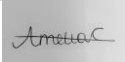


Royal Berkshire NHS Foundation Trust Elective Recovery Facility Sustainability and Energy Statement

Client Royal Berkshire NHS Foundation Trust

Date 9th March 2023
File Ref P.019614 Sustainability Statement R001
Revision R001
Classification ☒ Public | ☐ Internal | ☐ Restricted | ☐ Confidential

Revision

REVISION	REVISION DETAILS / ISSUE TYPE	PAGE NOS	DOCUMENT PREPARED BY			DOCUMENT CHECKED BY		
			NAME	SIGNATURE	DATE	NAME	SIGNATURE	DATE
R001	First Issue for Comment		A Cunnane		09.03.23	L Green		09.03.23

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Executive Summary

As part of the planning process for the new Elective Recovery Facility being built on the Royal Berkshire Hospital site, RED Engineering has been engaged to provide a sustainability and energy statement.

Having reviewed the scheme documents and in conjunction with current, local and national policy frameworks; The National Policy Framework 2021¹ and the Reading Local Plan 2019, this document demonstrates the applicant is committed to ensuring the scheme delivers a building that minimises its environmental impact.

The key features of the proposed development with regard to sustainability are contained within the body of this document as follows;

- Inclusion of urban greening to provide enhanced biodiversity;
- Minimisation of operational energy consumption through building fabric and building services efficiency measures;
- Prolonging the use of the building, by significantly reducing the annualised carbon emission of the development;
- Provision of water efficient / low flow sanitaryware fittings and fixtures to reduce potable water consumption and foul water discharge;
- Well located and accessible development, incorporating safe and secure cycle parking spaces to encourage sustainable and active transport choices.

Due to the nature and location of the site in the town centre, the scope for sustainable design features is constrained in some aspects. The proposed development will therefore deliver sustainability improvements on site to meet the aspirations of local and national policies.

¹ [National Planning Policy Framework \(publishing.service.gov.uk\)](https://www.gov.uk/publishing-service)

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1.0 Introduction

RED Engineering has been instructed on behalf of the NHS trust (the Applicant) in support of planning for the demolition of an existing prefabricated building and development of a new two-storey hospital building, located in Reading (hereafter referred to as 'the Site').

This Sustainability and Energy Statement describes the approach that the design team has taken to integrate and consider sustainability during the design process. The purpose of this document is to assess the extent that the Site accords with the principles of sustainable development and the relevant planning policy requirements.

The development of the sustainability and energy strategy is based on the following principles:

- Set categorical objectives and constraints to cover all sustainability aspects.
- Reduce upfront and operational carbon emissions.
- Align to the transition to net-zero emissions future.
- Promote sustainable practices by design choices.

The project team for the development is comprised as follows.

PROJECT TEAM	REPRESENTATIVE
Applicant	Royal Berkshire NHS Foundation Trust
Architect	GBS
Quantity Surveyor	CSA
M&E Consultant	RED Engineering
Structural Consultant	Stantec
Sustainability Consultant	RED Engineering
BREEAM Consultant	RED Engineering
Acoustician	Hepworth Acoustics

2.0 Site location and description

2.1 Existing Site Context

The site address is the Royal Berkshire Hospital, London Road, Reading, RG1 5AN and the location in relation to its surroundings is shown in Figure 1. This site is occupied by an existing temporary modular building, situated between Craven Road to the east, Redlands Road to the west and the main South Block hospital building.

2.2 Proposed Development / Scope of works

The proposed scheme is to demolish the existing prefabricated building and to construct a new two-storey hospital building which, will link into the adjacent South Block building. Building services plant is to be located within a ground floor level compound, adjoining the east elevation of the building.

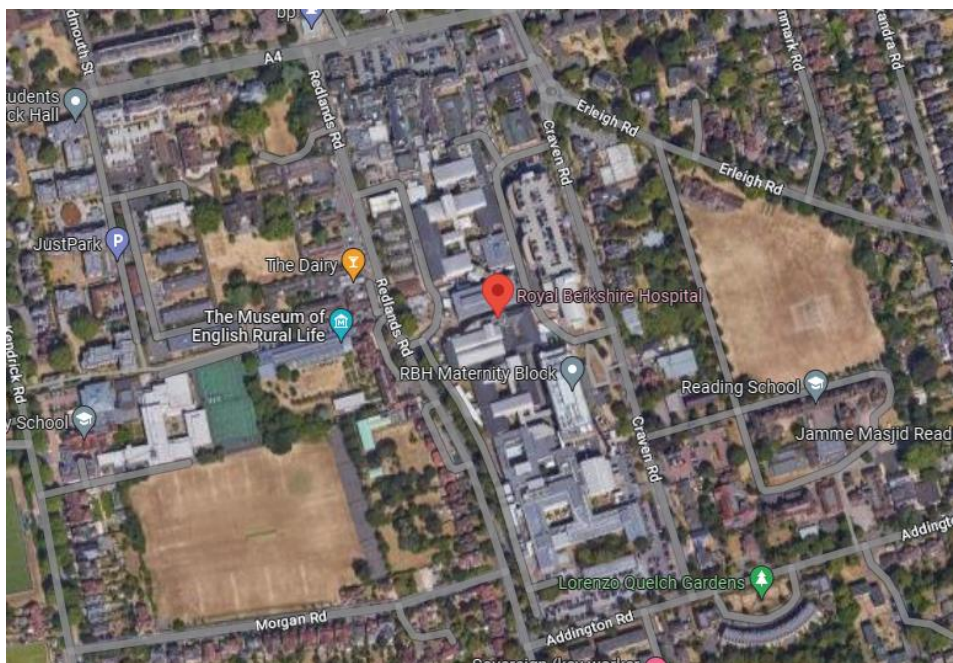


Figure 1. Site location

3.0 Policy Review

In order to ensure the delivery of a sustainable development, it is important to identify any current and emerging policy requirements that are relevant to the Site and development proposals. A desk-based review of relevant national, regional and local planning policies have therefore been undertaken.

3.1 National Planning Policy Framework (NPPF)

The National Planning Policy Framework (NPPF), last revised in July 2021, plays a key role in delivering the Government's objectives on sustainable development. The NPPF has three overarching objectives, to promote effective environmental protection, foster well-designed, healthy communities and support economic growth and productivity. In this way, the guidance seeks to prioritise long term interests over short term success and encourages ownership at the local level. Reading Borough Council has sought to incorporate core NPPF strategies into their Local Plan based on the principle of the presumption in favour of sustainable development. Key sustainability objectives within the NPPF are set out below:

- Reduce the need for car dependency and provide easy access to public transport;
- Build prosperous communities with opportunities for employment and economic growth across all areas of society;
- Ensure that all new developments contribute to the government's targets of carbon emission reductions;
- Maintain, enhance or restore biodiversity and geological interests; and
- Protect the condition of land, its use, and its development from potential hazards.

3.2 Reading Borough Local Plan (2019)

Reading Borough (hereafter referred to as 'the council') Local Plan adopted November 2019 sets out the vision, strategic objectives and policies for development in Reading up until 2036 and forms the main statutory consideration in deciding planning applications. The key policies that are most relevant to the project are discussed below.

3.2.1 Policy CC1: Presumption in favour of sustainability development

This policy is designed to ensure that decisions are taken in line with the National Planning Policy Framework and presumption is placed in favour of a sustainable development. Where appropriate, the Council will work proactively with applicants jointly to find solutions which, mean that proposals can be approved wherever possible.

Planning law requires that applications for planning permission must be determined in accordance with the development plan unless material considerations indicate otherwise. Planning applications that accord with the policies in the development plan (including, where relevant, with policies in neighbourhood plans) will be approved without delay, unless material considerations indicate otherwise. Proposed development that conflicts with the development plan will be refused, unless other material considerations indicate otherwise.

3.2.2 Policy CC2: Sustainable design and construction

The policy seeks to encourage the incorporation of sustainable design and construction techniques in order to minimise the impact of future growth. As such, proposals for new developments, including the construction of new buildings and the redevelopment and refurbishment of existing building stock, will be acceptable where the design of buildings and site layouts use energy, water, minerals, materials and other

natural resources appropriately, efficiently, with care and take account of the effects of climate change. To meet these requirements;

- All major non-residential developments or conversions to residential are required to meet the most up-to-date BREEAM 'Excellent' standards, where possible;
- All minor non-residential developments or conversions to residential are required to meet the most up-to-date BREEAM 'Very Good' standard as a minimum;
- All non-residential development or conversions to residential should incorporate water conservation measures so that predicted per capita consumption does not exceed the appropriate levels set out in the applicable BREEAM standard. Both residential and non-residential development should include recycling greywater and rainwater harvesting where systems are energy and cost effective.

3.2.3 Policy CC3: Adaptation to Climate change

This policy requires Reading's growth to take place in a sustainable manner, incorporating climate change adaptation technologies. All developments will demonstrate how they have been designed to incorporate measures to adapt to climate change. The following measures shall be incorporated into a development;

- Wherever possible, new buildings shall be orientated to maximise the opportunities for both natural heating and ventilation and reducing exposure to wind and other elements;
- Proposals involving both new and existing buildings shall demonstrate how they have been designed to maximise resistance and resilience to climate change for example by including measures such as solar shading, thermal mass, heating and ventilation of the building and appropriately coloured materials in areas exposed to direct sunlight, green and brown roofs, green walls, etc;
- Use of trees and other planting, where appropriate as part of a landscape scheme, to provide shading of amenity areas, buildings and streets and to help to connect habitat, designed with native plants that are carefully selected, managed and adaptable to meet the predicted changed climatic conditions; and
- All development shall minimise the impact of surface water runoff from the development in the design of the drainage system, and where possible incorporate mitigation and resilience measures for any increases in river flooding levels as a result of climate change.

3.2.4 Policy CC4: Decentralised energy

This policy promotes use of decentralised energy including CHP and district heating, which has particular applications to a dense urban area such as Reading. In meeting the sustainability requirements of this plan, developments of the sizes set out below shall demonstrate how consideration has been given to securing energy for the development from a decentralised energy source.

Any development of more than 20 dwellings and / or non-residential development of over 1,000sq m shall consider the inclusion of decentralised energy provision, within the site, unless it can be demonstrated that the scheme is not suitable, feasible or viable for this form of energy provision. Where there is existing decentralised energy provision present within the vicinity of an application site, further developments of 10 dwellings or more or non-residential development of 1,000sq m or more will be expected to link into the existing decentralised energy network or demonstrate why this is not feasible.

3.2.5 Policy CC5: Waste minimisation and storage

This policy seeks to achieve a more sustainable approach to methods of waste management and requires developments to demonstrate measures to minimise the generation of waste in the construction, use and life of buildings and promote more sustainable approaches to waste management, including the reuse and recycling of construction waste and the promotion of layouts and designs that provide adequate, well-designed space to facilitate waste storage, reuse, recycling and composting.

3.2.6 Policy ENE12: Biodiversity and the green network

This policy seeks to attain a balance between accommodating development activity and preserving important biodiversity and geodiversity.

On all sites, development should not result in a net loss of biodiversity and geodiversity and should provide a net gain for biodiversity wherever possible. Development should:

- Protect and wherever possible, enhance features of biodiversity interest on and adjacent to the application site, incorporating and integrating them into development proposals wherever practicable; and
- Provide new tree planting, wildlife friendly landscaping and ecological enhancements (such as wildlife ponds, bird and bat boxes) wherever practicable. In exceptional circumstances where the need for development clearly outweighs the need to protect the value of the site, and it is demonstrated that the impacts cannot be;
 - Avoided;
 - Mitigated or;
 - Compensated for on-site;
 then, new development will provide off-site compensation to ensure that there is “no net loss” of biodiversity.

3.2.7 Policy EN15: Air quality

This policy requires developments to have regard to the need to improve air quality and reduce the effects of poor air quality. Development that would detrimentally affect air quality will not be permitted unless the effect is to be mitigated. The following criteria should be taken into account;

- Whether the proposal, including when combined with the cumulative effect of other developments already permitted, would worsen air quality;
- Whether the development is within, or accessed via, an Air Quality Management Area; and
- Whether it can be demonstrated that a local worsening in air quality that would not detrimentally affect human health or the environment would be offset by an overall improvement in air quality, for instance through reduction in the need to travel.

Where a development would introduce sensitive uses (such as residential, schools and nurseries, hospitals, care facilities) into, or intensify such uses within, an Air Quality Management Area, detrimental effects on that use will be mitigated. Mitigation measures should be detailed in any planning application. If there are significant detrimental effects that cannot be mitigated, the application should be refused.

Where required, planning obligations will be used to secure contributions to measures to tackle poor air quality or for air quality monitoring.

3.2.8 Policy EN16: Pollution and water resources

This policy recognises that the effective protection of the environment is a key aspect of sustainable development, and reducing pollution is one of the core planning principles in the NPPF. As such, developments will only be permitted as follows;

- Where it would not be damaging to the environment and sensitive receptors through land, noise or light pollution;
- Where it would result in no deterioration in, or ideally enhance, ground and surface water quality; and
- Where adequate water resources, sewerage and wastewater treatment infrastructure will be in place to support the proposed development prior to occupation.

Proposals for development that are sensitive to the effects of noise or light pollution will only be permitted in areas where they will not be subject to high levels of such pollution, unless adequate mitigation measures are provided to minimise the impact of such pollution.

Development will only be permitted on land affected by contamination where it is demonstrated that the contamination and land gas can be satisfactorily managed or remediated so that it is suitable for the proposed end use and will not impact on the groundwater environment, human health, buildings and the wider environment, during demolition and construction phases as well as during the future use of the site.

3.2.9 Policy ENE17: Noise generating equipment

Where noise generating equipment is proposed, the noise source specific level (plant noise level) should be at least 10dBA below the existing background level as measured at the nearest noise sensitive receptor.

3.2.10 Policy ENE18: Flooding and drainage

This policy seeks to reduce flood risk within Reading and, in the first instance, developments will be directed to areas at lowest risk of flooding, following the Sequential and Exceptions Test set out in the NPPF, and taking into account the effects of climate change. It will consider flooding from all sources, including fluvial, surface water, groundwater and sewer flooding.

Where development in areas at risk of flooding is necessary, it will not reduce the capacity of the flood plain to store floodwater, impede the flow of floodwater or in any way increase the risks to life and property arising from flooding. Wherever possible, development should be designed to reduce flood risk, both on, and off site.

All major developments must incorporate sustainable drainage systems (SuDS) as appropriate and in line with the Government's Technical Standards. Smaller schemes are encouraged to incorporate SuDS, where possible. Runoff rates should aim to reflect greenfield conditions and, in any case, must be no greater than the existing conditions of the site. Schemes should ensure that the movement of water through vertical infiltration as well as horizontal run-off does not worsen contamination effects. Wherever possible, SuDS provision should maximise ecological benefits, link into the existing Green Network, incorporate tree planting and landscaping and avoid damage to existing significant trees, including through changes to the site hydrology. All new developments in areas of flood risk should give priority to SuDS.

3.2.11 Policy TR1: Achieving the transport strategy

This policy requires developments to contribute appropriately to meeting the objectives of the most up-to-date Local Transport Plan (2011-2026) or any successor document, including sub-strategies, specific projects identified and the local action plans.

Planning permission will not be granted for major development proposals unless there is a commitment to implement measures to promote and improve sustainable transport facilities, such as through provision to encourage walking, cycling and the use of public transport and through agreed travel plans, safe routes to local facilities and services, including schools and parks, and similar measures. Additionally, all development proposals should make appropriate provision for works and contributions to ensure an adequate level of accessibility and safety by all modes of transport from all parts of a development, particularly by public transport, walking and cycling, in accordance with any agreed transport assessment submitted as part of the application.

3.2.12 Policy TR3: Access, traffic and highway-related matters

This policy seeks to ensure that development proposals will not interfere with the free flow of traffic on the highway and that there would be no risk to the safety of people using that road. In determining proposals involving a new or altered access onto the transport network, improvement works to the transport network, the creation of new transport infrastructure or the generation of additional trips on the transport network, consideration will be given to the effect on safety, congestion and the environment. Development will only be permitted where;

- Accesses and works to the highway comply with the adopted standards of the Transport Authority;

- The development would not have a material detrimental impact on the functioning of the transport network;
- The proposals would not be detrimental to the safety of users of the transport network, including pedestrians and cyclists;
- The proposal would not generate regular movement of heavy goods vehicles (HGVs) on unsuitable roads, or on roads without easy access to the Classified Highway Network; and
- For non-residential uses, or new dwellings on classified roads, off-street servicing would be provided.

Proposals involving either the construction of a new site access, or a material increase in the use of an existing site access, directly onto the Classified Highway Network will not be acceptable if they would be likely to result in the encouragement of the use of the network for short local trips or compromise the safe movement and free flow of traffic on the network or the safe use of the road.

3.2.13 Policy TR4: Cycle routes and facilities

This policy recognised cycling as one of the most sustainable forms of transport, and forms an important part of Reading's transport strategy. As such, developments will be expected to make full use of opportunities to improve access for cyclists to, from and within the development and to integrate cycling through the provision of new facilities. Development of new facilities for cycling, such as cycle hire points and cycle parking, will be acceptable.

The cycle routes identified in the most up-to-date Cycling Strategy will be maintained, enhanced and added to or extended. Development will not detrimentally affect an identified cycle route. Where opportunities exist, improvements to that route, including the provision of connecting routes, and / or cycling facilities will be sought within developments or through planning contributions.

3.2.14 Policy TR5: Car and cycle parking and electric vehicle charging

The policy seeks to reduce local air quality issues linked to traffic and congestion. As such, developments should provide car parking and cycle parking that is appropriate to the accessibility of locations within the Borough to sustainable transport facilities, particularly public transport. Developments should also make the following provision for electric vehicle charging points:

- All new houses with dedicated off-street parking should provide charging points;
- Within communal car parks for residential or non-residential developments of at least 10 spaces, 10% of spaces should provide an active charging point.

3.2.15 Policy ER3: Royal Berkshire Hospital

This policy recognises The Royal Berkshire Hospital as a highly significant facility which serves the needs of Reading as well as much of its hinterland. Unless it is proposed to move to a new site, the Hospital site on Craven Road will continue to be a focus for healthcare development to meet requirements, and the site will need to be flexible to adapt to changing technologies or modes of service delivery. Such development will be supported where it complies with the following criteria:

- Where development would result in an increase in staff or visitors, it should be accompanied by measures which ensure that development does not have an adverse effect on the functioning of the highway, either as a result of increased use or by resulting in additional on-street parking in surrounding streets;
- Development will conserve the listed main block on London Road and 17 Craven Road, ensuring that their use is consistent with its conservation;
- Development would not result in adverse effects on the setting of listed buildings and conservation areas; and
- There will be no significant detrimental impact on neighbouring residential properties

4.0 Sustainability review of the Development

The design team have been engaged in pre-application discussions with Reading Borough Council to establish the relevant policy drivers and develop a sustainability strategy for the proposed development that, as a minimum, aligns with key national and local sustainability drivers and requirements, and enables the design team to determine where there are opportunities to exceed these.

As part of the sustainability strategy for the development, it is proposed that the building will be assessed against BREEAM New Construction 2018 with a target rating of 'Excellent'.

The desktop policy review has identified the following sustainability priority themes for the proposed development:

- Use of natural resources and minimising waste;
- Sustainable transport and accessibility;
- Energy;
- Water;
- Sustainable drainage and flood risk;
- Nature conservation and biodiversity;
- Environmental Certification; and
- Pollution.

4.1 Use of Natural Resources and Minimizing Waste

A circular economy is one where materials are retained in use at their highest value for as long as possible and are then re-used or recycled, leaving a minimum of residual waste. The adoption of circular principles throughout the design and construction process will aim to reduce waste and move towards achieving net zero-waste.

RELEVANT APPLICABLE POLICIES	
Reading Local Plan (2021)	Policy CC5: Waste minimisation and storage

The project should consider circular economy principles at all stages of the project to reduce embodied carbon and operate within a circular economy in line with those described in figure 2. The prevention of waste creation is given the top priority and can be supported during the design stages of the project. The use of offsite pre-fabrication incentives and sourcing products with minimised transport packaging aid in the reduction of potential waste material arriving at site.

Embodied Carbon in building elements such as steel and concrete will be significantly minimised by careful specification. The use of Low cement / zero cement (geopolymer) concretes and greener electric arc furnace steels (EAF) instead of basic oxygen furnace steels (BOF) will make a significant reduction to the developments embodied carbon.

During the construction phase of the development low levels of waste production will be targeted. This will be achieved through the development and implementation of a Site Waste Management Plan (SWMP) or equivalent for the site. The SWMP will detail how methods / practices on site will be in accordance with the waste hierarchy targets for the diversion of waste from landfill.

Waste materials will be sorted into separate key waste groups either onsite or offsite through a licensed contractor recovery. In addition, consideration has been given to the operational waste of the site, hence waste facilities will be provided, in line with Local Authority's requirements. The site will be designed to provide appropriate waste / recycling segregation storage facilities.

Figure 2. Waste Hierarchy



4.2 Sustainable Transport

Appropriate transport links are a key element of sustainable development, so that low carbon transport choices can be made. Reading Council promotes sustainable transport choices in order to mitigate the impact of developments on the environment, improve air quality, promote healthier lifestyles and respond to congestion affecting roads and transport.

RELEVANT APPLICABLE POLICIES	
Reading Local Plan (2019)	Policy TR1: Achieving the transport strategy Policy TR3: Access, traffic and high-way related matters Policy TR4: Cycle routes and facilities Policy TR5: Car and cycle parking and electric vehicle charging

[TRANSPORT STATEMENT AND FRAMEWORK TRAVEL PLAN BEING PRODUCED, SECTION WILL BE UPDATED WHEN INFORMATION IS RECEIVED]

4.3 Energy

In order to achieve The Royal Berkshire NHS Foundation Trust carbon emissions reduction of up to 7% per annum and aim to become Net Zero target by 2040, the importance of incorporating sustainable aspects into building design is recognised.

RELEVANT APPLICABLE POLICIES	
Reading Local Plan (2019)	Policy CC2: Sustainable design and construction Policy CC3: Adaptation to climate change Policy CC4: Decentralised energy

The following section provides an overview of the responses of the development's design that aim to minimise operational carbon emissions through a combination of fabric and building services efficiency measures in line with the 'Energy Hierarchy', figure 3.

Be Lean – Use Less Energy

- New building fabric with very high levels of insulation
- High levels of air tightness
- Optimised glazed areas
- Solar control glazing to minimise cooling loads
- Low / zero carbon technologies
- High efficacy LED Luminaires
- Lighting control including presence detection and daylight linked dimming

The lighting scheme design recognises the need to provide good lighting in an energy effective manner. As a result, all lighting will be in accordance with the CIBSE Lighting Guide and shall have a high efficiency LED light source, with combined daylight sensing in the communal areas. Luminaires shall be selected to meet the requirements of the Energy Strategy and comply, as a minimum, to requirements of the Building Regulations Part L for energy efficiency performance.

The adoption of energy efficiency measures under a 'Lean' case building will result in reductions in CO² emissions in line with Local and National requirements.

Be Clean – Supply Energy Efficiently

The next step in the energy hierarchy is the 'Be Clean' strategy of supplying the required energy. Two options for decentralised energy are being considered for the heating and cooling strategies of the building, these are;

- Extending and expanding the existing district (LTHW) and (CHW) networks to accommodate for the new building loads; and
- A standalone 4-pipe Air Source Heat Pump (ASHP) to provide LTHW / CHW local to the building.

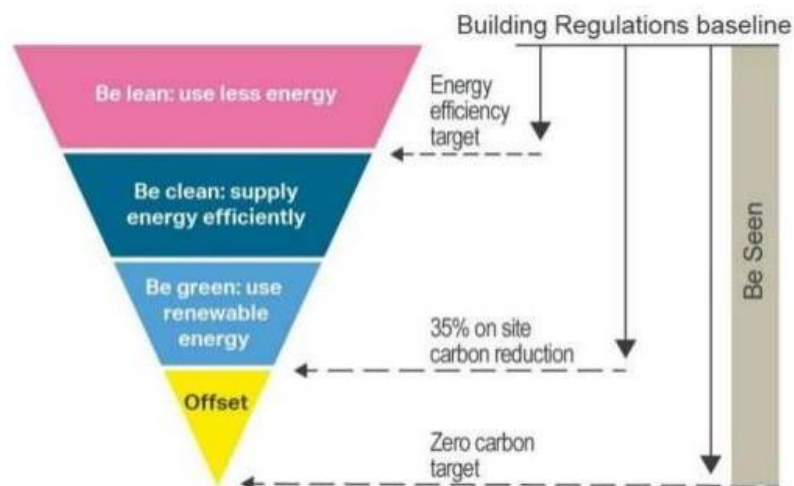
The incorporation of such options will depend on the feasibility and constraints of the Site.

Be Green – Use Renewable Energy

The feasibility of renewable energy technologies such as wind power, ground source cooling, biomass, photovoltaics (PV) and ASHP will be reviewed as part of the Energy Modelling Strategy. The most practical system to minimise CO² emissions is considered to be the incorporation ASHP to provide heating and cooling.

ASHP's use the heat energy from the outside air, to accumulate heat for the systems in the building. Using a heat pump system will sustainably reduce the developments running costs and carbon emissions by up to 75%.

Figure 3. Energy Hierarchy



4.4 Water

Current climate projections forecast significant more extreme weather leading to impacts including intense rainfall and floods, heatwaves, droughts and increased risk of subsidence. The incorporation of water efficiency measures into buildings will, therefore, be critical in limiting future deficits in water availability as well as reducing associated carbon emissions. Reading Council recognises the need for the implementation of water saving measures within building design.

RELEVANT APPLICABLE POLICIES

Reading Local Plan (2019)

Policy CC3: Adaption to climate change

4.4.1 Water efficiency

The development will incorporate several measures to reduce water demand and usage. An assessment of the efficiency of the developments domestic scale water consuming components will be undertaken for the purpose of BREEAM. The proposed development will be assessed against a notional baseline from the BRE in order to provide an accurate industry benchmark to assess against, and it is the design team's aspiration to achieve the equivalent of a 40% improvement over baseline performance - the equivalent of 3 credits under the BREEAM Wat 01 issue. This will be achieved through the incorporation of efficient sanitaryware (a combination of low flow taps, showers and low-flush toilets).

A water meter will be installed on the mains water supply to the building to enable the monitoring of water consumption in line with BREEAM requirements and reduce water wastage. Areas consuming 10% or more of the buildings total water demand, will be either fitted with individual sub meters or have water monitoring equipment integral to the plant or area.

4.5 Sustainable drainage and flood risk

The Council recognises the potential for increases in frequency and intensity of localised storms over the Borough as a result of climate change. Such rainfall patterns will exacerbate localised drainage problems, which may be increased by the use of non-porous materials in construction. Developments are, therefore, required to adopt the principles of Sustainable Urban Drainage Systems (SuDS) to ensure that surface water is managed sustainably and effectively.

RELEVANT APPLICABLE POLICIES

Reading Local Plan (2019)

Policy CC2: Adapting to climate change
Policy EN18: Flooding and drainage

4.5.1 Flood risk

According to the latest Environmental Agency UK Flood Map the Site is located in Flood Zone 1 (less than 1 in 1,000 annual probability of river or sea flooding (<0.1%) in any year). This also confirms that the Site has low risk of flooding from all sources including, tidal/fluvial, pluvial, groundwater and artificial sources.

4.5.2 Surface water run-off rate

The existing building is to be demolished and replaced, and it is proposed that existing drainage connections to the public sewers would be maintained. It is intended for runoff rates to be no greater than the existing conditions of the site. Integration of permeable pavements and soft landscaping measures aim to replicate natural drainage as closely as possible and minimise the impacts of the development through reduced volume and rate of surface runoff.

[CIVILS DRAINAGE REPORT BEING PRODUCED, THIS SECTION WILL BE UPDATED WHEN INFORMATION IS RECEIVED]

4.6 Nature conservation and biodiversity

The protection and enhancement of biodiversity in the Borough is crucial, particularly in the context of biodiversity losses due to development pressure, climate change and deficiencies in access to nature.

RELEVANT APPLICABLE POLICIES

Reading Local Plan (2019)

Policy EN7: Local green space and public open space
Policy EN12: Biodiversity and the green network

An arboricultural report has been undertaken by Sylva Consultancy in support of planning. It is understood that the site is not located within a conservation area or are any tree preservation orders (TPO's) are present on trees within or adjacent to the site. As such, due to the type of works proposed and lack of habitat connectivity it is anticipated that impacts on habitats will be negligible.

In order to provide potential for biodiversity net gain, new ground floor soft landscaping, living walls, trees and shrubs will be installed.

[ECOLOGY REPORT BEING PRODUCED, THIS SECTION WILL BE UPDATED WHEN INFORMATION IS RECEIVED]

4.8 Environmental Certification

All developments must achieve the highest feasible level of the relevant sustainable design standards in order to contribute to Reading Council's overarching sustainability objectives. The use of the Building

Research Establishment Environmental Assessment Methodology (BREEAM) certification scheme will help to mitigate the life cycle impacts of new, or major works on existing buildings, on the environment.

RELEVANT APPLICABLE POLICIES

Reading Local Plan (2019)

Policy CC2: Sustainable design and construction

As part of the development of the Site's sustainability strategy, it is proposed that building elements are assessed against the BREEAM New Construction 2018 methodology and achieve an "Excellent" rating in line with Reading Borough Councils planning policy.

A BREEAM pre-assessment has been prepared for the proposed development to provide an initial strategy. The pre-assessment provides an indicative pathway to achieving credits but the assessments themselves are dynamic and as such the final constructed Site may not be a complete reflection of the credits initially targeted as part of the BREEAM pre-assessment undertaken pre-planning.

4.9 Pollution

All developments must be designed, constructed and operated to limit contribution to poor air quality and excessive noise as far as possible.

RELEVANT APPLICABLE POLICIES

Reading Local Plan (2019)

Policy EN15: Air quality

Policy EN16: Pollution and water resources

Policy EN17: Noise generating equipment

4.9.1 Air Quality

[AIR QUALITY REPORT REQUIRED, SECTION WILL BE UPDATED WHEN INFORMATION IS RECEIVED]

4.9.2 Noise

A Plant Noise Assessment has been prepared by Hepworth Acoustics [Revision R01v1], which is submitted in support of the planning submission for the proposed development. The development will require the installation of plant, most noticeably Air Handling Units (AHU), Chillers and an emergency backup generator. The Plant Noise Assessment has indicated a potential 8Db exceedance of the applicable target rating sound level limit at the nearest noise sensitive receptors based on initial designs and it is therefore recommended that suitable provision is maintained with the scheme for atmosphere-side attenuators to the AHU exhausts, providing insertion losses.

The assessment concludes that, subject to the recommendations set out within the report, the Site is able to achieve noise standards suitable for its intended use.

5.0 Conclusion

This document demonstrates how the proposed development accords with the sustainability requirements of the NPPF and Reading Local Plan. In addition to the features set out in the proposals, a number of planning conditions shall be invited to ensure the completed development is built out in the most sustainable manner, these have been considered in this assessment. The applicant is committed to ensuring the scheme delivers a building that is high quality and minimises its environmental impact.

The Key features of the proposed development with regard to sustainability are as follows;

- Inclusion of urban greening, to provide enhanced biodiversity;
- Minimisation of operational energy consumption through building fabric and building services efficiency measures;
- Prolonging the use of a building, significantly reducing the annualised carbon emission of the development;
- Provision of water efficient / low flow sanitaryware fittings and fixtures to reduce potable water consumption and foul water discharge;
- Well located and accessible Development, incorporating safe and secure cycle parking spaces to encourage sustainable and active transport choices.