

**bre** SUSTAINABILITY REPORT  
2006/2007





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## 1.1 BRE GROUP CHIEF EXECUTIVE STATEMENT

Living and operating as sustainably as possible is a challenge which must be embraced by corporations and individuals alike. We at BRE believe that sustainability is at the heart of good business and the BRE Group has set a challenging agenda with some tough targets which we will work tirelessly to meet.

Our aim is to build upon our progress and continually improve our performance year on year. We aspire to be not just amongst the best, but an exemplar sustainable organisation helping to improve the quality of life for our staff, customers and the public whilst protecting and preserving the planet and its natural resources.

## 1.2 MISSION AND VALUES

The BRE Group's mission is to **build a better world** and our vision is our **unmistakable imprint on a highly regarded and sustainable built environment**.

Our core values are:

- The authority which derives from knowledge, independence, objectivity and ethics
- Maximising client benefit through a deep understanding of their needs and aspirations
- Making a difference
- Enjoying what we do as a team
  - Pride, passion and service
  - Personal responsibility and self-reliance
  - Creativity and entrepreneurship.

We aim to monitor progress towards our vision through the following milestones:

- By 2008 to be able to gift aid 6% of our net turnover to the BRE Trust
- By 2010 to be a best practice exemplar in our own business
- By 2010 to have used our core competencies to achieve a strong business outside of the built environment
- By 2012 to have doubled our turnover in real terms
- By 2015 to be recognised worldwide as providing leadership in sustainability, innovation and safety in the built environment.

Progress towards more specific environmental and social targets are also measured and these are highlighted later in this report. As much of the BRE Group's core business is directly connected with helping others to improve their environmental performance and the environment around them, it is essential for us to practice what we preach and thus ensure our operations and activities are being managed in a way which is both energy and resource-efficient.

To meet this commitment, the BRE Group has a formal Environmental Policy in place with BRE certified against the ISO 14001 Environmental Management System standard.



## 2.1 NEW GROUP STRUCTURE

April 2007 saw the creation of a new holding company to manage the assets of the BRE Trust and support the growth of the Group. The two principal Group companies, BRE and BRE Certification report to the holding company, which is also responsible for nurturing new businesses such as BRE Ventures, BRE Training and BRE Ireland.

The BRE Group Holding Company sets overall Group policy on sustainability, health, safety and environment, quality, human resources, financial management and other key areas of governance. It is responsible for ensuring that these are implemented within the Group Companies.

## 2.2 OPERATIONS

Every working day, over 600 research scientists, engineers, architects, surveyors, psychologists, administrators, managers and many others on BRE sites bring together their expertise, skills and knowledge to advise clients on issues as wide ranging as:

- Construction quality, process and productivity
- Innovation and product development
- Sustainable development
- Environmental impact of construction
- Whole-life performance
- Energy efficiency of buildings
- Renewable energy in buildings
- Certification of products, systems and people
- Building performance; structures, materials and systems
- Prevention and control of fire
- Security
- Risk management.

**Why do we do it?** Because we share a passionate commitment to help the UK's built environment industries to be the best.

The BRE Group is committed to making its comprehensive expertise and experience available to benefit those involved in construction and associated industries, from multinational companies and government departments to individual architects and builders. It does this through:

- Commissioned research, development and testing programmes for individual clients and consortia
- Consultancy and advice
- Product testing for certification purposes
- Best Practice programmes (e.g. Energy Efficiency; Construction Best Practice)
- Publication of BRE Digests, Good Building Guides, Good Repair Guides, research reports, books, etc.
- Conferences, seminars, workshops and other events
- Training and assessment
- E-commerce activities (including BRE's online bookshop at [www.BREbookshop.com](http://www.BREbookshop.com))

A complete review of the BRE Group's services can be found on our website at [www.bre.co.uk](http://www.bre.co.uk)

## 2.3 STAKEHOLDERS

The BRE Holding Company (BRETAM Ltd) is owned by the BRE Trust, a registered charity with a mission to champion excellence and innovation in the built environment. This ownership structure enables the BRE Group of companies to be held as a national asset on behalf of the construction industry and its clients, independent of specific commercial interests. It also maintains the BRE Group's impartiality and objectivity in providing research and advice.

Through its research programmes, the BRE Trust aims to achieve:

- A higher quality built environment
- Built facilities which offer improved functionality and value for money
- A more efficient and sustainable construction sector
- A higher level of innovative practice.

Further information on the BRE Trust, including details of the trustees and its programme of activities, can be found at [www.bretrust.org.uk](http://www.bretrust.org.uk)



## 2.3 ENVIRONMENTAL POLICY

The BRE Group is the pre-eminent centre for research in the built environment within the United Kingdom, with much of our core business concerned with helping others to improve their environmental performance. We aim to ensure that our operations and activities are managed in an energy and resource-efficient manner, in order to minimise detrimental impacts on the environment.

Our environmental policy is to:

- Comply with all relevant legislation
- Seek continual improvement in our environmental performance
- Contribute to economic, environmental and social sustainability in the short and long term.

A director on the BRE Group Holding Company is responsible for the policy across the Group. Specific responsibilities have been established within the Group companies for implementation of the policy.

This will be achieved by:

- Maintaining an environmental management system
- Setting objectives and targets to minimise the environmental impact of our operations
- Training our employees to achieve and maintain high standards of environmental performance
- Using products and processes that assist in reducing the environmental life cycle impacts of our activities and those of our clients and suppliers
- Communicating openly and consulting with stakeholders on environmental issues.

### Guy Hammersley

BRE Group Director  
July 2007

## 2.4 HEALTH AND SAFETY POLICY

The BRE Group is the pre-eminent centre for research in the built environment within the UK, with much of our core business concerned with helping others to improve their safety performance. Our vision is a working life without accidents. Our operations and activities are managed in a manner which aims to eliminate or reduce to a minimum, any risks to the health and safety of our employees, visitors and contractors.

Our health and safety policy is to:

- Comply with all relevant legislation
- Seek continual improvement in our safety performance
- Make health and safety an integral part of our business success.

A BRE Group Director is responsible for the policy across the BRE Group. Specific responsibilities exist within the Group companies for implementation of the policy.

This will be achieved by:

- Working to a system aligned with ISO 9001
- Setting goals and action plans to ensure continuous improvement in our safety performance
- Training our employees to achieve and maintain high standards of health and safety performance
- Encouraging the use of new technologies and processes to facilitate the effective management of health and safety
- Communicating openly with staff, customers, suppliers and contractors on health and safety issues.

The foundation for our success is our core values:

- Nothing is worth getting hurt
- Health and safety is everyone's responsibility
- Health and safety is integral to everything we do and to the success of our business.

### Guy Hammersley

BRE Group Director  
July 2007



# 3 SOCIAL RESPONSIBILITY

Section 3.1 provides information on the staff profile across our business in 2006/07. Section 3.2 details progress made towards health and safety over the past year. We conclude by looking at the BRE Group's involvement in the local community.

## 3.1 STAFF PROFILES AND DIVERSITY

Table 1 provides a clear picture of the staff profile across the different bands within the BRE Group. A band is the broadest measure of an employee's position within the organisation. For each band category there is a generic role profile which sets out specific accountabilities, performance measures, knowledge, experience and behaviours expected of staff. However, staff within the same band can and do have very different jobs.

The band range goes from A up to G and above for senior management. These categories and their particular attributes are used as a part of the performance and development review process and they are an essential component of staff development procedures.

The numbers in brackets represent comparative data from 2005/06. Please also note that BRE has recently undergone a restructuring, and therefore the future management structure will be slightly different to that presented below.

**Table 1:** Band profiles across the organisation broken down by gender (source: HR department as of 10 May 2007)

Band	Example of role types	Number of females	Number of males	Total	% of staff in band (as of 10/05/07)
A	Junior Admin/Student Placements	10 (10)	4 (2)	14 (12)	2.4% (2.1%)
B	Admin/Consultants & Technicians	62 (53)	41 (30)	103 (83)	17.4% (14.6%)
C	Senior Consultants & Technicians	82 (77)	90 (85)	172 (162)	29.0% (28.5%)
D	Senior Consultants	45 (46)	119 (124)	164 (170)	27.7% (29.9%)
E	Principal Consultants	15 (14)	85 (81)	100 (95)	16.9% (16.7%)
F	Centre Directors	3 (3)	16 (21)	19 (24)	3.2% (4.2%)
G	Divisional Managing Directors	1 (1)	3 (4)	4 (5)	0.7% (0.9%)
I	Chief Executive	0 (0)	1 (1)	1 (1)	0.2% (0.2%)
	Other (includes BRE crèche)	11 (12)	5 (5)	16 (17)	2.7% (3.0%)
	<b>TOTAL</b>	<b>229 (216)</b>	<b>364 (353)</b>	<b>593 (569)</b>	<b>100%</b>

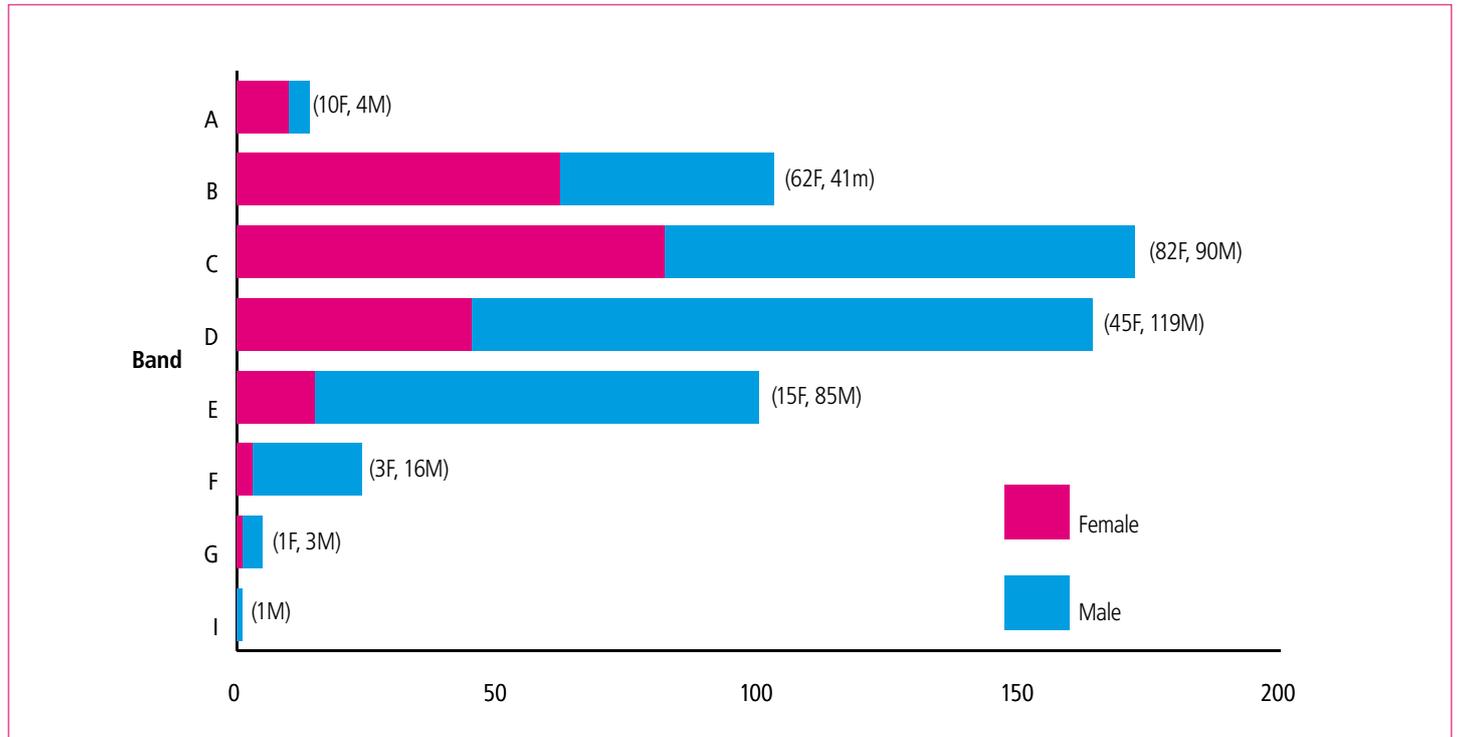
N.B. Numbers in brackets represent comparative data from 2005/06

Human Resources records and monitors ethnicity of BRE Group staff. This data is sought from all employees but the decision to provide information is entirely at the discretion of the individual staff member.

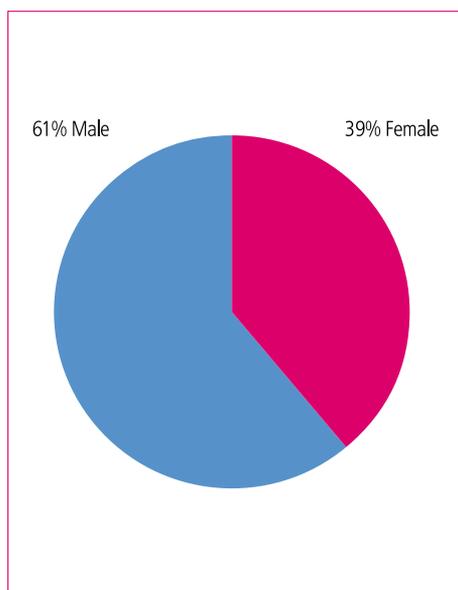
In 2006/07, we have ethnicity data for 81% of staff of which 90.7% have defined themselves as 'white' and 9.3% as from other ethnic groups. This therefore shows an increase of 1.3% in staff from other ethnic groups.

In 2005/06, we reported that 79% of staff had provided information on ethnicity of which 92% defined themselves as 'white' and 8% as from other ethnic groups.

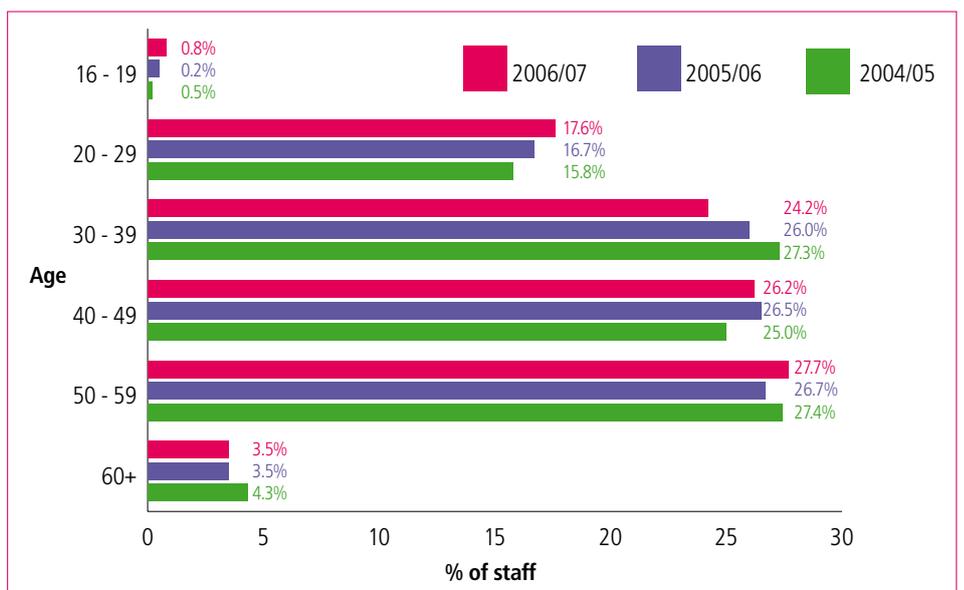
Human Resources also records and monitors disability in the workforce. In 2004/05, six employees described themselves as disabled, and in 2005/06, this figure dropped to four. In 2006/07, we have five employees who describe themselves as disabled.



**Figure 1:** Gender information across bands in 2005/06 (source: HR department as of 10 May 2007)



**Figure 2:** A profile of staff gender across the organisation (source: HR department as of 14 May 2007)



**Figure 3:** A profile of staff age across the organisation over the past three years (source: HR department as of 15 May 2007)

## FLEXIBLE WORKING

In 2004 through to 2005/2006, the BRE Group employed 72 staff on a range of part time contracts. In 2006/07, we now employ 63 staff on a range of part time contracts.

Flexible working is encouraged informally too, through general working patterns of staff. Home working is quite common and Figure 4 illustrates the percentage of staff who work from home. The number of staff who say they never work from home has fallen from 62% to 51% in 2006/07. Whilst there has not been a dramatic shift in staff regularly working from home for a day or more per week, there is a shift towards flexible working with staff far more likely to work from home where the need arises. This is reflected in the 25% that work from home 1 day or less per month, and 16% of home-workers who work 2-3 days per month.

Furthermore, 74% of survey respondents have indicated that they would be willing to work from home more often than they do currently, and of those, 41% would be willing to work one day a week from home. This would be a significant shift in home working and something the BRE Group wants to encourage. Providing further guidance to staff on home working practices and the associated benefits will be addressed as a part of the new Green Travel Plan to be developed in 2007/08.

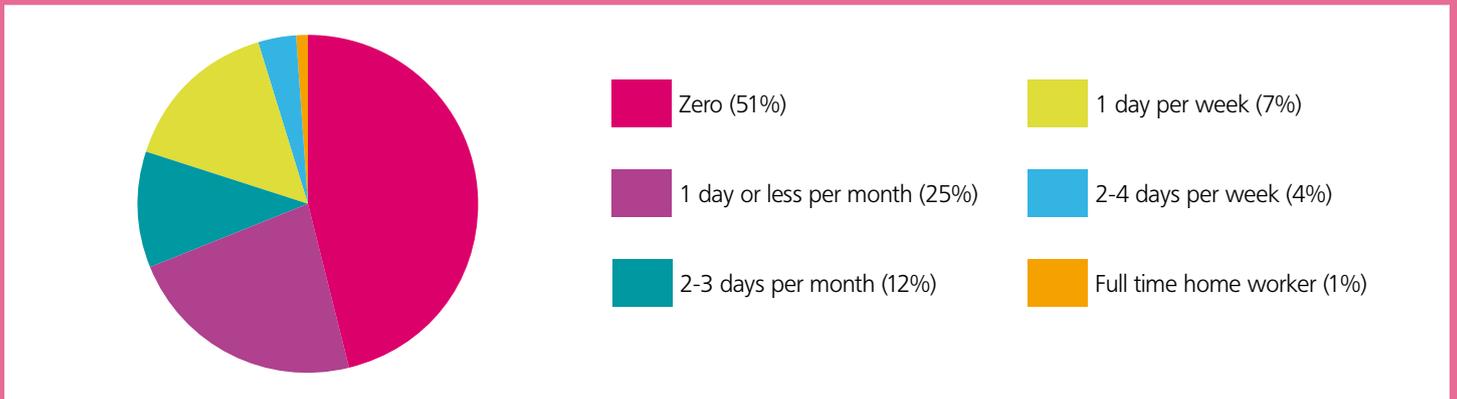
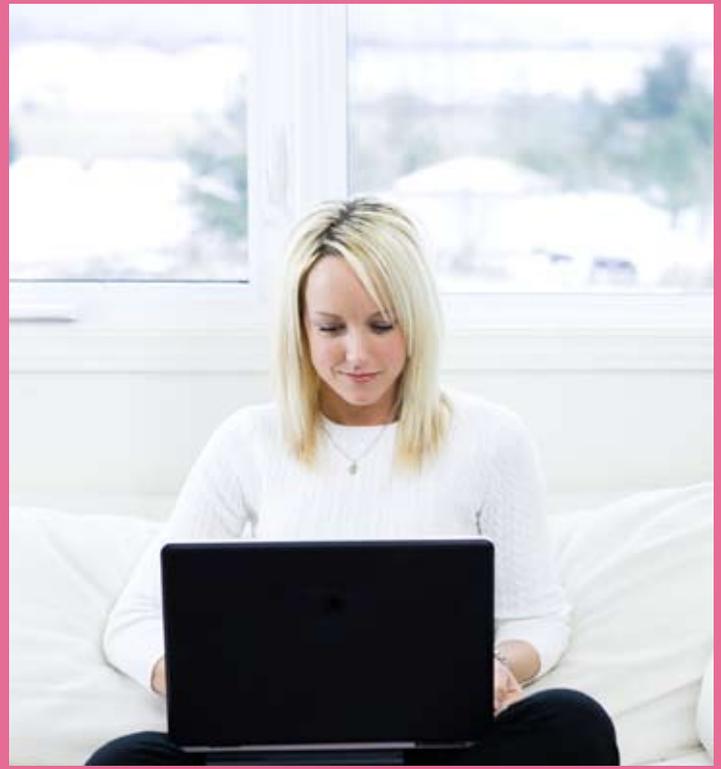


Figure 4: Staff home working patterns (source: BRE staff transport survey 2007)

## 3.2 EMPLOYEE WELL-BEING / HEALTH AND SAFETY

### Achievements

During 2006/2007, we continued to make significant progress in developing our policy of continuous improvement in health and safety. Some key achievements are listed below:

- Occupational health.** The occupational health service was further developed, providing significant help in managing long term employee illness, musculoskeletal disorders and in equipping BRE with the skills and equipment to carry out audiometry testing.
- Working safely committee.** The working safely committee successfully delivered a number of critical projects leading to new procedures and improvements in the management of contractors, hazardous substances, first aid and emergency response, and risk assessment.
- Fire safety.** Essential remedial measures to our buildings have been identified and undertaken. Further measures are being assessed in view of changing business activities and appropriate actions will be implemented. A new sweeper disc system has also been implemented and there has been a comprehensive programme of staff training, whereupon a major emergency practice exercise was undertaken.
- Training.** More health and safety training has been delivered than ever before. Site-wide, regular mini training sessions were successfully introduced and training is being tailored to meet the specific needs of the different Groups.
- Communication.** A set of playing cards communicating health, safety and fire behaviours were designed and distributed to all employees.
- BRE Safety Case presented at IOSH 07.** The BRE Health and Safety Manager presented a paper on contractor management at this year's IOSH annual conference.

## Accidents

During 2006/2007, we received 30 entries in the Accident Book. This represents a drop of 39% compared with 2005/2006 (49 entries). 23 were BRE employee accidents and 7 were contractor/visitor accidents. Figure 5 illustrates the types of injuries resulting from these accidents.

There were no accidents resulting in lost work time in 2006/07; a great improvement over 2005/06 where there were six lost work time accidents. Moreover, there were no RIDDOR reportable accidents in 2006/07.

The accident rate for 2006/2007 was an LTAR of 0.0

$$\text{*Lost Time Accident Rate} = \frac{\text{Number of Lost Time Accidents} \times 1,000,000}{\text{Number of Hours Worked in Period}}$$

With the introduction of BRE's campaign of continuous improvement in health and safety, our reporting of accidents and incidents has improved, which we believe to have had a positive effect on staff. This has resulted in fewer accidents occurring compared with 2005/06. It is imperative that we continue to encourage staff to report all accidents, however minor, as this enables potential hazard areas to be identified and improvements made to our management procedures and working practices.

## Staff health

The percentage of days lost due to sickness across the BRE Group during 2006/2007 was 2.78%, which represents a fall of 0.24% on the previous year. In total, there were 4,236 days of absence between 01/04/06 and 31/03/07, which represents an average of 7.2 days per employee.

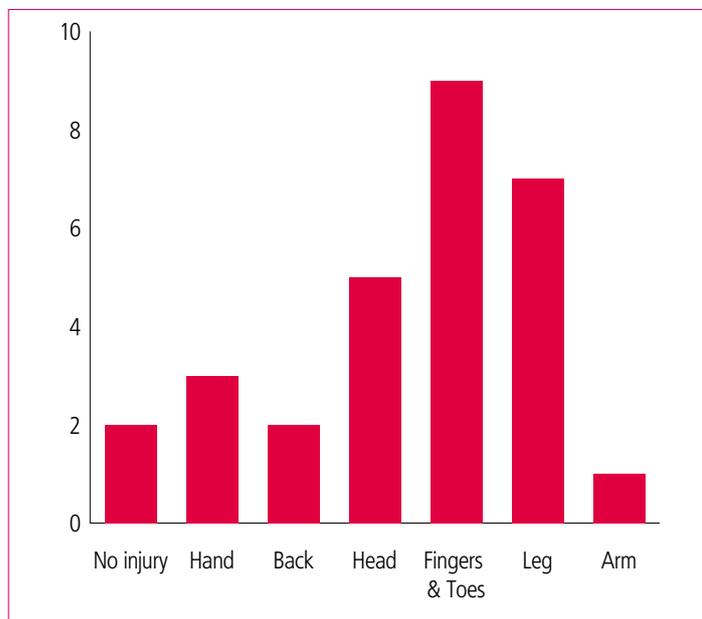


Figure 5: Type of injury (source: Health and Safety team)

## NEW INITIATIVES FOR 2007/2008

Following the restructure, the two Group companies will have their own Health, Safety and Environment Managers. The Group Holding Company will retain a Health, Safety and Environment team who shall report to the responsible Group Director, headed by the BRE Group Health and Safety Manager. The corporate team will set overall policy and standards, and audit compliance in the new structure. They will also retain responsibility for First Aid, Occupational Health and the Service Groups.

Key features of the drive for continual improvement in health and safety will include ongoing, frequent and highly visible walkabouts by senior staff, a high priority on training and communication and a focus on high risk activities.

Specific new initiatives will include:

- **A new training approach** – full roll out of the new mini training sessions
- **Working at height** – supporting the HSE drive on working at height and undertaking a campaign within our own business
- **Behavioural safety** – initiating a new approach of behavioural safety management.





### 3.3 BRE IN THE COMMUNITY

BRE has extensive links with the local community. As well as being a major employer for Watford, St Albans and the surrounding areas, we run programmes for local schools and provide advice and support to local companies working in construction and the built environment.

We have worked with Parmiter's School for over seven years, participating in their annual Industry Day for Year 10 students. Students design and build a bridge made from spaghetti which we test for structural strength and stability. Parmiter's also took part for the second time in an Engineering Education Scheme project in association with BRE.

We have groups of students visiting BRE's facilities, particularly our Integer House, to learn about recycled building materials and low carbon technologies. Again, some Parmiter's students were recently involved in a workshop on design and construction issues for the new Willmott Dixon Rethinking School of the Future on the BRE Innovation Park which opened in June 2007.

Other similar events include an annual visit by 'A' Level physics students from Watford Grammar School for Girls who base one of their projects on what they see and learn at BRE. We also open our doors to local residents to display the latest sustainable and modern methods of construction.

The BRE Group fosters close working relationships with Universities across the country through the BRE Trust research programmes and the activities of Group companies. The BRE Trust has established four high profile University Partnership Centres of Excellence at Edinburgh (Fire safety Engineering), Strathclyde (Energy Utilisation), Bath (Innovative Materials) and Cardiff (Sustainable Building Design). In addition, the BRE Trust is currently sponsoring 17 PhD students through their studies.

The BRE Group is a member of the Abbey Line Community Rail Partnership, a local community rail group tasked with encouraging the uptake of rail travel between Watford Junction and St Albans Abbey stations. This 6.4 mile route was one of the UK's first designated Community Railways and in the first year of the Abbey Line Community Rail Partnership, a 10-15% growth in passenger numbers was recorded<sup>[1]</sup>

Allied to the Partnership, is the line's status as one of 6 Pilot Projects nominated by the Department for Transport, each of which is designed to demonstrate a different aspect of its Community Rail Development Strategy. On the Abbey Line, the project is about rebuilding the passing loop at Bricket Wood station, which serves BRE This would enable a more convenient 2-train service to operate at a 30-min frequency, attracting more staff and members of the general public to use the line. Encouraging uptake of rail travel is also about making it fun, especially for children, and as such the CRP organises various 'theme' events for children which includes the Ghost Train photographed opposite.

We have strong links with EEDA, the local development agency covering the East of England. EEDA recently allocated major funding for the refurbishment of BRE's Victorian Stable Block as a sustainable exemplar. This will be used as the basis for a training and education facility for builders and designers etc. throughout the region, addressing the issues of converting and upgrading older existing properties to improve their energy and building performance.

# 4 ENVIRONMENTAL SUSTAINABILITY

BRE Group environmental Key Performance Indicators (eKPIs) for the period April 2006 – March 2007 are detailed in Section 4.1 below. Section 4.2 comments on each eKPI and includes graphs to illustrate trends on the Group’s performance.

## 4.1 ENVIRONMENTAL KEY PERFORMANCE INDICATORS (EKPI)

Table 2 (overleaf) presents last year’s performance on utility usage, waste generation and recycling for the Garston site. These figures include tenant organisations located at Garston which total 339 individuals. Tenants lease office and laboratory space from BRE and therefore consume resources and create waste, thus contributing to our overall impact. This has an influence on a number of management issues concerning energy and water consumption at Garston which are to be addressed as a priority in 2007/08, not least to separate our own consumption for monitoring and reporting purposes. The travel figures relate to the whole of the BRE Group, including our regional offices in Scotland, Wales and Ireland.

**BRE carbon footprint**

Using the data in Table 2, we have worked out the BRE Group’s total carbon footprint as expressed in tonnes of CO<sub>2</sub> per year. This is based on the combined figures for total electricity use (Garston), total gas use including the Furnace Building (Garston), energy consumed for water delivered to site (Garston), total business mileage by car, rail and air (all sites), and the total miles travelled by BRE staff to get to and from work (all sites).

It was discussed internally if the staff commute should be included as part of our overall carbon footprint. As we are tackling this issue and putting initiatives in place to reduce the impact of staff commuting to work, for example through encouraging home working and car sharing, it was decided that this is part of BRE’s indirect impact. Therefore it is included as part of our overall carbon footprint. To give this issue some added significance, the total number of miles driven to and from work by our staff last year is equivalent to going round the world 100 times!<sup>[18]</sup>

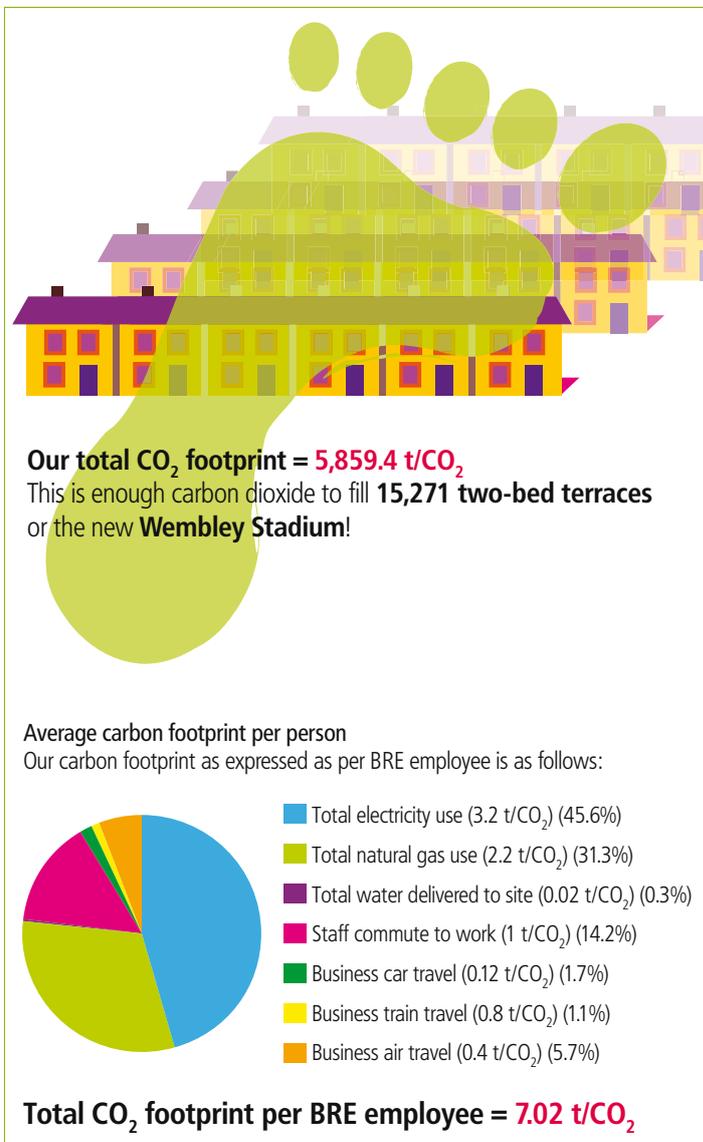
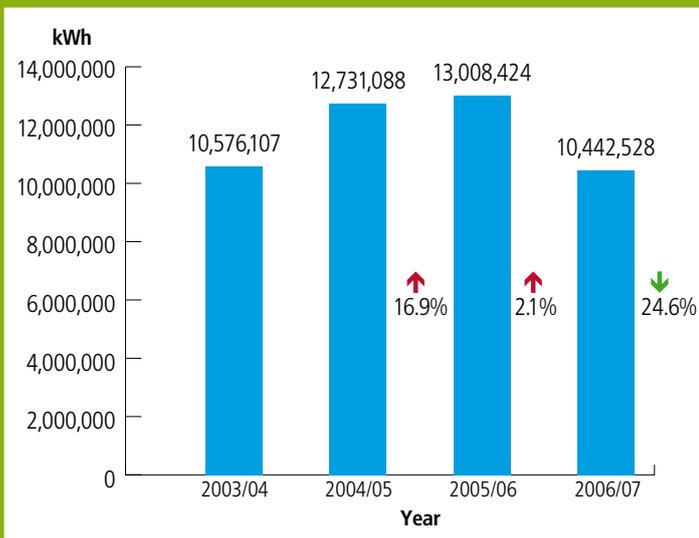


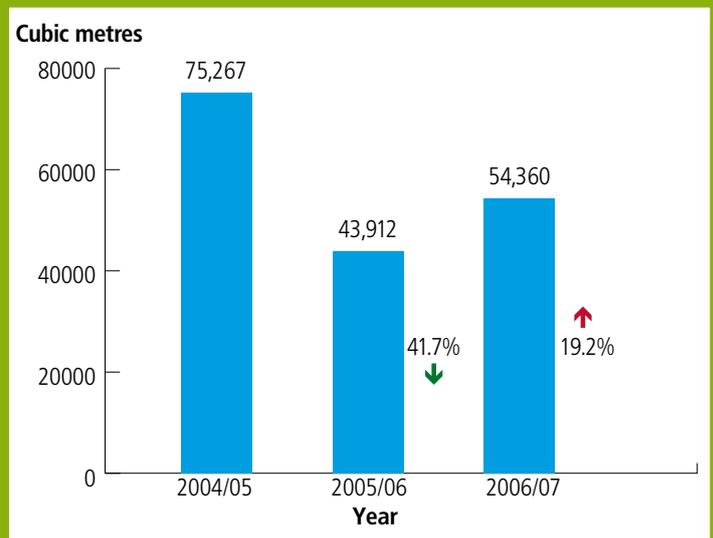
Figure 6: Average CO<sub>2</sub> footprint per BRE employee.

**Table 2:** BRE Environmental Key Performance Indicators (source: Facilities Group, BRE Purchasing and Staff Transport Survey 2007)

eKPI	Total	kWh/m <sup>2</sup> [2]	Tonnes CO <sub>2</sub> emissions	Impact per person [3]	Data period	FY05/06	% change
1 Annual electricity use	6,844,615 kWh	158.9	2,943	3.2 t/CO <sub>2</sub>	Apr06–Mar07	6,999,877 kWh <sup>[4]</sup>	↓ 2.2%
2 Annual natural gas use (including Furnace Building)	10,442,528 kWh	242.4	1,984	2.2 t/CO <sub>2</sub>	Apr06–Mar07	13,008,424 kWh	↓ 24.6%
2a Annual natural gas use of Furnace Building	763,392 kWh	–	–	–	Apr06–Mar07	697,000 kWh	↑ 8.7%
2b Annual natural gas use (excluding Furnace building)	9,679,136 kWh	224.7	–	–	Apr06–Mar07	12,311,424 kWh	↓ 27.2%
3 Annual water use	54,360 m <sup>3</sup>	–	21.7 <sup>[5]</sup>	59,671 litres	2006/2007 <sup>[6]</sup>	43,912 m <sup>3</sup>	↑ 19.2%
<b>4 Waste &amp; recycling (Garston only)</b> (All figures in tonnes)							
<b>Total waste generated</b>	<b>1015.1</b>				Apr06–Mar07	<b>764.6</b>	<b>↑ 24.7%</b>
<b>Recycled:</b>							
Construction waste <sup>[7]</sup>	143.6					132.1	
Paper	18.6					18.7	
Newspapers/magazines	6.7					5.4	
Cans	1.0					0.3	
Plastics	1.4					1.3	
Wood	46.2					11.3	
Cardboard	32.4					11.9	
Scrap metal	46.2					10.5	
Inert	103.1					8.8	
Glass	5.9					0.0	
<b>Total</b>	<b>405.1</b>			0.7 tonnes per BRE employee		<b>200.2</b>	<b>↑ 13.7%</b>
% of total waste	39.9%					26.2%	
<b>Land filled:</b>							
Office waste <sup>[8]</sup>	165.1					167.3	
Construction waste	430.9					396.2	
Other	14					0.9	
<b>Total</b>	<b>610</b>			1.1 tonnes per BRE employee		<b>564.5</b>	<b>↑ 7.5%</b>
% of total waste	60.1%					73.8%	
<b>5 Transport</b> (figures in miles)							N/A
BRE staff commute <sup>[9]</sup> :							
Car (inc. car share)	2,413,731		544.3 <sup>[12]</sup>		Transport survey 2007	<b>2,802,152<sup>[17]</sup></b>	
Motorcycle	81,371		14 <sup>[13]</sup>				
Train	92,245		9.6 <sup>[14]</sup>				
Bus	46,404		6.7 <sup>[15]</sup>				
Cycle/walk	89,368		0				
<b>Total</b>	<b>2,723,119</b>		<b>574.6</b>	<b>1 t/CO<sub>2</sub></b>			
Business travel:							
Car	312,990 <sup>[10]</sup>		70.6	0.12 t/CO <sub>2</sub>	Apr06–Mar07		
Train	416,276 <sup>[11]</sup>		43.5	0.08 t/CO <sub>2</sub>	Transport survey 2007		
Air	1,025,299		222 <sup>[16]</sup>	0.40 t/CO <sub>2</sub>	Apr06–Mar07		



**Figure 7:** Total annual natural gas use (including the Furnace Building) on the Garston site 2003/04 – 2006/07 (source: BRE Purchasing)



**Figure 8:** Annual water use on the Garston site 2004/05 – 2006/07 (source: BRE Purchasing)

## 4.2 COMMENTARY ON EKPIs

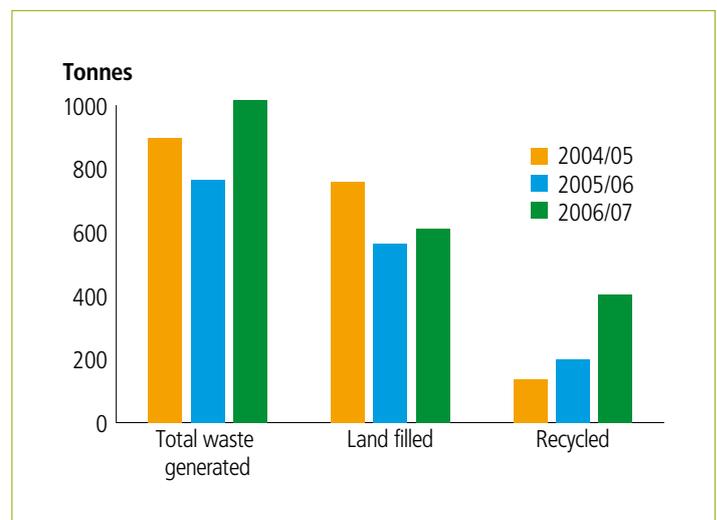
**eKPI 1** – Electricity use at Garston has reduced by 2.2% compared with 2005/06. Our impact per square metre of used space has therefore reduced from 162 kWh/m<sup>2</sup> to 159 kWh/m<sup>2</sup> **Benchmark**, but is still short of our 5% reduction target. A key project in 2007/08 is to install electricity sub-metering across major buildings on the Garston site, including those occupied by our main tenants. This will allow BRE to separate tenant electricity usage and monitor and target our key buildings. This year's electricity reduction target is detailed in Section 6.

**eKPI 2** – As illustrated in Figure 7, natural gas use at Garston has reduced by nearly 25% compared with 2005/06 which surpasses our 10% reduction target. Gas use associated with operation of the Furnace Building has increased by 8.7% over the same period. Therefore, gas use excluding the Furnace Building has reduced by 27%. This equates to 225 kWh/m<sup>2</sup> in 2006/07 compared with 286 kWh/m<sup>2</sup> in 2005/06 **Benchmark**. The reduction in gas use can be attributed to the continuing works being carried out on the heating and control systems across the Garston site. This year's gas reduction target is detailed in Section 6.

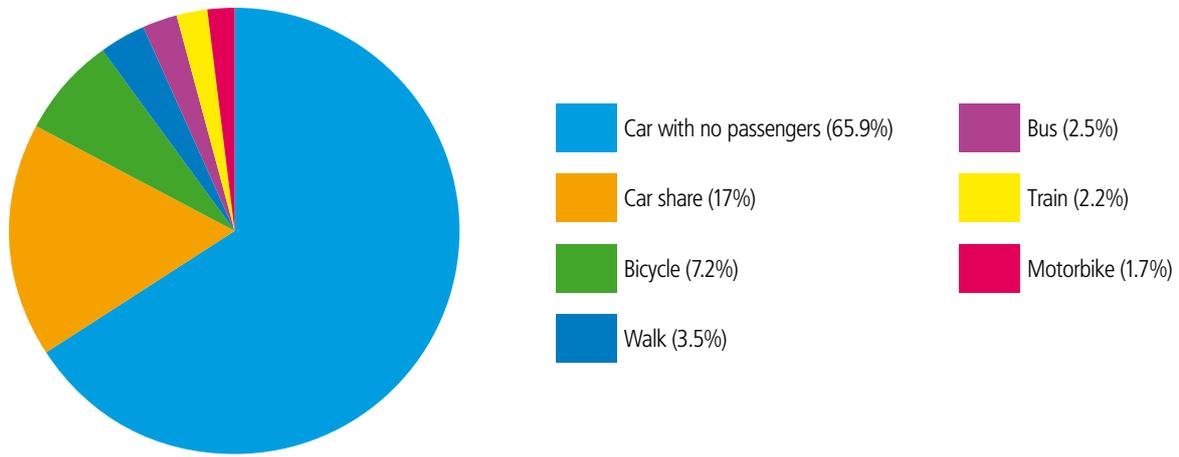
**eKPI 3** – Water use has risen from 43,912 m<sup>3</sup> to 54,360 m<sup>3</sup> in 2006/07; a rise of 19.2% as illustrated in Figure 8. This equates to 59,671 litres of water per person, per year (including tenants). Our total water usage can also be expressed as 1.26 m<sup>3</sup>/m<sup>2</sup> floor area/annum **Benchmark**. The Executive Agency of the Office of Government Commerce benchmark is 0.62 m<sup>3</sup>/m<sup>2</sup> floor area/annum<sup>[19]</sup>. This benchmark figure is for a university campus site which is the closest comparable site to operations at Garston, however the nature of BRE's business does require high volumes of water to be used for testing purposes. This includes the testing of concrete samples and weather tightness which can use up to 2000 litres per test. Water is reused in some test facilities across the Garston site, however due to Legionella concerns, water can only be stored for up to 5 days. Various projects are being undertaken in 2007/08 to reduce the water usage of the concrete laboratory and wind tunnel facility.

There has also been an increase in tenant numbers on site from 267 in 2005/06 to 339 in 2006/07, which will impact on our total water usage figure. This year's water target as detailed in Section 6 will address water sub-metering in key buildings on the Garston site to enable us to target and monitor our usage more closely, whilst starting to separate tenant water usage from our own.

**eKPI 4** – In 2006/07, BRE diverted 39.9% of its waste from landfill **Benchmark**. This fell short of the waste from landfill target set of 50%. This does, however, represent a 13.7% increase in recycled waste compared with 2005/06. Total waste generated on site has increased by 24.7% compared with 2005/06 as illustrated in Figure 9. Despite this, 81.8% of the extra waste generated, which is largely attributable to testing activities, was segregated and diverted from landfill. As a consequence, waste sent to landfill only increased by 7.5% over the same period. New waste segregation and landfill targets are detailed in Section 6.



**Figure 9:** Waste to landfill and diverted streams on the Garston site 2004-2007 (source: Facilities Group)



**Figure 10:** Staff modes of travel to BRE place of work (source: Staff transport survey 2007)

**eKPI 5** – In May 2007, we undertook a staff travel survey providing both quantitative and qualitative figures of our travel related impact. Figure 10 illustrates the main modes of transport taken by BRE staff travelling to work. Single occupancy car travel has reduced by 3.8% (2005 survey – 69.7%). Most notably, there has been an increase in use of public transport from 0.9% in 2005 to 4.7% in 2007 (bus and train). Car share has increased by 0.7% to 17% over the past two years. Approximately half of car sharers share with other colleagues at BRE, with the other half dropping someone else off on the way to work. Cyclists have increased by 1.2% to 7.2%.

This is the first year that we have published figures on our travel impact relating to car, train and air business travel. This allows us to start to build up a fuller picture of our total CO<sub>2</sub> footprint as a business. Air travel is responsible for 66% of our total business travel emissions, underlying the significant impact that aviation has. It is however a necessary part of operating a global business and consequently for the second year running, we are continuing our partnership with Climate Care<sup>19</sup> and have offset our CO<sub>2</sub> emissions from flying.

See 'endnotes' for the sources of data for our business travel related emissions.

BRE continues to encourage staff to car share which is seen as the most practical alternative to single occupancy car travel to work. Car sharing

retains the speed and convenience of travelling by car to work, but can dramatically cut carbon emissions. Whilst we currently have only 4 allocated car share spaces on the Garston site, there are approximately 50 staff who car share, some on a more regular basis than others.

The number of car share spaces on site is seen as a positive visual example which demonstrates our commitment to delivering on our green travel plan. Thus we have set a target to more than double the current number of car share spaces (to 10) by year end. This will be achieved through delivery of a revamped car share database, providing better assistance to staff in finding a suitable car share partner. This was the priority action as voted by 29% of respondents in the staff transport survey when asked what would encourage them to car share.

The information and trends indicated as a result of the staff transport survey will inform BRE's new green travel plan. This plan will map out the long term objectives for the BRE Group over the next three-five years in a bid to reduce our travel related footprint.

Finally, last year's sustainability report alluded to our ongoing discussions with a local bus company to improve public transport links to the Garston site. Although initial discussions held last year were encouraging with the bus company proposing to run a diverted service through the BRE site, an economic solution to re-routing the bus unfortunately could not be found, due to the prohibitive cost of the required on-site works.

# 5 DELIVERY AGAINST 2006/07 SUSTAINABILITY TARGETS

Table 3 chronicles the progress made in delivering against our sustainability targets in 2006/07.

**Table 3:** Commentary on performance against last year's sustainability targets

Target (2006/07)	Achieved	Commentary
Achieve ISO 14001 certification within BRE's Construction Division.	Yes	Successful certification to ISO14001 extending the scope of the EMS to include all activities of the Environment and Construction Divisions (now BRE Ltd) was achieved in November 2006. LRQA certificate number: 4001064 issued 4 January 2007. Expires 9 December 2009.
Reduce natural gas consumption at the Garston site (excluding the Furnace Building) by 10% (based on 2005/2006 figures).	Yes	Natural gas consumption at the Garston site excluding the Furnace Building reduced by 27.2% in 2006/07.
Implement electricity sub-metering at the Garston site	No	In hindsight, it was overly optimistic to commit to tackling both the extensive works required on site regarding the heating and control systems, as well as installation of electricity sub-metering. This remains a high priority project which will commence in 2007/08. See Section 6 sustainability targets 2007/08 for further details.
Reduce electricity consumption (excluding Burn Hall) by 5% (based on 2005/2006 figures).	No	<p>Comparing usage in 2006/07 with the 2005/06 figure as reported in last year's Sustainability Report would deliver a 15% reduction in consumption. However, the 2005/06 figure was an estimate based on known usage at the time between 01/08/05 to 31/03/06, and averaged to a 12 month period. This figure has since been proven to be inaccurate and not representative of actual usage throughout a 12 month period.</p> <p>A new estimate for 2005/06 usage has therefore been calculated, based on actual data from Sept 05 – March 06, which accurately represents a 12 month period.</p> <p>Comparing usage in 2006/07 with this new 2005/06 estimate delivers a 2.2% reduction in electricity consumption.</p> <p>It has become clear that a simple overarching reduction target is not appropriate when set against the rapid growth plans of the BRE Group which will result in significant increase in business activity and in staff numbers. A commitment has been made to develop and implement a new strategy to reduce electricity consumption in the context of this business growth.</p>

Target (2006/07)	Achieved	Commentary
Reduce water consumption by 5% (based on 2005/2006 figures).	No	Tight control over water usage remains elusive due to the poor water infrastructure and frequency of water leaks on site. Consumption rose by 19.2% in 2006/07 compared with 2005/06, and hence the 5% reduction target was not met. See Section 6 sustainability targets 2007/08 for details of this year's water target.
Off-set BRE's annual CO <sub>2</sub> emissions resulting from staff air travel on business.	Yes	BRE staff flew a total of 1,025,299 miles last year resulting in 222 tonnes/CO <sub>2</sub> . This was off-set with the organisation 'Climate Care' who invest in several kinds of projects in the developing world including energy efficiency and renewable energy generation.
Make Resource06 a 'climate neutral' event by off-setting the CO <sub>2</sub> associated with attendee travel to Garston.	Yes	A £5 charge was incorporated into the cost of attending this event which was invested with Climate Care to off-set the associated CO <sub>2</sub> emissions from attendee travel to Garston.
Implement new procedures for the handling and disposal of hazardous substances and waste on the Garston site.	Yes	Procedure Disposal of Hazardous Substances: 2.OP.190 was issued on October 2006. It is accessible to all staff through BRE Group's health and safety management system on the company intranet.
Involve the local community and key stakeholders in any future development plans for the Garston site.	On going	The BRE Group is still developing its long term business plans and has made a commitment to actively engage with the local community as these evolve. Local residents were invited to the recent Offsite2007 and a briefing by the Group Chief Executive.



# 6 SUSTAINABILITY TARGETS FOR 2007/08

- 1** Reduce natural gas consumption on the Garston site (excluding the Furnace Building and Burn Hall) by 10% (based on 2006/2007 figures).
- 2** Develop and implement a strategy to reduce electricity consumption on the Garston site which reflects the planned business growth and increase in staff numbers.
- 3** Install electricity sub-metering in key buildings on the Garston Site.
- 4** Install water sub-metering in five buildings on the Garston site.
- 5** Increase waste segregated on the Garston site by 5% (based on 2006/2007 figures).
- 6** Divert 50% of waste generated on the Garston site away from landfill (based on 2006/2007 figures).
- 7** Increase the current number of car share spaces on the Garston site to 10.
- 8** Launch the BRE Group School's Strategy to take lessons on sustainability into schools.



# ENDNOTES

- 1 Source: [www.abbeyline.org.uk/about.htm](http://www.abbeyline.org.uk/about.htm)
- 2 Based on total treated floor area of 43,083m<sup>3</sup>.
- 3 596 BRE employees (as of 14/05/07) of which 63 are part time. Therefore, BRE full time equivalent employees = 572 (conversion factor 0.625). 339 tenants on the Garston site. Total of 911 persons.
- 4 Actual electricity usage between 01/08/05 to 31/07/06.
- 5 M<sup>3</sup> of water contributes 0.4 kg of CO<sub>2</sub> to the atmosphere – source: Advanced Demand Side Management – <http://www.adsm.com> [accessed 01/05/07].
- 6 Annual water usage figure relates to the period 15/03/06 to 20/03/07 for the Farm Gate Meter and the period 05/01/06 – 06/12/06 for North Gate Meter.
- 7 Figures are based on an estimated 25% recovery rate via F&R Cawley MRF facility.
- 8 Office waste figure is an estimate based upon the number and size of bins located on the Garston site and the number of lifts carried out over the year .
- 9 Source: BRE Staff Transport survey 2007. 405 survey responses to 'what is your normal mode of transport to work'. Normalised for 596 staff. Distances based on 'as the crow flies'.
- 10 Source: BRE Finance – staff car mileage claims during 2006/07. This figure does not include assessors and salesmen as their allowance is outside the mileage claims process and was not available at the time of compiling this report.
- 11 Source: BRE Staff Transport survey 2007. 387 survey responses to 'how many miles do you typically travel per month by train on business'. Normalised for 596 staff for the year.
- 12 CO<sub>2</sub> conversion factor based upon the average BRE staff car which emits 255.5 g/CO<sub>2</sub>/mile (source: BRE Staff Transport Survey 2007).
- 13 CO<sub>2</sub> conversion factor based on average petrol motorbike 0.1718 kg/CO<sub>2</sub>/mile (source: Defra's GHG conversion factors for company reporting, June 2007)
- 14 Train CO<sub>2</sub> conversion factor 0.0602 kg/CO<sub>2</sub>/km (source: Defra's GHG conversion factors for company reporting, June 2007)
- 15 Bus CO<sub>2</sub> conversion factor 0.0891 kg/CO<sub>2</sub>/km (source: Defra's GHG conversion factors for company reporting, June 2007)
- 16 CO<sub>2</sub> emissions resulting from all BRE business flights in 2006/07 were offset with Climate Care – [www.climatecare.org](http://www.climatecare.org)
- 17 This is the mean distance travelled by all BRE staff to work per year based upon upper and lower limits. Data from Staff Transport survey May 2005.
- 18 The circumference of the earth at the equator is 24,901.55 miles (total miles driven by car and motorcycle, 2,495,105)
- 19 OGcbuying.solutions: Final Watermark Project Report May 2003. Available at <http://www.adsm.com/watermarkbenchmarks.htm>
- 20 Climate Care offsets CO<sub>2</sub> emissions by funding projects around the world. These involve renewable energy (replaces non-renewable fuel such as coal), energy efficiency (reduces the amount of fuel needed) and forest restoration (absorbs CO<sub>2</sub> from the atmosphere as the trees grow). See website for further details of their approach – <http://www.climatecare.org/>