

Strategies for a low carbon urban built environment

This document serves as a template or guide for the description of cases for Working Group 1 of COST Action C23. Cases will normally be designs and/or constructed buildings, but may also include software tools, educational programmes, or anything that can be argued is relevant to reducing carbon emissions in buildings. The focus of WG1 is on buildings rather than on infrastructure.

The document has been set up as a *form*, with named fields for collecting specific information. It is only possible, therefore, to enter content (text and images) in predefined areas. If you have difficulties with this please let me know. Chris (c.tweed@qub.ac.uk)

Case study title:

Author:

Reference:

The headings below should be relevant to most of the cases identified as relevant to this WG, but in some cases there may not be enough available information to provide a complete account. I have included some notes to try to clarify what I think could be described under each heading. These are not intended to be exhaustive, so if you think of something you consider important to document a case please include it. Please provide as much information as you can.

1. Context

This section should explain the context in which the case has been developed. If the case presented is a building this section should describe the procurement process, site selection and the socio-economic climate in which the case has grown. If there is anything unusual or interesting about the historical background to the case, this could also be described here, as well as any general aims or objectives.

2. Building

The building should be described under two sub-headings: physical features and management.

2.1. Physical features

This section should provide enough detail to allow someone unfamiliar with the case to understand how it sits within its site, how it has been constructed and what (if any) energy systems are in use. Of course, any novel aspects of the design, such as passive cooling or heating, should be described in detail, including how they are expected to operate under occupation. The description can (and should, where possible) include images as well as text.

2.2. Management

There is always the temptation to focus exclusively on the technical aspects of low carbon design at the expense of human factors, but as technical understanding improves the scope for major reductions in carbon emissions transfers to improved human understanding and operation. How is the building (or case) managed? Are there any novel methods of ensuring the case makes a significant contribution to reducing carbon emissions?

3. Performance criteria

This section should identify the criteria that will apply to the case to determine if the case has been successful. For example, this section might describe (briefly) the legislative requirements for a house that were in operation at the time the case was constructed. This section will set the initial objectives for the case.

4. Decision making

If possible, it would be interesting to know something about the processes that led to the final design of the case. What is the history of the project? Who was involved? What were their roles? Who made which decisions and why? It is often possible to identify key decisions that were made in a project that altered its future development significantly. If there are any such decisions in the selected case, record them here.

5. Cost analysis

It would be helpful to have an indication of costs. This can be a fairly simple calculation of both capital and operating costs, if possible showing the difference between conventional and low-carbon provision.

6. Carbon analysis

Clearly, for a case to have relevance to C23 it will be necessary to show to what extent the case has met, failed to meet, or exceeded the performance criteria specified in 3 above. This is particularly important for those criteria that relate to carbon emissions. However, it is not necessary for a case to demonstrate 'best practice,' since we are interested in learning from mistakes and minor failures as well as exemplars. If analyses of carbon emissions are available, this is where they could be included.

7. Key points

Summarise or highlight a few of the most important points to have emerged from documenting this case.