factor	1	Effective PV Area	450 m ²	Predicted Annual output	90.40 kWp/yr
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Shading Factor	1										
Effective PV Area	450 m ²										
Predicted Annual output	90.40 kWp/yr										
	ASHP ASHP plant can be located at roof level and integrated into space heating and hot water systems (albeit with some degree of ancillary top-up heating to raise water temperatures). Implementing heat-pump technology brings the additional benefit of a shift towards combustion-free development, with the associated benefit to local air quality. Suitability to Proposed Development: A strategy that utilises ASHP has been deemed the most appropriate option for the Proposed Development, and this solution is expected to reduce carbon emissions considerably in real terms. For this reason, the technology has been included as the main heating and cooling source in the Proposed Development. It has also been proposed for some of the domestic hot water demand. Detailed descriptions have been given in the Be Lean section.										

5.4 Energy strategy summary.

Energy and Carbon Reduction Summary

The adoption of the Energy Strategy described in this report will result in the Proposed Development being a net-zero carbon building. A summary of the features incorporated at each stage of the energy hierarchy are provided below:

Be Lean.	Passive design and energy efficiency - Fabric insulation levels achieving improvements over the Building Regulations Part L (2021) requirements. - Tight air permeability improvement upon Building Regulations Part L (2021) requirements. - Efficient LED light fittings.
Be Clean.	‘Be clean’ measures have been deemed unfeasible. No further carbon reductions have been identified at the ‘Be Clean’ Stage
Be Green.	Energy supply using low & zero carbon technologies. - Heating and cooling delivered through ASHP and VRF systems, which are low carbon technologies. - A 360 m² PV panel array has achieved over 10% CO₂ reductions over the notional building.

CO₂ Emission Reductions and Part L 2021 Results

The performance of Proposed Development has been assessed against Part L 2021 of the Building Regulations, including both the ER and the PER. The results are shown in Table 5, and demonstrate compliance with the Part L 2021 criteria, leading to a total emission reduction of **14.9%** of CO₂ per year, beyond the Part L 2021 notional building.

It is anticipated that the all-electric Energy Strategy will result in the building achieving an EPC rating of A.

BRUKL document has been provided in Appendix E.

Table 5: Part L and EPC Results

Building	Emission Rate			Primary Energy Rate			EPC	PV Array
	TER	BER	Performance	TPER	TBER	Performance		
	kgCO ₂ /m ² .yr	kgCO ₂ /m ² .yr	%	kWh/m ² .yr	kWh/m ² .yr	%		m ²
Winnersh 810	4.48	3.81	14.9	48.23	39.82	17.4%	A	450

6. Conclusion.

This report presents the Energy and Sustainability Strategy for the Proposed Development which has been informed by national and local policy requirements, the Applicant’s vision and sustainable design and development guidance and frameworks including, but not limited to:

- National Planning Policy Framework (NPPF) (2021)
- Wokingham Borough Local Development Framework, Core Strategy (Adopted January 2010)
- Wokingham Borough Development Plan – Managing Development Delivery 2014
- Wokingham Borough Local Development Framework – Sustainable Design and Construction – SPD (2010)
- Wokingham Borough Council Climate Emergency Action Plan
- BREEAM New Construction 2018

To capture the multi-faceted sustainability benefits and values that the Proposed Development can bring to the site, local community, surrounding businesses, and future building users, five defined factors – the people, the building, the social network, the natural environment, and the economic aspects – inform our proposed sustainability framework. The Proposed Development complies with local and national policy and will achieve exemplar sustainability. These are summarised below.

Physical Capital	“Building the future” - Energy Strategy - Flood risk management and urban drainage - Sustainable transport
Social Capital	“Connecting people” - Inclusive design and accessibility - Placemaking and community - Connection to nature
Economic Capital	“New opportunities” - Sustainable and local procurement - Fair operating practices - Employment use
Human Capital	“Happy and healthy” - Local air quality - Indoor air quality - Construction pollution prevention - Noise - Safety and security - Health and wellbeing assessment
Natural Capital	“Positive impact” - Ecology and biodiversity - Water consumption - Climate change, resilience and adaption - Responsible sourcing - Waste management - Resource efficiency

Appendix A: Local policy review.

Wokingham Borough Local Development Framework, Core Strategy (Adopted January 2010)
Below are the key policy requirements from the Wokingham Borough Council's Core Strategy 2010 in relation to the Sustainability matters.

Table 7: Key Policies from Wokingham Borough Council's Core Strategy 2010

Policy Reference	Policy Requirements
CP1 Sustainable Development	Planning permission will be granted for proposals that: a. Maintain or enhance the high quality of the environment; b. Minimise the emission of pollutants into the wider environment; c. Limit any adverse effects on water quality (including ground water); d. Ensure the provision of adequate drainage; e. Minimise the consumption and use of resources and provide for recycling; f. Incorporate facilities for recycling of water and waste to help reduce per capita water consumption; g. Avoid areas of best and most versatile agricultural land; h. Avoid areas where pollution (including noise) may impact upon the amenity of future occupiers; i. Avoid increasing (and where possible reduce) risks of or from all forms of flooding (including from groundwater); j. Provide attractive, functional, accessible, safe, secure and adaptable schemes; k. Demonstrate how they support opportunities for reducing the need to travel, particularly by private car in line with CP6; and l. Contribute towards the goal of reaching zero-carbon developments ⁴¹ as soon as possible by: - Including appropriate on-site renewable energy features; and - Minimising energy and water consumption by measures including the use of appropriate layout and orientation, building form, design and construction, and design to take account of microclimate so as to minimise carbon dioxide emissions through giving careful consideration to how all aspects of development form.
CP3 General Principles for Development	Planning permission will be granted for proposals that: a. Are of an appropriate scale of activity, mass, layout, built form, height, materials and character to the area together with a high quality of design without detriment to the amenities of adjoining land users including open spaces or occupiers and their quality of life; b. Provide a functional, accessible, safe, secure and adaptable scheme; c. Have no detrimental impact upon important ecological, heritage, landscape (including river valleys) or geological features or water courses. d. Maintain or enhance the ability of the site to support fauna and flora including protected species; e. Use the full potential of the site and contribute to the support for suitable complementary facilities and uses; f. Contribute to a sense of place in the buildings and spaces themselves and in the way they integrate with their surroundings (especially existing dwellings) including the use of appropriate landscaping; g. Provide for a framework of open space in secure community use achieving at least 4.65 ha/1,000 population provision together with recreational/sporting facilities in addition to private amenity space;

Policy Reference	Policy Requirements
	h. Contribute towards the provision of an appropriate sustainable network of community facilities; i. Do not lead to a net loss of dwellings and other residential accommodation or land; and j. Do not lead to a loss of community or recreational facilities/land or infrastructure unless suitable alternative provision is available. Development proposals will be required to demonstrate how they have responded to the above criteria through the submission of Design and Access Statements, clear and informative plans, elevations and street scenes and where required Masterplans, Development Briefs, Concept Statements and Design Codes.
CP6 Managing Travel Demand	Planning permission will be granted for schemes that: a. Provide for sustainable forms of transport to allow choice; b. Are located where there are or will be at the time of development choices in the mode of transport available and which minimise the distance people need to travel; c. Improve the existing infrastructure network, including road, rail and public transport, enhance facilities for pedestrians and cyclists, including provision for those with reduced mobility, and other users; d. Provide appropriate vehicular parking, having regard to car ownership; e. Mitigate any adverse effects upon the local and strategic transport network that arise from the development proposed; f. Enhance road safety; and g. Do not cause highway problems or lead to traffic related environmental problems.
CP7 Biodiversity	Sites designated as of importance for nature conservation at an international or national level will be conserved and enhanced and inappropriate development will be resisted. The degree of protection given will be appropriate to the status of the site in terms of its international or national importance. Development: a. Which may harm county designated sites (Local Wildlife Sites in Berkshire), whether directly or indirectly, or b. Which may harm habitats or, species of principle importance in England for nature conservation, veteran trees or features of the landscape that are of major importance for wild flora and fauna (including wildlife and river corridors), whether directly or indirectly, or c. That compromises the implementation of the national, regional, county and local biodiversity action plans will be only permitted if it has been clearly demonstrated that the need for the proposal outweighs the need to safeguard the nature conservation importance, that no alternative site that would result in less or no harm is available which will meet the need, and: i) Mitigation measures can be put in place to prevent damaging impacts; or ii) Appropriate compensation measures to offset the scale and kind of losses are provided.

Draft Local Plan Public Consultation Plan (not currently adopted)

Policy DH7 – Energy

To minimise energy use in a new development, proposals will be supported where they:

1. Implement the Energy Hierarchy within the design of new buildings by prioritising a ‘fabric first’ approach and passive design and landscaping measures to minimise energy demand for heating, lighting and cooling;
2. Demonstrate a reduction in on-site energy demand and maximise the use of low carbon energy sources across the scheme to minimise the effects of climate change;
3. Maximise opportunities to link into and/or expand existing renewable and low carbon energy networks wherever it is feasible and viable to do so;
4. Embrace innovative sustainable design solutions for energy efficiency and low carbon energy generation and use, over and above the National Housing Standards Building Regulations;
5. Appropriately integrate solar gain, natural ventilation or ventilation with heat recovery, fabric performance and passive principles into the layout and design.

Policy DH8 – Environmental Standards

Development proposals for non-residential development will be supported provided they meet the following environmental standards:

1. Meet or exceed water conservation measures so that predicted per capita consumption does not exceed the appropriate levels set out in the applicable BREEAM standard;
2. Incorporate greywater recycling and rainwater harvesting where possible; and
3. Incorporate suitable waste management facilities, including on site recycling.
4. Major non-residential developments will additionally be required to meet the most up-to-date BREEAM ‘Excellent’ standards, or any future equivalent.

Policy DH10 – Low carbon and renewable energy generation

1. Development proposals for new standalone low carbon and renewable energy generation schemes and associated infrastructure, or extensions to existing schemes, will be supported provided they are of an appropriate scale and do not give rise to unacceptable impacts on landscape, biodiversity, heritage assets, character of the area, and amenity.
2. Where clear evidence can be demonstrated of local support for the provision of new, or extension of existing, low carbon or renewable energy generation schemes, this will be given significant weight in decision taking.
3. Neighbourhood plans are encouraged to identify and allocate sites for renewable energy generation within their neighbourhood area.

Appendix B: Responses to Sustainable Design and Construction SPD.

Wokingham Borough Local Development Framework – Sustainable Design and Construction – SPD (2010)

Table 8 presents a summary of the Proposed Development’s responses to the checklist set out in the Sustainable Design and Construction SPD.

Table 8: Responses to the Sustainable Design and Construction SPD

	Wokingham Borough Local Development Framework – Sustainable Design and Construction – Supplementary Planning Document (2010)	Alignment to Draft Local Plan Public Consultation Plan (2020)	Proposed Development Response
Measuring and Demonstrating Sustainability, Sustainable Design and Energy Efficiency.	Has the development been designed to optimise the use of energy from the sun?	DH7	PV panels are proposed for the rooftop.
	Has the development been designed to optimise natural ventilation?	DH7, SS9	Mechanical supply and extract with heat recovery ventilation will be provided to the service/welfare areas by an MVHR (Mechanical Ventilation with Heat Recovery) unit located within the service/welfare area. Natural ventilation can be incorporated into the office spaces.
	How will the design of the building make efficient use of energy?	DH7	Good practice levels of insulation and limit of fabric air permeability are specified to minimise use of supplementary heating during periods of cold weather. Energy efficient LED lighting will be installed throughout.
	Has the development met the necessary mandatory Code for Sustainable Homes/ BREEAM level requirements?	DH8	The Proposed Development is undertaking certification with the BREEAM, targeting a rating of “Excellent” under the BREEAM New Construction 2018 scheme.
	Has the development considered being built to a level above the mandatory Code for Sustainable Homes/ BREEAM level requirements?	DH8	See comment above.
	For mixed use developments, have you contacted the BRE who could help produce a bespoke assessment?	DH8	Not applicable.
On-site Renewable/Energy Generation	How has the generation of energy from decentralised, renewable or low carbon	DH10	The Proposed Development will be heated and cooled via the use of VRF and electric heat pumps, omitting the requirement for gas combustion on site.

	Wokingham Borough Local Development Framework – Sustainable Design and Construction – Supplementary Planning Document (2010)	Alignment to Draft Local Plan Public Consultation Plan (2020)	Proposed Development Response
	technologies been considered?		In addition to this, a number of solar PV arrays have been included within the design.
	How will the development incorporate decentralised, low carbon or renewable energy technologies to satisfy the at least 10% requirement of Policy NRM11 of the South East Plan?	DH10	A PV array of 450 m2 is proposed for the development which will provide c.90.40 kWp/yr, and is expected to reduce the carbon emissions to c.3.81kgCO2e per year. This is equivalent to a 14.90 % reduction of carbon emissions against the notional building and 10% against the be-lean stage. Therefore, satisfies the 10% requirement of Policy CC05. Additionally, the Proposed Development will utilise ASHP, considered to be a low-carbon technology, as the primary source of heating and cooling. The estimated heating and cooling energy demand for the whole site equates to 51,285 kWh/yr, which is approximately 26.70% of the total regulated energy consumption.
	Has an energy statement been produced to satisfy the requirements of the Developers Guidance note for the 10% renewable Energy requirement of the South East Plan policy NRM11? The Energy Statement could form part of a wider Sustainability Statement or the Design and Access Statement.	DH10	Yes, the energy statement is included within Section 5 of this report.
Water Resource Management	How will the development incorporate the use of water saving devices to achieve water efficiency?	DH9	The water use on the site will be restricted to the office space and as such represents a limited consumption. The Proposed Development will be fitted with water efficient fixtures and fittings, and water submeters will be provided to enable the monitoring of water consumption for all major water uses consuming more than 10% of the building’s total water demand. Mains water metering will be

	Wokingham Borough Local Development Framework – Sustainable Design and Construction – Supplementary Planning Document (2010)	Alignment to Draft Local Plan Public Consultation Plan (2020)	Proposed Development Response
			incorporated in the design. Sensor controls of taps and WCs will be installed to automatically stop the flow. A leak detection system capable of detecting a major water leak will be installed on the utilities water supply to detect any major leaks within each building, as well as between the buildings and the utilities water supply.
	Has the development considered incorporating water efficiency measures to achieve internal potable water consumption of 105 litres per person per day?	DH9	See comment above. The Applicant has set out a minimum water efficiency standard for all of their new developments, including the target for a minimum of 25% water reduction compared to the BREEAM New Construction 2018 baseline consumption.
	How will the development incorporate harvesting and reuse of rainwater?	DH8	Rainwater Harvesting and Greywater Recycling will not be implemented into this scheme due to the limited number of sanitary fittings provided.
	How will the development incorporate the reuse, collection and treatment of grey water?	DH8	As above.
	Has the design considered the use of SUDs and how will they be incorporated and maintained in the development?	NE9, C8	Priority will be given in the Proposed Development to the inclusion of SuDs accounting for groundwater and geological conditions. Where feasible, the post-development site will not exceed greenfield runoff rates. To achieve a meaningful reduction in runoff rates from the existing site, attenuation and flow rate restriction will be considered for surface water drainage.
	Is the development designed to be resilient to flooding?	SS8, SS9	The site has areas in both Flood Zones 1 and 2 and has not historically been impacted by fluvial flooding. The site is not shown to be at risk of surface water flooding and as the development has no new below ground works, the risk from groundwater is also discounted. The Proposed Development will not increase the risk of flooding elsewhere and will have a positive reduction in flood risk with the inclusion of surface water attenuation in line with national policy.
	Has the development considered the change in flood risk over the lifetime of	SS8, SS9	Yes, the Flood Risk Assessment has considered and presented mitigation strategies in line with the Climate Change scenario.

	Wokingham Borough Local Development Framework – Sustainable Design and Construction – Supplementary Planning Document (2010)	Alignment to Draft Local Plan Public Consultation Plan (2020)	Proposed Development Response
	development because of climate change?		
	Have all sources of flood risk been considered?	NE8	Yes, the Flood Risk Assessment considers flood risk attributed to tidal, fluvial, pluvial, groundwater, sewers and artificial sources such as reservoirs and canals.
	Where required, has a FRA or surface water Drainage Strategy been produced?	NE8	A Flood Risk Assessment and supplementary Drainage Strategy has been submitted as part of the planning application.
	Has appropriate consideration been given to surface water and drainage issues – including SUDs and green roofs?	NE9	The Flood Risk Assessment report has considered surface water and drainage and proposed any mitigation necessary. The feasibility of SuDs has been considered in the drainage strategy. The drainage scheme introduces permeable block paving and permeable paved areas within the carpark. Rainwater pipes to flow to the subbase from the western elevation, with discharge to the southern existing outfall. An attenuation tank is proposed for attenuation of flows from service yard and remaining rainwater pipes.
	How will the design ensure that run-off from the site will not increase, or where possible be reduced, as a result of the development?	SS9	The Flood Risk Assessment has concluded that the Proposed Development will not increase the risk of flooding elsewhere and will have a positive reduction in flood risk with the inclusion of surface water attenuation in line with national policy. Where feasible, the post-development site will not exceed greenfield runoff rates. To achieve a meaningful reduction in runoff rates from the existing site, attenuation and flow rate restriction will be considered for surface water drainage.
	How have the wildlife habitats and natural features on and adjacent to the site been considered and how will they be retained, protected and enhanced?	C8, HC4, NE1	The Proposed Development is located on a previously developed site of approx. 1.2ha which is predominantly hard, impermeable surfaces, including hardscaping and roof surface, and areas of formal landscaping of primarily modified grassland, shrub beds and trees. The existing landscaped areas are of low ecological value. The site has no designation for its wildlife importance and the closest area of importance is 1350m from the site. Four local wildlife sites are situated within 1km of the site.

	Wokingham Borough Local Development Framework – Sustainable Design and Construction – Supplementary Planning Document (2010)	Alignment to Draft Local Plan Public Consultation Plan (2020)	Proposed Development Response
			The Proposed Development largely impacts areas of negligible ecological value. However, precautionary measures have been recommended to manage the limited risk of disturbance to protected or notable species that may be supported by the landscaped areas in the existing site. Measures include minimisation of the impact of external lighting, and tree or shrub removal to take place outside of the peak nesting season or after confirmation of no nesting on site.
	Has an ecological assessment, where a significant impact on biodiversity is likely or probable, been carried out?	C8, NE1	A PEA has been produced by John Wenman Ecological Consultancy LLP in support of the application and confirmed that the Proposed Development largely impacts areas of negligible ecological value. A survey was undertaken of the site, including identifying the presence / likely absence of notable or legally protected species and the sites potential to support them, as written in the PEA report. The survey was conducted in accordance with the CIEEM Guidelines for Preliminary Ecological Appraisal 2nd Edition (CIEEM 2017).
Waste, Recycling and Composting Facilities	How will the development provide, or have access to appropriate facilities for the storage and collection of waste?	DH8, C2	A central waste stores facility is to be provided with segregated waste stream for collection by a private waste contractor.
	How will the development incorporate provision for on site composting, green waste and sink macerators?	MW1, DH8	No segregated food or organic waste storage has been envisaged due to the limited generation of this waste stream during the building's intended operation.
	Has an audit of the materials present on the site been conducted with assessment of the extent to which materials could be reused?	MW1, MW2, SS14	A pre-demolition audit has been commissioned in relation to the BREEAM assessment and will be undertaken prior to the demolition of the existing buildings on site.
	How will the development make the maximum use of	MW1, MW2	The Applicant has set targets for diversion from landfill for construction (70%), demolition (80%) and excavation waste (95%). The construction waste

	Wokingham Borough Local Development Framework – Sustainable Design and Construction – Supplementary Planning Document (2010)	Alignment to Draft Local Plan Public Consultation Plan (2020)	Proposed Development Response
	construction and demolition waste?		management will align to the waste hierarchy, and the recycling and reuse of materials on site or locally will be maximised. A Waste Management Plan will be developed for the Proposed Development, to outline opportunities for waste minimisation and management, and ensure best practice is adopted for the construction phase.
	How will the development make maximum use of recycled materials?	MW1, MW2	Priority will be given to specification of materials, products and systems with a high recycled content, the extent of which will need to be determined by the design and construction team in due course. Most materials will be suitable for dismantling and recycling at end-of-life.
	How will provision be made for the storage and recycling of waste for all users of the site?	MW1, MW2	The Proposed Development will include 1,100L storage bins for waste segregation and storage of recyclable and non-recyclable waste, and waste storage will be clearly labelled to ensure cross contamination of all waste streams is minimised.
Sustainable Transport	Requirement for developments to provide or have existing access to appropriate facilities for secure and covered cycle storage and changing/ drying facilities.	C4	The proposal has allowed for covered and secure cycle storage.
Health, Safety and Well-being	How will the development address issues of air, noise and light pollution to minimise their impact?	HC6	The Proposed Development will be electricity-led, combustion free and is therefore expected to have a minimal impact on local air quality. The location is well connected via active or public transport networks, therefore encouraging staff and visitors to use alternative modes of transport to and from the site. Negative impacts as a result of the Proposed Development to the surrounding acoustic environment will be mitigated as far as practically possible. The Environmental Noise Survey sets out internal sound level targets to address the internal acoustic conditions and risk of noise ingress to sensitive receptors from the Proposed Development. A fixed noise limit has been proposed at the boundary with commercial properties.

	Wokingham Borough Local Development Framework – Sustainable Design and Construction – Supplementary Planning Document (2010)	Alignment to Draft Local Plan Public Consultation Plan (2020)	Proposed Development Response
			During the construction phase, areas of concern will be managed including waste reduction strategies, noise and dust pollution, and construction traffic. Contractors will be required to identify potential sources of dust and other air pollution, and appropriate dust control measures will be implemented. It is also intended that the Principal Contractor shall register under the Considerate Constructors Scheme and achieve a best practice score.
	Has evidence been provided on the measures that will enable developers to meet their obligations in respect of land affect by contamination?	HC9	Not applicable – No contamination.
	Has an assessment of existing levels of pollution to or from the Proposed Development is likely or probable?	HC6	See comments above.
Sustainable Transport	How has the design and layout incorporated measures to reduce the need to travel, especially by car and promoted alternative and sustainable modes of transport such as walking, cycling and the use of public transport?	SS6, SS8	A range of amenities are accessible for pedestrians and cyclists from the site. The bordering road, Eskdale Road, provides a suitable route for pedestrians with low speeds and street lighting. For cyclists, both Winnersh Triangle and Earley train stations are accessible. Additionally, the site provides linkages to the local cycle network. Sheltered cycle parking is being provided within the layout as well as electric vehicle charging points in accordance with the latest Wokingham Borough Council standards. The development will also benefit from the wider travel plan for Winnersh Triangle business park which provides ongoing measures and incentives which seek to encourage travel by non-car modes and reduce single occupancy car trips.
Sustainable Construction	Will the development use responsibly sourced and recycled materials?		Key considerations will be made regarding procurement, led by the implementation of the Applicant's Responsible Sourcing Policy, which aims to ensure that the suppliers they engage with adhere to the environmental, social and governance values and best practice consistent with the Applicant's

	Wokingham Borough Local Development Framework – Sustainable Design and Construction – Supplementary Planning Document (2010)	Alignment to Draft Local Plan Public Consultation Plan (2020)	Proposed Development Response
			own commitments, including the impacts on their Scope 3 emissions. The Responsible Sourcing Policy must be read and acted upon by all suppliers and their supply chains. The team will look to facilitate the selection of products that reduce the negative environmental, economic and social impacts across their supply chain including extraction, processing and manufacturing. A full review of the materials specified for the Proposed Development will be undertaken during the detailed design development stages aiming for materials to meet the following requirements where possible: 1) products to have available responsible sourcing certificates and/or Environmental Product Declarations, 2) products to minimise Global Warming Potential (GWP), and 3) all timber used at the Proposed Development aims to be FSC or PFC certified or similar.
	Will the development use locally sourced materials, preferably within 35 miles?	-	When specifying products consideration will be given to sourcing locally where viable. A sustainable procurement plan will be developed incorporating this strategy.
	Will the development achieve a minimum target of 25-30% of roads, pavements, public spaces and car parks to be from locally reclaimed or recycled materials in line with good practice?	-	Yes, the development will aim to meet the target 25-30% recycled materials However this is based on the specification at this stage and is subject to both the detailed design and the procurement.
	How will the selected materials help to retain local character, ensure long life and ensure a low environmental impact?	-	The selection of materials and recessive colours proposed have an aesthetic that should sit well with the surrounding business park. The materials are robust for long life and low environment impact, as they can be dismantled, recycled and reused.
	Has a site waste management Plan been completed, if the estimated cost is greater than £300,000 or over excluding VAT?	DH8, MW1	The main contractor will be required to produce a Site Waste Management Plan prior to commencement of any demolition or construction works on-site.

	Wokingham Borough Local Development Framework – Sustainable Design and Construction – Supplementary Planning Document (2010)	Alignment to Draft Local Plan Public Consultation Plan (2020)	Proposed Development Response
			One of the aims of the document will be to investigate how recycling of construction material can be maximised, and to highlight means to divert specific waste streams from landfill.

Appendix D: Summary of BREEAM pre-assessment.

The summary table below highlights the list of targeted credits for the current BREEAM 2018 V6 pre-assessment. Mandatory credits to achieve a ‘Excellent’ rating and above are highlighted by (M_v). Additional mandatory credits for an ‘Outstanding’ rating are highlighted by (M_e) and (M_o) respectively.

Table 9: BREEAM Target Summary

Category	Issue	Credits		
		Available	Targeted	Potential
Management	Man 01: Project brief and design	4	3	+1
	Man 02: Lifecycle cost and service life planning	4	4	-
	Man 03: Responsible construction practices (M _e), (M _o)	6 (+1)	6 (+1)	-
	Man 04: Commissioning and handover (M _e), (M _o)	4	3	+1
	Man 05: Aftercare (M _e), (M _o)	N/A	N/A	N/A
Health & Wellbeing	Hea 01: Visual comfort	3 (+1)	2	+1
	Hea 02: Indoor air quality	1	1	-
	Hea 04: Thermal comfort	2	2	-
	Hea 05: Acoustic performance	1	1	-
	Hea 06: Security	1 (+1)	0	+1
	Hea 07 Safe and healthy surroundings	2	2	-
Energy	Ene 01: Reduction of energy use and carbon emissions (M _e) (M _o)	13 (+5)	4	+2
	Ene 02: Energy monitoring (M) (M _e) (M _o)	2	2	-
	Ene 03: External lighting	1	1	-
	Ene 04: Low carbon design	3	1	-
	Ene 05: Energy efficient cold storage	N/A	N/A	N/A
	Ene 06: Energy efficient transportation systems	2	2	-
	Ene 07 Energy efficient laboratory systems	N/A	N/A	N/A
	Ene 08: Energy efficient equipment	N/A	N/A	N/A
Transport	Tra 01: Transport assessment and travel plan	2	2	-
	Tra 02: Sustainable transport measures	10	6	-
Water	Wat 01: Water consumption (M _v) (M _e) (M _o)	5 (+1)	3	+1
	Wat 02: Water monitoring (M _v) (M _e) (M _o)	1	1	-
	Wat 03: Water leak detection	2	2	-
	Wat 04: Water efficient equipment	0	1	-
Materials	Mat 01: Environmental impacts from construction products - Building life cycle assessment	7 (+3)	2	-
	Mat 02: Environmental impacts from construction products	1	1	-
	Mat 03: Responsible sourcing of construction products (M _v) (M _e) (M _o)	4 (+1)	3	-
	Mat 05: Designing for durability and resilience	1	1	-
	Mat 06: Material efficiency	1	1	-

Category	Issue	Credits		
		Available	Targeted	Potential
Waste	Wst 01: Construction waste management (M _o)	5 (+1)	4	+1
	Wst 02: Use of recycled and sustainably sourced aggregates	1 (+1)	0	-
	Wst 03: Operational waste (M _e), (M _o)	1	1	-
	Wst 04 Speculative finishes	1		-
	Wst 05: Adaptation to climate change	1 (+1)	1	-
	Wst 06: Design for disassembly and adaptability	2	2	-
Land Use and Ecology	LE 01: Site Selection	2	1	-
	LE 02: Identifying and understanding the risks and opportunities for the project	2 (+1)	2	-
	LE 03: Managing negative impacts on ecology	3	3	-
	LE 04: Change and enhancement of ecological value	4 (+1)	4	-
	LE 05: Long term ecology management and maintenance	2	2	-
Pollution	Pol 01: Impact of refrigerants	3	2	-
	Pol 02: Local air quality	2	2	-
	Pol 03: Flood and surface water management	5	5	-
	Pol 04: Reduction of night-time light pollution	1	1	-
	Pol 05: Reduction of noise pollution	1	1	-
Innovation	Inn 01: Approved innovation and exemplary level credits	10	1	-
	Targeted weighted score rating:	73.40%		
	Potential weighted score rating:	80.29%		

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	Actual	Notional
Heating + cooling demand [MJ/m ²]	97.56	85.74
Primary energy [kWh _{tp} /m ²]	39.82	48.23
Total emissions [kg/m ²]	3.81	4.48



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