

SUSTAINABILITY STATEMENT

Pre-application for demolition of existing bungalow and construction of new dwelling at

Silver Birches, Heath Ride, Finchampstead, RG40 3QJ

1. Introduction

This sustainability statement supports a full planning application for the demolition of the existing bungalow and construction of a new dwelling at Silver Birches, Heath Ride, Finchampstead, RG40 3QJ. The use remains C3 (Dwellinghouses).

The statement addresses the key principles of sustainable development as set out in the Wokingham Borough Council Climate Emergency Action Plan (CEAP), with particular reference to policies:

- CP1 – Sustainable Development
- CP3 – General Principles for Development
- CP18–CP21 – Strategic Development Locations (SDLs)
- Sustainable Design & Construction SPD
- Climate Change SPD (2023)

The location plan is shown in the plan in Figure 1 below, with a google map screenshot shown in Figure 2.

SITE PLAN 1:200



Site Plan

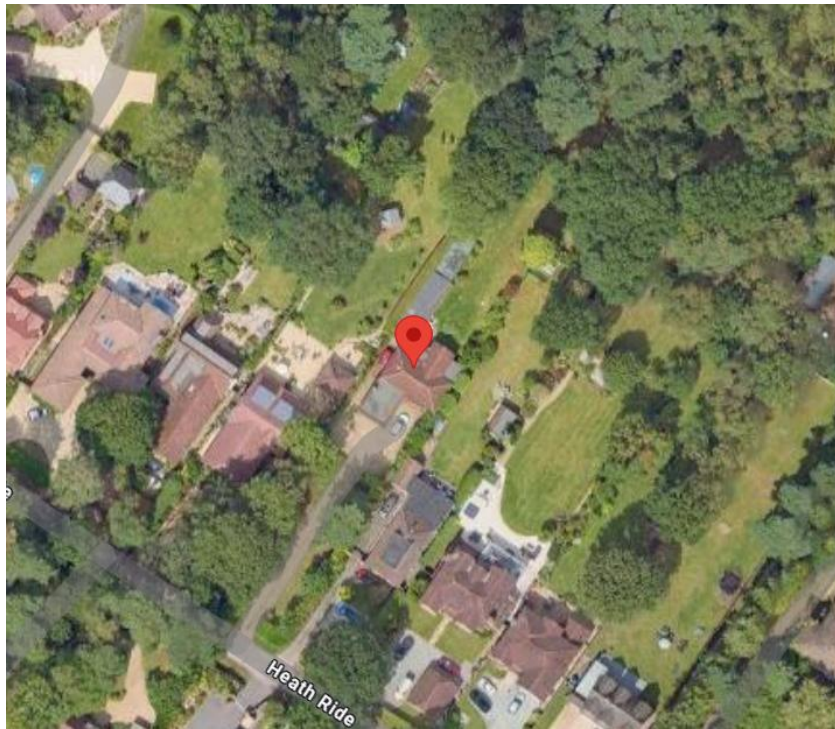


Figure 2

2. Proposed Approach to Sustainability

This proposal seeks to deliver a high-quality, energy-efficient replacement dwelling that aligns with Wokingham Borough Council's adopted planning policies and guidance, including Core Strategy Policy CP1 (Sustainable Development), CP3 (General Principles), the Sustainable Design and Construction SPD (2010), and the Climate Change SPD (2023).

The approach taken considers the full range of sustainability issues, including energy and carbon reduction, water conservation, climate resilience, sustainable construction methods, and long-term environmental impact. The following measures are proposed:

- Energy & carbon emissions
- Water conservation
- Flood risk, surface & wastewater management
- Waste & pollution
- Materials selection and sustainable construction method
- Transport and Sustainable Travel

This will demonstrate that this proposed development will meet the requirements of the policies of the Wokingham Borough Council Climate Emergency Action Plan (CEAP).

2.1 Wokingham Borough Council's Sustainable Design and Construction Supplementary Planning Document (2010), alongside Core Strategy Policy CP1 (Sustainable Development) and the Climate Change SPD (2023), sets out clear expectations for new development to achieve high standards of environmental performance and long-term sustainability. While compliance with the BREEAM Domestic Refurbishment Scheme is not required for residential proposals, the new dwelling has been designed in accordance with the relevant principles of sustainable construction, energy efficiency, and climate adaptation as set out in Wokingham's adopted policies and guidance.

The proposed replacement dwelling will contribute positively to the borough's climate objectives and includes the following key sustainability features:

- **Energy Efficiency:** The dwelling will incorporate a high-performance thermal envelope (insulation, air tightness, and glazing) and utilise an air source heat pump for low-carbon space and water heating. The use of solar photovoltaic (PV) panels will generate renewable electricity on site in line with the SPD's expectation to meet at least 10% of energy demand through on-site renewables (Policy NRM11).
- **Water Conservation:** The development will include water-efficient fixtures and fittings designed to achieve a consumption target of no more than 105 litres per person per day, in line with SPD guidance. The site layout will also accommodate sustainable drainage features to reduce runoff and mitigate flood risk.
- **Waste Minimisation:** Construction will be managed under a Site Waste Management Plan (SWMP) to reduce landfill waste, encourage recycling of demolition materials, and ensure responsible sourcing of new construction materials — including the use of locally sourced and certified sustainable products.
- **Sustainable Design and Construction:** The building will follow a fabric-first approach, prioritising energy performance through material selection and passive design. The layout and orientation will maximise natural daylight and solar gain, contributing to lower energy demand.
- **Transport and Location:** Provision for electric vehicle (EV) charging will be incorporated to support the transition to zero-emission transport. Secure cycle storage will also be provided, promoting sustainable travel choices.

This approach ensures that the new dwelling not only meets but exceeds the minimum standards set out in Wokingham's planning policy framework and contributes meaningfully to the borough's wider ambitions under its Climate Emergency Action Plan to achieve net-zero carbon emissions by 2030.

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

(Policy CP1 and Sustainable Design & Construction SPD)

The proposed replacement dwelling has been designed to significantly improve energy performance and reduce carbon emissions in accordance with Wokingham Borough Council's Core Strategy Policy

CP1 (Sustainable Development) and the requirements of the Sustainable Design and Construction SPD (2010). The development also supports the objectives of the Climate Emergency Action Plan, which seeks to achieve net-zero carbon emissions across the borough by 2030.

Key energy and carbon-related design features include:

- **Low-Carbon Heating:** The new dwelling will incorporate an air source heat pump, providing energy-efficient space and water heating while eliminating reliance on fossil fuels.
- **High Thermal Performance:** The building fabric will be designed to achieve high levels of insulation, airtightness, and low U-value double or triple glazing, in line with a fabric-first approach. This will reduce heat loss and maintain internal comfort with minimal energy input.
- **On-Site Renewable Energy:** The installation of solar photovoltaic (PV) panels is proposed to generate renewable electricity on-site, supporting the SPD's requirement to meet at least 10% of energy demand through decentralised renewable or low-carbon sources (as per Policy NRM11).
- **Efficient Layout and Orientation:** The dwelling's layout will optimise solar gain, daylighting, and natural ventilation, further reducing energy demand for heating and lighting.
- **Smart Energy Management:** Provision will be made for smart meters and low-energy lighting and appliances to support responsible energy use and carbon reduction throughout the building's lifecycle.

These measures will ensure that the new home is energy-efficient, low-carbon, and compliant with Wokingham's sustainability requirements, delivering a substantial improvement in performance compared to the existing building it replaces. The design responds proportionately to the scale of development and contributes to the Council's broader climate objectives.

Benchmarks:

- **Energy Use Intensity (EUI):**
- **Four bedrooms on First Floor**
- **Cinema & Focal Garden Room on Ground Floor.**

Energy Benchmarks

(Policy CP1 and Sustainable Design & Construction SPD)

The proposed replacement dwelling at Silver Birches, Heath Ride, Finchampstead, RG40 3QJ has been assessed against national and local energy performance benchmarks to ensure its design meets Wokingham Borough Council's requirements for sustainable development. In accordance with Core Strategy Policy CP1 and the Sustainable Design and Construction SPD, we believe that the new home will exceed the minimum standards set by Approved Document Part L (2021) of the Building Regulations, with a strong focus on reducing operational energy demand and long-term carbon emissions.

As a private residential dwelling (Use Class C3), the property will target a low Energy Use Intensity (EUI) — consistent with best-practice design guidance (e.g. LETI and RIBA 2030 targets for new homes). The design aims to achieve an operational EUI of approximately 35–50 kWh/m²/year,

significantly below the national average for existing housing stock.

Proposed Energy and Carbon Reduction Measures:

- **Enhanced Fabric Insulation:** High-performance insulation to all external walls, floors, and roof structures will be installed to reduce heating and cooling demands and improve thermal comfort. Target U-values will exceed current Part L requirements.
- **Low-Carbon Heating System:** The property will be heated via an air source heat pump, providing efficient low-temperature heating and hot water while eliminating on-site fossil fuel use.
- **Triple/High-Spec Double Glazing:** High-quality windows with low U-values will minimise heat loss, reduce drafts, and improve acoustic and thermal performance.
- **LED Lighting:** All internal and external lighting will be low-energy LED, with the option for occupancy sensors and daylight controls in circulation spaces to reduce unnecessary electricity use.
- **Smart Controls:** Thermostatic zoning and smart controls will be incorporated to allow responsive, efficient heating management based on occupancy and time-of-day.
- **Renewable Energy Generation:** The development will integrate solar photovoltaic (PV) panels to offset a proportion of electricity consumption and contribute toward the SPD requirement for on-site renewables (minimum 10% energy demand under NRM11).
- **Airtightness and Ventilation:** The design will meet high airtightness standards (targeting $\leq 5 \text{ m}^3/\text{h} \cdot \text{m}^2$ at 50Pa), paired with mechanical ventilation with heat recovery (MVHR) or high-efficiency natural ventilation to maintain air quality and minimise heat loss.

(Policy CP1 and Wokingham's Climate Objectives)

This proposal for the demolition of an existing bungalow and the construction of a new dwelling has been designed to support Wokingham Borough Council's sustainability goals, including the borough's commitment to achieving net-zero carbon emissions by 2030. The development aligns with Core Strategy Policy CP1 (Sustainable Development), the Sustainable Design and Construction SPD (2010), the Climate Change SPD (2023), and the Climate Emergency Action Plan (CEAP).

Energy Performance Targets

The new dwelling will be designed to exceed the requirements of Building Regulations Part L (2021). The aim is to achieve a low Energy Use Intensity (EUI) of approximately 35–50 kWh/m²/year, which is consistent with best practice for low-energy residential development. Measures contributing to this target include:

- A fabric-first design approach, incorporating high levels of insulation, low air permeability, and high-performance double or triple glazing
- Heating and hot water provided by an air source heat pump, eliminating the need for gas
- Low-energy LED lighting, with the potential for smart controls and zoning to reduce unnecessary consumption
- Careful building orientation and internal layout to optimise daylighting and reduce artificial lighting demand

Carbon Emissions and Environmental Impact

Although new construction inherently involves some embodied carbon, the development will offset this through:

- Use of low embodied carbon and locally sourced materials
- Implementation of a Site Waste Management Plan (SWMP) to minimise construction waste and maximise recycling
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Integration of a green roof, which will provide:

- Improved insulation and thermal regulation
- Rainwater attenuation, contributing to sustainable drainage
- Urban cooling and biodiversity habitat

The green roof represents a key environmental feature that contributes to both climate change adaptation and carbon reduction by lowering the building's energy demand and enhancing ecological value.

4. Water Resource Management

(Policy CP1, Sustainable Design & Construction SPD, and Climate Change SPD)

The proposed development at Silver Birches, Heath Ride, RG40 3QJ will incorporate a range of measures to promote water efficiency and sustainable drainage in accordance with Wokingham Borough Council's Core Strategy Policy CP1, the Sustainable Design and Construction SPD (2010), and the Climate Change SPD (2023). These measures also support national objectives under the Climate Change Act 2008 and local ambitions to enhance climate resilience and reduce pressure on water resources.

Water Efficiency Measures

- The new dwelling will be fitted with low-flow taps, dual-flush toilets, and water-efficient appliances, with the aim of achieving a total potable water consumption of ≤105 litres per person per day, consistent with the SPD's best practice targets.
- Water efficiency will be reinforced through the selection of fixtures and fittings meeting relevant Water Regulations Advisory Scheme (WRAS) and Water Efficiency Product Labelling Scheme standards.

Surface Water Management and Drainage

- The site will incorporate sustainable drainage systems (SuDS) to manage surface water runoff and prevent localised flooding. Measures will include:
 - A green roof system, which will retain rainwater, slow runoff, and reduce pressure on the existing drainage network.
 - Use of permeable paving or natural infiltration areas in any external hardstanding,

to allow rainwater to soak away naturally where feasible.

- The development has been designed to ensure no net increase in impermeable surface area and will maintain or improve existing surface water discharge rates.

Climate Adaptation and Resilience

- **The water management strategy contributes to the borough's wider climate adaptation goals by:**
 - **Increasing on-site water retention capacity,**
 - **Reducing runoff-related pollution risk,**
 - **Supporting local biodiversity through soft landscaping and the green roof,**
 - **Encouraging rainwater infiltration to replenish groundwater resources.**

Water Use Benchmarks and Targets

(Policy CP1 and Sustainable Design & Construction SPD)

The proposed new dwelling at Silver Birches, Heath Ride, RG40 3QJ will be designed to promote water efficiency and sustainable resource use, in line with Wokingham Borough Council's Sustainable Design and Construction SPD (2010) and Core Strategy Policy CP1 (Sustainable Development). These documents set expectations for responsible water management as part of climate adaptation and sustainability.

Water Consumption Targets

- The development will aim to achieve a maximum water consumption of 105 litres per person per day, in line with best-practice targets outlined in the SPD and national technical standards for water efficiency in new dwellings (aligned with Part G of the Building Regulations and supported by the Optional Building Regulations standard).
- This will be achieved using:
 - Low-flow taps and showers
 - Dual-flush WCs
 - Water-efficient appliances (e.g. dishwashers, washing machines)

Futureproofing and Monitoring

- While the proposal does not require formal water metering under planning policy, the dwelling will be designed to accommodate future smart metering, leak detection, and real-time usage monitoring where feasible.
- Plumbing systems will be specified with ease of maintenance and efficiency in mind, helping to prevent water loss over the building's life cycle.

5. Flood Risk, Surface & Wastewater Management

(Policy CP1, Sustainable Design & Construction SPD, and Climate Change SPD)

Flood Risk

According to the Environment Agency's Flood Map for Planning, the site at Silver Birches, Heath Ride, Finchampstead, RG40 3QJ is located entirely within Flood Zone 1, meaning it is at low risk of flooding from rivers or the sea. There is no recorded history of flooding on-site from surface water or groundwater sources.

As a result, no specific flood mitigation measures are required for this proposal. Nevertheless, the development will incorporate a range of measures to improve water resilience and manage runoff sustainably.

Surface Water Drainage

As the proposal involves new operational development, sustainable drainage techniques will be introduced in accordance with Wokingham's Sustainable Design and Construction SPD, which encourages developers to mimic natural drainage wherever possible.

Key drainage features include:

- A green roof, which will reduce the volume and rate of surface water runoff, promote evapotranspiration, and improve stormwater attenuation.
- Permeable paving or surfacing for any new hardstanding areas (e.g. paths, patios), supporting natural infiltration into the soil.
- Surface water discharge will be designed to follow the drainage hierarchy (infiltration, then controlled discharge to sewer if needed) and will ensure no increase in runoff rates compared to the existing situation.

These measures will help manage rainfall sustainably, reduce the risk of localised flooding, and relieve pressure on the surrounding drainage infrastructure.

Wastewater Management

- The proposed dwelling will connect to the existing mains foul drainage network, which has sufficient capacity to accommodate a single residential unit.
- The design includes water-efficient appliances and fixtures, helping to reduce the volume of wastewater generated and supporting responsible long-term infrastructure use.
- No new infrastructure is required beyond a standard connection to the foul sewer system.

6. Waste & Pollution

(Policy CP1, Sustainable Design & Construction SPD, and Climate Change SPD)

Construction Waste Management

As the proposal involves demolition of the existing bungalow and construction of a new dwelling, a robust waste management strategy will be implemented in accordance with the Sustainable Design and Construction SPD (2010).

- A Site Waste Management Plan (SWMP) will be prepared to ensure demolition materials (e.g., bricks, timber, concrete) are reused or recycled wherever possible, minimising the volume of waste sent to landfill.
- Priority will be given to on-site crushing and reuse of aggregates, and sourcing of recycled materials for the new build where feasible.
- Packaging waste will be reduced through bulk purchasing, careful delivery planning, and working with suppliers who utilise recyclable or returnable packaging.

Pollution Control

The construction phase will include measures to limit environmental impacts:

- Dust suppression through on-site water sprays and sheeting of skips where required.
- Wheel washing facilities to prevent mud or debris from being tracked onto the public highway.
- Noise and vibration will be controlled through considerate construction hours and the use of low-noise equipment where practical.
- Non-toxic, low-VOC paints, adhesives, and finishes will be specified to reduce chemical emissions and improve indoor air quality.

(Policy CP1, Sustainable Design & Construction SPD, and Climate Change SPD)

The proposed development will include both construction-phase and long-term operational measures to minimise pollution and environmental impact, consistent with Wokingham Borough Council's sustainability policies and its commitment to improving air, water, and environmental quality.

Construction Phase Pollution Control

Although construction works will be temporary, the following mitigation measures will be implemented to limit any environmental harm:

- **Dust Control:** Dust will be managed through on-site water suppression and covering of skips or loose materials as needed, especially during demolition.
- **Noise Management:** Construction activity will be limited to standard working hours. Low-noise equipment and good practice site management will be adopted to minimise disruption to neighbours.
- **Site Access and Cleanliness:** Wheel washing facilities and temporary surfacing will be used to prevent mud or debris from being deposited on public roads.
- **Ground and Water Protection:** Construction materials and fuels will be stored securely to prevent contamination. Spill kits will be available on site if required.

Operational Pollution Control

Once completed, the new dwelling will be designed and maintained to avoid long-term pollution risks:

- **Air Quality:** The building will be heated via an electric air source heat pump, removing the need for combustion-based heating and avoiding on-site NOx emissions. The use of smart heating controls will ensure energy-efficient operation.
- **Indoor Air Quality:** The specification will prioritise low-VOC paints, adhesives, and finishes to improve occupant health and reduce emissions.
- **Noise Control:** The building will be constructed with enhanced acoustic insulation and will not include any external plant or noise-generating equipment. Normal domestic noise will be minimal and appropriate for the setting.
- **External Environment:** Bin storage areas will be enclosed and well-managed to avoid odours, litter, or attraction of pests. No hazardous materials will be stored externally.

Operational Waste Management

Once complete, the new dwelling will incorporate:

- Internal and external bin storage designed to facilitate the separation of general waste, recyclables, and compostable material in line with Wokingham's waste collection services.
- The design of the home will encourage responsible waste reduction by providing convenient, accessible facilities for sorting recyclables.

Targets and Ongoing Commitment

- **Construction Waste Diversion:** Aim to divert at least 90% of demolition and construction waste from landfill through reuse and recycling.
- **Material Selection:** Prioritise responsibly sourced, low-waste materials, including FSC-certified timber and products with recycled content.
- **Lifecycle Waste Reduction:** The dwelling will be designed for durability and easy maintenance to extend its lifecycle and reduce future waste.

7. Policy Compliance

(Policy CP1 and Supporting SPD Guidance)

The proposed replacement dwelling has been designed to ensure full compliance with Wokingham Borough Council's sustainability policies, including Core Strategy Policy CP1, the Sustainable Design and Construction SPD (2010), and the Climate Change SPD (2023). The development also supports the strategic aims of the Climate Emergency Action Plan, which seeks to reduce emissions and improve environmental performance across all sectors of development.

The project:

- Minimises carbon emissions, pollution, and surface water runoff through efficient building design, low-carbon heating, and a green roof;
- Delivers a sustainable, low-impact new home that respects the character and sensitivity of its residential surroundings; and
- Contributes positively to Wokingham Borough Council's environmental and public health objectives, by prioritising responsible construction, waste management, air quality, and climate resilience.

Materials Selection & Sustainable Construction Methods

(Policy CP1, Sustainable Design & Construction SPD, and Climate Change SPD)

The proposed development will prioritise sustainable materials and construction practices to reduce the environmental impact of both demolition and new build activities. The design approach reflects the guidance in Wokingham Borough Council's Sustainable Design and Construction SPD (2010) and supports the borough's wider commitment to resource efficiency and low-carbon development.

Sustainable Material Selection

The dwelling will be constructed using durable, responsibly sourced, and low-embodied carbon materials, including:

- FSC- or PEFC-certified timber for structural and internal elements
- Recycled aggregates or materials reclaimed from demolition, where feasible
- Low-VOC paints, sealants, and finishes, to promote healthy indoor air quality
- Locally sourced materials (within ~35 miles) to reduce transport-related emissions and support the regional economy

Construction Waste Minimisation

A Site Waste Management Plan (SWMP) will guide demolition and construction phases, ensuring:

- Separation and reuse of demolition materials where possible
- Recycling of packaging and construction off-cuts
- Avoidance of over-ordering and use of products with minimal or recyclable packaging

Construction Methods

- The development will adopt a fabric-first approach, maximising energy performance through

- high-quality insulation, airtight construction, and careful detailing to reduce thermal bridging.
- Construction processes will aim to minimise site disruption and emissions by using off-site prefabricated elements where appropriate.
 - Site activity will follow the principles of the Considerate Constructors Scheme, limiting noise, dust, and traffic disruption.

8. Conclusion

This sustainability statement has demonstrated that the proposed demolition of the existing bungalow and construction of a new dwelling at Silver Birches, Heath Ride, Finchampstead, RG40 3QJ is fully aligned with the principles of sustainable development as set out in Wokingham Borough Council's Core Strategy, the Sustainable Design and Construction SPD (2010), the Climate Change SPD (2023), and the borough's Climate Emergency Action Plan.

The proposal will deliver a high-quality, energy-efficient home that reflects both local and national environmental objectives. Key areas of policy alignment include:

- Policy CP1 (Sustainable Development): The proposal optimises land use by replacing an outdated building with a modern, climate-responsive dwelling, promoting efficient resource use and minimising environmental impact.
- Sustainable Design & Construction SPD: The design adopts a fabric-first approach, incorporates low-carbon heating via an air source heat pump, and includes sustainable water and waste management features such as a green roof and SuDS.
- Climate Change SPD (2023): The development contributes to borough-wide climate resilience by reducing operational and embodied carbon, improving biodiversity, and adapting to future climate pressures through sustainable drainage and energy efficiency.
- Climate Emergency Action Plan (CEAP): The proposal supports Wokingham's goal of achieving net-zero carbon emissions by 2030, with clear commitments to low-energy performance, smart controls, and responsible construction practices.

In summary, the proposed development represents a balanced, sustainable, and future-ready approach to residential construction, delivering a low-impact, environmentally responsible new home that meets both the functional needs of future occupants and the climate priorities of Wokingham Borough Council.