
Building Environment and Services Engineers

Energy & Sustainability Statement

CLIENT

Kindred Living Project Ltd.

PROJECT

1677 - Eastleigh Court

Revision 1.0 - 20.02.2026 - Planning

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Rev	Date of Issue	Status	Issued by	Checked by	Summary of changes
1.0	20/02/2026	Planning	KJ	MM	

1 Executive Summary

This Energy and Sustainability Statement supports the planning application for the proposed development at Eastleigh Court, Bishopstrow and sets out a comprehensive low-carbon and sustainable design strategy in accordance with the National Planning Policy Framework (NPPF), Building Regulations Part L (2021), and the Wiltshire Core Strategy.

The proposals comprise the refurbishment of the listed Eastleigh Court building and the construction of a new Pavilion building. A bespoke and proportionate approach has been adopted to reflect the mixed new-build and heritage nature of the scheme.

The Pavilion building has been assessed against the principles of the BREEAM New Construction framework using a bespoke qualitative methodology and demonstrates high sustainability performance across energy, health and wellbeing, materials, water efficiency, waste, ecology, pollution and management categories. The estimated overall performance is equivalent to a BREEAM “Excellent” rating.

A dynamic energy model confirms that the Pavilion exceeds Building Regulations Part L 2021 requirements by approximately 31% for both regulated carbon emissions and primary energy demand. Performance is achieved through a high-performance building envelope, all-electric heating and hot water systems using air source heat pumps (ASHPs), efficient ventilation with heat recovery, smart controls, and low-energy lighting and appliances.

The existing Eastleigh Court building will be improved through a conservation-led strategy focused on fabric improvements and the replacement of the existing oil-fired heating system with a hybrid ASHP and water source heat pump (WSHP) solution, delivering significant carbon reductions while retaining historic fabric and existing distribution systems where feasible.

The development also delivers wider sustainability benefits including significant biodiversity net gain, sustainable drainage systems, water efficiency measures, low embodied carbon construction materials, and improved indoor environmental quality.

Overall, the proposals demonstrate a robust, policy-compliant and future-ready approach to low-carbon design and environmental performance, fully aligned with Wiltshire Core Strategy policies and national sustainability objectives.

2 Introduction

This Energy and Sustainability Statement has been prepared to support the planning application for the proposed development at Eastleigh Court, Bishopstrow. The document has been produced by the design team and sets out the specific sustainability principles, energy strategy, and environmental performance measures proposed in accordance with the National Planning Policy Framework (NPPF), the Building Regulations, and the Wiltshire Core Strategy.

The contents of the document have been arranged according to the BREEAM criteria in order to demonstrate a comprehensive and policy-led approach to sustainable construction, climate change mitigation, occupant wellbeing, and environmental enhancement. Given the nature of the proposals, which comprise both new-build development and the sensitive refurbishment of a listed building, a bespoke qualitative methodology has been adopted to ensure that sustainability measures are applied in a proportionate and appropriate manner, which draws upon the knowledge of the experienced design team.

The Qualitative Assessment Criteria set out in Section 4 relate to the proposed Pavilion building, which represents the new construction element of the scheme. This assessment has been informed by the BREEAM New Construction approach and is used to demonstrate how the Pavilion responds to the requirements of Wiltshire Core Strategy Core Policy 41 (Sustainable Construction and Low Carbon Energy), alongside wider national objectives for reducing carbon emissions and improving environmental performance.

The existing Eastleigh Court building, which is a designated heritage asset, has been assessed separately. In line with the principles of the NPPF and Wiltshire Core Strategy Core Policy 58 (Ensuring the Conservation of the Historic Environment), it is recognised that standard new-build sustainability assessment methodologies are not appropriate for historic buildings where fabric retention and conservation are primary considerations.

The sustainability strategy for Eastleigh Court is addressed separately in Section 6 – Approach to Eastleigh Court, which sets out measures to improve energy efficiency and reduce carbon emissions, including sensitive fabric enhancements and the replacement of the existing oil-fired heating system with a low-carbon heat pump solution.

The combined qualitative assessment of the Pavilion and the sensitive sustainability-led refurbishment of Eastleigh Court demonstrate a comprehensive and balanced response to Wiltshire's planning policies, supporting the delivery of a low-carbon, high-quality development that will provide long-term environmental, social, and economic benefits.

Client: Kindred Living Project Ltd
Architect: Studioshaw
Structural Engineer: Structure Workshop
MEP / Energy Engineer: Skelly and Couch
Landscape Architect: Ed Olley Garden Design
Ecology: Ecology By Design
Planning: Newmark
Cost Consultant: Measur
Heritage: Portico Heritage
Acoustic: Hepworth Acoustics
Flood Risk and SuDS: Sumo
Transport: Pell Frischmann

3 Proposed Building

Kindred Living Project propose to turn Eastleigh Court and the former Eastleigh Court Stables into luxury short stay self-catering accommodation where guests can also hold celebrations and events.

Planning permission is sought for the change of use of Eastleigh Court from Use Class E Offices to short stay rental accommodation. In addition, planning permission and Listed Building Consent is sought for internal and external repair, restoration and enhancement works, including the demolition of the existing ground floor extension and the provision of a new single storey extension.

The scheme also proposes the construction of a new pavilion building to deliver an ancillary acoustically treated events space and pool house facilities, along with a new outdoor swimming pool.

As part of their stay, guests will be able to use the new extension in Eastleigh Court for seated dining of up to 60 people. For events involving more than 60 seated guests the option will be available to hire a marquee and a designated landscaped space will be provided away from neighbouring properties.

Following Kindred Living Project's purchase of the adjacent former Eastleigh Court stables building, the properties have been reunited under a single ownership. The former stables are currently in Use Class C3 and this application includes seeking planning permission to convert the property from residential to short stay rental accommodation. It will be possible for the former stables and Court properties to be rented together or separately. It will not be possible for either the Court or the former stables to be rented by the room.

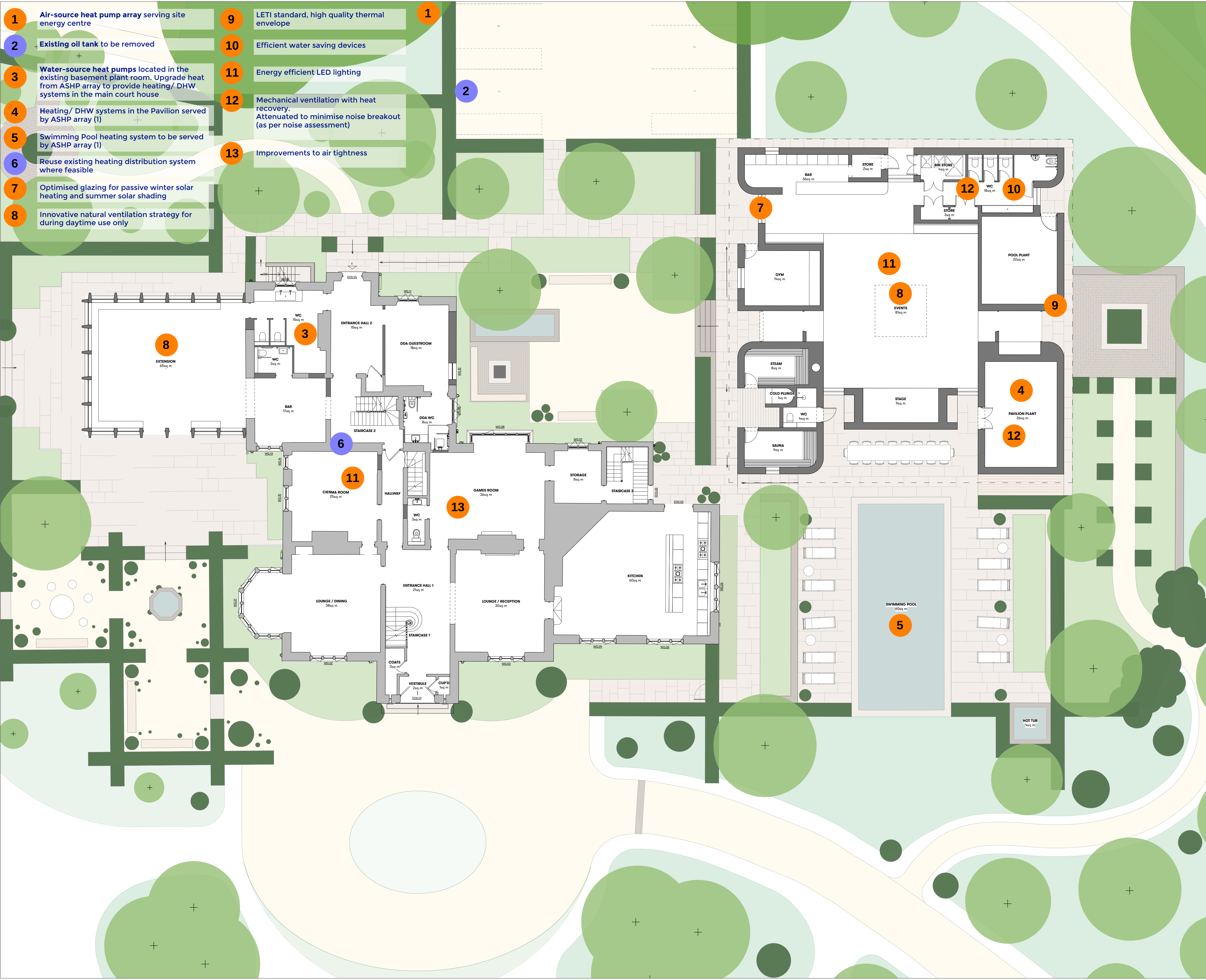
Both properties will only be available for short-term rentals with a minimum rental period of three nights. The properties will be managed by a house manager living off site. No staff will be living on site.

A detailed landscaping masterplan is proposed which seeks to optimise the introduction of new planting including a large number of new trees and a pond. The design and layout has been configured to introduce biodiverse planting and areas of both formal planting and low maintenance grasses.

Sufficient new parking spaces are proposed within the grounds to provide for the parking requirements of overnight and day guests, contractors and staff. A new substation is also proposed within the grounds to serve the entire property.

Please refer to Appendix A and Appendix B for the existing and proposed site plans.

The client would like to establish a highly sustainable destination. This would demonstrate leadership across the industry in environmental issues, as well as bringing other benefits in terms of marketing and enhanced cost efficiency in operation of the buildings. A bespoke Energy and Sustainability strategy has therefore been developed in accordance with these ambitions. Many of the key principles are summarised in the diagram below.



- 1

Air-source heat pump array serving site energy centre
- 2

Existing oil tank to be removed
- 3

Water-source heat pumps located in the existing basement plant room. Upgrade heat from ASHP array to provide heating/ DHW systems in the main court house
- 4

Heating/ DHW systems in the Pavilion served by ASHP array (1)
- 5

Swimming Pool heating system to be served by ASHP array (1)
- 6

Reuse existing heating distribution system where feasible
- 7

Optimised glazing for passive winter solar heating and summer solar shading
- 8

Innovative natural ventilation strategy for during daytime use only

- 9

LETI standard, high quality thermal envelope
- 10

Efficient water saving devices
- 11

Energy efficient LED lighting
- 12

Mechanical ventilation with heat recovery. Attenuated to minimise noise breakout (as per noise assessment)
- 13

Improvements to air tightness

- 1
- 2

- KEY

Existing Wall

Proposed Wall

Eastleigh Court

1.1

Existing concrete roof tiles to be replaced with clay to match existing

1.2

Existing flat roof

1.3

New dormer window pitched roof. Tiles to match existing

1.4

New conservation roof light to replace existing
- Proposed Court Extension
- 2.1

Standing seam copper pitched roof
- 2.2

Stepped stone coping

Proposed Pavilion

3.1

Standing seam metal hipped roof with central raised roof light

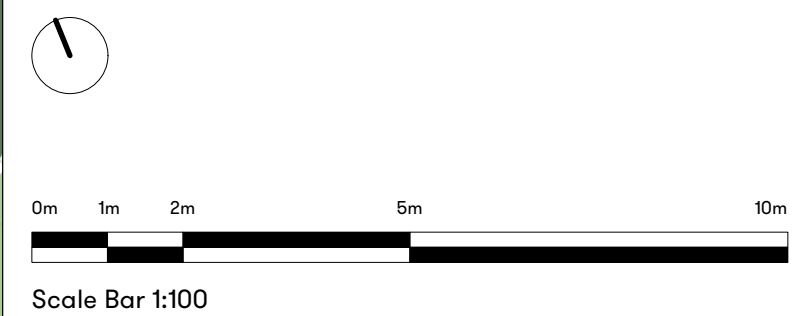
3.2

Stone chimney

3.3

Concealed gutter on each side of roof

NOTE.
See landscape plans for details



revision	date	amendment
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studioshaw

- Report all drawing errors and omissions to the Architect
- All dimensions in millimeters unless noted otherwise
- Drawings for tender purposes only
- Do not scale from this drawing.
- All dimensions to be measured on site and to be the responsibility of the contractor.

job title 088_Eastleigh Court		
drawing title Proposed Court & Pavilion - Ground Floor Plan		
status	DRAFT	date
scale	1:100 @ A1	22/01/25
job no	drawing no.	revision
088	088-XX-00-11100	

4 Planning Policies

4.1 Introduction

The need to create a more sustainable built environment for future generations has led, in the last few years, to the introduction of a series of minimum design standards for sustainable design and construction of new and refurbished buildings. This section summarises the requirements for sustainable design from the Building Regulations and the local Planning Authority (Wiltshire Council).

4.2 National Context

- National Planning Policy Framework (NPPF)
- Planning Practice Guidance (PPG)
- Planning (Listed Buildings and Conservation Areas) Act 1990

4.2.1 The Building Regulations

The Building Regulations Part L - Conservation of Fuel and Power are continually being updated to improve the energy efficiency of new and refurbished building work that needs to be inspected by Building Control or an approved inspector.

The baseline for any design is to meet the Building Regulations and any Planning Requirements.

The design will be registered under the new Building Regulations Part L Volume 2, 2021 edition (incorporating 2023 amendments), which came into force on the 15th of June 2022. This new revision strengthens the performance requirements for buildings and seeks to further reduce carbon emissions from new buildings.

4.3 Local Context - Wiltshire Core Strategy

4.3.1 Wiltshire Core Strategy (WCS) adopted 2015

- Core Policy 41 – Sustainable Construction and Low Carbon Energy
- Core Policy 50 – Biodiversity and Geodiversity
- Core Policy 57 – Ensuring High Quality Design and Place Shaping
- Core Policy 58 – Ensuring the Conservation of the Historic Environment
- Core Policy 60 – Sustainable Transport
- Core Policy 61 – Transport and Development
- Core Policy 67 – Flood Risk and Drainage

This Sustainability and Energy Strategy outlines the principles of sustainable construction and low carbon design proposed for Eastleigh Court, Bishopstrow. A bespoke strategy has been developed according to the Wiltshire Core Strategy and highlights the approach to the following:

- a. Climate Change Mitigation
- b. Adaptation to climate change
- c. Sustainable Transport
- d. Biodiversity and Green infrastructure
- e. Water management
- f. Site waste management
- g. Use of materials

In particular, the report demonstrates how the development will achieve the national carbon reduction and overheating targets.

5 Qualitative Assessment Criteria

5.1 Scope

The contents of the assessment criteria are set out in accordance with the BREEAM criteria for New Construction¹ to ensure their requirements are captured in the bespoke assessment.

The Qualitative Assessment Criteria apply only to the proposed Pavilion building, which constitutes the new-build element of the development. The assessment has been structured with reference to the BREEAM New Construction framework to demonstrate how the Pavilion responds to national and local planning policy objectives relating to sustainable design, energy efficiency, carbon reduction, occupant wellbeing, and environmental performance, including those set out within the National Planning Policy Framework (NPPF) and the Wiltshire Core Strategy.

The existing Eastleigh Court building, which is a listed heritage asset, has not been assessed separately under the Qualitative Assessment Criteria. This reflects the policy requirement to adopt a proportionate and sensitive approach to the refurbishment of historic buildings, where extensive new-build sustainability benchmarking methodologies are not considered appropriate or compatible with conservation principles.

Instead, the sustainability strategy for Eastleigh Court is addressed in Section 6 – Approach to Eastleigh Court, which sets out targeted fabric improvements, low-carbon heating upgrades, and operational efficiency measures that align with Core Policy 41 (Sustainable Construction and Low Carbon Energy) while safeguarding the historic significance of the building in accordance with Core Policy 58 (Ensuring the Conservation of the Historic Environment).

This approach ensures that:

- The Pavilion is robustly assessed against contemporary sustainability and low-carbon policy standards for new development; and
- The existing listed building is enhanced through a tailored refurbishment strategy that delivers energy and carbon improvements in a manner consistent with heritage planning policy.

We have included estimated scoring within each section and the weighted score which contributes to the total. ***An overall score >70% equates to an “Excellent” rating.***

5.2 Management

5.2.1 Project brief and design

Appropriate briefing and stakeholder engagement activities have taken place to inform the design at early stages and throughout development. The client is Kindred Living Project, a new lifestyle and property company passionate about creating meaningful, connecting spaces. They have experience in hospitality, and founded Kindred in 2019, a vibrant community focussed venue in Hammersmith, London. The client has assembled an award-winning team of consultants with a track record in designing exemplar projects within historic and sensitive contexts. The client is therefore aware of the information required by the wider project team at relevant stages.

¹ BREEAM UK New Construction Version 6.1 Technical Manual – SD5079

5.2.2 Life cycle cost and service life planning

The design and brief have been informed by careful planning and evaluation by the client and design team. The location and desired capacity and quality of the proposed development and landscape have been determined through careful investigation of alternatives with a view to longevity.

Elements of the building fabric are detailed to improve their life cycle with appropriate maintenance and oversight. Services are equally to be accommodated to suit best practice and maximise longevity.

5.2.3 Responsible construction practices

Designs have been developed with a view to ensuring healthy and safe working conditions for the prospective contractors/subcontractors and their teams. Building materials and systems are to be responsibly sourced and fabricated to follow best practice principles. The prospective contractor will ultimately take on the responsibility of delivering the design following responsible practices.

The superstructure of the Pavilion and Court Extension is predominately timber which will be locally sourced. The timber structure has been designed assuming a low grade of softwood in order to keep options open for the timber species. The structure has been arranged as far as possible to keep timber sizes down and avoid using engineered timber products. This will make it easy to transport and assemble on site. The materials used throughout are sustainable and robust.

5.2.4 Aftercare

The MEP Engineers and Architects will continue to engage with the Eastleigh Court development post-completion to ascertain building performance in relation to the design brief during the first year of occupation. The client will actively maintain the buildings and landscape as well as manage operation for the foreseeable future. The design assumes regular upkeep to external planting, facades, exposed structure, etc.

Proposed planting has been carefully specified by the landscape designer to ensure that the plants are planted in the optimum location and with the correct soil and are species that are native and climate resilient. The planting specification has been developed to limit the number of species and therefore simplify maintenance. Formal planting will require regular maintenance, and this will be undertaken by a specialist employed by the client. The planting will be draught tolerant and bio-diverse, with large areas of wild long grasses which will be low maintenance.

5.2.5 Commissioning and handover

A comprehensive commissioning plan will be written into MEP specifications.

To include:

- Testing and commissioning schedule of building services, control systems, and building fabric
- Management of commissioning, performance testing and handover
- Production of building user guides for technical and non-technical persons

Management estimated score = 20/21 credits, weighted as 10.5%

5.3 Health and Wellbeing

5.3.1 Acoustic Performance

An acoustic report has been produced as part of the planning submission.

5.3.2 Security

A site wide security strategy will be designed in accordance with best practise security principles to ensure a safe and secure environment for building users.

5.3.3 Safe access and outside spaces

Pavilion

The Pavilion is all single storey, with level access throughout. Both entrances are step free and level differences on the west side of the pavilion are dealt with by a series of 1:13 ramps which lead guests up to the east garden. There is an accessible Part M compliant WC located in the north east corner of the building.

Car parking

New car parking has been designed with input from a transport consultant who has produced swept path analysis and visibility splay analysis to ensure safe access in, out and around the site. Blue badge parking is included as part of the proposal, and this is located close to Eastleigh Court.

5.3.4 Visual Comfort

We have applied good practice daylight factors and uniformity ratios so that the spaces are predominantly daylighted and artificial lighting is minimised.

Internal lighting levels and zoning controls (for specific areas only) will be designed in accordance with the SLL Code for Lighting 2012 and CIBSE Lighting Guide 7, 2023.

5.3.5 Indoor Air Quality

The proposed development has been designed to provide a high standard of indoor air quality in accordance with Approved Document F (2021) and CIBSE guidance, supporting occupant health and comfort.

The main events space is served by a central Air Handling Unit (AHU) supplying filtered, tempered fresh air. The system is designed to maintain suitable ventilation rates for periods of high occupancy and includes high-efficiency filtration to reduce particulate and pollutant ingress. Where required, the AHU also provides cooling via a DX coil, contributing to both temperature and humidity control.

The gym and WC areas are served by Mechanical Ventilation with Heat Recovery (MVHR) units. These systems continuously extract stale and humid air while recovering heat from the exhaust air to pre-condition incoming fresh air, reducing heat loss and improving overall system efficiency.

Ventilation rates will be demand-controlled using CO₂ and humidity sensors, ensuring adequate fresh air is supplied while minimising unnecessary energy use. Continuous extract in wet areas prevents odour build-up and reduces the risk of condensation and mould growth.

This strategy delivers good indoor environmental quality while maintaining energy efficiency and supporting the wider sustainability objectives of Wiltshire Core Policies CP41 and CP57 and the National Planning Policy Framework (NPPF).

5.3.6 Thermal Comfort

The Pavilion has been designed to ensure a high level of internal comfort for occupants throughout the year, in full accordance with the National Planning Policy Framework (NPPF) and Wiltshire Core Strategy Policies CP41 (Sustainable Construction and Low Carbon Energy) and CP57 (Ensuring High Quality Design and Place Shaping). The strategy focuses on mitigating overheating risk, enhancing occupant well-being, and ensuring resilience to future climate change. Careful consideration has also been taken to reduce noise breakout.

Passive Design and Solar Control

The Pavilion has been carefully designed to minimise overheating and solar gain during warmer months with a passive first design approach – using architectural form and building fabric rather than cooling systems as initial mitigation measures. These include:

- **Roof overhangs and shading:** All glazing is recessed beneath a large overhanging roof, providing effective solar shading and reducing direct summer sun exposure.
- **Reduced and optimised glazing areas:** Glazing is kept to a functional minimum and strategically placed. Triple-glazed units with low g-values are proposed throughout to limit solar heat gains while retaining thermal efficiency in winter.
- **High thermal mass construction:** The Pavilion incorporates stone-clad walls, which provide high thermal mass, absorbing heat during the day and releasing it slowly as temperatures drop. This helps regulate internal temperatures and prevent overheating.

These measures comply with the energy hierarchy promoted by Wiltshire Council and guidance in CIBSE TM52 for limiting overheating risk.

Active Cooling and Mechanical Ventilation

To provide resilience during high occupancy events or prolonged hot weather, the Pavilion is equipped with an air handling unit (AHU) incorporating a direct expansion (DX) cooling coil:

- The DX coil allows the system to actively cool supply air, maintaining internal comfort conditions where passive measures alone are insufficient.
- The unit modulates airflow and cooling output based on internal temperature and CO₂ levels, ensuring energy-efficient and demand-responsive operation.
- Cooling also assists with humidity control, improving overall comfort for guests and staff.
- The AHU will be supplied with attenuators as per the acoustic consultant recommendations.

This approach ensures compliance with Policy CP57, which requires buildings to deliver comfortable and usable environments for occupants.

Control, Monitoring and Efficiency

- Weather compensation, time controls and occupancy sensors ensure cooling is used only when required.

- This approach aligns with Wiltshire Core Policy 41, encouraging efficient building services and reduced energy use.

Health & Wellbeing estimated score = 13/18 credits, weighted as 10%

5.4 Energy

This section outlines the proposed energy strategy for the Pavilion and demonstrates how it aligns with Wiltshire Core Policy 41 (Sustainable Construction and Low-Carbon Energy). The strategy has been designed to reduce energy demand, improve energy efficiency, and support the transition to low-carbon energy sources in accordance with local and national sustainability objectives. By addressing the requirements of Core Policy 41, the development aims to contribute meaningfully to Wiltshire's targets for reducing carbon emissions and promoting sustainable growth.

The following low carbon design measures implemented to reduce operational energy consumption and carbon emissions.

5.4.1 Passive Design Features

The largest carbon savings can be made from good passive design on the basis that energy use is reduced or eliminated at source. The building will include the following passive design features:

- a high-quality thermal envelope and good airtightness to industry good practise standards
- excellent daylighting to minimise use of artificial lighting in the day
- optimised glazing levels on different facades to provide solar heating in the colder months, with deep reveals for solar shading in the summer
- glazing positioned to provide good daylight penetration within the deep floor zone
- utilisation of the building form for effective natural ventilation by promoting both cross and stack ventilation

5.4.2 Active Design Features

M&E services will be designed to be as efficient as possible and includes the following:

- demand driven ventilation in areas with mechanical extract/ventilation
- MVHR in wet rooms to recover up to 95% of the heat from the extracted air
- heating and hot water provided by heat pump technology throughout
- energy efficient LED lighting with >100lumen/watt output
- lighting controls linked to occupancy and daylight levels
- water saving measures such as non-concussive taps to save on DHW generation
- optimised hot water storage to reduce standing and distribution losses
- grade 'A' efficiency electrical kitchen appliances throughout
- sub-metering on all major energy consuming loads
- use of an intuitive plant control system

5.4.3 Renewable Energy

Incorporating low/zero carbon energy systems are a key element for energy and carbon reduction.

Space heating and domestic hot water will be provided to the entire estate by air source heat pump technology (ASHPs). These systems extract latent heat from the ambient air and upgrade it to a usable temperature via a vapour compression cycle. Compared with conventional fossil fuel boilers, the ASHPs offer significantly improved efficiency, with a seasonal coefficient of performance (SCOP) typically between 3.0 and 4.0. This means that for every 1 kWh of electricity consumed, 3–4 kWh of heat is delivered to the building.

The proposed swimming pool will also be heated using ASHP technology, providing a low-carbon and energy-efficient heat source in line with the wider renewable energy strategy for the development.

The system design includes:

- Low-temperature underfloor heating circuits to maximise heat pump efficiency.
- Buffer and hot water storage tanks sized to meet peak heating and hot water demands typical of event occupancy patterns.
- Weather compensation and smart controls to modulate output based on internal and external conditions, reducing unnecessary energy use.

All heating and hot water demand is met without the use of fossil fuels, ensuring the building contributes to long-term decarbonisation targets and aligns with Wiltshire Council's climate objectives.

The suggested measures maximise the renewable savings as they are based on building use profiles, building location, form and layout. A PV array has been considered, but the array would be limited by roof profile and over shadowing from trees, along with consideration of proximity of the Listed Building; hence the relative savings compared to the proposal would be small.

5.4.4 Energy Monitoring

Energy metering and sub-metering will be designed in for all end-uses. This will include with monitoring and displays. The client will engage a certified MEP contractor for maintenance and monitoring.

5.5 Energy Assessment

A dynamic energy assessment has been carried out to demonstrate how the targets for regulated CO₂ emissions reduction over and above Building Regulations Part L 2021 will be met.

5.5.1 Model Parameters

Modelling software: IES VE 2024

Thermal elements:

Fabric U values

Construction Elements	Target U-Value (W/m ² K)
External Wall	0.15
Roof	0.12
Floor	0.12
Glazing (Window)	0.80

Fabric efficiency measures

Glazing G-value	0.4 – 0.3
Air tightness (m ³ /h.m ² @50Pa)	3

HVAC Systems

Event Space:

System	System Specification
Heating	ASHP and UFH, SCOP = 3.57
Domestic Hot Water	ASHP SCOP = 3.57
Ventilation	SFP < 1.55 W/l/s Heat recovery efficiency 80%
Cooling	SEER = 5

WC and Gym Space:

Building Zone	System Specification
Heating	ASHP and UFH, SCOP = 3.57
Domestic Hot Water	ASHP SCOP = 3.57
Ventilation	SFP < 1.4 W/l/s Heat recovery efficiency 80%

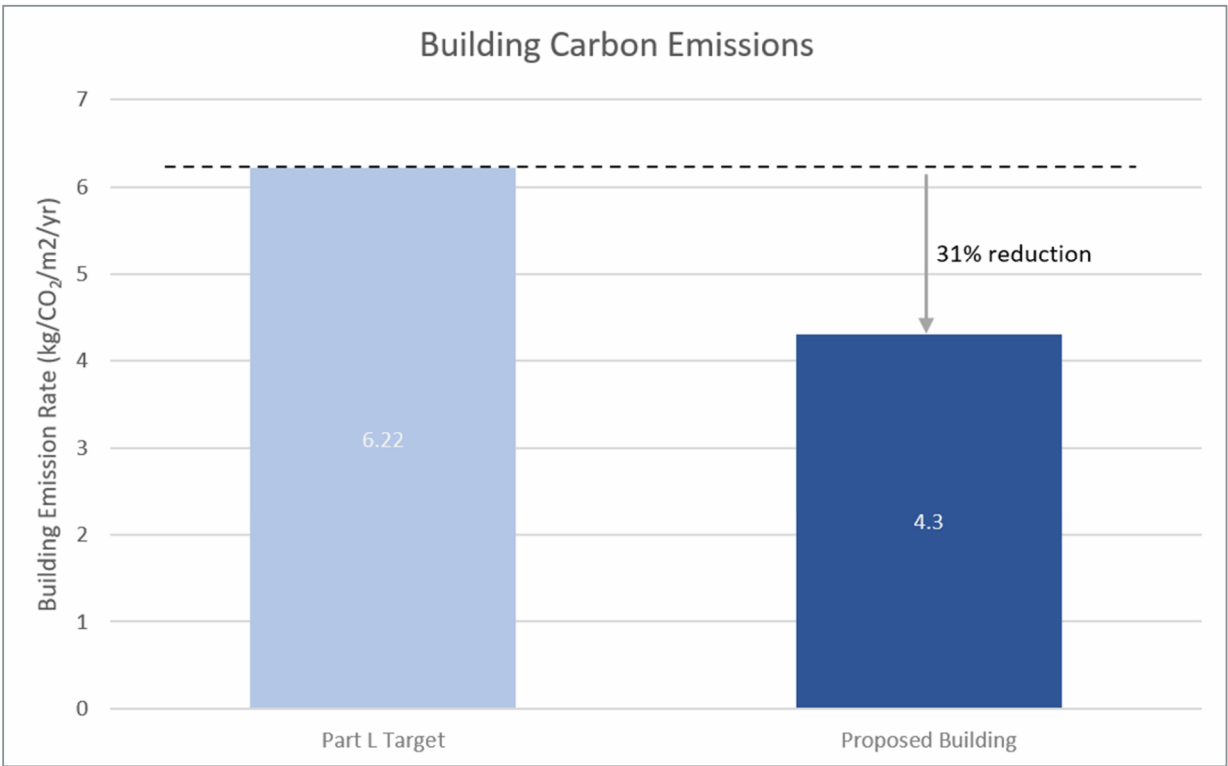
5.5.2 Results

A Part L Building Regulations 2021 compliance assessment has been undertaken for the proposed development. The results demonstrate that the building significantly outperforms the minimum regulatory requirements for energy efficiency and carbon emissions.

The results are summarised in the table and graph below.

See the *Appendix C* for the BRUKL document.

Dwelling Emission Rate (kgCO2/m2/yr)	Target Emission Rate (kgCO2/m2/yr)	Improvement
4.30	6.22	30.8% improvement over Part L requirements
Dwelling Primary Energy Rate (kWh/m2/yr)	Target Primary Energy Rate (kWh/m2/yr)	Improvement
46.91	67.66	30.7% reduction in primary energy demand



These results confirm that the development exceeds both the carbon emissions and primary energy performance targets set out in Approved Document Part L 2021.

Key Factors Contributing to Compliance

- Use of Air Source Heat Pumps (ASHPs) for all heating and hot water demand, removing reliance on fossil fuels and significantly reducing regulated emissions.
- High-performance building fabric, including improved U-values and reduced air permeability
- Efficient heating distribution systems such as low-temperature emitters compatible with heat pumps.
- Reduced energy demand from lighting and auxiliary systems, achieved through LED lighting, smart controls and time/occupancy scheduling.

5.5.3 Energy Assessment Conclusion

The proposed development achieves a 31% improvement over the Part L 2021 target for carbon emissions and a 31% reduction in primary energy demand. This demonstrates clear compliance with national building regulations and contributes to wider objectives of the Wiltshire Council Core Policy 41 – Sustainable Construction and Low Carbon Energy and the National Planning Policy Framework (NPPF).

This meets the minimum standard for a BREEAM Excellent rating.

Energy estimated score = 16/23 credits, weighted as 11%

5.6 Transport

5.6.1 Transport assessment and travel plan

A Transport Statement is provided as part of the application.

5.6.2 Sustainable transport measures

The proposed development benefits from access to existing pedestrian infrastructure along Bishopstrow Road which runs along the east side of the site. The site is well connected within Bishopstrow Village and continuous footway provision is available between the site and much of eastern Warminster. The walking route between the site and the town includes several bus stops, further facilitating modes of transport other than cars for both guests and staff. Cycle parking will be provided on site and will likely be predominantly used by staff travelling between Warminster and the site. A plan showing Eastleigh Court in the context of local available cycle routes can be found in the transport assessment included as part of this application. The nearest bus stop is located on Bishopstrow Road very close to the northern entrance to the site. Buses provide connectivity through Warminster, Salisbury, Frome and Bath. The closest railway station is Warminster which is located 2.7km from the site and is accessible via a 6 minute taxi ride, 33 minute walk or 8 minute bicycle ride. The development therefore has great access to the station which has regular services to Bristol, Cardiff, Southampton, Portsmouth and London.

Transport estimated score = 6/12 credits, weighted as 5%

5.7 Water

Sustainable water use has been designed in line with the principles outlined in the Wiltshire Core Strategy - Core Policy 41. The strategy will reduce potable water demand and support long-term environmental sustainability. We have focused on implementing effective and proportionate water-saving measures which include:

- the specification of efficient ultra-low flow fittings and appliances
- monitoring water use and leak detection between the utility supply and building.

These measures will ensure meaningful reductions in water consumption, aligning with the building's scale and usage.

Water estimated score = 7/9 credits, weighted as 5.5%

5.8 Materials

Materials with low embodied carbon have been chosen throughout. An embodied carbon calculator has been used by the structural engineers to compare the proposed wall build-ups with standard brick and block cavity wall construction. The timber frame and stone wall build-up for the new Pavilion building and the extension to Eastleigh Court is 46 kgCO₂e/m. This is much less than a standard wall construction which is at 84 kgCO₂e/m.

5.8.1 Environmental impacts and responsible sourcing of construction products

Concrete and steel used for substructure will be minimised where possible. Internal linings, fittings and joinery will largely be timber products also. Building products will be responsibly sourced from sustainable supply chains wherever possible.

Concrete will only be used in the foundations which will be designed to be as efficient as possible, and the structure is lightweight throughout. The embodied carbon of the concrete can be reduced using supplementary cementitious materials (SCMs) such as GGBS and pulverised fuel ash as well as other emerging materials like limestone and calcined clay. The use of these will be explored during the detailed design phase of the project.

5.8.2 Design for durability and resilience

The external details will be developed to increase the resistance of the envelope to problematic weathering and mechanical defects. Assembled elements will be designed to be capable of being straightforwardly dismantled for maintenance, repair, and replacement.

All timber connections within the pavilion roof structure will be pinned to minimise complexity. All timber structure will be internal and thus protected from any weathering effects. The stone which will be used to clad the extension and pavilion are hard wearing.

5.8.3 Material efficiency

Optimisation of the timber superstructure, substructure and envelope has been carried out to increase the opportunities for modularisation and material efficiency. This limits the requirement for unique elements and reduces quantity of wastage.

The timber has been designed to work with a low-grade softwood as above and uses standard timber sizes throughout. This way of construction has a lower carbon footprint than if engineered timber was used. The exposed joists in the pavilion are repetitive which reduces wastage.

Materials estimated score = 10/14 credits, weighted as 5.5%

5.9 Waste

5.9.1 Construction waste management

A plan to mitigate against construction waste is to be developed with the input of a specialist timber subcontractor at the next stage of design. The superstructure is already conceived to make use of standard size solid timber sections to minimise on-site cutting and waste. Typical spacing of rafters and wall studs has been adopted throughout the timber structure to match standard plywood sheet sizes, to minimise the need for on-site cutting.

5.9.2 Use of recycled aggregates

The concrete specification will make use of recycled aggregates where readily available and not detrimental to performance criteria.

There may be an opportunity to recycle crushed masonry from demolition of the existing extension for use as hardcore under new landscaped areas, to be explored in the next stage.

5.9.3 Operational waste

The design has considered the storage and management of operational waste in accordance with Wiltshire Council requirements, ensuring accessible, hygienic, and appropriately sized facilities that support effective waste segregation and promote sustainable waste practices.

5.9.4 Adaptation to climate change and design for adaptability

The building has been designed to allow for future increases in temperatures through use of future weather files for estimating the likelihood of overheating. Similarly, roof and gutter design is based on allowance for increase rainfall rates.

The Pavilion has been carefully designed to reduce solar gain in the hotter months. The glazing is all set back underneath an overhanging roof which will provide solar shading. Glazing throughout is kept to a minimum and triple glazed windows with low g-values will be used throughout. The stone cladding walls have high thermal mass which contributes to a stable and comfortable indoor temperature. This is done by effectively absorbing heat which regulates temperature and prevents overheating.

The event space within the Pavilion has been designed to be loose fit, allowing for a variety of future uses. The event space is a perfect square room of 9 x 9m which is free from columns. The support spaces include bar, toilets and back of house areas all positioned so that the main event space is clear of corridors and awkward corners. Built in furniture will be kept to a minimum and the client will be operating the venue in a flexible way, the site being used not only for weddings but a diverse range of celebrations and gatherings.

Waste estimated score = 9/10 credits, weighted as 5.5%

5.10 Land Use and Ecology

An Ecological Impact Assessment has been produced and is included as part of the planning submission. The scheme has been designed to maximise on-site biodiversity enhancements and achieves a Biodiversity Net Gain of 18.05% in Habitat Units, and 1760.54% in Hedgerow Units - in excess of the mandatory 10% requirement as per the Wiltshire Core Strategy.

5.10.1 Ecological risks and Opportunities

Proposed works to the existing building at the site are being sensitively designed to avoid any potential impact on identified bat roosts present. Survey work is ongoing to establish roost type and species, and where necessary, this information will be used to inform the proposals and any mitigation features.

Lighting is to be low level and will be specifically designed to avoid any impacts on identified bat roosts / features within the landscape considered suitable to support foraging / commuting bats as outlined in the Ecological Impact Assessment.

The habitats across the site are likely to support notable species such as breeding birds, and hedgehogs.

Further opportunities for maximising Biodiversity at the site will be explored and will include the inclusion of features such as bird and bat boxes.

5.10.2 Managing impacts on ecology

Any trees requiring removal due to health and safety concerns regarding ash dieback will be sensitively removed, ensuring that works are undertaken outside of bird nesting season, and in accordance with any necessary survey work for bats, as directed under the supervision of an ecologist.

Logs from any necessary tree removal works will be retained on site to provide additional mitigation and enhancement features for species such as amphibians and reptiles in particular.

Construction works will be completed in accordance with a CEMP, which will ensure no impacts on retained habitats and / or any notable species.

Eastleigh Court will be delivered to be net phosphorous neutral, and will not contribute to further pressure on the river system. Increases in the loading of phosphorous to the River Avon through overnight accommodation will be offset through reducing phosphorous inputs elsewhere in the river catchment.

5.10.3 Ecological change and enhancement

The proposals are designed to maximise the existing landscape character and features present and provide biodiversity uplift in accordance with the statutory requirement as necessary. This will be achieved through the introduction of new tree planting, enhancement of the grassland habitat, and the inclusion of new, high-quality habitat features such as ponds, and hedgerows. This will provide a wildlife friendly, and aesthetically pleasing site that will provide a range of benefits to visitors and cliental.

5.10.4 Long term ecological management and maintenance

A long-term ecological management and maintenance plan has been developed, outlining measures to protect, enhance, and sustain the site's ecological features, ensuring biodiversity is supported throughout the life of the development.

Land Use and Ecology estimated score = 10/13 credits, weighted as 10%

5.11 Pollution

5.11.1 Flood and surface water management

A flood risk assessment has been undertaken to ensure that the building will be protected from all forms of flooding through the design of appropriate resilience measures. Surface water is to be managed through a sustainable drainage system (SuDS) which will prioritise re-use (where feasible) and provide storage for the 1:100-year event including a climate change allowance.

The site is in flood zone 1, at low risk of flooding from Rivers. The proposed development location is not at risk of surface water flooding and there are no overland flow paths crossing the site that would be impacted.

The site is not at risk of reservoir flooding and groundwater flood risk is low.

Porous and permeable surfacing will be utilised throughout the scheme. Permeable pavements provide interception, source control and treatment of run-off at source, before disposing of run-off directly into the natural ground beneath (where ground conditions allow) therefore significantly reducing volumes of surface water run-off.

It is currently envisaged that surface water run-off will be disposed of predominantly with the use of new deep borehole soakaways and infiltration methods, limiting the discharge of surface water flows into the local sewer network.

Foul flows from the development's welfare facilities will drain via a new pipe network into the local public sewerage system.

A flood risk assessment and drainage strategy has been undertaken and is included as part of the planning application.

5.11.2 Reduction of noise pollution

A noise assessment has been carried out as part of the planning application that demonstrate how noise pollution will be limited on site.

Most of the plant will be located internally to minimise noise pollution. There will be an external ASHP array suitably located near the car park behind Eastleigh Court, to minimise noise pollution to neighbouring properties and local ecology. Noise generating plant operations will be during the hours of (07:00-23:00).

5.11.3 Impact of refrigerants

Ultra-efficient heat pump technology for heating and hot water systems will be specified that use refrigerants with a low GWP and/or DELC CO₂ equivalent emissions.

5.11.4 Local air quality

There will be no gas to site and no onsite emissions from MEP plant.

5.11.5 Light pollution

External lighting will be designed in accordance with the ILP guidance notes and will be on photocell and timeclock controls to automatically turn off during pre-agreed curfew hours.

Pollution estimated score = 9/12 credits, weighted as 6%

5.12 Innovation

The proposed use of an ambient loop heating system with air source heat pumps providing the baselevel heating which is boosted locally within each building by water source heat pumps is proven technology but considered innovative.

Innovation estimated score = 3/10 credits, weighted as 3%

5.13 Qualitative Assessment Conclusion

The Qualitative Assessment Criteria demonstrate that the proposed Pavilion building has been designed to achieve a high standard of sustainability performance in accordance with the principles of the BREEAM New Construction framework and Wiltshire Core Strategy Core Policy 41.

The Pavilion incorporates a comprehensive range of passive and active design measures, including a high-performance building envelope, low-carbon heat pump systems, efficient ventilation and lighting, responsible material selection, and significant biodiversity enhancement.

An estimated and weighted score has been included within each section (which contributes to the total). As per the BREEAM guidance, an overall score >70% equates to an “Excellent” rating.

The assessment set out above results in an estimated BREEAM score of 72% and therefore an Excellent rating.

The assessment confirms that the Pavilion will deliver a low-carbon, energy-efficient and high-quality building that responds positively to local and national sustainability policy objectives.

6 Approach to Eastleigh Court

The refurbishment of the listed Eastleigh Court will be done sensitively, with historic features restored, refurbished and reused throughout. A careful photographic survey has been carried out which captures every element of the existing building. This has been used to carefully develop a strategy which aims to retained as much of the existing building fabric as possible, reducing waste. A heritage consultant has been appointed as part of the design team and the Wiltshire Council Conservation Officer has and will be consulted throughout.

6.1 Building fabric

Improvements will be made whilst respecting the Listing of the building. Hence, the focus will be on:

- air tightness generally
- existing window performance (sealing gaps / improving mechanisms)
- careful coordination of new drainage and ventilation for new en-suites so there is no boxing out or damage to historic cornicing

6.2 Heat source

The current heating and hot water system is served by oil-fired boilers which connect to traditional radiator heat emitters and distribution pipework. Due to the heritage constraints of the building, significant alterations to internal finishes, radiators, pipe runs will be avoided. A key objective of the energy strategy is therefore to upgrade the heat generation plant with a low carbon solution that has minimal impact on the building's fabric.

A two-stage hybrid heat pump system will replace the oil boiler plant:

1. Primary Heat Source – Air Source Heat Pump (ASHP) Array

An external ASHP array will provide low-carbon ambient temperature heat. Heat will be delivered into a low-temperature primary circuit at approximately 40–50°C.

2. Secondary Boost – Water Source Heat Pumps (WSHPs)

The low-temperature heat from the ASHPs will feed a series of closed loop water source heat pumps located within the existing plantroom. These WSHPs will “upgrade” the heat to higher distribution temperatures (65–75°C), allowing compatibility with the existing radiator systems and pipework.

This cascade arrangement provides high overall system efficiency while providing user comfort and maintaining the building's existing systems.

6.2.1 Benefits of the Proposed Approach:

Re-use of Existing Infrastructure: By boosting the heat pump output to higher temperatures, the majority of the existing radiators, pipework, and distribution systems can be retained, significantly reducing embodied carbon, cost, and intrusion into historic interiors.

Elimination of Fossil Fuels: The removal of oil-fired boilers eliminates on-site combustion, associated CO₂ emissions, fuel deliveries, and risk of oil leakage.

Improved Efficiency and Carbon Reduction: The combined ASHP–WSHP system operates with a seasonal coefficient of performance (SCOP) of approximately 2.5–3.0 for high-temperature output. This delivers substantial carbon reductions compared with oil systems, particularly as the national grid continues to decarbonise.

Reduced Local Air Pollution: The removal of oil combustion reduces NOx, SOx and particulate emissions, improving local air quality and supporting regional clean air commitments.

6.3 Other measures

- demand driven ventilation in areas with mechanical extract/ventilation
- energy efficient LED lighting with >100lumen/watt output
- lighting controls linked to occupancy and daylight levels
- water saving measures such as low flow fittings and non-concussive taps to save on DHW generation
- optimised hot water storage to reduce standing and distribution losses
- grade 'A' efficiency electrical kitchen appliances throughout
- sub-metering on all major energy consuming loads

7 Conclusion

This Energy and Sustainability Statement sets out a comprehensive and policy-led approach to delivering a highly sustainable development at Eastleigh Court, Bishopstrow. The proposals have been carefully designed to respond positively to national and local planning policy objectives relating to climate change mitigation, low-carbon energy, environmental quality, biodiversity enhancement, and the conservation of heritage assets.

The development adopts a proportionate and bespoke methodology that recognises the distinct nature of the proposals:

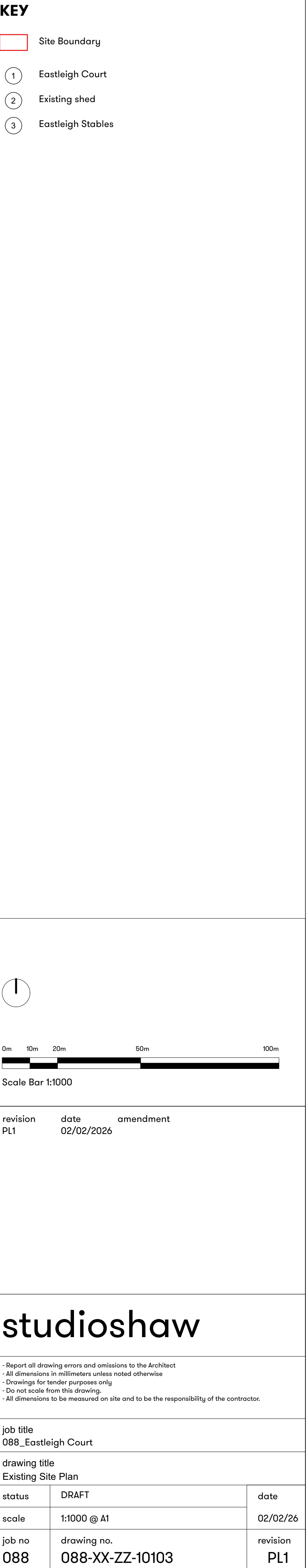
- The new Pavilion building has been robustly assessed against sustainability principles through the Qualitative Assessment Criteria, demonstrating high levels of environmental performance consistent with BREEAM “Excellent” standards.
- The existing listed Eastleigh Court building has been addressed through a tailored approach that prioritises fabric retention while delivering meaningful carbon reduction and energy efficiency improvements in a manner consistent with conservation policy.

The energy strategy achieves a 31% improvement over Building Regulations Part L 2021 targets for both carbon emissions and primary energy demand, supported by high-performance building fabric, all-electric low-carbon heating systems, and efficient building services. The scheme also delivers significant wider sustainability benefits, including biodiversity net gain in excess of statutory requirements, sustainable drainage solutions, responsible material use, and enhanced occupant wellbeing.

Overall, the proposals represent a balanced, high-quality and future-focused development that fully aligns with Wiltshire Core Strategy policies, supports national objectives for decarbonisation and sustainable growth, delivers long-term environmental, social and economic benefits, and enhances the site while respecting its historic significance.

The Energy and Sustainability Statement therefore confirms that the development is fully compliant with planning policy and demonstrates a strong commitment to delivering a low-carbon, resilient and environmentally responsible scheme. The proposals should be viewed positively as a high-performing sustainable development that makes a meaningful contribution to Wiltshire Council’s climate and sustainability ambitions.

8 Appendix A



③ Eastleigh Stables

SOUTH ENTRANCE

5

Scale Bar 1:1000

revision	date	amendment
PL1	02/02/2026	

studioshaw

- Report all drawing errors and omissions to the Architect
- All dimensions in millimeters unless noted otherwise
- Drawings for tender purposes only
- Do not scale from this drawing.
- All dimensions to be measured on site and to be the responsibility of the contractor

job title
088_Eastleigh Court

drawing title
Existing Site Plan

status	DRAFT	date
scale	1:1000 @ A1	02/02/2025
job no 088	drawing no. 088-XX-ZZ-10103	revision PL1

9 Appendix B



KEY

- Site Boundary
- 1 Eastleigh Court
- 2 Eastleigh Stables
- 3 The Pavilion

NOTE

See Preliminary Tree Schedule for details on tree species, tree structural conditions, site notes and tree categories



Scale Bar 1:1000

revision	date	amendment
PL1	02/02/2026	

studioshaw

- Report all drawing errors and omissions to the Architect
- All dimensions in millimeters unless noted otherwise
- Drawings for tender purposes only
- Do not scale from this drawing.
- All dimensions to be measured on site and to be the responsibility of the contractor.

job title
088_Eastleigh Court

drawing title
Proposed Site Plan

status	DRAFT	date
scale	1:1000 @ A1	02/02/26
job no	drawing no.	revision
088	088-XX-ZZ-10110	PL1

10 Appendix C

Project name

Eastleigh Court Pavilion Part L

As designed

Date: Fri Nov 07 16:02:16 2025

Administrative information

Building Details

Address: Address 1, City, Postcode

Certifier details

Name: Name

Telephone number: Phone

Address: Street Address, City, Postcode

Certification tool

Calculation engine: Apache

Calculation engine version: 7.0.28

Interface to calculation engine: IES Virtual Environment

Interface to calculation engine version: 7.0.28

BRUKL compliance module version: v6.1.e.1

Foundation area [m²]: 207.19The CO₂ emission and primary energy rates of the building must not exceed the targets

Target CO ₂ emission rate (TER), kgCO ₂ /m ² annum	6.22
Building CO ₂ emission rate (BER), kgCO ₂ /m ² annum	4.3
Target primary energy rate (TPER), kWh _{PE} /m ² annum	67.66
Building primary energy rate (BPER), kWh _{PE} /m ² annum	46.91
Do the building's emission and primary energy rates exceed the targets?	BER ≤ TER BPER ≤ TPER

The performance of the building fabric and fixed building services should achieve reasonable overall standards of energy efficiency

Fabric element	U _{a-Limit}	U _{a-Calc}	U _{i-Calc}	First surface with maximum value
Walls*	0.26	0.15	0.15	BR000000:Surf[1]
Floors	0.18	0.12	0.12	BR000000:Surf[0]
Pitched roofs	0.16	0.11	0.12	TR000002:Surf[2]
Flat roofs	0.18	0.05	0.05	NN000000:Surf[5]
Windows** and roof windows	1.6	0.8	0.8	BR000000:Surf[2]
Rooflights***	2.2	2.1	2.1	NN000000:Surf[4]
Personnel doors^	1.6	1.2	1.2	GY000000:Surf[3]
Vehicle access & similar large doors	1.3	-	-	No vehicle access doors in building
High usage entrance doors	3	-	-	No high usage entrance doors in building
U _{a-Limit} = Limiting area-weighted average U-values [W/(m ² K)] U _{a-Calc} = Calculated area-weighted average U-values [W/(m ² K)] U _{i-Calc} = Calculated maximum individual element U-values [W/(m ² K)] * Automatic U-value check by the tool does not apply to curtain walls whose limiting standard is similar to that for windows. ** Display windows and similar glazing are excluded from the U-value check. *** Values for rooflights refer to the horizontal position. ^ For fire doors, limiting U-value is 1.8 W/m ² K NB: Neither roof ventilators (inc. smoke vents) nor swimming pool basins are modelled or checked against the limiting standards by the tool.				

Air permeability	Limiting standard	This building
m ³ /(h.m ²) at 50 Pa	8	3

Building services

For details on the standard values listed below, system-specific guidance, and additional regulatory requirements, refer to the Approved Documents.

Whole building lighting automatic monitoring & targeting with alarms for out-of-range values	YES
Whole building electric power factor achieved by power factor correction	>0.95

1- ASHP UFH + AHU

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.57	5	0	1.55	0.8
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

2- ASHP UFH + MVHR

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.57	-	0	-	0.8
Standard value	2.5*	N/A	N/A	N/A	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					

1- ASHP DHW

	Water heating efficiency	Storage loss factor [kWh/litre per day]
This building	3.57	0.005
Standard value	2*	N/A
* Standard shown is for all types except absorption and gas engine heat pumps.		

Zone-level mechanical ventilation, exhaust, and terminal units

ID	System type in the Approved Documents
A	Local supply or extract ventilation units
B	Zonal supply system where the fan is remote from the zone
C	Zonal extract system where the fan is remote from the zone
D	Zonal balanced supply and extract ventilation system
E	Local balanced supply and extract ventilation units
F	Other local ventilation units
G	Fan assisted terminal variable air volume units
H	Fan coil units
I	Kitchen extract with the fan remote from the zone and a grease filter
NB: Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.	

Zone name	SFP [W/(l/s)]										HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I		Zone	Standard
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1			
Gym	-	-	-	1.4	-	-	-	-	-	-	-	N/A
WC	-	-	-	1.4	-	-	-	-	-	-	-	N/A

General lighting and display lighting	General luminaire	Display light source	
Zone name	Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
Standard value	95	80	0.3
Bar	105	105	1.143

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
Gym		105	-	-
Pool Plant		105	-	-
WC		105	-	-
Plant Room		105	-	-
East Entrance Foyer		105	-	-
West Entrance Foyer		105	-	-
Sauna/Steam Room		105	-	-
Event Space		100	-	-

The spaces in the building should have appropriate passive control measures to limit solar gains in summer

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
Bar	NO (-95.4%)	NO
Gym	NO (-72.2%)	NO
East Entrance Foyer	N/A	N/A
West Entrance Foyer	N/A	N/A
Event Space	NO (-41%)	NO

Regulation 25A: Consideration of high efficiency alternative energy systems

Were alternative energy systems considered and analysed as part of the design process?	YES
Is evidence of such assessment available as a separate submission?	YES
Are any such measures included in the proposed design?	YES

Technical Data Sheet (Actual vs. Notional Building)

Building Global Parameters

	Actual	Notional
Floor area [m ²]	312.7	312.7
External area [m ²]	1139.1	1139.1
Weather	LON	LON
Infiltration [m ³ /hm ² @ 50Pa]	3	3
Average conductance [W/K]	177.82	273.09
Average U-value [W/m ² K]	0.16	0.24
Alpha value* [%]	28.51	10

* Percentage of the building's average heat transfer coefficient which is due to thermal bridging

Building Use

% Area Building Type

Retail/Financial and Professional Services
 Restaurants and Cafes/Drinking Establishments/Takeaways
 Offices and Workshop Businesses
 General Industrial and Special Industrial Groups
 Storage or Distribution

100 Hotels

Residential Institutions: Hospitals and Care Homes
 Residential Institutions: Residential Schools
 Residential Institutions: Universities and Colleges
 Secure Residential Institutions
 Residential Spaces
 Non-residential Institutions: Community/Day Centre
 Non-residential Institutions: Libraries, Museums, and Galleries
 Non-residential Institutions: Education
 Non-residential Institutions: Primary Health Care Building
 Non-residential Institutions: Crown and County Courts
 General Assembly and Leisure, Night Clubs, and Theatres
 Others: Passenger Terminals
 Others: Emergency Services
 Others: Miscellaneous 24hr Activities
 Others: Car Parks 24 hrs
 Others: Stand Alone Utility Block

Energy Consumption by End Use [kWh/m²]

	Actual	Notional
Heating	1.7	3.22
Cooling	3.97	3.98
Auxiliary	11.53	17.73
Lighting	8.63	10.81
Hot water	5.96	10.05
Equipment*	111.16	111.16
TOTAL **	31.8	45.8

* Energy used by equipment does not count towards the total for consumption or calculating emissions.

** Total is net of any electrical energy displaced by CHP generators, if applicable.

Energy Production by Technology [kWh/m²]

	Actual	Notional
Photovoltaic systems	0	0
Wind turbines	0	0
CHP generators	0	0
Solar thermal systems	0	0
<i>Displaced electricity</i>	<i>0</i>	<i>0</i>

Energy & CO₂ Emissions Summary

	Actual	Notional
Heating + cooling demand [MJ/m ²]	75.64	72.98
Primary energy [kWh _{PE} /m ²]	46.91	67.66
Total emissions [kg/m ²]	4.3	6.22

HVAC Systems Performance										
System Type	Heat dem MJ/m2	Cool dem MJ/m2	Heat con kWh/m2	Cool con kWh/m2	Aux con kWh/m2	Heat SSEFF	Cool SSEER	Heat gen SEFF	Cool gen SEER	
[ST] Central heating using water: floor heating, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	4.9	0	0.4	0	19.6	3.57	0	3.57	0
	Notional	21.8	0	2.2	0	12.8	2.78	0	----	----
[ST] Fan coil systems, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	35.9	115.6	3.3	8	16.6	3	4	3.57	5
	Notional	57.8	82.5	5.8	8.1	25.7	2.78	2.84	----	----
[ST] No Heating or Cooling										
	Actual	0	0	0	0	0	0	0	0	0
	Notional	0	0	0	0	0	0	0	----	----

Key to terms

Heat dem [MJ/m2]	= Heating energy demand
Cool dem [MJ/m2]	= Cooling energy demand
Heat con [kWh/m2]	= Heating energy consumption
Cool con [kWh/m2]	= Cooling energy consumption
Aux con [kWh/m2]	= Auxiliary energy consumption
Heat SSEFF	= Heating system seasonal efficiency (for notional building, value depends on activity glazing class)
Cool SSEER	= Cooling system seasonal energy efficiency ratio
Heat gen SSEFF	= Heating generator seasonal efficiency
Cool gen SSEER	= Cooling generator seasonal energy efficiency ratio
ST	= System type
HS	= Heat source
HFT	= Heating fuel type
CFT	= Cooling fuel type