

Sustainable construction policies

Operational energy and carbon Evidence base complementary report

July 2026 | Rev P02

Contents and introduction

Introduction

This report provides an update to Cotswold District Council's energy and carbon evidence base for sustainable construction policies (December 2023). Etude, together with Levitt Bernstein, assisted the Council with creating the 2023 evidence base to justify net zero buildings policies based on operational energy metrics. Since the report was issued, a number of important developments have occurred relating to net zero operational energy policies. As such this update reflects this changing context.

The scope of this report covers:

- An update to the statutory context surrounding net zero policies.
- The recently released Future Homes and Future Buildings Standards and what these mean for the existing evidence base and Cotswold's proposed policies.
- A review of recent successful evidence bases from other local authorities adopting similar policies.
- Implementation of policies and the development management process.

Document quality control

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Revision history

P01	29/05/2026	First issue to the client
P02	09/07/2026	Final issue with amendments.

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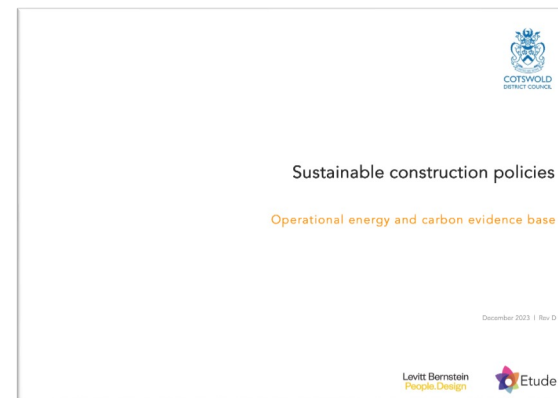
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This report complements the Cotswold District Council's energy and carbon evidence base for sustainable construction policies (December 2023); Etude & Levitt Bernstein.

1.0

Policy context update



Policy context update | The 2023 WMS: the legal response and inspectors' comments

The 2023 Written Ministerial Statement

A Written Ministerial Statement (WMS) was issued on 13th December 2023 by the Parliamentary Under Secretary of State for Levelling Up, Housing and Communities. A key extract of the statement is:

Any planning policies that propose local energy efficiency standards for buildings that go beyond current or planned buildings regulation should be rejected at examination if they do not have a well-reasoned and robustly costed rationale that ensures:

- *That development remains viable, and the impact on housing supply and affordability is considered in accordance with the National Planning Policy Framework.*
- *The additional requirement is expressed as a percentage uplift of a dwelling's Target Emissions Rate (TER) calculated using a specified version of the Standard Assessment Procedure (SAP).*

The legal response to the 2023 WMS

Open legal advice sought from Estelle Dehon KC concludes that the WMS should not prevent local authorities from exercising their statutory powers and duties.

“ So long as there is a robust evidence base – a reasoned and robustly costed rationale – it is open to examining inspectors, in the exercise of their planning judgment, to determine that policies based on [energy metrics] are consistent with national policy on climate change mitigation and the net zero obligation, and, to the extent that there would be deviation from the 2023 WMS, that can be justified on the evidence and does not prevent overall consistency of the proposed local plan with national policy (particularly as national policy can pull in different directions). ”

Estelle Dehon KC

The response from planning inspectors at examination

The response from planning inspectors appointed by the secretary of state at examination found policies that went beyond building regulations and used operational energy metrics justified.

“ ...there is a justified rationale for the approach taken in Core Policy 22. Although the use of alternative metrics to TER means that it departs from the WMS, that departure is justified by the evidence presented to us and the objectives of the Plan in addressing climate change.”

Inspector comment, Uttlesford Local Plan (January 2026)

“ ...The (2023) WMS is a material consideration but needs to be read in the context of national policy and legislation. Evidence is presented to indicate that achieving net zero using the (EUI) metric proposed is both technically and financially feasible.”

Inspector comment, Winchester (March 2026)

Policy context update | The draft 2025 NPPF consultation

The draft 2025 NPPF consultation

In December 2025, the government announced a consultation on the new draft National Planning Policy Framework (NPPF). Of particular relevance to this study is *PM13 Setting Standards* and *DM7 Relationships with Other Regulatory Regimes* which propose to:

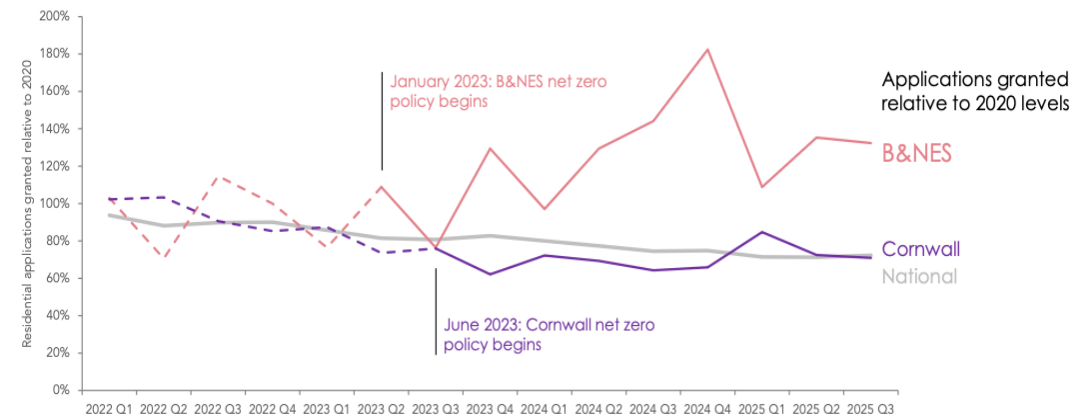
- Limit local standards for energy efficiency in dwellings.
- Prevent local policies for any matters that are already covered by building regulations (with the exception of accessibility and water efficiency but including energy and carbon emissions).

Local energy policies do not stifle planning and development

One of the key arguments that the Government has made for this policy is that allowing local authorities to set their own policies inhibits development. Data from the Ministry of Housing, Communities and Local Government (MHCLG) demonstrate that local net zero energy policies introduced by Bath & North East Somerset Council and Cornwall Council in 2023 did not hold back planning and development in these areas. There is no evidence that net zero policies make the planning process too complex or that they constrain housing delivery (see graph on the right).

What PM13 and DM7 might mean for local plans if they are adopted in the NPPF

At this stage PM13 and DM7 are under consultation and it may be that the proposal is not taken forward. If it is, it is likely to extend to energy efficiency only, which may include limiting the ability of local authorities to set space heating demand and energy use-intensity targets (see box on the right for mitigating options). Renewable energy does not appear to be included and therefore it may be possible for local authorities to continue setting their own standards for renewable energy provision. Embodied carbon policies may face constraints but draft wording is vague and therefore the NPPF policy may be difficult to implement in practice.



% of residential applications granted relative to 2020. The pink line shows that applications granted for B&NES were consistently higher for B&NES after the introduction of the policy and higher than the national average. The purple line shows that were marginally lower but were already on a downward trajectory after 2020 anyway.

Chart based on MHCLG reference table 2 (PS2) data for district planning applications, showing applications granted for major and minor dwellings. This shows applications granted relative to 2020 levels in each area. Applications can refer to multiple dwellings. Data is not available for individual dwellings.

Justification for operational energy and embodied carbon policies

- Robust justification for local planning policies for operational energy and embodied carbon is important. There are other national policies which must be highlighted as a justification for the proposed local policies.
- Operational energy policies such as space heating demand and energy use intensity and embodied carbon policies could be considered to be sufficiently different from building regulations metrics to not be covered by PM13 and DM7. Building regulations covers regulated energy uses only, while operational energy use policies would cover total energy use. Operational energy policies can be measured in-use, whereas building regulations metric cannot.

Policy context update | The need for operational energy net zero policies

Complying with national policy

There are strategic national targets for the energy performance and carbon emissions of buildings contained in several legislative documents, but the specific requirements for new buildings are set by the Building Regulations. Building regulations are generally limited in ambition by what is achievable on the most viability constrained sites in England. Cotswold District Council can determine the viability of setting better standards based on the local, not national, conditions.

The role of new buildings in carbon budgets

The concept of carbon budgets is absolutely critical to understand. Net Zero is not only about a destination; a very significant and fast decarbonisation pathway is needed and, in contrast to most other sectors, the technology to completely decarbonise new buildings already exists at scale.

Reducing energy bills

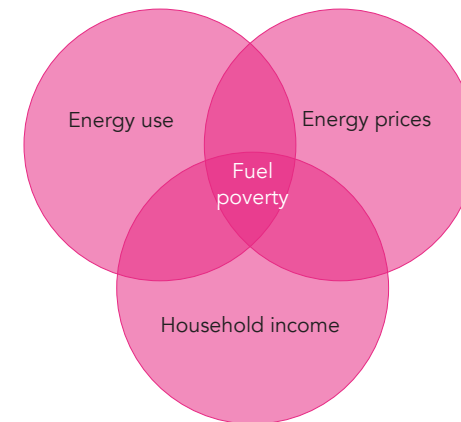
Energy costs are now a major issue for many UK residents. An energy efficient dwelling will help to reduce energy demand which in turn will reduce energy bills. It will also make the temperature more stable, enabling a 'smart' heating system to make the most of flexible dynamic electricity prices. Incorporating PV generation can generate significant cost savings when electricity is used by residents on-site.

Wider co-benefits

Better insulated buildings generally and housing specifically brings wider benefits to residents, communities and the region. Improving housing quality plays an important part in tackling health inequalities.

Embodied carbon

The Climate Change Committee (CCC) recommended that a whole life carbon assessment for new homes should be included within the Future Homes Standard, but it was excluded, leaving a policy gap that needs to be filled for the UK to meet its net zero obligation.



The dwelling's energy use is one of the three key factors contributing to fuel poverty. The proposed policy has a specific requirement for domestic buildings on energy efficiency.



The Government predicts housing quality impacts will increase as the population ages. NHS costs source: BRE, (image source: gov.uk)

2.0

The Future Homes and Building Standards (FHS and FBS)

FHS and FBS | Timeline for introduction

The current Building Regulations, Part L 2021

The current section of the building regulations that governs energy and carbon emissions is Part L 2021. It will be replaced by the Future Homes Standard (residential) and the Future Buildings Standard (non-residential) in March 2027.

New homes being designed now will need to meet the timescales indicated opposite, otherwise they will need to comply with the new Part L 2026 standards when they come into force (March 2027).

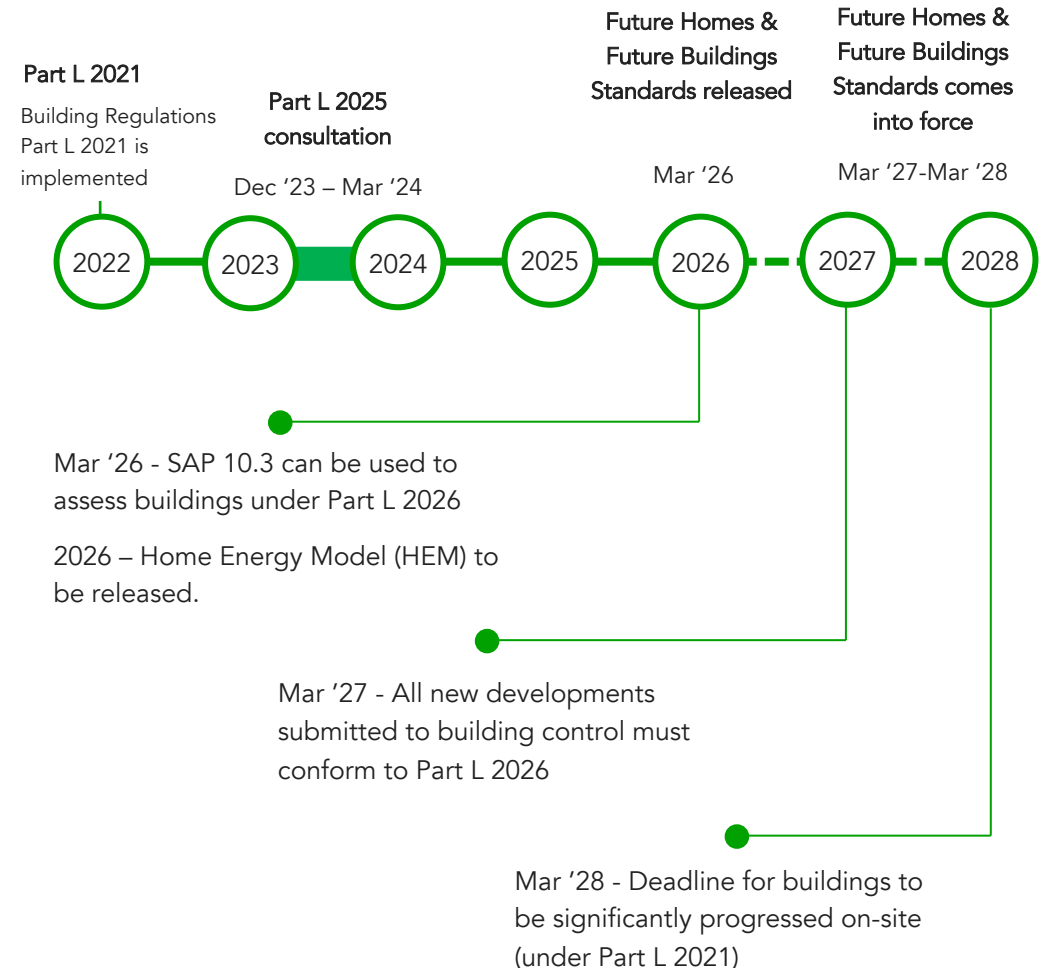
Part L1 2026 (Dwellings) - The Future Homes Standard

Details of the UK Government's Future Homes Standard (FHS), or Part L1 2026, were published in March 2026. It will come into force on 24th March 2027* (except for higher risk building for which the date will be 27th September 2027).

The key changes between Part L 2021 and Part L1 2026 are discussed on the following page.

Part L2 2026 (Non-dwellings) - Future Buildings Standard (FBS)

The Future Buildings Standard (FBS) brings changes to Part L (conservation of fuel and power) and Part F (ventilation) of the Building Regulations for new and existing non-domestic buildings. It will deliver stronger fabric and services, low-carbon heating (no gas boilers), and greater use of on-site renewable generation.



The Future Homes Standard (FHS) and The Future Building Standard (FBS) have recently been released. The key updates and milestones are illustrated in the graphic above.

FHS and FBS | Summary of key changes for dwellings (Part L1 2026)

Part L1 2026 (or FHS) marks the UK’s shift towards building ‘zero-carbon ready’ new homes. It assesses buildings against the same metrics as Part L1 2021, (carbon emissions, fabric energy efficiency and primary energy), but key changes to the calculation methodology, requirements and notional building encourage higher performance design.

An updated grid electricity carbon factor

The grid electricity carbon factor has been updated from 0.136 to 0.086 kgCO₂/kWh for Part L1 2026 calculations, which aligns with various grid decarbonisation forecasts. This is much lower than the carbon factor for any fossil fuels.

A new requirement for low carbon heating systems

Part L1 2026 requires on-site space heating and DHW systems to be efficient and use low carbon fuels, favouring electricity-based options for new buildings. Space heating and DHW can also be provided by a district heat network.

A new functional requirement for renewable generation

On-site renewable energy generation is a new functional requirement under Part L1 2026. Every new residential building is required to provide a minimum amount of renewable generation, based on the size, in particular the floor area, of the building. This is most likely to be achieved through rooftop PV systems. There are exemptions under specific circumstances, such as where roof orientation or shading makes generation impractical, but these must be justified and accepted by Building Control.

A new notional dwelling

Part L1 2026 introduces a revised notional dwelling, which is used to calculate the performance which will have to be met by the actual dwelling in terms of carbon emissions, fabric energy efficiency and primary energy.

The main updates to the notional specification compared with Part L 2021 include:

- **Air permeability and ventilation:** an improved airtightness target and upgrade to decentralised Mechanical Extract Ventilation (dMEV), to maintain air quality where natural infiltration is insufficient.
- **Space heating and DHW:** upgrade to Air Source Heat Pumps (ASHP). Combined with the reduction in grid electricity carbon factor and requirement for low carbon heating, this makes compliance with fossil fuel based systems very difficult.
- **Photovoltaics:** the notional building now includes a PV system sized to match that of the actual building, up to a maximum threshold.

	Part L1 2021	Part L1 2026
Air permeability	5 m ³ /m ² /hr @ 50Pa	4 m ³ /m ² /hr @ 50Pa
Ventilation	Natural (i.e. intermittent mechanical extract ventilation)	dMEV (i.e. decentralised continuous mechanical extract ventilation)
Space heating and DHW	Individual gas boiler	Individual or communal ASPH
Photovoltaics	System facing south-east or south-west <i>For houses:</i> kWp = 40% of ground floor area, including unheated spaces / 6.5 <i>For flats:</i> kWp = 40% of dwelling floor area / (6.5 * number of storeys in block)	System facing south-east at 45° pitch kWp same as actual building up to: <i>For houses:</i> 40% ground floor area including unheated spaces / 4.5 <i>For flats:</i> 40% dwelling floor area / number of storeys / 4.5

Summary of key notional dwelling specification changes between Part L1 2021 and Part L1 2026

FHS and FBS | PV requirements for dwellings (Part L1 2026)

Solar PV as a mandatory requirement

Part L1 2026 introduces a new functional requirement for solar photovoltaic (PV) panels on **all new dwellings**. This is a significant change from Part L 2021, under which PV was not mandatory. Critically, the amount of PV required cannot be offset by higher levels of energy efficiency, it must be provided.

The generation requirement

The amount of solar PV that must be provided on the actual building must meet or exceed a minimum annual **generation requirement**. It is not simply an area requirement as sometimes thought.

The generation requirement is determined from a hypothetical array of a size determined by the method outlined on the right.

The generation of the actual array must account for actual orientation, tilt and overshadowing. Compliance is assessed using the SAP methodology.

Rules for maximising solar PV generation

Solar panels must be installed on each “reasonably practicable roof area”, with all roof faces used where necessary to meet the generation target, regardless of orientation or overshadowing. Minimum offsets from roof edges, ridges and windows must be adhered to.

Exemptions

Exemptions are very limited. North-facing pitches and heavily shaded roofs are not exempt from the maximisation requirement. The only full exemption applies where, despite maximising PV across all roof faces, annual generation remains below **720 kWh/year**. Applications for exemption must include diagrams demonstrating maximised PV provision.

How building control officers will make judgements on exemptions is unknown.

5.73 Roof-mounted photovoltaic arrays on dwellinghouses should be designed to achieve a reasonable output using one of the following.

- a. An annual output (in kWh) for the dwellinghouse as calculated using the **approved methodology** of at least equal to that of a photovoltaic array with all of the following characteristics.
 - i. Installed peak power (kWp) equal to photovoltaic panels with an efficiency of 0.22kWp per m² installed over an area equivalent to 40% of the dwellinghouse's ground floor area (see equation 5.1).
 - ii. Orientated south-east to south-west.
 - iii. Pitch of 45 degrees.
 - iv. Not overshadowed.
- b. An annual output (in kWh) for the **dwelling** as calculated using the **approved methodology** at least equal to that of a photovoltaic array covering the reasonably practicable roof area with a panel efficiency of 0.22 kWp/m².

Equation 5.1

An appropriate level of installed peak power (PPDWELLING) in kWp for an individual dwellinghouse can be calculated using the following equation.

$$\text{PPDWELLING} = \text{APVD} \times \text{EFFPV}$$

equation 5.1

Where:

EFFPV = PV panel efficiency (kWp/m²) of 0.22kWp/m² or higher

APVD = area available for photovoltaic panels (m²) equivalent to at least 40% of the ground floor area.

Extract from Part L1 2026 relating to Photovoltaic Panels

How the generation requirement is calculated

This generation requirement must be calculated using the approved methodology.

In simplistic terms the generation requirement is:

- The generation of a hypothetical PV array of a capacity (kWp) that is calculated by using the ground floor area of the dwelling: 40% of ground floor area × 0.22 kWp/m².
- The generation of this hypothetical PV array is determined using fixed assumptions on orientation (south-east), tilt (45 degrees), and overshadowing (no overshadowing).

Importantly, it is a **generation requirement**, not an area requirement.

FHS and FBS | How the PV requirements of Part L1 2026 affect Cotswold Councils' local plan policy

The requirement for all buildings to provide renewable energy generation is one of the most significant changes to Part L1 2026. This is most likely to be delivered through a PV system and can be installed anywhere within the curtilage of the building. Generated electricity should be made available for residents' use.

Cotswolds' on-site renewable energy requirement

The minimum 80 kWh/m²/yr on-site renewable energy requirement in the Cotswolds policies is broadly equivalent to the Part L 2026 PV requirement for a typical semi-detached house. The energy balance requirement is likely to exceed the FHS requirement for flats, providing an important additional backstop.

Optimised roof design

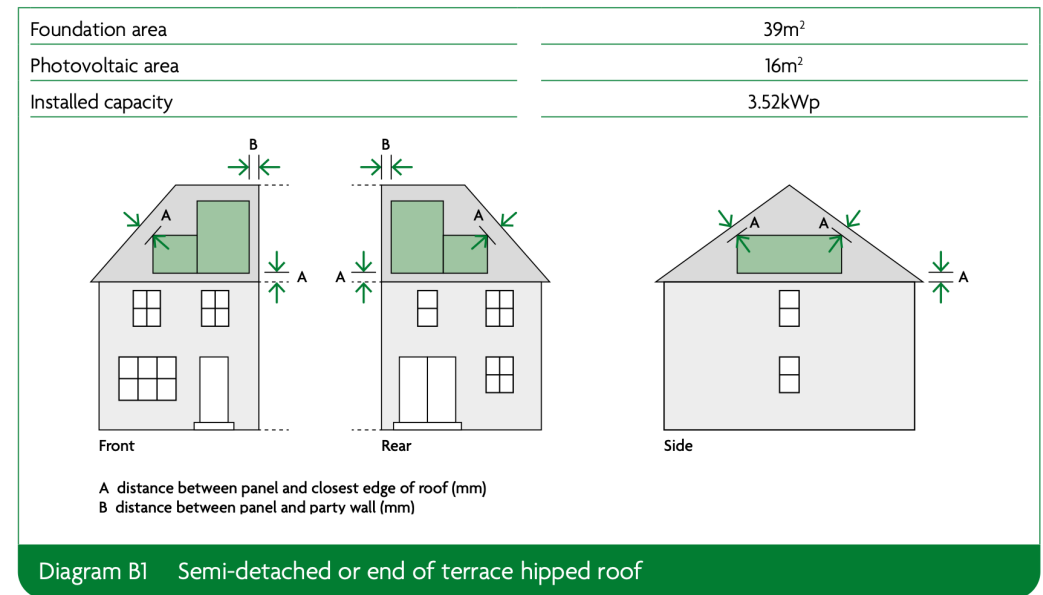
Part L1 2026 does not require optimised roof design. Local policy can go further by requiring this, reducing the amount of PV needed and supporting better design outcomes. Where local policy requires optimised roof design, it will act as an effective backstop on renewable energy generation.

Local policy and the draft 2025 NPPF

Renewable energy provision does not appear to fall within the energy efficiency restrictions proposed under PM13 of the draft 2025 NPPF. It may therefore be possible for local authorities to continue setting standards for on-site renewable energy that go beyond the mandatory FHS requirement.

Blocks of flats

For blocks of flats, Part L 2026 provides no strong mechanism to incentivise efficient placement of plant equipment to maximise PV coverage. The energy balance requirement in the Cotswolds policies is likely to exceed the Part L 2026 requirement for flats, providing an important additional lever.



These diagrams from the Approved Document L2026 illustrate how PV must be maximised.

- B9** Evidence should be provided to the **building control body** in the following circumstances.
- To support the need for lower output on-site renewable electricity generation than the standards in paragraphs 5.73(a), 5.74(a) and 5.74(b).
 - In the exceptional circumstances where it is not possible to install any on-site electricity that would meet the standards given in paragraph 5.77.
- This should include the following as appropriate.
- Roof diagrams with and without proposed photovoltaic panels clearly demonstrating any design restriction on panels. Examples of roof diagrams are provided in paragraph B11.
 - A statement outlining why lower provision is being installed and why any modification to designs cannot be made.
 - Any calculations made in support of paragraphs 5.73(a), 5.74(a) and 5.74(b), signed by a suitably qualified person. A suitably qualified person includes a qualified On Construction Domestic Energy Assessor.

Extract from Part L1 2026 relating to Photovoltaic Panels

FHS and FBS | Summary of key changes for non-domestic developments

Part L2 2026 (FBS) marks the UK's shift towards building 'zero-carbon ready' new buildings.

It assesses buildings against the same metrics as Part L2 2021, (carbon emissions and primary energy), but there are some key changes that are likely to make it more challenging to comply with.

A new requirement for low carbon heating systems

Part L2 2026 requires on-site space heating and hot water systems to be efficient and use low carbon fuels, favouring electricity-based options for new buildings. Space heating and hot water can also be provided by a district heat network.

A new notional building

While Part L2 2026 has been recently published, the update to the National Calculation Methodology (NCM) modelling guide, which defines the notional building specification, has not yet been publicly released, nor have any approved calculation software.

This means we can determine the policy intent from Part L2 2026, but we do not know the details of how building performance will be benchmarked by the notional building under Part L2 2026.

However, there is a draft NCM modelling guide that was released for consultation that gives an indication of the likely changes to the notional specification under Part L2 2026. This document contains two proposed options for the notional specification.

Commissioning

All fixed building services that requires commissioning evidence for compliance with Part L in new buildings (other than dwellings) now includes lifts, escalators and moving footways.

The notional specification

The main updates to the notional specifications include:

- **Fabric improvements:** improved U-values and air permeability.
- **Ventilation:** upgrade to Mechanical Ventilation with Heat Recovery (MVHR).
- **Space heating and hot water:** upgrade to Air Source Heat Pumps with low flow temperatures. Combined with a likely reduction in grid electricity carbon factor and requirement for low carbon heating, this makes compliance with fossil fuel based systems very difficult.
- **Lighting:** more efficient lighting with smarter controls.
- **Photovoltaics:** the notional building always includes a PV system sized to a % of the assumed roof area.

FHS and FBS | How the previous modelling compares with the confirmed FHS notional building?

The Future Homes Standard has been confirmed since the original evidence base was issued

Cotswold District Council's energy and carbon evidence base for sustainable construction policies (December 2023) contains technical and cost feasibility evidence relating to the proposed net zero policies.

At the time, two baseline scenarios were used:

- Part L 2021 - this remains to be an accurate baseline of this standard.
- The anticipated Future Homes Standard - this baseline is now out of date as it has been superseded by the confirmed FHS. The table opposite summarises these differences which are significant enough for us to recommend that this baseline is not used for cost and viability purposes.

The Future Homes Standard baseline from the 2023 report is now out of date

In December 2023 the anticipated Future Homes Standard spec was based on the government's response to the the Future Homes Standard Consultation (published in November 2023). Since then, the actual FHS (or Part L1 2026) specification has been confirmed.

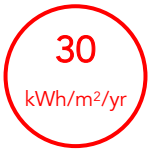
There are quite large differences in the fabric specification and solar PV requirement. For this reason, the energy and cost modelling results for Scenario 2 from the 2023 study are not suitable for use as a baseline for technical or viability purposes.

- Part L 2021 - this remains to be an accurate baseline of this standard.
- The anticipated Future Homes Standard (Scenario 2) - this baseline is now out of date as it should be superseded by new modelling using the confirmed FHS as a baseline. It should not be used for cost or viability purposes.

	Anticipated Part L 2025 (December 2023)	Confirmed Part L 2026
Building fabric strategy	Anticipated Future Homes Standard notional building specification (in Dec 2023)	Confirmed Future Homes Standard notional building specification (confirmed Mar 2026)
Floor (W/m ² K, SAP adjusted)	0.11	0.13
Walls (W/m ² K)	0.15	0.18
Roof (W/m ² K)	0.11	0.11
Windows (W/m ² K)	0.8 (triple-glazed)	1.2 (double-glazed)
Doors (W/m ² K)	1.0	1.0
Thermal bridging* (W/K)	10.25 (SAP) 6.3 (PHPP)	tbc
Air Permeability (m ³ /m ² /hr)	5	4
Ventilation	iMEV, 0.18 W/l/s	dMEV, 0.15 W/l/s
Space Heating	5kW ASHP Radiators at <45°C	5kW ASHP Radiators at <45°C
Domestic Hot Water	200l heat pump tank	200l heat pump tank
Waste water heat recovery (WWHR)	None	Yes (50% recovery)
Solar PV	0 kW	(approx. 40% GFA / 4.5)

The table above compares the anticipated FHS spec (from the December 2023 study) and the actual confirmed FHS spec (confirmed in March 2026). The differences in specification are significant and the FHS baseline from the 2023 study is no longer suitable. An update to the modelling is recommended.

FHS and FBS | Why a local energy policy for Cotswold is still needed (residential)

Requirement 1: Space heating demand	Justification for policy	Recommendation
 Until 31st December 2030  From 1st January 2031	The confirmed fabric specification of the notional building for Part L 2026 does not deliver much of an improvement over Part L 2021. We have undertaken some indicative modelling on a semi-detached house in the East of England. This showed us that the space heating demand of the Part L 2026 compliant dwelling was approximately 60 kWh/m²/yr. Therefore, this policy delivers a space heating demand that is approximately 50% lower at 30kWh/m²/yr and will be 75% lower at 15-20 kWh/m²/yr than the Part L 2026 compliant equivalent building. Co-benefits of the space heating demand policy include: • Better insulated walls, roofs and floors – this will reduce the risk of condensation and mould. • Triple glazed windows (rather than double glazed windows) – this will reduce cold drafts and reduce the risk of condensation and mould. • Excellent levels of air-tightness – this will further reduce drafts and improve comfort. • Mechanical ventilation with heat recovery (MVHR), a ventilation system that efficiently recovers heat from outgoing air. Incoming air is filtered and pre-heated – this will deliver improved indoor air quality and comfort. • Resilience to energy price fluctuations and extreme cold weather.	This policy delivers a significant improvement in fabric efficiency.
Requirement 2: All new developments must be fossil fuel free	Policy justification	Recommendation
	The new Part L 2026 effectively removes the ability to install gas boilers in new homes (due to the notional building now including an ASHP, and the grid electricity carbon factors having been updated and reduced). As a result, the significant carbon emissions associated with gas heating systems makes it difficult to comply with the Target Emissions Rate (TER). It appears that it is not possible to pass Part L 2026 using a gas boiler in individual dwellings (more work is needed to understand the implications of gas boilers in heat networks).	This policy is a backstop to any instances where homes with gas boilers are able to meet Part L 2026.
Requirement 3: Energy use intensity	Policy justification	Recommendation
	Cotswold's policy will deliver homes with overall lower total energy use than a Part L 2026 equivalent home. This, together with the presence of solar PV, may result in running cost savings for residents of approximately 40-60% (based on our modelling of a typical semi-detached house in the east of England). Benefits of the EUI policy include: • It is a target that can be measured at the meter and is therefore related to energy costs. • It helps protect occupants from high energy bills by limiting where direct electric heating can be used. • It may make inefficient heat networks unable to comply. • It potentially addresses the ability to use biomass heating in Part L 2026.	This policy delivers a significant improvement in overall energy use. It also protects occupants from inefficient heating systems.

Continued on following page



FHS and FBS | Why local energy policy for Cotswold is still needed (residential)

Requirement 4: On-site renewable energy generation	Policy justification	Recommendation
	How the Cotswold's proposed policy performs compared with Part L 2026 requirements Part L 2026 now includes a minimum solar PV requirement for all dwellings. The Part L 2026 requirement is based on ground floor area, in contrast to Cotswold's policy is based on total energy use. Therefore, how the two approaches compare will depend on the number of storeys the building has: • For 2-storey houses - Part L 2026 is likely* to exceed the energy balance requirement. However, if roof design is not optimized for solar PV this may not be the case. • For 3-storey houses and flats - the energy balance requirement is likely* to exceed the Part L 2026 requirement. *Further testing of different houses and flats with different number of storeys is needed. Benefits of Cotswold's policy for on-site renewable energy generation • The policy is likely to provide a greater ambition for dwellings of more than 2-storeys. • The policy can act as a back-stop requirement for all dwellings if there is a requirement to optimise roof design to achieve the policy requirement (this does not appear to be a strong requirement of Part L 2026).	Retain Requirement 4 in policy GE1. The energy balance requirement provides a useful backstop for renewable energy generation. Particularly if accompanied by guidance on how roof design should be optimized for maximum solar PV generation, and if development management have the ability to challenge inefficient roof design.
	The energy offset policy Cotswold's policy requires any renewable energy not met on-site to be offset through payment into an energy offset fund. This is a stronger requirement than Part L 2026, particularly for flats where the energy balance requirement will be difficult to achieve.	This policy should be retained as a requirement where an energy balance cannot be achieved on-site.

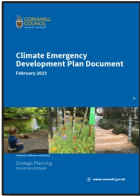
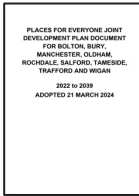
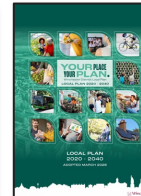
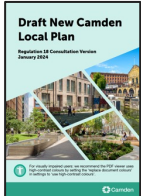
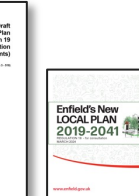
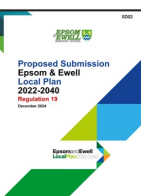
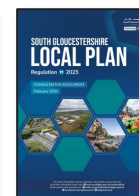
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Recently adopted local plans

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Operational energy and carbon | Local plans with operational energy use policies

The table below summarises local plans with operational energy use policies which have been adopted or or have been published for consultation.

Operational energy	
Source	Document
Adopted local plans with operational energy use policies	          Merton local plan 2024-2037/38 Cornwall CEDP 2023 Central Lincolnshire updated local plan Places for everyone adopted plan 2024 Winchester adopted Local Plan 2020-2040 Essex planning policy position Tendring Colchester Borders Garden Community adopted DPD Salt Cross Garden Village adopted AAP Bath & North East Somerset sustainable construction checklist SPD Uttlesford Local Plan 2021-2041
Emerging local plans with operational energy use policies	         Camden draft new local plan 2024 Tower Hamlets draft new local plan 2024 Ealing draft new local plan 2024 Enfield draft new local plan 2024 Kensington and Chelsea new local plan 2024 Newham draft new local plan 2024 Epsom Ewell draft local plan 2022-2040 South Gloucestershire draft local plan Reading draft local plan

Recently adopted local plans | Precedents with similar energy policies

	Policy status	Space heating demand, kWh/m ² yr	Energy use intensity, kWh/m ² yr	Renewable energy	Embodied carbon
Winchester local plan (link to evidence base)	 Adopted Mar '26	Dwellings: 15	Dwellings: 35	Energy balance	Reduce and report. In line with RICS methodology or other recognised national methodology (no RICS modules stipulated)
Uttlesford (link to evidence base)	 Adopted Mar '26	Dwellings: 15 Bungalows: 20	Resi: 35 Non-resi: various	Energy balance (at least 120 kWh/m ² fp [industrial], and 80 kWh/m ² fp [other buildings])	"C" band from LETI and RIBA targets, limits for upfront and total embodied carbon.
Tendring Colchester Borders Garden Suburb	 Adopted June '25	Dwellings: 30	Dwellings: 40	Energy balance	Reduce and report. In line with RICS methodology or other recognised national methodology (no RICS modules stipulated).
Greater Manchester Combined Authority	 Adopted Mar '24	Houses: 20 Flats: 15	None	40% GFA	None.
Cotswold Garden Village (Salt Cross)	 Adopted Feb '24	Houses: 20 Flats: 15 Non-resi: 20	Resi: 35 Non-resi: various	Energy balance	Reduce and report (suggested in line with upfront embodied carbon limits in UKNZCBS).
Central Lincolnshire (link to evidence base)	 Adopted April '23	Dwellings: 15-20 Non-resi: 15-20	Resi: 35 (site average) Non-resi: 70 (site average)	Energy balance	Reduce and report
Merton	 Adopted Nov '24	Houses: 20 Flats: 15	Report only	Maximise	None
Cornwall DPD (link to evidence base)	 Adopted Feb '23	Dwellings: 30	Dwellings: 40	Energy balance	None
BANES (link to evidence base)	 Adopted Jan '23	Dwellings: 30	Dwellings: 40	Energy balance	Upfront embodied carbon: <900kgCO ₂ e/m ²

Precedents: other emerging Local Plans with similar energy policies (as at June 2026)

This table lists adopted local plans with similar net-zero energy-based operational energy and embodied carbon policies to those proposed by BDBC.

	Policy status	Space heating demand, kWh/m ² yr	Energy use intensity, kWh/m ² yr	Renewable energy	Embodied carbon
Newham	 At examination	Dwellings: 20 Non-resi: 20 Industrial: 15	Resi: 35 Non-resi: various	Energy balance (or 120 kWh/m ² fp [industrial], and 80 kWh/m ² fp [other buildings])	Upfront embodied carbon: <500kgCO ₂ e/m ² (major developments)
Epsom & Ewell	 At examination	Dwellings: 30 Non-resi: 15	Dwellings: 40	Energy balance	None
Reading	 At examination	Dwellings: 15-20 Non-resi: 15-20	Dwellings: 35 Non-resi: 70 (site average)	Energy balance	Non-resi (where >5000m ²): <800 kgCO ₂ e/m ²
South Gloucestershire	 At examination	Bungalows and detached: 20 Semi- and terrace: 15 Flats: 15 Non-resi: None	Resi: 35 Non-resi: various	Energy balance (all) (or 150 kWh/m ² fp [industrial], and 105 kWh/m ² fp [other buildings])	Upfront embodied carbon (A1-5) i. Residential (4 storeys or fewer) - <400 kgCO ₂ e/m ² ii. Residential (5 storeys or greater) - <500 kgCO ₂ e/m ² iii. Major non-residential schemes - <600 kgCO ₂ e/m ² b. Whole life-cycle embodied carbon: i. Residential (4 storeys or fewer) - <625 kgCO ₂ e/m ² ii. Residential (5 storeys or greater) - <800 kgCO ₂ e/m ² iii. Major non-residential schemes - <970 kgCO ₂ e/m ²
Enfield	 At examination	Dwellings: 15 Non-resi: 15	Dwellings: 35 Non-resi: various	Energy balance (or 120 kWh/m ² fp [industrial], and 80 kWh/m ² fp [other buildings])	Major developments only Upfront (A1-A5): Dwellings: <500kgCO ₂ e/m ² ; Non-resi: <600kgCO ₂ e/m ² WLC: Calculate and report
Camden	 At examination	Dwellings: 20 Non-resi: 20	Dwellings: 35 Non-resi: various		GLA "aspirational" WLC (A1-A5) targets, or "standard" targets where not feasible.

Key for tables:

 = Adopted;  = At examination.



Recently adopted local plans | The viability of similar energy policies has been demonstrated successfully

Policies with energy metrics are found sound at examination

Below is a selection of Inspectors' comments from the examination of four other local plans with similar energy policies to those proposed by Cornwall Council.

These comments show that energy metric based policies have continued to be found sound at examination (including after the 2023 WMS).

	Policy status	Inspector comments
Winchester local plan	 Adopted Mar '26	"Having regard to the Council's viability evidence, including the requirements of the emerging Future Homes Standard and other Plan policy requirements that influence viability, in the round, I find the application of policies CN1 and CN3 would be unlikely to impose a significant financial burden on the Plan's planned development or have a significant effect on its affordability" ... no matter how energy efficiency is proposed to be measured, the environmental outcome, to mitigate climate change and contribute to the net zero obligation, will remain the same and it will meet the overarching aim of national policy. Therefore, based on the evidence before me, I find the Council's approach in policy CN1 and CN3, subject to the MMs proposed consistent with national policy, justified and effective. It is therefore sound."
Uttlesford	 Passed examination Jan '26 (awaiting adoption)	"We have considered the effect of achieving net zero carbon in operation on the viability of new development and are satisfied that realistic build-cost uplifts have been factored into Viability Assessment Stages 1 and 2 (INF7 and INF8). In the light of this, we accept the viability assessment reports findings that there is reasonable prospect of the Plan's strategic allocations coming forward viably"
Tendring Colchester Borders Garden Suburb	 Adopted June '25	"There is no evidence to suggest that, in this case, the longstanding aspiration for the garden community to meet the highest standards of sustainable design and construction measures would therefore make the development unviable or undevelopable over the plan period."
Cotswold Garden Village (Salt Cross)	 Adopted Feb '24	"...the application of Policy 2 in isolation, is unlikely to impose a high financial burden on the Garden Village scheme or have a significant effect on housing supply and affordability as other factors also impact on overall viability. The application of Policy 2 is not a factor likely to make a development unviable and there should therefore be no adverse impact on housing delivery and affordability."

Recently adopted local plans | Learning from recent Examinations in Public (EiP)

Although each Examination in Public (EiP) is specific to the local planning authority as each Local Plan is unique and as it needs to respond to a unique set of opportunities and constraints, there are consistent themes. This page summarises our analysis of the key 'ingredients' required for a successful examination process.

Policy justification should be articulated and clear

Being clear on the policy requirements and demonstrating that they are technically feasible and economically viable tends to be the natural focus of evidence bases. It is however also very important to articulate clearly the justification for the policy, and in particular what is the added value of it compared to Building Regulations requirements.

Reducing energy bills is a key co-benefit

Most of operational energy/carbon policies are related to the Councils' climate change commitment and ambition. However, these policies can have a very positive impact on residents' future energy bills. It would be very useful for the EiP to be able to articulate this benefit of the operational energy/carbon policy, along with any other potential co-benefits as they would not be delivered otherwise.

The impact of viability is a key consideration

The risk of impacting housing supply is naturally at the forefront of Planning Inspectors' concerns. It is therefore crucial to have a very thorough understanding of viability. The 'lower' the viability, the more important it will be to demonstrate it clearly with robust assumptions.

Flexibility of policy should be considered

Finally, it is reasonable of Planning Inspectors to seek to avoid policies which are too 'rigid' as they may create issues down the line. Introducing flexibility in the policy wording without 'watering it down' is very beneficial.

Policy justification should be articulated and clear

Reducing energy bills is a key co-benefit

The impact of viability is a key consideration

Flexibility of policy should be considered

Key considerations to be addressed for a successful examination process

4.0

Implementation and development management



Implementation of policies and development management

Etude supported Cornwall Council in developing its Climate Emergency Development Plan Document (DPD) in 2021. The DPD was examined in 2022, adopted in February 2023, and implemented from June 2023. Following implementation, Cornwall Council determined around 1,300 applications in the first year.

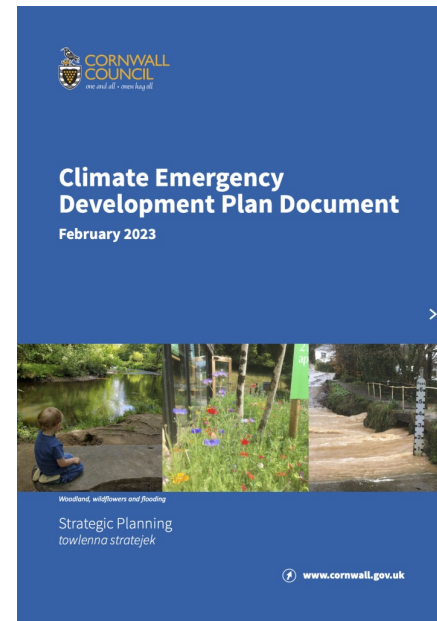
The following points summarise Cornwall Council's reflections on factors that supported effective implementation in practice.

Advice from Cornwall Council on implementing policy

- Clear and targeted messaging and training is key at all stages, particularly in the run-up to implementation.
- Support front-line Validation Teams with close working and their own bespoke training.
- As you develop your protocols and guidance, scenario testing is key. Development Management team leaders will be able to consider the range of applications you're likely to receive and help consider how best to approach matters like retrospective applications, the implications of designations and local development types.
- **Guidance documents should be "live"** so you are able to update these with the benefit of feedback and experience.
- **Specialist advice** is essential to supporting planning applications as well as building knowledge amongst case officers.
- Consider a **pre-application advice service** dedicated to net zero. This will help applicants design in energy from the early stages and can also help fund the specialist post.

The experience from the Greater Manchester Combined Authority

Etude also supported the Greater Manchester Combined Authority (GMCA) to develop pro forma application forms to rationalise and simplify the presentation of the critical information needed by Development Management teams to determine compliance with technical policies.



Cornwall Council's Development Plan

Energy and Carbon Proforma Residential		GMCA GREATER MANCHESTER COMBINED AUTHORITY	
Small minor development (XL extensions & 1 home)			
Project Name:		Ref. name: Alpha house	
Application ref:		Area (m ² GIA): 90	
Date:		Extension/home:	
		Target values	
Minimise energy demand	Form factor per home or extension	≤ 2	1.9
	Average glazing ratio per façade: North	~10-15%	15%
	South	~20-30%	5%
	East	~10-20%	30%
	West	~10-20%	30%
	Average external walls U-value (W/m ²)	≤ 0.15	0.14
	Wall thickness (mm)	≥ 400	475
	Average ground floor U-value (W/m ²)	≤ 0.10	0.1
	Average external roofs U-value (W/m ²)	≤ 0.10	0.1
	Average external doors U-value (W/m ²) (or double/triple glazed)	≤ 1.0	1.0
Average windows U-value (W/m ²) (or double/triple glazed)	≤ 1 (triple)	1.0	
Air permeability rate (m ³ /h/m ² @ 50 Pa)	≤ 3	3.0	
Ventilation strategy (background only)	-	MVHR	
Use renewable energy	PV footprint area (% of ground floor space)	≥ 40	44
Use low carbon energy	Fossil fuel free (yes/no)	Yes	Yes
	Heat source - Where the system for generating space heating and hot water is a heat pump and it achieves a SCOP of 3.5 or higher (then a Low Carbon Heat Approval not required)	Electric	Gas
Reduce overheating risk	Has the Good Homes Alliance overheating risk assessment tool been completed?	Yes	Yes
	Resulting score from the GHA tool?	<12	15
Minimise embodied carbon	Confirmation that a summary of the efforts made to design a lean, low carbon structure and building design has been submitted?	Yes	Yes

An example of a completed 'small minor' Energy and Carbon Proforma (Resi – XL extensions + 1 home)