

# BUILDING SUSTAINABLE SOLUTIONS

2004 - 2010 with Declaration of Intent



Ford Centre of Engineering and Mechanical Excellence (CEME), Dagenham ©BP Solar



BP Solar has supplied the solar panels to the new Centre for Engineering & Mechanical Excellence (CEME) which Ford has built with support from the UK Government. Solar power is a crucial element in creating a high tech image and the building is specifically designed to generate maximum solar energy through the position and angle of the roof. The installation includes PV modules on the roof and the latest building integrated BP Solar Powerglaz technology (BIPV) on its glass canopy at the main entrance of the building. The installation is 115kWp, which made it the largest solar installation in the UK when opened by Tony Blair, Prime Minister and Bill Ford, Ford Motor Company President.

"Since last Autumn's Better Building Summit, the issues of climate change, greener energy supplies and sustainability remain top of the agenda. Sustainable construction will be a key element of how we deal with these issues and literally how we choose to build our own future."

Patricia Hewitt,  
Secretary of State for  
Department of Trade and  
Industry

"The built environment is at the heart of our economy. It shapes how we all live our lives. But the manner in which it consumes natural resources means that it is responsible for some of the most serious global and local environmental change. The way we use natural resources for building, and the levels of pollutants emitted in the process of building and in the use of buildings, once occupied, are unsustainable. The construction industry must embrace more sustainable forms of building. This means buildings that meet the needs of society and stimulates the economy, but with higher environmental performance, particularly in terms of energy and water efficiency and waste management."

Sir John Harman and Victor Benjamin  
Better buildings - better lives, Sustainable Buildings  
Task Group Report

"Climate change is probably, in the long term, the single most important issue we face as a global community - the issue is now very, very, critical indeed."

Prime Minister  
Tony Blair,  
Parliamentary  
Monitor June 2004

# DECLARATION OF INTENT

## Building Sustainable Solutions, 2004 - 2010

**As partners in the Building Sustainable Solutions (BSS) partnership initiative we commit to work with all stakeholders in the first stage preparation and planning of regeneration, major building and construction projects seeking to ensure the integration of the following environmentally sustainable objectives:**

- Designing and constructing buildings with a low carbon threshold through the use of sustainable energy efficient building materials and renewable and sustainable energy technologies
- Minimising the use of construction materials and techniques which put human health and the local environment at risk
- Minimising the use of energy and waste intensive building techniques
- Maximising the use of locally produced environmentally sustainable building materials
- Maximising the integration of building design elements to enhance building user comfort
- Maximising the use of recyclable and recycled aggregates for use in construction
- Designing and constructing buildings which minimise water wastage and demand and maximise rainwater and greywater recycling
- Designing and constructing buildings to maximise the use of ICT (information and communication technology) building controls to minimise energy demand and usage
- Provision should be made in a building design for the integration of waste management and waste recycling facilities.
- Provision should be made for O&M (operation and maintenance) of buildings to be at the same standard as that used for their environmentally sustainable design and construction
- Provision should be made in a buildings design and construction for changes in the local climate such that a building can be adapted incrementally over time
- Provision should be made in a buildings design and construction for the inclusion of further energy saving elements
- Best value in the built environment should equate to environmentally sustainable best practice with a view to whole life-cycle costs and long term efficiency

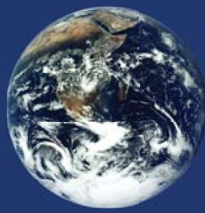
Note: The objectives set out above have been formulated through careful consideration of the Better buildings - better lives, Sustainable Buildings Task Group Report and Directive 2002/91/EC of the European Parliament and of the Council of 16 December 2002 on the energy performance of buildings.

## Action Points of Initiative

The first year of the BSS partnership initiative programme following the launch event with 130 companies, organisations and agencies on Tuesday 6 July 2004 (speakers included Paul Appleby, Chris Bridge, Sophie Churchill, Adrian Davies, Terry Dix, Rod Griffin, Dr Katherine Hyde, Ray Noble) and the Climate Change Solutions Co-ordinating Group meeting on Friday 3 September 2004 (speakers included Paul Appleby, Robert Browett, John Christophers, Michael Ciotkowski, Chris Donovan, Sue Innes, Keith Montague, Ant Wilson, apologies: Dr Katherine Hyde, Lucy Yorke) will include:

- A series of half-day workshops in 10-12 main cities to engage senior decision makers at a regional and city level on the environmentally sustainable buildings agenda, which will lead to a one-day Building Sustainable Solutions conference on Wednesday 25 May 2005
- Promotion of building design to the EU directive on the energy performance of buildings
- Promotion of the establishment of a Code for Sustainable Buildings (CSB) as recommended by the Sustainable Buildings Task Group
- Promotion of advanced ICT in building design to lower carbon emissions
- Encouraging appropriate student placement and employee training schemes in environmentally sustainable building design and construction
- Promotion of environmentally sustainable spatial planning
- Promotion of environmentally sustainable supply chain management systems





## Aim

Create a multi-purpose world-class Centre demonstrating and promoting global and local best practice solutions to adapt to as well as mitigate and counter the growing threat of climate change.

Complement the vision and creative design of the Eden Project.

The Centre will focus on the impact of human society on the environment and the urgent necessity for a paradigm shift toward an environmentally sustainable future in the 21st century. Central to this is the need to confront the growing threat from climate change with the imperative of generating solutions encompassing the strategic objectives of a low carbon clean technology future.

## Centre vision and ethos

Create a window to an environmentally sustainable world which will engage, inform and motivate mainstream society locally and globally.

Create a facility that combines environmentally sustainable design and construction with an inspirational content that can attract, motivate and support the widest range of participants from all sectors domestic and international.

The building should be an exemplar of advanced environmentally sustainable design with a low to zero carbon footprint. It should encompass the very best energy efficient and environmental management systems including goods and service procurement. The building design should fulfil the key objectives of the Building Sustainable Solutions (BSS) initiative 'Declaration of Intent'.

## Centre outline

### CORE CENTRAL BUILDING

Providing information/reception, administration, lifts, stairs, restaurants and meeting points with a major photo exhibition.

### THE CONTINENTS

Five cylindrical buildings interlinked with the core central building representing the five continents of the earth and their interdependence.

### Lower ground floor – KNOW-HOW AND SHOW-HOW

Provide capacity for flexible theatre space, films, conference, workshops, live performances, small poster exhibitions and bistros.

### Ground floor – A SHARED EARTH

The five continents each represented by a building sharing cultural, public and business activities featuring and promoting environmentally sustainable development and the shared need to counter climate change.

### First floor – THE MODERN WORLD

Each of the five buildings would feature one of the key environmentally sustainable challenges of the modern world transport, buildings, energy/water, industry and food/farming, displaying environmentally sustainable best practice and new opportunities.

### Second floor – MANAGING CLIMATE CHANGE SOLUTIONS

Leased facilities for major UK and international agencies and organisations, companies and institutions promoting environmentally sustainable development including trade, investment and international partnerships, knowledge and technology transfers.

### Third floor – THE UNIVERSAL EYE

Conservatory and meeting space with restaurant, and hospitality facility for second floor.

### WALK THE WORLD

A major feature would be a conservatory garden that would surround the perimeter of the buildings with five gardens, one for each continent displaying environmentally sustainable plant growth and endangered species from around the World.

### A VIRTUAL WORLD

The building will make maximum use of and showcase the very latest ICT including provision of network and satellite links to all centres locally and globally on climate change and the wider development of environmental sustainability. Real time visual access to conferences and events on sustainable development globally will be made available to registered users. The Centre will be used to demonstrate the potential of the knowledge economy to help deliver a low carbon clean technology future.