

# Indoor Green Space: influences your health

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# Introduction

This is a text rich/image poor version of the presentation given on 8<sup>th</sup> March 2007. This version has been prepared in order to allow those not present at the workshop to gain a fuller understanding of the context of and material presented in the workshop.

The first few slides provide the context for the presentation. The approach, to focus on the extent of mental ill health in the UK and the link to environmental quality, is just one many which could have been taken.

The main body of the presentation sets out a theoretical background which can be used to explain how environmental quality does influence humans and in particular the presentation illustrates the value of plant rich environments.

The presentation concludes by indicating that this is only one part of a complex picture but an important one in influencing human health.

# A depressing story

Levels of mental ill health are high – higher than many people appreciate.

At any one time one in six people in the UK have a diagnosable mental illness

Within anyone year one in four people in the UK have a diagnosable mental illness

Within their life time one in three people in the UK have a diagnosable mental illness

WHO predicts that by 2020 depression will be second only to heart disease as a cause of disability.

White, E. (2005) *Greening the Blues*  
The Ecologist October 2005 p59



World Health Organization

# Mental (Un)well-being

[Mental illness is] our biggest social problem - even bigger than unemployment and bigger than poverty  
The economic cost of mental illness is £21bn a year.

Roughly 91 million working days are lost annually to mental distress.

Lord (Richard) Layard (2005)

A major influence on a person's mental well being is their environment. An environment which is rich in references to nature is preferred to one in which such references are lacking.

# Nature makes you feel good

“Nature and living things, it seems, make most people feel good. The idea that the quality of nature in peoples’ home neighbourhood affects their mental health is not a new one, but it has not affected either the planning of our urban and rural environments or public health priorities.”

Pretty, Peacock, Sellens and Griffin 2005



# We put greenery everywhere

- On the outside buildings
- On the Inside buildings: atria, offices, shops, hospitals, homes
- On the decorations inside our homes: wall paper, paintings, photographs, other decorations



# Main Theories

**1979** “Stress recovery” theory (Ulrich, *et al* 1991, 1983 and 1979) restorative potential of nature stems from its capacity to provide a sense of refuge.

**1989** “Attention restoration” theory (Kaplan, 1995; Kaplan and Kaplan 1989) emphasizes the long term cognitive benefits of contact with nature.

**1984** “Model of environmental effects on mental and physical health” Freeman (1984) physical, social and cultural factors impact on the nervous system and is manifest as mental or physical illness.

**1993** The “biophilia” hypothesis - humans have an innate need to be in contact with nature (Wilson, 1993). The “biophobia” hypothesis explains aversion to certain aspects of nature (Ulrich, 1993).

# Windowless work place with indoor plants vs no plants

This study documents some of the benefits of adding plants to a windowless work place - a college computer lab. When plants were added **participants were:**

**more productive** (12% quicker reaction time on the computer task)

**less stressed** (systolic blood pressure readings lowered by one to four units)

**more attentive** (an increase of 0.5 on a self-reported scale from one to five)



# The Effect of Indoor Foliage Plants on Health and Discomfort Symptoms

- The objective - to assess the effect of foliage plants in the office on health and symptoms of discomfort among office personnel.
- When plants were present (compared to absence) it was found that:
  - sum of symptoms was 23% lower
  - complaints regarding cough and fatigue were reduced by 37 and 30%
  - level of dry/hoarse throat and dry/itching facial skin each decreased approximately 23%
- Overall, a significant reduction in neuropsychological symptoms and mucous membrane symptoms, while skin symptoms seemed to be unaffected.



# Plants are beneficial to people.

- **create** an individual working environment
- **bring** colour into the room
- **give** a feeling of well-being
- **create** a live atmosphere
- **beneficial** for a positive mood
- **help** to overcome stress
- **regulate** the climate - influence humidity and improve air quality
- **absorb** carbon dioxide and other harmful substances
- **emit** oxygen and they **bind** dust

The overall effects are that people who work in environments where there are plants have:

- fewer colds
- lower levels of formaldehyde, and
- a greater sense of general well-being
- **Formaldehyde** is a colourless, organic chemical and an excellent preservative and bonding agent. It is found in lipstick, toothpaste, soft drinks, shampoo, kitchen cabinets, carpeting, and wall boards. Some of the everyday symptoms of exposure to formaldehyde are eye, nose and throat irritation, coughing, skin rashes, headaches, dizziness, nausea, vomiting and nosebleed.

# Plants are good for you

- Ulrich – Theory of Supportive Design
- General Guidelines
  - A sense of control with respect to physical surroundings
  - Access to social support
  - Access to **positive distractions**
- **Positive distractions:**
  - **Nature such as trees, plants and water**
  - Laughter, comedy
  - Caring or smiling human faces

One of the recognised techniques for improving the level of happiness in:

**4. Plant something - Even if it's a window box or pot plant. Keep it alive!**

see [bbc.co.uk/lifestyle](http://bbc.co.uk/lifestyle)