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**Ref: Swindon Borough Council Central Area Action Plan Examination.**

Dear Mr Kemp

Please accept this letter as written submission to the hearing sessions in relation to the Swindon Borough Council Central Area Action Plan Examination. We would like to provide evidence in support of green roofs policies.

There is a great wealth of evidence available to support green roofs. We are not able to replicate all of the studies here but will provide pointers to this documentation. However, we expanded on what we feel may be local factors in support of the Central Area Green Roof policy.

**Local factors**

Central Swindon is currently something of a "black hole" for biodiversity. Not only is this a missed opportunity for wildlife, it is also missed opportunity for people to enjoy wildlife.

In parts of the Central Area (mostly to the north of the railway line) are a number of Brownfield sites (previously developed land). These sites are unique within Swindon, as are the assemblages of plants and species that they contain. In creating a "brown roof" the substrate on which these assemblages have formed is simply taken from ground level to roof level, thereby helping to maintain biodiversity. In addition there are other environmental benefits, e.g. the materials are reused on site and therefore, there is no need to transport, lowering CO2 emissions.

The land north of the railway is also noted as being one of the few places where Black Redstart are present in Swindon. As the climate changes green roofs will offer new opportunities for species like these, spreading northwards in response to hotter drier summers.

Green roofs are diverse. Examples being;

- Roof top terraces and more traditional gardens, with good access by people. Examples have been incorporated into recent developments in the Central Area of Swindon.
- Specially erected green roofs, with limited access to people
- Brown roofs, using materials that are found on site.
- Green Facades.

Recent research (Sheffield University Biodiversity in Urban Gardens BUGS project [www.bugs.group.shef.ac.uk/bugs/bugs2.index.html](http://www.bugs.group.shef.ac.uk/bugs/bugs2.index.html) ) has shown that it is the diversity and personal preference of gardeners that enables urban environments to maintain a wide range of species. The Central Area of Swindon does not have this diversity of gardens and therefore contains little biodiversity. In adopting these policies and encouraging a range of different green roof options Swindon Borough Council would greatly enhance biodiversity in Central Swindon.

Over the past year residents of Swindon have had to endure flooding on a number of occasions. The run off from heavily built up areas such as the Central Area of Swindon is considerable. In other major developments occurring throughout Swindon Borough, Sustainable Urban Drainage Systems (SUDS) techniques are being employed to hold back peak flows and allow them to trickle through more slowly. In the Central Area of Swindon there is insufficient space to incorporate SUDS features, such as attenuation ponds, and therefore, Green Roofs would provide a realistic alternative dramatically reducing surface run off. A 1 inch deep sedum and moss roof would retain about 58% of water, whilst a 4 inch extensive grass and herb roof would absorb about 71% of water ([www.lid-stormwater.net/greenroofs\\_benefit.htm](http://www.lid-stormwater.net/greenroofs_benefit.htm) )

Nature conservation in Britain has traditionally focused on the protection of special sites, whether statutorily designated (e.g. SSSIs), other nature reserves, or Wildlife Sites. While this has been both necessary and urgent given the rapid loss of wildlife from much of the landscape over the last forty years, this reactive approach is now recognised to be insufficient in preventing the fragmentation of habitats (and subsequent decline in species).

Small and isolated habitats are particularly threatened by climate change, and are unlikely to be viable in safeguarding species in the long term. In recognition that a new approach was required, the Royal Society of Wildlife Trusts (RSWT) launched the Rebuilding Biodiversity Initiative in 2002, which requires a landscape scale approach to nature conservation – linking together areas of priority wildlife habitats into robust and extensive networks. This approach has been incorporated into the Draft Regional Spatial Strategy, which contains policies relating to Green Infrastructure. As a response to the Regional Spatial Strategy Swindon Borough Council and the Great Western Community Forest have begun work to produce a Green Infrastructure Strategy. This indicates that at a local, regional and sub regional level the Central Area of Swindon acts as a barrier. By adopting the green roof policies (and other policies within the Central Area Action Plan – e.g. Canals, green spine, transport) this barrier could be significantly overcome with benefits to both people and wildlife.

Should you have any queries in relation to this please contact Neil Pullen, Swindon Wildlife Officer, on 01793 814768.

### **General evidence.**

You may also find the following general background information helpful.

[www.livingroofs.org](http://www.livingroofs.org) is an independent website containing papers and links of both the evidence for and barriers to Green roofs. Benefits are separately detailed with accompanying text or links under the following headings:

#### **Environment**

- Air Quality
- Biodiversity

Energy Conservation  
Green space  
Health  
Heat Island effect  
Noise amelioration  
Recycling  
Surface water runoff

**Economic**

Extended roof life  
Fuel savings  
Drainage costs  
Reuse of aggregates

Further information including a number of case studies, forums and research papers can be found at [www.greenroofcentre.co.uk](http://www.greenroofcentre.co.uk)

Yours sincerely

Neil Pullen  
Swindon Wildlife Officer

Cc Swindon Borough Council (Forward planning)