

Theme/Sub-theme/Policy ref	Low energy use/Operational energy/E1.1	
Objective	Minimise operational energy demand (heating, hot water, electricity) – ‘zero carbon ready by design’.	
Requirement	Prioritise Passivhaus house design where possible; mitigate where not.	
Metric 2022 (unconstrained)	Major developments (>10 homes). Where possible, Passivhaus or equivalent standard with Space Heating Demand (SHD) <15 kWh/m ² /y, Energy Use Intensity (EUI) of <35 kWh/m ² /y and may be higher density housing (terrace and/or apartment forms) allowable, subject to detailed appraisal. All planning for major developments to be accompanied by Whole Life Cycle Carbon Emission Assessment using recognised methodology. An Energy Statement will be submitted to demonstrate compliance.	Small developments (up to 10 homes). Where possible, Passivhaus or equivalent standard with SHD <15 kWh/m ² /y, EUI of <35 kWh/m ² /y.
Metric 2022 (constrained)	If area character, existing building or other similar constraints negate Passivhaus or equivalent standard, planning permissions for new or refurbished builds will be tested to ensure performance is as predicted (targets of <50 kWh/m ² /y for SHD and EUI) and a Post Occupancy Evaluation Report submitted to LPA within a specified period. All planning for major developments to be accompanied by Whole Life Cycle Carbon Emission Assessment using recognised methodology. An Energy Statement will be submitted to demonstrate compliance.	Small developments (up to 10 homes). If area character, existing building or other similar constraints negate Passivhaus or equivalent standard, planning permissions for new or refurbished builds will be tested to ensure performance is as predicted (targets of <50 kWh/m ² /y for SHD and EUI) and a Post Occupancy Evaluation Report submitted to LPA within a specified period.
Context	Target consistent with anticipated Future Home Standard and based on Passivhaus Standard and LETI recommendations. Equivalent CO ₂ emissions of 35 kWh/m ² /y (all electric) = 4.76 kg CO ₂ /m ² /y (SAP 10.2 carbon factors). Note also West Oxfordshire, Cotswold and Forest of Dean District Councils ‘Net Zero Carbon Toolkit’.	
Best practice benchmark	Targets recommended by Passivhaus, LETI and RIBA. Government National Design Guide (2021).	
Policy baseline	NFDC Local Plan Part One (2020). NFDC Local Plan Part Two (2014). NFDC Declaration of a Climate and Nature Emergency (2021). NFNPA Local Plan (2019). HCC Hampshire Energy Strategy (2012). UK Government: National Planning Policy Framework (2021).	

Evidence base

Policies:

National

In the NPPF (July 2021) under 'Section 14: Meeting the challenge of climate change, flooding and coastal erosion', it states: "The planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure", "New development should be planned for in ways that: a) avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure; and b) can help to reduce greenhouse gas emissions, such as through its location, orientation and design. Any local requirements for the sustainability of buildings should reflect the Government's policy for national technical standards" and "When determining planning applications for renewable and low carbon development, local planning authorities should: a) not require applicants to demonstrate the overall need for renewable or low carbon energy, and recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions; and b) approve the application if its impacts are (or can be made) acceptable. Once suitable areas for renewable and low carbon energy have been identified in plans, local planning authorities should expect subsequent applications for commercial scale projects outside these areas to demonstrate that the proposed location meets the criteria used in identifying suitable areas." Also, "Local planning authorities should support community-led initiatives for renewable and low carbon energy, including developments outside areas identified in local plans or other strategic policies that are being taken forward through neighbourhood planning".

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf

HCC

Many of the 'eight key principles' in the Hampshire Energy Strategy 2012 look to reduce energy consumption, increase energy efficiency or encourage energy security.

<https://documents.hants.gov.uk/climate-change/HCCEnergyStrategyFinalWITHFORMATTINGv1.pdf>

NFNPA

The NFNPA Local Plan (2019) includes several policies of relevance here. 'Policy SP11: Climate change' explicitly states that mitigation will include "sustainable design and construction of buildings including improved water and energy efficiency" (consistent with the Government's zero carbon buildings policy) as well as "supporting small scale renewable and low carbon energy generation". In the section on sustainable design and construction, it states "New buildings should be designed to maximise energy efficiency and take account of landform, layout, building orientation, massing and landscaping to minimise energy use and CO2 emissions. Innovative design and technologies, such as low carbon technology, will be encouraged, and the use of materials sourced as locally as possible will be preferred". It also states, "that in order to prevent the problem becoming worse, carbon emissions in the UK need to be reduced". Similarly, 'Policy SP1: Supporting sustainable development' states "Sustainable development in the National Park is considered to be that which...is resilient and responsive to the impacts of climate change through improved energy efficiency and making appropriate use of small-scale renewable energy". 'Policy SP14: Renewable energy' limits the provision of renewable energy to small scale schemes, such as individual households or businesses.

<https://www.newforestnpa.gov.uk/planning/local-plan/>

<https://www.newforestnpa.gov.uk/app/uploads/2019/08/SA-Report-for-Adopted-Local-Plan-August-2019.pdf>

The NFNPA Design Code SPD (2021) contains a few references of note. 'Section 9: Resources' states "Well-designed places and buildings conserve natural resources including land, water, energy and materials. Their design should respond to the impact of climate change by being energy efficient and minimising carbon emissions to meet net zero by 2050." The use of renewable energy sources is mentioned repeatedly in Section 6.

<https://www.newforestnpa.gov.uk/planning/design-guide/>

NFDC Local Plan

Direct references to climate change in the NFDC Local Plan Part One (2020) relate mostly to mitigation of flood risk where it states "significant parts of the Plan Area face some level of flood risk".

'Policy CCC1: Safe and healthy communities' states "Development should not result in pollution or hazards which prejudice the health and safety of communities and their environments including air quality and the water environment." 'Policy STR1: Achieving sustainable development' references the need states "All new development will be expected to make a positive social, economic and environmental contribution to community and business life in the Plan Area" but has few policies designed to reduce energy consumption in new

developments. To quote NFDC Executive Head Planning, Regeneration and Economy, Claire Upton-Brown, from 24th April 2021 “Local Plan Part 1 is light on policies towards carbon neutrality”.

https://www.newforest.gov.uk/media/705/Local-Plan-Document-2016-2036/pdf/Local_Plan_2016-2036_Part_One_FINAL.pdf

In the introduction section of the 2020 NFDC ‘Sustainability Appraisal’, it states “A Sustainability Appraisal (SA) is a process through which the sustainability of a plan or programme is assessed during its preparation. It tests the extent to which the plan or programme, when judged against reasonable alternatives, will help to achieve relevant sustainability objectives”. ‘10. Managing Climate Change’ screened out two clauses (“10.2 Encourage energy and resource efficiency and climate change resilience in the siting, construction and adaptability?” and “10.3 Encourage microgeneration and renewable and community-based energy”) stating that “these can only be addressed in site policies and through implementation measures – they are not relevant for strategic site selection.” Greenhouse gas emissions appear to be considered solely in the context of minimising transport-based emissions.

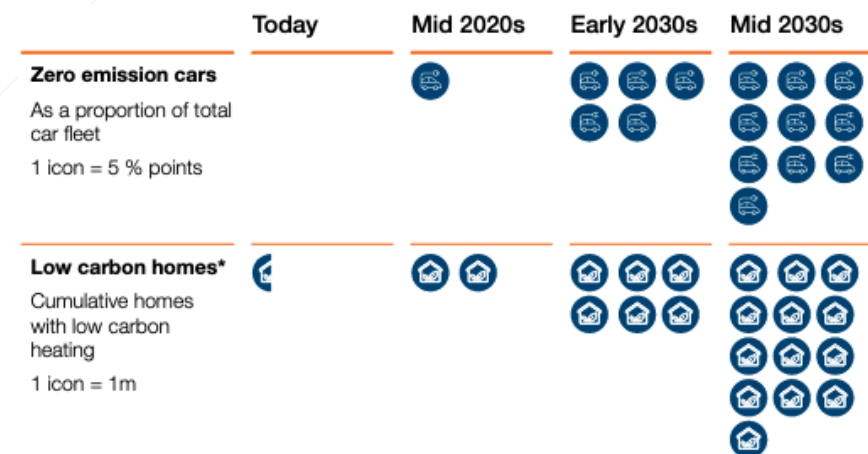
https://www.newforest.gov.uk/media/710/Sustainability-Appraisal-Local-Plan-2016-36/pdf/SUSTAINABILITYAPPRAISAL_REPORT_FINAL_July_2020.pdf

In the NFDC Local Plan Part Two (2014) under ‘Energy and Resource Use’ it states “The Core Strategy aims to minimise the impacts arising from new development on the factors that contribute towards climate change” and mentions ‘CS4: Energy and Resource Use’; ‘CS10: Spatial Strategy’; ‘CS24: Transport considerations’. The following policy is included to guide renewable energy developments to appropriate locations”. That policy is ‘DM4 Renewable and low carbon energy generation’ which states “The benefits associated with development proposals relating to renewable energy schemes will be given significant weight, provided that they avoid unacceptable impacts.

<https://www.newforest.gov.uk/article/1463/Local-Plan-Part-2-Sites-and-Development-Management>

Evidence of policy issues:

National policy is clear. The ‘Net Zero Strategy: Build Back Greener’ report from October 2021 sets the direction of travel: “An ambition that by 2035, no new gas boilers will be sold”, “Social Housing Decarbonisation Scheme and Home Upgrade Grants”, “helping <consumers> make their homes warmer, more efficient”, etc. A specific target is shown in the graphic.



https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1033990/net-zero-strategy-beis.pdf

Energy costs increasing. Average at least doubling, but moving fast. Green mortgages taking energy costs into account.

<https://researchbriefings.files.parliament.uk/documents/CBP-9491/CBP-9491.pdf>

Current review of the NPPF might change things.

Energy performance of local housing stock v. national or regional data – EPC data.

Survey results of energy efficient buildings.

Evidence of transport CO2e locally high

LCWIP results – Beaumont Park dataset

HCC LTP4

“Rail plays a vital role in providing for longer-distance freight transport, commuting, and local journeys within Hampshire”

“There are high levels of car ownership across Hampshire: 45% of households have two or more cars or vans; and only 10% of households do not own a car or van”. UK average 31.6%, South East 40.6%. This and below 2011 census data ***update?

Average households with no car in Hampshire (not including Southampton & Portsmouth) = 10%. New Forest area = 8.9%.

Between 1-2% travel by bus to work in Ringwood urban area.

Between 10-15% walk to work in Ringwood urban area.

Between 7-10% cycle to work in Ringwood urban area.

Between 75-79% drive to work in Ringwood urban area.

“10 times as many jobs in Hampshire are accessible by car as they are by public transport”

“<2% accessible by public transport in south Hampshire”

Increase in numbers of people working from home due to Covid.

“Surface transport accounts for 37% of CO2 emissions in Hampshire. Passenger cars are the main contributor, accounting for approx. 65% of domestic transport emissions in Hampshire”.

<https://documents.hants.gov.uk/transport/HCC-EvidenceBase.pdf>

Evidence of local issues:

Postcode EPC lodgements – 2021

Ringwood Parish area, 2021, number of lodgements by EPC rating and TEC* totals.

EPC	'A'	'B'	'C'	'D'	'E'	'F'	'G'	Total
Number	0	17	91	106	27	9	3	253
Percent	0.0	6.7	36.0	41.9	10.7	3.6	1.2	100
TEC totals	0	2041	18031	28488	8948	4174	2138	58104

Average TEC per 2021 lodgement in **Ringwood Parish = 252.3 kWh/m² pa.**

* Department for Levelling Up, Housing & Communities energy consumption values defined as current estimated total energy consumption (TEC) for the property in a 12 month period (kWh/m²). Displayed on EPC as the current primary energy use per square metre of floor area. Data protected by Data Protection, Data Licence & Copyright and Privacy Policy conditions.

The same database shows New Forest had 3825 lodgements in the same period for existing and new dwellings.

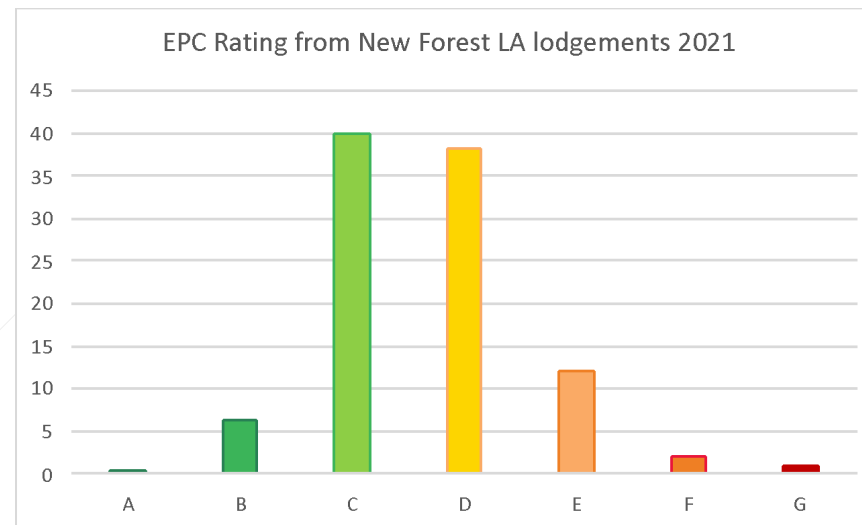
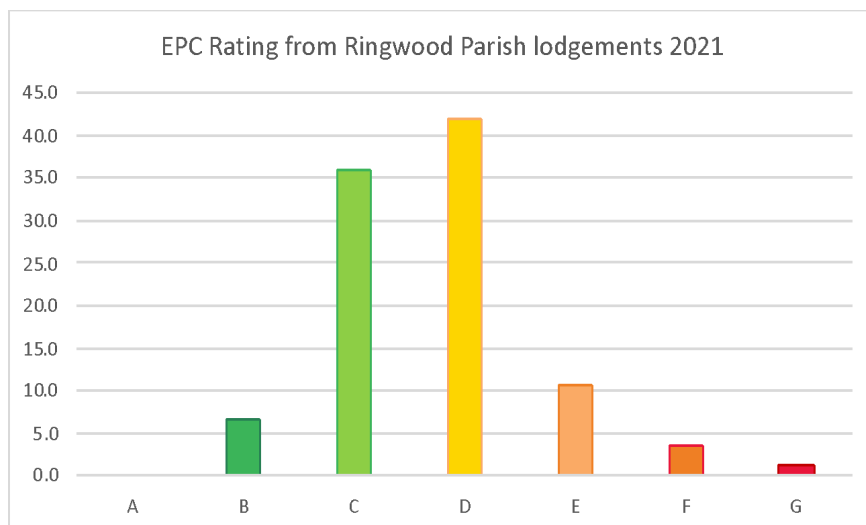
<https://epc.opendatacommunities.org/domestic/search>

Government data from Live tables on Energy Performance of Buildings Certificates

<https://www.gov.uk/government/statistical-data-sets/live-tables-on-energy-performance-of-buildings-certificates#epcs-for-all-domestic-properties-existing-and-new-dwellings>

New Forest Local Authority Area, 2021, number of lodgements by EPC rating

EPC	'A'	'B'	'C'	'D'	'E'	'F'	'G'	Total
Number	15	241	1529	1464	461	79	36	3825
Percent	0.4	6.3	40.0	38.3	12.0	2.1	0.9	100



Local Authority TEC data from 3825 lodgements (2021) gives combined energy consumption of 899825 kWh/m² pa, which corresponds to an average per lodgement for **New Forest LA = 235.2 kWh/m² pa**.

Average energy use per lodgement in 2021 in **Ringwood Parish was ~7% higher than New Forest Local Authority Area**.

The 'energy use excess' (2021 lodgement data) in Ringwood Parish compared to the average across the New Forest is ~17.1 kWh/m² pa.

AECOM Housing Needs Assessment (Jan 2022) indicated that there are 6405 dwellings in Ringwood Parish. Using lodgement data as a proxy for all housing in Ringwood Parish and the figure of 6405 dwellings, then the 'energy use excess' of the parish is around 91000 kWh/m² pa. 'Energy use excess' in this context is the amount of energy currently used above the average for the New Forest.

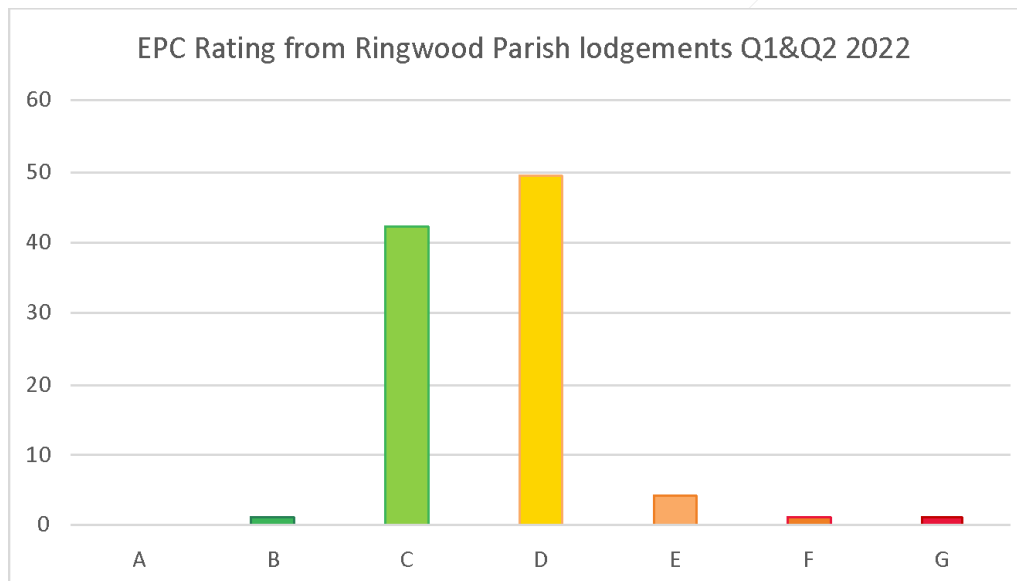
The lodgement data also list property sizes. The average in the New Forest Local Authority Area is 97m². Using this figure with the 'energy use excess' figure of 17.1 kWh/m² pa suggests an average 'energy use excess' per house per year in Ringwood Parish is around 1.66 MW. Across the 6405 dwellings in the parish, the total excess is over 10,600 MW pa.

I think for the NP we can say that the proposed standards in E1.1 would lead to an energy saving of around 35 kWh/m² pa for an average size house (100m²). The 2021 EPC lodgement information provided previously in the Evidence Base suggests the 'energy use excess' in the Ringwood Parish compared to the New Forest Local Authority Area was 14.2 kWh/m² pa. One new house therefore offsets the excess emissions of ~2.5 existing houses, on average and given all the assumptions. According to Natalie Wheeler (RS Energy), a Passivhaus 100m² house would typically have a TEC calculated using SAP12 of less than 50 kWh/m² pa.

Push back arguments

"Yes, but you've cherry picked 2021 data as this shows a big difference. You should have used a different year, like 2022 or 2000 or sometime"

Obviously 2022 data isn't available yet for the full year. The first two quarters of lodgements show the following distribution for Ringwood Parish:



As for 2021, EPC rating 'D' is the highest percentage.

EPCs were not fully introduced until 2008, so data from 2000 are not available.

“Increased energy performance standards will increase costs and make development applications not viable”.

Costs do not necessarily have to be higher. Major developers claim higher costs because they are taking existing designs and adding extras to them to improve energy efficiency. Doing this does add costs. According to Persimmon, 2010 to 2013 Building Regulations additional costs added £640 to an average build. Based on a CPRE study, this didn't affect developer profits too much. According to Peter Truscott (CEO of Crest Nicholson), the build cost of applying 2023 Building Regs will add ~£5k and 2025 Building Regs will add ~£15k. Not much compared to an average property price in Ringwood of £580k.

Using Modern Methods of Construction (MMC), such as Modular Factories, costs can reduce. ZedPods were used by Mid-Devon Council and the cost was around 25% lower than a conventional build. Perhaps as important, the build times are much reduced. According to Mr Truscott, the developer margin is 18-20% of the overall 'cost' of a new build. At a sales price of £580k, that is about £110k. That margin is spread over period of construction, typically 2 or 3 years, so the margin is £37-55k pa. A MMC build is a lot faster, so the margin can be expected to be gained in a single year.

“No major developer has built to a high energy efficiency specification at scale”.

Persimmon has its 600 home Germany Beck site near York for 'net zero' housing, a step towards its 2021 pledge that all “its homes will be net zero-carbon in use by 2030”.

The Crest Nicholson Elmsbrook site started in 2016 and was planned to have higher efficiency standards than applicable building regulations. Around 400 dwellings have been built. The sales price of these is comparable to Ringwood.

Barratt's Hanham Hall development of 186 'zero carbon' new private and affordable homes was reported to cost £20k per dwelling more than a conventional build and was completed in 2015.

Major developers know how to build to higher standards if they wish to or are required to. As stated above, the cost difference between 2010 and 2013 Building Regulations was £640 for an average home. That was sufficient incentive for the major developers to build only around half of their developments to the 2013 standards in 2020 with the rest built to earlier standards due to what many have called loopholes.

Note that Policy E1.1 doesn't require 'zero carbon'.

"The local EPC data are skewed as there is currently a moratorium on new house building due to phosphorus mitigation".

Not relevant – there is still a problem that needs addressing.

Refs:

<https://publications.parliament.uk/pa/cm201719/cmselect/cmbeis/1730/173009.htm#footnote-052>

<https://cprekent.org.uk/planning/laying-the-building-myth-to-rest/>

<https://publications.parliament.uk/pa/cm201719/cmselect/cmbeis/correspondence/Rachel-Reeves-from-Persimmon-19-04-09.pdf>

<https://www.zoopla.co.uk/house-prices/ringwood/> (Aug 2022)

<https://www.bbc.co.uk/sounds/play/m0019kks>

Greencore and ZedPod call reports for RNP.

<https://www.onthemarket.com/details/11417372/>

<https://www.barrattdevelopments.co.uk/showcase/hanham-hall-bristol>

Other Datasets

Ringwood Built Up Area

2016 population 14,487

2016 employment 9,403

<https://nic.org.uk/studies-reports/national-infrastructure-assessment/national-infrastructure-assessment-1/dataset/>