

SUSTAINABILITY STATEMENT

Demolition and rebuilding of garage workshop.

at

Land at Lemart Close, Reading, RG30 6BU

1. Introduction

The proposed scheme will see the demolition and rebuilding of garage workshop used for car repair and refurbishment.

The existing location plan is shown in the plan in Figure 1 below, with the proposed site plan and building layout shown in Figure 2.

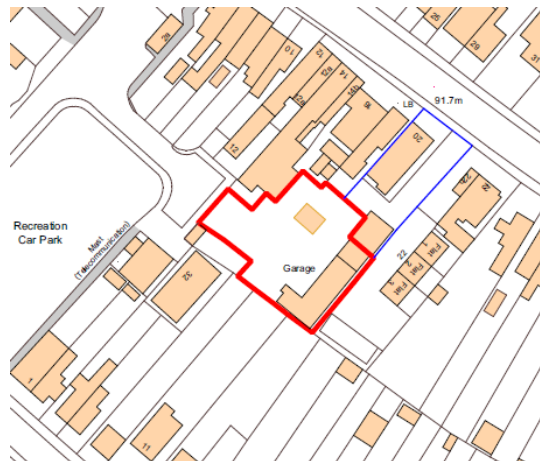


Figure 1

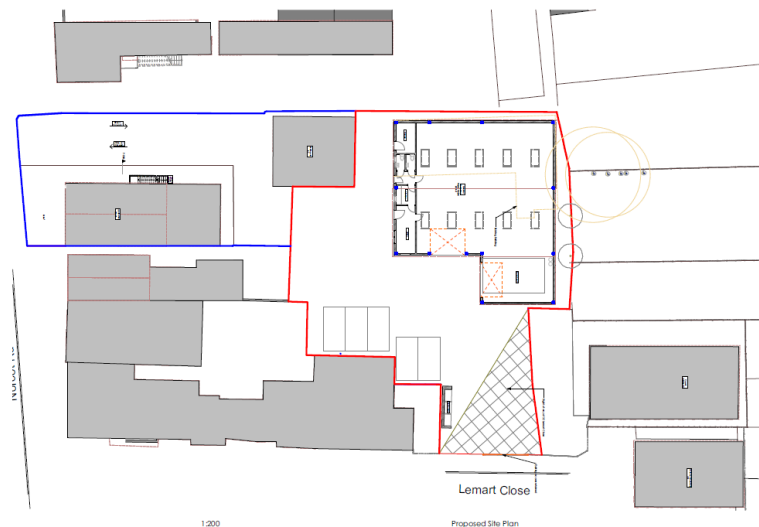


Figure 2

2. Proposed Approach to Sustainability

This statement sets out the approach that the applicant is proposing to adopt to ensure that the proposal meets high standards of sustainability. The report includes a discussion of the full range of sustainability issues as shown below:

- Energy & carbon emissions
- Water conservation
- Flood risk, surface & waste water management
- Waste & pollution
- Materials selection and sustainable construction method

This will demonstrate that this proposed development will meet the requirements of policies **CC1.CC2.CC3.CC4.CC5**, of the **Reading Core Strategy**.

2.1 Reading Borough Council's (RBC) Sustainable Design and Construction SPD (2011) also requires proposals such as this to demonstrate compliance with the 'very good' standard of the **BREEAM Domestic Refurbishment Scheme**.

The proposed development will achieve the 'Very Good' standard of the BREEAM Domestic Refurbishment Scheme, as required by Reading Borough Council's Sustainable Design and Construction SPD (2011).

To meet this standard, the project will incorporate:

- **Energy Efficiency Measures:** High-performance insulation, energy-efficient HVAC, and potential for solar PV.
- **Water Conservation Strategies:** Low-flow fixtures and feasibility of rainwater harvesting.
- **Waste Reduction & Recycling:** A Site Waste Management Plan (SWMP) will ensure at least 90% of demolition and construction waste is diverted from landfill.
- **Sustainable Material Selection:** Prioritization of locally sourced, low-carbon, and recycled-content materials.

3. Energy & Carbon Emissions (Policy CC1 & CC2)

The proposed development will incorporate measures to **minimise carbon emissions** and **improve energy efficiency**, including:

- **Enhanced Building Fabric:** High-performance insulation, airtight construction, and low U-value materials to reduce energy demand.
- **Efficient Heating & Lighting:** LED lighting, energy-efficient HVAC systems, and, where feasible, air-source heat pumps.
- **Renewable Energy Integration:** Solar PV panels will be considered to reduce reliance on grid electricity.
- **Low-Carbon Construction:** Selection of low-embodied-carbon materials, efficient logistics to reduce transport emissions, and potential use of off-site prefabrication to minimise construction waste.

Benchmarks:

- **Energy Use Intensity (EUI):** For workshops or open working areas, the Chartered Institution of Building Services Engineers (CIBSE) provides benchmarks. According to CIBSE TM46, typical energy consumption for such spaces is approximately **180 kWh/m²/year**.

Proposed Measures:

- **Enhanced Insulation:** Implement high-performance insulation to reduce heating and cooling demands.
- **Efficient HVAC Systems:** Install energy-efficient heating, ventilation, and air conditioning systems to optimize energy use.
- **LED Lighting:** Utilize LED lighting with occupancy sensors to minimize unnecessary energy consumption.
- **Renewable Energy Integration:** Assess the feasibility of installing solar photovoltaic panels to offset a portion of the energy demand.

Targets:

- **Energy Reduction:** Aim to achieve an EUI of **150 kWh/m²/year**, representing a **16% improvement** over the typical benchmark.
- **Carbon Emission Reduction:** Strive for a corresponding reduction in CO₂ emissions, aligning with local and national carbon reduction goals.

4. Water Resource Management

Water Conservation (Policy CC3)

Water-saving measures will be implemented to **reduce potable water consumption** and enhance sustainability, including:

- **Efficient Fixtures & Fittings:** Installation of water-efficient taps, low-flush toilets, and flow-restricting showers.
- **Rainwater Harvesting:** Feasibility assessment for rainwater harvesting for non-potable uses such as vehicle washing.
- **Sustainable Drainage (SuDS):** Permeable paving and green landscaping features to reduce surface water runoff.

Water Consumption

Benchmarks:

- **Water Use Intensity:** While specific benchmarks for garage workshops are limited, general guidance suggests that efficient water use in commercial facilities should be targeted. For instance, in office settings, consumption below **0.55 m³/m²/year** is considered efficient.

Proposed Measures:

- **Low-Flow Fixtures:** Install water-efficient taps and toilets to reduce water usage.
- **Rainwater Harvesting:** Implement a system to collect and utilize rainwater for non-potable uses, such as vehicle washing.
- **Regular Monitoring:** Install submeters to monitor water usage and identify potential leaks or areas for improvement.

Targets:

- **Water Consumption:** Aim for a water use intensity of **0.5 m³/m²/year**, aligning with best practices for commercial facilities.

5. Flood Risk, Surface & Wastewater Management

The Environment Agency's Flood Mapping for the area shows the site is not located within an area considered to be at risk from flooding.

There are no additional areas of hard-standing or roof area on site as result of the proposed scheme and the existing surface water runoff provision is considered to be adequate for site needs and will be retained in full.

Flood Risk, Surface & Wastewater Management (Policy CC4)

Given the importance of managing flood risk and wastewater efficiently, the following measures will be incorporated:

- **Flood Resilient Design:** Compliance with local flood risk assessments, including raised floor levels if necessary.
- **Surface Water Drainage:** Sustainable drainage systems (SuDS), such as soakaways, permeable surfaces, and attenuation tanks, to reduce runoff.
- **Water Recycling & Treatment:** Use of appropriate filtration and drainage systems to minimise contamination of local water sources.
- **Target Runoff Rates:** Maintain or reduce existing runoff rates to prevent increased flood risk to surrounding areas.

6. Waste & Pollution

The appointed contractor for the scheme will be encouraged to develop a comprehensive site waste management plan (SWMP) prior to the start of construction reflecting the recognition that reduction of waste begins in the design and ordering stage of a project and carries on through to the sign-off of the building. This SWMP will set targets and procedures for the sorting, reusing and recycling of construction waste into defined waste groups, either on site or through a licensed contractor at a waste transfer station.

Targets:

- **Waste Diversion:** aim to divert at least 90% of construction waste from landfill through recycling and reuse.
- **Pollution Control:** Ensure compliance with all relevant environmental regulations to prevent site contamination.

Waste & Pollution Control (Policy CC4 & CC5)

To **minimise construction waste and pollution**, the following strategies will be adopted:

- **Waste Reduction & Recycling:** A Site Waste Management Plan (SWMP) will be implemented to track, reduce, and recycle demolition and construction waste.
- **Minimisation of Air & Noise Pollution:**
 - Dust suppression techniques, including damping down and covering materials.
 - Adherence to permitted working hours to reduce noise impact.
 - Low-emission construction vehicles and machinery where possible.
- **Contaminated Land Management:** Any existing site contamination will be managed according to best practices to prevent environmental harm.

7. Materials Selection & Sustainable Construction Methods

Materials Selection & Sustainable Construction Methods (Policy CC3 & CC5)

The development will prioritise responsibly sourced, durable, and recyclable materials, including:

- **Sustainable Building Materials:**
 - FSC-certified timber and locally sourced aggregates.
 - Use of recycled and reclaimed materials where feasible.
 - Non-toxic and low-VOC materials to enhance indoor air quality.
- **Sustainable Construction Practices:**
 - Efficient site logistics to reduce emissions.
 - Prefabrication or modular construction elements to reduce onsite waste.
 - Adoption of circular economy principles by designing for material reuse and disassembly.
- **Targets:**
 - **Embodies Carbon Reduction:** Achieve a 10% reduction in embodied carbon compared to standard construction practices.

8. Conclusion

This sustainability statement demonstrates that the proposed redevelopment at **Lemart Close, Reading** aligns with **Reading Core Strategy policies CC1, CC2, CC3, CC4, and CC5**. The project will integrate energy-efficient design, water conservation, flood mitigation, waste reduction, and sustainable construction practices to deliver a **low-carbon, resource-efficient, and environmentally responsible development**.

