



SAFE PIPEWORK FOR FUEL

Durapipe

PLX

Safe Pipework for Fuel

PIPEWORK FOR FUEL TRANSFER

DURAPIPE PLX IS A COMPLETE RANGE OF SPECIALIST **FUSION-WELDED PIPEWORK SYSTEMS** FOR THE SAFE TRANSFER OF **LIQUID FUELS & THEIR VAPOURS**.

PLX is suitable for use with leaded, unleaded petroleum, including ethanol rich alternative fuels (E85), diesel, bio-diesel and fuel oils.

PLX is commonly used in forecourts as well as critical power applications in hospitals, data centres, prisons and banks.

The Durapipe PLX range was originally developed over 25 years ago and through continuous product innovation, PLX plastic pipework offers the ultimate in environmental protection with maximum protection against permeation and leak free joints when transferring fuel.

Durapipe PLX is fully compliant with the Energy Institute (Institute of Petroleum Performance systems), rigorous EN, conforming to EN1425 testing and other worldwide recognised standards.

Key Product Information

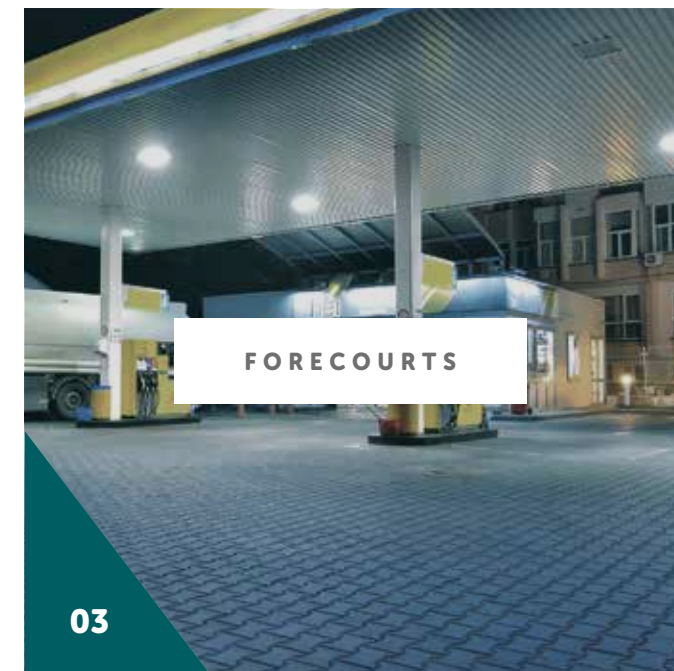
- 10 bar pressure rating
- Temperature Rating: -20°C up to 50°C
- 30 Year Design Life
- Size Range: 32mm up to 315mm
- Electrofusion System



Maintaining power supply in the event of a mains failure is vital in many environments including hospitals, energy farms, prisons and a range of other applications. Our PLX pipework safely and effectively feeds fuel-powered emergency generators used for back-up power in many critical power supply applications.



Bulk re-fuelling applications for marinas, airports, rail and bus depots require a reliable pipework system to feed the fuel dispensers. Our large diameter PLX pipe and fittings ensure fuel can be safely, efficiently and quickly conveyed to a wide range of vehicles.



Over the last 25 years PLX products have been installed in more than 17,000 forecourts worldwide for some of the biggest international oil companies and retailers. Our extensive portfolio of products means that we can fulfil all of the fuel transfer pipework requirements for an entire forecourt from tanker to pump.



With the successful operation of so many businesses relying on data centres, maintaining power supply is crucial. Uninterrupted Power Supply Systems (UPS) are an integral part of data centre infrastructure and our PLX pipework system offers the reassurance that fuel will always be efficiently transferred to power the battery generators should the UPS be called into action.

THE DURAPIPE PLX RANGE HAS BEEN ESTABLISHED FOR OVER 25 YEARS

Durapipe PLX is a complete range of specialist fusion-welded pipework systems for the safe transfer of liquid fuels and their vapours. Suitable for use with leaded or unleaded petroleum or all types of petroleum, including ethanol rich alternative fuels (E85), diesel, bio-diesel and fuel oils. Through continuous product innovation, PLX plastic pipework offers the ultimate in environmental protection with maximum protection against permeation and leak free joints when transferring fuel.

Contents

PLX Single Wall Pipe System	6
PLX Close-Fit Pipe System	7
PLX Pipe-in-Pipe System	8
PLX Blue Pipe System	9
PLX+ Pipe System	10
PLX Tools & Accessories	11
Pipework for Forecourts	12
Pipework for Transport Refuelling	14
Pipework for Critical Power	16
PLX Case Studies	18
Durapipe UK Added Value Services	20
Sustainability	22

PLX SINGLE WALL PIPE SYSTEM

Our high performance multi-layered polyethylene composite pipe system has been used for over 25 years for fuelling applications.

PLX single-wall is available in sizes from 32-160mm (up to 315mm available upon request) and is commonly used for below ground applications both within forecourts and other bulk fuelling environments. The single-wall products are available in straight lengths or 50m and 100m coils.

The pipe system is co-extruded with a protective layer using the latest extrusion technology, resulting in consistent and technically superior performance.



Key Product Information

- Forecourt & bulk fuelling installations
- Below ground applications
- Suction & Offset Fill lines
- Size Range: 32mm to 160mm (up to 315mm on request)
- SDR 11 & SDR 17
- PN10 and PN6 rated
- Polyethylene black outer skin
- Available in straights and coils
- EN 14125 approved
- Fusion welded system
- UV resistant
- Transition fittings available

PLX CLOSE-FIT PIPE SYSTEM

Provides security against accidental fuel leaks or losses, whilst providing an opportunity for continuous interstitial space monitoring and environmental protection.

PLX Close-Fit pipe is available in sizes from 32#40mm to 110#125mm and is used for above and below ground applications for the fill and vent requirements within forecourts and other bulk fuelling situations. Close-Fit pipe is available in straight lengths or 50 and 100 metre coils.

The pipe system is co-extruded with a protective layer using the latest extrusion technology, resulting in consistent and technically superior performance.



Key Product Information

- Forecourt & bulk fuelling installations
- Above and below ground applications
- Suction applications
- Size Range:
 - 32#40mm to 63#75mm - SDR11 - PN10,
 - 90#110mm to 110#125mm - SDR17 - PN6,
 - 90#110mm to 110#125 - SDR11 - PN10
- Dual contained system with self centering ribs
- Ability to monitor interstitial space for leak detection security
- UV resistant
- 'One-Weld' transition technology
- Polyethylene black outer skin with red stripes
- Available in straights and coils
- EN 14125 approved
- Fusion welded system
- Transition fittings available

PLX PIPE-IN-PIPE SYSTEM

The PLX 'Pipe-in-Pipe' system offers a dual contained option that can be used above or below ground. Pipe-in-Pipe provides resistance to all hydrocarbon based fuels, ensuring there is no permeation of fuel through to the atmosphere.

PLX Pipe-in-Pipe is available in sizes from 160#225mm to 315#400mm and has a pressure rating of 10bar whilst operating up to 20°C. The system is often used in transport refuelling applications such as rail yards and marinas or where large volumes of fuel, or fuel contaminated water needs to be transported.

The pipe made from a robust Polyethylene material provides exceptional resistance to rapid crack propagation and long term stress cracking.



Key Product Information

- Forecourt & industrial installations
- Above & below ground applications
- Suitable for ducted installations
- Size Range: 160#225mm to 315#400mm
- SDR 11
- PN10 rated
- Dual contained system with interval supports between pipes
- Ability to monitor interstitial space for leak detection security
- UV resistant
- Transition fittings available

PLX BLUE PIPE SYSTEM

PLX Blue offers the choice of both single wall and dual contained, giving the option to be monitored for leak detection if required and offering peace of mind to the installer and client alike.

With the ever-increasing use of AdBlue to lower NOx concentrations in the exhaust emissions of diesel engines, a high quality pipework system is required to convey the solution from tank to pump.

PLX Blue is available in sizes from 32mm up to 63#75mm as standard (larger sizes available on request) and has a pressure rating of 10bar, operating up to 20°C.

The system is often used in forecourts and other transport refuelling applications such as, distribution centres, lorry parks, rail yards and marinas.

The pipe made from a robust Polyethylene material provides exceptional resistance to rapid crack propagation and long term stress cracking.



Typical Applications

- Forecourts, Truck parks, Distribution centres, Ports and Marinas, Rail

Features and benefits

- Single wall 32mm up to 63mm (straights)
- Dual contained 32#40mm (straights)
- PN10 rated
- Polyethylene black outer skin with sky blue stripes
- System specially tested for Adblue® applications
- Fusion welded system
- 'One-Weld' transition technology
- Stainless Steel Transition Fittings

PLX+ PIPE SYSTEM

This conductive system dissipates electrostatic buildup within fuel pipework, offering a solution to specifiers and installers alike for safe conductive plastic pipework for fuel.

With the pipe's dissipative qualities and the fittings' innovative design, PLX+ offers a truly distinctive system which enables the contractor a swift and precise installation without any concerns to efficiently install the system safely and effectively. There is no change in installation procedures for either PLX or PLX+ system.

The integral conductive connector ensures that there are no loose items which could go missing during the installation process, whilst the green and yellow striping gives clear indication that the pipe system is 'conductive'.

Products: Single Wall, Dual Containment, Threaded Transitions, Flanged Transitions



Forecourt

- Pressure Systems, Suction Systems, Offset Fill, Vents, Tank Chamber Connection, Sump & Pump Connection

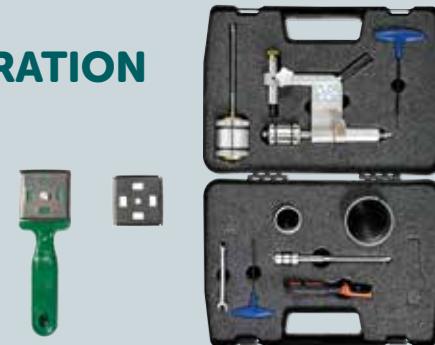
Features & Benefits

- 50mm up to 125mm
- Polyethylene black outer skin with green & yellow stripes
- Single wall & dual containment
- PN10 (up to 63mm) and PN6 (90mm upwards) rated
- EN 14125 approved
- Complies with ATEX 137 directive
- Fusion welded system
- 'One-Weld' transition technology
- Transition fittings available

PLX TOOLS & ACCESSORIES

The range of PLX preparation tools and accessories has been specifically developed in order to enhance a smooth and easy pipework installation process.

PIPE PREPARATION TOOLS



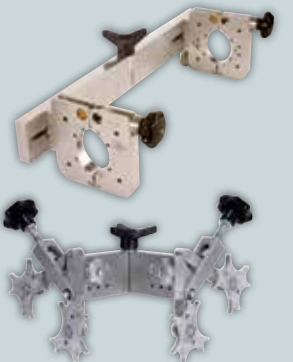
WELDING MACHINES



PROTECTION SLEEVES



PIPE CLAMPS



PIPE CUTTERS



CHAMBER & SUMP ENTRY FITTINGS



DURAPIPE PLX FOR FORECOURTS

Durapipe PLX has been used to fulfil different pipework requirements of the forecourt market for over 25 years. The range consisting of both single wall and dual contained pipe and fittings has been installed in thousands of stations around the world during this time. Furthermore, the NEW PLX+ system now caters for 'conductive' specifications in the forecourt market.

TANK CHAMBER CONNECTION

The chamber is central to the forecourt system, it provides inspection access to the tank and protects the fuel line connections. Durapipe PLX Chamber entry fittings and compact flanges require minimal installation time and the innovative design is advantageous where space is at a premium.

ADBLUE/DEF

PLX Blue is a specially designed pipework system for the conveyance of DEF/AdBlue, in both single wall and dual contained options.

OFFSET FILL AREA

Large bore PLX pipework can dramatically reduce tank filling time by improving flow rates. For higher fuel velocities PLX+ has been developed for 'conductive' specifications.

VENTS

PLX pipe and fittings safely transfer the vapour, from the pumps to the underground storage tanks, with no permeation into the atmosphere. Used for both stage one and stage two vapour recovery PLX is your safe, environmentally friendly choice for installation. The larger bore of PLX fill and vent systems will assist air/vapour flow and the condensed vapour return to its respective tank.

SUMP AND PUMP CONNECTION

PLX threaded adaptors and compact flanges provide a safe and secure connection to pumps, dispensers and tanks.

PLX EF dual contained fittings and extended transitions can reduce costs and reduce the need for under pump sumps.

TRANSPORT REFUELLING APPLICATIONS

The bulk fuelling requirements of transportation hubs can be diverse where reliability is of paramount importance. PLX plastic pipework, often in large diameter sizes has been used to supply fuel to marinas, airports, rail haulage yards and haulage distribution depots.



AVIATION

PLX is both internally and externally corrosion resistant, as well as being compatible with civil and military grade aviation fuels.

Durapipe PLX ensures a clean supply to all types of aviation refuelling activity.

AIRPORT



TUNNELS

PLX can be used for surface water drainage pipework installations which are under most road tunnels.

Through kerb drainage systems, PLX can be connected safely and transfer these mixed chemical fluids through to a separator and other storage facilities.

TUNNEL

MARINA



PORTS AND MARINAS

Durapipe PLX dual Contained pipework provides a secure environment for bulk transfer of marine fuels to storage tanks, during vessel refuelling, bunkering and water pumping operations.



HAULAGE OR DISTRIBUTION CENTRES

The added protection of the dual containment pipework provides a leak tight system suitable for high-speed suction or pumped applications.

DISTRIBUTION CENTRE

RAILWAY DEPOT

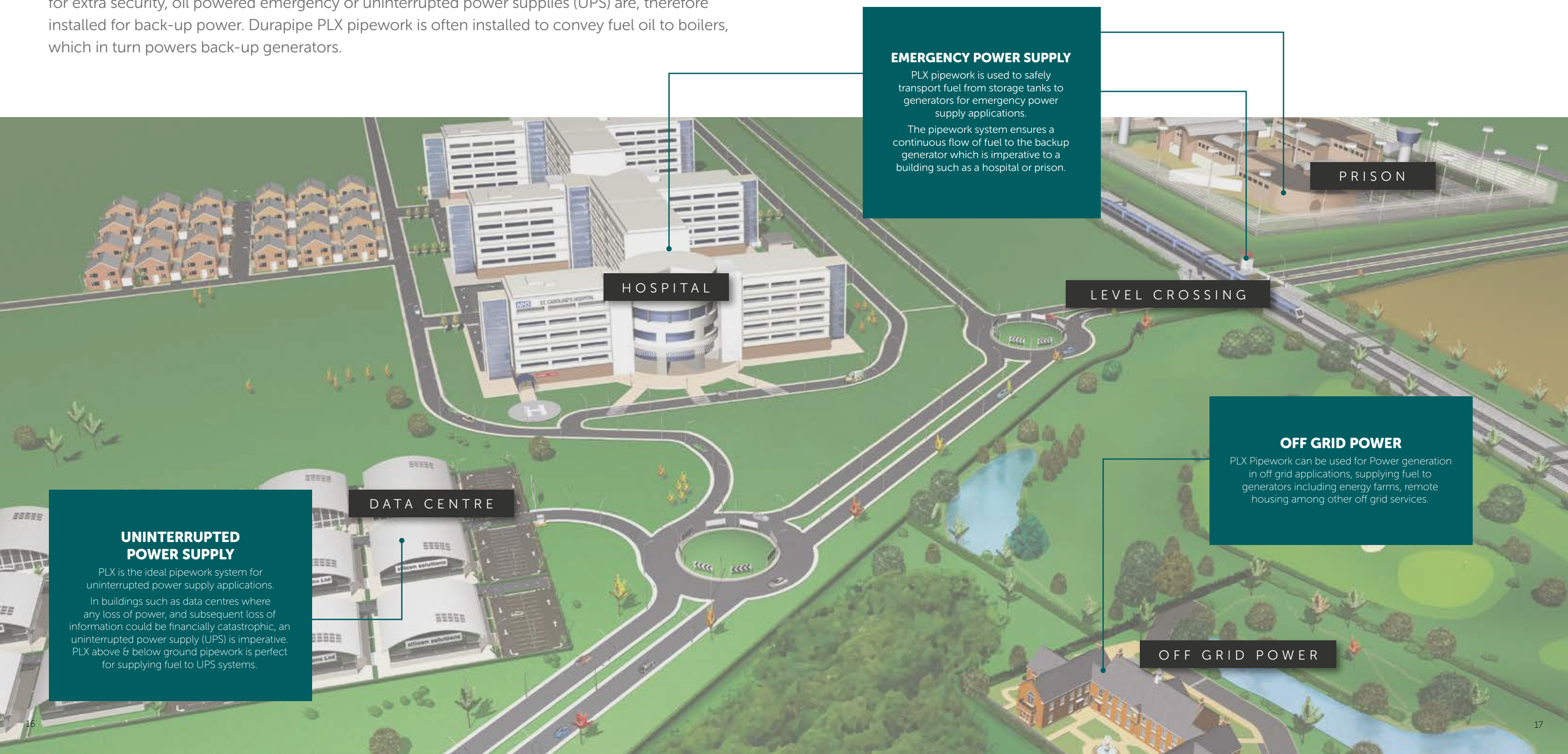


RAIL

Compact, robust and maintenance free, Durapipe PLX is insulated against accidental damage and freezing conditions. Easily installed into pre-formed shallow ducts, Durapipe PLX systems are suitable for fuel and lubrication oil dispensing applications whilst ensuring no permeation.

DURAPIPE PLX FOR CRITICAL POWER SUPPLY APPLICATIONS

Sudden or prolonged loss of electrical power can be catastrophic for many business services so for extra security, oil powered emergency or uninterrupted power supplies (UPS) are, therefore installed for back-up power. Durapipe PLX pipework is often installed to convey fuel oil to boilers, which in turn powers back-up generators.



EMERGENCY POWER SUPPLY

PLX pipework is used to safely transport fuel from storage tanks to generators for emergency power supply applications.

The pipework system ensures a continuous flow of fuel to the backup generator which is imperative to a building such as a hospital or prison.

HOSPITAL

PRISON

LEVEL CROSSING

UNINTERRUPTED POWER SUPPLY

PLX is the ideal pipework system for uninterrupted power supply applications. In buildings such as data centres where any loss of power, and subsequent loss of information could be financially catastrophic, an uninterrupted power supply (UPS) is imperative. PLX above & below ground pipework is perfect for supplying fuel to UPS systems.

DATA CENTRE

OFF GRID POWER

PLX Pipework can be used for Power generation in off grid applications, supplying fuel to generators including energy farms, remote housing among other off grid services.

OFF GRID POWER

CASE STUDIES

BAHRAIN AIRPORT

The major new \$1.1 billion modernisation programme at Bahrain International Airport included the construction of a new passenger terminal, in addition to the expansion and refurbishment of the existing terminal. Designed to improve the infrastructure and services at the airport to enable it to cater for future aviation needs, the development works increased the airport's capacity from nine million passengers a year to 14 million per year.

THE CHALLENGE

As part of an expansion scheme at Bahrain International Airport, a reliable pipework solution was required to feed a new back-up power system to ensure that airport operations can continue to run as normal in the event of a mains power failure.

THE SOLUTION

Durapipe PLX secondary contained close-fit pipe coils were installed to transfer diesel to the new fuel-powered emergency generators.

ALDER HEY HOSPITAL

THE CHALLENGE

The new Alder Hey in the Park development required a pipe system to feed the new fuel-powered back-up generators.

THE SOLUTION

Durapipe secondary contained PLX pipe-in-pipe was installed to safely transport diesel to the emergency generators should the mains power fail.



GLOUCESTER GATEWAY FORECOURT

THE CHALLENGE

A unique new service station required a complex network of pipes to distribute a variety of different fuels across the forecourt to the dispensing pumps for vehicle fuelling.

THE SOLUTION

Durapipe dual contained close-fit PLX pipe and dual contained PLX fill and vent pipe were installed for the complex fuel supply requirements of the forecourt.

HMAS CAIRNS, QUEENSLAND

THE CHALLENGE

Installing new fuel pipework into existing Navy and Sugar Wharf, to accommodate HMAS CAIRNS in Queensland, Australia.

THE SOLUTION

Over 1,500 metres of secondary contained Durapipe PLX pipework supplied to local distributor Shipman King. This solution offers adequate volume for refueling large naval vessels.



ADDED VALUE SERVICES



CUSTOMER SERVICES

We pride ourselves on the high level of customer service levels we provide to each and every customer. Our customer services team offers support at every stage of a project from the point of order through to delivery and logistics and during the installation process.



QUALITY MANUFACTURING

We are committed to delivering quality products, with all of our pipework systems manufactured in accordance with ISO9001, while we also operate an environmental management system certified to ISO14001.



CHEMIST

Our company chemist is on hand to evaluate the chemicals and chemical combinations that are intended for use and provide advice on the most suitable Durapipe material for each individual chemical application.



INSTALLATION ADVICE

Plastic pipework systems offer superior installation and lifetime benefits, compared with traditional materials, and we offer free product training, jointing demonstrations and installation advice either on-site or at a location convenient for the customer.



TECHNICAL SUPPORT

Providing assistance to the entire customer supply chain, our experienced technical support team offer specification guidance and material estimates through to product training, jointing demonstrations and ongoing maintenance recommendations once the pipework system is operational.



GLOBAL DISTRIBUTION NETWORK

All of our pipework systems are available from an extensive network of distributors across more than 75 countries worldwide. We work closely with every one of our distribution partners to ensure products are delivered to customers as smoothly and quickly as possible.



VALVE DEPARTMENT

Our unrivalled valve department offers a unique service, with the team able to quote, build, test and dispatch an actuated valve within 24 hours, ensuring minimum downtime and disruption for customers.



BIM

It is important to us that we can offer specifiers and consultants all of the tools that they need to design new pipework systems, which is why we are developing BIM models for all of the products including PLX within the Durapipe portfolio, which can all be downloaded from our website.



ALAIN RONDEAU
HEAD OF GLOBAL BUSINESS DEVELOPMENT

E-mail: alain.rondeau@alixaxis.com
Telephone number: +44 7901 510 644

NOEL HUGHES
GLOBAL BUSINESS ACCOUNT MANAGER

E-mail: noel.hughes@alixaxis.com
Telephone number: +44 7786 113599



DURAPIPE UK IS A PROUD MEMBER OF THE BRITISH PLASTICS FEDERATION (BPF) PLASTICS PIPES GROUP (PPG)

SUSTAINABILITY

Plastic pipework systems are a sustainable and environmentally responsible choice that will serve generations to come. They are energy efficient during manufacturing and provide peak performance during service. Strong, durable, lightweight and flexible, plastic pipework systems require significantly less energy to manufacture, transport and install than metal alternatives, and supply a long service life.

The cumulative energy requirements to manufacture, install and transport plastic pipework is estimated to be substantially less than most non-plastic systems.

Plastic saves energy – besides the technical advantages of plastics (eg. corrosion resistance) there are inherent benefits that contribute to energy efficiency and energy sustainability.

Durapipe & Aliaxis

The continuous mission of Durapipe and the Aliaxis group is to ensure our product offering is as sustainable as possible and considers the impacts on the environment whilst maintaining the highest quality and performance.

- Comply with all relevant environmental legislation, codes of practice and standards relating to quality and the environment.
- Continually improve the company's environmental performance, minimising any pollution risk and adopting best practice.
- Increase usage of recycled materials where appropriate.
- Take positive action to reduce waste by promoting energy conservation and recycling.
- Optimising production processes.
- Consolidating transportation routes across group companies.

Durapipe Environmental Management System

Durapipe UK operates environmental management system that has been successfully assessed against the BS EN ISO 14001 environmental management system.



Durapipe UK reserves the right to modify the details in this publication as products and specifications are updated and improved. The content of this publication is for general information only and it is the user's responsibility to determine the suitability of any product for the purpose intended.

For further information on all Durapipe UK products and services contact our Customer Services Department as detailed below.

Registered Office:

Durapipe UK
Hyssop Close
Swaffield Park
Hawks Green
Cannock
Staffordshire
WS11 7FU
United Kingdom

Customer Services

Tel: **+44 (0)844 800 5509**
Fax: **+44 (0)1543 471682**



Tel: **+44 (0)1543 471680**
Fax: **+44 (0)1543 471690**
email: enquiries@durapipe.co.uk
www.durapipe.co.uk



an *O*Aliaxis company