



40 Culver Lane, Earley, Reading, RG6 1DY

Proposed demolition of the existing dwelling and erection of a replacement dwelling.

Sustainability Statement

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1. Introduction

1.1. Executive Summary

This Sustainability Statement has been prepared by 1 Right Plan in support of a full application for the demolition of the existing dwelling and the erection of a replacement 4-bedroom detached dwelling at 40 Culver Lane, Earley, Reading, RG6 1DY. It should be read alongside the accompanying Planning Statement, which sets out the full description, site context and planning policy assessment of the proposal.

The purpose of this Statement is to set out how the proposed replacement dwelling responds to national and local planning policy on climate change, sustainable design and resource efficiency, and to detail the specific sustainability and energy measures that will be incorporated into the scheme, consistent with the commitments already set out in Section 3 ('Sustainability and Energy') of the Planning Statement.

The existing dwelling is a chalet-style building of poor thermal performance and in a relatively poor state of repair, whose form, storey heights and roof construction do not allow the standard of accommodation or level of energy performance sought to be achieved through refurbishment alone. Its replacement with a new dwelling constructed to current Building Regulations standards will, in itself, deliver a substantial improvement in energy efficiency over the existing building.

The replacement dwelling will be assessed against Approved Document L1A (2021) of the Building Regulations using the standard SAP 10.2 methodology and the energy hierarchy of Be Lean, Be Clean and Be Green. On the basis of the specification set out in Section 3 of this Statement, the development is anticipated to achieve a regulated CO2 emissions reduction in the order of 70-80% against the Part L1A (2021) Notional Building baseline, to be confirmed by full SAP calculations at the technical design / Building Regulations stage.

This Statement also addresses water efficiency (targeting the 105 litres/person/day standard required by Policy CC04 of the Managing Development Delivery Local Plan), climate change adaptation and sustainable drainage, biodiversity and green infrastructure, and the management of demolition and construction waste.

1.2. Planning Policy

The policies of most relevance to this Statement are summarised below; a full policy assessment of the proposal is provided in the accompanying Planning Statement.

1.2.1. National Planning Policy Framework (August 2026)

The National Planning Policy Framework (NPPF) was substantially revised and republished on 17 August 2026, adopting a coded structure of plan-making and national decision-making policies. The following policies are of particular relevance to sustainability and energy:



- Policy CC2 (Mitigation of climate change) requires proposals, where relevant, to use design approaches which conserve energy and other resources in accordance with Policy DP3(2)(b), and to take advantage of opportunities to reuse existing structures and materials. Policy CC2(2) gives substantial weight to the benefits of improving the energy efficiency of existing buildings; as set out below, replacement of the existing dwelling with a new building built to current standards is the only means of achieving the level of energy performance sought.
- Policy CC3 requires proposals to be located and designed so that risks from climate change, including flood risk and surface water, are minimised or safely managed.
- Policy DP3(2)(b) identifies Climate as one of the seven core principles of well-designed places, requiring design approaches which conserve energy and other resources.
- Policy F8 requires proposals which could affect drainage on or around the site to incorporate sustainable drainage systems proportionate to the nature and scale of the proposal.

1.2.2. Wokingham Borough Core Strategy and Managing Development Delivery Local Plan

Core Strategy Policy CP1 (Sustainable development) requires proposals to provide attractive, functional, accessible, safe, secure and adaptable schemes and to support opportunities for reducing the need to travel.

MDD Local Plan Policy CC04 (Sustainable Design and Construction) requires new homes to be delivered to a high standard of sustainable design and construction, including meeting an internal potable water consumption target of 105 litres or less per person per day, and requires all development to incorporate suitable waste management facilities, including on-site recycling. Policy CC09 addresses flood risk from all sources and Policy CC10 requires sustainable drainage to be incorporated into new development.

2. Description of the Development

2.1. Site and Existing Dwelling

The application site is located on the southern side of Culver Lane in Earley, within an established residential area to the east of Reading town centre, and lies within the development limits of Earley as defined on the Wokingham Borough Policies Map. The site is not within a Conservation Area, the Green Belt, or Flood Zone 2 or 3, and is not itself subject to any Tree Preservation Order, although a protected copper beech within the neighbouring garden of No. 42 Culver Lane stands close to the eastern boundary.

The existing dwelling is a detached, chalet-style building of one and a half storeys which is of no particular architectural or historic interest and is in a relatively poor state of repair, with moved, raised, missing and broken roof tiles and missing mortar to the ridge and hip tiles recorded by the Preliminary Roost Assessment. The property makes inefficient use of a generously sized plot, both in the accommodation it provides and the quality of that accommodation.



2.2. Proposed Replacement Dwelling

The proposal comprises the demolition of the existing dwelling and its ancillary structures and the erection of a replacement two storey detached dwelling with a broadly rectangular footprint of circa 10.1m by circa 15.7m (circa 158.6m² footprint) and a gross internal floor area of circa 285.0m² across the two floors, providing 4no. double bedrooms, each with its own en-suite, together with a hall, reception room, lounge, study, kitchen/dining room, separate dining room and bathroom at ground floor.

The building would be covered by a hipped roof with a central ridge and subordinate hips to the front and rear, articulated by 2no. front gables, with an eaves height of circa 5.4m and a ridge height of circa 8.6m. External materials would comprise facing brickwork to the ground floor, a contrasting render or hung finish to the first floor, plain tiles to the roof and UPVC fenestration. The existing vehicular access and frontage hardstanding would be retained without alteration.

3. Sustainability and Energy Strategy

3.1. The Energy Hierarchy

As the proposal is for a new replacement dwelling, it falls to be assessed under Approved Document L1A (2021) using the standard SAP 10.2 methodology, applying the recognised energy hierarchy:

- Be Lean - reduce energy demand through an efficient building fabric and passive design.
- Be Clean - supply the remaining energy demand efficiently, through efficient building services.
- Be Green - meet residual demand through low or zero carbon (LZC) renewable technology.

This approach directly responds to NPPF Policy CC2(2) (substantial weight to improved energy efficiency of existing buildings, achieved here through wholesale replacement) and Policy DP3(2)(b) (design approaches which conserve energy and other resources), together with Core Strategy Policy CP1 and MDD Local Plan Policy CC04.

3.2. Baseline and Fabric Specification ('Be Lean')

The baseline (Notional Building) for the assessment is a specification fully compliant with, but not exceeding, Approved Document L1A (2021). The proposed specification, summarised in Table 3.1, improves on this baseline across all key fabric elements, reducing the fabric heat loss of the dwelling ahead of the introduction of any renewable technology.

Element	Part L1A (2021) baseline (Notional)	Proposed specification
External wall U-value	0.26 W/m ² K	0.18 W/m ² K
Ground floor U-value	0.18 W/m ² K	0.13 W/m ² K



Element	Part L1A (2021) baseline (Notional)	Proposed specification
Roof U-value	0.16 W/m ² K	0.11 W/m ² K
Windows / glazed doors U-value	1.60 W/m ² K	1.20 W/m ² K or better (high performance double or triple glazing)
Air permeability	8 m ³ /(h·m ²) @ 50Pa	≤ 4 m ³ /(h·m ²) @ 50Pa - reduced to the minimum consistent with health requirements
Thermal bridging	Default (Y = 0.15)	Reduced through recognised construction details and careful design of junctions
Hot water storage / pipework	Standard insulation	Highest practicable level of insulation to hot water pipes and storage vessels

Table 3.1: Baseline (Part L1A 2021 Notional Building) specification compared with the proposed development specification.

Together, these fabric-first measures are anticipated to reduce regulated CO₂ emissions in the order of 15-20% against the Notional Building baseline, before any improvement to building services or the introduction of renewable technology is taken into account.

3.3. Efficient Building Services ('Be Clean')

The dwelling will be provided with energy efficient internal and external lighting throughout, and appliances specified to a minimum B energy rating, in accordance with the commitments set out in the Planning Statement. Mechanical extract ventilation will be provided to the kitchen and wet rooms, with trickle ventilation to habitable rooms, to maintain good indoor air quality without unnecessary heat loss. Due to the scale of the development (a single dwelling), connection to a district heat network or the use of combined heat and power is not applicable; there is no existing or planned heat network within the vicinity of the site.

3.4. Renewable and Low Carbon Technology ('Be Green')

Having minimised demand through the fabric-first approach and specified efficient services, the following renewable and low carbon technologies are proposed to further reduce the residual carbon emissions of the dwelling:

- Air Source Heat Pump (ASHP) - proposed as the primary heating and hot water technology, providing space heating and domestic hot water via low temperature radiators or underfloor heating, and typically achieving a seasonal coefficient of performance (SCOP) in excess of 3.0.
- Solar Photovoltaics (PV) - the hipped roof provides suitable orientation and area for a roof-mounted PV array, sized having regard to the dwelling's floor area and energy demand, subject to confirmation at technical design stage.



- Ground source heat pumps, wind turbines and biomass have been considered and are not proposed, for the same reasons of site constraint, proportionality and residential amenity as set out in 1 Right Plan's other Sustainability Statements for comparable schemes.

On the basis of the fabric, services and renewable technology specification set out above, the development is anticipated to achieve the indicative level of performance summarised in Table 3.2, to be confirmed and finalised through full SAP 10.2 modelling of the 'as-built' specification at Building Regulations stage.

Stage	Indicative regulated CO2 saving vs baseline (%)	Notes
Baseline (Part L1A 2021 Notional)	-	Reference point
Be Lean	15-20%	Improved fabric, air permeability & thermal bridging
Be Clean	0%*	No further saving at this stage; ASHP saving captured under 'Be Green'
Be Green	55-65%	ASHP + roof-mounted PV array
Cumulative on-site saving	70-80%	Subject to confirmation by full SAP assessment

Table 3.2: Indicative regulated CO2 emissions savings at each stage of the energy hierarchy. *Consistent with standard SAP methodology, the efficiency benefit of the ASHP is reported cumulatively at the 'Be Green' stage.

The demolition of the existing dwelling will be carried out so that materials are reused and recycled so far as practicable, in accordance with Policy CC2(1)(d) of the NPPF, as addressed further in Section 6 below.

4. Water Efficiency

In accordance with MDD Local Plan Policy CC04, the dwelling will be designed to achieve an internal potable water consumption target of no more than 105 litres per person per day, achieved through the specification of water-efficient fittings, including:

- Taps (excluding kitchen): maximum 6 litres/minute flow rate.
- Kitchen taps: maximum 10 litres/minute flow rate.
- Showers: maximum 8 litres/minute flow rate.
- Baths: maximum 170 litres capacity to overflow.
- WCs: dual flush, average effective flush volume no greater than 4.0/2.6 litres (full/part flush).
- Washing machines and dishwashers: minimum B-rated, specified to manufacturers' water-efficient standards.

A full water efficiency calculation will be undertaken to confirm compliance with the 105 litres/person/day target at technical design / Building Regulations stage.



5. Climate Change Adaptation and Drainage

5.1. Overheating and Passive Design

In accordance with Approved Document O (2021) and NPPF Policy CC3, the dwelling has been designed with regard to the cooling hierarchy, including dual-aspect habitable rooms, openable windows to support cross-ventilation, and appropriately specified glazing to limit unwanted solar gain to principal rear-facing rooms. These measures will manage the risk of internal overheating without reliance on mechanical cooling.

5.2. Surface Water and Flood Risk

The application site does not lie within Flood Zone 2 or 3 and is not identified as being at risk of flooding from other sources in the Council's Strategic Flood Risk Assessment; the sequential test is not required for the replacement of an existing single residential property under Policy CC09(3)(a) of the MDD Local Plan. Surface water will be managed within the site by means of sustainable drainage, incorporating permeable paving to hardstanding areas where applicable and soakaways where ground conditions permit, with the retained rear garden's soft landscaping ensuring no material increase in surface water run-off. Foul drainage will connect to the existing mains drainage serving the property. This approach accords with Policies CC09 and CC10 of the MDD Local Plan and Policy F8 of the NPPF.

6. Biodiversity and Green Infrastructure

The scheme's ecological measures are addressed in full in the accompanying Planning Statement and supporting tree and bat survey reports, and are summarised here for completeness. The proposal retains the protected copper beech (T1) and two further trees (T2 and T3) identified in the BS 5837:2012 tree survey, protected by tree protection barriers and ground protection during demolition and construction, in accordance with MDD Local Plan Policy CC03 and NPPF Policy N3.

Biodiversity enhancement will be delivered through integrated swift bricks and bat boxes within the fabric of the new dwelling (NPPF Policy N2(1)(f)), hedgehog-permeable gaps within boundary fencing, and new native planting within the retained garden areas, in accordance with MDD Local Plan Policy CC03. A statutory biodiversity gain plan demonstrating a minimum 10% net gain in biodiversity will be submitted and approved prior to commencement of development, in accordance with the Environment Act 2021 and Schedule 7A to the Town and Country Planning Act 1990.



7. Waste and Materials

7.1. Demolition and Construction Waste

A site waste management plan will be implemented to ensure that materials arising from the demolition of the existing dwelling and the construction of the replacement dwelling are reused and recycled so far as practicable, in accordance with Policy CC2(1)(d) of the NPPF, including the reuse of non-contaminated excavated soil and hardcore within the site where feasible.

7.2. Materials

Building materials will be responsibly and legally sourced from certified suppliers, with all timber and timber-based products sourced in accordance with the UK Government's Timber Procurement Policy ('Legal' and 'Sustainable'). The proposed material palette of facing brickwork, render or hung finish, plain roof tiles and UPVC fenestration has been selected to reflect the mixed but predominantly traditional material treatment of the surrounding properties, as set out in the Planning Statement.

7.3. Operational Waste

Screened storage for general waste and recycling bins will be provided within the frontage of the property, within convenient carrying distance of the highway for collection, in accordance with MDD Local Plan Policy CC04(3).

8. Conclusion

This Sustainability Statement demonstrates that the proposed replacement dwelling at 40 Culver Lane, Earley has been designed with regard to national and local planning policy on climate change, sustainable design and resource efficiency.

Through the wholesale replacement of a poorly performing existing dwelling with a new building constructed to current Building Regulations standards, an improved fabric specification exceeding the minimum Approved Document L1A (2021) baseline, the installation of an air source heat pump and roof-mounted solar PV, water-efficient fittings targeting the 105 litres/person/day standard required by MDD Local Plan Policy CC04, sustainable drainage, biodiversity enhancement, and the responsible management of demolition and construction waste, the proposal responds positively to Policies CC2, CC3 and DP3 of the National Planning Policy Framework (August 2026), Core Strategy Policy CP1, and Policies CC03, CC04, CC09 and CC10 of the Managing Development Delivery Local Plan.



On this basis, the proposed development is considered to represent a sustainable, energy efficient replacement dwelling, and it is respectfully requested that the Council grants planning permission for the scheme.

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