



Rolls-Royce

Climate change in Nottinghamshire: accepting the challenge

Nigel Marsh

Company Head of Environmental Management

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Rolls-Royce Group plc

- **Global company with major operations in UK, Americas, Scandinavia & Germany**
- **35 000 employees in more than 48 countries**
- **Manufacture, test and development of a range of aero and industrial gas turbine engines (53 000 in service world-wide), diesel engines, marine equipment, nuclear power plant and specialist fabrications**
- **Markets: Civil Aerospace, Defence
Aerospace, Marine & Energy**
- **Annual sales of £5.6bn**



“Dealing with climate change is one of the biggest challenges on the EU and international environmental agenda. Scientists agree that it is happening.”

***Margot Wallström
EU Environment Commissioner
May 2004***

“.....the issue is now very, very critical indeed”

Tony Blair May 2004

Business and Climate Change

- **A consensus of the world's experts believe drastic cuts in greenhouse gas emissions are required to prevent a climate catastrophe**
- **National and international actions to mitigate greenhouse gas emissions are likely to have a profound effect in industries/products associated with use of fossil fuels**
- **Climate change is the primary long term sustainability issue for many industries from both a manufacturing process and product use standpoint**
- **There are many opportunities as well as challenges**
- **Both adaptation & mitigation will be required**

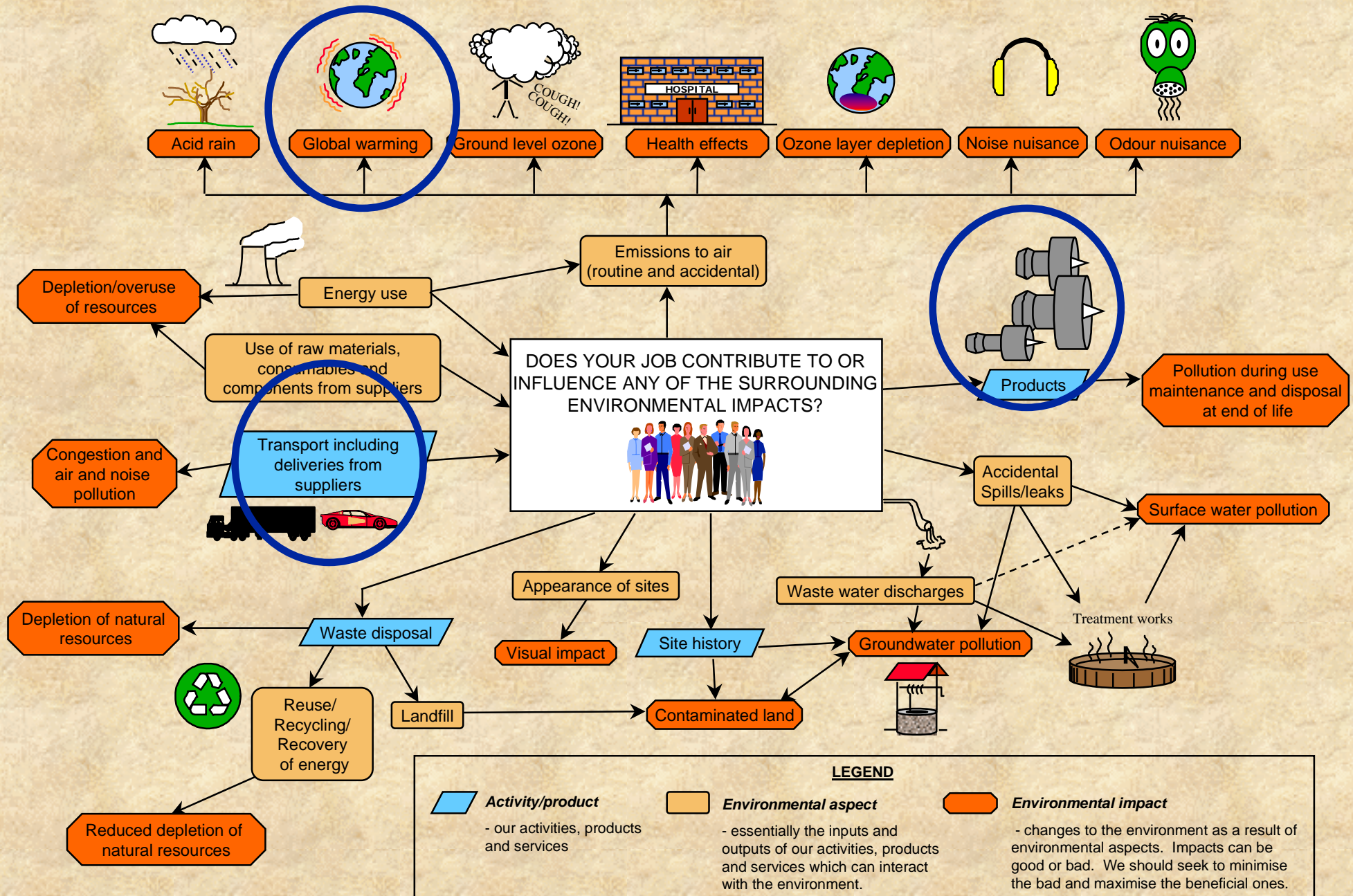
Climate change

There are 2 different aspects to the contribution of Rolls-Royce to climate change:

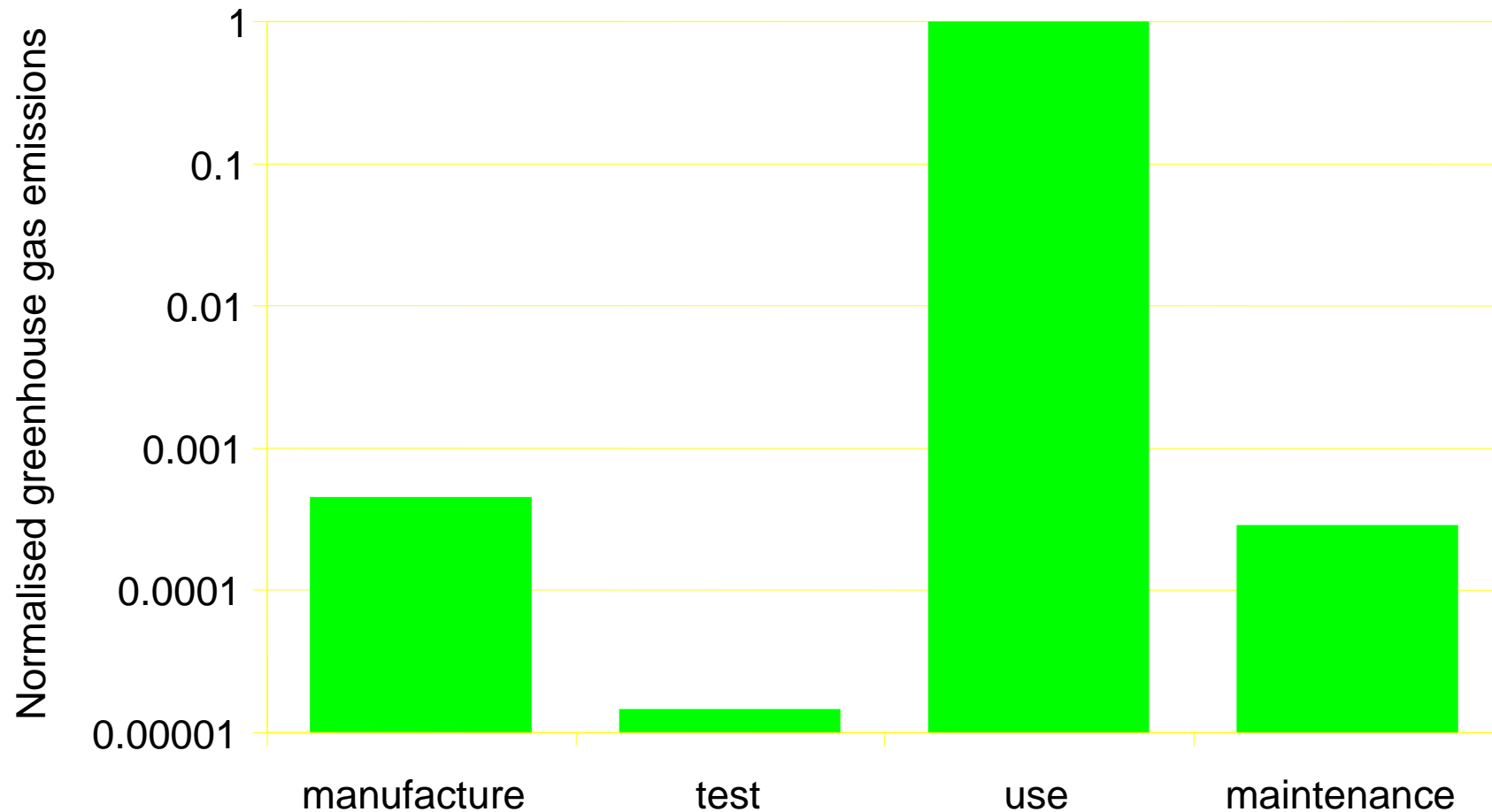
- **Impact of product use**
- **Impact of production operations**



POTENTIAL ENVIRONMENTAL ASPECTS AND IMPACTS ARISING FROM YOUR WORK ACTIVITIES



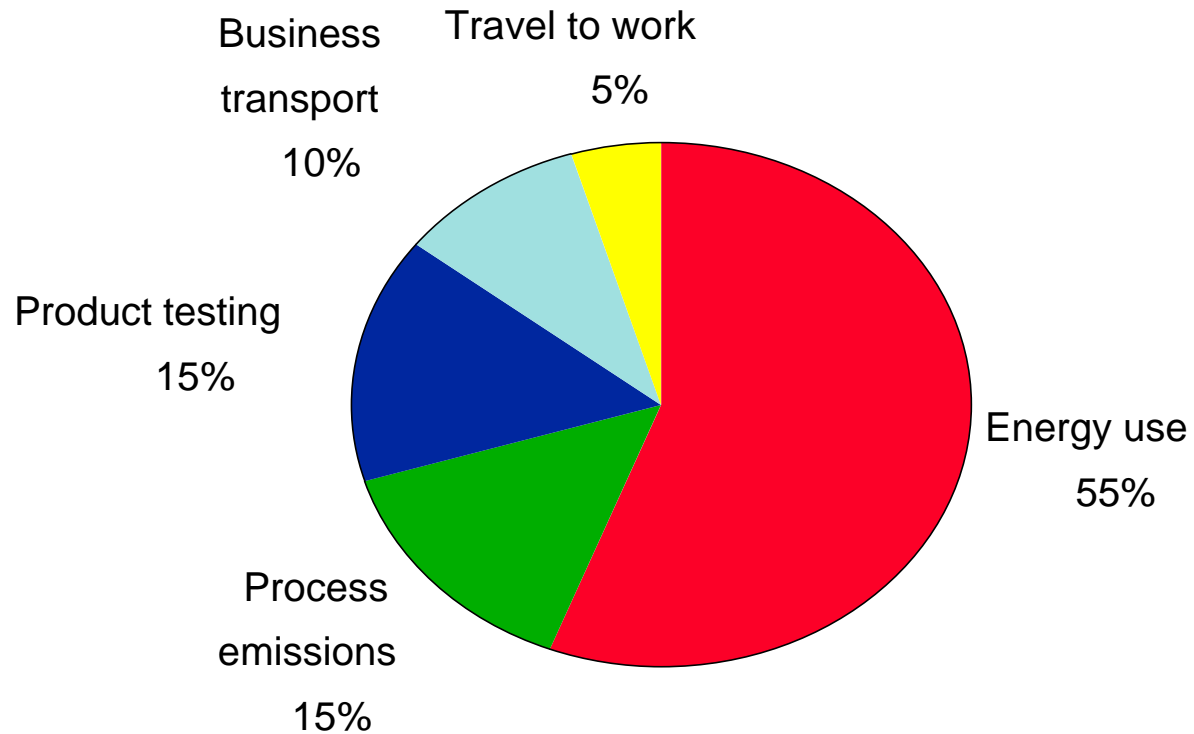
Life Cycle Analysis for a modern aero engine



What are we doing?

- **Setting ambitious product targets for increased efficiency & reduced emissions**
- **Researching new technologies eg, tidal turbines and fuel cells**

Rolls-Royce GHG emissions - Operations



Data is estimated for UK only in 2000

Company Targets and Performance Improvement to date - Operations (1998-2003)

Company Global Target

Achieved

Reduce annual energy consumption by 10%	25%
Reduce GHG emissions by 10%	32%
Reduce the use of solvents by 10%	10% p.a.
Reduce water consumption by 10%	33%
Reduce solid waste by 10%	(Underlying rate) 21%
Recycling 50% of solid waste	50%
Implement strategies to phase out hazardous substances	Some implemented
Reduce LTI rate (over 1 day) by 25%	47%

Continual Improvement



What are we doing?

- **Setting targets for reduced energy use in our businesses**
- **Building new state of the art facilities with energy efficient buildings and processes**
- **IPPC – permitted installations committed to BAT**

What are we doing?

- **UK ETS/EU ETS**
- **CCL agreements**
- **Formation of Utilities Strategy Group (energy & water)**
- **Increased metering and monitoring of energy & water usage**
- **Studies on energy efficiency and water minimisation**
- **Energy champions**

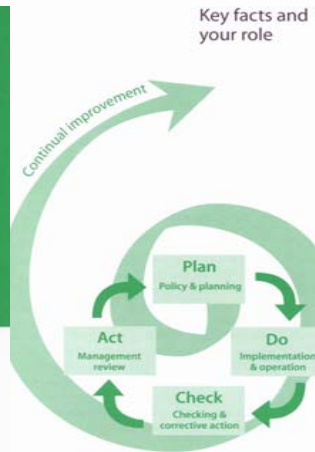
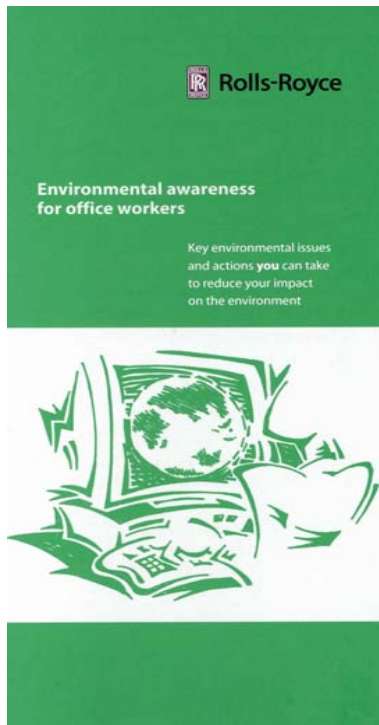
What are we doing?

- **Envirowise**
- **Carbon Trust – establishing total carbon footprint**
- **Green energy purchased at Barnoldswick**
- **Energy awareness and education programmes**
- **Bike to work day**

World Environment Day

- 1. I will replace one light bulb in my house with an energy saving version.*
- 2. I will hang out, rather than tumble dry, one load of washing per week.*
- 3. I will put a 'water hippo' in my cistern to reduce the amount of water used per flush.*
- 4. I will replace one two-mile car journey per week by walking, cycling or taking a bus.*
- 5. I will plant one tree either in my garden or as part of a community forest.*
- 6. I will start re-using plastic bags when shopping.*
- 7. I will switch off my television, rather than leave it on stand-by.*
- 8. I will take showers instead of baths.*
- 9. I will turn the thermostat on my gas-fired central heating down by one degree centigrade.*
- 10. I will turn the tap off when I brush my teeth.*

Training Materials - leaflets



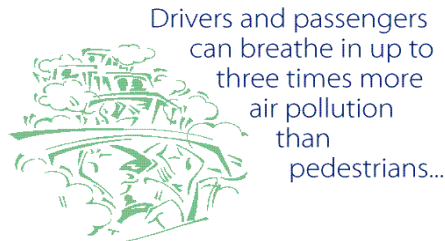
Training Materials - Posters

Rolls-Royce
ISO 14001
 Environmental Management System

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ISO 14001
 Environmental Management System

Did you know?



Drivers and passengers can breathe in up to three times more air pollution than pedestrians...

Is that journey really necessary?

Are you doing your bit?

Did you know?

Boiling a kettle half full, instead of full, four times a day...



could save enough electricity to run a TV set for four hours...



Are you doing your bit?

Did you know?



£6.5 billion is wasted on energy in the UK each year.



This could pay a 'super model' to get out of bed every day for 2000 years...

Are you doing your bit?

Thank you for listening!

Rolls-Royce Group plc external environmental report

<http://www.rolls-royce.com/community/environment/default.jsp>

Rolls-Royce powering a better world
Environment Report 2003



CONTACT DETAILS:

- +44 (0) 1332 2 48578
- nigel.marsh@rolls-royce.com