



CLIMATECONSULTING

Luton Borough Council – Sustainable Planning Policy Review

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1 Context and scope of the study

Climate Consulting has been commissioned by Luton Borough Council to carry out a review of its existing Development Management Policies with a view to developing a new set of robust policies for its forthcoming Local Plan (2011-2031). The new Local Plan is to be ‘design-led’ and ‘area-based’, focussing on the city’s district and neighbourhood centres.

Luton Borough Council’s existing Core strategy was adopted in March 2006. It contains Policy ENV9 on ‘Design Principles’ which states that proposals for built development will be granted planning permission provided that they ‘utilise passive energy sources and minimise energy and water consumption’. Other relevant policies include:

1. Policy U3 – renewable energy generation in new buildings
2. Policy ENV14 – the water environment

This study includes a high level review of existing evidence bases and forthcoming national policy and regulation. Four ‘design-focussed’ policies are proposed and organised under four sustainable priorities:

1. Energy/carbon reduction for new development
2. Sustainable development for new development
3. Decentralised energy for new development
4. Sustainable urban drainage and flood risk

2 National policy and regulations

All planning applications must consider and adhere to relevant regulations and polices, as well as other material considerations, relating to sustainable development. This report covers the two relevant tiers of policy and regulation:

- National:
 - The National Planning Policy Framework
 - Building Regulations Part L
 - Sustainability Standards – BREEAM and the Code for Sustainable Homes
- Local:
 - Local Plans
 - Neighbourhood Plans

Appendix A contains a brief summarising the most relevant energy and sustainability legislation and standards in the UK.

3 Existing evidence bases

The Council has commissioned Climate Consulting to review its relevant evidence bases and assess their value as sources of information for design-focussed, area-based development management policies. Until this work is carried out at the scale of Luton’s urban district and neighbourhood centres, there is a limit to the value of existing evidence bases to inform and justify innovative area-based development management policies.

3.1 Sustainable Development and Adaptation and Mitigation of Climate Change Study by Parsons Brinckerhoff

The report considers the energy hierarchy that prioritises energy efficiency, followed decentralised energy over on-site renewable energy generation and explores all the main low/zero carbon technology and energy sources, including waste. For each technology, the report:

- evaluates whole-life cost effectiveness comparing capital cost with financial and carbon savings; however, the datasets are far from clear, lacking clear units;
- audits existing residential and non residential properties and makes projections on the developments expected to be constructed by 2031;
- investigates to what extent applying energy efficiency to new buildings could contribute to achieving Code for Sustainable Homes and BREEAM carbon targets;
- considering major developments in ‘growth areas’, it examines the potential for deploying low/zero carbon technologies across admin areas, identifying scale and location of installations within growth areas; and
- studies the advantages and disadvantages of a carbon offset fund, when targets cannot be met on-site.

The report recommends sustainable policies on the basis of the above evidence, recommending specific policy targets and justifying them by outlining the implications of their implementation and delivery in Luton. Considering, however, that the evidence base was geared towards informing the regulation of the outward expansion of Luton’s urban fringes, the Council has asked Climate Consulting to recommend policies which focus on improving its urban interior, namely its district centres and neighbourhood centres instead. Thus, the recommendations in the evidence base are, largely, no longer relevant and will not be summarised in any detail.

3.2 Solar imaging and thermal imaging data

Luton Borough Council has datasets on the potential for solar renewable energy installations (https://apps.luton.gov.uk/Map_line/Mapform.aspx?T=SOL) and heat demand based on thermal imaging surveys (https://apps.luton.gov.uk/Map_line/Mapform.aspx?T=SOL). Both sets of data are publically available as on-line map tools. The data for both tools cannot be viewed at a scale above around 1:1250. Consequently, whilst the tools contain valuable datasets on local solar renewable resource and heat demand/capacity, the lack of facility to access this data at appropriate and useable scales for planning policy limit its potential as a practical tool for constructing area-based policies or indeed prioritising and piloting local carbon reduction schemes in areas where it will have the greatest sustainable impact.

Despite the tools' limited facility to analyse the potential of district and neighbourhood centres for decentralised and renewable energy installations, it would be straightforward to locate a proposed development and assess its basic potential (e.g. for solar installations). There is, therefore, scope for the Borough's development management team to utilise the tools to help enforce/justify adopted development management policies that encourage decentralised and renewable energy.

4 Luton Local Plan 2001-2011

Luton Borough Council's existing Local Plan was adopted in March 2006. It contains Policy ENV9 on 'Design Principles' which states that proposals for built development will be granted planning permission provided that they 'utilise passive energy sources and minimise energy and water consumption'. The policy does not attempt signpost developers to the mandatory minima in Part L of the Building Regulations 2010 (see Appendix A), nor does it attempt to go beyond them. Moreover, it provides little guidance as to how developers seeking planning permission might demonstrate compliance at the pre-application stage, when seeking planning permission and at the detailed design stage.

Policy U3 on *renewable energy generation in new buildings* states "all proposals for new buildings totalling 1,000 square metres floorspace or more will be required to incorporate renewable power generation equipment to provide at least 10% of the predicted energy requirements for those buildings, unless it can be demonstrated that there are overwhelming practical reasons why this is not appropriate".

Policy ENV14 on *the water environment* states "planning permission will not be granted for development that:

- a) would result in increased flood risk either on-site or elsewhere; or
- b) does not incorporate appropriate water conservation measures; or
- c) would pose an unacceptable risk of pollution to groundwater or surface water; or
- d) would have an adverse impact upon the ecology of the River Lea or its tributaries or their banks or corridors; or

- e) fails to facilitate the opening up of culverts and the removal of concrete channels along the River Lea or its tributaries, except where the scale of the scheme does not make this feasible.

5 Luton Local Plan 2011-2031 Development Management Policies

5.1 Carbon reduction and sustainable energy policy

The policies used by Local Planning Authorities to promote energy efficiency, carbon dioxide reduction and climate change mitigation in new developments can be broadly divided into the following categories:

1. A ‘Merton Rule’ policy that secures on-site renewable energy production in ‘major’ developments. Such policies are target-based requiring a set reduction in CO₂ using on-site renewable energy technologies.
2. A target-based CO₂ reduction policy, with specific submission requirements. Targets can be measured against a variety of baselines, including the Building Regulations, and can be achieved through passive and active energy efficiency measures, as well as from decentralised and renewable energy sources.
3. A process-based CO₂ reduction policy designed to promote a preferred energy hierarchy of measures. In the interests of maximising carbon reduction cost effectively, passive and active energy efficiency measures are prioritised, followed by decentralised energy and, finally, renewable energy measures.

In Luton’s existing Core Strategy, Policy U3 on *renewable energy generation in new buildings* makes use of the “Merton Rule”.

“all proposals for new buildings totalling 1,000 square metres floor space or more will be required to incorporate renewable power generation equipment to provide at least 10% of the predicted energy requirements for those buildings, unless it can be demonstrated that there are overwhelming practical reasons why this is not appropriate”

The above policy does not promote the bigger picture of early holistic building design, nor does it promote measures that reduce the most carbon cost effectively. If the Council were to recycle the Policy U3 in their new Local Plan, Luton would run the risk of encouraging energy strategies which inhibit the viability of more appropriate and effective low carbon servicing strategies at the detailed design and construction phases¹.

In the London Plan² (2011), for example, active energy efficiency measures that reduce energy demand are prioritised over the more expensive low/zero carbon energy generation measures. Based on the fact that the mandatory minimums set out in Part L of the Building

¹ The National Planning Policy Framework now expects new developments to consider landform, layout, building orientation, massing and landscaping to minimise energy consumption, effectively eliminating bad design/planning as an excuse for not meeting regional and local planning policy.

² <http://www.london.gov.uk/sites/default/files/LP2011%20Chapter%205.pdf>

Regulations are set to change in 2013 (see Appendix A) and ‘zero carbon’ buildings will be required by 2016, Climate Consulting recommend a pragmatic process-based policy that:

- provides developers with the necessary information to comply with the policy, i.e. the materials and evidence that will be required before and after determination
- emulates best practice emphasising the directive to maximise passive and active energy efficiency measures to reduce demand first before considering low/zero carbon energy generation on-site

A suggested policy is presented below:

“All new development must comply with the version of Building Regulations Part L in place at the time of application (until such time as zero carbon standards are required under Part L), the principles of good design promoted by the Energy Hierarchy in order of priority, i.e. a combination of:

- Passive design principles (e.g. layout and orientation) that minimise energy demand through maximising natural light, solar gain and natural ventilation;
- Energy efficiency measures (e.g. insulation, air tightness and efficient building services), where practical improving on the minimum standards specified in the Building Regulations;
- Decentralised energy generation (e.g. connection to an existing or planned heat and/or power network. If such a network does not exist or is not planned investigation into developing a network on site should be undertaken) where it is viable and can be demonstrated to contribute positively to the overall carbon dioxide reduction strategy; and
- On-site renewable and other low carbon energy generation

All new developments of 10 or more dwellings, or in excess of 1000 sq. m. in the case of other development, are required, and minor developments are strongly encouraged, to submit an energy statement that:

- evidences ‘carbon compliance’ through preliminary calculations under the Standard Assessment Procedure and National Calculation Method or such methodologies as replace these, unless it can be demonstrated to the satisfaction of the Local Planning Authority that a more appropriate methodology should be used; and
- investigates the technical feasibility, financial viability and CO₂ saving potential of all measures available.

Conditions will be attached to planning permissions requiring submission that prove that the development has been built according to the approved energy statement.

Luton Borough Council’s development management policies can contribute more than carbon reduction towards sustainable development, climate change mitigation and adaptation. With a presumption in favour of sustainable development being at the heart of the National Planning Policy Framework, Luton should highlight the importance of the broader concepts of sustainability by encouraging developers and authorities to go beyond the mandatory minima in the building regulations. See section 5.3.

5.2 Community energy funds

As the Building Regulations become increasingly onerous on the road to ‘zero carbon’, achieving ‘carbon compliance’, i.e. the CO₂ reductions required on-site, will become both technically and financially harder to achieve and off-site alternatives will be

required more often. ‘Community Energy Funds’ or CEFs are one alternative named by Central Government as an Allowable Solution to meeting the Part L requirement for ‘zero carbon’ dwellings (2016) and buildings (2019) off-site providing mandatory on-site reductions (still being defined) are met. Monies accrued locally can be pooled for local investments in carbon saving/offsetting projects. The model already works in many local authorities in the form of ‘Carbon Offset Funds’. Set-up on the strength of local planning policy, many local authorities – Ashford, Milton Keynes, Brighton and Hove, Brent and Barking and Dagenham to name just a few – have similar carbon offset mechanisms in place for development proposals that cannot meet carbon reduction requirements in their existing planning policies, policies which require CO₂ reductions beyond the mandatory maxima in Building Regulation Part L. Accrued funds are invested in local carbon saving/offsetting projects.

Building Regulations Part L will demand greater CO₂ savings from 2013 and target ‘zero carbon’ in 2016. Therefore, Climate Consulting recommends that Luton Borough Council adopt a carbon reduction policy that does not require targeted reductions in CO₂ beyond those required in the Building Regulations Part L. If this approach is adopted, there would be no requirement for a ‘Carbon Offset Fund’ prior to 2016, as developments not meeting the Building Regulations simply won’t be permitted. Following the adoption of the zero carbon requirement under Part L 2016, however, a CEF could present a legitimate route for developments to comply with Building Regulations.

Establishing a CEF has many benefits, it will:

- ensure investments in ‘allowable solutions’ will be retained within the local economy;
- help local authorities take strategic oversight over projects that would otherwise not go ahead, helping to de-risk projects and leverage additional investment; and
- offer opportunity for neighbouring local authorities to fulfil a mutual ‘Duty to Cooperate’ on strategic priorities like climate change and sustainable energy.

Administering a CEF comes with a responsibility to find and deliver the most valuable and appropriate win-win projects which:

- maximise carbon reduction;
- identify short-term impacts and risks to local residents, flora and fauna as well as opportunities for improvements;
- integrate long-term climate change adaptation and mitigation measures; and
- foster good governance through regional cooperation.

In order to establish a working CEF mechanism Luton Borough Council will need to:

- formulate a working framework
- establish a realistic carbon pricing mechanism to determine developer payments based on a cost review of off-site carbon reduction measures that have already been successfully implemented in the Borough
- identify the scope and scale of carbon reduction schemes to be funded
- utilise existing evidence bases and resources to inform and justify a fund

Moreover, Luton Borough Council needs to follow developments on the CLG’s ongoing development of a workable ‘allowable solutions’ framework

For a CEF to function, Luton Borough Council must acknowledge it in their Local Plan as an ‘allowable solution’ to the national zero carbon requirement, with wording on how developers must make financial contributions, either to a local or national fund and a list of renewable and low carbon energy projects to be promoted.

The concept of community energy funds as an Allowable Solution is still evolving and is yet to be crystallised and clarified in national guidance. Indeed, it is unlikely that local authorities will have all the details prior to publishing a Local Plan. It may, therefore, be necessary to refer to a forthcoming Supplementary Planning Document (SPD) that will contain details of the CEF, alongside details of the local authorities Community infrastructure Levy and Section 106 procedures. Details might include a detailed structure for governance, funding and delivery.

Luton Borough Council may not have the resources and expertise to manage the fund exclusively in-house. Consultations with the Local Strategic Partnership (LSP) as well as other organisations such as Local Enterprise Partnerships (LEPs), Arms Length Management Organisations (ALMOs) and Community Interest Companies (CICs) would help to develop and assess the business case for productive partnerships.

The cost of administering a fund will vary significantly depending on its size, scale and the nature of the low-carbon projects. For example, if the Council was to invest in energy efficiency measures in public buildings and social housing, existing channels and resources could be used to distribute funds, whereas more ambitious, area-based renewable projects will require rigorous feasibility studies, planning applications and considerable communication and coordination with external stakeholders and other local authority departments – all of which raise the cost of carbon and cost Council time and resources.

One workable model might be for the Council to utilise its existing environmental sustainability and energy efficiency team(s) to manage the funding, marketing, delivery, monitoring and reporting of carbon saving projects, leaving the retrofitting work to an external installer.

There are three working carbon offset models that could potentially work in the Borough of Luton as a CEF model come 2016. The three models are arranged in order of the amount of planning and work required setting them up.

1. Developers could pay into a CEF used by Luton to invest in strategic projects that meet national and local criteria but are delivered and reported by developers.
2. Developers could choose to deliver schemes from an agreed list published by Luton. Chosen schemes could be secured by condition and evidenced through clear and independently verified reporting. For example, developers offset directly to a partner social housing provider through, for example, rent-a-roof schemes.

3. Luton could invite developers to propose schemes eligible for CEF funds, encouraging innovation.

Based on the above, Climate Consulting recommends the following policy for Luton Borough Council. The policy remains sufficiently flexible so that off-site solutions may be administered through a range of mechanisms such as a Special Purpose ‘allowable solution’ Vehicle. It could either be incorporated into the sustainable energy policy proposed in Section 5.1 or could function as a standalone policy.

“Where it can be demonstrated to the satisfaction of the Local Planning Authority that achieving ‘zero carbon’ standards when required, is technically and/or financially unfeasible on-site, any shortfall will be required to be achieved and approved by the local planning authority off-site, either through:

- additional investments in local carbon reducing retrofitting schemes in the Borough; and/or
- a financial contribution to a Borough ‘community energy fund’ to be ring-fenced for investment in to local strategic carbon reduction schemes, the procedural details of which are to be published in an appropriate evidence base or supplementary planning document in preparation for a local ‘allowable solutions’ mechanism for ‘zero carbon’ requirements under the building regulations.

Conditions will be attached to planning permissions requiring submission of as-built Building Control Compliance documentation showing the carbon savings associated with offsite measures over the commercial lifetime of the installation.”

5.3 Sustainability standard policy

“Sustainability standards, such as the Code for Sustainable Homes and BREEAM, provide an effective way of linking the energy requirements already discussed to a wider range of measures relating to resource efficiency, reducing pollution, conserving biodiversity and adapting to climate change.” Sustainability standards are also an effective way for developers and local authorities to communicate sustainable design and construction achievements and requirements, respectively. Indeed, some developers will elect to exceed national and local standards in a bid to stand out and pre-empt increasingly more stringent targets.

Incorporating sustainability standards in planning policy requirements is a simple and effective way for local planning authorities to secure an overall breadth of sustainability in new development. Proof can be requested at various stages of the planning process to guarantee that a certain standard will, is being or has been achieved. Pre-assessment reports (generally secured at the application stage), interim certificates and post-construction certificates (generally secured through planning conditions) offer planners, developers and tenants external and objective verification of a property’s low-carbon/sustainable credentials and aspirations. Climate Consulting proposes the following policy for Luton Borough Council:

“All proposals for new residential development will be required to meet the following full Code for Sustainable Homes standards or an equivalent standard where appropriate. These requirements will not come into effect until successive updates to Part L of the Building Regulations become mandatory:

- at least Code level 3 is currently required.
- at least Code level 4 will be required for all new homes once updates to Part L come into effect, (currently scheduled for 2013).

All new non-residential developments over 1000 square metres will be required to achieve the BREEAM “Very Good” standard or equivalent until 2013 when developments will be required to meet BREEAM “Excellent” standard or equivalent. New non-residential developments below this threshold will also be encouraged to meet this standard.

The submission of Code for Sustainable Homes or BREEAM pre-assessment reports, (as appropriate), will be required to demonstrate compliance. Conditions will be attached to planning permissions requiring submission of final Code certificates and post construction BREEAM certificates (as appropriate), and such conditions will not be discharged until compliance has been satisfactorily demonstrated.”

There is scope for the above policy to be amended to include area-based requirements for specific districts or neighbourhoods. Within these areas, Luton Borough Council might request a specific number of percentage points within specific categories – flood risk, ecology, air quality etc. - of BREEAM and the Code for Sustainable Homes. Work will be required to determine which areas and categories might benefit from higher sustainability standards.

5.4 Decentralised energy policy

Decentralised energy requirements could be part of a general sustainable energy policy, or, alternatively, Luton Borough Council may wish to adopt a separate, more detailed policy tailored to “decentralised energy opportunity areas” i.e. areas that have been identified (by mapping energy demand, profile and density) as suitable for the establishment of a district heating network. Below is an example of a “process-based policy” that could be adopted in decentralised energy opportunity areas.

Decentralised energy networks take time to plan, develop and construct. Target-based decentralised energy policies that require the use of CHP and higher carbon reductions can be very difficult to justify or enforce in opportunity areas where operational decentralised energy networks are yet to be constructed. In the absence of a network, developers would have to implement technically and financially onerous, and potentially impractical, renewable energy strategies to achieve the required carbon reductions without the benefits of carbon savings associated with decentralised energy networks.

It is required that new development in a decentralised energy opportunity area should, unless it can be demonstrated to the satisfaction of the Local Planning Authority that it would be unfeasible or unviable, contribute to the establishment of a strategic decentralised energy network(s) in suitable locations according to the following protocol:

1. Developments should connect up to any available decentralised energy network.
2. Where a network does not (yet) exist, developments should consider installing a network to serve the site. The network should connect to or be compatible with connection to an area-wide network at a future date.
3. Where a network does not (yet) exist, and establishing an on-site network has been demonstrated to be unfeasible or unviable, applicants should demonstrate that the development's energy strategy is compatible with connection to a future network.

The following general principles also apply to all development.

4. Development of all sizes should seek to make use of available heat, biomass and waste heat.
5. New development should be designed to maximise the opportunities to accommodate a decentralised energy solution, considering density, mix of use, layout and phasing.

On the ground it makes more sense to communicate to the developer a suitable 'process' that would require them to ensure their development is compatible with connection to a heat network in future and allow them to model the development connected to a district energy network, calculate the carbon reductions achieved as a result of the connection, accurately estimate the shortfall that would have to be met through installing on-site renewables and then implement the energy strategy minus the network connection under the condition that, once available, the development can be connected at the developer's expense. In the interim, standard efficient gas boilers could be used to supply heat to the development.

5.5 Monitoring

Once sustainable energy standards are established within local policy, enforcement of these standards will be necessary to achieving long-term success. Monitoring the relevant policy outcomes can help determine whether policy is driving change as predicted, and at what rate.

To determine whether Boroughs are meeting their climate change policy targets, there is a real need to put effective monitoring processes in place. This is particularly true when determining whether new developments meet the planning requirements for sustainability. Monitoring can refer to one of two rather different processes:

- **Collation of figures predicted by developers:** Monitoring energy assessments at the planning stage can identify the number and proportion of approved schemes that aim to achieve sustainability ratings, and the intended measures to be employed in reaching those standards. Facts and figures are usually collected through a Council's applications recording system or recorded separately by Development management officers. As the predicted energy use of a development is unlikely to be accurate at

the planning stage, a discrepancy will inevitably occur between the predicted CO₂ offsets and those achieved in practice on the ground.

- **Measuring outcomes on the ground:** There are commonly few mechanisms in place to monitor whether or not policy targets for CO₂ emissions reduction are being met on the ground. Two methods are explored in this section:
 - Attaching post-construction conditions to planning permissions requiring the submission of as-built Building Control Compliance documentation showing the Target Emission Rate (TER) and Dwelling Emission Rate (DER) / Building Emission Rate (BER), or such other metrics as replace these and post-construction certificates for achieved sustainability standards under the Code for Sustainable Homes and BREEAM.
 - Putting in processes that actively and remotely monitor ongoing energy generation from low/zero carbon energy generation technologies throughout the installation's lifetime.

On the ground, monitoring energy generation from renewable energy technologies is easier than accurately accounting for the annual carbon savings associated with measures that reduce demand on-site. Mainly, this is for two reasons:

- Generation (electricity and heat) meters are fitted to most renewable installations eligible for the Feed-in Tariff (FiT) and Renewable Heat Incentive (RHI).
- A building's total carbon footprint is influenced by building design and building users. Both are intrinsically linked, meaning that measures that reduce energy demand cannot be clearly audited and accounted for, especially where there is no energy data history through which to track energy consumption changes.

There are very few techniques available to accomplish this and (generally) extremely limited resources. Building up an accurate picture of microgeneration in the Borough is further complicated by the fact that in many cases renewable energy installations can be installed as Permitted Development without Council notification. Moreover, there are logistical difficulties with remote monitoring. Each technology must be fitted with a generation meter with a SIM card or broadband connection registered with the system owner, i.e. the institution or individual benefitting from the FiT or RHI. In order to obtain the generation data remotely Luton Borough Council would have to either:

1. Obtain login details for remote access to generation data from registered system owner.
2. Request the data be sent for Council review, manually inputting the data into a Council monitoring spreadsheet.
3. Establish a monitoring requirement in which it is mandatory for low and zero carbon energy technologies to be fitted with Council access.

With no established best practice technique for monitoring on the ground there is significant variation in the level of monitoring undertaken by different local authorities. Most have no

formal data monitoring system, electing to use informal networks developed by development management and building control officers.

Luton should seek to establish a suitable sustainability and renewable energy monitoring system that is:

- Simple to use and understand.
- Accurate.
- Reliable.
- Not time consuming for Council Officers:
 - Should fit in with existing Council practice, minimising extra workload or the need for additional training
 - A renewable energy monitoring system would ideally be remote and automated, so that site visits are unnecessary and minimal disruption occurs to technology owners or site occupants
- Responsibility for the process should fall to a relevant Council Department:
 - Development Control officers would likely be responsible for processing any data collected from planning applications
 - The Energy or Sustainability Manager may be responsible for monitoring renewable energy installations. Additionally, responsibility may also be held by Development Control officers in following up conditions of planning agreements for new build developments achieving emissions reductions through renewable energy technology installations
- Data collected should be suitable for analysis via a range of criteria, to allow ease of use in reporting.
- Available to multiple users.

An alternative to using internal informal monitoring procedure would be to use an external scheme. There are few schemes currently available to local authorities to monitor renewable energy use on the ground. The Building Birth Certificates (BBC) scheme has been established by Adrian Hewitt of Metropolis Green. The aim of the BBC scheme is to create a GIS database that will allow Councils and Planning Authorities to remotely monitor the performance of renewable energy installations in their Boroughs, which is useful for:

- Allowing Councils to compare developments' renewable energy offsets against those proposed in planning submissions, and therefore to determine whether developments are meeting renewable energy targets.
- Forming the basis for setting a local carbon price, with a view to establishing a Community Energy Fund.
- Monitoring installed renewable energy capacity in a Borough, and thus gain information for AMR indicators.

The BBC programme is designed to be simple to use and understand. The steps in the process are as follows:

1. The developer registers the site and proposed technology on the website.
 - This asks for basic details: contacts; site postcode; predicted heat and electricity consumption; predicted renewable energy generation.
2. The site and its details are then logged onto the central server, which is held by the BBC developer, Energence Ltd. Details of this record are passed to the Council.
3. When the technology is installed on site, a specialised datalogger (monitoring device) is installed in conjunction.
 - The developer pays the cost of installation, typically about £500³
 - Dataloggers may also be retrofitted to technology installations, however this is more expensive
4. The datalogger uses an internet connection to transmit real-time information back to the central server.
5. Information is gathered on renewable energy generation and site energy consumption throughout the year.
 - This allows comparisons to be made between the predicted and actual generation capacity, and the percentage emissions or energy offset achieved through renewable energy.
6. The information can be read via the webpage. This is password protected, so that Council officers can gain access to the relevant site information.
7. The website will demonstrate which installations or developments are meeting the relevant target. This will be provided as percentages of target met, and more detailed information, including generation capacity at given time intervals, can also be shown.
 - Collection or monitoring of data in annual intervals could directly contribute to the writing of Annual Monitoring Reports.

Council subscription fees to the BBC scheme are estimated at £10,000 per year. These may be recouped through charging the developers through a section 106 agreement.

The London Borough of Merton was the first Council to join the scheme, followed by Oxford and Barking and Dagenham and another six London Boroughs. The scheme is still relatively new with limited feedback on the how well it is working in practice and in particular how well (and indeed how) the installation of the dataloggers is being enforced. Luton should note that there is no clear evidence that the benefits of the system would justify its considerable expense.

³ Based on updated figure provided by Adrian Hewitt in April 2009

5.6 Sustainable urban drainage policy

Capita have suggested that Luton Borough Council adopt the following ‘surface water drainage’ policies to reduce the risk from surface water flooding throughout the whole borough:

1. All developments across the catchment (excluding minor house extensions less than 250m²) which relate to a net increase in impermeable area are to include at least one 'at source' SUDS measure (e.g. water butt, rainwater harvesting tank, bioretention planter box etc). This is to assist in reducing the peak volume of runoff discharging from developments.
2. Proposed ‘brownfield’ redevelopments of more than one property or area greater than 0.1 hectare are required to reduce post- development runoff rates for events up to and including the 1 in 100 year return period event with an allowance for climate change (in line with PPS25 and UKCIP guidance) to 50% of the existing site conditions. If this results in a discharge rate lower than the Greenfield conditions it is recommended that the Greenfield rate (calculated in accordance with IoH124) are used.
3. Developments located in Critical Drainage Areas (CDAs) and for redevelopments of more than one property or area greater than 0.1 hectare are required to reduce runoff to that of a predevelopment Greenfield runoff rate (calculated in accordance with IoH124). It is recommended that a SUDS treatment train is utilised to assist in this reduction.

In addition, other policies were recommended:

- a) to manage the pollutant loads generated from proposed development applications were re:
- b) relating to site based flood risk assessments for surface water that is similar to the current practice of the EA for fluvial flood risk.

Area based policies are recommended to address the non-point source flooding occurring in specific areas in the Borough. These policies focus on areas ripe for redevelopment and the urban/rural fringes of the Borough.

Capita's recommendations seem to be sound, however, Climate Consulting recommend that Luton Borough Council investigate the practical implications of adopting the recommended policies in an attempt to establish how onerous they are likely to be on developers. Any synergies with the SUDs and flood risk categories sustainability standards such as the Code for Sustainable Homes and BREEAM should be investigated in the interests of consistency and clarity with other development management policies. Area-based surface water drainage policies, for example, could require higher levels of the Code for Sustainable Homes, specifically under issues Wat1, Wat2, Sur1 and Sur2 and BREEAM, specifically under issues Wat1, Wat2, Wat3, Wat4 and Pol3.

Appendix A – Planning Policy and Regulation

National Planning Policy Framework

All UK local authorities' policies ("Local Plans") have to be in conformity with the NPPF. The provision of energy (including heat) and climate change mitigation and adaptation have been deemed strategic priorities for local authorities.

The framework emphasizes the need for planning authorities and statutory planning consultees to be positive and proactive, finding solutions rather than problems and outwardly engaging the public to consult relevant stakeholders before submitting a full planning application. Delays must be avoided wherever possible.

Paragraph 192. *...To avoid delay, applicants should discuss what information is needed with the local planning authority and expert bodies as early as possible.*

Paragraph 193. *Local planning authorities should publish a list of their information requirements for applications, which should be proportionate to the nature and scale of the development proposals and reviewed on a frequent basis.*

NPPF and Sustainable Development

At its heart is a 'presumption in favour of sustainable development' which requires development control officers to approve compliant applications without delay. Applications must be deemed compliant if in accordance with development plans or development plans are absent, silent or out-of-date. Developments may only be refused if their adverse impacts significantly and demonstrably outweigh the benefits. In fact, **Paragraph 152** states that local authorities should seek net gains in all three pillars of sustainable development – economic, social and environmental.

Paragraph 152. *Local planning authorities should seek opportunities to achieve each of the economic, social and environmental dimensions of sustainable development, and net gains across all three.*

NPPF and Design

Innovative design promoting high levels of sustainability should not be refused on the grounds of incompatibility with existing 'scapes'.

Paragraph 63. *In determining application, great weight should be given to outstanding or innovative designs which help raise the standard of design more generally in the area.*

Paragraph 65. *Local planning authorities should not refuse planning permission for buildings or infrastructure which promote high levels of sustainability because of concerns about incompatibility with an existing townscape, if those concerns have been mitigated by good design (unless...relates to a designated heritage asset and the impact would cause material harm...not outweighed by...economic, social and environmental benefits).*

All too often, the bigger picture of holistic building design (use less energy) is not applied at the inception of a building design. This leads to restrictions in later stages, which prevent low carbon servicing strategies from being viable. It is now expected that new developments will consider landform, layout, building orientation, massing and landscaping to minimise energy consumption, effectively eliminating bad design/planning as an excuse for not meeting regional and local planning policy. Such an approach is consistent with Luton Borough Council’s ‘design-led’ approach and its development management policies should reflect this.

Paragraph 96. *In determining planning applications local planning authorities should expect new development to...take account of landform, layout, building orientation, massing and landscaping to minimise energy consumption.*

NPPF and Climate Change

Paragraph 94 states that local planning authorities should adopt proactive strategies to mitigate and adapt to climate change. As a strategic priority local authorities are compelled to work together to identify synergies and partnerships for change. Areas in which local planning authorities might collaborate include those outlined in **Paragraph 97**:

- consider identifying suitable areas for renewable energy sources and supporting infrastructure
- identify where development can draw its energy supply from decentralised, renewable or low carbon energy supply systems and for co-locating potential heat customers and suppliers.

Paragraph 99. *New developments should be planned to avoid increased vulnerability to the range of impacts arising from climate change...care must be taken to ensure that risks can be managed through suitable adaptation measures, including the through the planning of green infrastructure.*

Building Regulations Part L 2013: between now and 2016

The Building Regulations set standards for design and construction which apply to most new buildings and many alterations to existing buildings in England and Wales. They include mandatory minimum requirements for many issues including fire safety, drainage and ventilation. Part L (2010) is of particular relevance because it deals with the conservation of fuel and power.

- Part L1a outlines the regulations for new dwellings
- Part L1b outlines the regulations for existing dwellings
- Part L2a outlines the regulations for new buildings other than dwellings
- Part L2b outlines the regulations for existing buildings other than dwellings

Each Part L has detailed minimum requirements related to building materials, on-site energy use and generation, all of which influence energy efficiency and CO₂ emissions. As well as regulating buildings today, Part L is used to set out a road map for future CO₂ reductions.

The current Part L (adopted October 2010) requires that CO₂ emissions of new developments (called the Dwelling Emissions Rate (DER) for dwellings, or Building Emissions Rate (BER) for non-residential) should be lower than or equal to the Target Emissions Rate (TER) which is calculated specifically for individual buildings using nationally-approved software SAP or NCM⁴. Forthcoming revisions to Part L, set out by the Department for Communities and Local Government, will feature increasingly stringent limits on the CO₂ emissions of new buildings. The revisions are summarised below:

- 2013: TER to be 25% lower than 2010 levels (corresponding to the energy requirements of Level 4 of the Code for Sustainable Homes).
- 2016: All new homes to be 'Zero Carbon', a concept which is still in the process of being defined by central government (corresponding to the energy requirements of Level 6 of the Code for Sustainable Homes).

The Government has commissioned a consultation on changes to Part L. The core of the consultation concerns the nuts and bolts of the interim CO₂ target needed for new dwellings in 2013 to ease the passage towards zero carbon dwellings in 2016.

Another feature of the consultation is the emphasis placed on existing buildings, and the potential to use applications for extensions and conversions as a trigger to enforce higher standard of energy efficiency in existing buildings.

The consultation covers all aspects of the proposals for a 2013 update to Part L, the part of the Building Regulations that deals with energy and CO₂ emissions. The biggest issue at stake is the interim CO₂ target needed to ease the passage towards zero carbon in 2016, but another key feature is the emphasis placed on existing buildings, and the potential to use applications for extensions and conversions as a trigger to enforce higher standard of energy efficiency in existing buildings. Recent announcements suggest that the proposals for extensions are unlikely to go ahead, nevertheless both elements are of critical importance to planners:

⁴ The Standard Assessment Procedure (SAP) is the government-approved methodology for modelling energy performance of residential units while the National Calculation Method (NCM) is the equivalent procedure for non-residential developments and can be applied using tools such as the Simplified Building Energy Model (SBEM).

- **Interim CO₂ target** – tougher Building Regulations targets call for solutions that impinge on areas formerly the preserve of planning (e.g. building design, layout and appearance) and that need to be addressed at an earlier stage.
- **Energy efficiency in extensions** – householder applications form a significant chunk of many planners’ workloads, and the planners will typically be the first point of contact for the applicant so it is essential that any energy efficiency requirements are taken on board at this early stage. Moreover, certain energy efficiency measures may require planning permission themselves.

Given the uncertainty around the carbon targets tied to the building regulations, Luton’s development management policies should be suitably flexible to be adhere to future amendments and changes on the road to ‘zero carbon’ developments.

Sustainability Standards

It is important that appropriate synergies are sought between measures relating to energy and CO₂ in the energy statements and the broader sustainability measures detailed in planning applications. These synergies are most commonly sought through sustainability standards. Sustainability standards are an effective way for developers to communicate achievements in sustainable design and construction. Indeed, some developers will elect to exceed national and local standards in a bid to stand out and pre-empt increasingly more stringent targets.

Incorporating sustainability standards in planning policy requirements is a simple and effective way for local planning authorities to secure an overall breadth of sustainability in new development. Proof can be requested at various stages of the planning process to guarantee that a certain standard will, is being or has been achieved. Pre-assessment reports (generally secured at the application stage), interim certificates and post-construction certificates (generally secured through planning conditions) offer planners, developers and tenants external and objective verification of a property’s low-carbon/sustainable credentials and aspirations. Moreover, standards highlight the importance of the broader concepts of sustainability and encourage developers and authorities to go beyond the mandatory minima in the building regulations.

BREEAM

There is no mandatory energy requirement at lower levels of BREEAM (Pass, Good and Very Good) but BREEAM ‘Excellent’ and ‘Outstanding’ set requirements based on the development’s Energy Performance Ratio which is calculated on the basis of operational energy demand and CO₂ emissions.

BREEAM	
Rating	Minimum percentage improvement in DER over TER
Pass	0% (compliance with Part L 2010 required)
Good	0% (compliance with Part L 2010 required)
Very Good	0% (compliance with Part L 2010 required)
Excellent	-25% of regulated emissions (Part L 2013)

Outstanding	-40% of regulated emissions
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Code for Sustainable Homes

The mandatory energy standard (called Ene1) of CSH relates directly to the TER set out in Part L. The Ene1 requirement for CSH (2010) Levels 1 to 3 is simply that the DER is no greater than the 2010 TER (i.e. Part L compliance), while for higher CSH levels, a percentage reduction is required, e.g. 25% for CSH Level 4. Being tied to the building regulations, the Code offers a clear and coherent path towards more sustainable development.

The Code for Sustainable Homes	
Rating	Minimum percentage improvement in DER over TER
Level 1	0% (compliance with Part L 2010 required)
Level 2	0% (compliance with Part L 2010 required)
Level 3	0% (compliance with Part L 2010 required)
Level 4	-25% of regulated emissions (Part L 2013)
Level 5	-100% of regulated emissions
Level 6	'Zero Carbon' and 'Allowable solutions' (Part L 2016)

Local and Neighbourhood Plans

Local Developments are the principle development planning documents produced by Local Planning Authorities. They must be positively prepared, justified, effective and consistent with national policy, specifically the National Planning Policy Framework. These holistic and strategic documents set the context within which Neighbourhood Development Plans will sit.

Neighbourhood Plans represent a new tier of planning policy. Produced by communities themselves, they will act as the first point of reference for developers and planners. Town and Parish Councils can produce them, or, where there are no Parish Councils, communities can establish formally recognised 'Neighbourhood Forums' to produce them.

Neighbourhood Development Plans contain general planning policies called Neighbourhood Development Orders (NDOs) that permit the development and use of land they do not restrict it, eliminating the need for planning applications for certain types of development. NDOs need majority support in a referendum of the neighbourhood. In order to be considered by the 'Neighbourhood forum' the NDO must have:

- regard to the National Planning Policy;
- general conformity with strategic policies in the principle local development plan; and,
- regard for EU obligations and human rights requirements.



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