Ipswich Borough Council

Core Strategy and Policies Development Plan Document

Policies DM1 and DM2 – Advice Note

June 2015

This guidance note explains how compliance with policies DM1 Sustainable Development and DM2 Decentralised Renewable or Low Carbon Energy of the adopted Core Strategy and Policies development plan document (2011) will be tested and what information needs to be submitted. This will assist planning officers in considering applications as well as helping other interested parties to understand how the relevant requirements have been met.

The Core Strategy and Policies DPD is currently subject to review, including revised requirements in relation to policy DM1, however the guidance within this note will remain relevant upon adoption of the revised plan. It should also be noted that, following the Planning Update Ministerial Statement of 25th March 2015 the Council will no longer require Code for Sustainable Homes standards to be met but instead requires specific energy and water efficiency standards only. Please see the Council's 'Ministerial Statement - Planning Update 25th March 2015 - Advice for Applicants (June 2015)' note for further information.

Policies DM1 and DM2 are two separate planning requirements and where both are relevant to a proposed development the Council would expect the minimum requirements of both to be met.

Please use this Advice Note as follows:

	Please see…
Developments of less than 10 dwellings	**DM1** (pages 2-6)
Developments of 10 or more dwellings	**DM1** (pages 2-6), **DM2** (pages 11-12)
Conversions to residential use below 500sqm external floorspace	**N/A**
Conversions to residential use of 500sqm – 1,000sqm external floorspace or more	**DM1** (pages 7-10)
Conversions to residential use of more than 1,000sqm external floorspace	**DM1** (pages 7-10), **DM2** (pages 11-12)
Non-residential development below 500sqm external floorspace	**N/A**
Non-residential development 500sqm – 1,000sqm floorspace	**DM1** (pages 7-10)
Non-residential development over 1,000sqm floorspace	**DM1** (pages 7-10), **DM2** (pages 11-12)

Policy DM1: Sustainable Development

Policy DM1 should be read alongside the Council's Advice Note on implementing the Planning Update Ministerial Statement of 25th March 2015 (see https://www.ipswich.gov.uk/content/core-strategy-and-policies-adoption). This has led to replacement of reference to the Code for Sustainable Homes with a standard for energy efficiency equivalent to level 4 of the Code for Sustainable Homes and a standard for water efficiency equivalent to the new optional Building Regulations standard and broadly equivalent to level 4 of the Code for Sustainable Homes. Policy DM1 should therefore be interpreted as follows:

All new residential and non-residential buildings shall be required to achieve a high standard of environmental sustainability.

In this regard all developments exceeding the thresholds set out below shall achieve the following standards as a minimum unless, in exceptional circumstances, it can be clearly demonstrated that this is either not feasible or not viable:

All new homes will be expected to achieve reductions in CO_2 emissions of 19% below the Target Emission Rate of the 2013 edition of the 2010 Building Regulations (Part L).

All new homes will be expected to achieve water use of no more than 110litres/person/day.

All other residential and non-residential development with a gross external floorspace of 500sqm or more are required to meet the following standards:

Timescales (grant of planning permission)	BREEAM Standard
2010	BREEAM 'Very Good'
2013	BREEAM 'Excellent'
2016	BREEAM 'Excellent'

This Advice Note contains separate advice in relation to meeting the standards and submitting a planning application for each part of DM1.

The Council's current Validation List requires the following in relation to DM1:

31a. Sustainability and Energy Assessment	When is this required? All major developments (as defined on page 4) for new buildings. What is required? This assessment should outline the approach taken to integrate sustainability during the design process. This can include topics such as water use, materials, surface water run-off, waste, pollution, health and wellbeing, management, ecology and transport. This should also include estimated energy loads and consumption as well as predicted CO2 (carbon) emissions, with the aim that a minimum of 15% of energy requirements to come from renewable sources. Where applicable, this should include BREEAM and Code for Sustainable Homes assessments, and how policy requirements will be attained.	NPPF para. 17 & Section 10 and NPPG: 'Climate change' & 'Renewable and low carbon energy' Core Strategy policies CS1, DM1, DM2 & DM4

Following the publication of the Ministerial Statement, reference to a Code for Sustainable Homes assessment in the Validation List should be read as reference to the information set out within this note. Section 31a of the Validation List will be amended shortly.

The Council will usually attach a condition requiring the relevant energy efficiency, water efficiency or BREEAM standard to be met but will also require the applicant to demonstrate, at the planning application stage, how the standards will be met. The Council provides a pre-application service (see https://www.ipswich.gov.uk/content/planning-fees for charges) should applicants wish to discuss achievement of the requirements prior to submitting a formal planning application.

In relation to Listed Buildings or proposals within a Conservation Area, any reduction in the standards achieved should be informed by discussion with the Council's conservation officer and the nature and outcome of this should be documented as part of the information submitted with the planning application.

Where an applicant can demonstrate to the satisfaction of the Council that the required standards cannot be met for reasons of feasibility or viability (under the terms of DM1), it is expected that those measures that are able to be incorporated would be. In these circumstances the applicant should clearly explain which specific measures cannot be applied and why.

Energy Efficiency Standards for New dwellings

Policy requirement: All new homes will be expected to achieve reductions in CO_2 emissions of 19% below the Target Emission Rate of the 2013 edition of the 2010 Building Regulations (Part L).

This requirement relates to new build dwellings only. Conversions to residential use should be assessed using the BREEAM Domestic Refurbishment assessment method (see below).

The minimum requirements related to CO_2 emissions to meet The Building Regulations 2010 are currently contained in Part L1A 2013 edition (published March 2014).

A SAP assessment (Standard Assessment Procedure) is the recognised method of calculating the energy use and resultant CO_2 emissions from dwellings. More information on SAP assessments can be found at www.gov.uk/standard-assessment-procedure.

For outline planning applications where the design of buildings is a reserved matter, applicants are expected to indicate how the energy efficiency requirement will be achieved, and a condition will be attached to any outline permission requiring the standard to be met. The information set out below will need to be submitted at Reserved Matters stage.

For applications for full planning permission, or at reserved matters stage, a design stage SAP assessment should be undertaken. The detailed design stage SAP report should be submitted alongside the planning application, however a planning statement, sustainability statement or similar should include a summary table, similar to that shown below, to help readers to identify the key elements of the report which are relevant to achieving the energy efficiency standard.

SAP assessments should be carried out by an accredited SAP assessor. The calculations must be undertaken using SAP 2012 or any subsequent updates. The calculations should relate to regulated energy use only i.e. heating and cooling systems and fixed internal lighting. For larger developments where a number of dwelling types are repeated throughout the development, a separate DER and TER should be provided for each dwelling type.

A SAP assessment will show the following:

- Target Emission Rate (TER): The TER is the maximum (under 2013 edition of Part L) allowable CO_2 emissions of a notional building of same type, size and shape to the proposed building. TER is expressed in annual kg of CO_2 per m^2. The calculations must be undertaken using SAP 2012 or any subsequent updates. It should be assumed that the heating would be provided by gas boilers and that any mechanical ventilation or cooling would be provided by electrically powered equipment.

- Dwelling Emission Rate (DER): At design stage, the DER should calculate the predicted CO_2 emissions taking account of the energy demand reduction measures proposed to achieve a 19% improvement over 2013 edition of Part L requirements. This should be shown alongside the TER.

The applicant should include the SAP assessment within, or as an annex to, the Sustainability and Energy Statement required under the Council's Validation List (see above). The Sustainability and Energy Statement should clearly show the following calculations and figures for each dwelling type, based upon the SAP assessment (shading indicates where figures are to be included):

Stage	Calculation / result	Notes
1. Calculate the TER	……$KgCO_2/m^2$/pa (a)	This is the baseline from which emissions reduction improvements must be calculated.
2. Calculate 19% reduction in CO_2 emissions over TER	(a) x 0.81 = …… (b)	This is the target DER and should help to inform the measures to be incorporated.
3. Calculate the design stage DER	……$KgCO_2/m^2$/pa (c)	This will show the predicted CO2 emissions from the dwelling(s) as designed.
4. Is (c) equal to or less than (b)?	Yes / No	If the DER is greater than (b) further measures should be included. An application should not be submitted which shows the DER as greater than (b) without justification.
5. DER as percentage of TER	$\frac{(a) - (c)}{(a)}$ x 100 = ……%	For information, this will show the actual percentage reduction achieved.

Steps 3 – 5 must be repeated in relation to the 'as built' DER and submitted to the Council in order for the condition to be discharged.

The Sustainability and Energy Statement should also describe the measures to be taken to achieve the minimum 19% CO_2 emissions savings. These measures might include both architectural and building fabric measures (passive design) and energy efficient services (active design). Passive design measures might include building orientation, overshading, window sizing and positioning and materials usage. Active design measures might include the use of energy efficient lighting and heating systems. Introducing energy demand reduction features is encouraged at the earliest design stage of a development.

For developments of 10 or more dwellings which must also meet the requirements of policy DM2 (see below), the calculations at this stage should exclude any renewable or low carbon energy being included to meet the requirements of DM2. This is to ensure that the requirements of both policies are met and that measures are not double counted.

The Council will attach a condition to planning permission requesting a copy of the Final as built SAP report(s) prior to occupation of each dwelling, showing the 'as built' DER, in order to evidence that the correct percentage saving has been achieved in order to discharge the condition.

Water Efficiency Standards for New Dwellings

Policy Requirement: All new homes will be expected to achieve water use of no more than 110litres per person per day.

This requirement relates to new build dwellings only. Water efficiency measures for non-residential developments and for conversions to residential use are considered through the BREEAM assessment process.

Applicants should submit details of the expected water use for the dwelling through reference to a recognised calculation report. This could include either a report produced through Building Research Establishment Water Calculator for New Dwellings or through www.watercalculator.org.uk. This should be included within, or as an annex to, the Sustainability and Energy Statement required under the Council's Validation List. The Sustainability and Energy Statement should contain a summary of the measures proposed and the overall water use expected for each dwelling in terms of litres per person per day. Where there are a number of dwelling types proposed within a development individual water calculations should be produced for each dwelling type.

The Council will attach a condition to any planning permission requiring details of 'as built' water efficiency to be submitted to the planning authority prior to occupation of the dwelling(s).

BREEAM for residential conversions and non-residential development

Policy requirement: All other residential and non-residential development with a gross external floorspace of 500sqm or more are required to meet BREEAM 'Excellent'.

For BREEAM projects a Design Stage Assessment will need to be undertaken and submitted at the planning application stage. Where a Design Stage Assessment reveals that the proposal does not meet the relevant requirements the applicant will be expected to revisit the proposal to ensure that the required standards are met. Where an applicant can demonstrate to the satisfaction of the Council that the required standards cannot be met for reasons of feasibility or viability (under the terms of DM1), it is expected that those measures that are able to be incorporated would be. In these circumstances the applicant should clearly explain which specific measures cannot be applied and why.

Upon completion of the development and prior to occupation, the Council will request a copy of the BREEAM certificate to verify that the development has been carried out as proposed in relation to BREEAM standards. Any changes between the measures proposed at design stage and the measures incorporated in the final development should be agreed with the planning authority. BREEAM assessments must be a carried out by a qualified and licensed BREEAM assessor.

For developments in excess of 1,000sqm which must also meet the requirements of policy DM2 (see below), the assessment at this stage should exclude any renewable or low carbon energy being included to meet the requirements of DM2. This is to ensure that the requirements of both policies are met and that measures are not double counted.

BREEAM for non-residential development

Guidance on designing to BREEAM standards for non-residential development is contained in the BREEAM New Construction, Non-Residential Buildings Technical Manual[1]. This Advice Note is based upon the guidance contained in this Manual, however applicants should refer to any future updates where available.

BREEAM criteria are established for a range of new build non-residential developments, however any proposals not covered may require a bespoke set of criteria to be developed by the Building Research Establishment.

There are nine key requirements (management, health and wellbeing, energy, transport, water, materials, waste, land use & ecology and pollution) and in relation to these the following information is required:

- The number of credits achieved in relation to each of the above requirements;
- The measure(s) by which each credit has been achieved;
- Clear separation in the above in relation to minimum mandatory standards and optional credits, highlighting where minimum mandatory standards have been met;
- Any additional credits received through innovation credits;
- Application of the BREEAM specified weighting to each requirement area;
- Total score, compared against BREEAM rating benchmarks.

At the planning application stage an interim, or design stage, assessment should be undertaken. The BREEAM report should be presented in, or as an annex to, the Sustainability and Energy Statement. A summary table, similar to that shown below, should

[1] BREEAM UK New Construction, Non-Domestic Buildings (Building Research Establishment, 2014)

be included within the Sustainability and Energy Statement and will help readers to identify the key elements of the report which are relevant to achieving the BREEAM standard.

BREEAM domestic refurbishment key requirement	**Measure(s) to be applied**	**Credits**	**Weighting**	**Score**	**Relevant section / page of Sustainability and Energy Statement**
Management					
Health and Wellbeing					
Energy					
Transport					
Water					
Materials					
Waste					
Land Use & Ecology					
Pollution					
Innovation		-	-		
Total	-	-	-		
BREEAM Rating					

In addition to the overall score, confirmation should be given that each of the minimum standards for the BREEAM rating achieved have been met. This could be shown using a table similar to that below.

BREEAM Rating:		
Key Requirement	**Minimum Standard**	**Credits achieved**
Management (construction)		
Management (commissioning)		
Management (operational)		
Energy (Emissions)		
Energy (Monitoring)		
Water (Consumption)		
Water (Monitoring)		
Materials		
Waste (construction)		
Waste (operational)		
Land Use & Ecology		

Where a development is to be developed within one building but includes ancillary or less-dominant uses a single BREEAM assessment should be undertaken. Where a mixed use development is to be developed involving more than one building, or would be within one building but involve a range of equally-dominant uses, a BREEAM assessment should be undertaken for each building / use.

Further information on BREEAM for non-residential properties, including case studies, can be found at http://www.breeam.org/page.jsp?id=369.

BREEAM for Domestic Refurbishment

For conversions to residential use the BREEAM domestic refurbishment standards should apply. Guidance on designing to BREEAM standards for domestic refurbishment is contained in the BREEAM UK Refurbishment and Fit-Out 2014, Non-Domestic Buildings,

Technical Manual[2]. This Advice Note is based upon the guidance contained in this Manual, however applicants should refer to any future updates where available.

In relation to each of the 7 key requirements (Management, Health and Wellbeing, Energy, Water, Materials, Waste and Pollution) the following information is required:

- The number of credits achieved in relation to each of the above requirements;
- The measure(s) by which each credits has been achieved;
- Clear separation in the above in relation to minimum mandatory standards and optional credits, highlighting where minimum mandatory standards have been met;
- Any additional credits received through innovation credits;
- Application of the BREEAM specified weighting to each requirement area;
- Total score, compared against BREEAM rating benchmarks.

At the planning application stage an interim, or design stage, assessment should be undertaken. The BREEAM report should be presented in, or as an annex to, the Sustainability and Energy Statement. A summary table, similar to that shown below, should be included within the Sustainability and Energy Statement and will help readers to identify the key elements of the report which are relevant to achieving the BREEAM standard.

BREEAM domestic refurbishment key requirement	**Measure(s) to be applied**	**Credits**	**Weighting**	**Score**	**Relevant section / page of Sustainability and Energy Statement**
Management					
Health and Wellbeing					
Energy					
Water					
Materials					
Waste					
Pollution					
Innovation		-	-		
Total	-	-	-		
BREEAM Rating					

In addition to the overall score, confirmation should be given that each of the mandatory requirements for the BREEAM rating achieved have been met. This could be shown using a table similar to that below.

BREEAM Rating:		
Key Requirement	**Mandatory credits / measures**	**Credits achieved**
Management		
Health and Wellbeing		
Energy		
Water		
Materials		
Waste		
Pollution		

[2] BREEAM Refurbishment Domestic Buildings (Technical Manual SD5072 – 2012 – 2.0)

Where existing features would contribute towards achievement of the relevant BREEAM standards and are to be retained, the appropriate number of credits can be awarded.

Further information on BREEAM domestic refurbishment, including case studies, can be found at http://www.breeam.org/page.jsp?id=228.

Policy DM2: Decentralised Renewable or Low Carbon Energy

All new build development of 10 or more dwellings or in excess of 1,000 sq. m of other residential or non-residential floorspace shall provide at least 15% of their energy requirements from decentralised and renewable or low-carbon sources. If it can be clearly demonstrated that this is not either feasible or viable, the alternative of reduced provision and/or equivalent carbon reduction in the form of additional energy efficiency measures will be expected. The design of development should allow for the development of feed in tariffs.

In order to calculate how much renewable or low carbon energy needs to be provided, it is first necessary to calculate how much energy is predicted to be used.

The Council's Validation List requires the following in relation to DM2:

31a. Sustainability and Energy Assessment	When is this required? All major developments (as defined on page 4) for new buildings. What is required? This assessment should outline the approach taken to integrate sustainability during the design process. This can include topics such as water use, materials, surface water run-off, waste, pollution, health and wellbeing, management, ecology and transport. This should also include estimated energy loads and consumption as well as predicted CO2 (carbon) emissions, with the aim that a minimum of 15% of energy requirements to come from renewable sources. Where applicable, this should include BREEAM and Code for Sustainable Homes assessments, and how policy requirements will be attained.	NPPF para. 17 & Section 10 and NPPG: 'Climate change' & 'Renewable and low carbon energy' Core Strategy policies CS1, DM1, DM2 & DM4

The requirements under policy DM2 should be calculated *after* the requirements under DM1 have been calculated.

For new dwellings, the calculation of 15% of energy requirements should be based upon the energy requirements identified in the design stage Dwelling Emission Rate (see section on DM1 above). For non-residential development and conversions to residential use the calculation of 15% of energy requirements should be based on the kwh/year energy requirements identified through the BREEAM process, once the BREEAM standard has been achieved.

These figures will form the baseline for calculations undertaken in relation to DM2 as set out in the table below. A summary table, containing the information presented in the table below, should be included within the Sustainability and Energy Statement to help readers to identify the key elements of the report which are relevant to achieving the requirements of policy DM2, including cross-reference to the relevant parts of the SAP assessment or BREEAM report.

Stage	Calculation	Notes
1. Identify baseline kwh/year energy use	……kwh/yr (electricity) + ……kwh/yr (gas) = ……kwh/yr (total) (a)	This will be contained within the SAP / BREEAM assessment submitted under the requirements related to policy DM1.
2. Calculate a 15% reduction in kwh/yr	(a) x 0.15 = ……(b)	This is the minimum amount of kwh/year to be generated from renewable or low carbon sources.
3. Identify kwh/yr contribution from selected technology(ies)	……kwh/yr (technology 1) + ……kwh/yr (technology 2) = ……kwh/yr (c)	Please see paragraphs below on selecting an appropriate technology.
4. Is (c) equal to or greater than (b)?	Yes / No	If the (c) is less than (b) further measures should be included. An application should not be submitted which shows (c) as less than (b) without justification.
5. Calculate the percentage of energy requirements being met from renewable or low carbon energy.	(c) x 100 = ……% (a)	For information, this shows what percentage will be achieved.

When selecting which technology or technologies to use under stage 3 in the table above, consideration should be given to the following:

- If the desired energy requirement cannot be met through use of one technology, consider the use of alternatives or more than one technology;
- Consideration should be given to the technical performance of different technologies in different conditions, for example solar panels will not perform well on north facing roof slopes;
- Consideration must be given to the visual and design impact of the chosen technologies and efforts made to minimise any impact. The technology should be integrated into the design from the outset of the design;
- Decentralised means that the source of the energy should be local (i.e. not obtained through the National Grid). As such, commitment to signing up to a green energy tariff would not meet the requirements of the policy.

Details of the renewable energy technologies to be incorporated should be contained within, or as an annex to, the Sustainability and Energy Statement submitted as part of the planning application. This may take the form of a leaflet or webpage printout showing the design, size and expected energy contribution of the installation.