

Natural benefits

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Ed Suttie explains how biophilic design can nurture us in the workplace

We all know the benefits of exercise and a good diet. But what about the buildings in which we spend most of our lives? We isolate ourselves from nature at home, at work and in daily life, and evidence abounds that this is to our detriment.

The relationship of health and well-being with buildings is complex, and depends on how we perceive and experience them. You might ask: what materials are around me? Why do I get a headache working here? Why am I calm in this space? Why am I hot when my colleague feels cold?

The [WELL Building Standard](#) , [Fitwel](#) and other certification schemes have directed attention towards the health and well-being of building occupants, and in offices this has also helped improve productivity.

These schemes also raise questions never before asked of construction and refurbishment projects. According to the [World Green Building Council](#) , staff and their benefits make up 90% of the costs of an office-based company, so it would seem wise to pay attention to people and their needs.

Inspiring design

Harvard professor Edward O. Wilson concluded in his book [Biophilia](#) that we have an inherent connection to nature, and a biological need for physical, mental and social connections with it.

The natural world therefore has a part to play in everything from our health and well-being to our livelihoods and the economy. The construction industry is no exception to this, so to integrate it with nature more effectively we can follow the principles of biophilic design, a concept that takes account of many features in workplace environments that can support health and well-being.

Research has shown that being in natural environments or even viewing depictions of nature has a positive impact on our well-being. Natural environments can alleviate negative emotions such as anger, anxiety, depression and stress, while helping us feel calm and be inspired. Biophilic design brings us into contact with nature in the built environment.



Figure 1: Biophilic design in Norway: an indoor green wall provides direct contact with nature

Leading offices in London and elsewhere are already designing environments around their occupants? health needs ? maximising natural light, clean air and so on ? as well as considering the business case.

These projects are prompting conversations and grabbing headlines, but building owners and facilities managers also want to know what they can do within limited budgets and the need to ensure a return on investment. As hard evidence has been lacking, the Building Research Establishment (BRE) has begun a [biophilic office project](#) .

Live office

BRE and [Oliver Heath Design](#) , supported by a number of partners that produce green walls, lighting and flooring or deal with furniture and acoustics, started the research project to strengthen the evidence base for biophilic design and its positive effects on office occupants. The aim is to help realise the exciting potential of our existing buildings.

A live office refurbishment on the BRE Watford campus is providing robust indoor environment and occupant data.

Baseline information is being collected this year in the existing building to quantify how it functions now, covering such characteristics as acoustics, light, air quality, thermal comfort and materials, including floor tiles, paint, doors, walls, lighting and services as well as occupants? health and well-being. The next stage is the biophilic refurbishment, after which office and occupants will be monitored for another year. A control environment has also been established, which will remain unchanged throughout the study.

The long-term findings are intended to improve understanding of the influence of biophilic design and product choices on occupants. The project will result in open guidance for facility managers, developers and building owners and occupiers, while professional institutions including [RICS](#) and the [Chartered Institution of Building Services Engineers](#) will use the findings the better to equip their members. It could ultimately inform the [Health and Wellbeing category in BREEAM](#) as well.

Biophilic refurbishment doesn't have to be extensive or expensive ? the choice of floor covering, wall paint and lighting all have significant biophilic qualities ? and choices informed by research evidence can help create positive, healthier and more energising workplaces for the future from the offices of the past.

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Further information

- Related competencies include: [Sustainability](#)
- This feature was taken from the [RICS Building Surveying Journal](#) (October/November 2018)
- Related categories include: [Inclusive design](#) , [Indoor air quality](#) , [Modern methods of construction](#)