Securing the Future: Our Sustainable Development Policy
As the World’s leading rail fastening manufacturer, Pandrol Group is committed to be socially responsible and to perpetuate a process of sustainable development of Social, Economic and Environmental Sustainability.

‘The Pandrol Way’ is a set of guidelines that encapsulates our values and that we use to guide our actions. As an example, we develop new products and provide after sales service with the aim of meeting one of our stated Pandrol Way objectives - ‘To provide the best quality and performance whilst remaining cost competitive and/or clearly offering added value and benefit to the customer’.

We conduct our business in an ethical manner and enforce Ethics Policies (including Bribery and Corruption Policies) to all of our Operating Companies. We respect the law, support universal human rights, protect the environment and benefit the communities where we work.

Environmental and sustainability issues have always been at the forefront when developing our products and it is important to us that these issues are embedded in the way we operate our company. We believe it is our responsibility to make our organisation more environmentally sustainable. We look at what we do and carry out actions that will reduce our impact on the environment.

Our Quality Systems have been certified against ISO 9001 for more than 20 years, which covers the design, development and production undertaken by the Pandrol Group. We continue to improve and update our Group and Local Quality Systems, and the recent addition of a Group Environmental System (ISO 14001) has helped us to plan and carry out our production in a more environmentally friendly way, providing a more sustainable approach in our business. We have always had Occupational Health and Safety policies at all of our Operating Companies, but we are moving to implementing OH&SAS 18001 globally.

The Pandrol Group Policy on Sustainable Development is tiered down to our Operating Companies. It is important to us that we undertake our endeavours in an affordable manner and deliver our goals in a way which is ethical and makes good business sense. To undertake this, we set out within this Policy Statement our goals and strategies.

Our definition of sustainable development is: “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”
SOCIAL SUSTAINABILITY

OUR GOALS ARE:
To be compliant with regional labour legislation.
To be seen in the community as a responsible corporate entity which runs a safe, efficient, environmentally friendly, sustainable business and by maintaining community relations.
To share best practice around the Pandrol Group and provide a safe working environment for our employees and the communities in which we operate.

CASE STUDIES

01 DEVELOPING PEOPLE

Over the past four years the Pandrol Technical Department has recruited trainee technicians and designers from the local area.

These trainees were recruited for their keen attitude, academic abilities and willingness to work with our local college and university partners.

The academic study programmes offer trainees various levels of learning from foundation to Master’s Degree. These programmes are offered, in a number of relevant subjects including mechanical engineering, metallurgy and engineering design.

The benefits for Pandrol in employing enthusiastic and talented employees from the local community are clear. The community also benefits with additional employment for individuals whose practical skills and academic abilities have been nurtured by the Pandrol training programme.

Indeed the programme has been so successful that several current employees are now also engaged on similar academic study programmes at local universities and we plan to recruit further trainees for the programme.

Pandrol USA has participated in a CO-OP programme with a local university, with a number of engineering students enrolled in this programme.

In order to meet our goals we have implemented the following strategies based on our Ethics Policy, People and the Community:

Ethics Policy
To treat employees fairly and with respect, regardless of age, gender, religious and cultural background and in accordance with local and regional regulations.
The economic stability of the Pandrol Group depends on its ability to maximise profits whilst minimising environmental damage.

OUR GOALS ARE:

To maintain our position as the World’s leading rail fastening manufacturer.

To provide adequate profitability and cashflow to meet and if possible exceed the expectations of our shareholders.

In order to meet our goals we have implemented the following strategies for our Products and Markets:

**Products**

- To meet and if possible exceed the expectations of our customers.
- To improve our supply chain management and flow down continuous improvement.
- To make improvements and innovations in procurement practices and logistics, benchmarking against best practice in other companies, including companies within the Pandrol Group.
- To develop new products; to fill the gaps identified in the current product range; to make significant improvements in performance and cost competitiveness; to maximise benefits of emerging material science and production engineering technologies; to be highly responsive to customer requirements.
- To make major strides in manufacturing productivity and in minimising wasteful downtime, by not operating equipment beyond its useful economic life or in a way that increases overall operating costs.
- To train our customers in the use and maintenance of our products.
- To develop and provide a fully integrated solution from product conception to product installation.

**Markets**

- To have the strongest Brand in the Railway industry for professionalism, innovation, customer service, attention to detail, diligence and an attitude of personal responsibility.
- To provide the best quality and performance whilst remaining cost competitive and/or clearly offering added value and benefit to the customer.
- To seek complementary acquisitions and/or alliances/partnerships, which fit our business ethos and help us achieve our goals.

**CASE STUDIES**

02 **FASTCLIP FE**

Through careful design and application of new manufacturing techniques, Pandrol’s latest generation of switch-on/switch-off fastening system uses rail clips that are 20% lighter and shoulder components that are 40% lighter than their predecessors. Not only does this reduce cost and increase competitiveness, but it reduces the amount of raw material consumed, the energy required to manufacture, and the associated transportation costs.

03 **PANDROL RE**

As well as reducing the clip weight, in this new design Pandrol has engineered components that will last longer in service and need to be replaced less frequently. Moreover, the new system can be installed much more quickly and efficiently when renewing track than is possible with the older alternatives. This means that more can be achieved in the same length of track possession, so that costs are reduced and there is less disruption to service.

04 **PLASTICS MANUFACTURE**

In the last few years, production of many plastic components has been moved to locations close to, or on the same site as, clip production. This has enabled us to reduce the number of trucks coming to our factories and therefore reduce the noise impact and the air emission impact on our neighbourhoods. One other example is the change in the plastic injection motors used in the UK which has enabled us to reduce our energy consumption.
ENVIRONMENTAL SUSTAINABILITY

Pandrol strives to achieve best practices in sustainable environmental management and endeavours to minimise environmental impact. This is achieved through effective management of energy consumption and non-renewables, and reduction of manufacturing waste by re-using and recycling. Any remaining waste is disposed of in a safe and legal manner.

OUR GOALS ARE:

To minimise the use of natural resources, reducing waste and recycling by-products such as paper and plastic and actively seeking ways to reduce our environmental impact.

To improve the sustainability of our business worldwide.

To protect natural resources by reducing the risk of our impact on air quality and the natural environment. Also to protect our heritage and natural habitats and seek opportunities to enhance them where reasonably possible.

In order to meet our goals we have implemented the following strategies:

Our Planet – The Local and Global Environment
The Pandrol Group is present in ten countries which utilise locally sourced raw materials where possible. These representations of Pandrol Group companies enable us to have strong relationships with our suppliers. We are also investing in our factories in order to reduce their impact on the environment and improve their sustainability.

We are continuing to benchmark our operations so we will know where we stand, as part of our ISO 14001 compliance. From these benchmarks we will monitor ongoing improvements and reductions of our environmental impact.

We have a local presence near to our customers in order to minimise transport related pollution. We understand the need to reduce our carbon footprint for procurement activities and processes.

We are developing our factories in a way that minimises the impact of noise, vibration and air pollution on our neighbours and minimise our energy usage.

We are acting to reduce the mileage burden in our products too.

FACTORY LIGHTING

The majority of the traditional fluorescent tubes at Pandrol UK have now been replaced with high efficiency and significantly higher lumen output fittings. This has made a huge difference to the light levels in all the working areas whilst using less power than the previous fittings. The average light level has increased by around 30% and in some areas by 200% or more, whilst the power consumption is down by 15%- 20%. Annual energy savings are 50,000 kW-h per year.

Pandrol USA has replaced many of its fluorescent fixtures in the plant with more efficient metal halide lights. The magnetic ballasts in the fluorescent fixtures that remain are being replaced with more efficient electronic ballasts. In addition, motion sensor light switches have been installed in all bathrooms and the lunch room to help reduce electrical consumption.

INJECTION MOULDING MACHINES

Three injection moulding machines were purchased by Pandrol UK with additional servo control of hydraulic power systems including variable speed pumps. This enables the power delivery to be matched accurately to demand. As a result, the energy consumption of the machines has been reduced by 15%, saving around 70,000 kW-h per year.

Pandrol USA utilises highly efficient vFD controlled rotary air compressors. In addition, proper scheduled maintenance of the equipment and repair of air leaks throughout the plant has allowed us to lower the nominal pressure from 125 psi to 90 psi. This has reduced the electrical consumption of the compressors by approximately 20%.

COMPRESSED AIR SYSTEMS AT PANDROL UK AND PANDROL USA

Three obsolete piston compressors, each thirty years old, which were inefficient and generated high levels of noise and oil waste, have been replaced with a high efficiency screw compressor at the Worksop site of Pandrol UK. A second variable speed screw compressor has been added, linked to a computerised compressed air management system. As a result, our compressed air generating costs have been reduced by 30%. Energy consumption for compressed air has also been reduced by over 200,000 kW-h per year.

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CASE STUDIES
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08 POWDER PAINT LINES
Installation of the FASTCLIP automated paint line at Pandrol UK has removed the need for a minimum of 500 transport journeys per year for subcontract painting. The saving will be at least 60,000 transport miles.

Installation of an in house paint system that uses water base paint will be saving approximately 50,000 miles in truck transport between Pandrol USA and Pandrol Canada. It is also estimated that 1,000 gallons of water based paint consumed annually will replace the solvent based paint used in Canada.

09 ENVIRONMENTAL ASSESSMENT PRIOR TO PURCHASE OF NEW COMPRESSOR
In the first half of 2009 the Pandrol Australia Manufacturing Management team undertook an analysis of costs, noise levels and energy usage for replacing the existing screw drive compressor with an inverter style compressor. In 2010 the new compressor was purchased and installed. The new compressor is about 15 dB (A) quieter than the previous compressor when operating above 50% capacity. The new compressor is estimated to save 25 Kilowatts, 18 hours per operating day or about 100,000 kW-h per year. The greenhouse gas saving is estimated to be about 110 tonnes per year.

10 MONITORING OF ENERGY CONSUMPTION
Electricity and gas consumption across the Pandrol UK site is monitored monthly and compared against previous periods relative to production levels to identify anomalies. Portable electrical data logging equipment is used to track consumption of specific equipment, enabling focussed management of effort to reduce energy consumption.

11 REDUCING TRANSPORT COST, NOISE AND AIR POLLUTION
Pandrol UK’s shipping practice up until 2005 was for factored product purchased outside of the UK to be routed through the UK factory for paper based QA compliance checks prior to being sent onward to the final Customer destination.

The amount of product routed through the UK has been reduced from 73% to 54% over this period as a result of local QA resources to ensure product compliance.

The outcome is to reduce the total distance travelled so reducing energy costs.

12 WASTE COMPACTION
The manufacturing and logistics processes generate around 150 damaged Lo-Lift bags per week at Pandrol UK. The bags were previously stored loose on site and then removed by skip monthly by a recycling company.

A baling machine was purchased in 2008, capable of compressing 150 bags into a 1m³ bale. The time taken is less than an hour. We were disposing of 900 loose bags in a 40m³ skip. By use of a baler, we are able to dispose of around 6,000 bags in the same size skip or reduce the skip size for more frequent removal.

Current skip disposal costs are £80 per skip. By loading compressed bales, we will save around £800 per year in skip charges and are able to sell the compressed polypropylene rather than pay for its removal and we reduce unnecessary transport journeys.

13 MONITORING OF WASTE STREAMS
All waste and recycling streams at Pandrol UK are tracked monthly to enable trending and targeted reduction of waste generation.
CASE STUDIES

14 MONITORING OF WATER CONSUMPTION

Pandrol UK undertake monthly tracking of water consumption is used to identify potential leaks and losses across the site.

15 AUDIT OF COMPRESSED AIR LINES TO REDUCE LOAD ON COMPRESSOR AND REDUCE ENERGY USE

When air leaks from the compressed air system, that air must be replaced with new pressurised air from the compressor. This uses energy. The manufacturing management team at Pandrol Australia has developed a plan for auditing all areas of the factory to reduce the number of leaks. It is believed that this can save between 20,000 and 50,000 kW-h per year. The greenhouse gas savings is estimated to in the range of 20 to 55 tonnes per year.

NOTE: We have selected case studies from several of our Operating Companies, but similar stories are applicable to our other Operating Companies.

These case studies identify what Pandrol Group has been undertaking in the last few years. Going forward, in the next few years, we are going to look at ways and means to share the best practices identified so far and continue to make improvements where reasonably possible.

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