

# BUILDING

## PERFORMANCE POLICY GUIDANCE



ABERDEEN  
CITY COUNCIL

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# BUILDING PERFORMANCE GUIDANCE

## 1. BACKGROUND

This guidance document is designed to support and help inform decision making when considering the construction of new, and refurbishment of, corporate assets.

It is designed to implement the requirements of the Buildings Performance Policy (BPP), which was approved in January 2016 and the accompanying Buildings Checklist (BC) which has been updated to reflect changes in legislation and market conditions. Both the BPP and BC will be reviewed on an annual

basis to ensure they remain fit for purpose and align to corporate requirements.

The BPP covers all new build and refurbishment projects which Aberdeen City Council (ACC) is involved with. Those developments progressed considered as exceptions will be subject to the requirements of the BC. The aim of both is to take a strategic view ensuring buildings are future proofed and designed to reduce the financial liability of these assets through:-

- **Reducing running cost of buildings by reducing utility demand.**
- **Reducing building emissions, through preventative measures such as BREEAM assessment and;**
- **Future proofing buildings in terms of access to fibre broadband and building management/ monitoring systems with potential connectivity to district heating networks.**

It is envisaged that there will be additional capital costs associated with ensuring corporate assets comply with the BPP and BC. These are likely to be balanced by savings from within revenue budgets that may have a return of investment longer than typical corporate budgeting cycles. For example, district heating connectivity pay back may span a number of decades as opposed to years with economies of scale being factored in. However, there are exceptions, for example if ACC install the district heating in a multi storey building, the cost will be from ACC's Housing Revenue Account (HRA), but the savings are actually generated via residents own energy bills throughout the lifespan of the heating system. In these instances ACC does not benefit directly aside from helping to meet plans, policies and strategy's developed to assist citizens, alleviation of fuel poverty for example.

It should also be noted that external and internal connectivity of our properties will open up new opportunities to maintain and monitor the conditions of buildings, increasing long term performance efficiency and reducing maintenance costs for the council and occupants.

As the range of buildings which both the BPP and BC would apply to is very broad it is not possible to calculate the financial impact of every scenario. It will be the responsibility of the project design team and the SIP and Capital Board, to examine any variation in capital costs on a project by project basis to ensure value for money. Advice to help with making these decisions will be available to the SIP and Capital Boards, as well as the project design team from the contact list illustrated within section 5.

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The BPP would support a range of other ACC policies, plans, strategies and targets such as those listed below. It would also help support city wide initiatives too.

- **Improving Customer and Staff Experience, as well as use of resources.**
- **Local Outcome Improvement Plan.**
- **Vision for Aberdeen 2012-2017.**
- **Powering Aberdeen - Sustainable Energy Action Plan and the Covenant of Mayors.**
- **Climate Change Adaption Plan.**
- **Shaping Aberdeen – Strategic Infrastructure Plan (SIP).**
- **Connecting Aberdeen – Accelerate Aberdeen.**
- **Housing Strategy – Reducing Fuel Poverty.**
- **Carbon Reduction Commitments.**
- **Climate Change Reporting Duties.**
- **Air Quality Action Plan.**
- **Aberdeen Heat Network expansion.**
- **Corporate Travel Plan.**
- **Local Transport Strategy.**

Lists of further relevant documents are available within the [Literature Review](#) relating to Powering Aberdeen.

## 2. WHEN THE POLICY APPLIES

The BPP applies for all new builds, complete refurbishment projects and major extensions that are both domestic and non-domestic. The BC can be used to ensure the BPP is complied with for these projects.

The BPP will not apply in instances where part refurbishment is taking place or where minor extension of an existing building is planned. In this instance the relevant section(s) of the BC must be complied with.

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## 3. FREQUENTLY ASKED QUESTIONS

### 3.1 GENERAL

#### 1) Where can I find a copy of the BPP and BC?

The BPP can be found here (link) and the BC can be found here (link). The links will refer to a holding webpage.

#### 2) Who is responsible for the BPP and BC?

All ACC staff are responsible to ensure they comply with both the BPP and BC from Councillors and Senior Managers to Clients and Design Teams.

#### 3) What is the purpose of the BPP and BC?

The purpose of the BPP is to reduce the running costs and emissions of ACC buildings. The purpose of the BC is to help designers to ensure they have considered all aspects of building performance.

#### 4) What is the reason both should be complied with?

To ensure that the performance of ACC buildings is improving.

#### 5) What happens if a development cannot or does not meet the BPP?

All projects have to be signed off by Senior Managers. If the BPP is not going to be met this will have to be justified to Senior Managers and signed off by them. This can be done through the project proposal and business cases with explanations of why it was not achievable. If compliance to the BPP is not possible, then the project should comply with the BC.

#### 6) Are there any exceptions to the BPP?

The BPP applies to all new builds, complete refurbishments and major extensions. One exception would be unheated spaces where the BC would apply. There will be cases where the stated Energy Performance Certificates (EPC)/BREEAM ratings are not possible such as in multi-storey properties and granite buildings. Where the BPP is not possible an explanation will be required in the project proposal/business case.

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## 7) What are the timescales around the council meeting this BPP?

The BPP was approved and is in place from 2016 so is to be used with immediate effect. Training will be delivered to appropriate departments initially and ongoing training will be available for new starts thereafter.

## 8) Who will decide when EPC/BREEAM ratings are achievable and affordable?

This is for Senior Managers to approve with guidance and advice from Officers. Support is available through a range of council officers listed in section 5 below.

## 9) Who is responsible to ensure the BPP/BC is carried out?

All ACC staff are responsible to ensure they comply with both the BPP and BC from Councillors and Senior Managers to Clients and Design Teams.

## 3.2 BUILDINGS CHECKLIST (BC)

### 10) When should the BC be used?

The BC can be completed for all projects, but must be completed for the exceptions where the BPP doesn't apply e.g. part refurbishment projects and minor extensions.

### 11) What is the BC for?

The BC is intended to act as a guide for designers to consider at the design and specification stages of a project to achieve a sustainable design. Some items may easily be 'ticked off', while others have been included to act as a prompt to consider further action. In each case however the BC should be completed with the details of action taken or reasons why items were not implemented noted in the comments column.

### 12) When should each section of the BC be used?

The BC is broken down into sections. All sections in the BC apply to new builds. Some sections may not apply to refurbishments such as 'site selection'. On smaller projects, many of the items will still be relevant and should be considered. Where it is considered that certain items are not relevant the appropriate box should be marked N/A. There must be a justifiable reason however for deciding that a particular item is not relevant on a particular project and this should be included in the comments column.



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## 13) How do other policies relate to the checklist?

It is important to be aware of other policies and initiatives such as ACC's Timber Procurement Policy for example which should be implemented on all projects. Reference should be made to Local Development Plan policies, Supplementary Guidance and Technical Advice notes. These set the standards of sustainable design for private developers. ACC is expected to achieve and where possible exceed these standards in its own developments, to demonstrate commitment and leadership on sustainable design.

## 3.3 ENERGY

## 14) What is a district heating system?

District heating (also known as heat networks or teleheating) is a system for distributing heat generated in a centralised location for residential and commercial heating requirements such as space heating and water heating.

## 15) When should the heat network be connected to?

Small scale Combined Heat and Power (CHP) and associated district heating is not always cost effective. Therefore it might be appropriate to consider the bigger picture and ensure a development can connect to the district heating network in the future, in which case making the development future proofed for such connectivity.

Larger scale district heating can be viable when there is a diversity of potential connections such as a school, housing and offices; where demand is high and required at all times during the day. It is the intention to expand the heat network in Aberdeen so new developments should investigate the potential to connect. However it should be noted that there is a conflict between installation of a CHP/district heating connection and BREEAM scoring. BREEAM only awards points for low carbon CHP, not gas. However, it has been agreed by senior management that expansion of the heat network in Aberdeen takes precedence over BREEAM; in the hope that gas engines can be replaced with alternatives in the future.

## 16) Who will decide when it is feasible to connect to the heat network?

Discussions should be had with district heating experts about the potential to connect and this should be signed off by a Senior Management at the project proposal stage.

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## 17) How do Energy Efficiency Standards for Social Housing (EESH) fit in to the BPP and BC?

The Domestic Housing Team reports annually to the Scottish Housing Regulator (SHR) on EESH which requires 69 points to be considered. This is equivalent to EPC rating C for any Social Housing and EPC rating D, depending upon fuel and dwelling type. This is likely to increase, with targets becoming more stringent year on year.

Further information is available here: <http://www.energyefficientsocialhousing.org/>

## 18) What is an EPC?

Energy Performance Certificates (EPCs) are needed whenever a property is built, sold, or rented. An EPC contains information about a property's energy use and typical energy costs and recommendations about how to reduce energy use and save money.

An EPC gives a property an energy efficiency rating from A (most efficient) to G (least efficient) and is valid for 10 years.

## 19) How much does it cost to get an EPC?

It costs between £60 and £120 to register a building on the Energy Performance Register and get an EPC. Please note that the Asset Policy Energy Team can provide an EPC service to all ACC domestic new homes and existing dwellings. This should be deleted and replaced with: The Asset Policy Energy Team, as accredited assessors, can provide an EPC service to all ACC domestic new homes and existing dwellings. Please contact them directly to confirm requirements and cost.

## 3.4 BRE / BREEAM

### 20) What is BREEAM?

BREEAM - Building Research Establishment Environmental Assessment Tool was first published by the Building Research Establishment (BRE) in 1990, is the world's longest established method of assessing, rating, and certifying the sustainability of buildings. More than 250,000 buildings have been BREEAM certified and over a million are registered for certification – many in the UK and others in more than 50 countries around the world.

**Click here** for BREEAM rated buildings within Aberdeen.

### 21) How much does BREEAM certification cost?

This is difficult to quantify as it's very much dependent on the scale/scope of the development. It is suggested advice is sought from a qualified BREEAM assessor or the Building Research Establishment.



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## 22) What support is available from BREEAM Assessors in the Council?

There are a number of trained BREEAM Assessors in the council for BREEAM New Construction Non Domestic, BREEAM Communities and for BREEAM Home Quality Mark. Assistance and advice is available for projects which will seek BREEAM certification.

## 23) What is the Home Quality Mark?

The Home Quality Mark (HQM) was developed by BRE and has been created to serve the UK's house builders and the householders who buy and rent new homes.

HQM will help house builders to demonstrate the high quality of their homes and to differentiate them in the marketplace. At the same time, it will give householders the confidence that the new homes they are choosing to buy or rent are well designed and built, and cost effective to run.

## 3.5 DEFINITIONS

### 24) What is defined as a refurbishment?

Refurbishments are generally multiple upgrades to a development and the BPP applies only to complete refurbishments. A single upgrade such as improvements to a roof or to toilets would not be considered as a refurbishment. The BC can be used for all refurbishments. The BPP will apply to complete refurbishments only.

The project manager/lead must make a judgement as to what constitutes a part and complete refurbishment on a project by project basis. Some useful references are **here** and **here**.

### 25) What is a Building Management System?

A building management system (BMS), otherwise known as a building automation system (BAS), is a computer-based control system installed in buildings that controls and monitors the building's mechanical and electrical equipment such as ventilation, lighting, power systems, fire systems, and security systems.

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## 26) What does Fibre connected mean?

This means a building is set up to connect to fibre broadband internet services. All buildings which have the capacity to connect to fibre will be expected to do so regardless of the current need. In such cases it will be a requirement that any new or refurbished project is connected to fibre direct to the premises/home and not to a street cabinet. It is important to be aware that fibre products are less reliant on the exchange network and new entrants to the market do not utilise this. The exchange network is in the ownership of BT.

New domestic buildings should be designed to facilitate internal high speed home networks (conduit or network points installed and connected). This will future proof homes fit for “lifetime living” and support transitions to digital service delivery for both public and private sectors. A similar approach should be adopted for refurbishments where the nature of construction allows for this.

## 27) What does Fibre network ready mean?

Where a building cannot be connected to Fibre it must be delivered as “Fibre network ready”. This means that the building can be connected with at a later date with no additional internal modifications required, through a suitably ducted trench provided to the edge of the curtilage of the property. Consideration should also be given to ensuring the external environment within the boundaries of a development area accommodates digital technology e.g. smart street lighting for example.

## 28) What does network ready mean?

This means a building being ready to connect to a district heating network in the future if it becomes available.

## 3.6 MONITORING

### 29) How is performance against the BPP and BC to be reported?

When drafting a project proposal and business case the expected outcome with regards to the BPP should be detailed here. If the policy will not be met then explanations detailing why will be expected. This will have to be signed off by Senior Managers who will be trained on the policy and whom are ultimately responsible for determining if the project proceeds or not.

### 30) How will the BPP be enforced and monitored?

This is likely to be monitored through the Performance Management Framework which is being developed for ACC as a whole. An internal audit programme will be developed and reported on annually at the time of the BPP review.

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## 4. CASE STUDIES



### Energy Performance Certificates

#### Quarryhill

Property at Quarryhill could save £2,205 over 3 years and go from E to A rating EPC. The estimated energy costs for this property was estimated to be £3,945.  
[Link to Quarryhill case study](#)

#### Caircry Court

Property at Caircry Court could save £75 over 3 years and go from C to C rating EPC.  
[Link to Caircry Court case study](#)

#### Tullos Place

Property at Tullos Place can save £33 over 3 years and go from C to C rating EPC.  
[Link to Tullos Place case study](#)



### BREEAM

A full list of BREEAM case studies can be found at  
<http://www.breeam.com/case-studies>



### Education

#### Bygrove Primary School, Poplar, UK

Bygrove Primary School in Poplar underwent an extension at the front of the school comprising a multi-purpose room, a therapy/medical room (which is fully accessible for special educational needs pupils), a staff room and associated amenities. The works also included a covered play area for nursery school pupils and new landscaping in the playground.

<http://www.breeam.com/case-study-bygrove-primary-school-poplar-uk>

#### Brandon Primary School

The development is a new build primary school to replace the school facilities on the site of the existing primary school in the village of Brandon in county Durham. The school is a single storey building (with net floor area of 2,824m<sup>2</sup>), housing educational and ancillary facilities for 390 pupils from Reception to Year 6, as well providing a 26 place nursery.

<http://www.breeam.com/case-study-brandon-primary-school>

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## **The Suttie Centre, University of Aberdeen**

was developed through a strong collaboration between NHS Grampian and the University of Aberdeen. It combines teaching accommodation for undergraduate and postgraduate students and healthcare professionals in a single building. <http://www.breeam.com/case-study-matthew-hay-building-university-of-aberdeen-uk>



## Residential

### **Mountain Halls, University of Glamorgan**

The £18 million Mountain Halls development on the Treforest campus was completed in the autumn of 2011. It provides 476 modern, contemporary and purpose built en-suite student residences – all with hard-wired internet connections.

<http://www.breeam.com/index.jsp?id=523>

### **Lancaster University Redevelopment**

The purpose of the development was to provide 800 new student residential rooms for Lancaster University with high levels of environmental performance at an affordable rent. University Partnerships Programme (UPP) had previously delivered over 3300 new student residential rooms on the Lancaster University campus.

<http://www.breeam.com/index.jsp?id=287>



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## 5. FURTHER INFORMATION AND CONTACTS

The table below details resources and useful contacts. Please note the majority of contacts are internal to ACC and their contact details are available on the zone. The exception to this is Ian Booth from Aberdeen Heat and Power.

### RESOURCES

- Building Research Establishment – <http://www.bre.co.uk>
- Green Guide - <https://www.bre.co.uk/greenguide/podpage.jsp?id=2126>
- BREEAM – <http://www.breeam.com>
- EPC - <http://www.energysavingtrust.org.uk/domestic/energy-performance-certificates>
- Leadership in Energy and Environmental Design - <http://www.leed.net>
- Promoting sustainable design in architecture - <http://www.ads.org.uk>
- Materials checklist - <http://www.greenspec.co.uk>
- Waste and Resources Action Programme – recycled content - <http://www.wrap.org.uk>
- <http://www.buildinggreen.com>
- <http://www.lowcarbonbuildings.org.uk/>
- <http://www.forestryscotland.com>
- <http://www.ribabookshops.com/item/green-guide-to-the-architects-job-book/55696/>

NAME	DESIGNATION	SERVICE AREA	KNOWLEDGE AREA
David Dunne	Senior Planner	Local Development Plan	Planning Supplementary Guidance BREEAM
Mai Muhammad	Energy Manager - Corporate Assets	Energy Management Team	Corporate Energy Management
Kevin Christie	Senior Domestic Energy Officer	Energy Management Team	Domestic Energy Management
Gordon Wright	Senior Project Manager	IT and Transformation Services	Digital connectivity Intelligent use of technology
Louise Napier	Senior Planner	Transport Strategy	Travel planning Alternative transport
Hannah Lynch	Waste Strategy Officer	Waste Team	Waste management
Amy Gray	Senior Sustainable Development Officer	Environmental Policy	Home Quality Mark BREEAM
Fei Zheng	Energy Co-ordinator	Land and Property Assets	Domestic Energy Management Home Quality Mark Domestic EPC Assessor BRE Approved Certifier of Design Domestic Refurbishment

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NAME	DESIGNATION	SERVICE AREA	KNOWLEDGE AREA
Ian Perry	Asset Manager, Team Leader	Land and Property Assets	Domestic building works
Neil Esslemont	Design, Team Leader	Land and Property Assets	Non-domestic building works
John Buthlay	Design, Team Leader	Land and Property Assets	Domestic and social housing building works
William Watson	Principal Architect	Land and Property Assets	Building design Social Housing
Ian Booth	Aberdeen Heat and Power	External to ACC	District heating networks
Robert Forbes	Senior Planner	Development Management	New Construction
Russell Watson	Building Standards Officer	Building Standards	New Construction
Alison Hope	Planner	Local Development Plan	New Construction Home Quality Mark
Martin Stewart	Property Inspector	Land and Property Assets	New Construction
Andrew Miller		Development Management	New Construction
Sinclair Laing	Team leader	Environmental Policy	BREEAM Communities
Laura Robertson	Senior Planner	Masterplanning	BREEAM Communities
Nigel McDowell	Senior Planner	Masterplanning	BREEAM Communities
Karen Van Eden	Environmental Planner	Environmental Policy	BREEAM Communities
Sandy Highton	Sustainable Development Officer	Environmental Policy	Home Quality Mark
Amy Perry	Project Officer	Economic Development	Home Quality Mark
Kirsty Watt	Building Standards Officer	Building Standards	Home Quality Mark
Sinclair Young	Building Standards Officer	Building Standards	Home Quality Mark
Gavin Whyte	Building Standards Officer	Building Standards	Home Quality Mark
Robert Harkin	Building Standards Officer	Building Standards	Home Quality Mark