

Sustainable Development:

NHS ENVIRONMENTAL ASSESSMENT TOOL

Lorraine Brayford

DH EFD Sustainable Development Programme Manager

Northern NHS Estates TAG

Friday, 13th July 2007

Conference Centre, Wrightington

NHS ENVIRONMENTAL ASSESSMENT TOOL



BACKGROUND:

- Gov Sustainability Action Plan
 - Joint Funding - NHS Estates/DTI
 - Based on BREEAM (Building Research Establishment's Environmental Assessment Method)
 - Sustainable Development as a requirement on Gov bodies
- Links to:
 - Procure 21/ PFI/LIFT process
 - ERIC
 - AEDET

AIMS AND ASPIRATIONS:

- Raise environmental awareness within NHS facilities and services
- Estimate the environmental impact of NHS facilities and services
- Seek to establish an environmental improvement programme

- Estimating environmental performance
- Specifying performance
- Monitoring ongoing performance

NEAT – What does it cover?



- Management
- Energy
- Transport
- Water
- Materials
- Landuse and Ecology
- Pollution
- Internal Environment
- Social
- Operational waste

Version 1.0

For existing sites

NEAT aims: Raise awareness of environmental facilities and estimate the environmental impact of NHS facilities and

This shows the rating achieved

This is an assessment of This is a site within

These are the navigation buttons

This table shows the percentage required to achieve each rating

Provisional

between 39	red
between 54	amber
between 70	green
between 100	best practice
%	Rating
0	Unclassified
more than 25	Pass
more than 40	Good
more than 55	Very Good
more than 70	Excellent

RATING
(Pass, Good, Very Good, Excellent)

Good

You have entered 1 Unit Name

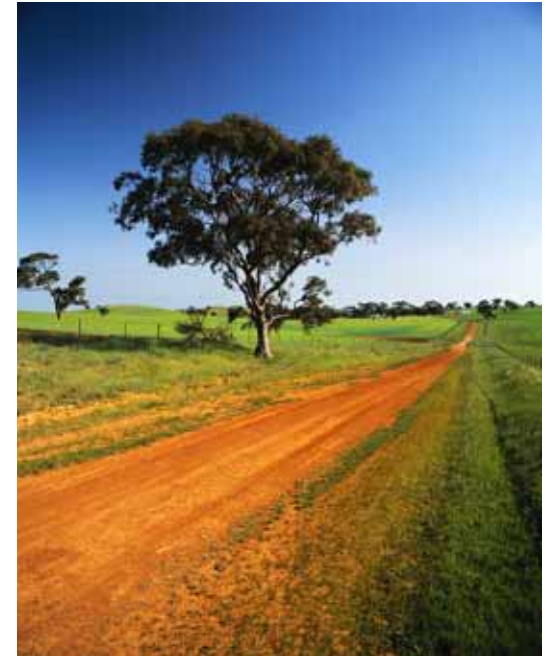
	Score	Weighting	weighted score
Management	34%	15	5.1
Energy	49%	15	7.3
Transport	64%	10	6.4
Water	33%	5	1.7
Materials	50%	5	2.5
Landuse/Ecology	0%	10	0.0
Internal Environment	50%	15	7.5
Pollution	22%	10	2.2
Social	6		6.3
Operational Waste	5		2.7
Results Chart			1.75

Click this button to show the chart.

BREEAM FOR HEALTHCARE

B4H WHY?

- NEAT issued 2002
- Revision and update for:
 - legislation
 - Government requirements
 - Departmental policy
 - Developing and changing standards
- NEAT self assessment
- B4H accreditation process
 - Raise credibility & profile
 - Monitoring
 - Recognise achievement
- WHEN? – autumn **2008**



BREEAM FOR HEALTHCARE

- B4H – why?

WHAT IS A SUSTAINABLE HEALTHCARE BUILDING?

“A building with give and not just take. An organisation with standards that matter. An organisation that cares and is seen to care”

Buildings that address:

- Low carbon ↪ carbon neutral ↪ zero carbon
- Waste a RESOURCE – reduce; reuse; recover; recycle
- Transport friendly – location; accessibility; alternatives
- Water efficient – conservation
- Promotes good land use for healthcare & communities
 - Site Waste Management Plans
 - Biodiversity Action Plans
 - Health promotion ie natural ventilation, light and sight



CLIMATE CHANGE NHS MANDATORY ENERGY/CARBON EFFICIENCY TARGETS



Reminder – Energy/Carbon Efficient Buildings

To achieve this we have introduced two sets of mandatory targets for NHS bodies in England to:

- 1. reduce the level of primary energy consumption by **15% or 0.15 MtC (million tonnes carbon) from March 2000 to March 2010**[\[1\]](#)
- 2. achieve a target of **35-55 GJ/100 cu.m.** energy efficiency performance for the healthcare estate[\[2\]](#) for all new capital developments and major redevelopments or refurbishments; and that all existing facilities should achieve a target of **55-65 Gj/100 cu.m.**

[\[1\]](#) DETR *Climate Change Programme*

- [\[2\]](#) NHS Estates *Developing an Estate Strategy*

B4H - LEGISLATIVE UPDATE

- **EU EMISSIONS TRADING SCHEME**
 - Applies 20 megawatts thermal capacity - De minimis 3 MW
 - phase II – **New Entrants Reserve**
- **BUILDING REGULATIONS 2006**
 - Updates - 2010; 2013; 2016
- **ENERGY PERFORMANCE OF BUILDINGS DIRECTIVE**
 - Energy Performance Certificate
 - Display Energy Certificate
- **CARBON REDUCTION COMMITMENT**
 - half hourly metered electricity consumption of 6,000 + megawatt hours per annum



ENERGY PERFORMANCE OF BUILDINGS DIRECTIVE (EPBD)



- ARTICLES 7 – 10 cover:
 - Energy Performance and Display Certificates
 - Boiler inspections
 - Air conditioning inspections, and
 - Qualifications
- Aim – to influence attitudes of developers and occupiers to the carbon efficiency of buildings
- Buildings to be independently assessed
- All certificates will be held on a central register
- Forthcoming Energy End Use Directive will make it a requirement for access to energy consumption data (metered bills)

EPCs & DEC

Article 7 – Energy Performance Certificates (EPC)

- **April 2008** all newly constructed non-dwellings
- Dwellings with a floor area up to 500m² for sale or rent
- **October 2008** include all remaining non-dwellings i.e. NHS
- EPC will last 10 years
- Allows comparison of a building's assets on a consistent basis: energy calculation by the standardised new National Calculation Method; & indicate how the building might be improved

www.ncm.bre.co.uk/index.jsp

Display Energy Certificate (DEC)

- **April 2008** all public buildings 1000m²
- DEC of metered energy consumption in the entrance foyer
- All public buildings Valid for 12 months
- Indicate how well building being operated; in-use performance compared to benchmarks; and how to improve management, operation, fabric, plant



B4H – need & justification

Government requirements

SUSTAINABLE CONSTRUCTION

- Draft Strategy for Sustainable Construction (Dti)
 - Zero carbon
 - Zero waste
- Code for Sustainable Housing
 - 6 levels of commitment
- Building a Greener Future (DCLG)
- Sustainability of New Non Domestic Buildings (DCLG)



B4H – need & justification

Government requirements



GOVERNMENT COMMITMENT – UPDATE/cont..

- Building a better quality of life – strategy for more sustainable construction (2000)
- Constructing the Best Government Client – Achieving sustainability in construction procurement – Sustainability Action Plan (2000)
- Communities Plan *Sustainable Communities: Building for the Future* (2003) – programme of action for economic, social and environmental development
- Achieving Excellence in Construction – Procurement Guide 11 – Sustainability
- Sustainable Operations of the Government Estate
- National Sustainable Procurement Task Force Report

SITE WASTE MANAGEMENT PLANS

- Increasing number of construction sites
- 400 m tonnes construction materials p.a. – 1/3rd wasted
- Illegal dumping/Fly tipping – 1/5th construction or demolition waste
- Incidents/accidents/organised gangs

SWMP:

- Details amount and type of waste on construction site
- Forecast how waste will be reused, recycled or disposed of
- Updated during construction process
- Record how waste is managed
- Confirms disposal arrangements for waste that cannot be recycled at a legitimate site

Whose responsibility?

- Principal contractor to produce
- Trust to ensure it is available for their capital schemes over £250,000

ENVIRONMENTAL MANAGEMENT

ENVIRONMENT

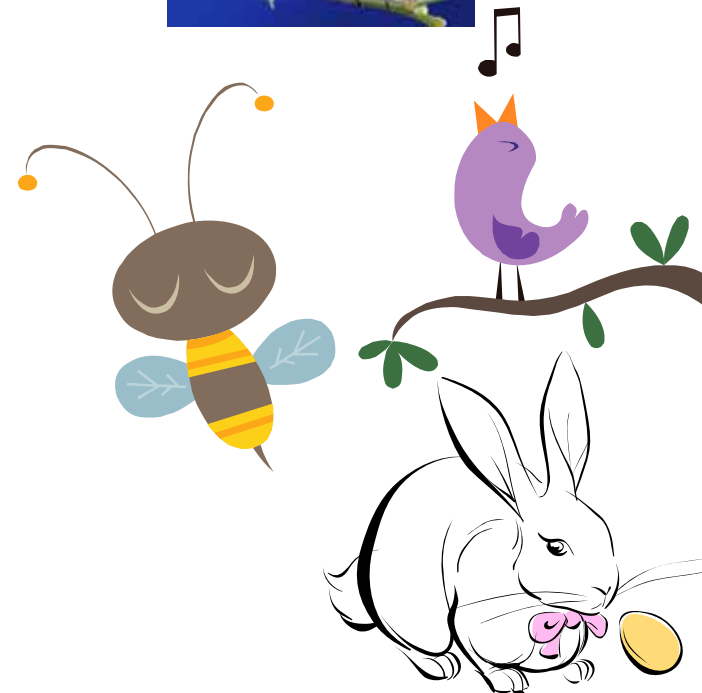
- Environmental Liability Directive

BIODIVERSITY

- Natural Environment and Rural Communities Act
 - Section 40 requires Biodiversity Action Plans from 1st October 2006

TOOLS/GUIDANCE:

- NEAT/BREEAM for Healthcare (later 2008)



HTM 07 Guidance



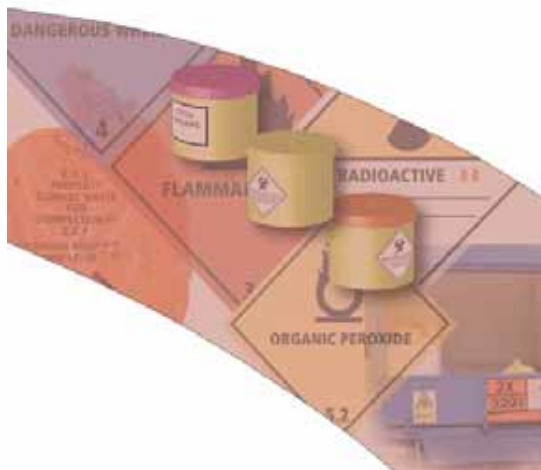
Environment and sustainability
Health Technical Memorandum
07-01: Safe management of
healthcare waste

07-01 Safe Management of
Healthcare Waste
07-02 EnCO₂de
07-03 Transport
Management and
Car Parking



Health Technical Memorandum
07-03
Transport management and car-
parking

Environment and sustainability



Health Technical Memorandum 07-02:
EnCO₂de –
making energy work in healthcare

Environment and sustainability



NEAT
NHS
Environment
Assessment
Tool

Finance Directorate



SHINE

**Learning network for sustainable healthcare
buildings**

WHAT IS SHINE?

SHINE Network aims to help NHS Trusts improve sustainability of their buildings by providing a learning network with guidance, case studies, events and training covering all aspects of sustainable buildings and how they can be delivered.

www.shine-network.org.uk

SHINE

Learning network for sustainable healthcare buildings



Delivery Team -

- Construction Industry Research & Information Association (CIRIA)
- Constructing Excellence in the Built Environment
- Forum for the Future
- Sustainable Development Foundation

Partners –

- DH EFD
- Procure21
- London NHS
- Partnerships for Health
- Sustainable Development Commission
- The Future Healthcare Network
- The Ashden Trust

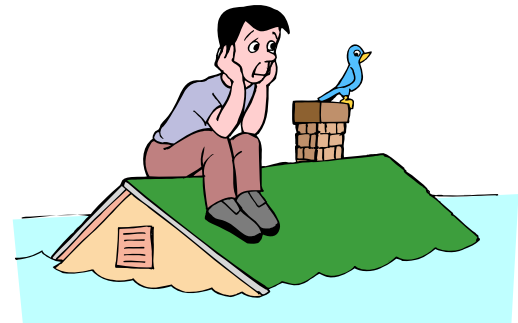
Finance Directorate

NHS – WHAT TO DO?

- Senior level buy in
- Project Team
 - skill mix and expertise is crucial
 - Understand impact of sustainable development
 - Social – impact on community/considerate contractor
 - Economic – efficiency savings
 - Environmental – reduce negative impact
- Best value approach
 - Lowest initial price is not always cheapest end cost
 - Whole life costing is key

NHS WHAT TO DO NEXT?

- Design for flexibility
 - Healthcare developing standards
 - Reform requirements
 - Legislation and regulation
 - Climate Change – weather change scenarios
 - Floods and droughts
- Be prepared to innovate
- Research grant and funding opportunities



- **Leighton Hospital, Cheshire, CW1 4QJ** - sensors monitor natural light levels and adjust internal lighting. Lighting pre-programmed
- **St Charles' Hospital, London, W10 6DZ** - saved £1200 a year with a microprocessor to control light level based on natural daylight
- **Barnsley Primary Care Trust, South Yorkshire** - installation of ground source heat pump to provide heating. Estimated a 50% lower carbon emission than a traditional heating system and save around £1.7m over the whole life of the system
- **Great Western Hospital, Swindon - saved £1.7M**

**Dispel the myth – it does NOT cost more to be sustainable
Don't build a legacy of costly inefficiency**

B4H

USEFUL WEB SITES:

Department for Communities and Local Government

www.communities.gov.uk

Department for Trade and Industry

www.dti.gov.uk

Department of the Environment, Food & Rural Affairs

www.defra.gov.uk

Department of Health

www.dh.gov.uk

Carbon Trust

www.thecarbontrust.co.uk

Waste & Resources Action Programme

www.wrap.org.uk

Alliance for sustainable Buildings

www.shine-network.org.uk

Thank you and have a nice day!



Lorraine Brayford
Sustainable Development
Programme Manager
Department of Health



Lorraine.brayford@dh.gsi.gov.uk

0113 254 6328



Finance Directorate