



Reducing carbon emissions in new development

Supplementary Planning Guidance

November 2010

Enterprise, Planning and Infrastructure
Aberdeen City Council
Marischal College
Broad Street
Aberdeen AB10 1AB

www.aberdeencity.gov.uk

INTRODUCTION

This Guidance sets requirements for the minimum reduction of carbon dioxide emissions in new developments beyond the 2007 building regulations carbon dioxide emissions standard. This Guidance was first approved May 2009 and has now been updated taking cognisance of changes to Legislation, Scottish Planning Policy and the Structure Plan.

The requirement in SPP has been amended to comply with the Climate Change (Scotland) Act 2009, which requires local development plans to “require all new buildings to be designed to avoid a specified and rising proportion of the projected greenhouse gas emissions from their use through the installation and operation of low and zero carbon generating technologies.”

Although the policy context related to this Supplementary Planning Guidance (SPG) has now changed, the policy assists Aberdeen in meeting the requirements of the Climate Change Act and SPP. More importantly it continues to show commitment to climate change and supporting the renewable energy industry in Scotland and the North East.

The purpose of this Supplementary Planning Guidance (SPG) is to:

- explain how Aberdeen City Council be will be applying the national planning policy
- help applicants provide the required information at the right time to satisfy the policy

This SPG complements and should be read alongside the development plan for Aberdeen, which comprises the Structure Plan (2009) and the Aberdeen Local Plan (2008).

NATIONAL PLANNING POLICY CONTEXT

Climate change, energy insecurity and rising fuel poverty are key challenges for Scotland now and in the foreseeable future.

The Royal Commission on Environmental Pollution concluded that to avoid dangerous climate change the UK would need to cut its CO₂ emissions by 60% by 2050 (below 1990 levels). The Scottish Government has set the target for Scotland at an 80% reduction in carbon dioxide emissions by 2050.

More than 40% of Scotland’s carbon dioxide emissions, a major cause of climate change, come from the energy we use to heat, light and run our buildings. Domestic buildings in Scotland – some 2.2 million homes – contribute approximately 30% of all of Scotland’s carbon emissions. The Scottish Government aims to increase the rate of house building in Scotland from about 25,000 per year to 35,000 per year by 2015. Consequently, by 2050 ‘new build’ housing may account for over 30% of all housing in Scotland.

Requiring new buildings to meet more stringent energy standards will lessen their environmental impact, make them more affordable to heat, lessen our dependence on imported energy and support a domestic market for low and zero carbon (LZC) technologies. Implementation of this SPG would thereby contribute to sustainable economic growth.

Energy efficiency has long been recognised as the most cost effective way to reduce our CO₂ emissions and save resources. Building standards are the minimum standards that all new buildings must meet. This SPG does not duplicate these standards but requires developments above the threshold figure to incorporate LZC equipment, in line with the national planning policy. In most cases, this will mean that the energy assessment information required to satisfy the buildings standards will be required at planning stage, not afterwards.

1. <http://www.sbsa.gov.uk/sullivanreport.htm>

THE DEVELOPMENT PLAN CONTEXT

The Development Plan for Aberdeen comprises the Aberdeen City and Shire Structure Plan (2009) and the Aberdeen Local Plan (2008).

The Structure Plan sets two targets which this SPG will help the city achieve: for all new buildings to be carbon neutral by 2016 and for the city region's electricity needs to be met from renewable sources by 2020.

The Aberdeen Local Plan places great emphasis on high standards of design and (Policy 1) allows the Planning Authority to request that a design statement be submitted in support of a planning application. Policy 23 states that in assessing planning applications for new developments the City Council will give 'favourable weight' according to the degree to which they further the interests of sustainable development through amongst other things the use of energy efficient technologies such as solar panels, and the creation of energy efficient layouts.

ABERDEEN CITY COUNCIL'S PLANNING POLICY FOR REDUCING CARBON EMISSIONS IN NEW DEVELOPMENT

Pending adoption of a new local development plan, in order to bring Aberdeen City Council's local planning policy in to line with the national planning policy requirement, the following interim policy has been formulated:

POLICY: Reducing Carbon Emissions in New Development

All applications proposing development with a total cumulative floor-space of 500sqm or more (excluding Change of Use or conversion within the envelope of existing buildings) should incorporate on-site zero and low carbon (LZC) equipment contributing at least an extra 15% reduction in CO2 emissions beyond the 2007 building regulations carbon dioxide emissions standard.

Where it has been demonstrated (to the satisfaction of Aberdeen City Council) that technical or planning policy constraints limit the application of LZC equipment on the application site, the provision of equivalent carbon savings elsewhere in the area will satisfy the requirements of this policy.

It is the responsibility of applicants to provide the necessary technical calculations in support of planning applications. Software programs have been developed which predict the energy performance of buildings. The programs have been adopted to assess compliance with the building standards. The relevant software programs are:

- For Dwellings: SAP2005 (Standard Assessment Procedure, 2005 Edition)
- For Non-Domestic Buildings: SBEM (Simplified Building Energy Model)

The results of the calculations should be presented in the same format as Figure 1 below:

Example Calculations to be submitted to the Planning Authority		
	Calculation	Figures
1	2007 Building Regulations CO2 Standard	23.01 kgCO2/m ² /annum
2	Actual Emissions Rate Using LZCGT	18.45 kgCO2/m ² /annum
3	Percentage Reduction	19.8%
4	Actual Emissions Rate Without LZCGT Equipment	22.41 kgCO2/m ² /annum
5	Percentage Reduction Due to LZCGT	17.2%

Equivalent carbon savings elsewhere in the area will be taken to mean equivalent CO2 emissions reductions reached through:

- the installation of LZC equipment elsewhere in Aberdeen
- or
- by a financial contribution to Aberdeen City Council's carbon offset fund

Financial Contribution:

The financial contribution is a one-off payment calculated at a rate of £200 for each tonne of CO₂, which would be emitted (annually) above that required by the policy, secured by legal or other appropriate means (such as a payment made prior to release of planning consent).

The £200 figure was established by the National Energy Foundation's Milton Keynes Carbon Offset Study, carried out in 2004.

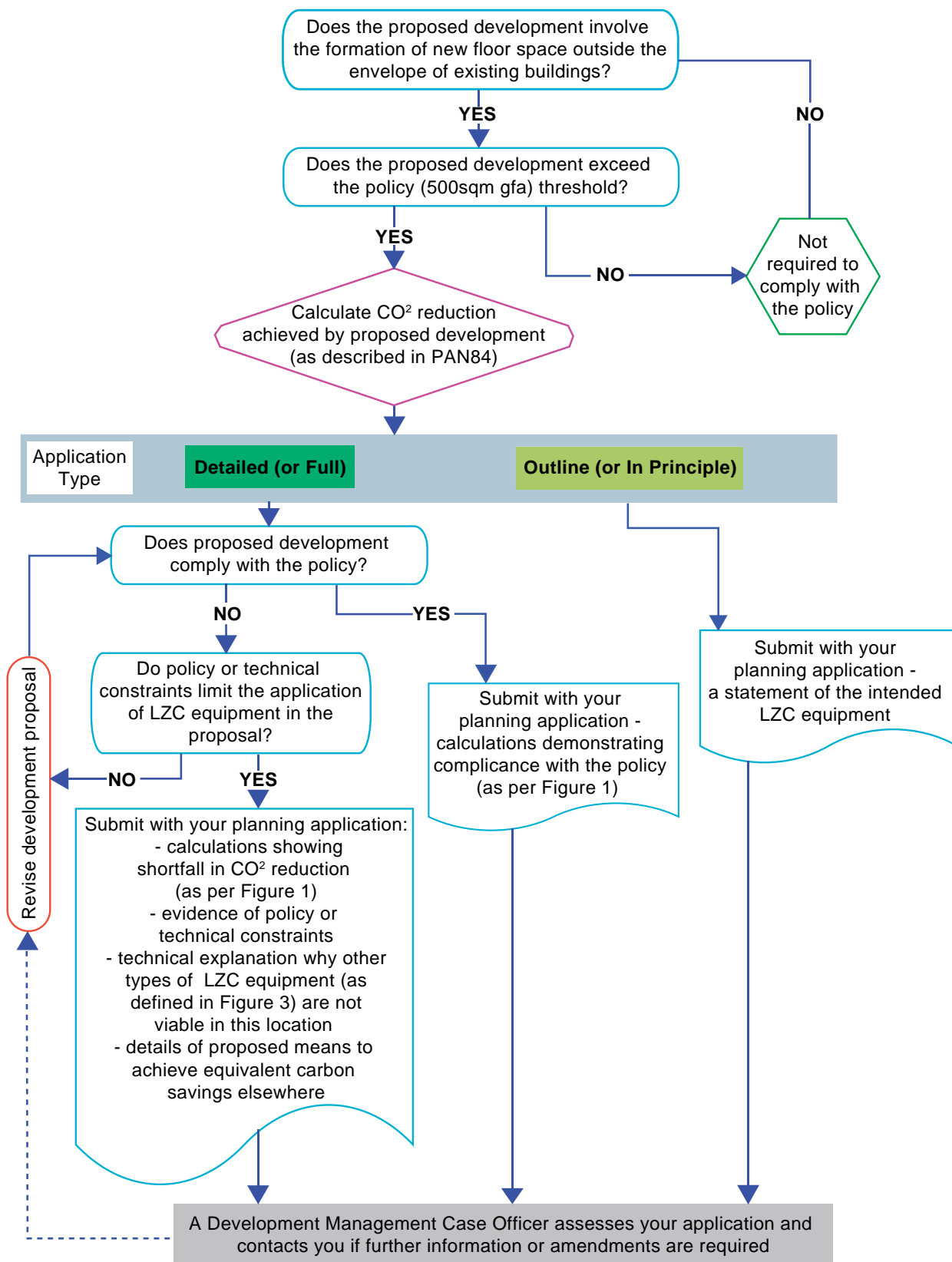
It was based on estimates of the most cost effective carbon reduction measures available.

The carbon offset fund will be a ring fenced pot of money used solely to reduce carbon dioxide emissions in the city. This will, for example, include energy saving measures in the homes of people in Aberdeen who are in fuel poverty and Aberdeen City Council's Decentralised Energy programme.

The flow diagram on the next page illustrates at what stage you will need to submit information to Aberdeen City Council in support of your planning application.

Figure 2: Flow Diagram for applicants to comply with the policy

Flow diagram for applicants to comply with the policy*



Where Planning Permission is granted for your development proposal, a suitable condition will be applied to ensure any LZC equipment proposed is installed prior to occupation

Where the permission requires the applicant to achieve carbon savings elsewhere, legal or other appropriate means (such as withholding planning permission pending payment of the necessary sum or installation of equipment) will be employed to ensure delivery of required savings, or payment of the appropriate sum into Aberdeen City Council's carbon offset fund.

*The phrase 'the policy' refers to the SPG policy detailed on p.5 of this guidance.

PRE-APPLICATION DISCUSSIONS

The installation of LZC equipment can raise additional issues which need to be tackled at an early stage in planning a development. As an example, ground source heat pumps can cause significant damage to trees. Where trees are present on, or adjacent to the site where associated pipes are to be buried, a tree survey should be submitted along with the application highlighting the likely impact of the excavation works on the tree(s) and any mitigation proposed. The impact the excavation works and installation are likely to have on local hydrology should also be investigated.

Before submitting your planning application, we encourage you to discuss your proposal with us. We can advise you of your project's compliance with planning policies and on detailed design matters.

ELIGIBLE TECHNOLOGIES

LZC equipment comprises a broad range of technologies. It incorporates both micro-generation and micro-renewable technologies, including some fossil fuels. Figure 3 below identifies the eligible LZC equipment to meet the requirements of this policy.

Eligible LZC Equipment	
Biomass	Geothermal
Fuel cells	Ground source heat pumps
Photovoltaics	Water source heat pumps
Micro-hydro	Air source heat pumps
Micro-wind	Combined heat and power (CHP)
Solar Power	Heat exchange recovery systems

HOW THIS POLICY FITS WITH CHANGES IN BUILDING STANDARDS

The 2010 editions of the Building Standards Technical Handbooks came into force on 1 October 2010. Section 6 (energy) of the revised Technical Handbooks now requires all new buildings to deliver a 30% reduction in CO2 emissions compared to the 2007 Building Regulations. This requirement can be met by a range of measures, which include insulation, low energy lighting, heat loss, air-tightness, and LZC equipment. There are planned increases in the standards that will require carbon neutral buildings by 2016.

The Supplementary Planning Guidance will continue to require a 15% saving beyond the 2007 standard through the use of LZC equipment. Therefore, the Council will expect developers to deliver at least half of the 30% saving required by building standards through the use of LZC equipment. This will make a positive contribution towards climate change, and it will continue to support the renewable energy industry in Scotland and the North East.

CONTACT US

Please get in contact if you wish to discuss your proposal with us:

Development Plan Team
Enterprise, Planning and Infrastructure
Aberdeen City Council
Marischal College
Broad Street
Aberdeen AB10 1AB
Telephone: 01224 523329
Fax: 01224 523180
E-Mail: ldp@aberdeencity.gov.uk

USEFUL DOCUMENTS

Development Plan:

Aberdeen City and Shire Structure Plan (2009):

<http://www.aberdeencityandshire-sdpa.gov.uk/home/home.asp>

Aberdeen City Council (2008) Aberdeen Local Plan:

<http://www.aberdeencity.gov.uk/aberdeenlocalplan>

Detailed Advice on LZC Equipment:

Scottish Government (2002) PAN 45: Renewable Energy Technologies:

<http://www.scotland.gov.uk/Publications/2002/02/pan45/pan-45>

Scottish Government (2006) Annex to PAN 45 Renewable Energy Technologies:

Planning for Micro Renewables:

<http://www.scotland.gov.uk/Publications/2006/10/03093936/0>

Greater London Authority (2004) Integrating renewable energy into new developments:

Toolkit for planners, developers and consultants:

http://www.london.gov.uk/mayor/environment/energy/renew_resources.jsp

ACKNOWLEDGEMENTS

Cover photo courtesy of NG Bailey - CHP at BP North Sea Operations Centre, Dyce



ABERDEEN
CITY COUNCIL

Enterprise, Planning and Infrastructure
Aberdeen City Council
Marischal College
Broad Street
Aberdeen AB10 1AB

www.aberdeencity.gov.uk

For help with **language / interpreting** and other formats of communication support, please contact: 01224 523 329

ভাষা/ইন্টারপ্রেটিং এবং অন্যান্য ফরমেটের
যোগাযোগ সাহায্যের জন্য দয়া করে
:01224 523 329
নম্বরে যোগাযোগ করবেন।

如果需要語言/傳譯及其他形式的傳訊支援服務，
請聯絡:01224 523 329

Если требуется помощь при выборе
языка / переводчика или других
способов общения, звоните по
телефону : 01224 523 329

للحصول على مساعدة بخصوص اللغة/ الترجمة
و وسائل الاتصال الأخرى، الرجاء الاتصال
بالرقم التالي: 01224 523 329

زبان / ترجمانی (انٹرپرائٹنگ) میں مدد اور اپنی بات دوسروں
تک پہنچانے میں مدد کی دوسری طرزوں کیلئے، براہ کرم اس نمبر پر
رابطہ کریں: 01224 523 329

W razie potrzeby pomocy z językiem
angielskim albo z tłumaczeniem, albo
jakiejkolwiek innej pomocy do
porozumienia, proszę skontaktować:
01224 523 329