



OUR PLAN FOR SUSTAINABILITY

Jaguar Land Rover
Sustainability Report
2011 / 2012



PERFORMANCE SUMMARY

LIFECYCLE						
JAGUAR LAND ROVER FLEET TAILPIPE CO ₂ EMISSIONS		2011 (CY)	2010 (CY)	2009 (CY)	2008 (CY)	2007 (CY)
EU FLEET AVERAGE CO ₂ EMISSIONS PER KILOMETRE (g/km)		206	223	228	236	240
MANUFACTURING IMPACTS		2011/12	2010/11	2009 (CY)	2008 (CY)	2007 (CY)
ENERGY	TOTAL ENERGY USE (MWh) ENERGY USE PER VEHICLE PRODUCED (MWh/VEHICLE)	1,022,418 3.18	984,016 4.13	811,510 5.13	1,026,334 3.92	1,072,691 3.69
EMISSIONS	TOTAL CO ₂ EMISSIONS (TONNES) CO ₂ EMISSIONS PER VEHICLE PRODUCED (TONNES/VEHICLE)	297,739 0.93	274,825 1.15	236,026 1.49	301,591 1.15	317,280 1.09
WASTE	TOTAL WASTE (THOUSAND TONNES) WASTE PER VEHICLE PRODUCED (KG/VEHICLE)	15.29 47.55	11.45 48.06	10.78 68.22	19.99 76.36	18.09 62.23
WATER	TOTAL WATER USE (M ³) WATER USE PER VEHICLE PRODUCED (M ³ /UNIT)	1,008,827 3.14	883,403 3.71	730,272 4.62	1,038,404 3.97	1,052,208 3.62
SOLVENTS (CALENDAR YEAR)	TOTAL SOLVENTS USED (TONNES)	1,632	1,392	1,152	1,325	1,484
NON-MANUFACTURING IMPACTS		2011/12	2010/11	2009 (CY)	2008 (CY)	2007 (CY)
ENERGY	TOTAL ENERGY USE (MWh)	93,418	99,843	91,849	102,983	95,471
EMISSIONS	TOTAL CO ₂ EMISSIONS (TONNES)	37,633	38,488	35,606	40,297	37,688
WASTE	TOTAL WASTE (THOUSAND TONNES)	1.17	1.28	1.74	1.17	1.76
WATER	TOTAL WATER USE (M ³)	129,720	144,771	139,191	139,437	131,601

All manufacturing data from 2007 to 2009 has been restated to exclude the Browns Lane veneer manufacturing facility, which was sold in 2010. Due to a change in our reporting procedures, data is now reported for the financial year (FY) from April to March unless explicitly stated as calendar year (CY).

OUR PEOPLE		2011/12	2010 (CY)	2009 (CY)	2008 (CY)	2007 (CY)
EMPLOYEES	NUMBER OF EMPLOYEES	23,848	14,974	14,605	14,975	15,135
TRAINING AND DEVELOPMENT		2011/12	2010/11	2009/10	2008 (CY)	2007 (CY)
EMPLOYEE DEVELOPMENT	NUMBER OF DAYS TRAINING PROVIDED	42,425	21,851	14,560	—	—
HEALTH, SAFETY AND WELLBEING		2011/12	2010 (CY)	2009 (CY)	2008 (CY)	2007 (CY)
REPORTABLE INCIDENTS	NUMBER OF REPORTABLE INCIDENTS (UNDER RIDDOR)*	47	60	50	52	76
LOST TIME CASE RATE	NUMBER OF LOST TIME CASES PER 200,000 HOURS WORKED	0.20	0.22	0.21	0.35	0.49
OCCUPATIONAL ABSENCE RATE	NUMBER OF DAYS LOST PER 200,000 HOURS WORKED	2.64	2.79	2.81	4.66	8.47
OCCUPATIONAL HEALTH	NUMBER OF FIRST TIME VISITS TO OCCUPATIONAL HEALTH CENTRES	716	663	729	1,245	1,574
DIVERSITY		2011 (CY)	2010 (CY)	2009 (CY)	2008 (CY)	2007 (CY)
GENDER DIVERSITY	% OF WOMEN IN WORKFORCE	9	8	8	—	—
	% OF WOMEN IN MANAGEMENT (APPROX TOP 1,800 EMPLOYEES)	12	12	11**	—	—
	% OF WOMEN IN SENIOR MANAGEMENT (APPROX TOP 125 EMPLOYEES)	5	5	3***	—	—
ETHNIC DIVERSITY	% ETHNIC MINORITIES IN WORKFORCE	8	8	8	—	—
	% ETHNIC MINORITIES IN MANAGEMENT (APPROX TOP 1,800 EMPLOYEES)	6	5	5	—	—
	% ETHNIC MINORITIES IN SENIOR MANAGEMENT (APPROX TOP 125 EMPLOYEES)	3	1	2***	—	—
GLOBAL CORPORATE SOCIAL RESPONSIBILITY		2011/12	2010/11	2009 (CY)	2008 (CY)	2007 (CY)
CHARITY SUPPORT	AMOUNT DONATED (IN CASH AND IN KIND) (GBP MILLIONS)	1.4	1.4	1.3	1.4	1.3

* Figures have been updated to those previously reported

** 2009 data restated. previously data reported for % of management as approx top 1,500 employee

*** 2009 data restated. previously data reported for % of senior management as approx top 1,500 employees

CONTENTS

6	 STRATEGY	22	 THE LIFECYCLE	68	 OUR PEOPLE	80	 GLOBAL CSR
7	CEO Statement	23	The Lifecycle Impact	69	Introduction	81	Introduction
8	About Jaguar Land Rover	28	Product Design	70	Ethical Conduct	82	Our Strategy
10	About This Report	41	Raw Materials and Component Production	71	Health, Safety and Wellbeing	83	Advancing Knowledge
11	Key Facts and Figures	45	Transporting Components to our Factories	74	Diversity	86	Improving Lives
12	Our Values and Policy	48	Manufacturing	76	Training and Development	89	CO ₂ Offsetting Case Studies
13	Our Strategy	60	Transporting Products to Customers	78	Employee Engagement	91	Global Charity Support
18	Environmental Innovation	62	Product Use by Customers	79	Union Consultation	95	Supporting Humanitarian and Conservation Work
20	Global CSR	66	Product End of Life				



CEO STATEMENT

Message from
Dr. Ralf Speth
CEO, Jaguar Land Rover



Welcome to our second sustainability report, introducing Jaguar Land Rover's vision to deliver Sustainability Excellence.

The accompanying strategy incorporates and builds on our ongoing commitment to environmental innovation – one of three core passions that drive our corporate strategy to be One High Performance Company. I believe that our commitment to sustainability will drive long-term shareholder value and a vibrant, successful business.

We have ambitious growth plans to establish ourselves as a global player in the premium automotive market over the next three to four years; developing sustainable products that meet the needs of customers now and in the future is vital to that goal. There is no single technical solution, so we have implemented a multi-faceted approach to improve our overall environmental performance. Our technology road map, and advanced product development processes will enable us to respond to our sustainability challenges whilst delivering our growth plans.

Over the last five years we have invested heavily in new products, facilities, research and development, and we will invest £2 billion in the current fiscal year to March 2013. This scale of investment requires excellent partnerships with our suppliers and research partners to enable the delivery of our technology innovation and CO₂ reduction strategy.

We are on track to achieve our target to reduce fleet CO₂ emissions by 25% on 2007 levels by 2015. The Range Rover Evoque, launched in July 2011, sends a powerful message about our commitment to sustainability, and the new Range Rover will reduce tailpipe emissions by 23% compared with the outgoing model.

We are also investing in environmental innovation projects to improve efficiency across our operations. We are making good progress

towards our ambitious goal to cut the environmental footprint of our business by 25% by March 2013, having already cut manufacturing CO₂ emissions by 15%, waste to landfill by 37% and water use by 13% per vehicle produced. As we grow our global footprint we are investing in innovative green building technologies that we will be proud to showcase as our operations for the future.

The passion and commitment of our people is a key driving force to our success, and we are investing in extensive skills training, and developing our workforce of the future by inspiring innovation through technology. The safety of our people remains paramount, and all sites are certified to the international health & safety standard OHSAS 18001. However I am extremely saddened to report the death of one of our employees following an incident in our press shop at Halewood in September 2011, investigations are continuing.

Our commitment to sustainability goes beyond our products and operations, with our goal to add value to communities by advancing knowledge and improving lives. Developed through our global corporate social responsibility programme, our class leading CO₂ offset programme has compensated 5 million tonnes of CO₂ to date by offsetting 100% of manufacturing assembly emissions and a dedicated customer programme. By investing in projects that have additional social and economic benefits we have helped improved the lives of over 1.2 million people.

It is critical we maintain our strong reputation as a responsible business and I am delighted that we have recently achieved Platinum level in the Business in the Community Corporate Responsibility Index, which is the leading UK measure in responsible business practice.

In this report, we set out our performance over the last year and our strategy to contribute to a sustainable future. I look forward to updating you on our progress next year.

ABOUT JAGUAR LAND ROVER

Founded on two iconic British car brands, Jaguar and Land Rover, we are a leading premier automotive business in the UK. Jaguar has sold high performance saloon and sports cars since 1922 and for more than 60 years Land Rover has built vehicles with the widest breadth of capability.

Jaguar Land Rover is the largest automotive employer in the UK and the leading investor in automotive research and development in the country. We are also a major exporter with 80% of vehicles manufactured in the UK sold abroad.

The company has been owned by Tata Motors Ltd since June 2008. Tata Motors is a long-term and strategic owner that is fully committed to Jaguar Land Rover's business plan and product lines. Jaguar Land Rover contributes significantly to Tata Motors' financial results and we collaborate where possible, such as on electrical engineering and engine development.



JAGUAR PRODUCTS



XJ



XF



XK

LAND ROVER PRODUCTS



DEFENDER



FREELANDER 2



DISCOVERY 4



THE RANGE ROVER



RANGE ROVER SPORT



RANGE ROVER EVOQUE

23,848
employees

170,000
people supported
through dealerships,
suppliers and local
businesses

2
product
development sites
and 3 manufacturing
facilities in the UK

54,227
Jaguar vehicles
sold globally for
2012 financial year

251,632
Land Rover vehicles sold
globally for 2012 financial
year

70%
of sales to UK, North
America, China, Italy,
Russia and Germany

£800m
invested in research and
development on vehicle
environmental technology



ABOUT THIS REPORT

This is the second combined Jaguar Land Rover sustainability report. We publish an index of conformance with the Global Reporting Initiative (GRI) indicators.

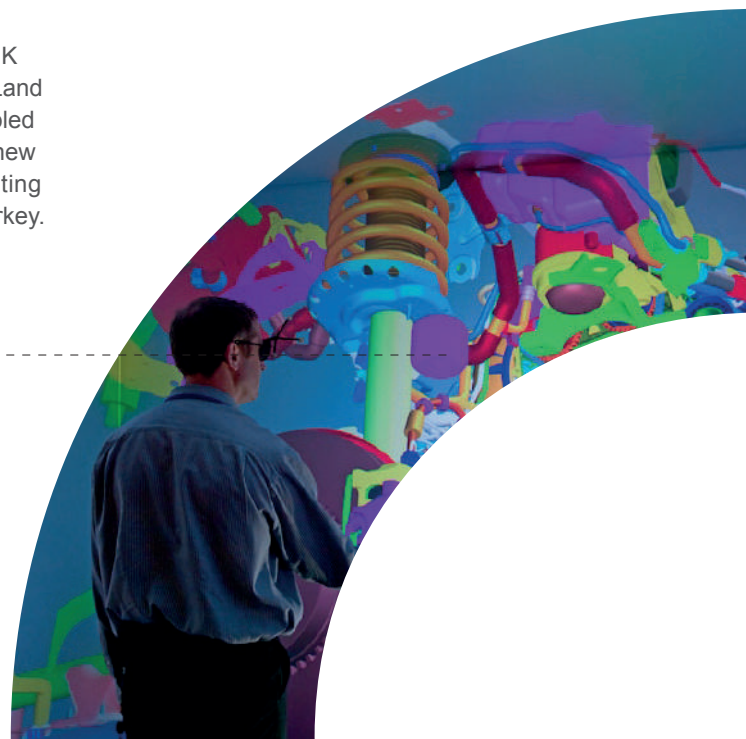
Data covers the financial year from April 2011 to March 2012, unless otherwise stated. We have changed our reporting procedures and here we report for the financial year for the first time, where previous reports covered the calendar year.

Due to this change in the way we collect and report data, environmental goals and target dates have been restated from calendar year 2012 to financial year 2012/13. This means our existing environmental targets now end in March 2013.

The report covers all our manufacturing and product development operations. These are based at Castle Bromwich, Gaydon, Halewood, Solihull and Whitley in the UK.

Joint venture assembly plants outside the UK where complete knock down (CKD) kits of Land Rover components are painted and assembled are not included. In 2011 we established a new assembly plant in India, in addition to existing plants in Kenya, Malaysia, Pakistan and Turkey.

Previous reports are available at
www.jaguarlandrover.com



JAGUAR LAND ROVER

KEY FACTS AND FIGURES

INCOME
£13,512m
from sales of products

FINANCIAL YEAR APRIL
2011 TO MARCH 2012

EXPENDITURE
£1,011m
payments and provisions
for employees

£8,733m
material cost of sales

£751m
product development
costs capitalised

£3,012m
other expenses

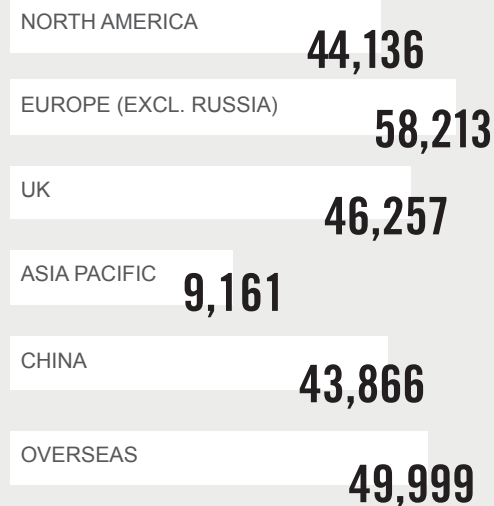
PROFIT
£1,507m
profit before tax

JAGUAR LAND ROVER
GLOBAL SALES
Retail volumes (no. vehicles)

JAGUAR CARS LTD.
54,227

LAND ROVER
251,632

LAND ROVER
Regional volumes (no. vehicles)



JAGUAR CARS LTD
Regional volumes (no. vehicles)



OUR VALUES AND POLICY

The core values of all Tata Group companies provide a strong framework for our sustainability approach:

INTEGRITY

We must conduct our business fairly, with honesty and transparency. Everything we do must stand the test of public scrutiny.

UNDERSTANDING

We must be caring, show respect, compassion and humanity for our colleagues and customers around the world, and always work for the benefit of the communities we serve.

EXCELLENCE

We must constantly strive to achieve the highest possible standards in our day-to-day work and in the quality of the goods and services we provide.

UNITY

We must work cohesively with our colleagues across the group and with our customers and partners around the world, building strong relationships based on tolerance, understanding and mutual cooperation.

RESPONSIBILITY

We must continue to be responsible, sensitive to the countries, communities and environments in which we work, always ensuring that what comes from the people goes back to the people many times over.

SUSTAINABLE DEVELOPMENT POLICY

We are guided by our Sustainable Development Policy that outlines how we can make a positive contribution to society and the environment. The policy commits Jaguar Land Rover to act responsibly and ethically towards employees, shareholders, customers, suppliers, dealers, society and the environment.

All Jaguar Land Rover employees are guided by our Code of Conduct and we monitor compliance with the Code (see page 70). The Code is available at www.jaguarlandrover.com.



OUR STRATEGY

Our sustainability vision aims to ensure we grow our business while responding to global trends and stakeholder needs. Our strategy will help us ensure that sustainability is embedded at every stage of the life cycle of our products and at all levels of our business.

OUR BUSINESS IS GROWING

This is an exciting time for Jaguar Land Rover. With the support of our parent company Tata Motors Limited, our business is poised to grow significantly in the coming years. We are investing heavily to realise ambitious growth plans and develop more sustainable products. We will spend around £2 billion in the 2013 financial year on new products and on strengthening our manufacturing capabilities, including a new £350 million engine plant in the West Midlands.

Vehicle lines such as the Range Rover Evoque are creating new markets and strengthening sales in existing ones. In 2011 we expanded assembly operations into India, one of our key markets, and announced plans for our first manufacturing facility abroad in another key market, China, through a joint venture with Chery Automobile Company Ltd. We predict Jaguar Land Rover sales will more than double in volume by 2020, largely due to increasing demand in emerging markets.

OUR VISION IS TO DELIVER SUSTAINABILITY EXCELLENCE. WE ARE EMBEDDING THIS VISION IN OUR BUSINESS THROUGH:

LONG TERM PROFITABLE SUSTAINABLE GROWTH; INVESTMENT IN CLEAN TECHNOLOGY

INNOVATIVE LOW-CARBON VEHICLE SOLUTIONS FOR OUR CUSTOMERS OF THE FUTURE

DRIVING ENVIRONMENTAL INNOVATION THROUGHOUT OUR BUSINESS

INVESTING IN OUR PEOPLE, AND CREATING SUSTAINABILITY CHANGE

DYNAMIC PARTNERSHIPS WITH OUR SUPPLY CHAIN, INTEGRATING LIFE CYCLE ASSESSMENT INTO OUR PROCESSES

ADDING VALUE TO OUR LOCAL AND GLOBAL COMMUNITIES



GLOBAL CHALLENGES

Sustainability is fundamental to the reputation of our brands, future profitability and the trust of our stakeholders. We make high performance and premium vehicles but they do not need to have a significant environmental footprint. As a growing company, it's more important than ever that we have a comprehensive strategy in place to reduce our impact on the environment and maximise the positive benefits our business can bring. To do this we must respond effectively to several emerging global trends that are shaping the future of our business:

GLOBAL ENERGY DEMAND IS PREDICTED TO INCREASE BY A THIRD FROM 2010 TO 2035, WITH ENERGY-RELATED CO₂ EMISSIONS INCREASING BY 20% IN THE SAME PERIOD.

DEMAND IS ALSO OUTSTRIPPING SUPPLY FOR OTHER INCREASINGLY SCARCE NATURAL RESOURCES SUCH AS MINERALS AND WATER.

THE GLOBAL POPULATION IS EXPECTED TO REACH 9 BILLION PEOPLE BY 2050 WITH ALMOST ALL OF THE GROWTH OCCURRING IN CITIES.



UP TO 85% OF THIS GROWTH WILL OCCUR IN ASIA AND THE MIDDLE CLASS IN EMERGING MARKETS SUCH AS CHINA AND INDIA WILL HAVE GREATER SPENDING POWER AND CAR OWNERSHIP.¹

IN EMERGING MARKETS, FUEL NEEDED FOR TRANSPORT COULD INCREASE OIL CONSUMPTION BY 15% FROM 2010 TO 2035.

WEALTH PATTERNS ARE CHANGING WITH AN EXPANDING MIDDLE CLASS, PREDICTED TO GROW FROM 1.8 BILLION PEOPLE WORLDWIDE IN 2010 TO 4.9 BILLION IN 2030.

¹ KPMG, Expect the unexpected: Building business value in a changing world, 2012.

These global challenges are integral to the development of our sustainability strategy as we balance the needs of our business with the needs of our stakeholders.

Communicating with and listening to our stakeholders is key to ensuring that our strategy addresses the issues that are important to them, as well as helping us understand our sustainability impacts and how to tackle these. We engage with a wide variety of stakeholders to ensure we understand their expectations, keep track of sustainability trends in the automotive industry, and communicate our position on pertinent issues.

CUSTOMERS

HOW WE ENGAGE

Our marketing research function runs customer feedback sessions where customers express views on our products. Through our marketing and sales operations we have regular high-level meetings with importers and dealers to give and receive feedback on sustainability and other issues.

EXAMPLES OF ENGAGEMENT IN 2011/12

In May 2012 we ran a series of 30 focus groups, 10 of them in the US, to gain insights into consumer perceptions about sustainability in general and CO₂ offsetting in particular.

EMPLOYEES

HOW WE ENGAGE

We communicate and engage with employees in a number of ways, including through our annual employee engagement survey, regular presentations to staff members, our intranet site, and an employee magazine.

EXAMPLES OF ENGAGEMENT IN 2011/12

In 2012, we launched our 'New Pulse' employee engagement and satisfaction survey, which was open to all permanent and hourly employees for the first time (see Our People, page 78).

COMMUNITY AND EDUCATION ORGANISATIONS

HOW WE ENGAGE

We have developed many long-term partnerships with local and regional educational authorities and universities, as well as other organisations.

We work extensively with stakeholders such as the Confederation of British Industry, the Skills Funding Agency, Chambers of Commerce, and the Society of Motor Manufacturers and Traders to share information on skills, gender, the ageing workforce, and education, training and development.

We work with local government in the areas surrounding our sites and hold regular community meetings to share and exchange information.

EXAMPLES OF ENGAGEMENT IN 2011/12

We are taking a leading role in two local enterprise partnerships (covering Coventry and Warwickshire, and Greater Birmingham and Solihull), formed in 2011 to help determine local economic priorities. We have also begun to build partnerships with community groups and local authorities in Wolverhampton ahead of our plans to build a new engine plant there.

We continue to invest in five resource centres for school children as part of our Education Business Partnership with education authorities in Birmingham, Coventry, Warwickshire, Solihull and Liverpool. (See Community, page 84).

INDUSTRY ORGANISATIONS

HOW WE ENGAGE

Jaguar Land Rover is a member of Business in the Community (BitC) – an organisation that encourages companies to continually improve their impact on society.

Through the Carbon Disclosure Project we report annually on our carbon emissions and carbon strategy (see page 43).

We are members of the Society of Motor Manufacturers and Traders, with whom we work on sustainability issues affecting our sector.

EXAMPLES OF ENGAGEMENT IN 2011/12

In 2011, we were awarded the BitC Community Mark for excellence in community investment. In 2012, we received a national 'big tick' from BitC for our climate change plans.

Jaguar Land Rover was rated Platinum in BitC's Corporate Responsibility Index 2012. We are the only UK-based global automotive company to achieve Platinum level.

POLICYMAKERS

HOW WE ENGAGE

We engage with a range of policymakers at UK and European level. We regularly meet with ministers, other parliamentarians, UK government departments, members of the European Parliament, and the European Commission.

Jaguar Land Rover is a member of the Confederation of British Industry's Energy Committee and its Environmental Affairs Committee.

EXAMPLES OF ENGAGEMENT IN 2011/12

Focus areas for our discussions with policymakers in 2011/12 included research and development policy; the availability of incentives for manufacturing low carbon vehicles; and how to establish a regulatory framework that encourages lower emissions but also provides the conditions to help industry thrive.

NGOs (NON-GOVERNMENTAL ORGANISATIONS)

HOW WE ENGAGE

We engage with a range of NGOs to share our strategy and listen to their views. Jaguar Land Rover is a corporate member of the Forum for the Future, which we have been working with since 2000. The Forum acts as a 'critical friend' to Jaguar Land Rover, helping us to develop strategy on sustainability and to analyse our progress.

EXAMPLES OF ENGAGEMENT IN 2011/12

We engaged with NGOs to share our carbon reduction strategy and our sustainability aspirations.

Representatives from NGOs participated in the two meetings we held for opinion formers in 2011/12.

OPINION FORMERS

HOW WE ENGAGE

We find it useful to seek the views of 'opinion formers' on sustainability, such as sustainability experts, pressure group leaders, investors, and consumer representatives. We do this through face-to-face meetings to promote dialogue.

EXAMPLES OF ENGAGEMENT IN 2011/12

We held two stakeholder engagement meetings in London in 2011/12, one seeking views from opinion formers on our general sustainability strategy, and the other on our carbon offsetting programme. These have provided useful feedback that will help us to further define our strategy and identify possible issues that we need to address in the future.



INTRODUCING OUR SUSTAINABILITY STRATEGY FOR 2020: 360° SUSTAINABILITY

To achieve our sustainability vision, we take a 360° approach to sustainability across the lifecycle of our products and operations, from design to use and end of life. Our strategy for 2020 comprises two key themes: Environmental Innovation and Global Corporate Social Responsibility. It builds on the progress we have already made to reduce our environmental impacts and contribute to society by investing in local and global projects.

ENVIRONMENTAL INNOVATION

SUSTAINABILITY CHALLENGES	OUR RESPONSE
REDUCING FLEET TAILPIPE CO ₂ EMISSIONS	Developing technologies to reduce vehicle weight, improve aerodynamics and fuel efficiency to reduce EU fleet average tailpipe CO ₂ emissions by 25% by 2015.
REDUCING PRODUCT ENVIRONMENTAL IMPACTS OVER THE LIFE CYCLE	Using life cycle assessment to understand the environmental impacts of our products at each stage – from design and manufacture to use and end of life – and enable our engineers to target reductions.
ENGAGING SUPPLIERS ON SUSTAINABILITY	Assessing and monitoring supplier performance against sustainability criteria and partnering closely with suppliers to help us develop more sustainable products.

GLOBAL CSR

SUSTAINABILITY CHALLENGES	OUR RESPONSE
DEVELOPING SKILLS FOR THE GREEN ECONOMY	Offering opportunities for apprentices, graduates and undergraduates, and partnering with schools to encourage children to pursue careers in science, technology, engineering and mathematics.
CONTRIBUTING TO LOCAL COMMUNITIES AND GLOBAL SUSTAINABLE DEVELOPMENT	Encouraging employees to volunteer their time to support local projects to promote teambuilding and benefit communities. Supporting more than 50 sustainable development projects in 17 countries through projects that offset CO ₂ emissions from manufacturing operations and customer vehicle use.

SUSTAINABLE PRODUCTS

ADVANCING KNOWLEDGE

SUSTAINABLE OPERATIONS

IMPROVING LIVES

ENVIRONMENTAL INNOVATION

Launched in 2009, our Environmental Innovation strategy aims to cut the environmental impact of our products and operations across the entire product life cycle. Innovation is at the heart of what we do and our engineers are striving to design more sustainable vehicles as well as creating new vehicle concepts that challenge existing notions of mobility.

We partner closely with suppliers to help us achieve improvements in our products and encourage them to tackle their environmental footprint through the supply chain. Cutting the impact of our manufacturing and product development operations is an important focus and our goal is to close the loop in our manufacturing processes. As we work to reduce our carbon footprint, we are investing in a CO₂ offsetting programme to offset emissions from manufacturing. See page 43 for our efforts to cut the impact of our operations and work with suppliers.

We measure progress against environmental goals through an Environmental Innovation scorecard. In 2009 we set challenging targets to reduce our carbon footprint and ecological footprint by 2012 and we are making good progress towards these. Annual targets are embedded in the Company Balanced Scorecard and linked to individual employee objectives to make sure environmental innovation is a business priority understood by everyone at Jaguar Land Rover.



ENVIRONMENTAL MANAGEMENT

Our Environmental Management System (EMS) is designed to ensure we identify, measure and manage our environmental impacts effectively, fully comply with all relevant legislation and regulations, and support environmental best practice across our operations. The system has been in place since 1998 and is fully certified to the internationally recognised environmental standard ISO 14001.

Environment teams at each site are responsible for implementing the EMS. They meet regularly to review progress against targets, discuss new regulations and share best practice. Data on environmental impacts is also reviewed by senior managers to assess progress, and performance against environmental targets is regularly audited.





ENVIRONMENTAL INNOVATION STRATEGY 2012

DRIVERS	TARGETS (baseline year 2007)	PROGRESS	IN 2013 WE WILL PUBLISH FURTHER AMBITIOUS TARGETS TO 2020 TO SUPPORT OUR ENVIRONMENTAL INNOVATION GOALS AND CSR GOALS.
CLIMATE CHANGE reducing our carbon footprint	25% reduction in EU fleet CO ₂ by 2015 25% reduction in operational CO ₂ emissions by March 2013	We are on track to meet the target to reduce EU fleet CO ₂ emissions by 2015. We have reduced average fleet CO ₂ emissions by 14% since 2007 Operational CO ₂ emissions cut by 15% per vehicle produced since 2007	
ENVIRONMENTAL EFFICIENCY reducing our ecological footprint	25% reduction in waste to landfill by March 2013 10% reduction in water use by March 2013 15% reduction in total emissions from our logistics operations by March 2013	Waste to landfill cut by 37% per vehicle produced since 2007 Water use cut by 13% per vehicle produced since 2007 CO ₂ emissions from inbound logistics (components and materials inbound to our manufacturing facilities) cut by 22% since 2007 per vehicle produced. CO ₂ emissions from outbound logistics (finished products to market) cut by 9% per vehicle since 2008	



GLOBAL CORPORATE SOCIAL RESPONSIBILITY

Beyond the impact of our products, operations and supply chain, we have a wider responsibility to contribute to the economy and to society both in the UK and abroad. Through our Global Corporate Social Responsibility strategy (see page 80), we are partnering with others to help develop solutions to social and economic challenges.

Areas of focus include advancing knowledge by building science and engineering skills in the UK, developing young engineers and supporting

technology entrepreneurs and start-up businesses. We aim to improve people's lives through our involvement in community projects, charity contributions and our employees' volunteering efforts.

Globally, we contribute to more than 50 sustainable development projects through our comprehensive CO₂ offsetting programme. We are developing targets to measure our progress towards our Global Corporate Social Responsibility goals up to 2020.



EMBEDDING OUR SUSTAINABILITY STRATEGY IN THE BUSINESS IS KEY TO ITS SUCCESS

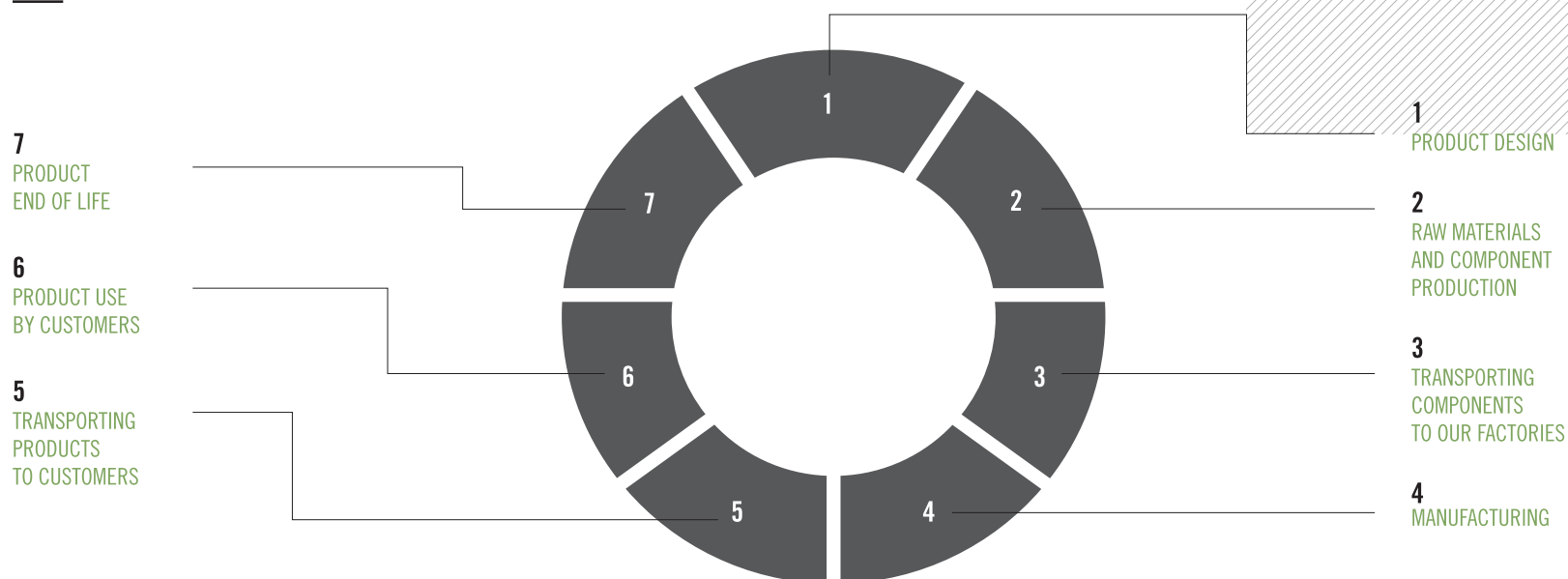
We have a well-defined system in place to ensure that sustainability is integrated in decision-making throughout the company. Ultimate responsibility resides with our CEO and Board of Directors. The leadership shown by our CEO and other senior leaders plays a vital role in demonstrating the importance of sustainability to the company. Beyond this, we have the following sustainability governance structure in place:

- A Board-level committee meets quarterly to review implementation of our sustainability strategy, our performance, examples of best practices, and an analysis of potential new risks and ways to address these.
- A Sustainability Action Group of senior managers from various functions works with the Board committee to develop our sustainability policy, strategy and goals.
- The Executive Director's Office, which had its first full year of operation in 2011, brings together environment, sustainability and community affairs teams with those responsible for company strategy, product planning and government relations. This puts sustainability at the heart of the company's strategic planning.
- The Corporate Sustainability and Compliance team is responsible for developing policy and strategy and guiding its day-to-day implementation by working closely with all business functions.
- We expect everyone at Jaguar Land Rover to operate responsibly and think about sustainability in their daily activities. Environmental innovation is linked to individual employee objectives through annual targets in the Corporate Scorecard and Business Plan. The Corporate Scorecard and Business Plan is reviewed annually and implemented at all levels of the business in the first quarter of each performance year. Both company and functional objectives are communicated to employees to ensure that individual and departmental goals are in line with company priorities.





THE LIFE CYCLE IMPACT OF OUR PRODUCTS



From the moment we develop the concept for a new car we consider sustainability. We are reducing the environmental and social impacts of our vehicles at every stage of the life cycle, from product design to the end of the vehicle's life.

The greatest opportunity for us to influence the life cycle impact of a vehicle comes at the design stage, and here we concentrate our efforts on finding ways to reduce future potential impacts. We focus on reducing tailpipe CO₂ emissions generated during use by our customers, as well as reducing CO₂ emissions from manufacturing. We design cars that use resources efficiently and can be disposed of and recycled at the end of their life.

1

PRODUCT DESIGN

SUSTAINABILITY IMPACTS

Environmental impacts of research and development activities.

Emissions from testing prototypes around the world. We test cars for cold climate durability and for withstanding extreme heat.

OPPORTUNITY TO REDUCE IMPACTS

Product design is the main way we can reduce the environmental and social impact of our cars throughout the life cycle. During design we look for opportunities to reduce tailpipe CO₂ emissions; use renewable and recycled materials; make cars safer for passengers and pedestrians; and make them easy to disassemble and recycle at end of life.

We reduce the impacts of the research and development process itself by using simulations rather than building prototype vehicles.

We use energy as efficiently as we can at our testing facilities. We use renewable energy sources such as photovoltaic cells at our research and development site in Whitley, UK, which saves around 540 tonnes of CO₂ a year.

2

RAW MATERIALS AND COMPONENT PRODUCTION

SUSTAINABILITY IMPACTS

Impacts from the production of raw materials and components within our suppliers' operations include resource consumption, waste, energy use and associated CO₂ emissions. Creating a new vehicle, including producing and sourcing materials and components and building the car in our factories, accounts for around 25% of the life cycle impact of a car.¹

OPPORTUNITY TO REDUCE IMPACTS

Suppliers must meet our strict environmental requirements and we work with them to reduce their impacts.

By using life cycle assessment at the very start of the design process, our engineers can specify more sustainable components, such as renewable materials, for our cars.

¹ The percentage impact of each stage of the vehicle life cycle provided in this section is an average based on our life cycle assessments of six Jaguar and Land Rover vehicles, assuming the vehicle is in use for 200,000 km.

3

TRANSPORTING COMPONENTS TO OUR FACTORIES

SUSTAINABILITY IMPACTS

CO₂ emissions from fuel used to transport materials and components to our factories.

OPPORTUNITY TO REDUCE IMPACTS

Inbound transport is mostly outsourced and we partner with transport companies to reduce emissions and meet joint sustainability goals. For instance, we work with suppliers to use more efficient trucks and we train drivers to improve fuel economy.

Sourcing components from local suppliers where possible helps to reduce mileage travelled and associated emissions.

4

MANUFACTURING

SUSTAINABILITY IMPACTS

Energy used at our manufacturing facilities for body stamping, joining, painting and final assembly of vehicles.

Waste from the manufacturing process.

Emissions to air from solvent use and water consumption in our paint shops.

OPPORTUNITY TO REDUCE IMPACTS

We are improving the energy efficiency of our manufacturing operations, and reducing associated emissions as well as water use, waste to landfill and solvent use.



5

TRANSPORTING PRODUCTS TO CUSTOMERS

SUSTAINABILITY IMPACTS

CO₂ emissions from fuel used to distribute finished cars to customers by road, rail and sea.

OPPORTUNITY TO REDUCE IMPACTS

Switching from road to rail and sea where possible to reduce transport emissions and working with our transport companies to minimise their fleet's carbon footprint.

Reducing the length of journeys to dealers in the UK and improving efficiency of distribution within the countries we export to.

Sharing deliveries with other car manufacturers to reduce the overall impact of logistics.

6

PRODUCT USE BY CUSTOMERS

SUSTAINABILITY IMPACTS

Tailpipe CO₂ emissions currently account for around 75% of the life cycle impact.

The safety of drivers, passengers and pedestrians is also a key consideration at this stage.

OPPORTUNITY TO REDUCE IMPACTS

We have most influence over the impacts in this stage through design. We reduce tailpipe emissions by making our cars lighter, more aerodynamic and making the powertrain more efficient. We are also exploring hybrid and electric technologies to further reduce emissions.

We encourage customers to drive responsibly and offset emissions.

A range of safety features improve vehicle safety for customers and pedestrians such as a 'deploying bonnet' system in Jaguars that lifts the bonnet before a pedestrian is struck, absorbing energy from the impact and minimising injury.

7

PRODUCT END OF LIFE

SUSTAINABILITY IMPACTS

Waste materials can harm the environment or human health if not disposed of responsibly.

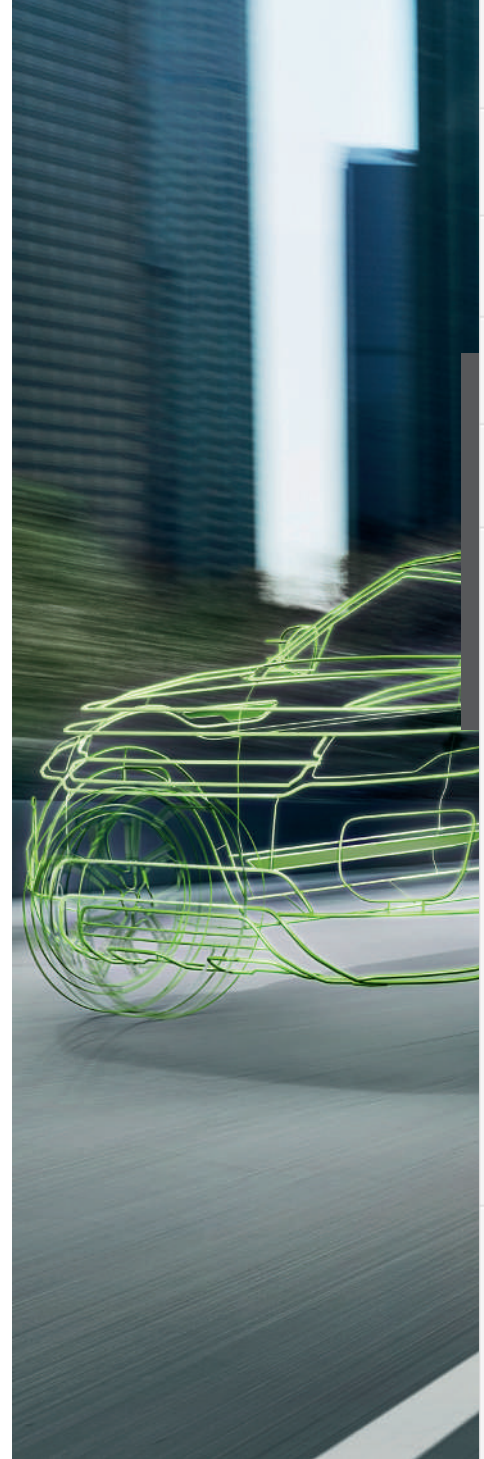
Impacts such as energy use and waste from operations to disassemble and dispose of a car when it is no longer in use. This is a very small part (1%) of the life cycle impact of a vehicle. The end of life stage will be more significant in the future as we explore hybrid and electric vehicle technology with high voltage battery storage systems that must be disposed of safely.

OPPORTUNITY TO REDUCE IMPACTS

We work with partners to design our vehicles to ensure materials can be separated, recovered and recycled to meet end of life legal requirements.

We offer a take back service for end-of-life vehicles and work with partners to ensure they are disposed of responsibly.

We remanufacture parts to reduce waste, lower customer costs, and extend the life of vehicles.



LEARNING FROM
LIFE CYCLE ASSESSMENTS

To ensure that we are integrating sustainability across our product range, it is essential that we understand the environmental impact at each stage of a vehicle’s development, use, and disposal. We do this using life cycle assessment (LCA). This quantifies the environmental impact of raw material use, production and manufacturing, the vehicle in use with a customer, and disposal at end of life. Once calculated the impact is stated in terms of carbon dioxide equivalent (CO₂e), so that the different impacts can be easily compared and analysed. When referring only to tailpipe emissions, CO₂ is used.

We have in-house capacity to complete full LCAs for all new vehicles. We follow the international standards ISO 14040, 14044 and 14062 and we gain third party certification from the Vehicle Certification Agency for full vehicle LCAs.

Through these assessments, we gain a better understanding of the total environmental impact of our vehicles and we feed this knowledge into improving product design and our operations. We are piloting an online tool to help our engineers



use LCA information in their design decisions (see box) and our purchasing teams are increasingly using LCAs to guide their buying decisions (see page 41).

We have completed LCAs for four vehicles. The summary results opposite show that we are reducing the impact of new products across their life cycle. We are currently undertaking an assessment on the All-New Range Rover.

JAGUAR XJ
COMPARED WITH THE PREVIOUS XJ:

The assessment² demonstrated that CO₂e emissions across the life cycle were reduced by 5.2 tonnes per car, compared with the previous model³. The majority of the 8.3% improvement was achieved in the use phase by improving fuel economy and associated tailpipe emissions.

RANGE ROVER EVOQUE
COMPARED WITH THE LAND ROVER FREELANDER 2:

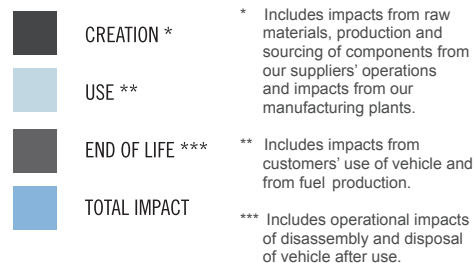
We tested the Range Rover Evoque⁴ against the most comparable vehicle in our portfolio, the Land Rover Freelander 2. The assessment demonstrated that CO₂e emissions across the life cycle were reduced by 3.8 tonnes per car, compared with the Freelander 2. The majority of the 8% improvement was achieved in the use phase through lightweight design, improved fuel economy, and associated reduction of tailpipe emissions.

² X351 diesel engine XJ 2010 model year

³ This is based on an average taken from our life cycle assessment, that assumes the vehicle is in use for 200,000 km.

⁴ Range Rover Evoque TD4 150ps Diesel 6-Speed Manual 4WD Pure 2012 model year

SUMMARY OF LIFE CYCLE ASSESSMENT RESULTS

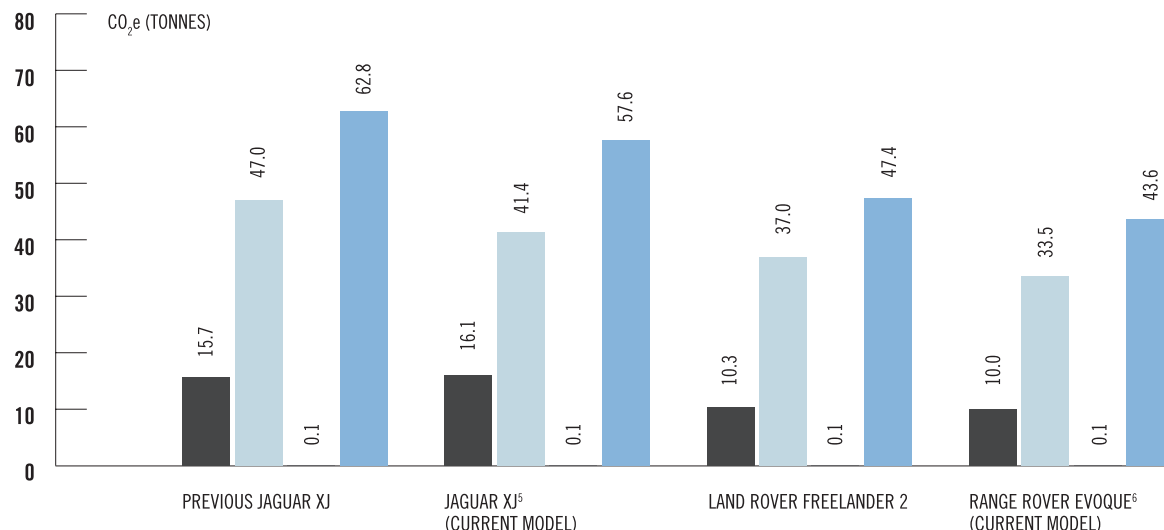


MAKING INFORMED DESIGN DECISIONS



We are testing and developing a tool for our engineers to assess the environmental impact of parts and components used in our vehicles. The online 'Rapid Life Cycle Assessment' tool gives them detailed information on the environmental impact of the parts that they are designing at every stage – in production, in use, and during disposal. By using this tool at the very start of the process, our engineers can design the vehicle in an environmentally sustainable way.

Tested during 2011 and early 2012 by a number of engineering departments across the business, we are now rolling out the Rapid Life Cycle Assessment tool to numerous projects.



We are raising customers' and other stakeholders' understanding of life cycle assessment using an interactive tool that shows the results of the Range Rover Evoque LCA on the Land Rover Our Planet website. We aim to improve customers' understanding of the impact of cars throughout the life cycle. This will become increasingly

important as the significance of each life cycle stage changes with the introduction of hybrid and electric vehicle technologies. We also encourage customers to reduce emissions from the use phase by driving responsibly (see page 65).

⁵ X351 diesel engine XJ 2010 model year

⁶ Range Rover Evoque TD4 150ps Diesel 6-Speed Manual 4WD Pure 2012 model year

PRODUCT DESIGN

The first stage of the life cycle of our vehicles is design. By making smart design decisions, we can significantly reduce the impact that our cars have on the environment.

Design decisions made years before a vehicle reaches the customer can significantly reduce the impact they have at later stages of the life cycle. For example, by using lighter materials for the body shell of a car, the vehicle weighs less and is more fuel efficient when driven, reducing the amount of CO₂ emitted through the tailpipe. Lightweight body materials tend to have higher production impacts than steel, so we use life cycle assessment to ensure we select materials with the least environmental impacts overall. Further tailpipe CO₂ reductions come from making the vehicle's powertrain – the system that powers the car – as efficient as possible, as well as reducing engine size and optimising the shape to improve aerodynamic efficiency, which saves fuel.

We use recycled and renewable materials where possible, minimise the use of hazardous substances and design our cars so that they can be dismantled and recycled easily at the end of their life (see page 66). We are also making changes to the research and development process itself and finding ways to reduce the environmental impact of product testing (see box). Using virtual testing facilities reduces the number of prototype cars we have to build, minimising waste from the product design stage.

Design decisions can also have social benefits, for instance, by making them safer for drivers, passengers and pedestrians (see product safety, page 64).

REDUCING ENVIRONMENTAL IMPACTS OF PROTOTYPE TESTING



When we develop a new vehicle, we build prototypes for testing on different terrains and in different conditions. We are always looking for new ways to reduce waste and use more recycled materials in prototypes. The prototypes themselves are reused as much as possible for further testing. Any prototypes that are not reused are recycled by our approved partners in line with end of life vehicle disposal requirements. Parts suitable for reuse are sold.

As part of the prototype testing programme, we disguise our cars with camouflage to prevent them being recognised and scrutinised on the track before we are ready to launch the finished product. Hard plastic body camouflage disguises our prototypes. For example, around 40kg of plastic was used as camouflage on the All-New Range Rover during testing. In line with our strategy to use renewable and recycled materials (see page 39), the plastic mouldings contain approximately 25% recycled plastic and our prototype design engineers established a closed-loop recycling process with the material supplier so that material can be recovered and recycled. We will reuse the camouflage panels from these Range Rover prototypes in future development programmes.

DESIGNED FOR IMPROVED CO₂ PERFORMANCE

The greatest environmental impact of our vehicles is the CO₂ released from the tailpipe into the atmosphere. Tailpipe emissions account for around 75% of a car's carbon footprint across the life cycle so reducing this impact through design is a priority.¹⁰

We are required by law to reduce the average tailpipe CO₂ across our fleet of vehicles in Europe, the US, China, Japan and South Korea. In Europe our target is to reduce our fleet CO₂ by 25% by 2015, from 2007 levels, in line with legislation.

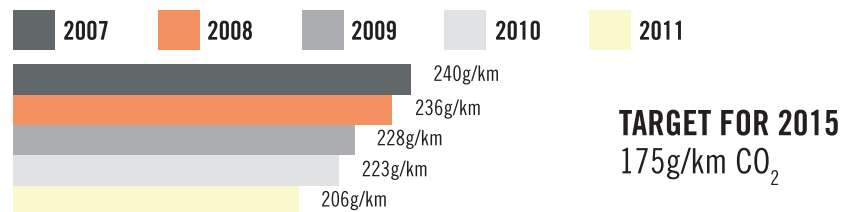
We want to lead the market for low carbon luxury and all-terrain cars. Reducing tailpipe emissions gives us a competitive advantage and it opens up new markets for our products. More than 85% of customers who

have bought a Range Rover Evoque, our most fuel-efficient vehicle, have never owned a Land Rover before.

We are on track to achieve our target to reduce fleet CO₂ emissions by 25% on 2007 levels by 2015. We reduced our EU fleet average by 7.6% to 206g/km in 2011¹¹ compared with 223g/km in 2010. In total, we have reduced average fleet CO₂ emissions by 14% since 2007. Strong sales of the Range Rover Evoque, including a model that achieves 129g/km, were a significant factor in reducing our fleet average emissions in 2011.

We are adding new fuel saving technologies across our fleet and developing a hybrid electric model of the All-New Range Rover which will further reduce our average fleet emissions.

JAGUAR LAND ROVER EU FLEET AVERAGE TAILPIPE CO₂ EMISSIONS



¹⁰ This is based on an average taken from our life cycle assessments of six Jaguar and Land Rover vehicles, assuming the vehicle is in use for 200,000km (see Life Cycle Assessment, page 22).

¹¹ Calendar year

CY 2011

FUEL g/km

CY 2011

FUEL g/km

LAND ROVER

DEFENDER

2.2L (110)	DIESEL	291
2.2L (90)	DIESEL	266

FREELANDER

2.2L TD4 4WD AUTO	DIESEL	185
2.2L TD4 4WD MANUAL	DIESEL	165
2.2L ED4 2WD MANUAL	DIESEL	158

DISCOVERY 4

3.0L TDV6 – 188KW	DIESEL	230
3.0L TDV6 – 155KW	DIESEL	224
5.0L V8	PETROL	328

RANGE ROVER EVOQUE

2.2L ED4 2WD MANUAL	DIESEL	133
2.2L TD4 4WD MANUAL	DIESEL	149
2.2L SD4 4WD MANUAL	DIESEL	149
2.2L SD4 4WD AUTO	DIESEL	174
2.0L SI4 4WD AUTO	PETROL	199
COUPE – 2.2L ED4 2WD MANUAL	DIESEL	129
COUPE – 2.2L SD4 4WD AUTO	DIESEL	169

Data based on EU-27.

RANGE ROVER SPORT

3.0L TDV6 – 188KW AUTO	DIESEL	230
3.0L TDV6 – 155KW AUTO	DIESEL	224
5.0L V8 AUTO	PETROL	327
5.0L V8 SUPERCHARGED AUTO	PETROL	348

RANGE ROVER

4.4L V8 AUTO	DIESEL	253
5.0L V8 AUTO	PETROL	326
5.0L V8 SUPERCHARGED AUTO	PETROL	348

JAGUAR

XJ

3.0L TDV6 AUTO	DIESEL	184
5.0L V8 AUTO	PETROL	264
5.0L V8 SUPERCHARGED AUTO	PETROL	289

XF

2.2L I4 AUTO	DIESEL	149
3.0L V6 AUTO	DIESEL	169
5.0L V8 AUTO	PETROL	264
5.0L V8 SUPERCHARGED AUTO	PETROL	292

XK

5.0L V8 AUTO	PETROL	264
5.0L V8 SUPERCHARGED AUTO	PETROL	292

CASE STUDY

DESIGNING SUSTAINABILITY INTO
THE ALL-NEW RANGE ROVER



In the development of our latest vehicle, the All-New Range Rover, we have built sustainability considerations into its design from the initial concept onwards. The diagram below illustrates some of the design features that make this vehicle more sustainable:



ENGINE

Smaller 3.0 litre V6 engine reduces tailpipe CO₂ emissions by 23% (see page 33).⁷



POWERTRAIN

Stop/Start technology reduces time spent idling at traffic lights, helping to save fuel when the engine is switched off (see page 33).⁸



BODY STRUCTURE

Lightweight body structure made of aluminium saves around 180kg over the outgoing model of the Range Rover (see page 35).

85% of all materials used in the All-New Range Rover can be recycled at the end of the vehicle's life (see page 66).



INTERIOR & EXTERIOR MOULDINGS

Made with 31.5kg of recycled plastic and 44kg of renewable material.



LEATHER TRIM

High quality certified low carbon leather sourced from Bridge of Weir in Scotland. Hides travel less than 100km on average to reach the tannery and are produced in a self-sustaining production facility.⁹

⁷ Tailpipe CO₂ reduction is for the TDV6 model of the All-New Range Rover, compared to the previous Range Rover.

⁸ Stop/Start technology is available on the TDV6 models of the All-New Range Rover.

⁹ Bridge of Weir leather awarded ECO2L Label from the German Leather Federation.

PRODUCT DESIGN STRATEGY

It takes years to develop a car from concept to launch so we already have plans in place for our products to the end of 2015. There are three elements to our product design strategy for reducing tailpipe emissions:

i - POWERTRAIN EFFICIENCY AND AERODYNAMICS

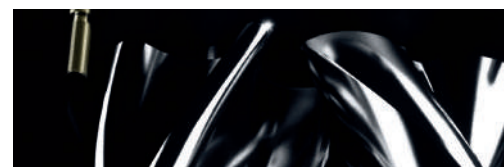
Improving the efficiency of the engine, aerodynamics and transmission and reducing the friction of tyres on the road helps to make cars more fuel efficient. A more efficient engine can deliver the same or more performance at the same time as reducing tailpipe emissions.

ii - LIGHTWEIGHT MATERIALS

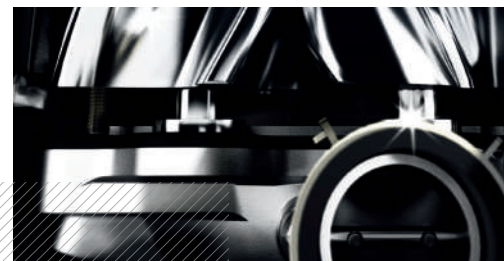
Reducing the weight of a car by using lighter materials for the body and components. A lighter vehicle needs less power and can use a smaller engine to offer the same performance.

iii - HYBRID TECHNOLOGY

Combining an internal combustion engine with an electric motor. Hybrid electric vehicles use less fuel to travel the same distance by recovering some of the energy lost in driving and braking and using it to power the car.



WE ARE USING POWERTRAIN EFFICIENCIES, AERODYNAMICS AND LIGHTWEIGHT MATERIALS TO IMPROVE TAILPIPE EMISSIONS ACROSS OUR EXISTING FLEET AND WE ARE USING THESE TECHNOLOGIES TO MEET OUR 2015 TARGET. WE ARE EXPLORING HYBRID AND ELECTRIC VEHICLE TECHNOLOGIES THAT COULD DRAMATICALLY REDUCE VEHICLE EMISSIONS IN FUTURE.



i - POWERTRAIN EFFICIENCIES IN 2011/12

We are offering customers the choice of smaller engines and more efficient powertrains without compromising on performance. In 2011/12 we introduced new vehicles, engines and greater powertrain efficiencies to reduce tailpipe emissions, including:

- Launching the All-New Range Rover with a V6 diesel engine. Combined with the vehicle's lightweight technology, the V6 diesel offers the same performance as the outgoing model with a V8 diesel engine. The All-New Range Rover achieves 195g/km of CO₂, compared with 253g/km for the outgoing model. We are developing a hybrid electric model of this vehicle that will further improve its efficiency.

- Introducing a supercharged 3.0 litre V6 petrol engine for the Jaguar XF and XJ. Compared with the 5.0 litre naturally aspirated V8 engine this new engine gives the vehicle the same performance but uses less fuel. It emits up to 14% less CO₂ than the V8. In certain markets the V6 engine will also have the ability to run on fuel with 85% ethanol content which results in lower tailpipe emissions. This was launched for the XJ in July 2012 and for the XF in September 2012.

- Increasing our range of engines to offer downsized turbocharged four cylinder diesel and petrol engines as an alternative to

naturally aspirated six cylinder engines. The new turbocharged four cylinder petrol engine, first launched in the Range Rover Evoque in 2011, will be available in the Jaguar XJ, XF and Land Rover Freelander during 2012.

- **This smaller, lighter 2.0 litre engine offers more power and torque but uses 30% less fuel and achieves up to 22% lower CO₂ emissions in the Jaguar XF compared with the outgoing 3.0 litre V6 model.**

- Launching an eight speed automatic gearbox which improves fuel economy by enabling the vehicle's engine to run at a lower speed. First launched for the V8 diesel Range Rover this technology is now available for the 2.2 litre diesel Jaguar XF. We will continue to introduce the new gearbox in more vehicles models with the aim of covering 30% of our product range by the end of 2012 and all vehicles in future.

- Rolling out Stop/Start technology to automatic vehicles. Already available across all manual vehicles in our range, this technology stops and

starts the engine under certain conditions, for instance when a car is idle at traffic lights. This saves fuel when the engine is switched off in urban driving conditions and can result in a reduction in CO₂ emissions of up to 7%. We are one of the first car manufacturers to offer this advanced technology in automatic gearboxes and we aim to make it available in all our cars in most of our markets in the next decade.

- **Launching a two wheel drive Range Rover Evoque and Land Rover Freelander with Stop/Start for customers who do not require high levels of off-road capability. This achieves a saving of up to 15g/km CO₂ on a like-for-like basis.**

- Installing Intelligent Power Supply Management and Smart Regenerative Charging to reduce the load on the vehicle battery by charging it when the vehicle is decelerating, reducing tailpipe CO₂ by around 2-3%. This technology is fitted to all Jaguar and Land Rover vehicles, with the exception of the Land Rover Defender, any 2.7 litre diesel vehicle and any 3.0 litre gasoline vehicles sold in China.



ii - LIGHTWEIGHT MATERIALS

Designing lighter vehicles is one of the most effective ways to reduce tailpipe CO₂ emissions. A lighter vehicle can provide the same performance for the customer with a smaller and more fuel efficient engine. **Jaguar Land Rover pioneered the use of aluminium body structures on Jaguar sports cars and saloons, reducing the weight of the body structure by around 40% by replacing steel monocoque designs with aluminium stamped panels, castings and extrusions.** These lightweight vehicle architecture techniques have now been employed on both the Range Rover Evoque and the All-New Range Rover.

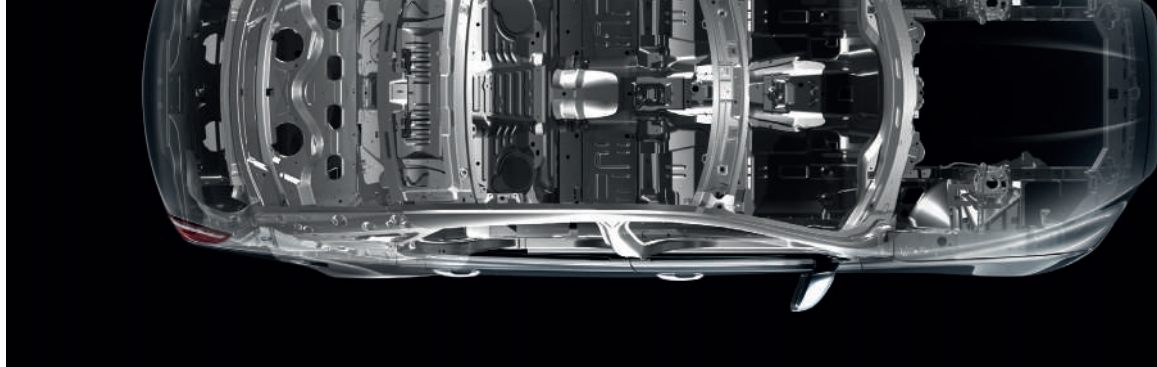
With the lightest model weighing less than 1,600 kg, the Range Rover Evoque is 30.9% lighter than the 2012 model of the Range Rover Sport, which was the smallest Range Rover at that time. This was achieved through design features such as an aluminium roof panel and bonnet that together weigh 14kg less than if they had been made of steel. Producing the fender in a thermoplastic material and the tailgate out of polymeric composites saved a further 13kg compared with conventional steel equivalents.

Using aluminium and other lightweight materials reduces the carbon footprint of our vehicles throughout the lifecycle. For instance:

- Choosing plastic and composite materials rather than metal for some components saves more CO₂ equivalent (CO₂e) emissions when the impact is considered throughout the lifecycle. For example, the Range Rover Evoque's composite tailgate and thermoplastic fender save 134kg of CO₂e across the lifecycle, largely in the customer use phase (see page 62).
- Aluminium panels to make the body structure are assembled using self-pierce rivets, using less energy and water in our manufacturing process than the conventional spotwelding of steel panels.
- Once built, lighter vehicles can be transported to the customer using less fuel (see page 60).

- The aluminium sheet used is being developed to incorporate more recycled material. The target for the main structural aluminium sheet is to achieve 75% recycled content. Aluminium can also be recycled again at the end of the vehicle's life (see page 66).

WE ARE RESEARCHING NEXT-GENERATION MATERIALS CALLED CARBON FIBRE REINFORCED COMPOSITES (CFRCs) THAT COULD CUT THE BODY WEIGHT OF CURRENT JAGUAR AND LAND ROVER VEHICLES BY 60%. A SEPARATE RESEARCH PROJECT IS DEVELOPING LIGHT WEIGHT, LOW ENERGY SEATING FOR ELECTRIC VEHICLES. NEW VEHICLE ARCHITECTURE FOR ELECTRIC VEHICLES PRESENTS THE OPPORTUNITY FOR RADICAL RE-DESIGN, INCLUDING THE POTENTIAL FOR ELEMENTS OF THE SEAT STRUCTURE TO BE INTEGRATED INTO THE BODY STRUCTURE.



CASE STUDY

LIGHT-WEIGHT CRASH-CRUSH ALUMINIUM ALLOY IMPROVES LIFECYCLE IMPACT OF THE ALL-NEW RANGE ROVER

The All-New Range Rover demonstrates the latest generation of Jaguar Land Rover's light-weight vehicle architecture. Using a monocoque aluminium body shell for the first time on a luxury SUV, this technology reduces the mass of the All-New Range Rover's body structure by around 180kg compared with the previous model. This weight reduction means a smaller V6 engine can be used instead of a V8, improving fuel efficiency and reducing tailpipe emissions by 23% while improving the performance of the car.

One of the technologies that has enabled us to make these significant improvements in vehicle mass has been the development of a new crash-crush aluminium alloy with our supplier partner Novelis. Anticorodal®-300T61 is a heat treatable alloy made of aluminium, magnesium and silicon and developed for automotive structural body applications with high crash performance requirements.



iii - HYBRID AND ELECTRIC VEHICLES

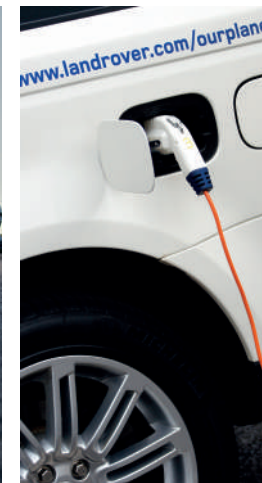
Hybrid and electric vehicles have the potential to achieve significantly lower tailpipe emissions and this technology is likely to be at the heart of a future fleet of sustainable, low carbon vehicles. We are investing heavily in hybrid and electric vehicle technology and have designed the All-New Range Rover so we can introduce these features in future.

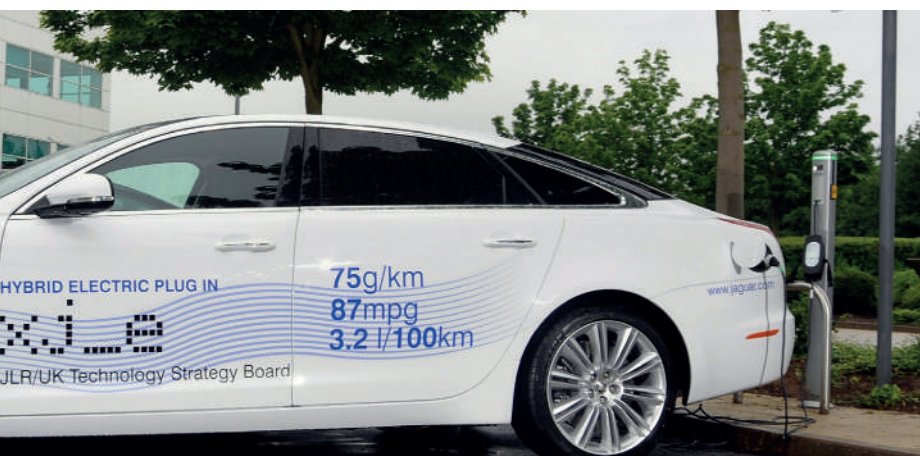
The importance of life cycle assessment grows with the development of hybrid and electric vehicles. Production of electronic components to support these vehicles has a higher impact compared with traditional combustion engine components. Tailpipe emissions are reduced but there is a shift in the source of emissions from fuel production and combustion to electricity generation. By using life cycle assessment we aim to understand and reduce environmental impacts throughout the vehicle's life.

The carbon intensity of grid electricity varies by country depending on the combination of coal, oil, gas, nuclear or renewable sources used, all of which give a different outcome for the life cycle impact of vehicles charged from the electricity grid. The true environmental benefit of hybrid and electric vehicles depends on the availability of low carbon electricity grids around the world. Hybrid and electric vehicles have additional benefits including reduced noise and air pollution.

The main challenges we face in developing hybrid and electric vehicles are the significant costs of developing the technology and manufacturing vehicles on a large scale. The complexity of hybrid technology and CO₂ equivalent emissions savings vary from mild and full hybrids that combine an internal combustion engine with an electric motor, to plug-in hybrids that can be charged from a domestic energy supply. Battery electric vehicles that have no combustion engine can achieve zero tailpipe emissions whilst driving.

We have invested £800 million in research and development to work towards making these technologies a commercial reality. Key research partners include the Technology Strategy Board and Warwick University's Technology Innovation Centre. We also partner with relevant suppliers to develop hybrid and electric vehicle technologies. Key hybrid and electric vehicle research projects in 2011/12 include:





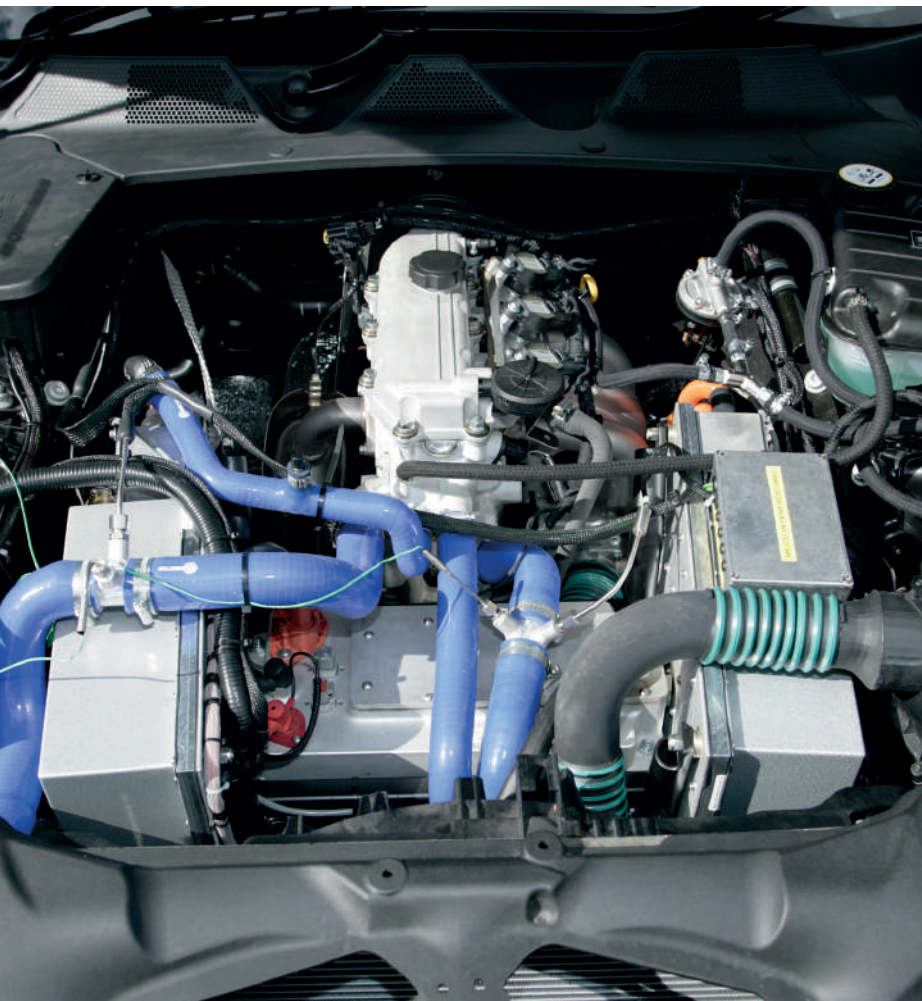
◦ JAGUAR XJ_E

In partnership with the Technology Strategy Board, we are leading the 'REEvolution' consortium of UK suppliers and vehicle manufacturers to develop low carbon solutions for premium luxury cars. The Jaguar XJ_e is a parallel plug-in hybrid electric vehicle (PHEV) that achieves major CO₂ reductions without compromising vehicle performance. With the downsized engine the vehicle produces 75g/km of tailpipe CO₂, which is 70-75% lower than the existing non-hybrid model of the Jaguar XJ. The performance is still comparable, with the PHEV model reaching top speeds of 250kph (155mph) and accelerating from 0-100kph in less than six seconds. The carbon reductions come from pairing a lithium-ion battery with a 2.0 litre petrol engine, giving it an electric vehicle range of 25 miles. We are developing a Jaguar XJ_e demonstration vehicle for testing and evaluation.



◦ RANGE_E

We tested five demonstration models of our first plug-in diesel hybrid Range Rover in 2011/12. The Range_e combines our 3.0 litre Range Rover Sport diesel engine with an electric motor and lithium-ion battery. The battery can be recharged from a domestic power supply and the vehicle can be driven for over 20 miles on electric power alone after four hours of charging. It retains the long-distance cruising capabilities of the Range Rover Sport, but has a fraction of the environmental impact. The vehicle emits 89g/km of tailpipe CO₂ and attains higher fuel efficiency than the traditional Range Rover Sport, achieving 85 miles per gallon. This means that with a full tank of fuel, the car can be driven for 690 miles.



◦ FLYWHEEL HYBRID SYSTEM

We have pioneered research on a flywheel energy storage system for hybrid vehicles for several years. A flywheel system can recover and store energy generated during braking and transfer this energy straight back to the wheels under acceleration. This can reduce vehicle tailpipe CO₂ emissions significantly and is a cheaper and lighter alternative to existing battery storage electric hybrids. In 2011, we finished a major project with the Technology Strategy Board and several partners to explore how this technology could be produced cost effectively for premium vehicles. A flywheel hybrid system was integrated into the rear axle of a Jaguar XF saloon and it achieved a 12% reduction in CO₂ emissions compared to the original model without the system.

◦ INTELECT

As a member of the INTELECT consortium, we are developing an affordable electric vehicle that could be manufactured in high volumes. Working with a small motor company, YASA Motors; a components manufacturer, SEVCON; an established supplier of driveline systems, GKN Driveline and Warwick University, the partnership aims to increase the competitiveness of UK suppliers that can manufacture electric vehicles in large numbers. The partnership will develop and demonstrate the technology and provide the foundation for a potential production programme.

DESIGNING IN SUSTAINABLE MATERIALS

Choosing materials is one of the key design decisions that our engineers make. We aim to use renewable and recycled materials in our vehicles where possible, while maintaining the premium look and feel that our customers expect. Many of the materials we use, such as steel, aluminium and plastics, are also recyclable and we design vehicles with disassembly in mind to facilitate easier recycling at end of life (see page 66).

Since 2007 we have increased the quantity of renewable and recycled materials used in the non-metallic parts of our new vehicle lines by at least 25%. The All-New Range Rover has up to 66% more recycled plastic and renewable materials than its predecessor and the Range Rover Evoque has 25% more than the Land Rover Freelander 2, the most similar vehicle for comparison.

RENEWABLE AND NATURAL MATERIALS

Materials such as leather, natural rubber, wood, cardboard and cotton can have a lower environmental impact than man-made alternatives if they are from sustainable sources such as sustainably managed forests or reusing waste cotton from manufacturing jeans. The Range Rover Evoque contains 21kg of renewable material including cotton carpet insulation, natural rubber shock absorbers and leather door and seat trims. The All-New Range Rover contains up to 31.5kg of renewable materials with over 21kg of leather used in its interior.

We are researching new types of natural fibres that could reduce the weight and life cycle impact of vehicle components by 30% on average, compared to plastic. Biotex is made of flax plant fibres that have been woven into a strong fabric and once heated and formed, could be used to make semi-structural components such as door trim panels in future.



RESEARCHING RECYCLED ALUMINIUM



We are developing a new metal alloy, RivAlloy, which has higher recycled aluminium content than the aluminium alloy we currently use. The chemistry of RivAlloy means it can tolerate higher levels of impurities from aluminium scrap castings that were previously disregarded. The castings can be recycled and added to other elements to create the alloy, reducing the amount of aluminium sent to landfill. Using the new alloy to make car body parts also reduces transport emissions because materials recycled in the UK can be used, instead of importing castings from a supplier in Germany.

RivAlloy complements our ongoing research into recycled aluminium through both REALCAR and REALCAR 2. These projects are funded by the Technology Strategy Board. REALCAR and REALCAR 2 aims to reduce aluminium waste streams going to landfill and develop the UK aluminium recycling infrastructure, by increasing the composition of recycled aluminium used in vehicle manufacture to 75%.

RECYCLED MATERIALS

We are increasing the amount of recycled aluminium we use and investing in research on new aluminium alloys (see box) so we can manufacture aluminium vehicles with reduced energy intensity. Recycled aluminium can be up to 95% less carbon intensive to produce than virgin aluminium. We aim to incorporate as much recycled aluminium into our cars as possible to lower the overall vehicle carbon footprint. The **REALCAR** and subsequent **REALCAR 2** projects are establishing closed loop recycling process for aluminium, both at our manufacturing plants and at our strategic suppliers, which enables use of recycled aluminium sheets in the Jaguar XJ and the All-New Range Rover.

The All-New Range Rover contains 31.5kg of recycled plastic. Other recycled plastic is used to make the door casings, instrument panel and centre console, headliner and upper pillar trim, trunk trim, wheel arch liners, air ducting,

subwoofer and speaker and load floor support. The amount of recycled plastic used in the All-New Range Rover is equivalent to 2,100 small bottles per vehicle.



Morzine is a fabric made from 100% mechanically recycled polyester from bottles and fibres and requires 66% less energy to produce. Both Range Rover Evoque and the All-New Range Rover use recycled Morzine fabric on the roof headliner and upper pillars, helping to lower the carbon footprint of these vehicles.



RAW MATERIALS AND COMPONENT PRODUCTION



Once a vehicle has been designed, we source raw materials and components from suppliers before beginning the manufacturing process. We expect suppliers to uphold the same high standards on sustainability as we set ourselves, and we work closely with them to reduce the environmental and social impacts of the products and services we buy.

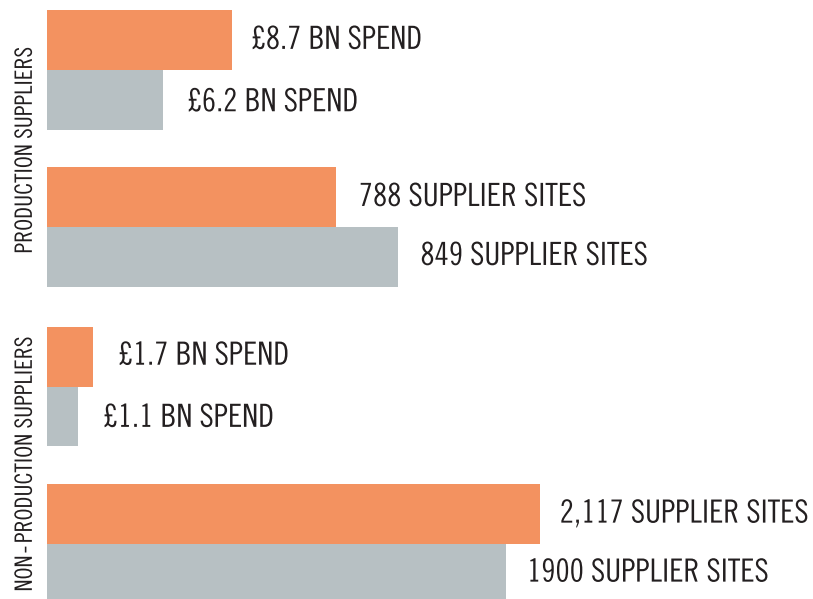
Jaguar Land Rover spent in excess of £10 billion with more than 2,500 suppliers in 2011/12. The majority of our spend is with production suppliers, who provide the materials, components and tools we need to manufacture our vehicles. We also procure products and services to support the running of our business, such as marketing and IT, from non-production suppliers.

The trend in the automotive sector over recent years has been to increase the use of suppliers in low cost emerging markets. In contrast, in 2011/12 we increased our business with first tier UK suppliers – representing 44% of our production spend – and focused particularly on those based near our manufacturing sites. This helps us improve responsiveness, reduce costs, and cut environmental impacts from transport (see Inbound transport, page 45).

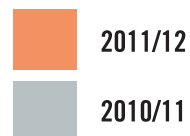
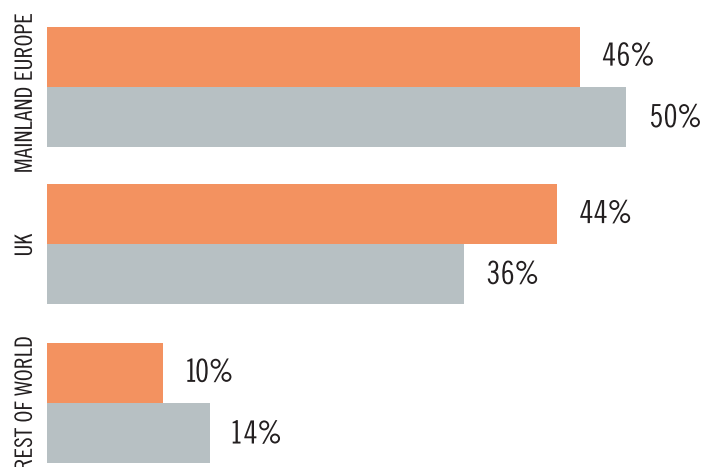
As we establish manufacturing sites in growth markets, we will aim to source at least 40% of components locally. Maintaining our high standards for suppliers is paramount as we introduce new companies to our supplier base.

We clearly communicate our expectations to suppliers, monitor their compliance, and support them in meeting these expectations by developing strategic, long-term relationships and offering training and guidance.

SUPPLY CHAIN PROFILE



LOCATION OF PRODUCTION SUPPLIERS BY SPEND*



SUPPLIER REQUIREMENTS

We set out our social and environmental requirements in Jaguar Land Rover's Global Terms and Conditions and our Supplier Guide on Sustainability, which includes a Code of Basic Working Conditions. We regularly review our sustainability requirements for suppliers, which were updated and consolidated in March 2012. We expect suppliers to convey our requirements to their own suppliers.

New production suppliers are assessed against our Jaguar Land Rover Quality standard, which requires all long-term strategic suppliers to achieve third party accreditation to the international environmental management standard ISO 14001 before they can qualify as a Jaguar Land Rover supplier. All suppliers also undergo a detailed Manufacturing Site Assessment that includes sustainability criteria.

MONITORING SUPPLIERS IN EMERGING MARKETS

Dedicated sourcing teams in China and India monitor and support our suppliers. We carry out an early pre-qualification site assessment for potential new suppliers in these markets, based on social and ethical questions that are particularly relevant to each country. This has enabled us to assess more suppliers and provide feedback about what they need to do to meet our standards.

* Analysis based on expenditure with direct (tier 1) suppliers

WORKING WITH SUPPLIERS TO REDUCE THE ENVIRONMENTAL IMPACTS OF THE MATERIALS WE SOURCE

From 2012, we are using three innovative tools to work with suppliers to continually reduce the environmental impacts of their products:

ACHILLES SUPPLIER MANAGEMENT SYSTEM

In 2011 we began working with Achilles to develop a web-based system for the automotive industry that will allow participating companies to share sustainability information about their suppliers. The Achilles system will assess ISO 14001 environmental management accreditation, ISO 18001 health and safety management accreditation, responses to sustainability questions, and whether suppliers disclose their carbon impact. The aim is to improve standards and supplier visibility throughout the automotive industry's supply chain. Jaguar Land Rover is the first automotive company to join Achilles.

In anticipation of the expansion of our supply base in the Far East, in September 2011 we conducted on-site reviews of 33 potential supplier sites in China, including sustainability criteria. Of these, 22 met acceptable standards, 10 needed support to achieve them, and one was rejected as a potential supplier due to unacceptable standards.

CARBON DISCLOSURE PROJECT (CDP) SUPPLY CHAIN INITIATIVE:

In 2011, Jaguar Land Rover became the first vehicle manufacturer in the automotive sector to ask suppliers to participate in the CDP Supply Chain Initiative, which encourages suppliers to measure, report and set reduction targets on their climate impacts. This will help us better understand suppliers' environmental impacts, support them in reducing their carbon emissions, and identify best practices. Following a trial with 26 suppliers in 2011, we have invited our top 150 (covering more than 60% of production purchasing spend) to disclose their emissions through CDP in 2012.

LIFE CYCLE ASSESSMENTS (LCAs)

We have piloted the use of LCAs to help us with buying decisions and our choice of components. We intend to increasingly use LCAs in this way, and in 2011/12 we developed a carbon life cycle indicator tool, LCA Rapid, to facilitate this. By asking suppliers to analyse and disclose information on the environmental impacts associated with the production, use and disposal of their products, we will be able to assess and compare impacts of different components - and identify ways to reduce these impacts.

We rigorously apply standards on restricted substance management in compliance with REACH, the European Union's regulation on the registration, evaluation, authorisation and use of restricted chemicals. We maintain a comprehensive list of prohibited or restricted substances that production suppliers must not use, and we require our suppliers to report any substances of concern. If these are present, then they must be engineered out of any components supplied to manufacture our vehicles.



JAGUAR LAND ROVER RECOGNISED FOR RESPONSIBILITY TO SUPPLIERS



Our work with suppliers was recognised in the 2011 Supplier Relationships Index compiled by the global information company IHS. The Index, based on feedback from supplier satisfaction surveys, placed Jaguar Land Rover first among automotive companies for 'profit potential'. We were particularly praised for paying for development and tooling costs on time, having better payment terms than most, and providing technical assistance to help suppliers operate more efficiently.

STRENGTHENING THE SUPPLY CHAIN

Strong relationships with our strategic suppliers are essential to our business, and help us to engage with them on sustainability issues. We take a leading role in developing awareness and analysis of the constraints that our suppliers face, especially around access to finance for business expansion as our demand grows. We play an active role in the UK Automotive Council Supply Chain Group, which was established to create a unified UK automotive industry approach to supporting growth in the supply chain.

In 2011/12 we helped several suppliers to expand in order to meet increasing production volumes as demand for our vehicles increased. To ensure continuity of supply during the economic downturn, we have provided support for vulnerable suppliers to ensure the viability of their businesses. This helps to reduce the risk of disruption of supply to our manufacturing operations and supports local economies where suppliers operate.

In 2011/12 we also brought high volumes of work back to the UK, reducing the environmental impacts of transporting parts such as large stamped panels that were being delivered from as far afield as Sweden. We are now manufacturing these close to our assembly plants in the UK.

Following the 2011 Japanese earthquake and tsunami, many of our suppliers were affected either directly through their supply chain or indirectly through customers changing their manufacturing schedules. We quickly established a supplier support task force to help all affected suppliers, and set out plans to protect supplies and return production to normal as soon as possible. We were the first non-Japanese original equipment manufacturer to put a team on the ground in Japan to provide support for suppliers.



TRANSPORTING COMPONENTS TO OUR FACTORIES

We source the components and materials we need from suppliers in the UK and around the world. Collectively, these components travel up to 25 million miles to our factories and we have a range of programmes in place to cut the environmental impacts of this inbound transport.

WE SET A TARGET TO CUT TOTAL EMISSIONS FROM OUR LOGISTICS TRANSPORT BY 15% BY THE END OF MARCH 2013 (FROM 2007 LEVELS).¹²

This includes distributing finished vehicles to customers (see page 60). We are on track to exceed our target, having achieved a 22% reduction in CO₂ per vehicle we produce since 2007.

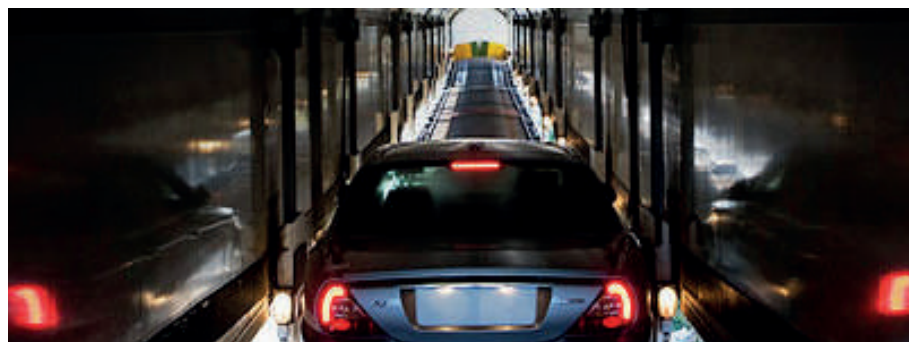
Our objective is to have a strong local supply chain to support our aim to source components from suppliers close to our manufacturing sites where possible, saving fuel and reducing carbon emissions as a result. However, it is still necessary to source many components from further afield and our procurement team balances the need to source high quality and affordable components from emerging markets with the costs and environmental implications of longer transport distances.

¹² Due to changes in the way we collect and report data, targets have been restated from calendar year 2012 to financial year 2012/13.



Almost all our inbound transport is outsourced, so working closely with suppliers is central to cutting associated impacts. We have worked with our main logistics supplier since 2008 to cut fuel use and carbon emissions from inbound transport. For example, we make sure trailers are aerodynamic and are packed as fully as possible, and we share deliveries with other companies to reduce the total number of trips required. Drivers are trained on fuel efficient driving and we set a maximum speed of 53mph for trucks to save fuel. In 2011/12 we worked with suppliers and contractors to make inbound logistics more efficient by:

- Introducing 52 new trailers that weigh 7.4 tonnes less and can carry heavier loads than existing models with a more aerodynamic design. This reduces fuel use by 2%, equivalent to saving 9.4 tonnes of CO₂ emissions a year per trailer.
- Redesigning packaging to help load trucks more efficiently saved 494 tonnes of CO₂ emissions in 2011.
- Transporting engines sourced from a factory in Valencia, Spain, by sea rather than road, saving 924 tonnes of CO₂ emissions per year from August 2011.
- Reducing the number of shipping journeys, saving 446 tonnes of CO₂ emissions in 2011/12.
- Piloting the use of longer trailers in January 2012 which provide up to 10% more capacity in each truck, reducing CO₂ emissions by around 10%. Following a successful trial, we are beginning to use these longer trailers on suitable routes which will save 14.8 tonnes of CO₂ emissions per year.
- Introducing an online central monitoring system to gain a better understanding of the speed, routes and fuel usage of trucks. The system also produces daily reports for each driver to help them use more efficient driving styles and routes, supporting driver debriefs and training requirements.



CASE STUDY

BRINGING BODY STRUCTURE PARTS CLOSER TO HOME



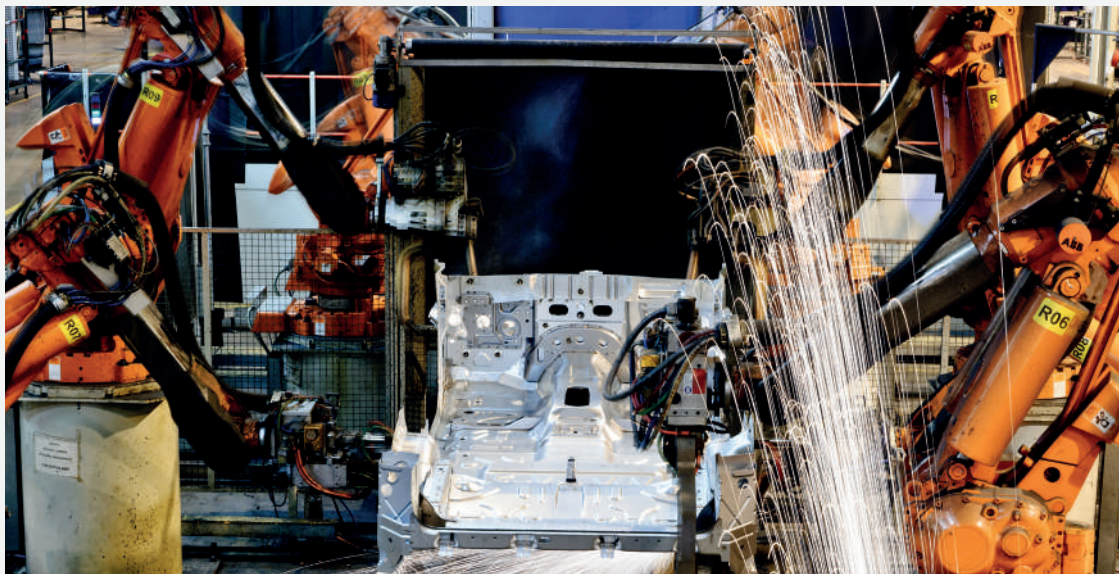
Moving our sources of supply closer to our UK manufacturing sites is cutting the carbon footprint of inbound transport. In 2011 we transferred the production of body structure parts for the Range Rover Evoque from suppliers in Sweden and Belgium to our Halewood plant in Merseyside and to a new supplier in Wales. This cut 233 tonnes of CO₂ a year by eliminating the need to transport these parts across 1,604 miles of mainland Europe to the UK.

The project required careful planning and cooperation across a number of company functions – plus an initial investment of £7.6 million to create the capacity to make the body parts in the UK. But it will generate savings of £9.9 million a year in addition to supporting the local economy around Halewood and in Wales.

THIS CUT 233 TONNES OF CO₂ A YEAR BY ELIMINATING THE NEED TO TRANSPORT THESE PARTS ACROSS 1,604 MILES OF MAINLAND EUROPE TO THE UK.



Our operations form an important part of our products' life cycle. We have manufacturing sites in Solihull, Halewood and Castle Bromwich, and product development sites at Gaydon and Whitley - all in the UK. Minimising impacts from our operations is a key element of our Environmental Innovation strategy and is especially important as we increase manufacturing capacity to meet growing demand for our vehicles.



We are investing £9 million on efficiency measures at existing sites across the company from 2009 to March 2013, focusing on areas where we feel we can achieve the most significant reductions. We concentrate on driving down greenhouse gas emissions, cutting waste, and reducing our use of energy, solvents, water and other natural resources in our manufacturing and product development.

We establish environmental targets for each site in key areas such as energy use, water use and waste. This also benefits the business by reducing costs.

Our compliance with environmental regulations is verified through a number of mechanisms, including internal and third party audits and a comprehensive compliance assurance process. In 2011/12, we did not receive any fines or prosecutions related to breaches of environmental regulations.

CASE STUDY

NEW 'GREEN' ADVANCED ENGINE MANUFACTURING FACILITY IN WOLVERHAMPTON



Our new advanced engine manufacturing facility is being designed with sustainability embedded throughout, and we have set ourselves the goal of achieving an 'excellent' rating from the BREEAM assessment for sustainable buildings.

The building has been designed to minimise energy demand through the use of insulated cladding, to maximise daylight through the roof design, and to harness natural ventilation through the use of automatic louvres. This will reduce the energy needed for lighting and cooling.

All equipment at the plant will be fitted with meters to monitor energy use, and all systems are controlled and operated by a Central Building Management System to maximise efficiency. Waste heat from compressed air machines will be used to warm the building space.

Rainwater will be captured via an underground storage system for use in the manufacturing process, while the machine and assembly areas will be fitted with state of the art fluorescent lighting that adjusts according to the amount of daylight available and turns off if an area is not being used. Extensive landscaping and green space for employees will enhance the site.



PERFORMANCE¹³

Our Environmental Innovation strategy outlines a strategic goal, set in 2009 to reduce the environmental footprint from our manufacturing operations, focusing on reducing CO₂ emissions, waste to landfill, and water use (see page 18). By March 2012, a year before the target date, we had already exceeded our waste and

water targets per vehicle produced. We had also achieved a 15% reduction in manufacturing CO₂ emissions for each vehicle produced, and we now face the challenge of continuing to improve energy efficiency as we prepare our sites for the development of future vehicle models.

¹³ Note that in 2010 Jaguar sold the Browns Lane veneer manufacturing facility, therefore data from this plant is excluded from this report.

¹⁴ All manufacturing performance targets are per vehicle produced, although this was not explicitly stated in our last Sustainability Report (2009/10). Due to changes in the way we collect and report data, targets have been restated from calendar year 2012 to financial year 2012/13.

TARGET¹⁴

PROGRESS

Since 2007 baseline year

REDUCE MANUFACTURING CO₂ EMISSIONS PER VEHICLE PRODUCED BY 25% BY MARCH 2013, FROM 2007 BASELINE



CO₂ EMISSIONS CUT BY 15% PER VEHICLE PRODUCED

REDUCE MANUFACTURING WASTE TO LANDFILL PER VEHICLE PRODUCED BY 25% BY MARCH 2013, FROM 2007 BASELINE



WASTE TO LANDFILL CUT BY 37% PER VEHICLE PRODUCED

REDUCE MANUFACTURING WATER USE PER VEHICLE PRODUCED BY 10% BY MARCH 2013, FROM 2007 BASELINE



WATER USE CUT BY 13% PER VEHICLE PRODUCED

ENERGY USE AND CLIMATE CHANGE

2011/12

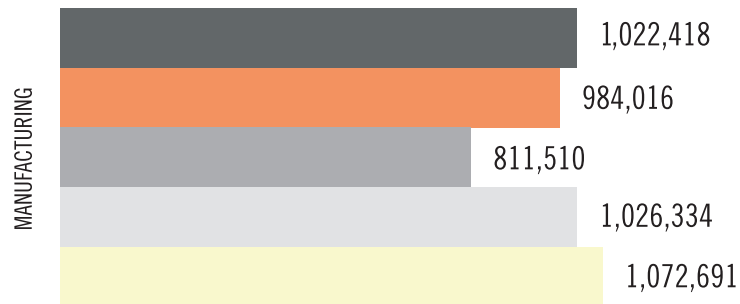
2010/11

2009

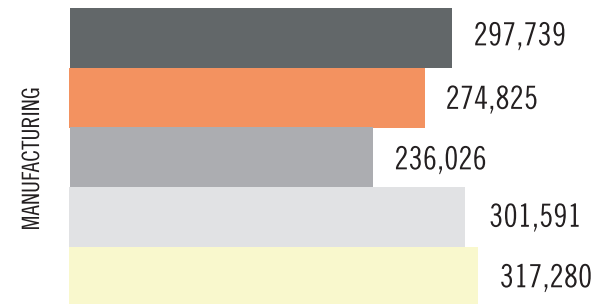
2008

2007

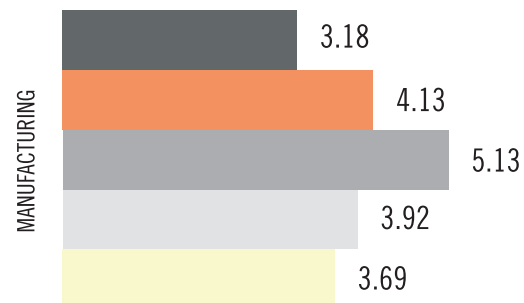
TOTAL ENERGY USE (MWh)



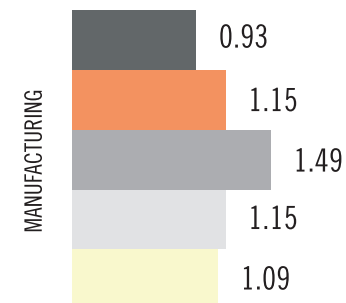
TOTAL CO₂ EMISSIONS (TONNES)



ENERGY USED PER VEHICLE PRODUCED (MWh/VEHICLE)



CO₂ EMISSIONS PER VEHICLE PRODUCED (TONNES PER VEHICLE)



IMPROVING ENERGY EFFICIENCY

Although the largest life cycle carbon impact from our vehicles comes during their use by our customers, we also emit CO₂ from energy use in the manufacturing process. Production volumes increased by 35% in 2011/12, but we were able to avoid a significant increase in our total energy use by implementing efficiency measures that have helped us achieve a 23% reduction in the energy use per vehicle produced.

We also reduced CO₂ emissions per vehicle produced by almost 20% in 2011/12, although the total CO₂ emissions from manufacturing increased by 8% to 297,739 tonnes, reflecting the increase in production volumes. In 2011/12 our non manufacturing product development sites saw an increase in engineering staff and vehicle testing activities, but due to energy efficiency projects and the installation of photovoltaic panels at Whitley, absolute energy use across these sites decreased by 6% and absolute CO₂ emissions fell by 2%.

Energy use is closely monitored at all our sites through our building management system. Site energy teams meet weekly to identify efficiencies, and our cross-functional Carbon Working Group meets monthly to share best practice across sites. Energy efficiency measures introduced during 2011/12 included:

LIGHTING AND HEATING UPGRADES AT SOLIHULL THAT WILL SAVE AN ESTIMATED 2,056 TONNES OF CO₂ EMISSIONS A YEAR

A THERMAL IMAGING SURVEY AT GAYDON AND WHITLEY TO PINPOINT AND ADDRESS AREAS OF HEAT LOSS

REPLACEMENT OF THE BUILDING ENERGY MANAGEMENT SYSTEM AT CASTLE BROMWICH, SAVING 830 TONNES OF CO₂ EMISSIONS A YEAR

CEILING FANS INSTALLED AT WHITLEY AND GAYDON THAT FORCE WARM AIR IN THE CEILING VOID DOWN TO GROUND LEVEL, REDUCING ENERGY CONSUMPTION AND CO₂ EMISSIONS BY CUTTING HEATING REQUIREMENTS

A PAINT SHOP AIR DRYER SEQUENCING PROJECT AT SOLIHULL THAT WILL SAVE 1,046 TONNES OF CO₂ EMISSIONS A YEAR

PAGE 52

CASE STUDY

INSTALLING PHOTOVOLTAIC AT WHITLEY

In 2012 we completed a £3 million investment to install 1.17MW photovoltaic (PV) panels on the roofs of our research and development centre at Whitley.

The project is part of our long-term ambition to reduce our reliance on fossil fuels as a source of energy. We estimate the PV panels will save around 540 tonnes of CO₂ emissions a year.

Changes to the UK government's feed-in-tariff scheme have made it less attractive to pursue further PV panel initiatives, but we will continue to consider these options and carry out smaller scale projects that make use of solar power. We plan to install a 50kW PV roof installation at Solihull during 2012/13.



RENEWABLE/ALTERNATIVE ENERGY

Using low carbon or renewable energy reduces our reliance on fossil fuels, helping us improve energy security and cut carbon emissions. Renewable and low carbon energy initiatives in 2011/12 included:

- Installing 1.17MW photovoltaic (PV) panels on the roofs of our research and development centre at Whitley (see case study)
- Providing charging posts and spaces for electric vehicles at our Gaydon, Whitley and Castle Bromwich sites
- Using food waste from catering facilities at our Gaydon and Whitley sites as a renewable source of energy, saving an estimated 19 tonnes of CO₂ emissions and diverting more than 84 tonnes of waste from landfill in 2011/12
- Installing solar and wind powered car speed signs at our Solihull plant, following a suggestion from two employees
- Exploring the viability of ground source heat pumps that use the earth as a heat source in the winter or a heat sink in the summer
- Initiating discussions with third parties about a partnership to build a biomass plant



OFFSETTING UNAVOIDABLE CO₂ EMISSIONS FROM MANUFACTURING

We are working hard to reduce carbon emissions from the production and use of our vehicles, but some emissions inevitably remain. While technology continues to develop, CO₂ offsetting enables us to make an impact now, and helps us balance the emissions that have not been eliminated. As part of our integrated carbon reduction strategy, we offset 100% of our manufacturing assembly emissions. Also our CO₂ offsetting programme enables customers to offset emissions from driving our vehicles (see Product use, page 63).

To date we have delivered more than 5 million tonnes of CO₂, which is equivalent to eliminating all emissions from the UK for 3.4 days. Our offsetting programme supports the growth of renewable energy, clean technology, and energy efficiency projects around the world (see Global Corporate Social Responsibility, page 86).

For example, our investment in wind energy has created 1.2 million tonnes of emissions reductions since 2006 and our support for projects that generate renewable energy from waste products and biomass has reduced more than 900,000 tonnes of emissions. We partner with climate and development specialist ClimateCare to run the programme. It is overseen by an operating committee that includes ClimateCare and Jaguar Land Rover representatives. Chaired by Forum for the Future, the committee meets quarterly to review progress. All emissions reduction projects funded by our offsetting programme go through a rigorous validation and verification process. Projects follow the United Nations protocols for carbon offsetting and comply with established standards for voluntary offsets, including the Gold Standard, the Social Carbon Standard, and the Verified Carbon Standard.

Our CO₂ offsetting programme complements our carbon reduction strategy, but does not replace it. We recognise that while offsetting has a role in the context of a wider carbon strategy, it must always be carried out in conjunction with activities that reduce direct and indirect emissions.



WASTE

CASE
STUDY

Raising awareness of waste reduction efforts among employees and other stakeholders through our Making Zero Waste Work campaign and a 'Waste Wall' – a large portable display used at employee roadshows.



WASTE

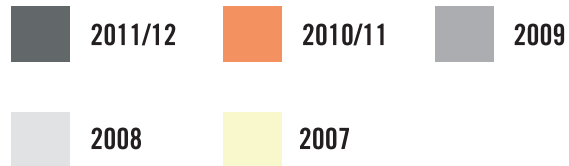
Minimising waste and promoting recycling is key to reducing the environmental impact of our manufacturing operations. Most of our scrap metal, wooden packaging, cardboard and plastic is recycled, and we ask suppliers to provide re-usable packaging wherever possible so that we can return it to them. The design of our vehicles also plays an important part in waste reduction at manufacturing plants, for example by using more recycled and reusable materials (see product design, page 28).

Due to increased overall production levels and substantial construction related to plant improvement work, waste generated by our manufacturing operations increased in 2011/12 to 15,290 tonnes. However, our total waste produced per vehicle dropped to 47.55kg, and the amount of waste we sent to landfill fell by 12% per vehicle produced when compared to 2010/11. Waste generated by our non manufacturing plants fell slightly in 2011/12, partly thanks to recovery and recycling initiatives at the design stage (see below).

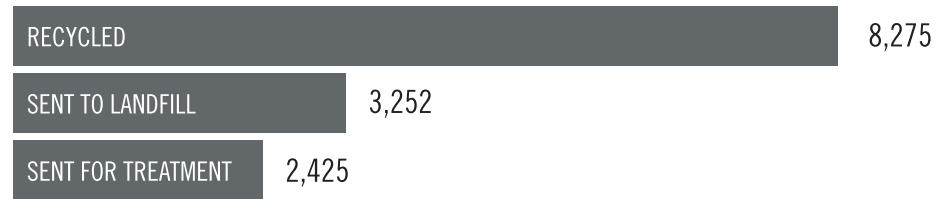
Initiatives to reduce waste and promote recycling in 2011/12 included:

- Investing £235,000 to introduce a 'closed loop' recycling system at our Solihull press shop, which ensures that any scrap metal from manufacturing, such as aluminium and steel, is collected, segregated and sent back to our suppliers for recycling. A similar system is already in place at Castle Bromwich
- Working with waste management contractors to collect and sort waste from Castle Bromwich for recycling. This has reduced waste sent to landfill from the site by 70% from 40 tonnes to 13 tonnes per month. A similar system was already in place at Halewood and has now been trialled at Solihull
- Minimising waste sent to landfill from demolition of part of our Solihull site by, for instance, sending steel and glass for recycling and using rubble from the old building in the foundations of the new one. The initiative generated £140,000 for the business and resulted in only 155 of the 7,222 tonnes of building material being sent to landfill
- Working with contractors to recover and recycle 24 tonnes of nylon powder and 25 tonnes of waste polyurethane dust from the design processes
- Running an employee campaign called 'every can counts' that promotes the collection of aluminium cans for recycling at Gaydon and Whitley
- Establishing a project to investigate how to achieve zero waste in the future. Working with Warwick University, this will involve identifying all waste streams and possible routes for treatment, re-use and recycling, and establishing feasibility studies at various sites

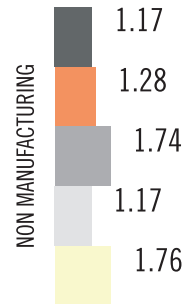
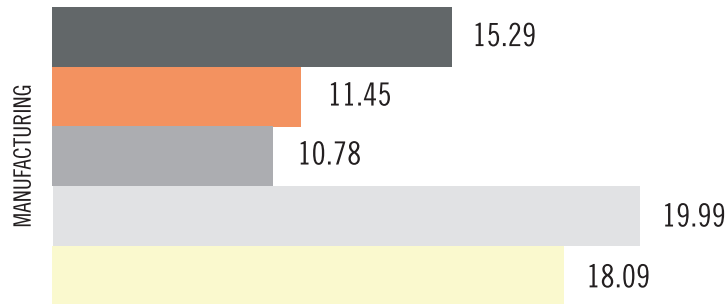
WASTE



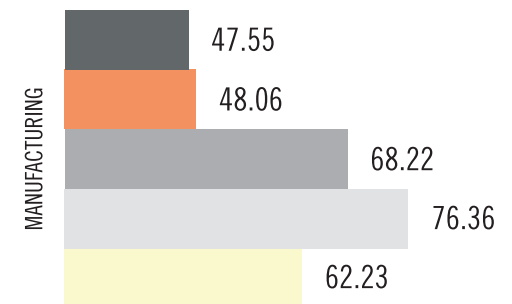
RECYCLING AND DISPOSAL OF NON-HAZARDOUS WASTE (MANUFACTURING AND NON MANUFACTURING IN TONNES)



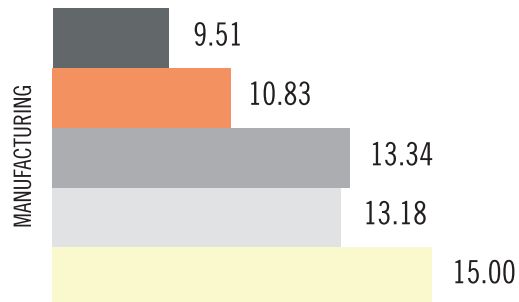
TOTAL HAZARDOUS AND NON HAZARDOUS WASTE GENERATED (THOUSAND TONNES)



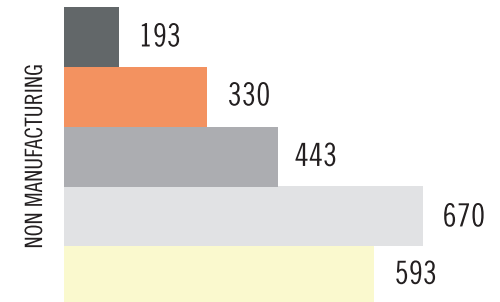
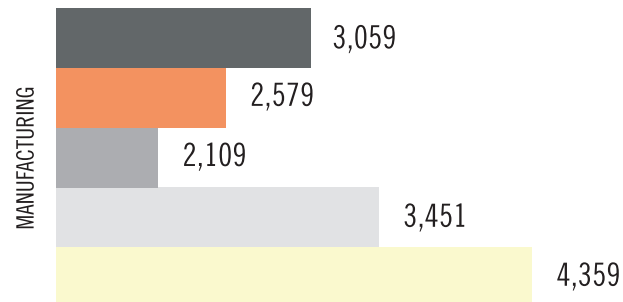
TOTAL WASTE PER VEHICLE (KG/VEHICLE)



TOTAL WASTE SENT TO LANDFILL PER VEHICLE (KG/VEHICLE)



TOTAL WASTE SENT TO LANDFILL (TONNES)



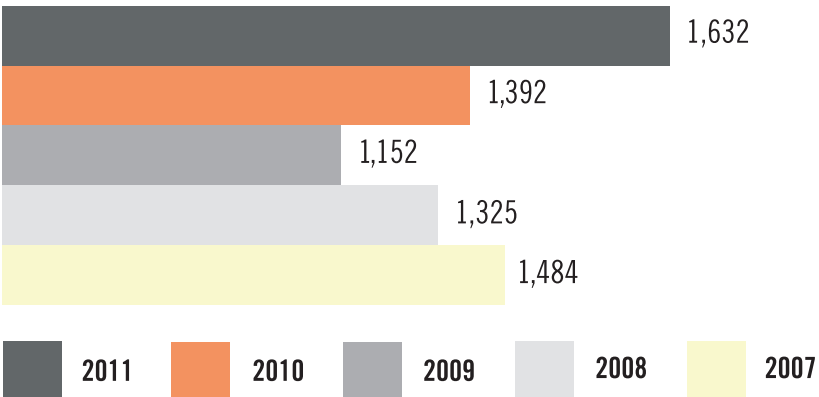
SOLVENTS

Emissions of volatile organic compounds (VOCs) from solvents used in our paint shops can contribute to local air pollution. We are committed to minimising our use of solvents by using water-based, low-solvent coatings to reduce VOC emissions without compromising paint quality. Each of our paint shops holds an Integrated Pollution Prevention and Control permit and we report the amount of solvent we use each year according to the European Solvent Emissions Directive.

We used a total of 1,632 tonnes of solvent in 2011 as a result of increased production volumes. Around 617 tonnes of solvent was reclaimed for reuse.

We are exploring ways to reduce solvent use in existing paint shop facilities. For instance, we introduced a new system for the All-New Range Rover that means that when changes of paint are required for contrasting colours on a vehicle, the spray heads no longer need to be purged of the previous colour. This cuts the amount of solvent needed and reduces waste paint.

TOTAL SOLVENTS USED INMANUFACTURING PROCESSES (TONNES)*



* Solvent data is all calendar year.



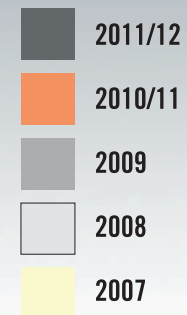
WATER

We reduced water use per vehicle produced by 15% in 2011/12, but our total water use in manufacturing increased by 14% due to a significant increase in production volumes.

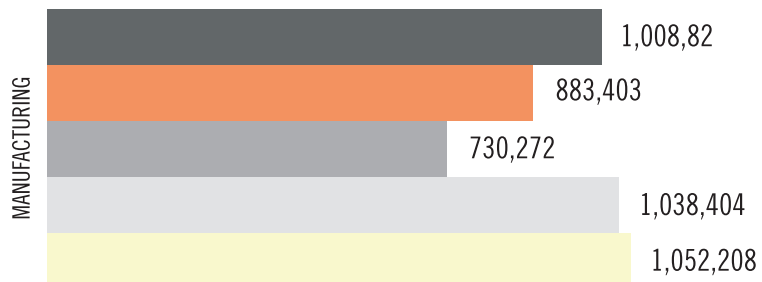
Our paint shops are a key focus for water reduction efforts, as this is where much of our water use occurs. At our Castle Bromwich facility, for example, we are exploring ways to recycle water in our manufacturing processes after it has been used in the paint shop.

A pilot scheme demonstrated that this could save an estimated 37,000m³ of water per year at Castle Bromwich alone – around 15% of total water use in its paint shop.

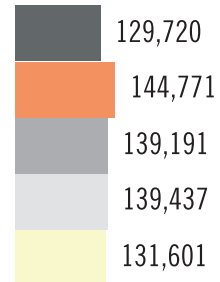
We recognise that water use will become a bigger focus as we begin manufacturing outside the UK, where water scarcity is a more significant issue.



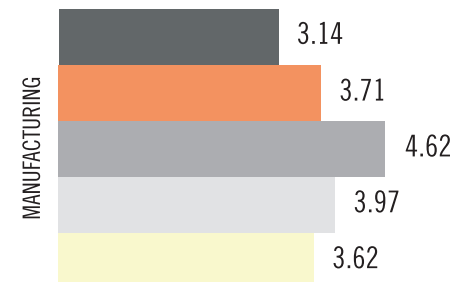
TOTAL WATER USE (M³)



NON MANUFACTURING



WATER USED PER VEHICLE PRODUCED (M³ PER VEHICLE)

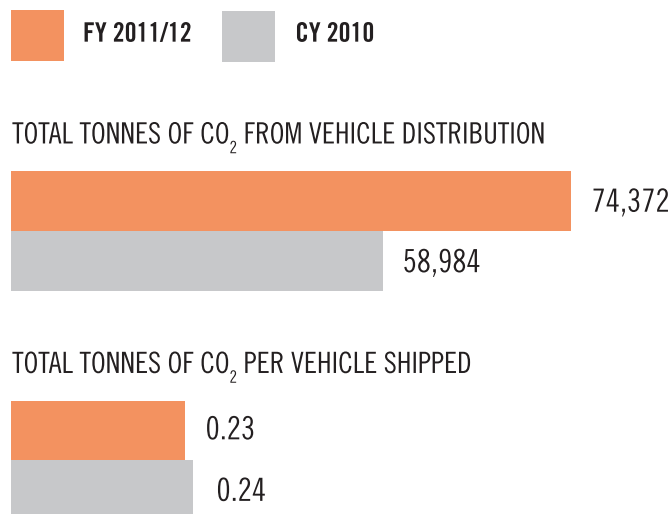


TRANSPORTING PRODUCTS TO CUSTOMERS

Finished Jaguar and Land Rover vehicles are transported from our manufacturing sites in the UK to customers in 177 countries by road, rail and sea. Reducing the environmental impact of transporting our finished products to market is an important part of reducing the life cycle impact of each car we make – and designing lighter weight vehicles helps to support this goal (see page 35).

Improving distribution also has further benefits for our business as we reduce our transport costs, customers receive vehicles sooner and they are less likely to be damaged on route. Our customer base is growing in emerging markets as we sell more products in countries such as China and Russia, making it challenging to reduce overall emissions from logistics.

In 2011/12 our products travelled around 50 million miles, generating 74,372 tonnes of CO₂. This increase from 2010/11 is due to business growth with a significant rise in vehicle production volume and sales. However, by improving the efficiency of logistics operations, we decreased the amount of CO₂ emitted per vehicle by 3% to 0.23 in 2011/12.





OVERALL, WE ARE ON TRACK TO MEET OUR COMBINED TARGET TO CUT EMISSIONS FROM BOTH INBOUND AND OUTBOUND TRANSPORT LOGISTICS BY 15% BY THE END OF MARCH 2013, FROM 2007.¹⁵

Since 2008, we have already achieved a 9% reduction from outbound logistics alone. See page 45 for information about the contribution our inbound logistics team made to meeting this target.

We are cutting emissions from outbound logistics by dispatching directly from manufacturing sites to dealers, reducing the length of truck journeys for vehicles sold in the UK. We are also sharing deliveries with other car manufacturers, switching from road to rail where possible to transport vehicles to ports for export and improving the efficiency of distribution to and within our export markets.

In 2011/12 we reduced emissions from outbound logistics in the UK by transporting vehicles from our manufacturing plants in the UK to ports for export by rail rather than by road, saving 600 tonnes of CO₂, equivalent to 2% of total emissions from outbound logistics. Working with suppliers and encouraging them to offer driver training which can significantly improve fuel efficiency and reduce transport emissions.

Working with our largest shipping company to reduce emissions from their ocean fleet and cut their environmental footprint by designing new vessels, developing new technologies and retrofitting older vessels.

We are also improving distribution of our vehicles within the countries we export to. In 2011/12 we reduced carbon emissions from transporting vehicles by 20% in two key export markets, China and Russia.

In China, we achieved this by shipping to an additional port in southern China, reducing shipment times and inland distribution mileage. For Russia, we changed our port of entry from Turku in Finland to St Petersburg, significantly reducing the amount of miles vehicles had to travel to reach customers in Russia, saving almost 6,000 tonnes of CO₂ emissions. We have also announced plans to manufacture vehicles in China, through a joint venture with another motor company. This will help us reduce the impact of transporting products to customers in our second largest market.

¹⁵ Due to changes in the way we collect and report data, targets have been restated from calendar year 2012 to financial year 2012/13.

PRODUCT USE BY CUSTOMERS

Life cycle assessment shows that the most significant environmental impacts of our vehicles are tailpipe emissions from customer use, which on average account for around 75% of a car's total carbon footprint.¹⁶ The most effective way to reduce these impacts is through product design, and this is a key focus for Jaguar Land Rover (see page 28).

It is also important that we help our customers understand the impacts associated with driving their vehicles. We do this by communicating sustainability messages about our products, raising awareness of the benefits of safe and responsible driving (see page 64), and by offering customers the chance to offset the carbon emissions associated with use of their vehicles (see box). The Land Rover Driving Code gives customers guidelines on driving their vehicle safely and responsibly, available at landrover.com/ourplanet.

One of the best channels available to communicate with our customers is through the hundreds of franchised dealerships that sell Jaguar and Land Rover vehicles around the world.

As dealers have the most significant direct contact with our customers, we work with dealers to encourage them to deliver messages about sustainability in customer conversations and through their showrooms.

We ask dealerships to display the Jaguar Land Rover sustainable development policy as well as information on sustainability relating to our vehicles, which is also included in welcome packs for customers in some countries. We provide training to dealership employees on our sustainability activities, and they must complete online training courses covering topics such as reducing tailpipe CO₂ emissions before they qualify to sell our vehicles.

¹⁶ This is based on an average taken from our life cycle assessments of six Jaguar and Land Rover vehicles, assuming the vehicle is in use for 200,000 km (see Life Cycle Assessment, page 22).

Sustainability related material is provided to dealers when each new model is launched. This includes tips for dealers on how to:

- Provide advice on driving in a more environmentally friendly manner
- Provide information on carbon offsetting where relevant
- Talk to customers about how to minimise environmental impacts of vehicles during their use and at the end of their life, including through product takeback (see End of life, page 66)

ENGAGING CUSTOMERS ON CO₂ OFFSETTING

Our CO₂ offsetting programme enables customers to compensate for emissions from the use of their vehicles - by investing in projects that help to reduce emissions elsewhere in the world, particularly in developing countries. (See Global Corporate Social Responsibility, page 80 for more on the projects we invest in).

Land Rover vehicles are automatically included in the programme for the first 45,000 miles as part of the vehicle purchase process in 10 participating countries, covering around 55% of all Land Rover sales globally. Land Rover customers can also choose to offset further miles should they wish.

Offsetting is not included as part of the purchase of Jaguar cars, but Jaguar customers can choose to offset emissions from driving by investing in selected projects through ClimateCare. We promote offsetting to customers on our website and in our brochures, via social media and videos in dealer premises, and on telephone call holding messages.

We have begun to gather views from stakeholders on our offsetting programme to understand how best to take it forward. In 2012, we ran a series of customer insight sessions in the UK, Europe and US. In April 2012 we ran a roundtable discussion with eight sustainability and carbon offsetting experts, who provided feedback on our approach and gave their views on how best to communicate our offsetting scheme to key audiences. The findings from both these stakeholder research exercises will feed into the future development of our offsetting programme.



PRODUCT SAFETY



The safety of everyone who drives, travels in or comes into contact with our vehicles is essential to the way we design and build our products.

Our customers need to feel safe when they are in our cars, and to know they will have protection in the event of an accident. We have a responsibility to meet that need and our reputation depends on it. This can also help us gain competitive advantage as safety can be a key consideration in buying decisions.

We integrate both active and passive safety systems into our vehicles. Active systems help to prevent accidents occurring through innovations such as reversing cameras, automatic cruise control and blind spot monitoring. Passive systems are designed to reduce the effects of drivers, passengers and pedestrians in the event of an accident. These include enhanced front and side airbags, headrests designed to minimise whiplash and a 'deploying bonnet' system.

Jaguar Land Rover is leading the industry with several innovations to improve vehicle safety. We developed the world's first deploying bonnet system which lifts the bonnet before contact is

made if a pedestrian is about to be struck. This absorbs energy from the impact gradually, to minimise injury. The system is now fitted in all new Jaguar vehicles sold worldwide apart from the US.

In 2011, we became the first car manufacturer to offer adaptive cruise control with intelligent emergency braking. It is available as an option on our XF 12MY Jaguar. Adaptive cruise control is designed to use microwave radar in the front bumper to sense if the vehicle ahead slows down. It then adjusts the throttle and brake to maintain a constant time gap. Seat belts are automatically tightened if the cruise system goes into emergency auto brake mode when a collision is likely. Once the road clears it takes the car back up to the previous speed. The radar also operates a Forward Alert, which gives the driver an audible warning if the traffic ahead slows quickly or another vehicle moves into the same lane. We are now working with the European New Car Assessment Programme (Euro NCAP) to help devise an industry standard for this technology.



SAFETY TESTING

We use computer models of our new vehicles to conduct a series of simulated crash tests. Virtual tests allow us to identify and mitigate potential risks before building prototype vehicles. Once a prototype has been produced, we conduct rigorous crash tests to ensure all components meet our strict safety requirements.

Independent safety testing of Jaguar and Land Rover vehicles is carried out by Euro NCAP. Euro NCAP's star ratings (from zero to five) are internationally recognised as a reliable independent source of information about car safety. The ratings include crash performance, pedestrian performance, child protection and active safety.

Two of our new models were tested in 2011: The Jaguar XF and the Range Rover Evoque. The XF was awarded four stars, with maximum points achieved for side impact barrier tests and bumper protection for pedestrians. The Evoque scored a full five stars, achieving maximum points for side barrier impact and protection of a three-year-old child. Notable safety features of the Evoque include a strong, stable safety cell, driver and passenger airbags, side curtain and thorax airbags. The vehicle also features the latest generation of electronic active braking systems, including a Corner Brake Control function that is designed to prevent rear end instability when braking on corners.

DRIVING SAFELY

While we focus heavily on product safety, we also have a role to play in promoting safe handling of our vehicles. We offer Land Rover owners training on safe off-road driving as part of the 'Land Rover Experience' at our global network of purpose-built, off-road courses.



PRODUCT END OF LIFE

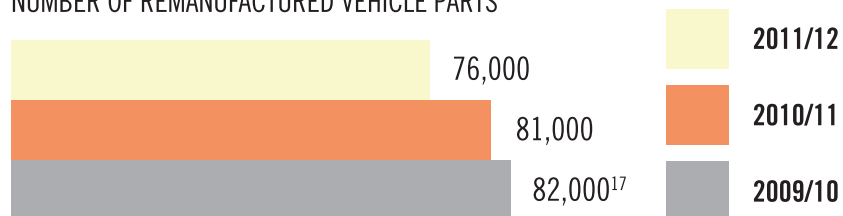
At the end of their useable life, our cars are dismantled and the saleable parts sold or recycled. Design decisions made at the start of the life cycle help us ensure that materials can be separated and recycled at the end. **Our cars are designed to be 85% recyclable and 95% recoverable at the end of their life with no more than 5% ending up in landfill.** We also test disassembly of our cars in workshop facilities, feeding the results into the design process.

Our Aftersales and Service business function remanufactures old and used vehicle parts to make best use of the complex structures and components in our cars. This allows us to reduce the cost of ownership for our customers and extend the service life of vehicles when new replacement parts are no longer available.

In 2011/12, Jaguar Land Rover remanufactured 76,000 old and used vehicle parts. This is a 6% decrease from 2010/11 as a result of more new vehicle lines being launched and significantly improved vehicle reliability. As our product lines mature and grow, and with the emergence of new technologies, we will be able to remanufacture more parts for models such as the Range Rover Evoque and the Jaguar XJ in the future.

¹⁷ The figure from the 2009/10 Jaguar Land Rover Sustainability Report has been restated.

NUMBER OF REMANUFACTURED VEHICLE PARTS



All our current models meet the EU End of Life Vehicles (ELV) Directive requirements for recovery and reuse or recycling. During manufacturing, we mark vehicle parts according to their content, such as plastics or metals, to make it easy to identify and separate materials. We produce manuals on how to dismantle our vehicles, including guidance on how to safely and responsibly dispose of hazardous materials and fluids. We follow the International Dismantling Information System (IDIS) requirements and our guidance for dismantlers is available to approved ELV treatment centres. More information on IDIS is available at www.idis2.com.

TAKEBACK

Our dealerships advise customers on how to dispose of their cars through our free take-back service in the European Union. There are 250 take-back points in the UK alone. These are operated by a supplier, Cartakeback, and are licensed by the Environment Agency as authorised treatment facilities. A list of authorised facilities is available at www.cartakeback.com.

WHAT HAPPENS TO YOUR CAR AT END OF LIFE?

When a vehicle arrives at a recycling facility, it undergoes a series of processes. Initial treatment includes:

Any saleable parts are removed and sold. Vehicles are then shredded and materials are separated for recycling. Metals are sorted into two groups for recycling into ferrous and non-ferrous metals. Some non-metal components are also recycled, such as glass that could be used as an aggregate for road building. The remaining residue is sent to landfill.

Heavy metals, used in small quantities in our vehicles for some safety and emissions systems, enter a closed loop recycling system and are not released to the environment.





OUR PEOPLE

—



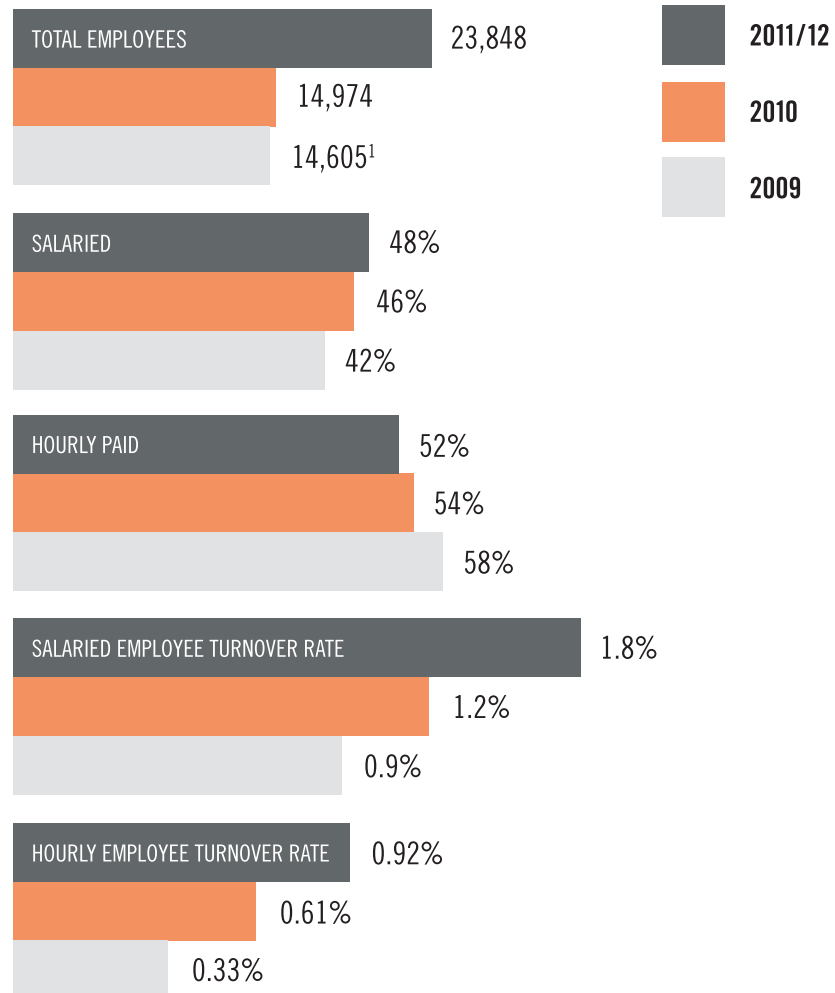
OUR PEOPLE

Our people are vitally important to everything we do. Their continued commitment is essential to the success of our business, and we do all we can to make sure they are safe, engaged, and motivated in their workplaces.

Our first priority as a responsible employer is to protect the health, safety and wellbeing of our employees. We also want to get the best out of our people by helping them build new skills and achieve their career aspirations; by providing flexible working options that fit in with family and other commitments; and by offering competitive pay and benefits that encourage them to stay with us.

As production, sales and profits have steadily improved since 2010, we have increased our directly-employed workforce of salaried staff and hourly-paid production workers to 23,848. We have also taken on an increasing number of graduates and apprentices (see Community, page 83). We work hard to retain our talented staff, and in 2011/12 our employee turnover rate remained low at 1.8% for the salaried population and 0.92% for the hourly population.

PEOPLE PROFILE



¹ The figure from the 2009/10 Jaguar Land Rover Sustainability Report has been restated.

ETHICAL CONDUCT

We expect all employees to comply with our Code of Conduct in everything they do. The Code is supported by detailed policies on gifts and entertainment and on anti-bribery, which aligns with the UK Bribery Act 2010.



Each year we ask every Jaguar Land Rover employee to certify that he or she has read, understood and will comply with the Code of Conduct. Employees have a duty to promptly report any actions they believe may violate the Code and there will be no reprisals against those who file reports in good faith, even if they are not certain a violation has occurred.

Concerns can be reported directly to their manager; to the compliance or human resources departments; via an incident reporting form on our intranet; or via a confidential telephone and web-based helpline which has been run by a third party since April 2012.

Jaguar Land Rover thoroughly investigates all reports and anyone found in breach of the Code may be subject to disciplinary action, including dismissal in the most serious cases. In 2011/12, a total of 36 whistleblowing reports were received.





HEALTH, SAFETY AND WELLBEING

Everyone at Jaguar Land Rover must comply with our Health and Safety Policy, which outlines the measures we take to reduce risks. Managers are responsible for overseeing implementation of the Health and Safety Policy, and all employees are expected to keep health and safety considerations at the forefront of their minds.

HEALTH AND SAFETY MANAGEMENT

All our sites are certified to the international health and safety certification standard OHSAS 18001. In 2011 we introduced our own 'safe behaviour index', an audit tool that site supervisors are required to complete during each shift, recording performance against safety criteria and noting any risks identified and the level of compliance with safety requirements, such as the wearing of eye protection, proper chemical storage and the condition of machine guards. The outcomes are managed locally and the

completion of audits is fed in to site scorecards. All incidents are investigated and control measures are implemented where necessary to prevent similar incidents recurring. We inform the UK Health and Safety Executive (HSE) of any reportable incidents, and comply fully if the HSE decides to conduct its own investigation.

RAISING AWARENESS

Manufacturing employees receive weekly health and safety briefings, a quarterly bulletin, and safety briefs in response to any significant

incidents that occur. In 2011 we reviewed and strengthened our health and safety training and inductions by tailoring these to address the types of risk faced by employees in different roles. This contributed to an 11% reduction in the number of first time visits to the occupational health centre in 2011 (see page 72). We also continued to run campaigns to raise awareness of specific risks or safety processes, such as safe maintenance.

We refreshed our contractor management process to increase the focus on safety issues – this is particularly important as our

production volumes increase and we have more contractors on site. Contractors are vetted on safety management and policies before they are allowed on site, and have to prepare a document stating how they are planning to monitor health and safety. Once on site, we regularly audit their performance.

In March 2011 we ran our first annual contractor road show to provide health and safety briefings for senior representatives from our main contractors.

PERFORMANCE IN 2011*

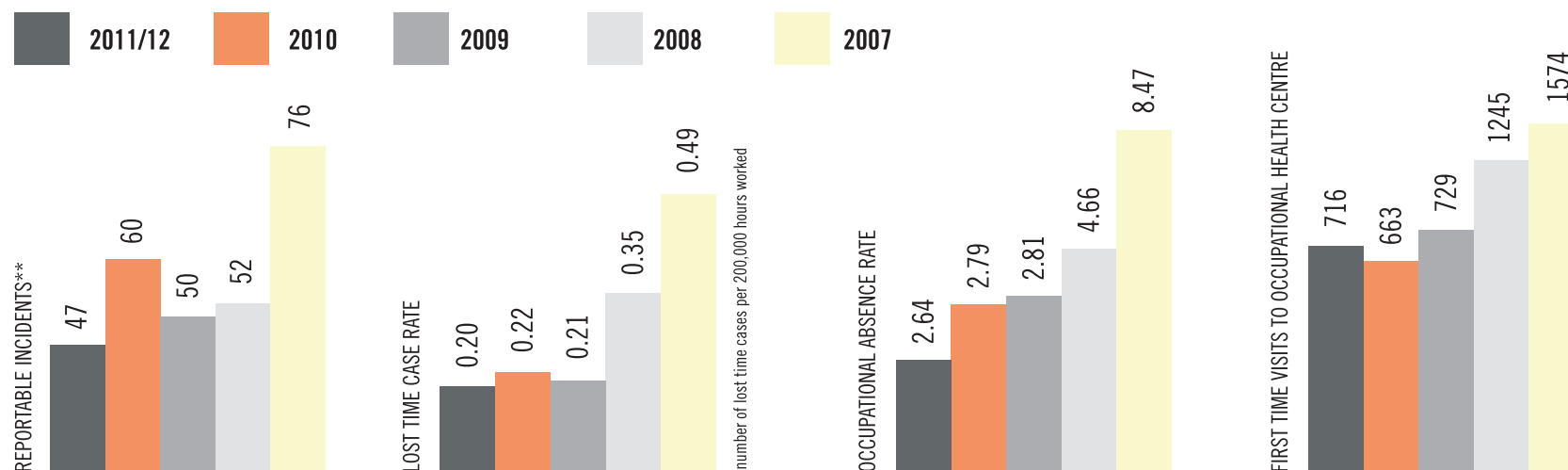
In 2011, we achieved a 17% decrease in the lost time case rate per 200,000 hours worked, exceeding our goal to improve our health and safety performance by around 10% year-on-year. The most common types of injury are cuts and lacerations.

However, we are extremely saddened to report the death of one of our employees in September 2011 following an incident in our press shop at Halewood. We are cooperating fully with an investigation into the incident by the UK Health and Safety Executive and continue to work with them to ensure effective measures are taken to prevent reoccurrence. We have also had documentation and processes verified by externally accredited companies.

In 2011, we reported 48 serious incidents recordable under the Reporting of Injury Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR). We investigate all incidents to assess their root causes and to implement remedial measures. Land Rover was subject to a prosecution by the UK Health and Safety Executive in April 2011 relating to the control of risks arising from the use of vibrating hand tools at the Solihull facility. Land Rover

pleaded guilty and was fined £20,000 plus costs. The processes are now compliant, and we have implemented robust procedures, training regimes and auditing processes to ensure adherence.

While we remain committed to continuous improvement we have adjusted our health and safety targets in the short term to take account of the challenges provided by an influx of new contractors and employees with the rapid expansion of our business since 2010.



* Figures for 2011 include agency staff; previous years do not. ** Figures have been updated to those previously reported.

WELLBEING

We encourage employees to live a healthy lifestyle and aim to help them balance their work and family commitments. As well as being good for our employees, this will have benefits for the company, such as reduced absence and greater productivity.

Our total absence rate declined by 32% in 2011 with 2.91 days lost per 200,000 hours worked for hourly paid employees and 1.47 days for salaried employees.

Our flexible working options include job-sharing, part-time work, working from home, and variable hours where an individual's role allows - and we have a highly competitive maternity leave package of one year at full pay.

We also give employees the option to request a career break of up to four years if they have been with the company for two or more years. Initiatives to enhance the wellbeing of employees include:

ADVICE ON MAINTAINING A GOOD WORK-LIFE BALANCE FROM DOCTORS AND NURSES AT ON-SITE OCCUPATIONAL HEALTH CENTRES.

FREE CLINICS TO HELP EMPLOYEES STOP SMOKING AND MONITOR THEIR BLOOD PRESSURE.

A FREE COUNSELLING SERVICE AVAILABLE TO ALL EMPLOYEES.

HEALTH CAMPAIGNS THAT FOCUS ON SPECIFIC ISSUES SUCH AS HEART HEALTH, CANCER AWARENESS, MENTAL HEALTH AND MUSCULOSKELETAL DISORDERS.

PHYSIOTHERAPY FOR THOSE WHO ARE RECOVERING FROM ILLNESS OR INJURY.

A WEB-BASED HEALTH GUIDE THAT HELPS EMPLOYEES ASSESS THEIR FITNESS LEVELS AND DEVISE APPROPRIATE EXERCISE PROGRAMMES.



DIVERSITY

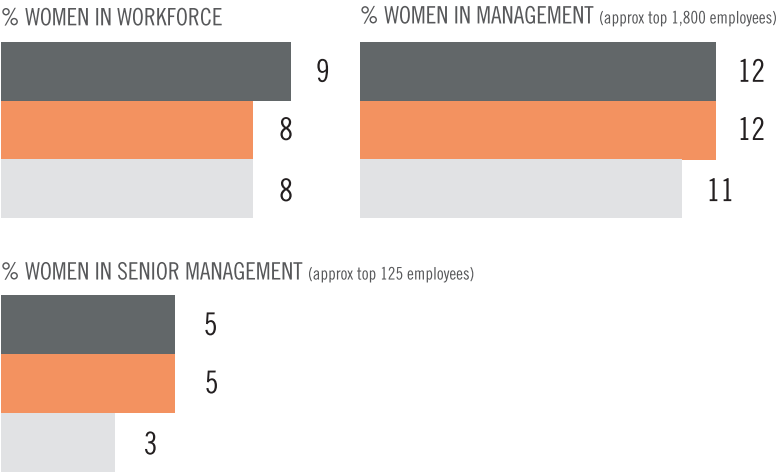
We are committed to treating our employees with respect - regardless of age, disability, gender, gender reassignment, race, religion or belief, or sexual orientation – and to promoting equal opportunities in the workplace and the recruitment process.

Promoting diversity makes good business sense, because a workforce composed of people from diverse backgrounds and experiences better reflects the profile of our customers, helping us understand and respond to their needs.

All employees are encouraged to challenge and report any incidents of discrimination, and must comply with our ‘Dignity at Work’ policy, which is designed to prevent harassment, bullying and victimisation and is included as part of induction training for new starters. Our Diversity and Inclusion Council oversees implementation of the policy and Diversity Champions sit on our People Development Committees, which support employees’ career development.

Our annual Diversity and Inclusion Awards recognise employees’ best practice in promoting diversity within and outside the business.

GENDER



ETHNIC DIVERSITY



DIVERSITY PERFORMANCE

Around 8% of our employees are from ethnic minorities (defined as non white British/Irish/Other) and we continue to offer support for employees with disabilities through occupational health departments and accessibility measures at our sites. In 2011, we were awarded the 'Two Ticks' symbol by the UK government's Jobcentre Plus organisation, which recognises employers that have made commitments to employ, keep and develop the abilities of disabled staff. Jaguar Land Rover also joined the Employers Forum on Disability, an employers' organisation focused on disability as it affects business. Improving gender balance is a priority, as the automotive industry has traditionally attracted more men than women, and women represent just 9% of our workforce.

The proportion of women at all levels of the business remained static in 2011 compared to the previous year.

WE AIM TO ATTRACT MORE WOMEN INTO ENGINEERING ROLES, WITH WOMEN MAKING UP AROUND 18% OF OUR GRADUATE INTAKE, 8% OF OUR APPRENTICES AND 18% OF UNDERGRADUATE PLACEMENTS IN 2011.

We also offer a personal development programme specifically for women, with 162 women participating since its launch in 2009.

In November 2011 we founded The Engineering Network for Women, which runs networking events around the UK to connect

women who work for Jaguar Land Rover with female engineering students who are interested in pursuing a career in the automotive sector. Its Facebook page has hundreds of followers. Five network events were held in 2011 and the network had its first gathering at Jaguar Land Rover Head Office in Whitley in April 2012. In October 2011 we launched Jaguar Land Rover's Women in Engineering Sponsorship Scheme, which gives financial and practical support to female undergraduates interested in engineering careers, as well as work experience with the company through 3 or 12-month placements. Ten initial placements were offered in 2012 with each participant assigned a mentor and given a bursary of £1,500.



TRAINING AND DEVELOPMENT

Excellent opportunities for skills and career development play an essential role in retaining the most talented employees at Jaguar Land Rover. We provide each employee with training and development opportunities tailored to their needs as identified through appraisals.

TRAINING AND DEVELOPMENT

% EMPLOYEES COMPLETING AN APPRAISAL



NUMBER OF DAYS TRAINING PROVIDED*



* The data for 2011/12 training has been calculated on a different basis than previously, but figures for 2010/11 and 2009/10 have been re-calculated on the same basis so as to make them comparable.

APPRAISALS

Our aim is for every employee to have an annual appraisal to measure performance against personal objectives and our corporate values. These appraisals provide an opportunity for one-to-one feedback with managers, allow time to discuss issues that have arisen over the year, and identify training and development needs.

Our personnel development committees work with individuals to match their skills and potential with available roles in the company.

In 2011/12, 94% of employees received an appraisal and we extended our 360-degree feedback tool to all managers to enhance the appraisal process. This involves managers answering a series of questions about how they approach their work, then nominating seven people to respond to the same questions - three peers, three subordinates and their manager. This reveals strengths and areas for development and helps to identify recommendations for future training and development.

TRAINING

In 2011/12 we provided 42,425 days training, including courses on health and safety, management and leadership, technical skills, and personal skills such as time management and how to influence people. In 2012 we will pilot training on sustainability issues, starting with an introductory 40-minute online course that will eventually be made available to all employees. We also support employees wanting to obtain degrees or professional qualifications relevant to their work through part-time courses, with 239 employees studying for degrees in 2011.

Our leadership programmes are tailored to the needs of managers at all levels:

92 senior leaders completed the Dynamic Business Leaders programme in 2011 and by the end of 2012 around 150 will have been through our Strategic Global Leaders training, which covers themes such as value creation, creating a global mindset, and the process and execution of business decisions.

298 employees completed our High Performance Leaders programme, organised in association with Cranfield University, covering how to deliver a business case, the management of change and the importance of collaboration.

185 new or newly promoted managers had participated in our Management Skills programme, which aims to develop the core management skills required for line managers.

153 established line managers completed the Leadership Practices Programme in 2011/12, with a further 260 spaces available for managers to complete during the 2012/13 financial year.

IN ADDITION TO OUR LEADERSHIP PROGRAMMES, WE OFFER PERSONAL SKILLS COURSES TO EMPLOYEES. IN 2011 WE RAN 191 SUCH COURSES, WITH MORE THAN 2,500 PEOPLE RECEIVING TRAINING ON AREAS SUCH AS BUSINESS ACUMEN AND CREATING AND MAINTAINING EFFECTIVE RELATIONSHIPS. IN MAY 2012 WE LAUNCHED A SUPERVISOR SKILLS PROGRAMME FOR AROUND 400 SUPERVISORS WHO WILL COMPLETE THE COURSE IN 2012/13.



EMPLOYEE ENGAGEMENT

We communicate regularly with employees about our company strategy, discuss changes to the business that may affect them, and get their feedback on our performance as an employer.

In 2012, we launched our 'New Pulse' employee engagement and satisfaction survey, which was open to both hourly paid and salaried staff for the first time to give us a more comprehensive picture of employee views. The overall response rate was high at 83%, with a strong response from hourly paid employees taking the opportunity to complete the questions for the first time.

The survey focused on how engaged employees feel, and sought their perception of the company's commitment to customer service, product quality and continuous improvement. Responses help managers identify actions and targets for improvement, and guide the development of company policies and practices. The Employee Engagement Index - our measure of how engaged

employees are based on questions about pride in the company, satisfaction, advocacy and commitment – showed 72% of hourly paid employees and 79% of salaried staff viewed the company favourably, compared with a UK benchmark of 63%.

Our Employee Satisfaction Index showed a strong improvement in satisfaction levels for salaried staff – 65% compared with 57% in December 2010. This is based on employees' responses to questions on topics such as reward and recognition, training opportunities, and overall satisfaction with the company. Satisfaction scores among hourly staff were lower at 50%, and work will be undertaken to identify actions to improve this.

WE ALSO AIM TO ENGAGE EMPLOYEES IN OUR SUSTAINABILITY GOALS. OUR ENVIRONMENTAL INNOVATION AWARDS PLAY A BIG PART IN THIS, RECOGNISING TEAMS THAT HAVE MADE A BIG CONTRIBUTION TO SUSTAINABILITY.



As well as this formal Pulse Survey, we engage regularly with employees in a number of ways, including:

A QUARTERLY LEADERSHIP CONFERENCE FOR OUR TOP 150 SENIOR MANAGERS.

—

EVENTS WHERE WE PRESENT INFORMATION ON OUR BUSINESS PERFORMANCE TO EMPLOYEES.

—

MEETINGS BETWEEN BOARD MEMBERS AND THEIR FUNCTIONAL STAFF.

—

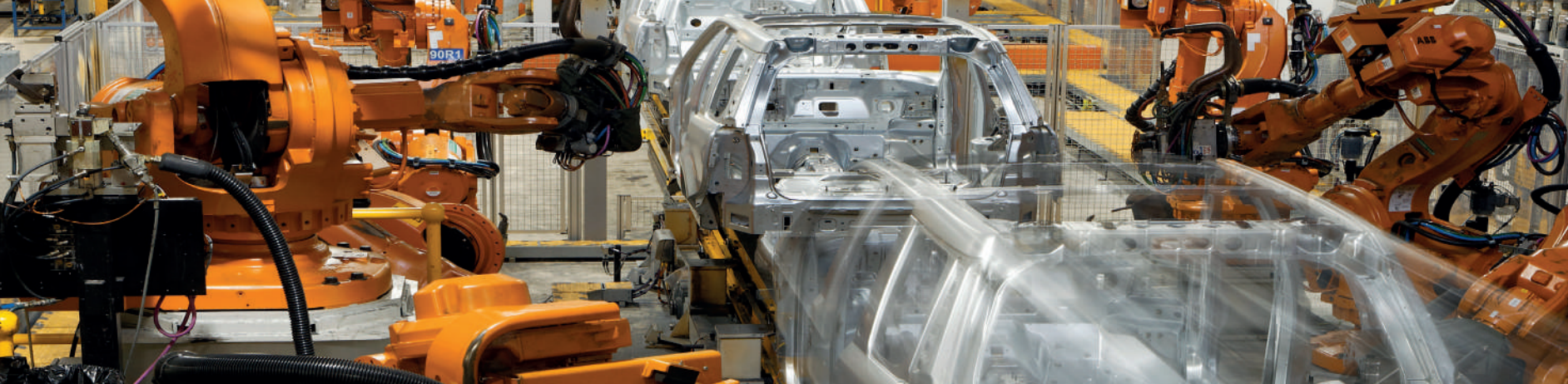
AN INTRANET SITE, WEEKLY PLANT NEWSLETTERS AND AN EMPLOYEE MAGAZINE.

—

USE OF INTRANET FORUMS, BLOGS AND WEBCASTS.

—





UNION CONSULTATION

We regularly negotiate with recognised trade unions on pay, terms and conditions for our employees, and we are committed to consulting with unions on any key changes to the business.

In 2011, 63% of Jaguar Land Rover employees belonged to one of our recognised trade unions: UNITE, T&G and GMB.

This included the majority (89%) of our hourly paid production employees and 31% of our salaried staff.²

We generally agree a two-year pay deal with the unions. Proposed deals go to a workplace ballot and are implemented if the majority agree.

NEGOTIATIONS INVOLVE THREE SEPARATE BODIES WITHIN THE COMPANY:

The Jaguar Salaried Negotiating Committee, Jaguar Joint Negotiating Committee and Land Rover Joint Negotiating Committee.

The most recent pay and conditions agreement for Jaguar Land Rover hourly and salaried employees (A-C grades) came into effect on 1st November 2010. The next negotiation will be effective from 1st November 2012. In July 2011 we agreed with the unions a set of terms and conditions for the advanced engine manufacturing facility in Wolverhampton, which will come into effect when scheduled production begins there in January 2015.

Our grievance procedure meets Advisory, Conciliation and Arbitration Service (ACAS) guidelines. If an employee raises a concern or grievance with their union, the first step is an initial discussion with their line manager. If the issue remains unresolved, it is elevated to the area manager, then the plant's human resources manager, and finally to the Joint Negotiating Committee if necessary.

² These figures are a minimum, as they are derived from records of those who pay their union subscription through the payroll.



GLOBAL CORPORATE SOCIAL RESPONSIBILITY

We are committed to playing a full and active part in the life of the communities in which we operate, whether in the UK or abroad. As we begin to expand our manufacturing presence into other countries such as China, we will ensure that community involvement is a significant element of our business strategy there.

Jaguar Land Rover provides employment for more than 23,000 people directly and 170,000 indirectly through suppliers around the world. Our wider contribution to communities includes providing education initiatives to promote careers in the automotive industry, investing in the next generation of engineers and designers, contributing to charities in cash and in kind, and encouraging our employees to volunteer their time to help good causes. This includes backing for charities and partner organisations that focus on conservation and humanitarian work internationally.

Our commitment to communities mirrors our presence in each region. For example, we have already begun to nurture partnerships with local community groups and local authorities in Wolverhampton ahead of our plans to build a £350m advanced engine manufacturing facility at the i54 business park. All our sites have a community liaison committee responsible for collaborating with local authorities, non-governmental organisations and other local businesses to coordinate volunteering activity, community investment and fundraising.

We also take a leading role in two local enterprise partnerships in the UK – covering Coventry and Warwickshire, and Greater Birmingham and Solihull – which determine local priorities to stimulate economic growth and create jobs.

As well as supporting our communities, we aim to be a responsible neighbour by minimising noise or transport disruption from our operations and talking to local people about any concerns.



OUR STRATEGY

Our Global Corporate Social Responsibility strategy articulates the areas where we believe Jaguar Land Rover can make the biggest contribution to society. Our objective is to be a partner in developing solutions to social and economic challenges by focusing on two key areas: Advancing knowledge and improving lives. To read our Environmental Innovation strategy, see page 18.

ENVIRONMENTAL INNOVATION

SUSTAINABILITY CHALLENGES OUR RESPONSE

SUSTAINABLE PRODUCTS

REDUCING FLEET TAILPIPE CO₂ EMISSIONS Developing technologies to reduce vehicle weight, improve aerodynamics and fuel efficiency to reduce EU fleet average tailpipe CO₂ emissions by 25% by 2015.

SUSTAINABLE OPERATIONS

REDUCING PRODUCT ENVIRONMENTAL IMPACTS OVER THE LIFE CYCLE Using life cycle assessment to understand the environmental impacts of our products at each stage – from design and manufacture to use and end of life – and enable our engineers to target reductions.

ENGAGING SUPPLIERS ON SUSTAINABILITY Assessing and monitoring supplier performance against sustainability criteria and partnering closely with suppliers to help us develop more sustainable products.

GLOBAL CSR

SUSTAINABILITY CHALLENGES OUR RESPONSE

ADVANCING KNOWLEDGE

DEVELOPING SKILLS FOR THE GREEN ECONOMY Offering opportunities for apprentices, graduates and undergraduates, and partnering with schools to encourage children to pursue careers in science, technology, engineering and mathematics.

IMPROVING LIVES

CONTRIBUTING TO LOCAL COMMUNITIES AND GLOBAL SUSTAINABLE DEVELOPMENT Encouraging employees to volunteer their time to support local projects to promote teambuilding and benefit communities.

Supporting more than 50 sustainable development projects in 17 countries through projects that offset CO₂ emissions from manufacturing operations and customer vehicle use.

ADVANCING KNOWLEDGE

To ensure the continued growth of our business, we need to be able to draw on a pool of talented people with the engineering and technical skills required to design, manufacture and assemble our vehicles. We provide backing for school and work-based activities that present engineering as an attractive career choice for young people and encourage them to consider relevant further or higher education, apply for apprenticeships or join us through our Graduate Development Programme.

We also nurture research and teaching links with more than 30 UK universities - in particular with Warwick University, where we have a 200 strong advanced research team working on projects such as hybrids and materials engineering.

Our support for apprentices, graduates and undergraduates gives young people the chance to take their first step towards a career in manufacturing or engineering, and supplies us with a pool of talent to draw upon in future years.

We substantially increased the number of apprentices taken on in 2011 and plan to recruit a further 133 in 2012. We also more

than doubled the number of engineering and commercial graduates joining our Graduate Development Programme and increased the number of industrial placements offered to undergraduates.

The Jaguar Land Rover Technical Accreditation Scheme promotes higher education courses relevant to the automotive industry. Seven universities participate, including Bradford, Southampton and York, which all joined in 2011. Our strategic partnership with Coventry University continues, with more than 100 Jaguar Land Rover employees taking first and second degree courses there each year.

BUILDING SKILLS	2011/12	2010/11
APPRENTICES TAKEN ON	114	36
GRADUATES JOINING GRADUATE DEVELOPMENT PROGRAMME	337	135
UNDERGRADUATE INDUSTRIAL PLACEMENTS (3-15 MONTHS)	66	49

PROMOTING ENGINEERING IN SCHOOLS AND COLLEGES



We encourage our teams at every UK site to support a local school in collaboration with the local education authority through, for example, governorships, mentoring and presentations. The aim is to improve standards while highlighting the benefits of engineering and manufacturing careers. More than 150 employees have taken on roles as school governors or mentors, and we offered work experience for 354 students aged 14-16 in 2011.

We are committed to promoting the UK government's Science, Technology, Engineering and Mathematics (STEM) agenda through our national education programmes, which help to address the national shortage of engineers. To counteract the continuing decline in the number of students choosing STEM subjects, Jaguar Land Rover has developed a range of initiatives to make young people more aware of the automotive industry and to stimulate interest in related technologies. These include competitions for schoolchildren across the UK:

In 2011, around 1,860 students aged 5-11 from 62 schools took part in the first Jaguar Primary School Challenge to design and build race cars out of cardboard or balsa wood, using template software. The idea is based on Jaguar's annual School Sports Car Challenge for secondary school students, established in 2007.

Land Rover's annual 4x4 in Schools Technology Challenge for children aged 11-19 centres around designing and building a radio controlled 4-wheel-drive (4x4) vehicle. In 2011, 340 students took part and several have since joined our apprentice scheme.

The annual Jaguar Cars Maths in Motion Challenge engages children of all ages and abilities in a software-based mathematics project that includes a competition to win a Grand Prix-type race. More than 1,300 schools and 200,000 students took part in 2011, making it the largest mathematics challenge of its kind in the UK.

Through our participation in Business in the Community's Business Class initiative, we connect with local secondary schools to help students with vocational qualifications, apprenticeships, work-related learning, enterprise education and work experience, as well as working with teachers to design tailored programmes that draw on our expertise.

In 2011 we agreed to enter into a partnership with the Princes Trust XL programme for 14-16 year-olds who are struggling at school, working with a school in Solihull to encourage students to re-engage with their education and develop life skills.

Jaguar Land Rover invests around £350,000 a year in five resource centres for schoolchildren as part of an Education Business Partnership with education authorities in Birmingham, Coventry, Warwickshire, Solihull and Liverpool. Around 20,000 students and 2,000 teachers visited the five centres in 2011 to learn about engineering, manufacturing and the automotive business, with 85% from communities within a 30-mile radius. Discussions are taking place with local authorities in South Staffordshire and Wolverhampton to provide similar facilities near our planned i54 advanced engine manufacturing facility.

CASE STUDY BIG BANG FAIR

In March 2012 Jaguar Land Rover was one of the key sponsors of the annual Big Bang Fair, the largest celebration of science, technology, engineering and mathematics (STEM) for young people in the UK. Big Bang provided an opportunity for us to promote related careers and address the UK shortage of engineers, who are essential for the growth of our business.



The Big Bang
UK Young Scientists & Engineers Fair

With 56,000 visitors over three days at Birmingham's National Exhibition Centre, the event made science and engineering practical and fun by giving children lots of hands-on experience, including chances to design a solar-powered water heater, explore radioactivity with a real Geiger counter, and carry out a mock hospital operation.

Our stand highlighted how exciting engineering careers can be, and we had the Jaguar C-X75 and Land Rover DC100 concept vehicles on display.

More than 100 Jaguar Land Rover graduates led tours around the event, and our engineers and apprentices were on the stand to talk about the exhibits and their career experiences.

A survey found that 90% of 8-11 year olds felt they had learned more about science at the fair, and 76% of 12-14 year olds viewed engineering more positively as a result of their visit.

For more details visit
www.thebigbangfair.co.uk.



IMPROVING LIVES

SUPPORTING GLOBAL SUSTAINABLE DEVELOPMENT PROJECTS THROUGH OUR CO₂ OFFSETTING PROGRAMME

Jaguar Land Rover contributes to improving the lives of people in the communities where we operate and around the world through our support for CO₂ offsetting projects, our charity support and employee volunteering.

We support more than 50 sustainable development projects in 17 countries through our programme to offset emissions from our manufacturing assembly operations and customer use of our vehicles (see Manufacturing, page 48).

We choose to invest in projects that not only reduce CO₂ emissions but deliver additional social benefits, such as better health and improved local infrastructure. For example, fuel efficient stoves benefit the health of approximately 1.2 million people by improving indoor air quality as well as reducing

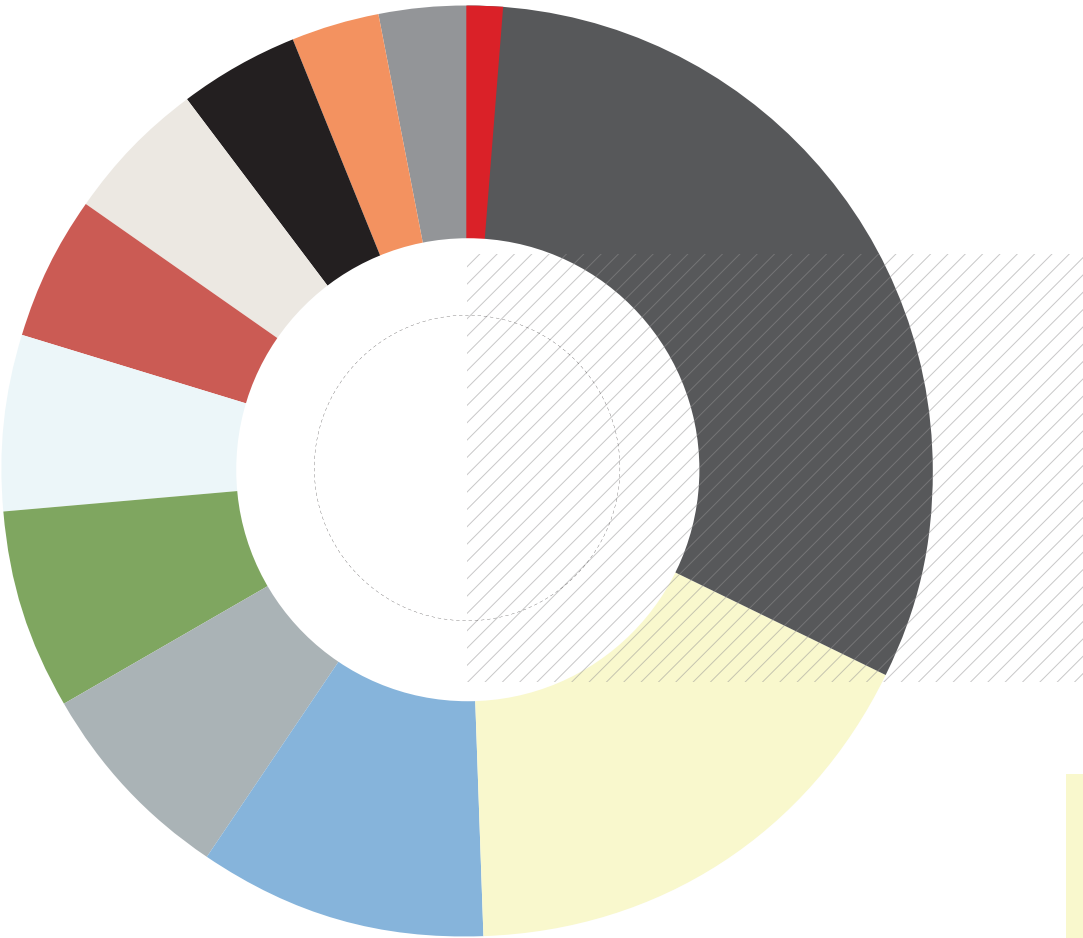
emissions. According to the World Health Organisation, more people in the developing world die from diseases contracted as a result of poor indoor air quality than from malaria. Jaguar Land Rover is now one of the largest distributors of these stoves globally, funding the distribution of more than 315,000 in Uganda, Ghana and Cambodia.

ClimateCare, the climate and development specialist that runs our offsetting programme, ensures that the projects we invest in improve the health and wellbeing of local communities, and where possible, stimulate local entrepreneurial activity and employment. In this way our offsetting programme is contributing to development goals as well as carbon reductions.

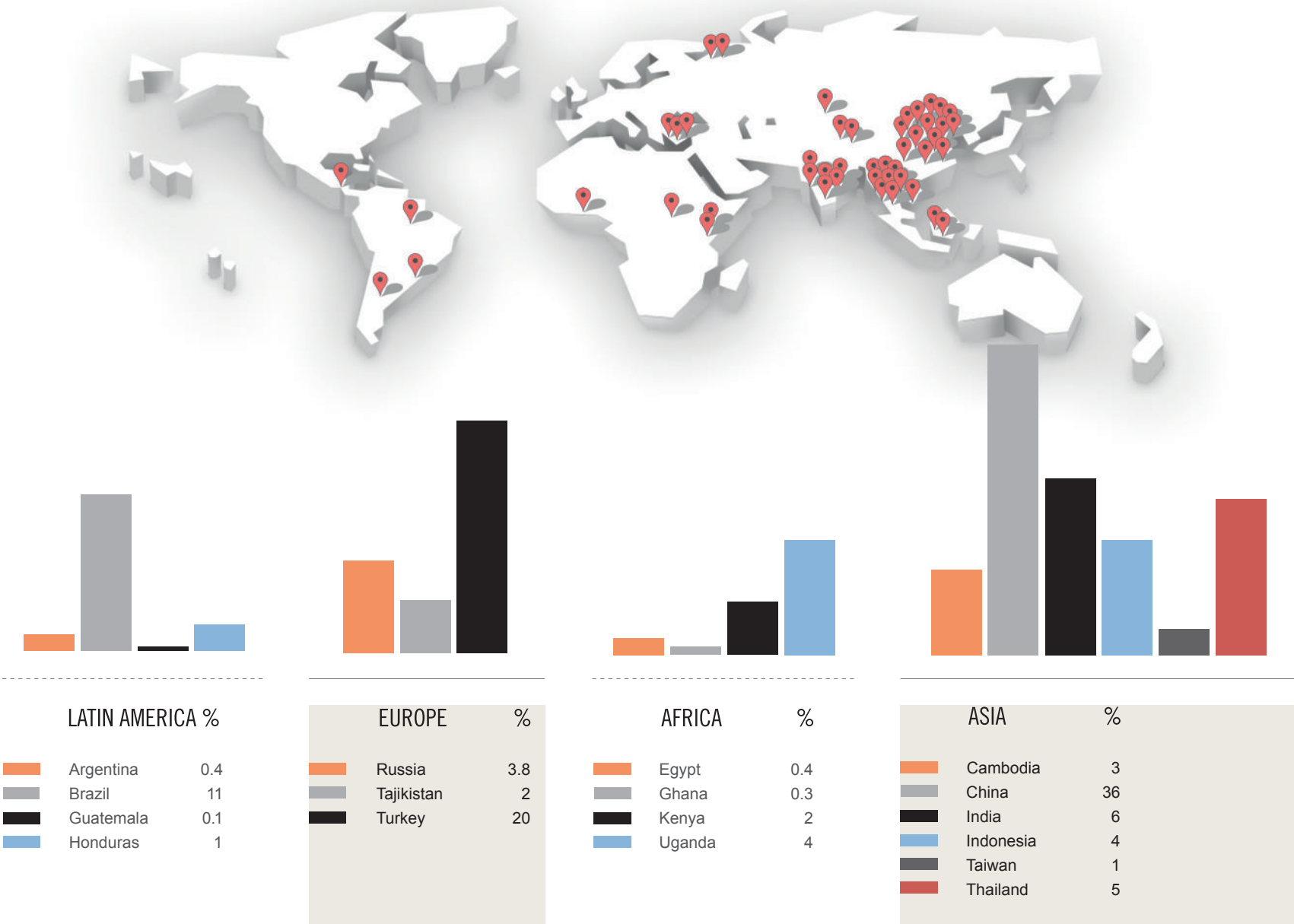


DIVERSITY OF OFFSET PROJECTS
SUPPORTED BY JAGUAR LAND ROVER

TYPE OF PROJECT	%
Wind power	32
Hydro power	17
Clean cooking stoves	10
Fuel switch	7
Biogas	7
Biomass	6
Waste heat recovery	5
Waste gas recovery	5
Combined heat & power	4
Geothermal energy	3
Energy efficiency in industry	3
Water	1



GEOGRAPHIC SPREAD OF OFFSET
PROJECTS SUPPORTED BY
JAGUAR LAND ROVER

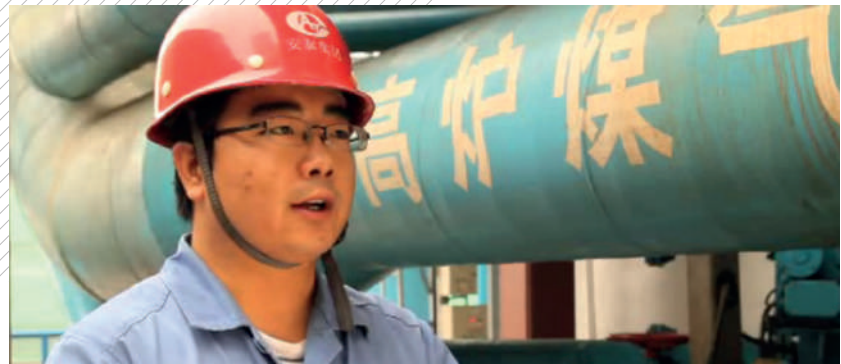


CASE STUDY OFFSETTING PROJECT



INDIA: 17.5 MW WIND PROJECT 72,103 TONNES OF CO₂ EMISSIONS REDUCTION

We have provided support to this 17.5 MW wind project, consisting of 18 wind farm sites across India. This project provides employment to local people during assembly, installation and operation of the wind farms. It has also boosts confidence in renewable energy and reduces dependence on fossil fuel powered generation of electricity.



CHINA: WASTE GAS RECOVERY 372,140 TONNES OF CO₂ EMISSIONS REDUCTIONS

A waste gas recovery project in Antai, China, has transformed the energy efficiency of a major steel production plant by capturing many of the greenhouse gases produced from the blast furnace, coke ovens and converter processes. The gases are pre-cleaned and fed through pipes to the boilers, where the mixed gas is fired to produce steam, which drives two 25MW turbines that generate electricity. The electricity generated is used to run the plant, reducing dependency on grid electricity, which would otherwise be sourced from China's fossil-fuel dependent national grid.

CASE STUDY OFFSETTING PROJECT



KENYA: WATER PURIFICATION 29,479 TONNES OF CO₂ EMISSIONS REDUCTIONS

By supplying simple, gravity-fed water filters to households in Western Kenya, this project has provided safe water, greatly improving the health of local communities by cutting the incidence of water-borne disease. Previously, girls and women spent long hours gathering wood to boil water, but can now pour water through a filter and drink it directly without boiling. This has substantially reduced carbon emissions generated by wood and charcoal fires, and improves health as women and children spend less time exposed to smoky fires. Local employment is also created through the distribution and promotion of the water filters.

RUSSIA: COMBINED HEAT AND POWER 260,216 TONNES OF CO₂ EMISSIONS REDUCTIONS

People living in the Russian town of Onega are benefiting from a heating plant that replaces their former coal-fired boilers with heating powered by waste wood. The wood is sourced from sustainable forests and would otherwise decompose anaerobically. By using the waste wood fuel, emissions from coal are significantly reduced, resulting in significant emissions reductions and improving the health of local people. By avoiding the stockpiling of wood waste, emissions of methane have also fallen.

THAILAND: BIOGAS RECOVERY 386,297 TONNES OF CO₂ EMISSIONS REDUCTIONS

One of the biogas projects supported by Jaguar Land Rover uses methane produced by pig manure to supply electricity to four pig farms in the Ratchaburi Province of Thailand. Local businesses also benefit from supplying technology, parts and equipment for the programme. The project helps to boost the profile of renewable energy technologies in Thailand, strengthens the country's self-sufficiency, and provides cleaner forms of energy to meet the country's rapidly rising energy demand.

GLOBAL CHARITY SUPPORT

We donated more than £1.4m to charities in cash and in kind in 2011/12 and continued our partnerships with global conservation and humanitarian organisations (see box). While we contribute to many charities internationally, nationally and locally, we continue to focus our support on three nominated organisations:

NATIONAL SOCIETY FOR THE PREVENTION OF CRUELTY TO CHILDREN (NSPCC)

Jaguar has raised around £2.1 million for the NSPCC since 1996 and is signed up to the NSPCC national Child's Voice Appeal to help raise £1.5 million by 2013 through Jaguar dealerships.

INTERNATIONAL FEDERATION OF RED CROSS AND RED CRESCENT SOCIETIES (IFRC)

Land Rover partners with the IFRC on a three-year global initiative called 'Reaching Vulnerable People Around the World'. We have provided more than £3.4 million through corporate donations, vehicle loans and fundraising since the launch of the programme in 2010.

BEN

Jaguar Land Rover's support for BEN - a charity that helps people who work in the UK automotive industry in times of need - includes the use of facilities at Castle Bromwich for the BEN welfare team, worth £15,000 a year, as well as a donation of 72 pence for each Jaguar Land Rover vehicle sold.

Jaguar Land Rover is also a corporate member of Transaid, an international development charity that aims to reduce poverty and improve livelihoods across the developing world through creating better transport systems.

A significant part of our commitment to charities is made by matching personal donations from employees through our payroll giving scheme. This generated £45,500 in 2011/12, which the company matched to make a total of £91,000.

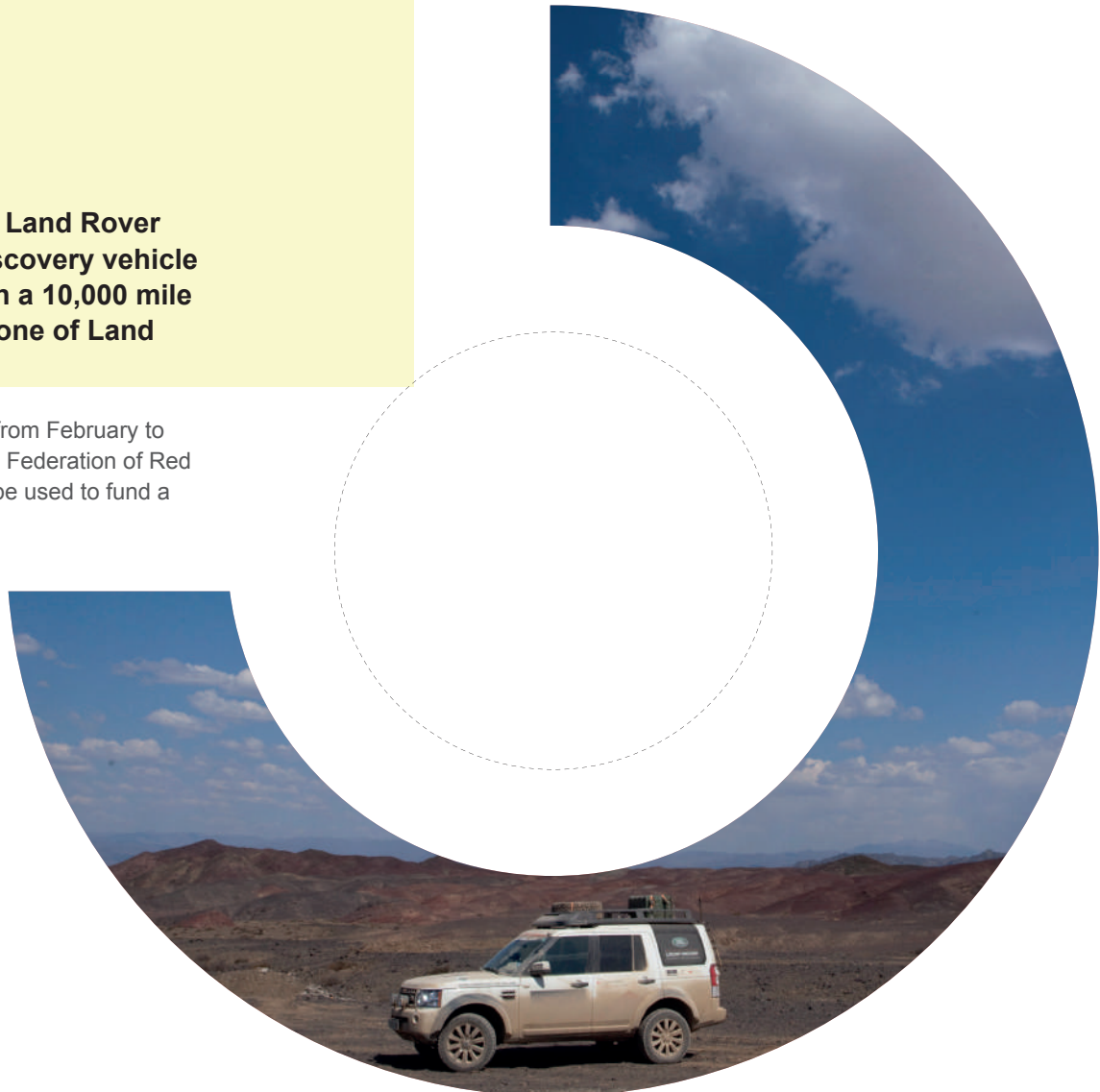
JAGUAR LAND ROVER COMMUNITY CONTRIBUTIONS IN 2011/12	
CHARITABLE GIVING DONATIONS	£47,539.02
EMPLOYEE VOLUNTEERING TIME	17,000 HOURS
MANAGEMENT COSTS IN KIND (use of buildings, vehicles etc.)	£1.4 MILLION

CASE STUDY

LAND ROVER'S JOURNEY OF DISCOVERY

To mark production of the one millionth Land Rover Discovery, we sent the one millionth Discovery vehicle from the Solihull manufacturing plant on a 10,000 mile charitable expedition to Beijing, China, one of Land Rover's fastest growing markets.

The journey across Europe and Central Asia lasted from February to April 2012, and raised £1 million for the International Federation of Red Cross and Red Crescent Societies. The money will be used to fund a water and sanitation project in Uganda.



PROMOTING EMPLOYEE VOLUNTEERING ON LOCAL COMMUNITY PROJECTS

In 2011/12, more than 1,000 employees volunteered 17,000 hours of their time to help their local communities. We encourage employee volunteering by offering up to 16 hours of paid volunteering time per year, not only to work in local communities but to improve morale and promote teamwork and leadership skills.

We work with local authorities and the Business in the Community CARES programme – a national campaign to encourage employee volunteering – to identify projects that need assistance. Employees can also nominate their own.

More than 100 employees spent time mentoring school children, providing careers advice and helping them with job applications. Other popular projects involve environmental work, regeneration and building improvements, or acting as STEM Ambassadors who help schools with the teaching of science, technology, engineering and mathematics.



CASE STUDY HELPING SCHOOLS IN INDIA



When we export our vehicles and parts to India, we need to protect them with significant amounts of packaging, including wooden pallets. Once the goods have been delivered, however, we can make good use of these locally valuable materials by donating them to community projects.

In Pune, for example, we have worked to refashion wooden pallets and other export packing material from our Land Rover Freelander and Jaguar XF models into much-needed equipment for local schools. A workshop team in our sister company Tata Motors takes the packing materials sent from our Halewood plant and converts them into desks and benches.

THE PROJECT HAS TRANSFORMED CLASSROOMS IN THE VILLAGES OF INGLUN AND TALEGHAR, AND OTHERS WILL RECEIVE NEW FURNITURE AS THE WORKSHOP CONTINUES TO GATHER AND RE-PURPOSE PACKAGING OF ALL SORTS.



SUPPORTING HUMANITARIAN AND CONSERVATION WORK

Land Rover has collaborations with international humanitarian and conservation partners, including through vehicle loans and donations:

IN SUPPORT OF



International Federation
of Red Cross and Red Crescent Societies



INTERNATIONAL FEDERATION OF RED CROSS AND RED CRESCENT SOCIETIES (IFRC)

The world's largest humanitarian network reaching over 150 million people annually through 187 National Red Cross and Red Crescent Societies and the work of 13 million volunteers. Provides support during and after natural disasters and health emergencies to meet the needs and improve the lives of vulnerable people.

BORN FREE FOUNDATION

A wildlife charity that works to protect threatened species in the wild and prevent animals from suffering in captivity.

ROYAL GEOGRAPHICAL SOCIETY

A body of academics and professional geographers that aims to advance geographical learning.

To find out more on Land Rover's collaborative humanitarian and conservation projects, please visit Land Rover [Our Planet website](#).



ADDRESS

JAGUAR LAND ROVER
ABBAY ROAD
WHITLEY
COVENTRY
CV3 4LF

EMAIL

jaguarsd@jaguar.com
landroversd@landrover.com